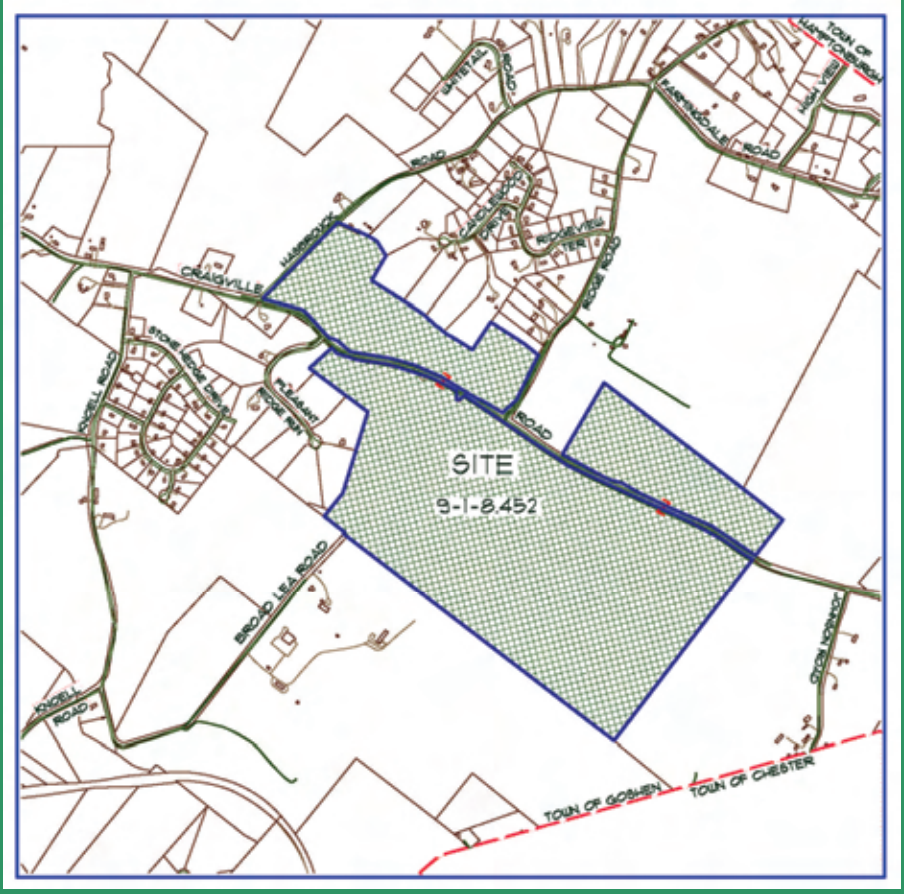
Young's Grove



Draft Environmental Impact Statement

Town of Goshen
Orange County, New York

Volume III

July 2008
Revised December 2009

Young's Grove

Draft Environmental Impact Statement

CRAIGVILLE ROAD & BROADLEA ROAD
TOWN OF GOSHEN
ORANGE COUNTY, NEW YORK

Tax Map Designation: Section 8, Block 1, Lot 8.452

Volume III of III

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Prepared By: North County Ecological Services, Inc.
Dated: June 26, 2008

Biodiversity Study
Prepared By: North County Ecological Services, Inc.
Dated: June 9, 2009

I. Herpetological Investigation
Prepared By: J Tesauro, Ecological Consultant
Dated: June 16, 2008

J. Traffic Impact Study
Prepared By: John Collins Engineers, PC
Dated: July 18, 2007, revised September 10, 2008.

K. Water System to Serve Young's Grove Subdivision
Prepared By: Pietrzak & Pfau Engineering & Surveying, PLLC
Dated: October 2009

L. Wastewater Assimilation Capacity Analysis
Prepared By: HydroQual, Inc.
Dated: November 9, 2007

Wastewater Treatment Plant Information
Prepared By: HydroQual, Inc.
Dated: September 19, 2008

M. Cultural Resource Study
Prepared By: City/Scape: Cultural Resource Consultants
Dated: September 2007

Phase II Archaeological Investigation
Prepared By: City/Scape: Cultural Resource Consultants
Dated: December 2008

Appendix H

Endangered, Threatened and Rare Species Report
&
Biodiversity Study

Endangered, Threatened and Rare Species Report

Lands of Rieger Homes Inc.
(Youngs Grove Residential Subdivision)

Town of Goshen, Orange County, New York

Prepared For:

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June 26, 2008

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1.0 INTRODUCTION

At the request of the project sponsor, North Country Ecological Services, Inc. (NCES) conducted an investigation to determine if endangered, threatened and/or rare species or habitats conducive to their existence are found on a 354.01± acre property known as the "Youngs Grove" (the "Site"). The flora and fauna species review was conducted after a formal consultation with the U.S. Fish and Wildlife Service (USFWS) and the New York State Department of Environmental Conservation Natural Heritage Office (DEC) had occurred. The USFWS and DEC were contacted to determine if any federally or state listed endangered, threatened or rare flora/fauna species and/or ecologically sensitive habitats are known to occur on, or within the immediate vicinity of the Site.

According to information obtained from the USFWS, as presented in a letter dated March 14, 2005, the Indiana Bat (*Myotis sodalis*) and the Bog Turtle (*Glyptemys muhlenbergii*) have the potential to exist on the Site based upon recently documented occurrences of these species within the vicinity of the Site. Specifically, the USFWS letter indicates that there are "known Indiana Bat roost trees within 5 miles of the Site; there is a known Indiana Bat hibernacula within 35 miles of the Site; and, there are known Bog Turtle areas that are found less than 10 miles from the Site".

Since the letter obtained from the USFWS is over a year old, NCES also consulted the USFWS website for information regarding the potential for endangered, threatened or rare species within the project's general geographic location. Based on the information contained on the website, the Bald Eagle (*Haliaeetus leucocephalus*), Bog Turtle, Indiana Bat, Shortnose and Atlantic Sturgeon (*Acipenser brevirostrum and Acipenser oxyrinchus*) and the Dwarf Wedge Mussel (*Alasmidonta heterodon*) have the potential to be found on or in the vicinity of the Site. The speculated presence of the Bald Eagle, Shortnose and Atlantic Sturgeon and the Dwarf Wedge Mussel are recognized by the USFWS based upon historically recorded occurrences of the species within the entire extent of Orange County, New York.

The response obtained from DEC Natural Heritage Office (dated March 1, 2005) indicated that the Natural Heritage Database did not possess any "records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats on, or within the immediate vicinity of the site." As a result, the DEC did not provide any information regarding the presence of any endangered, threatened or rare flora/fauna species and or significant ecological habitats. However, the DEC correspondence also states that "the lack of recorded occurrences does not preclude the site from being reviewed for un-known populations of rare or state listed species."

Since the information from the DEC was also over a year old, NCES also reviewed information contained within the DEC's on-line Environmental Resource Mapper program to obtain up-to-date information relative to state-listed species. According to the ERM, no endangered, threatened or species of special concern are known to exist on the Site. The correspondences with the USFWS and DEC, as well as a copy of the information obtained from their websites, are contained in Appendix A.

Subsequent to the information received from the USFWS and the DEC, NCES visited the subject property on separate occasions and conducted field reviews to identify the existing community structure of the Site and to determine if any of the species (or habitats conducive to their existence) referenced by the USFWS and DEC could potentially exist on the Site. In addition, NCES also reviewed the property for the potential presence of other endangered, threatened or rare flora/fauna species or supportive habitats that were not referenced within the USFWS and DEC correspondences. The various site reviews were conducted from on October 20, 2005, through June 8, 2008.

Separate site inspections were conducted during different times of the year and at various times of the day to increase survey times and the likelihood of determining if any of the species identified by the agencies, or any other rare species and/or supportive habitats not referenced by the USFWS and DEC, are present. The surveys were conducted during various times of the year to ensure that the Site was reviewed during adequate seasons

when certain species are most readily identifiable. The surveys were conducted during spring, summer and fall months to comply with general survey protocols.

To conduct the review, NCES walked the entire property searching for suitable habitats and presence of rare species. During the review, the vegetative species were recorded and photographs were taken to document the existing conditions and vegetative community types. Photographs taken during the review are contained in Appendix B.

2.0 SITE DESCRIPTION

The Site is located along Craigville Road, approximately 2,000 feet to the east of the intersection of Craigville Road and Knoell Road in Town of Goshen, Orange County, New York (Figure 1). The centralized Site coordinates are 41° 23' 20.5" N latitude and 74° 16' 23.7" W longitude. Elevations on the Site range from 668± feet above mean sea level (msl), found on top of a ridge that is located in the southwest corner of the Site, to 380± feet above msl, found along a stream corridor located in the northwest corner of the Site, resulting in an elevation difference of 288± feet.

The Site is bisected by Craigville Road and approximately 252.88± acres (71%) of the Site is located to the south of Craigville Road and 101.13± acres (29%) are found to the north of Craigville Road. The portion of the Site located to the north of Craigville Road is separated into two parcels by Ridge Road. Approximately 57.32± acres are found to the west of Ridge Road and 43.81± acres are located to the east of Ridge Road.

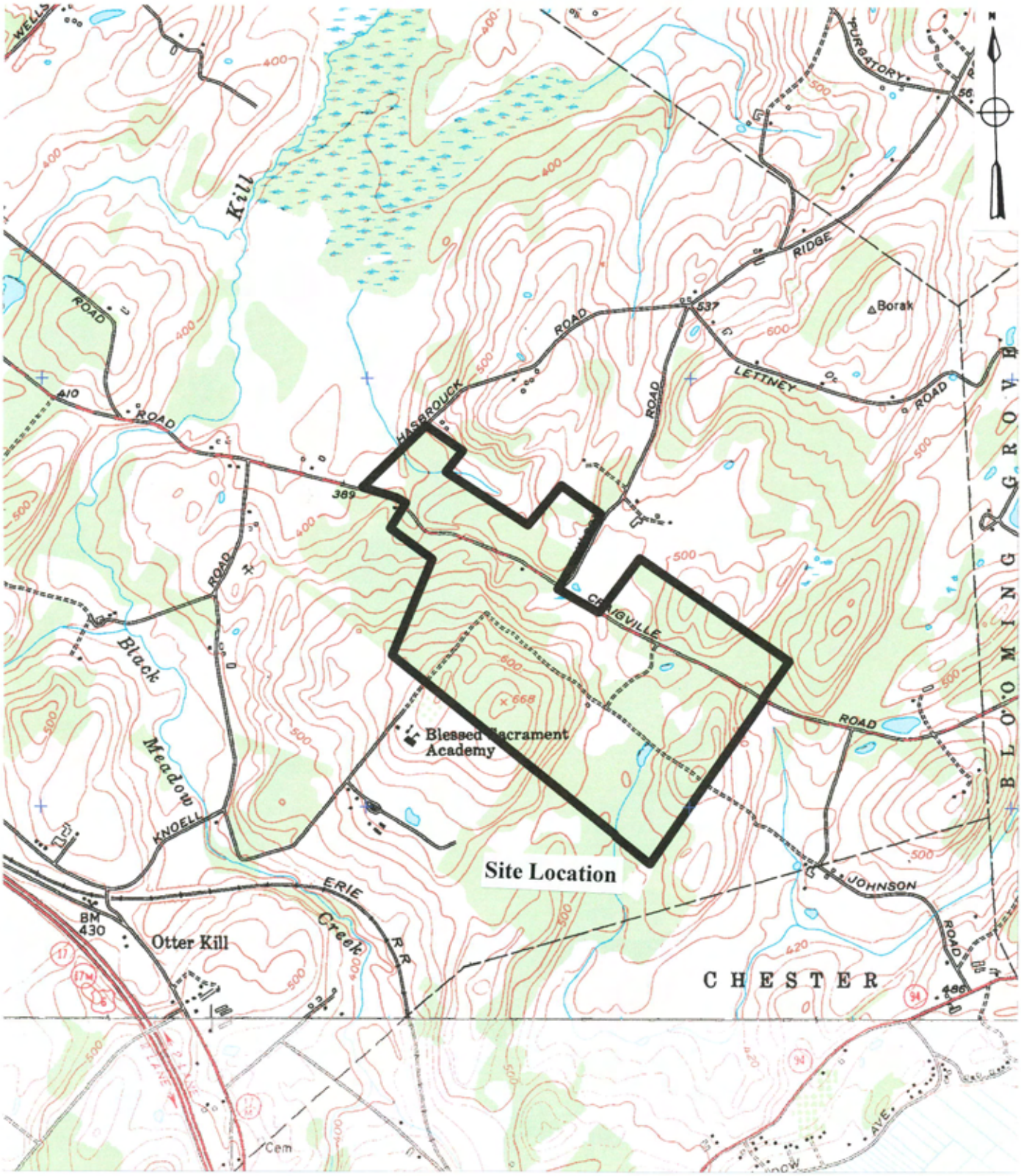
The Site can be generally characterized as abandoned, undeveloped, forested land. Remnant foundations and associated structures/debris from an original farmstead was found on the property. An old roadway, leading from Johnson Road to the farmstead was also observed. Other signs of previous farming activities such as remnant barbed wire fencing and stonewalls also were observed on the property. The only recent development or activity to occur on the subject property includes the installation of several water wells, which were used during the hydrological evaluation of the proposed development.

2.1 Existing Ecological Communities

The Site is comprised of the following ecological communities and habitat types as described in the *Ecological Communities of New York State* (Reschke, 1990): Rocky headwater stream, Intermittent stream, Farm pond, Oak-tulip tree forest, Beech-maple mesic forest, Successional southern hardwoods, Successional northern hardwoods and unpaved road. In addition, due to a lack of description of community types within *Ecological Communities of New York State* and what was observed and documented during the field reviews, NCES also utilized information presented within the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, 1979) and identified the following wetland community types on the Site: Palustrine forested wetland, Palustrine scrub-shrub wetland and Palustrine emergent wetland.

The forested uplands are contained on the knolls and ridges that found on the property. The Palustrine wetland communities are found in natural drainage corridors and depressions that are found interspersed among the forested uplands. Each of the aforementioned ecological community types provide different and diverse habitats on the property.

The location and configuration of the individual ecological community types identified during the Site investigation are shown on the drawing entitled "Ecological Community and Habitat Types - " that is contained in Appendix C. The location and configuration of the regulated wetlands and watercourses identified on the Site are shown on the wetland delineation map titled "Wetland Delineation Map – Youngs Grove", that is contained in Appendix D. The overall extent of the individual ecological community types identified on the Site is detailed in Table 1 below.



Base Map: USGS Goshen 7.5' Quadrangle, Orange County, NY.

Scale: 1" = 2,000'

North Country Ecological Services, Inc.
132 West Main Street
Johnstown, NY 12095

FIGURE 1- Site Location Map

3.2 Vegetation

During the endangered/threatened species investigation, NCES identified nine (9) different ecological communities on the Site. The ecological communities identified include, Rocky headwater stream, Intermittent Stream, Farm pond, Palustrine forested wetland, Palustrine scrub-shrub wetland, Palustrine emergent wetland, Oak-tulip tree forest, Beech-maple mesic forest and Successional southern hardwoods. All of the ecological community types, with the exception of the Rocky headwater stream and Intermittent stream possessed vegetative cover types within them. The streams identified on the site do not possess vegetation within their defined bed and banks.

The Farm pond exists as a shallow open body of water that possesses a Palustrine forested, scrub-shrub and emergent wetland fringe. In addition, the pond also contains some submergent aquatic plant species. Some of the dominant species of vegetation identified within and immediately adjacent to the Farm pond includes, but is not limited to, coontail (*Ceratophyllum demersum*), duck weed (*Lemna minor*) reed canary grass (*Phalaris arundinacea*), fowl manna grass (*Glyceria striata*), jewelweed (*Impatiens capensis*), tussock sedge (*Carex stricta*), sensitive fern (*Onoclea sensibilis*) silky dogwood (*Cornus amomum*), gray birch (*Betula populifolia*), Red Maple (*Acer rubrum*), green Ash (*Fraxinus pennsylvanica*) and American elm (*Ulmus americana*).

Some of the dominant species of vegetation observed within the Palustrine forested wetlands included, but are not limited to, red maple, green ash, American elm, pin oak (*Quercus palustris*), gray birch, gray dogwood (*Cornus racemosa*), silky dogwood tussock sedge, sensitive fern, royal fern (*Osmunda regalis*), skunk cabbage (*Symplocarpus foetidus*), fowl manna grass, lakebank sedge (*Carex lacustris*), brome-like sedge (*Carex bromoides*) and jewelweed.

Some of the dominant species of vegetation observed within the Palustrine scrub-shrub wetlands included, but are not limited to, gray dogwood, silky dogwood, arrowwood (*Viburnum dentatum*), highbush blueberry (*Vaccinium corymbosum*), spicebush (*Lindera*

Table 1

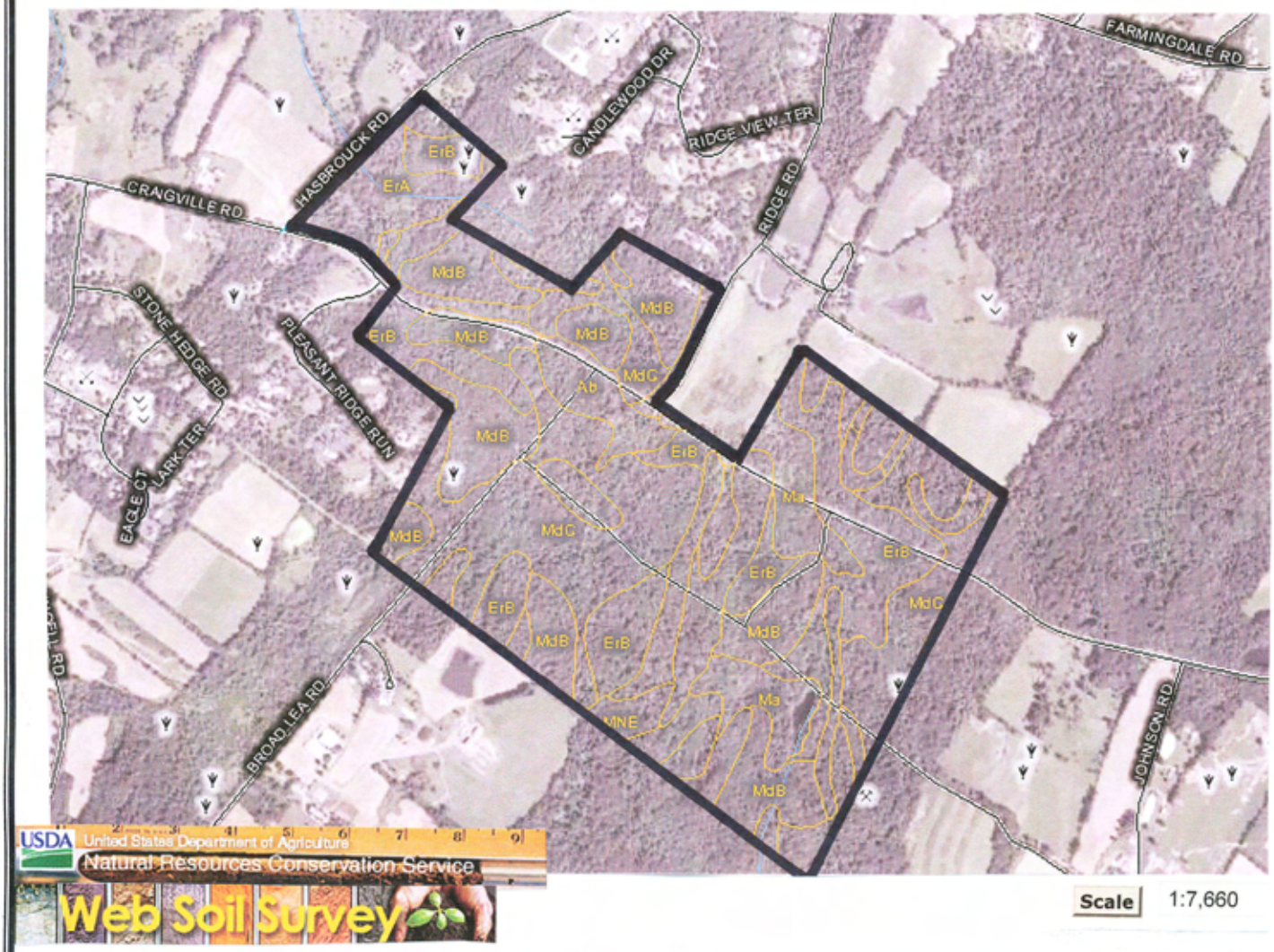
Existing Ecological Community Types

Ecological Community Type	Extent in Acres	Percentage of the Site
Rocky Headwater Stream	0.91± acres	0.20± %
Intermittent Stream	1.57± acres	0.44± %
Farm Pond	1.10± acres	0.31± %
Oak-Tulip Tree Forest	55.19± acres	15.4± %
Beech-Maple Mesic Forest	33.65± acres	9.50± %
Successional Southern Hardwoods	129.97± acres	38.7± %
Successional Northern Hardwoods	65.38± acres	18.4± %
Un-paved Gravel Road	5.20± acres	1.46± %
Palustrine Forested Wetland	49.35± acres	13.9± %
Palustrine Scrub-Shrub Wetland	8.38± acres	2.30± %
Palustrine Emergent Wetland	3.31± acres	0.90± %
Totals for Site	**354.01 ± acres**	**100.0 %**

3.0 EXISTING CONDITIONS

3.1 Soils

The soils on the Site were reviewed in the field and through the USDA Soil Survey for Orange County, New York (the "Soil Survey"). According to the Soil Survey, there are six (6) soil series on the Site. The soils are: Alden silt loam (Ab); Erie gravelly silt loam, with 3 to 8 percent slopes (ErB); Hollis soils, moderately steep (HoD); Madalin silt loam (Ma); Mardin gravelly silt loam, with 3 to 25 percent slopes (MdB, MdC & MdD) and, Mardin soils, steep (MNE) (Figure 2). The Madalin soil series is categorized as being comprised of a limestone or calcareous soil complex. Calcareous soil types are often associated with rare and/or sensitive species of flora and fauna. Each of the mapped soil types were confirmed by NCES during the field review.



Soils Legend

Ab	–	Alden silt loam, 0 to 3 percent slopes
BnB	–	Bath-Nassau channery silt loam, 3 to 8 percent slopes
ErA	–	Erie gravelly silt loam, 0 to 3 percent slopes
ErB	–	Erie gravelly silt loam, 3 to 8 percent slopes
ESB	–	Erie extremely stony soils, gently sloping
HoD	–	Hoosic gravelly sandy loam, 18 to 25 percent slopes
Ma	–	Madalin silt loam
MdB	–	Mardin gravelly silt loam, 3 to 8 percent slopes
MdC	–	Mardin gravelly silt loam, 8 to 15 percent slopes
MdC	–	Mardin gravelly silt loam, 15 to 25 percent slopes
MNE	–	Mardin soils, steep

Base Map: NRCS Web Soil Survey 2.0 – Orange County, N.Y. Scale: As Noted

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FIGURE 2- SOIL SURVEY MAP

benzoin), nannyberry (*Viburnum lentago*), speckled alder (*Alnus rugosa*), winterberry (*Ilex verticillata*), pussy willow (*Salix discolor*), witch hazel (*Hamamelis virginiana*), agrimony (*Agrimonia parviflora*), sensitive fern, tussock sedge, brome-like sedge, fowl manna grass, purple loosestrife (*Lythrum salicaria*) and jewelweed.

Some of the dominant species of vegetation observed within the emergent wetlands included, but are not limited to, reed canary grass, cattails (*Typha latifolia*), purple loosestrife, soft rush (*Juncus effusus*), willow herb (*Epilobium* spp.) foxtail sedge (*Carex vulpinoidea*), new england aster (*Aster novae-angliae*), meadowsweet (*Spirea latifolia*), smartweed (*Polygonum amphibium*), tearthumb (*Polygonum sagittatum*), lakebank sedge, brome-like sedge, tussock sedge, skunk cabbage, bur-reed (*Sparganium* spp.), sensitive fern, dark green bulrush (*Scirpus atrovirens*), wool grass (*Scirpus cyperinus*), and beggars ticks (*Bidens tripartita*).

Some of the dominant species of vegetation observed in the Oak-tulip tree forest included, but are not limited to, northern red oak (*Quercus rubra*), white oak (*Quercus alba*), tulip tree (*Liriodendron tulipifera*), sugar maple (*Acer Saccharum*), black cherry (*Prunus serotina*), white ash (*Fraxinus pennsylvanica*), black walnut (*Juglans nigra*), multiflora rose (*Rosa multiflora*), maple-leaved viburnum (*Viburnum acerifolium*) virginia creeper (*Parthenocissus quinquefolia*), poison *ivy (Rhus radicans), common blue violet (Viola sororia),* New York fern *(Thelypteris noveboracensis*), and garlic mustard (*Alliaria officinalis*).

Some of the dominant species of vegetation observed within the Beech-maple mesic forest included, but are not limited to, sugar maple, black cherry, american beech, white ash (*Fraxinus americana*), hop hornbeam (*Oystra virginiana*), hornbeam (*Carpinus caroliniana*), Christmas fern (*Polystichum agrostichoides*), may apple (*Podophyllum peltatum*), virginia creeper, and common blue violet.

Some of the dominant species of vegetation observed within the Successional southern hardwoods included, but are not limited to, northern red oak, sugar maple, black cherry, red maple, red cedar (*Juniperus virginiana*), buckthorn (*Rhamnus cathartica*), honeysuckle (*Lonicera tatarica*), multiflora rose, Japanese barberry (*Berberis thunbergii*), poison ivy, garlic mustard and virginia creeper.

4.0 PROJECT DESCRIPTION

The proposed project is the development of a cluster-type residential subdivision composed of single-family residences. At this time, there are two conceptual site designs. The Preferred Plan includes the construction of 127 individual single-family detached residential homes. The Alternative Plan entails the construction of 106 single-family residences. Both options also entail the construction of paved roadways, the establishment of a stormwater control systems, and the installation of potable water and sanitary sewer utilities. The conceptual layouts of the both subdivision options, as well as the location and configuration of the proposed impact areas and conservation areas are shown on the drawings entitled "Youngs Grove – 106 Lot Disturbance Limits" and "Youngs Grove – 127 Lot Disturbance Limits", dated on January 24, 2008 and are contained in Appendix E.

The proposed development utilizes available upland areas found within the boundaries of the Site. A "cluster-type" residential development has been designed in order to maximize the preservation of beneficial uplands and existing wetlands to the greatest extent practicable. An extensive 100 foot upland buffer has been established around each of the NYSDEC regulated wetlands. The Planning Board has asked the Project Sponsor to provide a 300 foot buffer around the environmental resources found at the northwest portion of the Site, near Hasbrouck Road. A cumulative total of 254.29± acres (72%) of the Site, comprised of 66.35± acres of Palustrine wetlands and 187.94± acres undeveloped forested uplands will remain as "Open Space" post development.

5.0 SURVEY METHODOLGY

To facilitate the endangered/threatened species review, a literature search was first conducted by NCES by contacting the DEC and the USFWS for known records of species and community type occurrence. NCES also reviewed the Soil Survey, USGS topographic mapping and other technical sources of information to establish an anticipated general sense of the types of communities and species that could occur at the property. Based upon the results of the literature review, an on-site field review for the agency referenced species and community types could be undertaken. The field review entailed an on-site field inspection of the entire subject property, not just the area of development, as well as the adjacent lands that immediately border it. A total of 65 man-hours were enlisted by NCES in reviewing the Site specifically for the endangered and threatened species. In addition, approximately 98 other man-hours were spent on-site reviewing the wetland delineation and conducting a tree survey. General species reviews were also conducted concurrently with the delineation review and tree survey.

During the field reviews, NCES recorded the community types and the species of flora and fauna that were identified. Species were identified visually, by vocalization, or by physical remains (tracks, scat, fur, feathers, bones, etc.) A list of the species identified/observed on the property is contained in Appendix F. The species list only defines those species that were identified by NCES during the four site visits. Any apparent lack of individual species accounts with regard to amphibians, reptiles, songbirds, and herbaceous vegetation may be attributed to the time of year when the site reviews were conducted. The resumes of the biologists that conducted the field reviews are contained in Appendix G.

6.0 SPECIES SPECIFIC REVIEWS

The following sub-sections provide specific habitat assessments of those species that were identified by the USFWS as having been historically recorded within Orange County, New York, and thus having the potential to be found on the Site. A lack of

endangered, threatened or rare species reference within these sub-sections does not preclude those species from having the potential to exist at the Site.

6.1 Bald Eagle Habitat Assessment

The Bald Eagle was recently removed from the Endangered and Threatened Species List by the USFWS. However, at the request of the agencies for all project sites, NCES conducted a general assessment for potential Bald Eagle habitat and visually searched for eagles utilizing the information presented in the U.S. Fish and Wildlife Service's "Northern States Bald Eagle Recovery Plan" (Grier et. al., 1983) (the "Recovery Plan") and Bald Eagle Management Guidelines (BEMG). The Recovery Plan and BEMG provide information and guidance regarding procedures and habitats to review and techniques to avoid impact to potential habitat. The purpose of the general habitat assessment was to document whether or not suitable habitat exists at the site that could be utilized by Bald Eagles.

According to the Recovery Plan "essential" or "suitable" habitats are ecosystems that are identified as being conducive to nesting, perching, and foraging by Bald Eagles. If at any point during the habitat assessment Bald Eagles were observed or evidence of utilization (nesting, perching, foraging) of the Site by Bald Eagles was documented, it would be determined that suitable habitat exists and additional studies may be required.

Suitable nesting trees are typically located in areas with 30-50 percent canopy cover and Bald Eagles prefer tall living trees, often the tallest available for nesting (Ontario MNR, 1987). Eagles create large, easily recognizable stick nests, approximately five (5) feet in diameter that are typically found near the top of "super canopy" trees that are taller than the adjacent trees surrounding it (Andrew & Mosher, 1982). Given that paired Bald Eagles are monogamous and mate for life, they often utilize the same nest year after year and some nests may be up to nine (9) feet in diameter and weigh as much as two (2) tons (baldeagleinfo.com, Internet). Bald Eagle nests are also found in areas associated with low human disturbance, suitable forest structure, and abundant prey (Fraser et. al., 1985).

Because fish are the most important prey for Bald Eagles, nests are typically located immediately adjacent to, or along the banks of, open bodies of water where prey species are readily available (Livingston et. al., 1990). Supporting research conducted by the Ontario MNR also revealed that Bald Eagles require large expanses of mixed or deciduous forest around the shores of larger rivers and lakes. Perch sites are also associated with open water. A perch site is defined as a tree or series of trees possessing an open canopy, offer a clear approach from all directions, and that are adjacent to open bodies of water (Ontario MNR, 1987). Perch sites are often found within 1.5 km of active nest sites (Livingston et. al., 1990). Mainly perch sites are used for foraging practices (Andrew and Mosher, 1982), however, Eagles will utilize other tall, dead, partially dead, or living trees near the nest for perching during rest (Ontario MNR, 1987).

Foraging habitat for the Bald Eagle is typically associated with lakes and rivers that support fish (Ontario MNR, 1987). The Recovery Plan also states that Bald Eagles are also known to be scavengers during winter months and as water bodies freeze over eagles may feast upon carrion and that carrion becomes a main portion of their diet.

Bald Eagle Habitat Assessment Results

During the assessment, no Bald Eagles or evidence of their historic utilization of the area was observed on, or adjacent to, the Site. NCES reviewed the property and adjacent lands for existing active or remnant abandoned Eagle and/or other birds-of-prey nests; potential perching sites; and, potential foraging habitat. No eagle nests or perching trees were identified. NCES also walked the extent of the edge habitat found adjacent to the forested areas in search of large trees that could potentially be categorized as suitable nesting sites for Bald Eagles. As a result, no suitable nesting trees were observed.

No open water bodies, suitable for use by Bald Eagles were identified within the boundaries of the subject property. While several intermittent streams and an area of ponded water are located within the boundaries of the Site, these water bodies are not typical of, nor are they considered as a preferred foraging area for Bald Eagles. These

water bodies are small; possess relatively shallow water (< 3 feet); and do not support a population of large fish. Therefore, it has been determined that no foraging habitat exists on or immediately adjacent to the Site.

Given the lack of nesting, perching and foraging habitats on or adjacent to the Site, it is highly unlikely that Bald Eagles would inhabit or utilize the Site.

6.2 Bog Turtle Phase 1 Habitat Assessment:

NCES completed the assessment for potential Bog Turtle habitat following the guidelines presented in Appendix B – *Guidelines for Bog Turtle Surveys* (last revised April 2006) contained within the U.S. Fish and Wildlife Services "Bog Turtle Northern Population Recovery Plan" (Klemens, 2001) (the "BTNPRP"). According to the BTNPRP, potential and suitable habitat for Bog Turtles includes Palustrine emergent or scrub-shrub wetlands that contain a relatively open canopy, and the following three criteria:

1) Suitable hydrology – characterized as "…Typically spring fed with shallow surface water or saturated soils present year round…", "interspersed with dry and wet pockets…", "…sub-surface flow", and "…shallow rivulets (less than 4 inches deep) or pseudo rivulets are often present."

2) Suitable soils – characterized as "… a bottom substrate of permanently saturated organic or mineral soils." "These are often soft, mucky-like soils; you will usually sink to your ankles (3-5 inches) or deeper in muck, although in degraded wetlands or summers of dry years this may be limited to areas near spring heads or drainage ditches." "In some portions of the species range, the soft substrate consists of scattered pockets of peat instead of muck."

3) Suitable vegetation – characterized as "dominant vegetation of low grasses and sedges (in emergent wetlands), often with a scrub shrub component." "Common emergent vegetation includes, but is not limited to tussock sedge (*Carex stricta*), soft rush (*Juncus effusus*), rice cut grass (*Leersia oryzoides*), sensitive fern (*Onoclea sensibilis*), tearthumb (*Polygonum* spp.), jewelweed (*Impatiens capensis*), arrowheads (*Sagittaria* spp.), skunk cabbage (*Symplocarpus foetidus*), panic grasses (*Panicum* spp.), other sedges (*Carex* spp.), spike rushes (*Eleocharis* spp.), grass-of-Parnassus (*Parnassia glauca*), shrubby cinquefoil (*Dasiphora fruticosa*), sweet flag (*Acorus calamus*), and in disturbed sites, reed canary grass (*Phalaris arundinacea*) and purple loosestrife (*Lythrum salicaria*)." Common

Bog Turtle Phase 1 Habitat Assessment Results

During the assessment, NCES traversed the entire Site and reviewed each of the wetlands. Based on the results of the review, NCES retained the assistance of Mr. Jason Tesauro, of J. Tesauro Ecological Consulting to assist in the investigation for potential/suitable Bog Turtle habitat and other amphibian and reptile species. The field survey concluded that due to the lack of key habitat requirements such as: open-canopied, emergent wetland with a prevalence of grasses, sedges and mosses; soft "mucky" soils; and shallow, spring fed, slow moving water, the majority of the on-site and bordering wetlands are considered unsuitable habitat for Bog Turtles.

However, three small discrete emergent wetlands were identified that do possess all three criteria to be categorized as "potential" Bog Turtle habitat. These areas have been identified as Areas A, B, and C (See figure 1 contained in J. Tesauro Report). Area A is located within an emergent wet meadow that is found within the interior of the wetland complex located adjacent to Hasbrouck Road. Area B is a drained farm pond that is found in the westernmost portion of the wetland complex found to the south of Craigville Road. Area C is located within an emergent/shrub wet meadow that is located near the center of the Site, also south of Craigville Road. Approximately 0.75± acres of potential Bog Turtle habitat was identified.

In light of the fact that potential Bog Turtle habitat was identified on the Site, NCES initiated a Phase II Presence/Absence study for Bog Turtles. The purpose of the Phase II study is to determine if Bog Turtles are present within the potential habitats identified. NCES coordinated with Mr. Tesauro and conducted the Phase 2 Survey following the USFWS updated "Guidelines for Bog Turtle Surveys", last revised April 2006, which

amended the previous guidelines contained in Appendix A of the "Bog Turtle, Northern Population, Recovery Plan", dated May 15, 2001 (Klemens, 2001) (the "Recovery Plan").

During the Phase II survey, NCES and Mr. Tesauro only included wetland areas B and C in the survey efforts. A 300' buffer was placed on the wetland complex by the Planning Board as a protective measure since it is the closest wetland to the Purgatory Swamp Significant Biodiversity Areas. Since Wetland A's proximal distance from the proposed development is more than 300 feet, based on the Recovery Plan guidelines, Wetland Area A did not require review during the Phase II evaluation. In accordance with state protocols and the Recovery Plan, the Phase 2 Surveys were conducted on four separate dates, two (2) were held in May of 2008 and two (2) were held in June of 2008. The individual survey dates were: April 15, 2008; May 7, 2008; May 30, 2008; and June 8, 2008.

During the Phase 2 Survey, three (3) biologists (two (2) representatives from NCES and Mr. Tesauro) spent a minimum of two (2) man-hours per survey systematically searching the wetland areas for individual Bog Turtles. As directed by the Recovery Plan and revised Guidelines for Bog Turtle Surveys, four (4) separate site surveys were conducted on four (4) different dates to effectively review the potential habitat and enhance the opportunity to locate individual turtles and/or nesting sites.

During each of the Phase 2 Surveys, each of the biologists traversed the wetlands and visually searched for basking turtles, transient turtles or turtle nests. The biologists also searched all rivulets and travel corridors found within the wetland for moving or foraging turtles. All areas of "mucky" soils were also probed with a 1" diameter probe to locate submerged individuals.

Characteristic Bog Turtle habitat within the wetlands were traversed thoroughly in different directions and along different transects, to ensure adequate survey coverage. Before and after each of the surveys, the time, ambient air temperature, weather conditions and species observed were recorded.

The four (4) individual site surveys were held on days when the ambient air temperature was at least 60 degrees at 9:00 am, skies were cloudless to partly cloudy, and no precipitation was forecast. The information collected during the individual surveys is outlined in the Table 2.

Table 2
Phase 2 Bog Turtle Survey Data

Date	**4/15/2008**	**5/7/2008**	**5/30/2008**	**6/8/2008**
Start Time	3:00pm	9:15am	11:00 am	12:50pm
Temperature	68° F	68° F	90º F	90º F
Cloud Cover	partly cloudy	none	partly cloudy	none
Wind Speed	< 5mph	< 5mph	5-10 mph	< 5mph
Precipitation	none	none	none	none
End Time	4:15pm	10:15am	12:15 pm	2:30pm
Temperature	69° F	70° F	93º F	91º F
Cloud Cover	partly cloudy	none	partly cloudy	none
Wind Speed	< 5mph	< 5mph	5-10 mph	< 5mph
Precipitation	none	none	none	none
Person Hours	3.75	3	3.75	4.5

During the Phase 2 Surveys, no Bog Turtles were found and only a few species of amphibians were observed. The species of amphibians observed included American Toad (*Bufo americanus*), Green Frog (*Rana clamitans*), Wood frog (Rana sylvatica), Bull Frog (*Rana catesbeiana*), Pickerel Frog (*Rana palustris*), Spring Peeper (*Pseudacris crucifer*), Spotted Salamander (*Ambystoma maculatum*) and Red-spotted Newt (*Notopthalmus viridescens*). Red Efts, the terrestrial stage of the Red-spotted Newt were also identified during the surveys.

In addition, a few species of reptiles were also observed during the phase II surveys. The species include, Common Snapping Turtle (*Chelydra serpentina*), Painted Turtle (*Chrysemys picta*) and Northern Water Snake (*Nerodia sipedon*). The turtle species and Northern Water snakes were not identified within the Bog Turtle habitats, but were observed on-site during the days when the surveys were completed. The individual species accounts, are listed in Table 3.

Table 3
Reptile and Amphibian Observation Data

Date	Reptiles	Amphibians
4/15/2008	Snapping Turtle, Painted Turtle, Northern Water Snake	Green Frog, Wood Frog, Spring Peeper, Bull Frog, Spotted Salamander Larvae
5/7/2008	None	Green Frog, Wood Frog, Spring Peeper, Spotted Salamander Larvae
5/30/2008	None	Green Frog American Toad, Wood Frog
6/8/2008	Northern Water Snake	Green Frog, American Toad, Wood Frog, Bull Frog, Pickerel Frog

Based on the overall characteristics of the wetlands reviewed, their state of natural succession and observances of fluctuation of water levels within them, it was concluded that the wetlands, while meeting criteria set forth in the Recovery Plan, are not likely to harbor a viable population of Bog Turtles. As the survey progressed, the hydrological input diminished the suitable Bog Turtle habitat to approximately ½ of what was initially assessed as potential habitat during the Phase 1 Habitat Survey. A separate Phase 1 Bog Turtle Habitat report and supplemental herpetological letter report of findings have been prepared by Mr. Tesauro and are contained within Appendix H.

6.3 Indiana Bat Habitat Assessment:

NCES reviewed the entire property in search of areas that meet the criteria for potential summer maternal roosting sites and suitable foraging habitat for the Indiana Bat. NCES also searched for any caves or mines that could be used as a potential winter hibernacula. NCES utilized the information obtained from the USFWS, including the "*Indiana Bat*

Project Review Fact Sheet", which defines criteria of potential Indiana bat habitats, and outlines procedures to conduct the habitat analysis. The field evaluation was conducted following the recommended procedures outlined on the fact sheet.

According to the New York State Department of Environmental Conservation (DEC) and the USFWS, suitable, potential Indiana Bat summer roosting habitats are characterized as "…trees (dead, dying, or alive) or snags, greater than or equal to 5 inches in diameter at breast height (dbh), with exfoliating or defoliating bark, or containing cracks, crevices, or holes that could potentially be used by Indiana Bats as a roost". Maternal colonies "generally use trees greater than or equal to 9 inches dbh." In addition, "structure appears to be more important than a particular tree species or habitat type." It is also documented that due to the fact that roosting sites are "warmed by direct exposure to solar radiation, trees exposed to extended periods of direct sunlight are preferred over those in shaded areas."

Potential foraging habitat for the Indiana bat is defined as "…streams, associated floodplain forests, and impounded water bodies (ponds, wetlands, reservoirs)…" along with "canopies of upland forests, clearings with early successional vegetation, borders of croplands, along wooded fence rows, and over farm ponds in pastures". The USFWS also state that "while Indiana bats appear to forage in a wide variety of habitats, they seem to tend to stay close to tree cover" and that "Indiana bats may fly up to 2-5 miles from upland roosts" to forage and/or locate new roost sites.

Indiana Bat Habitat Assessment Summary

Based on the agency criteria for potential roosting sites, only trees greater than 5" dbh are of an age class that could provide characteristics that are preferred by Indiana Bats as summer roost sites. As a result, NCES focused the review for potential roosting trees within the forested upland and forested wetland habitats. These habitats are located in portions of the property that have not been farmed, and therefore the majority (80-85±%) of the trees found in these areas are greater than 5" dbh. Other mature trees are found

along old stonewall, apparent old farm meadows and along the old farm road. These trees were also reviewed to determine if any possessed characteristics conducive to summer roosting/maternity sites for the Indiana Bat.

The dominant tree species identified in the forested uplands included: northern red oak, white oak, black cherry, sugar maple, red maple, white ash, and quaking aspen. The dominant trees observed within the forested wetlands included American elm, green ash, cottonwood, pin oak, swamp white oak and red maple. Of the trees that are larger than 5" dbh, most did not possess exfoliating/defoliating bark, cracks, crevices, or holes.

During the review, trees that are consistent with those described within the DEC criteria as potential roost trees were noted. These trees include shagbark hickory, dead red/white oak and wind/insect damaged sugar maples. In addition, some American elm and wind/insect damaged cottonwoods that possessed partially exfoliating bark, small cracks, and/or holes were found within the forested wetlands. Trees that met the criteria for potential roost sites were identified on both sides of Craigville Road.

Of the potential roosting trees, most are located along the north-facing slope of the upland ridge that extends along the southwestern property boundary. These trees are located in areas that possess a dense canopy and therefore do not receive direct, prolonged periods of sunlight during spring and summer months. In light of the fact that these trees do not receive significant amounts of direct sunlight (solar radiation) from the sun, they are not consistent with conditions that are documented by the USFWS and DEC as preferred material roosting habitat. However, because they meet the general roost criteria, a few select trees may be utilized as a daily roosting site by individual bats.

Few potential roost trees are found on the portion of the Site positioned to the northeast of Craigville Road. However, these trees are positioned along south facing upland ridges that receive direct, prolonged solar radiation from the sun. As a result, these trees do meet the criteria to be categorized as potential summer maternal roost sites. Based upon

the proposed development scenarios, the majority of these trees will not be impacted as a result of the construction of the residential subdivision.

Some of the trees found immediately adjacent to, and within, the forested wetlands also possessed exfoliating/defoliating bark, cracks, crevices, or holes. These include dead elms and physically damaged cottonwood or green ash trees. These trees are located in areas that do receive direct solar radiation and are found in semi-open canopies and adjacent to scrub-shrub and emergent wetlands. Due to their physical condition and location they meet the criteria to be classified as potential roost sites. Based upon the review of the site plans, none of these trees will be removed or disturbed as a result of the project. No portion of the forested wetlands that contain potential roost trees are to be impacted and no development within 100 feet of the wetlands, with the exception of one road crossing, is to occur. Therefore, the trees that exhibit suitable characteristics for Indiana bats will be preserved post-development.

Potential foraging habitat was found throughout the property and it includes: the canopy of the forested uplands and wetlands; over the early successional fields/emergent wetlands; and, within the edge habitat that borders the Site. Potential foraging areas consist of a variety of different habitats that are relatively common throughout the geographic region. Therefore, it should be noted that sufficient habitat exists in the vicinity of the Site that would sustain healthy populations of a variety of species of bats.

6.4 Shortnose and Atlantic Sturgeon Habitat Assessment

The Shortnose and Atlantic Sturgeon are listed as endangered species in New York State and the only recorded populations of these fish are known to occur within the tidal portions of the Hudson River (NYNHP, 2006). This portion of the Hudson River extends from New York Harbor to the Federal Dam at Troy (NYNHP, 2006). Sturgeon are found in rivers, tidal estuaries and marine environments and spawn in freshwater although they may also use salt water during periods of their lifespan (Kieffer and Kynard, 1993). Shortnosed Sturgeon generally spawn in upstream reaches of rivers (Jirka, 2006).

Sturgeon also use portions of main channels that are deepwater habitats with significant current, and possess gravel, cobble or boulder substrates (Buckley and Kynard, 1985).

Sturgeon Habitat Assessment Results

During the review, NCES reviewed the Site for potential Sturgeon Habitat. No perennial streams or habitat conducive to Sturgeon was found on the property. All streams that were observed were shallow, less than 2 feet wide, and intermittent in nature. None of them appeared to support any fish species.

Given the complete lack of suitable habitat conducive to the existence of Sturgeon, it has been determined by NCES that it is highly unlikely that sturgeon exist within and/or utilize any aquatic habitats identified on the Site.

6.5 Dwarf Wedge Mussel Habitat Assessment

The Dwarf Wedge Mussel is listed as an endangered species by the USFWS and the DEC. The Dwarf Wedge Mussel is a species of mollusk that inhabits freshwater areas and it can be found in small creeks and/or large deep rivers (Gabriel 1995). These bivalves are typically located in stable streams/habitats that possess substrates ranging from mixed sand, pebbles, gravel, and or clay (Nedeau, 2006). In the southern portion of its range, these mussels may be imbedded in substrates under logs or root masses (Moser, 1993) and are known to burrow into firmer sand, gravel, or cobble substrates in the northern extremes of their range (Fichtel and Smith 1995). Typical habitat also possesses permanent running water where stream currents/velocities are usually slow to moderate (USFWS, 2004).

The only known population of these mussels, within New York State, exists within a 10 mile stretch of the Neversink River (DEC Fact Sheet, 2007). This population of Dwarf Wedge Mussels was identified in the 1990 as a result of ecological study being

undertaken for the Natural Heritage Program (USFWS, 1993). Historically, the Dwarf Wedge Mussel was known to inhabit much of the Delaware River Basin (USFWS, 2004).

Dwarf Wedge Mussel Habitat Assessment Results

During the review NCES searched the Site for the presence of suitable habitat for Dwarf Wedge Mussels. As a result, it was determined that no potential habitat conducive to the existence of Dwarf Wedge Mussels exists at the Site. The streams identified on the Site are intermittent and/or ephemeral in nature and therefore periodically dry up during the summer months, pending the amounts of direct precipitation received. In addition, the Rocky heady water stream is subject to flash flooding and extremely high velocity currents during spring thaw and immediately after heavy precipitation events. As a result, it has been determined by NCES that it is highly un-likely that Dwarf Wedge Mussels exist within and/or utilize any of the aquatic habitats identified.

6.6 Northern Cricket Frog Habitat Assessment

The Northern Cricket Frog is listed by the DEC as a New York State Endangered species. The Northern Cricket Frog is not recognized by the USFWS on the Endangered/Threatened Species list, as it is a very common species throughout the southern portion of its range. Southeastern New York, including the Hudson Highlands, and the Shawangunk region of Orange, Ulster and Dutchess Counties, is positioned at the northernmost extent of the current range of the Northern Cricket Frog (NYSNHP, 2007). Northern Cricket Frogs are typically observed between late March and early April and again through mid-October while migrating too and from its summer and winter range.

The Northern Cricket Frog inhabits open emergent wetlands found along the edges of permanent water sources such as ponds, bogs and lakes (Harding, 2000). They can also be found amongst emergent marsh-like vegetation located on sandy, gravelly or muddy bars and banks of small slow moving intermittent streams (Conant and Collins, 1998). In winter months, Northern Cricket Frogs burrow in mucky soils below the frost line (DEC,

2007). In New York, Northern Cricket Frogs are believed to over winter in terrestrial habitats found adjacent to summer aquatic sites (NYSNHP, 2007).

Recent studies have shown that known Northern Cricket Frog inhabitation sites have been altered by Beaver (*Castor canadensis*) activities (NYNHP, 2007). Recent studies have also shown declines in amounts of suitable habitat for Northern Cricket Frogs (DEC, 2007). The decline of suitable habitat can be attributed to the clearing and drainage of wetlands associated with development and farming practices, the spraying of DDT and other pesticides, contamination of wetland habitat from road salts and the introduction of predatory fish species that feed on Northern Cricket Frog eggs (DEC, 2007).

Northern Cricket Frog Habitat Assessment Results

During the habitat assessment, NCES identified a potential habitat that is suitable for the existence of Northern Cricket Frogs. This habitat includes the farm pond and adjacent Palustrine wetland habitats that exist immediately adjacent to it. In light of the fact that a habitat conducive to Northern Cricket Frogs was identified on the site, NCES conducted additional separate early morning and late evening acoustic monitoring surveys to determine if Northern Cricket Frogs are found on the Site.

To complete the acoustic survey, NCES visited the site on four (4) separate occasions and positioned biologists around the pond complex to listen for Northern Cricket Frog breeding call vocalizations. NCES also set up listening stations adjacent to the emergent wetland complex found at the intersection of Craigville and Ridge roads to determine if Northern Cricket Frog inhabited the suitable habitat (flooded wet meadow) found off-site to the. The acoustic surveys were conducted on May 15, 2008, May 20, 2008; May 21, 2008; and June 8, 2008. The survey dates and times, as well as amphibians identified are detailed in Table 4.

Table 4
Northern Cricket Frog Survey Data

Date	5/15/2008	5/20/2008	5/21/2008	6/8/2008
Start Time	7:50pm	7:45pm	5:15 am	12:50pm
Temperature	68° F	74° F	60º F	90º F
Cloud Cover	partly cloudy	none	partly cloudy	none
Wind Speed	< 5mph	< 5mph	5-10 mph	< 5mph
Precipitation	none	none	none	none
End Time	8:45pm	8:30pm	8:30 am	2:30pm
Amphibians Present	Green Frog, Bull Frog, American Toad, Gray Tree Frog	Green Frog, Bull Frog, American Toad, Gray Tree Frog	Green Frog, Bull Frog, Gray Tree Frog	Green Frog, Bull Frog, Pickerel Frog, Gray Tree Frog

During the acoustic monitoring sessions and other visits to the Site, NCES did not observe or audibly hear Northern Cricket Frogs on, or adjacent to the Site.

The pond is suitable breeding habitat for common amphibian species such as Green frog (*Rana clamitans*), Gray Tree Frog (*Hyla versicolor*), Spring Peeper (*Pseudacris crucifer*), Wood Frog (*Rana sylvatica*), American Toad (*Bufo americanus*) Red-spotted Newt (*Notopthalmus viridescens*) and Spotted Salamander (*Ambystoma maculatum*). The pond also possesses habitat that supports common species of reptiles including Painted Turtle (*Chrysemys picta*), Snapping Turtle (*Chelydra serpentina*) and Northern Water Snake (*Nerodia sipedon sipedon*). All of the aforementioned species were observed within or immediately adjacent to the pond.

7.0 Other Endangered, Threatened, Rare or Ecological Sensitive Species/Habitats

During the species and habitat assessment, NCES did not observe any federally or state listed endangered, threatened or special of concern species.

In accordance with the Scoping Document for the project, NCES reviewed the *Southern Wallkill Biodiversity Plan* (SWBP) for information regarding the presence of endangered, threatened and/or rare species. Based upon our review of the SWBP, it was determined that the project site is not located within a Significant Biodiversity Area. However, The site is located less than 2 miles east of the Purgatory Swamp Significant Biodiversity Area.

As a result, NCES cross-referenced the observed species list with the "Development-Sensitive Species Focal List" contained within the SWBP and determined that twelve (12) species identified by the SWBP as "Development Sensitive" coincide with species that were observed by NCES. These species include: Spotted Salamander, Wood Frog, Eastern Box Turtle (*Terrapene carolina*), Gray Tree Frog, Barred Owl (*Strix varia*), Black-throated Green Warbler (*Dendroica virens*), Baltimore Oriole (*Icterus galbula*), Chestnut-sided Warbler (*Dendroica pensylvanica*), Eastern Towhee (*Pipilo erythrophthalmus*), Eastern Kingbird (*Tyrannus tyrannus*), Wood Thrush (*Hylocichla mustelina*) and ovenbird (*Seiurus aurocapillus*).

NCES also reviewed and the *New York State Comprehensive Wildlife Strategy Plan* (NYSCWSP) for additional information relative to endangered, threatened and rare species. Based upon the review of the NYSCWSP, it has been determined that only two species that was observed on the Site by NCES are recognized by the NYSDEC as a species of greatest conservation need. The two species is the Ruffed Grouse (*Bonasa umbellus*) and the Eastern Box Turtle.

While 12 species observed on the site that correlate to the SWBP's "development sensitive" species and 2 species correlate to the NYSCWSP's "species of greatest conservation need", populations of these species are in stable conditions and the proposed development is highly un-likely to have any significant effect. Only one of the aforementioned species, the Eastern Box Turtle, is recognized by the DEC or USFWS as an endangered, threatened or special concern species. The Eastern Box Turtle is listed as a species of special concern. The other species are listed as being demonstrably secure in New York State by the New York Natural Heritage Program. The Ruffed Grouse is also categorized by the DEC as an upland game bird that can be hunted during small game season.

To expand on the potential bird species that may inhabit the Site, NCES consulted the DEC's *New York State Breeding Bird Atlas* for known information relative to populations of breeding birds that can be found on or within the immediate geographic region. The Breeding Bird Atlas segregates each individual County into designated blocks and provides information relative to the bird species found within the block. The bird species that have been identified as existing within the block are then separated into three categories to record breeding behavior. These categories are Possible (PO), Probable (PR) and Confirmed (CO).

According to the Breeding Bird Atlas, the project site is located within Block 5558D, in the Town of Goshen, Orange County, New York. According to the Breeding Bird Atlas, there are a total of 68 bird species that exhibit breeding characteristics in the Block. Of these species, 19 are categorized as Possible, 18 are categorized as Probable and 31 species are Confirmed breeding species. When cross-referenced with the NYS Natural Heritage *2007 Rare Animal Status List* (both active and watch lists), only 1 species, the Great Blue Heron (*Ardea herodias*), is found on both lists.

According to the Breeding Bird Atlas, Great Blue Herons were observed within breeding habitat in the Block, however, nesting and breeding was not documented. Herons typically nest in tall trees and are communal nesters where several nests will found near each other. Potential breeding and foraging habitat is present on the site; however, it is generally limited to the permanent open water pond and the adjacent wetlands. These areas will not be impacted by the development.

NCES also reviewed information contained within the DEC *Amphibian and Reptile Atlas* (Herp. Atlas) regarding information on known occurrences of amphibian and reptile species within Orange County, New York. When cross-referenced with the NYS Natural Heritage *2007 Rare Animal Status List* (both active and watch lists), of the known species of amphibians and reptiles occurring within Orange County, New York only nine (9) species are found on both lists. These species include, Northern Cricket Frog, Southern Leopard Frog (*Rana sphenocephala*), Marbled Salamander, Timber Rattlesnake (*Crotalus horridus*), Northern Copperhead (*Agkistrodon contortrix*), Spotted Turtle (*Clemmys guttata*), Wood Turtle (*Glyptemys insculpta*), Bog Turtle and the Eastern Box Turtle.

Potential Habitat exists at the Site for Wood Turtles, Spotted Turtles, and Southern Leopard Frogs. These habitats consist of the Palustrine forested, scrub shrub and emergent wetlands found adjacent to them. The suitable habitats are limited to those areas that possess water year round. These habitats are situated immediately adjacent to the intermittent and perennial stream channels found on the property. Based upon the proposed development plan, these habitats are not to be impacted as a result of the residential subdivision project. Large congruent sections of these habitats will remain post development that can be utilized by these species, should they exist on the property.

In addition, the farm pond also provides habitat for Northern Cricket Frogs and Spotted Turtles. The pond appears to have been created as an impoundment of water that was created for agricultural purposes associated with the original farmstead. The pond possesses a dense submergent vegetative community, a herbaceous edge that transitions

into forested wetland habitat, and as a result, it has been determined that the impoundment may be conducive to the existence of Northern Cricket Frog, Southern Leopard Frog and Spotted Turtle. Portions of the edge habitat and adjacent forested wetlands possess areas characteristic of seasonally impounded vernal pools. These areas may be conducive to the existence of Marbled Salamanders. As previously stated in this report, a general review of the pond was undertaken and none of these related species were identified within or immediately adjacent to it.

The property does not possess preferred habitat for Timber Rattlesnakes and/or Northern Copperheads. Timber Rattlesnakes are generally located in deciduous upland forests, in rugged terrain, and most are associated with rock outcrops, steep ledges and talus slopes**.** Typically, Northern Copperheads use rock outcrops or rocky areas with talus slopes for cover, feeding and for over-wintering. Over-wintering and basking areas are usually located where the snakes can receive maximum sunlight exposure. No talus slopes or rock outcrops were identified that could be utilized by Timber Rattlesnakes or Copperheads as basking sites. No caves, or large fissures/crevasses were identified during the site review that could be utilized as a potential hibernaculum.

Eastern Box Turtles occupy a range of habitats but are mainly terrestrial in nature. They are typically associated with semi-moist deciduous forested uplands that contain dense understories. They can also be found in wooded swamps and grassy fields. The property possesses habitats that are conducive to the existence of Box Turtles and during the Site assessments, one Eastern Box Turtle, an adult male, was identified.

8.0 CONCLUSION

During the field reviews, no individual Bald Eagles, Bog Turtles, Indiana Bats, Shortnose/Atlantic Sturgeon, Dwarf Wedge Mussels, or Northern Cricket Frogs were identified on the Site. Additionally, no significant or critical habitats conducive to the existence of Bald Eagles, Shortnose/Atlantic Sturgeon, or Dwarf Wedge Mussels were identified within the boundaries of the Site either. With the exception of one individual

Eastern Box Turtle, no other endangered, threatened or special concern species of flora/fauna and no species that are listed as rare or ecologically sensitive/significant were observed.

During the field reviews, potential summer roosting and foraging habitat was identified for the Indiana Bat. Efforts have undertaken by the Applicant and the Engineers to promote the preservation of the potential roosting and foraging habitat to the greatest extent practicable. A total of 297.16± acres of available forested upland and aquatic habitats are to remain post-development for use by Indiana and other species of bats. However, if it is determined that potential roost trees will have to be removed by the development, it is suggested that the trees should be removed during winter months (October through March) as this is when Indiana Bats are found in winter hibernacula's and are not utilizing individual roost trees. By selectively removing roost trees during the winter months, direct impacts to individual bats will be avoided.

Three potential areas of suitable Bog Turtle habitat were identified. However, as a result of the Phase II Presence/Absence Survey conducted, no individual Bog Turtles were found within the suitable habitats. In addition, based upon the existing natural successional of the wetlands and observed fluctuations in the hydrological regime of the identified habitats, it has been determined that, while the wetland areas meet the criteria of potential habitat as outlined in the Recovery Plan, they are highly un-likely to sustain a viable population of Bog Turtles. Additionally, based upon the proposed development plans, none of the three wetlands identified as potential Bog Turtle habitat are to be impacted and a significant upland buffer (>200 feet) has been included around them.

A habitat (the farm pond) was identified on the site that is conducive to the existence Northern Cricket Frogs and possibly Southern Leopard Frogs. However, characteristic shrub and other dense emergent vegetation were lacking along the pond edge that are typically associated with Northern Cricket Frog Habitat. Additionally, separate audible surveys at the pond did not result in the identification of Northern Cricket or Southern Leopard Frogs. It was determined that the pond is utilized as breeding habitat by

common amphibian species such as Green Frog, Gray Tree Frog, Spring Peeper, Wood frog, American toad, Red-spotted Newt and Spotted Salamander. Based upon the proposed development plan, no direct impacts to the pond, or adjacent forested wetlands, are proposed and a significant upland buffer has been imposed around the entire wetland complex, in most cases above the required 100' established by the NYSDEC..

While a species of special concern, the Eastern Box Turtle, was identified on the property, the identification of one individual of the species should not be viewed as a significant event. The proposed development plan limits the proposed development areas to the more open and mature forested areas, while preserving the denser, Successional southern hardwoods and Palustrine wetland habitats, which are preferred by Eastern Box Turtles. Therefore, a significant amount of available habitat for Eastern Box Turtles will remain on the Site, post-development.

Based upon the proposed development plan, it has been determined that a cumulative total of 254.29± acres (72%) of the Site will remain undisturbed, post-development. The proposed development has been designed as a cluster-type subdivision and as a result, an extensive amount of contiguous forested and aquatic habitats will remain for use/inhabitation by the resident and transient species of wildlife that utilize the Site. Given the extensive amount of preserved lands, coupled with the large upland buffers provided between the proposed development and adjacent aquatic resources, it has been determined by NCES that the development of the Site is highly un-likely to result in any significant or adverse effect upon the species of flora and fauna that are found on the property.

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Appendix A

Correspondences with the USFWS and DEC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, NY 13045

March 14, 2005

Ms. Lesley A. Rodriguez
Administrative Assistant
Pienzak & Pfau, PLLC
262 Greenwich Avenue, Suite A
Goshen, NY 10924

Re: SBL: 9-1-8.452

Dear Ms. Rodriguez:

This responds to your February 7, 2005, letter requesting information on the presence of endangered or threatened species in the vicinity of the proposed Rieger Homes on Craigville Road in the Town of Goshen, Orange County, New York.

There is potential for the Federally- and State-listed endangered Indiana bat (*Myotis sodalis*) to occur within the proposed project area. The Indiana bat is known to winter in six counties in New York State. While the U.S. Fish and Wildlife Service (Service) has learned a great deal about the wintering population with standardized biennial counts organized by the New York State Department of Environmental Conservation (NYSDEC) Endangered Species Unit, we are continuing to study Indiana bat migratory patterns and summer habitat use within the State. Previous research has documented Indiana bat movements of up to 330 miles between hibernacula and summer habitats (Kurta and Murray 2002). However, that study, as well as the majority of research on Indiana bats, took place in the Midwest.

In the Northeast, multiple State and Federal agencies are investigating Indiana bat movements; the most recent studies of bats from hibernacula in Essex and Ulster Counties, New York, provide additional information. In the spring of 2002 through 2004, the NYSDEC successfully tracked female Indiana bats from their hibernacula in Essex and Ulster Counties to their spring roosts, distances up to approximately 30 miles. From the Ulster County study, multiple roosts were located on both sides of the Hudson River in the Towns of Crawford, Wallkill, Hamptonburgh, and New Windsor, Orange County, and near the City of Poughkeepsie and in the Towns of Beekman, East Fishkill, and LaGrange, Dutchess County. The closest observed roost trees were within approximately 5 miles from the proposed project and the Ulster County hibernacula are approximately 35 miles from the proposed project. Based on the proximity of the proposed project site to both the hibernacula and known spring roost locations, the Indiana bat may be found at the proposed project site if suitable roosting or foraging habitat is present.

The Indiana bat is typically [illegible]

(dead, dying, or alive) or snags, greater than or equal to 5 inches diameter breast height (d.b.h.) with exfoliating or defoliating bark, or containing cracks, crevices, or holes that could potentially be used by Indiana bats as a roost. However, maternity colonies generally use trees greater than or equal to 9 inches d.b.h. Overall, structure appears to be more important than a particular tree species or habitat type. The growing body of information, including ongoing studies in New York, indicates usage of numerous species of trees that contain suitable structure. Only site-specific information can lead to habitat suitability determinations. Additional information on potentially suitable summer habitat can be found on our website at http://nyfo.fws.gov/es/ibatdraft99.pdf.

Streams, associated floodplain forests, and impounded water bodies (ponds, wetlands, reservoirs, etc.) provide preferred foraging habitat for pregnant and lactating Indiana bats, some of which may fly up to 1.5 miles from upland roosts. Indiana bats also forage within the canopy of upland forests, over clearings with early successional vegetation (e.g. old fields), along the borders of croplands, along wooded fencerows, and over farm ponds in pastures (U.S. Fish and Wildlife Service 1999).

The project site should be evaluated and described by a qualified person as to the presence, amount, and distribution of suitable summer roosting/maternity and foraging habitat, and the presence of any mine(s)/cave(s) that could serve as a hibernacula that would be disturbed by the proposed project. Please contact us to discuss this evaluation in greater detail. Staff from our office may be available to assist with an initial site visit to determine whether additional detailed habitat analyses or surveys for Indiana bats will continue to be recommended.

In addition to the Indiana bat, the proposed project is less than 10 miles from known bog turtle (*Clemmys muhlenbergii*) sites. The bog turtle is Federally-listed as threatened and State-listed as endangered. The Service recommends that an evaluation be completed of any existing habitat that would be disturbed, directly or indirectly, by the project, and its potential to support the bog turtle (Phase I survey). Bog turtles prefer open canopy wetlands with soft, saturated soils such as fens or sedge meadows fed by seeps and springs of cold groundwater that has been in contact with calcium-rich bedrock or soils. In New York, bog turtles are very often found in or near rivulets having deep mucky substrate, but where above-surface water depths are very shallow – usually only a few inches deep at most. Plant species commonly associated with bog turtle habitats include tamarack (*Larix laricina*), cinquefoil (*Potentilla* spp.), alders (*Alnus* sp.), willows (*Salix* sp.), sedges (*Carex* sp.), sphagnum moss (*Sphagnum* sp.), jewelweed (*Impatiens capensis*), rice cut-grass (*Leersia oryzoides*), tearthumb (*Polygonum sagittatum*), arrow arum (*Peltandra virginica*), red maple (*Acer rubrum*), skunk cabbage (*Symplocarpus foetidus*), rushes (*Juncus* sp.), and bulrushes (*Scirpus* sp.). If the evaluation indicates that the site has the potential to support the bog turtle, it should be surveyed by a qualified person to determine the presence or absence of this species (Phase II surveys). Service guidelines for bog turtle surveys[illegible] are available for your information. Please contact this office before conducting any Phase II surveys.

The project's environmental documents should identify project activities that might result in adverse impacts to the Indiana bat, bog turtle, or their habitat. Information to assist with the evaluation of potential impacts on bog turtles can be found in Appendix A - Bog Turtle Conservation Zones of the Bog Turtle (*Clemmys muhlenbergii*) Northern Population Recovery Plan (U.S. Fish and Wildlife Service 2001) which can be found at [illegible] Information on any potential impacts [illegible] habitat and [illegible] surveys for the Indiana bat [illegible]

turtle, or their habitat, and to determine the need for further coordination or consultation pursuant to the Endangered Species Act (ESA) (87 Stat. 884, as amended, 16 U.S.C. 1531 *et seq.*). Except for the potential for Indiana bat, bog turtle, and occasional transient individuals, no other Federally-listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project area. In addition, no habitat in the project area is currently designated or proposed "critical habitat" in accordance with provisions of the ESA. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of Federally-listed and proposed endangered and threatened species in New York* is available for your information. If the proposed project is not completed within one year from the date of this letter, we recommend that you contact us to ensure that the listed species presence/absence information for the proposed project is current.

The above comments pertaining to endangered species under our jurisdiction are provided as technical assistance pursuant to the ESA. This response does not preclude additional Service comments under other legislation.

As stated above, the Indiana bat and bog turtle are listed as endangered by the State of New York. The information requested above should be coordinated with both this office and with the NYSDEC. The NYSDEC contacts for the Endangered Species Program is Mr. Peter Nye, Endangered Species Unit, 625 Broadway, Albany, NY 12233 (telephone: [518] 402-8859).

For additional information on fish and wildlife resources or State-listed species, we suggest you contact the appropriate State regional office(s),* and:

New York State Department of Environmental Conservation
New York Natural Heritage Program Information Services
625 Broadway
Albany, NY 12233-4757
(518) 402-8935

Since wetlands may be present, you are advised that National Wetlands Inventory (NWI) maps* may or may not be available for the project area. However, while the NWI maps are reasonably accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes.

Work in certain waters of the United States, including wetlands, may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act, the Service may concur, with or without recommending additional permit conditions, or recommend denial of the permit depending upon potential adverse impacts on fish and wildlife resources associated with project construction or implementation. The need for a Corps permit may be determined by contacting the appropriate Corps office(s).* In addition, should any part of the proposed project be authorized, funded, or carried out, in whole or in part, by a Federal agency, such as the Corps, further consultation between the Service and that Federal agency pursuant to the ESA may be necessary.

Thank you for your time. If you require additional information please contact Robyn Niver at (607) 753-9334.

Sincerely,

for David A. Stilwell
Field Supervisor

*Additional information referred to above may be found on our website at: http://nyfo.fws.gov/es/section7.htm

References:

Kurta, A., and S.W. Murray. 2002. Philopatry and migration of banded Indiana bats (*Myotis sodalis*) and effects of radio transmitters. Journal of Mammalogy 83(2) 585-589.

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U.S. Fish and Wildlife Service. 2001. Bog Turtle (*Clemmys muhlenbergii*), Northern Population, Recovery Plan. Hadley, Massachusetts. 103 pp

cc: NYSDEC, New Paltz, NY (Attn. S. Joule)
NYSDEC, Albany, NY (Endangered Species: Attn. P. Nye)
NYSDEC, Albany, NY (Natural Heritage)
COE, New York, NY

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New York Field Office
3817 Luker Road, Cortland, NY 13045
Phone: (607) 753-9334
Fax: (607) 753-9699

Long Island Field Office
3 Old Barto Rd., Brookhaven, NY 11719
Phone: (631) 776-1401
Fax: (631) 776-1405

Endangered Species Act List Request Response Cover Sheet

This cover sheet is provided in response to a search of our website* for information regarding the potential presence of species under jurisdiction of the U.S. Fish and Wildlife Service (Service) within a proposed project area.

Attached is a copy of the New York State County List of Threatened, Endangered, and Candidate Species for the appropriate county(ies). The database that we use to respond to list requests was developed primarily to assist Federal agencies that are consulting with us under Section 7(a)(2) of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). Our lists include all Federally-listed, proposed, and candidate species known to occur, as well as those likely to occur, in specific counties.

The attached information is designed to assist project sponsors or applicants through the process of determining whether a Federally-listed, proposed, or candidate species and/or "critical habitat" may occur within their proposed project area and when it is appropriate to contact our offices for additional coordination or consultation. You may be aware that our offices have provided much of this information in the past in project-specific letters. However, due to increasing project review workloads and decreasing staff, we are now providing as much information as possible through our website. We encourage anyone requesting species list information to print out all materials used in any analyses of effects on listed, proposed, or candidate species.

The Service routinely updates this database as species are proposed, listed, and delisted, or as we obtain new biological information or specific presence/absence information for listed species. If project proponents coordinate with the Service to address proposed and candidate species in early stages of planning, this should not be a problem if these species are eventually listed. However, we recommend that both project proponents and reviewing agencies retrieve from our online database an *updated* list every 90 days to append to this document to ensure that listed species presence/absence information for the proposed project is *current*.

Reminder: Section 9 of the ESA prohibits unauthorized taking** of listed species and applies to Federal and non-Federal activities. For projects not authorized, funded, or carried out by a Federal agency, consultation with the Service pursuant to Section 7(a)(2) of the ESA is not required. However, no person is authorized to "take**" any listed species without appropriate authorizations from the Service. Therefore, we provide technical assistance to individuals and agencies to assist with project planning to avoid the potential for "take**," or when appropriate, to provide assistance with their application for an incidental take permit pursuant to Section 10(a)(1)(B) of the ESA.

Additionally, endangered species and their habitats are protected by Section 7(a)(2) of the ESA, which requires Federal agencies, in consultation with the Service, to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. An assessment of the potential direct, indirect, and cumulative impacts is required for all Federal actions that may affect listed species.

For instance, work in certain waters of the United States, including wetlands and streams, may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended;16 U.S.C. 661 *et seq.*), the Service may concur, with or without recommending additional permit conditions, or recommend denial of the permit depending upon potential adverse impacts on fish and wildlife resources associated with project construction or implementation. The need for a Corps permit may be determined by contacting the appropriate Corps office(s).*

For additional information on fish and wildlife resources or State-listed species, we suggest contacting the appropriate New York State Department of Environmental Conservation regional office(s) and the New York Natural Heritage Program Information Services.*

Since wetlands, ponds, streams, or open or sheltered coastal waters may be present in the project area, it may be helpful to utilize the National Wetlands Inventory (NWI) maps as an initial screening tool. However, they may or may not be available for the project area. Please note that while the NWI maps are reasonably accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes. Online information on the NWI program and digital data can be downloaded from Wetlands Mapper, http://wetlands.fws.gov/mapper_tool.htm.

Project construction or implementation should not commence until all requirements of the ESA have been fulfilled. After reviewing our website and following the steps outlined, we encourage both project proponents and reviewing agencies to contact our office to determine whether an accurate determination of species impacts has been made. If there are any questions about our county lists or agency or project proponent responsibilities under the ESA, please contact the New York or Long Island Field Office Endangered Species Program at the numbers listed above.

Attachment (county list of species)

*Additional information referred to above may be found on our website at:
http://www.fws.gov/northeast/nyfo/es/section7.htm

** Under the Act and regulations, it is illegal for any person subject to the jurisdiction of the United States to *take* (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import or export, ship in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered fish or wildlife species and most threatened fish and wildlife species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. "Harm" includes any act which actually kills or injures fish or wildlife, and case law has clarified that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife.

Orange County

Federally Listed Endangered and Threatened Species and Candidate Species

This list represents the best available information regarding known or likely County occurrences of Federally-listed and candidate species and is subject to change as new information becomes available.

Common Name	Scientific Name	Status
Atlantic Sturgeon[2]	*Acipenser oxyrinchus oxyrinchus*	C
Bald eagle[1]	*Haliaeetus leucocephalus*	D
Bog turtle	*Clemmys muhlenbergii*	T
Indiana bat (S)	*Myotis sodalis*	E
Dwarf wedge mussel	*Alasmidonta heterodon*	E
Shortnose sturgeon[2]	*Acipenser brevirostrum*	E

Status Codes: E–Endangered T–Threatened P–Proposed C–Candidate D–Delisted

W–Winter S–Summer

[1] The bald eagle was delisted on August 8, 2007. While there are no ESA requirements for bald eagles after this date, the eagles continue to receive protection under the Bald and Golden Eagle Protection Act (BGEPA). Please follow the Service's May 2007 Bald Eagle Management Guidelines to determine whether you can avoid impacts under the BGEPA for your projects. If you have any questions, please contact the endangered species branch in our office.

[2] Primarily occurs in Hudson River. Principal responsibility for this species is vested with the National Oceanic and Atmospheric Administration/Fisheries.

Information current as of: 1/29/2008

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **FAX:** (518) 402-8925
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

March 1, 2005

Lesley A. Rodriguez
Pietrzak & Pfau
262 Greenwich Ave, Suite A
Goshen, NY 10924

Dear Ms. Rodriguez:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to an Environmental Assessment for the proposed 362.5 acre Reiger Homes Project, area as indicated on the map you provided, located in the Town of Goshen, Orange County.

> We have no records of known occurrences of rare or state listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain any information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of rare or state-listed species, or of significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Data bases. Your project may require additional review or permits: for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

Betty Ketcham

Betty Ketcham, Information Service
New York Natural Heritage Program

Enc.

Appendix B

Site Photographs

Photograph 1) This photograph was taken within the forested wetland that is found on the south side of Craigville Road.

Photograph 2) This photograph was taken from the interior of the forested wetland that is found near the center of the site and on the south side of Craigville Road.

Photograph 3) This photograph shows the open water pond that is found near the southeast corner of the property.

Photograph 4) This photograph shows an inundated section of Palustrine forested wetland that is located to the southwest of the open water pond.

Photograph 5) This photograph was taken of emergent wetland that is found near the western property boundary that is to the south of Craigville Road.

Photograph 6) This photograph was taken of an old farm pond that is found near the western corner of the site. The old pond has filled with silt and become wetland.

Photograph 7) This photograph shows forested wetland that is found to the northeast of Craigville and Ridge Road.

Photograph 8) This photograph shows the emergent wetland that is found immediately to the east of Craigville and Ridge Roads.

Photograph 9) This photograph shows the transition from emergent to forested wetland that is found to the north of Craigville road.

Photograph 10) This photograph shows the ponded water that is found in the forested wetland that is found to the north of Craigville Road.

Photograph 11) This photograph was taken of the forested wetland is found near the northeast corner of the property.

Photograph 12) This photograph was taken of the forested wetlands that are found in the northeast corner of the site.

Photograph 13) This photograph was taken within the center of potential Bog Turtle Habitat B, while looking south through the emergent wetland.

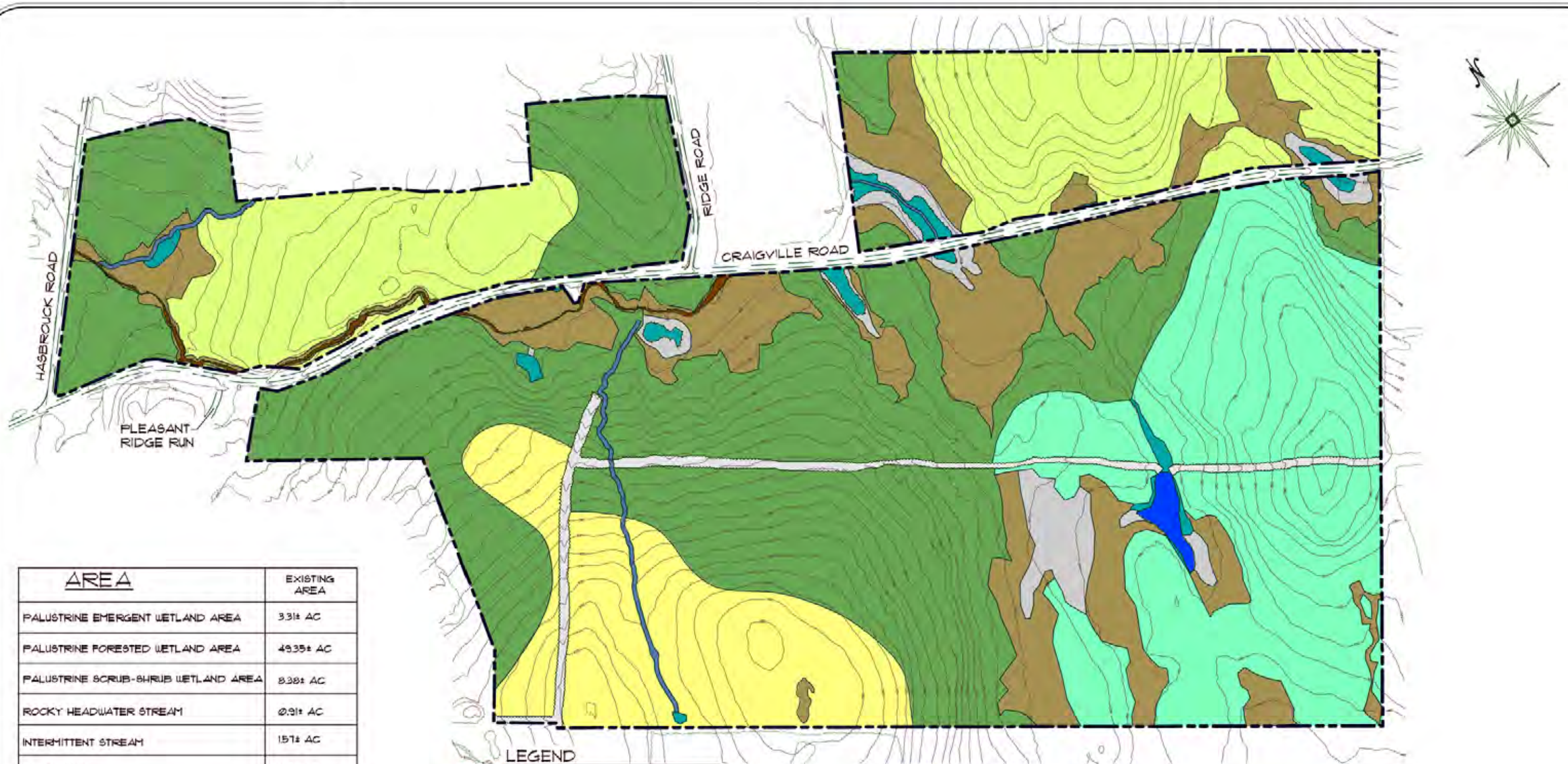
Photograph 14) This photograph was taken from the center of potential Bog Turtle Habitat B, while looking east toward the eastern boundary of the emergent wetland.

Photograph 15) This photograph was taken from the center of potential Bog Turtle Habitat C, while looking west through the emergent wetland.

Photograph 16) This photograph was taken from the center of potential Bog Turtle Habitat C, while looking north towards Craigville Road.

Appendix C

Existing Ecological Community Types



AREA	EXISTING AREA
PALUSTRINE EMERGENT WETLAND AREA	3.31± AC
PALUSTRINE FORESTED WETLAND AREA	49.35± AC
PALUSTRINE SCRUB-SHRUB WETLAND AREA	8.38± AC
ROCKY HEADWATER STREAM	0.91± AC
INTERMITTENT STREAM	1.57± AC
FARM POND	1.10± AC
SUCCESSIONAL SOUTHERN HARDWOODS	129.97± AC
SUCCESSIONAL NORTHERN HARDWOODS	65.38± AC
OAK-TULIP TREE FOREST	55.19± AC
BEECH-MAPLE MESIC FOREST	33.65± AC
ABANDONED GRAVEL ROAD	5.20± AC
TOTAL SITE	354.01± AC

LEGEND

- PALUSTRINE EMERGENT WETLAND AREA
- PALUSTRINE FORESTED WETLAND AREA
- PALUSTRINE SCRUB-SHRUB WETLAND AREA
- ROCKY HEADWATER STREAM
- INTERMITTENT STREAM
- SUCCESSIONAL SOUTHERN HARDWOODS
- SUCCESSIONAL NORTHERN HARDWOODS
- OAK-TULIP TREE FOREST
- BEECH-MAPLE MESIC FOREST
- ABANDONED GRAVEL ROAD
- FARM POND

YOUNG'S GROVE

TOWN OF GOSHEN
TAX MAP NO. : 9-1-8.452

EXISTING ECOLOGICAL COMMUNITIES AND HABITAT TYPES

GRAPHIC SCALE: 1 in. = 500 ft.

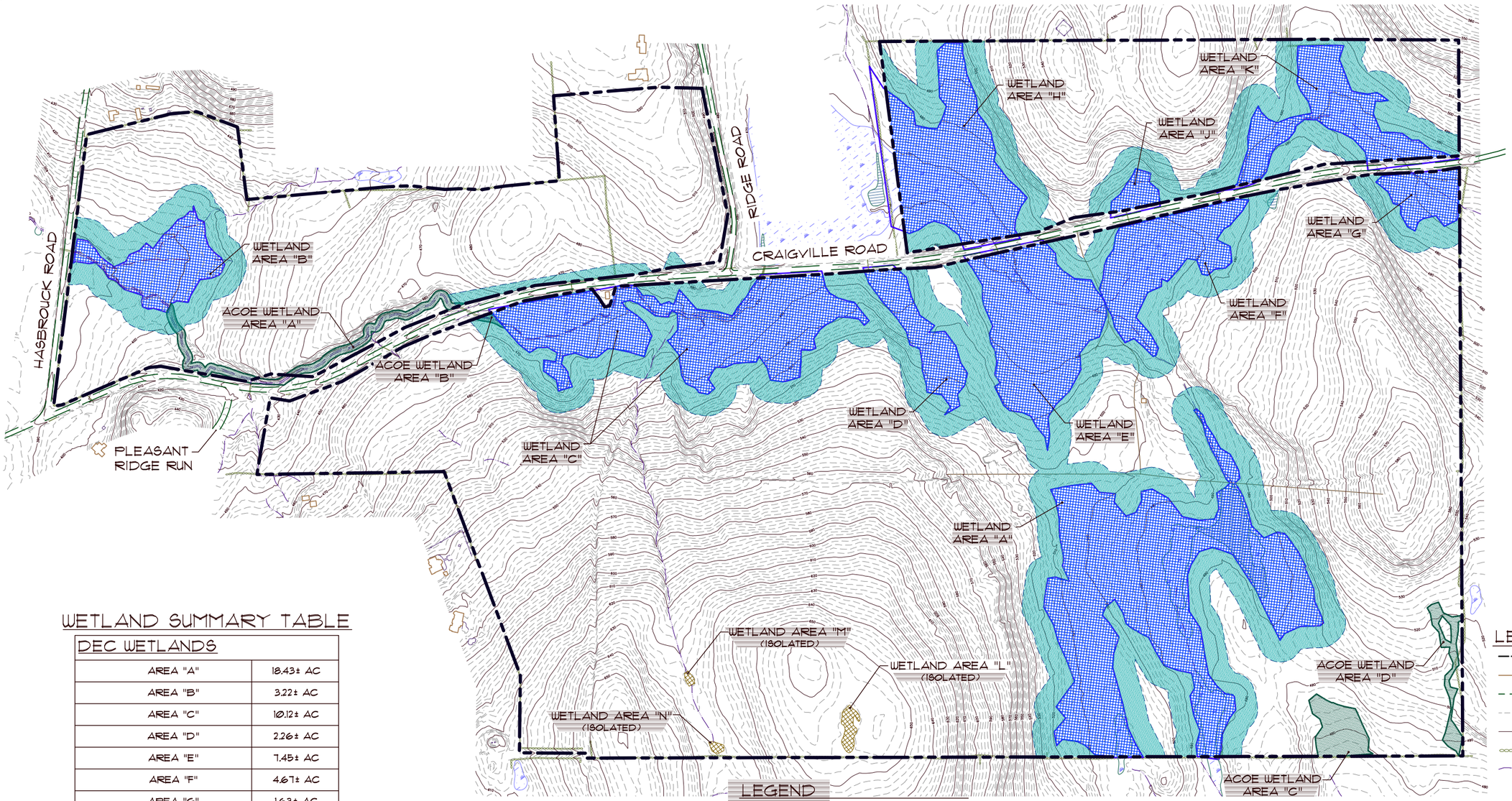
APPENDIX C

06/08	DATE OF ORIGIN
DATE	DESCRIPTION
REVISIONS	

ESPOSITO & ASSOCIATES
262 GREENWICH AVENUE, SUITE B
GOSHEN NY, 10924
845.294.0558 Fax 845.294.0580

Appendix D

Wetland Delineation Map



WETLAND SUMMARY TABLE

DEC WETLANDS	
AREA "A"	18.43± AC
AREA "B"	3.22± AC
AREA "C"	10.12± AC
AREA "D"	2.26± AC
AREA "E"	7.45± AC
AREA "F"	4.67± AC
AREA "G"	1.63± AC
AREA "H"	7.27± AC
AREA "J"	0.60± AC
AREA "K"	4.25± AC
TOTAL:	59.90± AC
ISOLATED WETLANDS	
AREA "L"	0.26± AC
AREA "M"	0.05± AC
AREA "N"	0.06± AC
TOTAL:	0.37± AC

ACOE WETLANDS	
AREA "A"	1.28± AC
AREA "B"	0.07± AC
AREA "C"	1.22± AC
AREA "D"	0.68± AC
TOTAL:	3.25± AC
TOTAL WETLANDS:	63.52± AC

LEGEND

- DEC WETLANDS LINE
- ACOE WETLANDS LINE
- DEC WETLANDS BUFFER LINE
- ISOLATED WETLANDS LINE
- DEC WETLANDS AREA
- ACOE WETLANDS AREA
- ISOLATED WETLANDS AREA
- DEC WETLANDS BUFFER AREA

LEGEND

- PROPOSED PROPERTY LINE
- EXISTING STRUCTURE
- EDGE OF PAVEMENT
- EXISTING CONTOUR LINE MINOR
- EXISTING CONTOUR LINE MAJOR
- EXISTING STONEWALL
- WATER EDGE OR STREAM

YOUNG'S GROVE

TOWN OF GOSHEN
TAX MAP NO. : 9-1-8.452

WETLAND DELINEATION MAP

GRAPHIC SCALE: 1 in. = 500 ft.

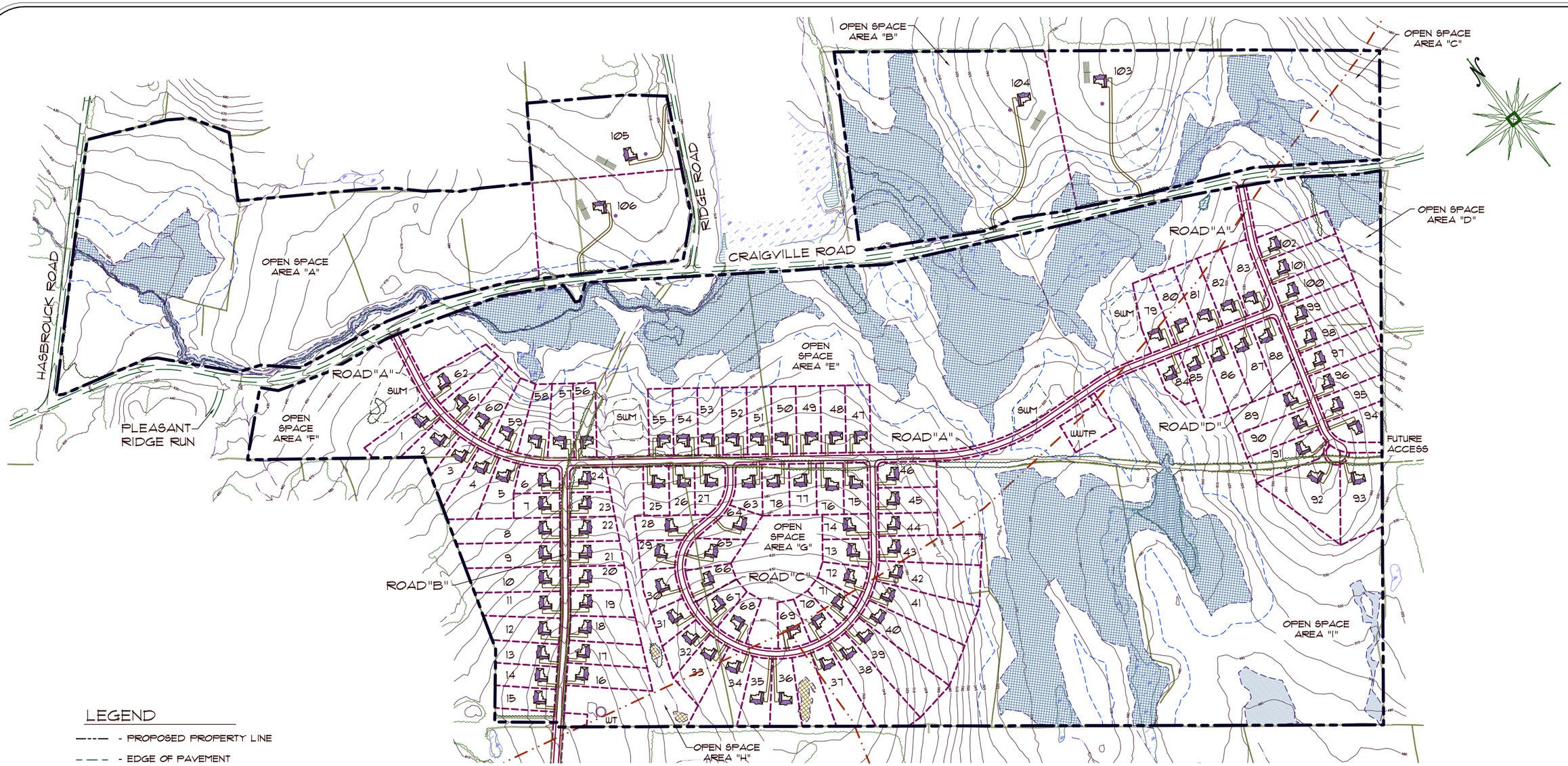
APPENDIX D

06/08	DATE OF ORIGIN
DATE	DESCRIPTION
REVISIONS	

ESPOSITO & ASSOCIATES
262 GREENWICH AVENUE, SUITE B
GOSHEN NY, 10924
845.294.0558 Fax 845.294.0580

Appendix E

Proposed Development Plans and Ecological Community Impact Map



LEGEND

- PROPOSED PROPERTY LINE
- EDGE OF PAVEMENT
- EXISTING CONTOUR LINE MAJOR
- EXISTING TREELINE
- EXISTING STONEWALL
- WATER EDGE OR STREAM
- WETLANDS LINE
- DEC WETLAND BUFFER LINE
- DEC WETLANDS AREA
- ACOE WETLANDS AREA
- ISOLATED WETLANDS AREA

RECORD OWNER AND APPLICANT:

R.H. CRAIGVILLE, LLC
6 OLD NORTH PLANK ROAD
NEWBURGH, NEW YORK 12550

YOUNG'S GROVE

TOWN OF GOSHEN
TAX MAP NO. : 9-1-8.452

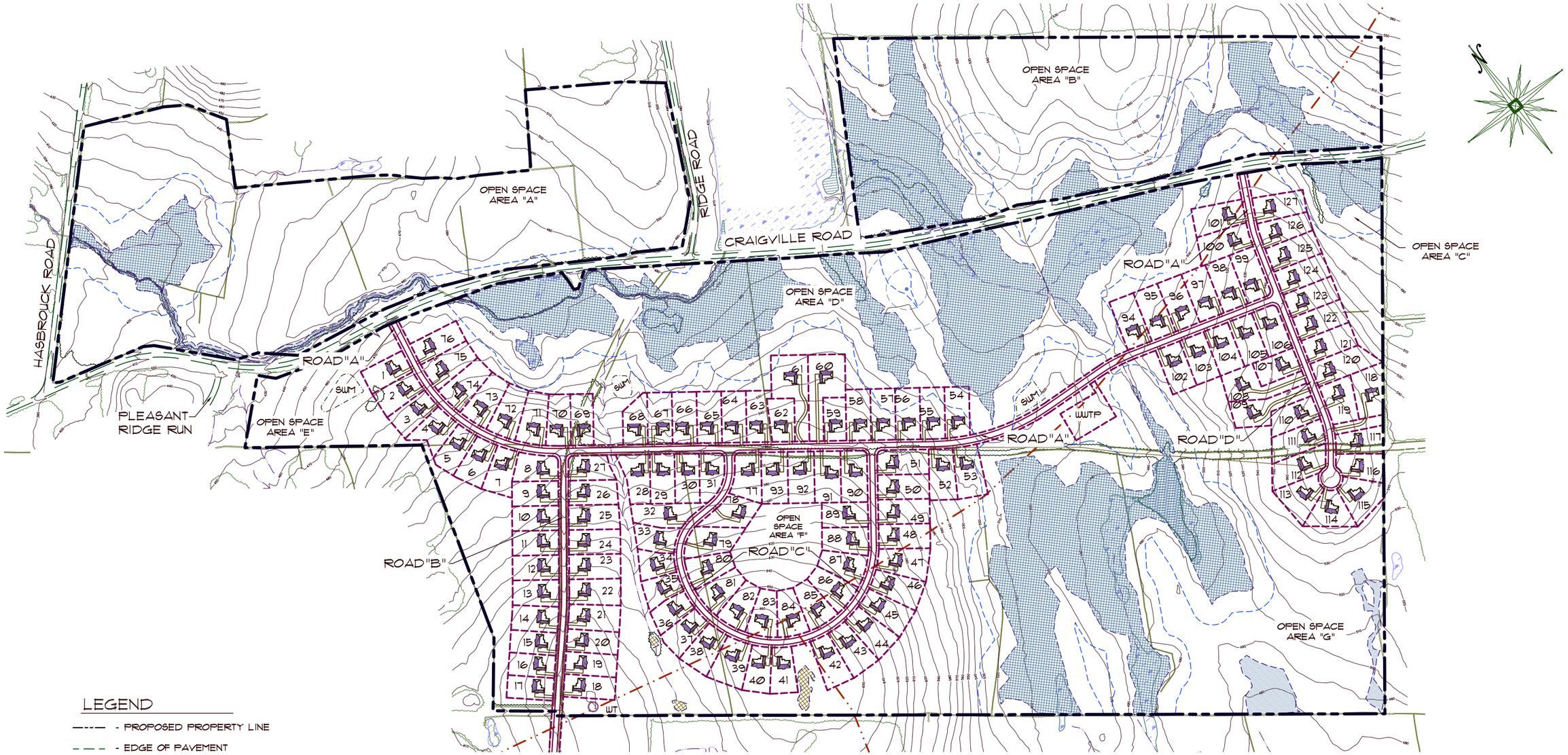
106 LOT LAYOUT

GRAPHIC SCALE: 1 in. = 500 ft.

APPENDIX E-1

06/08	DATE OF ORIGIN
DATE	DESCRIPTION
REVISIONS	

ESPOSITO & ASSOCIATES
262 GREENWICH AVENUE, SUITE B
GOSHEN NY, 10924
845.294.0558 Fax 845.294.0580



LEGEND

- PROPOSED PROPERTY LINE
- EDGE OF PAVEMENT
- EXISTING CONTOUR LINE MAJOR
- EXISTING TREELINE
- EXISTING STONEWALL
- WATER EDGE OR STREAM
- WETLANDS LINE
- DEC WETLAND BUFFER LINE
- DEC WETLANDS AREA
- ACOE WETLANDS AREA
- ISOLATED WETLANDS AREA

RECORD OWNER AND APPLICANT:

R.H. CRAIGVILLE, LLC
6 OLD NORTH PLANK ROAD
NEWBURGH, NEW YORK 12550

YOUNG'S GROVE

TOWN OF GOSHEN
TAX MAP NO. : 9-1-8.452

127 LOT LAYOUT

GRAPHIC SCALE: 1 in. = 500 ft.

APPENDIX E-2

06/08	DATE OF ORIGIN
DATE	DESCRIPTION
REVISIONS	

ESPOSITO & ASSOCIATES
262 GREENWICH AVENUE, SUITE B
GOSHEN NY, 10924
845.294.0558 Fax 845.294.0580

AREA	EXISTING AREA	AFFECTED AREA	REMAINING AREA
PALUSTRINE EMERGENT WETLAND AREA	3.31± AC	——	3.31± AC
PALUSTRINE FORESTED WETLAND AREA	49.35± AC	——	49.35± AC
PALUSTRINE SCRUB-SHRUB WETLAND AREA	8.38± AC	——	8.38± AC
ROCKY HEADWATER STREAM	0.91± AC	——	0.91± AC
INTERMITTENT STREAM	1.57± AC	0.02± AC	1.55± AC
FARM POND	1.10± AC	——	1.10± AC
SUCCESSIONAL SOUTHERN HARDWOODS	129.97± AC	24.27± AC	105.70± AC
SUCCESSIONAL NORTHERN HARDWOODS	65.38± AC	15.56± AC	49.82± AC
OAK-TULIP TREE FOREST	55.19± AC	——	55.19± AC
BEECH-MAPLE MESIC FOREST	33.65± AC	13.55± AC	20.10± AC
ABANDONED GRAVEL ROAD	5.20± AC	3.45± AC	1.75± AC
TOTAL SITE	354.01± AC	56.85± AC	297.16± AC

LEGEND

- PALUSTRINE EMERGENT WETLAND AREA
- PALUSTRINE FORESTED WETLAND AREA
- PALUSTRINE SCRUB-SHRUB WETLAND AREA
- ROCKY HEADWATER STREAM
- INTERMITTENT STREAM
- SUCCESSIONAL SOUTHERN HARDWOODS
- SUCCESSIONAL NORTHERN HARDWOODS
- OAK-TULIP TREE FOREST
- BEECH-MAPLE MESIC FOREST
- ABANDONED GRAVEL ROAD
- FARM POND
- AFFECTED DEVELOPMENT AREA

YOUNG'S GROVE

TOWN OF GOSHEN
TAX MAP NO. : 9-1-8.452

PROPOSED ECOLOGICAL COMMUNITIES AND HABITAT TYPES

GRAPHIC SCALE: 1 in. = 500 ft.

APPENDIX E-3

06/08	DATE OF ORIGIN
DATE	DESCRIPTION
REVISIONS	

ESPOSITO & ASSOCIATES
262 GREENWICH AVENUE, SUITE B
GOSHEN NY, 10924
845.294.0558 Fax 845.294.0580

Appendix F

Observed Species List

Flora and Fauna Inventory of Rieger Homes Site

This list only identifies the species observed/identified on the site during the individual site visits. Most species were identified visually or by vocalization. However, those species denoted with ** indicates that they were identified by tracks, scat or physical remains confirmed during the field visit.

Flora

Trees:

Common Name	Scientific Name
Box-elder Maple	*Acer negundo*
Striped Maple	*Acer pennsylvanicum*
Red Maple	*Acer rubrum*
Sugar Maple	*Acer saccharum*
Ailanthus	*Ailanthus altissima*
Black Birch	*Betula lenta*
Yellow Birch	*Betula lutea*
White Birch	*Betula papyrifera*
Gray Birch	*Betula populifolia*
American Hornbeam	*Carpinus caroliniana*
Pignut Hickory	*Carya glabra*
Shagbark Hickory	*Carya ovata*
Hawthorn	*Crataegus crus-galli*
American Beech	*Fagus grandifolia*
White Ash	*Fraxinus americana*
Green Ash	*Fraxinus pennsylvanica*
Black Walnut	*Juglans nigra*
Red Cedar	*Juniperus virginiana*
Tulip Tree	*Liriodendron tulipifera*
Wild Apple	*Malus sylvestris*
Hop Hornbeam	*Oystra virginiana*
White Pine	*Pinus strobus*
Eastern Sycamore	*Platanus occidentalis*
Cottonwood	*Populus deltoides*
Big-tooth Aspen	*Populus grandidentata*
Quaking Aspen	*Populus tremuloides*
Black Cherry	*Prunus serotina*
Choke Cherry	*Prunus virginiana*
White Oak	*Quercus alba*
Swamp White oak	*Quercus bicolor*
Scarlet Oak	*Quercus coccinea*
Pin Oak	*Quercus palustris*
Red Oak	*Quercus rubra*

Chestnut Oak	*Quercus montana*
Black Locust	*Robinia pseudoacacia*
White Willow	*Salix alba*
Eastern Hemlock	*Tsuga canadensis*
American Elm	*Ulmus Americana*

Shrubs:

Common Name	**Scientific Name**
Speckled Alder	*Alnus rugosa*
Shadbush Serviceberry	*Amelanchier canadensis*
Japanese Barberry	*Berberis thunbergii*
Hawthorn	*Crataegus crus-galli*
Silky Dogwood	*Cornus amomum*
Flowering Dogwood	*Cornus florida*
Gray Dogwood	*Cornus racemosa*
Red-osier Dogwood	*Cornus stolonifera*
Witch Hazel	*Hamamelis virginiana*
Winterberry	*Ilex verticillata*
Spicebush	*Lindera benzoin*
Tatarian Honeysuckle	*Lonicera tatarica*
Common Buckthorn	*Rhamnus cathartica*
Staghorn Sumac	*Rhus typhina*
Multiflora Rose	*Rosa multiflora*
Red Raspberry	*Rubus idaeus*
Blackberry	*Rubus allegheniensis*
Pussy Willow	*Salix discolor*
Black Willow	*Salix nigra*
Common Elderberry	*Sambucus canadensis*
Meadowsweet	*Spirea latifolia*
Steeplebush	*Spirea tomentosa*
Highbush Blueberry	*Vaccinium corymbosum*
Maple-leaved Viburnum	*Viburnum acerifolium*
Arrowwood	*Viburnum dentatum*
Nannyberry	*Viburnum lentago*

Vines:

Common Name	**Scientific Name**
Oriental Bittersweet	*Celastris orbiculatus*
Virginia Creeper	*Parthenocissus quinquefolia*
Poison Ivy	*Rhus radicans*
Dewberry	*Rubus procumbens*
Summer Grape	*Vitis aestivalis*
Riverbank Grape	*Vitis riparia*

Herbaceous Plants:

Common Name	Scientific Name
Yarrow	*Achillea millefolium*
Sweet Flag	*Acorus calamus*
Agrimony	*Agrimonia parviflora*
Redtop	*Agrostis alba*
Water Plantain	*Alisma plantago-aquatica*
Garlic Mustard	*Alliaria officinalis*
Leeks	*Allium vinale*
Ragweed	*Ambrosia artemisiifolia*
Hog Peanut	*Amphicarpaea bracteata*
Common Burdock	*Arctium minus*
Common Milkweed	*Asclepias syraca*
New England Aster	*Aster novae-angliae*
Beggars Ticks	*Bidens tripartita*
Marsh Marigold	*Caltha palustris*
Brome-like	*Carex bromoides*
Lakebank Sedge	*Carex lacustris*
Broom Sedge	*Carex scoparia(group)*
Tussock Sedge	*Carex stricta*
Fox Sedge	*Carex vulpinoidea*
Upland Sedge	*Carex pennsylvanica.*
Spotted Knapweed	*Centaurea maculosa*
Daisy	*Chrysanthemum leucanthemum*
Chickory	*Cichorium intybus*
Canada Thistle	*Cirsium arvense*
Bull Thistle	*Cirsium vulgar*
Orchard Grass	*Dactylis glomerata*
Wild Carrot	*Daucus carota*
Deptford Pink	*Dianthus armeria*
Teasel	*Dipsacus sylvestris*
Barnyard Grass	*Echinochloa crusgalli*
Willow Herb	*Epilobium spp.*
Daisy Fleabane	*Erigeron annuus*
Trout Lily	*Erythronium americanum*
Field Horsetail	*Equisetum arvense*
Joe-pye Weed	*Eupatorium maculatum*
Boneset	*Eupatorium perfoliatum*
Wild Strawberry	*Fragaria virginiana*
White Avens	*Geum canadense*
Fowl Manna Grass	*Glyceria striata*
Bedstraw	*Galium aparine*
Day Lily	*Hemerocallis fulva*
Jewelweed	*Impatiens capensis*
Blue Flag Iris	*Iris versicolor*

Soft Rush	*Juncus effusus*
Rice Cut Grass	*Leersia oryzoides*
Duckweed	*Lemna minor*
Birdsfoot Trefoil	*Lotus corniculatus*
Ragged Robin	*Lychnis flos-cuculi*
Moneywort	*Lysimachia nummularia*
Purple Loosestrife	*Lythrum salicaria*
Yellow Sweet Clover	*Melilotus officinalis*
Evening Primrose	*Oenothera biennis*
Sensitive Fern	*Onoclea sensibilis*
Cinnamon Fern	*Osmunda cinnamomea*
Royal Fern	*Osmunda regalis*
Switch Grass	*Panicum virgatum*
Reed Canary Grass	*Phalaris arundinacea*
White Beard-tongue	*Penstemon digitalis*
Timothy	*Phleum pratense*
Common Reed	*Phragmites australis*
Clearweed	*Pilea pumila*
English Plantain	*Plantago lanceolata*
Common Plantain	*Plantago major*
Water Smartweed	*Polygonum amphibium*
Japanese Knotweed	*Polygonum cuspidatum*
Tearthumb	*Polygonum sagittatum*
Christmas Fern	*Polystichum agrostichoides*
Herbaceous Cinquefoil	*Potentilla simplex*
Black-eyed Susan	*Rudbeckia hirta*
Dark Green Bulrush	*Scirpus atrovirens*
Wool Grass	*Scirpus cyperinus*
Bristly Foxtail	*Setaria faberii*
Common Greenbrier	*Smilax rotundifolia*
Canada Goldenrod	*Solidago canadensis*
Late Goldenrod	*Solidago gigantea*
Early Goldenrod	*Solidago juncea*
Rough-stem Goldenrod	*Solidago rugosa*
Slender-leaved Goldenrod	*Solidago tenuifolia*
Field Sow Thistle	*Sonchus arvensis*
Bur-reed	*Sparganium erectum*
Skunk Cabbage	*Symplocarpus foetidus*
Dandelion	*Taraxacum officinale*
Red Clover	*Trifolium pratense*
Cattail	*Typha latifolia*
Stinging Nettle	*Urtica dioica*
Mullein	*Verbascum thappsus*
Blue Vervain	*Verbena hastata*
Cow Vetch	*Vicia cracca*
Common Blue Violet	*Viola sororia*

Fauna

Mammals:

Common Name	Scientific Name
Eastern Coyote**	*Canis latrans*
Woodchuck**	*Marmota monax*
Meadow Vole	*Microtus pennsylvanicus*
Mink**	*Mustela vison*
White-tailed Deer	*Odocoileus virginiana*
Muskrat**	*Ondatra zibethica*
Deer Mouse	*Peromyscus maniculatus*
Raccoon**	*Procyon lotor*
Eastern Gray Squirrel	*Sciurus carolinensis*
Cottontail Rabbit	*Sylvilagus floridanus*
Eastern Chipmunk	*Tamias striatus*
Red Squirrel	*Tamiasciurus hudsonicus*
Grey Fox**	*Urocyon cinereoargenteus*
Black Bear**	*Ursus americanus*

Birds:

Common Name	Scientific Name
Wood Duck	*Aix sponsa*
Red-winged Blackbird	*Agelaius phoeniceus*
Mallard	*Anas platyrhynchos*
Cedar Waxwing	*Bombycilla cedrorum*
Ruffed Grouse	*Bonasa umbellus*
Canada Goose	*Branta canadensis*
Red-tail Hawk	*Buteo jamaicensis*
Northern Cardinal	*Cardinal cardinalis*
American Goldfinch	*Carduelis tristis*
Veery	*Catharus fuscescens*
Eastern Wood-pewee	*Contopus virens*
American Crow	*Corvus brachyrhynchos*
Common Raven	*Corvus corax*
Blue Jay	*Cyanocitta cristata*
Black-throated Blue Warbler	*Dendroica caerulescens*
Yellow-rumped Warbler	*Dendroica coronata*
Chestnut sided Warbler	*Dendroica pensylvanica*
Yellow Warbler	*Dendroica petechia*
Black-throated Green Warbler	*Dendroica virens*
Pileated Woodpecker	*Dryocopus pileatus*
Gray Catbird	*Dumetella carolinensis*
Common Yellowthroat	*Geothlypis trichas*
Wood Thrush	*Hylocichla mustelina*

Baltimore Oriole	*Icterus galbula*
Tree Swallow	*Iridoprocne bicolor*
Dark-eyed Junco	*Junco hyemalis*
Eastern Wild Turkey	*Meleagris gallopavo*
Swamp Sparrow	*Melospiza georgiana*
Song Sparrow	*Melospiza melodia*
Northern Mockingbird	*Mimus polyglottos*
Brown-headed Cowbird	*Molothrus ater*
Northern Parula	*Parula americana*
Black-capped Chickadee	*Parus atricapillus*
Tufted titmouse	*Parus bicolor*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Picoides villosus*
Eastern Towhee	*Pipilo erythrophthalmus*
Eastern Phoebe	*Sayornis phoebe*
Ovenbird	*Seirus aurocapillus*
Eastern Bluebird	*Sialia sialis*
White-breasted Nuthatch	*Sitta carolinensis*
Chipping Sparrow	*Spizella passerina*
Field Sparrow	*Spizella pusilla*
Barred Owl	*Strix varia*
European Starling	*Sturnus vulgaris*
Tree Swallow	*Tachycineta bicolor*
House Wren	*Troglodytes aedon*
Eastern Kingbird	*Tyrannus tyrannus*
Red-eyed Vireo	*Vireo olivaceus*
Mourning Dove	*Zenaida macroura*
White-throated Sparrow	*Zonotrichia albicollis*

Amphibians/Reptiles:

Common Name	**Scientific Name**
Spotted Salamander	*Ambystoma maculatum*
Snapping Turtle	*Chelydra serpentina*
Eastern Painted Turtle	*Chrysemys picta picta*
Grey Tree Frog	*Hyla versicolor*
Northern Water Snake	*Nerodia sipedon sipedon*
Red Eft	*Notophthalmus viridescens viridescens*
Redback Salamander	*Plethodon cinereus*
Northern Slimy Salamander	*Plethodon glutinosus*
Bull Frog	*Rana catesbeiana*
Green Frog	*Rana clamitans*
Wood Frog	*Rana sylvatica*
Eastern Box Turtle	*Terrapene carolina carolina*
Garter Snake	*Thamnophis sirtalis sirtalis*

Appendix G

Consultant Resumes

Stephen P. George, President / Senior Ecologist

Education

B.A. - Environmental Science, Wildlife Management - 1983-1985, SUNY Plattsburgh, *Plattsburgh, NY*

A.A.S. - Natural Resources Conservation/Ecology – 1980 – 1982, SUNY Morrisville, *Morrisville, NY*

Experience

Mr. George possesses a wide range of experience in the fields of Ecology, Biology and Wetland Science. As the President and Senior Ecologist of North Country Ecological Services, Inc., Mr. George is responsible for: completing delineations of state and federal wetlands; compiling endangered and threatened species reports; completing habitat assessments and species inventories for flora and fauna; Environmental Impact Statement preparation; wetland mitigation design, construction, and monitoring; and, the preparation/finalization of reports and permit applications for submission to clients and regulatory agencies.

Work Experience

President & Senior Ecologist

1994–Present North Country Ecological Services, Inc. Johnstown, NY

Responsible for planning, execution, and completion of detailed technical reports for ecological studies including regulatory and legal issues. Also responsible for the preparation and execution of Environmental Impact Statements; habitat inventories; federal and state wetland delineations; wetland mitigation design; wetland mitigation monitoring; wetland permit applications; endangered species evaluations; wildlife management plans; stormwater and erosion control plans; and, water quality monitoring.

Environmental Analyst/Ecologist

1989–1994 Smith & Mahoney, P.C. Albany, NY

Managed the development and co-authored Environmental Impact Statements for private, municipal, and commercial developments. Projects included residential housing developments, transfer stations, landfills, shopping malls, and industrial facilities. Supervised and conducted ecological studies and impact assessments of aquatic and terrestrial communities. Responsible for the preparation of federal and state wetland delineations, reports, mitigation, and the necessary permits for the clients. Assisted in the landfill siting process for the Saratoga County and the Montgomery-Otsego-Schoharie County Solid Waste Management Authority. Assisted in hazardous waste remediation projects. Duties also included assisting

survey department, construction inspection and monitoring, water quality analysis and monitoring, and methane gas monitoring at landfills.

Engineering Technician/Environmental Analyst
1986-1989 Phillip Clark Engineers and Associates, P.C. Newburgh, NY

Prepared Environmental Impact Statements, assisted the survey crew, and conducted environmental analysis. Resident Engineer and Construction Inspector on the Harriman and Middletown WWTF construction projects. Resident Engineer for several potable water, municipal sewer main projects, water tower installation, and roadway construction. Experience includes pipeline and building layout, directional boring, concrete testing, pressurized and gravity water main testing, and as-built documentation.

Specific Endangered & Threatened Species Experience

- Karner Blue Butterfly evaluations
- Timber Rattlesnake field investigations
- Bog Turtle Phase 1 and 2 Studies

Additional Training

- ACOE Regulatory IV Course - Jurisdictional Wetland Delineation
- National Institute for Certification of Engineering Technologies – Highway Construction, Level II
- OSHA – 40 Hour Health and Safety at Hazardous Materials Sites
- Rutgers College – Freshwater Wetland Construction
- Rutgers College – Endangered and Threatened Species of Southern NJ
- Volunteer to Environmental Defense / Jason Tesauro – Conducted Bog Turtle Surveys in Columbia and Dutchess Counties, New York.
- USFWS – Wallkill River National Wildlife Refuge, New Jersey. Assisted with radio telemetry survey of Bog Turtles.

Special Licenses

- NYSDEC – Nuisance Wildlife Control Operations
- NYSDEC – License to Collect and Possess
- NYSDEC Sportsman's Education Instructor (firearm, archery, trapping, waterfowl identification).

Affiliations

- Society of Wetland Scientists
- NYS Wetland Forum, Co-Founder, Former Board Member
- National Audubon Society Member
- Corporate Wetlands Restoration Partnership NYS Chapter Member
- National Bowhunter Education Foundation, Board Member
- NYSDEC Wilderness Search & Rescue (Team 5-1) Member

Publications

- Wildlife Society Bulletin, Volume 15, No. 2, Summer 1987 – Evaluation of Site Variables Affecting Nest Box Use by Wood Ducks.

Thomas M. Ward, Vice President – Ecologist

NORTH COUNTRY ECOLOGICAL SERVICES, INC.

Education

1996-2000 SUNY Cobleskill *Cobleskill, NY*

- B.T. Animal Science - Wildlife Management
- A.A.S. Animal Science - Fisheries & Wildlife Technologies

Experience

Mr. Ward possesses hands on experience in the fields of Ecology, Biology and Wetland Science. Mr. Ward works directly with clients, municipalities, regulatory agencies and other professionals to meet all the environmental requirements needed to assess and develop project sites. Some of these requirements include: delineating federal and state wetland boundaries; assessing wetland and ecological impacts; conducting surveys for endangered/threatened species and/or ecological habitats; and, compiling reports, permit applications, and mitigation plans.

Work Experience

Vice President - Ecologist / Biologist

9/2000–Present North Country Ecological Services, Inc. *Johnstown, NY*

Responsible for planning, executing and completion of detailed site assessments and technical reports for ecological studies and permitting processes. Also responsible for the preparation and execution of Environmental Impact Statements; federal and state wetland delineations and reports; conducting flora/fauna and habitat inventories; wetland mitigation design; wetland mitigation monitoring; preparation of state and federal wetland permit applications; endangered and threatened species evaluations and reports; and, wildlife management plans;

Wetland Specialist

8/1999–9/2000 NYS Department of Environmental Conservation *Albany, NY*

Responsible for contacting landowners in Saratoga County and conducting delineations of state regulated wetlands, answering related questions on DEC regulations, informing individual landowners on wetland conservation, and making DEC Article 24 wetland map amendments. Also provided with landowners with Article 24 permit applications and requirement guidelines. Coordinated efforts between regional and central DEC offices.

Wildlife Coordinator

Seasonal-1999 Birdsong Farm *Delhi, NY*

Responsible for establishing a working Pheasant brooding and release program on the property. Other duties included; building/erecting blue bird houses and wood duck nest boxes, constructing hiking trails, and managing habitat for deer, turkey and pheasants. Initiated a wildlife management plan for the working farm.

Specific Endangered & Threatened Species Project Experience

- Chester Golf Course, Town of Chester, Orange County, New York: Completed Phase 1 Bog Turtle assessment for a combination golf course and residential housing project on 150± acres. Conducted a Phase 2 survey under the guidance of Dr. Eric Kiviat of Hudsonia.
- Rensselaer City School Project: Review of 80± acres to identify several species of flora that the NYSDEC listed as sensitive. Completed Phase 1 Indiana Bat habitat assessment. Coordinated efforts with USFWS/DEC to determine if project would impact Indiana Bats.
- Pozzolini Residential Subdivision: Completed Phase 1 Bog Turtle and Indiana Bat habitat assessments for a proposed residential subdivision.
- Winter Wonderland Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment for the project site. A Phase 2 assessment was conducted under the supervision of Mr. Jason Tesauro.
- Reservoir Road Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment for the project site. A Phase 2 assessment was conducted under the supervision of Mr. Jason Tesauro.
- Laroe Road Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment and Indiana Bat habitat assessment for the project site.
- Monhagen Estates Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment and Indiana Bat habitat assessment for the project site.
- Beamer Road Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment and Indiana Bat habitat assessment for the project site.
- Martinelli Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment and Indiana Bat habitat assessment for the project site.
- Bruceville Road Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment and Indiana Bat habitat assessment for the project site.
- Dicaprio Park: Completed a habitat survey for Karner Blue Butterflies on the proposed parklands.
- Woodsfield Estates Residential Subdivision: Completed a review for Karner Blue Butterflies on the project site.
- Tuxedo Park: Completed a Habitat Assessment and Visual Survey for Timber Rattlesnakes on the project site.
- Pine Hill Development: Completed a Habitat Assessment and Visual Survey for Timber Rattlesnakes on the project site.

Additional Training

- Rutgers College – Freshwater Wetland Construction
- Rutgers College – Endangered & Threatened Species of Southern NJ
- USFWS – WallKill River National Wildlife Refuge, New Jersey. Assisted with radio telemetry survey of Bog Turtles.
- Volunteer to Environmental Defense / Jason Tesauro – conducted Bog Turtle Surveys in Columbia and Dutchess Counties, New York.

Special Licenses

- NYSDEC – Nuisance Beaver Training Snare Workshop Certificate
- NYSDEC – Nuisance Wildlife Control Operations and NYS Pistol Permit
- NYSDEC – License to Collect and Possess

Affiliations

- New York State Wetlands Forum, Inc. - Member
- Corporate Wetlands Restoration Partnership – NYS Chapter Member
- Quality Deer Management Association – NYS Chapter Member

Appendix H

J. Tesauro Letter Report of Findings

J. Tesauro
ECOLOGICAL CONSULTING
391 WAHL ROAD, LIVINGSTON MANOR, NEW YORK 12758
845.482.5973 – JASONTESAURO@YAHOO.COM

Herpetological Investigation, Rieger Tract,
Town of Goshen, New York

by Jason Tesauro

June 16, 2008

A general herpetological evaluation and survey was conducted on the proposed Rieger Homes residential development located in the Town of Goshen, New York on 15 April, 30 April, 16 May, and 8 June 2008. A portion of this work was done in conjunction with a Phase 2 bog turtle survey done on two small wetlands located on the south side of Craigville Road in the western end of the parcel. This report summarizes the results of the herpetological investigation.

The Rieger Homes parcel was first visited on 21 May 2007 for general reconnaissance. Several wetland areas were identified during this visit including three areas of suitable bog turtle habitat, forested wetland containing vernal pools, seasonally flooded emergent wetland, forested riparian habitat, and an artificial impoundment. The remainder of the habitat consisted primarily of upland deciduous forest with some patches of former human habitation. Surveys were focused primarily on the wetland portions of the property.

Survey methods entailed random opportunistic surveys under warm, sunny conditions which would be conducive to surface activity, movement, and/or breeding of many reptilian and amphibian species (i.e., herptiles) likely to occur on site. The site was also visited in the evenings of 5/15 and 5/20, the morning of 5/21 and in the late afternoon of 6/8 by North Country Ecological Services (NCES) to document calling anurans. Aquatic and fossorial species (e.g., salamanders) were actively searched for through dip-netting and lifting logs, stones, and other material in both forest and riparian habitat.

Species documented during this investigation were as follows:

Common Name	**Latin Name**	**NYSDEC Status**
Green frog	*Rana clamitans melanota*	
Bullfrog	*Rana catesbiana*	
Pickerel frog	*Rana palustris*	
Wood frog	*Rana sylvatica*	
Northern spring peeper	*Pseudacris crucifer*	
Northern gray treefrog	*Hyla versicolor*	
American toad	*Bufo americanus*	

Two-lined salamander	*Eurycea bislineata*	
Red-backed salamander	*Plethodon cinereus*	
Northern slimy salamander	*Plethodon gluttinosus*	
Dusky salamander	*Desmognathus subfuscus*	
Red-spotted newt	*Notophtalamus viridescens*	
Spotted salamander	*Amybstoma maculatum*	
Eastern garter snake	*Thamnophis sirtalis*	
Northern water snake	*Nerodia sipedon*	
Common snapping turtle	*Chelydra serpentina*	
Eastern painted turtle	*Chrysemys picta*	
Eastern box turtle	*Terrapene carolina*	Special Concern

The Rieger tract contained a diverse herpetological community, comprised mostly by common species. The eastern box turtle, a Special Concern species, was the only species observed that is officially 'listed' by the New York State Bureau of Wildlife. The richest herptile area was associated with a wetland complex located in the southeastern corner of the property that contained an artificial impoundment and forested wetland habitat. Large concentrations of wood frogs and spotted salamanders bred in the vernal pools found within the boundaries of the forested wetlands and also within the shallow shoreline habitat of the impoundment. The pools appeared suitable for other obligate vernal pool amphibians including marbled salamander and Jefferson salamanders, although none were observed. The southernmost vernal pool within this complex contained a lush plant community dominated by high-bush blueberry (*Vaccinium corymbosum*), spicebush (*Lindera benzoin*), and various hardwoods. Thick mounds of peat moss (*Sphagnum* sp.) grew at the base of many of the shrubs and trees within the pool, providing suitable habitat for four-toed salamander (*Hemidactylium scutatum*), but none were found. The artificial impoundment, which appeared to hold water year-round, supported aquatic turtles, red-spotted newts, and was used as breeding habitat for all the anurans observed on site with the exception of American toads. Auditory and visual surveys did not yield any northern cricket frogs (*Acris crepitans*) in the pond. In New York, northern cricket frogs are typically associated with large, circumneutral ponds with a well-established emergent and aquatic vegetation community. This impoundment, while superficially suitable, may be limited by its water chemistry and its isolation from other northern cricket frog populations.

A second significant emergent and forested wetland complex, also containing vernal pools, exists on the eastern side of the property but on the north side of Craigville Road (Figure 1). This area contained a shallow, sedge-dominated wetland that bordered on large, flooded, grassy marsh to the west (located off site). Wood frogs and spotted salamanders were documented in this ponded sedge marsh along with green frogs, American toads, and spring peepers. Together with the off-site marsh, these wetlands provided excellent habitat for the spotted turtle (*Clemmys guttata*), a Special Concern species. A small turtle was observed peripherally diving into the water from a tussock on 30 April; however, it was not captured and identification could not be confirmed.

The riparian habitat on the site was not very ecologically productive. Green frogs, water snakes, and two-lined salamanders were the only herptile species documented. Fish were not common. The stream itself was compromised by its proximity to Craigville Road and appeared to be very flashy, possibly from upstream impacts associated with agricultural activities and land development within the watershed. The wood turtle (*Glyptemys insculpta*), a Special Concern species, is associated with riparian habitats and is common in certain parts of Orange

County; however, the stream was only marginally suitable for the species, and was so close to Craigville Road that road mortality would be a major threat to this far-ranging, transient turtle. The small, seasonal stream from the impoundment in the southern corner of the property, which eventually drains into this creek, was the only location where dusky salamanders were documented.

The two wet meadows surveyed for bog turtles (See forthcoming Phase 2 report by NCES) produced green frogs, spotted salamanders, wood frogs, and spring peepers. The latter three were only documented breeding at the westernmost patch of habitat, which was partially ponded (it had formerly been an impoundment). A third suitable bog turtle habitat located 100 meters east of Hasbrouck Road, which was not subjected to a Phase 2 investigation due to its distance from proposed development, was visited once and did not produce any herptiles.

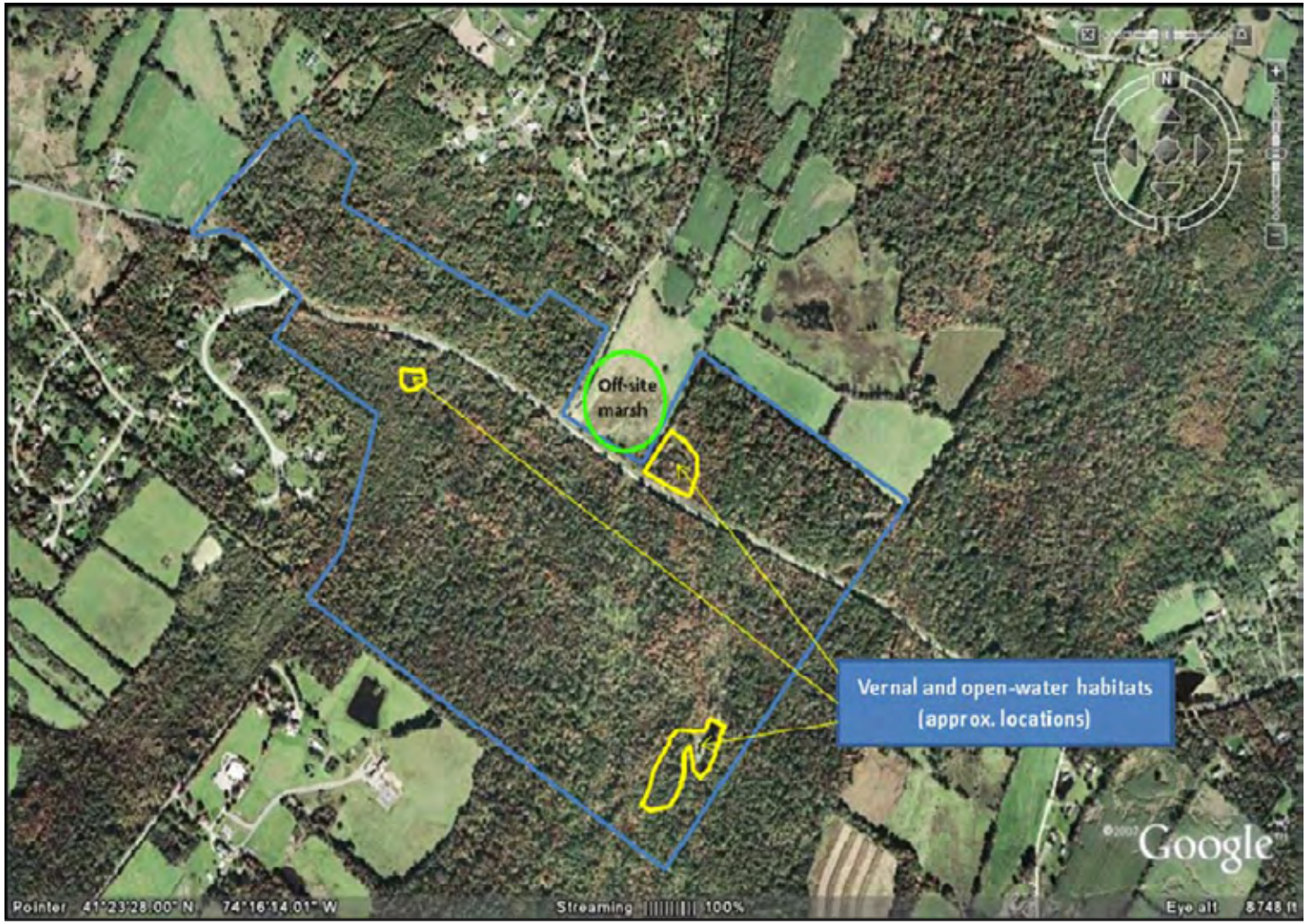
Northern water snakes were the most commonly observed snake species on the site, mostly associated with the permanent pond and riparian habitats. Garter snakes were observed in the upland woods and along trails. Old tin, trash, and scattered debris near former dwellings were turned over in pursuit of eastern milk snakes (*Lampropeltis triangulum*), black rat snakes (*Elaphe obsoleta*), and brown snakes (*Storeria dekayi*); however, none of these species were found.

The upland forest, which comprised the bulk of the habitat area on site, was casually surveyed. Log-rolling yielded red-backed salamanders, slimy salamanders, and a single juvenile spotted salamander. A male box turtle was found along the forest edge on the north side of Craigville Road. Although only a handful of wood frogs and a single spotted salamander were observed in the forest, it is assumed that the upland forest habitat throughout the property provides habitat for the large numbers of spotted salamanders, northern spring peepers, and northern gray treefrogs that were observed breeding in the pond and various wetland habitats.

References:

Northern Cricket Frog Fact Sheet. http://www.dec.ny.gov/animals/7120.html

Figure 1. – Vernal and open-water habitats documented on the proposed Riegar Homes site . Goshen, NY



Biodiversity Report

Lands of Rieger Homes Inc.
(Youngs Grove Residential Subdivision)
Town of Goshen, Orange County, New York

Prepared For:

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July 8, 2009

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1.0 INTRODUCTION

At the request of the Town of Goshen Planning Board (the "Town") and as directed by the Project Sponsors, North Country Ecological Services, Inc. (NCES) conducted an ecological investigation of a 354.01± acre property known as "Youngs Grove" (the "Site") in order to complete a Biodiversity Study for the Site. The biodiversity study was completed in order to obtain data relative to the existing flora and fauna communities found on the property as well as to document the current ecological conditions present. The Biodiversity Study encompassed the Site and references other properties that are located within the same watershed and that are associated with "Significant Biodiversity Areas" and "Biodiversity Hubs", as defined within the *Southern Wallkill Biodiversity Plan* (SWBP).

The SWBP was directly utilized in the preparation of the Biodiversity Study for the Site. Based on the information presented within the SWBP, it has been determined that the Site, while not physically part of Purgatory Swamp complex, is contained within the "Purgatory Swamp Significant Biodiversity Area" and associated "Biodiversity Hub" (Figure 1). As a result, the Site has been identified as being of ecological importance as it contains natural habitats that can support high biodiversity and high species richness. The SWBP suggests that the lands within and directly connected to the significant biodiversity area requires enhanced conservation measures to promote ecological diversity within the Town of Goshen, Orange County, New York.

As a result, prior to any development practices, the Town has requested that the existing ecological character of the Site and adjacent properties within the Significant Biodiversity Area/Hub be reviewed to provide a baseline of information required to assess the existing condition of the property, the quality of habitats identified and the biological integrity of the indigenous flora and fauna inhabiting the Site. The information provided by the Biodiversity Study will be utilized to determine potential mitigative measures to be implemented into the design of the proposed development to promote best conservation/development practices.

2.0 SITE DESCRIPTION

The Site is located along Craigville Road, approximately 2,000 feet to the east of the intersection of Craigville Road and Knoell Road in Town of Goshen, Orange County, New York (Figure 2). The centralized Site coordinates are 41° 23' 20.5" N latitude and 74° 16' 23.7" W longitude. Elevations on the Site range from 668± feet above mean sea level (msl), found on top of a ridge that is located in the southwest corner of the Site, to 380± feet above msl, found along a stream corridor located in the northwest corner of the Site, resulting in an elevation difference of 288± feet.

The Site is bisected by Craigville Road and approximately 252.88± acres (71%) of the Site is located to the south of Craigville Road and 101.13± acres (29%) are found to the north of Craigville Road. The portion of the Site located to the north of Craigville Road is separated into two parcels by Ridge Road. Approximately 57.32± acres are found to the west of Ridge Road and 43.81± acres are located to the east of Ridge Road.

The Site can be generally characterized as abandoned, undeveloped, forested land. Remnant foundations and associated structures/debris from an original farmstead was found on the property. An old roadway, leading from Johnson Road to the farmstead was also identified. Other signs of previous farming activities such as remnant barbed wire fencing and stonewalls also were observed on the property. The only recent development or activity to occur on the subject property includes the installation of several water wells, which were used during the hydrological evaluation of the proposed development.

3.0 EXISTING CONDITIONS

3.1 Existing Ecological Communities

The Site is comprised of the following ecological communities and habitat types as described in the *Ecological Communities of New York State* (Edinger, 2002):

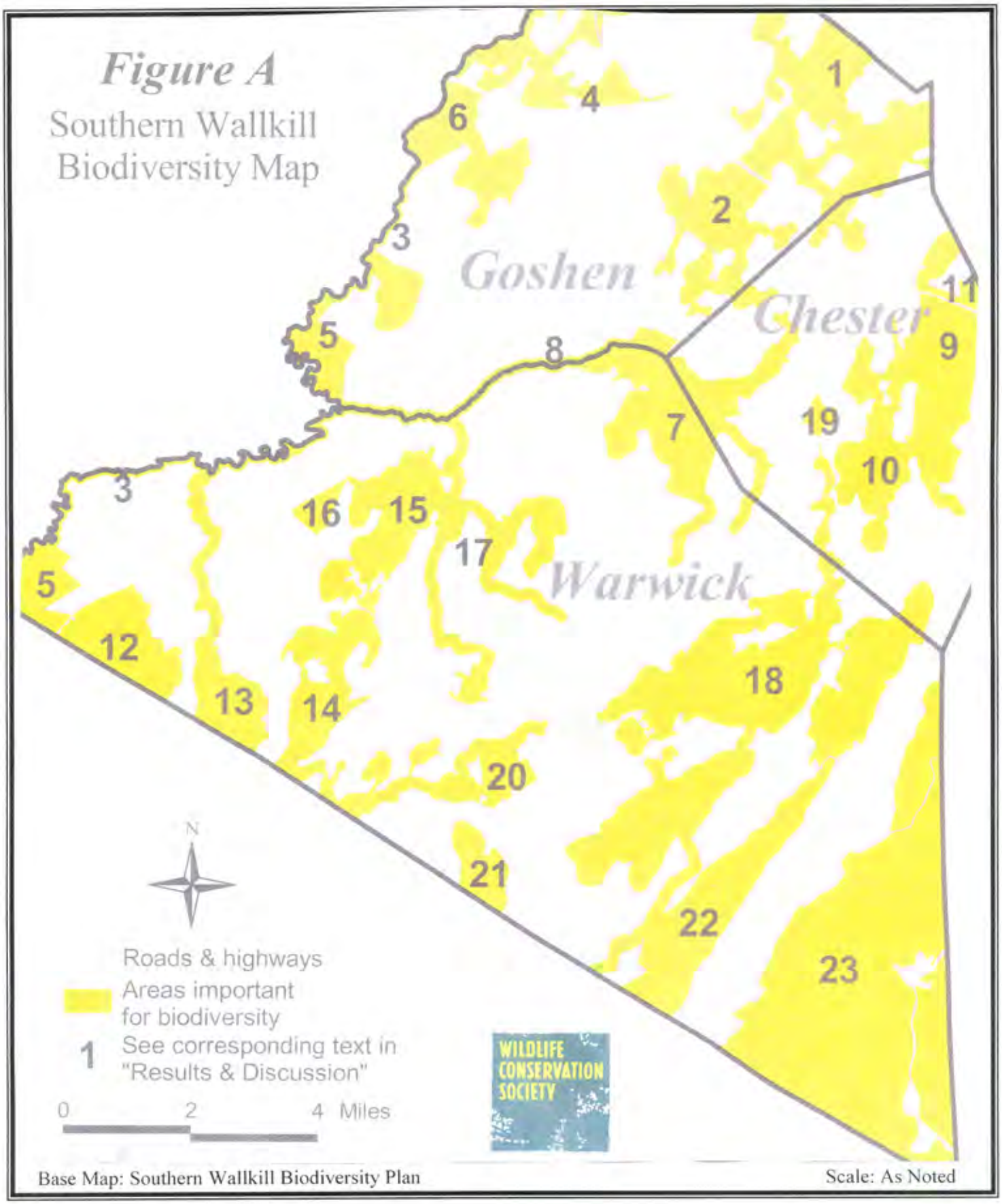

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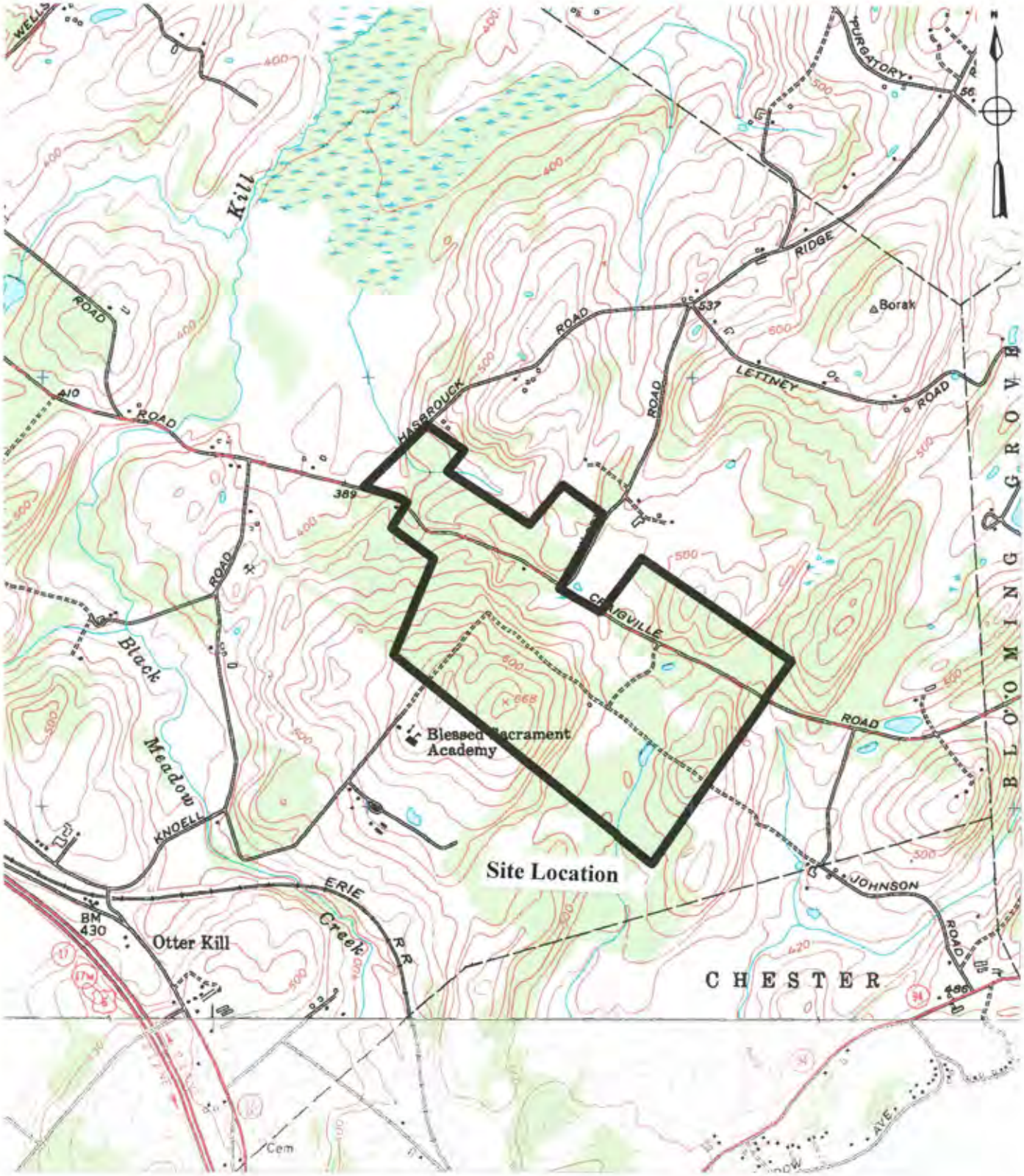
FIGURE 1- Significant Biodiversity Areas



Base Map: USGS Goshen 7.5' Quadrangle, Orange County, NY.

Scale: 1" = 2,000'

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FIGURE 2 Site Location Map

- Rocky headwater stream;
- Intermittent stream;
- Farm pond;
- Oak-tulip tree forest;
- Beech-maple mesic forest;
- Successional southern hardwoods;
- Successional northern hardwoods; and,
- unpaved road

In addition, due to a lack of description of community types within *Ecological Communities of New York State* and what was observed and documented during the field reviews, NCES also utilized information presented within the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, 1979) and identified the following wetland community types on the Site:

- Palustrine forested wetland;
- Palustrine scrub-shrub wetland; and,
- Palustrine emergent wetland.

The location and configuration of the individual ecological community types identified during the Site investigation are shown on the drawing entitled "Ecological Community and Habitat Types - " that is contained in Appendix A. The location and configuration of the regulated wetlands and watercourses identified on the Site are shown on the wetland delineation map titled "Wetland Delineation Map – Youngs Grove", that is contained in Appendix B. Both of these drawings have been prepared by Esposito and Associates. The overall extent of the individual ecological community types identified on the Site is detailed in Table 1 below.

Table 1

Existing Ecological Community Types

Ecological Community Type	Extent in Acres	Percentage of the Site
Rocky Headwater Stream	0.91± acres	0.20± %
Intermittent Stream	1.57± acres	0.44± %
Farm Pond	1.10± acres	0.31± %
Oak-Tulip Tree Forest	55.19± acres	15.4± %
Beech-Maple Mesic Forest	33.65± acres	9.50± %
Successional Southern Hardwoods	129.97± acres	38.7± %
Successional Northern Hardwoods	65.38± acres	18.4± %
Un-paved Gravel Road	5.20± acres	1.46± %
Palustrine Forested Wetland	49.35± acres	13.9± %
Palustrine Scrub-Shrub Wetland	8.38± acres	2.30± %
Palustrine Emergent Wetland	3.31± acres	0.90± %
Totals for Site	**354.01 ± acres**	**100.0 %**

The forested uplands comprise the largest habitat type on the Site. A total of four (4) separate ecological community types, encompassing 282.39± comprise the forested uplands on the property. Therefore, approximately 80% of the property currently exists as a form of forested upland. These forested uplands are located on knolls and ridges that extend throughout all portions of the property. The forested areas are not pristine in nature and most area exhibit indication of previous agricultural usage of the property.

The Successional Southern Hardwoods and the Successional Northern Hardwoods exist in areas that were previously cleared for agricultural uses and are composed of early to mid-successional species of trees and shrubs that are typical previously cleared/farmed areas. The other forested areas have been historically logged and managed for timber and/or firewood. Several abandoned gravel/dirt roads extend through the forested areas on the Site. The gravel roads lead to a dilapidated homestead that existed within the southwest corner of the Site.

The Palustrine wetland communities are contained within natural drainage corridors and located in natural depressions that are found interspersed among the forested uplands. These wetlands are predominantly comprised of a forested cover type (80%) and the majority of the wetlands are located in areas that are to wet to have been historically farmed. However, given the location of some of the remnant barbed wire fencing, portions of the wetlands may have been utilized as pasture. Two separate portions of wetlands were impounded to create farm ponds for previous agricultural purposes. Old wood, stone and earthen dams were identified on the property. By blocking the natural flow of water through the wetlands, the ponds were created.

Three separate streams were identified on the Site. One stream is a perennial tributary that is classified as a "Rocky headwater Stream" and is located along Craigville Road. This stream undulates along Craigville Road and as a result, portions of it are located to the north and south of the roadway. This stream is a second order tributary of Purgatory Swamp, which is hydrologically contiguous with the Otter Kill and Black Meadow Creek. This stream possesses flowing water year round and, with the exception of the open water farm ponds, is the only source of exposed water on the property, year round.

The other streams identified on the property are intermittent and/or ephemeral tributaries of the aforementioned perennial stream. These streams are located on the portion of the Site that is found to the south of Craigville road and both flow northward and directly into the perennial tributary. Based upon the observations during the independent site visits, it has been determined that these streams only possess flowing water during spring thaw and after heavy precipitation events. All of the streams are subject to heavy velocities during spring thaw and therefore periodically "wash-out" during flooded conditions. As a result the streams do not provide any stable aquatic wildlife habitat.

3.2 Regulated Wetlands and Streams

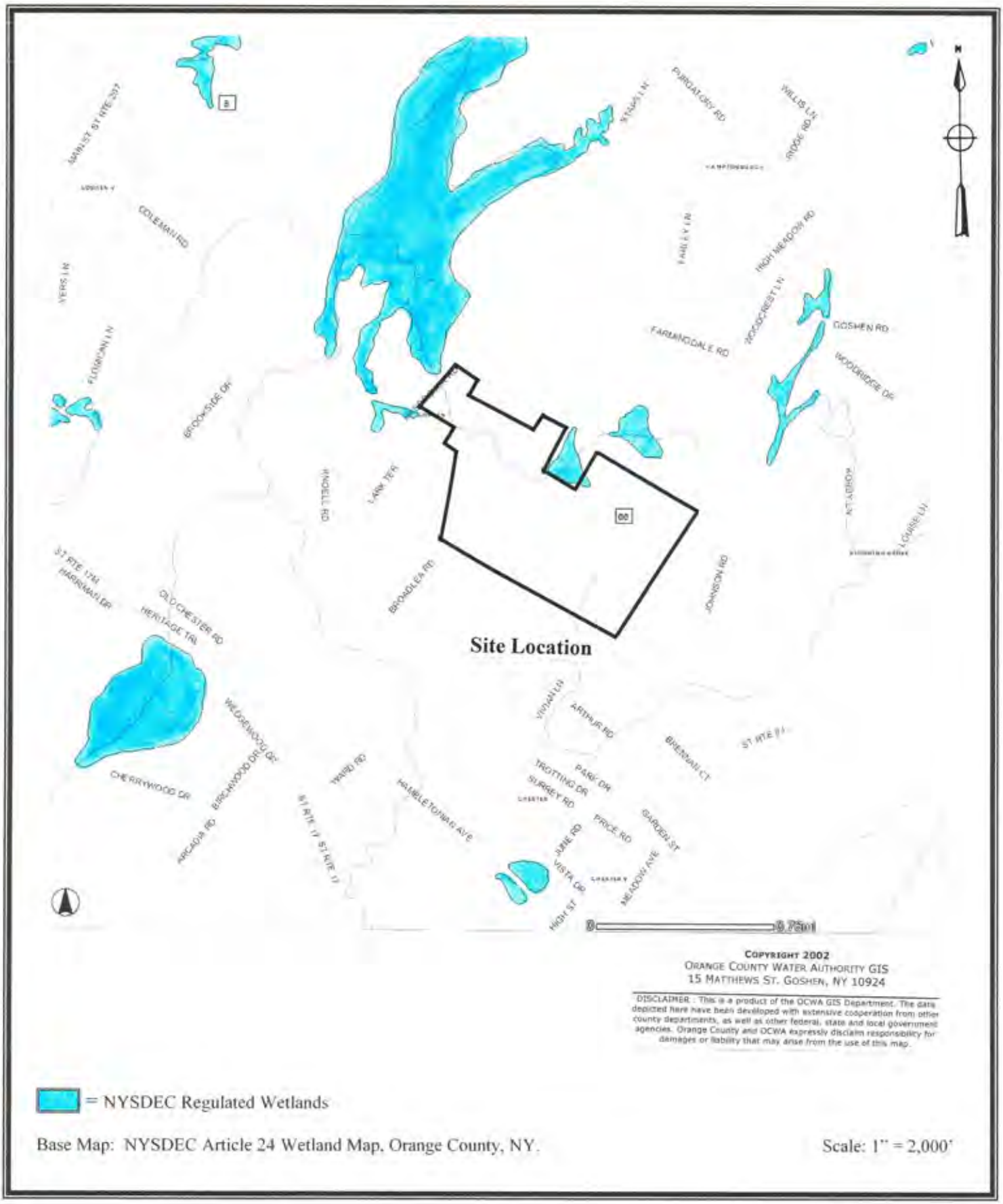
The wetlands and watercourses on the Site were delineated by Robert Torgersen prior to the reviews conducted by NCES. These wetlands and watercourses identified were

subsequently surveyed by Pietrzak and Pfau, PLLC. A cumulative total of 62.14 acres of wetland and defined streams were identified on the property. During the ecological review, NCES reviewed the wetlands and watercourses that were identified and determined that each of the areas that were delineated are physically and/or hydrologically connected with tributary systems of a navigable waterway. As a result, they are all regulated by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act.

NCES also reviewed information contained within the New York State Department of Environmental Conservation (DEC) Environmental Resource Mapper and subsequently determined that a portion of the wetlands identified are contiguous with and part of Freshwater Wetland GO-37 (Figure 3). As a result, these wetlands and the associated 100 foot adjacent areas are regulated by the DEC pursuant to Article 24 of the Environmental Conservation Law. Additionally, based on the information presented by the Environmental Resource Mapper, it has been determined that the perennial tributary that is located along Craigville Road is classified by the DEC as a Class C regulated stream.

3.3 Soils

The soils on the Site were reviewed in the field and through the USDA Soil Survey for Orange County, New York (the "Soil Survey"). According to the Soil Survey, there are six (6) soil series on the Site. The soils are: Alden silt loam (Ab); Erie gravelly silt loam, with 3 to 8 percent slopes (ErB); Hollis soils, moderately steep (HoD); Madalin silt loam (Ma); Mardin gravelly silt loam, with 3 to 25 percent slopes (MdB, MdC & MdD) and, Mardin soils, steep (MNE) (Figure 4). The Madalin soil series is categorized as being comprised of a limestone or calcareous soil complex. Calcareous soil types are often associated with rare and/or sensitive species of flora and fauna. Each of the mapped soil types were confirmed by NCES during the field review.



= NYSDEC Regulated Wetlands

Base Map: NYSDEC Article 24 Wetland Map, Orange County, NY.

Scale: 1" = 2,000'

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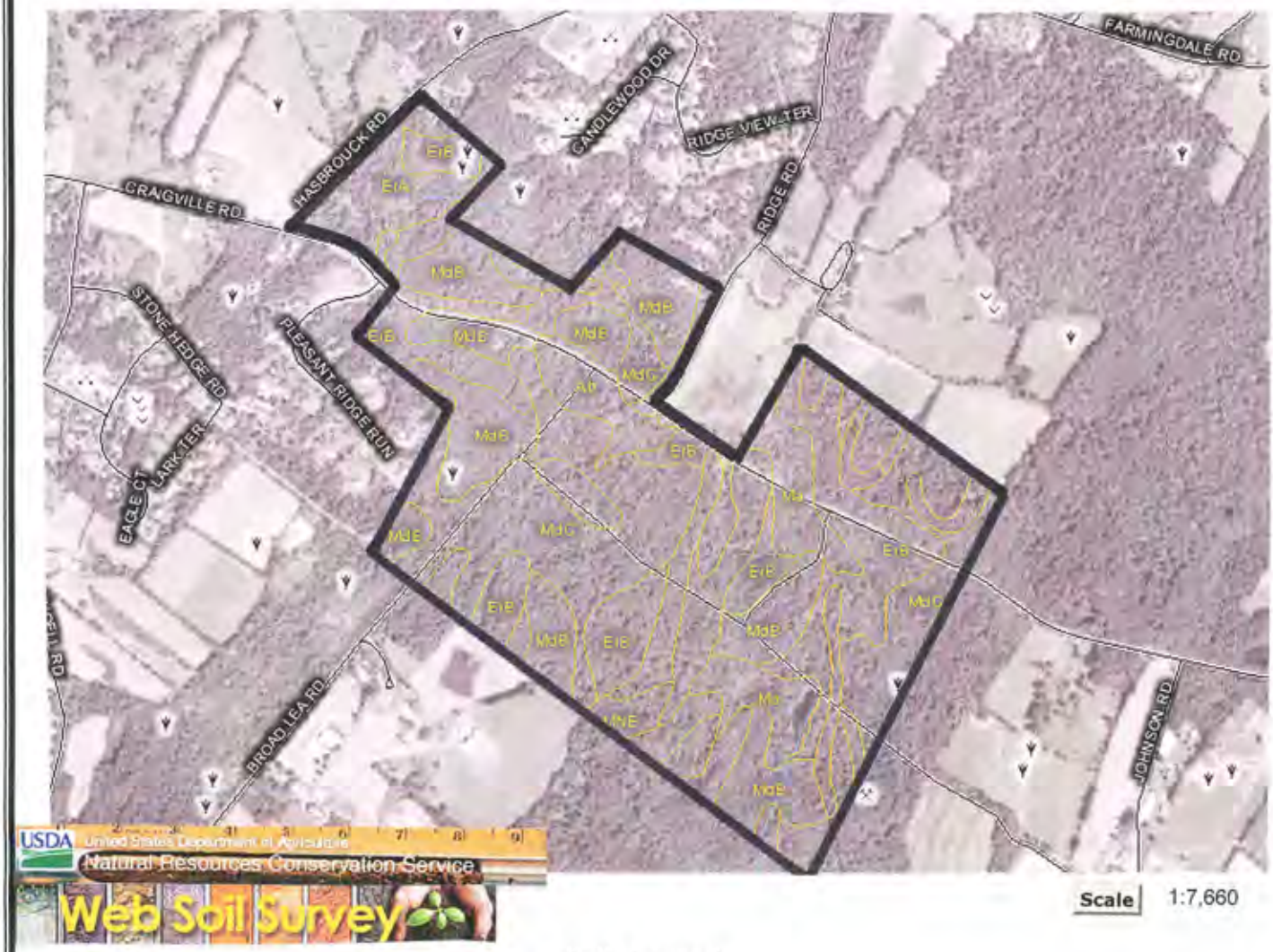
FIGURE 3 DEC WETLANDS



Soils Legend

Ab	–	Alden silt loam, 0 to 3 percent slopes
BnB	–	Bath-Nassau channery silt loam, 3 to 8 percent slopes
ErA	–	Erie gravelly silt loam, 0 to 3 percent slopes
ErB	–	Erie gravelly silt loam, 3 to 8 percent slopes
ESB	–	Erie extremely stony soils, gently sloping
HoD	–	Hoosic gravelly sandy loam, 18 to 25 percent slopes
Ma	–	Madalin silt loam
MdB	–	Mardin gravelly silt loam, 3 to 8 percent slopes
MdC	–	Mardin gravelly silt loam, 8 to 15 percent slopes
MdC	–	Mardin gravelly silt loam, 15 to 25 percent slopes
MNE	–	Mardin soils, steep

Base Map: NRCS Web Soil Survey 2.0 – Orange County, N.Y. Scale: As Noted

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FIGURE 4 SOIL SURVEY MAP

3.4 Vegetation

During the ecological investigation, NCES identified nine (9) different ecological communities on the Site. The ecological communities identified include, Rocky headwater stream, Intermittent Stream, Farm pond, Palustrine forested wetland, Palustrine scrub-shrub wetland, Palustrine emergent wetland, Oak-tulip tree forest, Beech-maple mesic forest and Successional southern hardwoods. All of the ecological community types, with the exception of the Rocky headwater stream and Intermittent stream possessed vegetative cover types within them. The streams identified on the Site do not possess vegetation within their defined bed and banks.

The Farm pond exists as a shallow open body of water that possesses a Palustrine forested, scrub-shrub and emergent wetland fringe. In addition, the pond also contains some submergent aquatic plant species within the littoral zone. Some of the dominant species of vegetation identified within and immediately adjacent to the Farm pond includes, but is not limited to, coontail (*Ceratophyllum demersum*), duck weed (*Lemna minor*) reed canary grass (*Phalaris arundinacea*), fowl manna grass (*Glyceria striata*), jewelweed (*Impatiens capensis*), tussock sedge (*Carex stricta*), sensitive fern (*Onoclea sensibilis*) silky dogwood (*Cornus amomum*), gray birch (*Betula populifolia*), Red Maple (*Acer rubrum*), green Ash (*Fraxinus pennsylvanica*) and American elm (*Ulmus americana*).

Some of the dominant species of vegetation observed within the Palustrine forested wetlands included, but are not limited to, red maple, green ash, American elm, pin oak (*Quercus palustris*), gray birch, gray dogwood (*Cornus racemosa*), silky dogwood tussock sedge, sensitive fern, royal fern (*Osmunda regalis*), skunk cabbage (*Symplocarpus foetidus*), fowl manna grass, lakebank sedge (*Carex lacustris*), brome-like sedge (*Carex bromoides*) and jewelweed.

Some of the dominant species of vegetation observed within the Palustrine scrub-shrub wetlands included, but are not limited to, gray dogwood, silky dogwood, arrowwood (*Viburnum dentatum*), highbush blueberry (*Vaccinium corymbosum*), spicebush (*Lindera benzoin*), nannyberry (*Viburnum lentago*), speckled alder (*Alnus rugosa*), winterberry (*Ilex verticillata*), pussy willow (*Salix discolor*), witch hazel (*Hamamelis virginiana*), agrimony (*Agrimonia parviflora*), sensitive fern, tussock sedge, brome-like sedge, fowl manna grass, purple loosestrife (*Lythrum salicaria*) and jewelweed.

Some of the dominant species of vegetation observed within the emergent wetlands included, but are not limited to, reed canary grass, cattails (*Typha latifolia*), purple loosestrife, soft rush (*Juncus effusus*), willow herb (*Epilobium* spp.) foxtail sedge (*Carex vulpinoidea*), new england aster (*Aster novae-angliae*), meadowsweet (*Spirea latifolia*), smartweed (*Polygonum amphibium*), tearthumb (*Polygonum sagittatum*), lakebank sedge, brome-like sedge, tussock sedge, skunk cabbage, bur-reed (*Sparganium* spp.), sensitive fern, dark green bulrush (*Scirpus atrovirens*), wool grass (*Scirpus cyperinus*), and beggars ticks (*Bidens tripartita*).

Some of the dominant species of vegetation observed in the Oak-tulip tree forest included, but are not limited to, northern red oak (*Quercus rubra*), white oak (*Quercus alba*), tulip tree (*Liriodendron tulipifera*), sugar maple (*Acer Saccharum*), black cherry (*Prunus serotina*), white ash (*Fraxinus pennsylvanica*), black walnut (*Juglans nigra*), multiflora rose (*Rosa multiflora*), maple-leaved viburnum (*Viburnum acerifolium*) virginia creeper (*Parthenocissus quinquefolia*), poison *ivy (Rhus radicans), common blue violet (Viola sororia),* New York fern *(Thelypteris noveboracensis*), and garlic mustard (*Alliaria officinalis*).

Some of the dominant species of vegetation observed within the Beech-maple mesic forest included, but are not limited to, sugar maple, black cherry, american beech, white ash (*Fraxinus americana*), hop hornbeam (*Oystra virginiana*), hornbeam (*Carpinus caroliniana*), Christmas fern (*Polystichum agrostichoides*), may apple (*Podophyllum peltatum*), virginia creeper, and common blue violet.

Some of the dominant species of vegetation observed within the Successional southern hardwoods included, but are not limited to, northern red oak, sugar maple, black cherry, red maple, red cedar (*Juniperus virginiana*), buckthorn (*Rhamnus cathartica*), honeysuckle (*Lonicera tatarica*), multiflora rose, Japanese barberry (*Berberis thunbergii*), poison ivy, garlic mustard and virginia creeper.

3.5 Hydrology

Based upon the hydrological analysis completed for the Site, it has been determined that the Site is comprised of three "sub-regional" watersheds. The Site is divided into the three sub-regional watersheds as outlined below:

- Otter kill/Purgatory Swamp Watershed – Approximately 242± acres of the property (68%) drains directly into the Otter Kill and/or Purgatory Swamp.
- Cromline Creek Watershed – Approximately 109± acres of the property (30%) drains into Cromline Creek.
- Black Meadow Creek Watershed – Approximately 3± acres of the property (02%) drains into Black Meadow Creek

All of the wetlands identified on the Site physically abut intermittent and or perennial stream channels that are hydrologically connected to a tributary system of Purgatory Swamp and the Otter Kill.

Typically, on-site drainage is to the north and west, from the forested uplands into the natural drainage corridors and adjacent depressional wetlands. Water flows, via surface water runoff and from groundwater discharges into the defined stream channels. Each of the intermittent stream channels converge with the perennial stream near Craigville Road. The perennial stream flows to the northwest and directly into Purgatory Swamp. Purgatory Swamp is located approximately 2.0 miles west of the Site.

3.6 Ecological Connectivity

The Site possesses large areas of contiguous forested upland and undeveloped wetland communities that are physically connected with one another and which create a diverse habitat complex. The lack of development on the Site, other than previous agricultural uses, has resulted in the formation of contiguous habitat that is utilized by a variety of wildlife species. The on-site habitats are also both physically and hydrologically connected with the Purgatory Swamp Significant Biodiversity Area.

The habitats identified on the Site are bisected by Craigville and Ridge Roads, however, other undeveloped lands that form a distinctive habitat corridor between the Site and Purgatory Swamp were identified within the SWBP. These other lands are located immediately northwest of the property, extend between the Site and Purgatory Swamp, and are also bisected by existing Town roads. The off-site corridors are comprised of undeveloped forested uplands, riparian corridors and Palustrine wetland communities. As a result, it has been hypothesized by the SWBP that the ecological community types that are physically connected with significant biodiversity areas may be utilized/inhabited by sensitive and/or rare species of flora and fauna.

4.0 PROJECT DESCRIPTION

The proposed action is the development of a cluster-type residential subdivision composed of single-family residences. The Preferred Plan includes the construction of 106 individual single-family detached residential homes. The proposed development entails the construction of paved roadways, the establishment of a stormwater control systems, and the installation of potable water and sanitary sewer utilities.

The conceptual layout of the subdivision, as well as the location and configuration of the proposed impact areas and conservation areas are shown on the drawings entitled "Youngs Grove – 106 Lot Disturbance Limits" dated on June, 2008 and are contained in Appendix C.

The proposed development utilizes only a portion of the available upland areas found within the boundaries of the Site. A "cluster-type" residential development has been designed in order to maximize the preservation of beneficial uplands and existing wetlands to the greatest extent practicable. An extensive 100 foot upland buffer has been established around each of the NYSDEC regulated wetlands. The Planning Board has asked the Project Sponsor to provide a 300 foot buffer around the environmental resources found at the northwest portion of the Site, near Hasbrouck Road.

A cumulative total of 254.29± acres (72%) of the Site, comprised of 66.35± acres of Palustrine wetlands and 187.94± acres undeveloped forested uplands will remain as "Open Space" post development. Additionally, the disturbance is anticipated to be limited to 51± acres, which will leave approximately 303± acres undisturbed and in it's current vegetative state, post-development.

5.0 ENDANGERED, THREATENED AND RARE SPECIES

An Endangered, Threatened and Rare flora and fauna species review was conducted after a formal consultation with the U.S. Fish and Wildlife Service (USFWS) and the New York State Department of Environmental Conservation Natural Heritage Office (DEC) had occurred. The USFWS and DEC were contacted to determine if any federally or state listed endangered, threatened or rare flora/fauna species and/or ecologically sensitive habitats are known to occur on, or within the immediate vicinity of the Site.

According to information obtained from the USFWS, as presented in a letter dated March 14, 2005, the Indiana Bat (*Myotis sodalis*) and the Bog Turtle (*Glyptemys muhlenbergii*) have the potential to exist on the Site based upon recently documented occurrences of these species within the vicinity of the Site. Specifically, the USFWS letter indicates that there are "known Indiana Bat roost trees within 5 miles of the Site; there is a known Indiana Bat hibernacula within 35 miles of the Site; and, there are known Bog Turtle areas that are found less than 10 miles from the Site".

Since the letter obtained from the USFWS is over a year old, NCES also consulted the USFWS website for information regarding the potential for endangered, threatened or rare species within the project's general geographic location. Based on the information contained on the website, the Bald Eagle (*Haliaeetus leucocephalus*), Bog Turtle, Indiana Bat, Shortnose and Atlantic Sturgeon (*Acipenser brevirostrum and Acipenser oxyrinchus*) and the Dwarf Wedge Mussel (*Alasmidonta heterodon*) have the potential to be found on or in the vicinity of the Site. The speculated presence of the Bald Eagle, Shortnose and Atlantic Sturgeon and the Dwarf Wedge Mussel are recognized by the USFWS based upon historically recorded occurrences of the species within the entire extent of Orange County, New York.

The response obtained from DEC Natural Heritage Office (dated March 1, 2005) indicated that the Natural Heritage Database did not possess any "records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats on, or within the immediate vicinity of the site." As a result, the DEC did not provide any information regarding the presence of any endangered, threatened or rare flora/fauna species and or significant ecological habitats. However, the DEC correspondence also states that "the lack of recorded occurrences does not preclude the site from being reviewed for un-known populations of rare or state listed species."

Since the information from the DEC was also over a year old, NCES also reviewed information contained within the DEC's on-line Environmental Resource Mapper program to obtain up-to-date information relative to state-listed species. According to the ERM, no endangered, threatened or species of special concern are known to exist on the Site. The correspondences with the USFWS and DEC, as well as a copy of the information obtained from their websites, are contained in Appendix D.

Subsequent to the information received from the USFWS and the DEC, NCES visited the subject property on separate occasions and conducted field reviews to identify the existing community structure of the Site and to determine if any of the species (or habitats conducive to their existence) referenced by the USFWS and DEC could

potentially exist on the Site. In addition, NCES also reviewed the Site for the potential presence of other endangered, threatened or rare flora/fauna species or supportive habitats that were not referenced within the USFWS and DEC correspondences. The various site reviews were conducted from October 20, 2005, through June 8, 2008.

Separate Site inspections were conducted during different times of the year and at various times of the day to increase survey times and the likelihood of determining if any of the species identified by the agencies, or any other rare species and/or supportive habitats not referenced by the USFWS and DEC, are present. The surveys were conducted during various times of the year to ensure that the Site was reviewed during adequate seasons when certain species are most readily identifiable. The surveys were conducted during spring, summer and fall months to comply with general survey protocols.

5.1 Survey Methodology

To facilitate the endangered/threatened species review, a literature search was first conducted by NCES by contacting the DEC and the USFWS for known records of species and community type occurrence. NCES also reviewed the Soil Survey, USGS topographic mapping and other known/reliable technical sources of information to establish an anticipated general sense of the types of communities and species that could occur at the Site. Based upon the results of the literature review, an on-site field review for the agency referenced species and community types could be undertaken.

The field review entailed an on-site field inspection of the entire Site, not just the area of development, as well as the adjacent lands that immediately border it. A total of 65 man-hours were enlisted by NCES in reviewing the Site specifically for the endangered and threatened species. In addition, approximately 98 other man-hours were spent on-site reviewing the wetland delineation and conducting a tree survey. General species reviews were also conducted concurrently with the delineation review and tree survey. To conduct the review, NCES walked the entire property searching for suitable habitats and presence of rare species. NCES utilized visual encounter, cover object search and

call/response survey methodologies. During the review, the vegetative species were recorded and photographs were taken to document the existing conditions and vegetative community types. Photographs taken during the review are contained in Appendix E.

During the field reviews, NCES recorded the community types and the species of flora and fauna that were identified. Species were identified visually, by vocalization, or by physical remains (tracks, scat, fur, feathers, bones, etc.) A list of the species identified/observed on the property is contained in Appendix F. The species list only defines those species that were identified by NCES during the Site visits. Any apparent lack of individual species accounts with regard to amphibians, reptiles, songbirds, and herbaceous vegetation may be attributed to the time of year when the Site reviews were conducted. The resumes of the biologists that conducted the field reviews are contained in Appendix G.

6.0 SPECIES SPECIFIC REVIEWS

The following sub-sections provide specific habitat assessments of those species that were identified by the USFWS as having been historically recorded within Orange County, New York, and thus having the potential to be found on the Site. A lack of endangered, threatened or rare species reference within these sub-sections does not preclude those species from having the potential to exist at the Site.

6.1 Bald Eagle Habitat Assessment

The Bald Eagle was recently removed from the Endangered and Threatened Species List by the USFWS. However, at the request of the agencies for all projects, NCES conducted a general assessment for potential Bald Eagle habitat and visually searched for eagles utilizing the information presented in the U.S. Fish and Wildlife Service's "Northern States Bald Eagle Recovery Plan" (Grier et. al., 1983) (the "Recovery Plan") and Bald Eagle Management Guidelines (BEMG). The Recovery Plan and BEMG

provide information and guidance regarding procedures and habitats to review and techniques to avoid impact to potential habitat. The purpose of the general habitat assessment was to document whether or not suitable habitat exists on the Site that could be utilized by Bald Eagles.

According to the Recovery Plan "essential" or "suitable" habitats are ecosystems that are identified as being conducive to nesting, perching, and foraging by Bald Eagles. If at any point during the habitat assessment Bald Eagles were observed or evidence of utilization (nesting, perching, foraging) of the Site by Bald Eagles was documented, it would be determined that suitable habitat exists and additional studies may be required.

Suitable nesting trees are typically located in areas with 30-50 percent canopy cover and Bald Eagles prefer tall living trees, often the tallest available for nesting (Ontario MNR, 1987). Eagles create large, easily recognizable stick nests, approximately five (5) feet in diameter that are typically found near the top of "super canopy" trees that are taller than the adjacent trees surrounding it (Andrew & Mosher, 1982). Given that paired Bald Eagles are monogamous and mate for life, they often utilize the same nest year after year and some nests may be up to nine (9) feet in diameter and weigh as much as two (2) tons (baldeagleinfo.com, Internet). Bald Eagle nests are also found in areas associated with low human disturbance, suitable forest structure, and abundant prey (Fraser et. al., 1985).

Because fish are the most important prey for Bald Eagles, nests are typically located immediately adjacent to, or along the banks of, open bodies of water where prey species are readily available (Livingston et. al., 1990). Supporting research conducted by the Ontario MNR also revealed that Bald Eagles require large expanses of mixed or deciduous forest around the shores of larger rivers and lakes. Perch sites are also associated with open water.

A perch site is defined as a tree or series of trees possessing an open canopy that offer a clear approach from all directions, and that are adjacent to open bodies of water (Ontario MNR, 1987). Perch sites are often found within 1.5 km of active nest sites (Livingston et. al., 1990). Mainly perch sites are used for foraging practices (Andrew and Mosher,

1982), however, Eagles will utilize other tall, dead, partially dead, or living trees near the nest for perching during rest (Ontario MNR, 1987).

Foraging habitat for the Bald Eagle is typically associated with lakes and rivers that support fish (Ontario MNR, 1987). The Recovery Plan also states that Bald Eagles are also known to be scavengers during winter months and as water bodies freeze over eagles may feast upon carrion and that carrion becomes a main portion of their diet.

Bald Eagle Habitat Assessment Results

During the assessment, no Bald Eagles or evidence of their historic utilization of the area was observed on, or adjacent to, the Site. NCES reviewed the property and adjacent lands for existing active or remnant abandoned Eagle and/or other birds-of-prey nests; potential perching sites; and, potential foraging habitat. No eagle nests or perching trees were identified. NCES also walked the extent of the edge habitat found adjacent to the forested areas in search of large trees that could potentially be categorized as suitable nesting sites for Bald Eagles. As a result, no suitable nesting trees were observed.

No open water bodies, suitable for use by Bald Eagles were identified within the boundaries of the Site. While several intermittent streams and an area of ponded water are located within the boundaries of the Site, these water bodies are not typical of, nor are they considered as a preferred foraging area for Bald Eagles. These water bodies are small; possess relatively shallow water (< 3 feet); and do not support a population of large fish. Therefore, it has been determined that no foraging habitat exists on or immediately adjacent to the Site. Given the lack of nesting, perching and foraging habitats on or adjacent to the Site, it is highly unlikely that Bald Eagles would inhabit or utilize the Site.

6.2 Bog Turtle Phase 1 Habitat Assessment:

NCES completed the assessment for potential Bog Turtle habitat following the guidelines presented in Appendix B – *Guidelines for Bog Turtle Surveys* (last revised April 2006) contained within the U.S. Fish and Wildlife Services "Bog Turtle Northern Population Recovery Plan" (Klemens, 2001) (the "BTNPRP"). According to the BTNPRP, potential and suitable habitat for Bog Turtles includes Palustrine emergent or scrub-shrub wetlands that contain a relatively open canopy, and the following three criteria:

1) Suitable hydrology – characterized as "…Typically spring fed with shallow surface water or saturated soils present year round…", "interspersed with dry and wet pockets…", "…sub-surface flow", and "…shallow rivulets (less than 4 inches deep) or pseudo rivulets are often present."

2) Suitable soils – characterized as "… a bottom substrate of permanently saturated organic or mineral soils." "These are often soft, mucky-like soils; you will usually sink to your ankles (3-5 inches) or deeper in muck, although in degraded wetlands or summers of dry years this may be limited to areas near spring heads or drainage ditches." "In some portions of the species range, the soft substrate consists of scattered pockets of peat instead of muck."

3) Suitable vegetation – characterized as "dominant vegetation of low grasses and sedges (in emergent wetlands), often with a scrub shrub component." "Common emergent vegetation includes, but is not limited to tussock sedge (*Carex stricta*), soft rush (*Juncus effusus*), rice cut grass (*Leersia oryzoides*), sensitive fern (*Onoclea sensibilis*), tearthumb (*Polygonum* spp.), jewelweed (*Impatiens capensis*), arrowheads (*Sagittaria* spp.), skunk cabbage (*Symplocarpus foetidus*), panic grasses (*Panicum* spp.), other sedges (*Carex* spp.), spike rushes (*Eleocharis* spp.), grass-of-Parnassus (*Parnassia glauca*), shrubby cinquefoil (*Dasiphora fruticosa*), sweet flag (*Acorus calamus*), and in disturbed sites, reed canary grass (*Phalaris arundinacea*) and purple loosestrife (*Lythrum salicaria*)." Common scrub-shrub species include alder (*Alnus* spp.), red maple (*Acer rubrum*), willow (*Salix* spp), tamarack (*Larix laricina*), and in disturbed sites, multiflora rose (*Rosa multiflora*). "Some forested wetland habitats are suitable given hydrology, soils, and/or historic land use. These include red maple, tamarack, and cedar swamps."

Bog Turtle Phase 1 Habitat Assessment Results

During the assessment, NCES traversed the entire Site and reviewed each of the wetlands. Based on the results of the review, NCES retained the assistance of Mr. Jason Tesauro, of J. Tesauro Ecological Consulting to assist in the investigation for potential/suitable Bog Turtle habitat and other amphibian and reptile species. The field survey concluded that due to the lack of key habitat requirements such as: open-canopied, emergent wetland with a prevalence of grasses, sedges and mosses; soft "mucky" soils; and shallow, spring fed, slow moving water, the majority of the on-site and bordering wetlands are considered unsuitable habitat for Bog Turtles.

However, three small discrete emergent wetlands were identified that do possess all three criteria to be categorized as "potential" Bog Turtle habitat. These areas have been identified as Areas A, B, and C. Area A is located within an emergent wet meadow that is found within the interior of the wetland complex located adjacent to Hasbrouck Road. Area B is a drained farm pond that is found in the westernmost portion of the wetland complex found to the south of Craigville Road. Area C is located within an emergent/shrub wet meadow that is located near the center of the Site, also south of Craigville Road. Approximately 0.75± acres of potential Bog Turtle habitat was identified.

In light of the fact that potential Bog Turtle habitat was identified on the Site, NCES initiated a Phase II Presence/Absence study for Bog Turtles. The purpose of the Phase II study is to determine if Bog Turtles are present within the potential habitats identified. NCES coordinated with Mr. Tesauro and conducted the Phase 2 Survey following the USFWS updated "Guidelines for Bog Turtle Surveys", last revised April 2006, which amended the previous guidelines contained in Appendix A of the "Bog Turtle, Northern Population, Recovery Plan", dated May 15, 2001 (Klemens, 2001) (the "Recovery Plan").

During the Phase II survey, NCES and Mr. Tesauro only included wetland areas B and C in the survey efforts. A 300' buffer was placed on the wetland complex by the Planning Board as a protective measure since it is the closest wetland to the Purgatory Swamp Significant Biodiversity Areas. Since Wetland A's proximal distance from the proposed development is more than 300 feet, based on the Recovery Plan guidelines, Wetland Area A did not require review during the Phase II evaluation. In accordance with State protocols and the Recovery Plan, the Phase 2 Surveys were conducted on four separate dates, two (2) were held in May of 2008 and two (2) were held in June of 2008. The individual survey dates were: April 15, 2008; May 7, 2008; May 30, 2008; and June 8, 2008.

During the Phase 2 Survey, three (3) biologists (two (2) representatives from NCES and Mr. Tesauro) spent a minimum of two (2) man-hours per survey systematically searching the wetland areas for individual Bog Turtles. As directed by the Recovery Plan and revised Guidelines for Bog Turtle Surveys, four (4) separate surveys were conducted on four (4) different dates to effectively review the potential habitat and enhance the opportunity to locate individual turtles and/or nesting sites. During each of the Phase 2 Surveys, each of the biologists traversed the wetlands and visually searched for basking turtles, transient turtles or turtle nests. The biologists also searched all rivulets and travel corridors found within the wetland for moving or foraging turtles. All areas of "mucky" soils were also probed with a 1" diameter probe to locate submerged individuals.

Before and after each of the surveys, the time, ambient air temperature, weather conditions and species observed were recorded. The four (4) individual surveys were held on days when the ambient air temperature was at least 60 degrees at 9:00 am, skies were cloudless to partly cloudy, and no precipitation was forecast. The information collected during the individual surveys is outlined in the Table 2.

Table 2
Phase 2 Bog Turtle Survey Data

Date	4/15/2008	5/7/2008	5/30/2008	6/8/2008
Start Time	3:00pm	9:15am	11:00 am	12:50pm
Temperature	68° F	68° F	90º F	90º F
Cloud Cover	partly cloudy	none	partly cloudy	none
Wind Speed	< 5mph	< 5mph	5-10 mph	< 5mph
Precipitation	none	none	none	none
End Time	4:15pm	10:15am	12:15 pm	2:30pm
Temperature	69° F	70° F	93º F	91º F
Cloud Cover	partly cloudy	none	partly cloudy	none
Wind Speed	< 5mph	< 5mph	5-10 mph	< 5mph
Precipitation	none	none	none	none
Person Hours	3.75	3	3.75	4.5

During the Phase 2 Surveys, no Bog Turtles were found and only a few species of amphibians were observed. The species of amphibians observed included American Toad (*Bufo americanus*), Green Frog (*Rana clamitans*), Wood frog (Rana sylvatica), Bull Frog (*Rana catesbeiana*), Pickerel Frog (*Rana palustris*), Spring Peeper (*Pseudacris crucifer*), Spotted Salamander (*Ambystoma maculatum*) and Red-spotted Newt (*Notopthalmus viridescens*). Red Efts, the terrestrial stage of the Red-spotted Newt were also identified during the surveys.

In addition, a few species of reptiles were also observed during the phase II surveys. The species include, Common Snapping Turtle (*Chelydra serpentina*), Painted Turtle (*Chrysemys picta*) and Northern Water Snake (*Nerodia sipedon*). The turtle species and Northern Water snakes were not identified within the Bog Turtle habitats, but were observed on-site during the days when the surveys were completed. The individual species accounts, are listed in Table 3.

Table 3
Reptile and Amphibian Observation Data

Date	Reptiles	Amphibians
4/15/2008	Snapping Turtle, Painted Turtle, Northern Water Snake	Green Frog, Wood Frog, Spring Peeper, Bull Frog, Spotted Salamander Larvae
5/7/2008	None	Green Frog, Wood Frog, Spring Peeper, Spotted Salamander Larvae
5/30/2008	None	Green Frog American Toad, Wood Frog
6/8/2008	Northern Water Snake	Green Frog, American Toad, Wood Frog, Bull Frog, Pickerel Frog

Based on the overall characteristics of the wetlands reviewed, their state of natural succession and observances of fluctuation of water levels within them, it was concluded that the wetlands, while meeting criteria set forth in the Recovery Plan, are not likely to harbor a viable population of Bog Turtles. As the survey progressed, the hydrological input diminished the suitable Bog Turtle habitat to approximately ½ of what was initially assessed as potential habitat during the Phase 1 Habitat Survey. A separate Phase 1 Bog Turtle Habitat report and supplemental herpetological letter report of findings have been prepared by Mr. Tesauro and are contained within Appendix H.

6.3 Indiana Bat Habitat Assessment:

NCES reviewed the entire property in search of areas that meet the criteria for potential summer maternal roosting sites and suitable foraging habitat for the Indiana Bat. NCES also searched for any caves or mines that could be used as a potential winter hibernacula. NCES utilized the information obtained from the USFWS, including the "*Indiana Bat Project Review Fact Sheet*", which defines criteria of potential Indiana bat habitats, and outlines procedures to conduct the habitat analysis. The field evaluation was conducted following the recommended procedures outlined on the fact sheet.

According to the New York State Department of Environmental Conservation (DEC) and the USFWS, suitable, potential Indiana Bat summer roosting habitats are characterized as "…trees (dead, dying, or alive) or snags, greater than or equal to 5 inches in diameter at breast height (dbh), with exfoliating or defoliating bark, or containing cracks, crevices, or holes that could potentially be used by Indiana Bats as a roost". Maternal colonies "generally use trees greater than or equal to 9 inches dbh." In addition, "structure appears to be more important than a particular tree species or habitat type." It is also documented that due to the fact that roosting sites are "warmed by direct exposure to solar radiation, trees exposed to extended periods of direct sunlight are preferred over those in shaded areas."

Potential foraging habitat for the Indiana bat is defined as "…streams, associated floodplain forests, and impounded water bodies (ponds, wetlands, reservoirs)…" along with "canopies of upland forests, clearings with early successional vegetation, borders of croplands, along wooded fence rows, and over farm ponds in pastures". The USFWS also state that "while Indiana bats appear to forage in a wide variety of habitats, they seem to tend to stay close to tree cover" and that "Indiana bats may fly up to 2-5 miles from upland roosts" to forage and/or locate new roost sites.

Indiana Bat Habitat Assessment Summary

Based on the agency criteria for potential roosting sites, only trees greater than 5" dbh are of an age class that could provide characteristics that are preferred by Indiana Bats as summer roost sites. As a result, NCES focused the review for potential roosting trees within the forested upland and forested wetland habitats. These habitats are located in portions of the property that have not been farmed, and therefore the majority (80-85±%) of the trees found in these areas are greater than 5" dbh. Other mature trees are found along old stonewall, apparent old farm meadows and along the old farm road. These trees were also reviewed to determine if any possessed characteristics conducive to summer roosting/maternity sites for the Indiana Bat.

The dominant tree species identified in the forested uplands included: northern red oak, white oak, black cherry, sugar maple, red maple, white ash, and quaking aspen. The dominant trees observed within the forested wetlands included American elm, green ash, cottonwood, pin oak, swamp white oak and red maple. Of the trees that are larger than 5" dbh, most did not possess exfoliating/defoliating bark, cracks, crevices, or holes.

During the review, trees that are consistent with those described within the DEC criteria as potential roost trees were noted. These trees include shagbark hickory, dead red/white oak and wind/insect damaged sugar maples. In addition, some American elm and wind/insect damaged cottonwoods that possessed partially exfoliating bark, small cracks, and/or holes were found within the forested wetlands. Trees that met the criteria for potential roost sites were identified on both sides of Craigville Road.

Of the potential roosting trees, most are located along the north-facing slope of the upland ridge that extends along the southwestern Site boundary. These trees are located in areas that possess a dense canopy and therefore do not receive direct, prolonged periods of sunlight during spring and summer months. In light of the fact that these trees do not receive significant amounts of direct sunlight (solar radiation) from the sun, they are not consistent with conditions that are documented by the USFWS and DEC as preferred material roosting habitat. However, because they meet the general roost criteria, a few select trees may be utilized as a daily roosting site by individual bats.

Few potential roost trees are found on the portion of the Site positioned to the northeast of Craigville Road. However, these trees are positioned along south facing upland ridges that receive direct, prolonged solar radiation from the sun. As a result, these trees do meet the criteria to be categorized as potential summer maternal roost sites. Based upon the proposed development scenarios, the majority of these trees will not be impacted as a result of the construction of the residential subdivision.

Some of the trees found immediately adjacent to, and within, the forested wetlands also possessed exfoliating/defoliating bark, cracks, crevices, or holes. These include dead elms and physically damaged cottonwood or green ash trees. These trees are located in areas that do receive direct solar radiation and are found in semi-open canopies and adjacent to scrub-shrub and emergent wetlands. Due to their physical condition and location they meet the criteria to be classified as potential roost sites. Based upon the review of the Preliminary Subdivision Plans, none of these trees will be removed or disturbed as a result of the proposed action. No portion of the forested wetlands that contain potential roost trees are to be impacted and no development within 100 feet of the wetlands, with the exception of one road crossing, is to occur. Therefore, the trees that exhibit suitable characteristics for Indiana bats will be preserved post-development.

Potential foraging habitat was found throughout the Site and it includes: the canopy of the forested uplands and wetlands; over the early successional fields/emergent wetlands; and, within the edge habitat that borders the Site. Potential foraging areas consist of a variety of different habitats that are relatively common throughout the geographic region. Therefore, it should be noted that sufficient habitat exists in the vicinity of the Site that would sustain healthy populations of a variety of species of bats.

6.4 Shortnose and Atlantic Sturgeon Habitat Assessment

The Shortnose and Atlantic Sturgeon are listed as endangered species in New York State and the only recorded populations of these fish are known to occur within the tidal portions of the Hudson River (NYNHP, 2006). This portion of the Hudson River extends from New York Harbor to the Federal Dam at Troy (NYNHP, 2006). Sturgeon are found in rivers, tidal estuaries and marine environments and spawn in freshwater although they may also use salt water during periods of their lifespan (Kieffer and Kynard, 1993). Shortnosed Sturgeon generally spawn in upstream reaches of rivers (Jirka, 2006). Sturgeon also use portions of main channels that are deepwater habitats with significant current, and possess gravel, cobble or boulder substrates (Buckley and Kynard, 1985).

Sturgeon Habitat Assessment Results

During the review, NCES reviewed the Site for potential Sturgeon Habitat. No perennial streams or habitat conducive to Sturgeon was found on the Site. All streams that were observed were shallow, less than 2 feet wide, and intermittent in nature. None of them appeared to support any fish species. Given the complete lack of suitable habitat conducive to the existence of Sturgeon, it has been determined by NCES that it is highly unlikely that sturgeon exist within and/or utilize any aquatic habitats identified on the Site.

6.5 Dwarf Wedge Mussel Habitat Assessment

The Dwarf Wedge Mussel is listed as an endangered species by the USFWS and the DEC. The Dwarf Wedge Mussel is a species of mollusk that inhabits freshwater areas and it can be found in small creeks and/or large deep rivers (Gabriel 1995). These bivalves are typically located in stable streams/habitats that possess substrates ranging from mixed sand, pebbles, gravel, and or clay (Nedeau, 2006). In the southern portion of its range, these mussels may be imbedded in substrates under logs or root masses (Moser, 1993) and are known to burrow into firmer sand, gravel, or cobble substrates in the northern extremes of their range (Fichtel and Smith 1995). Typical habitat also possesses permanent running water where stream currents/velocities are usually slow to moderate (USFWS, 2004).

The only known population of these mussels, within New York State, exists within a 10 mile stretch of the Neversink River and portions of the Lower Delaware River system (DEC Fact Sheet, 2008). This population of Dwarf Wedge Mussels was identified in the 1990 as a result of ecological study being undertaken for the Natural Heritage Program (USFWS, 1993). Historically, the Dwarf Wedge Mussel was known to inhabit much of the Delaware River Basin (USFWS, 2004).

Dwarf Wedge Mussel Habitat Assessment Results

During the review NCES searched the Site for the presence of suitable habitat for Dwarf Wedge Mussels. As a result, it was determined that no potential habitat conducive to the existence of Dwarf Wedge Mussels exists at the Site. The streams identified on the Site are intermittent and/or ephemeral in nature and therefore periodically dry up during the summer months, pending the amounts of direct precipitation received. In addition, the Rocky heady water stream is subject to flash flooding and extremely high velocity currents during spring thaw and immediately after heavy precipitation events. As a result, it has been determined by NCES that it is highly un-likely that Dwarf Wedge Mussels exist within and/or utilize any of the aquatic habitats identified.

6.6 Northern Cricket Frog Habitat Assessment

The Northern Cricket Frog is listed by the DEC as a New York State Endangered species. The Northern Cricket Frog is not recognized by the USFWS on the Endangered/Threatened Species list, as it is widespread throughout the southern portion of its range. Southeastern New York, including the Hudson Highlands, and the Shawangunk region of Orange, Ulster and Dutchess Counties, is positioned at the northernmost extent of the current range of the Northern Cricket Frog (NYSNHP, 2007). Northern Cricket Frogs are typically observed between late March and early April and again through mid-October while migrating to and from its summer and winter range. Cricket Frogs are active at summer habitats from May through late August.

The Northern Cricket Frog inhabits open emergent wetlands found along the edges of permanent water sources such as ponds, bogs and lakes (Harding, 2000). They can also be found amongst emergent marsh-like vegetation located on sandy, gravelly or muddy bars and banks of small slow moving intermittent streams (Conant and Collins, 1998). In winter months, Northern Cricket Frogs burrow in mucky soils below the frost line (DEC, 2007). In New York, Northern Cricket Frogs are believed to over winter in terrestrial habitats found adjacent to summer aquatic sites (NYSNHP, 2007).

Recent studies have shown that known Northern Cricket Frog inhabitation sites have been altered by Beaver (*Castor canadensis*) activities (NYNHP, 2007). Recent studies have also shown declines in amounts of suitable habitat for Northern Cricket Frogs (DEC, 2007). The decline of suitable habitat can be attributed to the clearing and drainage of wetlands associated with development and farming practices, the spraying of DDT and other pesticides, contamination of wetland habitat from road salts and the introduction of predatory fish species that feed on Northern Cricket Frog eggs (DEC, 2007).

Northern Cricket Frog Habitat Assessment Results

During the habitat assessment, NCES identified a potential habitat that is suitable for the existence of Northern Cricket Frogs. This habitat includes the farm pond and adjacent Palustrine wetland habitats that exist immediately adjacent to it. In light of the fact that a habitat conducive to Northern Cricket Frogs was identified on the Site, NCES conducted additional separate early morning and late evening acoustic monitoring surveys to determine if Northern Cricket Frogs are found on the Site.

To complete the acoustic survey, NCES visited the Site on four (4) separate occasions and positioned biologists around the pond complex to listen for Northern Cricket Frog breeding call vocalizations. NCES also set up listening stations adjacent to the emergent wetland complex found at the intersection of Craigville and Ridge roads to determine if Northern Cricket Frog inhabited the suitable habitat (flooded wet meadow) found off-site to the. NCES also visited other known Northern Cricket Frog Habitat within Orange County, New York and documented that the Northern Cricket Frogs were actively calling at those locations. By knowing that the frogs were active in other locations, NCES assumed that, if Northern Cricket Frogs were found on or within the immediate vicinity of the Site, they would also be active and calling. The acoustic surveys were conducted on May 15, 2008, May 20, 2008; May 21, 2008; and June 8, 2008. The survey dates and times, as well as amphibians identified are detailed in Table 4.

Table 4
Northern Cricket Frog Survey Data

Date	5/15/2008	5/20/2008	5/21/2008	6/8/2008
Start Time	7:50pm	7:45pm	5:15 am	12:50pm
Temperature	68° F	74° F	60º F	90º F
Cloud Cover	partly cloudy	none	partly cloudy	none
Wind Speed	< 5mph	< 5mph	5-10 mph	< 5mph
Precipitation	none	none	none	none
End Time	8:45pm	8:30pm	8:30 am	2:30pm
Amphibians Present	Green Frog, Bull Frog, American Toad, Gray Tree Frog	Green Frog, Bull Frog, American Toad, Gray Tree Frog	Green Frog, Bull Frog, Gray Tree Frog	Green Frog, Bull Frog, Pickerel Frog, Gray Tree Frog

During the acoustic monitoring sessions and other visits to the Site, NCES did not observe or audibly hear Northern Cricket Frogs on or immediately adjacent to the Site.

The pond is suitable breeding habitat for common amphibian species such as Green frog (*Rana clamitans*), Gray Tree Frog (*Hyla versicolor*), Spring Peeper (*Pseudacris crucifer*), Wood Frog (*Rana sylvatica*), American Toad (*Bufo americanus*) Red-spotted Newt (*Notopthalmus viridescens*) and Spotted Salamander (*Ambystoma maculatum*). The pond also possesses habitat that supports common species of reptiles including Painted Turtle (*Chrysemys picta*), Snapping Turtle (*Chelydra serpentina*) and Northern Water Snake (*Nerodia sipedon sipedon*). All of the aforementioned species were observed within or immediately adjacent to the pond.

7.0 Other Endangered, Threatened, Rare or Ecologically Sensitive Species/Habitats

During the species and habitat assessments, NCES did not observe any Federally or State listed endangered, threatened or special of concern species that were not referenced by the DEC and/or USFWS correspondences. The Site is comprised of forested upland and Palustrine wetland habitats that are monotypic in nature and which are common within the geographic region.

In accordance with the Scoping Document issued by the Town of Goshen, NCES reviewed the SWBP for supplemental information regarding the presence of endangered, threatened and/or rare species. Based upon our review of the SWBP, it was determined that the project Site is located within the Significant Biodiversity Hub for Purgatory Swamp. The Site is located less than 2 miles east of the Purgatory Swamp Significant Biodiversity Area.

As a result, NCES referenced the observed species list with the "Development-Sensitive Species Focal List" contained within the SWBP. The SWBP defines "Development Sensitive Species" as those that are "…usually habitat specialists, with very specific habitat requirements that are compromised by development" and that "…tend to disappear from the landscape as habitats are altered or fragmented." The SWBP lists a total of 78 individual wildlife species as being development sensitive. The complete list of Development Sensitive Species, as compiled within the SWBP is contained in Appendix I.

Based upon the review of the observed species list compiled by NCES during the Site investigations, it has been determined that twelve (16) species identified by the SWBP as "Development Sensitive" coincide with species that were observed by NCES. These species include: Spotted Salamander, Wood Frog, Eastern Box Turtle (*Terrapene carolina*), Gray Tree Frog, Barred Owl (*Strix varia*), Black-throated Green Warbler (*Dendroica virens*), Baltimore Oriole (*Icterus galbula*), Chestnut-sided Warbler (*Dendroica pensylvanica*), Eastern Towhee (*Pipilo erythrophthalmus*), Eastern Kingbird (*Tyrannus tyrannus*), Wood Thrush (*Hylocichla mustelina*), Veery (*Catharus fuscescens*), Eastern Wood Pewee (*Contopus virens*), Northern Parula (*Parula americana*), Field Sparrow (*Spizella pusilla*) and ovenbird (*Seiurus aurocapillus*).

NCES also reviewed and the *New York State Comprehensive Wildlife Strategy Plan* (NYSCWSP) for additional information relative to endangered, threatened and rare species. The NYSCWSP was compiled by the DEC and provides a list of "Species of Greatest Conservation Need". The species contained within the list are separated into

avian, mammal, reptile, amphibian, fish, mollusk, crustacean, and insect categories. The complete list of Species of Greatest Conservation Need is contained in Appendix J. Based upon the review of the NYSCWSP, it has been determined that only two species that was observed on the Site by NCES are recognized by the NYSDEC as a species of greatest conservation need. The two species is the Ruffed Grouse (*Bonasa umbellus*) and the Eastern Box Turtle.

While 16 species observed on the Site that correlate to the SWBP's "Development Sensitive" species and 2 species correlate to the NYSCWSP's "Species of Greatest Conservation Need", only one of the aforementioned species, the Eastern Box Turtle, is recognized by the DEC or USFWS as an endangered, threatened or special concern species. The Eastern Box Turtle is listed by the DEC as a species of special concern. The other species are all listed as being demonstrably secure in New York State by the New York Natural Heritage Program. The Ruffed Grouse is also categorized by the DEC as an upland game bird that can be hunted during small game season.

7.1 Supplemental Breeding Bird Information

To expand on the potential bird species that may inhabit the Site, NCES consulted the DEC's *New York State Breeding Bird Atlas* for known information relative to populations of breeding birds that can be found on or within the immediate geographic region. The Breeding Bird Atlas segregates each individual County into designated blocks and provides information relative to the bird species found within the block. The bird species that have been identified as existing within the block are then separated into three categories to record breeding behavior. These categories are Possible (PO), Probable (PR) and Confirmed (CO).

According to the Breeding Bird Atlas, the Site is located within Block 5558D, in the Town of Goshen, Orange County, New York. According to the Breeding Bird Atlas, there are a total of 68 bird species that exhibit breeding characteristics in the Block. A copy of the Breeding Bird Atlas information obtained for Block 558D is contained within Appendix K.

Of the 68 bird species identified within Block 5558D species, 19 are categorized as Possible, 18 are categorized as Probable and 31 species are Confirmed breeding species. When compared with the "Development Sensitive" species list contained within the SWBP, a total of 16 bird species are found on both lists. These species include: the American Kestrel (*Falco sparverius*), Northern Flicker (*Colaptes auratus*), Eastern Wood Pewee, Eastern Kingbird, Veery, Wood Thrush, Brown Thrasher (*Toxostoma rufum*), Blue-winged Warbler (*Vermivora pinus*), American Redstart (*Setophaga ruticilla*), Ovenbird, Scarlet Tanager (*Piranga olivacea*), Field Sparrow, Rose-breasted Grosbeak (*Pheucticus ludovicianus*), Bobolink (*Dolichonyx oryzivorus*), Eastern Meadowlark (*Sturnella magna*) and Baltimore Oriole. Of the aforementioned species, 7 were identified on the Site by NCES.

However, when NCES cross-referenced the 68 bird species identified within Breeding Block 5558D with the NYS Natural Heritage *2007 Rare Animal Status List* (both the active and watch lists), only 1 species of bird, the Great Blue Heron (*Ardea herodias*), is found on both lists. According to the Breeding Bird Atlas, Great Blue Herons were observed within breeding habitat in the Block, however, nesting and breeding was not documented. Herons typically nest in tall trees and are communal nesters where several nests will found near each other. Potential foraging habitat is present on the site; however, it is generally limited to the permanent open water pond and the adjacent wetlands. These areas will not be impacted by the development.

7.2 Supplemental Amphibian and Reptile Information

NCES also reviewed information contained within the DEC *Amphibian and Reptile Atlas* (Herp. Atlas) regarding information on known occurrences of amphibian and reptile species within Orange County, New York. Based upon the Herp. Atlas, a cumulative total of 50 individual amphibian and reptile species are known to occur within Orange County, New York. During the ecological investigation, NCES identified a total of 13 amphibian and reptile species.

When NCES cross-referenced the Herp Atlas information with the NYS Natural Heritage *2007 Rare Animal Status List* (both active and watch lists), of the 50 known species of amphibians and reptiles occurring within Orange County, New York only nine (9) species are found on both lists. These species include, Northern Cricket Frog, Southern Leopard Frog (*Rana sphenocephala*), Marbled Salamander, Timber Rattlesnake (*Crotalus horridus*), Northern Copperhead (*Agkistrodon contortrix*), Spotted Turtle (*Clemmys guttata*), Wood Turtle (*Glyptemys insculpta*), Bog Turtle and the Eastern Box Turtle.

Potential Habitat exists at the Site for the Wood Turtle, Spotted Turtle, and Southern Leopard Frog. These habitats consist of the Palustrine forested, scrub shrub and emergent wetlands found on the Site. However, the suitable/viable habitats are limited to those areas that possess water year round. These habitats are situated immediately adjacent to the intermittent and perennial stream channels found on the Site. Based upon the proposed development plan, these habitats are not to be impacted as a result of the proposed action. Large contiguous sections of these habitats will remain post development that can be utilized by these species, should they exist on the Site.

In addition, the farm pond also provides habitat for Northern Cricket Frogs and Spotted Turtles. The pond appears to have been created as an impoundment of water that was created for agricultural purposes associated with the original farmstead. The pond possesses a dense submergent vegetative community, a herbaceous edge that transitions

into forested wetland habitat, and as a result, it has been determined that the impoundment may be conducive to the existence of Northern Cricket Frog, Southern Leopard Frog and Spotted Turtle.

Portions of the edge habitat and adjacent forested wetlands possess areas characteristic of seasonally impounded vernal pools. These areas may be conducive to the existence of Marbled Salamanders. As previously stated in this report, a general review of the pond was undertaken and none of these related species were identified within or immediately adjacent to it.

The Site does not possess preferred habitat for Timber Rattlesnakes and/or Northern Copperheads. Timber Rattlesnakes are generally located in deciduous upland forests, in rugged terrain, and most are associated with rock outcrops, steep ledges and talus slopes**.** Typically, Northern Copperheads use rock outcrops or rocky areas with talus slopes for cover, feeding and for over-wintering. Over-wintering and basking areas are usually located where the snakes can receive maximum sunlight exposure. No talus slopes or rock outcrops were identified that could be utilized by Timber Rattlesnakes or Copperheads as basking sites. No caves, or large fissures/crevasses were identified during the site review that could be utilized as a potential hibernaculum.

Eastern Box Turtles occupy a range of habitats but are mainly terrestrial in nature. They are typically associated with semi-moist deciduous forested uplands that contain dense understories. They can also be found in wooded swamps and grassy fields. The property possesses habitats that are conducive to the existence of Box Turtles and during the Site assessments, one Eastern Box Turtle, an adult male, was identified.

7.3 Species of Conservation Concern

According to the information provided by the Town of Goshen Planning Board, the Biodiversity Report is to include an assessment for "species of conservation concern" which are found on-site or which are associated with habitats that are identified on-site. A species of conservation concern is hereby defined as being:

- Endangered or Threatened under the Federal Endangered Species Act
- Endangered, Threatened, Rare or Special Concern under the NYS Environmental Conservation Law
- Designated as S1, S2, or S3 by the New York State Natural Heritage Program

As a result, NCES consulted with the USFWS and DEC Natural Heritage Office for known occurrences of endangered, threatened and rare/special concern species. In addition, NCES also reviewed literature information, including DEC Rare Plant List (2008), DEC Rare Animal List, Northern Wallkill Biodiversity Plan, New York State Comprehensive Wildlife Strategy Plan, DEC Breeding Bird Atlas and the DEC Herpetological Atlas to compile a list of species of conservation concern as defined by the Town of New Paltz. The individual species of flora and fauna identified as "species of conservation concern" as derived from the agency consultation and literature review are listed on the Species of Conservation Concern List that is contained in Appendix L.

As a result of the review, it was determined that a cumulative total of 221 species of fauna (mammals, birds, amphibians, reptiles and fish) and a cumulative total of 121 species of flora (trees, shrubs and herbaceous vegetation) can be classified as "Species of Conservation Concern". Of these species 221 species of fauna and 121 species of plants identified, only two species the Eastern Box Turtle and the Northern Parula were observed by NCES during the individual site visits conducted during the 2005, 2006, 2007 and 2008 field seasons.

8.0 INVASIVE SPECIES

Prior to the Site investigation, NCES reviewed the compiled list of invasive plant species that are known to occur within the Lower Hudson area of New York State, as established by the Invasive Plant Council (IPC) Partnership for Regional Invasive Species Management (PRISM). By consulting the PRISM database, NCES obtained a list of the probable invasive species that may be found on or immediately adjacent to the Site. As a result, during the Site investigation, NCES identified several known invasive plant species. These species include the following: tree of heaven (*Ailanthus altissima*), Japanese barberry (*Berberis thunbergii*), garlic mustard (*Alliaria officinalis*), common buckthorn (*Rhamnus cathartica*), multiflora rose (*Rosa multiflora*), oriental bittersweet (*Celastrus orbiculata*), purple loosestrife (*Lythrum salicaria*), wild carrot (*Daucus carota*), tatarian honeysuckle (*Lonicera tatarica*) and common mullein (*Verbascum thappsus*).

With the exception of tree of heaven, all of the other invasive plant species are better established on the Site. Individual *Ailanthus* trees are found along the Craigville Road corridor. The amount of tree of heaven identified does not appear to pose any significant threat to the forested upland component of the property at this time.

Purple loosestrife was noted in the wetland areas where previous agricultural activities had occurred. The loosestrife is not a dominant plant species nor does it appear to be affecting the overall plant diversity at this time. The purple loosestrife was found to be controlled through indigenous biological control by a specific beetle (*Galerucella* spp.). Adult *Galerucella* beetles were observed on the new growth of purple loosestrife stems and significant leaf damage was noted. The *Galerucella* beetles have been released throughout the Hudson Valley as a biological control agent at select and permitted sites and the beetle's range has expanded to include non-targeted colonies of loosestrife. Their presence throughout the region is now well documented.

The garlic mustard, common buckthorn, multiflora rose, oriental bittersweet, wild carrot, tatarian honeysuckle, and common mullein are found distributed throughout the Site but not in densities or expanses that are negatively affecting or resulting in the overall displacement of the native vegetation.

9.0 CONCLUSION

During the field reviews, no individual Bald Eagles, Bog Turtles, Indiana Bats, Shortnose/Atlantic Sturgeon, Dwarf Wedge Mussels, or Northern Cricket Frogs were identified on the Site. Additionally, no significant or critical habitats conducive to the existence of Bald Eagles, Shortnose/Atlantic Sturgeon, or Dwarf Wedge Mussels were identified within the boundaries of the Site either. With the exception of one individual Eastern Box Turtle, no other Federal and/or State listed endangered, threatened or special concern species of flora/fauna were observed.

During the field reviews, potential summer roosting and foraging habitat was identified for the Indiana Bat. Efforts have undertaken by the Project Sponsors and the Project Engineers to promote the preservation of the potential roosting and foraging habitat to the greatest extent practicable. A total of 303± acres of available forested upland and aquatic habitats are to remain post-development for use by Indiana and other species of bats. However, if it is determined that potential roost trees will have to be removed by the development, it is suggested that the trees should be removed during winter months (October through March) as this is when Indiana Bats are found in winter hibernacula's and are not utilizing individual roost trees. By selectively removing roost trees during the winter months, direct impacts to individual bats will be avoided.

Three potential areas of suitable Bog Turtle habitat were identified. However, as a result of the Phase II Presence/Absence Survey conducted, no individual Bog Turtles were found within the suitable habitats. In addition, based upon the existing natural successional of the wetlands and observed fluctuations in the hydrological regime of the identified habitats, it has been determined that, while the wetland areas meet the criteria

of potential habitat as outlined in the Recovery Plan, they are highly un-likely to sustain a viable population of Bog Turtles. Additionally, based upon the proposed development plans, none of the three wetlands identified as potential Bog Turtle habitat are to be impacted and a significant upland buffer (>200 feet) has been included around them.

A habitat (the farm pond) was identified on the Site that is conducive to the existence Northern Cricket Frogs and possibly Southern Leopard Frogs. However, characteristic shrub and other dense emergent vegetation were lacking along the pond edge that are typically associated with Northern Cricket Frog Habitat. Additionally, separate audible surveys at the pond did not result in the identification of Northern Cricket or Southern Leopard Frogs. It was determined that the pond is utilized as breeding habitat by common amphibian species such as Green Frog, Gray Tree Frog, Spring Peeper, Wood frog, American toad, Red-spotted Newt and Spotted Salamander. Based upon the Preliminary Subdivision Plans, no direct impacts to the pond, or adjacent forested wetlands, are proposed and a significant upland buffer has been imposed around the entire wetland complex, in most cases above the required 100' established by the NYSDEC.

While a species of special concern, the Eastern Box Turtle, was identified on the property, the identification of one individual of the species should not be viewed as a significant event. The Preliminary Subdivision Plans limit the areas affected by the development to the more open and upland forested areas, while preserving the denser, Successional southern hardwoods and Palustrine wetland habitats, which are preferred by Eastern Box Turtles. Therefore, a significant amount of available habitat for Eastern Box Turtles will remain on the Site, post-development.

Based upon the Preliminary Subdivision Plans, it has been determined that a cumulative total of 303± acres (86%) of the Site will remain undisturbed, post-development. The proposed action has been designed as a cluster-type subdivision and as a result, an extensive amount of contiguous forested and aquatic habitats will remain for use/inhabitation by the resident and transient species of wildlife that utilize the Site.

Given the extensive amount of preserved lands, coupled with the large upland buffers provided between the affected development area and adjacent aquatic resources, it has been determined by NCES that the development of the Site is highly un-likely to result in any significant or adverse effect upon the species of flora and fauna that are found on the property.

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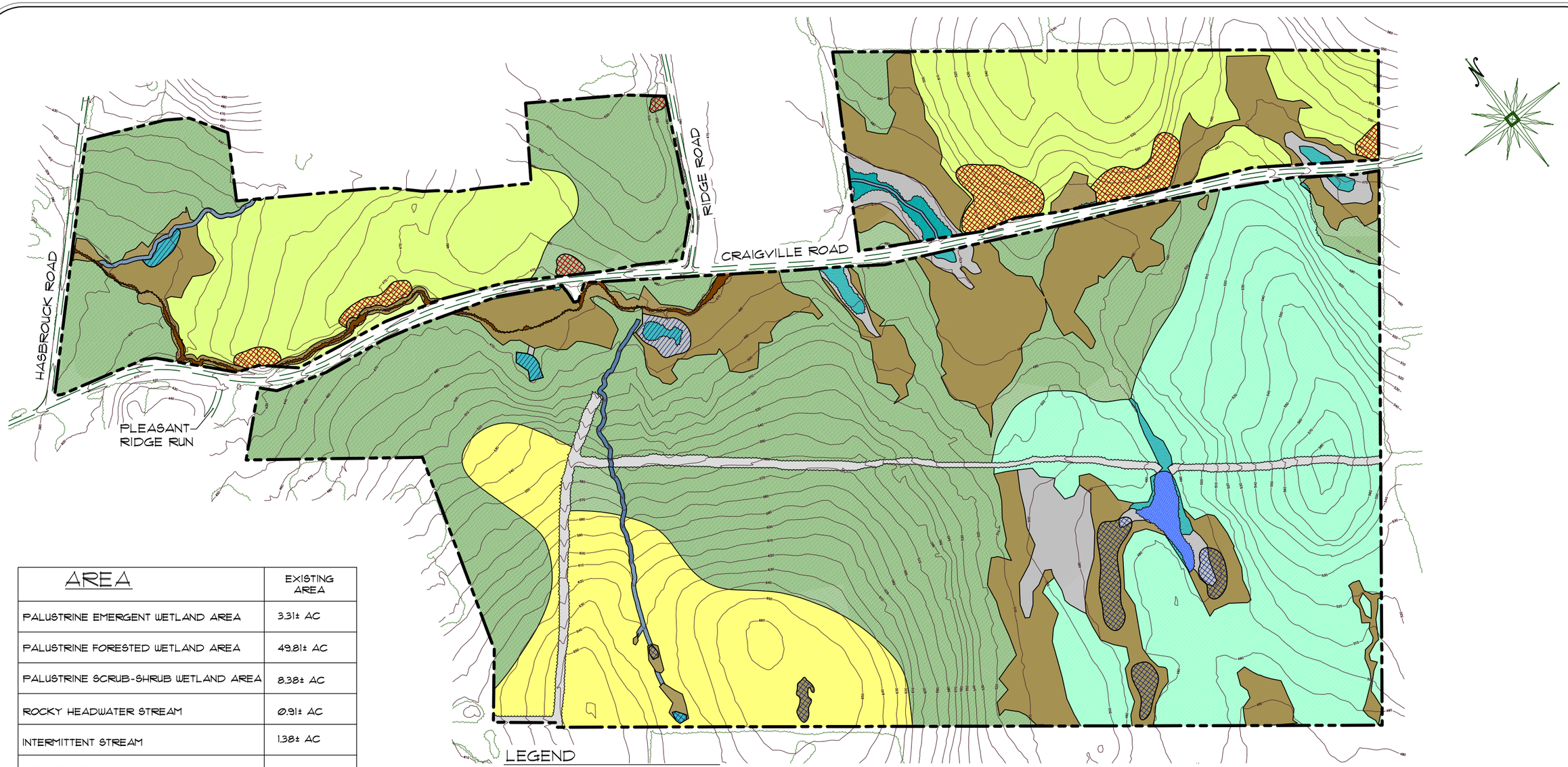
Appendix A

Existing Ecological Community Types



AREA	EXISTING AREA
PALUSTRINE EMERGENT WETLAND AREA	3.31± AC
PALUSTRINE FORESTED WETLAND AREA	49.81± AC
PALUSTRINE SCRUB-SHRUB WETLAND AREA	8.38± AC
ROCKY HEADWATER STREAM	0.91± AC
INTERMITTENT STREAM	1.38± AC
FARM POND	1.10± AC
SUCCESSIONAL SOUTHERN HARDWOODS	129.92± AC
SUCCESSIONAL NORTHERN HARDWOODS	65.38± AC
OAK-TULIP TREE FOREST	55.19± AC
BEECH-MAPLE MESIC FOREST	33.43± AC
ABANDONED GRAVEL ROAD	5.20± AC
TOTAL SITE	354.01± AC

LEGEND

- PALUSTRINE EMERGENT WETLAND AREA
- PALUSTRINE FORESTED WETLAND AREA
- PALUSTRINE SCRUB-SHRUB WETLAND AREA
- ROCKY HEADWATER STREAM
- INTERMITTENT STREAM
- SUCCESSIONAL SOUTHERN HARDWOODS
- SUCCESSIONAL NORTHERN HARDWOODS
- OAK-TULIP TREE FOREST
- BEECH-MAPLE MESIC FOREST
- ABANDONED GRAVEL ROAD
- FARM POND
- SUITABLE BOG TURTLE HABITAT
- VERNAL POOL HABITATS
- SHAGBARK HICKORY LOCATIONS (POTENTIAL INDIANA BAT HABITAT)

YOUNG'S GROVE

TOWN OF GOSHEN
TAX MAP NO. : 9-1-8.452

EXISTING ECOLOGICAL COMMUNITIES

GRAPHIC SCALE: 1 in. = 500 ft.

APPENDIX A

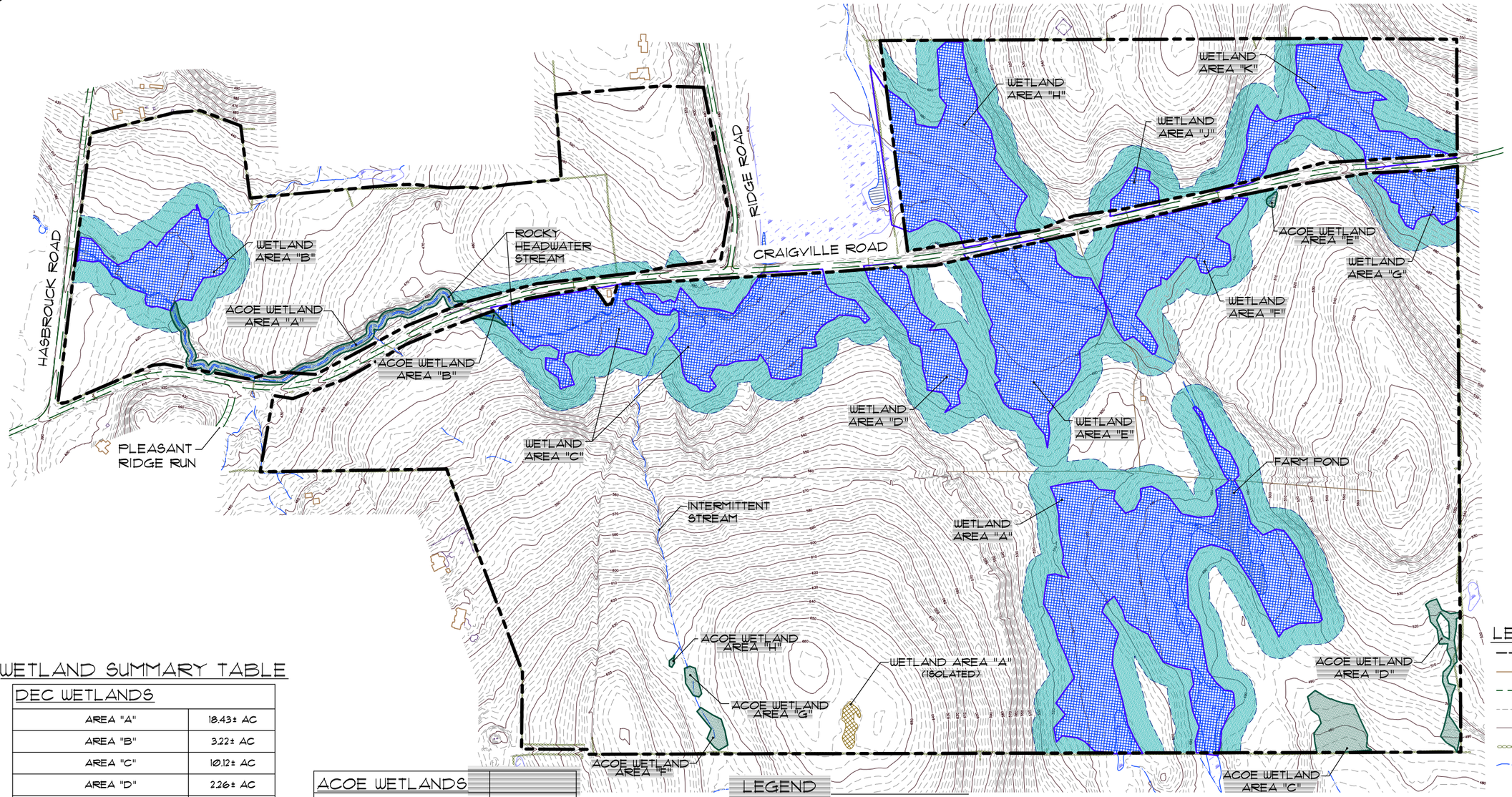
DATE	DESCRIPTION
09/09	REVISION PER COMMENTS
06/08	DATE OF ORIGIN

REVISIONS

ESPOSITO & ASSOCIATES
262 GREENWICH AVENUE, SUITE B
GOSHEN NY, 10924
845.294.0558 Fax 845.294.0580

Appendix B

Wetland Delineation Map



WETLAND SUMMARY TABLE

DEC WETLANDS	
AREA "A"	18.43± AC
AREA "B"	3.22± AC
AREA "C"	10.12± AC
AREA "D"	2.26± AC
AREA "E"	7.45± AC
AREA "F"	4.67± AC
AREA "G"	1.63± AC
AREA "H"	7.27± AC
AREA "J"	0.60± AC
AREA "K"	4.25± AC
TOTAL:	59.90± AC
ISOLATED WETLANDS	
AREA "A"	0.26± AC
TOTAL:	0.26± AC

ACOE WETLANDS	
AREA "A"	1.28± AC
AREA "B"	0.07± AC
AREA "C"	1.22± AC
AREA "D"	0.68± AC
AREA "E"	0.05± AC
AREA "F"	0.29± AC
AREA "G"	0.16± AC
AREA "H"	0.02± AC
TOTAL:	3.77± AC
TOTAL WETLANDS:	63.93± AC

LEGEND

- DEC WETLANDS LINE
- ACOE WETLANDS LINE
- DEC WETLANDS BUFFER LINE
- ISOLATED WETLANDS LINE
- DEC WETLANDS AREA
- ACOE WETLANDS AREA
- ISOLATED WETLANDS AREA
- DEC WETLANDS ADJACENT AREA

LEGEND

- EXISTING PROPERTY LINE
- EXISTING STRUCTURE
- EDGE OF PAVEMENT
- EXISTING CONTOUR LINE MINOR
- EXISTING CONTOUR LINE MAJOR
- EXISTING STONEWALL
- WATER EDGE OR STREAM

YOUNG'S GROVE

TOWN OF GOSHEN
TAX MAP NO. : 9-1-8.452

DELINEATED/REGULATED WETLANDS

GRAPHIC SCALE: 1 in. = 500 ft.

APPENDIX B

DATE	DESCRIPTION
09/09	REVISION PER COMMENTS
06/09	REVISION PER COMMENTS
06/08	DATE OF ORIGIN

REVISIONS

ESPOSITO & ASSOCIATES
262 GREENWICH AVENUE, SUITE B
GOSHEN NY, 10924
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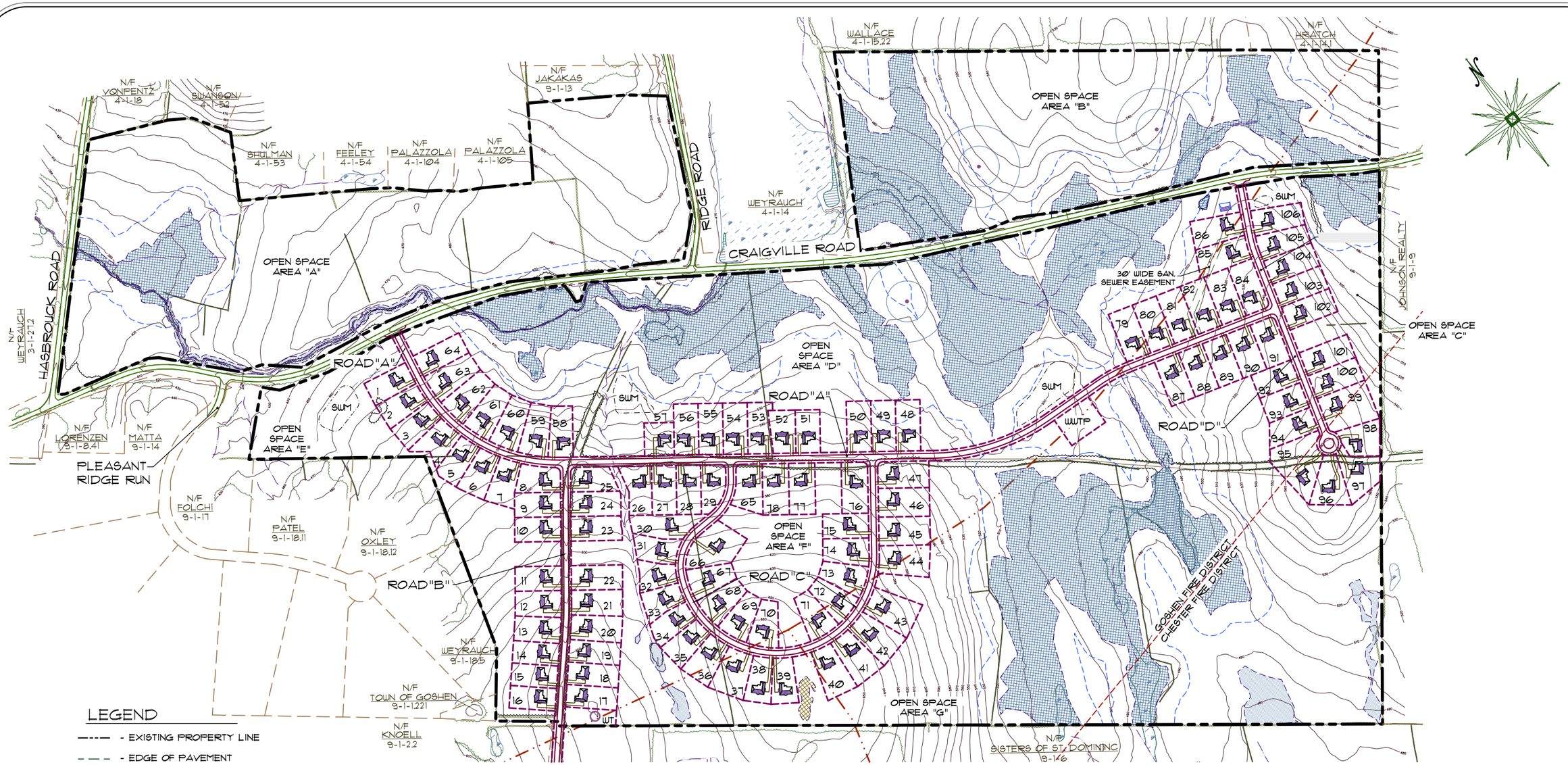
Appendix C

Proposed Site Development Plans



LEGEND

- EXISTING PROPERTY LINE
- EDGE OF PAVEMENT
- EXISTING CONTOUR LINE MAJOR
- EXISTING TREELINE
- EXISTING STONEWALL
- WATER EDGE OR STREAM
- WETLANDS LINE
- DEC WETLAND BUFFER LINE
- DEC WETLANDS AREA
- ACOE WETLANDS AREA
- ISOLATED WETLANDS AREA

RECORD OWNER AND APPLICANT:

R.H. CRAIGVILLE, LLC
6 OLD NORTH PLANK ROAD
NEWBURGH, NEW YORK 12550

YOUNG'S GROVE

TOWN OF GOSHEN
TAX MAP NO. : 9-1-8.452

106 LOT PREFERRED PLAN

GRAPHIC SCALE: 1 in. = 500 ft.

APPENDIX C-1

DATE	DESCRIPTION
09/09	REVISION PER COMMENTS
06/09	REVISION PER COMMENTS
06/08	DATE OF ORIGIN

REVISIONS

ESPOSITO & ASSOCIATES
262 GREENWICH AVENUE, SUITE B
GOSHEN NY, 10924
845.294.0558 Fax 845.294.0580

AREA	EXISTING AREA	AFFECTED AREA	REMAINING AREA
PALUSTRINE EMERGENT WETLAND AREA	3.31± AC	———	3.31± AC
PALUSTRINE FORESTED WETLAND AREA	49.81± AC	———	49.81± AC
PALUSTRINE SCRUB-SHRUB WETLAND AREA	8.38± AC	———	8.38± AC
ROCKY HEADWATER STREAM	0.91± AC	———	0.91± AC
INTERMITTENT STREAM	1.38± AC	———	1.38± AC
FARM POND	1.10± AC	———	1.10± AC
SUCCESSIONAL SOUTHERN HARDWOODS	129.92± AC	24.45± AC	105.47± AC
SUCCESSIONAL NORTHERN HARDWOODS	65.38± AC	15.39± AC	49.99± AC
OAK-TULIP TREE FOREST	55.19± AC	0.32± AC	54.87± AC
BEECH-MAPLE MESIC FOREST	33.43± AC	16.11± AC	17.32± AC
ABANDONED GRAVEL ROAD	5.20± AC	3.27± AC	1.93± AC
TOTAL SITE	354.01± AC	59.54± AC	294.47± AC

LEGEND

- PALUSTRINE EMERGENT WETLAND AREA
- PALUSTRINE FORESTED WETLAND AREA
- PALUSTRINE SCRUB-SHRUB WETLAND AREA
- ROCKY HEADWATER STREAM
- INTERMITTENT STREAM
- SUCCESSIONAL SOUTHERN HARDWOODS
- SUCCESSIONAL NORTHERN HARDWOODS
- SUITABLE BOG TURTLE HABITAT
- VERNAL POOL HABITATS
- SHAGBARK HICKORY LOCATIONS (POTENTIAL INDIANA BAT HABITAT)
- FARM POND
- AFFECTED DEVELOPMENT AREA
- BEECH-MAPLE MESIC FOREST
- OAK-TULIP TREE FOREST
- ABANDONED GRAVEL ROAD

YOUNG'S GROVE

TOWN OF GOSHEN
TAX MAP NO. : 9-1-8.452

PROPOSED ECOLOGICAL COMMUNITIES

GRAPHIC SCALE: 1 in. = 500 ft.

APPENDIX C-2

DATE	DESCRIPTION
09/09	REVISION PER COMMENTS
06/09	REVISION PER COMMENTS
06/08	DATE OF ORIGIN

REVISIONS

ESPOSITO & ASSOCIATES
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Appendix D

Correspondences with the DEC and USFWS Regarding Endangered and Threatened Species

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, NY 13045

March 14, 2005

Ms. Lesley A. Rodriguez
Administrative Assistant
Pietrzak & Pfau, PLLC
262 Greenwich Avenue, Suite A
Goshen, NY 10924

Re: SBL: 9-1-8.452

Dear Ms. Rodriguez:

This responds to your February 7, 2005, letter requesting information on the presence of endangered or threatened species in the vicinity of the proposed Rieger Homes on Craigville Road in the Town of Goshen, Orange County, New York.

There is potential for the Federally- and State-listed endangered Indiana bat (*Myotis sodalis*) to occur within the proposed project area. The Indiana bat is known to winter in six counties in New York State. While the U.S. Fish and Wildlife Service (Service) has learned a great deal about the wintering population with standardized biennial counts organized by the New York State Department of Environmental Conservation (NYSDEC) Endangered Species Unit, we are continuing to study Indiana bat migratory patterns and summer habitat use within the State. Previous research has documented Indiana bat movements of up to 330 miles between hibernacula and summer habitats (Kurta and Murray 2002). However, that study, as well as the majority of research on Indiana bats, took place in the Midwest.

In the Northeast, multiple State and Federal agencies are investigating Indiana bat movements; the most recent studies of bats from hibernacula in Essex and Ulster Counties, New York, provide additional information. In the spring of 2002 through 2004, the NYSDEC successfully tracked female Indiana bats from their hibernacula in Essex and Ulster Counties to their spring roosts, distances up to approximately 30 miles. From the Ulster County study, multiple roosts were located on both sides of the Hudson River in the Towns of Crawford, Wallkill, Hamptonburgh, and New Windsor, Orange County, and near the City of Poughkeepsie and in the Towns of Beekman, East Fishkill, and LaGrange, Dutchess County. The closest observed roost trees were within approximately 5 miles from the proposed project and the Ulster County hibernacula are approximately 35 miles from the proposed project. Based on the proximity of the proposed project site to both the hibernacula and known spring roost locations, the Indiana bat may be found at the proposed project site if suitable roosting or foraging habitat is present.

The Indiana bat is especially [illegible]

(dead, dying, or alive) or snags, greater than or equal to 5 inches diameter breast height (d.b.h.) with exfoliating or defoliating bark, or containing cracks, crevices, or holes that could potentially be used by Indiana bats as a roost. However, maternity colonies generally use trees greater than or equal to 9 inches d.b.h. Overall, structure appears to be more important than a particular tree species or habitat type. The growing body of information, including ongoing studies in New York, indicates usage of numerous species of trees that contain suitable structure. Only site-specific information can lead to habitat suitability determinations. Additional information on potentially suitable summer habitat can be found on our website at http://nyfo.fws.gov/es/ibatdraft99.pdf.

Streams, associated floodplain forests, and impounded water bodies (ponds, wetlands, reservoirs, etc.) provide preferred foraging habitat for pregnant and lactating Indiana bats, some of which may fly up to 1.5 miles from upland roosts. Indiana bats also forage within the canopy of upland forests, over clearings with early successional vegetation (*e.g.* old fields), along the borders of croplands, along wooded fencerows, and over farm ponds in pastures (U.S. Fish and Wildlife Service 1999).

The project site should be evaluated and described by a qualified person as to the presence, amount, and distribution of suitable summer roosting/maternity and foraging habitat, and the presence of any mine(s)/cave(s) that could serve as a hibernacula that would be disturbed by the proposed project. Please contact us to discuss this evaluation in greater detail. Staff from our office may be available to assist with an initial site visit to determine whether additional detailed habitat analyses or surveys for Indiana bats will continue to be recommended.

In addition to the Indiana bat, the proposed project is less than 10 miles from known bog turtle (*Clemmys muhlenbergii*) sites. The bog turtle is Federally-listed as threatened and State-listed as endangered. The Service recommends that an evaluation be completed of any existing habitat that would be disturbed, directly or indirectly, by the project, and its potential to support the bog turtle (Phase I survey). Bog turtles prefer open canopy wetlands with soft, saturated soils such as fens or sedge meadows fed by seeps and springs of cold groundwater that has been in contact with calcium-rich bedrock or soils. In New York, bog turtles are very often found in or near rivulets having deep mucky substrate, but where above-surface water depths are very shallow – usually only a few inches deep at most. Plant species commonly associated with bog turtle habitats include tamarack (*Larix laricina*), cinquefoil (*Potentilla* spp.), alders (*Alnus* sp.), willows (*Salix* sp.), sedges (*Carex* sp.), sphagnum moss (*Sphagnum* sp.), jewelweed (*Impatiens capensis*), rice cut-grass (*Leersia oryzoides*), tearthumb (*Polygonum sagittatum*), arrow arum (*Peltandra virginica*), red maple (*Acer rubrum*), skunk cabbage (*Symplocarpus foetidus*), rushes (*Juncus* sp.), and bulrushes (*Scirpus* sp.). If the evaluation indicates that the site has the potential to support the bog turtle, it should be surveyed by a qualified person to determine the presence or absence of this species (Phase II surveys). Service guidelines for bog turtle surveys[8] are available for your information. Please contact this office before conducting any Phase II surveys.

The project's environmental documents should identify project activities that might result in adverse impacts to the Indiana bat, bog turtle, or their habitat. Information to assist with the evaluation of potential impacts on bog turtles can be found in Appendix A - Bog Turtle Conservation Zones of the Bog Turtle (*Clemmys muhlenbergii*) Northern Population Recovery Plan (U.S. Fish and Wildlife Service 2001) which can be found at [illegible] Information on any potential impacts and the results of [illegible] habitat and/or surveys for the Indiana bat and bog turtle should be [illegible] potential impacts [illegible]

turtle, or their habitat, and to determine the need for further coordination or consultation pursuant to the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). Except for the potential for Indiana bat, bog turtle, and occasional transient individuals, no other Federally-listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project area. In addition, no habitat in the project area is currently designated or proposed "critical habitat" in accordance with provisions of the ESA. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of Federally-listed and proposed endangered and threatened species in New York* is available for your information. If the proposed project is not completed within one year from the date of this letter, we recommend that you contact us to ensure that the listed species presence/absence information for the proposed project is current.

The above comments pertaining to endangered species under our jurisdiction are provided as technical assistance pursuant to the ESA. This response does not preclude additional Service comments under other legislation.

As stated above, the Indiana bat and bog turtle are listed as endangered by the State of New York. The information requested above should be coordinated with both this office and with the NYSDEC. The NYSDEC contacts for the Endangered Species Program is Mr. Peter Nye, Endangered Species Unit, 625 Broadway, Albany, NY 12233 (telephone: [518] 402-8859).

For additional information on fish and wildlife resources or State-listed species, we suggest you contact the appropriate State regional office(s),* and:

New York State Department of Environmental Conservation
New York Natural Heritage Program Information Services
625 Broadway
Albany, NY 12233-4757
(518) 402-8935

Since wetlands may be present, you are advised that National Wetlands Inventory (NWI) maps* may or may not be available for the project area. However, while the NWI maps are reasonably accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes.

Work in certain waters of the United States, including wetlands, may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act, the Service may concur, with or without recommending additional permit conditions, or recommend denial of the permit depending upon potential adverse impacts on fish and wildlife resources associated with project construction or implementation. The need for a Corps permit may be determined by contacting the appropriate Corps office(s).* In addition, should any part of the proposed project be authorized, funded, or carried out, in whole or in part, by a Federal agency, such as the Corps, further consultation between the Service and that Federal agency pursuant to the ESA may be necessary.

Thank you for your time. If you require additional information please contact Robyn Niver at (607) 753-9334.

Sincerely,

for David A. Stilwell
Field Supervisor

*Additional information referred to above may be found on our website at: http://nyfo.fws.gov/es/section7.htm

References:

Kurta, A., and S.W. Murray. 2002. Philopatry and migration of banded Indiana bats (*Myotis sodalis*) and effects of radio transmitters. Journal of Mammalogy 83(2):585-589.

U.S. Fish and Wildlife Service. 1999. Agency Draft Indiana Bat (*Myotis sodalis*) Revised Recovery Plan. Fort Snelling, MN: U.S. Department of the Interior, Fish and Wildlife Service, Region 3. 53 p.

U.S. Fish and Wildlife Service. 2001. Bog Turtle (*Clemmys muhlenbergii*), Northern Population, Recovery Plan. Hadley, Massachusetts. 103 pp.

cc: NYSDEC, New Paltz, NY (Attn: S. Joule)
NYSDEC, Albany, NY (Endangered Species; Attn: P. Nye)
NYSDEC, Albany, NY (Natural Heritage)
COE, New York, NY

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **FAX:** (518) 402-8925
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

March 1, 2005

Lesley A. Rodriguez
Pietrzak & Pfau
262 Greenwich Ave, Suite A
Goshen, NY 10924

Dear Ms. Rodriguez:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to an Environmental Assessment for the proposed 362.5 acre Reiger Homes Project, area as indicated on the map you provided, located in the Town of Goshen, Orange County.

> We have no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain any information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of rare or state-listed species, or of significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Data bases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

Betty Ketcham

Betty Ketcham, Information Services
New York Natural Heritage Program

Enc.

New York State Depart...ent of Environmental Conservation
Division of Environmental Permits, Region 3
21 South Putt Corners Road, New Paltz, New York 12561
Phone: (845) 256-3054 • FAX: (845) 255-3042
Website: www.dec.state.ny.us

4/18 & 4/21

Erin M. Crotty
Commissioner

Lesley A. Rodriguez
Pietrzak & Pfau
262 Greenwich Ave. Suite A
Goshen NY 10924

Date: 2-8-05

4 pages

294-0610
Reiger Homes

RE: Stream classification

Location: T/ Goshen Orange County

Dear Mr. Rodriguez:

Based upon your inquiry of February 7, 2005

☒ The stream(s)/pond(s) you indicated currently ~~has~~/have a classification of:

Name	Class	Waters Index Number
Trib of Otterkill	C	H-89-20-13-1a
Sub Trib of Cromline Creek	C	H-89-19-2-2
Sub Trib of Cromline Creek	C	H-89-19-2-2-P296

therefore a Protection of Waters permit:
☐ is required (☐ application form enclosed) ☒ is not required
to physically disturb the bed or banks of ~~this~~/these stream(s)/pond(s).

If a permit is not required, please note, however, you are still responsible for ensuring that work shall not contravene the water quality standards of the stream. Care shall be taken to stabilize the disturbed areas promptly after construction, and all necessary precautions shall be taken to prevent contamination of the stream by silt, sediment, fuels, solvents, lubricants, or any other pollutant associated with the project.

☐ There are no streams/ponds that appear on our regulatory maps at the location/project site you identified. Therefore, if there is a stream or pond outlet present at the site with year-round flow, it assumes the classification of the watercourse into which it feeds, _____ Class "_____", and a Protection of Waters permit is/is not required. If there is a stream or pond outlet present at the site that runs intermittently (seasonally), it is not protected, and a Protection of Waters permit is not required (see above paragraph).

☒ Your project/site is near or in Freshwater Wetland 60-28 / 60-37. Class II / IIC. Be aware that a Freshwater Wetlands permit is required for any physical disturbance within these boundaries or within the 100 foot adjacent area. To have the boundary delineated, please read the attached notice.

☐ Your project/site is not within a New York State protected Freshwater Wetland. However, please contact your town officials and the United States Army Corps of Engineers in New York City, telephone (212) 264-5731 (Westchester/Rockland Counties), or (212) 264-0135 (other counties), for any permitting they might require. Please be aware that if your site is within Putnam County, wetland map revisions are being done in 2004. Affected landowners will be notified if their property is within a DEC regulated wetland.

- OVER PLEASE

☐ Other DEC permits appear ssary. Please submit applications (☐ enc. ed) for the following permits: _____. If you have reason to believe that all permits should not be processed simultaneously, please notify the contact person below, clearly stating your reasons.

☐ DEC has reviewed the State's Master Habitat Databank (MHDB) records. It has been determined that the site may have sensitive natural resources of concern (threatened & endangered species, etc.). If your inquiry is related to a specific development project, additional evaluation of the potential impacts of this project related to the sensitive resource(s) identified by this review, may be required. Please contact the person noted below.

☐ DEC has reviewed the State's Master Habitat Databank (MHDB) records. No records of sensitive natural resources of concern were found (threatened & endangered species, etc.).

Please note that MHDB records are continually updated. If the proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

Please contact the undersigned at (845) 256-_____ for further information.

☐ Other: _____

Please note that this letter only addresses the requirements for the following permits from the Department:

☒ Freshwater Wetlands ☐ Tidal Wetlands ☐ Other: _____
☒ Protection of Waters ☐ Mined Land Reclamation ☐ Master Habitat Databank

and that other permits from this Department or other agencies may be required for projects conducted on this property now or in the future. Also, regulations applicable to the location subject to this determination occasionally are revised and you should, therefore, verify the need for permits if your project is delayed or postponed. This determination regarding the need for permits will remain effective for a maximum of one year. You can also check our website (see letterhead) for the most current information.

Please contact this office if you have questions regarding the above information. Thank you

Sincerely,

Laurie Lawrence
Division of Environmental Permits
Region 3

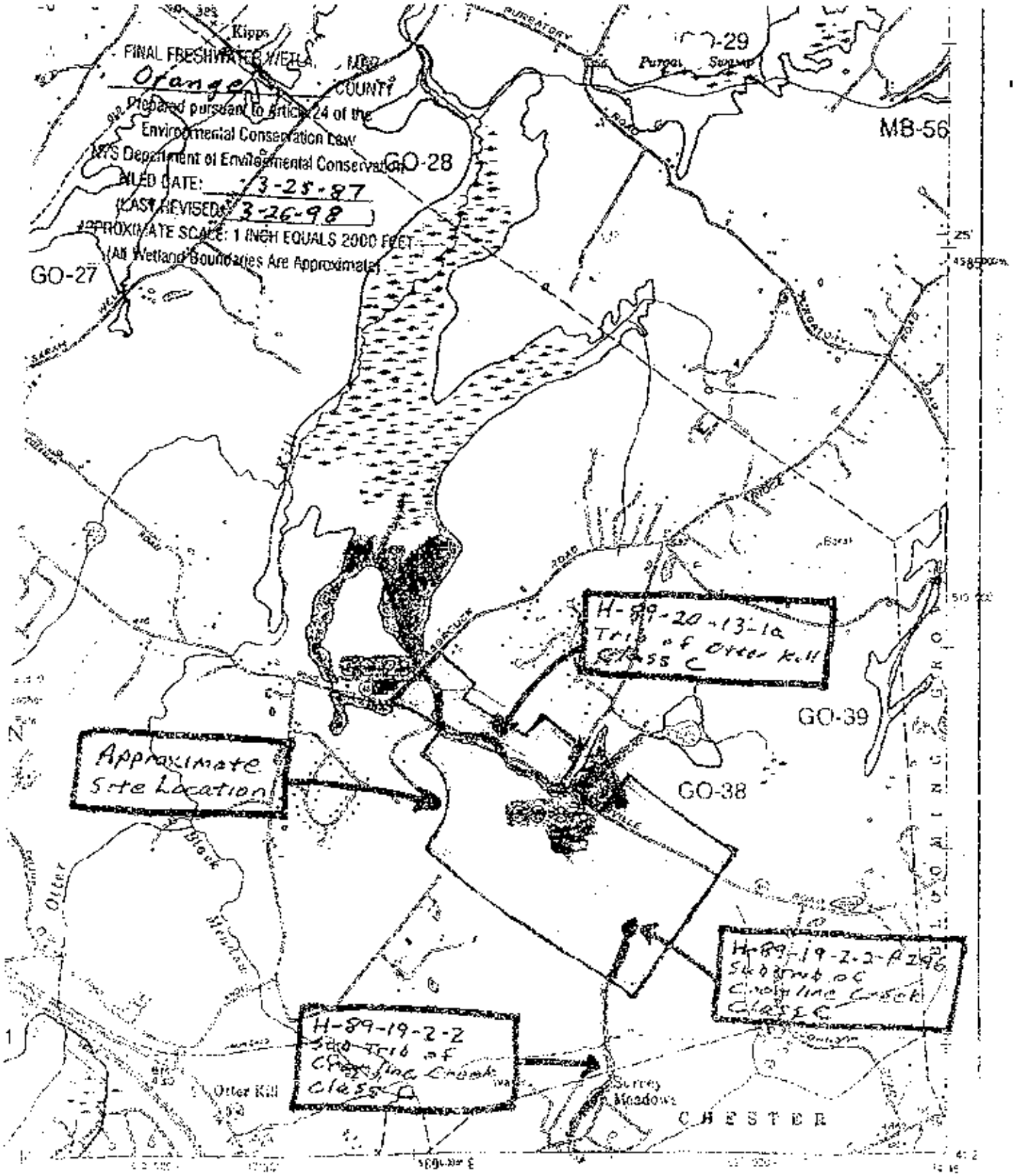
☒ Information/Permit Materials/Regulations (Map) Goshen Quadrangle) Attached.

cc: _____

NOTE:
Stormwater discharges now require a SPDES Stormwater permit from this Department if they either
- occur at industrial facilities and contain either toxic contaminants or priority pollutants OR
- result from construction projects involving the disturbance of one (1) or more acres of land.

Your project may be covered under one of two Statewide General Permits or may require an individual permit. If you believe your project would be covered under one of the General Permits and does not require any other DEC permits you may apply for coverage by filing a Notice of Intent with NYSDEC, Division of Water, 625 Broadway, Albany NY 12233-3505, (forms & permits available from this office or DEC Website at www.dec.state.ny.us or call 518-402-8100). If your project involves other DEC permits, please contact this office.

DEP2 [illegible]



BOUNDARIES:
State
County
Town or City
Incorporated Village

New York Sta Department of Environmental Conservation
21 South Putt Corners Rd., New Paltz, NY 12561-1696
Telephone: (845) 2 3064 • FAX: (845) 255-3042
Website: www.dec.state.ny.us

DELINEATING AND SURVEYING FRESHWATER WETLAND BOUNDARIES

1. The purpose of the delineation of freshwater wetland boundaries is to provide a precise identification of the regulated wetland boundary and its 100 foot adjacent area in order to aid in the planning and design of projects which may affect the wetland resource.

2. New York State regulated freshwater wetlands may be delineated by qualified consultants. However, for a delineation to be official (e.g., for use in permit applications), it must be validated by Department of Environmental Conservation (DEC) staff. For more information, call the appropriate staff, as follows:

(845) 256-3091	Michael Clancy	Dutchess, Ulster & Westchester
(845) 256-3057	Doug Gaugler	Orange, Putnam, Rockland & Sullivan

3. In general, DEC requires that sponsors of development projects retain licensed engineers or surveyors to accurately plot the delineated wetland boundary on project plans. However, such surveys may not be needed for very small projects, inquiries of a general nature, or certain land sales.

4. Surveys and development plans for DEC permit applications must include the following validation block:

NYSDEC FRESHWATER WETLAND BOUNDARY VALIDATION

The freshwater wetland boundary as represented on these plans accurately depicts the limits of Freshwater Wetland _____ as delineated by _____ on _____

DEC Staff: _____ Surveyor/Engineer: _____

Date: _____ SEAL

Wetland boundary delineations as validated by the New York State Department of Environmental Conservation remain valid for 10 years unless existing exempt activities, area hydrology, or land use practices change (e.g., agricultural to residential). After 10 years the boundary must be revalidated by DEC staff. Revalidation may include a new delineation and survey of the wetland boundary.

Any proposed construction, grading, filling, excavating, clearing or other regulated activity in the freshwater wetland or within 100 feet of the wetland boundary as depicted on this plan requires a permit from the NYS Department of Environmental Conservation under Article 24 of the Environmental Conservation Law (Freshwater Wetlands Act) prior to commencement of work.

5. In addition to the accurate identification of the freshwater wetland boundary, the limit of the 100 foot adjacent area must also be plotted on development plans and survey.

6. Copies of plans or surveys containing the boundary delineation and validation block must be submitted to the appropriate DEC staff person as listed above in item #2 for validation and original signature before applying for a DEC permit. One copy will be retained by DEC as a file copy. The signature and seal of the surveyor/engineer must be present prior to requesting DEC validation.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New York Field Office
3817 Luker Road, Cortland, NY 13045
Phone: (607) 753-9334
Fax: (607) 753-9699

Long Island Field Office
3 Old Barto Rd., Brookhaven, NY 11719
Phone: (631) 776-1401
Fax: (631) 776-1405

Endangered Species Act List Request Response Cover Sheet

This cover sheet is provided in response to a search of our website* for information regarding the potential presence of species under jurisdiction of the U.S. Fish and Wildlife Service (Service) within a proposed project area.

Attached is a copy of the New York State County List of Threatened, Endangered, and Candidate Species for the appropriate county(ies). The database that we use to respond to list requests was developed primarily to assist Federal agencies that are consulting with us under Section 7(a)(2) of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). Our lists include all Federally-listed, proposed, and candidate species known to occur, as well as those likely to occur, in specific counties.

The attached information is designed to assist project sponsors or applicants through the process of determining whether a Federally-listed, proposed, or candidate species and/or "critical habitat" may occur within their proposed project area and when it is appropriate to contact our offices for additional coordination or consultation. You may be aware that our offices have provided much of this information in the past in project-specific letters. However, due to increasing project review workloads and decreasing staff, we are now providing as much information as possible through our website. We encourage anyone requesting species list information to print out all materials used in any analyses of effects on listed, proposed, or candidate species.

The Service routinely updates this database as species are proposed, listed, and delisted, or as we obtain new biological information or specific presence/absence information for listed species. If project proponents coordinate with the Service to address proposed and candidate species in early stages of planning, this should not be a problem if these species are eventually listed. However, we recommend that both project proponents and reviewing agencies retrieve from our online database an *updated* list every 90 days to append to this document to ensure that listed species presence/absence information for the proposed project is *current.*

Reminder: Section 9 of the ESA prohibits unauthorized taking** of listed species and applies to Federal and non-Federal activities. For projects not authorized, funded, or carried out by a Federal agency, consultation with the Service pursuant to Section 7(a)(2) of the ESA is not required. However, no person is authorized to "take**" any listed species without appropriate authorizations from the Service. Therefore, we provide technical assistance to individuals and agencies to assist with project planning to avoid the potential for "take**," or when appropriate, to provide assistance with their application for an incidental take permit pursuant to Section 10(a)(1)(B) of the ESA.

Additionally, endangered species and their habitats are protected by Section 7(a)(2) of the ESA, which requires Federal agencies, in consultation with the Service, to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. An assessment of the potential direct, indirect, and cumulative impacts is required for all Federal actions that may affect listed species.

For instance, work in certain waters of the United States, including wetlands and streams, may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended;16 U.S.C. 661 *et seq.*), the Service may concur, with or without recommending additional permit conditions, or recommend denial of the permit depending upon potential adverse impacts on fish and wildlife resources associated with project construction or implementation. The need for a Corps permit may be determined by contacting the appropriate Corps office(s).*

For additional information on fish and wildlife resources or State-listed species, we suggest contacting the appropriate New York State Department of Environmental Conservation regional office(s) and the New York Natural Heritage Program Information Services.*

Since wetlands, ponds, streams, or open or sheltered coastal waters may be present in the project area, it may be helpful to utilize the National Wetlands Inventory (NWI) maps as an initial screening tool. However, they may or may not be available for the project area. Please note that while the NWI maps are reasonably accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes. Online information on the NWI program and digital data can be downloaded from Wetlands Mapper, http://wetlands.fws.gov/mapper_tool.htm.

Project construction or implementation should not commence until all requirements of the ESA have been fulfilled. After reviewing our website and following the steps outlined, we encourage both project proponents and reviewing agencies to contact our office to determine whether an accurate determination of species impacts has been made. If there are any questions about our county lists or agency or project proponent responsibilities under the ESA, please contact the New York or Long Island Field Office Endangered Species Program at the numbers listed above.

Attachment (county list of species)

*Additional information referred to above may be found on our website at:
http://www.fws.gov/northeast/nyfo/es/section7.htm

** Under the Act and regulations, it is illegal for any person subject to the jurisdiction of the United States to ***take*** (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import or export, ship in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered fish or wildlife species and most threatened fish and wildlife species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. “Harm” includes any act which actually kills or injures fish or wildlife, and case law has clarified that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife.

Appendix E

Site Photographs

Photograph 1) This photograph was taken within the forested wetland that is found on the south side of Craigville Road.

Photograph 2) This photograph was taken from the interior of the forested wetland that is found near the center of the site and on the south side of Craigville Road.

Photograph 3) This photograph shows the open water pond that is found near the southeast corner of the property.

Photograph 4) This photograph shows an inundated section of Palustrine forested wetland that is located to the southwest of the open water pond.

Photograph 5) This photograph was taken of emergent wetland that is found near the western property boundary that is to the south of Craigville Road.

Photograph 6) This photograph was taken of an old farm pond that is found near the western corner of the site. The old pond has filled with silt and become wetland.

Photograph 7) This photograph shows forested wetland that is found to the northeast of Craigville and Ridge Road.

Photograph 8) This photograph shows the emergent wetland that is found immediately to the east of Craigville and Ridge Roads.

Photograph 9) This photograph shows the transition from emergent to forested wetland that is found to the north of Craigville road.

Photograph 10) This photograph shows the ponded water that is found in the forested wetland that is found to the north of Craigville Road.

Photograph 11) This photograph was taken of the forested wetland is found near the northeast corner of the property.

Photograph 12) This photograph was taken of the forested wetlands that are found in the northeast corner of the site.

Photograph 13) This photograph was taken within the center of potential Bog Turtle Habitat B, while looking south through the emergent wetland.

Photograph 14) This photograph was taken from the center of potential Bog Turtle Habitat B, while looking east toward the eastern boundary of the emergent wetland.

Photograph 15) This photograph was taken from the center of potential Bog Turtle Habitat C, while looking west through the emergent wetland.

Photograph 16) This photograph was taken from the center of potential Bog Turtle Habitat C, while looking north towards Craigville Road.

Appendix F

Observed Species List

Flora and Fauna Inventory of Rieger Homes Site

This list only identifies the species observed/identified on the site during the individual site visits. Most species were identified visually or by vocalization. However, those species denoted with ** indicates that they were identified by tracks, scat or physical remains confirmed during the field visit.

Flora

Trees:

Common Name	Scientific Name
Box-elder Maple	*Acer negundo*
Striped Maple	*Acer pennsylvanicum*
Red Maple	*Acer rubrum*
Sugar Maple	*Acer saccharum*
Ailanthus	*Ailanthus altissima*
Black Birch	*Betula lenta*
Yellow Birch	*Betula lutea*
White Birch	*Betula papyrifera*
Gray Birch	*Betula populifolia*
American Hornbeam	*Carpinus caroliniana*
Pignut Hickory	*Carya glabra*
Shagbark Hickory	*Carya ovata*
Hawthorn	*Crataegus crus-galli*
American Beech	*Fagus grandifolia*
White Ash	*Fraxinus americana*
Green Ash	*Fraxinus pennsylvanica*
Black Walnut	*Juglans nigra*
Red Cedar	*Juniperus virginiana*
Tulip Tree	*Liriodendron tulipifera*
Wild Apple	*Malus sylvestris*
Hop Hornbeam	*Oystra virginiana*
White Pine	*Pinus strobus*
Eastern Sycamore	*Platanus occidentalis*
Cottonwood	*Populus deltoides*
Big-tooth Aspen	*Populus grandidentata*
Quaking Aspen	*Populus tremuloides*
Black Cherry	*Prunus serotina*
Choke Cherry	*Prunus virginiana*
White Oak	*Quercus alba*
Swamp White oak	*Quercus bicolor*
Scarlet Oak	*Quercus coccinea*
Pin Oak	*Quercus palustris*
Red Oak	*Quercus rubra*

Chestnut Oak	*Quercus montana*
Black Locust	*Robinia pseudoacacia*
White Willow	*Salix alba*
Eastern Hemlock	*Tsuga canadensis*
American Elm	*Ulmus Americana*

Shrubs:

Common Name	**Scientific Name**
Speckled Alder	*Alnus rugosa*
Shadbush Serviceberry	*Amelanchier canadensis*
Japanese Barberry	*Berberis thunbergii*
Hawthorn	*Crataegus crus-galli*
Silky Dogwood	*Cornus amomum*
Flowering Dogwood	*Cornus florida*
Gray Dogwood	*Cornus racemosa*
Red-osier Dogwood	*Cornus stolonifera*
Witch Hazel	*Hamamelis virginiana*
Winterberry	*Ilex verticillata*
Spicebush	*Lindera benzoin*
Tatarian Honeysuckle	*Lonicera tatarica*
Common Buckthorn	*Rhamnus cathartica*
Staghorn Sumac	*Rhus typhina*
Multiflora Rose	*Rosa multiflora*
Red Raspberry	*Rubus idaeus*
Blackberry	*Rubus allegheniensis*
Pussy Willow	*Salix discolor*
Black Willow	*Salix nigra*
Common Elderberry	*Sambucus canadensis*
Meadowsweet	*Spirea latifolia*
Steeplebush	*Spirea tomentosa*
Highbush Blueberry	*Vaccinium corymbosum*
Maple-leaved Viburnum	*Viburnum acerifolium*
Arrowwood	*Viburnum dentatum*
Nannyberry	*Viburnum lentago*

Vines:

Common Name	**Scientific Name**
Oriental Bittersweet	*Celastris orbiculatus*
Virginia Creeper	*Parthenocissus quinquefolia*
Poison Ivy	*Rhus radicans*
Dewberry	*Rubus procumbens*
Summer Grape	*Vitis aestivalis*
Riverbank Grape	*Vitis riparia*

Herbaceous Plants:

Common Name	Scientific Name
Yarrow	*Achillea millefolium*
Sweet Flag	*Acorus calamus*
Agrimony	*Agrimonia parviflora*
Redtop	*Agrostis alba*
Water Plantain	*Alisma plantago-aquatica*
Garlic Mustard	*Alliaria officinalis*
Leeks	*Allium vinale*
Ragweed	*Ambrosia artemisiifolia*
Hog Peanut	*Amphicarpaea bracteata*
Common Burdock	*Arctium minus*
Common Milkweed	*Asclepias syraca*
New England Aster	*Aster novae-angliae*
Beggars Ticks	*Bidens tripartita*
Marsh Marigold	*Caltha palustris*
Brome-like	*Carex bromoides*
Lakebank Sedge	*Carex lacustris*
Broom Sedge	*Carex scoparia(group)*
Tussock Sedge	*Carex stricta*
Fox Sedge	*Carex vulpinoidea*
Upland Sedge	*Carex pennsylvanica.*
Spotted Knapweed	*Centaurea maculosa*
Daisy	*Chrysanthemum leucanthemum*
Chickory	*Cichorium intybus*
Canada Thistle	*Cirsium arvense*
Bull Thistle	*Cirsium vulgar*
Orchard Grass	*Dactylis glomerata*
Wild Carrot	*Daucus carota*
Deptford Pink	*Dianthus armeria*
Teasel	*Dipsacus sylvestris*
Barnyard Grass	*Echinochloa crusgalli*
Willow Herb	*Epilobium spp.*
Daisy Fleabane	*Erigeron annuus*
Trout Lily	*Erythronium americanum*
Field Horsetail	*Equisetum arvense*
Joe-pye Weed	*Eupatorium maculatum*
Boneset	*Eupatorium perfoliatum*
Wild Strawberry	*Fragaria virginiana*
White Avens	*Geum canadense*
Fowl Manna Grass	*Glyceria striata*
Bedstraw	*Galium aparine*
Day Lily	*Hemerocallis fulva*
Jewelweed	*Impatiens capensis*
Blue Flag Iris	*Iris versicolor*

Soft Rush	*Juncus effusus*
Rice Cut Grass	*Leersia oryzoides*
Duckweed	*Lemna minor*
Birdsfoot Trefoil	*Lotus corniculatus*
Ragged Robin	*Lychnis flos-cuculi*
Moneywort	*Lysimachia nummularia*
Purple Loosestrife	*Lythrum salicaria*
Yellow Sweet Clover	*Melilotus officinalis*
Evening Primrose	*Oenothera biennis*
Sensitive Fern	*Onoclea sensibilis*
Cinnamon Fern	*Osmunda cinnamomea*
Royal Fern	*Osmunda regalis*
Switch Grass	*Panicum virgatum*
Reed Canary Grass	*Phalaris arundinacea*
White Beard-tongue	*Penstemon digitalis*
Timothy	*Phleum pratense*
Common Reed	*Phragmites australis*
Clearweed	*Pilea pumila*
English Plantain	*Plantago lanceolata*
Common Plantain	*Plantago major*
Water Smartweed	*Polygonum amphibium*
Japanese Knotweed	*Polygonum cuspidatum*
Tearthumb	*Polygonum sagittatum*
Christmas Fern	*Polystichum agrostichoides*
Herbaceous Cinquefoil	*Potentilla simplex*
Black-eyed Susan	*Rudbeckia hirta*
Dark Green Bulrush	*Scirpus atrovirens*
Wool Grass	*Scirpus cyperinus*
Bristly Foxtail	*Setaria faberii*
Common Greenbrier	*Smilax rotundifolia*
Canada Goldenrod	*Solidago canadensis*
Late Goldenrod	*Solidago gigantea*
Early Goldenrod	*Solidago juncea*
Rough-stem Goldenrod	*Solidago rugosa*
Slender-leaved Goldenrod	*Solidago tenuifolia*
Field Sow Thistle	*Sonchus arvensis*
Bur-reed	*Sparganium erectum*
Skunk Cabbage	*Symplocarpus foetidus*
Dandelion	*Taraxacum officinale*
Red Clover	*Trifolium pratense*
Cattail	*Typha latifolia*
Stinging Nettle	*Urtica dioica*
Mullein	*Verbascum thappsus*
Blue Vervain	*Verbena hastata*
Cow Vetch	*Vicia cracca*
Common Blue Violet	*Viola sororia*

Fauna

Mammals:

Common Name	Scientific Name
Eastern Coyote**	*Canis latrans*
Woodchuck**	*Marmota monax*
Meadow Vole	*Microtus pennsylvanicus*
Mink**	*Mustela vison*
White-tailed Deer	*Odocoileus virginiana*
Muskrat**	*Ondatra zibethica*
Deer Mouse	*Peromyscus maniculatus*
Raccoon**	*Procyon lotor*
Eastern Gray Squirrel	*Sciurus carolinensis*
Cottontail Rabbit	*Sylvilagus floridanus*
Eastern Chipmunk	*Tamias striatus*
Red Squirrel	*Tamiasciurus hudsonicus*
Grey Fox**	*Urocyon cinereoargenteus*
Black Bear**	*Ursus americanus*

Birds:

Common Name	Scientific Name
Wood Duck	*Aix sponsa*
Red-winged Blackbird	*Agelaius phoeniceus*
Mallard	*Anas platyrhynchos*
Cedar Waxwing	*Bombycilla cedrorum*
Ruffed Grouse	*Bonasa umbellus*
Canada Goose	*Branta canadensis*
Red-tail Hawk	*Buteo jamaicensis*
Northern Cardinal	*Cardinal cardinalis*
American Goldfinch	*Carduelis tristis*
Veery	*Catharus fuscescens*
Eastern Wood-pewee	*Contopus virens*
American Crow	*Corvus brachyrhynchos*
Common Raven	*Corvus corax*
Blue Jay	*Cyanocitta cristata*
Black-throated Blue Warbler	*Dendroica caerulescens*
Yellow-rumped Warbler	*Dendroica coronata*
Chestnut sided Warbler	*Dendroica pensylvanica*
Yellow Warbler	*Dendroica petechia*
Black-throated Green Warbler	*Dendroica virens*
Pileated Woodpecker	*Dryocopus pileatus*
Gray Catbird	*Dumetella carolinensis*
Common Yellowthroat	*Geothlypis trichas*
Wood Thrush	*Hylocichla mustelina*

Baltimore Oriole	*Icterus galbula*
Tree Swallow	*Iridoprocne bicolor*
Dark-eyed Junco	*Junco hyemalis*
Eastern Wild Turkey	*Meleagris gallopavo*
Swamp Sparrow	*Melospiza georgiana*
Song Sparrow	*Melospiza melodia*
Northern Mockingbird	*Mimus polyglottos*
Brown-headed Cowbird	*Molothrus ater*
Northern Parula	*Parula americana*
Black-capped Chickadee	*Parus atricapillus*
Tufted titmouse	*Parus bicolor*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Picoides villosus*
Eastern Towhee	*Pipilo erythrophthalmus*
Eastern Phoebe	*Sayornis phoebe*
Ovenbird	*Seirus aurocapillus*
Eastern Bluebird	*Sialia sialis*
White-breasted Nuthatch	*Sitta carolinensis*
Chipping Sparrow	*Spizella passerina*
Field Sparrow	*Spizella pusilla*
Barred Owl	*Strix varia*
European Starling	*Sturnus vulgaris*
Tree Swallow	*Tachycineta bicolor*
House Wren	*Troglodytes aedon*
Eastern Kingbird	*Tyrannus tyrannus*
Red-eyed Vireo	*Vireo olivaceus*
Mourning Dove	*Zenaida macroura*
White-throated Sparrow	*Zonotrichia albicollis*

Amphibians/Reptiles:

Common Name	**Scientific Name**
Spotted Salamander	*Ambystoma maculatum*
Snapping Turtle	*Chelydra serpentina*
Eastern Painted Turtle	*Chrysemys picta picta*
Grey Tree Frog	*Hyla versicolor*
Northern Water Snake	*Nerodia sipedon sipedon*
Red Eft	*Notophthalmus viridescens viridescens*
Redback Salamander	*Plethodon cinereus*
Northern Slimy Salamander	*Plethodon glutinosus*
Bull Frog	*Rana catesbeiana*
Green Frog	*Rana clamitans*
Wood Frog	*Rana sylvatica*
Eastern Box Turtle	*Terrapene carolina carolina*
Garter Snake	*Thamnophis sirtalis sirtalis*

Appendix G

Consultant Resumes

Stephen P. George, PWS

Education

B.A. - Environmental Science, Wildlife Management - 1983-1985, SUNY Plattsburgh, *Plattsburgh, NY*

A.A.S. - Natural Resources Conservation/Ecology – 1980 – 1982, SUNY Morrisville, *Morrisville, NY*

Experience

Mr. George possesses a wide range of experience in the fields of Ecology, Biology and Wetland Science. As the President and Senior Ecologist of North Country Ecological Services, Inc., Mr. George is responsible for: completing delineations of state and federal wetlands; compiling endangered and threatened species reports; completing habitat assessments and species inventories for flora and fauna; Environmental Impact Statement preparation; wetland mitigation design, construction, and monitoring; and, the preparation/finalization of reports and permit applications for submission to clients and regulatory agencies.

Work Experience

President & Senior Ecologist

1994–Present North Country Ecological Services, Inc. Johnstown, NY

Responsible for planning, execution, and completion of detailed technical reports for ecological studies including regulatory and legal issues. Also responsible for the preparation and execution of Environmental Impact Statements; habitat inventories; federal and state wetland delineations; wetland mitigation design; wetland mitigation monitoring; wetland permit applications; endangered species evaluations; wildlife management plans; stormwater and erosion control plans; and, water quality monitoring.

Environmental Analyst/Ecologist

1989–1994 Smith & Mahoney, P.C. Albany, NY

Managed the development and co-authored Environmental Impact Statements for private, municipal, and commercial developments. Projects included residential housing developments, transfer stations, landfills, shopping malls, and industrial facilities. Supervised and conducted ecological studies and impact assessments of aquatic and terrestrial communities. Responsible for the preparation of federal and state wetland delineations, reports, mitigation, and the necessary permits for the clients. Assisted in the landfill siting process for the Saratoga County and the Montgomery-Otsego-Schoharie County Solid Waste Management Authority. Assisted in hazardous waste remediation projects. Duties also included assisting

Thomas M. Ward, Vice President – Ecologist

NORTH COUNTRY ECOLOGICAL SERVICES, INC.

Education

1996-2000 SUNY Cobleskill *Cobleskill, NY*

- B.T. Animal Science - Wildlife Management
- A.A.S. Animal Science - Fisheries & Wildlife Technologies

Experience

Mr. Ward possesses hands on experience in the fields of Ecology, Biology and Wetland Science. Mr. Ward works directly with clients, municipalities, regulatory agencies and other professionals to meet all the environmental requirements needed to accurately assess and develop project sites. Some of these requirements include: delineating federal and state wetland boundaries; assessing wetland and ecological impacts; conducting surveys for endangered/threatened species and/or ecological habitats; and, compiling reports, permit applications, and mitigation plans.

Work Experience

Vice President - Ecologist / Biologist

9/2000–Present North Country Ecological Services, Inc. *Johnstown, NY*

Responsible for planning, executing and completion of detailed site assessments and technical reports for ecological studies and permitting processes. Also responsible for the preparation and execution of Environmental Impact Statements; federal and state wetland delineations and reports; conducting flora/fauna and habitat inventories; wetland mitigation design; wetland mitigation monitoring; preparation of state and federal wetland permit applications; endangered and threatened species evaluations and reports; and, wildlife management plans.

Wetland Specialist

8/1999–9/2000 NYS Department of Environmental Conservation *Albany, NY*

Responsible for contacting landowners in Saratoga County and conducting delineations of state regulated wetlands, answering related questions on DEC regulations, informing individual landowners on wetland conservation, and making DEC Article 24 wetland map amendments. Also provided with landowners with Article 24 permit applications and requirement guidelines. Coordinated efforts between regional and central DEC offices.

Wildlife Coordinator

Seasonal-1999 Birdsong Farm *Delhi, NY*

Responsible for establishing a working Pheasant brooding and release program on the property. Other duties included; building/erecting blue bird houses and wood duck nest boxes, constructing hiking trails, and managing habitat for deer, turkey and pheasants. Initiated a wildlife management plan for the working farm.

Specific Endangered & Threatened Species Project Experience

- Chester Golf Course, Town of Chester, Orange County, New York: Completed Phase 1 Bog Turtle assessment for a combination golf course and residential housing project on 150± acres. Conducted a Phase 2 survey under the guidance of Dr. Eric Kiviat of Hudsonia.
- Rensselaer City School Project: Review of 80± acres to identify several species of flora that the NYSDEC listed as sensitive. Completed Phase 1 Indiana Bat habitat assessment. Coordinated efforts with USFWS/DEC to determine if project would impact Indiana Bats.
- Pozzolini Residential Subdivision: Completed Phase 1 Bog Turtle and Indiana Bat habitat assessments for a proposed residential subdivision.
- Winter Wonderland Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment for the project site. A Phase 2 assessment was conducted under the supervision of Mr. Jason Tesauro.
- Reservoir Road Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment for the project site. A Phase 2 assessment was conducted under the supervision of Mr. Jason Tesauro.
- Laroe Road Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment and Indiana Bat habitat assessment for the project site.
- Monhagen Estates Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment and Indiana Bat habitat assessment for the project site.
- Beamer Road Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment and Indiana Bat habitat assessment for the project site.
- Martinelli Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment and Indiana Bat habitat assessment for the project site.
- Bruceville Road Residential Subdivision: Completed a Phase 1 Bog Turtle habitat assessment and Indiana Bat habitat assessment for the project site.
- Dicaprio Park: Completed a habitat survey for Karner Blue Butterflies on the proposed parklands.
- Woodsfield Estates Residential Subdivision: Completed a review for Karner Blue Butterflies on the project site.
- Tuxedo Park: Completed a Habitat Assessment and Visual Survey for Timber Rattlesnakes on the project site.
- Pine Hill Development: Completed a Habitat Assessment and Visual Survey for Timber Rattlesnakes on the project site.

Additional Training

- Rutgers College – Freshwater Wetland Construction
- Rutgers College – Endangered & Threatened Species of Southern NJ
- USFWS – WallKill River National Wildlife Refuge, New Jersey. Assisted with radio telemetry survey of Bog Turtles.
- Volunteer to Environmental Defense / Jason Tesauro – conducted Bog Turtle Surveys in Columbia and Dutchess Counties, New York.

Special Licenses

- NYSDEC – Nuisance Beaver Training Snare Workshop Certificate
- NYSDEC – Nuisance Wildlife Control Operations and NYS Pistol Permit
- NYSDEC – License to Collect and Possess

Affiliations

- New York State Wetlands Forum, Inc. - Member
- Corporate Wetlands Restoration Partnership – NYS Chapter Member
- Quality Deer Management Association – NYS Chapter Member

survey department, construction inspection and monitoring, water quality analysis and monitoring, and methane gas monitoring at landfills.

Engineering Technician/Environmental Analyst
1986-1989 Phillip Clark Engineers and Associates, P.C. Newburgh, NY

Prepared Environmental Impact Statements, assisted the survey crew, and conducted environmental analysis. Resident Engineer and Construction Inspector on the Harriman and Middletown WWTF construction projects. Resident Engineer for several potable water, municipal sewer main projects, water tower installation, and roadway construction. Experience includes pipeline and building layout, directional boring, concrete testing, pressurized and gravity water main testing, and as-built documentation.

Specific Endangered & Threatened Species Experience

- Karner Blue Butterfly evaluations
- Timber Rattlesnake field investigations
- Bog Turtle Phase 1 and 2 Studies

Additional Training

- ACOE Regulatory IV Course - Jurisdictional Wetland Delineation
- National Institute for Certification of Engineering Technologies – Highway Construction, Level II
- OSHA – 40 Hour Health and Safety at Hazardous Materials Sites
- Rutgers College – Freshwater Wetland Construction
- Rutgers College – Endangered and Threatened Species of Southern NJ
- Volunteer to Environmental Defense / Jason Tesauro – Conducted Bog Turtle Surveys in Columbia and Dutchess Counties, New York.
- USFWS – Wallkill River National Wildlife Refuge, New Jersey. Assisted with radio telemetry survey of Bog Turtles.

Special Licenses

- NYSDEC – Nuisance Wildlife Control Operations
- NYSDEC – License to Collect and Possess
- NYSDEC Sportsman's Education Instructor (firearm, archery, trapping, waterfowl identification).

Affiliations

- Society of Wetland Scientists
- NYS Wetland Forum, Co-Founder, Former Board Member
- National Audubon Society Member
- Corporate Wetlands Restoration Partnership NYS Chapter Member
- National Bowhunter Education Foundation, Board Member
- NYSDEC Wilderness Search & Rescue (Team 5-1) Member

Publications

- Wildlife Society Bulletin, Volume 15, No. 2, Summer 1987 – Evaluation of Site Variables Affecting Nest Box Use by Wood Ducks.

Appendix H

J. Tesauro Letter Reports on Phase I and Phase II Bog Turtle Surveys

J. Tesauro
ECOLOGICAL CONSULTING
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Wetland Habitat Investigation, Reiger Tract,
Town of Goshen, New York

by Jason Tesauro

15 November 2007

Wetlands were inspected on the proposed Rieger Homes residential development located in the Town of Goshen, New York on 21 May and 12 June 2007 to determine the presence of suitable habitat for the state-endangered/federally threatened bog turtle (*Glyptemys muhlenbergii*), the state-endangered northern cricket frog (*Acris crepitans*), and other wetland wildlife. The survey was performed together with Stephen George of North Country Ecological Services.

The wetlands investigated in this survey identified on the 'Conservation Analysis' map prepared by Esposito and Associates dated 21 April 2005. All wetlands were assessed for hydrology, dominant vegetation, and soils in the context of providing suitable habitat for the bog turtle and the northern cricket frog. Notes were taken on all reptiles and amphibians (=herps) observed during the survey. The results of this wetland habitat assessment follow.

Bog Turtle Habitat

Suitable habitat for the bog turtle was found at three locations (Figure 1). The first area of habitat was a small wet meadow located ca. 450 feet east of Hasbrouck Road on the north side of a stream. Dominant vegetation included tussock sedge (*Carex stricta*), several species of ferns, blue flag (*Iris versicolor*), joe-pye weed (*Eupatorium maculatum*) and red maple (*Acer rubrum*). The soft, saturated soils were largely mineral with a small organic component on the surface. The hydrology appeared to be groundwater-fed, but the droughty conditions appeared to have had caused much of the seepage to recede. The sedge meadow habitat appeared to have been much larger at one time but has since been forested by red maples and other hardwoods.

The second suitable bog turtle habitat was identified on the south side of Craigville Road on the western end of the project parcel (Figure 1). This habitat was cattail (*Typha*)-bur reed (*Sparganium*) marsh that occupied a drained impoundment. The soils were soft and peaty. The hydrology was spring-fed. Other vegetation included duckweed (*Lemna*) and several pond plants. Green frog (*Rana clamitans melanota*) was the only herp observed during the survey of this small wetland.

The third suitable bog turtle habitat was a small meadow also located on the south side of Craigville Road situated on a hillside south of a stream. This meadow was dominated by various sedges and grasses, including tussock sedge and manna grass (*Glyceria sp.*), skunk cabbage (*Symplocarpus foetidus*), cinnamon fern (*Osmunda cinnamomea*), and alder (*Alnus* sp.). The soils throughout the meadow were relatively firm and were comprised of mineral material; however there were a couple small seeps that created isolated saturated, mucky conditions. It is possible that this meadow is much wetter during periods of normal rainfall.

Northern Cricket Frog Habitat

The southeastern section of the property contained a shallow, permanent pond with a thickly vegetated shoreline (Figure 1). This pond, which appeared to have been impounded many years ago as an ice pond or possibly cattle watering hole, was situated within a larger complex of forested/scrub-shrub seasonal or vernal pools. When water levels are high, the pond appeared to form a continuous open water wetland with the surrounding vernal habitats that extended the properties southern border. Several spotted salamander (*Ambystoma maculatum*) egg masses were found along the shallow shore of the pond on 21 May 2007. Green frogs, bullfrogs (*Rana catesbiana*), red-spotted newts (*Nothopthalamus viridescens*), eastern painted turtles (*Chrysemys picta*), and common snapping turtle (*Chelydra serpentina*) were also observed in the pond. Based on the habitat, it is also possible that vernal pool obligate species such as wood frogs (*Rana sylvatica*) and marbled salamanders (*Ambystoma opacum*) also in occur (breed) in seasonally ponded portion of this wetland. The shallow water and lush vegetation of the permanent pond were indicative of northern cricket frog habitat. Although none were observed during the survey, northern cricket frogs do occur in this portion of Orange County, and it may be prudent to survey for the presence of this species during its breeding season.

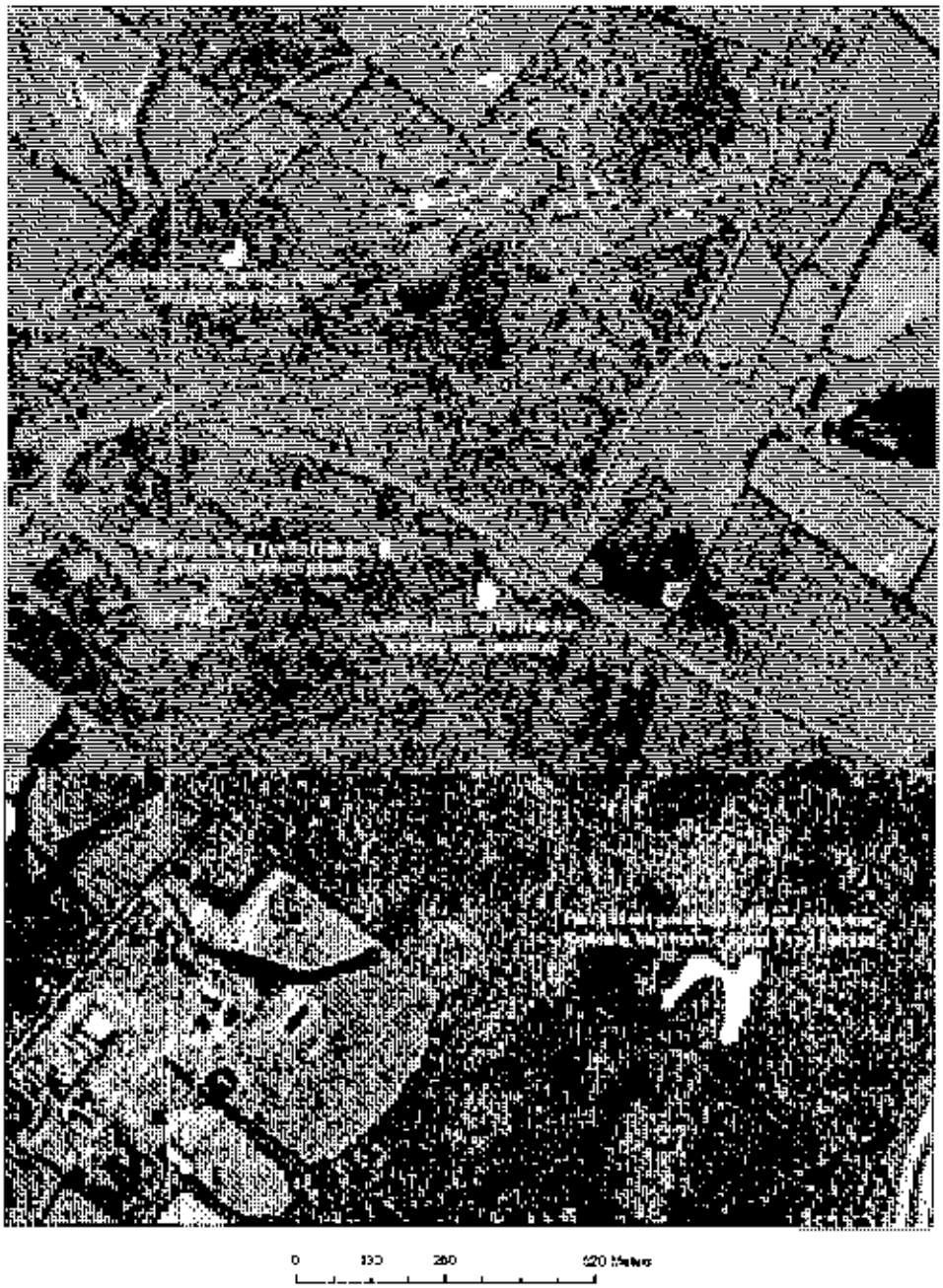
The remainder of the wetlands on the property consisted of hardwood swamp dominated by red maple and American elm (*Ulmus americana*). There were some marshy, open-canopy areas within portions of the swamp along Craigville Road featuring tussock sedge and lake sedge (*Carex lacustris*) which may provide habitat for species such as spotted turtles (*Clemmys guttata*) and four-toed salamander (*Hemidactylium scutatum*).

References:

Northern Cricket Frog Fact Sheet. http://www.dec.ny.gov/animals/7120.html

USFWS. 2001. Bog turtle (*Clemmys muhlenbergii*), northern population recovery plan. U.S. Fish and Wildlife Service, Hadley, MA. 103 p.

FIGURE 1. Suitable bog turtle and northern cricket frog habitats, Riegel Homes parcel, Goshen, NY



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Herpetological Investigation, Rieger Tract, Town of Goshen, New York

by Jason Tesauro

June 16, 2008

A general herpetological evaluation and survey was conducted on the proposed Rieger Homes residential development located in the Town of Goshen, New York on 15 April, 30 April, 16 May, and 8 June 2008. A portion of this work was done in conjunction with a Phase 2 bog turtle survey done on two small wetlands located on the south side of Craigville Road in the western end of the parcel. This report summarizes the results of the herpetological investigation.

The Rieger Homes parcel was first visited on 21 May 2007 for general reconnaissance. Several wetland areas were identified during this visit including three areas of suitable bog turtle habitat, forested wetland containing vernal pools, seasonally flooded emergent wetland, forested riparian habitat, and an artificial impoundment. The remainder of the habitat consisted primarily of upland deciduous forest with some patches of former human habitation. Surveys were focused primarily on the wetland portions of the property.

Survey methods entailed random opportunistic surveys under warm, sunny conditions which would be conducive to surface activity, movement, and/or breeding of many reptilian and amphibian species (i.e., herptiles) likely to occur on site. The site was also visited in the evenings of 5/15 and 5/20, the morning of 5/21 and in the late afternoon of 6/8 by North Country Ecological Services (NCES) to document calling anurans. Aquatic and fossorial species (e.g., salamanders) were actively searched for through dip-netting and lifting logs, stones, and other material in both forest and riparian habitat.

Species documented during this investigation were as follows:

Common Name	Latin Name	NYSDEC Status
Green frog	*Rana clamitans melanota*	
Bullfrog	*Rana catesbiana*	
Pickerel frog	*Rana palustris*	
Wood frog	*Rana sylvatica*	
Northern spring peeper	*Pseudacris crucifer*	
Northern gray treefrog	*Hyla versicolor*	
American toad	*Bufo americanus*	

Two-lined salamander	*Eurycea bislineata*	
Red-backed salamander	*Plethodon cinereus*	
Northern slimy salamander	*Plethodon glutinosus*	
Dusky salamander	*Desmognathus subfuscus*	
Red-spotted newt	*Notophtalamus viridescens*	
Spotted salamander	*Amybstoma maculatum*	
Eastern garter snake	*Thamnophis sirtalis*	
Northern water snake	*Nerodia sipedon*	
Common snapping turtle	*Chelydra serpentina*	
Eastern painted turtle	*Chrysemys picta*	
Eastern box turtle	*Terrapene carolina*	Special Concern

The Rieger tract contained a diverse herpetological community, comprised mostly by common species. The eastern box turtle, a Special Concern species, was the only species observed that is officially 'listed' by the New York State Bureau of Wildlife. The richest herptile area was associated with a wetland complex located in the southeastern corner of the property that contained an artificial impoundment and forested wetland habitat. Large concentrations of wood frogs and spotted salamanders bred in the vernal pools found within the boundaries of the forested wetlands and also within the shallow shoreline habitat of the impoundment. The pools appeared suitable for other obligate vernal pool amphibians including marbled salamander and Jefferson salamanders, although none were observed. The southernmost vernal pool within this complex contained a lush plant community dominated by high-bush blueberry (*Vaccinium corymbosum*), spicebush (*Lindera benzoin*), and various hardwoods. Thick mounds of peat moss (*Sphagnum* sp.) grew at the base of many of the shrubs and trees within the pool, providing suitable habitat for four-toed salamander (*Hemidactylium scutatum*), but none were found. The artificial impoundment, which appeared to hold water year-round, supported aquatic turtles, red-spotted newts, and was used as breeding habitat for all the anurans observed on site with the exception of American toads. Auditory and visual surveys did not yield any northern cricket frogs (*Acris crepitans*) in the pond. In New York, northern cricket frogs are typically associated with large, circumneutral ponds with a well-established emergent and aquatic vegetation community. This impoundment, while superficially suitable, may be limited by its water chemistry and its isolation from other northern cricket frog populations.

A second significant emergent and forested wetland complex, also containing vernal pools, exists on the eastern side of the property but on the north side of Craigville Road (Figure 1). This area contained a shallow, sedge-dominated wetland that bordered on large, flooded, grassy marsh to the west (located off site). Wood frogs and spotted salamanders were documented in this ponded sedge marsh along with green frogs, American toads, and spring peepers. Together with the off-site marsh, these wetlands provided excellent habitat for the spotted turtle (*Clemmys guttata*), a Special Concern species. A small turtle was observed peripherally diving into the water from a tussock on 30 April; however, it was not captured and identification could not be confirmed.

The riparian habitat on the site was not very ecologically productive. Green frogs, water snakes, and two-lined salamanders were the only herptile species documented. Fish were not common. The stream itself was compromised by its proximity to Craigville Road and appeared to be very flashy, possibly from upstream impacts associated with agricultural activities and land development within the watershed. The wood turtle (*Glyptemys insculpta*), a Special Concern species, is associated with riparian habitats and is common in certain parts of Orange

County; however, the stream was only marginally suitable for the species, and was so close to Craigville Road that road mortality would be a major threat to this far-ranging, transient turtle. The small, seasonal stream from the impoundment in the southern corner of the property, which eventually drains into this creek, was the only location where dusky salamanders were documented.

The two wet meadows surveyed for bog turtles (See forthcoming Phase 2 report by NCES) produced green frogs, spotted salamanders, wood frogs, and spring peepers. The latter three were only documented breeding at the westernmost patch of habitat, which was partially ponded (it had formerly been an impoundment). A third suitable bog turtle habitat located 100 meters east of Hasbrouck Road, which was not subjected to a Phase 2 investigation due to its distance from proposed development, was visited once and did not produce any herptiles.

Northern water snakes were the most commonly observed snake species on the site, mostly associated with the permanent pond and riparian habitats. Garter snakes were observed in the upland woods and along trails. Old tin, trash, and scattered debris near former dwellings were turned over in pursuit of eastern milk snakes (*Lampropeltis triangulum*), black rat snakes (*Elaphe obsoleta*), and brown snakes (*Storeria dekayi*); however, none of these species were found.

The upland forest, which comprised the bulk of the habitat area on site, was casually surveyed. Log-rolling yielded red-backed salamanders, slimy salamanders, and a single juvenile spotted salamander. A male box turtle was found along the forest edge on the north side of Craigville Road. Although only a handful of wood frogs and a single spotted salamander were observed in the forest, it is assumed that the upland forest habitat throughout the property provides habitat for the large numbers of spotted salamanders, northern spring peepers, and northern gray treefrogs that were observed breeding in the pond and various wetland habitats.

References:

Northern Cricket Frog Fact Sheet. http://www.dec.ny.gov/animals/7120.html

Appendix I

SWBP List of "Development Sensitive Species"

*Development-Sensitive and Listed Focal Species**

		Federal Status	State Status	Audubon WatchList Status
Amphibians				
Blue-spotted salamander	*Ambystoma laterale*		SC	
Jefferson X Blue-spotted salamander	*Ambystoma jeffersonianum X laterale* hybrid		SC	
Spotted salamander	*Ambystoma maculatum*			
Marbled salamander	*Ambystoma opacum*		SC	
Northern dusky salamander	*Desmognathus fuscus*			
Long-tailed salamander	*Eurycea longicauda*		SC	
Northern red salamander	*Pseudotriton ruber*			
Gray treefrog	*Hyla versicolor*			
Northern cricket frog	*Acris crepitans*		E	
Chorus frog	*Pseudacris triseriata*			
Southern leopard frog	*Rana sphenocephala*		SC	
Wood frog	*Rana sylvatica*			
Reptiles				
Spotted turtle	*Clemmys guttata*		SC	
Wood turtle	*Clemmys insculpta*		SC	
Bog turtle	*Clemmys muhlenbergii*	T	E	
Eastern box turtle	*Terrapene carolina*		SC	
Northern five-lined skink	*Eumeces fasciatus*			
Worm snake	*Carphophis a. amoenus*		SC	
Northern black racer	*Coluber c. constrictor*			
Black rat snake	*Elaphe obsoleta*			
Eastern hognose snake	*Heterodon platirhinos*		SC	
Northern red-bellied snake	*Storeria o. occipitomaculata*			
Eastern ribbon snake	*Thamnophis s. sauritus*			
Northern copperhead	*Agkistrodon contortrix mokasen*			
Birds				
American black duck	*Anas rubripes*			D
American bittern	*Botaurus lentiginosus*		SC	
Great egret	*Ardea alba*			
American woodcock	*Scolopax minor*			D
Spotted sandpiper	*Actitis maculana*			
Northern bobwhite	*Colinus virginianus*			
Northern harrier	*Circus cyaneus*		T	
Sharp-shinned hawk	*Accipiter striatus*		SC	
Cooper's hawk	*Accipiter cooperii*		SC	
Red-shouldered hawk	*Buteo lineatus*		SC	
American kestrel	*Falco sparverius*			
Barred owl	*Strix varia*			
Yellow-billed cuckoo	*Coccyzus americanus*			
Black-billed cuckoo	*Coccyzus erythropthalmus*			

*Federal & State status: E=Endangered, T=Threatened, SC=Special Concern; WatchList status: D=Declining; DR=Declining Rapidly

Development-Sensitive and Listed Focal Species (Concluded)*

		Federal Status	State Status	Audubon WatchList Status
Belted kingfisher	*Ceryle alcyon*			
Red-headed woodpecker	*Melanerpes erythrocephalus*		SC	D
Northern flicker	*Colaptes auratus*			
Eastern kingbird	*Tyrannus tyrannus*			
Eastern wood-pewee	*Contopus virens*			
Acadian flycatcher	*Empidonax virescens*			
Willow flycatcher	*Empidonax traillii*			D
Least flycatcher	*Empidonax minimus*			
Horned lark	*Eremophila alpestris*		SC	
Bobolink	*Dolichonyx oryzivorus*			
Eastern meadowlark	*Sturnella magna*			
Baltimore oriole	*Icterus galbula*			
Savannah sparrow	*Passerculus sandwichensis*			
Grasshopper sparrow	*Ammodramus savannarum*		SC	
Field sparrow	*Spizella pusilla*			
Eastern towhee	*Pipilo erythrophthalmus*			
Rose-breasted grosbeak	*Pheucticus ludovicianus*			
Scarlet tanager	*Piranga olivacea*			
Bank swallow	*Riparia riparia*			
Black-and-white warbler	*Mniotilta varia*			
Prothonotary warbler	*Protonotaria citrea*			D
Worm-eating warbler	*Helmitheros vermivorum*			D
Blue-winged warbler	*Vermivora pinus*			D
Northern parula	*Parula americana*			
Cerulean warbler	*Dendroica cerulea*		SC	DR
Chestnut-sided warbler	*Dendroica pensylvanica*			
Black-throated green warbler	*Dendroica virens*			
Prairie warbler	*Dendroica discolor*			D
Ovenbird	*Seiurus aurocapilla*			
Northern waterthrush	*Seiurus noveboracensis*			
Louisiana waterthrush	*Seiurus motacilla*			
Kentucky warbler	*Oporornis formosus*			D
Yellow-breasted chat	*Icteria virens*		SC	
Hooded warbler	*Wilsonia citrina*			
Canada warbler	*Wilsonia canadensis*			D
American redstart	*Setophaga ruticilla*			
Brown thrasher	*Toxostoma rufum*			
Marsh wren	*Cistothorus palustris*			
Wood thrush	*Hylocichla mustelina*			D
Veery	*Catharus fuscescens*			

*Federal & State status: E=Endangered, T=Threatened, SC=Special Concern; WatchList status: D=Declining; DR=Declining Rapidly

Appendix A

Focal Species of the Southern Wallkill Region

Development-Associated Focal Species

Amphibians

Northern two-lined salamander	*Eurycea bislineata*
American toad	*Bufo americanus*
Northern spring peeper	*Pseudacris crucifer*
Bullfrog	*Rana catesbeiana*
Green frog	*Rana clamitans*

Reptiles

Common snapping turtle	*Chelydra serpentina*
Painted turtle	*Chrysemys picta*
Eastern milk snake	*Lampropeltis triangulum*
Northern water snake	*Nerodia sipedon*
Northern brown snake	*Storeria d. dekayi*
Eastern garter snake	*Thamnophis s. sirtalis*

Birds

Canada goose	*Branta canadensis*
Rock dove	*Columba livia*
Blue jay	*Cyanocitta cristata*
American crow	*Corvus brachyrhynchos*
European starling	*Sturnus vulgaris*
Brown-headed cowbird	*Molothrus ater*
House finch	*Carpodacus mexicanus*
House sparrow	*Passer domesticus*
House wren	*Troglodytes aedon*

Appendix J

List of "Species of Greatest Conservation Need"

NEW YORK STATE

DEPARTMENT OF

tdoor Recreation

imals, Plants, Aquatic Life

pecies Conservation rograms

State Wildlife Grants (SWG)

Species of Greatest Conservation Need (SGCN)

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gulations and Enforcement

plications, Forms, Maps

out DEC

Species of Greatest Conservation Need (SGCN)

What Are SGCN?

The State Wildlife Grants program provides funds for conservation efforts aimed at preventing fish and wildlife populations from declining, reducing the potential for these species to be listed as endangered. In order to access these grant funds, New York State was required to develop a Comprehensive Wildlife Conservation Strategy (CWCS) that focuses on the "species of greatest conservation need." This includes those species that are deemed rare, imperiled and those for which status has not been established.

How Are Species Chosen as SGCN?

Species are chosen as SGCN using the following criteria:

- Species on the current federal list of endangered or threatened species that occur in New York
- Species that are currently State-listed as endangered, threatened or special concern
- Species with 20 or fewer elemental occurrences in the New York Natural Heritage Program database
- Estuarine and marine species of greatest

Page Applies To:

All Regions

On This Page:

Mammals

Birds

Reptiles

Amphibians

Fishes

Mollusks

Crustaceans

Beetles

Odonates

Mayflies and Stoneflies

Moths and Butterflies

What are SGCN?

How are SGCN Chosen?

Codes Used in Tables

Major Threats to SGCN

Related Links:

SCGNs by Habitat (PDF, 84kb)

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conservation need as determined by New York Department of Environmental Conservation, Bureau of Marine Resources staff

Based on this criteria, a preliminary list of more than 500 species was compiled. Subsequent consultation with the public and revision by DEC staff produced a list of 537 species of greatest conservation need. The list of species is certainly not exhaustive, but includes those species for which systematic assessments had been made by staff of the NYSDEC Division of Fish, Wildlife and Marine Resources and the New York Natural Heritage Program. Some species were eliminated because there was no clear conservation need, such as those species extirpated long ago, those that are rare but expanding their range in New York, and introduced species.

Other species were added to the list based on information from other sources, including:

- The Nature Conservancy Natureserve Explorer
- NYSDEC Staff experts added to the list after considering information on status, distribution and vulnerability to various threats; disease and unregulated harvest.
- The ecosystem approach to this conservation plan necessitated that species in neighboring states be included and some of those identified in Therres (1999) Wildlife Species of Regional Conservation Concern in the Northeastern United States were included.

The final list, presented here, will serve several purposes. The conservation needs of all species on this list (and other species for which New York has long-term stewardship responsibility) will be addressed in the Comprehensive Wildlife Conservation Strategy. We will consider the needs of species on this list as we identify and select work for current and future SWG funding. Additionally, the list may be used for prioritizing or directing other conservation programs in New York, including habitat protection and management, surveys, and research that may be

8924.

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funded from other sources such as the Environmental Protection Fund, Conservation Fund, Landowner Incentives Program, Farm Bill, North American Wetlands Conservation Act and traditional federal aid (Pittman-Robertson and Dingell-Johnson funds).

Codes Used in Species Lists/Tables

The following codes are used in the various species tables.

Listing Status:

- E/T/SC indicates if State-listed as Endangered, Threatened or Special Concern.
- (E)/(T)/(C) indicates if federally-listed as Endangered, Threatened or Candidate for listing.

NE Concern:

"X" indicates if species was listed as Wildlife Species of Regional Conservation concern in the Northeastern United States (Therres, 1999)

Heritage S-rank: state rank by NY Natural Heritage Program indicated as follows:

S1 - typically 5 or fewer occurrences
S2 - typically 6-20 occurrences
S3 - typically 21 - 100 occurrences
S4 - apparently secure in NYS
S5 - demonstrably secure in NYS
SA - accidental species
SH - historically known from NYS, but not seen in the past 15 years
SX - apparently extirpated from NYS
SR - reported to occur in NYS, but no specific locations documented
SU - species unrankable due to uncertainty about number of occurrences
SZ - species occurs in NYS, but generally not in specific locations
S? - species not evaluated yet
NR - not rated yet
Modifiers - (B) signifies that the species breeds instate, (N) signifies it does not breed instate

Other rankings:

- **Audubon Watch List:** "WL" indicates bird species included on the 2002 National Audubon Society Watchlist
- **Partners in Flight Concern Species:** "PIF" indicates bird species ranked by Partners in Flight
- **Shorebird Plan:** "SP" indicates bird species ranked as "Highly Imperiled" or "Species of High Concern" for one or more regions of the northeastern U.S. in the United States Shorebird Conservation Plan (Brown et al. 2001)
- **DEC Staff Judgement:** "DEC" indicates species added to the list based on professional judgement of appropriate NYSDEC staff experts

"Species of Greatest Conservation Need" in New York State

Note: to facilitate locating species of interest, the list is broken into major taxonomic groups (Tables 1 - 11), then listed alphabetically by species common name.

Table 1. Mammal Species of Greatest Conservation Need in New York State

Common Name	Scientific Name	Listing Status	NE Concern	Heritage Srank	Other Ranking
Allegheny woodrat	Neotoma magister	E	X	S1	
American marten	Martes americana			S3	
Blue whale	Balaenoptera musculus	E (E)		SZN	
Canada lynx	Lynx canadensis	T (T)	X	SX	
Eastern cougar	Felis concolor cougar	E (E)		SX	
Eastern red bat	Lasiurus borealis		X	S5B,SZN	
Fin whale	Balaenoptera physalus	E (E)		S1	
Gray wolf	Canis lupus	E (E)		SX	
Harbor porpoise	Phocoena phocoena	SC	X	S4	
Hoary bat	Lasiurus cinereus		X	S4B, SZN	

Humpback whale	Megaptera novaeangliae	E (E)		SZN	
Indiana bat	Myotis sodalis	E (E)		S1	
Least shrew	Cryptotis parva		X	SH	
Least weasel	Mustela nivalis			SH	
New England cottontail	Sylvilagus transitionalis	SC	X	SH	
Northern right whale	Eubalaena glacialis	E (E)		SZN	
River otter	Lontra canadensis			S5	
Sei whale	Balaenoptera borealis	E (E)		SZN	
Silver-haired bat	Lasionycteris noctivagans		X	S4B, SZN	
Small-footed bat	Myotis leibii	SC	X	S2	
Sperm whale	Physeter catodon	E (E)		SZN	

Table 2. Bird Species of Greatest Conservation Need in New York State

Common Name	Scientific Name	Listing Status	NE Concern	Heritage Srank	Other Ranking
American black duck	Anas rubripes			S2	WL,PIF-IA
American golden-plover	Pluvialis dominica			NR	
American oystercatcher	Haematopus palliatus			S3	WL,PIF-IA,SP
American bittern	Botaurus lentiginosus	SC	X	S4	PIF-IIA
American woodcock	Scolopax minor			S5	WL,PIF-IA,SP
Atlantic brant	Branta bernicla			S2	WL,PIF-IA
Bald eagle	Haliaeetus leucocephalus	T (T)		S2S3B,S2N	
Barn owl	Tyto alba			S3	
Bay-breasted warbler	Dendroica castanea			S2	WL,PIF-IA
Bicknell's thrush	Catharus bicknelli	SC	X	S2S3B	WL,PIF-IA

Black tern	Chlidonias niger	E	X	S2B	
Black-crowned night-heron	Nycticorax nycticorax			S3	DEC
Black rail	Laterallus jamaicensis	E		S1B,SZN	WL,PIF-IA
Black scoter	Melanitta nigra			NR	
Black-bellied plover	Pluvialis squatarola			NR	
Black-billed cuckoo	Coccyzus erythropthalmus			NR	
Black skimmer	Rynchops niger	SC		S2	PIF-IA
Black-throated blue warbler	Dendroica caerulescens			NR	
Blue-winged teal	Anas discors			NR	
Blue-winged warbler	Vermivora pinus			S5	WL,PIF-IA
Bobolink	Dolichonyx oryzivorus			S5	DEC,PIF-IIA
Bonaparte's gull	Larus philadelphia			NR	
Brown thrasher	Toxostoma rufum			NR	
Buff-breasted sandpiper	Tryngites subruficollis			NR	WL,SP
Canada warbler	Wilsonia canadensis		X	S5	WL,PIF-IA
Cape May warbler	Dendroica tigrina			S2	
Caspian tern	Sterna caspia			S1	
Cattle egret	Bubulcus ibis			S2	
Cerulean warbler	Dendroica cerulea	SC	X	S4B	WL,PIF-IA
Common eider	Somateria mollissima			NR	
Common goldeneye	Bucephala clangula			S2	
Common nighthawk	Chordeiles minor	SC		S4	
Common loon	Gavia immer	SC		S3S4	PIF-IIA
Common tern	Sterna hirundo	T	X	S3B	PIF-IIA
Cooper's hawk	Accipiter cooperii	SC		S4	

Cory's shearwater	Calonectris diomedea			NR	
Dickcissel	Spiza americana			NR	
Dunlin	Calidris alpina			NR	
Eastern meadowlark	Sturnella magna			NR	
Forster's tern	Sterna forsteri			S1	
Glossy ibis	Plegadis falcinellus			S2	PIF-IIB
Golden-winged warbler	Vermivora chrysoptera	SC	X	S4	WL,PIF-IA
Golden eagle	Aquila chrysaetos	E	X	SHB,S1N	
Grasshopper sparrow	Ammodramus savannarum	SC		S4	PIF-IIC
Great egret	Ardea alba			S2	
Greater shearwater	Puffinis gravis			NR	
Greater yellowlegs	Tringa melanoleuca			NR	
Greater scaup	Aythya marila			S2	PIF-IA
Gull-billed tern	Sterna nilotica			S1	
Harlequin duck	Histrionicus histrionicus		X	NR	
Henslow's sparrow	Ammodramus henslowii	T	X	S3B,SAN	WL,PIF-IA
Horned lark	Eremophila alpestris	SC		S5	
Horned grebe	Podiceps auritus			NR	
Hudsonian godwit	Limosa haemastica			NR	WL,SP
Kentucky warbler	Oporornis formosus			S2	WL,PIF-IA
King rail	Rallus elegans	T		S1B,SZN	PIF-IB
Laughing gull	Larus atricilla			S1	
Least tern	Sterna antillarum	T	X	S3B	IA(30)
Least bittern	Ixobrychus exilis	T		S3B,S1N	
Lesser scaup	Aythya affinis			NR	
Little gull	larus minutus			NR	
Little blue	Egretta				

heron	caerulea			S2	PIF-IB
Loggerhead shrike	Lanius ludovicianus	E	X	S1B,SZN	PIF-IIC
Long-tailed duck	Clangula hyemalis			NR	
Long-eared owl	Asio otis		X	S3	
Louisiana waterthrush	Seiurus motacilla		X	NR	
Marbled godwit	Limosa fedoa			NR	WL,PIF-IIC,SP
Northern pintail	Anas acuta			NR	
Northern harrier	Circus cyaneus	T	X	S3B,S3N	PIF-IIC
Northern goshawk	Accipiter gentilis	SC		S4B,S3N	
Northern bobwhite	Colinus virginianus			NR	
Olive-sided flycatcher	Contopus borealis			S4	WL,PIF-IB
Osprey	Pandion haliaetus	SC		S4B,SZN	
Peregrine falcon	Falco peregrinus	E		S3B,SZN	
Pied-billed grebe	Podilymbus podiceps	T	X	S3B,S1N	
Piping plover	Charadrius melodus	E (T)		S3B	WL,PIF-IA,SP
Prairie warbler	Dendroica discolor			S5	WL,PIF-IA
Prothonotary warbler	Protonotaria citrea			S2	WL,PIF-IB
Purple sandpiper	Calidris maritima			NR	WL,PIF-IA
Razorbill	Alca torda			NR	
Red knot	Calidris canutus		X	S?N	SP
Red-shouldered hawk	Buteo lineatus	SC		S4B,SZN	
Red-necked phalarope	Phalaropus lobatus			NR	
Red-headed woodpecker	Melanerpes erythrocephalus	SC		S4	WL,PIF-IB
Red-throated loon	Gavia stellata			NR	
Roseate tern	Sterna dougallii	E (E)		S1B	PIF-IB

Ruddy turnstone	Arenaria interpres			NR	
Ruddy duck	Oxyura jamaicensis			S1	
Ruffed grouse	Bonasa umbellus			NR	
Rusty blackbird	Euphagus carolinus			S3	WL,PIF-IB
Saltmarsh sharp-tailed sparrow	Ammodramus caudacutus		X	S3	WL,PIF-IA
Sanderling	Calidris alba			NR	
Scarlet tanager	Piranga olivacea			NR	
Seaside sparrow	Ammodramus maritimus	SC		S2S3	WL,PIF-IA
Sedge wren	Cistothorus platensis	T	X	S3B,SAN	PIF-IIC
Semipalmated sandpiper	Calidris pusilla			NR	
Sharp-shinned hawk	Accipiter striatus	SC		S4	
Short-eared owl	Asio flammeus	E	X	S2	WL,PIF-IB
Short-billed dowitcher	Limnodromus griseus			NR	WL
Snowy egret	Egretta thula			S2S3	
Spruce grouse	Falcipennis canadensis	E		S2	
Surf scoter	Melanitta perspicillata			NR	
Tennessee warbler	Vermivora peregrina			S2	
Thayer's gull	Larus thayeri			NR	
Three-toed woodpecker	Picoides tridactylus			S2	
Tricolored heron	Egretta tricolor			S2	
Upland sandpiper	Bartramia longicauda	T	X	S3B	PIF-IA,SP
Vesper sparrow	Pooecetes gramineus	SC		S5	
Whimbrel	Numenius phaeopus			NR	WL,SP
Whip-poor-will	Caprimulgus vociferus	SC	X	S4	PIF-IIA

White-winged scoter	Melanitta fusca			NR	
Willet	Catoptrophorus semipalmatus			S1	
Willow flycatcher	Empidonax traillii			S5	WL,PIF-IA
Wood thrush	Hylocichla mustelina			S5	WL,PIF-IA
Worm eating warbler	Helmitheros vermivorus			S4	WL,PIF-IA
Yellow-breasted chat	Icteria virens	SC		S3	PIF-IIA
Yellow-crowned night-heron	Nyctanassa violacea			S2	
Yellow rail	Coturnicops noveboracensis			NR	

Table 3. Reptile Species of Greatest Conservation Need in New York State

Common Name	Scientific Name	Listing Status	NE Concern	Heritage Srank	Other Ranking
Black rat snake	Elaphe obsoleta				DEC
Blanding's turtle	Emydoidea blandingii	T	X	S2S3	
Bog turtle	Clemmys muhlenbergii	E (T)		S2	
Coal skink	Eumeces anthracinus		X	S2S3	
Common five-lined skink	Eumeces fasciatus				DEC
Eastern massasauga	Sistrurus catenatus catenatus	E (C)		S1	
Eastern box turtle	Terrapene carolina	SC	X	S3	
Eastern hognose snake	Heterodon platirhinos	SC	X	S3S4	
Eastern ribbon snake	Thamnophis sauritus sauritus		X	S5	
Eastern mud turtle	Kinosternon subrubrum	E		S1	
Fence lizard	Sceloporus undulatus	T		S1	
	Chelonia				

Green turtle	mydas	T (T)		S1N	
Hawksbill	Eretmochelys imbricata	E (E)		SR	
Kemp's or Atlantic ridley	Lepidochelys kempii	E (E)		S1N	
Leatherback	Dermochelys coriacea	E (E)		SZN	
Loggerhead	Caretta caretta	T (T)		S1N	
Northern map turtle	Graptemys geographica				DEC
Northern diamondback terrapin	Malaclemys terrapin terrapin		X	S3	
Northern copperhead	Agkistrodon contortrix mokasen				DEC
Northern black racer	Coluber constrictor				DEC
Queen snake	Regina septemvittata	E	X	S1	
Short-headed garter snake	Thamnophis brachystoma				DEC
Smooth greensnake	Opheodrys vernalis				DEC
Snapping turtle	Chelydra serptina				DEC
Spiny softshell	Trionyx spiniferus	SC		S2S3	
Spotted turtle	Clemmys guttata	SC	X	S3	
Stinkpot	Sternotherus odoratus				DEC
Timber rattlesnake	Crotalus horridus	T	X	S3	
Wood turtle	Clemmys insculpta	SC	X	S3	
Worm snake	Carphophis amoenus	SC		S3S4	

Table 4. Amphibian Species of Greatest Conservation Need in New York State

Common Name	Scientific Name	Listing Status	NE Concern	Heritage Srank	Other Ranking
Blue-spotted salamander	Ambystoma laterale	SC	X	S3	

Common mudpuppy	Necturus maculosus				DEC
Eastern spadefoot	Scaphiopus holbrookii	SC	X	S3	
Four-toed salamander	Hemidactylium scutatum				DEC
Fowler's toad	Bufo fowlweri				DEC
Hellbender	Cryptobranchus alleganiensis	SC	X	S2	
Jefferson salamander	Ambystoma jeffersonianum	SC	X	S3	
Longtail salamander	Eurycea longicauda	SC	X	S2S3	
Marbled salamander	Ambystoma opacum	SC		S3	
Northern red salamander	Pseudotriton ruber				DEC
Northern cricket frog	Acris crepitans	E		S1	
Southern leopard frog	Rana sphenocephala	SC		S2S3	
Tiger salamander	Ambystoma tigrinum	E	X	S2S3	
Western chorus frog	Pseudacris triseriata				DEC

Table 5. Fish Species of Greatest Conservation Need In New York State

Common Name	Scientific Name	Listing Status	NE Concern	Heritage Srank	Other Ranking
Alewife	Alosa pseudoharengus			S5	
American shad	Alosa sapidissima			S4	DEC
American eel	Anguillla rostrata			S5	DEC
Atlantic tomcod	Microgadus tomcod			S3	DEC
Atlantic silverside	Menidia menidia			S2S3	
Atlantic sturgeon	Acipenser oxyrinchus		X	S1	
Banded sunfish	Enneacanthus obesus	T	X	S1S2	
Bay anchovy	Anchoa mitchilli			S3	

Bigeye chub	Notropis amblops			S2	
Black redhorse	Moxostoma duquesnei	SC		S2	
Blackchin shiner	Notropis heterodon			S1	
Blueback herring	Alosa aestivalis				DEC
Bluebreast darter	Etheostoma camurum	E	X	S1	
Brook trout, Heritage strains	Salvelinus fontinalis				DEC
Comely shiner	Notropis amoenus				DEC
Common pipefish	Syngnathus fuscus				DEC
Cunner	Tautogolabrus adspersus				DEC
Deepwater sculpin	Myoxocephalus thompsoni	E	X	S1	
Eastern sand darter	Ammocrypta pellucida	T	X	S2	
Extirpated fishes	Various sp.				DEC
Gravel chub	Erimystax x-punctatus	T	X	S1	
Inland silverside	Menidia beryllina			S2S3	
Iowa darter	Etheostoma exile			S2	
Ironcolor shiner	Notropis chalybaeus	SC		S1	
Killifish - 3 other spp	Fundulus spp.			S3, S5	DEC
Lake sturgeon	Acipenser fulvescens	T	X	S1S2	
Longear sunfish	Lepomis megalotis	T		S1	
Longhead darter	Percina macrocephala	T	X	S1	
Menhaden	Brevoortia tyrannus			SNRN	
Mooneye	Hiodon tergisus	T	X	S1	
Mountain brook lamprey	Ichthyomyzon greeleyi	SC	X	S1	
Northern puffer	Sphoeroides maculatus			SNRN	DEC
Ohio lamprey	Ichthyomyzon bdellium			S1	

Oyster toadfish	Opsanus tau				DEC
Pirate perch, western	Aphredoderus sayanus gibbosus			S2	
Pugnose shiner	Notropis anogenus	E		S1	
Rainbow smelt	Osmerus mordax			S5	DEC
Redfin shiner	Lythrurus umbratilis	SC		S2	
River redhorse	Moxostoma carinatum		X	S2?	
Round whitefish	Prosopium cylindraceum	E	X	S1S2	
Sauger	Stizostedion canadense			S1	
Seahorses and pipefish	Syngnathus spp.			NR	DEC
Sharks, skates and rays	Elasmobranchiomorphi			NR	DEC
Shortnose sturgeon	Acipenser brevirostrum	E (E)		S1	
Silver shiner	Notropis photogenis			S2	
Spotfin killifish	Fundulus luciae			S1	
Spotted darter	Etheostoma maculatum	T	X	S1	
Sticklebacks - 5 spp	Gasterosteidae			S3, S4, SU	DEC
Streamline chub	Erimystax dissimilis	SC		S2	
Swallowtail shiner	Notropis procne			S2	
Swamp darter	Etheostoma fusiforme	T		S1S2	
Tautog	Tautoga onitis			S?N	DEC
Winter flounder	Pseudopleuronectes americanus			S3?	DEC

Table 6. Mollusk Species of Greatest Conservation Need in New York State

Common Name	Scientific Name	Listing Status	NE Concern	Heritage Srank	Other Ranking
Alewife floater	Anodonta implicata			S1S2	

Banded physa	Physella vinosa			S1	
Bay scallop	Argopecten irradians			NR	X
Black sandshell	Ligumia recta			S2S3	
Blue mussel	Mytilus edulis				
Brook floater	Alasmidonta varicosa	T	X	S1	
Buffalo pebblesnail	Gillia altilis	SC		S1	
Campeloma spire snail	Cincinnatia cincinnatiensis			S1	
Canadian duskysnail	Lyogyrus walkeri			S?	
Chittenango ovate amber snail	Novisuccinea chittenangoensis	E (T)		S1	
Clubshell	Pleurobema clava	E (E)		SH	
Coldwater pondsnail	Stagnicola woodruffi			S?	
Deertoe	Truncilla truncata			S1	
Dwarf wedgemussel	Alasmidonta heterodon	E (E)		S1	
Eastern pearlshell	Margaritifera margaritifera			S2	
Eastern pondmussel	Ligumia nasuta		X	S2S3	
Elktoe	Alasmidonta marginata		X	S4	
Fat pocketbook	Potamilus capax	E (E)		SH	
Fawnsfoot	Truncilla donaciformis			SH	
File rams-horn	Planorbella pilsbryi			SH	
Fringed valvata	Valvata lewisi	SC		S1	
Globe siltsnail	Birgella subglobosus			S3	
Gravel pyrg	Pyrgulopsis letsoni			SH	
Green floater	Lasmigona subviridis	T	X	S1S2	
Hard clam	Mercenaria			NR	X

	mercenaria				
Hickorynut	Obovaria olivaria			SH	
Kidneyshell	Ptychobranchus fasciolaris			S2	
Lance aplexa	Aplexa elongata			S2	
Lilliput	Toxolasma parvum			SH	
Mapleleaf	Quadrula quadrula			SH	
Mossy valvata	Valvata sincera	SC		S1	
Mucket	Actinonaias ligamentina			S1S2	
Northern riffleshell	Epioblasma torulosa rangiana	(E)		SP	
Oyster	Crassostrea virginica			NR	X
Paper pondshell	Utterbackia imbecillis			SH	
Pimpleback	Quadrula pustulosa			SH	
Pink mucket	Lampsilis abrupta	E (E)		SH	
Pink heelsplitter	Potamilus alatus			S2S3	
Pocketbook	Lampsilis ovata			S2S3	
Purplecap valvata	Valvata perdepressa			SP	
Rainbow	Villosa iris			S2S3	
Rayed bean	Villosa fabalis	E	X	S1	
Ribbed mussel	Geukensia demissa				
Round pigtoe	Pleurobema sintoxia			S1	
Round hickorynut	Obovaria subrotunda			SH	
Salamander mussel	Simpsonaias ambigua		X	SH	
Sheepnose	Plethobasus cyphus		X	NR	
Slippershell mussel	Alasmidonta viridis			S1S2	
Snuffbox	Epioblasma triquetra		X	SH	
Spindle	Acella			S?	

lymnaea	haldemani				
Threeridge	Amblema plicata			S1	
Tidewater mucket	Leptodea ochracea		X	S1	
Tubercled blossom	Epioblasma torulosa	(E, XN)		SH	
Wabash pigtoe	Fusconaia flava			S2	
Watercress snail	Fontigens nickliniana			S1S3	
Wavyrayed lampmussel	Lampsilis fasciola	T		S1	
White heelsplitter	Lasmigona complanata			SH	
Yellow lamp mussel	Lampsilis cariosa		X	S3	
Yellow sandshell	Lampsilis teres			SH	

Table 7. Crustacean Species of Greatest Conservation Need in New York State

Common Name	Scientific Name	Listing Status	NE Concern	Heritage Srank	Other Ranking
American Lobster	Homarus americanus			NR	X
Blue crab	Callinectes sapidus			NR	X
Devil crawfish	Cambarus diogenes			S2	
Horseshoe crab	Limulus polyphemus			NR	X
Marine zooplankton	Crustacea - various spp.			NR	X
Piedmont groundwater amphipod	Stygobromus tenuis tenuis			S?	

Table 8. Beetle Species of Greatest Conservation Need in New York State

Common Name	Scientific Name	Listing Status	NE Concern	Heritage Srank	Other Ranking
A tiger beetle	Cicindela unipunctata			SH	
A tiger beetle	Cicindela patruela			SH	
A tiger beetle	Cicindela ancocisconensis			S1	
A tiger	Cicindela			SH	

beetle	abdominalis				
American burying beetle	Nicrophorus americanus	E (E)		SH	
Cobblestone tiger beetle	Cicindela marginipennis			S1	
Northeastern beach tiger beetle	Cicindela dorsalis dorsalis	T (T)		SX	
Puritan tiger beetle	Cicindela puritana	(T)		SR	
Sylvan hygrotus diving beetle	Hygrotus sylvanus			SH	

Table 9. Damselfly and Dragonfly Species of Greatest Conservation Need in New York State

Common Name	Scientific Name	Listing Status	NE Concern	Heritage Srank	Other Ranking
American rubyspot	Hetaerina americana			S2S3	
Appalachian jewelwing	Calopteryx angustipennis			SH	
Arrow clubtail	Stylurus spiniceps			S2	
Arrowhead spiketail	Cordulegaster obliqua			S2S3	
Black meadowhawk	Sympetrum danae			S2S3	
Blue-tipped dancer	Argia tibialis			S1	
Boreal snaketail	Ophiogomphus colubrinus			S1	
Brook snaketail	Ophiogomphus aspersus			S2	
Cobra clubtail	Gomphus vastus			SH	
Comet darner	Anax longipes			S2	
Common sanddragon	Progomphus obscurus	SC		S1	
Ebony boghaunter	Williamsonia fletcheri			S1	
Elusive clubtail	Stylurus notatus			SH	
Extra-striped snaketail	Ophiogomphus anomalus	SC		S1	
Forcipate emerald	Somatochlora forcipata			S1	

Gray petaltail	Tachopteryx thoreyi	SC		S2	
Green-faced clubtail	Gomphus viridifrons			S1	
Incurvate emerald	Somatochlora incurvata			S1	
Lake emerald	Somatochlora cingulata			S1	
Little bluet	Enallagma minusculum	T		S1	
Mantled basketail	Tetragoneuria semiaquea			SH	
Midland clubtail	Gomphus fraternus			S1S3	
Mocha emerald	Somatochlora linearis			S2S3	
Needham's skimmer	Libellula needhami			S2S3	
New england bluet	Enallagma laterale			S2	
Ocellated emerald	Somatochlora minor			S2S3	
Pine barrens bluet	Enallagma recurvatum	T		S1S2	
Pygmy snaketail	Ophiogomphus howei	SC		S1	
Rambur's forktail	Ischnura ramburii			S2	
Rapids clubtail	Gomphus quadricolor			S1S2	
Ringed emerald	Somatochlora albicincta			SH	
Ringed boghaunter	Williamsonia lintneri			SH	
Riverine clubtail	Stylurus amnicola			SH	
Russet-tipped clubtail	Stylurus plagiatus			S1	
Sable clubtail	Gomphus rogersi			S1	
Scarlet bluet	Enallagma pictum	T		S1	
Seepage dancer	Argia bipunctulata			SH	
Septima's clubtail	Gomphus septima	SC		S1	
Skillet clubtail	Gomphus			SH	

	ventricosus				
Southern sprite	Nehalennia integricollis	SC		S1	
Sparkling jewelwing	Calopteryx dimidiata			SH	
Spatterdock darner	Aeshna mutata			S2	
Spine-crowned clubtail	Gomphus abbreviatus			S2S3	
Subarctic darner	Aeshna subarctica			S1?	
Subarctic bluet	Coenagrion interrogatum			S1S3	
Taper-tailed darner	Gomphaeschna antilope			S1	
Tiger spiketail	Cordulegaster erronea			S1	
Yellow-sided skimmer	Libellula flavida			S1	

Table 10. Mayfly and Stonefly Species of Greatest Conservation Need In New York State

Common Name	Scientific Name	Listing Status	NE Concern	Heritage Srank	Other Ranking
A mayfly	Ameletus tertius			S?	
A mayfly	Ameletus tarteri			S?	
A mayfly	Baetis rusticans			S?	
A mayfly	Brachycercus maculatus			S?	
A mayfly	Dannella provonshai			S?	
A mayfly	Epeorus suffusus			S?	
A mayfly	Epeorus punctatus			S?	
A mayfly	Epeorus frisoni			S?	
A mayfly	Eurylophella bicoloroides			S?	
A mayfly	Heptagenia julia			S?	
A mayfly	Heptagenia culacantha			S?	
	Leucrocuta				

A mayfly	thetis			S?	
A mayfly	Nixe rusticalis			S?	
A mayfly	Plauditus gloveri			S?	
A mayfly	Procloeon ozburni			S?	
A mayfly	Procloeon simile			S?	
A mayfly	Procloeon mendax			S?	
A mayfly	Procloeon vicinum			S?	
A mayfly	Rhithrogena anomala			S?	
A mayfly	Rhithrogena uhari			S?	
A mayfly	Siphlonurus barbarus			S?	
A mayfly	Siphlonurus barbaroides			S?	
A stonefly	Allocapnia illinoensis			S?	
A stonefly	Alloperla voinae			S?	
A stonefly	Alloperla vostocki			S?	
A stonefly	Utaperla gaspesiana			S?	
A stonefly	Pteronarcys comstocki			S?	
Tomah mayfly	Siphlonisca aerodromia	E		S1	

Table 11. Moth and Butterfly Species of Greatest Conservation Need in New York State

Common Name	Scientific Name	Listing Status	NE Concern	Heritage Srank	Other Ranking
A borer moth	Papaipema aerata			SH	
A borer moth	Papaipema marginidens			SH	
A geometrid moth	Euchlaena madusaria			SH	
A geometrid moth	Nemoria bifilata			SH	
A geometrid moth	Semiothisa banksianae			S1	

A geometrid moth	Semiothisa denticulata			S1	
A hand-maid moth	Datana ranaeceps			S1S3	
A looper moth	Lambdina canitiaria			SH	
A moth	Lepipolys perscripta			SH	
A noctuid moth	Abagrotis barnesi			S1	
A noctuid moth	Agrotis obliqua			S1	
A noctuid moth	Amphipoea erepta ryensis			S1	
A noctuid moth	Anomogyna rhaetica			S1S2	
A noctuid moth	Apamea inordinata			SH	
A noctuid moth	Apamea mixta			SH	
A noctuid moth	Chaetaglaea cerata			S1S2	
A noctuid moth	Chytonix ruperti			S1	
A noctuid moth	Chytonix sensilis			S1S3	
A noctuid moth	Eucoptocnemis fimbriaris			S1	
A noctuid moth	Euxoa lidia thanatologia			SH	
A noctuid moth	Euxoa pleuritica			S2S3	
A noctuid moth	Fagitana littera			S2S3	
A noctuid moth	Fishia enthea			SH	
A noctuid moth	Hydraecia stramentosa			S1S3	
A noctuid moth	Lithophane lepida lepida	E		S1	
A tussock moth	Orgyia detrita			SH	
A noctuid moth	Orthodes obscura			S1?	
A noctuid moth	Paectes abrostolella			S1	
A noctuid	Phoberia			S2S3	

moth	orthosioides				
A noctuid moth	Psaphida thaxteriana			SH	
A noctuid moth	Richia acclivis			S2S3	
A noctuid moth	Schinia bifascia			SH	
A noctuid moth	Synedoida adumbrata			S1S2	
A noctuid moth	Zale largera			S1	
A notodontid moth	Heterocampa varia			S1S2	
A slug moth	Monoleuca semifascia			S1	
Acadian swordgrass moth	Xylena thoracica			S1S2	
An underwing moth	Catocala sp 3			SH	
Arogos skipper	Atrytone arogos arogos	E		SH	
Aweme borer moth	Papaipema aweme			SH	
Barrens itame	Itame sp 1			S1	
Barrens metarranthis moth	Metarranthis apiciaria			SH	
Barrens dagger moth	Acronicta albarufa			SH	
Bay underwing	Catocala badia			S2S4	
Bird dropping moth	Cerma cora			S1S3	
Black-bordered lemon moth	Thioptera nigrofimbria			SH	
Black fungus moth	Metalectra tantillus			SH	
Blueberry gray	Glena cognataria			S1S3	
Bog elfin	Callophrys lanoraieensis			S1	
Bogbean buckmoth	Hemileuca sp 1	E		S1	
Brazilian	Calpodes				

skipper	ethlius			SH	
Broad-lined catopyrrha	Catopyrrha coloraria			S2S3	
Brown-bordered geometer	Eumacaria latiferrugata			S2S4	
Buchholz's gray	Hypomecis buchholzaria			SH	
Chain fern borer moth	Papaipema stenocelis			S1?	
Checkered white	Pontia protodice	SC		SA	
Chestnut clearwing moth	Synanthedon castaneae			SH	
Coastal heathland cutworm	Abagrotis crumbi benjamini			S1S3	
Coastal barrens buckmoth	Hemileuca maia ssp 5	SC		S2	
Culvers root borer	Papaipema sciata			SH	
Dark stoneroot borer moth	Papaipema duplicata			S?	
Dimorphic gray	Tornos scolopacinarius			SH	
Doll's merolonche	Merolonche dolli			SH	
Dot-lined white	Artace cribraria			SH	
Frosted elfin	Callophrys irus	T		S1S3	
Golden borer moth	Papaipema cerina			SH	
Golden aster flower moth	Schinia tuberculum			S2	
Gordian sphinx	Sphinx gordius			S1S3	
Gorgone checkerspot	Chlosyne gorgone			S1	
Gray woodgrain	Morrisonia mucens			S1S3	
Hairy artesta	Trichoclea artesta			S1S3	
Henry's elfin	Callophrys henrici			S2S3	
Heracleum					

stem borer moth	Papaipema harrisii			SH	
Herodias or pine barrens underwing	Catocala herodias gerhardi			S2S3	
Hessel's hairstreak	Callophrys hesseli	E		S1	
Imperial moth	Eacles imperialis pini			S?	
Inland barrens buckmoth	Hemileuca maia maia	SC		S1	
Jair underwing	Catocala jair				
Jersey jair underwing	Catocala jair ssp 2			S1S2	
Jutta arctic	Oeneis jutta			S1	
Karner blue	Lycaeides melissa samuelis	E (E)		S1	
Lemmer's noctuid moth	Lithophane lemmeri			SR	
Maritime sunflower borer moth	Papaipema maritima			SH	
Melsheimer's sack bearer	Cicinnus melsheimeri			SH	
Mottled duskywing	Erynnis martialis			S1S2	
Northern oak hairstreak	Fixsenia favonius ontario			S1S3	
Northern metalmark	Calephelis borealis			SH	
Olympia marble	Euchloe olympia			S1	
Ostrich fern borer moth	Papaipema sp 2			S1?	
Pale green pinion moth	Lithophane viridipallens			SH	
Persius duskywing	Erynnis persius persius	E		SH	
Phyllira tiger moth	Grammia phyllira			SH	
Pine barrens zanclognatha	Zanclognatha martha			S1S2	
Pine devil	Citheronia sepulcralis			S1	

Pink sallow	Psectraglaea carnosa			S2	
Precious underwing	Catocala pretiosa pretiosa			SH	
Quiet or sweet underwing	Catocala dulciola			SH	
Regal moth	Citheronia regalis			S1	
Regal fritillary	Speyeria idalia	E		SH	
Seaside golden borer moth	Papaipema duovata			SH	
Silvery blue	Glaucopsyche lygdamus lygdamus			SH	
Southern grizzled skipper	Pyrgus wyandot	E		SH	
Stinging rose caterpillar moth	Parasa indetermina			SH	
Tawny crescent	Phyciodes batesii batesii			SH	
The little beggar	Eubaphe meridiana			SH	
The consort underwing	Catocala consors sorsconi			SH	
The maroonwing	Sideridis maryx			S2S3	
Toothed apharetra	Apharetra dentata			S2S3	
Variable sallow	Sericaglaea signata			SH	
Woolly gray	Lycia ypsilon			SH	
Yellow stoneroot borer	Papaipema astuta			SH	

Some of the major threats to New York Fish and Wildlife

Birds

- Contaminants, pesticides
- Illegal or unregulated harvest

- Degraded habitat
- Entanglement, entrainment, impingement, electrocution
- Isolated populations

Crustacea/ Meristomata

- Degradation of water quality
- Sedimentation, erosion
- Contaminants, pesticides
- Disease
- Climate change

Freshwater Fish

- Competition from introduced species
- Sedimentation, erosion
- Altered hydrology of waterways
- Degradation of water quality
- Loss of habitat

Herpetofauna

- Habitat fragmentation
- Contaminants, pesticides
- Disease
- Illegal or unregulated harvest
- Degradation of water quality

Insects

- Contaminants, pesticides
- Habitat loss and fragmentation
- Other human disturbances
- Loss of streamside buffers
- Sedimentation, erosion

Mammals

- Habitat loss
- Disease
- Human disturbance
- Competition for life support

- Altered hydrology

Marine fish

- Illegal or unregulated harvest
- Entanglement, entrainment
- Climate change
- Contaminants, pesticides
- Degradation of water quality

Mollusk

- Isolated populations
- Competition from introduced species
- Disturbed predator/ prey cycles
- Habitat loss
- Degradation of water quality

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Appendix K

NYSDEC 2000-2005 Breeding Bird Atlas Information

NEW YORK STATE
DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

NYS Breeding Bird Atlas

ATLAS 2000

Block 5558D

2000-2005

Navigation Tools

Perform Another Search
Show All Records
Sort by Field Card Order
Sort by Taxonomic Order
View 1985 Data

Block 5558D Summary

Total Species:	68
Possible:	19
Probable:	18
Confirmed:	31

Click on column heading to sort by that category.

List of Species Breeding in Atlas Block 5558D

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Great Blue Heron	*Ardea herodias*	X1	5/18/2004	Protected
Green Heron	*Butorides virescens*	X1	6/14/2004	Protected
Black Vulture	*Coragyps atratus*	X1	4/19/2004	Protected
Turkey Vulture	*Cathartes aura*	X1	4/19/2004	Protected
Canada Goose	*Branta canadensis*	X1	4/19/2004	Game Species
Mute Swan	*Cygnus olor*	NE	4/19/2004	Protected
Mallard	*Anas platyrhynchos*	X1	4/19/2004	Game Species
Red-tailed Hawk	*Buteo jamaicensis*	NE	4/29/2004	Protected
American Kestrel	*Falco sparverius*	X1	6/5/2004	Protected
Wild Turkey	*Meleagris gallopavo*	X1	4/29/2004	Game Species
Killdeer	*Charadrius vociferus*	P2	5/18/2004	Protected
Rock Pigeon	*Columba livia*	P2	4/29/2004	Unprotected
Mourning Dove	*Zenaida macroura*	P2	4/29/2004	Protected
Chimney Swift	*Chaetura pelagica*	ON	6/14/2004	Protected
Ruby-throated Hummingbird	*Archilochus colubris*	X1	5/19/2004	Protected
Red-bellied Woodpecker	*Melanerpes carolinus*	X1	6/14/2004	Protected
Downy Woodpecker	*Picoides pubescens*	FY	6/14/2004	Protected
Hairy Woodpecker	*Picoides villosus*	X1	4/29/2004	Protected
Northern Flicker	*Colaptes auratus*	X1	6/14/2004	Protected
Pileated Woodpecker	*Dryocopus pileatus*	X1	4/29/2004	Protected
Eastern Wood-Pewee	*Contopus virens*	S2	7/1/2004	Protected
Eastern Phoebe	*Sayornis phoebe*	ON	6/14/2004	Protected
Great Crested Flycatcher	*Myiarchus crinitus*	S2	7/1/2004	Protected
Eastern Kingbird	*Tyrannus tyrannus*	P2	6/14/2004	Protected
Yellow-throated Vireo	*Vireo flavifrons*	FY	7/7/2004	Protected
Warbling Vireo	*Vireo gilvus*	FY	6/14/2004	Protected
Red-eyed Vireo	*Vireo olivaceus*	S2	5/19/2004	Protected
Blue Jay	*Cyanocitta cristata*	FL	6/14/2004	Protected
American Crow	*Corvus brachyrhynchos*	X1	4/19/2004	Game Species

Tree Swallow	*Tachycineta bicolor*	X1	6/14/2004	Protected
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	ON	5/10/2004	Protected
Barn Swallow	*Hirundo rustica*	ON	5/18/2004	Protected
Black-capped Chickadee	*Poecile atricapillus*	FL	7/20/2004	Protected
Tufted Titmouse	*Baeolophus bicolor*	FL	7/20/2004	Protected
White-breasted Nuthatch	*Sitta carolinensis*	X1	5/18/2004	Protected
Carolina Wren	*Thryothorus ludovicianus*	S2	7/7/2004	Protected
House Wren	*Troglodytes aedon*	NY	6/14/2004	Protected
Eastern Bluebird	*Sialia sialis*	ON	6/14/2004	Protected
Veery	*Catharus fuscescens*	S2	6/14/2004	Protected
Wood Thrush	*Hylocichla mustelina*	S2	6/14/2004	Protected
American Robin	*Turdus migratorius*	FL	6/14/2004	Protected
Gray Catbird	*Dumetella carolinensis*	FY	6/14/2004	Protected
Northern Mockingbird	*Mimus polyglottos*	FY	7/7/2004	Protected
Brown Thrasher	*Toxostoma rufum*	X1	6/14/2004	Protected
European Starling	*Sturnus vulgaris*	ON	4/29/2004	Unprotected
Cedar Waxwing	*Bombycilla cedrorum*	S2	7/7/2004	Protected
Blue-winged Warbler	*Vermivora pinus*	X1	5/18/2004	Protected
Yellow Warbler	*Dendroica petechia*	S2	5/18/2004	Protected
American Redstart	*Setophaga ruticilla*	S2	6/14/2004	Protected
Ovenbird	*Seiurus aurocapilla*	S2	6/14/2004	Protected
Common Yellowthroat	*Geothlypis trichas*	FY	6/14/2004	Protected
Scarlet Tanager	*Piranga olivacea*	FY	6/20/2004	Protected
Chipping Sparrow	*Spizella passerina*	FL	6/14/2004	Protected
Field Sparrow	*Spizella pusilla*	FY	7/7/2004	Protected
Song Sparrow	*Melospiza melodia*	NE	7/20/2004	Protected
Swamp Sparrow	*Melospiza georgiana*	X1	4/29/2004	Protected
Northern Cardinal	*Cardinalis cardinalis*	FY	6/14/2004	Protected
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	FL	7/20/2004	Protected
Indigo Bunting	*Passerina cyanea*	S2	6/14/2004	Protected
Bobolink	*Dolichonyx oryzivorus*	D2	5/18/2004	Protected
Red-winged Blackbird	*Agelaius phoeniceus*	FY	6/14/2004	Protected

Eastern Meadowlark	*Sturnella magna*	FY	7/1/2004	Protected
Common Grackle	*Quiscalus quiscula*	FY	6/20/2004	Protected
Brown-headed Cowbird	*Molothrus ater*	P2	5/18/2004	Protected
Baltimore Oriole	*Icterus galbula*	FY	7/1/2004	Protected
House Finch	*Carpodacus mexicanus*	NE	7/20/2004	Protected
American Goldfinch	*Carduelis tristis*	P2	6/14/2004	Protected
House Sparrow	*Passer domesticus*	ON	5/18/2004	Unprotected

Appendix L

List of "Species of Conservation Concern" for Orange County, New York

Species of Conservation Concern

The following list of flora and fauna has been generated to define "Species of Conservation Concern" that can be found in New York State. Species of Conservation Concern are defined as 1) being listed by the DEC or USFWS as "Endangered, Threatened or Special Concern, 2) being classified as S1, S2 or S3 by the New York State Natural Heritage Program (NHP), or 3) Being listed as a "Species of Greatest Conservation Need" within the New York State Comprehensive Wildlife Conservation Strategy. Current Rank Codes are defined at the end of the Species List

Amphibians

Common Name	Scientific Name	DEC	USFWS	NHP
N. Cricket Frog	*Acris crepitans*	E	U	S1
Jefferson Salamander	*Ambystoma Jeffersonianum*	SC	U	U
Blue-spotted Salamander	*Ambystoma laterale*	SC	U	U
Marbled Salamander	*Ambystoma maculatum*	SC	U	S3
Tiger Salamander	*Ambystoma tigrinum*	SC	U	S1/S2
Fowlers Toad	*Bufo fowleri*	U	U	U
Eastern Hellbender	*Cryptobranchus allegheniensis*	SC	U	S2
Four-toed Salamander	*Hemidactylium scutatum*	U	U	U
Longtail Salamander	*Eurycea longicauda*	SC	U	S2/S3
Common Mudpuppy	*Necturus maculosus*	U	U	U
Wehrles Salamander	*Plethodon wehrlei*	U	U	S3
Western Chorus Frog	*Pseudacris triseriata*	U	U	U
Northern Red Salamander	*Pseudotriton ruber*	U	U	U
S. Leopard Frog	*Rana sphenocephala*	SC	U	S2/S3
E. Spadefoot Toad	*Scaphiopus holbrooki*	SC	U	S2/S3

Reptiles

Common Name	Scientific Name	DEC	USFWS	NHP
Northern Copperhead	*Agkistrodon contortrix*	U	U	S3
E. Spiny Softshell	*Apalone spinifera*	SC	U	S2/S3
Loggerhead Sea Turtle	*Caretta caretta*	T	T	S1
Worm Snake	*Carphophis amoenus*	SC	U	S2
Green Sea Turtle	*Chelonia mydas*	T	T	S1
Common Snapping Turtle	*Chelydra serpentina*	U	U	U
Spotted Turtle	*Clemmys guttata*	SC	U	S3
Wood Turtle	*Clemmys insculpta*	SC	U	S3
Black Racer	*Coluber constrictor*	U	U	U
Timber Rattlesnake	*Crotalus horridus*	T	U	S3
Leatherback Sea Turtle	*Demochelys coriacea*	E	E	S1

Black Rat Snake	*Elaphe obsoleta*	U	U	U
Blandings Turtle	*Emydoidea blandingii*	T	U	S2/S3
Hawksbill Sea Turtle	*Eretomochelys imbricata*	E	E	SNA
Coal Skink	*Eumeces anthracinus*	U	U	S2/S3
Five-lined Skink	*Eumeces fasciatus*	U	U	S3
Bog Turtle	*Glyptemys muhlenbergii*	E	T	S2
Common Map Turtle	*Graptemys geographica*	U	U	S3
E. Hognose Snake	*Heterodon platirhinos*	SC	U	S3
Mud Turtle	*Kinosternum subrubrum*	E	U	S1
Atlantic (Ridley) Sea Turtle	*Lepidochelys kempii*	E	E	S1
E. Diamondback Terrapin	*Malaclemys terrapin*	U	U	S3
Smooth Green Snake	*Opheodrys vernalis*	U	U	U
Queen Snake	*Regina septemvittata*	E	U	S1
N. Fence Lizard	*Sceloporus undulatus*	T	U	S1
Eastern Massasauga	*Sistrurus catenatus*	E	C	S1
Musk Turtle	*Sternotherus odoratus*	U	U	U
E. Box Turtle	*Terrapene caroliniana*	SC	U	S3
Shorthead Garter Snake	*Thamnophis brachystoma*	U	U	S3
Eastern Ribbon Snake	*Thamnophis sauritus*	U	U	S5

Mammals

Common Name	Scientific Name	DEC	USFWS	NHP
Sei Whale	*Balaenoptera borealis*	E	E	SNA
Blue Whale	*Balaenoptera musculus*	E	E	SNA
Finback Whale	*Balaenoptera physalus*	E	E	S1
Gray Wolf	*Canis lupis*	E	E	X
Least Shrew	*Cryptotis parva*	U	U	SH
Northern Right Whale	*Eubalaena glacialis*	E	E	SNA
Eastern Cougar	*Felix concolor*	E	E	X
Silver-haired Bat	*Lasionycteris noctivagans*	U	U	S4
Eastern Red Bat	*Lasiurus borealis*	U	U	S5
Hoary Bat	*Lasiurus cinereus*	U	U	S4
River Otter	*Lontra canadensis*	U	U	S5
Canada Lynx	*Lynx canadensis*	T	T	X
Marten	*Martes americana*	U	U	S3
Humpback Whale	*Megaptera novaeangliae*	E	E	SNA
Least Weasel	*Mustela nivalis*	U	U	SH
E. Small-footed Bat	*Myotis leibii*	SC	U	S2
Indiana Bat	*Myotis sodalis*	E	E	S1
Allegheny Woodrat	*Neotoma magister*	E	U	S1
Harbor Seal	*Phocoena phocoena*	SC	U	S3
Sperm Whale	*Physeter macrocephalus*	E	E	SNA
New England Cottontail	*Sylvilagus transitionalis*	SC	C	S1/S2
Bottlenose Dolphin	*Tursiops truncatus*	U	U	S3

Birds

Common Name	Scientific Name	DEC	USFWS	NHP
Coopers Hawk	*Accipiter cooperii*	SC	U	S4
Northern Goshawk	*Accipiter gentilis*	SC	U	S3
Sharp-shinned Hawk	*Accipiter striata*	SC	U	S4
Northern Saw-whet Owl	*Aegolius acadicus*	U	U	S3
Razorbill	*Alca torda*	U	U	NR
Sharp-tailed Sparrow	*Ammodramus caudacutus*	U	U	S3
Henslow's Sparrow	*Ammodramus henslowii*	T	U	S3
Seaside Sparrow	*Ammodramus maritimus*	SC	U	S2/S3
Grasshopper Sparrow	*Ammodramus savannarum*	SC	U	S4
Northern Pintail Duck	*Anas acuta*	U	U	NR
Blue-winged teal	*Anas discors*	U	U	NR
Black Duck	*Anas rubripes*	U	U	S2
Great Egret	*Ardea alba*	U	U	S2
Ruddy Turnstone	*Arenaria interpres*	U	U	NR
Short-eared Owl	*Asio flammeus*	E	U	S2
Long-eared Owl	*Asio otis*	U	U	S3
Golden Eagle	*Aquila chrysaetos*	E	E	S1
Lesser Scaup	*Aythya affinis*	U	U	NR
Upland Sandpiper	*Bartramia longicauda*	T	U	S3
Ruffed Grouse	*Bonasa umbellus*	U	U	NR
American Bittern	*Botaurus lentiginosus*	SC	U	S4
Atlantic Brant	*Branta bernicula*	U	U	S2
Cattle Egret	*Bubulcus ibis*	U	U	S3
Common Goldeneye	*Bucephala clangula*	U	U	S2
Red-shouldered Hawk	*Buteo lineatus*	SC	U	S4
Sanderling	*Calidris alba*	U	U	NR
Dunlin	*Calidris alpina*	U	U	NR
Purple Sandpiper	*Calidris maritima*	U	U	NR
Semipalmated Sandpiper	*Calidris pusilla*	U	U	NR
Cory's Shearwater	*Calonectris diomedea*	U	U	NR
Chuck-wills-widow	*Caprimulgus carolinensis*	U	U	S2
Whip-poor-will	*Caprimulgus vociferus*	SC	U	S4
Bicknell's Thrush	*Catharus bicknelli*	SC	U	S2/S3
Piping Plover	*Charadrius melodus*	E	E	S3
Black Tern	*Chlidonias niger*	E	U	S2
Common Nighthawk	*Chordeiles minor*	SC	U	S4
Northern Harrier	*Circus cyaneus*	T	U	S3
Sedge Wren	*Cistothorus platensis*	T	U	S3
Long-tailed Duck	*Clangula hyemalis*	U	U	NR
Black-billed Cuckoo	*Coccyzus erythrophthalmus*	U	U	NR
Northern Bobwhite Quail	*Colinus virginianus*	U	U	NR
Olive-sided Flycatcher	*Contopus borealis*	U	U	S4
Yellow Rail	*Coturnicops noveboracensis*	U	U	NR

Bay-breasted Warbler	*Dendroica castanea*	U	U	S2
Black-throated Blue Warbler	*Dendroica caerulescens*	U	U	NR
Cerulean Warbler	*Dendroica cerulea*	SC	U	S4
Prairie Warbler	*Dendroica discolor*	U	U	S5
Palm Warbler	*Dendroica palmarum*	U	U	S1
Blackpoll Warbler	*Dendroica striata*	U	U	S3
Cape May Warbler	*Dendroica tigrina*	U	U	S2
Bobolink	*Dolichonyx oryzivorus*	U	U	S5
Little Blue Heron	*Egretta caerulea*	U	U	S2
Snowy Egret	*Egretta thula*	U	U	S2/S3
Tri-colored Heron	*Egretta tricolor*	SC	U	S2
Yellow-bellied Flycatcher	*Empidonax flaviventris*	U	U	S3
Willow Flycatcher	*Empidonax trailli*	U	U	S5
Acadian Flycatcher	*Empidonax virescens*	U	U	S3
Horned Lark	*Eremophila alpestris*	SC	U	S5
Rusty Blackbird	*Euphagus carolinus*	U	U	S3
Spruce Grouse	*Falcipennis canadensis*	E	U	S2
Peregrine Falcon	*Falco peregrinus*	E	U	S3
Common Loon	*Gavia immer*	SC	U	S3
Red-throated Loon	*Gavia stellata*	U	U	NR
Gull-billed Tern	*Gelochelidon nilotica*	U	U	S1
American Oystercatcher	*Haematopus palliates*	U	U	S3
Bald Eagle	*Haliaeetus leucocephalus*	T	U	S2
Worm-eating Warbler	*Helmitheros vermivorus*	U	U	S4
Harlequin Duck	*Histrionicus histrionicus*	U	U	NR
Caspian Tern	*Hydroprogne caspia*	U	U	S1
Wood Thrush	*Hylocichla mustelina*	U	U	S5
Yellow-breasted Chat	*Icteria virens*	SC	U	S3
Least Bittern	*Ixobrychus exilis*	T	U	S1/S3
Loggerhead Shrike	*Lanius ludovicianus*	E	U	S1
Laughing Gull	*Larus atricilla*	U	U	S1
Little Gull	*Larus minutus*	U	U	NR
Bonaparts Gull	*Larus philadelphia*	U	U	NR
Thayers Gull	*Larus thayerii*	U	U	NR
Black Rail	*Laterallus jamaicensis*	E	U	S1
Short-billed Dowitcher	*Limnodromous griseus*	U	U	NR
Marbled Godwit	*Limosa fedoa*	U	U	NR
Hudsonian Godwit	*Limosa haemastica*	U	U	NR
Red Crossbill	*Loxia curvirostra*	U	U	S3
White-winged Crossbill	*Loxia leucoptera*	U	U	S3
Red-headed Woodpecker	*Melanerpes erythrocephalus*	SC	U	S4
White-winged Scoter	*Melanitta fusca*	U	U	NR
Black Scoter	*Melanitta nigra*	U	U	NR
Surf Scoter	*Melanitta perspicillata*	U	U	NR
Whimbrel	*Numenius phaeopus*	U	U	NR
Eskimo Curlew	*Numensis borealis*	E	U	U

Yellow-crowned Heron	*Nyctanassa violacea*	U	U	S2
Black-crowned Heron	*Nycticorax nycticorax*	U	U	S3
Kentucky Warbler	*Oporonis formosis*	U	U	S2
Ruddy Duck	*Oxyura jamaicensis*	U	U	S1
Osprey	*Pandion haliaetus*	SC	U	S4
Northern Parula	*Parula americana*	U	U	S3/S4
Gray Jay	*Perisoreus canadensis*	U	U	S3
Double-crested Cormorant	*Phalacrocorax auritus*	U	U	S3
Red-necked Phalarope	*Phalaropus lobatus*	U	U	NR
Scarlet Tanager	*Piranga olivacea*	U	U	NR
Glossy Ibis	*Plegadis falcinellus*	U	U	S2
American Golden Plover	*Pluvialis dominica*	U	U	NR
Black-bellied Plover	*Pluvialis squatarola*	U	U	NR
Black-backed Woodpecker	*Picoides arcticus*	U	U	S3
Three-toed Woodpecker	*Picoides dorsalis*	U	U	S2
Horned Grebe	*Podiceps auritus*	U	U	NR
Pied-billed Grebe	*Podilymbus podiceps*	T	U	S1/S3
Boreal Chickadee	*Poecile hudsonica*	U	U	S3
Vesper Sparrow	*Pooecetes gramineus*	SC	U	S5
Prothonotary Warbler	*Protonotaria citrea*	U	U	S2
Greater Shearwater	*Puffinis gravis*	U	U	NR
King rail	*Rallus elegans*	T	U	S1
Clapper Rail	*Rallus longirostris*	U	U	S3
Black Skimmer	*Rynchops niger*	SC	U	S2
American Woodcock	*Scolopax minor*	U	U	S5
Common Eider	*Somateria mollissma*	U	U	NR
Dickcissel	*Spiza americana*	U	U	NR
Clay-colored Sparrow	*Spizella pallida*	U	U	S2
Least Tern	*Sterna antillarum*	T	U	S3
Roseate Tern	*Sterna dougallii*	E	E	S1
Forsters Tern	*Sterna forsteri*	U	U	S1
Common Tern	*Sterna hirundo*	T	U	S2
Eastern Meadowlark	*Sturnella magna*	U	U	NR
Brown Thrasher	*Toxostoma rufum*	U	U	NR
Greater Yellowlegs	*Tringa melanoleuca*	U	U	NR
Buff-breasted Sandpiper	*Tryngites subruficollis*	U	U	NR
Barn Owl	*Tyto alba*	U	U	S1
Golden-winged Warbler	*Vermivora chrysoptera*	SC	U	S4
Tennessee Warbler	*Vermivora peregrina*	U	U	S2
Blue-winged Warbler	*Vermivora pinus*	U	U	S5
Philadelphia Vireo	*Vireo philadelphicus*	U	U	S3
Canada Warbler	*Wilsonia canadensis*	U	U	S5

Fish

Common Name	Scientific Name	DEC	USFWS	NHP
Mud Sunfish	*Acantharchus pomotis*	T	U	S1
Shortnose Sturgeon	*Acipenser brevirostrum*	E	E	S1
Lake Sturgeon	*Acipenser flavescens*	T	U	S2
Atlantic Sturgeon	*Acipenser oxyrinchus*	E	C	S1
Blueback Herring	*Alosa aestivalis*	U	U	S3
Hickory Shad	*Alosa mediocris*	U	U	S2
Alewife	*Alosa pseudoharengus*	U	U	S5
American Shad	*Alosa sapidissima*	U	U	S4
Eastern Sand Darter	*Ammocrypta pellucida*	T	U	S2
Bay Anchovy	*Anchoa mitchilli*	U	U	S3
American Eel	*Anguilia rostrata*	U	U	S5
Pirate Perch	*Aphredodrerus sayanus*	U	U	S2
Freshwater Drum	*Aplodinotus grunniens*	U	U	S2
Menhaden	*Brevoortia tyrannus*	U	U	NR
Quillback	*Carpoides cyprinus*	U	U	S2
Longnose Sucker	*Catastomus catastomus*	U	U	S3
Redside Dace	*Clinostomus elongatus*	U	U	S3
Cisco	*Coregonus artedi*	U	U	S3
Spoonhead Sculpin	*Cottus ricei*	E	U	SH
Lake Chub	*Couesius plumbeus*	U	U	S3
Brook Stickleback	Culaea inconstans	U	U	S3
Satinfin Shiner	*Cyprinella analostana*	U	U	S3
Gizzard Shad	*Dorosoma cepedianum*	U	U	S3
Blue-spotted Sunfish	*Enneacanthus glorious*	U	U	S3
Banded Sunfish	*Enneacanthus obesus*	T	U	S1
Streamline Chub	*Erimystax dissimilis*	SC	U	S1
Gravel Chub	*Erimystax punctata*	T	U	S1
Lake Chubsucker	*Erimyzon sucetta*	T	U	SH
Greenside Darter	*Etheostoma blennioides*	U	U	S3
Rainbow Darter	*Etheostoma caeruleum*	U	U	S3
Bluebreast Darter	*Etheostoma camurum*	E	U	S1
Iowa Darter	*Etheostoma exile*	U	U	S2
Swamp Darter	*Etheostoma fusiforme*	T	U	S1/S2
Spotted Darter	*Etheostoma maculatum*	T	U	S1
Variegate Darter	*Etheostoma variatum*	U	U	S2
Banded Darter	*Etheostoma zonale*	U	U	S3
Tongue-tied Minnow	*Exoglossum laurae*	U	U	S2
Mummichog	*Fundulus heteroclitus*	U	U	S3
Spotted Killifish	*Fundulus luciae*	U	U	S1
Mooneye	*Hiodon tergisus*	T	U	S1
Bigeye Chub	*Hybopsis amblobs*	U	U	S2
Ohio Lamprey	*Ichthyomyzon bdellium*	U	U	S1
Northern Brook Lamprey	*Ichthyomyzon fossor*	U	U	S1

Mountain Brook Lamprey	*Ichthyomyzon greeleyi*	SC	U	S1
Silver Lamprey	*Ichthyomyzon unicuspis*	U	U	S3
Brook Silverside	*Labidesthes sicculus*	U	U	S3
American Brook Lamprey	*Lampetra appendix*	U	U	S3
Longnose Gar	*Lepisosteus osseus*	U	U	S3
Redbreast Sunfish	*Lepomis auritus*	U	U	S3
Green Sunfish	*Lepomis cyanellus*	U	U	S3
Longear Sunfish	*Lepomis megalotis*	T	U	S1/S2
Burbot	*Lota lota*	U	U	S3
Striped Shiner	*Luxilus chrysocephalus*	U	U	S3
Redfin Shiner	*Lythrurus umbratilis*	SC	U	S2
Silver Chub	*Macrhybopsis storeriana*	E	U	SH
Inland Silverside	*Menidia beryllina*	U	U	S2/S3
Atlantic Silverside	*Menidia menidia*	U	U	S2/S3
Atlantic Tomcod	*Microgadus tomcod*	U	U	S3
Silver Redhorse	*Moxostoma anisurum*	U	U	S3
River Redhorse	*Moxostoma carinatum*	U	U	S2
Black Redhorse	*Moxostoma duquesnei*	SC	U	S2
Golden Redhorse	*Moxostoma erythrurum*	U	U	S3
Greater Redhorse	*Moxostoma valenciennesi*	U	U	S2
Grubby	*Myoxocephalus aenaeus*	U	U	S3
Deepwater Sculpin	*Myoxocephalus thompsonii*	E	U	S1
Hornyhead Chub	*Nocomis biguttatus*	U	U	S3
Comely Shiner	*Notropis amoenus*	U	U	S3
Pugnose Shiner	*Notropis anogenus*	E	U	S1
Silverjaw Minnow	*Notropis buccatus*	U	U	S1
Iron-colored Shiner	*Notropis chalybaeus*	SC	U	S1
Bigmouth Shiner	*Notropis dorsalis*	U	U	S3
Black-chin Shiner	*Notropis heterodon*	U	U	S1
Blacknose Shiner	*Notropis heterolepis*	U	U	S3
Silver Shiner	*Notropis photogenis*	U	U	S2
Swallowtail Shiner	*Notropis procne*	U	U	S2
Sand Shiner	*Notropis stramineus*	U	U	S3
Mimic Shiner	*Notropis volucellus*	U	U	S3
Stonecat	*Noturus flavus*	U	U	S3
Tadpole Madtom	*Noturus gyrinus*	U	U	S3
Brindled Madtom	*Noturus miurus*	U	U	S1
Oyster Toadfish	*Opsanus tau*	U	U	U
Rainbow Smelt	*Osmerus mordax*	U	U	S5
Logperch	*Percina caprodes*	U	U	S3
Channel Darter	*Percina copelandi*	U	U	S2
Gilt Darter	*Percina evides*	E	U	S1
Longhead Darter	*Percina macrocephala*	T	U	S1
Blackside Darter	*Percina maculata*	U	U	S3
Shield Darter	*Percina peltata*	U	U	S3
Trout-perch	*Percopsis omiscomaycus*	U	U	S3

Finescale Dace	*Phoxinus neogaeus*	U	U	S3
Round Whitefish	*Prosopium cylindraceum*	E	U	S1/S2
Atlantic Salmon	*Salmo salar*	U	U	S3
Brook Trout	*Salvelinus fontinalis*	U	U	U
Sauger	*Sander canadensis*	U	U	S1
Northern Puffer	*Sphoeroides maculatus*	U	U	NR
Atlantic Needlefish	*Strongylura marina*	U	U	S1/S2
Northern Pipefish	*Syngnathus fuscus*	U	U	S3
Cunner	*Tautogolabrus adspersus*	U	U	U
Hogchoker	*Trinectes maculatus*	U	U	S3
Eastern Mudminnow	*Umbra pygmaea*	U	U	S3

Plants

NCES specifically utilized the NHP Rare Plant Status List (Young, June 2008) to compile the following list of plant species. As the project site is located in Orange County, New York only those plants that are recognized by the NHP as being known to occur or probable to be found in Orange County (and which meet the criteria to be classified as a Species of Special Concern) have been identified.

Common Name	**Scientific Name**	**DEC**	**USFWS**	**NHP**
Woodland Agrimony	*Agrimonia rostellata*	T	U	S2
Puttyroot	*Aplectrum hymale*	E	U	S1
Virginia Snakeroot	*Aristolochia serpentaria*	E	U	S2
Purple Milkweed	*Asclepias purpurascens*	U	U	S2/S3
Bradley's Spleenwort	*Asplenium bradleyi*	E	U	SH
Thickleaf Orach	*Atriplex dioica*	E	U	S1
Screw Stem	*Bartonia paniculata*	E	U	S1
River Birch	*Betula nigra*	U	U	S3
Delmarva Beggar-ticks	*Bidens bidentoides*	R	U	S3
Water Marigold	*Bidens beckii*	T	U	S3
Smooth Bur-marigold	*Bidens laevis*	T	U	S2
Green Rock Cress	*Boechera missouriensis*	T	U	S2
Drummond's Rock Cress	*Boechera stricta*	E	U	S2
Saltmarsh Bulrush	*Bolboschoenus novae-angliae*	E	U	S1
Blunt-lobed Grape Fern	*Botrychium oneidense*	E	U	S2/S3
Side-oats Grama	*Bouteloua curtipendula*	E	U	S1
Terrestrial Starwort	*Callitriche terrestris*	T	U	S2/S3
Tall Bellflower	*Campanulastrum americanum*	U	U	S1
Long's Bittercress	*Cardamine longii*	T	U	S2
Thicket Sedge	*Carex abscondita*	T	U	S1
Bush's Sedge	*Carex bushii*	U	U	S3
Clustered Sedge	*Carex cumulata*	T	U	S2/S3

Davis' Sedge	*Carex davisii*	T	U	S2
Glaucous Sedge	*Carex glaucodea*	E	U	S2/S3
Cloud Sedge	*Carex haydenii*	E	U	S1
Marsh Straw Sedge	*Carex hormathodes*	T	U	S2/S3
False Hop Sedge	*Carex lupuliformis*	R	U	S2
Meads Sedge	*Carex meadii*	E	U	SH
Midland Sedge	*Carex mesochorea*	E	U	S2
Troublesome Sedge	*Carex molesta*	T	U	S2/S3
Black-edged Sedge	*Carex nigromarginata*	E	U	S1/S2
Reflexed Sedge	*Carex retroflexa*	E	U	S2/S3
Rezniceks Sedge	*Carex reznicekii*	U	U	S1/S2
Straw Sedge	*Carex straminea*	E	U	S1
Lined Sedge	*Carex striatula*	E	U	S1
Bent Sedge	*Carex styloflexa*	E	U	S1
Cat-tail Sedge	*Carex typhina*	T	U	S1
Willdenows Sedge	*Carex willdenowii*	T	U	S2/S3
Scarlet Indian Paintbrush	*Castilleja coccinea*	E	U	S1
American Bittersweet	*Celastris scandens*	U	U	S3
Prickly Hornwort	*Ceratophyllum echinatum*	T	U	S3
Atlantic White Cedar	*Chamaecyparis thyoides*	R	U	S3
Fairy Wand	*Chamaelirium luteum*	T	U	S1/S2
Yellow Harlequin	*Corydalis flavula*	U	U	S3
Water Pigmyweed	*Crassula aquatica*	E	U	S1
Five-angled Field Dodder	*Cuscuta pentagona*	U	U	S3
Northern Wild Comfrey	*Cynoglossum virginianum*	E	U	S1/S2
Red-rooted Flat sedge	*Cyperus erythrorhizos*	U	U	S3
Little-leaf Tick-trefoil	*Desmodium ciliare*	T	U	S2/S3
Spreading Tick-trefoil	*Desmodium humifusum*	E	U	SH
Stiff-tick Trefoil	*Desmodium obtusum*	E	U	S1
False Daisy	*Eclipta prostrata*	E	U	S1
American Waterwort	*Elatine americana*	E	U	S1
Ovate Spikerush	*Eleocharis ovata*	E	U	S1/S2
Robbins Spikerush	*Eleocharis robbinsii*	U	U	S3
Estuary Hatpins	*Eriocaulon parkeri*	U	U	X
Dwarf Umbrella Sedge	*Fuirena pumila*	R	U	S3
Spring Avens	*Geum vernum*	E	U	S2/S3
Rough Avens	*Geum virginianum*	E	U	S2
Featherfoil	*Hottonia inflata*	T	U	S2
Kidney-leaf Mud-plantain	*Heteranthera reniformis*	U	U	S3
Wild Hydrangea	*Hydrangea arborescens*	E	U	S2
Great St. Johnswort	*Hypericum ascyron*	U	U	S3
Golden-seal	*Hydrastis canadensis*	T	U	S2
Riverbank Quillwort	*Iosetes riparia*	E	U	S1
Weak Rush	*Juncus debilis*	E	U	S1
Woodland Rush	*Juncus subcaudatus*	E	U	S1
Downy Lettuce	*Lactuca hirsute*	E	U	S1

Creamy Wild Pea	*Lathyrus ochroleucus*	U	U	S3
Slender Pinweed	*Lechea tenuifolia*	T	U	S2
Illinois Pinweed	*Lechea racemulosa*	R	U	S3
Eastern Grasswort	*Lilaeopsis chinensis*	T	U	S2
Mudwort	*Limusella australis*	R	U	S3
Southern Yellow Flax	*Linum medium x texanum*	T	U	S2
Stiff Yellow Flax	Linum striatum	R	U	S3
Large Twayblade	*Liparis lilifolia*	E	U	S1
Dwarf Bulrush	*Lipocarpha micrantha*	E	U	S1
Spiny Woodrush	*Luzula echinata*	U	U	S3
Gypsy-wort	*Lycopus rubellus*	E	U	S1
Lance-leaved Loosestrife	*Lysimachia hybrida*	E	U	S1
Adders-mouth Orchid	*Malaxis bayardii*	E	U	S1
Slender Bunchflower	*Melanthium latifolium*	U	U	SX
Virginia Bunchflower	*Melanthium virginicum*	E	U	SH
Winged Monkeyflower	*Mimulus alatus*	R	U	S3
Appalachian Sandwort	*Minuartia glabra*	T	U	S2
Golden Club	*Oronitium aquaticum*	T	U	S2
Violet Wood Sorrel	*Oxalis violacea*	T	U	S2/S3
Wiry Panic Grass	*Panicum flexile*	T	U	S3
Swamp Lousewort	*Pedicularis lanceolata*	T	U	S2
Carey's Smartweed	*Persicaria careyi*	T	U	S1/S2
Virginia Ground-cherry	*Physalis virginiana*	E	U	SH
Jack Pine	*Pinus banksiana*	R	U	S3
Virginia Pine	*Pinus virginiana*	E	U	S1
Hooker's Orchid	*Plantanthera ciliaris*	E	U	S1
Riverweed	*Podostemum ceratophyllum*	T	U	S2
Slender Knotweed	*Polygonum tenue*	R	U	S3
Water-thread Pondweed	*Potamogeton diverisifolius*	E	U	S1
Spotted Pondweed	*Potamogeton pulcher*	T	U	S2
Comb-leaved Mermaidweed	*Proserpinaca pectinata*	T	U	S2
Dwarf Sand-cherry	*Prunus pumila x depressa*	T	U	S2
Blue Mountain-mint	*Pycanthemum muticum*	T	U	S2/S3
Swamp Buttercup	*Ranunculus hispidus*	E	U	S1
Small-flowered Crowfoot	*Ranunculus micranthus*	T	U	S3
Roseroot	*Rhodiola rosea*	E	U	S1
Rhodora	*Rhododendron canadensis*	T	U	S2
Globe Beakrush	*Rhynchospora recognita*	U	U	SX
Tooth-cup	*Rotala ramosior*	T	U	S2
Spongy Arrowhead	*Sagittaria montevidensis*	T	U	S2
Strap-leaf Arrowhead	*Sagittaria subulata*	U	U	S3
Georgia Bulrush	*Scirpus georgianus*	E	U	S1
Hyssop Skullcap	*Scutellaria integrifolia*	E	U	S1
Michaux's Blue-eyed Grass	*Sisyrinchium mucronatum*	E	U	S1
Purple Meadow Parsnip	*Thaspium trifoliatum*	U	U	X
|Northern Gamma Grass	*Tripsacum dactyloides*	T	U	S2

Spreading Globeflower	*Trollius laxus*	R	U	S3
Swollen Bladderwort	*Utricularia inflata*	E	U	S2
Lesser Bladderwort	*Utricularia minor*	T	U	S3
Zigzag Bladderwort	*Utricularia subulata*	U	U	S3
Culver's Root	*Veronicastrum virginicum*	T	U	S2
Southern Arrowwood	*Viburnum dentatum venosum*	T	U	S2
Large Yellow-eyed Grass	*Xyris smalliana*	U	U	S2

USFWS, DEC and NHO Current Rank Codes:

E = Endangered
T = Threatened
SC = Special Concern
C = Candidate Species
R = Rare
V = Exploitably Vulnerable
S1 = Critically Imperiled
S2 = Imperiled
S3 = Uncommon/Rare
S4 = Apparently Secure
S5 = Demonstrably Secure
SNA = Migrant Species Only
SH = Not found in New York State in last 20 Years
X = Extirpated in New York State
U = Unlisted in New York State

Appendix M

List of "Habitat for Species of Conservation Concern" for the Project Site

Habitat for Species of Conservation Concern

The following list of fauna has been generated to define "Species of Conservation Concern" of which habitats that they are associated with have been identified on the Youngs Grove property. These species were extrapolated from the overall list of "Species of Special Concern" that was generated for Orange County, New York. The presence of suitable habitat does not specifically indicate the presence of the species. Species denoted by ** indicates that they were observed/identified on-site during the many ecological reviews.

Amphibians

Common Name	Scientific Name	Associated Habitat
N. Cricket Frog	*Acris crepitans*	OWP and adjacent SSW
Jefferson Salamander	*Ambystoma Jeffersonianum*	PFW and VP
Blue-spotted Salamander	*Ambystoma laterale*	PFW and VP
Marbled Salamander	*Ambystoma maculatum*	PFW and VP
Four-toed Salamander	*Hemidactylium scutatum*	PFW
Longtail Salamander	*Eurycea longicauda*	PFW
Northern Red Salamander	*Pseudotriton ruber*	RHS and Perennial Stream
S. Leopard Frog	*Rana sphenocephala*	PEM

Reptiles

Common Name	Scientific Name	Associated Habitat
Common Snapping Turtle**	*Chelydra serpentina*	OWP and all wetlands
Spotted Turtle	*Clemmys guttata*	OWP and adjacent SSW
Wood Turtle	*Clemmys insculpta*	Perennial Stream
Black Racer	*Coluber constrictor*	FOR
Black Rat Snake	*Elaphe obsoleta*	FOR
Bog Turtle	*Glyptemys muhlenbergii*	PEM
E. Box Turtle**	*Terrapene caroliniana*	FOR and SSW/PEM
Eastern Ribbon Snake	*Thamnophis sauritus*	PEM and ESUPL

Mammals

Common Name	Scientific Name	Associated Habitat
Eastern Red Bat	*Lasiurus borealis*	FOR UPL
Indiana Bat	*Myotis sodalis*	FOR UPL

Birds

Common Name	Scientific Name	Associated Habitat
Coopers Hawk	*Accipiter cooperii*	FOR
Northern Goshawk	*Accipiter gentilis*	FOR
Sharp-shinned Hawk	*Accipiter striata*	FOR
Northern Saw-whet Owl	*Aegolius acadicus*	FOR
Black Duck	*Anas rubripes*	OWP
Ruffed Grouse**	*Bonasa umbellus*	FOR and ESUPL
Red-shouldered Hawk	*Buteo lineatus*	FOR
Bicknell's Thrush	*Catharus bicknelli*	FOR
Sedge Wren	*Cistothorus platensis*	PEM
Black-billed Cuckoo	*Coccyzus erythrophthalmus*	FOR
Olive-sided Flycatcher	*Contopus borealis*	PFW and SSW
Bay-breasted Warbler	*Dendroica castanea*	FOR
Black-throated Blue Warbler**	*Dendroica caerulescens*	FOR
Cerulean Warbler	*Dendroica cerulea*	FOR
Yellow-bellied Flycatcher	*Empidonax flaviventris*	FOR and PFW
Willow Flycatcher	*Empidonax trailli*	PFW and SSW
Acadian Flycatcher	*Empidonax virescens*	PFW and SSW
Wood Thrush**	*Hylocichla mustelina*	FOR and ESUPL
Red-headed Woodpecker	*Melanerpes erythrocephalus*	FOR, PFW
Kentucky Warbler	*Oporonis formosis*	FOR
Northern Parula**	*Parula americana*	FOR and ESUPL
Scarlet Tanager	*Piranga olivacea*	FOR and ESUPL
American Woodcock	*Scolopax minor*	PFW, SSW and ESUPL
Clay-colored Sparrow	*Spizella pallida*	ESUPL and RIP
Brown Thrasher	*Toxostoma rufum*	FOR and ESUPL
Tennessee Warbler	*Vermivora peregrina*	FOR
Blue-winged Warbler	*Vermivora pinus*	ESUPL
Philadelphia Vireo	*Vireo philadelphicus*	FOR and RIP
Canada Warbler	*Wilsonia canadensis*	FOR

Fish

Common Name	Scientific Name	Associated Habitat
Brook Stickleback	*Culaea inconstans*	Perennial stream
Redbreast Sunfish	*Lepomis auritus*	OWP
Green Sunfish	*Lepomis cyanellus*	OWP
Blacknose Shiner	*Notropis heterolepis*	Perennial stream
Silver Shiner	*Notropis photogenis*	Perennial stream
Stonecat	*Noturus flavus*	Perennial stream
Tadpole Madtom	*Noturus gyrinus*	Perennial stream
Brook Trout	*Salvelinus fontinalis*	Perennial stream

Associated Habitat Legend:

FOR = Forested Upland, *which entails the Oak-Tulip Tree Forest, Beech Maple Mesic Forest and Successional Northern Hardwoods associated with the Project Site.*
ESUPL = Early Successional Forested Upland, *which entails the Successional Southern Hardwoods associated with the Project Site.*
PFW = Palustrine Forested Wetland, *which entails the Palustrine Forested Wetland associated with the Project Site.*
SSW = Palustrine Scrub-Shrub Wetland, *which entails the Palustrine Scrub-Shrub Wetland associated with the Project Site.*
PEM = Palustrine Emergent Wetland, *which entails the Palustrine Emergent Wetland associated with the Project Site.*
OWP = Open Water Pond, *which entails the Farm Pond associated with the Project Site.*
RIP = Riparian Stream Corridor, *which entails Rocky Headwater Tributary associated with the Project Site.]*
VP = Vernal Pools, *which entails the Vernal Pools associated with the Project Site.*

Appendix I

Herpetological Investigation

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Herpetological Investigation, Reiger Tract,
Town of Goshen, New York

by Jason Tesauro

June 16, 2008

A general herpetological evaluation and survey was conducted on the proposed Rieger Homes residential development located in the Town of Goshen, New York on 15 April, 30 April, 16 May, and 8 June 2008. A portion of this work was done in conjunction with a Phase 2 bog turtle survey done on two small wetlands located on the south side of Craigville Road in the western end of the parcel. This report summarizes the results of the herpetological investigation.

The Reiger Homes parcel was first visited on 21 May 2007 for general reconnaissance. Several wetland areas were identified during this visit including three areas of suitable bog turtle habitat, forested wetland containing vernal pools, seasonally flooded emergent wetland, forested riparian habitat, and an artificial impoundment. The remainder of the habitat consisted primarily of upland deciduous forest with some patches of former human habitation. Surveys were focused primarily on the wetland portions of the property.

Survey methods entailed random opportunistic surveys under warm, sunny conditions which would be conducive to surface activity, movement, and/or breeding of many reptilian and amphibian species (i.e., herptiles) likely to occur on site. The site was also visited in the evenings of 5/15 and 5/20, the morning of 5/21 and in the late afternoon of 6/8 by North Country Ecological Services (NCES) to document calling anurans. Aquatic and fossorial species (e.g., salamanders) were actively searched for through dip-netting and lifting logs, stones, and other material in both forest and riparian habitat.

Species documented during this investigation were as follows:

Common Name	**Latin Name**	**NYSDEC Status**
Green frog	*Rana clamitans melanota*	
Bullfrog	*Rana catesbiana*	
Pickerel frog	*Rana palustris*	
Wood frog	*Rana sylvatica*	
Northern spring peeper	*Pseudacris crucifer*	
Northern gray treefrog	*Hyla versicolor*	
American toad	*Bufo americanus*	

Two-lined salamander	*Eurycea bislineata*	
Red-backed salamander	*Plethodon cinereus*	
Northern slimy salamander	*Plethodon gluttinosus*	
Dusky salamander	*Desmognathus subfuscus*	
Red-spotted newt	*Notophtalamus viridescens*	
Spotted salamander	*Amybstoma maculatum*	
Eastern garter snake	*Thamnophis sirtalis*	
Northern water snake	*Nerodia sipedon*	
Common snapping turtle	*Chelydra serpentina*	
Eastern painted turtle	*Chrysemys picta*	
Eastern box turtle	*Terrapene carolina*	Special Concern

The Rieger tract contained a diverse herpetological community, comprised mostly by common species. The eastern box turtle, a Special Concern species, was the only species observed that is officially 'listed' by the New York State Bureau of Wildlife. The richest herptile area was associated with a wetland complex located in the southeastern corner of the property that contained an artificial impoundment and forested wetland habitat. Large concentrations of wood frogs and spotted salamanders bred in the vernal pools found within the boundaries of the forested wetlands and also within the shallow shoreline habitat of the impoundment. The pools appeared suitable for other obligate vernal pool amphibians including marbled salamander and Jefferson salamanders, although none were observed. The southernmost vernal pool within this complex contained a lush plant community dominated by high-bush blueberry (*Vaccinium corymbosum*), spicebush (*Lindera benzoin*), and various hardwoods. Thick mounds of peat moss (*Sphagnum* sp.) grew at the base of many of the shrubs and trees within the pool, providing suitable habitat for four-toed salamander (*Hemidactylium scutatum*), but none were found. The artificial impoundment, which appeared to hold water year-round, supported aquatic turtles, red-spotted newts, and was used as breeding habitat for all the anurans observed on site with the exception of American toads. Auditory and visual surveys did not yield any northern cricket frogs (*Acris crepitans*) in the pond. In New York, northern cricket frogs are typically associated with large, circumneutral ponds with a well-established emergent and aquatic vegetation community. This impoundment, while superficially suitable, may be limited by its water chemistry and its isolation from other northern cricket frog populations.

A second significant emergent and forested wetland complex, also containing vernal pools, exists on the eastern side of the property but on the north side of Craigville Road (Figure 1). This area contained a shallow, sedge-dominated wetland that bordered on large, flooded, grassy marsh to the west (located off site). Wood frogs and spotted salamanders were documented in this ponded sedge marsh along with green frogs, American toads, and spring peepers. Together with the off-site marsh, these wetlands provided excellent habitat for the spotted turtle (*Clemmys guttata*), a Special Concern species. A small turtle was observed peripherally diving into the water from a tussock on 30 April; however, it was not captured and identification could not be confirmed.

The riparian habitat on the site was not very ecologically productive. Green frogs, water snakes, and two-lined salamanders were the only herptile species documented. Fish were not common. The stream itself was compromised by its proximity to Craigville Road and appeared to be very flashy, possibly from upstream impacts associated with agricultural activities and land development within the watershed. The wood turtle (*Glyptemys insculpta*), a Special Concern species, is associated with riparian habitats and is common in certain parts of Orange

County; however, the stream was only marginally suitable for the species, and was so close to Craigville Road that road mortality would be a major threat to this far-ranging, transient turtle. The small, seasonal stream from the impoundment in the southern corner of the property, which eventually drains into this creek, was the only location where dusky salamanders were documented.

The two wet meadows surveyed for bog turtles (See forthcoming Phase 2 report by NCES) produced green frogs, spotted salamanders, wood frogs, and spring peepers. The latter three were only documented breeding at the westernmost patch of habitat, which was partially ponded (it had formerly been an impoundment). A third suitable bog turtle habitat located 100 meters east of Hasbrouck Road, which was not subjected to a Phase 2 investigation due to its distance from proposed development, was visited once and did not produce any herptiles.

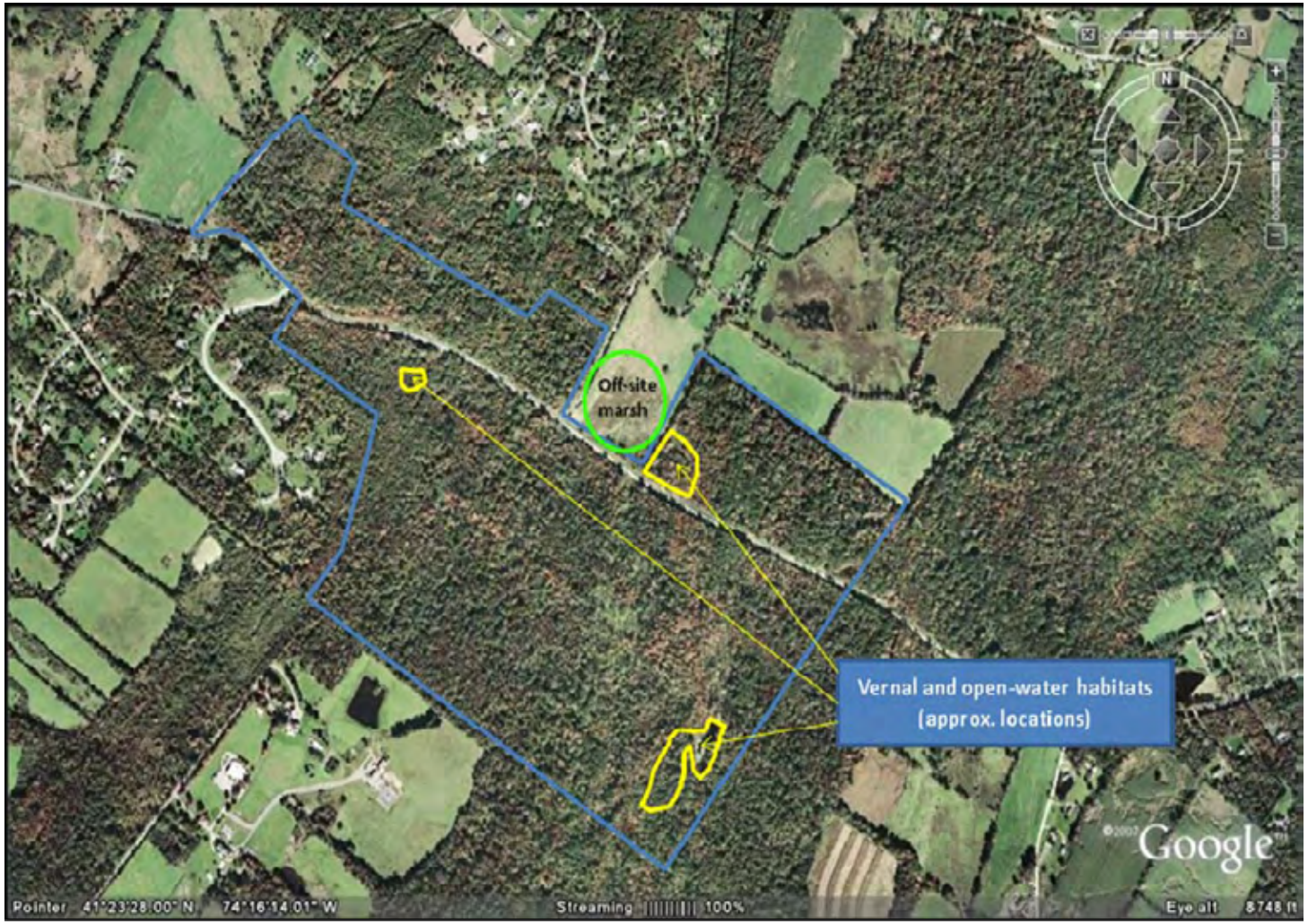
Northern water snakes were the most commonly observed snake species on the site, mostly associated with the permanent pond and riparian habitats. Garter snakes were observed in the upland woods and along trails. Old tin, trash, and scattered debris near former dwellings were turned over in pursuit of eastern milk snakes (*Lampropeltis triangulum*), black rat snakes (*Elaphe obsoleta*), and brown snakes (*Storeria dekayi*); however, none of these species were found.

The upland forest, which comprised the bulk of the habitat area on site, was casually surveyed. Log-rolling yielded red-backed salamanders, slimy salamanders, and a single juvenile spotted salamander. A male box turtle was found along the forest edge on the north side of Craigville Road. Although only a handful of wood frogs and a single spotted salamander were observed in the forest, it is assumed that the upland forest habitat throughout the property provides habitat for the large numbers of spotted salamanders, northern spring peepers, and northern gray treefrogs that were observed breeding in the pond and various wetland habitats.

References:

Northern Cricket Frog Fact Sheet. http://www.dec.ny.gov/animals/7120.html

Figure 1. – Vernal and open-water habitats documented on the proposed Riegar Homes site . Goshen, NY



Appendix J

Traffic Impact Study

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TRAFFIC IMPACT STUDY

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RIEGER HOMES SUBDIVISION
CRAIGVILLE ROAD AND BROADLEA ROAD
TOWN OF GOSHEN, NEW YORK

JOB NO. 394

JULY 18, 2007

REVISED SEPTEMBER 10, 2008

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SECTION I

INTRODUCTION

A. DESCRIPTION OF PROPOSED DEVELOPMENTS (Figure No.1)

The Rieger Homes subdivision is proposed to consist of 130 single family dwelling units. The development site is located on the south side of Craigville Road and west of Knoell Road. There are three planned access points to the site including two new roadway connections to Craigville Road as well as an extension of Broadlea Road into the site. The location of the development is shown on Figure No. 1. A design year of 2016 has been considered for the purposes of this evaluation.

B. SCOPE OF STUDY

This study has been prepared to evaluate the potential traffic impacts of the proposed subdivision as they relate to the roadway system in the area. As part of this study, detailed turning movement traffic counts were conducted at several area intersections which were identified in a scoping document prepared by the Town of Goshen Planning Board. The traffic counts for each of these intersections were summarized for the weekday AM and PM peak hours and used to establish the Existing Traffic Volumes. These volumes were also compared with other historical data including information from the Goshen Town Wide Traffic Study.

The Existing Traffic Volumes were projected to a future design year utilizing a background growth factor based on historical information. In addition, the traffic from other planned or recently approved developments in the area was also estimated and added to the projected traffic volumes to obtain the design year No-Build Traffic Volumes.

Estimates of the peak hour traffic expected to be generated by the proposed subdivision were computed based on information published by the Institute of Transportation Engineers (ITE). The Site Generated Traffic Volumes for the development were assigned to the roadway network using an arrival and departure distribution which was developed based upon a review of the existing traffic patterns in the area. These Site Generated Traffic Volumes were then combined with the design year No-Build Traffic Volumes to obtain the future Build Traffic Volumes.

A detailed capacity analysis was conducted at each of the intersections utilizing the procedures outlined in the 2000 Highway Capacity Manual. The Existing, No-Build and Build Traffic Volumes were all analyzed for each of the peak hours to identify Levels of Service and operating conditions. Based on the results of the analysis, recommendations for improvements were made were necessary. Historical accident data for the area roadways were also reviewed to identify any problem areas.

SECTION II

EXISTING ROADWAY AND TRAFFIC CONDITIONS

A. DESCRIPTION OF EXISTING ROADWAY NETWORK

The proposed subdivision is accessed by several area roadways including Craigville Road, Knoell Road, Broadlea Road, Old Chester Road, Ridge Road and Hasbrouck Road. A description of these roadways is as follows:

1. Craigville Road (CR66)

   Craigville Road (County Route 66) is a two lane (plus paved shoulders) collector road which runs in a generally southeast and northwest direction. It originates at an intersection with NYS Route 94 in the Town of Blooming Grove. It continues through the Town of Goshen intersecting with roadways such as Knoell Road, Coleman Road and more locally Ridge Road and Hasbrouck Road. It has double yellow centerline, white edgeline shoulder striping, and the pavement is in generally good condition. The average width of the roadway is 30 feet consisting of two 11± foot travel lanes and two 4± foot shoulders. It has a posted speed limit of 45mph, which changes to 30mph in the Village. There are some sections with horizontal curves where there are reduced advisory speeds of 35mph. The roadway terminates at an offset signalized intersection with Scotchtown Avenue at NYS Route 207. There is no on street parking allowed along any

section of Craigville Road and school busses stop along its entire length at specific intersections and private houses including at the intersection of Craigville Road and Pleasant Ridge Run Road near the site.

2. Old Chester Road

Old Chester Road originates at a "T" intersection with Knoell Road and traverses in a westerly direction intersecting with Duck Farm Road. The roadway is a two lane road with generally good alignment. The speed limit along this roadway is posted at 40mph. The roadway continues into the Village of Goshen where it designation changes to South Church Street. The speed limit changes to 30mph in the Village. It has an "all way stop" controlled intersection with South Street and Parkway. Old Chester Road has an average width of 20 feet and the pavement is in generally good condition.

3. Coleman Road

Coleman Road is a two lane unstriped roadway which originates at a "stop" sign controlled "T" intersection with Craigville Road, traverses in a northwesterly direction and terminating at a channelized "stop" and "yield" controlled intersection with Sarah Wells Trail. This roadway has a posted speed limit of 35mph and the pavement is in generally fair condition. The average width of the roadway varies from 20 feet to 22 feet

4. Knoell Road

Knoell Road originates at a "T" intersection with Craigville Road and continues in a southerly direction intersecting with Old Chester Road. It consists of one lane in each direction and has a 35mph posted speed limit. The pavement is in generally good condition for the length of the roadway; however the double yellow centerline markings are faded in spots specifically around curves where the centerline may be crossed. The average width along the roadway is about 22 feet.

5. NYS Route 17M (Chester Road)

NYS Route 17M is a major east/west roadway which generally parallels NYS Route 17. In the study vicinity, it has intersections with Old Chester Road, Duck Farm Road, the ramps to and from NYS Route 17, and has a signalized intersection with South Street. The posted speed limit for the roadway is 50 mph and the pavement is in generally good condition. The roadway consists of two 11± foot travel lanes and 5± foot shoulders on either side of the roadway.

6. Broadlea Road

Broadlea Road is a local roadway serving one residential home, the Harmony Farm, which is a community farm type facility and Dominican Hall, which is an intermediate care facility. It originates at a "T" intersection with Knoell Road and continues east and then north and currently terminates at a "dead end." In the future the roadway is proposed

to be extended to provide an access point to the proposed subdivision. The pavement is in generally poor condition and has an average width of 20 to 21 feet. The roadway has no posted speed limit.

7. Ridge Road

Ridge Road originates at a "T" intersection with Craigville Road and traverses in a northwesterly direction into the Town of Hamptonburgh where it terminates at an intersection with Sarah Wells Trail. The roadway has a posted speed limit of 35mph and has double yellow centerline pavement markings which are faded in spots. The pavement in in generally fair condition and has an average with of 20 to 21 feet.

8. Hasbrouck Road

Hasbrouck Road is a local roadway which originates at a "T" intersection with Craigville Road. It continues northwest to an intersection with Ridge Road and Farmingdale Road where the roadway terminates. It has a posted speed limit of 35mph and has double yellow centerline pavement markings. The pavement is in generally good condition and the roadway has an average width of 22 feet. At the intersection with Craigville Road the double yellow centerline and stop bar are faded.

B. 2007 EXISTING TRAFFIC VOLUMES (Figures No. 2 and 3)

Detailed turning movement traffic counts were collected at several area intersections which were identified in the scoping document by the Town of Goshen Planning Board. The locations which were surveyed included the following:

1. Craigville Road and Ridge Road
2. Craigville Road and Hasbrouck Road
3. Craigville Road and Coleman Road
4. Knoell Road and Broadlea Road
5. Craigville Road and Knoell Road
6. Old Chester Road and Knoell Road
7. Craigville Road and Proposed Westerly Site Access Road
8. Craigville Road and Proposed Easterly Site Access Road

The traffic counts at these locations were collected for both Weekday AM and PM Peak Hour conditions from 7:00 AM to 9:30 AM and 3:30 PM to 6:30 PM. The counts were collected on April 11th and April 12th of 2007. Based upon a review of the traffic counts together with other available data from the New York State Department of Transportation and from other studies including the Goshen Town Wide Traffic Study, the peak hours were determined to occur as follows:

Weekday Peak AM Highway Hour -- 7:45 AM to 8:45 AM
Weekday Peak PM Highway Hour -- 4:45 PM to 5:45 PM

The resulting peak hour turning movement traffic counts for each of these intersections are identified on Figures No. 2 and 3.

C. ACCIDENT DATA (Tables A and B and Appendix E)

All available accident data was collected for the area roadways from the New York State Department of Transportation for the latest three year period. This information was then summarized by the location, date, time of day and type of accident and is shown in Table A. It was also compared to Statewide Averages as summarized in Table B. Copies of the NYSDOT accident summary reports are contained in Appendix E. It should be noted that there are four accidents that repeat in Table A because they occurred at the intersection of Craigville Road and Knoell Road. Also the accidents that have a location stated occurred at or near an intersecting roadway. Those accidents without a stated location were link accidents, meaning they occurred between intersections.

SECTION III

EVALUATION OF FUTURE TRAFFIC CONDITIONS

A. 2016 NO-BUILD TRAFFIC VOLUMES (Figures No. 4 through 9)

The 2007 Existing Traffic Volumes were projected to a future 2016 design year utilizing a background growth factor of 1.5% per year. This growth factor was used to account for area growth and miscellaneous development traffic in the area. Figures No. 4 and 5 summarize the projected traffic volumes for the roadway network. In addition, traffic for other major approved or pending projects in the area including Harness Estates, the Goshen Executive Center, Hambletonian Park, Heritage Estates and Maplewood Village at Goshen were added to the roadway network and combined with the Projected Traffic Volumes to obtain the 2016 No-Build Traffic Volumes for each of the peak hours. The other development traffic volumes are shown on Figures 6 and 7 while the 2016 No-Build Traffic Volumes are shown on Figures No. 8 and 9.

B. SITE GENERATED TRAFFIC VOLUMES (Table No. 1)

Estimates of the expected site generated traffic volume for the proposed subdivision was computed based on information published by the Institute of Transportation Engineers (ITE) as contained in their report entitled, "Trip Generation", 7th Edition, 2003. The hourly trip generation rates and corresponding peak hour site generated traffic volumes for the development are shown in Table No. 1.

C. ARRIVAL AND DEPARTURE DISTRIBUTIONS (Figures No. 10 and 11)

Based upon a review of the existing traffic patterns in the area as well as consideration of the proposed access locations, an arrival and departure distribution was developed for the proposed subdivision. Figures No. 10 and 11 show the arrival and departure distributions, respectively.

D. 2016 BUILD TRAFFIC VOLUMES (Figures No. 12, 13, 14 and 15)

The Site Generated Traffic Volumes shown on Table No. 1 were assigned to the roadway network utilizing the arrival and departure distributions. The resulting Site Generated Traffic Volumes are shown on Figures No. 12 and 13 for both peak hours. These traffic volumes were then combined with the 2016 No-Build Traffic Volumes to obtain the 2016 Build Traffic Volumes which are shown on Figures No. 14 and 15.

E. DESCRIPTION OF ANALYSIS PROCEDURES

In order to determine existing and future traffic operating conditions at the study area intersections, it was necessary to perform capacity analyses. The following is a brief description of the analysis method utilized in this report:

- Signalized Intersection Capacity Analysis

  The capacity analysis for a signalized intersection was performed in accordance with the procedures described in the 2000 Highway Capacity Manual, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service "A" represents the best condition and a Level of Service "F" represents the worst condition. A Level of Service "C" is generally used as a design standard while a Level of Service "D" is acceptable during peak periods. A Level of Service "E" represents an operation near capacity. In order to identify an intersection's Level of Service, the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

- Unsignalized Intersection Capacity Analysis

  The unsignalized intersection capacity analysis method utilized in this report was also performed in accordance with the procedures described in the 2000 Highway Capacity Manual. The procedure is based on total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the Level of Service, the average amount of vehicle delay is computed for each critical movement to the intersection.

Additional information concerning signalized and unsignalized Levels of Service can be found in Appendix "D" of this report.

F. TRAFFIC IMPACT ANALYSIS RESULTS (Table No. 2)

A detailed capacity analysis was conducted at each of the area intersections utilizing the procedures described above. The analysis considered the Existing, No-Build and Build conditions and computed a Level of Service and identification of expected vehicle delays for each of these conditions. The results are summarized in Table No. 2. A description of each of the intersections follows:

1. Craigville Road and Coleman Road

Coleman Road intersects with Craigville Road at a "stop" sign controlled "T" intersection. All approaches to the intersection consist of one lane and traffic is currently controlled by a "stop" sign. The capacity analysis conducted at the intersection utilizing the Existing Traffic Volumes indicates a Level of Service "B" or better during peak periods.

The intersection was reanalyzed under future conditions. The analysis indicates that a Level of Service "B" or better will be maintained. It is recommended that new pavement markings be installed including new centerline striping and a painted "stop" bar on the Coleman Road approach to the intersection.

2. Old Chester Road and Knoell Road

Old Chester Road intersects with Knoell Road at "T" type intersection. All approaches consist of one lane. It is recommended that additional pavement markings including a painted "stop" bar be added to the intersection to better

control traffic flow and that clearing of any excess vegetation be completed to provide adequate sight distance. The capacity analysis conducted at the intersection indicates a Level of Service "B" or better during peak periods. The analysis was recomputed with the future No-Build and Build Traffic Volumes. A review of these analyses indicates similar Levels of Service will be maintained.

3. Craigville Road and Ridge Road

Ridge Road intersects with Craigville Road at a stop sign controlled "T" intersection. Each of the approaches consists of one lane. The capacity analysis conducted at the intersection utilizing the Existing Traffic Volumes indicates a Level of Service "A" is currently experienced during both peak periods. The intersection was reanalyzed under future conditions which indicate a Level of Service "B" or better will be maintained.

4. Craigville Road and Hasbrouck Road

Craigville Road and Hasbrouck Road intersect at a "T" intersection. All approaches consist of one lane and the Hasbrouck Road approach is currently controlled by a "yield" sign. The capacity analysis conducted for the intersection utilizing the Existing Traffic Volumes indicates that a Level of Service "A" currently exist during both the AM and PM peak hour. Reanalyzing the intersection with the future No-Build and Build Traffic Volumes indicates that this Level of Service will be maintained. As traffic continues to increase in the area, it may be desirable to replace the "yield" sign with a "stop" sign. Also, new

pavement markings including a stop bar on the Hasbrouck Road approach should be installed.

5. Knoell Road and Broadlea Road

Broadlea Road intersects Knoell Road at a "stop" sign controlled "T" intersection. Each of the approaches consists of one lane. Capacity analysis conducted with the Existing Traffic Volumes indicates a Level of Service "A" is currently experienced. Reanalyzing the intersection with the future No-Build and Build Traffic Volumes indicates that the Level of Service will be maintained. It is recommended that new pavement markings be installed including new centerline striping and a painted "stop" bar on the Broadlea Road approach to the intersection.

6. Craigville Road and Knoell Road

Knoell Road intersects Craigville Road at a "T" intersection. Each approach consists of one lane and the Knoell Road approach is "stop" sign controlled. Capacity analysis conducted for the intersection utilizing Existing Traffic Volumes indicates a Level of Service "B" or better is currently experienced during peak periods. Reanalyzing the intersection for the future No-Build and Build conditions indicates that this Level of Service will be maintained. Currently, the pavement markings on the Knoell Road are faded and should be restriped including the "stop" bar. In addition, any excess vegetation looking east of the intersection should be cleared to ensure adequate sight distance.

7. Evaluation of Proposed Access Drives

In addition to the above intersections, the individual access connections to the development were also analyzed. Levels of Service for the primary intersections are summarized in Table No. 2. It is anticipated that both of these intersections will operate at acceptable Levels of Service "B" or better. It is recommended that the intersections be controlled by "stop" signs and that appropriate pavement markings including "stop" bars and center lines be installed to control traffic.

G. SUMMARY AND CONCLUSIONS

Based on the above analysis, there are several intersections in the study area which will need to be upgraded to accommodate future traffic volumes. These upgrades include sight distance improvements and new pavement markings. These improvements will be required regardless of the proposed development. The analysis indicates that with the completion of these improvements, the additional traffic from the proposed subdivision will not result in a significant negative impact on the surrounding intersections. All intersections analyzed will operate at acceptable Levels of Service. A Highway Work Permit will be required from the Orange County DPW for the access connections to Craigville Road.

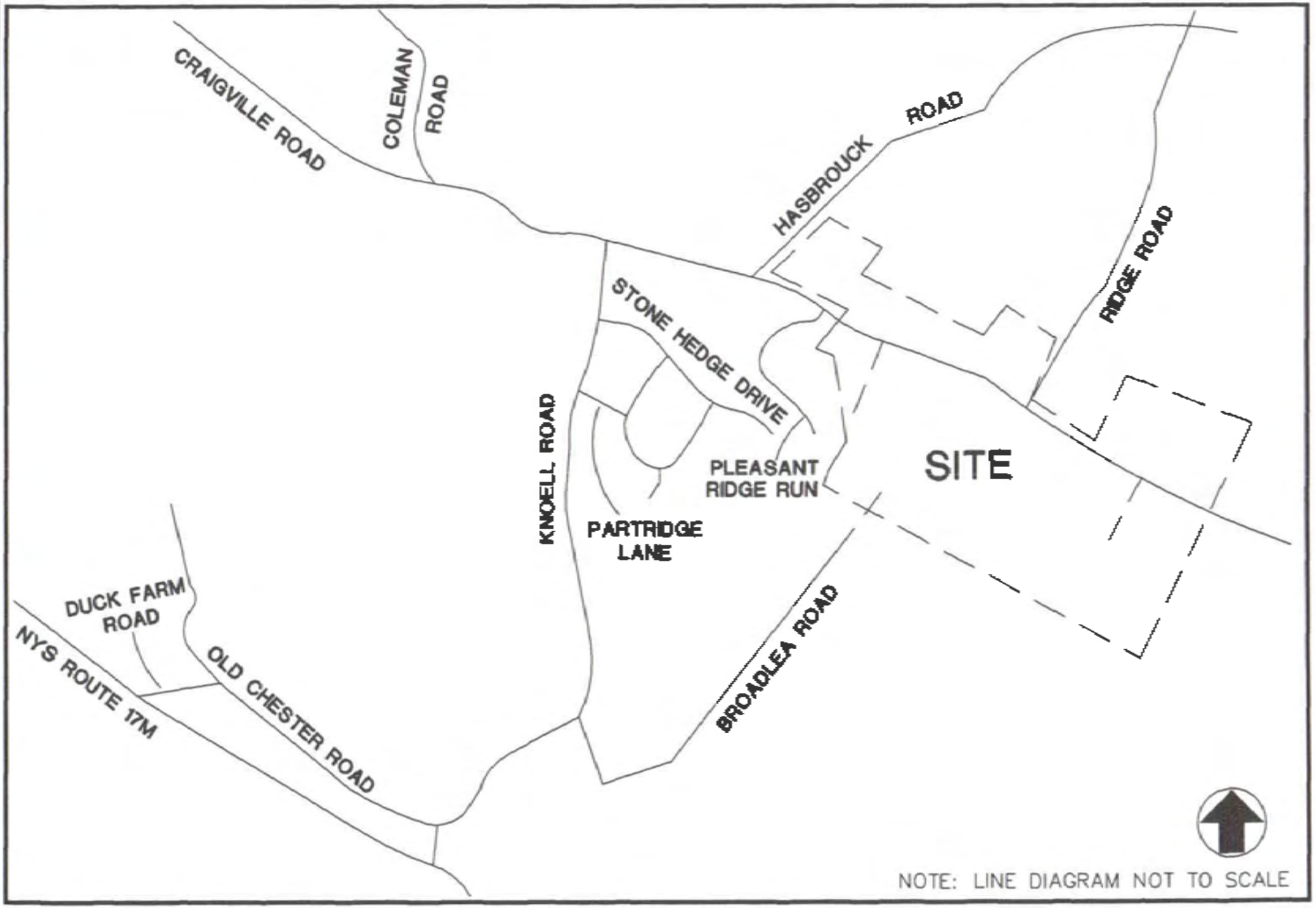
Respectfully Submitted,
JOHN COLLINS ENGINEERS, P.C.

Philip J. Grealy, Ph.D., P.E.

394.TIS

APPENDIX "A"

FIGURES

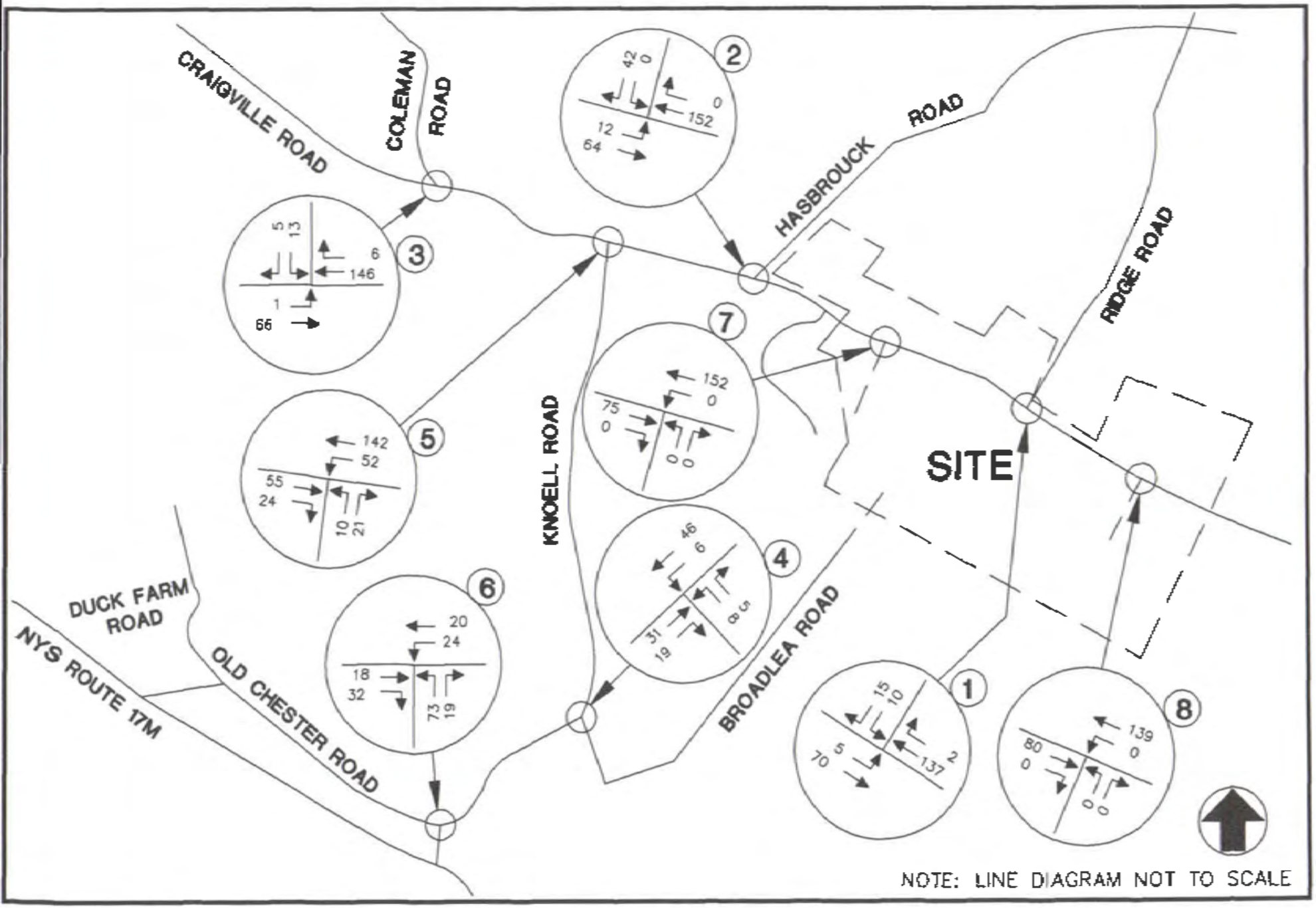


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

SITE LOCATION MAP

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 1

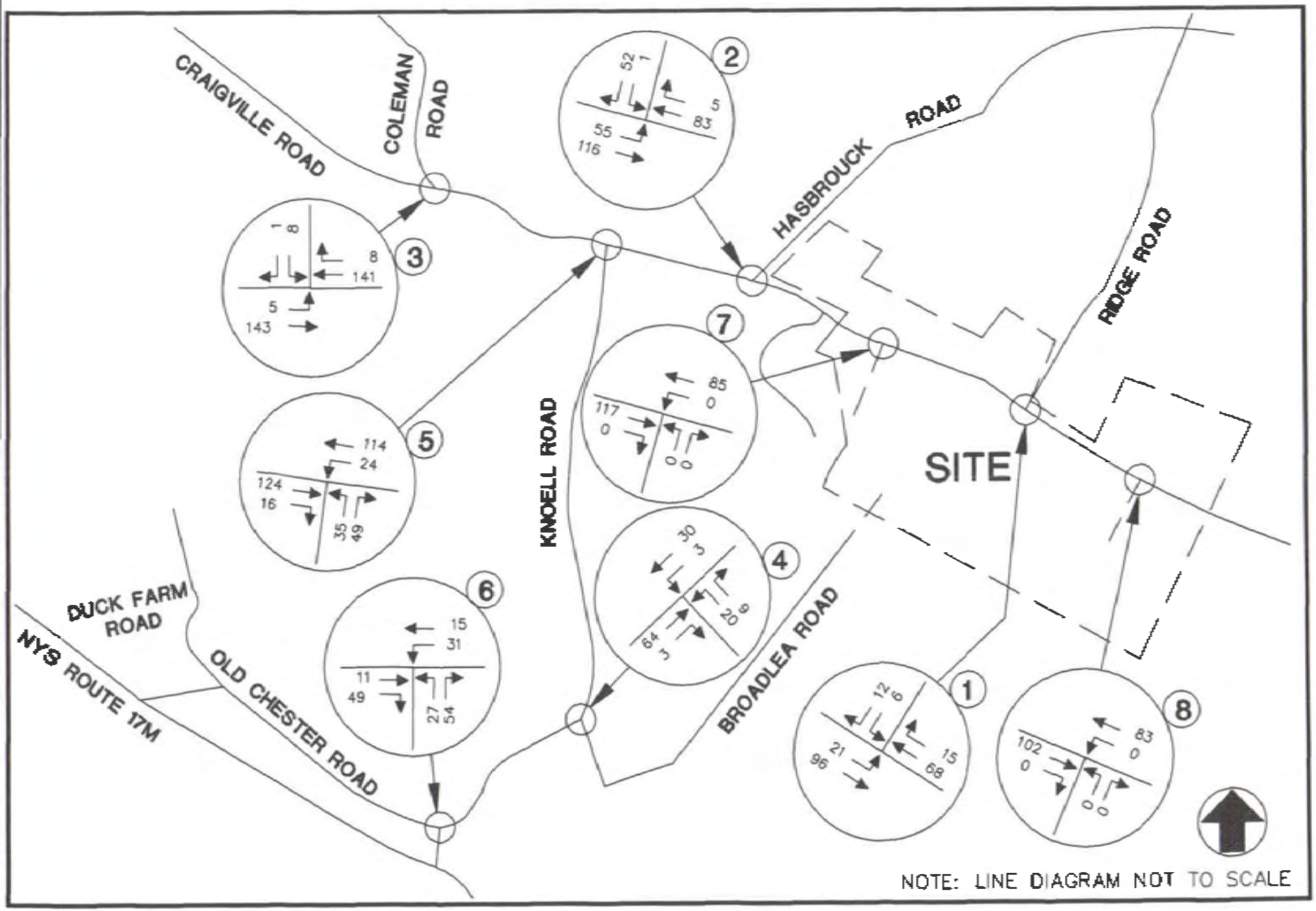


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

2007 EXISTING TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 2

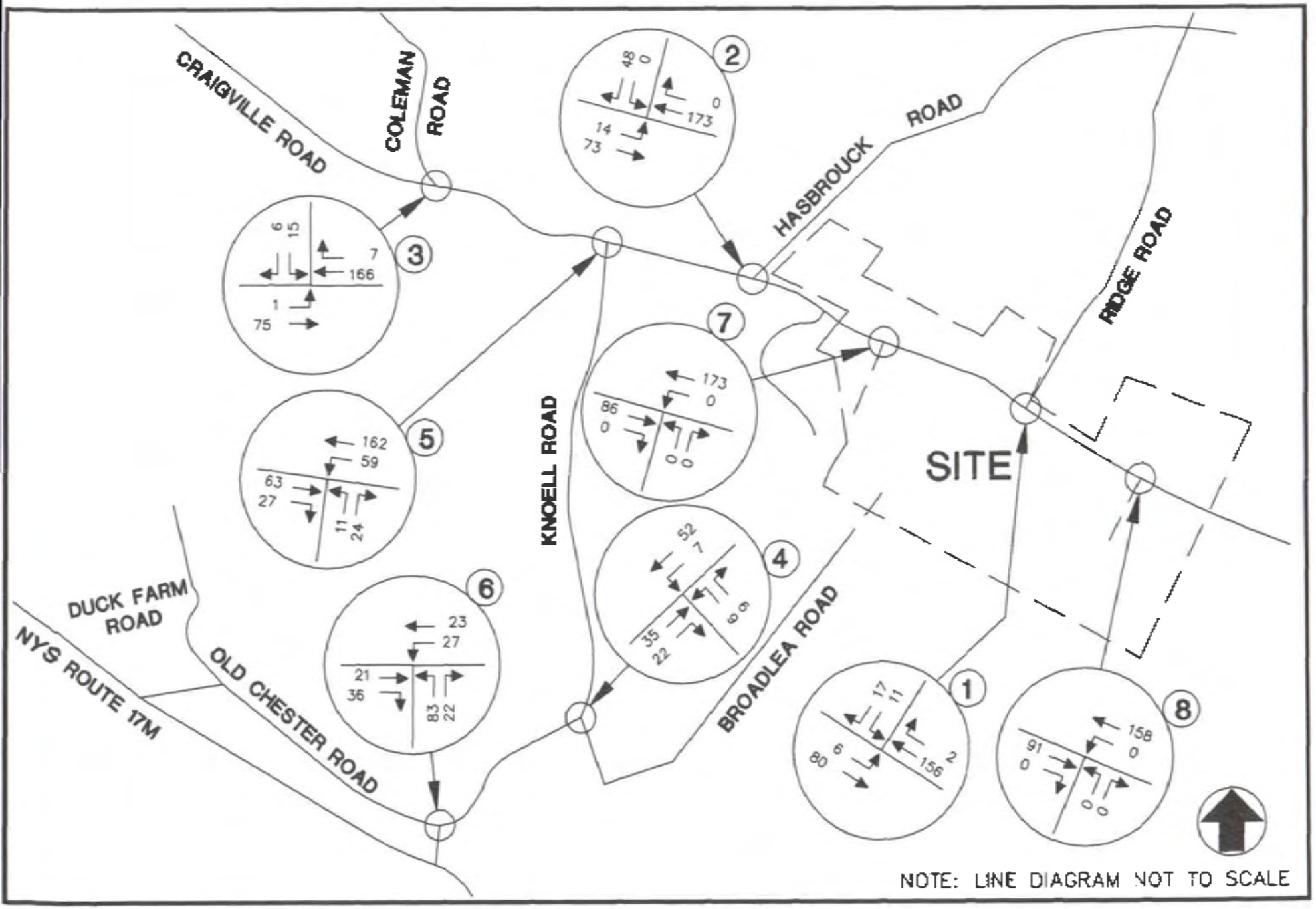


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

2007 EXISTING TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 3

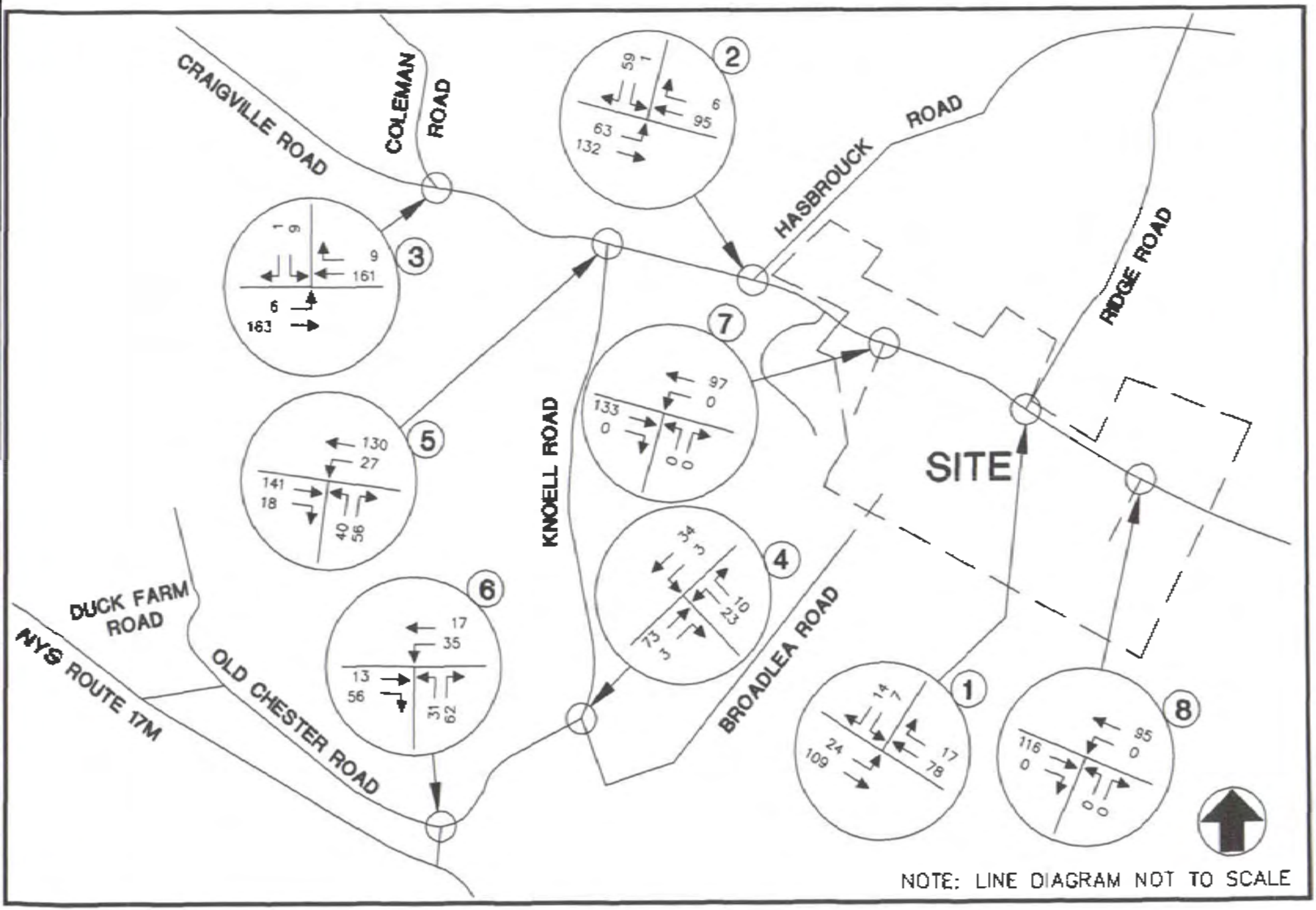


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

2016 PROJECTED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 4

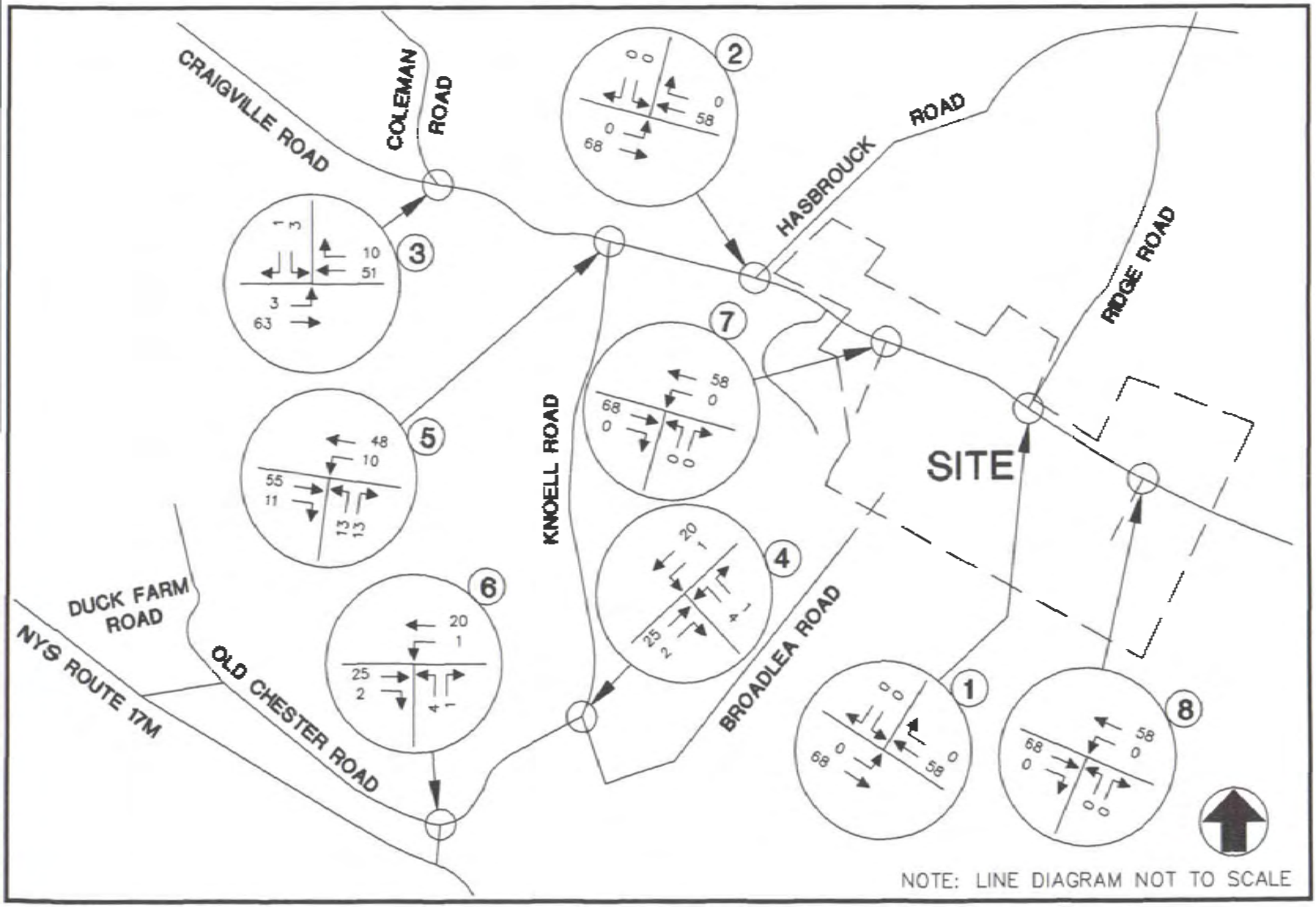


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

2016 PROJECTED TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 5

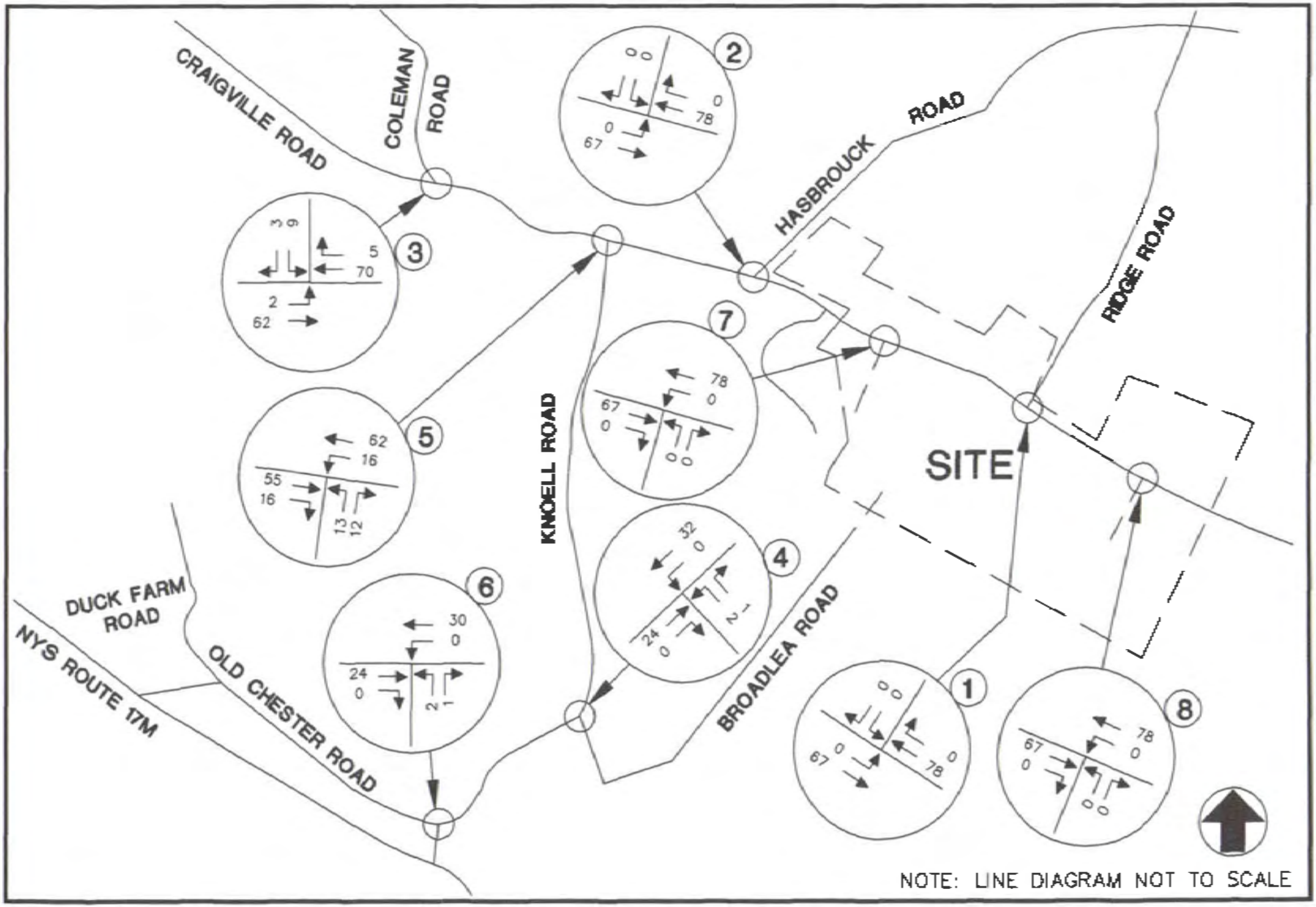


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

OTHER DEVELOPMENT TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 6

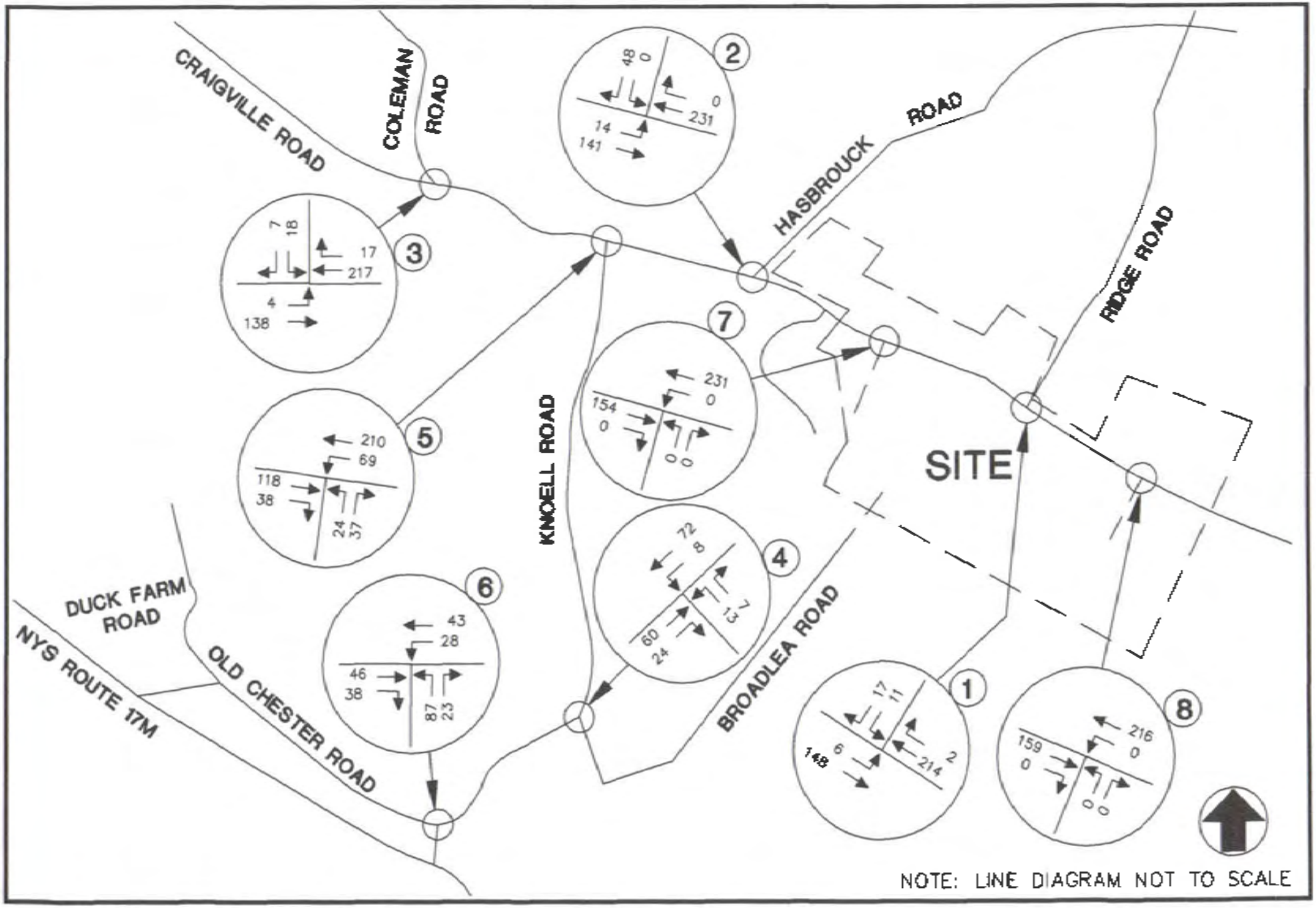


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

OTHER DEVELOPMENT TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 7

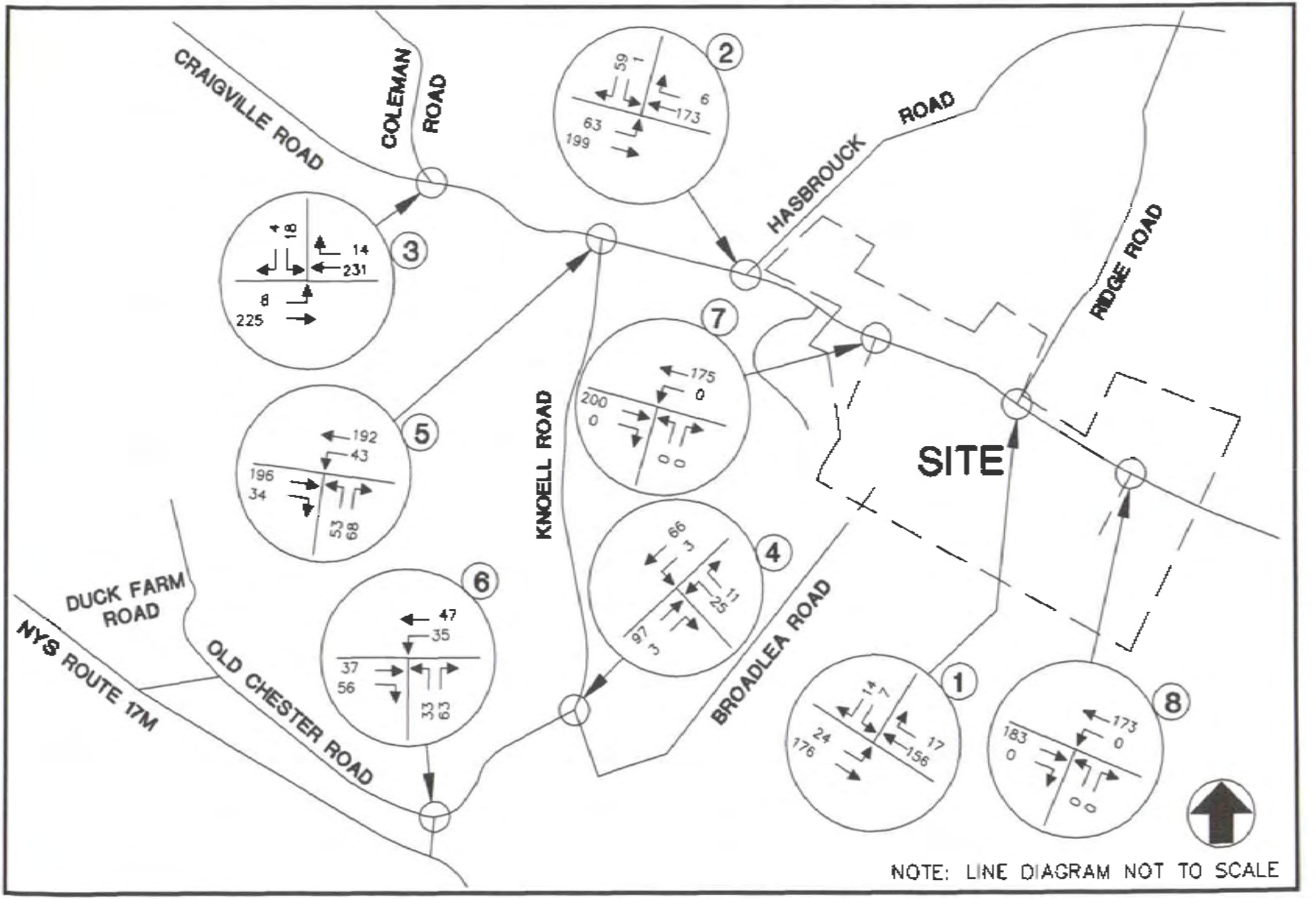


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

2016 NO-BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 6

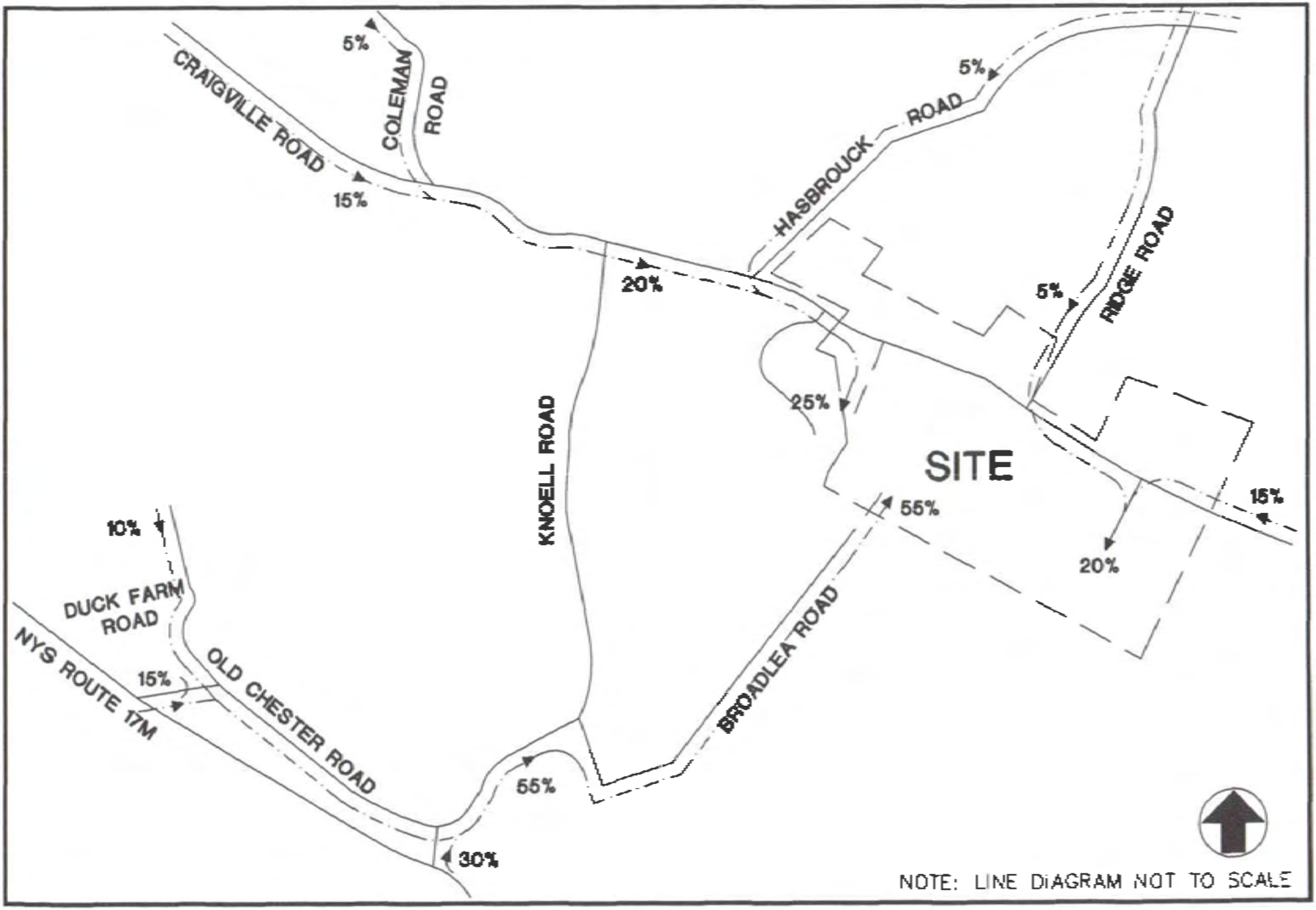


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

2016 NO-BUILD TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 9

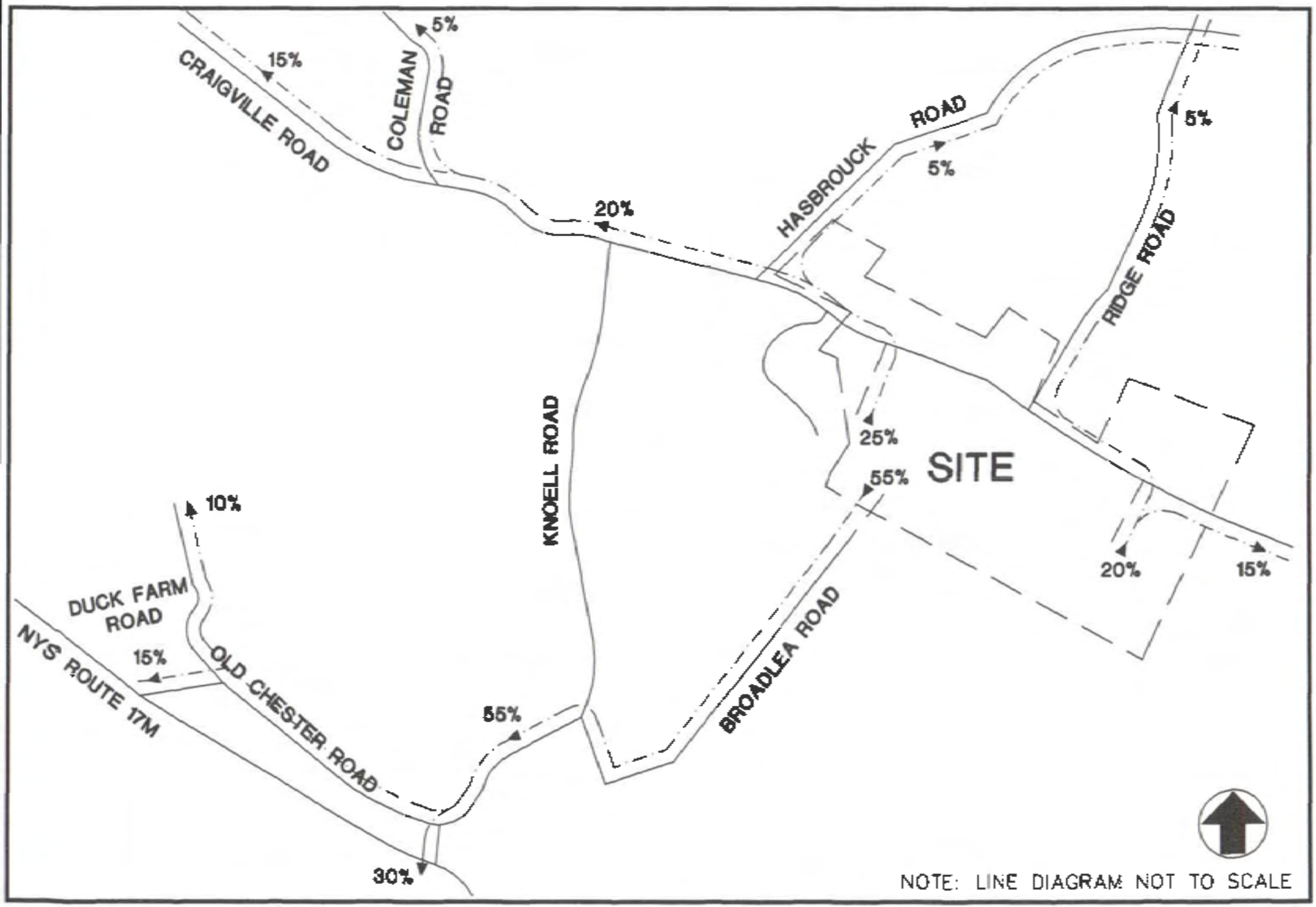


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

ARRIVAL DISTRIBUTION

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 10

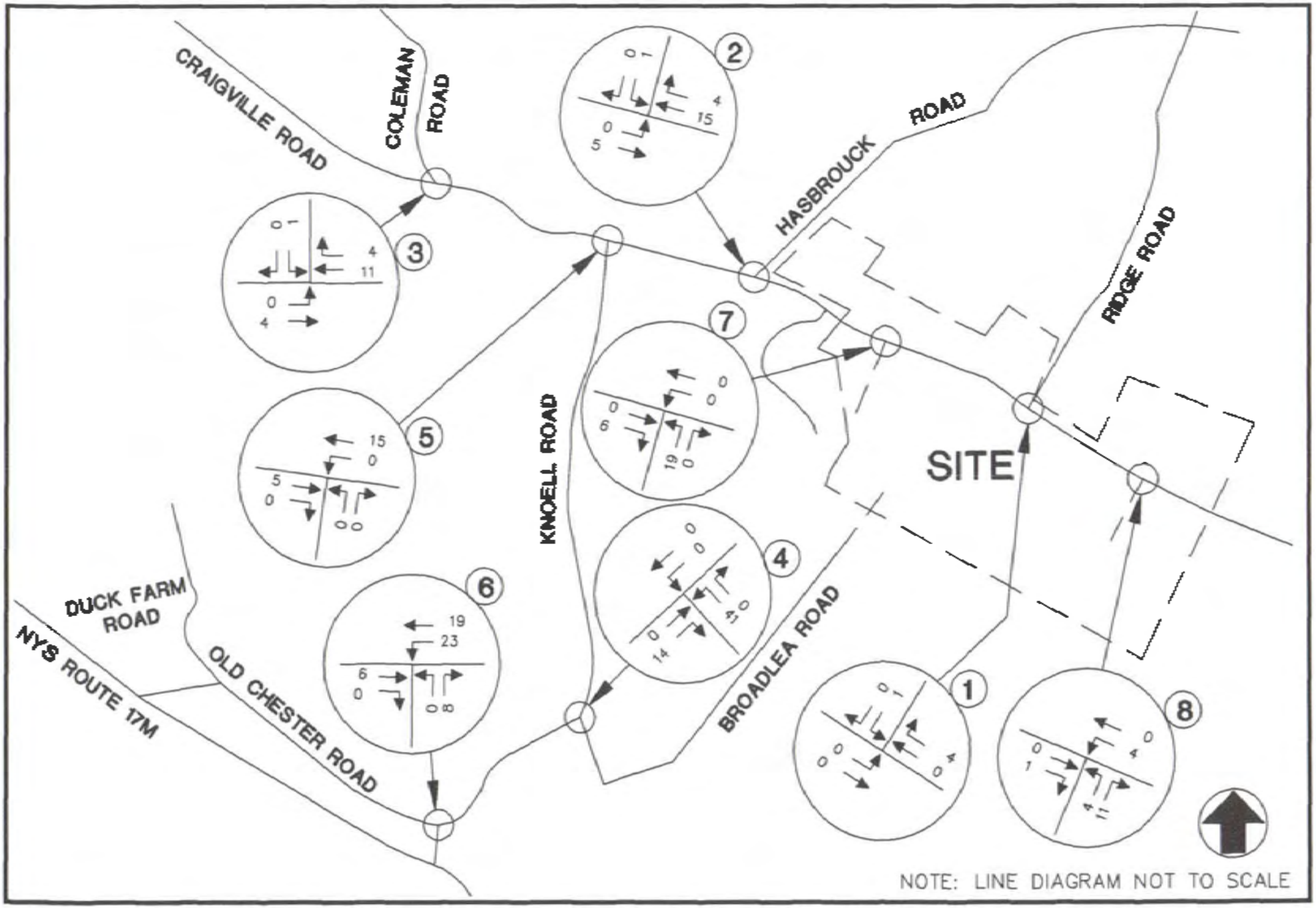


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

DEPARTURE DISTRIBUTION

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 11

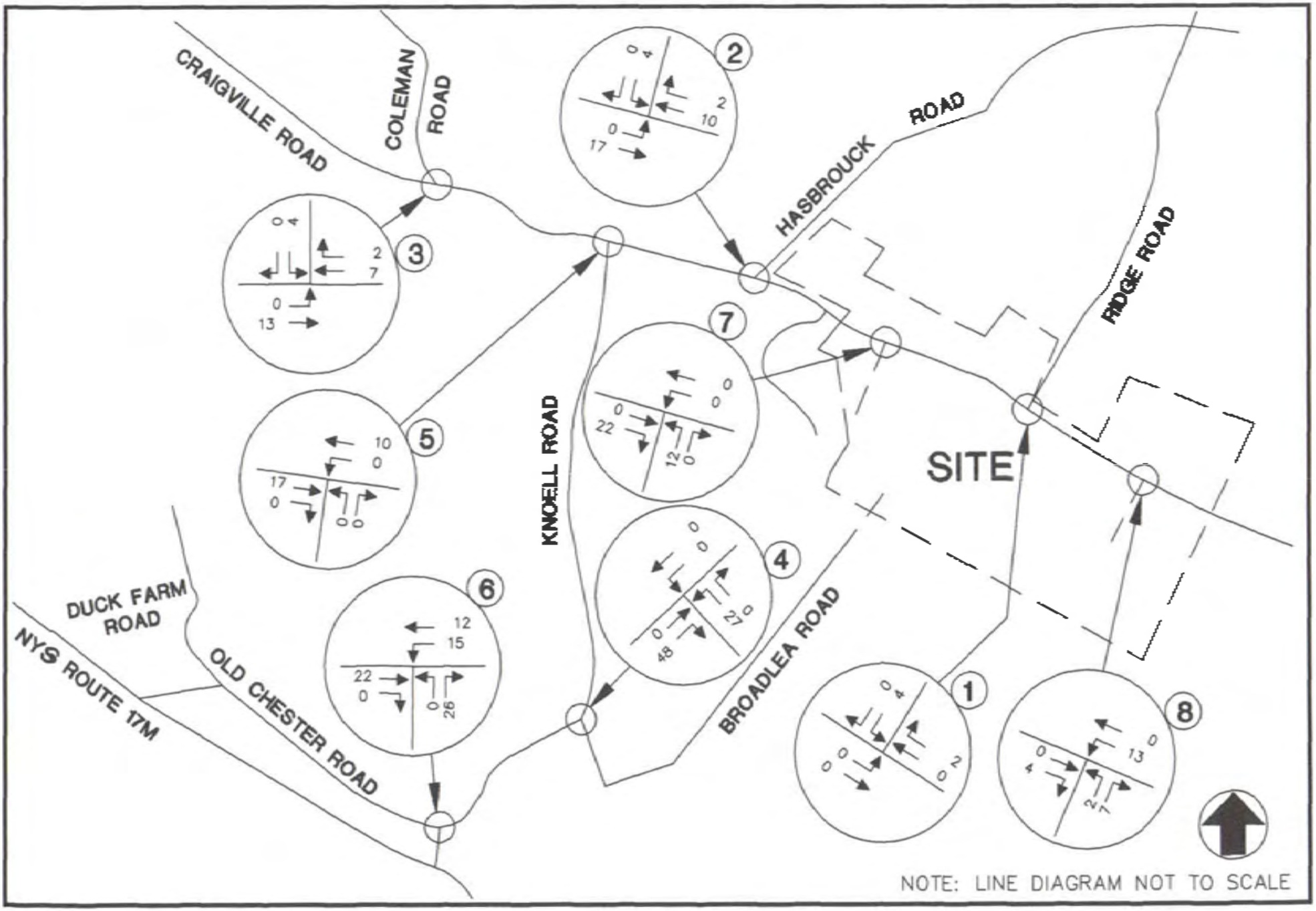


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 12

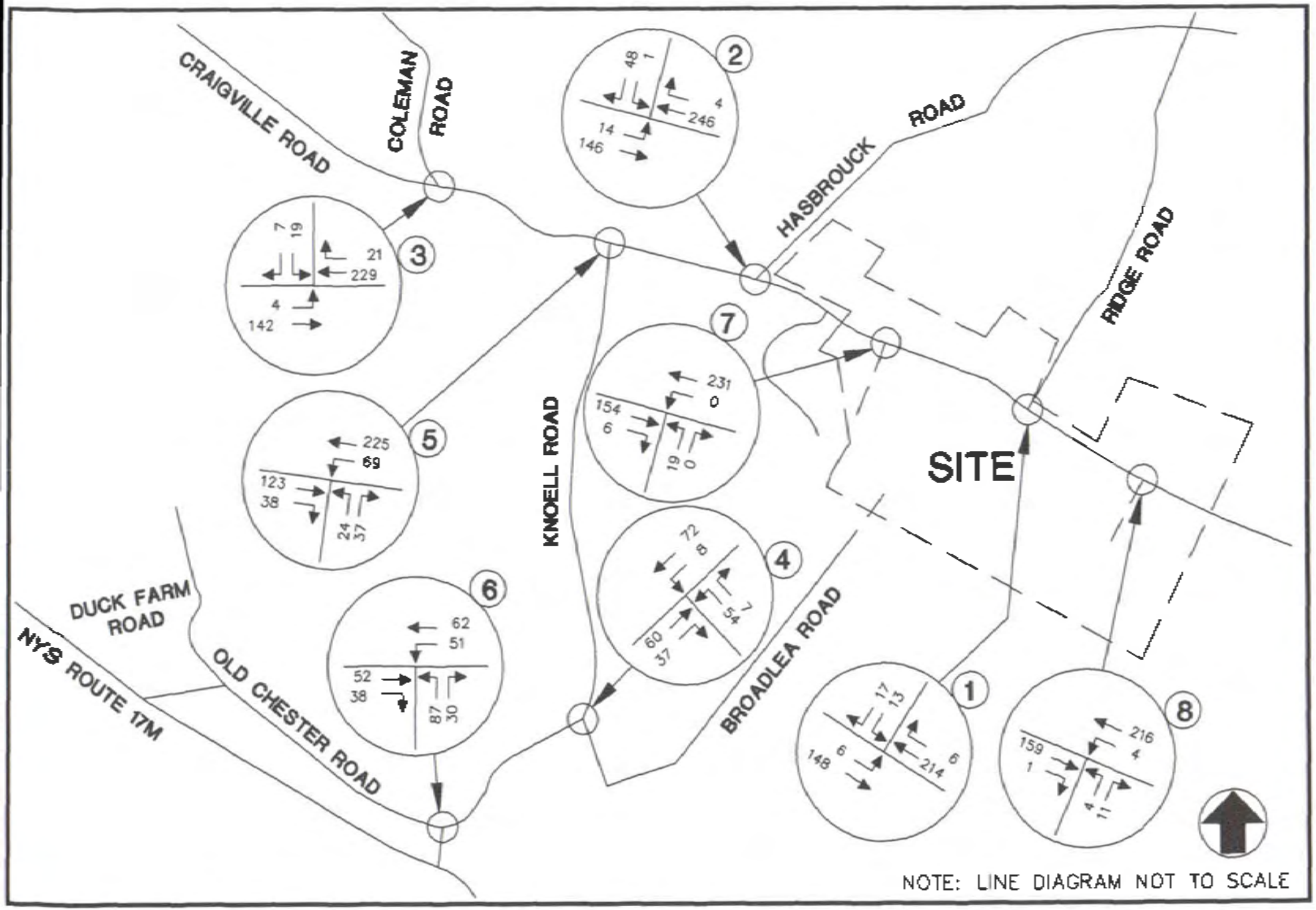


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 13

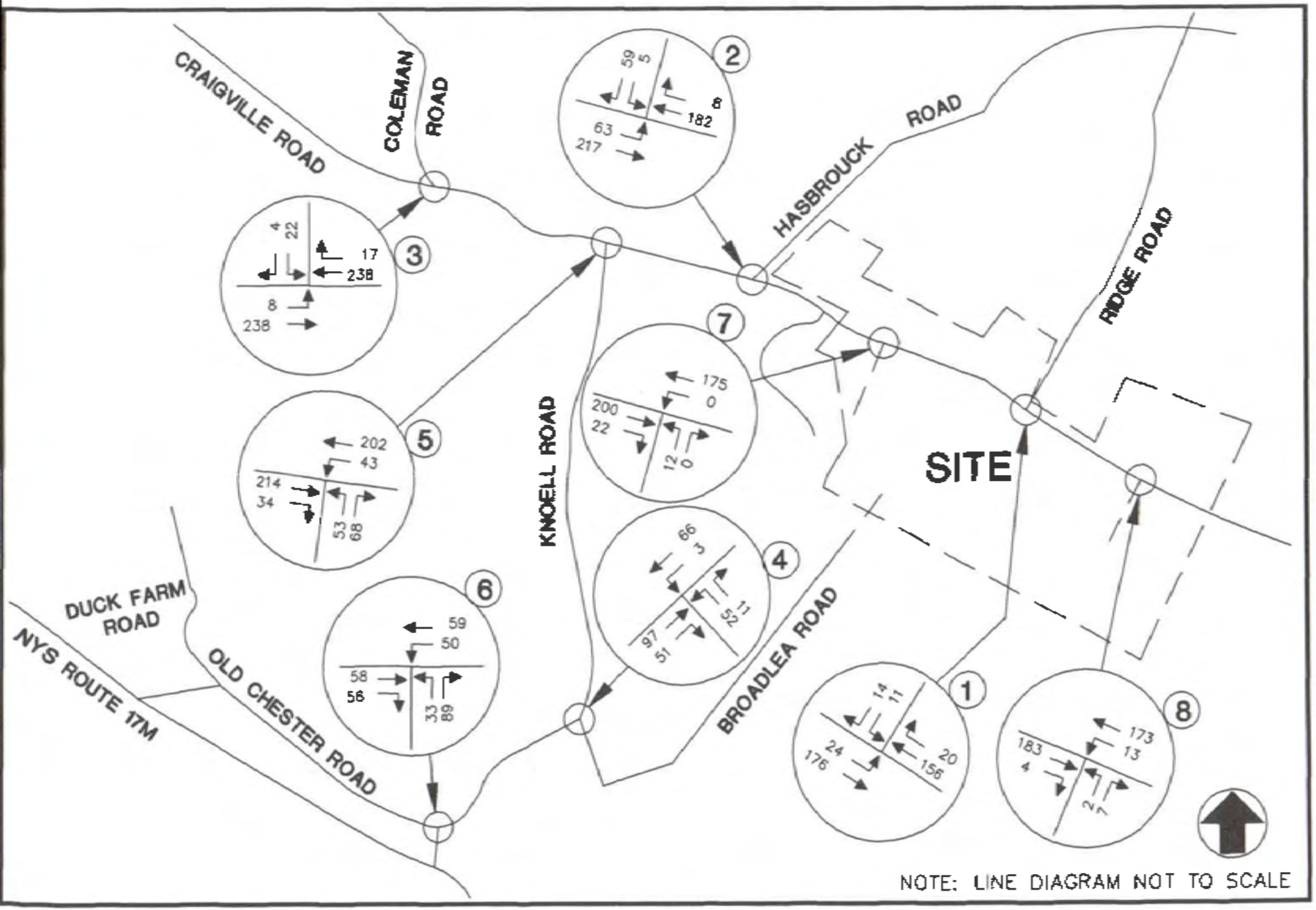


RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

2016 BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 14



RIEGER HOMES
TOWN OF GOSHEN, NEW YORK

2016 BUILD TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 394 DATE: JUN. 2007 FIG. NO. 15

APPENDIX "B"

TABLES

TABLE 1

HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED
SITE GENERATED TRAFFIC VOLUMES

RIEGER HOMES	ENTRY		EXIT	
	HTGR*	VOLUME	HTGR*	VOLUME
SINGLE FAMILY HOUSES (130 UNITS)				
PEAK AM HOUR	0.19	25	0.58	75
PEAK PM HOUR	0.67	87	0.38	49

NOTES:

1) * THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON THE DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 7TH EDITION, 2003.

TABLE 2

LEVEL OF SERVICE SUMMARY TABLE

			2007 EXISTING		2016 NO-BUILD		2016 BUILD	
			AM	PM	AM	PM	AM	PM
1	CRAIGVILLE ROAD & RIDGE ROAD	UNSIGNALIZED						
		EB	A[7.5]	A[7.4]	A[7.7]	A[7.6]	A[7.7]	A[7.6]
		SB	A[9.5]	A[9.1]	B[10.3]	A[10.0]	B[10.4]	B[10.3]
2	CRAIGVILLE ROAD & HASBROUCK ROAD	UNSIGNALIZED						
		EB	A[7.6]	A[7.5]	A[7.8]	A[7.7]	A[7.8]	A[7.8]
		SB	A[9.3]	A[9.0]	A[9.9]	A[9.6]	B[10.1]	A[10.0]
3	CRAIGVILLE ROAD & COLEMAN ROAD	UNSIGNALIZED						
		EB	A[7.5]	A[7.5]	A[7.7]	A[7.8]	A[7.8]	A[7.8]
		SB	A[9.7]	B[10.3]	B[10.9]	B[12.0]	B[11.1]	B[12.3]
4	KNOELL ROAD & BROADLEA ROAD	UNSIGNALIZED						
		WB	A[8.9]	A[9.1]	A[9.3]	A[9.5]	A[9.8]	A[9.9]
		SB	A[7.3]	A[7.3]	A[7.4]	A[7.4]	A[7.4]	A[7.5]
5	CRAIGVILLE ROAD & KNOELL ROAD	UNSIGNALIZED						
		WB	A[7.5]	A[7.5]	A[7.7]	A[7.8]	A[7.7]	A[7.9]
		NB	A[9.5]	B[10.2]	B[10.9]	B[12.3]	B[11.1]	B[12.6]
6	KNOELL ROAD & OLD CHESTER ROAD	UNSIGNALIZED						
		WB	A[7.3]	A[7.4]	A[7.4]	A[7.5]	A[7.5]	A[7.5]
		NB	A[9.5]	A[9.1]	B[10.1]	A[9.5]	B[10.7]	A[9.9]
7	CRAIGVILLE ROAD & SITE ACCESS 1	UNSIGNALIZED						
		WB	-	-	-	-	A[7.6]	A[7.7]
		NB	-	-	-	-	B[11.4]	B[11.3]
8	CRAIGVILLE ROAD & SITE ACCESS 2	UNSIGNALIZED						
		WB	-	-	-	-	A[7.6]	A[7.6]
		NB	-	-	-	-	A[9.7]	A[9.8]

TABLE NO. A

KNOELL ROAD

NODE/LINK	LOCATION	DATE	TIME	TRAFFIC CONTROL	ACCIDENT CLASS *	# OF VEHICLES - INJURIES	LIGHT CONDITION	ROAD CONDITION	WEATHER	MANNER OF COLLISION	APPARENT CONTRIBUTING FACTORS
38066	Craigville Rd CO68	06/20/03	6:00 AM	none	PDO	1 - 0	dark-road unlighted	wet	rain	other	non-reportable
38066	Craigville Rd CO68	07/03/04	4:25 PM	none	PDO & I	1 - 1	daylight	dry	clear	other	unsafe speed passing or lane usage
38066	Craigville Rd CO68	06/22/05	5:14 PM	stop sign	PDO	2 - 0	daylight	dry	cloudy	left turn	non-reportable
38066	Craigville Rd CO68	10/25/05	7:30 AM	no passing zone	PDO	1 - 0	daylight	dry	clear	other	non-reportable
38066-1054		09/23/04	3:00 PM	none	PDO	1 - 0	n/a	dry	cloudy	other	non-reportable
38066-1054		01/31/05	5:24 PM	none	PDO	1 - 0	dusk	dry	clear	other	non-reportable
1054-1061		03/09/06	6:20 PM	non-reportable	PDO	1 - 0	n/a	n/a	n/a	other	non-reportable
1054-1061		11/05/06	12:55 PM	none	PDO	1 - 0	daylight	dry	clear	other	lost consciousness
38067-38068		01/26/05	10:24 AM	none	I	1 - 4	daylight	dry	clear	other	driver inattention
38067-38068		05/15/06	1:46 PM	none	I	2 - 1	daylight	wet	cloudy	head on	pavement slippery
38068	Broadlea road	10/03/06	4:30 PM	non-reportable	PDO	1 - 0	n/a	n/a	n/a	other	non-reportable
38068	Broadlea road	10/28/06	3:00 PM	non-reportable	PDO & I	1 - 1	daylight	wet	rain	other	non-reportable

* PDO = PROPERTY DAMAGE ONLY I = INJURY F= FATALITY

TABLE NO. A (CONTINUED)

CRAIGVILLE ROAD - 66 ORANGE

NODE/LINK	LOCATION	DATE	TIME	TRAFFIC CONTROL	ACCIDENT CLASS *	# OF VEHICLES - INJURIES	LIGHT CONDITION	ROAD CONDITION	WEATHER	MANNER OF COLLISION	APPARENT CONTRIBUTING FACTORS
38053-38052 CO66		04/17/03	10:30 AM	no passing zone	PDO	1 - 0	n/a	dry	clear	other	non-reportable
38053-38052 CO66		11/12/04	2:30 PM	none	PDO	1 - 0	daylight	snow/ice	sleet/hail	other	non-reportable
38053-38052 CO66		07/24/06	10:30 AM	no passing zone	none	1 - 0	daylight	dry	clear	other	lost consciousness
38053-38052 CO66		11/06/06	11:08 AM	none	PDO	1 - 0	daylight	dry	clear	other	reaction to other involved vehicle
38052	Hasbrouck Rd	12/31/04	6:53 PM	yield sign	I	1 - 2	dark-road unlighted	wet	cloudy	other	unsafe speed, traffic control device disregarded
38066	Knoell Road	06/20/03	6:00 AM	none	PDO	1 - 0	dark-road unlighted	wet	rain	other	non-reportable
38066	Knoell Road	07/03/04	4:25 PM	none	PDO & I	1 - 1	daylight	dry	clear	other	unsafe speed, passing or lane usage
38066	Knoell Road	06/22/05	5:14 PM	stop sign	PDO	2 - 0	daylight	dry	cloudy	left turn	non-reportable
38066	Knoell Road	10/25/05	7:30 AM	no passing zone	PDO	1 - 0	daylight	dry	clear	other	non-reportable
38066-38065 CO66		01/15/06	5:00 PM	no passing zone	I	1 - 1	dark-road unlighted	snow/ice	n/a	other	pavement slippery

* PDO = PROPERTY DAMAGE ONLY I = INJURY F = FATALITY

TABLE B

SUMMARY OF ACCIDENT RATES AND COMPARISON TO STATE WIDE AVERAGE

KNOELL ROAD B/W OLD CHESTER ROAD & CRAIGVILLE ROAD

LENGTH	1.34	MILES
AADT	1240	VPD

YEAR	ACCIDENTS	RATE	STATE WIDE AVERAGE	
03	0	0.00	2.81	ACC/MVM
04	1	1.65	2.81	ACC/MVM
05	2	3.30	2.81	ACC/MVM
06	5	8.24	2.81	ACC/MVM

CRAIGVILLE ROAD B/W RIDGE ROAD & COLEMAN ROAD

LENGTH	1.28	MILES
AADT	3220	VPD

YEAR	ACCIDENTS	RATE	STATE WIDE AVERAGE	
03	2	1.33	2.81	ACC/MVM
04	3	1.99	2.81	ACC/MVM
05	2	1.33	2.81	ACC/MVM
06	3	1.99	2.81	ACC/MVM

		85TH PERCENTILE SPEED OF ONCOMING TRAFFIC	REQUIRED STOPPING SIGHT DISTANCE	REQUIRED INTERSECTION SIGHT DISTANCE	PROVIDED SIGHT DISTANCE
EAST	LOOKING EAST	58 MPH	540'	640'	1000' +
DRIVEWAY	LOOKING WEST	52 MPH	450'	575'	330'
WEST	LOOKING EAST	58 MPH	540'	640'	525'
DRIVEWAY	LOOKING WEST	52 MPH	450'	575'	270'
BROADLEA ROAD	LOOKING SOUTH	38 MPH	305'	445'	900' +
	LOOKING NORTH	39 MPH	305'	445'	600' +

APPENDIX "C"

CAPACITY ANALYSIS

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGVILLE RD & RIDGE RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394AMEX1
East/West Street: CRAIGVILLE RD
North/South Street: RIDGE RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	5	70			137	2
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	5	77			152	2
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				10		15
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				11		16
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	5						27	
C(m) (vph)	1439						831	
v/c	0.00						0.03	
95% queue length	0.01						0.10	
Control Delay	7.5						9.5	
LOS	A						A	
Approach Delay							9.5	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGVILLE RD & RIDGE RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394PMEX1
East/West Street: CRAIGVILLE RD
North/South Street: RIDGE RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	21	96			68	15
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	23	106			75	16
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				6		12
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				6		13
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	23						19	
C(m) (vph)	1517						893	
v/c	0.02						0.02	
95% queue length	0.05						0.07	
Control Delay	7.4						9.1	
LOS	A						A	
Approach Delay							9.1	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGVILLE RD & RIDGE RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394AMNB1
East/West Street: CRAIGVILLE RD
North/South Street: RIDGE RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	6	148			214	2
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	6	164			237	2
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				11		17
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				12		18
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	6						30	
C(m) (vph)	1340						706	
v/c	0.00						0.04	
95% queue length	0.01						0.13	
Control Delay	7.7						10.3	
LOS	A						B	
Approach Delay							10.3	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGVILLE RD & RIDGE RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394PMNB1
East/West Street: CRAIGVILLE RD
North/South Street: RIDGE RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	24	176			156	17
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	26	195			173	18
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				7		14
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				7		15
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	26						22	
C(m) (vph)	1395						746	
v/c	0.02						0.03	
95% queue length	0.06						0.09	
Control Delay	7.6						10.0-	
LOS	A						A	
Approach Delay							10.0-	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGVILLE RD & RIDGE RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394AMBD1
East/West Street: CRAIGVILLE RD
North/South Street: RIDGE RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	6	148			214	6
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	6	164			237	6
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				13		17
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				14		18
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	6						32	
C(m) (vph)	1335						696	
v/c	0.00						0.05	
95% queue length	0.01						0.14	
Control Delay	7.7						10.4	
LOS	A						B	
Approach Delay							10.4	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGVILLE RD & RIDGE RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394PMBD1
East/West Street: CRAIGVILLE RD
North/South Street: RIDGE RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	24	176			156	20
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	26	195			173	22
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				11		14
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				12		15
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	26						27	
C(m) (vph)	1390						706	
v/c	0.02						0.04	
95* queue length	0.06						0.12	
Control Delay	7.6						10.3	
LOS	A						B	
Approach Delay							10.3	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGSVILLE RD & HASBROUCK RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394AMEX2
East/West Street: CRAIGSVILLE RD
North/South Street: HASBROUCK RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	12	64			152	0
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	13	71			168	0
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0		42
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				0		46
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	13						46	
C(m) (vph)	1422						881	
v/c	0.01						0.05	
95% queue length	0.03						0.17	
Control Delay	7.6						9.3	
LOS	A						A	
Approach Delay							9.3	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGSVILLE RD & HASBROUCK RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394PMEX2
East/West Street: CRAIGSVILLE RD
North/South Street: HASBROUCK RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	55	116			83	5
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	61	128			92	5
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		52
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		57
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	61						58	
C(m) (vph)	1509						959	
v/c	0.04						0.06	
95% queue length	0.13						0.19	
Control Delay	7.5						9.0	
LOS	A						A	
Approach Delay							9.0	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGSVILLE RD & HASBROUCK RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394AMNB2
East/West Street: CRAIGSVILLE RD
North/South Street: HASBROUCK RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	14	141			231	0
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	15	156			256	0
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0		48
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				0		53
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	15						53	
C(m) (vph)	1321						788	
v/c	0.01						0.07	
95% queue length	0.03						0.22	
Control Delay	7.8						9.9	
LOS	A						A	
Approach Delay							9.9	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGSVILLE RD & HASBROUCK RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394PMNB2
East/West Street: CRAIGSVILLE RD
North/South Street: HASBROUCK RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	63	199			173	6
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	70	221			192	6
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		59
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		65
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	70						66	
C(m) (vph)	1387						841	
v/c	0.05						0.08	
95% queue length	0.16						0.25	
Control Delay	7.7						9.6	
LOS	A						A	
Approach Delay							9.6	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGSVILLE RD & HASBROUCK RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394AMBD2
East/West Street: CRAIGSVILLE RD
North/South Street: HASBROUCK RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	14	146			246	4
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	15	162			273	4
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		48
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		53
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	15						54	
C(m) (vph)	1298						763	
v/c	0.01						0.07	
95% queue length	0.04						0.23	
Control Delay	7.8						10.1	
LOS	A						B	
Approach Delay							10.1	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGSVILLE RD & HASBROUCK RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394PMBD2
East/West Street: CRAIGSVILLE RD
North/South Street: HASBROUCK RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	63	217			182	8
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	70	241			202	8
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				5		59
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				5		65
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	70						70	
C(m) (vph)	1373						791	
v/c	0.05						0.09	
95% queue length	0.16						0.29	
Control Delay	7.8						10.0-	
LOS	A						A	
Approach Delay							10.0-	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGSVILLE RD & COLEMAN RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394AMEX3
East/West Street: CRAIGSVILLE RD
North/South Street: COLEMAN RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	66			146	6
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	1	73			162	6
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				13		5
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				14		5
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	1						19	
C(m) (vph)	1422						783	
v/c	0.00						0.02	
95% queue length	0.00						0.07	
Control Delay	7.5						9.7	
LOS	A						A	
Approach Delay							9.7	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGSVILLE RD & COLEMAN RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394PMEX3
East/West Street: CRAIGSVILLE RD
North/South Street: COLEMAN RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	5	143			141	8
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	5	158			156	8
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				8		1
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				8		1
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	5						9	
C(m) (vph)	1427						688	
v/c	0.00						0.01	
95% queue length	0.01						0.04	
Control Delay	7.5						10.3	
LOS	A						B	
Approach Delay							10.3	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGSVILLE RD & COLEMAN RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394AMNB3
East/West Street: CRAIGSVILLE RD
North/South Street: COLEMAN RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	138			217	17
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	4	153			241	18
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				18		7
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				20		7
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	4						27	
C(m) (vph)	1317						640	
v/c	0.00						0.04	
95% queue length	0.01						0.13	
Control Delay	7.7						10.9	
LOS	A						B	
Approach Delay							10.9	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGSVILLE RD & COLEMAN RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394PMNB3
East/West Street: CRAIGSVILLE RD
North/South Street: COLEMAN RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	8	225			231	14
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	8	250			256	15
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				18		4
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				20		4
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	8						24	
C(m) (vph)	1304						541	
v/c	0.01						0.04	
95% queue length	0.02						0.14	
Control Delay	7.8						12.0	
LOS	A						B	
Approach Delay							12.0	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGSVILLE RD & COLEMAN RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394AMBD3
East/West Street: CRAIGSVILLE RD
North/South Street: COLEMAN RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	142			229	21
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	4	157			254	23
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				19		7
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				21		7
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	4						28	
C(m) (vph)	1298						622	
v/c	0.00						0.05	
95% queue length	0.01						0.14	
Control Delay	7.8						11.1	
LOS	A						B	
Approach Delay							11.1	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGSVILLE RD & COLEMAN RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394PMBD3
East/West Street: CRAIGSVILLE RD
North/South Street: COLEMAN RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	8	238			238	17
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	8	264			264	18
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				22		4
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				24		4
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	8						28	
C(m) (vph)	1292						522	
v/c	0.01						0.05	
95% queue length	0.02						0.17	
Control Delay	7.8						12.3	
LOS	A						B	
Approach Delay							12.3	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: KNOELL ROAD & BROADLEA ROAD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394AMEX4
East/West Street: BROADLEA ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		31	19	6	46	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		34	21	6	51	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0		0	1
Configuration			TR		LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	8		5			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	8		5			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		6		13				
C(m) (vph)		1563		941				
v/c		0.00		0.01				
95% queue length		0.01		0.04				
Control Delay		7.3		8.9				
LOS		A		A				
Approach Delay				8.9				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: KNOELL RD & BROADLEA RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394PMEX4
East/West Street: BROADLEA ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		64	3	3	30	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		71	3	3	33	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	20		9			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	22		10			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	0				
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		3		32				
C(m) (vph)		1538		920				
v/c		0.00		0.03				
95% queue length		0.01		0.11				
Control Delay		7.3		9.1				
LOS		A		A				
Approach Delay				9.1				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: KNOELL RD & BROADLEA RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394AMNB4
East/West Street: BROADLEA ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		60	24	8	72	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		66	26	8	80	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	13		7			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	14		7			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	0				
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		8		21				
C(m) (vph)		1515		865				
v/c		0.01		0.02				
95% queue length		0.02		0.07				
Control Delay		7.4		9.3				
LOS		A		A				
Approach Delay				9.3				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: KNOELL RD & BROADLEA RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394PMNB4
East/West Street: BROADLEA ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		97	3	3	66	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		107	3	3	73	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	25		11			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	27		12			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		3		39				
C(m) (vph)		1493		845				
v/c		0.00		0.05				
95% queue length		0.01		0.14				
Control Delay		7.4		9.5				
LOS		A		A				
Approach Delay				9.5				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: KNOELL RD & BROADLEA RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394AMBD4
East/West Street: BROADLEA ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		60	37	8	72	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		66	41	8	80	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	54		7			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	60		7			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		8		67				
C(m) (vph)		1497		823				
v/c		0.01		0.08				
95% queue length		0.02		0.27				
Control Delay		7.4		9.8				
LOS		A		A				
Approach Delay				9.8				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: KNOELL RD & BROADLEA RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394PMBD4
East/West Street: BROADLEA ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		97	51	3	66	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		107	56	3	73	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	52		11			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	57		12			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		3		69				
C(m) (vph)		1428		798				
v/c		0.00		0.09				
95% queue length		0.01		0.28				
Control Delay		7.5		9.9				
LOS		A		A				
Approach Delay				9.9				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGVILLE ROAD & KNOELL ROAD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394AMEX5
East/West Street: CRAIGVILLE ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		55	24	52	142	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		61	26	57	157	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	10		21			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	11		23			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		57		34				
C(m) (vph)		1522		838				
v/c		0.04		0.04				
95% queue length		0.12		0.13				
Control Delay		7.5		9.5				
LOS		A		A				
Approach Delay				9.5				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGVILLE ROAD & KNOELL ROAD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394PMEX5
East/West Street: CRAIGVILLE ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		124	16	24	114	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		137	17	26	126	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	35		49			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	38		54			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		26		92				
C(m) (vph)		1439		786				
v/c		0.02		0.12				
95% queue length		0.06		0.40				
Control Delay		7.5		10.2				
LOS		A		B				
Approach Delay				10.2				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGVILLE ROAD & KNOELL ROAD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394AMNB5
East/West Street: CRAIGVILLE ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		118	38	69	210	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		131	42	76	233	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	24		37			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	26		41			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		76		67				
C(m) (vph)		1416		673				
v/c		0.05		0.10				
95% queue length		0.17		0.33				
Control Delay		7.7		10.9				
LOS		A		B				
Approach Delay				10.9				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGVILLE ROAD & KNOELL ROAD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394PMNB5
East/West Street: CRAIGVILLE ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		196	34	43	192	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		217	37	47	213	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	53		68			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	58		75			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		47		133				
C(m) (vph)		1323		627				
v/c		0.04		0.21				
95% queue length		0.11		0.80				
Control Delay		7.8		12.3				
LOS		A		B				
Approach Delay				12.3				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGVILLE ROAD & KNOELL ROAD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394AMBD5
East/West Street: CRAIGVILLE ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		123	38	69	225	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		136	42	76	250	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	24		37			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	26		41			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		76		67				
C(m) (vph)		1410		660				
v/c		0.05		0.10				
95% queue length		0.17		0.34				
Control Delay		7.7		11.1				
LOS		A		B				
Approach Delay				11.1				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGVILLE ROAD & KNOELL ROAD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394PMBD5
East/West Street: CRAIGVILLE ROAD
North/South Street: KNOELL ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		214	34	43	202	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		237	37	47	224	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	53		68			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	58		75			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		47		133				
C(m) (vph)		1301		606				
v/c		0.04		0.22				
95% queue length		0.11		0.83				
Control Delay		7.9		12.6				
LOS		A		B				
Approach Delay				12.6				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: OLD CHESTER RD & KNOELL RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394AMEX6
East/West Street: OLD CHESTER ROAD
North/South Street: KNOELL ROAD/DUCK FARM ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		18	32	24	20	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		20	35	26	22	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	73		19			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	81		21			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		26		102				
C(m) (vph)		1563		905				
v/c		0.02		0.11				
95% queue length		0.05		0.38				
Control Delay		7.3		9.5				
LOS		A		A				
Approach Delay				9.5				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: OLD CHESTER RD & KNOELL RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2007 EXISTING TRAFFIC VOLUMES
Project ID: 394PMEX6
East/West Street: OLD CHESTER ROAD
North/South Street: KNOELL ROAD/DUCK FARM ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		11	49	31	15	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		12	54	34	16	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	27		54			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	30		60			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		34		90				
C(m) (vph)		1549		970				
v/c		0.02		0.09				
95% queue length		0.07		0.31				
Control Delay		7.4		9.1				
LOS		A		A				
Approach Delay				9.1				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: OLD CHESTER RD & KNOELL RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394AMNB6
East/West Street: OLD CHESTER ROAD
North/South Street: KNOELL ROAD/DUCK FARM ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		46	38	28	43	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		51	42	31	47	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	87		23			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	96		25			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		31		121				
C(m) (vph)		1514		830				
v/c		0.02		0.15				
95% queue length		0.06		0.51				
Control Delay		7.4		10.1				
LOS		A		B				
Approach Delay				10.1				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: OLD CHESTER RD & KNOELL RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 NO-BUILD TRAFFIC VOLUMES
Project ID: 394PMNB6
East/West Street: OLD CHESTER ROAD
North/South Street: KNOELL ROAD/DUCK FARM ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		37	56	35	47	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		41	62	38	52	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	33		63			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	36		70			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		38		106				
C(m) (vph)		1502		907				
v/c		0.03		0.12				
95% queue length		0.08		0.40				
Control Delay		7.5		9.5				
LOS		A		A				
Approach Delay				9.5				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: OLD CHESTER RD & KNOELL RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394AMBD6
East/West Street: OLD CHESTER ROAD
North/South Street: KNOELL ROAD/DUCK FARM ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		52	38	51	62	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		57	42	56	68	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	87		30			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	96		33			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		56		129				
C(m) (vph)		1507		763				
v/c		0.04		0.17				
95% queue length		0.12		0.61				
Control Delay		7.5		10.7				
LOS		A		B				
Approach Delay				10.7				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: OLD CHESTER RD & KNOELL RD
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394PMBD6
East/West Street: OLD CHESTER ROAD
North/South Street: KNOELL ROAD/DUCK FARM ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		58	56	50	59	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		64	62	55	65	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	33		89			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	36		98			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		55		134				
C(m) (vph)		1473		876				
v/c		0.04		0.15				
95% queue length		0.12		0.54				
Control Delay		7.5		9.9				
LOS		A		A				
Approach Delay				9.9				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGVILLE RD & SITE ACCESS 1
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394AMBD7
East/West Street: CRAIGVILLE ROAD
North/South Street: SITE ACCESS 1
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		154	6	0	231	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		171	6	0	256	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	19		0			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	21		0			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		0		21				
C(m) (vph)		1411		586				
v/c		0.00		0.04				
95% queue length		0.00		0.11				
Control Delay		7.6		11.4				
LOS		A		B				
Approach Delay				11.4				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGVILLE RD & SITE ACCESS 1
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394PMBD7
East/West Street: CRAIGVILLE ROAD
North/South Street: SITE ACCESS 1
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		200	22	0	175	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		222	24	0	194	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	12		0			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	13		0			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		0		13				
C(m) (vph)		1332		588				
v/c		0.00		0.02				
95% queue length		0.00		0.07				
Control Delay		7.7		11.3				
LOS		A		B				
Approach Delay				11.3				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: AM PEAK HOUR
Intersection: CRAIGVILLE RD & SITE ACCESS 2
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394AMBD8
East/West Street: CRAIGVILLE ROAD
North/South Street: SITE ACCESS 2
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		159	1	4	216	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		176	1	4	240	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	4		11			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	4		12			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		4		16				
C(m) (vph)		1411		778				
v/c		0.00		0.02				
95% queue length		0.01		0.06				
Control Delay		7.6		9.7				
LOS		A		A				
Approach Delay				9.7				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: RGD
Agency/Co.: JCE
Date Performed: 9/5/08
Analysis Time Period: PM PEAK HOUR
Intersection: CRAIGVILLE RD & SITE ACCESS 2
Jurisdiction: GOSHEN
Units: U. S. Customary
Analysis Year: 2016 BUILD TRAFFIC VOLUMES
Project ID: 394PMBD8
East/West Street: CRAIGVILLE ROAD
North/South Street: SITE ACCESS 2
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		183	4	13	173	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		203	4	14	192	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	2		7			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	2		7			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		14		9				
C(m) (vph)		1376		766				
v/c		0.01		0.01				
95% queue length		0.03		0.04				
Control Delay		7.6		9.8				
LOS		A		A				
Approach Delay				9.8				
Approach LOS				A				

APPENDIX "D"

STANDARDS

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS) for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-minute analysis period. The criteria are given in Exhibit 16-2 from the 2000 Highway Capacity Manual published by the Transportation Research Board.

EXHIBIT 16-2

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE (LOS)	CONTROL DELAY PER VEHICLE (S/VEH)
A	≤10
B	>10-20
C	>20-35
D	>35-55
E	>55-80
F	>80

LEVEL OF SERVICE A describes operations with low control delay, up to 10 seconds per vehicle (s/veh). This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

LEVEL OF SERVICE B describes operations with control delay greater than 10 and up to 20 seconds per vehicle (s/veh). This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with Level of Service "A", causing higher levels of delay.

LEVEL OF SERVICE C describes operations with control delay greater than 20 and up to 35 seconds per vehicle (s/veh). These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LEVEL OF SERVICE D describes operations with control delay greater than 35 and up to 55 seconds per vehicle (s/veh). At Level of Service D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LEVEL OF SERVICE E describes operations with control delay greater than 55 and up to 80 seconds per vehicle (s/veh). This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

LEVEL OF SERVICE F describes operations with control delay in excess of 80 seconds per vehicle (s/veh). This level is considered unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

The Level of Service (LOS) for unsignalized intersections is determined by the computed or measured control delay and is defined for each minor movement. Control delay is defined as the total elapsed time a vehicle stops at the end of the queue to the time the vehicle departs from the stop line. This total elapsed time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to speed of vehicles in queue. Average control delay for any particular minor movement is a function of the capacity of the approach and the degree of saturation. The Level of Service Criteria are given in Exhibit 17-2 from the 2000 Highway Capacity Manual published by the Transportation Research Board.

EXHIBIT 17-2

LEVEL OF SERVICE FOR CRITERIA
FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE (LOS)	AVERAGE CONTROL DELAY (S/VEH)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

The Level of Service Criteria for unsignalized intersections are somewhat different from the criteria for signalized intersections.

Appendix K

Water System to Serve Young's Grove Subdivision

WATER SYSTEM

TO SERVE

YOUNG'S GROVE SUBDIVISION

TOWN OF GOSHEN
ORANGE COUNTY, NEW YORK

ENGINEERING REPORT

PIETRZAK & PFAU ENGINEERING & SURVEYING, PLLC
262 GREENWICH AVENUE
GOSHEN, NEW YORK 10924

P&P No. 25108.01
October 2009

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I. BACKGROUND

II. LAYOUT

III. FLOWS

IV. PROPOSED HYDRAULIC

V. WATER TREATMENT

VI. PRELIMINARY WATER TOWER DESIGN

VII. CONNECTION TO THE STONEHEDGE SYSTEM

APPENDIX

A. LOCATION MAP

B. WATER TOWER VOLUMES AND STATIC PRESSURES

I. BACKGROUND

The purpose of this report is to accompany plans for a central water system supplied by three (3) drilled wells to serve the proposed Young's Grove Subdivision. Additionally, an evaluation has been completed for this water system to provide a supplemental water source to the existing homes located within the Stonehedge Water District.

The project site is approximately 354.01± acres of vacant land located in the Town of Goshen, Orange County, New York. The proposed project is located to the southwest and northeast of Craigville Road, southeast of Hasbrouck Road and northwest of Johnson Road. This project is currently identified as Section 9, Block 1, Lot 8.452 on the Town of Goshen Tax Map. The project site is located in the RU-1 residential zoning district.

The project proposes the construction of 106 single family lots. The remaining areas not proposed for home sites are to be utilized for open space and utilities that include three community wells, a water storage tank, well pump house, a sewage pump station, a sewage treatment plant, and four stormwater treatment/detention ponds.

A proposed internal road system will provide access to all proposed lots and utilities. This road system will gain access at three (3) locations. Two (2) access points are proposed off of Craigville Road and one (1) access point is proposed by the extension of Broad Lea Road.

II. LAYOUT

As mentioned earlier, the proposed water system is designed to provide service to the 106 proposed units, within the Young's Grove Subdivision. An eight inch (8") diameter DIP main is proposed in roadways A, B, C and D. The proposed water main

will be capped just beyond the last service on roadways A, B, and D. The watermain in Road C is to be looped via two (2) connections to the water main in Road A. The proposed eight inch (8") diameter main will provide domestic water supply, as well as fire protection to the Young's Grove Subdivision. All portions of the proposed water main will be completely within proposed and existing right-of-ways or easements.

The water system has been proposed to include a 79' high by 34' diameter water storage tank to serve the project. The proposed water tower will be located within the higher elevation of the Young's Grove Subdivision near the westerly most property corner. Access to the proposed water tower shall be provided near station 12+25 off of proposed Road B. The water tower will be connected to the distribution system via an 8" Ø water main. This water main will extend from the water tower, 130± feet across an open space lot and connect to the main located in proposed Road B of the Young's Grove distribution system.

Thirteen (13) of the 106 homes are to be served by individual booster pumps as they are located in a low pressure zone. These pumps will be sized to maintain a domestic water pressure of 35 psi for the thirteen (13) homes.

There are three (3) drilled wells proposed to serve the project. These wells are located in the northerly portion of the site as can be seen on the accompanying plans. Two wells are located to the north of Craigville Road and one well is located to the south of Craigville Road. The plans call for the construction of a pump house to be located at the east access point (Road D) off Craigville Road. The pump house will contain the proposed water treatment for the project. The water system to serve the Young's Grove site consists of approximately 10,000 L.F. of eight inch (8") DIP. The proposed system includes the addition of multiple, eight inch (8") valves. The placement of these valves is indicated on the accompanying plans.

Additionally, multiple fire hydrants are proposed as part of the water system. Hydrants are located at the proposed intersections, and along the roadways to adhere to all appropriate spacing requirements. The locations of the hydrants are indicated on the accompanying plans. The utility layout has been designed to minimize the number of crossings of the water main with either storm drainage or sanitary sewer mains.

As per the profiles shown on the accompanying plans, a minimum vertical separation distance is provided from the proposed water main to any utility crossing of eighteen inches (18”), and additionally a minimum of four feet (4’) of cover shall be maintained over all distribution piping.

Proposed service connections to each house shall be three-quarter inch (3/4”) diameter Type K copper installed in accordance with accompanying technical specifications and drawings.

The subdivision is to be sewered by a proposed gravity sewer main running to a proposed onsite sewage treatment plant. The sewage treatment plant is to be located at a low point on proposed Road A on the eastern portion of the subdivision. The gravity sewer on the western portion of the subdivision flows toward to the west subdivision entrance off Craigville road. A pump station at this location will pump the sewage approximately 1,800’ to a high point in proposed Road A, where it will connect to a proposed sanitary sewer manhole. All facilities will be owned and operated by the Town of Goshen.

III. FLOWS

Domestic:

The proposed water system design is based on the following calculations:

Number of 4 BR homes served: 106

106 – 4 BR homes at 400 gpd each – 106 x 400 = 42,400 gpd

Based upon the above, the average daily demand for on-site domestic water usage is: 42,400 gpd or approximately 29.4 gpm.

Using a per day usage factor of two (2) results in a maximum daily consumption of 84,800 gpd or 58.9 gpm for the proposed service area.

The peak hourly demand is calculated using a peaking factor of 3.9. Therefore, the peak hourly demand is 29.4 x 3.9 = 114.7 gpm.

Fire:

Fire flow requirements have been based upon ISO recommendations which require a two hour fire flow of 1,000 gpm.

Well Supply:

Five test wells have been drilled on the property since 2005. A pumping test program was completed in June 2007 by Leggette, Brashears & Graham, Inc. Three (3) of the test wells have been selected to supply the project's water system. Well #1 will be utilized as the production well and Well #2 and Well #5 shall be utilized as back-up wells.

Well Data:

Well	Depth (Ft.)	Drawdown (Ft.)	Rated Capacity (gpm)
Well #1	500	158.55	78
Well #2	550	141.38	45
Well #5	540	94.28	40

The New York State Department of Health will require that the connected well capacity equal the design maximum daily demand, with the best well (Well #1) out of service. Well #2 and Well #5 provide a capacity of 85 gpm, which exceeds the on-site maximum daily demand of 58.9 gpm.

IV. PROPOSED HYDRAULICS

An analysis of the proposed system shall be performed utilizing "WaterCad" software. The proposed water system shall supply a minimum 35 psi at all locations within the distribution system during domestic use and a minimum 20 psi during fire flow conditions.

V. WATER TREATMENT

Leggette, Brashears, and Graham, Inc collected ground-water samples from Wells 1, 2 and 5. The samples were analyzed for parameters specified in the NYSDOH Sanitary Code, Part 5, Subpart 5-1. Water quality analyses conducted on well water samples indicate good quality water in Wells 1, 2, and 5 in compliance with NYSDOH Drinking Water Standards with the exception of iron in Well 1 and odor (hydrogen sulfide) in all three of the wells. Treatment for iron and odor (hydrogen sulfide) shall be provided in the well pump house located at the east access point (Road D) off of Craigville Road. Odor can be treated through chemical oxidation by chlorination, followed by aeration, if necessary. In addition, disinfection by chlorination shall be provided in the pump house with a minimum required contact time of 30 minutes.

VI. PRELIMINARY WATER TOWER DESIGN

In sizing and sighting the proposed water tower, the following criteria were used:

- 2 hour fire flow above 20 psi
- 24 hour domestic storage above 35 psi

For the Young's Grove 106 Lot Subdivision, the total average daily flow for the homes is calculated to be 42,400 gal/day.

42,400 gallons = 5,669 cu. ft.

$$\frac{5{,}669}{908} = 6.2'$$

Based on 34' Ø tank (A=908 s.f.) the height differential required to provide

For a fire flow of 1,000 gpm for 2 hours = 120,000 Gal. = 16,044 cu. ft.

$$\frac{16{,}044}{908} = 17.7'$$

The water tower base has been set at 658.0' the tank is to be a 34' diameter, 79' high tank (78.84' nominal height). This tank will provide the required volumes as follows:

Elevation:

658.0 – 710.0 – None

710.0 – 727.7 – 2 hour fire flow storage

727.7 – 733.9 – 24 hour domestic storage

733.9 – 737.0 – Freeboard

The well pump will be connected to pressure sensors in the water tower. These sensors will be utilized to control pump on/off operations. The pump on elevation is to be set at 727.7 and the pump off elevation set at 733.9.

VII. CONNECTION TO THE STONEHEDGE WATER SYSTEM

The Town of Goshen has requested that the feasibility of a supplemental water connection to the existing Stonehedge water system be analyzed. This connection would serve as an additional water source for the Stonehedge water system. The existing Stonehedge water system is located to the east of the proposed Young's Grove Subdivision.

The Stonehedge water system is supplied by two (2) existing drilled wells. One well is currently out of service and has a capacity of 10 gpm. The second well is utilized as the production well and has a capacity 25 gpm. The system is pressurized by two (2) buried gravity holding tanks which have capacities of 20,000 gallons and 15,000 gallons. The system serves 134 persons and has 42 service connections.

The average daily consumption for the existing system during the time period from November 2006 to October 2007 was 7,300 gpd. Using a per day usage factor of two (2) results in a maximum daily consumption of 14,600 gpd or 10.1 gpm for the existing service area. The proposed maximum daily comsumption for the Young's Grove Subdivision is 58.9 gpm. The addition of the Stonehedge homes results in a total maximum daily comsumption for both service areas of 69 gpm. As previously mentioned, the well capacity for the Young's Grove water system, with the best well (Well #1) out of service, is 85 gpm. This exceeds the total maximum daily consumption for both service areas by 16 gpm.

An analysis of a proposed hydraulic connection to the existing Stonehedge system was performed to reveal the minimum pressures that could be provided to the existing Stonehedge underground holding tanks. The Stonehedge holding tanks are located adjacent to the Young's Grove property near the west property corner. The proposed Young's Grove water tower has the capability to provide the minimum required domestic

and fire flow pressures to the Stonehedge holding tanks. See Appendix B for Hydraulic Grade information.

The proposed water tower can provide the required volumes for both the proposed Young's Grove Subdivision and the existing Stonehedge Subdivision as follows:

Elevation:

658.0 – 672.0 – None

672.0 – 689.7 – 2 hour fire flow storage (Stonehedge Subdivision)

689.7 – 706.5 – None

706.5 – 708.9 – 24 hour domestic storage (Stonehedge Subdivision)

708.9 – 710.0 – None

710.0 – 727.7 – 2 hour fire flow storage (Young's Grove Subdivision)

727.7 – 733.9 – 24 hour domestic storage (Young's Grove Subdivision)

733.9 – 737.0 – Freeboard

Based on this analysis, the proposed Young's Grove water system would have the capacity to serve as an additional water source to the Stonehedge Water District. It should be noted that pressure reducing valves (PRV's) would be required so that pressures within the Stonehedge District do not exceed 100 psi.

APPENDIX A

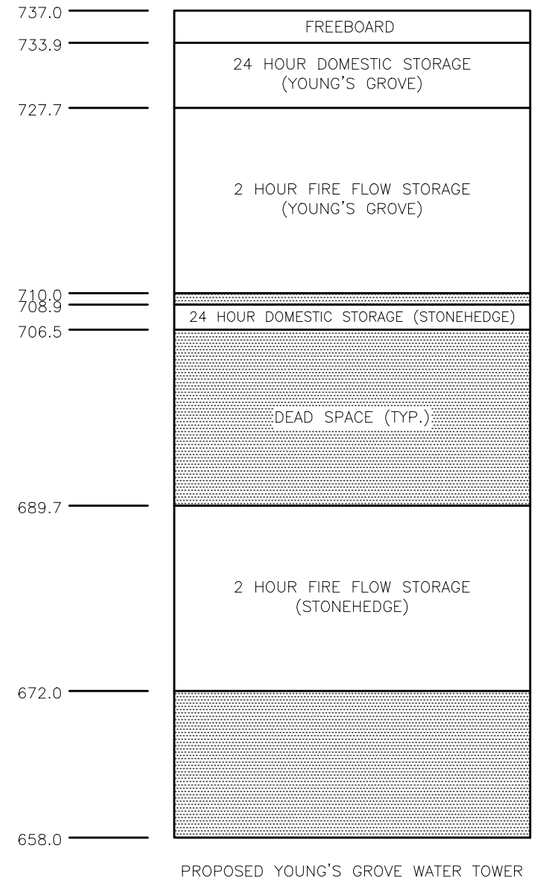
LOCATION MAP

LOCATION MAP

SCALE: 1" = 2,000'

APPENDIX B

WATER TOWER VOLUMES AND STATIC PRESSURES



HIGHEST PROPOSED
HOUSE FFE=±646.00
(YOUNG'S GROVE)
MINIMUM DOMESTIC STATIC PRESSURE = 35± PSI
MINIMUM FIRE FLOW STATIC PRESSURE = 27± PSI

EXISTING STONEHEDGE
UNDERGROUND HOLDING TANKS
ELEVATION=±626.00
MINIMUM DOMESTIC STATIC PRESSURE = 35± PSI
MINIMUM FIRE FLOW STATIC PRESSURE = 20± PSI

HIGHEST EXISTING
HOUSE FFE=±504.00
(STONEHEDGE)
MINIMUM DOMESTIC STATIC PRESSURE = 87 PSI
MINIMUM FIRE FLOW STATIC PRESSURE = 72 PSI

LOWEST PROPOSED
HOUSE FFE=±478.00
(YOUNG'S GROVE)
MINIMUM DOMESTIC STATIC PRESSURE = 107± PSI
MINIMUM FIRE FLOW STATIC PRESSURE = 99± PSI

LOWEST EXISTING
HOUSE FFE=±404.00
(STONEHEDGE)
MINIMUM DOMESTIC STATIC PRESSURE = 129± PSI
MINIMUM FIRE FLOW STATIC PRESSURE = 115± PSI

DATE	DESCRIPTION	INITIALS
10-27-09	ORIGINAL PREPARATION DATE	AT

REVISIONS

MAP CHECK DATE: 00/00/00 | INITIALED BY: -_-

PIETRZAK & PFAU
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P.E. LICENSE NO. 076936
P.L.S. LICENSE NO. 050075
N.J.P.L.S. LICENSE NO. 35396

SIGNATURE DATE

YOUNG'S GROVE

PROJECT TITLE

TOWN OF GOSHEN
ORANGE COUNTY, NEW YORK

WATER TOWER VOLUMES AND STATIC PRESSURES

SECTION 9 BLOCK 1 LOTS 8.452

DRAWING TITLE

UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING A LICENSED LAND SURVEYOR'S OR PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE N.Y. STATE EDUCATION LAW.

O.C.H.D. SHEET NO	D.E.C. SHEET NO	DRAWING NUMBER
N/A OF _#_	N/A OF _#_	_1_ OF _1_
SCALE	CAD REFERENCE	PROJECT NUMBER
N.T.S.	25108 HGL	25108.01

Appendix L

Wastewater Assimilation Capacity Analysis
&
Wastewater Treatment Plan Information

HydroQual

Environmental
Engineers & Scientists

November 9, 2007

Ms. Margaret Duke
NYS Department of Environmental Conservation
Region 3 Headquarters
21 South Putt Corners Road
New Paltz, NY 12561-1696

REHO.001.002

Dear Ms. Duke:

HydroQual has completed an initial Waste Assimilation Capacity (WAC) analysis of Cromline Creek at Vivian Lane and Otter Kill at Hasbrouck Rd. near Goshen, NY, Orange County, for the proposed discharge from a new wastewater treatment facility (WWTF) to serve the Rieger Homes development. A wastewater flow of 48,000 gpd is anticipated. Both of the potential discharge locations evaluated, where these streams exit the Rieger property, are at the headwaters of the streams. The locations of the Rieger Homes development and potential WWTF discharge locations are shown on the attached figure. The contributory drainage area at each location is relatively small. (0.98 square miles Otter Kill, 0.27 square miles Cromline). A field reconnaissance of Cromline Creek, Otter Kill and several downstream and nearby stream locations was performed.

The field evaluation and drainage area determination for both the Cromline Creek and Otter Kill concluded that these two locations are Intermittent Streams. The stream information is attached. We understand that Intermittent Stream Effluent Limits (ISEL) would apply for discharge at either of these on-site locations.

An alternative Rieger Homes discharge location into Black Meadow Creek was also evaluated. This scenario builds upon a WAC analysis that has been previously submitted to the Department on behalf of Heritage Development. The proposed Heritage Development Black Meadow Creek discharge location was analyzed assuming that the same WWTF would serve both projects. The total effluent flow is 74,000 gpd (48,000 gpd Rieger and 26,000 gpd Heritage). Black Meadow Creek and its downstream water, the Otter Kill are Class C waters. Otter Kill is tributary to Moodna Creek, an eventual tributary to the Hudson River. Protection of the uses of Black Meadow Creek as a C stream requires a high level of wastewater treatment. This is due in large part to the ammonia removal needed to meet Class C ammonia toxicity water quality standards. Black Meadow Creek, however, has a relatively large assimilation capacity for oxygen demanding materials because it is a shallow, moderate velocity stream. These physical characteristics, are factors in the selection of a "self purification factor" (f) in the analysis. In addition, the calculated MA7CD10 in Black Meadow Creek is 0.09 cfs (0.06 MGD), on the order of the combined wastewater flow for the Rieger plus Heritage WWTF. The WAC was performed using conservative assumptions, as appropriate. The calculations are attached to this letter.

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In addition, a field reconnaissance of the Black Meadow Creek and Otter Kill upstream and downstream of the approximate proposed Heritage WWTF discharge location was performed on behalf of Heritage. Dissolved oxygen, temperature, conductivity were measured at 6 locations. Flow measurements were made at 3 locations. These data, station descriptions and photos are included with this letter at the end of the WAC.

The main conclusions of the WAC analysis are listed below and the recommended effluent limits for the Rieger WWTF facility discharging on site and a combined Rieger-Heritage WWTF discharging to Black Meadow Creek and are summarized.

Rieger On-site WWTF

1. Both potential on-site Rieger WWTF discharge locations, headwaters of Cromline Creek and headwaters of Otter Kill, are into intermittent streams. ISEL would apply.

2. Rieger On-site potential discharge is upstream of Tomahawk Lake (Cromline Creek) and Browns Pond (Otter Kill).

Rieger Wastewater Treatment Facility
(on-site discharge location)
ISEL Effluent Limits

Parameter	Recommended Limit
$CBOD_5$	5 mg/L
TSS	10 mg/L
Ammonia	1.5 mg/L - Summer
	2.2 mg/L - Winter
Dissolved Oxygen	7.0 mg/L
Total Phosphorus[1]	1.0 mg/L Summer Only

[1]Lake Watershed, Q = 40,000 gpd

Rieger-Heritage WWTF to Black Meadow Creek

1. Black Meadow Creek and downstream, Otter Kill, have excellent water quality as indicated by dissolved oxygen measurements near saturation.

2. Analysis of the available low flow statistics for Otter Kill, Black Meadow Creek and nearby streams indicate that the MA7CD10 flow of Black Meadow Creek in the approximate location of the proposed discharge is on the order of 0.09 cfs (0.06 MGD).

3. The determination of required effluent concentrations for CBOD, ammonia and effluent dissolved oxygen indicated that ammonia surface water quality standards would govern ammonia. The allowable CBOD for the Rieger-Heritage facility was based on the stream capacity remaining after the ammonia concentration was set to meet C ammonia stream standards. To provide a sensitivity analysis, ammonia concentrations of 2.6 mg/L (maximum allowable), 2.0 mg/L and 1.0 mg/L were used in the determination of allowable CBOD5 as a function of ammonia. Effluent dissolved oxygen concentrations of 4.0 and 5.0 mg/L were evaluated. Post aeration may be required to meet the stream dissolved oxygen standard at the discharge location if the treatment process does not result in acceptable effluent dissolved oxygen.

4. The Rieger-Heritage WWTF is upstream of Browns Pond (Otter Kill).

Rieger-Heritage Wastewater Treatment Facility
(discharge to Black Meadow Brook)
Recommended Effluent Limits

Parameter	Recommended Limit
$CBOD_5$	14 mg/L
TSS	14 mg/L
Ammonia	2.6 mg/L – Summer
	3.9 mg/L - Winter
Dissolved Oxygen	5.0 mg/L
Total Phosphorus*	0.5 mg/L Summer Only

*Lake Watershed, Q>50,000 gpd

Additional Topics:

1. Disinfection: UV disinfection will be provided at the Rieger WWTF or the Rieger-Heritage WWTF.

2. Winter Ammonia Limits: Seasonal effluent limits for ammonia are appropriate since there are higher allowable stream ammonia levels during colder periods and winter MA7CD10 flows are typically higher than summer values.

3. Phosphorus Removal: The Rieger On-site WWTF or the Rieger-Heritage WWTF would be located in the headwaters area of the Moodna watershed. The presence of downstream lakes was investigated since the eutrophication status of any downstream lakes may be of concern. Seasonal total phosphorus limits are recommended.

The Rieger Homes project team looks forward to the guidance provided by the DEC on the project. We are looking forward to reviewing the recommended effluent limits with DEC to finalize the design parameters for the wastewater treatment facility. If you have any questions on this material, need additional information or wish to discuss the project, please feel free to call Patricia Kehrberger or myself.

Thank you again for your consideration.

Very truly yours,

HYDROQUAL, INC.

Joseph G. O'leary, P.E., BCEE
Principal

JGO/ha
RH-23 001-C/GO KF_0086.02 LTR

c: Alec Ciesluk, Jr. NYSDEC
Patricia Kehrberger, HydroQual
Steve Esposito, Esposito & Associates

Waste Assimilation Capacity (WAC) Analysis:

Proposed Rieger Homes WWTF discharge to Cromline Creek at Vivian Lane, Goshen, NY

From New York State Department of Environmental Conservation (DEC) Guidance

A. Receiving Stream Characteristics

1. Receiving water being investigated in the following streams:

   Cromline Creek
   Waters Index Number: H-89-19-1c and P 240h, 2 including tribs. and P 240c, P 249, P 249a, P 296, P 247a, 4 including P 250, P 250b, P 250c, P 251, 7 and 7-3
   Name: Tribs. and subtribs. of Cromline Creek, unnamed ponds
   Description: Isolated ponds (P 247a, P 251, P 250c). Trib. 4 contains irrigation canals which have not been indexed. Youngs Brook is trib 7.
   Class: C
   Standards: C

2. Statistical minimum average seven consecutive day streamflow occurring once in ten years (MA7CD10).

   The USGS/DEC Bulletin 74 lists two streams location near the study area.

   - Trout Brook near Walton Park, USGS 01373580, Drainage Area (DA)=2.39 mi^2, MA7CD 10 = 0.2 cfs, MA7CD 2 = 0.3 cfs, MA7CD 10 = 0.0837 cfs/mi^2

   - Seely Brook near Chester, USGS 01373600, Drainage Area (DA) = 12.8 mi^2, MA7CD 10 = 0.08 cfs, MA7CD 2 = 0.5 cfs, MA7CD 10 = 0.00625 cfs/mi^2

   Proposed WWTF discharge site, Cromline Creek, Drainage Area (DA) = 0.27 mi^2, MA7CD 10 = 0.001 cfs [0.27 mi^2 X 0.00625 cfs/mi^2 (from Seely Brook)].

3. Cromline Creek near the study area is an Intermittent Stream.

Waste Assimilation Capacity (WAC) Analysis:

Proposed Rieger Homes WWTF discharge to Otter Kill at Hasbrouck Road, Goshen, NY

From New York State Department of Environmental Conservation (DEC) Guidance

A. Receiving Stream Characteristics

1. Receiving water being investigated in the following streams:

   Otter Kill
   Waters Index Number: H-89-20-P 268, 10, 10a;12 including tribs. and P 285, P 287a, 13 including tribs. and P 289;15 including tribs., and P298, P299
   Name: Tribs. and subtribs. of Otter Kill, unnamed ponds
   Description: Isolated ponds (P 268, P 289).
   Class: C
   Standards: C

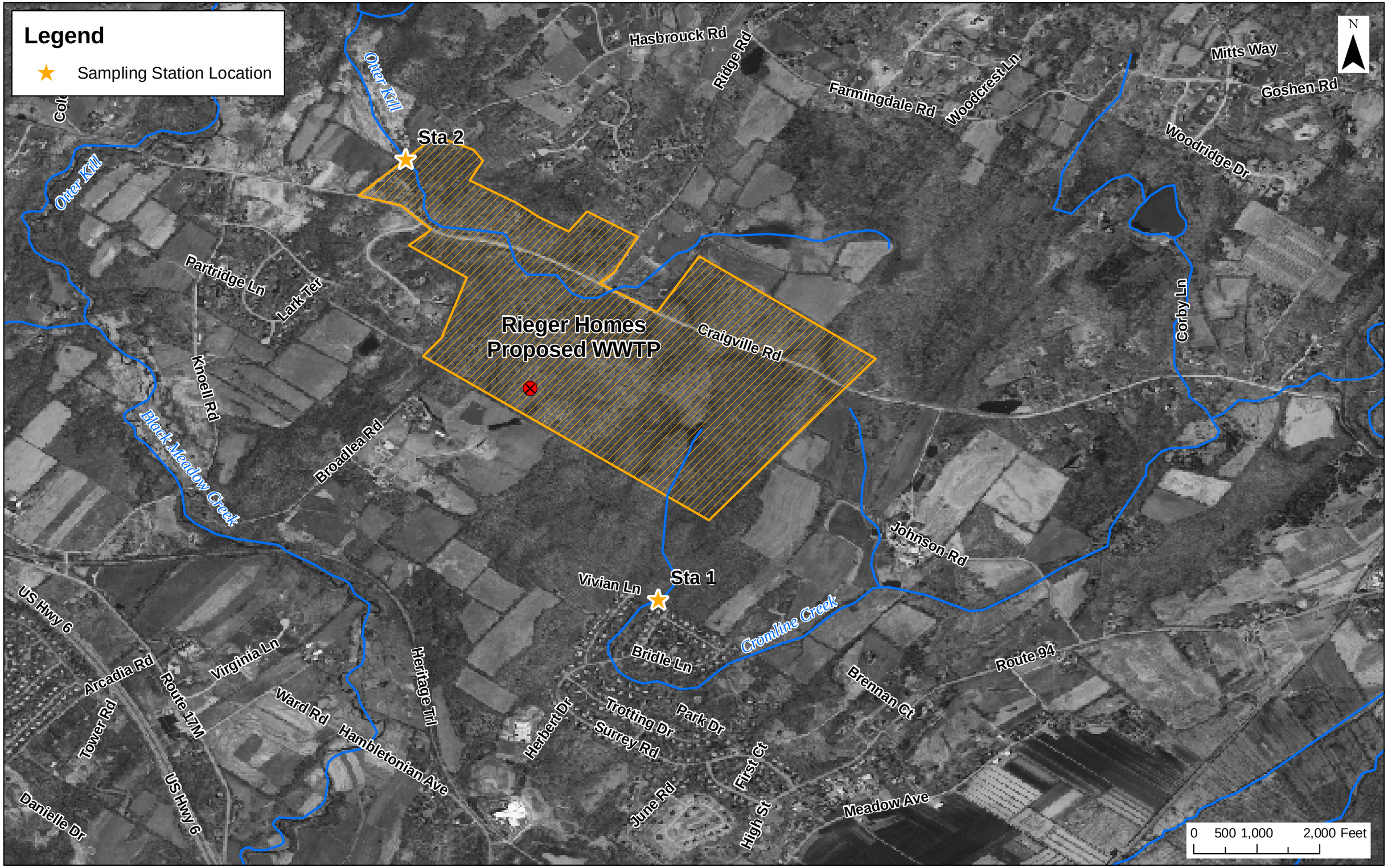
2. Statistical minimum average seven consecutive day streamflow occurring once in ten years (MA7CD10).

   The USGS/DEC Bulletin 74 lists one stream location near the study area.

   - Black Meadow Creek near Florida, USGS 01373518, Drainage Area (DA)=3.47 mi^2, MA7CD 10 = 0.0 cfs, MA7CD 2 = 0.01 cfs, MA7CD 10 = 0.0 cfs/mi^2

   Proposed WWTF discharge site, Otter Kill, Drainage Area (DA) = 0.98 mi^2, MA7CD 10 = 0.0 cfs [0.98 mi^2 X 0.0 cfs/mi^2].

3. Otter Kill near the study area is an Intermittent Stream.


Legend
Sampling Station Location
N
Hasbrouck Rd
Ridge Rd
Farmingdale Rd
Woodcrest Ln
Mitts Way
Goshen Rd
Woodridge Dr
Otter Kill
Sta 2
Partridge Ln
Lark Ter
Rieger Homes
Proposed WWTP
Craigville Rd
Corby Ln
Knoell Rd
Black Meadow Creek
Broadlea Rd
Johnson Rd
Vivian Ln
Sta 1
Cromline Creek
US Hwy 6
Bridle Ln
Route 94
Arcadia Rd
Virginia Ln
Route 17M
Ward Rd
Heritage Trl
Brennan Ct
Tower Rd
Hambletonian Ave
Herbert Dr
Trotting Dr
Park Dr
Surrey Rd
First Ct
June Rd
High St
Meadow Ave
Danielle Dr
0 500 1,000 2,000 Feet

Cromline Creek Station 1 (at Vivian Lane)

Otter Kill Station 2 (at Hasbrouck Road)

Otter Kill Station 2 (at Hasbrouck Road)

Waste Assimilation Capacity (WAC) Analysis:

Proposed Rieger-Heritage WWTF discharge to Black Meadow Creek, Goshen, NY

From New York State Department of Environmental Conservation (DEC) Guidance

A. Receiving Stream Characteristics

1. Receiving water being investigated in the following streams:

   Black Meadow Creek upstream of the confluence of Otter Kill and Black Meadow Creek
   Waters Index Number: H-89-20-19 and P 307a, 20 including tribs. and P 312c, P 312h, P 312, P 312a, P 313, P 314a, P 314, P 314b, P 314d, 21 including trib. and P 315b, P 315c, P 315d, P 315e, P 315f
   Name: Tribs. and subtribs. of Otter Kill (Black Meadow Creek), unnamed ponds
   Description: Isolated ponds (P 312h, P 314b, P 312d, P315b, P 315c, P 315d, P 315e, P 315f, P 312e, P 320c)
   Class: C
   Standards: C

   Otter Kill, downstream of the confluence of Otter Kill and Black Meadow Creek
   Waters Index Number: H-89-20-17 portion including trib. 2 and P 303
   Name: Trib. and subtrib. of Otter Kill, unnamed pond
   Description: From mouth to outlet of P 304b. Isolated pond (P 303)
   Class: C
   Standards: C

   Otter Kill, upstream of the confluence of Otter Kill and Black Meadow Creek
   Waters Index Number: H-89-20-P 268, 10, 10a; including tribs., P 285, P 287a, 13 including tribs. and P 289; 15 including tribs., and P 298, P 299
   Name: Tribs. and subtribs. of Otter Kill, unnamed pond
   Description: Isolated ponds (P 268, P 289)
   Class: C
   Standards: C

2. Statistical minimum average seven consecutive day streamflow occurring once in ten years (MA7CD10).

The USGS/DEC Bulletin 74 lists three streams location near the study area.

- Black Meadow Creek near Florida, USGS 01373518, Drainage Area (DA)=3.47 mi^2, MA7CD10 = 0.0 cfs, MA7CD2 = 0.01 cfs, MA7CD10= 0.0 cfs/mi^2.

- Seely Brook near Chester, USGS 01373600, Drainage Area (DA)=12.80 mi^2, MA7CD 10 = 0.08 cfs, MA7CD 2 = 0.5 cfs, MA7CD 10 = 0.0063 cfs/mi^2
  The drainage area and stream type is similar to the stream in the study area.

- Trout Brook near Walton Park, USGS 01373580, Drainage Area (DA)=2.39 mi^2, MA7CD 10 = 0.2 cfs, MA7CD 2 = 0.3 cfs, MA7CD 10 = 0.0837 cfs/mi^2
  The stream is wider than the stream in the study area.

Proposed WWTF discharge site, Black Meadow Creek downstream from the confluence of Otter Kill and Black Meadow Creek, Drainage Area (DA) = 13.96 mi^2, MA7CD 10 = 0.09 cfs [13.96 mi^2 X 0.0063 cfs/mi^2 (from Seely Brook)].

3. Black Meadow Creek is not an Intermittent Stream.

4. Stream Standards

   a) Dissolved Oxygen- Non-Trout waters use 4.0 mg/L minimum at any time.
   b) Ammonia- 1.5 mg/L NH_3 Summer
      2.2 mg/L NH_3 Winter

B. Receiving Waters Design Parameters

1. Dissolved oxygen saturation: 8.1 mg/L (500 ft, 25 ^oC)
Upstream DO: 7.4 mg/L (90% of saturation)

2. Temperature: 25 ^oC (non-trout stream)

3. Upstream total oxygen demand (TOD): 3.0 mg/L

4. Self purification factor (f): 1.5-3.0; Black Meadow Creek is a stream of slow to moderate velocity.

5. K_1 (BOD bottle rate of decay): 0.23/day

6. K_1 (base 10): 0.1 /day

7. Stream nitrification rate, K_n is the same as the BOD decay rate, 0.23/day

8. K_2, reaeration rate = 0.345/day for f = 1.5 and 0.69/day for f = 3.

C. Wastewater Characteristics

1. The wastewater will be domestic flow. Typical ultimate oxygen demand, CBODu = 300 mg/L and ultimate nitrogenous oxygen demand, NOD = 180 mg/L are anticipated for the influent.

2. Total ultimate oxygen demand is 480 mg/L. For the 0.074 MGD design flow, TOD influent load is 296 lbs/day.

3. Secondary treatment of effluent is not adequate for Black Meadow Creek (see WAC analysis)

4. Post-aeration of the effluent is needed. (See WAC Analysis – Oxygen Demand)

5. Although Black Meadow Creek is Class C, disinfection via ultra-violet (UV) will be provided on a seasonal basis.

D. Computation of Waste Assimilation Capacity and Wastewater Treatment Requirements

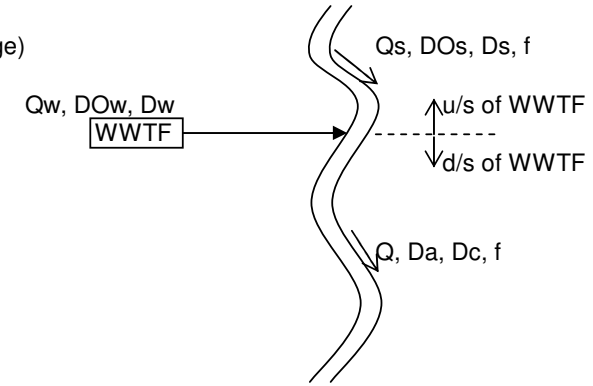
1. Black Meadow Creek is not a regulated stream.

2. Compute CBOD5 and ammonia from WAC load.

   See Ammonia Toxicity Analysis, WAC Analysis Ammonia and CBOD, Figure 2: Effluent Ammonia vs $CBOD_5$ at Effluent DO=4 mg/L and Figure 3: Effluent Ammonia vs $CBOD_5$ at Effluent DO=5 mg/L

WAC Analysis - Oxygen Demand

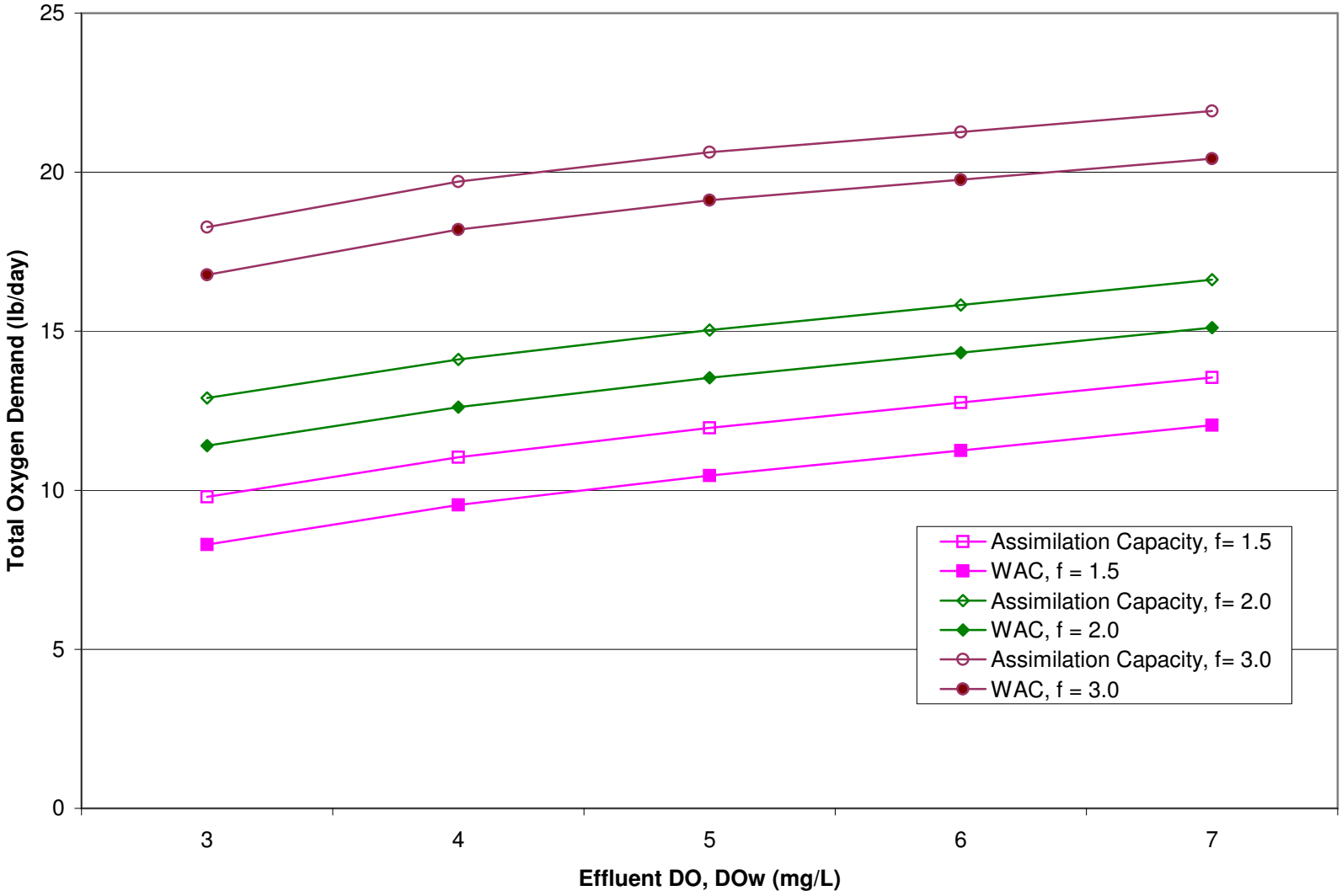
Effluent Flow from WWTF, Qw (MGD) =	0.074	(Rieger + Heritage)
Stream DO Saturation, Cs (mg/L) =	8.10	
Effluent DO, DOw (mg/L) =	4.00	
Effluent DO Deficit, Dw (mg/L) =	4.10	
Stream Flow u/s of the WWTF, Qs (MGD) =	0.06	
DO u/s of WWTF, DOs (mg/L) =	7.40	
Stream DO Deficit u/s of WWTF, Ds (mg/L) =	0.70	
Stream Standard, DO (mg/L) =	4.00	
Initial DO Deficit after Mixing, Da (mg/L) =	2.58	
Self Purification Factor, f =	2.0	
Critical DO Deficit, Dc (mg/L) =	4.10	



Stream Schematic

Effluent DO, DOw (mg/L)	f	Dc (mg/L)	Da (mg/L)	La (mg/L TOD) [From Graphs]	Assimilation Capacity, TOD (lb/day)	Upstream of WWTF, TOD (lb/day)	Waste Assimilation Capacity, TOD (lb/day)	TOD for WWTF (mg/L)
3.00	1.5	4.10	3.13	8.76	9.79	1.50	8.29	13.43
4.00	1.5	4.10	2.58	9.88	11.04	1.50	9.54	15.46
5.00	1.5	4.10	2.03	10.71	11.96	1.50	10.46	16.95
6.00	1.5	4.10	1.47	11.41	12.75	1.50	11.25	18.23
7.00	1.5	4.10	0.92	12.12	13.54	1.50	12.04	19.51
3.00	2.0	4.10	3.13	11.55	12.90	1.50	11.40	18.47
4.00	2.0	4.10	2.58	12.63	14.11	1.50	12.61	20.44
5.00	2.0	4.10	2.03	13.46	15.04	1.50	13.54	21.93
6.00	2.0	4.10	1.47	14.16	15.83	1.50	14.33	23.21
7.00	2.0	4.10	0.92	14.87	16.62	1.50	15.12	24.49
3.00	3.0	4.10	3.13	16.35	18.27	1.50	16.77	27.17
4.00	3.0	4.10	2.58	17.63	19.70	1.50	18.20	29.49
5.00	3.0	4.10	2.03	18.46	20.62	1.50	19.12	30.99
6.00	3.0	4.10	1.47	19.03	21.27	1.50	19.77	32.03
7.00	3.0	4.10	0.92	19.62	21.93	1.50	20.43	33.10

Figure 1: Total Oxygen Demand vs Effluent DO



Ammonia Toxicity Analysis

From Technical and Operational Guidance Series (1.1.1), "New York State Ambient Water Quality Standards and Guidance Values":

	Summer		Winter
pH =	7.25	pH =	7.25
Temperature =	25^0C	Temperature =	10^0C
Stream Standard Total Ammonia (mg/L NH3) =	1.5	Stream Standard Total Ammonia (mg/L NH3) =	2.2
Effluent Flow from WWTF, Qw (MGD) =	0.074	Effluent Flow from WWTF, Qw (MGD) =	0.074
Stream Flow u/s of the WWTF, Qs (MGD) =	0.06	Stream Flow u/s of the WWTF, Qs (MGD) =	0.06
Stream Flow d/s of WWTF, Q (MGD) =	0.134	Stream Flow d/s of WWTF, Q (MGD) =	0.134
Standard Total Ammonia u/s of the WWTF, (mg/L NH3) =	0.1	Standard Total Ammonia u/s of the WWTF, (mg/L NH3) =	0.1
k_1 (base e), day^{-1} =	0.23	k_1 (base e), day^{-1} =	0.23
Effluent Total Ammonia (mg/L NH3) =	2.6	Effluent Total Ammonia (mg/L NH3) =	3.9

WAC Analysis - Ammonia and CBOD

DO of Effluent, DOw (mg/L)	f	Effluent Total Ammonia (mg/L NH3)	Allowable WWTF NODu Load (lb/day)	Waste Assimilation Capacity, TOD (lb/day)	Allowable WWTF CBODu Load (lb/day)	Effluent CBODu (mg/L)	Effluent $CBOD_5$ (mg/L)
4.00	1.5	3.00	8.33	9.54	1.21	1.96	1.34
4.00	1.5	2.00	5.55	9.54	3.99	6.46	4.41
4.00	1.5	1.00	2.78	9.54	6.76	10.96	7.49
4.00	2.0	3.00	8.33	12.61	4.28	6.94	4.74
4.00	2.0	2.00	5.55	12.61	7.06	11.44	7.82
4.00	2.0	1.00	2.78	12.61	9.84	15.94	10.89
4.00	3.0	3.00	8.33	18.20	9.87	15.99	10.93
4.00	3.0	2.00	5.55	18.20	12.65	20.49	14.00
4.00	3.0	1.00	2.78	18.20	15.42	24.99	17.08
5.00	1.5	3.00	8.33	10.46	2.13	3.45	2.36
5.00	1.5	2.00	5.55	10.46	4.91	7.95	5.43
5.00	1.5	1.00	2.78	10.46	7.69	12.45	8.51
5.00	2.0	3.00	8.33	13.54	5.20	8.43	5.76
5.00	2.0	2.00	5.55	13.54	7.98	12.93	8.84
5.00	2.0	1.00	2.78	13.54	10.76	17.43	11.91
5.00	3.0	3.00	8.33	19.12	10.79	17.49	11.95
5.00	3.0	2.00	5.55	19.12	13.57	21.99	15.02
5.00	3.0	1.00	2.78	19.12	16.35	26.49	18.10

Figure 2: Effluent Ammonia vs $CBOD_5$ at Effluent DO=4 mg/L

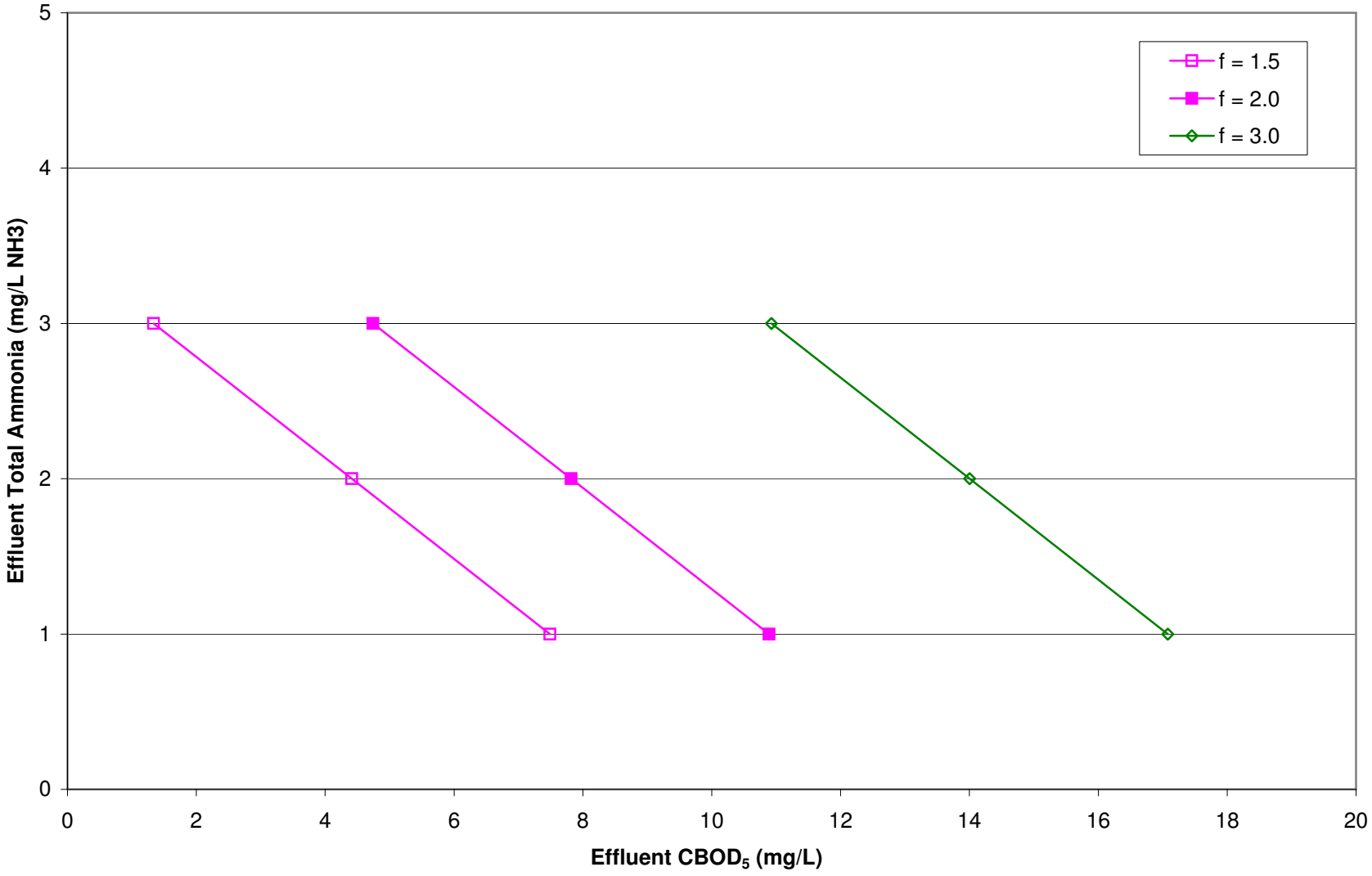
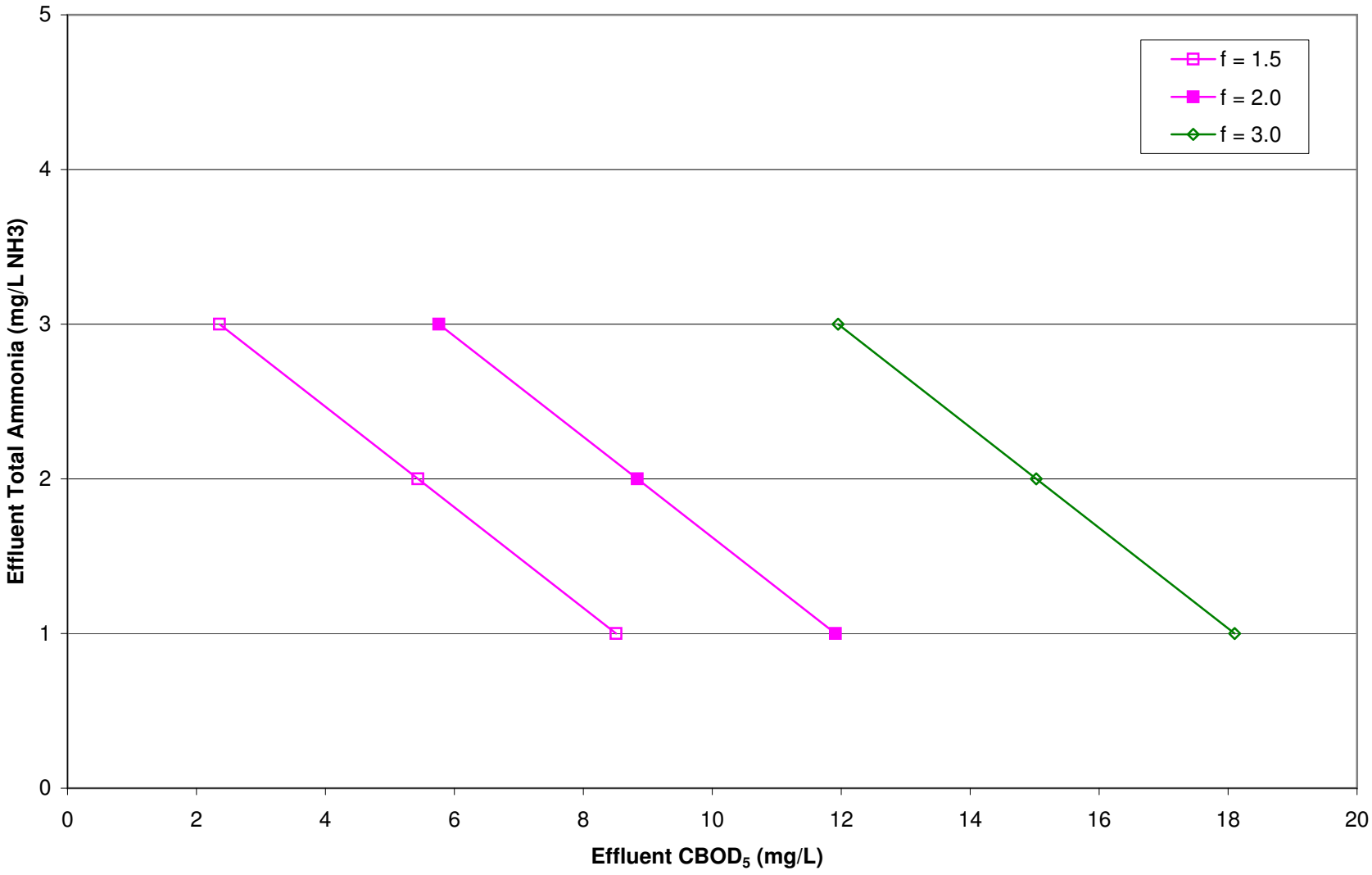


Figure 3: Effluent Ammonia vs $CBOD_5$, at Effluent DO=5 mg/L



Reconnaissance Trip:

The water quality tests and flow measurements are conducted at these following stations.

Black Meadow Creek

- Station 01 (across from Brookview Farm, Farm access bridge, below the crossing at 17M, upstream of confluence of Black Meadow Creek and Otter Kill)

  Lat/Long: $41^0$21’55” N / $74^0$17’18” W
  Picture: None

- Station 02 (at Old Chester Road, upstream of confluence of Black Meadow Creek and Otter Kill)

  Lat/Long: $41^0$22’59” N / $74^0$17’29” W
  Picture: BMCsta2.pdf

- Station 03 (on Brookhurst Farm crossing [private property], upstream of confluence of Black Meadow Creek and Otter Kill)

  Lat/Long: $41^0$23’26” N / $74^0$17’45” W
  Picture: None

Otter Kill

- Station 04 (at Old Chester Road, access through a farm, upstream of confluence of Black Meadow Creek and Otter Kill)

  Lat/Long: $41^0$23’01” N / $74^0$18’13” W
  Picture: OKsta4.pdf

- Station 05 (at Craigville Road, downstream of confluence of Black Meadow Creek and Otter Kill)

  Lat/Long: $41^0$23’52” N / $74^0$17’35” W
  Picture: OKsta5.pdf

- Station 06 (at Sarah Wells Trail, downstream of confluence of Black Meadow Creek and Otter Kill)

  Lat/Long: $41^0$25’31” N / $74^0$16’58” W
  Picture: OKsta6.pdf

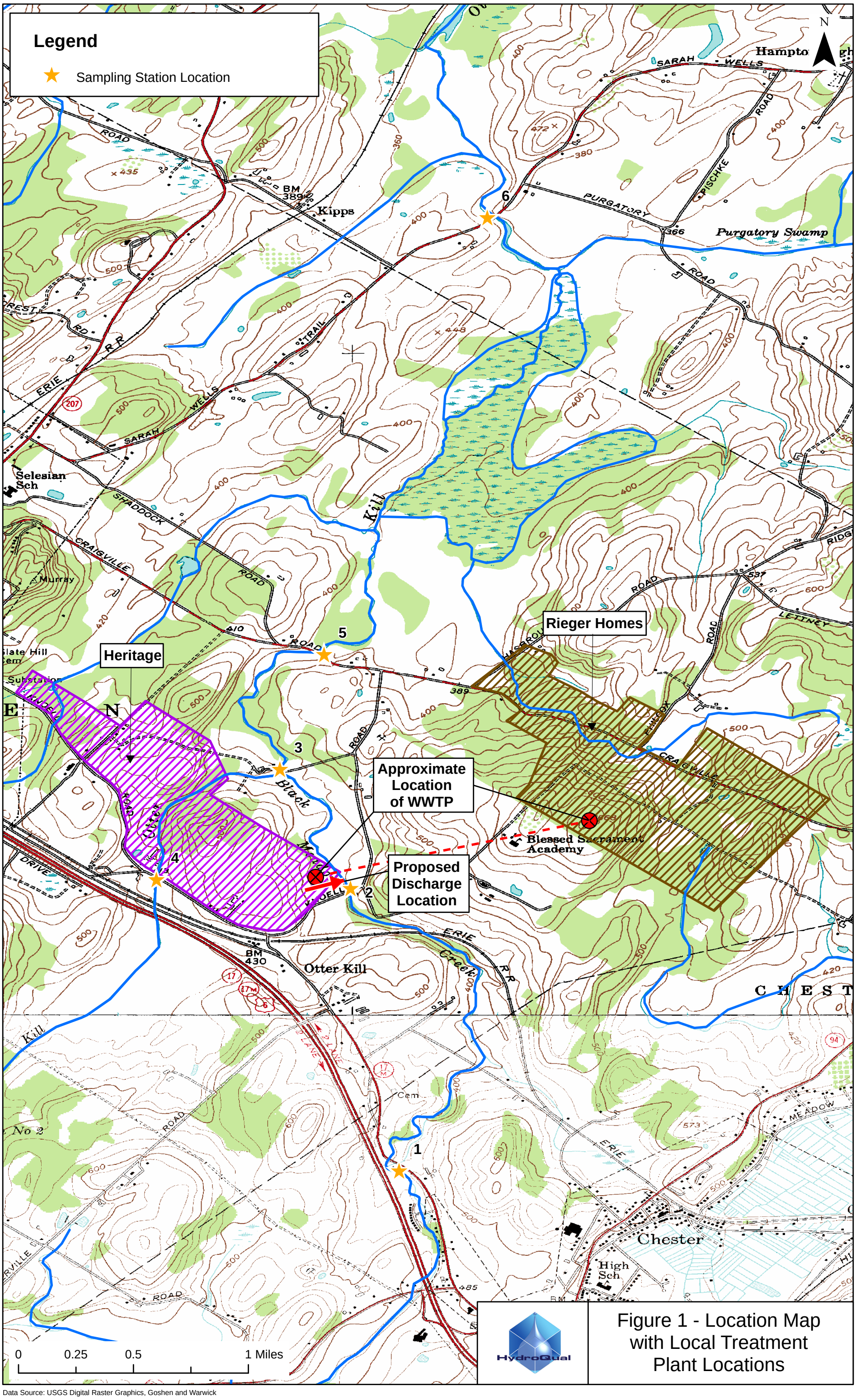


Figure 1 - Location Map with Local Treatment Plant Locations

Data Source: USGS Digital Raster Graphics, Goshen and Warwick

SAMPLING STATIONS:

Station Number	Stream Name	Location
1	Black Meadow Creek	across from Brookview Farm, Farm access bridge, below the crossing at 17M, upstream of confluence of Black Meadow Creek and Otter Kill
2	Black Meadow Creek	at Old Chester Road (Knoell Road), upstream of confluence of Black Meadow Creek and Otter Kill
3	Black Meadow Creek	on Brookhurst Farm crossing [private property], upstream of confluence of Black Meadow Creek and Otter Kill
4	Otter Kill	at Old Chester Road (Knoell Road), access through a Farm, upstream of confluence of Black Meadow Creek and Otter Kill
5	Otter Kill	at Craigville Road, downstream of confluence of Black Meadow Creek and Otter Kill
6	Otter Kill	at Sarah Wells Trail, downstream of confluence of Black Meadow Creek and Otter Kill

WATER QUALITY:

Station Number	Sampling Site	Date	Latitude	Longitude	Temperature (^{0}C)	Dissolved Oxygen % Saturation	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)
1	d/s of the bridge	08/16/07	41^{0}21'55"	74^{0}17'18"	21.61	102	8.93	0.520
1	u/s of the bridge	08/16/07	41^{0}21'55"	74^{0}17'18"	21.61	101	8.83	0.520
2	u/s of the bridge	08/16/07	41^{0}22'59"	74^{0}17'29"	20.94	99	8.40	0.565
3	u/s of the bridge	08/16/07	41^{0}23'26"	74^{0}17'45"	21.95	105	9.15	0.576
4	u/s of the bridge	08/16/07	41^{0}23'01"	74^{0}18'13"	23.80	59	5.01	0.437
5	u/s of the bridge	08/16/07	41^{0}23'52"	74^{0}17'35"	21.95	92	8.01	0.592
6	u/s of the bridge	08/16/07	41^{0}25'31"	74^{0}16'58"	21.81	94	8.20	0.470

FLOW MEASUREMENTS:

Station 1: d/s of the bridge

Distance across the Channel (ft)	Depth (ft)	Velocity (fps)	Area (ft^2)	Flow (cfs)
0	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00
2	0.20	0.38	0.20	0.08
3	0.30	0.50	0.30	0.15
4	0.40	0.41	0.40	0.16
5	0.30	0.50	0.30	0.15
6	0.40	0.41	0.40	0.16
7	0.30	0.96	0.30	0.29
8	0.70	0.65	0.70	0.46
9	0.60	0.73	0.60	0.44
10	0.40	1.28	0.40	0.51
11	0.20	-0.05	0.20	-0.01
12	0.00	0.00	0.00	0.00
Average	0.29	0.44		
Total			3.80	2.39

FLOW MEASUREMENTS:

Station 4: u/s of the bridge

Distance across the Channel (ft)	Depth (ft)	Velocity (fps)	Area (ft^2)	Flow (cfs)
0	0.00	0.00	0.00	0.00
1	0.80	0.03	0.80	0.02
2	1.10	0.01	1.10	0.01
3	1.25	0.00	1.25	0.00
4	1.20	0.00	1.20	0.00
5	1.25	0.00	1.25	0.00
6	1.10	0.00	1.10	0.00
7	1.00	0.00	1.00	0.00
8	0.80	0.00	0.80	0.00
9	0.80	0.00	0.80	0.00
10	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00
Average	0.78	0.00		
Total			9.30	0.04

Station 5: u/s of the bridge

Distance across the Channel (ft)	Depth (ft)	Velocity (fps)	Area (ft^2)	Flow (cfs)
0	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00
5	1.50	0.23	1.50	0.35
6	1.30	0.23	1.30	0.30
7	1.40	0.24	1.40	0.34
8	1.40	0.21	1.40	0.29
9	1.40	0.26	1.40	0.36
10	1.40	0.27	1.40	0.38
11	1.30	0.22	1.30	0.29
12	1.30	0.26	1.30	0.34
13	1.40	0.20	1.40	0.28
14	1.40	0.17	1.40	0.24
15	1.40	0.17	1.40	0.24
16	1.40	0.18	1.40	0.25
17	1.30	0.05	1.30	0.07
18	0.00	0.00	0.00	0.00
Average	0.94	0.14		
Total			17.90	3.71

Black Meadow Creek Station 2

Otter Kill Station 4

Otter Kill Station 5

HydroQual

September 19, 2008

Mr. Steve Esposito
Esposito & Associates
262 Greenwich Avenue
Goshen, New York 10924

REHO.001.002

Dear Mr. Esposito:

After review of the DEIS, additional information on the Young's Grove Wastewater Treatment Facilities was requested. The following items have been provided as attachments to this letter:

Attachment 1 - Comparison of alternative treatment technologies

Attachment 2 - Process design schematic flow diagram

Attachment 3 – System/Functional Descriptions

Attachment 4 - Treatment levels and design calculations.

Should you have any questions or require additional information please do not hesitate to contact me.

Very truly yours,

HYDROQUAL ENVIRONMENTAL
ENGINEERS & SCIENTISTS P.C.

Joseph G. Cleary, P.E., BCEE
Principal

JGC/lkj

cc: Steven Reiger, Reiger Homes
Kristin Munoz, HydroQual, Inc.

ATTACHMENT 1

WASTEWATER FEASIBILITY STUDY

A wastewater feasibility study was conducted for the wastewater treatment facility to serve the Reiger Homes development. As part of the study, a comparison of the advantages and disadvantages and life cycle cost estimates were prepared for two treatment scenarios, which included discharge to Cromline Creek and discharge to Otter Kill. For each discharge scenario several biological treatment alternatives were evaluated including: activated sludge extended aeration, membrane bioreactor (MBR), sequencing batch reactor (SBR), and moving bed bioreactor (MBBR). A process flow diagram for the overall wastewater treatment showing each scenario is provided on Figure 1.

The biological treatment technologies were first screened based on relative costs that were developed based on vendor quotes and cost estimates. The capital costs were developed by obtaining vendor quotes for each of the major treatment processes. Installation was estimated at 20% of equipment costs for those items which did not include installation in their quotes. Non-component costs including: electrical, piping, instrumentation, civil site work, and structural were estimated based on factors or percentages of equipment costs. In addition, non-cost factors were evaluated. The non-cost factors developed were as follows:

- Proven technology at other plants to meet permit limits
- Size and footprint
- Energy requirements
- Labor requirements
- Ease of Operation
- Reliability and process performance
- Sludge and residuals generated
- Availability in packaged systems
- Effluent quality consistency
- Ability to automate
- Redundancy
- Robust to changes and upsets

MBR and MBBR technologies were eliminated from further consideration based on screening costs. The activated sludge extended aeration and SBR technologies remained for comparison of the non-cost criteria. Table 1 presents a comparative screening of the activated sludge extended aeration and SBR treatment technologies. A rating of 1 to 5 with 5 being the highest was used to compute a total rating for relative comparison.

Activated sludge extended aeration technology was selected for the Reiger Homes site. The advantages of extended aeration are excellent effluent quality in winter. The system is a pre-engineering fabricated structure which allows for quick turnaround for installation. In addition, extended aeration is a well-known, proven process for treatment of domestic wastewater. No primary clarifier is required and the technology is adaptable for step feed and/or various selector designs.

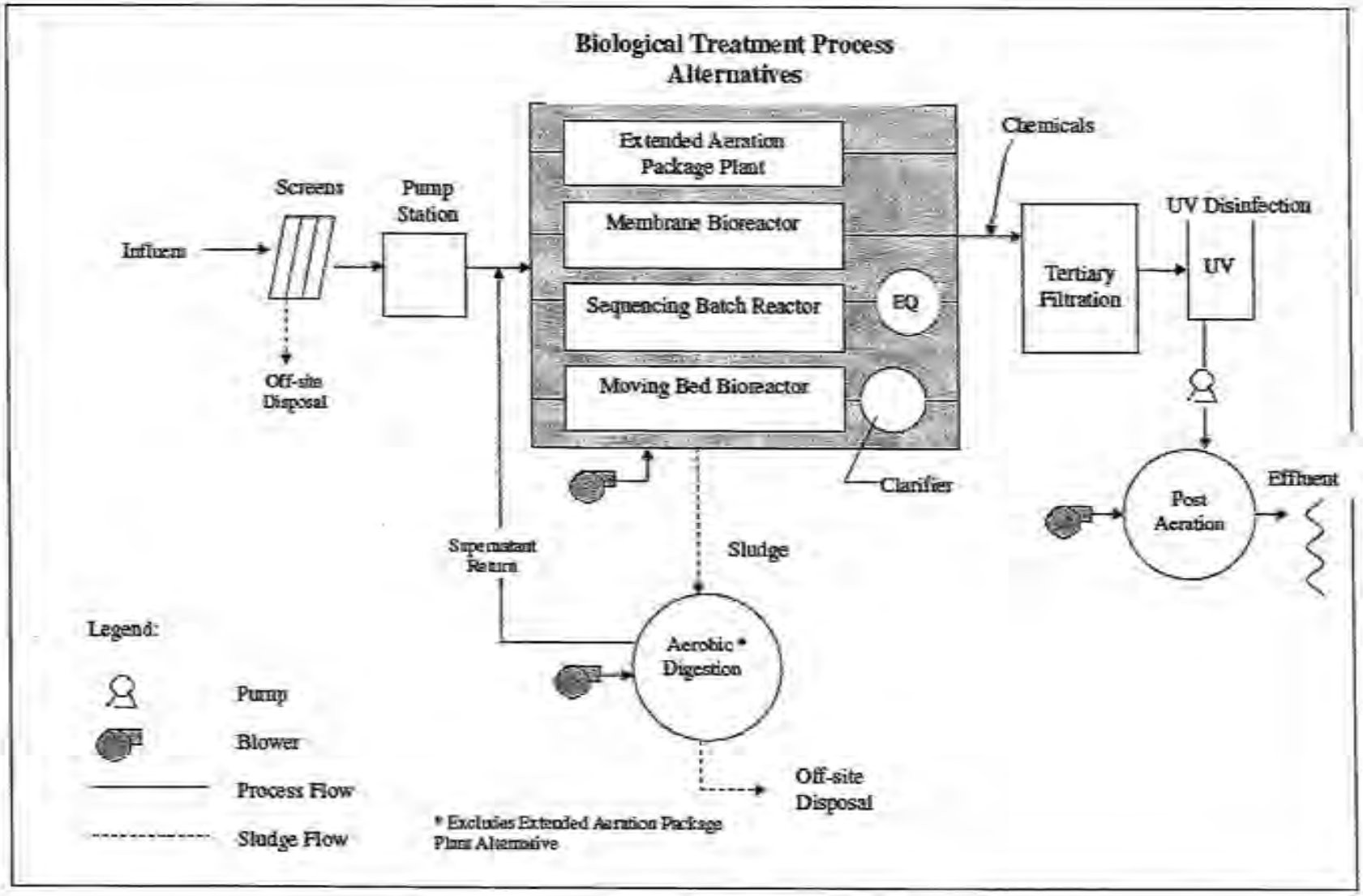


Figure 1. Process Flow Diagram For Overall Wastewater Treatment

Table 1. Comparison of Non-Cost Criteria for Biological Treatment Alternatives

PROPOSED TREATMENT ALTERNATIVES		SCREENING CRITERIA													Total	Technology Selected or Rejected (Preliminary)
		Proven technology at other plants to meet permit limits	Size and footprint	Energy requirements	Labor requirements	Ease of Operation	Reliability and process performance	Sludge generated	Availability in Packaged systems	Potential for odors	Effluent quality consistency	Ability to automate	Redundancy	Robust to change and upsets		
Alternative 1	Extended Aeration Package Plant	5	4	5	5	5	5	5	5	3	4	4	3	5	**58**	Selected
Alternative 2	Sequencing Batch Reactor (SBR)	5	5	4	5	4	4	5	4	3	5	5	3	5	**57**	

Notes: Non-cost criteria rating 1 to 5 with 5 being the highest rating

MBR and MBBR technologies were screened-out during initial evaluation as not cost effective

ATTACHMENT 2

PROCESS FLOW DIAGRAM

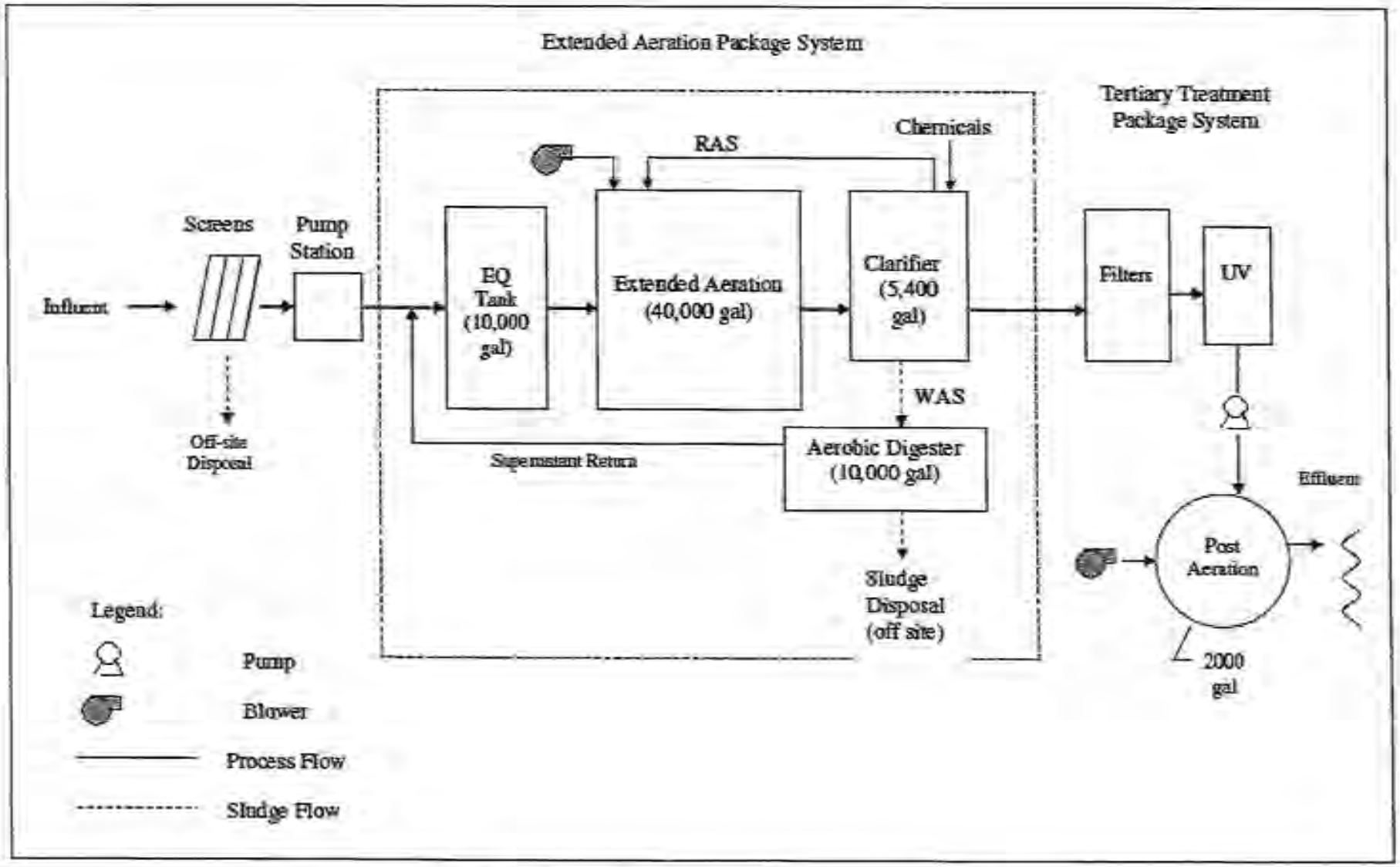


Figure 2. Process Flow Diagram For Extended Aeration System

SYSTEM NAME: Aerated Equalization Tank

MAJOR COMPONENTS: Integral bar screen, flow splitter tank, equalization tank

FUNCTION: Influent flow screening and equalization, regulate flow to the biological system

FUNCTIONAL DESCRIPTION:

The sanitary wastewater influent will be pumped using duplex grinder pumps to a flow control splitter box located on grates above the equalization tank. The flow control box contains an adjustable overflow broad weir and a 30 degree V-Notch discharge weir. The overflow broad weir will be adjustable so that a measured amount of pumped influent will discharge though the V-notch weir to the anoxic chamber, while recycling back the remaining influent back to the equalization chamber. An inlet flange with a manual bar screen will be provided at the influent port of the equalization tank to remove any unusually large solids from the incoming raw sewage. The bar screen will be fabricated from 1/2" diameter bars spaced 1" apart. The bars shall be sloped to permit easy cleaning of accumulating debris. A duplex set of submersible chopper pumps, 56 gpm at 15 ft TDH, will be furnished within the chamber and an emergency overflow will be provided between the equalization and anoxic chamber.

The equalization allows for a constant flow through the wastewater treatment plant by equalizing flow surges that may be incurred during peak flow times. The equalization chamber has a volume of 10,000 gallons and provides a detention time of 6 hours. The rectangular basin is part of the packaged treatment system. A blower/motor unit mounted will be provided in a fiberglass housing above the equalization tank. Liquid level sensors will regulate pumps and the blower/motor unit.

SYSTEM NAME: Extended Aeration System Package Plant

MAJOR COMPONENTS: Anoxic Selector Tank
Aeration Chamber
Air Diffuser System
Blower/Motor Units

FUNCTION: Activated sludge secondary treatment system

FUNCTIONAL DESCRIPTION:

Wastewater passing through the V-notch weir from the flow splitter tank will flow by gravity to the anoxic selector tank at the head of the extended aeration system. The anoxic tank is designed as an activated sludge selector tank to favor the growth of floc-forming bacteria instead of filamentous bacteria to provide an activated sludge with better settling and thickening properties. The anoxic tank is 10,000 gallons and is mixed with return activated sludge from the dual hopper clarifier. The detention time in the anoxic tank is approximately 6 hours. The anoxic tank will be mixed using a mechanical mixer.

From the anoxic tank, the wastewater will flow by gravity to the 30,000 gallon aeration chamber. The completely mixed rectangular tank will have hydraulic retention time (HRT) of approximately 24 hours and a solids retention time of 30 days (SRT). The design mixed liquor suspended solids (MLSS) concentration is approximately 3,000 mg/L with a food to microorganism ratio (F/M) of 0.08 pound of BOD per pound MLVSS per day. The vessels will be shaped on each side to prevent scum and froth accumulation. To insure maximum retention and eliminate short circuiting of raw sewage, the aeration chamber will be constructed with air diffusers placed longitudinally along one side of the chamber so as to, in conjunction with the flow control baffles, enhance the spiral rotation of the chamber contents. The velocity of rotation will be sufficient to scour the chamber bottom and prevent sludge filleting as well as to prevent the escape to the surface of minuscule air diffusion bubbles and by so causing their entrapment to provide maximum oxygenation efficiency.

An air distribution manifold consisting of a rectangular hollow steel tube will be installed along the entire length of the plant. Each diffuser drop assembly will be equipped with an air regulation and/or shut-off cock valve, union and an air diffuser header. The diffusers will be parallel to and near the base of the vessels side wall, at an elevation which will provide the optimum diffusion and mixing. Each air diffuser will be constructed of Celcon plastic with a removable and replaceable neoprene air check diaphragm and be capable of handling a wide range of air flow. The oxygen transfer capacity of each diffuser will be such that an adequate supply of oxygen will be maintained in the aeration chamber to meet treatment requirements.

Two (2) positive displacement blower/motor units will be supplied. The blower/motor units shall be capable of providing a minimum of 2,100 cubic feet of air per pound of BOD_5 plant loading. Caustic will be added to the aeration tank to replace alkalinity destroyed during the nitrification process. From the aeration tank, the wastewater will flow by gravity to a dual hopper gravity secondary clarifier, which is integral to the packaged system.

SYSTEM NAME: Secondary Clarifier

MAJOR COMPONENTS: Dual hopper gravity clarifier
WAS/RAS Air-Operated Diaphragm Pumps

FUNCTION: Solids separation

FUNCTIONAL DESCRIPTION:

Wastewater from the aeration tank will flow by gravity to the dual hopper gravity clarifier that has an average overflow rate of 200 gpd/ft^2 and a peak flow overflow rate of 400 gpd/ft^2. The total settling volume will include the volume of the upper 1/3 of the sludge hoppers. Flat bottom area of the hoppers will not be greater than one square foot and the slope of the walls will not be less than 1.7 vertical to 1.0 horizontal.

Waste activated sludge (WAS) will be pumped using an air lift pump to the aerobic digester. Return activated sludge (RAS) will also be pumped using the same air lift pump to the head of the anoxic tank. The estimated WAS flow rate to the aerobic digester is 260 gpd.

SYSTEM NAME: Aerobic Digester

MAJOR COMPONENTS:
Aerobic Tank
Aerated Sludge Day Tank
Diffused Aeration System
Digester Blower/Motor Units
WAS Pumps

FUNCTION: Volatile solids reduction and stabilization

FUNCTIONAL DESCRIPTION:

Sludge wasted from the clarifier is pumped to the aerobic digester for aerobic sludge digestion to reduce the volatile solids concentration and to stabilize the sludge to reduce pathogens, eliminate offensive odors, and inhibit, reduce, or eliminate the potential for putrification.

The aerobic sludge digestion is achieved in one tank that is part of the packaged wastewater treatment plant. The tank has working volume capacity of 10,000 gallons and a solids retention time (SRT) of 35 days. Liquid sludge from the aerobic digester will be sent off-site for disposal. The supernatant will be returned to the head of the anoxic tank.

SYSTEM NAME: Tertiary Filter

MAJOR COMPONENTS: Packaged Tertiary Filter
Clearwell chamber
Mudwell Pumps
Air Scour Blower Motor Unit

FUNCTION: Rapid sand filtration for suspended solids reduction and phosphorus removal

FUNCTIONAL DESCRIPTION:

Wastewater from the clarifier will be pumped to the filtration system. The packaged tertiary filter shall provide flow division, filtration, backwashing, and surge control of the wastewater. The influent wastewater shall enter the filter through a flow division chamber where the flow is equally divided to each of the two (2) 13.9 ft^2 dual media filter cells. Each filter cell shall contain both sand and anthracite to accomplish the sequential filtration and removal of suspended solids.

The wastewater percolates through the filter cells and then into a false bottom. From there it flows through a rise pipe, backwash pumps and into the clearwell. When the surface of the filter cells become covered with solids, the wastewater level begins to rise activating the air scouring and backwashing cycles. Air and clean backwash water are pumped through the filter from the bottom up to dislodge the retained solids. The media is then automatically air scoured and backwashed. The air scouring cycle shall provide for the agitation of the solids that have been collected in the upper portion of the media. The rising backwash water eventually overflows into the surge chamber where it is pumped back to the head of the anoxic tank.

The two filters are designed for peak flow conditions where 1 out of the 2 units is below the maximum loading of 5 gpm/ft^2. Under peak flow conditions, with only one unit in service the filtration rate is 4 gpm/ft^2. At design flow, with one unit in service the filtration rate is 2 gpm/ft^2.

After filtration, the wastewater flows by gravity to the Ultraviolet Disinfection System.

SYSTEM NAME: Ultraviolet Disinfection / Post Aeration

MAJOR COMPONENTS: Low pressure, high intensity UV Disinfection System
Aeration Tank
Fixed Course Bubble Diffused Aeration System

FUNCTION: Remove pathogens (UV)
Meet effluent DO limit of 7 mg/L (Post Aeration)

FUNCTIONAL DESCRIPTION:

The wastewater will flow by gravity from the filters to the ultraviolet (UV) disinfection system. The system is designed to provide a minimum dose at peak flow no less than 30,000 $\mu W\text{-}s/cm^2$.

The lamps have a 12,000 hour warranty and are driven by electronic ballasts. The lamps are cleaned with an automatic chemical/mechanical quartz sleeve cleaning system.

After disinfection, the wastewater flows by gravity to the 2,000 gallon post aeration tank. The tank is designed to provide 30 minutes hydraulic retention time at peak flow conditions with an air supply of 30 scfm/1000 gallon capacity. The Fixed Diffused Aeration System will provide 50 scfm air to increase the dissolved oxygen concentration in the wastewater to 6 to 7 mg/L prior to being discharged to the stream or wetland.

ATTACHMENT 4

TREATMENT LEVELS / DESIGN CALCULATIONS

HydroQual Engineers and Scientists, PC - Reiger Homes WasteWater Treatment Plant Design Data Sheet

Date: September 2008
Project REHO.001

HydroQual Engineers and Scientists, PC
1200 Mac Arthur Blvd
Mahwah, NJ 07430
Telephone (201) 529 - 5151
Fax: (201) 529 - 5728

1	***Influent Data (Combined Process + Sanitary Wastewater)***					
2						
3	Average Daily Flow Rate	40,000	gpd			
4	Maximum Daily Flow Rate	80,000	gpd	2.0	Peak Factor	
5						
6	BOD_5	200	mg/l	67	lbs/day	
7	TSS	225	mg/L	75	lbs/day	
8	Ammonia Nitrogen	25	mg/L	8	lbs/day	
9	Total Phosphorus	7	mg/L	2	lbs/day	
10	pH	6.5 - 8.5				
11						
12	***Discharge Permit Limits***					
13		**Intermittent Stream Effluent Limits**		**WAC Analysis Proposed Limits**		
14						
15	Flow	40,000	gpd	40,000	gpd	
16	BOD_5	5	mg/L	13	mg/L	
17	TSS	10	mg/L	13	mg/L	
18	Ammonia Nitrogen					
19	Summer	1.5	mg/L	2.8	mg/L	
20	Winter	2.2	mg/L	4.2	mg/L	
21	Total Phosphorus	0.5 - 1.0	mg/L	0.5	mg/L	(summer only)
22	Dissolved Oxygen	7.0	mg/L	5.0	mg/L	
23	Disinfection	< 200	FC/100 mL Geo Mean			
24						
25	***Design Limits***					
26						
27	BOD_5	5	mg/L	2	lbs/day	
28	TSS	10	mg/L	3	lbs/day	
29	Ammonia-Nitrogen	1	mg/L	0	lbs/day	
30						
31	***Site Conditions***					
32						
33	Site Elevation	500	Ft. MSL			
34	MLSS Temperature	10	°C (assumed- upstate NY)	50.0	°F	
35						
36	***Equalization Tank***					
37						
38	Number of Tanks	1				
39	Detention Time	0.25	Day at Design Flow			
40	Active Volume	10,000	gallons SELECTED	1337	ft^3	
41	Basin Wall Height	11	ft			
42	Surface Area	122	ft^2			
43	Tank Diameter	12	ft			
44						
45	*For rectangular*					
46	Tank Width	12.0	ft			
47	Tank Length	10.1	ft			

48	***Activated Sludge Biological Treatment***					
49						
50	***Design Conditions and Assumptions***					
51	Selected MLSS Concentration	3,000	mg/L	(3,000 - 6,000 mg/L acceptable for extended aeration)		
52	Food to Mass Ratio, F/M	0.08	mg BOD5/mg MLVSS-d	assuming MLVSS = 0.8MLSS (0.05 - 0.3 acceptable)		
53	Selected Solids Retention Time (SRT)	30	days	(20 - 30 days acceptable for extended aeration)		
54	Estimated kd	0.06	per day			
55	Net Sludge Yield	0.76	kg MLSS / kg BOD5			
56	Oxygen Coefficients					
57	kg O2/kg BOD5	1.28				
58	kg O2/kg NH3-N	4.6				
59	Transfer Factors					
60	alpha	0.85	typical for course bubble			
61	beta	0.95	typical for domestic wastewater			
62	Aeration Tank Detention Time	1	day			
63	DO mixed liquor	2	mg/L			
64	O2 Transfer Rate	30	kg O2/kw-d			
65						
66	**Aerobic Volume**					
67						
68	BOD5 Removed	29.5	kg/d			
69	Sludge Production	22.4	kg/d	49.4	lb/d	
70	System Mass	673	kg			
71						
72	Minimum Aerobic Reactor Volume	21,171	gallons	30000	gallons	SELECTED
73	Side Water Depth	11	ft			
74	Tank width	12	ft			
75	Aerobic Tank Length	30	ft			
76						
77	**Anoxic Volume**					
78						
79	Design Detention Time	6	hours			
80	Anoxic Reactor Volume	10000	gallons			
81	Side Water Depth	11	ft			
82	Tank width	12	ft			
83	Aerobic Tank Length	10	ft			
84						
85	Total Aerobic + Anoxic Volume	40000	gallons	40,000	gallons	SELECTED
86	Total Length	41	ft			
87						
88	Check HRT	1.00	day	OK		
89						
90	**Aeration**					
91	Estimate TKNinfluent	40.0	mg/L			
92	Estimate TKNeffluent	9.0	mg/L			
93	NH3 - Noxidized = TKNinfluent - Synthesis N - TKNeffluent					
94						
95	Synthesis N = 5% WAS of total daily sludge production					
96	Synthesis N (kg/d)	1.1	kg/d	2.5	lb/d	
97	Synthesis N (mg/L)	7.4	mg/L			
98	NH3 - Noxidized	23.6	mg/L			
99	NH3-N(kg/d)	3.6	kg/d			
100						
101	AOR= 1.28(kg O2/kg BOD5) x SynthesisN (kg BOD5/d) + 4.6(kg O2/kg NH3-N) x NH3-Noxidized					
102	AOR	17.4	kg O2/d			
103						
104	SAOR	28.2	kg O2/d			
105						
106						

107	***Clarifier***						
108							
109	Assume two sludge settling hoppers						
110	Top Dimension	10	ft	each			
111	Bottom Dimension	1	ft				
112	Surface Area of Sludge Settling Zone	200	ft^2				
113							
114	Average Overflow Rate	200	gpd/ft^2	Note: 200-600 gpd/ft2 acceptable for extended iteration			
115	Peak Overflow Rate	400	gpd/ft^2				
116							
117	***Aerobic Digeter***						
118							
119	Biological WAS to Digester	49.4	lb/d				
120	Estimated WAS VSS	15,000	mg/L				
121	Estimated VS Reduction in Digester	34	%				
122							
123	WAS Sludge Flow	260.4	gpd				
124	Required Digester Storage	35.0	days				
125							
126	Volume Required	9,115	gal		10000	gallons	SELECTED
127	Side Water Depth	11	ft				
128	Tank width	12	ft				
129	Aerobic Tank Length	10	ft				
130							
131	***Tertiary Filtration***						
132							
133	Package Filter Cell Area	13.9	ft^2				
134	Average Loading - 1 unit operating	2.00	gpm/ft^2				
135	Average Loading - 2 units operating	1.00	gpm/ft^2				
136							
137	Peak Loading - 1 unit operating	4.00	gpm/ft^2				
138	Peak Loading - 2 units operating	2.00	gpm/ft^2				
139							
140	* Only 1 unit required for average and peak flow conditions (less than 5 gpm/ft^2)						
141							
142	***Post Aeration***						
143							
144	Required HRT at peak flow	30	minutes				
145	Tank Volume	1,667	gallons		223	ft^3	
146	Tank Depth	11.0	ft				
147	Tank Area	20	ft^2				
148	Tank Diameter	5.1	ft				
149	Air Supply Requirements	30	scfm/1000 gallons capacity at peak flow				
150	Total Air Required	50	scfm				
151							

ATTACHMENT 3

FUNCTIONAL SYSTEM DESCRIPTIONS

SYSTEM NAME: Sanitary Wastewater Pump Station

MAJOR COMPONENTS: Pump Station Pit, Grinder Pumps, Level Controls

FUNCTION: Provide the necessary lift to move sanitary wastewater from the sanitary wastewater pump station to the inlet of the equalization tank. The grinder pumps will also provide comminution of solids, rags and stringy material commonly encountered in sanitary wastewaters that would otherwise foul pumps and downstream equipment.

FUNCTIONAL DESCRIPTION:

Sanitary wastewater flows to the sanitary pump station by gravity through the sanitary wastewater collection system. The sanitary pump station duplex grinder pumps lift the wastewater accumulated in the sanitary pump station pit through the force main to the inlet of the equalization tank. The pump is controlled by four (4) level switches located in the pump station pit. A low-low level switch turns the pump off during pumping operations as the water level in the pump station drops back below the low-low set point. The low level switch turns the lead pump on as the wastewater level rises in the pump station pit. The high level switch activates the lag pump while the high-high level switch sends sounds an audible alarm and dial out as needed. The average daily sanitary flow is 28 gpm and the pump will be sized to accommodate peak flows while preventing short cycling. The pumps will be run in a lead-lag mode with an alternating relay to change the lead and lag pumps after each pumping cycle.

Appendix M

Cultural Resource Study
&
Phase 2 Archaeological Investigation

PHASE 1A LITERATURE REVIEW & SENSITIVITY ANALYSIS & PHASE 1B ARCHAEOLOGICAL FIELD RECONNAISSANCE SURVEY

CRAIGVILLE ROAD SITE

Craigville Road & Hasbrouck Road
Town of Goshen.
Orange County, New York

Prepared For:

Rieger Homes
6 Old North Plank Road
Newburgh, New York 12550

Prepared By:

CITY/SCAPE: Cultural Resource Consultants
166 Hillair Circle
White Plains, New York 10605

September 2007

Management Summary

SHPO Project Review Number (if available):

Involved State and Federal Agencies (DEC, CORPS, FHWA, etc):

Phase of Survey: Phase 1A Literature Review & Sensitivity Analysis and Phase 1B Field Reconnaissance Survey

Location Information:

Location: Craigville Road & Hasbrouck Road

Minor Civil Division: Town of Goshen

County: Orange

Survey Area (Metric & English)

Length: 1977.1 m (6487')

Width: 731.09 m(2398')

Depth (when appropriate):

Number of Acres Surveyed: 60.9 hectares (150.49 acres)

Number of Square Meters & Feet Excavated (Phase II, Phase III only):

Percentage of the Site Excavated (Phase II, Phase III only):

USGS 7.5 Minute Quadrangle Map: Goshen

Archaeological Survey Overview

Number & Interval of Shovel Tests: 2831 @ 50' (15.24m)and 839 @ 5'(1.5m) & 25'(7.5m) intervals

Number & Size of Units:

Width of Plowed Strips:

Surface Survey Transect Interval:

Results of Archaeological Survey

Number & name of prehistoric sites identified: 0

Number & name of historic sites identified: 5

Number & name of sites recommended for additional work: 2

Results of Architectural Survey

Number of buildings/structures/cemeteries within project area: 0

Number of buildings/structures/cemeteries adjacent to project area: N/A

Number of previously determined NR listed or eligible buildings/structures/cemeteries/districts: N/A

Number of identified eligible buildings/structures/cemeteries/districts:N/A

Report Author (s): Stephanie Roberg-Lopez M.A., R.P.A. Gail T. Guillet and Beth Selig

Date of Report: September 2007

CRAIGVILLE ROAD SITE

Craigville Road & Harbrouck Road
Town of Goshen. Orange County, New York

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Craigville Road Site

Craigville Road & Hasbrouck Road

Town of Goshen, Orange County, New York

Introduction

The following report presents the results of a Phase 1A Literature Review and Sensitivity Analysis and Phase 1B Archaeological Field Reconnaissance Survey of the *Craigville Road* site for Rieger Homes, Inc. by CITY/SCAPE: Cultural Resource Consultants. Stephanie Roberg-Lopez, MA, RPA was the Principal Investigator. Stephanie Roberg-Lopez and Gail T. Guillet made the site visits. Beth Selig wrote the report under Stephanie Roberg-Lopez's supervision. Kim Croshier completed the site file and map research, and gathered the census and agricultural census data for the Youngs' family. Crew chiefs for the project were Leah Redding and Gregory Korosec. Field technicians included Ron Babcock, Samantha Browne, Michael Francesa, and Jeanette LeClair. Susan DeLeonardo completed the laboratory work, analyzed the historic artifacts, and created the data base. Photographs were taken by Gail T. Guillet, Beth Selig and Leah Redding.

The Phase 1 work was performed in accordance with the requirements of the State Environmental Quality Review Act (SEQRA) 6NYCRR, part 617 of the New York State Environmental Conservation Law and to meet the standards of the New York Archaeological Council (1994), as well as relevant federal standards (36 CFR 61).

Project Description

The proposed project area is located in the Town of Goshen, Orange County, New York. (Map 1-2 & Fig. 1 & 3) The property is an approximately ±354.01 acre (143.26 hectares) property located on the north and south side of Craigville Road, west of the intersection with Hasbrouck Road. (Photo 1 & 2) For the purposes of this discussion, the property is made up of three discrete parcels: the first and largest is south of Craigville Road, the second is north of Craigville Road between Hasbrouck Road and Ridge Road (referred to on the USGS Topo map as Philcox Road), and the third, which begins east of the small pond located on the northeast corner of the intersection of Craigville Road and Ridge, is a rectangular parcel that extends approximately 4000' along Craigville Road to agricultural fields located outside the project area. For the purposes of the Phase 1A the Area of Potential Effect (APE) will include the entirety of the project area; however, the proposed development will impact ±150.49 acres (60.9 hectares) of the ±354.01 acres (143.26 hectares), and, with the exception of wells and a nature trail on the north side of Craigville Road, will be limited to the south side of the highway. The remaining lands and wetlands will be conserved as open space. At the present time, the project area has access points from Craigville, Hasbrouck and Ridge Roads.

The project is bounded along its southwestern border by residences off of Pleasant Ridge Road. (Photo 36) To the southeast is the Blessed Sacrament Academy, located on Broadlea Road. (Photo 35) The remaining borders of the project area are comprised of farm fields and undeveloped land. (Photo 61) Formerly there was a road system that provided access to the interior of the Craigville Road site; this road system now exists as a series of overgrown

farm lanes, but is clearly depicted on the USGS topo map and the historic maps of the area (to be discusses below). (Photo 6, 53 & Map 1, 3-6) The first of these is a north-south farm road that was previously part of Broadlea Road, now closed with mounds of earth, which formerly extended north to the Ridge Road- Craigville Road intersection. In the center of the southern parcel of the *Craigville Road* site is another farm road that is perpendicular to the north-south road and runs eastward across the site. That road, now truncated, terminates in open agricultural fields (Photo 61), but formerly intersected Johnson Road east of the project area.

Today the majority of the project area is lightly forested, and based on the small diameter of the trees, the reforestation is relatively recent. (Photo 5, 7, 52) The wetlands within the project area, of which there are several, are characterized by moss and lichen covered rock and roots, as well as standing water. (Photo 4) Several small drainages flow into the large wetlands located within the *Craigville Road* site boundaries. (Photo 3, 68) There is a small pond located southeast an area referred to in this report as Historic Complex 1 (H1). (Photo 15)

Man-made features within the project area consist of stone walls that border the old farm roads that cross the *Craigville Road* site. (Photo 62) A series of stone foundations and associated wells, referred to in the Phase 1B report as Historic Complex 1 (H1) and Historic Complex 2 (H2) exist within the central portion of the project area south of Craigville Road. (Photo 8-14 & 22-31) These foundations represent two historic complexes owned by the Youngs family that will be discussed in more detail below. Additionally, a number of historic features, two of which are foundations, were identified in the course of the Phase 1A and Phase 1B surveys of the property. With the exception of Historic Complex 1 (H1), Historic Complex 2 (H2) and the historic foundation identified in the Phase 1B report as H5/F3, all of the historic features are located outside the Area of Potential Effect (APE).

The proposed development plan for the *Craigville Road* site is to create 130 single-family housing lots, storm water retention basins, trails, a waste water treatment easement, a scenic road corridor, infrastructure in the form of sewers and wells, and access roads. The proposed roads will follow the paths of the abandoned roads that traverse the project area, with the addition of a cul-de-sac in the eastern portion of the southern part of the project area. With the exception of several wells and a nature trail, the proposed development will take place on that portion of the site on the south side of Craigville Road. The nature trail, which is proposed on the northern portion of the site, will not involve ground disturbance of any kind.

Environmental Information

The topography of the site is characterized by an undulating ground surface. Slopes in excess of 15% are located adjacent to low lying wetland areas and southwest of Historic Complex 2 (H2). (Photo 5) Elevations on the site range from 440 feet (134.1m) Above Mean Sea Level (AMSL) in the northwest portion of the project area, to 660 feet (201.2 m) AMSL in the southwest portion of the *Craigville Road* site. Drainage within the site boundaries is into a series of wetlands located on the northern and southern sides of Craigville Road. It is possible that the wetlands along Craigville Road have been altered as the result of the re-construction of the Craigville Road, which is an historic highway between Goshen, Craigville and Chester. The rebuilding of the highway has raised portions of the road above the adjacent wetland areas. Two streams are located within the project area, the first flows parallel to the northern border of the southern parcel on Craigville Road, while the other flows south across the central portion of the project area. (Photo 3) There is at least one additional stream that flows from the southwest to join the stream along the northern boundary of the southern parcel behind the school house. Small pockets areas of percolating water at the ground surface were encountered throughout the project area. These pockets of water, as well as the

numerous wells associated with H1 and H2, attest to the presence of abundant water on the site. (Photo 13, 15, 31, 43, 64)

Looking at the larger environmental picture, Black Meadow Creek and the Otter Kill, both located west of the project area, flow into Moodna Creek, a tributary of the Hudson River. The Wallkill River, located 7 miles (11.2 k) west of the *Craigville Road* site, flows through Orange and Ulster County into the Hudson River at Rondout, south of Kingston. Projects excavated by CITY/SCAPE: Cultural Resource Consultants along the Wallkill River and Otter Kill suggest that Native American peoples used these routes to access the interior and, no doubt, utilized their resources as well. There are, as noted above, streams and wetlands within the project area that could have served as magnets for prehistoric peoples.

The project area is within the Ridge and Valley physiographic province, which extends from Lake Champlain to Alabama. The portion of the Ridge and Valley Province in which the project area is located is specifically identified as the Great Valley, which is bordered on the east by the New England Upland and on the west by Precambrian Highland (Schuberth, 1968: 16). The project area is located in an area of the Normanskill formation, which contains shale, argillite, and siltstone. At one time (at the end of the last period of glaciation) the project area was within the boundaries of a large pro-glacial lake, the last remnants of which are still evident in the "black dirt" agricultural area south of the Village of Goshen.

The characteristics of the soils within the project area has an important impact on the potential for the presence of cultural material, since the types of soils present affect the ability of an area to support human populations. The *Orange County Soil Survey* indicates that the majority of the site is Mardin gravelly silt loam (MdC, MdB & MdD), which has an impervious frangipan layer that affects the absorbs ion of water on the site, and Erie gravelly silt loam (ErA & ErB). These soils range from somewhat poorly drained to moderately well drained with slopes from 0 to 15% . (See Appendix C: Fig. 1: Soil Map & Soil Description)

Documentary Research

An examination of the archaeological site maps housed at Peebles Island indicates that there are no prehistoric sites within the project area or within a mile (1.6 km) radius of the site, nor are there any documented historic resources within a mile (1.6 km) radius. There are numerous prehistoric sites located in the general area, specifically along the Otter Kill, so the paucity of nearby prehistoric sites may reflect the lack of professional surveys in the area, rather than the lack of prehistoric sites.

Documentary research indicates that there are several Map Documented Structures (MDS) located within the boundaries of the project area. These include:

- a dwelling (owner not identified) on the northeast side of the intersection of Craigville Road and Hasbrouck Road shown on 1851 Sidney map (Map 3);
- a saw mill on the north side of Craigville Road west of Ridge Road shown on 1851 Sidney map (Map 3);
- a blacksmith shop on the southwest corner of the intersection of the north-south farm road (Broadlea Road) and Craigville Road shown on 1851 Sidney map (Map 3);

- a dwelling owned by H[enry] and O[liver] Youngs on the south side of the east-west interior farm road that is identified as Historic Complex 2 (H2)on 1851 Sidney map (Map 3);
- a dwelling owned by Mrs. L. Young[s] on the south side of the east-west interior farm road southeast of the H. & O. Youngs house seen on 1851 Sidney map (Map 3);
- a dwelling owned by M. Brennan on the southeast corner of the intersection of Broadlea Road and Craigville Road seen on 1875 Beers map (Map 4);
- a school house (still standing) located on south side of Craigville Road west of intersection of Broadlea Road and Craigville Road seen on 1875 Beers map (Map 4);
- and a dwelling owned by J. Boettmer located west of the school house on south side of Craigville Road seen on 1875 Beers map (Map 4);

The initial site visit and Phase 1B survey of the property confirm the presence of these resources, as well as one additional foundation located on the east side of the access road to Historic Complex 1 (H1) that is not included on the historic maps. None of the resources on the Craigville Road site are currently listed or identified as eligible for listing on the National Register of Historic Places; however, it is possible that historic sites within the project area may be eligible for such listing. The initial site visit identified no standing structures in the vicinity of the project area that are eligible for National Register listing.

Prehistoric and Historic Sites Located in Vicinity of Project Area

The archaeological site files formerly maintained by the New York State Museum (NYSM) are now located at the Peebles Island OPRHP office. The OPRHP Archaeological Site Files include both historic and prehistoric sites; an examination of these files indicates that, while there may be no sites within a one mile (1.6 km) radius, there are numerous sites within the general vicinity of the project area. These sites, presented in tabular form below, are included to provide some indication of the type and time period of sites identified in the vicinity of the *Craigville Road* site. The prehistoric sites identified range in date from the Paleo-Indian (c. 14,000-10,000 BP) to the Transitional Period (c. 3800-3000 BP), and include at least one mastodon find (c. 10,000 BP). There are several sites among those listed that are not clearly identified in terms of their date range that may extend the time period into the Woodland Period (c. 800 BC – AD 1500). Among the site types reported are camp sites and a rockshelter. Other types of sites may also be present, but the information available in the OPRHP and NYSM site files was not sufficiently complete to permit them to be designated other than as a “prehistoric site”.

Table 1: Prehistoric Sites within 2 Miles (3.2 km) Radius

OPRHP Site No.	Town	Distance from Project in feet/meters	Time Period	Site Type
A071.06.0003	Goshen	<9240’ (2816.8 m)	Probable Paleo	Prehistoric
A071.06.0004	Goshen	<7920’ (2414.4 m)	Paleo-Archaic	Prehistoric

OPRHP Site No.	Town	Distance from Project in feet/meters	Time Period	Site Type
A071.06.000123	Goshen	<10560' (3219.2 m)	Unknown	Prehistoric(Biface)
A071.06.000121	Goshen	<10560' (3219.2 m)	Late Archaic	Prehistoric (Poplar Island c. 6000-4000 BP)
A071.06.000122	Goshen	<10560' (3219.2 m)	Late Archaic	Prehistoric
A071.06.0020	Goshen	<6600' (2012 m)	c. 10,000 BP	Mastodon
A071.08.0008	Hamptonburgh	<10560' (3219.2 m)	Archaic/ Transitional	Prehistoric
A071.08.0009	Hamptonburgh	<9240' (2816.8 m)	Archaic	Prehistoric
A071.01.0023	Blooming Grove	<10560' (3219.2 m)	Unknown	Rockshelter
A071.51.0004	Chester	<7920' (2414.4 m)	Unknown	Prehistoric
A071.51.0013	Chester	<9240' (2816.8 m)	Unknown	Prehistoric camp site
A071.02.0064	Chester	<9240' (2816.8 m)	Unknown	Prehistoric (debitage)

Two of the reported sites, located southwest of the project area, along the Otter Kill, yielded Middle to Late Archaic Poplar Island projectile points (c. 6000-4000 BP) and biface fragments. To the north of the project area, five sites, all associated with an extensive wetland, are reported to date from the Paleo-Indian through the Archaic period. We have learned through repeated surveys that wetland areas, particularly those overlooked by level terraces and gently sloped land, were regularly utilized by prehistoric peoples collecting and processing wetland resources. Among these resources would have been the animals drawn to the wetland to drink, such as deer, the birds that used wetlands as a refuge, such as ducks, geese and other water fowl, amphibians that inhabit wetlands, such as frogs, and a variety of insects. Prehistoric peoples also collected and processed the starchy roots of wetland vegetation, including cattail and water lilies. These apparently served much the same purpose in the diet of prehistoric peoples in the Northeast as potatoes did for those of South America (CITY/SCAPE 2001). The reeds and shafts of phragmites were utilized in the construction of wigwams. Another possible attraction of wetland areas could have been the presence of beavers; a recent article in *Current Archaeology* discussed the exploitation of beaver by prehistoric peoples in Britain, concluding that the modification of the landscape by beavers could have created wetlands and ponds that attracted early hunter-gathers looking for game, wildfowl and fish (*Current Archaeology* 2007: 20-21).

Looking specifically at the *Craigville Road* site, the higher, drier and more level areas could have been attractive to prehistoric peoples harvesting and processing wetland resources. They types of sites might include short term or special use camp sites, but the large expanses of somewhat poorly to poorly drained soils would have limited the potential for larger, long term habitation sites.

With respect to the reported historic sites, site file research revealed the presence of numerous historic sites located in the Village of Chester and the hamlet of Craigville to the south. A selection of these sites are presented in tabular form below:

Historic Sites within 2 Miles (3.2 km) Radius				
OPRHP Site No.	**Site Name**	**Distance from Project in feet/meters**	**Time Period**	**Site Type**
A071.01.0083	Craig House	<9240' (2816.8 m)	c. 1750-1770	Residential
A071.01.0018	Craig Mill Site	<7920' (2414.4 m)	c. 1790	Foundation
A071.01.0017	HO Oats Site	<7920' (2414.4 m)	Unknown	Oatmeal factory
A071.51.0011	D[istrict] School Site	<10560' (3219.2 m)	Prior to 1851	Probable school
A071.02.000082	Yelverton-Tuthill	<5280' (1609.6 m)	c. 1850's	Foundation
A071.51.0010	Saw Mill	<10560' (3219.2 m)	c. 1859	Mill ruins
A071.51.0009	Plaster Mill	<10560' (3219.2 m)	c. 1859	Mill ruins
A071.51.0008	Denton Mill	<10560' (3219.2 m)	Prior to 1785	Standing ruins
A071.51.0007	Chester Mill	<10560' (3219.2 m)	Prior to 1785	Standing ruins
A071.51.0012	Foundation	<7920' (2414.4 m)	Unknown	Standing ruins

As with the prehistoric sites, the sites listed above are all are located more than a mile (1.6 k) from the project area, but are presented here to provide, in particular, an indication of the types of industrial activity that took place in the general vicinity of the project area. None of these sites will be impacted by the proposed development of the Craigville Road site.

Historic Resources Associated with Project Area

The material presented below is not intended to be an exhaustive examination of the history of the site, but is, rather, an exercise to locate and identify structures either on or adjacent to the project area that may be of historic significance. For this purpose, a group of historic maps available at the State Museum in Albany have provided the basis for the discussion. Although earlier maps exist, they do not, in most cases, identify points other than major highways or important individual structures, such as taverns and churches. They do not, in general, include the names of property owners.

The earliest map consulted was the J. C. Sidney's 1851 *Map of Orange County, New York.* (Map 3) As noted above, for the purposes of this discussion the project area is divided into three parcels, one on the south and two on the north side of Craigville Road; those on the north side of Craigville Road are divided by Ridge Road. The northwestern parcel, bounded to the west and east by Hasbrouck and Ridge Roads, was the location of a dwelling situated in the extreme southwestern corner of the parcel, and a saw mill located on the north side of the stream that flows across the northern portion of the *Craigville Road* site. The ownership of the house and saw mill is not indicated, but it may have been owned by the Rumsey family, who occupied the lands to the north and east. On the northeast corner of Ridge Road and Craigville Road was a house owned by P[hineas]. Rumsey. This dwelling is located on a small outparcel and is not within the project area. On the south side of the highway, on the west side of

the intersection of a road that would in the 19th and early 20th century have been Broadlea Road, was a blacksmith shop. The ownership of the blacksmith shop is not indicated, but it is likely that its presence at this intersection was related to the saw mill. The interior farm road that ran east from Broadlea Road through the center of the *Craigville Road* site appears on the 1851 map to trend somewhat south of the current road. The majority of the project area south of Craigville Road, excepting perhaps the blacksmith shop site and the land associated with the property on which the Boettmer house was later built, was owned by the Youngs, who our research indicates had been long time residents of the area (S. J. Clarke Publishing Company 1931:193-194). Benjamin Thompson's *The History of Long Island* states that Henry Youngs came to Orange County in 1731 from Southold on Long Island, where his family had long resided. Henry Youngs married Abigail Horton, with whom he had a number of children, including Henry, who " . . . remained on the farm of his father at Goshen, and married Elizabeth, daughter of Capt. Phineas Rumsey. . ." (Thompson 1843:383). The 1825 New York State census includes a Henry Youngs. Among his children were Henry and Hiram, who were identified as successful merchants in New York City, while Oliver, his third son, reportedly stayed on the Craigville farm (Thompson 1843:383). Two dwellings are shown on the south side of the east-west interior road that intersected Broadlea Road, one occupied by H. & O. Youngs, and a second by Mrs. L. Young[s]. Assuming that the house of Mrs. L. Youngs was located south of the east-west interior road, that building does not appear on the subsequent maps, nor is there any dwelling located north of this road where the Henry Youngs house was later shown. The Federal census for 1850 includes an Oliver Young, age 42, who is listed as a farmer, but no listing for a Mrs. L. Young was found (www.ancestry.com). To the south of the project area, a rail line, operated by the Erie Railroad, connected the Village of Goshen, which is east of the project area, to the hamlet of Craigville to the west of the project area, in the Town of Blooming Grove. Black Meadow Creek is south of the project area, flowing into the Otter Kill, a significant stream draining through the wetland north of the *Craigville Road* site. There is an unnamed tributary of the Otter Kill that flows from just north of the project area, through the western corner of the parcel east of Ridge Road, into the parcel on the south side of the highway, and from there along the northern boundary of the southern parcel, before flowing under Craigville Road between Ridge and Hasbrouck Roads. In 1851 this stream, which today contains little water, was sufficient to power the saw mill located on the northern portion of the *Craigville Road* site.

In 1875, when F. W. Beers' surveyed the area for the *County Atlas of Orange, New York*, H. Youngs owned 253 acres on the south side of Craigville Road. (Map 4) There are two dwellings on the site, but the house occupied by Mrs. L. Youngs is no longer shown on the south side of the east-west interior farm road. There is, however, a house owned by H. Youngs located on the north side of that roadway that is identified in this report as Historic Complex 1 (H1). The other dwelling, also owned by H. Youngs, is still on the south side of the road; this is the area identified as Historic Complex 2 (H2). At the southeast corner of the intersection of the north-south farm road was a dwelling not seen on the 1851 map that was occupied by M. Brennan. Based on the map, it would have been on the east side of Broadlea Road east of the blacksmith shop, however, neither the blacksmith shop nor the saw mill are shown on the 1875 map. West of the former blacksmith shop site, also on the south side of the highway, was the district school (Photo 49-50) and further along Craigville Road a dwelling occupied by J. Boettmer. Both of these structures would be within the current boundaries of the project area. The dwelling owned by P. Rumsey in 1851 is no longer shown at the intersection of Craigville Road and Ridge Road, and the land in that area on the north side of Craigville Road appears to be owned by D. Murray and a Mrs. Murray. Outside the southwestern corner of the project area, I. H Howell owned a farm containing 183 acres on the west side of Broadlea Road, while W. H. & G Farley owned 176 acres on the east side of Broadlea Road adjacent to the southern boundary of the project area. At the intersection of Broadlea Road and Knoell Road, south of the project area, was a "milk station" or milk stop on the railroad. Milk stops were established along the railroad to pick up milk from the local farmers, who shipped their milk either to creameries, located in centers like Chester, or directly to the metropolitan areas, including New

York City. To the east of the project area, in the town of Blooming Grove, the hamlet of Craigsville [*sic*] is the closest center of industry. The hamlet contained a post office, a saw and grist mill, and a freight depot. To the south was the village of Chester, by 1875 an important village and railroad junction, while to the west was the county seat, Goshen.

In the same year, the New York State Agricultural Census indicates that Henry Youngs owned 265 acres, of which 50 acres were improved and 50 acres were identified as unimproved. In that year the farm was valued at $25,000.00, with stock work $3,500.00. There were 65 acres of plowed/pasture land, and 200 acres of meadow that produced 200 tons of hay. No grain or root crops were grown at that time, but the farm had 100 apples trees that produced 400 bushels of apples and 5 barrels of cider. The farm still owned oxen in 1875, as well as 2 horses. The dairy herd consisted of 20 cows. The sale of eggs netted the farm $20.00, suggesting that in 1875 the raising of chicken did not represent a major component of the farm strategy. At this point, the farm was owned by the Henry Youngs who had been a dry goods manufacturer in Georgia and, prior to his retirement to Orange County upon the death of his uncle, also Henry Youngs, in 1869, the proprietor of the largest produce brokerage business in New York City County (The S. J. Clarke Publishing Company 1931: 193-194 & Chapman Publishing Co. 1895:1534-1535). Upon the death of this Henry Youngs, the farm was inherited by his son, also Henry Youngs, who became a physician in Goshen, and who was the sixth Henry Youngs to own the farm (Chapman Publishing Co. 1895:1534-1535).

During the tenure of Henry Youngs, the successful merchant, the farm increased in size from 265 acres to 315 acres, and the improved land increased from 50 acres to 215 acres. This is a significant increase and probably reflects the fact that the produce broker from New York City had substantial financial resources, compared to those of his uncle. In 1880 the Agricultural Census indicates that the farm now had 153 acres of plowed land, whereas none had been plowed in 1875. There were 162 acres in pasture, 153 acres in meadow that produced 150 tons of hay, 5 acres sown to oats that produced 200 bushels, 14 acres that produced 400 bushels of corn, and 1 acre planted with potatoes that produced 100 bushels of that crop. The 1880 census does not report any apple trees on the property, and it is likely that apples were no longer grown as a crop. The farm still maintained a herd of 20 cows, the same number as earlier, which produced 3650 gallons of milk, but it also had 150 chickens that produced 800 eggs for sale. The farm now had eight horses, which would have been used to pull farm equipment, but may also have included carriage horses. Under the management of Henry Youngs and his father, the farm, called "Youngstead" on the 1903 map, had become "one of the best dairy farms in the township" (Chapman 1895:1534). As described in the biographical sketch:

> *A visitor to the estate can see the work of three generations of men distinctly marked out and added one to the other, the work of the three last Henry Youngses, while the modern machinery and the finishing touches are plainly the work of the last, our subject . . . [who] was born in Brooklyn, N. Y. in 1866, and was the eldest member and only son of the family of Henry and Annie (Jackson) Youngs. . . . He has resided on his present beautiful farm for the past ten years, and in the carrying on of his labors is meeting with untold success. His place, besides being one of the largest in the township, ranks among the best in point of improvement* (Chapman 1895:1534).

By 1903, when J. M. Lathrop produced the *Atlas of Orange County, New York*, the Youngs' farm is reported to contain 298 acres. This is less than the 315 acres reported in the biographical sketch; it may be a mistake or, perhaps, the farm was decreased in size by the sale of a small part of the land. Like many of the farms in the area at that time, it had acquired a name, in this case "Youngstead". It is not clear whether the name was a way to identify the diary products from the farm, or a reflection of the fact that Henry Youngs considered himself a

"gentleman farmer". If that is the case, then we can see the naming of the farm as part of the "country estate" phenomenon that developed in the late 19th and early 20th century throughout the Northeast. The map indicates that Broadlea Road was still an established highway, connecting Craigville Road to the old road to Chester, and that the east-west farm road intersected present-day Johnson Road near the farm owned by W. S. Johnson. Johnson Road, which intercepts Route 94, provided direct access to Chester, less than five miles to the southeast. A new road that provided access to Historic Complex 1 had been established; this road intersected the east-west farm road. The two residences seen on the 1875 map are shown, the one on the north and the other on the south side of the east-west interior farm road. At the intersection of the north-south farm road was the district school and the Brennan dwelling, which was now owned Henry Youngs ("H. Y." on this map). East of the school was the Boettmer house, now owned by Mrs. Jonathan Boettmer. That property contained 45 acres. Near the southern boundary of the project area, a cemetery had been established; this cemetery is entirely outside the boundaries of the project area. (Photo 33-34) The 1903 map shows a number of dairy farms in the vicinity, including "Fairmont Dairy Farm" and "Maple Valley Dairy Farm", an indication that this was the primary occupation of the families in the area. On the Chester Road at Otterkill was the Otter Kill Creamery, another indication of the importance of dairying to the community.

The 1908 USGS topographical map of the project area shows five structures within the *Craigville Road* site boundaries. (Map 6) These structures are in the same locations as those depicted on the 1903 Lathrop map, and undoubtedly represent the same buildings. (Map 5) The road system within the project area is the same as that seen on the earlier maps, except that the interior east-west road is now shown as a dotted line, an indication that it was now a farm road or farm lane, rather than a part of the local highway network. Another difference is that the farm road from Craigville Road east of the extension of Broadlea Road appears to provide access to the farm on the south side of the interior roadway, rather than to the north side, as seen on the 1903 and earlier maps. This map also shows a small stream that flows from the pond on the south side of the interior road, which flows northwest through the southern parcel, crossing under Craigville Road into the northwestern parcel east of Hasbrouck Road. The stream, like the stream shown on the earlier maps, flows into the Otter Kill northwest of the project area. Like the 1903 map, no structures of any kind are shown north of Craigville Road. The cemetery indicated on the 1903 map is also shown on the 1908 topo; again, it appears to be completely outside the southern boundary of the property.

The New York State Census for 1915 indicates that Dr. Henry Youngs lived on Craigville Road, with his sisters, Edith and Emma, Nora Keoth, a domestic, Frank Barty, identified as a farm hand, Rose, his wife, who also helped in the house, and Al Schaffer, another farm hand. The census data does not tell us if the help lived in the main house, which was on the north side of the interior road and is identified in our report at Historic Complex 1 (H1), or if, perhaps, they lived on Historic Complex 2 (H2) in the interior of the site. In 1915 Dr. Henry Youngs was 48 years of age; he is identified as a physician in Goshen. His sister, Edith, was 47; she is identified as his companion. Emma, the younger of the two sisters, was 40 years old. There were two other siblings of Henry Youngs, a sister Anne Youngs Hawkins, and Maida, wife of Stewart Roe, who had died in 1913, leaving two small children.

The current topographical map (Map 1) shows only one structure within the project area. This would be the schoolhouse. There is an indication of a foundation in the same location as the dwelling on the south side of the interior east-west farm road, but no indication of the substantial foundation on the north side of that roadway. The roadway system has changed, with the north-south road now shown as a farm road. The road from Craigville Road east of Ridge Road now appears to access the area of dwelling on the north side of the interior east-west roadway, in contrast to that shown on the 1903 map, which accessed the dwelling on the south side of the road. This map shows the pond on the site, but has the drainage from that pond flow south, rather than north, as shown on the 1908 topo

map. The stream that flows from the north, east of Ridge Road, through the northern part of the southern parcel of the *Craigville Road* site is not shown; however, there is a stream shown in the northwestern parcel that flows northwest into the large wetland that borders the Otter Kill. The reason for the apparent confusion concerning the drainage on the site is not immediately evident, and it is possible that the rebuilding of Craigville Road has altered the drainage patterns on and near the site. The cemetery on the east side of Broadlea Road south of the project area boundaries is no longer shown, but photos taken in 2006-7 indicate that it still exists. It may be that the cemetery was no longer in use, which could explain its absence from the map.

Discussion of the Structures Located within the Project Area Boundaries

As a result of the cartographic research, a total of eight map documented structures (MDS) were identified within the project area boundaries. Three of these structures, the dwelling at the intersection of Craigville Road and Hasbrouck Road, the blacksmith shop, and the saw mill, appear on the 1851 map, but are not depicted on subsequent maps. The 1875 map indicates that between 1851 and that year, two dwellings, one occupied by M. Brennan and the other by J. Boettmer, and the district school had been built on the south side of Craigville Road. All of these buildings are within the boundaries of the project area. Of these structures, all of which were standing in 1903, only the schoolhouse remains. (Photo 49-50) Our initial examination of the project area did not identify any structural remains on the southeast corner of the intersection of Craigville and Ridge Roads, where in 1851 the Phineas Rumsey dwelling had stood. This building, if it still existed, would be outside the project area; today it is the location of a small pond. The initial walkover of the site and subsequent site visits identified the location of the blacksmith shop, the school house (Photo 49-50), Boettmer house, and the possible location of a feature associated with the saw mill. Evidence of the Brennan house was not identified during the walkovers of the site, nor during the Phase 1B field survey.

The map research identified two dwellings located in the interior of the project area, both of which would be dwellings of the Youngs family. Maps from the 19th century generally included only dwellings, though exceptions to the rule can be found. In the case of the *Craigville Road* site, the initial walkover of the site identified the foundations of the two Youngs dwellings, but also significant remains of two farm complexes, including barns and outbuildings. The first of the farm sites, referred to as Historic Complex 1 (H1), located on the north side of the interior roadway, included, in addition to the house foundation (H1/F4) (Photo 10-12), the foundation of a barn (H1/F2) (Photo 8-9), a dilapidated outbuilding now near collapse (Photo 11), a large foundation of unknown use (H1/F1), an associated berm of cinder and ash filled with ceramics and glass (Photo 18-21), a small foundation south of the farm buildings (H1/F3) (Photo 14), a windmill or wind driven pump associated with a stone lined well (H1/F5) (Photo 17), and the stone foundation of a small structure on the pond that might have been the foundation of a springhouse (H1/F6) (Photo 16). In addition to the foundations, several open wells were observed in the northern farm complex (Photo 13 & 31). The number and scale of the foundations were such that the possibility that the site had an industrial use was considered, but research indicates that the owners of the property were engaged in a large scale dairy operation.

The second complex, Historic Complex 2 (H2), is located on the north and south side of the interior east-west farm road a short distance southwest of the H1. The foundations identified on the south side of the road appear to be related to the house foundation (H2/F3) (Photo 24), including what was initially thought to be a root cellar (H2/F4) and several outbuildings of unknown use (H2/F1, H2/F2 & H2/F5) (Photo 30, 29, 22-23) The buildings on the north side of the road appear to be related to farming activities, and include a large barn (H2/F7) (Photo 25), a

substantial stone structure that served as the base of the building that stood on top of it (Photo 26-27), and a structure south of the barn foundation that has a concrete base and appears more recent than the other foundations observed on the site (H2/F6) (Photo 28). As was the case on the Historic Complex 1 (H1) north of the interior road, there were a number of wells associated with this farm complex (Photo 31).

Additional Research Undertaken

As part of the research, surveys completed in the general area were consulted. Three professional surveys were conducted within a two mile (3.2 km) radius of the *Craigville Site* project area. A Phase I Cultural Resource Survey, located 1¼ miles (2 k) south of the project area, in the Village of Chester was undertaken by BTK Associates in 2001; the field team surveyed 18.4 acres (7.44 hectares), but did not identify any cultural material (BTK 2001). A second Phase I survey, located 1½ miles (2.4 km), southwest of the project area was undertaken by Hartgen Archeological Associates, Inc., who tested 217 acres (87.8 hectares), and identified a small lithic assemblage consisting of two late archaic projectile points, one a Poplar Island (c. 6000-4000 BP), chert biface fragments, debitage and a core. No further work was recommended (Hartgen 1999). The third, undertaken by Columbia Heritage, Ltd., tested the Meadow Hill Subdivision site north of the village of Chester. Several pieces of chert debitage were recovered, but none were considered significant. These surveys are referenced in the bibliography.

Sensitivity Assessment and Site Prediction

Professional surveys and excavations in the Town of Goshen indicate the presence of numerous prehistoric sites in the general vicinity of the project area, including one site identified during the Phase 1A Report for Archeological Potential Sensitivity Assessment and Phase 1B Archeological Field Investigation for the Lone Oak/Arcadia Hill II Subdivision (Hartgen 2000). This site is located 1½ miles (2.4 km) southwest of the project area. Based on the presence of prehistoric sites in the general area, and taking the environmental factors into consideration, the potential of the *Craigville Road* site to contain prehistoric cultural resources is considered moderate. The environmental factors taken into consideration include:

- the presence of prehistoric sites in the general area in topography not dissimilar to that within the project area;
- the presence of streams on the site that could have provided potable water and fresh water resources;
- the presence of wetlands on and near the site that could have been a magnet for prehistoric peoples, who gathered these resources;
- and, the presence of level areas overlooking wetlands that could have been used for short-term habitation or special use camps.

Reducing the potential of the site to contain prehistoric resources is the areas of somewhat poorly and poorly drained soils within the project area.

With respect to the project area's historic sensitivity, the Phase 1A map research identified eight Map Documented Structures (MDS) within the project area. Several of these pre-date 1851, including the two located in the interior of the site that are identified in this report as Historic Complex 1 (H1) and Historic Complex 2 (H2). Both of these historic complexes will be impacted by the proposed project. Inspection of the ground surface revealed historic artifacts strewn across the surface of the Historic Complex 1 (H1) north of the east-west interior road; the majority of the artifacts observed were 20th century in date. It was not possible to examine the farm complex to the west (H2) with as much care, since at the time of the initial site visit the area was covered with vegetation that obscured the ground. On a subsequent visit, made in the early winter of 2006-7, artifacts, though fewer in number than on H1, were observed. It was during this site visit that the possible root cellar (H2/F4) and additional outbuildings on the south side of the road were noted.

In addition to these foundations, there were a number of map documented structures (MDS) located on the south side of Craigville Road along the highway. These include the school house (still standing), a blacksmith shop, and two dwellings, one owned by M. Brennan, the other by J. Boettmer. The school house, blacksmith shop and Brennan house location will not be impacted by the proposed development of the site; however, the entrance road at the northern end of the site will impact the J. Boettmer foundation and the area around it. In the mid-19th century, there was a saw mill located on the northern part of the site east of Hasbrouck Road. During the Phase 1B survey an historic feature that may be associated with the saw mill was identified. The 1851 map locates the saw mill on the north side of the stream that flowed through this part of the site, but does not show a mill pond associated with it. However, such a pond would have been necessary to provide water to the mill, and it appears that the location of the pond was identified during the Phase 1B survey. Directly opposite the J. Boettmer house foundation there is an earth and stone berm extending northeast from Craigville Road that has the appearance of a dam; behind the berm is a broad area that may have been the location of the pond. Below the dam is an area that was tested with four short transects, several of which yielded cultural material. The feature and the recovered material will be discussed in the Phase 1B report. No structure is shown on the north side of Craigville Road in this location, but it is considered possible that this feature is related to the saw mill seen on the 1851 map. This feature will not be impacted by the proposed project. During the initial site visit in the fall of 2006, the potential for there to be a cemetery on the site was suggested by two members of the Town of Goshen Planning Board, who happened to be visiting the site at the same time, but map research and a subsequent site visit indicate that the cemetery is located south of the project area, rather than within the boundaries of the site. (Photo 33-34).

Conclusions and Recommendations for Further Work

Based on the State Historic Preservation Office requirements (in effect as of May 30, 2005), which conform to those laid out in Section 106 of the National Historic Preservation Act and Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law, and the New York State Archaeological Council's Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State (The New York Archaeological Council 1994), it was the conclusion of CITY/SCAPE: Cultural Resource Consultants that a Phase 1B Archaeological Field Reconnaissance Survey of the *Craigville Road* site was warranted. Because of the potential sensitivity of the site for prehistoric cultural material, it was recommended that a Phase 1B Archaeological Field Reconnaissance Survey be undertaken on the higher, drier and more level areas within the Area of Potential Effect (APE). This would exclude wetlands and the areas of designated open space, neither of which will be impacted by the proposed development. While large portions of the site may have the potential to contain a prehistoric camp site of some type, it was also concluded that the historic foundations on the site required

investigation at the level of a Phase 1B survey. We recommended that before the Phase 1B testing begin that the historic foundations in the interior of the site (H1 and H2) be professionally surveyed to accurately locate all of the foundations. Once this had been done, these two areas would be subjected to close interval shovel testing in accordance with the current historic methodology. This shovel testing program would include the excavation of shovel tests at a 5' (1.5 m) interval around each of the foundations identified in the field survey, and the shovel testing of the yard areas at a 25' (7.6 m) interval. In addition, we proposed two hand excavated trenches to test the ash berm, and the collection of a grab sample of the historic artifacts from the historic complex (H1). We recommended that the historic foundations and features located along Craigville Road be subjected to shovel testing using the same historic methodology. The rationale for testing foundations and features outside the APE is that the development of the property will potentially have an impact on these resources by making them accessible to pot-hunters and acts of vandalism. We believe that the program outlined will adequately test the historic features currently within the boundaries of the *Craigville Road* site, making it possible to judge the types of resources present and their age. We further believe that the program outlined will allow us to determine whether either H1 or H2, or any of the other historic foundations on the site, have the potential to contribute to our understanding of the lifeways of the people occupying them, to how these sites fit into the larger regional context of the Town of Goshen and Orange County, and to determine if any are eligible for listing on the National Register for Historic Places.

PHASE 1B FIELD RECONNAISSANCE SURVEY

Phase 1B Introduction

From November 2006 through May 2007, CITY/SCAPE: Cultural Resource Consultants completed a field reconnaissance level archaeological survey of the *Craigville Road* site, Town of Goshen, Orange County, New York. (Map 1 & 2) The fieldwork was completed over an extended period of time, including a hiatus due to the winter freeze, and a delay resulting from the process of drafting accurate scale survey maps of the existing ruins within the historic site boundaries.

Archaeological fieldwork was supervised by Stephanie Roberg-Lopez, M.A., R. P. A., Principal Investigator. The crew chiefs were Leah Redding and Greg Korosec. Field technicians included Samantha Browne, Sam Blake, Kris Mierisch, Miguel Ramirez, Stephanie Grunberg, Mike Francese and Ron Babcock. The final report was completed by Beth Selig, Gail T. Guillet and Stephanie Roberg-Lopez. Site photography was completed by Gail T. Guillet, Beth Selig, and Leah Redding. The historic artifact analysis was completed by Susan DeLeanardo and Gail T. Guillet. The preparation of the Field Reconnaissance Map, the shovel test records, report graphics, site photography, and final production of the report were completed by Beth Selig.

Phase 1A Information

The proposed project description, environmental information, and archaeological sensitivity assessment are included in the Phase 1A report, which is bound with this document. (Phase 1A: pp. 1-12)

Methodology

Results of the Phase 1A confirmed that the site is located in an area of significant prehistoric activity. In addition, the landscape closely conforms to an ecological model that indicates the project area is sensitive for prehistoric cultural materials. Therefore, the testing strategy for the site was structured around the knowledge that the property possessed a moderate to high probability to yield prehistoric cultural remains. In addition to the prehistoric potential, a substantial historic complex, divided into Historic Complex 1 and Historic Complex 2, was identified in the walkover reconnaissance. Additionally, research identified several Map Documented Structure (MDS) within the project area, and another historic site, located southeast of H1, that was identified during the Phase 1B survey. The historic foundations confirmed by the Phase 1B were designated H3, H4 and H5. The presence of several historic sites within the project area indicated that the potential for the site to contain historic cultural resources was high.

At the time of the initial site visit and subsequent Phase 1B survey, the entire *Craigville Road* site was carefully inspected for any rock formations with the potential to yield lithic raw materials or shelter. No bedrock outcrops or any sources of lithic raw material were identified within the APE.

The initial work performed during the winter of 2006 and 2007 was the survey to identify prehistoric and/or historic cultural resources located on the *Craigville Road* site, excepting the historic resources associated with

Historic Complex 1 through Historic Complex 5, which were tested in the spring of 2007. Areas selected for subsurface testing were identified during a comprehensive walkover of the property. This walkover served to evaluate the site, assess loci of disturbance, rule out slope and wetland areas, assess available raw material and habitation resources, and determine former land usage. Those areas selected for shovel testing were subject to tests along transects conforming to the land surface. Determinations about the sensitivity of the various areas were based upon environmental factors, topography, and known activity patterns of the prehistoric population. Areas in excess of 15% slope, standing water, and designated wetlands were eliminated from testing, as were areas of prior disturbance. The locations of the tests and disturbed areas were recorded on a large-scale map that shows surveyed borders, structure locations and the project area boundaries. (See Field Reconnaissance Map) For the purposed of the prehistoric testing program, a 100' (30.4 m) buffer was observed around all wetland areas.

Subsurface testing within the *Craigville Road* site was in the form of shovel tests at 50' (15.24 m) intervals creating a grid across the site. All foundation perimeters were tested at a 5' (1.5 m) interval with the associated yard areas tested at a 25' (7.5 m) interval. Within an area designated as Historic Complex 1, two hand excavated test trenches were also completed within the boundary of a large ash berm. Additionally, a tightly controlled surface collection was undertaken along this ash berm, encompassing 5000 sq ft (555.5 sq m)

Field Methodology

Field Methodology employed at the *Craigville Road* site consisted of several stages of investigation. These included:

1. A walkover and visual inspection of the site to assess areas of potential sensitivity for prehistoric and historic cultural remains.
2. The excavation of a control shovel test to establish the stratigraphy of the site and to identify the depth and composition of the sterile glacially deposited sub soils.
3. Systematic visual inspection of the land surface to rule out the presence of rock faces and overhangs.
4. Shovel testing in the areas identified as having a potential sensitivity for prehistoric and historic remains.
5. Photographic documentation of the overall site.

The methodology for shovel testing in the sensitive areas involved excavating 40 cm (16 in) diameter shovel tests at the appropriate intervals. Soils were passed through a ¼ inch steel mesh screen and the materials remaining in the screens were carefully examined for historic and prehistoric artifacts. Items recovered from the screens were assigned to the stratum from which they were obtained. The stratigraphy of each test was recorded, including the depth and the soil description of each layer. (See Appendix D) The hand excavated trenches were completed using the same methodology, with the addition of photo documentation and graphic profiles. As described above, the area surrounding the ash berm was gridded and a systematic collection of artifacts from the ground surface was completed.

Field Results

Once a testing strategy had been established and areas unsuitable for testing were eliminated from the survey, potentially sensitive areas were systematically shovel tested and inspected.

A total of twenty-eight hundred and thirty one (2831) shovel tests on two hundred and forty-nine (249) transects were excavated in the *Craigville Road* site. Two historic complexes, (Historic Complex 1 & Historic Complex 2) were identified during the initial site visit. Three more historic foundations designated as Historic Complex 3 through 5 were identified during subsequent site visits and the Phase 1B survey. An additional eight hundred and thirty-nine (839) shovel tests on eighty six (86) transects were excavated within Historic Complex 1 (H1) and Historic Complex 2 (H2). (See Field Reconnaissance Map) The areas subjected to shovel testing to determine prehistoric potential represent the flat and well drained areas within the project area. As illustrated on the Field Reconnaissance Map, these flat areas are concentrated on the higher elevations and around the wetlands, making them ideal locations for prehistoric occupation. Wetlands cover approximately 14.5% of the *Craigville Road* site, creating a potentially rich prehistoric landscape. A 100 foot (30.4 m) wetland buffer was observed around all wetlands, and testing was not attempted in or adjacent to the wetlands, with the exception of Historic Complex 1 and Historic Complex 3, which was located in the midst of a wetland area.

Area 1

Testing commenced in the southern corner of the of the Craigville Road site, on the parcel located on the southern side of Craigville Road. Transects 1 through 25 containing three hundred and twenty-eight (328) shovel tests, comprehensively tested this area. The transects in the area were aligned northwest to southeast using the stone wall along the eastern edge of the north-south interior farm road as a baseline, and terminating at a second stone wall. This area is bounded to the north by the stone walls lining the east-west interior farm road and on the south by a stone wall that marks the property line. The area is bisected by a small drainage that traverses north–south. (Photo xx) In some areas standing water was evident on the ground surface outside the boundaries of the stream, precluding testing in some locations. The vegetation in this area consisted of open forest. The soils in this area were gray silt clay overlying a pale brown clay. No cultural material of any kind was recovered from this area.

Area 2

The second area selected for testing is located on the eastern side of the stone wall that provided the transect terminus in Area 1. Transects 26 through 51 aligned northwest to southeast containing five hundred and ninety-one (591) shovel tests that thoroughly tested the area. This area is bounded to the northeast by the east-west interior road and to the south by the property line. The eastern terminus of this area is defined by steep slopes overlooking a wetland. (Photo 5) The soils in this area were gray silt clay overlying a pale brown clay. No cultural material was recovered from this area.

Area 3

Testing then moved to the northwestern side of the interior road. This area is bounded to the east by steep slopes which terminate in a large wetland. The western boundary of this area is the property line, which is defined by residential yards and the termination of the forested area. (Photo 36) The north-south farm road bisects this area. A part of the southern boundary of Area 3 is marked by the east-west interior farm road, while the northeastern

boundary is a wetland that extends north east to Craigville Road. Transects 52 through 114 and TR 197 through TR 199, which tested a small area north of the north-south farm road, were aligned southwest to northeast and contained a total of four hundred and ninety-three (493) shovel tests. The soils in the area remained consistent with those previously discussed. No cultural material of any kind was recovered from this area.

Area 4

The fourth area selected for testing is in southwestern portion of the project area, west of Area 1. The western boundary is defined by a stone wall, the eastern by the north-south interior farm road, while the southern boundary is also marked by a stone wall. Transects 115 through 140, aligned southeast to northwest, which began at the southern property boundary, north, terminating at the southern boundary of Area 3. A total of two hundred and forty (240) shovel tests were excavated in this area. The soils in this area consisted of a gray silt clay, overlying a pale brown clay. No cultural material of any kind was recovered from this area.

Area 5

The next area selected for shovel testing is in the eastern portion of the project area. This area is separated from the areas previously discussed by a large wetland that comprises the western boundary of this area. The eastern boundary of this area is the southeastern property boundary, marked by a stone wall. Transects 141 through 196, aligned northeast-southwest, contained eight hundred and eleven (811) shovel tests that comprehensively tested the area. The soils encountered in this area are identical to those previously discussed. No cultural material of any kind was recovered from this area. Transect 200 and 201, containing a total of eight (8) shovel tests, were located southwest of Area 5, but are considered part of it.

Area 6

Testing then moved to the northern side of Craigville Road, where transects 205 through 233 tested an elevated knoll that is surrounded by wetlands. The northern boundary of Area 6 is a stonewall. This area was tested because it is to be the location of several test wells and a non-invasive nature trail. These transects were aligned northeast to southwest, and consisted of two hundred and sixty three (263) shovel tests. Soils were consistent with those previously discussed. No cultural material of any kind was identified.

Historic Complex 1 (H1)

Once the areas considered to have the potential to contain prehistoric cultural resources were tested, testing continued in the central portion of the project area along the north side of the east-west interior road, in the general vicinity of Historic Complex 1. (Photo 6-7) Transects 234 through 249, consisting of eighty-one (81) shovel tests, tested the outskirts of this historic complex. These tests recovered a nail, furnace scale, fragments of metal, and bottle glass. No prehistoric cultural material of any kind was encountered. Historic Complex 1 (H1) is located along a small drainage between two wetlands. (Photo 3-4) The complex consists of the remains of three structures (H1/F1, H1/F2, H1/F4), a possible privy (H1/F3), a small well and pump feature (H1/F5), a possible springhouse foundation (H1/F6), and four wells (H1/W1-H1/W3 and H1/F5). A dense ash and clinker berm is located along the northeastern perimeter of this complex. This berm contains a large number of artifacts and shows evidence of having been pot hunted. The small drainage and associated wetlands create the eastern boundary of this complex, with additional wetlands creating the western boundary. The southern boundary of this complex is the interior road, and the northern is a wetland that abuts Craigville Road.

Historic Complex 1, Foundation 1 (H1/F1)

The easternmost foundation is identified as Historic Complex 1 Foundation 1 (H1/F1). (See Field Reconnaissance Map, Fig. 4 & 5)(Photo 11) This feature is constructed of dry laid fieldstone and measures 30' by 60' (9.1m by 18.2m). It is rectangular in shape, and is oriented along the drainage. It appears to be a barn or similar outbuilding. Testing began at the northwest corner of the foundation, moving eastward. A total of 42 shovel tests were excavated at 5' (1.52 m) intervals around this foundation's perimeter. Of the 42 shovel tests, 23 were positive. Architectural material, in the form of window glass and nails, both round and square, predominated, with a minority of ceramic and bottle glass. Among the artifacts identified was a single fragment of stoneware, a gray salt-glazed sherd with a brown interior glaze, that probably represents a storage vessel, such as a crock. There was also a single sherd of whiteware, a single sherd of whiteware with a flow blue pattern, two sherds of ironstone, and from the northeast corner of the building, 54 sherds of redware. Stoneware and whiteware have a broad date range, with the stoneware in this context, more specifically in Orange County, dating from 1770-1900, and whiteware from 1830 to 1997. The flow blue sherd can be dated more closely, ranging from 1844-1870. The redware, assuming it is not fragments of flower pots, would be earlier; and while it is broadly dated to before 1900, it generally would date to the early to mid-19th century. Redware, which would probably have been of local manufacture, was used in food preparation and food service, but may also have been used in dairying activities. There was a green bottle that, based on its form and label ("26N"), provided the *terminus post quem* date for H1/F1 of 1930. The *terminus post quem* or TPQ date is the date before which an artifact could not have been deposited on the site.

Historic Foundation 2 (H1/F2)

Historic Complex 1 Foundation 2 (H1/F2) is located 40' (12.1 m) to the west of H1/F1. (See Field Reconnaissance Map & Fig. 4-6) This foundation consists of two smaller structures, connected by a retaining wall. (Photo 8-9) The length of the retaining wall is 102' (31.09 m), and is located along the southwestern side of these two structures. The northern portion of this structure measures 27' by 50' (8.2 m by 15.24 m), and the southern portion 20' by 16' (6.09 m by 4.8 m). The southern portion of this feature still contains its wooden frame superstructure. (Photo 9) This structure is dilapidated and has deteriorated further during the last year. H1/F2 is constructed of mortared cut stone and the walls measure approximately 12" (30 cm) thick. A total of sixty-four (64) shovel tests were excavated around the perimeter of this structure, and three (3) in the interior northwest corner. The majority of the shovel tests yielded architectural material in the form of window glass, nails and other architectural hardware. Included in the shovel tests were several artifacts related to horses, including harness parts, suggesting that H1/F2 included a stable for the family's horses. Bottle fragments recovered included several mason jars dating to the early 20th century (TPQ 1905), as well as milk glass canning jar lids, which have a TPQ of 1869. Most of the bottles ranged in date from 1870 to the 1930s. Ceramics were present in the form of stoneware, redware, in this case sherds of flower pots, whiteware, blue transfer print whiteware, ironstone, and soft paste porcelain, some with decal decoration, which date to the late 19th and early 20th century. Personal items recovered included a gold or yellow metal cuff link, a perfume bottle, plastic button, plastic belt buckle, and a leather shoe. A marble was also recovered, suggesting the presence of a child as one of the site's occupants. The marble, along with the plastic doll's arm and toy coffee pot, may have been possessions of the children of Maida Youngs Roe, who died in 1913. Lamp glass was present, suggesting that the building, prior to the installation of electricity, had been lighted by kerosene or oil lamps. Shot gun shells were identified in the material recovered from H1/F2, as they were from other areas on H1 and H2. Among the diagnostic items recovered was an unglazed ceramic or semi-porcelain "wall tube" or conduit of a type used in the early 20th century to enclose electrical wiring. Based on the markings on the tube, it was manufactured by G. F. Brunt Porcelain Company in East Liverpool, Ohio between 1895 and 1911. It

seems likely that the Brunt conduit was installed at the time that the barn was wired for electricity in the late 19th or early 20th century. Looking at the ceramics collection, and excluding the redware, the date range is 1830 to 1997. The blue transfer print whiteware dates to the mid to late 19th century, but the presence of whiteware with a decal design tips the date to the late 19th to early 20th century. With the inclusion of the identifiable glass, the ceramics, and the electrical conduit into consideration, the date of the artifact collection for H1/F2 is c. 1930.

Historic Foundation 3 (H1/F3)

Historic Complex 1 Foundation 3 (H1/F3) is located 80' (24.2 m) southwest of H1/F2. (See Field Reconnaissance Map & Fig. 4-6) This feature measures 5' (1.5m) square and was initially thought to be the location of the privy. This square feature consisted of a stone lined shaft reaching a depth of approximately 5' (1.5m) below ground surface. A series of eleven (11) shovel tests excavated around its perimeter and one (1) shovel test within the interior of the feature. These shovel tests were positive for window glass, nails, bone, lamp and window glass, bottle glass, ironstone and whiteware. The ground surface surrounding the area was covered with coal slag, cinder clinker and ash. The interior of this feature was partially filled with coal ash and clinker. The shovel test placed in the interior (Appendix D: H1/F3/STP 12) terminated at sterile subsoil, at a depth of 14" (45 cm) below ground surface. The presence of sterile subsoil, and the lack of the types of soils associated with latrine deposits, indicate that this is shaft feature was not the privy, but rather a well that has been filled. H1/F3 did, however, produce a significant amount of cultural material. Architectural materials were much more limited at this locus, with square and round nails and window glass recovered. Glass bottles were present, including medicine bottles dated 1870-1930, one of which was embossed "MIDDL . . . /NY" (Middletown/NY). There was at least one Mason jar, as well as bottles with a TPQ of 1905 and 1929. There was a single fragment of orange tinted carnival glass (H1/F3/STP 4) recovered on the northeast corner of the foundation. Carnival glass, essentially pressed glass with an iridescent finish, was extremely popular in the United States from approximately 1908 through 1918. It was known as "Poor Man's Tiffany", due to its being perceived as a "knock-off" of the elite ware produced by Tiffany and Steuben around the turn of the 19th century. The production of carnival glass ceased in the United States around 1931. An oil lamp burner was recovered from H1/F3/STP 8, along with many fragments of lamp glass. A small number of personal items were present, including part of a shoe and a milk glass button. The ceramic assemblage from H1/F3 was more extensive than that recovered on H1/F1 and H1/F2. Ironstone was the predominant ceramic type, with several patterns represented. There was a sherd of red transfer print and a sherd of purple transfer print; both of these were on ironstone vessels, which would have had a broad date range, but would post date 1850. There was ironstone with a green print that appeared to be a decal print, which would date it to the late 19th to early 20th century. There was whiteware, which can pre-date ironstone, but whiteware was represented by many fewer sherds than ironstone. Ironstone is generally the most predominant ceramic type on a mid to late 19th century site. There was a sherd of hand painted whiteware, which would be mid-19th century in date. There was also soft paste porcelain, some of which had a decal pattern of roses. Porcelain was represented by a single sherd in the assemblage from H1/F3. Although much of the material recovered was fragmentary, bowls and plates were recognized among the ceramics. The material recovered from the deposit suggests a domestic assemblage, and, while it is likely that it does represent a filled well, the precise nature of the feature is uncertain. The dating for the ceramic assemblage for H1/F3 ranges from the mid-19th century to the 20th century, and the glass presents the same picture.

Historic Foundation 4 (H1/F4)

Historic Complex 1 Foundation 4 (H1/F4) is located to the west of H1/F2. (See Field Reconnaissance Map & Fig. 4-6) Based on its size, the presence of heating ducts, waste disposal pipes, and the materials dumped around its perimeter, this foundation is identified as the remains of the house. This foundation is a 40' by 42.5' (12.1 m by 12.95 m) mortared stone wall creating a cellar hole with a depth of approximately 5' (1.5 m) below ground surface. The interior of this foundation has been divided into sections by small walls or columns. These interior features may represent the walls between doorways or support columns for the absent superstructure, which, according to the 1880 New York State Agricultural Census, was a frame building. A total of 42 shovel tests were excavated around the perimeter and the interior of H1/F4. The majority of the artifacts recovered were architectural materials, including square and round nails and window glass. A second oil lamp burner was recovered, along with lamp glass fragments. Linoleum in two different patterns was recovered, along with a porcelain door knob. Linoleum was invented in the mid-19th century, but came into general use in the early 20th century. Linoleum, which is particularly associated with the kitchen, was replaced by other materials by the 1950s. A number of metal fragments were recovered that were interpreted as tin cans that would have held food stuffs. The bottles recovered included a wine bottle, along with other bottles dating to 1870-1930. Mason jar fragments and a canning jar lid were also recovered. The plastic arm of a doll was recovered, another indication, along with the marble recovered at H1/F2, that children either lived on or visited the site. As noted above, Maida Youngs Roe died in 1913, leaving two children; it is possible that these toys were theirs. A metal hook that would have held a jeweled pendant was one of the very few personal items recovered, along with the white plastic stem of a cigar holder. Ironstone and whiteware were the ceramic types recovered, including a sherd of whiteware with a decal print of green ivy leaves (late 19th-early 20th century). A shot gun shell was recovered; the shot gun shells may represent hunting activities at the time of Youngs, occupation, but could also represent hunting or sporting activities that took place after the site's abandonment.

Historic Foundation 5 (H1/F5)

Located 110' (33.5m) to the north of H1F6 (discussed below) is the remains of a well designated Historic Complex 1 Foundation 5 (H1/F5). (See Field Reconnaissance Map & Fig. 4-6) This feature consists of a stone lined shaft, filled with leaf litter and other natural debris, of which only 3' (1 m) of the stone lined walls were visible. H1/F5 is a well, and it appears, based on the presence of metal blades that had collapsed into it, that a windmill or small wind turbine was associated with this feature. (Photo 17) The base of the superstructure was tested by seven (7) shovel tests, resulting in the recovery of two sherds of ironstone representing cup fragments, a single whiteware sherd with a green decal design of flowers and vines, and two fragments of milk glass. A surface scatter or dump site was identified in the small stream located to the south of this area that contained fragments of ironstone, milk glass and whiteware.

Historic Foundation 6 (H1/F6)

Historic Complex 1 Foundation 6 (H1/F6) is located 440' (134.1 m) south of H1/F3. (See Field Reconnaissance Map & Fig. 4-6) This three sided structure is located at the edge of a pond. (Photo 15-16) The dimensions of this foundation are 9' by 11' (2.7 m by 3.35 m) suggesting that it may have been the foundation of a spring house. This foundation is constructed of dry laid field stone with the walls measuring approximately 12" (30 cm) thick. At the time of the site visit and the field excavations this feature was filled with water. The eleven (11) shovel tests excavated around its perimeter did not contain cultural material of any kind.

Testing Yard Area on Historic Complex H1

Once the testing of the foundations was complete, the associated yard area for Historic Complex 1 F1 through F4 were tested at a 25' (7.5 m) interval. (See Fig. 4 & 5) A series of twenty-eight (28) transects (H1/Y1-H1/Y28) were laid out and one hundred and twenty three (123) shovel tests excavated. Transect H1/Y1 through H1/Y8 and H1/Y15 were excavated in the vicinity of H1/F1 with seventeen (17) positive shovel tests. These shovel tests yielded metal and pieces of horse harness, as well as window glass, bone, white and transfer printed ironstone, stoneware, redware flower pot fragments, and bottle glass fragments. The recovered bottle glass includes a bottle embossed with a milk of magnesia trademark manufactured by the Chas. H Philips Chemical Company located in Connecticut. Transects H1/Y 9 through H1/Y14 were excavated in the vicinity of H1/F2, with twelve (12) positive shovel tests. These shovel tests yielded minimal amounts of window, bottle glass and several nails. Transects H1/Y16 through H1/Y20 were excavated around H1/F3 with five (5) positive shovel tests. These shovel tests yielded an increased amount of household debris, in the form of ironstone, redware, soft paste porcelain, whiteware, container glass, and bottle glass. Transect H1/Y17/STP 3 yielded a fruit extract bottle embossed McMonagle & Rogers of Middletown New York. The manufacturer date of the bottle was 1870-1930. Transects H1/Y21 through H1/Y28 were excavated around H1/F4 with only three (3) positive shovel tests. The sparse amount of material recovered in this area, consisted of nails and glass.

The artifacts recovered from the yard areas on H1 consisted for the most part, domestic debris, along with architectural materials, medicine bottles, a wine bottle, preserved foods, including Guilden's Mustard (TPQ 1905) and the McMonagle & Rogers fruit extract made in Middletown, Mason jars and canning jar lids, clam shell, bone, lamp glass, fragments of a chamber pot, drinking glasses, and kaolin pipe fragments. Other artifacts recovered on H1 were associated with horses, including harness parts and a horseshoe.

The ceramics in the yard area correspond with the material previously described. There was a significant amount of ironstone, including sherds that appear to belong to a set with a green decal design composed of flowers and leaves. There was whiteware, including a sherd of a gilt edged tea cup, and a sherd of hand painted whiteware that would date to the mid-19th century. There were several sherds of stoneware that represent a gray salt-glazed crock and lid. The earliest artifact recovered was a single sherd of slip-trailed redware vessel that would date to 1750-1820. This piece could be an example of a curated item that survived in the house long past its date of manufacture. There were several pieces of semi- porcelain, one of which was manufactured in France. The only maker's mark recovered from the foundations or the yard area was a semi-porcelain serving dish from the Mercer Pottery in Trenton, New Jersey. It is marked "SEMI-VITREOUS/ WALDORF/MERCER CHINA. Mercer, which manufactured not only dinnerware, but electrical supplies and hardware and bathroom fixtures, produced white granite dinnerware and semi-porcelain hotel ware into the early 1930s (Lehner 1988:293). The last listing for the firm appears to have been in 1938, which, barring a date of manufacture for the Waldorf pattern, is the TPQ for the yard assemblage, which like the dates elsewhere on H1, is the 1930s.

Wells Located on Historic Complex H1 (H1/W1-H1/W3)

Four wells were identified within the parameters of H1. (Fig. 4 & 5) These wells consisted of stone lined shafts, filled either with water or leaf litter and other natural debris. Due to the depth of these features, and the potential hazards, none of these features were tested to determine their depth or if they contained deposits of cultural material.

Historic Complex 1 Well 1 (H1/W1) is located 75' (45 m) south of H1/F1. This well measure 5' (1.5 m) in diameter and is lined with unmortared field stone. Only 2' (60 cm) of the stone lining is visible above the water level. The second well (H1/W2) is located 13' (3.9 m) off southern corner of the house foundation (H1/F4) and is covered by a fieldstone cap, which had been broken open, sometime prior to the beginning of fieldwork. A narrow stone lined shaft, measuring approximately 3' (1 m) in diameter is visible. The third well (H1/W3) identified is located 55' (16.7m) off the southern corner of the house foundation (H1F4). This well is also a stone lined shaft feature, and is filled with natural debris. Due to the nature of its current cover, which is a small rusted "mini car", the dimensions of this feature were not discernable. (Photo 13) The fourth well identified, has been previously discussed as H1/F5.

Surface Collection of Yard Areas on Historic Complex 1 (H1)

A surface area of 5000 square feet (555.5 sq. m.) on the northeast portion of Historic Complex 1 was gridded out, and a surface collection was undertaken. (Fig, 4 & 5) This area is an "L" shaped portion of the ash berm that is located on the northern side of H1/F1 and H1/F2. This area was chosen based on the location of positive shovel tests, which were excavated along Transect H1/Y14, H1/Y1, H1/Y2, H1/Y3 and H1/Y5. The area was divided into blocks of 625 square feet (25' square) (69.4 sq. m) and each surface find was flagged and mapped into the grid. These finds are sorted in the artifact catalog by their block number. (Appendix A Fig. 5) This surface collection yielded an assortment of ceramics, consisting of stoneware, ironstone, soft paste porcelain, whiteware, and redware flower pots. Additionally, large amounts of bottle and container glass, as well as window glass, were also recovered. With the exception of a horseshoe, there were no metal fragments or architectural materials of any kind recovered from the surface collection.

Trenching of Ash Berm (Trench 1 and Trench 2)

Along the southern side of the surface collection grid, between transects H1/Y5 and H1/Y12, two trenches were hand excavated to test the ash berm noted above. (Fig, 4 & 5) These trenches, approximately 3' (1 m) in length and 3' (1 m) deep, were placed along the ash berm in an effort to identify any buried cultural deposits. Although no cultural horizons were identified within the ash layers, it was possible to see in profile the depositional episodes that created this berm. The varying coal ash and black cinder layers most likely represent spent fuel discarded from a furnace, but, because of the extent of the ash berm, the possibility that there had been a light industrial complex on the site, such as a smithy, was considered. The berm is quite large and deep (2-3' or 0.66 –1 m). The deposit overlays natural silt and gravel sediments. Judging by its size, this ash berm represents, at the minimum, decades of discarded spent fuel. As noted above, artifacts from varying time periods are embedded throughout all layers of the berm and this deposit has been actively mined for these artifacts. Pot holes and dug out pockets punctuate the surface of the berm. (Photo 19-21 &Appendix F: Trench Photographs and Profiles) Materials recovered from the two trenches included bottles dating, based on the dates of manufacture of the bottle types, from 1870-1930, 1913-1930 and 1919-1929. Medicine bottles were present, as well as a Borden's Malted Milk container (TPQ 1905). There were Mason jars, also with a TPQ of 1905. Of particular note is the presence of fragments of a Duraglas jar that has a TPQ of 1940; this is the latest diagnostic artifact in the entire H1 assemblage. There were ceramics, including ironstone, soft paste porcelain and stoneware. The only identifiable manufacturer's mark on the ceramics was one plate sherd was manufactured by John Maddock and Sons (Ltd.), a firm of potters located in Burselem, Staffordshire (Miller 1995:200 & 253). Examples of Maddock ironstone have also been recovered in the Town of North Castle in Westchester County and the Town of LaGrange in Dutchess County, as well as in many other locales (CITY/SCAPE: Cultural Resource Consultants 1994-1995 & 2006-7). Established in the early 19th

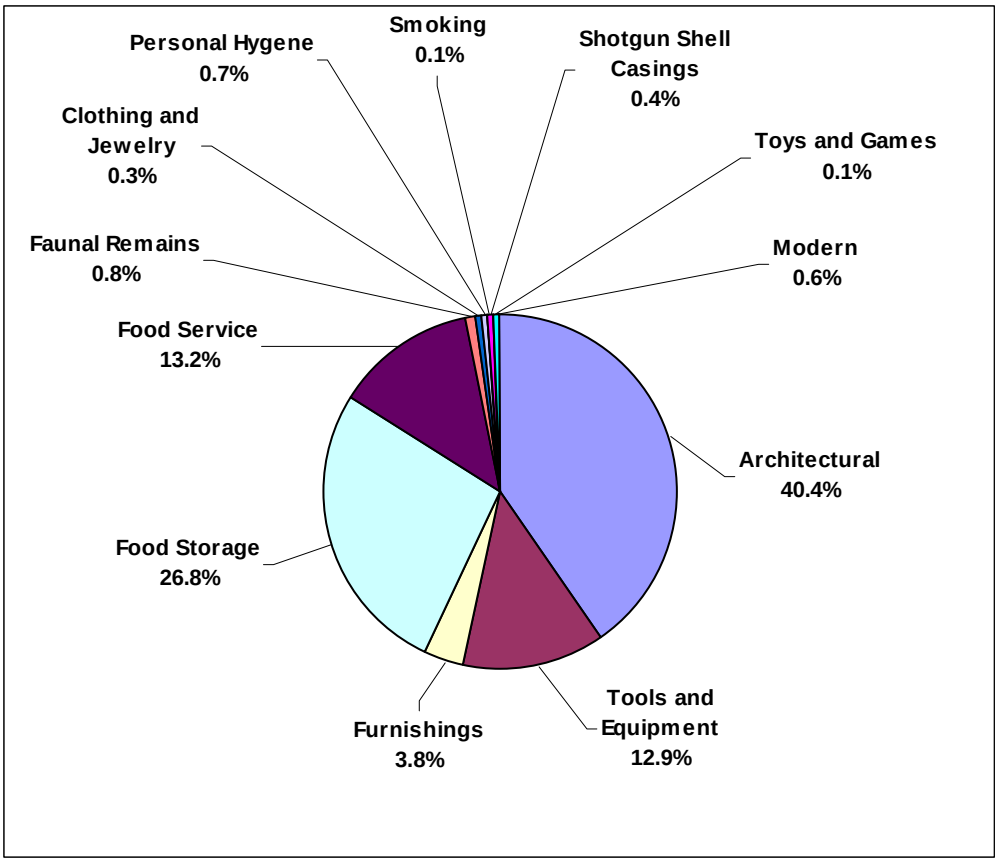
century, by John Maddock, the firm produced earthenware and ironstone from 1855 until perhaps as late as the mid-1960's. Based on the particular details of the mark recovered, it is believed that the plate was produced after 1905 but prior to 1926. The ash berm appears to have been used as a dump site in the early 20th century through about 1930, or, if we accept the Duraglas jar with the TPQ of 1940 as non-intrusive, possibly as late as 1940.

Analysis of Assemblage Recovered on Historic Complex H1

As described above, the work on H1 consisted of the excavation of shovel tests around the perimeter and in some cases in the interior of six foundations on H1, the excavation of 28 transects in the yard areas surrounding these four of the six foundations (H1/F1 through H1/F4), a surface collection of the yard area northeast of H1/F2, and the excavation of two trenches in the ash berm (dump) northeast of H1/F2. Once the artifacts were removed from the field, they were processed, depending on the type of material, and rebagged in the CITY/SCAPE: Cultural Resource Consultants laboratory. Susan DeLeonardo produced a catalog of the material using an EXCEL data base, which permitted us to query the data base to determine the artifact and ceramic types present, and to provide an overall date for the H1 assemblage. Susan DeLeonardo also prepared a synopsis of her findings, which is used as the basis for the following discussion.

The collection consists largely of architectural (40.4%) and food storage items (26.8%), which include bottles and cans. The two second largest categories are tools/equipment (12.9%) and food service (13.2%). The collection from H1 reflects a wide range of domestic activities and includes remnants of furnishings, clothing, jewelry, food remains, personal hygiene, toys, smoking pipes, and ammunition, in the form of shotgun shell casings.

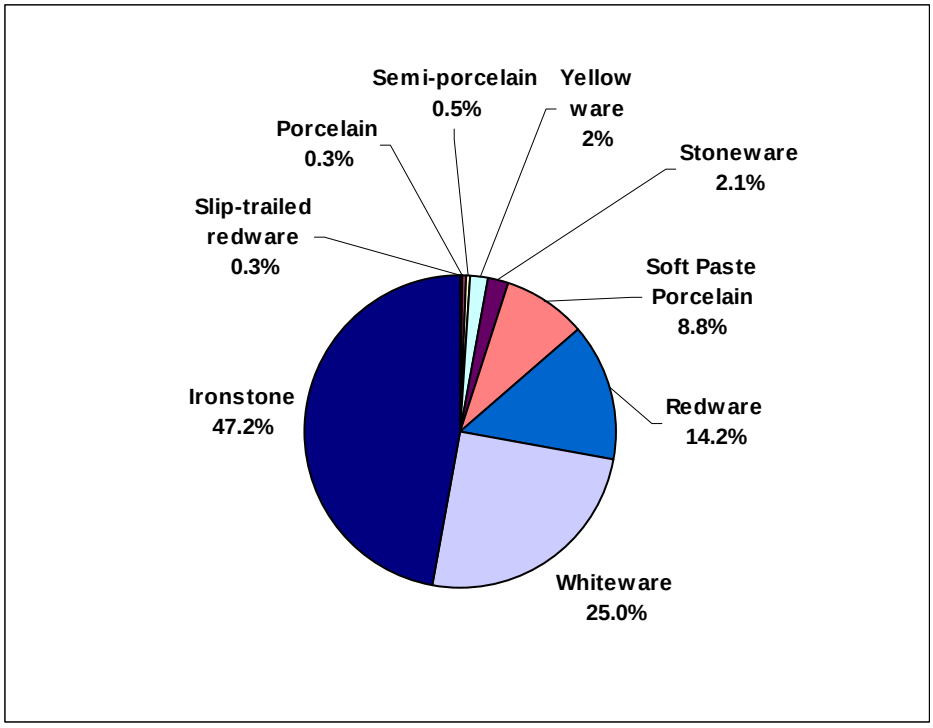
Historic Complex 1: Artifact Types by Percent



Other than window glass, which was recovered in significant quantities, the glass collection consists mostly of bottles, fruit jars, and canning jars, some of which are identifiable as Mason jars. The majority of these vessels are machine-made and post date 1905. At least two date to the 1930s, and one, a Duraglas jar recovered from the ash berm, cannot have been deposited prior to 1940, the year in which the manufacture of Duraglas began. If we accept that it is non-intrusive, we must, on the basis of this single artifact, assume an occupation of the site into the 1940s. A small number of bottles in this collection are mouth blown with tooled rims and date slightly earlier (1870-1930). At least one mid-19th century mouth blown bottle with an applied rim was also recovered. Identifiable brands within the glass collection are Phillips Milk of Magnesia, Guilden's Mustard, Lavoris Mouthwash, McMonagle and Rogers Premium Fruit Flavors, and Lysol cleaner. Also recognizable in the collection are wine bottles, candy dishes, carnival glass, which has a reasonably short production span (1908 through 1931), and a perfume bottle. Along with evidence of manufactured food stuffs, including fragments of tin cans, that provide evidence of the food preferences of the family, the field crew also recovered small amounts of animal bone and clam shell.

The ceramic assemblage is composed principally of ironstone (47.2%), which, as stated above, is characteristic of mid to late 19th sites. Whiteware (25%) is second, while soft paste porcelain (8.8%), and redware vessels (14.2%), most of which are identifiable as flower pots, make up most of the remainder of the assemblage. There are some remnants of Albany slip lined stoneware crocks (2.1%), used for food storage before the wide manufacture of glass containers in the second half of the 19th century, and yellowware fragments (2%). Yellowware was used in the kitchen and in dairy operations until glass, metal, and more recently plastic, replaced it. Only one early-style ceramic was recovered, a sherd of slip-trailed redware that would date to the late 18th (c. 1795) and early 19th century. No creamware or pearlware was recovered from H1; both of these ceramic types are dated to the late 18th and early 19th century, and their absence is another indication that the assemblage recovered on H1 does not represent an early deposit.

Historic Complex 1: Ceramic Types (Percentages)



Further analysis of the ceramic assemblage shows that the majority of the decorated ironstone, whiteware, and soft paste porcelain vessels are decorated with multi-color floral decal prints popular in the late 19th and early 20th centuries. The decoration of some of the ironstone, a green floral decal design along the rim of several plates, suggests that a set of dishes is present. Transfer printed and hand painted style ceramics, popular in the mid and late 19th century, are minimally present in the assemblage, whereas, these types of wares would be much more prevalent on a site dating to the mid-19th, as opposed to the late 19th, century. Other food service items are drinking glasses, candy dishes, and, perhaps, a glass stirring rod. Only two vessels with a maker's mark were identified in the H1assemblage: a serving dish manufactured by the Mercer Pottery in Trenton, New Jersey, the other a plate marked John Maddock and Son, Ltd., an English manufacturer was recovered from the ash berm. The Maddock firm has a long production history, but the particular form of the manufacturer's mark on this piece indicates that it was manufactured between 1905 and 1926. The piece from the Mercer Pottery dates to the 20th century (late 1920s-1938).

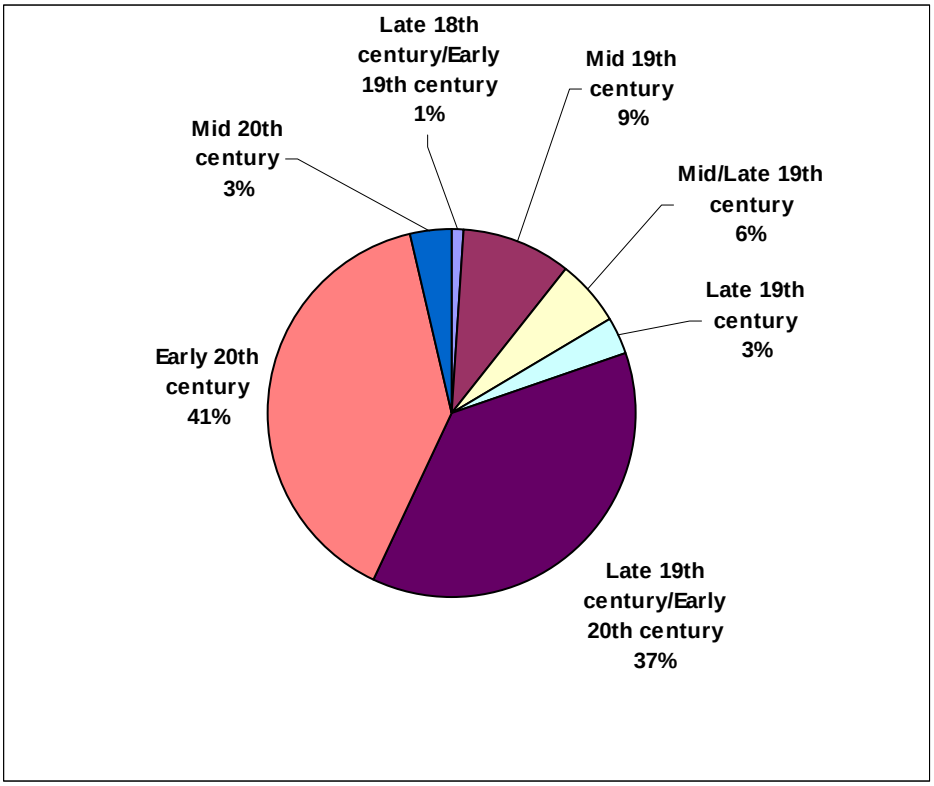
One of the diagnostic artifacts was a roughly 1" diameter unglazed ceramic or semi-porcelain "wall tube" or conduit. Conduit of this type was commonly used to house electrical wiring within the walls of early 20th century homes. Part of the imprinted label is visible and it reads "BRUNT/E. LIVERPOOL OHIO". Research indicates that this item was manufactured by the G. F. Brunt Porcelain Company based in East Liverpool Ohio and dates approximately 1895-1911. As noted above, it probably represents the date at which the barn was wired for electricity.

A diverse assortment of common household items were recovered from Historic Complex 1. In contrast, few personal items were recovered; among the personal items are shoe fragments, milk glass buttons, and a pendant fixture. The lack of personal items is an indication that the family took the time to pack their belongings and remove them at the time they left the property. The equipment collection includes horse accessories (harness parts and a horse shoe), large metal hooks, a metal machinery part (most likely for a pulley) and a wrench. Numerous lamp glass fragments and two oil lamp burners were also recovered. Other furnishing remnants include mirror glass and a porcelain door knob. Two children's toys were also found on H1, a marble and a plastic doll arm. A doll's china tea pot or coffee pot was recovered during one of the initial walkovers of the H1 complex.

Taken as a whole, the analysis of the artifacts recovered from the *Craigville Road* site, indicates that Historic Complex 1 (H1) dates to the early to mid-20th century. With the exception of the Duraglas (TPQ 1940), none of the artifacts from H1 post date 1930, however, that one artifact, assuming it was not intrusive, indicates that the site was occupied at least until that time. Research indicates that the Youngs family had occupied the property for many years, probably as early as 1731, but it appears, based on the material recovered in the Phase 1B survey, that the Historic Complex 2 is the original farm site, and that Historic Complex 1 (H1) was either built or enlarged at the time that the merchant, Henry Youngs, retired to his farm in the late 1860s with his wife and young family following the death of his uncle, also a Henry Youngs. Henry Youngs is said to have improved the farm, increasing its acreage and the amount of land that was actively farmed. He died in 1875, his wife dying a decade later. Based on this information, it appears that much of the material recovered from Historic Complex 1 (H1) dates to the time following the death of Mrs. Anne Jackson Youngs in 1885. If this is the case, then the artifact assemblage can be most closely associated with the tenure of Dr. Henry Youngs and his sister, Edith, who kept house for him. The 1915 New York State Census indicates that Dr. Henry Youngs and his sisters, Edith and Emma, occupied the house. Dr. Henry Youngs was a physician, whose office was in Goshen, but he continued to farm, with the day to day operation being, most probably, run by the two hired farm hands listed in the census.

Dr. Henry Youngs died on May 24, 1930 at the age of 63. Although we do not have subsequent census data, it is likely that he continued to live on the property until his death, and that his sisters, both of who were unmarried, continued to live with him in the house. It is possible that they continued to live in the house following his death, but, if we leave aside the Duraglas jar (TPQ 1940), the only artifact in the entire assemblage that provides any indication that the house was occupied into the early 1940s, we have picture of a property that was vacated shortly after Dr. Henry Youngs' death. That assumption is buttressed by the date of the artifacts recovered, of which 81% date to the late 19th to early 20th century, with only 3% dating to the mid-20th century.

Historic Complex 1: Dating



Providing a more precise date for the assemblage is made difficult by the fact that many of the items have a broad date range. For example, many of the bottles, based on their type, can be dated to between 1870 and 1930, but, although they could have been filled and sold any time after 1870, could have been purchased in the early years of the 20th century. Depending on how the dateable artifacts are sorted, the date would be skewed to the late 19th century. Only a few items have a TPQ that pre-dates 1900, whereas the overall the collection has a significant amount of material dating to the early 20th century. There is, with the exception of the Duraglas jar (TPQ 1940) and, perhaps the shot gun shells, no material on the site that post dates the 1930s, a strong indication that the site was unoccupied after that date.

Looking at Historic Complex 1 as a whole, the impression is of a property that was occupied into the 1930s, but not later. The fact that this date coincides precisely with the death of Dr. Henry Youngs is not likely to be happenstance. Stephanie Roberg-Lopez, principal investigator for the Craigville Road site, stated during one of the walkovers of the site that Historic Complex 1 (H1) had the appearance of a site that was abandoned rapidly, as though the occupants had one day closed the door and walked away. The lack of personal items suggests that the

two sisters of Dr. Henry Youngs removed from the site of their own volition, through where they moved to has not yet been learned. The fact that so much equipment from the house, including, among other things, a washing machine and refrigerator, is strewn around the yard suggests that the house was not completely emptied before the abandonment, but that once the house was unoccupied it was vandalized. There is no evidence that the buildings burned, but, other than the foundations, there is little evidence of the structures themselves, with the exception of the one building associated with H1/F2 that is dilapidated, but was had not yet collapsed in the fall of 2007.

Historic Complex 2

Testing of Historic Complex 2 (H2)

The second historic complex on the *Craigville Road* site, identified as Historic Complex 2 (H2), is located 700' (213.4 m) southwest of Historic Complex 1 (H1) and is bisected by the east-west interior farm road. (See Field Reconnaissance Map & Fig. 4 & 7) It is bordered to the north, west and south by a large wetland, and to the west by steep slopes. This complex consists of eight foundations, designated H2/F1, H2/F2, H2/F3, H2/F4, H2/F5, H2/F6, H2/F7 and H2/F8, three wells (H2/W1, H2/W2 & H2/W3), and a possible privy.

The methodology employed on H2 was as follows: each foundation was tested at a 5'(1.5 m) interval around its perimeter, with one or more shovel tests excavated in the interior. The yard areas around each foundation was then laid out with 34 transects identified as TR H2/Y1 through TR H2/Y34, and shovel tests were excavated along each transect at 25' (7.5 m) intervals. The artifacts recovered were removed to the CITY/SCAPE laboratory, where they were processed, rebagged and entered into an EXCEL data base. As was the case on H1, the data base was queried to determine the types of artifacts present, the types of ceramics present, and the date of the site. bagel

Historic Foundation 1 (H2/F1)

Testing began on the southern part of H2 with Historic Complex 2 Foundation 1(H2/F1) located at the southern extent of the complex. (See Field Reconnaissance Map, Fig. 4 & 7 & Photo 30) This foundation measures 27' by 16.5' (8.2 m by 5.03 m) and is constructed of mortared fieldstone. The walls of this foundation have collapsed, making a determination on the thickness of the walls impossible. A total of twenty six (26) shovel tests were excavated around its perimeter, and one in the center of the foundation. Cultural material recovered included modern beer bottles and a sunglass lens, as well as a metal fragment identified as an automobile part. Bottles from H2/F1 included several with a TPQ of 1870-1930 and 1913. There was a single drinking glass. There were metal fragments that are likely to be tin cans. There was architectural material, including square and round nails, and window glass. There was shell and butchered bone. Among the ceramics are redware, predominantly flower pot sherds, stoneware, representing a cream crock with a black glazed interior, whiteware, including blue and brown transfer print, along with whiteware with decal designs, dating to the late 19th and early 20th century. There was ironstone, including decal designs, as well as dark blue and black transfer print. There was also soft paste porcelain. H2/F1 yielded an assemblage that included both mid-19th century and modern material.

Historic Foundation 2 (H2/F2)

Historic Complex 2 Foundation 2 (H2/F2) is located approximately 35' (10.6 m) north of H2/F1. (See Field Reconnaissance Map, Fig. 4 & 7 & Photo 29) This foundation is a small elevated feature, constructed of mortared

fieldstone and measuring 16' by 10' (5 m by 3.04 m). The walls of this foundation rise to approximately 18" (45 cm) above ground surface. The eastern side of this foundation has three concrete steps that provide access to the foundation. It is unclear if this foundation was filled in during its construction or if the interior fill represents the remains of its demolition. Two (2) shovel tests were placed in its interior and yielded bottle glass and redware fragments, as well as a door latch and a mammal tooth. An additional twenty (20) shovel tests were placed around the foundation's perimeter, of which only three were sterile of cultural material. The artifacts recovered from H2/F2 included material dating to the late 18th through the mid-20th century. Among the early artifacts was slip-trailed redware (1750-1820) and pearlware (1780-1840). There was also hand painted whiteware and blue transfer print whiteware, both dating to the first half of the 19th century. There was annular ware and yellowware, often associated with vessels used in the kitchen, as well as ironstone (c. 1850) and soft paste porcelain with a decal design dating to the late 19th and early 20th century. There were a minimum of two stoneware vessels, one gray salt-glazed crock with an Albany slip interior, the other a buff colored vessel, also with an Albany slip interior. There were flower pot fragments, which are ubiquitous on historic archaeological sites. The only vessel form identified was plates; other vessel types were undoubtedly present, but the fragmentary sherds were too small to be identified. Architectural material was present in the form of nails, both round and square, and window glass. There were bottles with a TPQ of 1905, as well as canning jar lids with a TPQ of 1869. There was lamp glass. There were fragments of tin cans, and a shot gun shell dating to 1929-1932. There was clam shell and the molar of a large mammal, probably a cow. The impression gained from H2/F2 is of an assemblage that is earlier in date than anything recovered on the H1 complex. Some materials date to as late as the 1930s, but the presence of pearlware is an indication that H2 was occupied in the early 19th century.

Historic Foundation 3 (H2/F3)

Historic Complex 2 Foundation 3 (H2/F3) is located 60' (18.29 m) northeast of H2/F2. (See Field Reconnaissance, Fig. 4 & 7, Photo 24) This foundation measures 27 'x 37' (8.2 m by 11.2 m) and is constructed of dry laid fieldstone. The western side of this feature is absent, but its footprint is still visible on the ground surface. A series of forty-five (45) shovel tests were excavated around the foundation perimeter and the interior. Architectural material was represented by square and round nails, window glass, and hardware, including a latch, metal bracket and a screw. Bottles dated from 1870-1930 and 1905 to modern materials, including amber beer bottles fragments. There was a modern reflector light and an automobile dip stick. There were fragments of Mason jars and canning jar lids (TPQ 1869), as well as lamp glass and milk glass that may represent a lamp shade. There was clam and bone, as well as several teeth, including a canine tooth and three molars, not otherwise identified. There was a pipe stem and a chess piece (H2/F3/STP 34). Several sherds of ceramic date to the mid-19th century, including blue transfer print whiteware, flow blue whiteware, and hand painted whiteware with a pattern of green and yellow. There were at least three stoneware vessels, one a brown salt-glazed crock with a buff interior, one a tan jug with a buff interior, and a buff vessel with a brown interior. There was whiteware with a red transfer print that dates to the first half of the 19th century. There was redware with a clear glaze, and other sherds with a black glaze that may be Jackfield ware (1750-1830). There was ironstone (1850), some of which had a molded decoration around the rim. There was soft paste porcelain, some with a red and green pattern that dates to the late 19th century. There was a fragment of a porcelain figurine. There was a compass needle and a marble. The only vessel type identified was a plate, but, again, other vessel types may be present but unidentified. As was the case on several of the foundations on the site, a shot gun shell was among the artifacts recovered. An analysis of the distribution of artifacts show that the material was quite evenly distributed around the perimeter of H2/F3, with no midden area identified that might have been associated with the kitchen doorway. We had originally hypothesized, based on the identification of a feature interpreted as a porch, that the southwest side of the building was the façade, but an

analysis of the materials recovered from H2/F3 and H2/F4 provide some evidence that this was the side of the house. Logically, it would be assumed that the main entrance to the house would face the east-west interior road, which in the 19th and early 20th century was not a farm road, but part of the local road system.

The artifacts recovered on H2/F3 suggested that it had been occupied in the late 18th and early 19th century; however, the numbers of early artifacts recovered is so small that they do not register in the analysis of the assemblage. Despite this, the presence of even a small amount of material dating to the 18th and early 19th century is an important indicator that the date of H2 is early, and that it is likely to have been the original Youngs farmstead. Architectural material on H2/F3 represents 61.1% of the artifact types recovered, with food storage and food service artifacts representing 31.4%. Clam shell represented 7.5% of the assemblage, with bone representing 1.7%. Other than these artifact types, tools and equipment (1.9%), clothing (0.2%), personal hygiene (0.1%), toys and games (0.2%) and smoking paraphernalia (0.2%) were minimally represented. Modern artifacts recovered represented 0.4% of the assemblage. Looking at ceramics, ironstone is represents by a much smaller percentage than on H1, with whiteware representing 71% of the ceramics. As noted, whiteware has a broad date range, but the artifacts present in the H2/F3 assemblage are primarily 19th century in date. Stoneware (9%), semi-porcelain (4%), redware (2%) and porcelain (1%) are present, but in much smaller amounts.

Historic Foundation 4 (H2/F4)

Historic Complex 2 Foundation 4 (H2/F4) is located 50’ (15.24m) east of H2/F2 and is a field stone structure measuring 8’ by 10’ (2.4 m by 3.04 m). (See Field Reconnaissance Map, Fig. 4 & 7, Photo 32) This foundation consists of a cellar hole or shaft approximately 4’ (1.21 m) deep. Based on the apparent mounding of earth around it, this foundation was initially thought to be a root cellar. A total of twenty (20) shovel tests were excavated around the perimeter of this foundation with an additional shovel test placed within the interior (H2/F4/STP 21). The perimeter tests yielded a significant amount of cultural material, calling the identification of the feature as a root cellar into question, since has been asserted by some archaeologists that root cellars contain few if any artifacts. In this particular case, a greater concentration of artifacts was recovered from H2/F4 than from any other feature on the H2 complex. Despite the lack of any “night soils” such as would be expected from a privy deposit, the amount of material recovered would be consistent with such a feature, but, given the lack of those soils, the possibility that the foundation represents an earlier dwelling must be considered.

As has been stated elsewhere, research indicates that the *Craigville. Road* site had been occupied by the Youngs family since at least 1825 (1825 New York State Census), and perhaps much earlier. A house on the south side of the east-west interior road appears on the 1851 map (See Map 3), but Thompson, in *The History of Long Island*, states that the Youngs occupied this land from 1731, when Henry Youngs came to the Town of Goshen from Southold in Suffolk County (Thompson 1843:383).

Our analysis of the cultural material recovered from H2/F4 is consistent with a dwelling that may have had a storage area under a part of the building. The assemblage includes architectural materials, bottles, ceramics, shot gun shells, a kaolin pipe fragment, a number of personal items, a 1930 hunting license, and fragments of Duraglas (TPQ 1940). Architectural material was represented by nails, both round and square, and window glass, as well as a staple, a screw, a washer, a fastener, and a gear. There was a piece of a metal grate, such as would be associated with a stove. There was a Sears and Roebuck shot gun shell and a revolver handle. There were fragments of tin cans. There was a “Motts Pure Jelly’ can lid, which has a TPQ of 1842, but the item itself suggests that it is late 19th or early 20th century in date. Bottles were recovered with a TPQ of 1905, 1929 and 1938. There were fragments of at least one Mason jar and canning lids (TPQ 1869). There was at least one wine bottle, an indication that some

family members consumed alcohol. There was a Hellman's mayonnaise bottle (TPQ 1905) and a Guilden's Mustard (TPQ 1905). There were candy dishes, a drinking glass, lamp glass and several pieces of Duraglas (TPQ 1940). There was carnival glass with an orange tint similar to that recovered from H1/F3, which dates to between 1908 and 1931. There were personal items, including several buttons, in shell and glass, shoe parts, a metal clasp, such as would have been used on clothing, a safety pin, and a glass bead. There was clam shell and bone. There was a round, orange New York State "CITIZEN RESIDENT SPECIAL DEER LICENSE" dated 1930. The registration number of the license was #50329-A, and assuming that the State of New York retained such information it might be possible to determine the name of the person to whom it was issued.

The ceramic assemblage from H2/F4 ranged in date from the 18th century through the 20th century. There was a sherd of export porcelain that could date to as early as 1675. Assuming for the moment that it is early, it could have been brought to Orange County by Henry Youngs in 1731; however, given the overall date for the assemblage it is more likely that it is later. None the less, the date range for export porcelain is 1675-1800, with a mean date of 1837, which certainly suggests that it could have been a possession brought to the site by the first occupant, or, alternative, it may have been a curated item that was treasured long after its date of manufacture. There was pearlware, which dates to 1780-1830. The presence of pearlware, which was not identified on the H1 complex, is one of the indications that the H2 complex is earlier in date. There was Rockinghamware, which was first manufactured beginning in 1850. The fragment was too small to identify the vessel type, but Rockinghamware tea pots in the "Rachel at the Well" pattern have been recovered by CITY/SCAPE: Cultural Resource Consultants on farm sites in Dutchess and Sullivan County. There were redware vessels, some with a clear glaze, some with a black or brown mottled glaze (often associated with chamber pots), and some that were flower pot sherds. There was whiteware, with a date range of 1830 through 1997, being represented by hand painted (mid-19th century), blue transfer print (mid-19th century), gilt edge (late 19th century), and decal designs (late 19th and early 20th century). There was ironstone, some with a dark blue transfer print and some with a red transfer print. There was soft paste porcelain in a variety of designs, including molded designs, a green pattern, and gilt edge pattern. There were at least five stoneware vessels, including a gray with a brown interior, one with an Albany slip exterior and interior, a buff vessel with a buff interior, and a cream vessel decorated with olive green with a brown interior. There were plates and bowls represented in the assemblage. Two sherds were marked: the first was marked "[POR]CELAINE DE TERRE/Trade Mark (1880-1900), the second, "MAYER CHINA EST. 1881/MARION" (1881). The Mayer China Company was established in 1881 and continued in operation to the present time (Miller 1995:226). Based in Syracuse, New York, the company produces high grade hotel ware, white granite (or ironstone), decorated semi porcelain dinner and toilet sets, and miscellaneous tableware.

Our examination of the date for H2/F4 indicated that over 50% of the artifacts fell into the food storage category, with food service representing 16.8% of the assemblage. In contrast with H2/F3 architectural materials represent only 15.1% of the assemblage from H2/F4. Tools and equipment represent 4% of the assemblage, with minor amounts of other artifact types present. Modern artifacts represent only 0.2% of the assemblage. Here ironstone is the predominant ceramic type (58%), with whiteware representing 28%, a strong indicator that the assemblage represents a mid to late 19th century deposit. This feature did, however, have a variety of early material, but in small amounts. This is not unexpected on a site that was occupied by one family over a long period of time. It is probable that the early members of the family would have brought some items with them from Southold, but that would represent an almost vanishingly small amount of material on a site that was occupied into the 1940s. It is for this reason that, despite the presence of late 18th and early 19th century artifacts, that the data indicates that the H2/F4 feature dates to the early to mid-20th century.

Historic Foundation 5 (H2/F5)

Historic Complex 2 Foundation 5 (H2/F5) is located 70' (21.3 m) north of H2/F3 and consists of dry laid fieldstone. (See Field Reconnaissance Map, Fig. 4 & 7, Photo 22, 23 &45) The dimensions of this foundation are 16' by 20' (4.8 m by 6.09 m). Twenty two (22) shovel tests tested the perimeter of this foundation and two (2) were placed within the interior. Cultural material recovered included architectural materials, including square and round nail, window glass, a staple, and several pieces of metal. There was bottle glass and lamp glass. Metal fragments were present that probably represent tin cans. There was a metal fence post. There was a shot gun shell casing. Ceramics included whiteware, blue hand painted whiteware, and whiteware with a blue and green glaze. There was ironstone and Rockinghamware, along with semi-porcelain with green bands. There were sherds of a salt-glazed crock with an Albany slip interior. Personal items were represented by a metal button. In contrast with H2/F3 and H2/F4, the amount and diversity of the artifacts recovered on H2/F5 was sparse. The presence of whiteware, ironstone and Rockinghamware are, however, indications that the structure could date to as early as the 1850s. The presence of clay pipe in the floor of the foundation may have been associated with waste disposal, or, perhaps, heating, but if we assume that the structure dates to the mid-19th century, then the pipe indicates that the building was altered at some point in the 20th century.

Historic Foundation 6 (H2/F6)

Historic Complex 2 Foundation 6 (H2/F6) is located 70' (21.3 m) north of H2/F5. (See Field Reconnaissance Map, Fig. 4 & 7, Photo 28) Only portions of this foundation remain intact, although the footprint of the original structure is still discernable on the ground surface. The foundation measures roughly 40' by 39' (12.1 m by 11.8 m) at its widest points. The western wall is a concrete pad 4' (1.21 m) wide, that creates a small zigzag or inverted "z". The surface of this concrete slab is stepped, suggesting a stoop or porch leading from the structure to the ground surface. The eastern wall has collapsed, although the berm of stones is still present. A total of thirty nine (39) shovel tests were excavated around the established perimeter of this foundation; an additional six (6) shovel tests were excavated in the interior. Among the artifacts of interest were a "Popeye" pocket knife and an axe head. Window glass, nails, predominantly square, staples, two triangular metal fragments, a metal pipe, and several other pieces of metal with bolt holes were recovered. There was a shot gun shell casing. There were bottles, including clear, aqua, olive and amber. There was milk glass. There was barbed wire and metal chain link. Some ceramics were recovered in association with this foundation, but the ceramics were much fewer in number than on foundation on the south side of the east-west interior road. Among the ceramics were whiteware with a scalloped rim, whiteware hand painted in red, ironstone, plain and with a floral decal design. The purpose of this structure was not determined, but it may have been a storage building of some type.

Historic Foundation 7 (H2/F7)

Historic Complex 2 Foundation 7(H2/F7) is located 30' (9.14 m) north of H2/F6, and is believed to be the foundation of a barn. (See Field Reconnaissance Map, Fig. 4 & 7, Photo 25) This foundation measures 162' (49.3 m) long, and is 43' (13.1 m) wide in the center, and narrower, being only 31' (9.45 m), at each end. The barn's longest wall is the north wall, and the southern wall has a small stone berm extension suggest that there was an addition to the barn. The southern wall is incomplete, and a small berm of stones is visible along this footprint. This foundation has been built into the slope, and it is possible that this unfinished wall represents an entrance way for livestock. A series of ninety (90) shovel tests were excavated around the perimeter of the barn structure. Three (3) shovel tests were excavated within the interior. These shovel tests produced architectural metals, window glass, significant amounts of bottle glass, parts of a light bulb, a drinking glass, metal fragments, some metal machine

parts, drain pipe, a screw, clam shell, and minimal amounts of whiteware and soft paste porcelain. Again, as is the case with H2/F6, and in contrast with the foundation on the south side of the east-west interior road, the barn foundation yielded little in the way of domestic refuse.

Historic Foundation 8 (H2/F8)

Historic Complex 2 Foundation 8 (H2/F8) is located 55' (16.7 m) north of H2/F7 and is the northernmost foundation within the complex. (See Field Reconnaissance Map, Fig. 4 & 7) This foundation is a 15' by 11' (4.5 m by 3.35 m) dry laid fieldstone foundation with a depth of ~ 3'(<1 m) below ground surface. Eighteen (18) shovel tests were excavated around the perimeter, only one of which yielded cultural material in the form of bottle glass and ironstone. The ironstone was decorated with a decal design dating to the late 19th and early 20th century.

Testing Yard Area on Historic Complex H2 (H2)

The associated yard areas for Historic Complex 2 Foundation 1 through Foundation 8 were tested at a 25' (7.5 m) interval. (See Field Reconnaissance Map, Fig. 7, Photo 44-45) A series of thirty six (36) transects (H2/Y1 through H2/Y36) were laid out and one hundred and forty four (144) shovel tests were excavated. Transects H2/Y1 through H2/Y9 were excavated in the vicinity of H2/F1, H2/F2 and H2/F4, with eleven (11) positive shovel tests. These shovel tests yielded architectural metals and drain pipe fragments, window glass, bone, white and transfer printed ironstone, stoneware, redware flower pot fragments, and fragments of bottle glass. Transects H2/Y10 through H2/Y12 and H2/Y18 through H2/Y19 were excavated in the vicinity of H2/F3, with seven (7) positive shovel tests. These shovel tests yielded window glass, yellowware, whiteware, and several nails. Transects H2/Y13 through H2/Y17 were excavated around H2/F5 with three (3) positive shovel tests. These shovel tests yielded window glass, yellowware, whiteware, and drain pipe fragments. Transects H2/Y20 through H2/Y30 were excavated around H2/F6 and H2/F7 with only seven positive shovel tests. The sparse amount of material recovered in this area consisted of nails, window, and bottle glass, as well as a horseshoe. Transect H2/Y39 is located on the eastern extent of Historic Complex 2 along the wetland. It yielded an increased amount of ceramics in the form of whiteware and Rockingham ware that may represent a small dump site. The remaining five transects, H2/Y31 through H2/Y36, were located around H2/F8. No cultural material was recovered from these transects.

Wells Located on Historic Complex H2 (H2/W1, H2/W2, H2/W3)

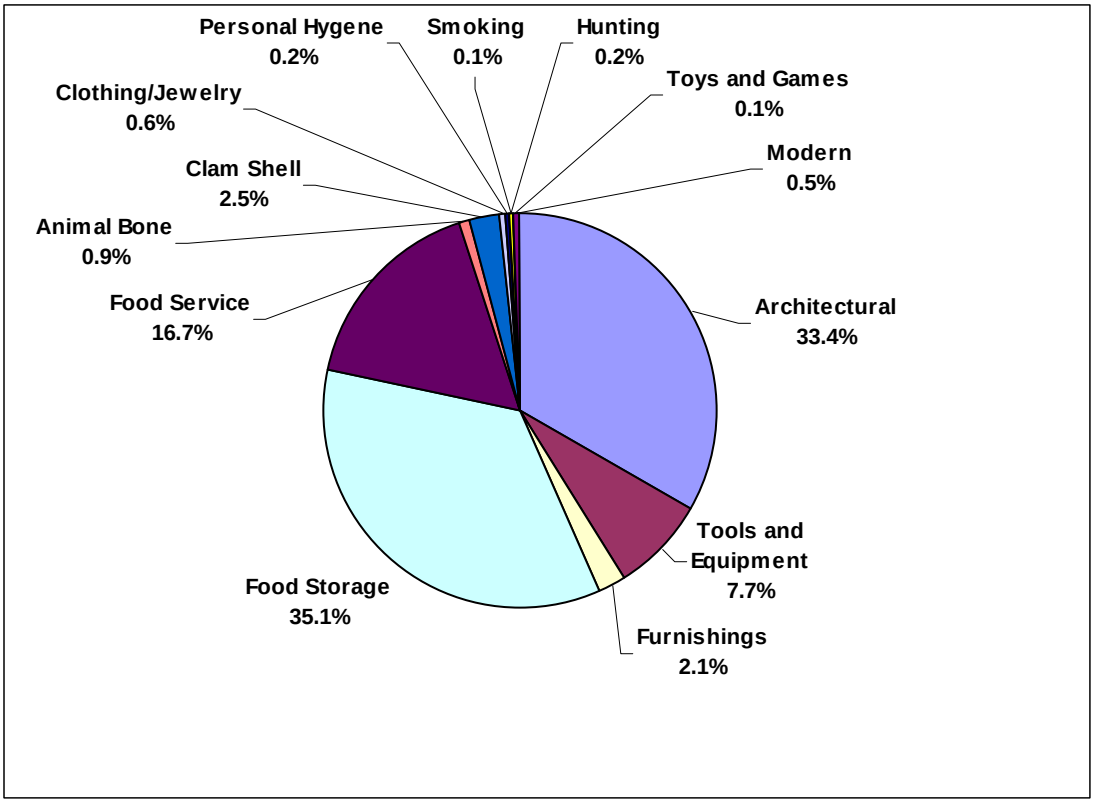
Three wells were identified within the confines of Historic Complex 2. (See Field Reconnaissance Map, Fig. 7, Photo 31) These wells are unmortared stone lined shaft feature, two of the three being filled with water. The first well (H2/W1) is located 23' (7.01 m) east of H2/F6. This well measures approximately 3' (1 m) in diameter. Due to the high water level within this feature at the time of field excavations, it was not possible to determine its depth. Based on the very murky appearance of the water, and the collapsing stone rim, it is possible that this well is very shallow. The second well identified (H2/W2) is located adjacent to the southwestern corner of the barn foundation (H2/F7). This stone lined shaft feature has either collapsed in on the northern side, or has been filled with stone. H2/W2 measures more than 5' (1.5 m) in diameter. The last well identified (H2/W3) is located 80' (24.3 m) east of H2/F5. This well, also a stone lined feature, measures roughly 4' (1.2 m) in diameter and approximately 3' (1 m) of the stone lining is visible above the water level. Due to the potential hazards, no testing of these features was undertaken.

Analysis of Assemblage Recovered on Historic Complex H2

The artifacts recovered from Historic Complex 2 (H2) indicate that, based on the recovery of fragments of Duraglas (TPQ 1940), the occupation of H2 extends into the mid-20th century; however, unlike H1, where the preponderance of the material dates to the late 19th and early 20th century, it appears that H2 was occupied at an earlier date, perhaps as early as the mid-18th century. Assuming this to be the case, some of the material recovered would be associated with the first Henry Youngs, who, it is reported, came to Orange County from Southold, Suffolk County, in 1731. The diagnostics for the early period are the export porcelain (1675-1800), the slip-trailed redware (1750-1820), the possible Jackfield (1750-1830), and the pearlware. All of these ceramic types are minimally represented in the various breakdowns presented in this analysis, because they are too few in number to be statistically significant, but for our purposes, there present even in small amounts is significant. Given the time span of H2, we would not expect that early material would be represented in large amount, compared with later material.

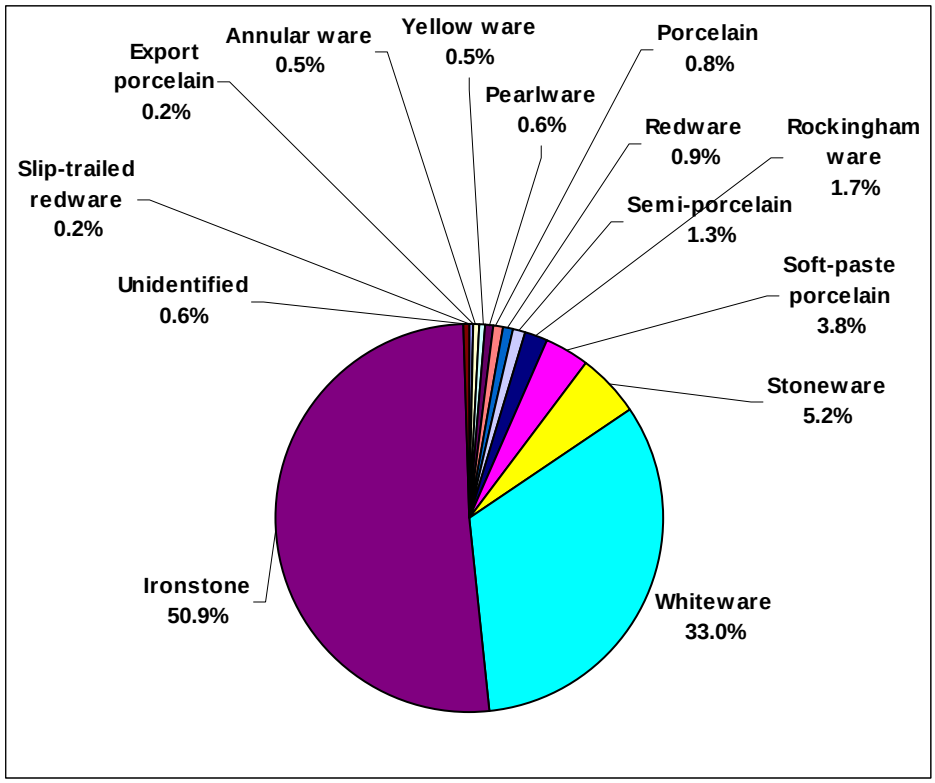
Looking first at the types of artifacts present, the pattern is somewhat different than that seen on H1. The H2 assemblage consists mostly of food storage and food service items (51.8%), with architectural materials representing 33.4% of the assemblage, whereas on H1 architectural materials (40.4%) and food storage and service (40%) were evenly represented. Tools and equipment are represented by a smaller percentage on H2 (7.7%) than on H1 (12.9%). Little was recovered in the form of clothing and jewelry (0.6%) or items associated with personal hygiene (0.2%). Percentage on H1 were fractionally higher, but not by an amount considered significant. A small amount of food remains, in the form of bone and clam shell, was recovered, and the collection also displays (in small quantities) a representative sample of domestic items including toys (0.1%), smoking pipes (0.1%), and shotgun shells (0.2%).

Historic Complex 2: Artifact Types (Percentage)



Looking at the ceramics, which are generally more diagnostic than glass or other items, ironstone and whiteware comprise over 80% of the ceramic assemblage. The large percentage of ironstone (50.9%) is a clear indication that, despite some earlier materials, the focus of H2 is on the mid to late 19th century. This is in contrast to H1, where the focus was on the late 19th and early 20th century. Stoneware represents 5.2% of the collection, including a gray salt-glazed with a brown interior, a gray salt-glazed with an Albany slip interior, a crock with an Albany exterior and interior glaze, a buff with buff interior, brown with buff interior, a tan jug with a heavily grooved buff interior, and a cream vessel with olive green design with a brown interior. Several of these types of stoneware were recovered from more than one foundation; in some cases it may be that a single vessel was broken and broadcast across the landscape, but it is more logical to assume that more than one vessel of a particular type is represented. While there are glass vessels and bottles in the collection, the presence of significant numbers of stoneware crocks and a stoneware jug, suggests that families like the Youngs, who would have already possessed stoneware storage vessels, may have continued to use them even after glass vessels were available. The stoneware in the assemblage is one of the indications that H2 was occupied earlier than H1. Other ceramics, as noted, including export porcelain (1675-1800), the slip-trailed redware (1759-1820) and the pearlware (1770-1830), are also indicative of an 18th and early 19th century occupation. Other food service items in the collection include a tablespoon, a spice container, candy dishes, and drinking glasses. Two of the vessels have legible makers' marks: the first being the "[POR]CELAINE DE TERRE"/Trade Mark (1880-1900), the second, "MAYER CHINA EST. 1881/MARION" pattern (1881). The Mayer China Company was established in 1881 and continued in operation to the present time (Miller 1995:226). Based in Syracuse, New York, the company produces high grade hotel ware, white granite (or ironstone), decorated semi porcelain dinner and toilet sets, and miscellaneous tableware.

Historic Complex 2: Ceramic Types (Percentage)

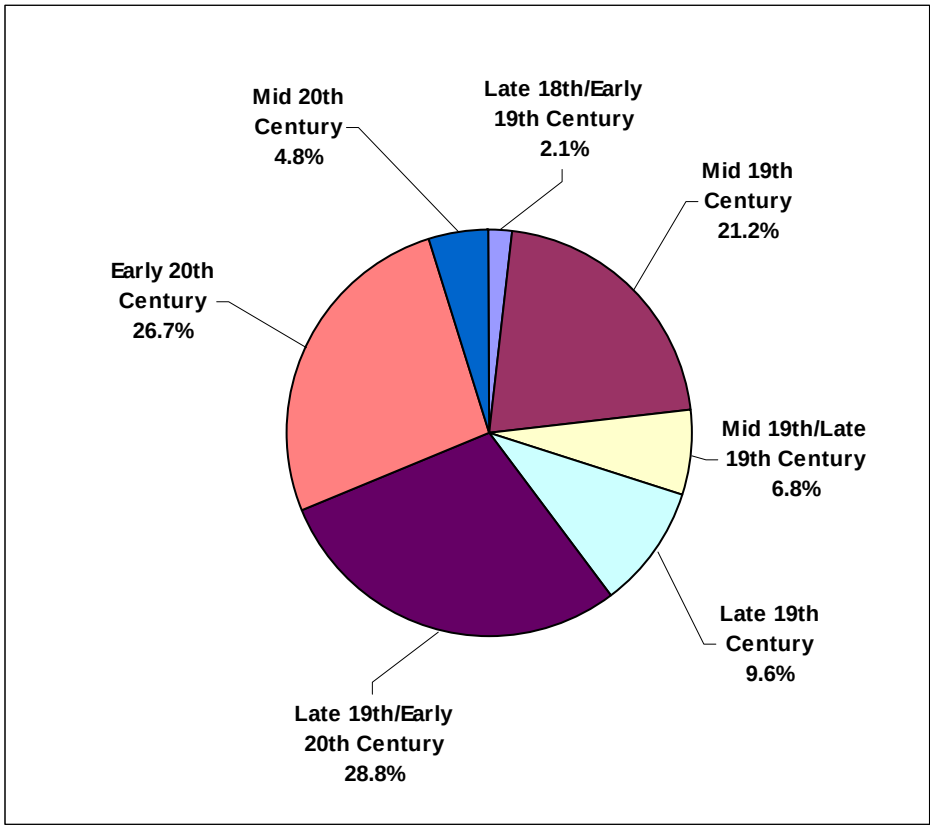


The glass assemblage consists mostly of bottles, fruit jars, and canning jars (some of which are specifically Mason jars). Multiple jar lid fragments and milk glass lid liners for canning jars are present in the collection as well. The majority of the bottles and jars are machine made and post date 1905. Those labeled "Duraglas," of which there are at least four, have a TPQ of 1940, indicating some occupation at this site into the mid 20th century. This date would be consistent with that for Historic Complex 1 (H1), which also had fragments of Duraglas that was collected from the ash berm. Recognizable in the glass collection are a wine bottle, a liquor bottle, two bottles of "Guilden's Mustard", a bottle of "Hellman's Blue Ribbon" mayonnaise, and a lid from a "Mott's Pure Jelly" jar. At least three (3) medicine bottles were also recovered, including a bottle of Saxlehner's Bitterquelle, a type of laxative mineral water. A bottle of Kreml hair tonic is an indication that the family was concerned with personal appearance and hygiene.

Personal items in the assemblage are several shell and milk glass buttons, a glass bead, and a metal (gold or brass) cufflink with inscribed initials. Unique finds in this collection are a wooden chess piece, a pocket knife depicting the cartoon character "Popeye" on the handle, and a New York State hunting license dated 1930.

The dating of H2 is complicated by the fact that early material is present, including export porcelain (1675-1800), slip-trailed redware (1750-1820), possible Jackfield (1750-1830), and pearlware (1770-1830), but in such small quantities that it does not show up in the overall percentages used to date the site. For this reason, the earliest dates indicated in the pie chart showing the percentages of artifacts by date is the late 18th and early 19th century (2.1%). In contrast to H1, where the mid-19th century represents only 9% of the assemblage, on H2 it represents almost a quarter (21.2%). This is a strong indication that H2 dates to an earlier time period than H1, a fact that appears borne out by the present of early material on H2, and its complete absence from H1.

Historic Complex 2: Dating



Despite this evidence of early occupation, the assemblage on H2, like that on H1, is strongly suggestive that occupation of the site extended into the late 19th and early 20th century. Based on our initial site visits, we had hypothesized that H2 is the earlier of the two historic complexes on the *Craigville Road* site, and this hypothesis is supported by the ceramics recovered. Based on the artifact assemblage, we further hypothesize that H2 is the original Youngs farmstead, settled by Henry Youngs as early as 1731. The New York Census for 1825 indicates that a Henry Youngs resided on the property in that year. We know that in 1851 Historic Complex 2 (H2) was owned by H. (Henry) and O. (Oliver) Young[s]; research indicates that Henry Youngs did not at that time occupy the house, being a successful merchant in New York City, but that the property was farmed by his younger brother, Oliver. At a later date H2 was owned by the Youngs family, who operated a large and successful dairy farm, but it seems that by 1875 they occupied the house (H1/F4) on the H1 site. It is likely that other members of the family, or, perhaps the hired help, occupied H2. Whatever the case, it appears, like H1, that H2 was abandoned within a very few years of 1930, the year when Dr. Henry Youngs died. The most recent artifacts on both H1 and H2 are fragments of Duraglas, which was not manufactured until 1940, and this must be taken as the *terminus post quem* (TPQ) for both Historic Complex 1 (H1) and Historic Complex 2 (H2).

Outlying Foundations (H3/F1, H4/F2 and H5/F3)

The Phase 1A research had identified several map documented structures (MDS) within the *Craigville Road* site, in addition to Historic Complex 1 (H1) and Historic Complex 2 (H2). These MDS included a blacksmith shop, a dwelling whose owner was not identified, a saw mill, and the dwelling of P. Rumsey (See Map 3), as well as a dwelling owned by J. Boettmer, another by M. Brennan, east of the blacksmith shop, and the district school house (See Map 4). The Phase 1B survey appears to have located the blacksmith shop, the foundation of the J. Boettmer house, and a feature that may be associated with the saw mill. Despite a careful examination of the area on three separate occasions, the survey failed to identify the Brennan house, or the dwelling and saw mill shown on the north side of Craigville Road east of the Hasbrouck Road intersection. The Phase 1B also identified a foundation located on the east side of the access road to H1 in the midst of an area now identified as wetland. This structure does not appear on any of the historic maps, which generally identified only dwellings and significant structures, such as a blacksmith shop, saw mill or school house.

During the Phase 1B Archaeological Field Reconnaissance Survey, these historic foundations and other historic features were identified; all are outside the Area of Potential Effect (APE). These foundations will not be impacted by the proposed development, however, in accordance with the New York State OPRHP and New York State Archaeological Association (NYSAA) standards, these features were tested to identify type of resource, date, and its relationship, if any, to Historic Complex 1 (H1) and Historic Complex 2 (H2). Additionally, the OPRHP and NYSAA recommends that these outlying features be tested based on the potential for vandalism and human intrusion following the development of the site.

Historic Complex 3 (H3/F1)

Historic Complex 3 Foundation 1(H3/F1) is located 490’ (149.3m) north of H1/F2 in the northeastern portion of the *Craigville Road* site. (See Field Reconnaissance Map, Fig. 8, Photo 60) This foundation is a 24’ by 20’ (7.3 m by 6.09 m) dry laid fieldstone foundation. This foundation is located in the midst of a wetland that today extends along the south side of Craigville Road. As discussed above, map research indicates that the area in which the foundations is located was formerly on the edge of a stream that flowed from the north side of Craigville Road, along the south side of the highway, before crossing under Craigville Road to the west of Ridge Road. Twenty-one

(21) shovel tests were excavated around the perimeter of H3/F1, which yielded two nails and two metal plates. A large poplar tree is currently growing in the center of this foundation, an indication that this area has been abandoned for some time. Additionally, two (2) transects were excavated on the north side of the foundation (H3/Y1 & H3/Y2). To the left side of the foundation is a wooden feature, thought to be a water trough. A horseshoe was recovered from the ground surface in this area. It may be that this structure was an animal shelter, which would not have been included on early maps.

Historic Complex 4 (H4/F2)

Historic Complex 4 Foundation 2 (H4/F2) refers to the J. Boettmer House site located on the south side of Craigville Road east of Pleasant Ridge Road. (See Field Reconnaissance Map, Fig. 9, Photo 54) The foundation is located 2700' (823 m) northwest of H2/F7, and the land on which the foundation is sited slopes down to the stream to the southeast. This foundation measures 45' by 30' (7.6 m by 9.14 m) and contains a small "el" off the back. Forty (40) shovel tests were excavated around the perimeter of the foundation, and 20 STP in the yard area (H4/Y1-Y4). Architectural materials were represented by window glass and nails, mostly square, but some that were round. There was a bolt, a metal plate, a spring, and an agate door handle. There were many fragments of glass, including clear, aqua and olive that represent bottles. There was a milk glass canning jar lid (TPQ 1869). There were ceramics, including whiteware, whiteware with a hand painted brown design, and whiteware with a blue transfer print design. There was a limited amount of ironstone, some of which had a blue transfer print design. There was porcelain, some sherds having a gilt floral design that would date to the late 19th century. There was a sherd of redware with a black glaze that may represent Jackfield (1750-1830), which was also identified on the H2 complex. In addition to the foundation, there was a flagstone and cement covered feature that may be a well. (Photo 57) At a distance from the foundation, to the south, was a shaft feature that may also be a well. Eight (8) shovel tests were excavated around this feature. Architectural material was present, including nails, both square and round, window glass, small bolts, and metal fragments.

Historic Complex 5 (H5/F3)

Historic Complex 5 Foundation 3 (H5/F3) is located on the north side of Craigville Road. (See Field Reconnaissance Map, Fig. 10, Photo 58-59) This feature covers and area 20' by 15' (6.09 m by 4.5 m) and consists of an ephemeral scatter of foundation stone. The feature is located on the north side and adjacent to Craigville Road east of Hasbrouck Road. (Photo 58) The feature is located along side a stone and earth berm that extends northeast from Craigville Road; although no mill pond associates with the saw mill is shown on the 1851 map, this feature is interpreted as a dam. The mill pond would have formed behind it to power the saw mill. Directly northwest of the earthen berm is a feature that may also be associated with the saw mill. This feature is not identified on the historic maps, but based on the cultural material recovered, it appears to be a dwelling, rather than an industrial complex. A total of twenty two (22) shovel tests were excavated around the feature's perimeter, with thirteen (13) yielding historic material. There was a metal top to a salt shaker or spice shaker. Food remains were represented by several pieces of bone and clam shell. A dense concentration of bottles was present, including those that were clear, aqua, olive and pink, the pink tint being an indication that the bottles had long been exposed to sunlight. There was an aqua tinted Mason jar, one of which has a TPQ of 1905, and two clear jars. Lamp glass was recovered, indicating that at one time the house was lit by oil or kerosene lamps. As on the other foundation, the ceramics represent the most diagnostic material. Ceramics recovered included pearlware (1780-1840) and redware with a black glaze that may be Jackfield (1750-1830). Both of these are early ceramic types that support the hypothesis that the H5/F3 is the Rumsey house foundation. In addition to these early pieces, there was stoneware, representing at least two

storage vessels, one being a gray salt-glazed crock with a brown interior, the other a gray salt-glazed crock with an Albany slip interior. There were two fragments of yellowware, which, as noted above, was used in food preparation and dairying activities before the mid-19th century, when glass vessels replaced it. There was whiteware in a variety of patterns and colors, dating from the 1830s through the early 20th century. Among the whiteware identified was brown transfer print (1830-1850), blue transfer print (1830-1870), flow blue transfer print (1844-1870), turquoise transfer print (late 19th century), whiteware with a yellow glaze dating to the late 19th century, and floral decal prints (late 19th-early 20th century). There was soft paste porcelain, also with a floral decal design of the same date. Although pieces dating to the late 19th century were present, the ironstone present on H5/F3 is minimal. Ironstone dates 1850 to the present, and, as stated above, it the most frequent ceramic found on mid to late 19th century sites. The paucity of ironstone from this foundation is somewhat unusual, particularly when compared with H1 and H2. As on the other sites, most of the material recovered was too fragmentary to identify as to vessel type, but on H5/F3 there was a sugar bowl, a metal salt or spice shaker top, and two ornate candy dishes. Based on the historic maps, this foundation dates from between 1851 and 1875, but the based on the materials recovered the assemblage spans a time period from the late 18th through the early 20th century.

Historic Complex 6 H6/F4)

Historic Complex 6 Foundation 4 (H6/F4) is located immediately west of the north-south interior farm road. This feature does not have a cellar hole, but is represented on the ground by a concentration of stones that rise from the stream to Craigville Road. This feature appears to correspond with the blacksmith shop shown on the 1851 map. A number of shovel tests were excavated in this area, but the cultural material recovered was not informative. While the feature is located on the site of the blacksmith shop, it does not appear that any evidence of its former industrial activity remains.

Conclusions concerning the Outlying Foundations (H3/F1, H4/F2, H5/F3 and H6/F4)

Only two of the foundations discussed above are located within the boundaries of the Area of Potential Effect (APE); however all were tested to conform to the present requirements of OPRHP and NYSAA, as discussed above. The first foundation (H3/F1), located east of the access road to Historic Complex 1 (H1), is not substantial, and no artifacts consistent with a dwelling were recovered. It is concluded that this foundation may be an animal shelter. It will not be impacted by the proposed project. The second foundation, (H4/F2)located on the south side of Craigville Road east of Ridge Road, is the Boettmer house site. It is in the area that will be the location of one of the entrance roads to the site, and it will be impacted by the proposed development of the *Craigville Road* site. The third feature (H5/F3) is an ephemeral foundation located immediately northeast of a stone and earthen berm, that is interpreted as a dam associated with the saw mill seen in this location on the 1851 map. The cultural material recovered was suggests a dwelling, rather than an industrial site. This site will not be impacted by the proposed development. In addition to these three foundations/features, the site of the blacksmith shop (H6/F4) was also identified. This site is located west of the north-south interior farm road that crossed the northern portion of the southern parcel of the site. This area was tested, but no material was recovered that could confirm its identification. This site will not be impacted by the proposed development. The Phase 1B survey failed to locate the M. Brenner house site. Our survey also failed to identify the P. Rumsey site, which is, however, outside the project area. We also failed to identify the house located at the intersection of Craigville Road and Hasbrouck Road; an area that will not be impacted by the proposed project.

Conclusions concerning the Artifact Assemblage

The assemblage of artifacts from *Craigville Road* site contains early material, some of which could date to the mid-18th century, but the preponderance of the material dates to the late 19th to early 20th century. No diagnostic material was recovered that dates to later than 1940 (Duraglas), and one has the impression that following the death of Dr. Henry Youngs in 1930 the family did not long remain on the farm. Although it has been stated that the two historic complexes have the appearance of abandonment, the fact that we recovered so few personal items and so little of the farm equipment suggests that the removal was orderly. It is possible that research would identify how this was accomplished, but one way could have been through an auction of the stock and farm equipment. Household items could also have been auctioned, but it is probable that the two unmarried sisters of Dr. Henry Youngs took many of their possessions with them when they moved elsewhere. It appears, however, that many household items were left behind and are currently strewn across the yard.

Research indicates that the farm was occupied by the Youngs family from as early as 1731, and, based on the fact that the early material was recovered from Historic Complex 2, if appears that this area was the original farmstead. The amount of early material is minimal, but it is present in the form of export porcelain, slip-trailed redware, Jackfield ware and pearlware. Material from the mid-19th century was recovered from both H1 and H2, but H2 was the location of the majority of the mid-19th century material, buttressing the identification of H2 as the original farmstead.

Following the Civil War, Henry Youngs, who had been a successful merchant in New York City, retired to the farm he inherited from his uncle, also Henry Youngs. At that time, he either built or, perhaps, enlarged the second of the two dwellings shown on the 1851 map. According to the Agricultural Census, this was a frame house. In retirement he is reported to have made significant improvements to his property that are reflected in the information derived from the New York State Agricultural Census discussed above. He died in 1875, leaving his wife, Anna, who outlived him by a decade, a son, Henry, who became a physician in Goshen, and four or, perhaps, five daughters, including Edith, who was unmarried and kept house for her brother, Anna E., born in 1870, who married into the Hawkins family, Amy B. (who may also have been known as Emma), who was unmarried, and Maida Youngs Roe, wife of Stewart Roe, who died in 1913, leaving two children. In addition to the family members living in the house, there were two women identified as domestic help and two men identified as farm hands.

The Youngs farm, referred to as “Youngstead” was operated as a dairy farm, but chickens were also raised for egg production. Significant acreage was used to raise hay and grain that would have fed the dairy herd. There would have been barns for the cows, and for the horses that plowed the fields and powered the equipment used to harvest the crops. There would have been structures to house the chickens. The New York State Agricultural Census confirms the presence of the dairy herd, the chickens and the horses, as well as oxen. While the Youngs farm was considered one of the largest and most successful in Orange County, it is likely that the Youngs family, who seem to have had significant financial resources from their mercantile activities, were “gentlemen farmers, who did not rely entirely on farm income for their day-to-day living expenses.

Looking at the ceramics from Historic Complex 1, the presence of whiteware and ironstone with decal designs suggests that a significant part of the assemblage dates to the time after the death of Anna Jackson Youngs in 1885. This would be the time period when Dr. Henry Youngs occupied “Youngstead.” We have not learned if Dr. Henry Youngs was married, but in 1915 his sister, Edith, kept house for him. It is probable that she chose the

new ceramics identified on the H1 complex. We do not know who occupied the H2 complex, but we suggest that it is likely to have been Frank and Rose Barty, who worked for Dr. Henry Youngs as a hired hand and maid.

While acknowledging the fact that a minimal amount of early material is present on the *Craigville Road* site, the dating of both the H1 and H2 complexes indicates that the *terminus ante quem* for the Youngs houses is the 1940s, based on the presence of Duraglas on both the H1 and H2 sites. However, for all practical purposes it seems that activity on the site ceased within a short time after Dr. Henry Youngs died in 1930. The sisters may have packed their things and moved away, but many household items were left behind on H1 to be scavenged and strewn around the yard. Although we no longer believe that the site was suddenly abandoned by two sisters, who one day locked the door and walked away, the fact remains that the domestic debris recovered appears to represents a time-capsule that was sealed shortly after 1930.

Summary and Conclusions

From November 2006 through May 2007, CITY/SCAPE: Cultural Resource Consultants completed a field reconnaissance level archaeological survey of the *Craigville Road* site, Town of Goshen, Orange County, New York. (Map 1 & 2) Prior to the start of fieldwork, a thorough review of the existing body of archaeological data relevant to the project area was undertaken and conclusions drawn concerning the probability of encountering historic and prehistoric cultural remains on the site. Additionally, a careful visual inspection of the project area was undertaken to confirm the location of a series of Map Documented Structures (MDS) on the site.

The fieldwork was completed over an extended period of time, including a hiatus due to the winter freeze, and a delay resulting from the process of drafting accurate scale survey maps of the existing ruins within the historic site boundaries. With the exception of foundations identified in wetland areas, all wetlands, areas of prior disturbance, and non-impacted areas were identified and eliminated from testing. Once this process was completed, areas possessing the potential to yield cultural remains were subjected to systematic subsurface archaeological testing.

A total of twenty-eight hundred and thirty one (2831) shovel tests on two hundred and forty-nine (249) transects were excavated in the *Craigville Road* site. Two historic complexes, (Historic Complex 1 & Historic Complex 2) appear on the Current Condition Map, and these were identified and examined during the initial site visit. Several Map Documented Structures (MDS) were identified during the research for the project; two of these foundations were located, either during the initial sites visits or during the Phase 1B survey. One additional historic foundation, designated Historic Complex 3, was identified in a wetland area during the Phase 1B survey. An additional eight hundred and thirty-nine (839) shovel tests on eighty six (86) transects were excavated within Historic Complex 1 (H1) and Historic Complex 2 (H2). (See Field Reconnaissance Map & Fig. 4-10) With the exception of the area surrounding H3/F1, the areas subjected to shovel testing represent the flat and well drained areas within the project area. As illustrated on the Field Reconnaissance Map, these flat areas are concentrated on the higher elevations and around the wetlands, making them ideal locations for prehistoric occupation. Wetlands cover approximately 14.5% of the *Craigville Road* site, creating a potentially rich prehistoric landscape. A 100 foot (30.4 m) wetland buffer was observed around all wetlands, and testing was not attempted adjacent to or in wetland area, with the exception of Historic Complex 1 and Historic Complex 3.

The results of the shovel testing were that no prehistoric artifacts of any kind were recovered. The testing of the historic areas led to the following preliminary conclusions:

- Historic Complex 1 (H1) contains a minimal amount of material dating to the mid to late 19th century, but, based on the recovery of Duraglas from the area of the ash berm, has a terminus post quem of 1940.
- Historic Complex 2 (H2) has a terminus post quem of 1940, based on the recovery of Duraglas, but also has an earlier component dating to the late 18th and early 19th century.
- Historic Complex 3 (H3/F1) may have been an animal shelter, but, based on the artifacts recovered, is not significant.
- Historic Complex 4 (H4/F2) is the site of the Boettmer house seen on the 1875 map; this site will be impacted by the proposed project and it will be necessary to further test this area to determine if the site has the potential to add to our knowledge of the site, its occupants, or its place in a broader regional picture.
- Historic Complex 5 (H5/F3) may be associated with the saw mill seen on the 1851 map; this area will not be impacted by the proposed project.
- Historic Complex 6 (H6/F4) is the location of the blacksmith shop seen on the 1851 map; this area will not be impacted by the proposed project.

Based on the materials recovered from the *Craigville Road* site and the above assessment, it is the opinion of CITY/SCAPE: Cultural Resource Consultants that two of the five foundations located on the south side of the east-west farm road on Historic Complex 2, specifically H2/F3 and H2/F4 have the potential to provide information that might be useful in placing this early farmstead in a broader regional context. We also conclude that Historic Complex 4 (H4/F2) has the potential to sustain damage as the result of the proposed development. This foundation is within the APE and it requires further investigation to determine if it has the potential to contribute to our knowledge of the early to mid-19th century development of the area. We therefore recommend that H2/F3, H2/F4 and H4/F2 (The Boettmer house) on the *Craigville Road* site be examined on the level of a Phase 2 Archaeological Investigation, which will:

- assess the integrity and the significance of the resources on H2/F3 and H2/F4 on Historic Complex 2 with respect to their potential to provide significant cultural information relating to an early Orange County family and the development of the Town of Goshen, Orange County;
- to increase our understanding through additional research of the development of the H1 and H2 complex during the time that the Youngs family occupied it, which appears, based on the artifacts recovered, to span a time period from the late 18th and early 19th centuries through the 1930s and, perhaps, into the 1940s;
- assess the integrity and the significance of the resources on Historic Complex 4 (H4/F2) with respect to their potential to provide significant cultural information relating to the development of the Town of Goshen, Orange County and the families that owned the property from the late 18th and early 19th centuries through the early 20th century;

- place the "Youngstead" farm site in a regional and local context through additional research, and, if examples can be found, comparing the artifact assemblage with sites of similar date in other parts of Orange County and the Hudson Valley;
- and, determine whether the resources on H2 and H4 meet the criteria for eligibility for nomination to the National Register of Historic Places.

It is, therefore, recommended that a proposal for a Phase 2 Archaeological Investigation be prepared that will be limited to those areas specified above (H2/F3, H2/F4 and H4/F3). It is further recommended that the proposal be discussed with OPRHP prior to implementation to ensure that the work conforms to the requirements of that agency.

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1957 *USGS Topographical Map*. Goshen Quadrangle. Scale: 1:24,000.

APPENDIX A

MAPS AND FIGURES

MAP AND FIGURE LIST

Maps

Map 1 Location Map. 1957 USGS Topo. 7.5 Minute Series. Goshen Quad. Original scale: 1:24,000). Current scale: 1¾" = 3180'

Map 2 Location Map. (Source: JIMAPCO *Hudson Valley Street Atlas* 2002). Current scale: 1" = 3,533'

Map 3 J. C. Sidney's 1851 *Map of Orange County, New York.* Current scale: 1¼" = 3,180'.

Map 4 F. W. Beers' 1875 Map of the Town of Goshen from County Atlas of Orange, New York. Current scale: 1" = 3,180'.

Map 5: Lathrop's 1903 Map of the Town of Goshen in Atlas of Orange County, New York. Current scale: 1" = 3,180'.

Map 6: 1908 USGS Topo. 15 Minute Series. Goshen Quadrangle. 1:62,500. Current scale: ⅝" = 3,180'.

Figures

Fig. 1: Aerial Photo of Project Area. (Source: http://websoilsurvey.nrcs.usda.gov) Scale on map.

Fig. 2: Soil Map. Source: http://websoilsurvey.nrcs.usda.gov) Scale on map.

Fig. 3: Location Map with wetlands delineated. (Source: Rieger Homes, Inc). Current scale: 1" = 1,590'.

Fig. 4: Craigville Road Site. Historic Complex Locations. Scale: 1" = 75'.

Fig. 5: Craigville Road Site. Historic Complex 1. Phase 1B Field Reconnaissance Map. Scale: 1" = 50'.

Fig. 6: Craigville Road Site. Historic Complex 1. Surface Collection and Trench Locations. Scale: 1" = 25'.

Fig. 7: Craigville Road Site. Historic Complex 2. Phase 1B Field Reconnaissance Map. Scale: 1" = 50'.

Fig. 8: Craigville Road Site. Historic Complex 3. Scale: 1" = 25'.

Fig. 9: Craigville Road Site. Historic Complex 4. Scale: 1" = 25'.

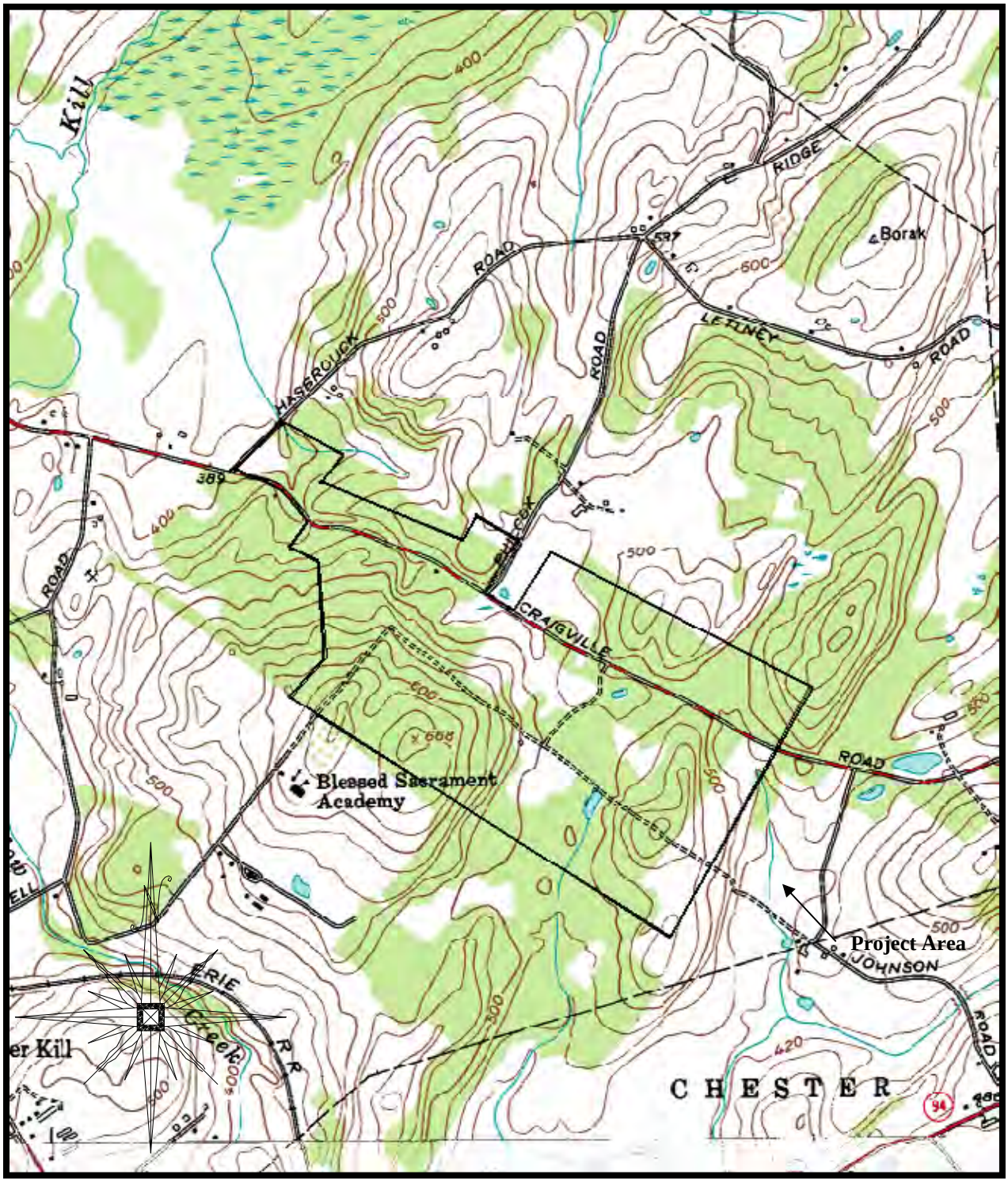
Fig. 10: Craigville Road Site. Historic Complex 5. Scale: 1" = 25'.

Fig. 11: Craigville Road Site. Historic Complex 6. Scale: 1"=25'.

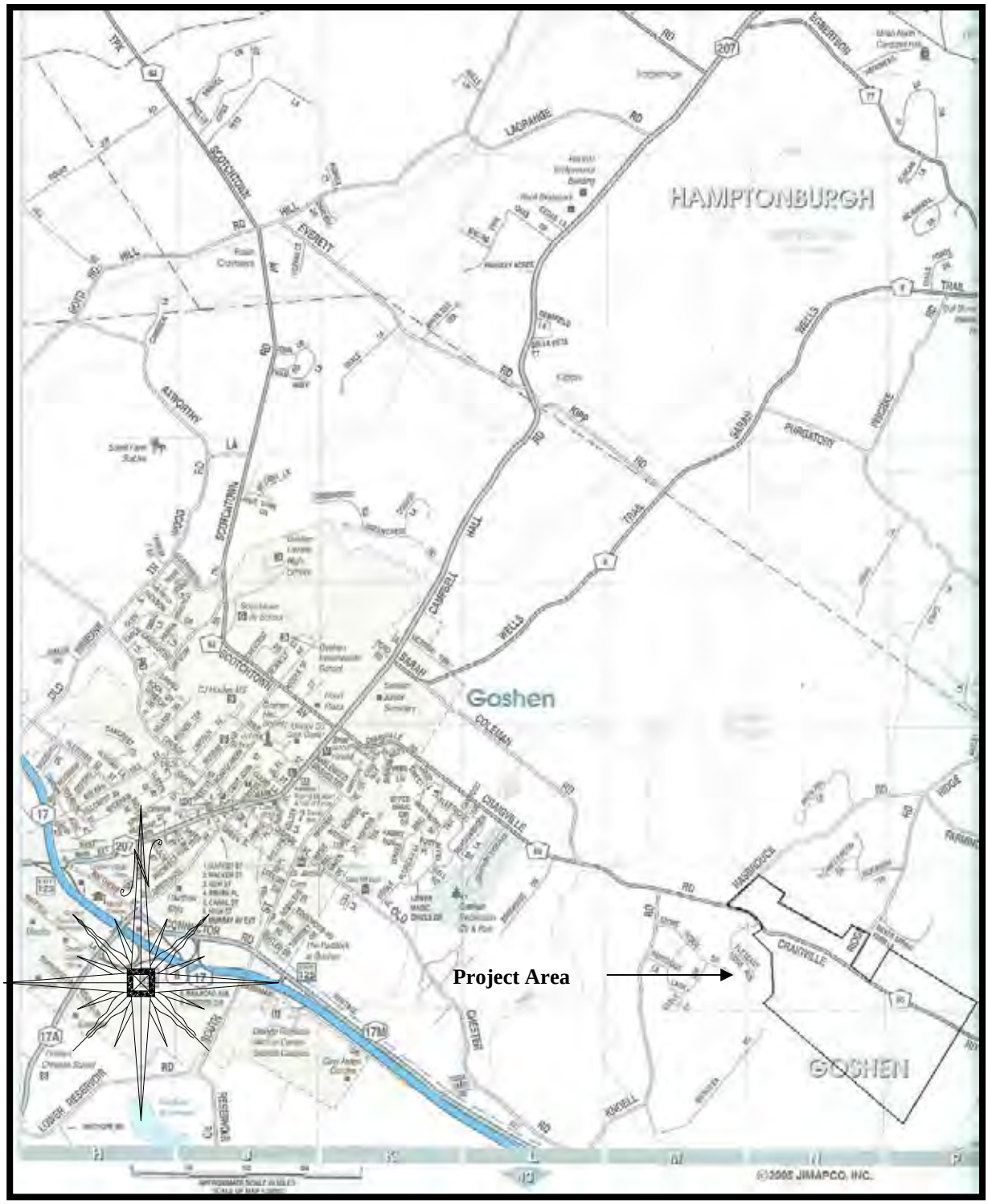
Phase 1B Field Reconnaissance Map. Scale: 1" = 200'

Map 1: 1957 USGS Topographical Map. 7.5 Minute Series. Goshen Quadrangle 1:24,000 Current Scale: 1 ¾”= 3180’

Craigville Road Site. Craigville Road and Hasbrouck Roads. Town of Goshen. Orange County, New York

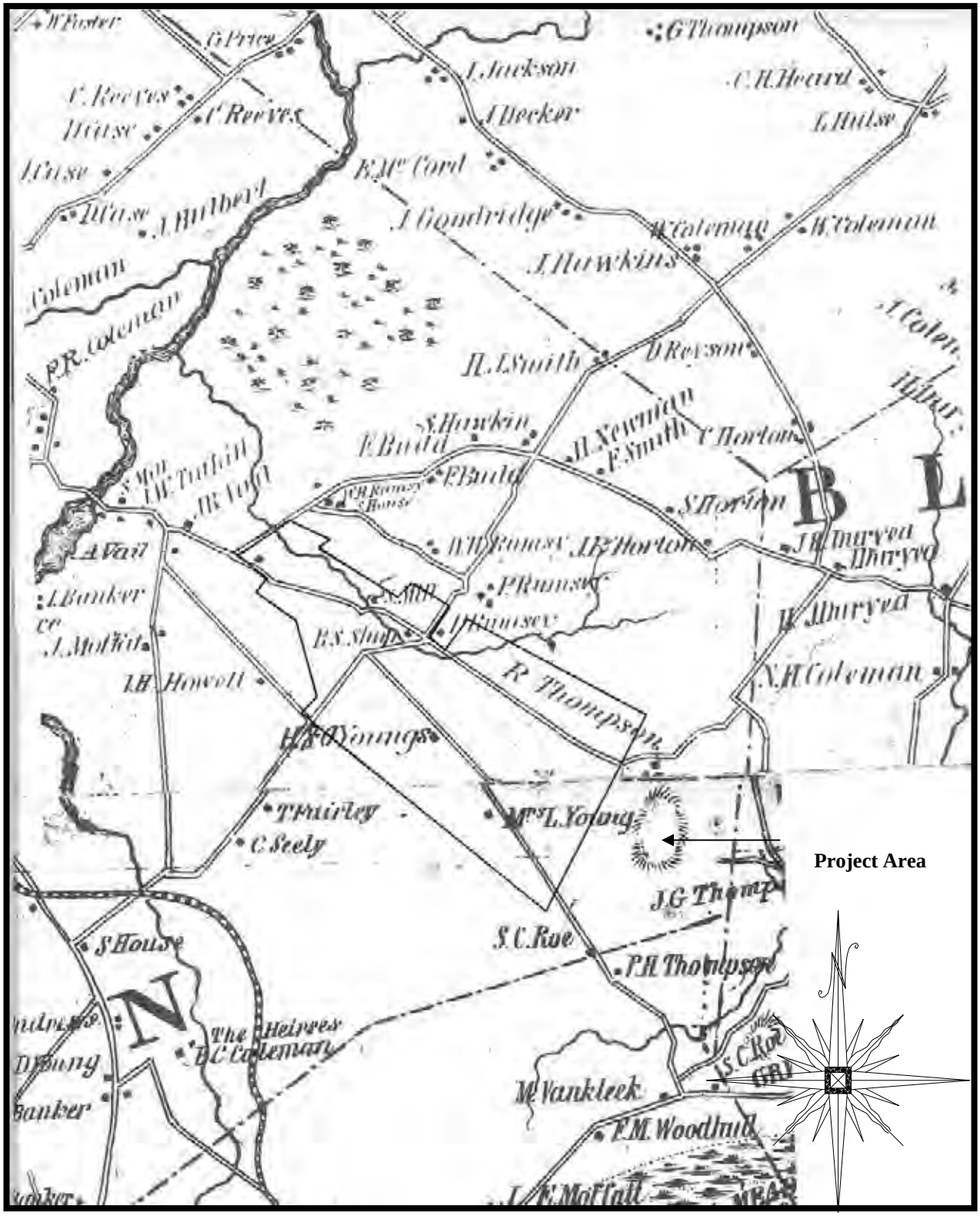


Map 2: Location Map including the Project Area. Taken From Jimapco's Hudson Valley Street Atlas Current Scale: 1"= 3533'
Craigville Road Site. Craigville Road and Hasbrouck Roads. Town of Goshen. Orange County, New York



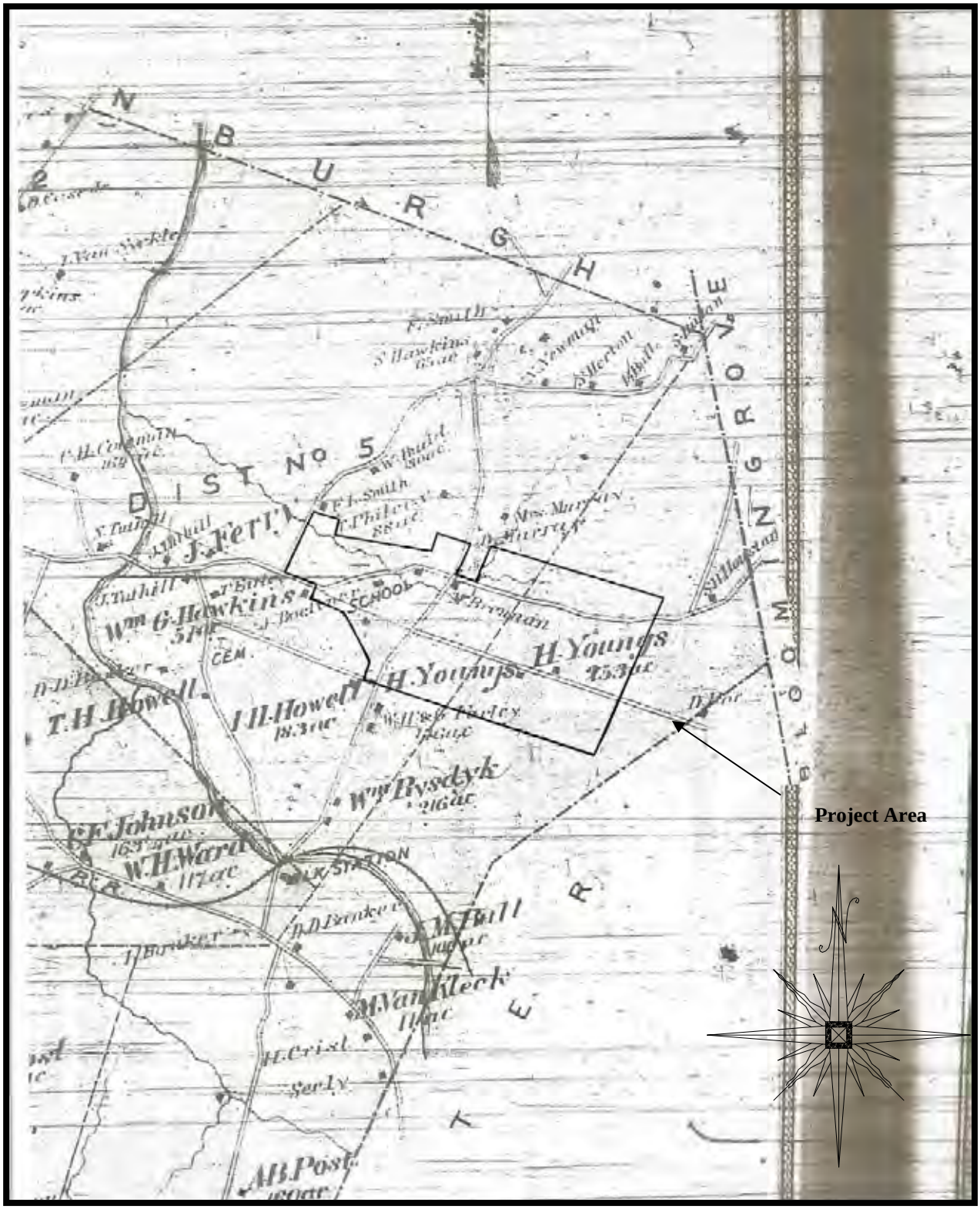
Map 3: J. C. Sidney's 1851 *Map of Orange County, New York*. Current scale: 1 ¼”=3180’

Craigville Road Site. Craigville Road and Hasbrouck Roads. Town of Goshen. Orange County, New York



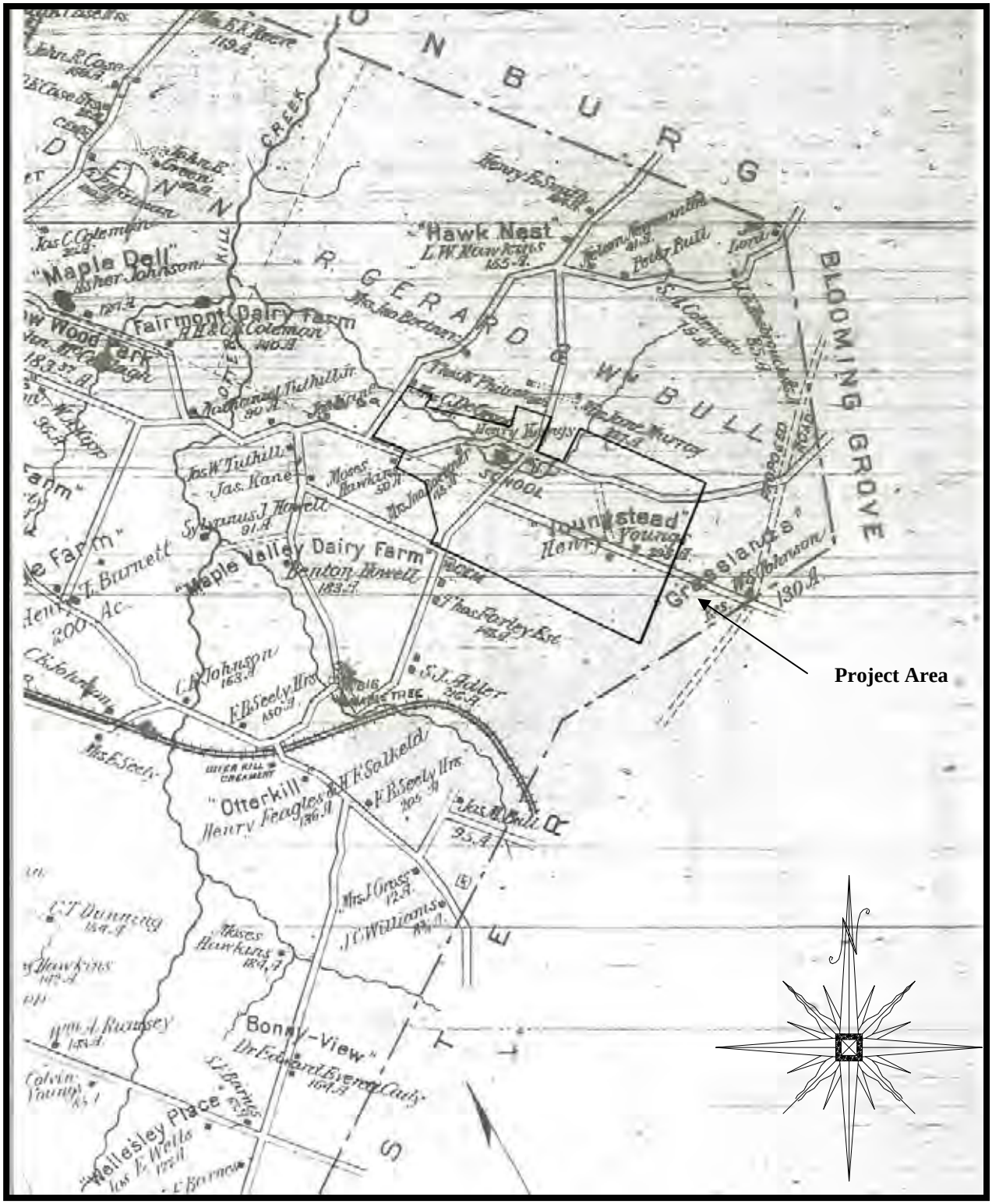
Map 4: F. W. Beers 1875 *Map of the Town of Goshen* from the *County Atlas of Orange, New York*. Current scale: 1"=3180'

Craigville Road Site. Craigville Road and Hasbrouck Roads. Town of Goshen. Orange County, New York



Map 5: Lathrop's 1903 *Atlas of Orange County New York.* Current scale:1"=3180'

Craigville Road Site. Craigville Road and Hasbrouck Roads. Town of Goshen. Orange County, New York



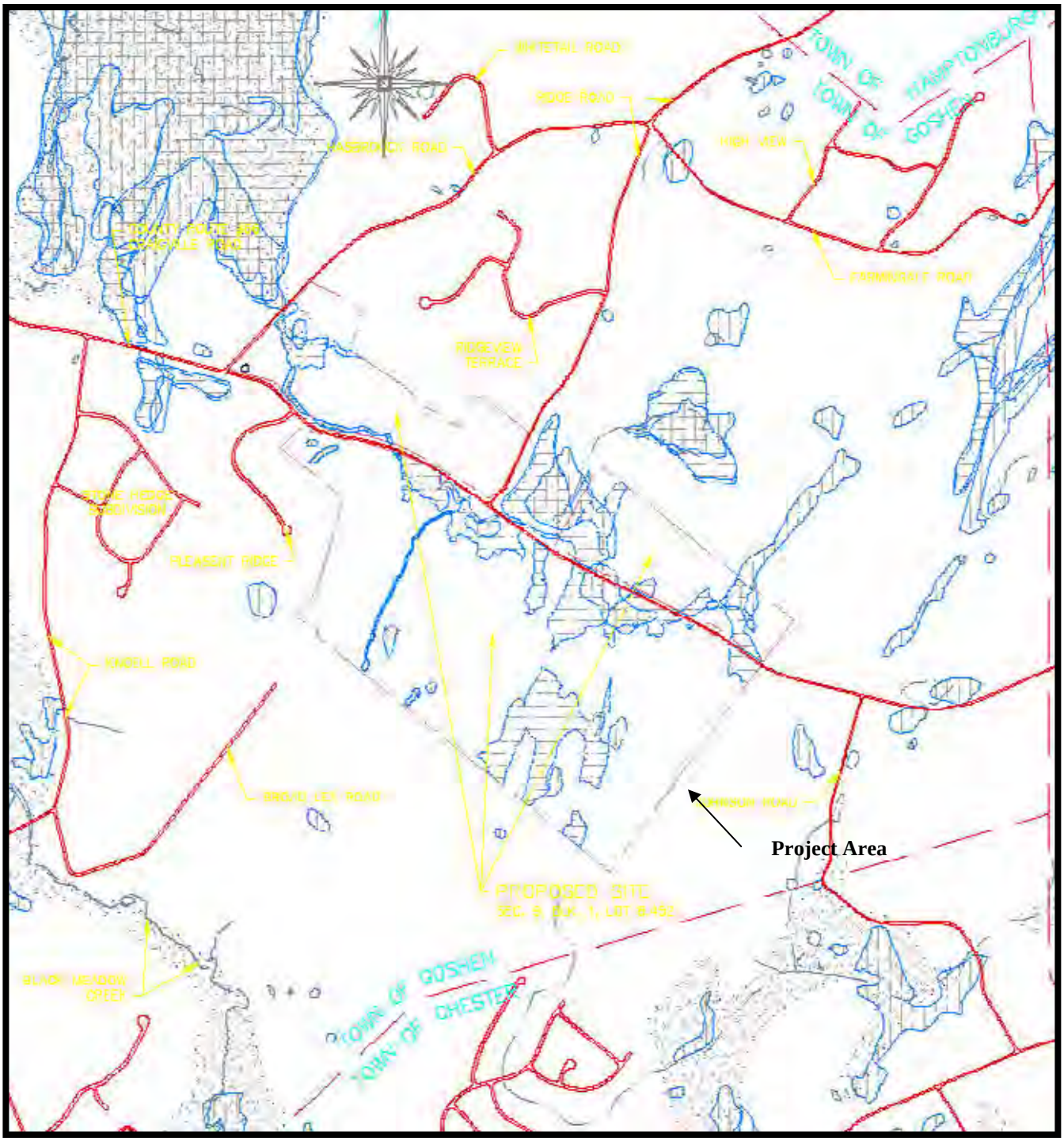
Map 6: 1908 USGS Topographical Map. 15 Minute Series. Goshen Quadrangle 1:62,500 Current Scale: 5/8”=3180’

Craigville Road Site. Craigville Road and Hasbrouck Roads. Town of Goshen. Orange County, New York

Figure 1: Aerial Photo of the Project Area. (Source: *Natural Resources Conservation Service Web Soil Survey* URL: http://websoilsurvey.nrcs.usda.gov Scale on Map
Craigville Road Site. Craigville Road and Hasbrouck Roads. Town of Goshen. Orange County, New York

Figure 3: Location Map of the project area. Provided by Riger Homes, Inc. Current Scale: 1”=1590’

Craigville Road Site. Craigville Road and Hasbrouck Roads. Town of Goshen. Orange County, New York



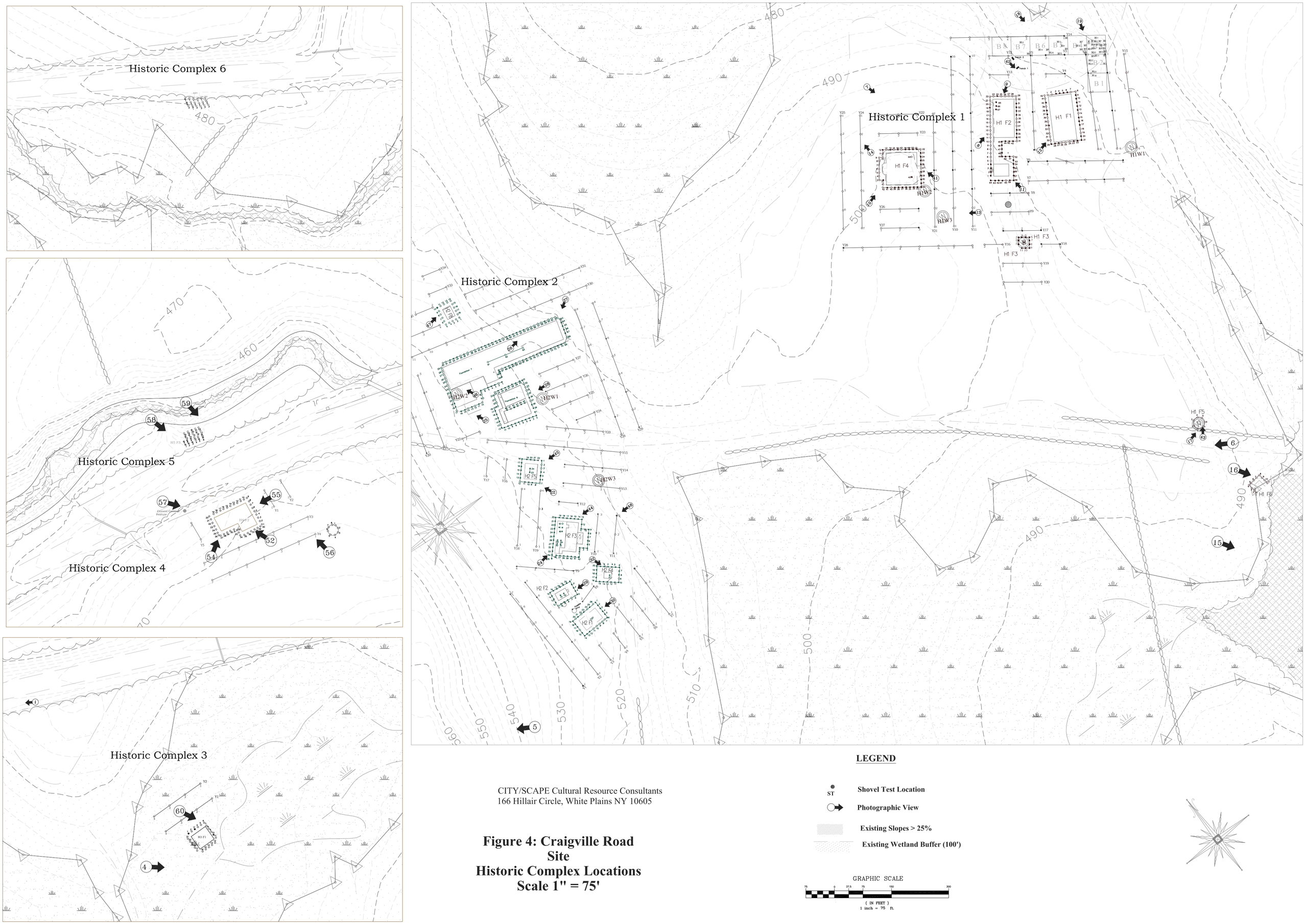


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Figure 4: Craigville Road Site
Historic Complex Locations
Scale 1" = 75'

LEGEND

ST **Shovel Test Location**

Photographic View

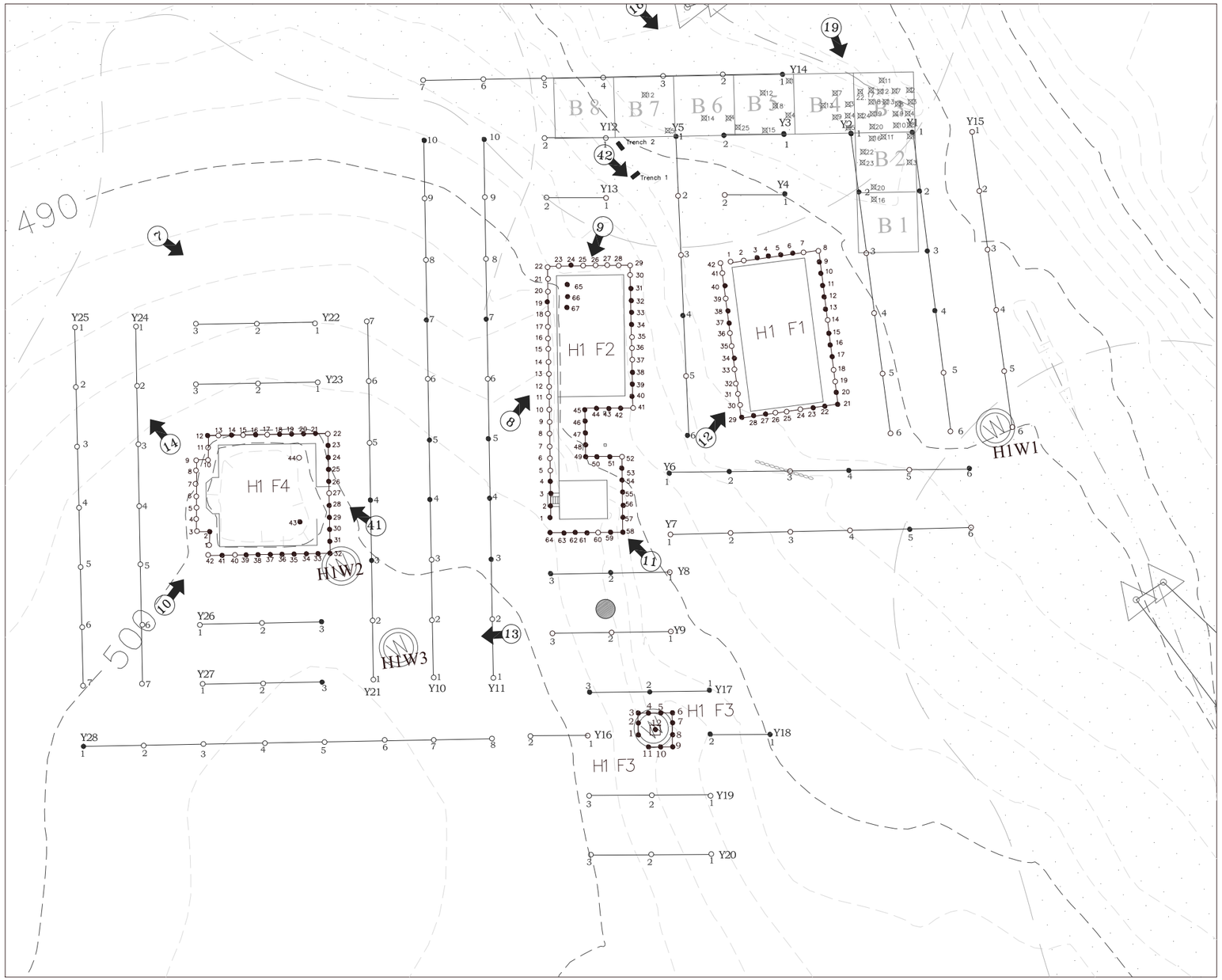
Existing Slopes > 25%

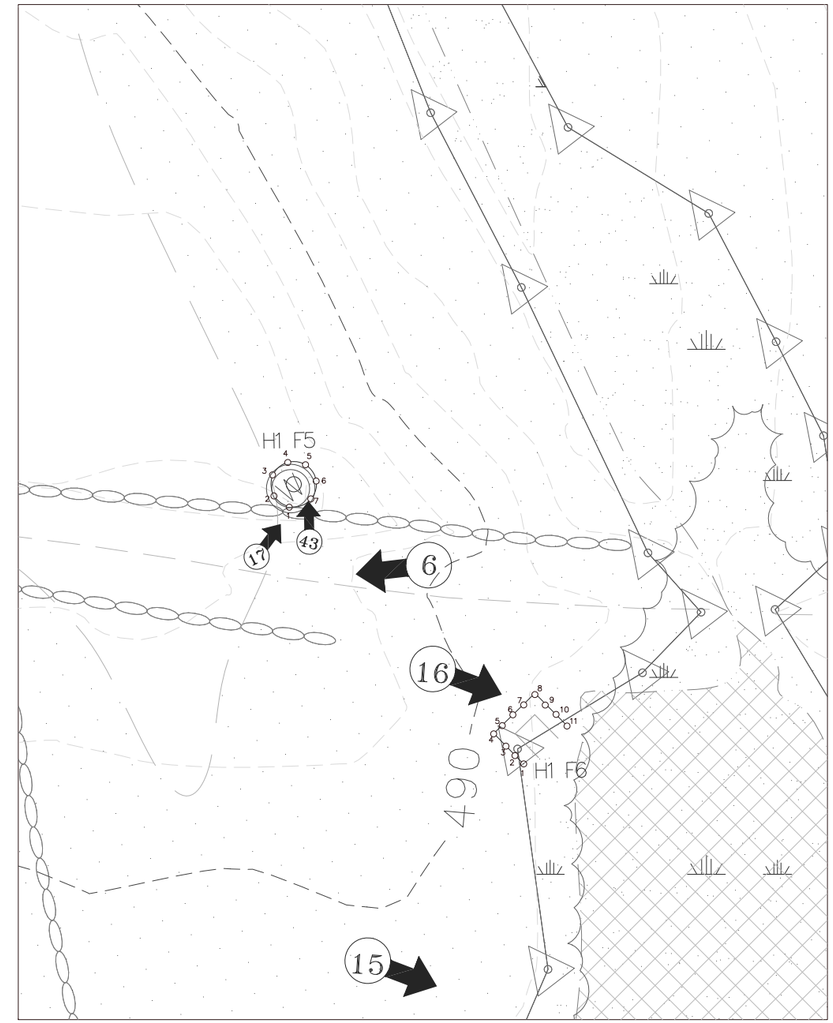
Existing Wetland Buffer (100')

GRAPHIC SCALE

75 0 37.5 75 150 300

(IN FEET)
1 inch = 75 ft.





LEGEND

ST — Positive Shovel Test Location

ST — Negative Shovel Test Location

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

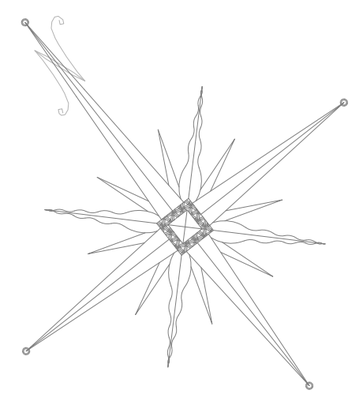


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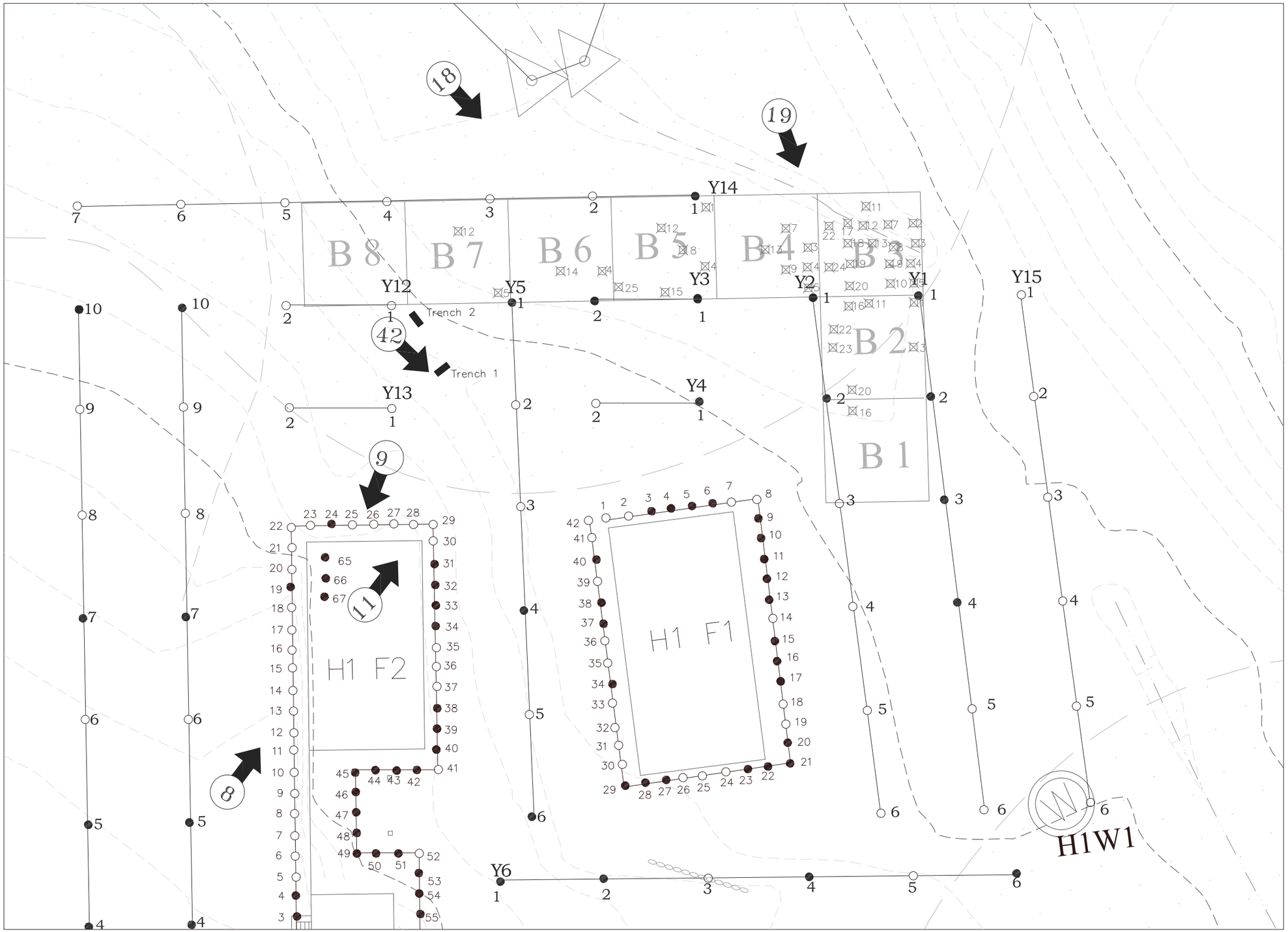
Figure 5: Historic Complex 1

Craigville Road Site
Phase 1B
Field Reconnaissance Map
Scale 1" = 50'



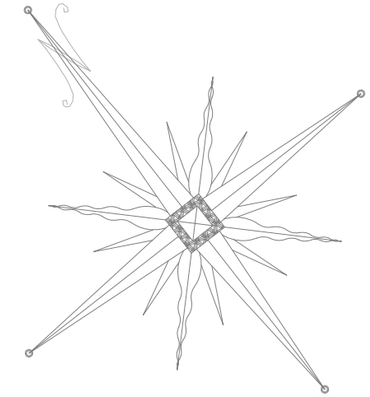


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Figure 6: Historic Complex 1 Surface Collection & Trench Locations

Craigville Road Site
Phase 1B
Field Reconnaissance Map
Scale 1" = 25'

GRAPHIC SCALE

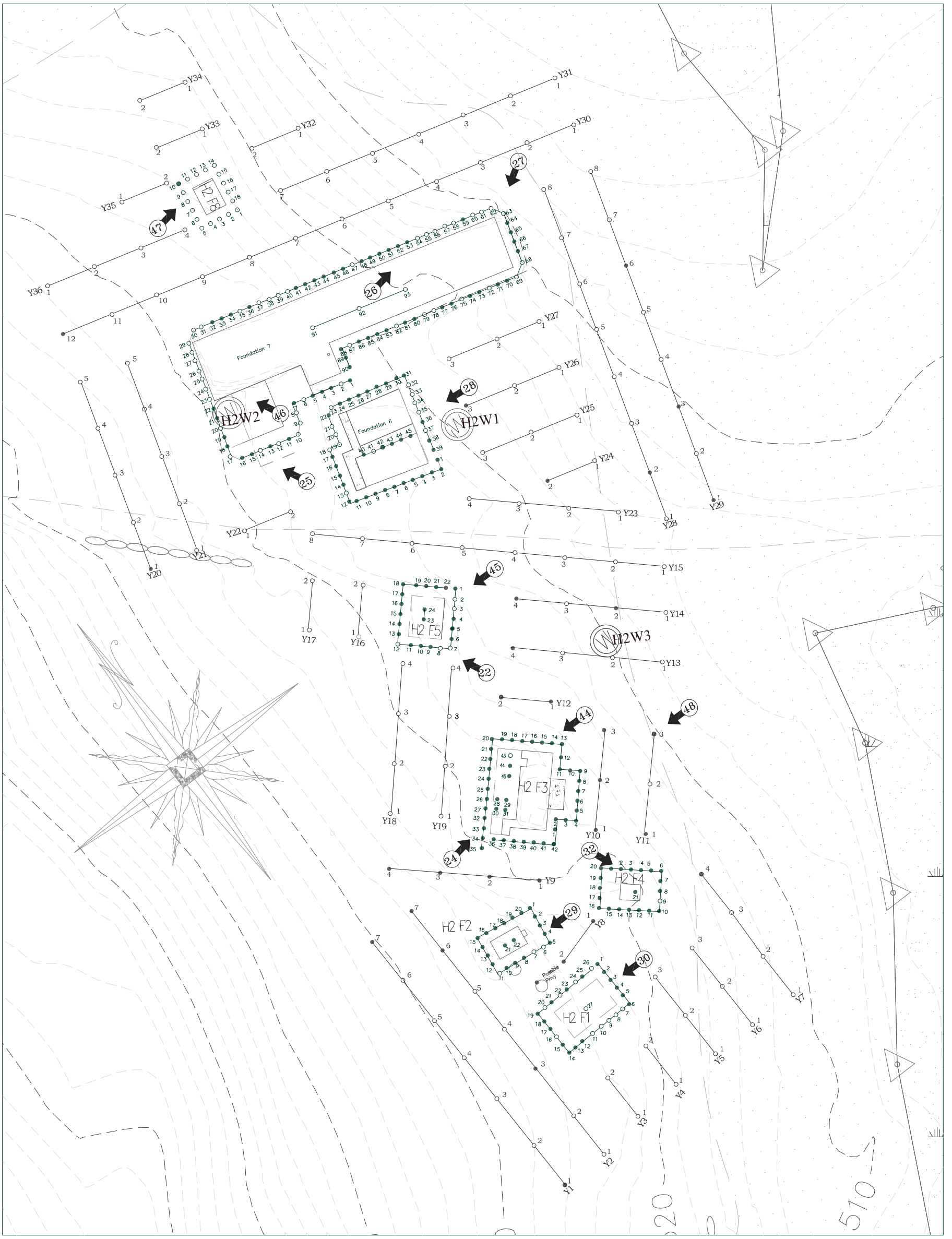
25 0 12.5 25 50 100

(IN FEET)
1 inch = 25 ft.

LEGEND

ST — Positive Shovel Test Location

ST — Negative Shovel Test Location



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LEGEND

ST — **Positive Shovel Test Location**

ST — **Negative Shovel Test Location**

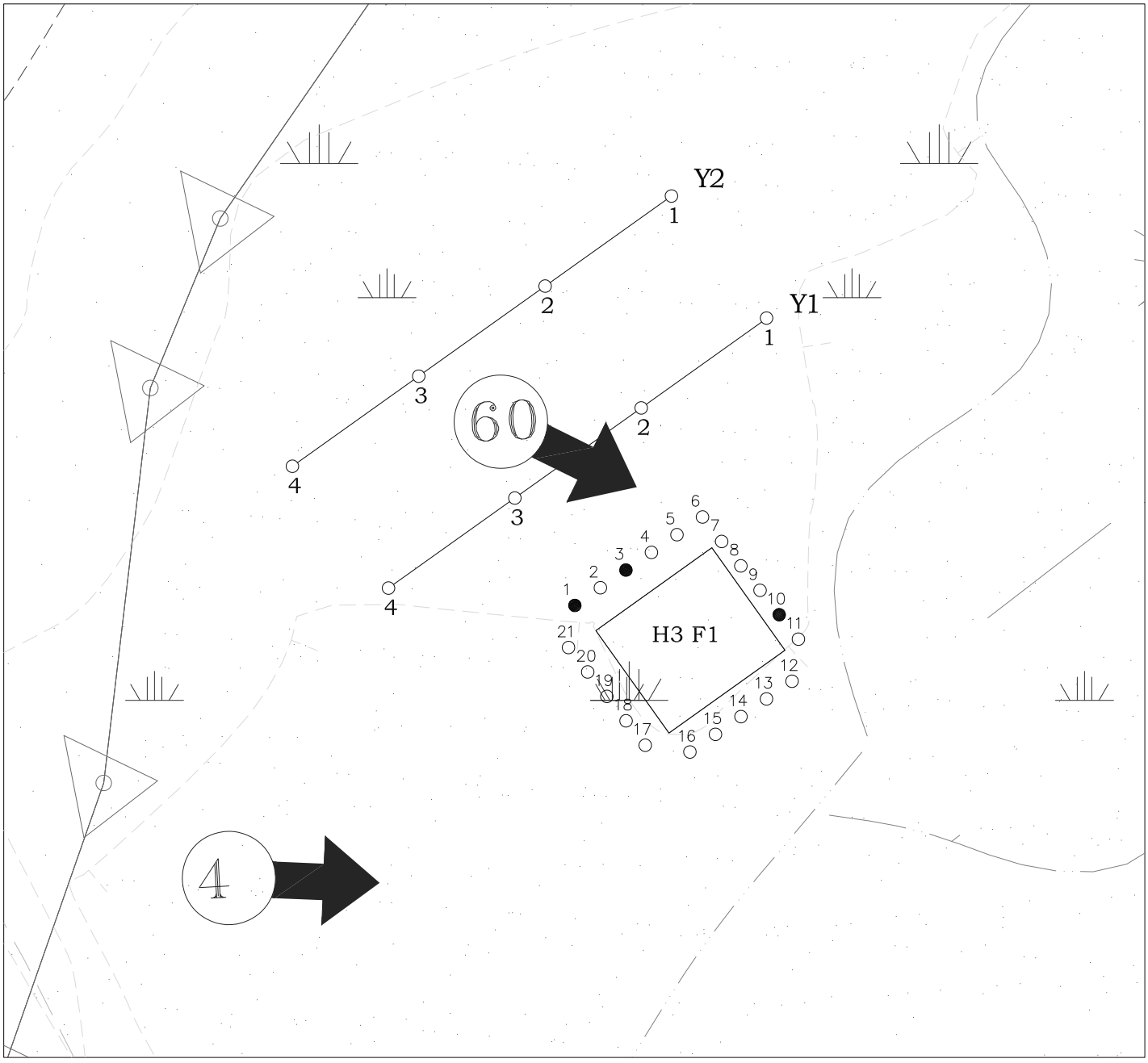
GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

Figure 7: Historic Complex 2

Craigville Road Site
Phase 1B
Field Reconnaissance Map
Scale 1" = 50'



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LEGEND

ST **Positive Shovel Test Location**

ST **Negative Shovel Test Location**

Figure 8: Historic Complex 3

Craigville Road Site
Phase 1B
Field Reconnaissance Map
Scale 1" = 25'

GRAPHIC SCALE

25 0 12.5 25 50 100

(IN FEET)
1 inch = 25 ft.

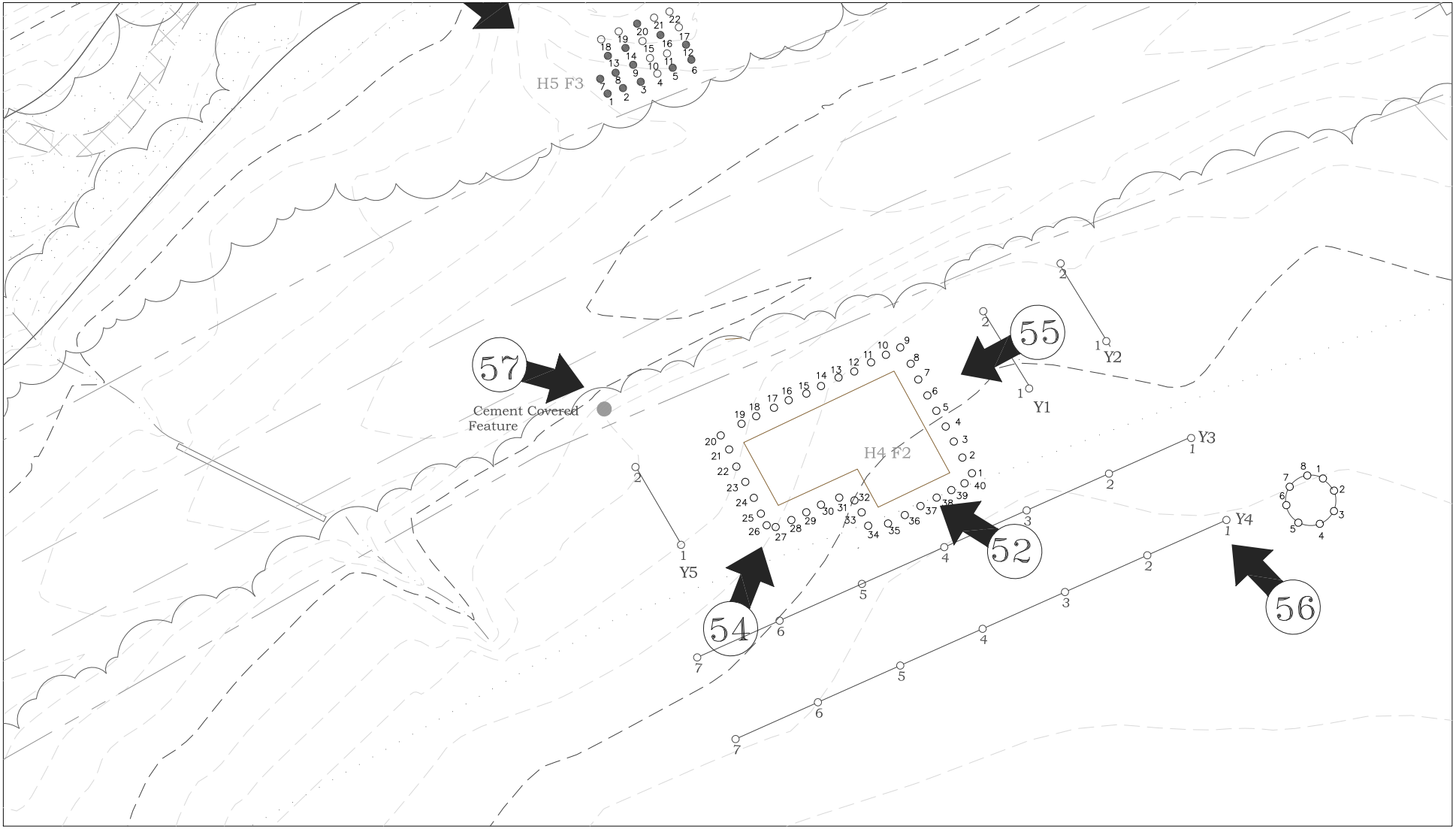

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Figure 9: Historic Complex 4
Craigville Road Site
Phase 1B
Field Reconnaissance Map
Scale 1" = 25'

LEGEND

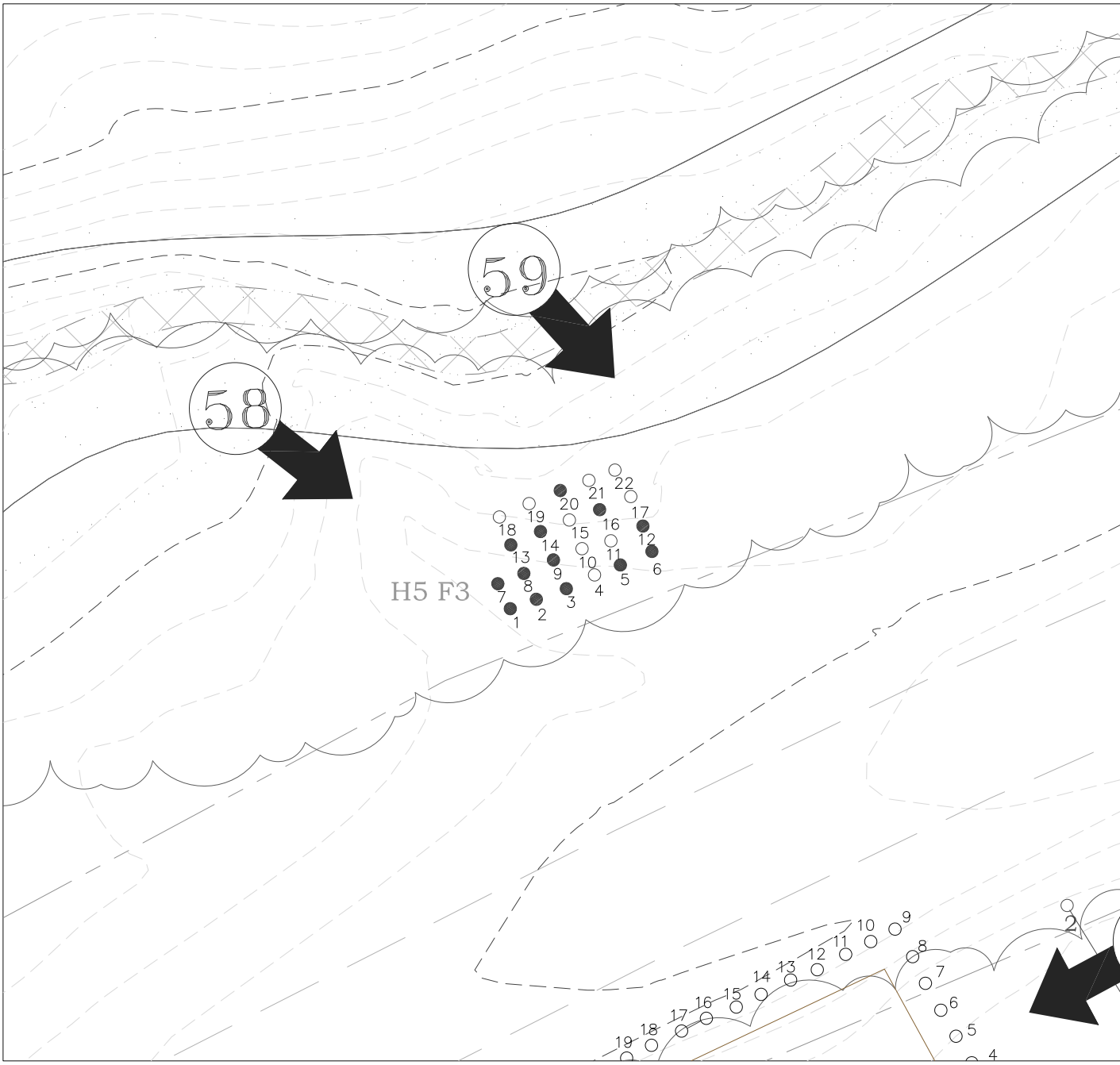
ST **Positive Shovel Test Location**

ST **Negative Shovel Test Location**

GRAPHIC SCALE

25 0 12.5 25 50 100

(IN FEET)
1 inch = 25 ft.



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LEGEND

ST **Positive Shovel Test Location**

ST **Negative Shovel Test Location**

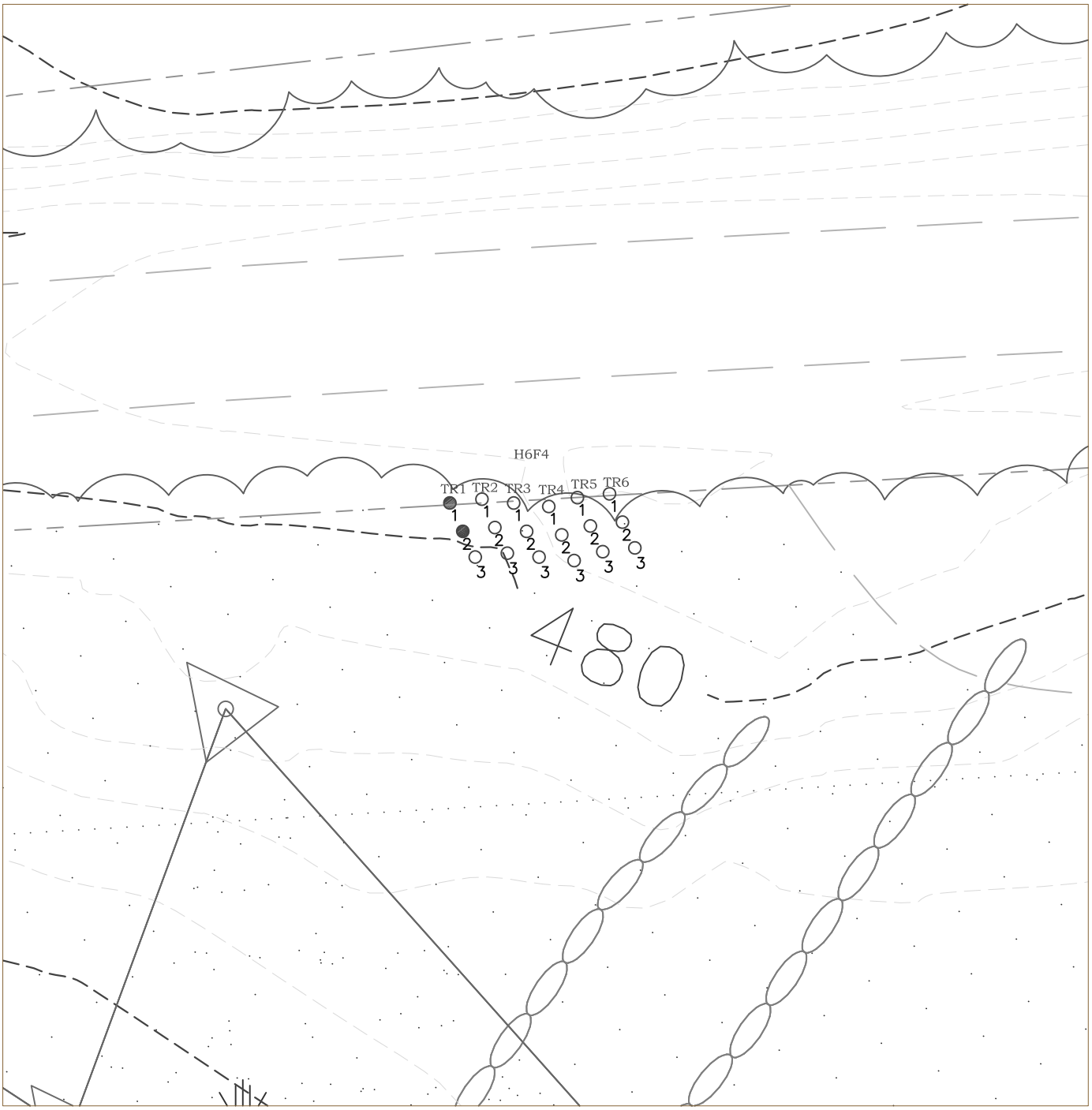
GRAPHIC SCALE

25 0 12.5 25 50 100

(IN FEET)
1 inch = 25 ft.

Figure 10: Historic Complex 5

Craigville Road Site
Phase 1B
Field Reconnaissance Map
Scale 1" = 25'



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LEGEND

ST Positive Shovel Test Location

ST Negative Shovel Test Location

GRAPHIC SCALE

25 0 12.5 25 50 100

(IN FEET)
1 inch = 25 ft.

Figure 11: Historic Complex 6

Craigville Road Site
Phase 1B
Field Reconnaissance Map
Scale 1" = 25'

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Craigville Road
Phase 1B Field
Reconnaissance Map
Scale 1" = 200'

LEGEND

ST **Shovel Test Location**

Photographic View

Existing Slopes > 25%

Existing Wetland Buffer (100')

GRAPHIC SCALE

0 50 100 150 200

(IN FEET)
1 inch = 70 ft.

APPENDIX B

PHOTOGRAPHS

Photo 39: Field crew maintained control on site by laying out flagged transects and compass orientation. View to northwest.

Photo 40: Transects and shovel tests were numbered using flagging tape and permanent markers. While these flags deteriorate over time, the flags allowed crew to maintain control on a large site during excavation. View to southeast.

Photo 41: In spring 2007 field crew returned to site to excavate two large historic complexes (H1 & H2). Historic testing included excavating shovel tests at 5' (1.52 m) intervals around all foundations and on a 25' (7.62 m) grid pattern in yard areas. In addition, a grab sample of surface artifacts was made and two trenches dug to test ash berm at edge of H1. Photo shows house foundation (H1/F4) on farm complex north of interior road. View to north.

Photo 42: Trench 1 was one of two trenches testing ash berm northeast of barn foundation (H1/F2). View to south.

Photo 43: Well located north of interior farm road (H1/F5) had evidence of base and metal blades and was interpreted as a windmill used to pump water from well. Foundation 5 was tested using historic methodology described above. View to northeast.

Photo 44: House foundation (H2/F3) was tested using historic methodology. Flags mark 5' (7.62 m) intervals around foundation. View to southwest.

Photo 45: Foundation of outbuilding (H2/F5) south of interior farm road. View to west.

Photo 46: Several wells were located in H2 farm complex. Many are open, but this one near barn foundation (H2/F7) has been filled with stones. View to north.

Photo 47: Foundation (H1/F8) located north of barn foundation (H2/F7) on H2. View to northeast.

Photo 48: Testing yard area near house foundation (H2/F3) south of interior farm road. View to southwest.

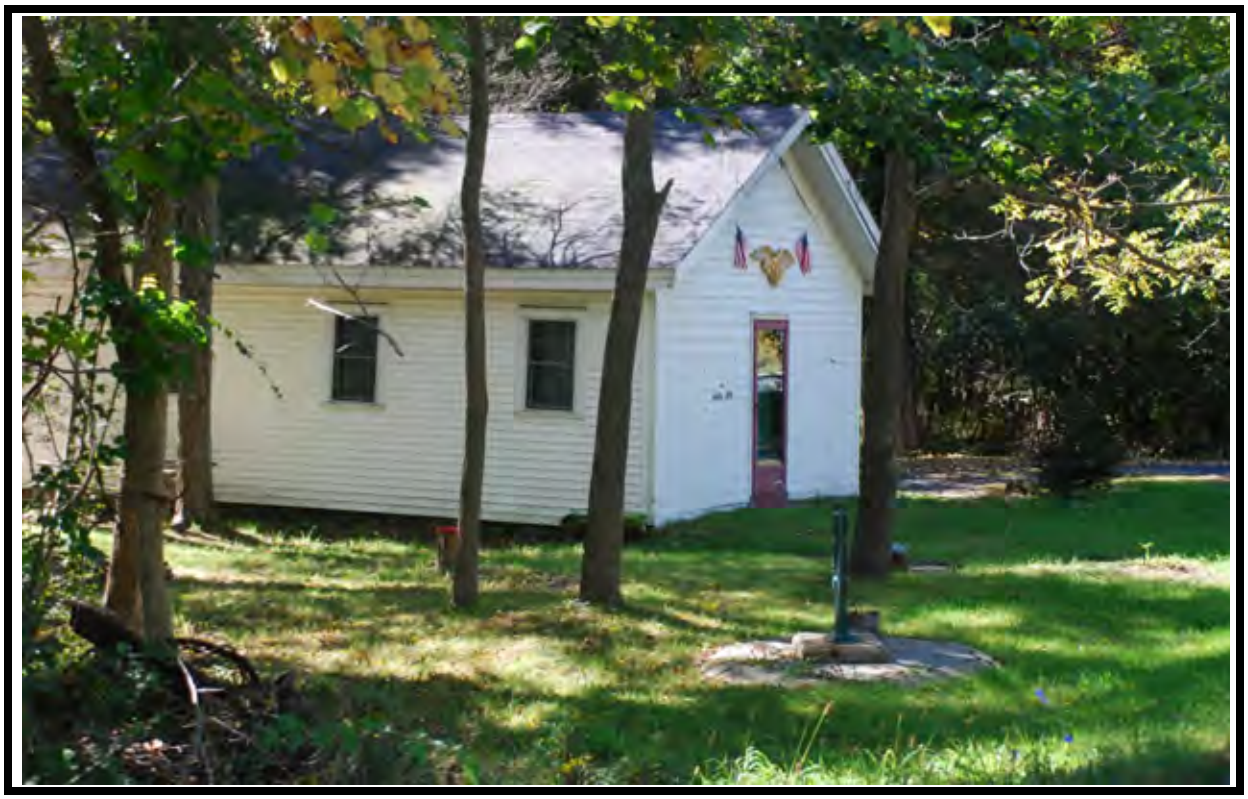


Photo 49: School house located on southern portion of site near intersection of Craigville Road and Ridge Road. Hand pump is seen in foreground, with new test well (red cap) to rear. View to northwest.

Photo 50: School house with privy in rear. Stream that flows across northern portion of site south of Craigville Road is beyond area of lawn behind privy. View to southeast.

Photo 51: Stream bed behind school house was dry in fall of 2007, but in 19th century it powered saw mill located on north parcel east of Harbrouck Drive. View to northwest.

Photo 52: Foundations of several historic structures are located in open space area along Craigville Road. This area was location of blacksmith shop seen on 1851 map. Although outside the APE, these foundations were tested because of potential exposure to vandalism and pot hunters as result of proposed project. View southeast.

Photo 53: Interior farm road lined with stone walls was until once connected to Broadlea Road. This farm road is immediately east of foundation seen in Photo 52. View to southwest.

Photo 54: Foundation identified as H4 is on south side of Craigville Road east of Pleasant Ridge Road. Foundation islocated in area of Boettmer house, a Map Documented Structure (MDS) on 1875 map. View to north.

Photo 55: Excavation on H5 had taken place prior to 2007 survey. Mound of stone and brick may be location of chimney. Foundations appears to be the Boettmer house. View to west.

Photo 56: Open shaft feature located southeast of H5/F3 may be a well, but no water was noted. View to north.

Photo 57: Flagstone and cement cover possible well associated with H5/F3. Feature is located northeast of house foundation. View to southeast.

Photo 58: Feature located opposite H5/F3. Based on configuration feature appears to be part of a dam across stream in area of saw mill seen on 1851 map. Craigville Road in background, but not visible. View to southeast.

Photo 59: Crew laid out pattern of shovel tests north of possible dam (See Photo 58). Craigville Road is seen in background. View to southeast.

Photo 60: Foundation (H3/F1) identified in Phase 1B survey located in midst of wetland east of access road to Historic Complex 1. Building does not appear on any historic map, and it is thought to be an animal shelter. View to southeast.

APPENDIX C

SOIL DESCRIPTION

Name	Soil Horizon Depth	Texture/ Inclusions	Slope (Percent)	Drainage	Landform
Alden Silt Loam (Ab)	Surface: 0-9" (0-23 cm) Subsoil: 9-36" (23-90 cm) Substratum: 36-60" (90-152 cm)	Silt Loam Silt Loam Gravelly Fine Sandy Loam	0 to 3%	Very poorly drained	Depressions (Toeslope)
Erie gravelly silt loam (ErB)	Surface: 0-9" (0-23 cm) Subsoil: 9-18" (23-45 cm) Subsoil: 18-54” (45-135) Substratum: 54-70" (135-175 cm)	Gravelly Silt Loam Channery Silt Loam Channery Silt Loam Channery Silt Loam	3 to 8%	Somewhat poorly drained	Dumlinoid ridges, Hills & Till plains (Footslope, summit)
Erie extremely stony soils (ESB)	Surface: 0-4" (0-23 cm) Subsoil: 4-18" (23-45 cm) Subsoil: 18-50” (45-135) Substratum: 50-70" (135-175 cm)	Gravelly Silt Loam Channery Silt Loam Channery Silt Loam Channery Silt Loam	3 to 8%	Somewhat poorly drained	Dumlinoid ridges, Hills & Till plains (Footslope, summit)
Hoosic gravelly sandy loam (HOD)	Surface: 0-5" (0-8 cm) Subsoil: 5-23" (8-58 cm) Substratum: 23-60" (58-152 cm)	Gravelly Sandy Loam Very Gravelly Sandy Loam Very Gravelly Sand	3 to 8%	Somewhat excessively drained	Deltas, Outwash plains, & Terraces (Backslope)
Madalin silt loam (Ma)	Surface: 0-10" (0-25 cm) Subsoil: 10-38" (25-95 cm) Substratum: 38-60" (95-152 cm)	Silt Loam Silty Clay Loam Stratified Silty Clay	0 to 3%	Poorly drained	Depressions (Toeslope)
Mardin gravelly silt loam (MdB)	Surface: 0-8" (0-20 cm) Subsoil: 8-20" (20-50 cm) Fragipan: 14-26" (35-65 cm) Substratum: 20-60" (50-152 cm)	Gravelly Silt Loam Gravelly Silt Loam Channery Silt Loam	3 to 8%	Moderately well drained	Drumlinoid ridges, Hill & Till Plains (Summit)
Mardin gravelly silt loam (MdC)	Surface: 0-7" (0-18 cm) Subsoil: 7-18" (18-45 cm) Fragipan: 14-26" (35-65 cm) Substratum: 18- 60" (45-152 cm)	Gravelly Silt Loam Gravelly Silt Loam Channery Silt Loam	8 to 15%	Moderately well drained	Drumlinoid ridges, Hill & Till Plains (Summit)

Name	**Soil Horizon Depth**	**Texture/ Inclusions**	**Slope (Percent)**	**Drainage**	**Landform**
Mardin gravelly silt loam (MdD	Surface: 0-6" (0-15 cm) Subsoil: 6-16" (15-40 cm) Fragipan: 14-26" (35-65 cm) Substratum: 16- 60" (40-152 cm)	Gravelly Silt Loam Gravelly Silt Loam Channery Silt Loam	15 to 25%	Moderately well drained	Drumlinoid ridges, Hill & Till Plains (Summit)
Mardin Soils (MNE)	Surface: 0-6" (0-15 cm) Subsoil: 6-15" (0-38 cm) Substratum: 15- 60" (38-152 cm)	Gravelly Silt Loam Gravelly Silt Loam Channery Silt Loam	25 to 35%	Moderately well drained	Drumlinoid ridges, Hill & Till Plains (Summit)
Rock outcrop Nassau Complex (RSD)	Surface: 0-10" (0-15 cm) Subsoil: 10-18" (0-38 cm) Substratum: 18-22" (38-152 cm)	Channery Silt Loam Very Channery Silt Loam Unweathered Bedrock	15 to 25%	Somewhat Excessively Drained	Benches, Ridges, & Till Plains (backslope)

APPENDIX D

SHOVEL TEST RECORDS

Appendix D: Shovel Test Record
Craigville Road Site. Craigville Rd. Town of Goshen, Orange County New York.

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
TR 1	1	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	3	0-13	0-5	10YR6/1	Gry Si Cl	NCM
	4	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	5	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	6	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	7	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	8	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-33	6-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	9	-	-	-	Not excavated: Standing Water	-
	10	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-33	6-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	11	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-38	10-15	10YR6/3	Pl Brn Cl	NCM
TR 2	12	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	13	0-5	0-2	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	14	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	15	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	16	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	17	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	18	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	19	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	20	-	-	-	Not excavated: Standing Water	-

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	21	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	22	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 3	23	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-33	7-13	10YR6/3	Pl Brn Cl	NCM
	24	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-33	7-13	10YR6/3	Pl Brn Cl	NCM
	25	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	26	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-25	5-10	10YR6/3	Pl Brn Cl	NCM
	27	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	28	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	29	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	30	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	31	0-30	0-12	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	32	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
	33	0-8	0-3	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 4	34	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	35	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	36	-	-	-	Not excavated: Standing Water	-
	37	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	38	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	39	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	40	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	41	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	42	0-30	0-12	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	43	0-25	0-10	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	44	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 5	45	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	46	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	47	-	-	-	Not excavated: Standing Water	-
	48	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-30	4-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	49	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	50	-	-	-	Not excavated: Standing Water	-
	51	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	52	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	53	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	54	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	55	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to root obstruction	NCM
	56	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-23	6-9	10YR6/3	Pl Brn Cl	NCM
TR 6	57	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-30	5-12	10YR6/3	Pl Brn Cl	NCM
	58	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	59	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	60	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	61	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	62	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	63	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	64	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	65	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-13	10YR6/3	Pl Brn Cl	NCM
	66	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	67	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 7	68	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	69	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-23	6-10	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	70	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-30	4-8	10YR6/3	Pl Brn Cl	NCM
	71	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-23	4-9	10YR6/3	Pl Brn Cl	NCM
	72	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-28	6-11	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	73	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	74	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	75	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	76	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-15	10YR6/3	Pl Brn Cl	NCM
	77	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-33	8-13	10YR6/3	Pl Brn Cl	NCM
	78	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	79	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-36	8-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
TR 8	80	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	81	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	82	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	83	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	84	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	85	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	86	-	-	-	Not excavated: Standing Water	-
	87	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	88	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-33	8-13	10YR6/3	Pl Brn Cl	NCM
	89	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	90	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	91	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 9	92	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	93	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-46	13-18	10YR6/3	Pl Brn Cl	NCM
	94	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	95	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	96	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	97	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	98	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	99	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-14	10YR6/3	Pl Brn Cl	NCM
	100	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	101	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	102	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 10	103	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	104	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	105	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	106	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	107	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	108	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	109	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-25	5-10	10YR6/3	Pl Brn Cl	NCM
	110	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	111	0-13	0-6	10YR6/1	Gry Si Cl	NCM
		13-25	6-10	10YR6/3	Pl Brn Cl	NCM
	112	-	-	-	Not excavated: Standing Water	-
	113	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	114	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 11	115	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	116	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	117	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	118	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	119	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	120	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	121	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl	NCM
	122	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	123	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	124	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	125	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-25	5-9	10YR6/3	Pl Brn Cl	NCM
	126	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
TR 12	127	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	128	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	129	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	130	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	131	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	132	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	133	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	134	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	135	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	136	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-33	10-13	10YR6/3	Pl Brn Cl	NCM
	137	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	138	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
TR 13	139	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	140	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-33	10-13	10YR6/3	Pl Brn Cl	NCM
	141	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	142	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-33	10-13	10YR6/3	Pl Brn Cl	NCM
	143	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	144	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	145	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	146	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	147	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	148	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	149	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	150	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	151	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-23	6-9	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
TR 14	152	0-8	0-3	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	153	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-11	10YR6/3	Pl Brn Cl	NCM
	154	0-8	0-3	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	155	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	156	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	157	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	158	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	159	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	160	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	161	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	162	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	163	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	164	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	165	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 15	166	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	167	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	168	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-38	10-15	10YR6/3	Pl Brn Cl	NCM
	169	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	170	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	171	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	172	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	173	0-28	0-11	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	174	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	175	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	176	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	177	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	178	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 16	179	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	180	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl	NCM
	181	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	182	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	183	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	184	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	185	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	186	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	187	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-43	8-17	10YR6/3	Pl Brn Cl	NCM
	188	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	189	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	190	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	191	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 17	192	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	193	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	194	0-30	0-12	10YR6/1	Gry Si Cl excavation terminated due to root obstruction	NCM
	195	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 17	196	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	197	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	198	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	199	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	200	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	201	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	202	0-5	0-2	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	203	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	204	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	205	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	206	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
TR 18	207	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	208	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	209	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	210	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	211	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	212	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	213	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	214	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	215	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	216	0-36	0-14	10YR6/1	Gry Si Cl	NCM
		36-46	14-18	10YR6/3	Pl Brn Cl	NCM
	217	0-30	0-12	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	218	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	219	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	220	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 19	221	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	222	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	223	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	224	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	225	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	226	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	227	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	228	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	229	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	230	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	231	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	232	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	233	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	234	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 20	235	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	236	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	237	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	238	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl	NCM
	239	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl	NCM
	240	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	241	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	242	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	243	0-30	0-12	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	244	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	245	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		23-33	8-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	246	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	247	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-25	8-10	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	248	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	249	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		23-33	8-13	10YR6/3	Pl Brn Cl	NCM
TR 21	250	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	251	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl	NCM
	252	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	253	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	254	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl	NCM
	255	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	256	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	257	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	258	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	259	-	-	-	Not excavated: Standing Water	-
	260	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	261	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	262	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	263	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	264	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	265	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 22	266	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	267	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	268	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	269	0-8	0-3	10YR6/1	Gry Si Cl	NCM
		8-18	3-7	10YR6/3	Pl Brn Cl	NCM
	270	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	271	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	272	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	273	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	274	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	275	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	276	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	277	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	278	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	279	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	280	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 23	281	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	282	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	283	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	284	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	285	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	286	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	287	0-28	0-11	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	288	-	-	-	Not excavated: Slope >15%	-
	289	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	290	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	292	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	292	-	-	-	Not excavated: Standing Water	-
	293	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	294	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	295	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	296	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 24	297	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl	NCM
	298	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	299	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	300	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	301	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	302	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	303	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	304	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	305	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	306	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	307	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	308	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	309	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	310	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	311	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 25	312	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	313	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	314	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	315	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	316	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	317	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	318	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	319	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	320	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	321	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	322	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	323	-	-	-	Not excavated: Standing Water	-

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	324	-	-	-	Not excavated: Standing Water	-
	325	0-5	0-2	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	326	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	327	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	328	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 26	329	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	330	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	331	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	332	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	333	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	334	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	335	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	336	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	337	0-23	0-9	10YR6/1	Gry Si Cl	NCM
	337	23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	338	0-23	0-9	10YR6/1	Gry Si Cl	NCM
	338	23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	339	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	340	-	-	-	Not excavated: Standing Water	-
	341	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	342	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	343	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	344	0-25	0-10	10YR6/1	Gry Si Cl	NCM
	344	25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	345	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	346	0-20	0-8	10YR6/1	Gry Si Cl	NCM
	346	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	347	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	348	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	349	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 27	350	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	351	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	352	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	353	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	354	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	355	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	356	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	357	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	358	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	359	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	360	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	361	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	362	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	363	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	364	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	365	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	366	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	367	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	368	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	369	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 28	370	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	371	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	372	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	373	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	374	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	375	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	376	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	377	-	-	-	Not excavated: Standing Water	-
	378	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	379	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	380	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	381	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	382	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	383	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	384	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	385	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	386	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	387	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	388	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	389	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	390	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 29	391	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	392	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	393	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	394	0-3	0-1	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	395	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	396	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	397	-	-	-	Not excavated: Standing Water	-
	398	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	399	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	400	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	401	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	402	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	403	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	404	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	405	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	406	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	407	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	408	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	409	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	410	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	411	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 30	412	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	413	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	414	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	415	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-25	8-10	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	416	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	417	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	418	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	419	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	420	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	421	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	422	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	423	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	424	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	425	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	426	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	427	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	428	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	429	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	430	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	431	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 31	432	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	433	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	434	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-36	8-14	10YR6/3	Pl Brn Cl	NCM
	435	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	436	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	437	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	438	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	439	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	440	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	441	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	442	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	443	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	444	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	445	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	446	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	447	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	448	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	449	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	450	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	451	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	452	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	453	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	454	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 32	455	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	456	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	457	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	458	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	459	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	460	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	461	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	462	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	463	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	464	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	465	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	466	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	467	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	468	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-36	8-14	10YR6/3	Pl Brn Cl	NCM
	469	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	470	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	471	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	472	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	473	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	474	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-36	8-14	10YR6/3	Pl Brn Cl	NCM
	475	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	476	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	477	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 33	478	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	479	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	480	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	481	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	482	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	483	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	484	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	485	-	-	-	Not excavated: Standing Water	-
	486	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	487	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	488	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	489	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	490	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	491	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	492	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	493	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	494	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	495	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	496	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-33	10-13	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	497	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	498	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	499	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	500	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 34	501	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	502	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	503	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	504	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	506	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	507	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	508	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	509	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	510	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	511	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	512	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	513	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
	514	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	515	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	516	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	517	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	518	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	519	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	520	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
	521	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	522	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	523	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	524	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 35	525	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	526	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	527	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	528	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	529	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	530	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	531	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	532	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	533	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	534	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	535	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	536	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	537	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	538	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	539	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	540	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	541	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	542	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	543	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	544	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	545	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	546	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	547	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	547	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	548	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 36	549	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	550	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	551	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	552	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	553	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	554	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	555	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	556	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	557	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	558	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	559	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	560	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	561	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	562	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	563	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	564	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	565	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	567	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	568	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	569	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	570	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	571	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 37	572	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	573	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	574	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	575	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	576	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	577	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	578	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	579	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	580	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	581	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	582	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	583	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	584	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	585	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	586	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	587	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	588	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	589	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	590	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	591	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	592	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	593	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	594	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	595	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 38	596	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	597	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	598	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	599	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	600	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	601	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	602	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	603	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	604	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	605	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	606	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	607	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	608	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	609	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	610	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	611	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	612	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	613	-	-	-	Not excavated: Slope >15%	-
	614	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	615	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	616	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	617	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	618	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	619	-	-	-	Not excavated: Slope >15%	-
TR 39	620	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	621	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	622	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	623	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	624	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	625	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	626	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	627	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	628	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	629	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	630	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	631	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	632	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	633	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	634	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	635	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	636	-	-	-	Not excavated: Slope >15%	-
	637	-	-	-	Not excavated: Slope >15%	-
	638	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	639	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	640	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	641	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	642	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	643	-	-	-	Not excavated: Slope >15%	-
TR 40	644	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	645	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	646	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	647	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	648	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	649	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	650	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	651	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	652	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	653	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-16	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	654	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	655	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	656	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	657	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	658	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-41	8-16	10YR6/3	Pl Brn Cl	NCM
	659	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-41	8-16	10YR6/3	Pl Brn Cl	NCM
	660	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-41	8-16	10YR6/3	Pl Brn Cl	NCM
	661	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	662	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	663	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	664	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	665	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	666	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	667	-	-	-	Not excavated: Slope >15%	-
TR 41	668	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	669	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	667	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	669	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	670	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	671	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	672	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	673	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	674	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	675	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	676	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	678	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	679	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	680	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	681	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	682	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	683	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	684	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	685	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	686	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	687	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	688	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	689	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	690	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	691	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 42	692	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	693	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	694	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	695	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	696	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	697	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	698	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	699	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	700	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	701	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	702	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	703	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	704	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	705	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	706	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	707	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	708	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	709	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	710	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	711	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	712	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	713	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	714	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	715	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 43	716	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	717	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	718	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	719	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	720	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	721	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	722	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	723	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	724	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	725	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	726	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	727	0-25	0-10	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	728	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	729	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	730	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	731	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	732	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	733	0-25	0-10	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	734	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	735	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	736	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	737	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	738	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 44	739	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	740	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	741	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	742	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	743	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	744	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	745	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	746	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	747	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	748	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	749	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	750	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	751	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	752	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	753	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	754	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	755	0-20	0-8	10YR6/1	Gry Si Cl	1 Metal Fence cap
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	756	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	757	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	758	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	759	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	760	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 45	761	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	762	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	763	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	764	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	765	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	766	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	767	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	768	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	769	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	770	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	771	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	772	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	773	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	774	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	776	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	777	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	778	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	779	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	780	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	781	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	782	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	783	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 46	784	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	785	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	786	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	787	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	788	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-28	9-11	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	789	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	790	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	791	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	792	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	793	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	794	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	795	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	796	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	797	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	798	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	799	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	800	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-10	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	801	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	802	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	803	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	804	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	805	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	806	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 47	807	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	808	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	809	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	810	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	811	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	812	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	813	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	814	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	815	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	816	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	817	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	818	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	819	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	820	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	821	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	822	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	823	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	824	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	825	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	826	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	827	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	828	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	829	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 48	830	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	831	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	832	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	833	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	834	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	835	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	836	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	837	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	838	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	839	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	840	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	841	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	842	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	843	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	844	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-33	8-13	10YR6/3	Pl Brn Cl	NCM
	845	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	846	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	847	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	848	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	849	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	850	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	851	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	852	-	-	-	Not excavated: Slope >15%	-
TR 49	853	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	854	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	855	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	856	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	857	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	858	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	859	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	860	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	861	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	862	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	863	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	864	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	865	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	866	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	867	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	868	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	869	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	870	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-33	8-13	10YR6/3	Pl Brn Cl	NCM
	871	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	872	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	873	-	-	-	Not excavated: Slope >15%	-
TR 50	874	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-25	0-10	10YR6/1	Gry Si Cl	NCM
	875	25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	876	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	877	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	878	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	879	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	880	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	881	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	882	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	883	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	884	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	885	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	886	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	887	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	888	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	889	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	890	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	891	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	892	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
		0-25	0-10	10YR6/1	Gry Si Cl	NCM
	893	25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	894	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	895	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-20	6-8	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
		0-25	0-10	10YR6/1	Gry Si Cl	NCM
	896	25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 51	897	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-28	9-11	10YR6/3	Pl Brn Si Cl	NCM
	898	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	899	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	900	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	901	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	902	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	903	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	904	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	905	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	906	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	907	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	908	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	910	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	911	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	912	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	913	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	914	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	915	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	916	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	917	-	-	-	Not excavated: Slope >15%	-
	918	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-30	9-12	10YR6/3	Pl Brn Si Cl	NCM
TR 52	919	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
		0-25	0-10	10YR6/1	Gry Si Cl	NCM
	920	25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	921	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	922	-	-	-	Not excavated: Slope >15%	-
	923	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 53	924	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	925	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	926	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	927	-	-	-	Not excavated: Slope >15%	-
	928	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 54	929	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	930	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	931	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	932	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	933	-	-	-	Not excavated: Slope >15%	-
TR 55	934	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	935	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	936	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	937	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	938	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	939	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	940	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	941	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	942	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	943	-	-	-	Not excavated: Slope >15%	-
	944	-	-	-	Not excavated: Slope >15%	-
TR 56	945	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	946	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	947	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	948	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	949	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	950	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	951	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	952	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	953	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	954	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	955	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-25	0-10	10YR6/1	Gry Si Cl	NCM
	956	25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	957	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 57	958	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	959	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	960	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	960	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	961	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	962	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	963	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	964	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		20-30	9-13	10YR6/3	Pl Brn Cl	NCM
	965	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	966	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	967	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	968	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	969	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	970	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 58	971	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	972	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	973	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	974	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	975	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	976	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	977	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	978	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	979	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	980	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	981	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	982	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	983	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
TR 59	984	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	985	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	987	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	988	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	989	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	990	-	-	-	Not excavated: Standing Water	-
	991	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	992	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	993	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	994	-	-	-	Not excavated: Standing Water	-
	995	-	-	-	Not excavated: Standing Water	-
	996	0-25	0-10	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 60	997	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	998	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	999	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1000	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1001	0-3	0-1	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1002	-	-	-	Not excavated: Standing Water	NCM
	1003	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1004	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1005	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1006	-	-	-	Not excavated: Standing Water	-
	1007	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1008	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1009	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 61	1010	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-10	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1011	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1012	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1013	0-5	0-2	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1014	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1015	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1016	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1017	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1018	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1019	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1020	0-25	0-10	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 62	1021	0-28	0-11	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1022	0-25	0-10	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1023	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1024	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-38	13-15	10YR6/3	Pl Brn Cl	NCM
	1025	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1026	-	-	-	Not excavated: Standing Water	-
	1027	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1028	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1029	0-25	0-10	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1030	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 63	1031	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1032	-	-	-	Not excavated: Standing Water	-
	1033	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1034	0-28	0-11	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1035	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1036	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1037	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1038	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 64	1039	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1040	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1041	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1042	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1043	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1044	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1045	-	-	-	Not excavated: Standing Water	-
	1046	-	-	-	Not excavated: Standing Water	-
TR 65	1047	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1048	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1049	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1050	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1051	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1052	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1053	0-20	0-8	10YR6/1	Gry Si Cl	NCM
TR 66		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1054	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1055	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1056	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1057	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1058	-	-	-	Not excavated: Standing Water	-
	1059	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1060	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
TR 67	1061	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1062	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1063	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1064	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1065	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1066	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1067	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-10	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
TR 68	1068	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1069	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1070	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1071	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1072	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
	1073	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1074	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1075	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
TR 69	1076	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1077	0-20	0-8	10YR6/1	Gry Si Cl	1 Glass Fragment
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1078	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1079	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1080	-	-	-	Not excavated: Slope >15%	-
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1081	-	-	-	Not excavated: Slope >15%	-
	1082	-	-	-	Not excavated: Slope >15%	-
	1083	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1084	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-30	10-12	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
TR 70	1085	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1086	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1087	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1089	-	-	-	Not excavated: Slope >15%	-
	1090	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1091	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1092	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1093	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1094	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
TR 71	1095	-	-	-	Not excavated: Standing Water	-
	1096	-	-	-	Not excavated: Standing Water	-

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1097	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1098	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1099	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1100	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1101	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 72	1102	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1103	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-38	10-15	10YR6/3	Pl Brn Cl	NCM
		0-25	0-10	10YR6/1	Gry Si Cl	NCM
	1104	25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1105	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1106	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1107	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 73	1108	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1109	-	-	-	Not excavated: Slope >15%	-
	1110	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1111	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-25	0-10	10YR6/1	Gry Si Cl	NCM
	1112	25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1113	-	-	-	Not excavated: Standing Water	-
TR 74	1114	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1115	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1116	-	-	-	Not excavated: Slope >15%	-
	1117	-	-	-	Not excavated: Slope >15%	-
	1118	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1119	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 75	1120	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1121	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1122	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1123	-	-	-	Not excavated: Slope >15%	-
	1124	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1125	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1126	-	-	-	Not excavated: Slope >15%	-
	1127	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1128	-	-	-	Not excavated: Slope >15%	-
	1129	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1130	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1131	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1132	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1133	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1134	-	-	-	Not excavated: Slope >15%	-
	1135	-	-	-	Not excavated: Slope >15%	-
TR 77	1136	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1137	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1138	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1139	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1140	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1141	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1142	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1143	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1144	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 78	1145	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1146	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1147	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1148	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1149	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1150	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1151	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1152	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1153	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 79	1154	0-30	0-12	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1155	0-25	0-10	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1156	-	-	-	Not Excavated: Standing Water	-
	1157	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1158	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1159	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1160	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1161	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 80	1162	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1163	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1164	-	-	-	Not excavated: Slope >15%	-
	1165	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1166	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 81	1167	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1168	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1169	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 82	1170	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 83	1171	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1172	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1173	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 84	1174	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1175	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1176	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 85	1177	0-20	0-8	10YR6/1	Gry Si Cl	1 metal object
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1178	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 86	1179	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1180	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1181	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-33	10-13	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
TR 87	1182	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1183	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1184	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-38	9-15	10YR6/3	Pl Brn Cl	NCM
TR 88	1185	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1186	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1187	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 89	1188	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1189	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
	1190	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-25	8-10	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1191	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 90	1192	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1193	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1194	0-20	0-10	10YR6/1	Gry Si Cl	NCM
		20-30	10-14	10YR6/3	Pl Brn Cl	NCM
	1195	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1196	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 91	1197	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1198	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1199	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1200	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1201	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1202	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1203	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1204	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 92	1205	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1206	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1207	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1208	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1209	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1210	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1211	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1212	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1213	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1214	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 93	1215	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1216	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1217	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1218	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1219	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1220	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1221	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1223	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1224	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1225	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 94	1226	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1227	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1228	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1229	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1230	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1231	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1232	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1233	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1234	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1235	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1236	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1237	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 95	1238	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1239	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1240	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1241	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1242	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1243	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1244	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1245	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1246	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1247	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1248	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1249	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 96	1250	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1251	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1252	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1253	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1254	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1255	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1256	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1257	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1258	0-8	0-3	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1259	-	-	-	Not excavated: Standing Water	-
	1260	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1261	0-25	0-10	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 97	1262	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1263	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1264	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1265	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1266	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1267	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1268	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1269	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1270	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1271	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1272	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1273	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 98	1274	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1275	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1276	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1277	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1278	-	-	-	Not excavated: Standing Water	-
	1279	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1280	-	-	-	Not excavated: Standing Water	-
	1281	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-25	8-10	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1282	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1283	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1284	-	-	-	Not excavated: Standing Water	-
	1285	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 99	1286	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1287	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1288	-	-	-	Not excavated: Standing Water	-
	1289	-	-	-	Not excavated: Standing Water	-
	1290	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1291	-	-	-	Not excavated: Standing Water	-

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1292	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1293	-	-	-	-	-
	1294	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-11	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1295	-	-	-	Not excavated: Standing Water	-
	1296	-	-	-	Not excavated: Standing Water	-
	1297	-	-	-	Not excavated: Standing Water	-
TR 100	1298	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl	NCM
	1299	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	1300	-	-	-	Not excavated: Standing Water	-
	1301	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1302	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1303	0-3	0-1	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1304	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1305	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1306	-	-	-	Not excavated: Standing Water	-
	1307	-	-	-	Not excavated: Standing Water	-
	1308	0-5	0-2	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1309	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 101	1310	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1311	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1312	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1313	-	-	-	Not excavated: Standing Water	-
	1314	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1315	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1316	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1317	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1318	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1319	-	-	-	Not excavated: Standing Water	-
	1320	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 102	1321	0-25	0-10	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1322	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1323	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1324	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1325	-	-	-	Not excavated: Standing Water	-
	1326	0-8	0-3	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1327	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1328	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1329	-	-	-	Not excavated: Standing Water	-
	1330	-	-	-	Not excavated: Standing Water	-
TR 103	1331	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1332	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1333	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1334	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1335	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1336	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1337	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1338	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1339	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1340	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 104	1341	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1342	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1343	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1344	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1345	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1346	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1347	-	-	-	Not excavated: Standing Water	-
	1348	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1349	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 105	1350	-	-	-	Not excavated: Standing Water	-
	1351	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1352	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1353	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1354	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1355	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1356	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1357	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1358	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 106	1359	-	-	-	Not Excavated: Standing Water	-

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1360	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1361	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1362	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1363	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1364	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 107	1365	-	-	-	Not Excavated: Standing Water	-
	1366	0-10	0-4	10YR6/3	Pl Brn Cl	NCM
	1367	-	-	-	Not Excavated: Standing Water	-
	1368	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 108	1369	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1370	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1371	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 109	1372	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1373	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1374	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1375	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1376	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1377	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1378	-	-	-	Not Excavated: Standing Water	-
TR 110	1379	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1380	-	-	-	Not excavated: Standing Water	-

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1381	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1382	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1383	-	-	-	Not Excavated: Standing Water	-
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 111	1384	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1385	-	-	-	Not excavated: Standing Water	-
	1386	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1387	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 112	1388	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1389	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1390	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1391	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1392	-	-	-	Not excavated: Standing Water	-
	1393	-	-	-	Not excavated: Standing Water	-
	1394	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1395	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1396	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1397	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1398	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1399	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-15	4-6	10YR6/3	Pl Brn Cl	NCM
TR 114	1400	-	-	-	Not excavated: Standing Water	-
	1401	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-28	6-11	10YR6/3	Pl Brn Cl	NCM
	1402	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1403	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1405	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-25	5-10	10YR6/3	Pl Brn Cl	NCM
TR 115	1406	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1407	-	-	-	Not excavated: Standing Water	-
	1408	-	-	-	Not excavated: Standing Water	-
	1409	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1410	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1411	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1412				No Shovel Test: Misnumbered	NCM
	1413				No Shovel Test: Misnumbered	NCM
	1414				No Shovel Test: Misnumbered	NCM
TR 116	1415	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1416	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1417	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1418	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1419	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1420	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 117	1421	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1422	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1423	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1424	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1425	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1426	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 118	1427	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1428	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1429	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1430	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1431	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1432	0-8	0-3	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 119	1433	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1434	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1435	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1436	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1437	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1438	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
TR 120	1439	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1440	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1441	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1442	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1443	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1444	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1445	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 121	1446	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1447	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1448	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1449	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1450	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1451	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1452	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 122	1453	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1454	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1455	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1456	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1457	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1458	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1459	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-36	12-14	10YR6/3	Pl Brn Cl	NCM
TR 123	1460	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1461	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1462	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1463	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1464	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1465	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1466	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 124	1467	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1468	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1469	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1470	0-23	0-9	10YR6/1	Gry Si Cl	NCM
	1471	23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1472	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1473	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-33	10-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1474	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 125	1475	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1476	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1477	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1478	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1479	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1480	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1481	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1482	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
TR 126	1483	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1484	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1485	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1486	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1487	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1488	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1489	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-38	9-15	10YR6/3	Pl Brn Cl	NCM
	1490	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 127	1491	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1492	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1493	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1494	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1495	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1496	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1497	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1498	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1499	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 128	1500	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1501	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	1502	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	1503	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1504	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1505	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1506	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1507	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1508	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 129	1509	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1510	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1511	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1512	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1513	0-20	0-8	10YR6/1	Gry Si Cl	NCM
	1514	20-28	8-11	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	1515	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1516	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1517	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 130	1518	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1519	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1520	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1521	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1522	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	1523	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1524	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1525	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1526	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 131	1527	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1528	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1529	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1530	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1531	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1532	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1533	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1534	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1535	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1536	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 132	1537	-	-	-	Not excavated: Standing Water	-

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1538	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-28	8-11	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	1539	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1540	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1541	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1542	-	-	-	Not excavated: Standing Water	-
	1545	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1546	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 133	1547	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1548	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1549	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1550	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1551	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl	NCM
	1552	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1553	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1554	-	-	-	Not excavated: Standing Water	-
	1555	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1556	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1557	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 134	1558	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1559	-	-	-	Not excavated: Standing Water	-
	1560	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-11	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1561	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1562	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1563	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-10	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	1564	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1565	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1566	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-25	8-10	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	1567	-	-	-	Not excavated: Standing Water	-
	1568	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 135	1569	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1570	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1571	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1572	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1573	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1574	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1575	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1576	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1577	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1578	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1579	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1580	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 136	1581	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1582	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1583	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1584	-	-	-	Not excavated: Standing Water	-
	1585	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1586	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1587	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1588	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1589	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1590	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1591	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-36	8-14	10YR6/3	Pl Brn Cl	NCM
	1592	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 137	1593	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1594	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1595	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1596	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1597	0-5	0-2	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1598	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1599	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1600	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1601	0-5	0-2	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1602	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1603	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1604	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 138	1605	-	-	-	Not excavated: Standing Water	-
	1606	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1607	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1608	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1609	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-30	9-12	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	1610	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1612	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1613	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1614	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1615	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1616	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1617	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 139	1618	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1619	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1620	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1621	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1622	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1623	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1624	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1625	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1626	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1627	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1628	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1629	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1630	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1631	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
TR 140	1632	-	-	-	Not excavated: Standing Water	-
	1633	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1634	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1635	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1636	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1637	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1638	-	-	-	Not excavated: Standing Water	-
	1639	-	-	-	Not excavated: Standing Water	-
	1640	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1641	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1642	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1643	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1644	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1645	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 141	1646	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1647	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1648	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1649	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1650	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1651	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1652	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1653	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1654	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1655	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1656	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-12	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	1657	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1658	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1659	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-38	12-15	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	1660	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-33	10-13	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	1661	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-33	10-13	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	1662	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1663	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1664	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1665	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1666	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1667	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1668	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1669	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1670	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1671	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 142	1672	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1673	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1674	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1675	-	-	-	Not excavated: Slope >15%	-
	1676	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1677	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1678	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1679	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1680	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1681	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1682	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1683	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1684	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1685	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1686	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1687	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1688	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1689	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1690	-	-	-	Not excavated: Standing Water	-
	1691	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1692	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1693	-	-	-	Not excavated: Standing Water	-
	1694	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1695	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1696	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1697	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
TR 143	1698	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1699	-	-	-	Not excavated: Standing Water	-
	1700	-	-	-	Not excavated: Standing Water	-
	1701	-	-	-	Not excavated: Standing Water	-
	1702	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1703	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1704	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1705	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1706	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1707	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1708	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1709	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1710	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1711	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1712	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1713	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-25	8-10	10YR6/3	Pl Brn Si Cl excavation terminated due to pooling water	NCM
	1714	0-13	0-5	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1715	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1716	-	-	-	Not excavated: Standing Water	-
	1717	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1718	-	-	-	Not excavated: Standing Water	-
	1719	-	-	-	Not excavated: Standing Water	-
	1720	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1721	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1722	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1723	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 144	1724	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1725	-	-	-	Not excavated: Standing Water	-
	1726	-	-	-	Not excavated: Standing Water	-
	1727	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1728	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1729	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1730	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
	1731	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1732	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1733	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1734	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1735	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1736	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1737	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1738	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1739	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1740	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1741	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1742	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1743	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1744	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1745	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1746	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1747	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 145	1748	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1749	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1750	-	-	-	Not excavated: Standing Water	-
	1751	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1752	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1753	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1754	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1755	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1756	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1757	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1758	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1760	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1761	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1762	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1763	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1764	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1765	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1766	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1767	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1768	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1769	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1770	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1771	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1772	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1773	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 146	1774	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1775	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1776	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1777	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1778	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1779	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1780	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1781	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1782	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1783	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1784	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1785	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1786	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1787	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1788	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1789	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1790	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1791	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1792	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1793	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-28	9-11	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1794	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1795	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1796	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1797	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1798	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1799	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 147	1800	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to rock obstruction	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1801	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1802	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1804	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1805	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1806	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1807	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1808	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1809	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1810	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1811	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1812	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1813	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1814	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1815	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1816	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1817	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1818	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1819	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1820	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1821	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 148	1822	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1823	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1824	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1825	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1826	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1827	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1828	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1829	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1830	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1831	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
	1832	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1833	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1834	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1835	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1836	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1837	-	-	-	Not excavated: Standing Water	NCM
	1838	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1839	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1840	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1841	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1842	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 149	1843	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1844	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1845	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1846	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1847	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1848	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1849	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1850	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1851	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1852	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1853	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1854	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1855	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1856	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1857	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1858	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1859	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1860	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 150	1861	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1862	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1863	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1864	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1865	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1866	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1867	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1868	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1869	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1870	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-38	9-15	10YR6/3	Pl Brn Cl	NCM
	1871	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1872	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1873	-	-	-	Not excavated: Standing Water	NCM
	1874	-	-	-	Not excavated: Standing Water	NCM
	1875	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1876	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 151	1877	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1878	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1879	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-38	9-15	10YR6/3	Pl Brn Cl	NCM
	1880	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1881	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1882	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1883	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1884	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1885	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1886	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1887	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1888	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1889	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1890	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1891	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1892	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1893	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	1894	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1895	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1896	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
TR 152	1897	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1898	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1899	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1900	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1901	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1902	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1903	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1904	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1905	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1906	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1907	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 153	1908	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1909	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1910	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1911	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 154	1912	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1913	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-33	8-13	10YR6/3	Pl Brn Cl	NCM
	1914	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1915	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 155	1916	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1917	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1918	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1919	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 156	1920	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1921	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1922	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 157	1923	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1924	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1925	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1926	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 158	1926	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1927	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1928	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 159	1929	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1930	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1931	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1932	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1933	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1934	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1935	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1936	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1937	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1938	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1939	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1940	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1941	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1942	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1943	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
	1944	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1945	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1946	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		23-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1947	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1948	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
TR 160	1949	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1950	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1951	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1952	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
		0-23	0-10	10YR6/1	Gry Si Cl	NCM
	1953	23-33	10-14	10YR6/3	Pl Brn Cl	NCM
		0-23	0-10	10YR6/1	Gry Si Cl	NCM
	1954	23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	1956	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1957	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1958	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1959	-	-	-	Not excavated: Standing Water	-
	1960	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1961	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1962	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
	1963	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	1964	0-36	0-14	10YR6/1	Gry Si Cl	NCM
		36-46	14-18	10YR6/3	Pl Brn Cl	NCM
	1965	0-36	0-14	10YR6/1	Gry Si Cl	NCM
		36-46	14-18	10YR6/3	Pl Brn Cl	NCM
	1967	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 161	1968	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1969	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1970	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	1971	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1972	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1973	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1974	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1975	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1976	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1977	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-38	9-15	10YR6/3	Pl Brn Cl	NCM
	1978	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
		0-23	0-9	10YR6/1	Gry Si Cl	NCM
	1979	23-33	9-13	10YR6/3	Pl Brn Cl	NCM
		0-23	0-9	10YR6/1	Gry Si Cl	NCM
	1980	23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1981	-	-	-	Not excavated: Standing Water	-
	1982	0-8	0-3	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	1983	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1984	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 162	1985	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	1986	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1987	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1988	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1989	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1990	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	1991	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1992	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	1993	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	1994	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-30	10-12	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1995	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-28	8-11	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1996	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-33	10-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	1997	-	-	-	Not excavated: Standing Water	-
	1998	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	1999	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2000	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2001	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2002	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2003	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 163	2004	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2005	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2006	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2007	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2008	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2009	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2010	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2011	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2012	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2013	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2014	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2015	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2016	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2017	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2018	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2019	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 164	2020	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2021	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2022	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2023	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2024	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2025	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2026	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2027	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2028	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2029	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2030	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2031	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2032	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2033	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2034	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2035	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 165	2036	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2037	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2038	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2039	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2040	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2041	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2042	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2043	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2044	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2045	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2046	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2047	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2048	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2049	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2050	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2051	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 166	2052	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2053	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2054	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2055	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2056	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2057	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2058	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2059	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2060	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2061	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2062	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2063	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2064	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2065	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2067	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2068	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2069	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2070	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2071	0-25	0-10	10YR6/1	Gry Si Cl	NCM
TR 167		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2072	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2073	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2074	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2075	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2076	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2077	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2078	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2079	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2080	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2081	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2082	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2083	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2084	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2085	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2086	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2087	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2088	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2089	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2090	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-33	6-13	10YR6/3	Pl Brn Cl	NCM
	2091	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-35	10-14	10YR6/3	Pl Brn Cl	NCM
	2092	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		28-23	7-11	10YR6/3	Pl Brn Cl	NCM
	2093	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2094	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-38	10-15	10YR6/3	Pl Brn Cl	NCM
TR 168	2095	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-35	10-14	10YR6/3	Pl Brn Cl	NCM
	2096	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-35	11-15	10YR6/3	Pl Brn Cl	NCM
	2097	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2098	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2099	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2100	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2101	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2102	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2103	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2104	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2105	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2106	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2107	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2108	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2109	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2110	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2111	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2112	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2113	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2114	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2115	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2116	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2117	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2118	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2119	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2120	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
TR 169	2121	0-15	0-5	10YR6/1	Gry Si Cl	NCM
		15-25	5-9	10YR6/3	Pl Brn Cl	NCM
	2122	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2123	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2124	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2125	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2126	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2127	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2128	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2129	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2130	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2131	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2132	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2133	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2134	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2135	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2136	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2137	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2138	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2139	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2140	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2141	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2142	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2143	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2144	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2145	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2146	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 170	2147	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2148	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2149	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2150	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2151	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2152	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2153	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2154	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2155	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2156	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2157	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2158	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2159	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2160	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2161	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2162	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	2163	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2164	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl	NCM
	2165	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2166	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2167	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2168	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2169	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2170	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2171	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2172	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 171	2173	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2174	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2175	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2176	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2177	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2178	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2179	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2180	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2181	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2182	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2183	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2184	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2185	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2186	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2187	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2188	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2189	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2190	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2191	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2192	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2193	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2194	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2195	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2196	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2197	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2198	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 172	2199	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2200	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2201	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2202	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2203	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2204	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2205	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-28	8-11	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	2206	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2207	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2208	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2209	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2210	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2211	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2212	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2213	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2214	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2215	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2216	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2217	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2218	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	2219	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2220	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2221	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
		0-18	0-7	10YR6/1	Gry Si Cl	NCM
	2222	18-28	7-11	10YR6/3	Pl Brn Cl	NCM
		0-20	0-8	10YR6/1	Gry Si Cl	NCM
	2223	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-20	0-8	10YR6/1	Gry Si Cl	NCM
	2224	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-18	0-7	10YR6/1	Gry Si Cl	NCM
TR 173	2225	18-28	7-11	10YR6/3	Pl Brn Cl	NCM
		0-18	0-7	10YR6/1	Gry Si Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2226	18-28	7-11	10YR6/3	Pl Brn Cl	NCM
		0-20	0-8	10YR6/1	Gry Si Cl	NCM
	2227	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-23	0-10	10YR6/1	Gry Si Cl	NCM
	2228	23-33	10-14	10YR6/3	Pl Brn Cl	NCM
		0-23	0-10	10YR6/1	Gry Si Cl	NCM
	2229	23-33	10-14	10YR6/3	Pl Brn Cl	NCM
		0-18	0-7	10YR6/1	Gry Si Cl	NCM
	2230	20-28	7-11	10YR6/3	Pl Brn Cl	NCM
		0-20	0-8	10YR6/1	Gry Si Cl	NCM
	2231	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2232	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2233	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2234	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2235	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2236	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2237	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2238	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2239	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2240	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2241	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2242	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2243	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2244	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2245	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2246	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2247	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2248	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
TR 174	2249	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2250	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2251	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2252	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2253	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2254	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2255	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2256	0-8	0-3	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2257	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2258	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2259	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2260	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2261	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2262	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2263	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2264	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2265	0-8	0-3	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2266	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2267	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2268	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2269	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2270	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 175	2271	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2272	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2273	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2274	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2275	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2276	-	-	-	Not excavated: Standing Water	-
	2278	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2279	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2280	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2281	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2282	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2283	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2284	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2285	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2286	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2287	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2288	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2289	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2290	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2291	-	-	-	Not excavated: Standing Water	-
TR 176	2292	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2293	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2294	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2295	-	-	-	Not excavated: Standing Water	-
	2296	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2297	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2298	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2299	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2300	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2301	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2302	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2303	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2304	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2305	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2306	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2307	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2308	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2309	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2310	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2311	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2312	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2313	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2314	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 177	2315	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2316	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 178	2317	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2318	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2319	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 179	2320	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2321	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2322	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
TR 180	2323	0-10	0-4	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2324	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2325	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 181	2326	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2327	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2328	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-30	7-12	10YR6/3	Pl Brn Cl	NCM
TR 182	2329	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2330	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2331	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2332	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2334	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2335	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2336	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2337	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2338	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
TR 183	2339	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2340	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2341	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2342	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-38	9-15	10YR6/3	Pl Brn Cl	NCM
	2343	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2344	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 184	2345	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2346	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2347	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2348	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2349	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2350	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2351	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2352	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2353	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2354	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 185	2355	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2356	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2357	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2358	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2359	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2360	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2361	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-41	8-16	10YR6/3	Pl Brn Cl	NCM
TR 186	2362	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2363	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2364	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2365	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2366	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2367	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
TR 187	2368	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2369	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2370	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2371	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2372	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2373	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
TR 188	2374	0-23	0-10	10YR6/1	Gry Si Cl	NCM
		23-33	10-14	10YR6/3	Pl Brn Cl	NCM
	2375	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2376	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 189	2377	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2378	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2379	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2380	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2381	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2382	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2383	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-33	10-13	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	2384	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2385	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2386	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2387	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2388	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2389	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2390	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2391	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2392	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2393	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2394	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2395	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2396	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 190	2397	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2398	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2399	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2400	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-38	9-15	10YR6/3	Pl Brn Cl	NCM
	2401	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2402	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-36	9-14	10YR6/3	Pl Brn Cl	NCM
	2403	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2404	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2405	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2406	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2407	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2408	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2409	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2410	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 191	2411	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2412	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2413	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2414	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2415	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2416	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2417	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2418	0-15	0-7	10YR6/1	Gry Si Cl	NCM
		15-25	7-11	10YR6/3	Pl Brn Cl	NCM
	2419	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2420	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2421	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2422	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2423	0-18	0-7	10YR6/1	Gry Si Cl	NCM
	2423	18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 192	2424	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2425	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2326	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2427	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2428	-	-	-	Not excavated: Standing Water	-
	2429	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-25	8-10	10YR6/3	Pl Brn Cl excavation terminated due to pooling water	NCM
	2430	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2431	0-20	0-8	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2432	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2433	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
TR 193	2434	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2435	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2436	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2437	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2438	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2439	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2440	-	-	-	Not excavated: Standing Water	-
	2441	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2442	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		23-33	8-12	10YR6/3	Pl Brn Cl	NCM
TR 194	2443	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-12	10YR6/3	Pl Brn Cl	NCM
	2444	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2445	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-25	5-10	10YR6/3	Pl Brn Cl	NCM
	2446	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2447	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2448	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2449	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2450	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 195	2451	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2452	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2453	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2454	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2455	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2456	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 196	2457	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 197	2458	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2459	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2460	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 198	2461	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2462	0-10	0-4	10YR6/1	Gry Si Cl	NCM
		10-20	4-8	10YR6/3	Pl Brn Cl	NCM
	2463	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
TR 199	2464	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2465	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2466	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 200	2467	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2468	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 201	2469	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2470	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2471	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2472	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 202	2473	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2474	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2475	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2476	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	2477	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 203	2478	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2479	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2480	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 204	2481	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2482	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2483	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2484	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 205	2485	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2486	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2487	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2488	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 206	2489	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2490	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2491	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2492	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2493	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 207	2494	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2495	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2496	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2497	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 208	2498	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2499	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 209	2500	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2501	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2502	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2503	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2504	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2505	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2506	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2507	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2508	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2509	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 210	2510	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2511	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2512	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2513	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2514	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2515	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2516	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2517	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2518	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2519	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2520	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2521	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
TR 211	2522	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2523	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2524	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2525	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2526	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2527	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2528	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2529	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2530	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2531	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2532	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2533	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
TR 212	2534	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2535	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2536	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2537	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2538	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2539	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2540	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2541	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2542	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2543	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2544	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2546	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 213	2547	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2548	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2549	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2550	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2551	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2552	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2553	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2554	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2555	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2556	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2557	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2558	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2559	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 214	2560	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2561	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2562	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2563	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2564	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2565	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2566	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2567	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2568	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2569	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2570	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 215	2571	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2572	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2573	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2574	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2575	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2576	0-15	0-6	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2577	0-18	0-7	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
	2578	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2579	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2580	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 216	2581	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2582	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2583	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2584	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2585	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2586	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2587	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2588	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2589	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 217	2590	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2591	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2592	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2593	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2594	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2596	-	-	-	Not excavated: Standing Water	-
		-	-	-	Not excavated: Standing Water	-
	2597	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2598	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2599	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 218	2600	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2601	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2602	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2603	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2604	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2605	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
		-	-	-	Not excavated: Standing Water	NCM
	2606	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2607	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2608	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2609	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 219	2610	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2611	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2612	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2613	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2614	0-23	0-9	10YR6/1	Gry Si Cl excavation terminated due to pooling water	NCM
		0-20	0-8	10YR6/1	Gry Si Cl	NCM
	2615	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-18	0-7	10YR6/1	Gry Si Cl	NCM
	2616	18-28	7-11	10YR6/3	Pl Brn Cl	NCM
		0-20	0-8	10YR6/1	Gry Si Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2617	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-20	0-8	10YR6/1	Gry Si Cl	NCM
	2618	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-20	0-8	10YR6/1	Gry Si Cl	NCM
	2619	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-23	0-9	10YR6/1	Gry Si Cl	NCM
	2620	23-33	9-13	10YR6/3	Pl Brn Cl	NCM
		0-23	0-9	10YR6/1	Gry Si Cl	NCM
TR 220	2621	23-33	9-13	10YR6/3	Pl Brn Cl	NCM
		0-23	0-9	10YR6/1	Gry Si Cl	NCM
	2622	23-33	9-13	10YR6/3	Pl Brn Cl	NCM
		0-20	0-8	10YR6/1	Gry Si Cl	NCM
	2623	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
		0-18	0-7	10YR6/1	Gry Si Cl	NCM
	2624	18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2625	-	-	-	Not excavated: Standing Water	-
	2626	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2627	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2628	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2629	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2630	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2631	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	2632	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2633	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
TR 221	2634	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2635	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2636	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2637	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2638	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2639	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2640	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2641	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 222	2642	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2643	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2644	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2645	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2646	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2647	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2648	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2649	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2650	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2651	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2652	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2653	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2654	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2655	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2656	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2657	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2658	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2659	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
TR 223	2660	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2661	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2662	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2663	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2664	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2665	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2666	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2667	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2668	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2669	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2670	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2671	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2672	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2673	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2674	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 224	2675	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2676	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2677	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2678	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2679	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2680	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2681	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2682	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2683	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2684	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2685	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2686	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2687	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	2688	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 225	2689	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2690	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2691	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2692	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	2693	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	2694	0-13	0-5	10YR6/1	Gry Si Cl	NCM
		13-23	5-9	10YR6/3	Pl Brn Cl	NCM
	2695	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2696	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2697	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2698	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2699	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2700	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2701	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
TR 226	2702	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2703	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2704	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2706	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2708	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2709	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2710	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2711	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2712	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2713	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
TR 227	2714	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2715	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2716	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2717	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2718	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2719	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2720	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2721	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2722	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2723	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2724	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 228	2725	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2726	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2727	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2728	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2729	0-18	0-7	10YR6/1	Gry Si Cl	NCM
		18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	2730	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2731	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 229	2732	0-15	0-6	10YR6/1	Gry Si Cl	NCM
		15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	2733	0-20	0-8	10YR6/1	Gry Si Cl	NCM
		20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	2734	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2735	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2736	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
	2737	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2738	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 230	2739	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
	2740	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	2741	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2742	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 231	2743	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	2744	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2745	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2746	0-33	0-13	10YR6/1	Gry Si Cl	NCM
		33-43	13-17	10YR6/3	Pl Brn Cl	NCM
TR 232	2747	0-25	0-10	10YR6/1	Gry Si Cl	NCM
		25-36	10-14	10YR6/3	Pl Brn Cl	NCM
	2748	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2749	0-23	0-9	10YR6/1	Gry Si Cl	NCM
		23-33	9-13	10YR6/3	Pl Brn Cl	NCM
TR 233	2750	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	2751	0-28	0-11	10YR6/1	Gry Si Cl	NCM
		28-38	11-15	10YR6/3	Pl Brn Cl	NCM
TR 234	2752	0-30	0-12	10YR6/1	Gry Si Cl	NCM
		30-41	12-16	10YR6/3	Pl Brn Cl	NCM
	2753	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2754	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2755	0-23	0-9	10YR4/6	Dk Y Brn Si Lo	NCM
		23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
TR 235	2756	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2757	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2758	0-25	0-10	10YR4/6	Dk Y Brn Si Lo	NCM
		25-50	10-20		ash	NCM
		50-70	20-30	10YR5/6	Y Brn Si Cl	NCM
	2759	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-45	8-18	10YR5/6	Y Brn Si Cl	NCM
TR 236	2760	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-35	7-14	10YR5/6	Y Brn Si Cl	NCM
	2761	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2762	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2763	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
TR 237	2764	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2765	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2766	0-33	0-13	10YR4/6	Dk Y Brn Si Lo	NCM
		33-58	13-23	10YR5/6	Y Brn Si Cl	NCM
	2767	0-30	0-12	10YR4/6	Dk Y Brn Si Lo	NCM
		20-60	12-24	10YR5/6	Y Brn Si Cl	NCM
TR 238	2768	0-20	0-10	10YR4/6	Dk Y Brn Si Lo	NCM
		20-55	10-22	10YR5/6	Y Brn Si Cl	NCM
	2769	0-23	0-9	10YR4/6	Dk Y Brn Si Lo	NCM
		23-50	9-19	10YR5/6	Y Brn Si Cl	NCM
	2770	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-1	10YR5/6	Y Brn Si Cl	NCM
	2771	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
TR 239	2772	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2773	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2774	0-28	0-11	10YR4/6	Dk Y Brn Si Lo	NCM
		28-53	11-21	10YR5/6	Y Brn Si Cl	NCM
	2775	0-25	0-10	10YR4/6	Dk Y Brn Si Lo	NCM
		25-50	10-20	10YR5/6	Y Brn Si Cl	NCM
TR 240	2776	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-45	8-18	10YR5/6	Y Brn Si Cl	NCM
	2777	0-10	0-4	10YR4/6	Dk Y Brn Si Lo	NCM
		10-50	4-19	10YR5/6	Y Brn Si Cl	NCM
	2778	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2779	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
TR 241	2780	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2781	0-23	0-9	10YR4/6	Dk Y Brn Si Lo	NCM
		23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	2782	0-18	0-7	10YR4/6	Dk Y Brn Si Lo terminated at rock obstruction	NCM
	2783	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2784	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2785	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2786	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
TR 242	2787	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2788	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2789	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2790	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2791	0-	0-35	10YR4/6	Dk Y Brn Si Lo	NCM
			35-45	10YR5/6	Y Brn Si Cl	NCM
	2792	0-23	0-9	10YR4/6	Dk Y Brn Si Lo	NCM
		23-50	9-19	10YR5/6	Y Brn Si Cl	NCM
	2793	0-25	0-10	10YR4/6	Dk Y Brn Si Lo	NCM
		25-50	10-20	10YR5/6	Y Brn Si Cl	NCM
TR 243	2794	0-25	0-10	10YR4/6	Dk Y Brn Si Lo	NCM
		25-50	10-20	10YR5/6	Y Brn Si Cl	NCM
	2795	0-23	0-9	10YR4/6	Dk Y Brn Si Lo	NCM
		23-50	9-19	10YR5/6	Y Brn Si Cl	NCM
	2796	0-23	0-9	10YR4/6	Dk Y Brn Si Lo	NCM
		23-50	9-19	10YR5/6	Y Brn Si Cl	NCM
TR 244	2797	0-38	0-15	10YR4/6	Dk Y Brn Si Lo	NCM
		38-68	15-25	10YR5/6	Y Brn Si Cl	NCM
	2798	0-23	0-9	10YR4/6	Dk Y Brn Si Lo	NCM
		23-35	9-14	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2799	0-30	0-12	10YR4/6	Dk Y Brn Si Lo	NCM
		30-43	12-17	10YR5/6	Y Brn Si Cl	NCM
	2800	0-336	0-13	10YR4/6	Dk Y Brn Si Lo	NCM
		33-45	13-18	10YR5/6	Y Brn Si Cl	NCM
	2801	0-25	0-10	10YR4/6	Dk Y Brn Si Lo	NCM
		25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	2802	0-23	0-9	10YR4/6	Dk Y Brn Si Lo	NCM
		23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	2803	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
TR 245	2804	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2805	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2806	0-23	0-9	10YR4/6	Dk Y Brn Si Lo	NCM
		23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	2807	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2808	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2809	0-13	0-5	10YR4/6	Dk Y Brn Si Lo	NCM
		13-38	5-15	10YR5/6	Y Brn Si Cl	NCM
	2810	0-50	0-20	10YR4/6	Dk Y Brn Si Lo	NCM
		50-75	20-30	10YR5/6	Y Brn Si Cl	NCM
	2811	0-60	0-24	10YR4/6	Dk Y Brn Si Lo	NCM
		60-70	24-34	10YR5/6	Y Brn Si Cl	NCM
	2812	0-30	0-12	10YR4/6	Dk Y Brn Si Lo	NCM
		30-50	12-20	10YR5/6	Y Brn Si Cl	NCM
TR 246	2813	0-25	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		25-35	8-14	10YR5/6	Y Brn Si Cl	NCM
	2814	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		18-35	7-14	10YR5/6	Y Brn Si Cl	NCM
	2815	0-23	0-9	10YR4/6	Dk Y Brn Si Lo	NCM
		23-38	9-15	10YR5/6	Y Brn Si Cl	NCM
	2816	0-38	0-15	10YR4/6	Dk Y Brn Si Lo	NCM
		38-50	15-19	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2817	0-38	0-15	10YR4/6	Dk Y Brn Si Lo	NCM
		38-50	15-19	10YR5/6	Y Brn Si Cl	NCM
	2818	0-25	0-10	10YR4/6	Dk Y Brn Si Lo	NCM
		25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	2819	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2820	0-23	0-9	10YR5/6	Y Brn Si Cl	NCM
		23-33	9-13	10YR4/6	Dk Y Brn Si Lo	NCM
	2821	0-28	0-11	10YR5/6	Y Brn Si Cl	NCM
		28-38	11-15	10YR4/6	Dk Y Brn Si Lo	NCM
	2822	0-15	0-6	10YR5/6	Y Brn Si Cl	NCM
		15-25	6-10	10YR4/6	Dk Y Brn Si Lo	NCM
TR 247	2823	0-20	0-8	10YR5/6	Y Brn Si Cl	NCM
		20-30	8-12	10YR4/6	Dk Y Brn Si Lo	NCM
	2824	0-20	0-8	10YR5/6	Y Brn Si Cl	NCM
		20-30	8-12	10YR4/6	Dk Y Brn Si Lo	NCM
	2825	0-8	0-3	10YR5/6	Y Brn Si Cl	NCM
		8-18	3-7	10YR4/6	Dk Y Brn Si Lo	NCM
TR 248	2826	0-25	0-10	10YR4/6	Dk Y Brn Si Lo	NCM
		25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	2827	0-10	0-4	10YR4/6	Dk Y Brn Si Lo	NCM
		10-25	4-10	10YR5/6	Y Brn Si Cl	NCM
	2828	0-25	0-10	10YR4/6	Dk Y Brn Si Lo	NCM
		25-33	10-13	10YR5/6	Y Brn Si Cl	NCM
TR 249	2829	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-33	8-13	10YR5/6	Y Brn Si Cl	NCM
	2830	0-15	0-6	10YR4/6	Dk Y Brn Si Lo	NCM
		15-25	6-10	10YR5/6	Y Brn Si Cl	NCM
	2831	0-20	0-8	10YR4/6	Dk Y Brn Si Lo	NCM
		20-33	8-13	10YR5/6	Y Brn Si Cl	NCM

APPENDIX D

SHOVEL TEST RECORDS

(HISTORIC COMPLEX 1)

Appendix D: Shovel Test Records: Historic Complex 1
Craigville Road Site. Craigville Road. Town of Goshen Orange County New York

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
H1F1	1	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	33-43	13-17	10YR5/6	Y Brn Sa Cl	NCM
	2	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Sa Cl	NCM
	3	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	Glass
		2	23-33	9-13	10YR5/6	Y Brn Sa Cl	NCM
	4	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	Ceramic nail
		2	18-28	7-11	10YR5/6	Y Brn Sa Cl	Glass 2
	5	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	Glass
		2	23-33	9-13	10YR5/6	Y Brn Sa Cl	Glass 2
	6	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	Metal, ceramic, glass
		2	18-28	7-11	10YR5/6	Y Brn Sa Cl	Glass 2
	7	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	Ceramic, glass, nail
		2	23-33	9-13	10YR5/6	Y Brn Sa Cl	NCM
	8	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	Ceramic
		2	18-28	7-11	10YR5/6	Y Brn Sa Cl	NCM
	9	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Sa Cl	NCM
	10	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	Ceramic, nail, metal, glass
		2	23-33	9-13	10YR5/6	Y Brn Sa Cl	NCM
	11	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	Glass
		2	20-30	8-12	10YR5/6	Y Brn Sa Cl	NCM
	12	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	Glass, nail
		2	20-30	8-12	10YR5/6	Y Brn Sa Cl	NCM
	13	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	Nail, metal
		2	30-40	12-16	10YR5/6	Y Brn Sa Cl	NCM
	14	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Sa Cl	NCM
	15	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	Nail
		2	28-38	11-15	10YR5/6	Y Brn Sa Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	16	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	Nail
		2	25-35	10-14	10YR5/6	Y Brn Sa Cl	NCM
	17	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	Nail
		2	25-35	10-14	10YR5/6	Y Brn Sa Cl	NCM
	18	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	Ceramic
		2	28-38	11-15	10YR5/6	Y Brn Sa Cl	NCM
	19	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	28-38	11-15	10YR5/6	Y Brn Sa Cl	NCM
	20	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	Nail
		2	30-40	12-16	10YR5/6	Y Brn Sa Cl	NCM
	21	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo terminated due to rock obstruction	metal
	22	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo excavation terminated due to rock obstruction	Nail
	23	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	Nail, metal
		2	25-35	10-14	10YR5/3	Brn Si Cl	NCM
	24	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	33-48	13-17	10YR5/3	Brn Si Cl	NCM
	25	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	33-43	13-17	10YR5/3	Brn Si Cl	NCM
	26	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	28-38	11-15	10YR5/3	Brn Si Cl	NCM
	27	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	Glass
		2	30-40	12-16	10YR5/3	Brn Si Cl	NCM
	28	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	Glass
		2	30-40	12-16	10YR5/3	Brn Si Cl	NCM
	29	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Sa Cl	NCM
	30	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	18-23	7-13	10YR5/6	Y Brn Sa Cl	NCM
	31	1	0-15	0-6	10YR4/2	Dk Gry Brn Si Lo	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
		2	15-25	6-10	10YR5/6	Y Brn Sa Cl	NCM
	32	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-38	8-15	10YR5/6	Y Brn Sa Cl	NCM
	33	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	Nail
		2	18-38	7-15	10YR5/6	Y Brn Sa Cl	NCM
	34	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-38	8-15	10YR5/6	Y Brn Sa Cl	NCM
	35	1	0-15	0-6	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	15-30	6-12	10YR5/6	Y Brn Sa Cl	NCM
	36	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	Glass
		2	20-33	8-13	10YR5/6	Y Brn Sa Cl	NCM
	37	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	Ceramic, Glass, metal
		2	18-28	7-11	10YR5/6	Y Brn Sa Cl	NCM
	38	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	30-40	12-16	10YR5/6	Y Brn Sa Cl	NCM
	39	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	Nail
		2	23-33	9-13	10YR5/6	Y Brn Sa Cl	NCM
	40	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo excavation terminated due to rock obstruction	NCM
	41	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	28-38	11-15	10YR5/6	Y Brn Sa Cl	NCM
	42	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	30-40	12-16	10YR5/6	Y Brn Sa Cl	NCM
H1F2	1	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	Glass
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM
	2	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	Glass
		2	18-28	7-11	10YR5/8	Y Brn Si Sa Cl	NCM
	3	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	Glass
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM
	4	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	Ceramic, Glass, Metal, bon
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	5	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	NCM
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM
	6	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	NCM
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM
	7	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	NCM
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM
	8	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	NCM
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM
	9	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	NCM
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM
	10	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	NCM
		2	18-28	7-11	10YR5/8	Y Brn Si Sa Cl	NCM
	11	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	NCM
		2	18-28	7-11	10YR5/8	Y Brn Si Sa Cl	NCM
	12	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	NCM
		2	18-28	7-11	10YR5/8	Y Brn Si Sa Cl	NCM
	13	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	NCM
		2	18-28	7-11	10YR5/8	Y Brn Si Sa Cl	NCM
	14	1	0-23	0-9	10YR3/4	Brn Si Sa Lo	NCM
		2	23-33	9-13	10YR5/8	Y Brn Si Sa Cl	NCM
	15	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	NCM
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM
	16	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	Nail, metal, glass
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM
	17	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	NCM
		2	18-28	7-11	10YR5/8	Y Brn Si Sa Cl	NCM
	18	1	0-23	0-9	10YR3/4	Brn Si Sa Lo	NCM
		2	23-33	9-13	10YR5/8	Y Brn Si Sa Cl	NCM
	19	1	0-23	0-9	10YR3/4	Brn Si Sa Lo	Leather, glass
		2	23-33	9-13	10YR5/8	Y Brn Si Sa Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	20	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	glass
		2	18-28	7-11	10YR5/8	Y Brn Si Sa Cl	NCM
	21	1		0-		Not excavated due to slope	NCM
	22	1		0-		Not excavated due to slope	NCM
	23	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	NCM
		2	18-28	7-11	10YR5/8	Y Brn Si Sa Cl	NCM
	24	1	0-23	0-9	10YR3/4	Brn Si Sa Lo	NCM
		2	23-33	9-13	10YR5/8	Y Brn Si Sa Cl	NCM
	25	1	0-23	0-9	10YR3/4	Brn Si Sa Lo	NCM
		2	23-33	9-13	10YR5/8	Y Brn Si Sa Cl	NCM
	26	1	0-23	0-9	10YR3/4	Brn Si Sa Lo	NCM
		2	23-33	9-13	10YR5/8	Y Brn Si Sa Cl	NCM
	27	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	NCM
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM
	28	1	0-10	0-8	10YR3/4	Brn Si Sa Lo	NCM
		2	20-30	8-12	10YR5/8	Y Brn Si Sa Cl	NCM
	29	1	0-23	0-9	10YR3/4	Brn Si Sa Lo	NCM
		2	23-33	9-13	10YR5/8	Y Brn Si Sa Cl	NCM
	30	1	0-33	0-13	10YR3/4	Brn Si Sa Lo	NCM
		2	33-43	13-17	10YR5/8	Y Brn Si Sa Cl	NCM
	31	1	0-23	0-9	10YR3/4	Brn Si Sa Lo	NCM
		2	23-33	9-13	10YR5/8	Y Brn Si Sa Cl	NCM
	32	1	0-23	0-9	10YR3/4	Brn Si Sa Lo	Metal, leather, glass
		2	23-30	9-12	10YR5/8	Y Brn Si Sa Cl	NCM
	33	1	0-15	0-6	10YR3/4	Brn Si Sa Lo	ceramic, glasss, metal, leatł
		2	15-25	6-10	10YR5/8	Y Brn Si Sa Cl	NCM
	34	1	0-15	0-6	10YR3/4	Brn Si Sa Lo	ceramic, glass, metal, bone,
		2	15-25	6-10	10YR5/8	Y Brn Si Sa Cl	NCM
	35	1	0-25	0-10	10YR3/4	Brn Si Sa Lo	NCM
		2	25-35	10-14	10YR5/8	Y Brn Si Sa Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	36	1	0-23	0-11	10YR3/4	Brn Si Sa Lo	NCM
		2	28-38	11-15	10YR5/8	Y Brn Si Sa Cl	NCM
	37	1	0-30	0-12	10YR3/4	Brn Si Sa Lo	NCM
		2	30-40	12-16	10YR5/8	Y Brn Si Sa Cl	NCM
	38	1	0-23	0-11	10YR3/4	Brn Si Sa Lo	Metal, glass
		2	28-38	11-15	10YR5/8	Y Brn Si Sa Cl	NCM
	39	1	0-30	0-12	10YR3/4	Brn Si Sa Lo	Nail, glass
		2	30-40	12-16	10YR5/8	Y Brn Si Sa Cl	NCM
	40	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	Metal, glass
		2	18-28	7-11	10YR5/8	Y Brn Si Sa Cl	NCM
	41	1	0-18	0-7	10YR3/4	Brn Si Lo	NCM
		2	18-28	7-11	10YR5/3	Y Brn Sa Cl	NCM
	42	1	0-10	0-8	10YR3/4	Brn Si Lo	Metal, glass
		2	20-30	8-12	10YR5/3	Y Brn Sa Cl	NCM
	43	1	0-23	0-9	10YR3/4	Brn Si Lo	Nail, metal, glass
		2	23-33	9-13	10YR5/3	Y Brn Sa Cl	NCM
	44	1	0-38	0-15	10YR3/4	Brn Si Lo	metal, shoe
		2	38-50	15-20	10YR5/3	Y Brn Sa Cl	NCM
	45	1	0-30	0-12	10YR3/4	Brn Si Lo	Metal, glass
		2	30-40	12-16	10YR5/3	Y Brn Sa Cl	NCM
	46	1	0-18	0-7	10YR3/4	Brn Si Lo	Metal, glass
		2	18-28	7-11	10YR5/3	Y Brn Sa Cl	NCM
	47	1	0-15	0-6	10YR3/4	Brn Si Lo	Ceramic, metal, glass
		2	15-25	6-10	10YR5/3	Y Brn Sa Cl	NCM
	48	1	0-10	0-4	10YR3/4	Brn Si Lo	Metal, glass
		2	10-20	4-8	10YR5/3	Y Brn Sa Cl	NCM
	49	1	0-15	0-6	10YR3/4	Brn Si Lo	Metal, glass
		2	15-25	6-10	10YR5/3	Y Brn Sa Cl	NCM
	50	1	0-18	0-7	10YR3/4	Brn Si Lo	Metal, glass
		2	18-28	7-11	10YR5/3	Y Brn Sa Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	51	1		0-		not excavated: rocks	NCM
	52	1	0-10	0-4	10YR3/4	Brn Si Lo	Ceramic, metal, glass
		2	10-20	4-8	10YR5/3	Y Brn Sa Cl	NCM
	53	1	0-10	0-4	10YR3/4	Brn Si Lo	Ceramic, metal, glass
		2	10-20	4-8	10YR5/3	Y Brn Sa Cl	NCM
	54	1	0-10	0-4	10YR3/4	Brn Si Lo	Ceramic, metal, glass
		2	10-20	4-8	10YR5/3	Y Brn Sa Cl	NCM
	55	1	0-8	0-3	10YR3/4	Brn Si Lo	Metal, glass
		2	8-18	3-7	10YR5/3	Y Brn Sa Cl	NCM
	56	1	0-10	0-4	10YR3/4	Brn Si Lo	Ceramic, metal, glass
		2	10-20	4-8	10YR5/3	Y Brn Sa Cl	NCM
	57	1	0-8	0-5	10YR3/4	Brn Si Lo	Metal, glass
		2	13-23	5-9	10YR5/3	Y Brn Sa Cl	NCM
	58	1	0-18	0-7	10YR3/4	Brn Si Lo	Ceramic, metal, glass
		2	18-28	7-11	10YR5/3	Y Brn Sa Cl	NCM
	59	1	0-23	0-9	10YR3/4	Brn Si Lo	NCM
		2	23-33	9-13	10YR5/3	Y Brn Sa Cl	NCM
	60	1	0-15	0-6	10YR3/4	Brn Si Lo	Metal, glass
		2	15-30	6-12	10YR5/3	Y Brn Sa Cl	NCM
	61	1	0-25	0-10	10YR3/4	Brn Si Sa Lo	Metal, glass
		2	25-35	10-14	10YR5/8	Y Brn Si Sa Cl	NCM
	62	1	0-30	0-12	10YR3/4	Brn Si Lo	Metal, glass
		2	30-40	12-16	10YR5/3	Y Brn Sa Cl	NCM
	63	1	0-25	0-10	10YR3/4	Brn Si Lo	Ceramic, metal, glass
		2	25-40	10-16	10YR5/3	Y Brn Sa Cl	NCM
	64	1	0-23	0-11	10YR3/4	Brn Si Sa Lo	Metal, ceramic
		2	28-38	11-15	10YR5/8	Y Brn Si Sa Cl	NCM
	65	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	NCM
		2	18-38	7-15	10YR5/8	Y Brn Si Sa Cl	NCM
	66	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	Ceramic, glass
		2	18-23	7-13	10YR5/8	Y Brn Si Sa Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	67	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	NCM
		2	18-23	7-13	10YR5/8	Y Brn Si Sa Cl	NCM
H1F3	1	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	Ceramic, glass
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-23	0-11	10YR3/4	Brn Si Sa Lo	NCM
		2	28-38	11-15	10YR5/8	Y Brn Si Sa Cl	NCM
	4	1	0-18	0-7	10YR3/4	Brn Si Sa Lo	NCM
		2	18-38	7-15	10YR5/8	Y Brn Si Sa Cl	NCM
	5	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	Ceramic
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-35	0-14	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	35-45	14-18	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	9	1	0-35	0-14	10YR4/2	Dk Gry Brn Si Lo	NCM
	10	1	0-30	0-12	10YR5/6	Y Brn Si Cl	Ceramic, glass
		2	30-40	12-16	10YR5/3	Brn Sa Cl	NCM
	11	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Sa Lo	Ceramic, glass
		2	28-38	11-15	10YR5/3	Brn Sa Cl	NCM
	12	1	0-35	0-14	10YR2/1	Blk Lo with coal ash	Ceramic, glass
		2	35-45	14-18	10YR5/3	Brn Sa Cl	NCM
H1F4	1	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-18	0-7	10YR7/2	Pl Gry Ash	NCM
		2	18-28	7-11	10YR7/2	Pl Gry Ash	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	5	1	0-18	0-7	10YR7/2	Pl Gry Ash	NCM
		2	18-28	7-11	10YR7/2	Pl Gry Ash	NCM
	6	1	0-10	0-8	10YR7/2	Pl Gry Ash	NCM
		2	20-30	8-12	10YR7/2	Pl Gry Ash	NCM
	7	1	0-10	0-8	10YR7/2	Pl Gry Ash	Metal, glass
		2	20-30	8-12	10YR7/2	Pl Gry Ash	NCM
	8	1	0-10	0-8	10YR7/2	Pl Gry Ash	NCM
		2	20-30	8-12	10YR7/2	Pl Gry Ash	NCM
	9	1	0-18	0-7	10YR7/2	Pl Gry Ash	NCM
		2	18-28	7-11	10YR7/2	Pl Gry Ash	NCM
	10	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	11	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	12	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	13	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	14	1	0-35	0-14	10YR4/2	Dk Gry Brn Si Lo	nails, metal glass
		2	35-45	14-18	10YR5/6	Y Brn Si Cl	NCM
	15	1	0-38	0-15	10YR5/6	Y Brn Si Cl	NCM
	16	1	0-35	0-14	10YR5/6	Y Brn Si Cl	nails, metal
		2	35-45	14-18	10YR4/2	Dk Gry Brn Si Lo	NCM
	17	1	0-35	0-14	10YR4/2	Dk Gry Brn Si Sa Lo terminated at rock obstruction	NCM
		2	35-45	14-18	10YR4/2	Dk Gry Brn Si Lo	NCM
	18	1	0-38	0-15	10YR4/2	Dk Gry Brn Si Sa Lo terminated at rock obstruction	Ceramic, metal , glass
	19	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Lo	Metal, glass, door knob
		2	33-43	13-17	10YR5/6	Y Brn Si Cl	NCM
	20	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Lo	Nail, glass
		2	33-43	13-17	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	21	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	glass
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	22	1	0-35	0-14	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	35-45	14-18	10YR5/6	Y Brn Si Cl	NCM
	23	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	metal, bone
		2	28-38	11-17	10YR5/6	Y Brn Si Cl	NCM
	24	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	Metal, glass, leather
		2	18-30	7-12	10YR5/6	Y Brn Si Cl	NCM
	25	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-33	8-13	10YR5/6	Y Brn Si Cl	NCM
	26	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	33-48	13-18	10YR5/6	Y Brn Si Cl	NCM
	27	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	28	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-33	8-13	10YR5/6	Y Brn Si Cl	NCM
	29	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	Metal, Ceramic, Glass
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	30	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	Ceramic, glass, nail
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	31	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	Ceramic, glass, nail, metal
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	32	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	Nail, glass
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	33	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	metal, glass, vinyl
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	34	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	Metal, ceramic, glass
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	35	1	0-38	0-15	10YR4/2	Dk Gry Brn Si Sa Lo terminated at rock obstruction	nail, plastic, vinyl
	36	1	0-10	0-8	10YR7/2	Pl Gry Ash	NCM
		2	20-30	8-12	10YR7/2	Pl Gry Ash	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	37	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	38	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	nail, metal
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	39	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	ceramic, glass, nail
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	40	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	41	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	glass
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	42	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	18-23	7-13	10YR5/6	Y Brn Si Cl	NCM
	43	1	0-38	0-15	10YR4/2	Dk Gry Brn Si Sa Lo terminated at rock obstruction	NCM
	44	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
H1F5	1	1	0-53	0-21	10YR4/2	Dk Gry Brn Si Sa Lo terminated at rock obstruction	
	2	1	0-8	0-3	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	8-30	3-12	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-33	8-13	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-40	10-16	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-28	0-11	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Sa Lo terminated at rock obstruction	
	1	1	0-28	0-11	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	28-40	11-16	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	2	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-13	0-5	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	13-33	5-13	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	33-43	13-17	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-38	8-15	10YR5/6	Y Brn Si Cl	NCM
	8	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	9	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-33	8-13	10YR5/6	Y Brn Si Cl	NCM
	10	1	0-15	0-6	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	15-30	6-12	10YR5/6	Y Brn Si Cl	NCM
H1Y01	1	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	Metal, glass
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Lo	Metal, glass
		2	33-43	13-17	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-38	0-15	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	38-48	15-19	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
H1Y02	1	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	Ceramic, glass
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	glass
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
H1Y03	1	1	0-38	0-15	10YR2/1	Blk Cl	Ceramic, glass, metal, bone
		2	38-48	15-19	10YR6/3	Ple Brn Cl	NCM
	2	1	0-38	0-15	10YR2/1	Blk Cl	Ceramic, glass, nal, metal
		2	38-53	15-21	10YR6/3	Ple Brn Cl	NCM
H1Y04	1	1	0-23	0-11	10YR2/1	Blk Cl	Ceramic, glass
		2	28-60	11-24	10YR6/3	Ple Brn Cl	NCM
	2	1	0-45	0-18	10YR2/1	Blk Cl terminated due to rock obstruction	nail
H1Y05	1	1	0-10	0-8	10YR3/4	Dk Y Brn Si Lo	glass
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-10	0-8	10YR3/4	Dk Y Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-10	0-8	10YR3/4	Dk Y Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-10	0-8	10YR3/4	Dk Y Brn Si Lo	Ceramic, glass
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-10	0-8	10YR3/4	Dk Y Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-10	0-8	10YR3/4	Dk Y Brn Si Lo	Ceramic, metal
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
H1Y05	1	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	glass
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	glass
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-23	0-9	10YR3/4	Dk Y Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-23	0-9	10YR3/4	Dk Y Brn Si Lo	nail
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-25	0-10	10YR3/4	Dk Y Brn Si Lo	NCM
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-10	0-8	10YR3/4	Dk Y Brn Si Lo	Ceramic
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
H1Y07	1	1	0-23	0-11	10YR3/4	Dk Y Brn Si Lo	NCM
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-30	0-12	10YR3/4	Dk Y Brn Si Lo	NCM
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-30	0-12	10YR3/4	Dk Y Brn Si Lo	Glass
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-38	0-15	10YR3/4	Dk Y Brn Si Lo	NCM
		2	38-48	15-19	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-30	0-12	10YR3/4	Dk Y Brn Si Lo	Ceramic
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
H1Y08	1	1	0-33	0-13	10YR3/4	Dk Y Brn Si Lo	NCM
		2	33-43	13-17	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-33	0-13	10YR3/4	Dk Y Brn Si Lo	Nails, bone
		2	33-43	13-17	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-8	0-3	10YR3/4	Dk Y Brn Si Lo	shell
		2	8-18	3-7	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
H1Y9	1	1	0-23	0-11	10YR3/4	Dk Y Brn Si Lo	NCM
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-25	0-10	10YR3/4	Dk Y Brn Si Lo	NCM
		2	25-48	10-19	10YR5/6	Y Brn Si Cl	NCM
H1Y10	1	1	0-15	0-6	10YR4/6	Dk Y Brn Si Lo	NCM
		2	15-25	6-10	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-25	0-10	10YR4/6	Dk Y Brn Si Lo	Ceramic, nail, glass
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-23	0-11	10YR4/6	Dk Y Brn Si Lo	NCM
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-23	0-9	10YR4/6	Dk Y Brn Si Lo	Metal
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-10	0-8	10YR4/6	Dk Y Brn Si Lo	Nail
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	metal
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	8	1	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	9	1	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	10	1	0-18	0-7	10YR4/6	Dk Y Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
H1Y11	1	1	0-10	0-4	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	10-20	4-8	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	Nail, glass
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	4	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	glass
		2	30-49	12-19	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	Ceramic
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	glass
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	8	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	9	1	0-35	0-14	10YR2/1	Blk Si Lo	NCM
		2	35-45	14-18	10YR6/3	Pl Brn Si Lo Cl	NCM
	10	1	0-15	0-6	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	15-25	6-10	10YR5/6	Y Brn Si Cl	NCM
H1Y12	1	1	0-10	0-8	10YR3/4	Dk Y Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-10	0-8	10YR3/4	Dk Y Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
H1Y13	1	1	0-25	0-10	10YR3/4	Dk Y Brn Si Lo	NCM
		2	25-38	10-13	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
H1Y14	1	1	0-30	0-12	10YR2/1	Blk Si Lo	NCM
		2	30-40	12-16	10YR6/3	Pl Brn Si Lo Cl	NCM
	2	1	0-30	0-12	10YR2/1	Blk Si Lo	NCM
		2	30-40	12-16	10YR6/3	Pl Brn Si Lo Cl	NCM
	3	1	0-33	0-13	10YR2/1	Blk Si Lo	NCM
		2	33-43	13-17	10YR6/3	Pl Brn Si Lo Cl	NCM
	4	1	0-35	0-14	10YR2/1	Blk Si Lo	NCM
		2	35-45	14-18	10YR6/3	Pl Brn Si Lo Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	5	1	0-33	0-13	10YR2/1	Blk Si Lo	NCM
		2	33-43	13-17	10YR6/3	Pl Brn Si Lo Cl	NCM
	6	1	0-33	0-13	10YR2/1	Blk Si Lo	NCM
		2	33-43	13-17	10YR6/3	Pl Brn Si Lo Cl	NCM
	7	1	0-35	0-14	10YR2/1	Blk Si Lo	NCM
		2	35-45	14-18	10YR6/3	Pl Brn Si Lo Cl	NCM
H1Y15	1	1	0-18	0-7	10YR3/4	Dk Y Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-18	0-7	10YR3/4	Dk Y Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-18	0-7	10YR3/4	Dk Y Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-23	0-9	10YR3/4	Dk Y Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-23	0-9	10YR3/4	Dk Y Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-10	0-8	10YR3/4	Dk Y Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
H1Y16	1	1	0-15	0-6	10YR4/2	Dk Gry Brn Si Sa Lo terminated at rock obstruction	NCM
	2	1	0-25	0-10	10YR3/4	Dk Y Brn Si Lo	NCM
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
H1Y17	1	1	0-25	0-10	10YR3/4	Dk Y Brn Si Lo	Ceramic, glass plastic
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-25	0-10	10YR3/4	Dk Y Brn Si Lo	Ceramic glass nail
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-30	0-12	10YR3/4	Dk Y Brn Si Lo	bottle
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
H1Y18	1	1	0-25	0-10	10YR3/4	Dk Y Brn Si Lo	Ceramic, glass, nail, metal
		2	25-45	10-18	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-33	0-13	10YR3/4	Dk Y Brn Si Lo	Metal, shell
		2	33-43	13-17	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
H1Y19	1	1	0-18	0-7	10YR3/4	Dk Y Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-23	0-11	10YR3/4	Dk Y Brn Si Lo	NCM
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-23	0-9	10YR3/4	Dk Y Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
H1Y20	1	1	0-15	0-6	10YR3/4	Dk Y Brn Si Lo	NCM
		2	15-25	6-10	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-40	0-16	10YR3/4	Dk Y Brn Si Lo	NCM
		2	40-50	16-20	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-35	0-14	10YR3/4	Dk Y Brn Si Lo	NCM
		2	35-45	14-18	10YR5/6	Y Brn Si Cl	NCM
H1Y21	1	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	33-43	13-17	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	glass
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	ceramic, glass, nail
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	28-33	11-13	10YR5/6	Y Brn Si Cl	NCM
H1Y22	1	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	3	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
H1Y23	1	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
H1Y24	1	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-33	10-13	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
H1Y25	1	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-50	10-20	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-50	10-20	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-50	10-20	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo terminated at rock obstruction	NCM
	5	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	18-49	7-19	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	6	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-45	8-18	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-53	8-21	10YR5/6	Y Brn Si Cl	NCM
H1Y26	1	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo terminated at rock obstruction	NCM
	2	1				Not Excavated: Debris pile	NCM
	3	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Sa Lo terminated at rock obstruction	glass, nail
H1Y27	1	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-50	10-20	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-38	10-15	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-8	0-5	10YR4/2	Dk Gry Brn Si Lo	glass, metal
		2	13-38	5-15	10YR5/6	Y Brn Si Cl	NCM
H1Y28	1	1	0-43	0-17	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	43-48	17-29	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-23	0-11	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	28-51	11-21	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-52	10-21	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-43	0-17	10YR4/2	Dk Gry Brn Si Sa Lo terminated at rock obstruction	NCM
	5	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	30-55	12-22	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-55	10-22	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-10	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-45	8-18	10YR5/6	Y Brn Si Cl	NCM
	8	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	33-58	13-23	10YR5/6	Y Brn Si Cl	NCM

APPENDIX D

SHOVEL TEST RECORDS

(HISTORIC COMPLEX 2)

APPENDIX D

SHOVEL TEST RECORDS

(HISTORIC COMPLEX 3)

Appendix D: Shovel Test Records: Historic Complex 3
Craigville Road Site. Craigville Road Town of Goshen, Orange County New York

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
H3F1	1	1	0-28	0-11	10YR2/1	Blk Si Lo	2 Metal Fragments
		2	28-38	11-15	10YR6/3	Pl Brn Cl	NCM
	2	1	0-18	0-7	10YR2/1	Blk Si Lo	NCM
		2	18-30	7-12	10YR6/3	Pl Brn Cl	NCM
	3	1	0-15	0-6	10YR2/1	Blk Si Lo	1 Metal Fragment
		2	15-25	6-10	10YR6/3	Pl Brn Cl	NCM
	4	1	0-20	0-8	10YR2/1	Blk Si Lo	NCM
		2	20-25	8-12	10YR6/3	Pl Brn Cl	NCM
	5	1	0-38	0-15	10YR2/1	Blk Si Lo	NCM
		2	38-50	15-20	10YR6/3	Pl Brn Cl	NCM
	6	1	0-15	0-6	10YR2/1	Blk Si Lo	NCM
		2	15-33	6-13	10YR6/3	Pl Brn Cl	NCM
	7	1	0-25	0-10	10YR2/1	Blk Si Lo	NCM
		2	25-35	10-14	10YR6/3	Pl Brn Cl	NCM
	8	1	0-18	0-7	10YR2/1	Blk Si Lo	NCM
		2	18-28	7-11	10YR6/3	Pl Brn Cl	NCM
	9	1	0-20	0-8	10YR2/1	Blk Si Lo	NCM
		2	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	10	1	0-25	0-10	10YR2/1	Blk Si Lo	glass
		2	25-38	10-15	10YR6/3	Pl Brn Cl	NCM
	11	1	0-25	0-10	10YR2/1	Blk Si Lo	NCM
		2	25-35	10-14	10YR6/3	Pl Brn Cl	NCM
	12	1	0-28	0-11	10YR2/1	Blk Si Lo	NCM
		2	28-33	11-13	10YR6/3	Pl Brn Cl	NCM
	13	1	0-30	0-12	10YR2/1	Blk Si Lo terminated due to pooling water	NCM
	14	1	0-25	0-10	10YR2/1	Blk Si Lo terminated due to pooling water	NCM
	15	1	0-8	0-5	10YR2/1	Blk Si Lo terminated due to pooling water	NCM
	16	1	0-15	0-6	10YR2/1	Blk Si Lo terminated due to pooling water	NCM
	17	1	0-28	0-11	10YR2/1	Blk Si Lo terminated due to pooling water	NCM
	18	1	0-28	0-11	10YR2/1	Blk Si Lo terminated due to pooling water	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	19	1	0-25	0-10	10YR2/1	Blk Si Lo terminated due to pooling water	NCM
	20	1	0-33	0-13	10YR2/1	Blk Si Lo	NCM
		2	33-43	13-17	10YR6/3	Pl Brn Cl	NCM
	21	1	0-33	0-13	10YR2/1	Blk Si Lo terminated due to pooling water	NCM
F1Y1	1	1	0-15	0-6	10YR2/1	Blk Si Lo	NCM
		2	15-38	6-13	10YR6/3	Pl Brn Cl	NCM
	2	1	0-35	0-14	10YR2/1	Blk Si Lo	NCM
		2	35-49	14-19	10YR6/3	Pl Brn Cl	NCM
	3	1	0-20	0-8	10YR2/1	Blk Si Lo	NCM
		2	20-38	8-15	10YR6/3	Pl Brn Cl	NCM
	4	1	0-10	0-4	10YR2/1	Blk Si Lo	NCM
		2	10-23	4-9	10YR6/3	Pl Brn Cl	NCM
F1Y2	1	1	0-18	0-7	10YR2/1	Blk Si Lo	NCM
		2	18-33	7-13	10YR6/3	Pl Brn Cl	NCM
	2	1	0-28	0-11	10YR2/1	Blk Si Lo	NCM
		2	28-40	11-16	10YR6/3	Pl Brn Cl	NCM
	3	1	0-20	0-8	10YR2/1	Blk Si Lo	NCM
		2	20-30	8-12	10YR6/3	Pl Brn Cl	NCM
	4	1	0-23	0-9	10YR2/1	Blk Si Lo	NCM
		2	23-33	9-13	10YR6/3	Pl Brn Cl	NCM

APPENDIX D

SHOVEL TEST RECORDS

(HISTORIC COMPLEX 4)

Appendix D: Shovel Test Records: Historic Complex 4
Craigville Road Site. Craigville Road. Town of Goshen, Orange County New York

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
H4F2	1	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Cl Lo	Glass
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Cl Lo	Glass
		2	25-33	10-13	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Cl Lo	Glass
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Cl Lo	Glass
		2	18-30	7-12	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Cl Lo	Glass
		2	23-30	9-12	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Cl Lo	Ceramic, Glass
		2	20-33	8-13	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-8	0-5	10YR4/2	Dk Gry Brn Si Cl Lo	Glass
		2	13-23	5-9	10YR5/6	Y Brn Si Cl	NCM
	8	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Cl Lo	Glass, Metal
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	9	1	0-15	0-6	10YR4/2	Dk Gry Brn Si Cl Lo terminated due to root obstruction	Glass
	10	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Cl Lo	Ceramic, glass
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	11	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Cl Lo	Ceramic, glass
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	12	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Cl Lo terminated due to root obstruction	NCM
	13	1	0-10	0-4	10YR4/2	Dk Gry Brn Si Cl Lo terminated due to root obstruction	NCM
	14	1	0-8	0-5	10YR4/2	Dk Gry Brn Si Cl Lo terminated due to root obstruction	NCM
	15	1	0-15	0-6	10YR4/2	Dk Gry Brn Si Cl Lo	NCM
		2	15-25	6-10	10YR5/6	Y Brn Si Cl	NCM
	16	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Cl Lo	Ceramic, glass, metal
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	17	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Cl Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	18	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Cl Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	19	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Cl Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	20	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Cl Lo	NCM
		2	23-30	9-12	10YR5/6	Y Brn Si Cl	NCM
	21	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Cl Lo	Nial, glass
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	22	1	0-28	0-11	10YR4/2	Dk Gry Brn Si Cl Lo	NCM
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	23	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Cl Lo	Glass
		2	33-43	13-17	10YR5/6	Y Brn Si Cl	NCM
	24	1	0-35	0-14	10YR4/2	Dk Gry Brn Si Cl Lo	Glass
		2	35-48	14-18	10YR5/6	Y Brn Si Cl	NCM
	25	1	0-35	0-14	10YR4/2	Dk Gry Brn Si Cl Lo	Glass, Ceramic
		2	35-48	14-18	10YR5/6	Y Brn Si Cl	NCM
	26	1	0-28	0-11	10YR4/2	Dk Gry Brn Si Cl Lo	NCM
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	27	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Cl Lo	Ceramic
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	28	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Cl Lo	Glass, Ceramic
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	29	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Cl Lo	Ceramic, Glass
		2	23-30	9-12	10YR5/6	Y Brn Si Cl	NCM
	30	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Cl Lo	Ceramic
		2	25-33	10-13	10YR5/6	Y Brn Si Cl	NCM
	31	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Cl Lo	NCM
		2	25-33	10-13	10YR5/6	Y Brn Si Cl	NCM
	32	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Cl Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	33	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Cl Lo	Glass, Ceramic
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	34	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Cl Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	35	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Cl Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	36	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Cl Lo	ceramic
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	37	1	0-15	0-6	10YR4/2	Dk Gry Brn Si Cl Lo	Glass, Ceramic, Nail
		2	15-23	6-9	10YR5/6	Y Brn Si Cl	NCM
	38	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Cl Lo	Glass, Ceramic, nail
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	39	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Cl Lo	Nail, metal
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	40	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Cl Lo	Glass
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
H4Y1	1	1	0-38	0-15	10YR4/2	Dk Gry Brn Si Cl	NCM
		2	38-48	15-18	10YR7/4	V Pl Brn Cl	NCM
	2	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Cl	NCM
		2	33-35	13-14	10YR7/4	V Pl Brn Cl	NCM
H4Y2	1	1	0-35	0-14	10YR4/2	Dk Gry Brn Si Cl	Metal
		2	35-48	14-18	10YR7/4	V Pl Brn Cl	NCM
	2	1	0-45	0-18	10YR4/2	Dk Gry Brn Si Cl	NCM
		2	48-49	18-19	10YR7/4	V Pl Brn Cl	NCM
H4Y3	1	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-28	0-11	10YR4/2	Dk Gry Brn Si Lo	Ceramic, Metal, Glass
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-33	0-13	10YR4/2	Dk Gry Brn Si Lo	Nail
		2	33-43	13-17	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Lo	Metal, Glass, Ceramic
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
H4Y4	1	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Cl	NCM
		2	25-35	10-14	10YR7/4	V Pl Brn Cl	NCM
	2	1	0-45	0-18	10YR4/2	Dk Gry Brn Si Cl	NCM
		2	48-53	18-22	10YR7/4	V Pl Brn Cl	NCM
	3	1	0-50	0-20	10YR4/2	Dk Gry Brn Si Cl	NCM
		2	50-55	20-24	10YR7/4	V Pl Brn Cl	NCM
	4	1	0-40	0-16	10YR4/2	Dk Gry Brn Si Cl	NCM
		2	40-50	16-20	10YR7/4	V Pl Brn Cl	NCM
	5	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Cl	NCM
		2	30-40	12-16	10YR7/4	V Pl Brn Cl	NCM
	6	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Cl	NCM
		2	20-30	8-12	10YR7/4	V Pl Brn Cl	NCM
	7	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Cl	NCM
		2	18-28	7-11	10YR7/4	V Pl Brn Cl	NCM
H4Y5	1	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Lo	Ceramic, Glass, Metal
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM

APPENDIX D

SHOVEL TEST RECORDS

(HISTORIC COMPLEX 5)

Appendix D: Shovel Test Records: Historic Complex 5
Craigville Road Site. Craigville Road. Town of Goshen Orange County New York

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
H5F3	1	1	0-23	0-9	10YR4/2	Dk Gry Brn Si Lo	ceramic
		2	23-33	9-13	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	Ceramic, glass
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-28	0-11	10YR4/2	Dk Gry Brn Si Lo	Ceramic, glass, nail
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	4	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	30-40	12-16	10YR5/6	Y Brn Si Cl	NCM
	5	1	0-35	0-14	10YR4/2	Dk Gry Brn Si Lo	Glass
		2	35-45	14-18	10YR5/6	Y Brn Si Cl	NCM
	6	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Lo	Glass
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-38	0-15	10YR4/2	due to rock obstruction	glass, nail
	8	1	0-35	0-14	10YR4/2	Dk Gry Brn Si Lo	Glass, nail, ceramic
		2	35-45	14-18	10YR5/6	Y Brn Si Cl	NCM
	9	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	18-28	7-11	10YR5/6	Y Brn Si Cl	NCM
	10	1	0-5	0-2	10YR4/2	Dk Gry Brn Si Lo excavation terminated due to rock obstruction	NCM
	11	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	25-35	10-14	10YR5/6	Y Brn Si Cl	NCM
	12	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	13	1	0-20	0-8	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	20-30	8-12	10YR5/6	Y Brn Si Cl	NCM
	14	1	0-28	0-11	10YR4/2	Dk Gry Brn Si Lo	Glass, ceramic, nail
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	NCM
	15	1	0-28	0-11	10YR4/2	Dk Gry Brn Si Lo	Glass
		2	28-38	11-15	10YR5/6	Y Brn Si Cl	Glass, ceramic, nail
	16	1	0-35	0-14	10YR4/2	Dk Gry Brn Si Lo	NCM
		2	35-45	14-18	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
	17	1	0-25	0-10	10YR4/2	Dk Gry Brn Si Sa Lo	NCM
		2	25-35	10-14	10YR5/3	Brn Sa Cl	NCM
	18	1	0-28	0-11	10YR4/2	Dk Gry Brn Si Sa Lo	NCM
		2	28-38	11-15	10YR5/3	Brn Sa Cl	NCM
	19	1	0-28	0-11	10YR4/2	Dk Gry Brn Si Sa Lo	NCM
		2	28-38	11-15	10YR5/3	Brn Sa Cl	NCM
	20	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Sa Lo	Fauna, glass, ceramic
		2	30-40	12-16	10YR5/3	Brn Sa Cl	NCM
	21	1	0-30	0-12	10YR4/2	Dk Gry Brn Si Sa Lo terminated at rock obstruction	NCM
	22	1	0-20	0-10	10YR4/2	Dk Gry Brn Si Sa Lo terminated at rock obstruction	NCM

APPENDIX D

SHOVEL TEST RECORDS

(HISTORIC COMPLEX 6)

Appendix D: Shovel Test Record :Historic Complex 6
Craigville Road Site. Craigville Road. Town of Goshen, Orange County New York

Transect	STP	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
H6/F4 TR1	1	1	0-28	0-11	10YR4/2	Dk Gry Brn Si Lo Cl	1 glass
		2	28-38	11-15	10YR5/6	Dk Y Brn Si Cl	NCM
	2	1	0-18	0-7	10YR4/2	Dk Gry Brn Si Lo Cl	2 glass
		2	18-30	7-12	10YR5/6	Dk Y Brn Si Cl	NCM
	3	1	0-15	0-6	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	15-25	6-10	10YR5/6	Dk Y Brn Si Cl	NCM
TR 2	1	1	0-7	0-18	10YR4/2	Dk Gry Brn Si Lo Cl	glass
		2	7-11	18-28	10YR5/6	Dk Y Brn Si Cl	NCM
	2	1	0-8	0-20	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	8-10	20-25	10YR5/6	Dk Y Brn Si Cl	NCM
	3	1	0-11	0-28	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	11-15	28-38	10YR5/6	Dk Y Brn Si Cl	NCM
TR 3	1	1	0-9	0-23	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	9-13	23-33	10YR5/6	Dk Y Brn Si Cl	NCM
	2	1	0-7	0-18	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	7-11	18-28	10YR5/6	Dk Y Brn Si Cl	NCM
	3	1	0-8	0-20	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	8-12	20-25	10YR5/6	Dk Y Brn Si Cl	NCM
TR 4	1	1	0-9	0-23	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	9-10	23-25	10YR5/6	Dk Y Brn Si Cl	NCM
	2	1	0-5	0-8	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	5-9	8-23	10YR5/6	Dk Y Brn Si Cl	NCM
	3	1	0-6	0-15	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	6-10	15-25	10YR5/6	Dk Y Brn Si Cl	NCM
TR 5	1	1	0-5	0-8	10YR4/2	Dk Gry Brn Si Lo Cl termianted at rock obstruction	NCM
	2	1	0-6	0-15	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	6-10	15-25	10YR5/6	Dk Y Brn Si Cl	NCM
	3	1	0-6	0-15	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	6-10	15-25	10YR5/6	Dk Y Brn Si Cl	NCM
TR 6	1	1	0-6	0-15	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	6-10	15-25	10YR5/6	Dk Y Brn Si Cl	NCM
	2	1	0-6	0-15	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	6-10	15-25	10YR5/6	Dk Y Brn Si Cl	NCM
	3	1	0-6	0-15	10YR4/2	Dk Gry Brn Si Lo Cl	NCM
		2	6-10	15-25	10YR5/6	Dk Y Brn Si Cl	NCM

APPENDIX E

ARTIFACT CATALOG

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		1		STP 03	2	architectural	window glass	clear				
1		1		STP 04	1	ceramic	stoneware		gray salt glazed w/brown interior		crock	
1		1		STP 04	3	architectural	nail		square			
1		1		STP 05	2	architectural	window glass	clear				
1		1		STP 06	3	metal	fragment					
1		1		STP 06	4	glass	bottle	green		"26N"		TPQ 1930
1		1		STP 06	1	architectural	nail		square			
1		1		STP 07	42	metal	fragment					
1		1		STP 07	1	glass	bottle	amber	stippled			
1		1		STP 07	10	architectural	window glass	clear				
1		1		STP 07	1	architectural	nail					
1		1		STP 07	1	ceramic	whiteware					
1		1		STP 08	54	ceramic	redware					
1		1		STP 08	1	ceramic	whiteware	flow blue	TP			mid/late 19th century
1		1		STP 10	1	metal	strip		rivet			
1		1		STP 10	1	glass	bottle	clear				
1		1		STP 10	1	ceramic	ironstone					
1		1		STP 11	3	glass	vessel	green tint			mug	
1		1		STP 12	2	glass	bottle	clear				
1		1		STP 13	4	architectural	nail		square			
1		1		STP 13	1	metal	staple					
1		1		STP 13	11	metal	container fragment					
1		1		STP 15	1	architectural	nail					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		1		STP 16	7	architectural	nail		square			
1		1		STP 17	2	architectural	nail		square			
1		1		STP 20	11	architectural	nail		square			
1		1		STP 21	1	architectural	nail					
1		1		STP 22	1	architectural	nail					
1		1		STP 22	4	metal	fragment					
1		1		STP 27	8	architectural	window glass	clear				
1		1		STP 28	1	architectural	window glass	clear				
1		1		STP 33	1	architectural	nail		square			
1		1		STP 36	11	architectural	window glass	clear				
1		1		STP 37	1	ceramic	ironstone					
1		1		STP 37	11	architectural	window glass	clear				
1		1		STP 37	1	architectural	window glass	aqua tint				
1		1		STP 37	7	architectural	nail		round			
1		1		STP 37	2	metal	fragment					
1		1		STP 38	2	architectural	window glass	clear				
1		1		STP 39	1	architectural	nail					
1		2		STP 01	7	glass	bottle	clear				
1		2		STP 01	1	glass	bottle	amber				
1		2		STP 01	1	glass	bottle	clear				
1		2		STP 01	1	architectural	window glass	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		2		STP 01	1	glass	bottle		with intact cap, small ~` 3 inches long, oval base, < 1 inch wide, "4"		perfume bottle	
1		2		STP 01	1	modern	plastic	green w/ flowers	belt buckle			
1		2		STP 01	1	modern	plastic	black				
1		2		STP 01	1	modern	plastic	red				
1		2		STP 02	1	metal	wrench					
1		2		STP 02	1	metal	clamp					
1		2		STP 02	1	modern	plastic	black	cap			
1		2		STP 02	19	metal	container fragment					
1		2		STP 02	1	modern	auto part		metal plug			
1		2		STP 02	4	glass	bottle	amber				
1		2		STP 02	2	glass	bottle	pink tint	mouth blown, tooled rim, patent finish	"..ADE../..ERIC.."		1870-1930
1		2		STP 02	3	glass	bottle	aqua tint				
1		2		STP 02	1	glass	bottle	blue-green tint				
1		2		STP 02	3	glass	bottle	cobalt blue				
1		2		STP 02	1	glass	bottle	green				
1		2		STP 02	12	glass	bottle	clear		"..K.."		
1		2		STP 02	3	ceramic	whiteware	blue	TP			mid 19th century
1		2		STP 03	14	glass	bottle	aqua tint				
1		2		STP 03	2	glass	bottle	olive				
1		2		STP 03	1	ceramic	SP porcelain					
1		2		STP 03	8	glass	bottle	blue-green tint				
1		2		STP 03	6	glass	bottle	cobalt blue				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		2		STP 03	28	architectural	window glass	clear				
1		2		STP 03	1	glass	bottle	clear	mouth blown, tooled rim, patent finish			TPQ 1905
1		2		STP 03	13	glass	bottle	clear				
1		2		STP 03	2	glass	bottle	amber				
1		2		STP 04	1	ceramic	SP porcelain					
1		2		STP 04	6	glass	bottle	clear				
1		2		STP 04	1	metal	fragment		silver colored, dense, melted			
1		2		STP 04	1	furnishing	tack nail					
1		2		STP 04	1	shotgun shell casing						
1		2		STP 04	1	metal	nut					
1		2		STP 04	1	metal	plate		circluar			
1		2		STP 04	1	metal	bolt					
1		2		STP 04	1	metal	bar		contains bolt holes			
1		2		STP 04	15	architectural	nail		square			
1		2		STP 04	1	metal	screw					
1		2		STP 04	1	glass	bottle	olive				
1		2		STP 04	1	bone						
1		2		STP 04	1	furnishing	mirror glass					
1		2		STP 04	8	glass	bottle	aqua tint				
1		2		STP 04	9	glass	bottle	clear				
1		2		STP 04	20	architectural	window glass	clear				
1		2		STP 04	15	glass	bottle	amber		"THE N.D. CO"	Lysol bottle	
1		2		STP 04	5	glass	mason jar	aqua tint				TPQ 1905
1		2		STP 04	2	glass	bottle	amber				
1		2		STP 19	1	horse accessory	harness part		leather with metal fastener			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		2		STP 19	1	glass	bottle	green				
1		2		STP 19	1	glass	bottle	clear				
1		2		STP 19	1	architectural	window glass	clear				
1		2		STP 24	3	architectural	window glass	clear				
1		2		STP 31	1	utensil handle	fork or spoon					
1		2		STP 31	1	shell	clam					
1		2		STP 31	1	architectural	window glass	clear				
1		2		STP 32	4	leather	strap					
1		2		STP 32	9	metal	fragment					
1		2		STP 32	1	architectural	nail		square			
1		2		STP 32	1	metal	wire					
1		2		STP 32	1	metal	screw					
1		2		STP 32	1	architectural	window glass	clear				
1		2		STP 33	2	metal	bolt					
1		2		STP 33	2	metal	fragment					
1		2		STP 33	9	architectural	nail					
1		2		STP 33	2	glass	mason jar	aqua tint				
1		2		STP 33	12	architectural	window glass	clear				
1		2		STP 33	1	ceramic	ironstone					
1		2		STP 33	5	glass	bottle	amber				
1		2		STP 33	7	glass	bottle	clear				
1		2		STP 34	9	glass	bottle	amber				
1		2		STP 34	1	glass	milk glass		~ 3 inches height, makers mark	"..KERS, ..ICAGO"		
1		2		STP 34	1	glass	bottle		small bottle			
1		2		STP 34	40	architectural	window glass	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		2		STP 34	15	architectural	window glass	clear				
1		2		STP 34	3	metal	washer					
1		2		STP 34	1	metal	bracket					
1		2		STP 34	16	metal	fragment					
1		2		STP 34	3	leather	fragment					
1		2		STP 34	1	bone	rodent bone					
1		2		STP 34	4	ceramic	ironstone					
1		2		STP 34	30	architectural	nail		square			
1		2		STP 34	1	metal	gear					
1		2		STP 34	1	metal	electrical part					
1		2		STP 34	1	horse accessory	harness part		metal ring			
1		2		STP 34	1	glass	bottle	olive				
1		2		STP 34	10	glass	bottle	aqua tint				
1		2		STP 34	1	metal	plate		engraved or punched	"H Y"	ID plate?	
1		2		STP 34	2	metal	screw					
1		2		STP 34	3	shotgun shell casing			very small lettering			
1		2		STP 34	2	furnishing	flower pot		redware			
1		2		STP 34	1	modern	plastic		outer cover of button			
1		2		STP 34	1	modern	plastic		button			
1		2		STP 34	1	fossilized coral						
1		2		STP 34	1	glass	bottle	clear	makers mark, Owens diamond, embossed numbers			TPQ 1929
1		2		STP 38	1	architectural	nail		square			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		2		STP 38	1	architectural	nail		round			
1		2		STP 38	5	architectural	nail					
1		2		STP 38	110	architectural	window glass	clear				
1		2		STP 38	1	metal	ring					
1		2		STP 39	2	glass	bottle	clear				
1		2		STP 40	3	architectural	window glass	clear				
1		2		STP 40	1	architectural	nail					
1		2		STP 40	2	glass	bottle	clear				
1		2		STP 40	1	glass	milk glass					
1		2		STP 42	2	metal	bar					
1		2		STP 42	2	metal	container fragment					
1		2		STP 42	1	metal	hook					
1		2		STP 44	1	metal	rod					
1		2		STP 44	2	architectural	nail		square			
1		2		STP 44	1	metal	bolt		bent			
1		2		STP 44	1	clothing	shoe fragment		whole shoe: mens style, leather and rubber w/tacks, right shoe			
1		2		STP 45	1	architectural	window glass	clear				
1		2		STP 45	4	metal	canning jar lid					
1		2		STP 45	6	glass	mason jar lid	aqua tint				
1		2		STP 46	7	architectural	window glass	clear				
1		2		STP 46	1	glass	mason jar	aqua tint				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		2		STP 46	6	architectural	nail					
1		2		STP 47	1	architectural	window glass	clear				
1		2		STP 47	1	architectural	nail					
1		2		STP 47	1	ceramic	whiteware					
1		2		STP 47	2	shell						
1		2		STP 47	1	glass	bottle	clear				
1		2		STP 48	5	architectural	nail					
1		2		STP 48	2	architectural	nail		square			
1		2		STP 48	1	glass		clear				
1		2		STP 48	1	glass	bottle	amber				
1		2		STP 48	1	horse accessory	harness part		leather strap with rivets			
1		2		STP 49	1	metal	bolt					
1		2		STP 49	1	shotgun shell casing						
1		2		STP 49	1	metal	washer					
1		2		STP 49	2	metal	wire					
1		2		STP 49	5	architectural	nail					
1		2		STP 49	2	metal	strip					
1		2		STP 49	1	horse accessory	harness part		metal ring			
1		2		STP 49	1	metal	ring					
1		2		STP 49	1	metal	buckle					
1		2		STP 49	1	metal	attachment					
1		2		STP 49	1	metal	bar					
1		2		STP 49	5	metal	container fragment					
1		2		STP 49	1	metal	plate					
1		2		STP 49	2	ceramic	ironstone					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		2		STP 49	1	furnishing	flower pot		redware			
1		2		STP 49	1	ceramic	stoneware	white	small unglazed cylindrical vessel			
1		2		STP 49	1	glass	bottle	cobalt blue				
1		2		STP 49	2	glass	bottle	aqua tint				
1		2		STP 49	4	glass	bottle	clear				
1		2		STP 49	13	architectural	nail		square			
1		2		STP 49	1	metal	screw					
1		2		STP 49	1	glass	milk glass					
1		2		STP 49	1	glass	bottle	amber				
1		2		STP 49	12	glass	bottle	clear				
1		2		STP 49	15	architectural	window glass	clear				
1		2		STP 49	3	glass	mason jar	aqua tint				
1		2		STP 49	1	glass	mason jar lid	aqua tint				
1		2		STP 49	2	glass	bottle	cobalt blue				
1		2		STP 49	1	glass	bottle	olive				
1		2		STP 49	1	metal	dial					
1		2		STP 50	15	glass	bottle	clear				
1		2		STP 50	6	metal	container fragment					
1		2		STP 50	16	glass	bottle	aqua tint				
1		2		STP 50	4	glass	bottle	cobalt blue	makers mark	"MAG../THE CHA../CH../GL. ."	Milk of Magnesia	
1		2		STP 52	5	ceramic	whiteware					
1		2		STP 52	1	glass	bottle	clear	mouth blown, tooled rim, crown finish		soda or mineral water	1870-1930
1		2		STP 52	1	ceramic	whiteware	flow blue	TP			mid/late 19th century

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		2		STP 52	1	carved wood					handle for utensil or pipe	
1		2		STP 52	6	architectural	nail		square			
1		2		STP 52	1	metal	cap					
1		2		STP 52	1	metal	container fragment					
1		2		STP 52	1	ceramic	whiteware					
1		2		STP 52	7	glass	bottle	aqua tint	mouth blown, tooled rim, patent finish			1870-1930
1		2		STP 52	1	ceramic	SP porcelain				bowl	
1		2		STP 52	1	glass	bottle	clear	mouth blown, tooled rim, patent finish			1870-1930
1		2		STP 52	19	glass	bottle	clear		"LOUIS"		
1		2		STP 52	2	architectural	window glass	clear				
1		2		STP 52	2	glass	bottle	amber				
1		2		STP 52	1	glass	handle		rounded		stirrer?	
1		2		STP 52	2	glass	bottle	olive				
1		2		STP 52	1	glass	bottle	aqua tint				
1		2		STP 53	7	architectural	nail		square			
1		2		STP 53	1	glass	bottle	cobalt blue				
1		2		STP 53	2	glass	bottle	clear		"..D"		
1		2		STP 53	2	glass	bottle	olive				
1		2		STP 53	15	glass	bottle	clear				
1		2		STP 53	1	shotgun shell casing						
1		2		STP 53	1	pipe			ceramic or semi porcelain	"BRUNT/ E.LIVERPOOL OHIO"		

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		2		STP 53	2	glass	milk glass					
1		2		STP 53	1	glass	bottle	amber				
1		2		STP 53	15	metal	container fragment					
1		2		STP 53	4	glass	bottle	aqua tint				
1		2		STP 53	14	architectural	window glass	clear				
1		2		STP 54	6	architectural	nail					
1		2		STP 54	3	architectural	nail		square			
1		2		STP 54	2	glass	milk glass					
1		2		STP 54	1	toy	marble		ceramic or shell			
1		2		STP 54	15	architectural	window glass	clear				
1		2		STP 54	27	ceramic	ironstone					
1		2		STP 55	5	glass	bottle	clear				
1		2		STP 55	1	glass	bottle	amber				
1		2		STP 55	7	architectural	window glass	clear				
1		2		STP 55	1	architectural	nail					
1		2		STP 56	1	glass	bottle	amber				
1		2		STP 56	2	ceramic	whiteware					
1		2		STP 56	2	furnishing	flower pot		redware			
1		2		STP 56	1	shotgun shell casing						
1		2		STP 56	8	architectural	window glass	clear				
1		2		STP 57	7	architectural	window glass	clear				
1		2		STP 57	1	glass	bottle	clear				
1		2		STP 57	1	architectural	nail		square			
1		2		STP 57	1	glass	bottle	aqua tint				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		2		STP 58	3	glass	canning jar lid	aqua tint				
1		2		STP 58	1	ceramic	redware					
1		2		STP 58	1	canning jar lid liner	milk glass			"BOYD.."		TPQ 1869
1		2		STP 58	2	glass	bottle	amber				
1		2		STP 58	1	ceramic	stoneware		buff w/buff interior		crock	
1		2		STP 58	1	ceramic	SP porcelain					
1		2		STP 58	2	shotgun shell casing						
1		2		STP 58	5	architectural	nail					
1		2		STP 58	2	metal	fragment					
1		2		STP 58	4	glass	bottle	clear				
1		2		STP 58	5	rubber	cord fragments					
1		2		STP 58	7	glass	bottle	cobalt blue				
1		2		STP 58	6	glass	bottle	aqua tint		"..EIS"		
1		2		STP 58	8	architectural	window glass	clear				
1		2		STP 58	1	glass	bottle	clear	small bottle, mouth blown, tooled rim, patent finish			
1		2		STP 60	1	glass	bottle	aqua tint				
1		2		STP 60	2	glass	bottle	olive				
1		2		STP 60	2	furnishing	lamp glass	clear				
1		2		STP 60	2	architectural	window glass	clear				
1		2		STP 60	5	architectural	nail		square			
1		2		STP 60	2	architectural	nail		round			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		2		STP 61	1	architectural	window glass	clear				
1		2		STP 61	2	glass	bottle	pink tint				
1		2		STP 61	1	architectural	nail					
1		2		STP 61	22	glass	bottle	clear	embossed numbers	"ANCHOR..SS"		
1		2		STP 62	1	glass	bottle	olive				
1		2		STP 62	2	architectural	nail					
1		2		STP 62	9	metal	fragment					
1		2		STP 62	56	architectural	window glass	clear				
1		2		STP 63	5	architectural	window glass	clear				
1		2		STP 63	11	architectural	nail		square			
1		2		STP 63	2	metal	fragment					
1		2		STP 63	5	ceramic	SP porcelain		floral decal: pink, yellow, green			late 19th century/early 20th century
1		2		STP 63	1	jewelry	cufflink or fastener		gold or brass			
1		2		STP 63	3	glass	bottle	clear	anchor makers mark			
1		2		STP 64	14	architectural	nail		square			
1		2		STP 64	1	ceramic	whiteware					
1		3		STP 01	1	ceramic	ironstone	red	TP			mid 19th century
1		3		STP 02	4	architectural	nail		square			
1		3		STP 02	1	glass	milk glass					
1		3		STP 02	6	glass	bottle	clear				
1		3		STP 02	2	ceramic	ironstone					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		3		STP 02	2	architectural	nail					
1		3		STP 02	2	glass	bottle	clear		"C.."		
1		3		STP 02	1	glass	milk glass		gilt rim		vessel	
1		3		STP 03	2	architectural	nail					
1		3		STP 03	1	glass	bottle	clear	mouth blown, tooled rim, patent finish, small bottle, < 1" diameter rim,		medicine bottle	1870-1930
1		3		STP 03	1	ceramic	SP porcelain					
1		3		STP 03	3	ceramic	SP porcelain		green background, hand painted tree (green and brown)		bowl	
1		3		STP 04	1	ceramic	whiteware	purple	TP			mid/late 19th century
1		3		STP 04	2	bone						
1		3		STP 04	2	glass	milk glass					
1		3		STP 04	1	glass	carnival glass	orange tint				
1		3		STP 04	4	furnishing	lamp glass	clear				
1		3		STP 04	2	architectural	nail		square			
1		3		STP 04	1	glass	bottle	aqua tint				
1		3		STP 04	3	glass	bottle	clear				
1		3		STP 04	6	glass	bottle	amber				
1		3		STP 04	2	ceramic	ironstone					
1		3		STP 04	1	glass	bottle	olive	mouth blown, tooled rim, crown finish		soda or mineral water	1870-1930
1		3		STP 04	2	glass	bottle	clear	mouth blown, applied rim			mid 19th century

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		3		STP 04	2	glass	bottle	green				
1		3		STP 04	1	architectural	nail					
1		3		STP 04	1	glass	bottle	clear				
1		3		STP 05	15	glass	bottle	clear				
1		3		STP 05	1	ceramic	porcelain					
1		3		STP 05	1	architectural	window glass	clear				
1		3		STP 05	1	glass	bottle	amber				
1		3		STP 05	2	ceramic	ironstone		thick body		chamber pot	
1		3		STP 05	1	ceramic	semi-porcelain				1/2 of plate	
1		3		STP 07	1	glass	bottle	aqua tint				
1		3		STP 07	2	ceramic	ironstone					
1		3		STP 07	1	glass	milk glass					
1		3		STP 07	3	glass	bottle	aqua tint				
1		3		STP 07	2	architectural	nail		square			
1		3		STP 07	1	architectural	nail		round			
1		3		STP 07	4	glass	bottle	clear	mouth blown, tooled rim, patent finish			1870-1930
1		3		STP 07	1	ceramic	ironstone		dark blue annular bands, reddish brown, tan glazed background			20th century
1		3		STP 07	2	glass	milk glass					
1		3		STP 07	6	glass	bottle	aqua tint				
1		3		STP 07	1	ceramic	ironstone				bowl	
1		3		STP 07	1	ceramic	SP porcelain				plate	
1		3		STP 07	1	glass	bottle	clear				
1		3		STP 07	1	ceramic	ironstone				bowl	
1		3		STP 07	1	glass	bottle	green				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		3		STP 07	1	glass	bottle	cobalt blue				
1		3		STP 07	1	glass	milk glass					
1		3		STP 07	1	architectural	window glass	clear				
1		3		STP 07	1	shell	clam					
1		3		STP 07	1	glass	bottle	aqua tint				
1		3		STP 07	1	glass	bottle	clear				TPQ 1905
1		3		STP 07	1	glass	bottle	amber				
1		3		STP 07	1	glass	bottle	clear	makers mark, Owens diamond with "I", embossed numbers, oval base			TPQ 1929
1		3		STP 07	1	glass	vessel	clear			vase	
1		3		STP 07	5	glass	bottle	pink tint	rectangular, mouth blown, tooled rim, prescription finish	"HYPOPHO../MIDDL../N.Y."	medicine bottle	1870-1930
1		3		STP 07	2	glass	bottle	pink tint		"4"		TPQ 1905
1		3		STP 07	3	glass	bottle	clear				
1		3		STP 07	1	metal	bar					
1		3		STP 08	1	glass	vessel	clear	amber decoration			
1		3		STP 08	1	ceramic	SP porcelain		decal print: green and brown foliage			late 19th century/early 20th century
1		3		STP 08	1	furnishing	oil lamp burner					
1		3		STP 08	1	glass	bottle	olive				
1		3		STP 08	1	clothing	button		milk glass			
1		3		STP 08	5	ceramic	whiteware					
1		3		STP 08	2	architectural	window glass	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		3		STP 08	1	glass	bottle	clear				
1		3		STP 09	9	architectural	window glass	clear				
1		3		STP 09	2	glass	bottle	olive				
1		3		STP 09	1	glass	vessel		lattice pattern			
1		3		STP 09	6	architectural	nail		square			
1		3		STP 09	3	ceramic	whiteware		hand painted: green, blue-green, red, brown			mid 19th century
1		3		STP 09	5	glass	bottle	aqua tint				
1		3		STP 09	2	glass	bottle	amber				
1		3		STP 09	4	ceramic	ironstone					
1		3		STP 09	20	furnishing	mirror glass					
1		3		STP 09	1	ceramic	yellow ware					TPQ 1840
1		3		STP 09	15	glass	milk glass				lamp shade?	
1		3		STP 09	18	furnishing	lamp glass	clear				
1		3		STP 09	17	glass	bottle	clear				
1		3		STP 09	2	glass	vessel	clear	opaque/frosted floral pattern			
1		3		STP 09	2	glass	milk glass					
1		3		STP 09	1	ceramic	ironstone		part of dark blue makers mark			late 19th century/early 20th century
1		3		STP 09	3	ceramic	ironstone				bowl	
1		3		STP 09	2	ceramic	SP porcelain		decal print: pink roses, green leaves			late 19th century/early 20th century
1		3		STP 09	1	furnishing	flower pot		redware			
1		3		STP 09	2	ceramic	whiteware					
1		3		STP 09	1	architectural	window glass	clear				
1		3		STP 09	8	glass	bottle	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		3		STP 09	1	glass	bottle	aqua tint				
1		3		STP 09	1	glass	drinking glass	clear				
1		3		STP 09	9	ceramic	ironstone					
1		3		STP 09	1	glass	milk glass					
1		3		STP 09	2	architectural	window glass	clear				
1		3		STP 10	1	thumbtack	milk glass					
1		3		STP 10	7	ceramic	ironstone		green print			late 19th century/early 20th century
1		3		STP 10	11	furnishing	lamp glass	clear				
1		3		STP 10	2	glass	vessel	opaque			thin body	
1		3		STP 10	11	glass	bottle	clear				
1		3		STP 10	13	architectural	window glass	clear				
1		3		STP 10	33	ceramic	whiteware					
1		3		STP 10	6	ceramic	yellow ware					TPQ 1840
1		3		STP 10	8	glass	milk glass					
1		3		STP 10	2	ceramic	SP porcelain					
1		3		STP 10	1	coal						
1		3		STP 11	1	glass	mason jar	aqua tint				
1		3		STP 11	2	ceramic	ironstone					
1		3		STP 12	4	clothing	shoe fragment		leather sole w/tacks			
1		3		STP 12	14	glass	bottle	clear				
1		3		STP 12	3	ceramic	ironstone				large bowl	
1		3		STP 12	5	glass	bottle	aqua tint				
1		3		STP 12	4	architectural	window glass	clear				
1		3		STP 12	1	architectural	nail					
1		3		STP 12	8	ceramic	ironstone				plate	
1		3		STP 12	1	ceramic	ironstone				bowl	

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		3		STP 12	1	ceramic	ironstone	purple	TP			mid 19th century
1		3		STP 12	1	glass	bottle	amber				
1		3		STP 12	1	glass	bottle	cobalt blue				
1		3		STP 12	2	ceramic	ironstone		green print			late 19th century/early 20th century
1		3		STP 12	6	furnishing	lamp glass	clear				
1		3		STP 12	1	architectural	window glass	clear				
1		3			1	architectural	window glass	clear	amber and opaque white decoration			
1		4		STP 02	1	architectural	nail		square			
1		4		STP 07	3	architectural	nail					
1		4		STP 07	24	metal	container fragment					
1		4		STP 12	1	architectural	nail					
1		4		STP 14	2	metal	fragment					
1		4		STP 14	10	architectural	window glass	clear				
1		4		STP 14	17	architectural	nail					
1		4		STP 14	2	glass	bottle	clear				
1		4		STP 14	1	architectural	nail		square			
1		4		STP 16	2	metal	container fragment					
1		4		STP 16	27	architectural	nail		square			
1		4		STP 16	1	metal	hook		attached to wall mount			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		4		STP 18	1	glass	bottle	amber				
1		4		STP 18	1	glass	mason jar lid	aqua tint				
1		4		STP 18	16	architectural	nail		square			
1		4		STP 19	1	furnishing	door knob		white porcelain			
1		4		STP 19	18	architectural	window glass	clear				
1		4		STP 19	1	jewelry	metal fixture for pendant					
1		4		STP 19	1	metal	container fragment					
1		4		STP 20	10	architectural	nail		square			
1		4		STP 20	5	architectural	window glass	clear				
1		4		STP 21	1	glass	bottle	clear				
1		4		STP 23	5	architectural	nail		square			
1		4		STP 24	1	furnishing	oil lamp burner					
1		4		STP 24	3	metal	fragment					
1		4		STP 24	1	architectural	nail		square			
1		4		STP 24	2	leather	fragment					
1		4		STP 24	1	architectural	window glass	clear				
1		4		STP 24	6	architectural	nail					
1		4		STP 24	1	metal	bolt					
1		4		STP 24	4	glass	bottle		mouth blown, tooled rim, prescription finish		medicine bottle	1870-1930
1		4		STP 24	1	glass	bottle	aqua tint				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		4		STP 24	14	furnishing	lamp glass	clear				
1		4		STP 25	36	metal	fragment					
1		4		STP 25	1	furnishing	lamp glass	clear				
1		4		STP 26	2	shotgun shell casing				"R P 45 AUTO"		
1		4		STP 26	11	architectural	nail		square			
1		4		STP 26	1	metal	screw					
1		4		STP 26	2	metal	fragment					
1		4		STP 26	10	architectural	nail		square			
1		4		STP 28	1	glass	mason jar	aqua tint		"PER.."		
1		4		STP 28	7	glass	bottle	aqua tint				
1		4		STP 28	5	architectural	window glass	clear				
1		4		STP 28	1	ceramic	ironstone				cup	
1		4		STP 28	1	glass	bottle	olive				
1		4		STP 28	2	glass	vessel	clear	decorated			
1		4		STP 28	1	ceramic	ironstone					
1		4		STP 28	1	metal	dipstick					
1		4		STP 29	30	architectural	window glass	clear				
1		4		STP 29	1	ceramic	whiteware					
1		4		STP 29	60	architectural	nail		square			
1		4		STP 29	30	metal	fragment					
1		4		STP 29	2	ceramic	whiteware					
1		4		STP 29	1	metal	staple					
1		4		STP 30	14	architectural	window glass	clear				
1		4		STP 30	1	glass	bottle	olive			wine bottle	
1		4		STP 30	1	glass	bottle	clear				
1		4		STP 30	7	architectural	nail		square			
1		4		STP 30	1	architectural	nail		round			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		4		STP 30	2	metal	screw					
1		4		STP 30	2	glass	milk glass					
1		4		STP 30	1	metal	fragment		silver colored, dense, melted			
1		4		STP 31	6	metal	fragment					
1		4		STP 31	8	architectural	nail		square			
1		4		STP 31	1	architectural	nail		round			
1		4		STP 31	1	ceramic	whiteware					
1		4		STP 31	1	glass	bottle	clear				
1		4		STP 32	3	architectural	window glass	clear				
1		4		STP 32	2	architectural	nail		round			
1		4		STP 33	5	architectural	nail		square			
1		4		STP 33	1	architectural	nail		round			
1		4		STP 33	3	architectural	window glass	clear				
1		4		STP 33	3	lineoleum or vinyl	fragment		polka dots, red and brown			
1		4		STP 33	2	metal	wire					
1		4		STP 33	2	metal	container fragment					
1		4		STP 34	2	metal	container fragment					
1		4		STP 34	3	architectural	nail		square			
1		4		STP 34	3	ceramic	whiteware					
1		4		STP 34	1	metal	box		circular with lid			
1		4		STP 35	1	architectural	nail		square			
1		4		STP 35	1	modern	plastic	white	cigar stem			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		4		STP 35	4	architectural	lineoleum paneling		tan background, green and red polka dots			
1		4		STP 36	2	metal	container fragment					
1		4		STP 36	15	architectural	nail		square			
1		4		STP 36	2	glass						
1		4		STP 36	3	glass	bottle	clear				
1		4		STP 36	10	architectural	window glass	clear				
1		4		STP 37	1	glass						
1		4		STP 37	13	architectural	nail		square			
1		4		STP 37	1	toy	doll arm		plastic			
1		4		STP 38	1	metal	pulley base		attached to bar w/bolts			
1		4		STP 38	14	architectural	nail		square			
1		4		STP 38	9	metal	container fragment					
1		4		STP 39	4	ceramic	ironstone		~ 3/4 inch thick			
1		4		STP 39	1	architectural	nail		square			
1		4		STP 39	17	architectural	window glass	clear				
1		4		STP 41	1	glass	canning jar lid	clear				
1		4		STP 43	2	architectural	window glass	clear				
1		4		STP 43	2	architectural	nail		square			
1		4		STP 43	1	metal	plate					
1		4		STP 43	7	architectural	nail		square			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1		5			1	ceramic	ironstone				cup fragment	
1		5			1	ceramic	ironstone				cup fragment	
1		5			2	glass	milk glass					
1		5			1	ceramic	whiteware		green TP or decal, floral w/vines			late 19th century/early 20th century
1			1	Surface	1	ceramic	ironstone					
1			1	Surface	1	glass	bottle	clear				
1			2	Surface	1	glass	bottle	green				
1			2	Surface	1	glass	bottle	clear				
1			2	Surface	1	ceramic	SP porcelain		decal print			late 19th century/early 20th century
1			2	Surface	1	ceramic	ironstone				cup	
1			2	Surface	1	glass	drinking glass	clear				
1			2	Surface	1	ceramic	SP porcelain				saucer	
1			2	Surface	2	glass	bottle	aqua tint				
1			2	Surface	7	glass	bottle	clear		"TRADE../..M../..V.."		
1			2	Surface	3	ceramic	SP porcelain		floral decal: green and pink		shallow, wide bowl	late 19th century/early 20th century
1			2	Surface	1	ceramic	SP porcelain		floral decal: pink roses, green leaves, stippled polygonal rim		plate	late 19th century/early 20th century
1			2	Surface	1	glass	drinking glass	clear	ornate			
1			2	Surface	3	ceramic	SP porcelain		stippled rim		plate	

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1			2	Surface	1	glass	bottle	clear	makers symbol, embossed numbers	"LAVORIS, THE LAVORIS COMPANY"	Lavoris mouthwash	TPQ 1905
1			2	Surface	1	glass	bottle	clear				
1			2	Surface	1	ceramic	ironstone					
1			2	Surface	1	architectural	window glass	clear				
1			2	Surface	3	glass	bottle	green		"26 N"		TPQ 1905
1			2	Surface	1	glass	mason jar	aqua tint				
1			2	Surface	1	glass	jar	clear				TPQ 1905
1			2	Surface	4	glass	jar	clear	Owens makers mark			1919-1929
1			3	Surface	1	horse accessory	horse shoe					
1			3	Surface	1	shell	clam					
1			3	Surface	1	canning jar lid liner	milk glass			"..NED CAP.."		TPQ 1869
1			3	Surface	1	ceramic	ironstone					
1			3	Surface	1	ceramic	whiteware					
1			3	Surface	1	clothing	button		milk glass, 2 holes			
1			3	Surface	1	shell						
1			3	Surface	3	glass	bottle	clear				
1			3	Surface	4	glass	bottle	green				
1			3	Surface	1	glass	bottle	pink tint				
1			3	Surface	1	glass	bottle	aqua tint				
1			3	Surface	1	glass	milk glass					
1			3	Surface	1	glass	bottle	amber				
1			3	Surface	2	glass	bottle	aqua tint				
1			3	Surface	1	glass	bottle	aqua tint				
1			3	Surface	1	architectural	window glass	clear				
1			3	Surface	1	ceramic	stoneware		buff w/Albany slip interior		crock lid	

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1			3	Surface	1	ceramic	stoneware		buff and brown w/Albany slip interior		crock	
1			3	Surface	5	ceramic	ironstone				chamber pot	
1			3	Surface	1	ceramic	ironstone				at least two plates	
1			3	Surface	1	shell	clam					
1			3	Surface	1	glass	bottle	green				
1			3	Surface	1	glass	candy dish	clear	ornate, thick body, with foot, scalloped rim			
1			3	Surface	5	architectural	window glass	clear				
1			3	Surface	1	shell	clam					
1			3	Surface	4	ceramic	whiteware					
1			3	Surface	1	glass	bottle	green				
1			3	Surface	3	glass	jar	clear				
1			3	Surface	2	glass	bottle	clear	makers mark	"..COU../..E.."		
1			3	Surface	1	glass	bottle	clear				
1			3	Surface	1	glass	bottle	pink tint		"ENGLAND"		
1			3	Surface	1	ceramic	SP porcelain				tea cup	
1			3	Surface	1	shell						
1			3	Surface	3	ceramic	ironstone		burned			
1			3	Surface	1	ceramic	SP porcelain					
1			3	Surface	1	glass	bottle	clear				TPQ 1905
1			3	Surface	2	glass	bottle	green	mouth blown, applied rim, crown finish		soda or mineral water	1870-1930
1			3	Surface	1	ceramic	ironstone		deep narrow dish		sanitary ware	
1			3	Surface	1	glass	bottle	clear	embossed numbers			TPQ 1905

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1			3	Surface	1	glass	vial	clear	double ring finish, embossed numbers		medicine bottle	TPQ 1905
1			3	Surface	3	glass	bottle	green	crown finish	"NEWARK/ ..ONTENTS 1 PINT 13.."		TPQ 1913
1			3	Surface	3	glass	bottle	green	crown finish			TPQ 1905
1			3	Surface	1	glass	jar	clear				TPQ 1905
1			3	Surface	7	glass	bottle	clear	Owens makers mark			1919-1929
1			3	Surface	2	ceramic	ironstone		green print w/gilt			late 19th century/early 20th century
1			3	Surface	1	glass	bottle	pink tint				
1			3	Surface	4	glass	bottle	clear		"..TON N.."		TPQ 1905
1			3	Surface	2	shell	clam					
1			3	Surface	2	glass	bottle	amber				
1			3	Surface	2	architectural	window glass	clear				
1			3	Surface	2	ceramic	ironstone					
1			3	Surface	2	ceramic	SP porcelain		decal print: pink roses, green leaves, stippled rim		saucer	late 19th century/early 20th century
1			3	Surface	3	ceramic	whiteware					
1			3	Surface	1	glass	bottle	clear				
1			3	Surface	1	ceramic	ironstone				cup	
1			3	Surface	1	ceramic	ironstone				plate	
1			3	Surface	1	glass	bottle	cobalt blue		"..S../OFFIC../.. LIPS/..NY"	Milk of Magnesia	
1			3	Surface	1	bone	long bone		butchering marks			
1			3	Surface	10	ceramic	ironstone		green print w/gilt trim			late 19th century/early 20th century

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1			3	Surface	2	ceramic	ironstone					
1			3	Surface	3	ceramic	SP porcelain					
1			3	Surface	1	glass	bottle	amber				
1			3	Surface	5	glass	bottle	clear				
1			3	Surface	3	glass	bottle	pink tint		"NEW/..PLES../M.."		
1			3	Surface	1	glass	rod		milk glass			
1			3	Surface	2	glass	bottle	green	crown finish			TPQ 1905
1			3	Surface	1	ceramic	ironstone		molded swirls, scalloped rim			
1			3	Surface	5	architectural	window glass	clear				
1			3	Surface	1	glass	bottle	cobalt blue				
1			3	Surface	1	shell						
1			3	Surface	1	glass	bottle	amber	mouth blown applied rim, champagne finish		wine or champagne	mid 19th century
1			3	Surface	4	ceramic	ironstone		green print			late 19th century/early 20th century
1			3	Surface	7	glass	bottle	clear				
1			3	Surface	1	glass	milk glass					
1			3	Surface	1	glass	bottle	aqua tint				
1			3	Surface	1	architectural	window glass	clear				
1			3	Surface	1	glass	bottle	olive				
1			3	Surface	2	glass	bottle	pink tint				
1			3	Surface	2	glass	bottle	aqua tint				
1			3	Surface	1	glass	bottle	aqua tint		"W.T.A. CO U.S.A."		
1			3	Surface	1	glass	bottle	green tint				
1			3	Surface	1	glass	rod		milk glass			
1			3	Surface	2	glass	bottle	green				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1			3	Surface	2	glass	bottle	aqua tint				
1			3	Surface	1	glass	bottle	olive			wine bottle	
1			3	Surface	1	glass	vessel		decorated			
1			3	Surface	1	glass	jar					TPQ 1905
1			3	Surface	1	glass	jar	clear	screw thread			
1			3	Surface	2	glass	bottle	aqua tint				
1			3	Surface	1	architectural	window glass	clear				
1			3	Surface	1	glass	jar	clear				
1			3	Surface	1	furnishing	flower pot		redware			
1			3	Surface	1	glass	mason jar			"..ERFEC.."		
1			3	Surface	7	glass	bottle	clear				
1			3	Surface	3	glass	bottle	cobalt blue				
1			3	Surface	4	ceramic	ironstone					
1			3	Surface	2	glass	bottle	green				
1			3	Surface	1	smoking pipe	mouth		metal and plastic			
1			3	Surface	1	glass	bottle	clear	collard ring finish			TPQ 1905
1			3	Surface	1	glass	bottle	clear	collard ring finish			TPQ 1905
1			3	Surface	1	glass	bottle	clear	bead finish			TPQ 1905
1			3	Surface	4	ceramic	ironstone		green print		burned	late 19th century/early 20th century
1			3	Surface	2	furnishing	mirror glass					
1			3	Surface	1	ceramic	whiteware		gilt print			
1			4	Surface	1	glass	bottle	clear				
1			4	Surface	1	ceramic	whiteware	blue	hand paint			mid 19th century
1			4	Surface	1	glass	bottle	aqua tint				
1			4	Surface	1	canning jar lid liner	milk glass			"BOYD'S"		TPQ 1869

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1			4	Surface	4	glass	bottle	green		"Hoffman.."	medicine bottle	TPQ 1905
1			4	Surface	1	glass	milk glass				bowl or lamp shade	
1			4	Surface	1	glass	bottle	amber				
1			4	Surface	1	glass	bottle	amber				
1			4	Surface	1	glass	bottle	green		"..175/2"		TPQ 1930
1			4	Surface	1	glass	bottle	cobalt blue		" ..NES/..N U.S. PAT…/U.C. 211906.."	Milk of Magnesia	
1			4	Surface	1	shell	clam					
1			4	Surface	1	glass	bottle	clear		"GUILDENS MUSTARD, BOTTLE 16, RED. U.S. PAT. OFF."		TPQ 1905
1			4	Surface	1	glass	bottle	clear				
1			4	Surface	1	metal	fragment					
1			5	Surface	1	glass	bottle	clear				
1			5	Surface	1	glass	bottle	clear				
1			5	Surface	1	glass	bottle	clear				
1			5	Surface	1	glass	drinking glass	clear	polygonal, makers mark, F in shield			
1			5	Surface	1	ceramic	ironstone		cylindrical vessel			
1			5	Surface	3	glass	bottle	pink tint	double ring finish			TPQ 1905
1			5	Surface	2	glass	bottle	clear	collard ring finish, Owens makers mark			TPQ 1905
1			5	Surface	1	glass	bottle	clear		"PHAR.."	medicine bottle	TPQ 1905
1			5	Surface	1	glass	bottle	amber	collard ring finish			TPQ 1905

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1			6	Surface	1	glass	bottle	amber	large bottle	"W.T.CO. 1" (Whitall Tatum Company)		1901-1905
1			6	Surface	1	glass	bottle	clear	club sauce finish, Owens makers mark (O in box) "36"			1919-1929
1			6	Surface	1	glass	bottle	clear	club sauce finish, Owens makers mark (O in box), embossed numbers			1919-1929
1			7	Surface	1	ceramic	semi-porcelain		thick bodied vessel, wide rim, large deep bowl		sanitary ware	
1			7	Surface	1	glass	bottle	clear		" 4 OZ"		TPQ 1913
1	1			STP 01	2	ceramic	stoneware		gray salt glazed w/Albany slip interior		crock	
1	1			STP 01	1	metal	fragment					
1	1			STP 01	3	furnishing	lamp glass	clear				
1	1			STP 01	1	shotgun shell casing						
1	1			STP 01	12	ceramic	ironstone		green print			late 19th century/early 20th century
1	1			STP 01	25	glass	bottle	clear				
1	1			STP 02	1	architectural	nail					
1	1			STP 02	5	glass	bottle	aqua tint	packer finish			
1	1			STP 03	1	architectural	nail					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1	1			STP 04	1	metal	bar		attached washer and bolts, ~11 inches length			
1	2			STP 01	1	glass	bottle	clear				
1	2			STP 01	1	shell	clam					
1	2			STP 01	3	architectural	window glass	clear				
1	2			STP 02	2	furnishing	lamp glass	clear				
1	2			STP 02	1	glass	bottle	clear		"10"		TPQ 1905
1	2			STP 07	1	ceramic	whiteware					
1	2			STP 07	1	glass	milk glass					
1	2			STP 07	3	architectural	window glass	clear				
1	3			STP 01	2	bone						
1	3			STP 01	2	metal	fragment					
1	3			STP 01	3	furnishing	lamp glass	clear				
1	3			STP 01	14	ceramic	ironstone		green print w/gilt trim, makers mark	"SEMI-V..US, WALDORF, MERCER CHINA"	serving bowl	late 19th century/early 20th century
1	3			STP 02	2	metal	fragment					
1	3			STP 02	1	architectural	nail					
1	3			STP 02	1	glass	bottle	clear				
1	3			STP 02	12	ceramic	ironstone		green print		large sherd, plate	late 19th century/early 20th century
1	4			STP 01	1	glass	bottle	clear				
1	4			STP 01	2	ceramic	ironstone		green print			late 19th century/early 20th century
1	5			STP 01	8	glass	bottle	clear				
1	5			STP 04	1	ceramic	stoneware		Albany slip interior and exterior			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1	5			STP 04	3	furnishing	flower pot		redware			
1	5			STP 04	3	architectural	window glass	clear				
1	5			STP 05	1	metal	bracket		L-shaped			
1	5			STP 05	1	architectural	window glass	clear				
1	5			STP 05	1	glass	bottle	amber				
1	5			STP 05	1	glass	bottle	amber	screw threads, makers mark, embossed numbers			TPQ 1905
1	5			STP 05	1	glass	bottle	cobalt blue		"MILK OF MAGNESIA/ TRADE MARK/ REG. U.S. PAT. OFF./ THE CHAS H. PHILLIPS CHEMICAL COMPANY GLENBROOK, CONN./ K 929/C-3/U.S.A.	Milk of Magnesia	TPQ 1905
1	5			STP 05	1	ceramic	stoneware		buff w/buff interior		crock	
1	5			STP 06	2	metal	barrel rib					
1	5			STP 11	1	architectural	window glass	clear				
1	5			STP 11	1	glass	bottle	clear				TPQ 1905
1	5			STP 11	1	glass	bottle	clear				
1	5			STP 11	2	ceramic	ironstone				plate	
1	5			STP 11	1	glass	bottle	aqua tint				
1	6			STP 01	1	glass	bottle	aqua tint				
1	6			STP 02	9	glass	bottle	amber				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1	6			STP 04	1	architectural	nail		square			
1	6			STP 06	1	ceramic	ironstone		green print			late 19th century/early 20th century
1	7			STP 05	1	glass	bottle	aqua tint				
1	7			STP 05	1	glass	bottle	clear				
1	7			STP 05	2	ceramic	ironstone	blue	TP		pot	mid 19th century
1	8			STP 02	21	architectural	nail		square			
1	8			STP 02	1	shell	clam					
1	8			STP 03	1	shell	clam					
1	10			STP 04	2	metal	screw					
1	10			STP 05	3	architectural	nail		square			
1	10			STP 07	1	architectural	nail					
1	11			STP 03	1	architectural	nail		round			
1	11			STP 03	2	glass	bottle	amber				
1	11			STP 04	10	glass	bottle	clear	stippled	"..N"		
1	11			STP 05	2	ceramic	whiteware					
1	11			STP 07	4	glass	bottle	clear				
1	15			STP 04	1	horse accessory	harness part		leather strap w/stitching holes			
1	15			STP 05	1	architectural	nail					
1	17			STP 01	1	glass	milk glass					
1	17			STP 01	1	glass	bottle	pink tint				
1	17			STP 01	2	ceramic	ironstone		green print			late 19th century/early 20th century
1	17			STP 02	6	metal	barbed wire					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1	17			STP 02	1	architectural	window glass	clear				
1	17			STP 02	3	furnishing	flower pot		redware			
1	17			STP 02	3	ceramic	ironstone		green print			late 19th century/early 20th century
1	17			STP 03	1	glass	bottle	clear	mouth blown, tooled rim, patent finish	"MCMONAGLE AND ROGERS PREMIUM FRUIT FLAVORS MIDDLETOWN N Y"	fruit extract	1870-1930
1	17				3	furnishing	flower pot		redware			
1	18			STP 01	4	architectural	window glass	clear				
1	18			STP 01	2	metal	fragment					
1	18			STP 01	1	architectural	nail		square			
1	18			STP 01	17	ceramic	whiteware					
1	18			STP 01	1	furnishing	lamp glass	clear				
1	18			STP 01	1	glass	bottle	aqua tint				
1	18			STP 01	1	glass	milk glass					
1	18			STP 01	9	glass	bottle	clear		"..RE.."		
1	18			STP 01	1	ceramic	SP porcelain		molded floral rim, makers mark in green	"CFH, GDM, FRANCE"	small dish	TPQ 1891
1	18			STP 02	1	metal	staple					
1	18			STP 02	2	shell	clam					
1	21			STP 03	2	glass	bottle	clear				
1	21			STP 04	1	smoking pipe	bowl		kaolin			
1	21			STP 04	1	ceramic	slip-trailed redware					1750-1820

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1	21			STP 04	1	architectural	nail		square			
1	21			STP 04	3	glass	bottle	clear				
1	26			STP 03	1	architectural	nail		round			
1	26			STP 03	1	architectural	window glass	clear				
1	26			STP 03	2	modern	auto part	gray tint	thick bodied glass			
1	27			STP 03	1	glass	bottle	clear				
1	27			STP 03	1	architectural	nail					
1	28			STP 01	1	furnishing	lamp glass	clear				
1	Surface			Ash Berm	4	glass	bottle	clear	mouth blown, tooled rim, patent finish	"CONTENTS 4 OZ/ W 4"		1913-1930
1	Surface			Ash Berm	1	glass	bottle	clear	lug type closure			1919-1929
1	Surface			Ash Berm	1	glass	pitcher	green tint	complete rim, spout w/sides			
1	Surface			Ash Berm	1	ceramic	SP porcelain		floral decal: green, red, brown			late 19th century/early 20th century
1	Surface			Ash Berm	1	glass	bottle	clear	mouth blown, tooled rim, prescription finish		medicine bottle	1870-1930
1	Surface			Ash Berm	3	glass	bottle	clear	mouth blown, tooled rim, prescription finish		medicine bottle	1870-1930
1	Surface			Ash Berm	4	ceramic	SP porcelain		molded decorated rim		plate	
1	Surface			Ash Berm	1	ceramic	semi-porcelain		thick bodied bowl		sanitary ware	

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1	Surface			Ash Berm	2	ceramic	SP porcelain		decal print: green and black, scalloped rim			late 19th century/early 20th century
1	Surface			Ash Berm	1	ceramic	ironstone				cup	
1	Surface			Ash Berm	1	ceramic	ironstone					
1	Surface			Ash Berm	3	ceramic	SP porcelain		floral decal: pink roses, green leaves, molded stippled rim		plate	late 19th century/early 20th century
1	Surface			Ash Berm	1	ceramic	SP porcelain		floral decal: pink, red, light green, dark green		plate	late 19th century/early 20th century
1	Surface			Ash Berm	1	ceramic	ironstone		stippled rim		one half of small plate	
1	Surface			Ash Berm	4	ceramic	ironstone		makers mark	"JOHN MADDOCK AND SONS/ROYAL VITREOUS"	plate	TPQ 1870
1	Surface			Ash Berm	2	glass	bottle	clear	lug type closure, Owens makers mark (O in box)			1919-1929
1	Surface			Ash Berm	1	glass	saucer	lime green milk glass	ribbed rim and exterior			
1	Surface			Ash Berm	1	glass	bottle	pink tint	screw thread	"BORDENS MALTED MILK/4"	malted milk	TPQ 1905
1	Surface			Ash Berm	1	glass	mason jar	aqua tint		"..N'S PATENT NOV 30TH 1858"		TPQ 1905

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
1	Surface			Ash Berm	2	ceramic	stoneware	gold, red, brown, white	hand decorated, dotted and striped w/ cloud shaped handle		anthropo-morphic or holiday decorated pot	
1				Surface	3	architectural	nail					
1				Surface	1	glass	jar	clear	Owens diamond makers mark, embossed numbers	"DURAGLAS"		TPQ 1940
1				Surface	1	modern	plastic	brown	hairpin			
1				Surface	1	architectural	window glass	clear				
2		1		STP 01	1	modern	beer bottle	amber				
2		1		STP 01	2	architectural	nail					
2		1		STP 01	1	clothing	sunglass lens					
2		1		STP 01	2	glass	drinking glass	clear	ribbed			
2		1		STP 01	1	glass	bottle	aqua tint				
2		1		STP 01	4	architectural	window glass	clear				
2		1		STP 01	1	glass	bottle	olive				
2		1		STP 01	1	glass	bottle	clear				
2		1		STP 01	3	glass	bottle	amber				
2		1		STP 01	22	glass	bottle	clear				
2		1		STP 01	9	architectural	nail					
2		1		STP 01	1	bone			butchering marks			
2		1		STP 01	1	ceramic	redware					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		1		STP 01	28	ceramic	whiteware		floral decal: pink, yellow, green			late 19th century/early 20th century
2		1		STP 01	1	ceramic	ironstone	black	TP			1879-1890
2		1		STP 01	1	ceramic	ironstone				cup	
2		1		STP 01	2	ceramic	whiteware	blue	TP			mid 19th century
2		1		STP 01	1	ceramic	ironstone		molded floral rim		plate	
2		1		STP 01	1	ceramic	ironstone		floral decal: blue, green, pink			late 19th century/early 20th century
2		1		STP 01	5	ceramic	ironstone				plate	
2		1		STP 01	1	ceramic	stoneware		cream w/olive, brown, and black glazed interior		crock	
2		1		STP 01	10	ceramic	ironstone		decal print: blue-green, red			late 19th century/early 20th century
2		1		STP 01	1	ceramic	ironstone					
2		1		STP 02	1	glass	bottle	amber				
2		1		STP 02	4	architectural	window glass	clear				
2		1		STP 02	11	glass	bottle	clear				
2		1		STP 03	1	glass	bottle	pink tint				
2		1		STP 03	7	architectural	window glass	clear				
2		1		STP 03	1	glass	bottle	amber				
2		1		STP 03	1	architectural	nail					
2		1		STP 03	1	furnishing	flower pot		redware			
2		1		STP 03	2	ceramic	whiteware					
2		1		STP 03	7	glass	bottle	clear				
2		1		STP 03	1	glass	bottle	clear	mouth blown, tooled rim			1870-1930

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		1		STP 03	1	glass	mason jar lid	aqua tint				
2		1		STP 03	1	glass	mason jar	aqua tint				
2		1		STP 04	12	glass	bottle	green	stippled			
2		1		STP 04	13	architectural	window glass	clear				
2		1		STP 04	1	ceramic	ironstone					
2		1		STP 04	1	glass	bottle	amber				
2		1		STP 04	4	architectural	nail					
2		1		STP 04	1	glass	bottle	olive				
2		1		STP 04	17	glass	bottle	clear				
2		1		STP 04	3	glass	bottle	clear		"ON../49		TPQ 1913
2		1		STP 04	1	glass	bottle lid	clear				
2		1		STP 04	3	glass	bottle	clear	anchor symbol	"HALF PINT/23/6"		TPQ 1913
2		1		STP 05	3	architectural	window glass	clear				
2		1		STP 05	1	glass	bottle	clear				
2		1		STP 05	1	glass	bottle	green	stippled			TPQ 1905
2		1		STP 06	5	glass	mason jar	aqua tint				
2		1		STP 06	4	glass	bottle	aqua tint				
2		1		STP 06	9	glass	bottle	clear		"..RED/..MARK /..HIBIT.."		
2		1		STP 06	9	architectural	window glass	clear				
2		1		STP 06	1	glass	bottle	clear				
2		1		STP 06	1	glass	bottle	olive				
2		1		STP 06	2	architectural	nail		round			
2		1		STP 06	2	ceramic	ironstone		decal print: green leaf			late 19th century/early 20th century
2		1		STP 08	1	architectural	window glass	clear				
2		1		STP 08	18	glass	bottle	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		1		STP 08	28	metal	fragment					
2		1		STP 08	1	glass	milk glass					
2		1		STP 08	3	ceramic	whiteware					
2		1		STP 08	7	modern	beer bottle	amber				
2		1		STP 12	2	architectural	nail					
2		1		STP 12	4	architectural	window glass	clear				
2		1		STP 12	1	glass	bottle	aqua tint				
2		1		STP 12	4	glass	bottle	olive				
2		1		STP 12	6	glass	bottle	clear				
2		1		STP 13	1	ceramic	ironstone					
2		1		STP 14	1	glass	bottle	clear				
2		1		STP 14	1	glass	bottle	amber				
2		1		STP 14	1	glass	bottle	aqua tint				
2		1		STP 15	1	glass	bottle	clear				
2		1		STP 17	2	glass	bottle	clear				
2		1		STP 17	5	ceramic	ironstone	black	TP			1879-1890
2		1		STP 17	1	ceramic	SP porcelain					
2		1		STP 18	2	ceramic	ironstone					
2		1		STP 19	2	glass	bottle	amber				
2		1		STP 19	1	glass	bottle	cobalt blue				
2		1		STP 19	1	glass	bottle	clear				
2		1		STP 19	6	ceramic	ironstone		decal print w/gilt, scalloped rim			late 19th century/early 20th century
2		1		STP 21	1	modern	auto part		dip stick fragment			
2		1		STP 21	20	metal	container fragment					
2		1		STP 21	2	glass	bottle	clear				
2		1		STP 21	1	ceramic	ironstone	dark blue	TP			mid 19th century
2		1		STP 21	1	glass	bottle	green tint				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		1		STP 21	2	architectural	window glass	clear				
2		1		STP 21	5	ceramic	whiteware					
2		1		STP 21	1	architectural	nail		square			
2		1		STP 21	2	glass	milk glass					
2		1		STP 23	1	glass	bottle	olive				
2		1		STP 23	2	ceramic	whiteware					
2		1		STP 24	2	glass	bottle	amber				
2		1		STP 24	2	glass	bottle	clear				
2		1		STP 24	1	glass	bottle	pink tint				
2		1		STP 25	3	glass	bottle	olive				
2		1		STP 25	1	glass	milk glass					
2		1		STP 25	1	glass	bottle	pink tint				
2		1		STP 25	4	architectural	nail					
2		1		STP 25	8	shell						
2		1		STP 25	5	ceramic	whiteware					
2		1		STP 25	11	glass	bottle	clear				
2		1		STP 25	1	metal	bolt					
2		1		STP 25	4	glass	bottle	amber		"..L 20"		
2		1		STP 25	1	ceramic	whiteware	brown	TP			1873-1895
2		1		STP 26	3	ceramic	ironstone					
2		1		STP 26	1	glass	bottle	aqua tint				
2		1		STP 26	5	glass	bottle	clear				
2		1		STP 27	4	glass	bottle	clear		"ONE PINT"		TPQ 1913
2		1		STP 27	2	glass	bottle	amber				
2		2		STP 01	17	ceramic	whiteware					
2		2		STP 01	4	architectural	window glass	clear				
2		2		STP 01	2	glass	bottle	aqua tint				
2		2		STP 01	1	metal	buckle					
2		2		STP 01	4	architectural	nail		square			
2		2		STP 01	4	glass	bottle	clear				
2		2		STP 01	1	metal	fragment					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		2		STP 01	1	shotgun shell casing				"WESTERN FIELD/NO.12"		1989-1932
2		2		STP 02	1	architectural	nail					
2		2		STP 02	7	ceramic	whiteware					
2		2		STP 03	4	architectural	nail		round			
2		2		STP 03	1	glass	bottle	clear				
2		2		STP 03	1	metal	plate		circular			
2		2		STP 03	9	glass	bottle	clear				
2		2		STP 03	1	canning jar lid liner	milk glass					TPQ 1869
2		2		STP 03	1	glass	bottle	olive				
2		2		STP 03	1	glass	bottle	pink tint				
2		2		STP 03	1	furnishing	lamp glass	clear				
2		2		STP 03	1	metal	fused nails					
2		2		STP 03	4	metal	container fragment					
2		2		STP 03	6	architectural	window glass	clear				
2		2		STP 03	2	ceramic	annular ware		tan and brown bands			
2		2		STP 05	3	furnishing	lamp glass	clear				
2		2		STP 05	5	architectural	nail					
2		2		STP 05	1	glass	bottle	clear		"FR.."		
2		2		STP 05	1	canning jar lid liner	milk glass					TPQ 1869
2		2		STP 05	1	architectural	window glass	clear				
2		2		STP 05	1	glass	bottle	aqua tint				
2		2		STP 05	5	glass	bottle	clear				
2		2		STP 05	2	ceramic	stoneware		gray salt glazed w/Albany slip interior		crock	

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		2		STP 05	1	ceramic	stoneware		buff w/Albany slip interior		crock	
2		2		STP 05	1	ceramic	whiteware					
2		2		STP 05	1	ceramic	SP porcelain		floral decal: pink and green			late 19th century/early 20th century
2		2		STP 08	3	furnishing	flower pot		redware/terra cotta			
2		2		STP 08	1	architectural	window glass	clear				
2		2		STP 08	2	ceramic	ironstone					
2		2		STP 08	1	glass	jar	clear	makers mark on base M in hexagon, embossed numbers			TPQ 1905
2		2		STP 09	2	metal	fragment					
2		2		STP 09	1	glass	bottle	clear				
2		2		STP 09	4	ceramic	ironstone					
2		2		STP 10	1	glass	bottle	clear				
2		2		STP 10	2	ceramic	whiteware	blue	TP			mid 19th century
2		2		STP 11	3	glass	bottle	clear				
2		2		STP 11	6	ceramic	ironstone		scalloped rim			
2		2		STP 11	1	ceramic	whiteware	green glaze				
2		2		STP 11	1	ceramic	SP porcelain		black bands		plate	
2		2		STP 13	3	architectural	window glass	clear				
2		2		STP 13	2	glass	bottle	clear				
2		2		STP 13	4	ceramic	whiteware	blue	TP			mid 19th century
2		2		STP 13	1	glass	bottle	amber				
2		2		STP 14	1	architectural	window glass	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		2		STP 14	1	glass	vessel	clear	decorated, leaves, roses			
2		2		STP 14	2	ceramic	whiteware		hand painted floral pattern: blue, green, black, red			mid 19th century
2		2		STP 14	3	glass	bottle	olive				
2		2		STP 15	1	ceramic	whiteware					
2		2		STP 15	3	glass	bottle	clear				
2		2		STP 15	3	architectural	nail		square			
2		2		STP 15	3	metal	fragment					
2		2		STP 16	4	glass	bottle	clear				
2		2		STP 17	2	shell	clam					
2		2		STP 17	8	glass	bottle					
2		2		STP 17	24	architectural	nail		square			
2		2		STP 17	6	architectural	window glass	clear				
2		2		STP 17	13	ceramic	whiteware					
2		2		STP 18	1	glass	candy dish		ornate			
2		2		STP 19	8	architectural	nail					
2		2		STP 19	1	architectural	nail		square			
2		2		STP 19	1	utensil	tablespoon		metal			
2		2		STP 19	22	metal	fragment					
2		2		STP 19	4	glass	bottle	olive				
2		2		STP 19	1	shell						
2		2		STP 19	1	ceramic	whiteware					
2		2		STP 19	1	shotgun shell casing						
2		2		STP 19	1	glass	bottle	pink tint				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		2		STP 19	1	glass	bottle	clear		"..EA..", "..K RE.."		
2		2		STP 19	3	architectural	window glass	clear				
2		2		STP 19	1	architectural	window glass	aqua tint				
2		2		STP 19	5	glass	bottle	clear				
2		2		STP 19	6	glass	bottle	aqua tint				
2		2		STP 19	1	ceramic	pearlware	blue	hand paint			1780-1840
2		2		STP 19	11	architectural	nail					
2		2		STP 19	8	ceramic	ironstone		floral decal: red and green			late 19th century/early 20th century
2		2		STP 19	12	architectural	window glass	clear				
2		2		STP 19	8	glass	bottle	clear				
2		2		STP 19	1	glass	bottle	aqua tint				
2		2		STP 19	1	glass	bottle	olive				
2		2		STP 19	21	ceramic	ironstone					
2		2		STP 19	1	ceramic	slip-trailed redware		rim sherd			1750-1820
2		2		STP 19	1	glass	bottle	clear	decorated w/white paint			
2		2		STP 20	3	leather	fragment					
2		2		STP 20	1	glass	bottle	aqua tint				
2		2		STP 20	5	glass	bottle	clear				
2		2		STP 20	1	ceramic	yellow ware					TPQ 1840
2		2		STP 20	3	architectural	nail					
2		2		STP 20	7	ceramic	ironstone					
2		2		STP 20	1	architectural	window glass	clear				
2		2		STP 21	2	glass	bottle	clear				
2		2		STP 21	1	metal	latch	iron				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		2		STP 21	1	tooth	molar	large animal				
2		2		STP 22	1	architectural	window glass	clear				
2		2		STP 22	3	glass	bottle	clear	stippled			
2		2		STP 22	1	ceramic	redware		black/brown mottled glaze			
2		2		STP 22	1	glass	bottle	amber				
2		3		STP 02	2	architectural	window glass	clear				
2		3		STP 02	2	glass	bottle	olive				
2		3		STP 02	8	architectural	nail					
2		3		STP 02	3	glass	bottle	aqua tint				
2		3		STP 02	1	ceramic	ironstone					
2		3		STP 02	2	ceramic	ironstone		scalloped rim			
2		3		STP 02	28	architectural	nail		square			
2		3		STP 02	1	metal	latch					
2		3		STP 02	1	metal	compass needle					
2		3		STP 02	1	architectural	window glass	clear				
2		3		STP 02	1	ceramic	ironstone	red	TP			mid 19th century
2		3		STP 02	3	glass	bottle	clear				
2		3		STP 03	1	tooth	canine					
2		3		STP 03	9	ceramic	whiteware					
2		3		STP 03	7	architectural	nail		square			
2		3		STP 03	1	architectural	window glass	clear				
2		3		STP 03	1	shell	clam					
2		3		STP 04	1	ceramic	whiteware	blue	TP			mid 19th century

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		3		STP 04	1	ceramic	porcelain		figurine fragment, pink decoration			
2		3		STP 04	1	ceramic	stoneware		gray salt glazed w/Albany slip interior		crock	
2		3		STP 04	1	ceramic	whiteware					
2		3		STP 04	17	architectural	nail		square			
2		3		STP 04	3	shell	clam					
2		3		STP 04	1	glass	bottle	clear				
2		3		STP 04	3	bone						
2		3		STP 05	1	architectural	window glass	aqua tint				
2		3		STP 05	4	glass	bottle	clear				
2		3		STP 05	1	architectural	window glass	clear				
2		3		STP 06	1	glass	bottle	clear				
2		3		STP 06	5	architectural	nail		square			
2		3		STP 06	1	architectural	nail		round			
2		3		STP 06	1	architectural	window glass	aqua tint				
2		3		STP 06	3	ceramic	stoneware		brown salt glazed w/buff unglazed interior	"..EY/E V-Wells/R K"	crock	
2		3		STP 06	1	ceramic	whiteware					
2		3		STP 07	5	architectural	window glass	clear				
2		3		STP 07	1	glass	bottle	amber				
2		3		STP 07	3	architectural	nail					
2		3		STP 08	16	architectural	window glass	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		3		STP 08	1	bone						
2		3		STP 08	2	metal	fragment					
2		3		STP 08	1	architectural	nail		square			
2		3		STP 08	7	architectural	nail					
2		3		STP 08	2	metal	screw					
2		3		STP 08	10	glass	bottle	clear				
2		3		STP 08	1	glass	bottle	green				
2		3		STP 08	4	ceramic	whiteware					
2		3		STP 08	1	ceramic	stoneware		tan/yellow exterior, buff grooved interior		jug	
2		3		STP 09	5	glass						
2		3		STP 09	1	glass	bottle	clear				
2		3		STP 09	20	architectural	nail		square			
2		3		STP 09	4	architectural	nail		round			
2		3		STP 09	2	shotgun shell casing						
2		3		STP 09	1	ceramic	whiteware	blue	hand paint			mid 19th century
2		3		STP 09	3	ceramic	whiteware					
2		3		STP 09	1	ceramic	redware		black glaze			
2		3		STP 09	1	architectural	nail		square			
2		3		STP 09	2	shell	clam					
2		3		STP 09	3	architectural	window glass	clear				
2		3		STP 10	1	glass	bottle	clear				
2		3		STP 10	1	glass	bottle	olive				
2		3		STP 11	2	shell						
2		3		STP 11	1	ceramic	SP porcelain					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		3		STP 11	1	architectural	window glass	clear				
2		3		STP 11	1	glass	bottle	clear				
2		3		STP 11	10	architectural	nail		square			
2		3		STP 11	2	architectural	nail		round			
2		3		STP 12	1	shotgun shell casing						
2		3		STP 12	5	architectural	nail		square			
2		3		STP 12	2	smoking pipe	stem					
2		3		STP 12	1	ceramic	whiteware					
2		3		STP 12	5	glass	bottle	clear				
2		3		STP 14	2	architectural	window glass	clear				
2		3		STP 14	14	architectural	nail		square			
2		3		STP 15	1	architectural	nail					
2		3		STP 15	1	architectural	nail		square			
2		3		STP 15	1	glass	bottle	clear				
2		3		STP 16	6	architectural	nail		square			
2		3		STP 16	1	metal	fragment					
2		3		STP 16	5	architectural	window glass	clear				
2		3		STP 17	1	ceramic	whiteware					
2		3		STP 17	4	architectural	window glass	clear				
2		3		STP 17	5	architectural	nail		square			
2		3		STP 18	1	architectural	window glass	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		3		STP 18	1	glass	bottle	clear				
2		3		STP 18	2	glass	vessel	clear				
2		3		STP 18	1	ceramic	stoneware		gray salt glazed w/Albany slip interior		crock	
2		3		STP 18	7	architectural	nail		square			
2		3		STP 19	3	architectural	nail		square			
2		3		STP 19	1	metal	clasp					
2		3		STP 19	2	shell	clam					
2		3		STP 19	2	ceramic	ironstone					
2		3		STP 19	1	glass	bottle	aqua tint		"JAN 1.."		
2		3		STP 20	1	glass			ribbed		reflector?	
2		3		STP 21	1	glass						
2		3		STP 21	1	glass	bottle	clear				
2		3		STP 21	1	ceramic	ironstone				plate	
2		3		STP 21	1	ceramic	stoneware		Albany slip interior and exterior			
2		3		STP 21	1	ceramic	stoneware		buff w/Albany slip interior		crock	
2		3		STP 21	1	ceramic	ironstone	blue	TP			mid 19th century
2		3		STP 21	1	ceramic	whiteware					
2		3		STP 21	15	architectural	window glass	clear				
2		3		STP 21	1	glass	bottle	aqua tint				
2		3		STP 21	2	modern	auto part		ribbed glass reflector or light			
2		3		STP 21	5	shell	clam					
2		3		STP 21	5	architectural	nail					
2		3		STP 22	1	glass	bottle	clear				
2		3		STP 22	2	bone						

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		3		STP 22	1	ceramic	whiteware					
2		3		STP 22	1	ceramic	stoneware		Albany slip exterior, brown interior			
2		3		STP 22	8	ceramic	whiteware					
2		3		STP 22	2	glass	bottle	aqua tint				
2		3		STP 22	1	glass	bottle	clear				
2		3		STP 22	1	ceramic	whiteware	blue	hand paint			mid 19th century
2		3		STP 22	2	glass	bottle	amber		"..62.."		
2		3		STP 22	2	architectural	window glass	clear				
2		3		STP 22	3	shell	clam					
2		3		STP 22	1	glass	bottle	aqua tint	mouth blown, tooled rim, flared prescription finish		medicine bottle	1870-1930
2		3		STP 22	14	architectural	nail		square			
2		3		STP 23	1	architectural	window glass	clear				
2		3		STP 23	3	glass	bottle	aqua tint				
2		3		STP 23	1	glass	bottle	aqua tint				
2		3		STP 23	4	glass						
2		3		STP 23	5	glass	bottle	clear				
2		3		STP 23	1	ceramic	redware		clear glaze			
2		3		STP 23	2	shell	clam					
2		3		STP 23	2	ceramic	whiteware	blue	hand paint			mid 19th century
2		3		STP 23	1	ceramic	whiteware	blue	TP			mid 19th century
2		3		STP 23	4	bone						
2		3		STP 23	22	architectural	nail		square			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		3		STP 25	1	metal	equipment part					
2		3		STP 26	3	architectural	nail		square			
2		3		STP 27	1	glass	bottle	clear	metal screw cap			TPQ 1905
2		3		STP 27	1	tooth	3 molars					
2		3		STP 27	1	shell	clam					
2		3		STP 27	3	ceramic	whiteware					
2		3		STP 27	7	architectural	nail		square			
2		3		STP 27	1	glass	milk glass				vessel or lamp shade	
2		3		STP 27	2	glass	bottle	clear				
2		3		STP 27	3	glass	mason jar	aqua tint				TPQ 1905
2		3		STP 27	2	glass						
2		3		STP 28	1	ceramic	SP porcelain					
2		3		STP 28	1	bone	rodent bone					
2		3		STP 28	1	ceramic	whiteware					
2		3		STP 28	1	glass	bottle	clear				
2		3		STP 28	6	architectural	nail		square			
2		3		STP 28	1	ceramic	whiteware	flow blue	TP			mid/late 19th century
2		3		STP 28	1	metal	staple					
2		3		STP 28	3	melted glass and metal	fragment					
2		3		STP 29	4	architectural	nail		square			
2		3		STP 30	1	ceramic	whiteware					
2		3		STP 30	1	glass	bottle	clear				
2		3		STP 30	1	bone						
2		3		STP 30	8	architectural	nail					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		3		STP 30	1	canning jar lid liner	milk glass					TPQ 1869
2		3		STP 31	3	architectural	nail		square			
2		3		STP 31	5	ceramic	whiteware					
2		3		STP 31	1	glass	bottle	clear				
2		3		STP 31	5	architectural	window glass	clear				
2		3		STP 31	1	toy	marble		green and white			
2		3		STP 32	28	architectural	nail		square			
2		3		STP 32	1	furnishing	lamp glass	clear				
2		3		STP 32	1	glass	bottle	clear				
2		3		STP 32	31	ceramic	whiteware		green and yellow hand paint, floral pattern			
2		3		STP 32	20	architectural	window glass	clear				
2		3		STP 33	2	ceramic	ironstone		part of makers mark, black print	"..IR.."		late 19th century/early 20th century
2		3		STP 33	12	architectural	nail		square			
2		3		STP 33	1	metal	fragment					
2		3		STP 33	1	glass	bottle					
2		3		STP 33	7	architectural	window glass	clear				
2		3		STP 34	1	chess piece	wooden					
2		3		STP 35	7	architectural	nail		square			
2		3		STP 35	1	metal	bracket					
2		3		STP 35	9	architectural	nail		square			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		3		STP 35	9	architectural	window glass	clear				
2		3		STP 35	2	clothing	button		shell			
2		3		STP 35	1	ceramic	stoneware		gray salt glazed w/Albany slip interior		crock	
2		3		STP 36	5	architectural	nail					
2		3		STP 36	31	shell	clam					
2		3		STP 36	2	architectural	window glass	clear				
2		3		STP 36	2	ceramic	whiteware	blue	hand paint			mid 19th century
2		3		STP 36	1	ceramic	whiteware					
2		3		STP 36	1	ceramic	SP porcelain					
2		3		STP 36	1	glass	bottle	clear				
2		3		STP 37	9	shell	clam					
2		3		STP 37	1	glass	bottle	amber				
2		3		STP 37	4	architectural	nail					
2		3		STP 37	2	architectural	nail		square			
2		3		STP 37	6	ceramic	whiteware					
2		3		STP 37	1	ceramic	stoneware		buff w/brown interior		crock	
2		3		STP 38	1	architectural	nail					
2		3		STP 38	1	architectural	nail		square			
2		3		STP 38	1	metal	fragment					
2		3		STP 38	1	glass	bottle	clear				
2		3		STP 40	1	metal	wheel		for small "office" type cart			
2		3		STP 40	1	metal	gear					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		3		STP 40	23	architectural	nail		square			
2		3		STP 40	1	architectural	nail		round			
2		3		STP 40	1	ceramic	stoneware		gray salt glazed w/Albany slip interior		crock	
2		3		STP 40	1	architectural	window glass	clear				
2		3		STP 41	2	architectural	window glass	clear				
2		3		STP 41	5	architectural	nail					
2		3		STP 41	6	ceramic	ironstone					
2		3		STP 41	1	glass	bottle	clear				
2		3		STP 42	1	shell						
2		3		STP 42	3	glass	bottle	clear				
2		3		STP 42	1	architectural	window glass	clear				
2		3		STP 44	2	glass	bottle	aqua tint				
2		3		STP 44	1	ceramic	SP porcelain		red and green print			late 19th century/early 20th century
2		3		STP 44	1	architectural	nail		square			
2		3		STP 45	11	glass						
2		3		STP 45	2	ceramic	whiteware					
2		3		STP 45	27	architectural	nail		square			
2		3			4	glass	bottle	aqua tint				
2		3			8	glass	bottle	clear				
2		3			1	glass	bottle	amber				
2		3			1	modern	auto part		dip stick fragment			
2		3			1	glass	bottle	clear		"..GUM"		

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		3			22	architectural	window glass	clear				
2		3			3	ceramic	whiteware					
2		3			1	ceramic	SP porcelain				bowl	
2		3			18	architectural	nail		square			
2		4		STP 01	1	ceramic	ironstone	dark blue	TP			mid 19th century
2		4		STP 01	34	glass	bottle	clear				TPQ 1930
2		4		STP 01	1	glass	bottle	aqua tint				
2		4		STP 01	4	furnishing	lamp glass	clear				
2		4		STP 01	7	architectural	window glass	clear				
2		4		STP 01	1	clothing	button		shell			
2		4		STP 01	1	clothing	button	black	glass			
2		4		STP 01	1	glass	bottle	amber				
2		4		STP 01	2	ceramic	SP porcelain		gilt band			late 19th century/early 20th century
2		4		STP 01	1	ceramic	Rockingham ware					TPQ 1850
2		4		STP 01	2	glass	bottle	amber	stippled			
2		4		STP 01	1	glass	bottle	green				
2		4		STP 01	3	ceramic	whiteware					
2		4		STP 01	2	ceramic	whiteware					
2		4		STP 01	1	ceramic	SP porcelain		green print			late 19th century/early 20th century
2		4		STP 01	1	ceramic	SP porcelain		molded design			
2		4		STP 01	1	ceramic	stoneware		gray salt glazed w/brown interior		crock	

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 01	1	ceramic	stoneware		Albany slip interior and exterior			
2		4		STP 02	1	glass	candy dish	clear	ornate			
2		4		STP 02	2	glass	bottle	clear		"..P.."		
2		4		STP 02	4	architectural	window glass	clear				
2		4		STP 02	25	glass	bottle	clear				
2		4		STP 02	4	ceramic	whiteware		floral decal: green, blue, red			
2		4		STP 02	1	architectural	nail					
2		4		STP 02	1	glass	milk glass					
2		4		STP 02	2	glass	bottle	aqua tint				
2		4		STP 02	1	glass	vessel	red tint				
2		4		STP 02	1	glass	bottle	amber				
2		4		STP 03	5	clothing	leather fragment with snaps					
2		4		STP 03	1	architectural	nail					
2		4		STP 03	1	shell	clam					
2		4		STP 03	1	architectural	nail		square			
2		4		STP 03	2	glass	bottle	amber				
2		4		STP 03	2	metal	equipment part					
2		4		STP 03	1	canning jar lid liner	milk glass					TPQ 1869
2		4		STP 03	1	clothing	button		porcelain			
2		4		STP 03	7	glass	bottle	clear				
2		4		STP 03	1	glass	bottle	amber				
2		4		STP 03	1	glass	milk glass					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 03	4	architectural	window glass	clear				
2		4		STP 03	1	metal	washer					
2		4		STP 03	15	architectural	window glass	clear				
2		4		STP 03	1	glass	bottle	green				
2		4		STP 03	5	glass	bottle	green	stippled			
2		4		STP 03	1	glass	bottle	olive				
2		4		STP 03	2	ceramic	whiteware		decal print w/gilt			late 19th century/early 20th century
2		4		STP 03	32	glass	bottle	clear				
2		4		STP 03	1	ceramic	stoneware		Albany slip interior and exterior			
2		4		STP 03	1	metal	fragment					
2		4		STP 03	1	ceramic	stoneware		buff w/buff interior		crock	
2		4		STP 03	1	glass	vessel	red tint	yellow hand paint: floral			
2		4		STP 03	1	metal	fastener					
2		4		STP 03	1	ceramic	whiteware	blue	TP			mid 19th century
2		4		STP 03	1	metal	rod		carbon?			
2		4		STP 03	2	ceramic	whiteware	red and green	hand paint			late 19th century/early 20th century
2		4		STP 03	12	ceramic	whiteware	bright yellow glaze	molded paisley decoration			late 19th century/early 20th century
2		4		STP 03	4	glass	bottle	aqua tint				
2		4		STP 03	7	architectural	nail		square			
2		4		STP 03	12	glass	bottle	clear	stippled	"..L.."		
2		4		STP 03	1	glass	candy dish	clear	ornate			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 03	1	metal	part					
2		4		STP 03	3	furnishing	lamp glass	clear				
2		4		STP 03	10	glass	bottle	amber				
2		4		STP 03	1	metal	container fragment					
2		4		STP 03	1	clothing	button		shell			
2		4		STP 03	3	ceramic	ironstone					
2		4		STP 03	1	ceramic	ironstone				plate	
2		4		STP 03	1	ceramic	ironstone				bowl	
2		4		STP 04	4	ceramic	ironstone					
2		4		STP 04	2	metal	wire					
2		4		STP 04	1	architectural	nail		square			
2		4		STP 04	1	metal	fragment					
2		4		STP 04	3	metal	container fragment					
2		4		STP 04	3	shell	clam					
2		4		STP 04	1	ceramic	redware		mottled black/brown glaze			
2		4		STP 04	3	furnishing	lamp glass	clear				
2		4		STP 04	6	glass	bottle	amber				
2		4		STP 04	5	architectural	window glass	clear				
2		4		STP 04	1	clothing	metal clasp					
2		4		STP 04	5	glass	bottle	olive				
2		4		STP 04	30	glass	bottle	clear				
2		4		STP 04	1	glass	bottle	pink tint				
2		4		STP 04	1	architectural	hinge					
2		4		STP 04	1	metal	container fragment					
2		4		STP 04	2	architectural	nail		square			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 04	7	architectural	nail					
2		4		STP 04	9	ceramic	whiteware					
2		4		STP 04	1	architectural	nail		square			
2		4		STP 04	3	architectural	nail					
2		4		STP 04	3	metal	fragment					
2		4		STP 04	3	architectural	window glass	clear				
2		4		STP 04	1	glass	large jar	aqua tint	embossed numbers, Owens makers mark (diamond)			TPQ 1929
2		4		STP 04	1	glass	bottle	clear	Owens makers mark (diamond with I)			TPQ 1929
2		4		STP 04	7	ceramic	ironstone	blue, yellow, black	decal or hand paint			late 19th century/early 20th century
2		4		STP 05	2	glass	bottle	clear	stippled	"DURAGLAS"		TPQ 1940
2		4		STP 05	3	glass	bottle	clear	stippled, embossed numbers			
2		4		STP 05	17	glass	bottle	clear				
2		4		STP 05	1	glass	bottle	aqua tint				
2		4		STP 05	1	architectural	window glass	clear				
2		4		STP 05	1	glass	bottle	olive				
2		4		STP 05	2	glass	bottle	amber				
2		4		STP 05	1	bone						
2		4		STP 05	1	shell	clam					
2		4		STP 05	1	architectural	nail		square			
2		4		STP 05	1	metal	container fragment					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 06	1	ceramic	stoneware		buff w/Albany slip interior		crock	
2		4		STP 06	1	glass	jar	clear				
2		4		STP 06	2	glass	bottle	green				
2		4		STP 06	2	architectural	window glass	clear				
2		4		STP 06	9	glass	bottle	clear		"WAPP../..NT.."		
2		4		STP 06	4	ceramic	ironstone		dark blue makers mark	"..CELAINE DE TERRE/ TRADE MARK"	plate	1880-1900
2		4		STP 06	5	architectural	nail					
2		4		STP 07	1	ceramic	stoneware		gray salt glazed w/Albany slip interior		crock	
2		4		STP 07	13	ceramic	whiteware					
2		4		STP 07	1	metal	gear					
2		4		STP 07	1	clothing	saftey pin					
2		4		STP 07	15	architectural	nail					
2		4		STP 07	1	metal	can base					
2		4		STP 07	1	metal	can lid			"Motts Pure Jelly", 14oz est. 1842	Jelly	
2		4		STP 07	19	metal	container fragment					
2		4		STP 07	1	metal	grate piece					
2		4		STP 07	15	ceramic	ironstone				plate	
2		4		STP 07	2	ceramic	ironstone				small bowl	
2		4		STP 07	5	ceramic	ironstone					
2		4		STP 07	4	ceramic	whiteware		gilt decorated			late 19th century/early 20th century

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 07	21	furnishing	lamp glass	clear				
2		4		STP 07	1	clothing	button		shell			
2		4		STP 07	27	ceramic	ironstone		black TP depicting women writing or painting outside			1879-1890
2		4		STP 07	2	clothing	shoe fragment		leather upper with grommets			
2		4		STP 07	2	glass	bottle	clear		"..HE../..AL.."		
2		4		STP 07	1	shell	clam					
2		4		STP 07	2	glass	vessel	clear	scalloped rim		candy dish or vase	
2		4		STP 07	5	ceramic	ironstone		gilt rim		platter	late 19th century/early 20th century
2		4		STP 07	1	glass	vessel lid	clear	ornate			
2		4		STP 07	1	glass	bottle	clear	embossed lattice design			
2		4		STP 07	1	glass	bottle	clear	rectangular			
2		4		STP 07	9	glass	bottle	aqua tint				
2		4		STP 07	13	glass	bottle	amber				
2		4		STP 07	2	ceramic	SP porcelain		gilt rim, decal print: pink roses, green leaves		plate	late 19th century/early 20th century
2		4		STP 07	1	glass	carnival glass	red tint	ornate			
2		4		STP 07	4	glass	bottle	aqua tint				
2		4		STP 07	10	glass	mason jar	aqua tint		"..E../..S.."		
2		4		STP 07	1	glass	vessel	clear	polygonal			
2		4		STP 07	1	glass	bottle	olive				
2		4		STP 07	12	architectural	window glass	clear				
2		4		STP 07	2	glass	jar	pink tint				
2		4		STP 07	50	glass	bottle	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 07	1	glass						
2		4		STP 07	1	glass	bottle	green tint				
2		4		STP 07	1	glass	bottle	clear				TPQ 1930
2		4		STP 07	3	glass	bottle	green	crown finish			TPQ 1905
2		4		STP 07	3	glass	bottle	clear		"Dura../Ra../6" (Duraglas)		TPQ 1940
2		4		STP 07	1	glass	bottle	clear		"..DEN..U.S."		
2		4		STP 07	1	glass	bottle	clear	collard ring finish			TPQ 1905
2		4		STP 07	1	glass	bottle	clear		"REGIS../FUL.."		
2		4		STP 07	2	glass	bottle	clear				TPQ 1905
2		4		STP 07	2	glass	vessel	opaque	imprinted decoration			
2		4		STP 07	1	metal	staple					
2		4		STP 07	1	metal	revolver handle fragment					
2		4		STP 08	1	leather	fragment					
2		4		STP 08	6	glass	bottle	clear	polygonal			
2		4		STP 08	6	glass	bottle	clear				
2		4		STP 08	10	glass	bottle	amber		"..E REFILL.."		
2		4		STP 08	1	glass	bottle	clear		"P."		
2		4		STP 08	9	glass	bottle	clear				
2		4		STP 08	1	furnishing	flower pot		redware/terra cotta			
2		4		STP 08	1	glass	bottle	aqua tint				
2		4		STP 08	1	glass	bottle		stippled			
2		4		STP 08	1	metal	container fragment					
2		4		STP 08	2	modern	plastic or rubber	black				
2		4		STP 08	1	glass	bottle	cobalt blue				
2		4		STP 08	1	glass	bottle	olive				
2		4		STP 08	1	glass	bottle	green				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 08	1	glass	carnival glass	orange tint	ornate, leaves, grapes		candy dish or drinking glass	
2		4		STP 08	1	glass	bottle	clear	decorated	"PAT APP FOR../R174 12-9.."		
2		4		STP 08	1	ceramic	SP porcelain	blue, yellow, green, pink	floral, black band around rim		plate	late 19th century/early 20th century
2		4		STP 08	2	glass	bottle	clear	embossed lattice design			
2		4		STP 08	1	glass	bottle	clear	embossed numbers	"DURAGLAS"		TPQ 1940
2		4		STP 08	1	glass	candy dish	clear	ornate			
2		4		STP 08	2	glass	candy dish		scalloped rim			
2		4		STP 08	1	glass	jar	clear				TPQ 1905
2		4		STP 08	2	modern	plastic		fragment			
2		4		STP 10	1	ceramic	Rockingham ware					TPQ 1850
2		4		STP 10	1	ceramic	whiteware					
2		4		STP 10	1	metal	bar		rectangular			
2		4		STP 10	2	architectural	nail					
2		4		STP 10	3	architectural	nail		square			
2		4		STP 10	1	architectural	nail		round			
2		4		STP 10	21	metal	container fragment					
2		4		STP 10	1	metal	plate					
2		4		STP 10	1	metal	rod					
2		4		STP 10	22	glass	bottle	clear				
2		4		STP 10	1	glass	bottle	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 10	1	glass	bottle	clear				TPQ 1905
2		4		STP 10	5	glass	bottle	clear	stippled	"..E.."		
2		4		STP 10	1	furnishing	lamp glass	clear				
2		4		STP 10	3	glass	carnival glass	orange tint	leaves/floral pattern			
2		4		STP 10	17	glass	bottle	green	stippled			
2		4		STP 10	1	glass	bottle	cobalt blue				
2		4		STP 10	7	glass	bottle	amber				
2		4		STP 10	2	glass	milk glass	blue	wavy design on exterior		bowl	
2		4		STP 10	1	clothing	button	red	glass			
2		4		STP 10	4	architectural	window glass	clear				
2		4		STP 11	1	shell	clam					
2		4		STP 11	8	glass	bottle	clear				
2		4		STP 11	1	glass	bottle	clear	stippled, embossed script lettering			
2		4		STP 11	1	glass	bottle	clear	white stripes			
2		4		STP 11	1	glass	mason jar lid	blue-green tint				
2		4		STP 11	5	ceramic	ironstone					
2		4		STP 11	4	glass	bottle	amber				
2		4		STP 11	1	architectural	window glass	clear				
2		4		STP 11	4	furnishing	lamp glass	clear				
2		4		STP 11	1	glass	bottle	aqua tint				
2		4		STP 11	1	glass	candy dish	clear	ornate			
2		4		STP 12	2	ceramic	whiteware					
2		4		STP 12	2	glass	bottle	aqua tint				
2		4		STP 12	1	glass	bottle	aqua tint		"GOS.."		
2		4		STP 12	1	architectural	window glass	clear				
2		4		STP 12	1	ceramic	redware		clear glaze			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 12	3	glass	bottle	clear				
2		4		STP 12	1	ceramic	whiteware	blue	TP			mid 19th century
2		4		STP 12	1	ceramic	stoneware		Albany slip interior and exterior			
2		4		STP 12	2	shell	clam					
2		4		STP 12	2	ceramic	whiteware					
2		4		STP 12	1	ceramic	ironstone					
2		4		STP 12	1	glass	bottle	clear	embossed script			
2		4		STP 12	2	glass	bottle	olive				
2		4		STP 12	1	glass	vessel lid		light blue milk glass, box lid w/embossed foliage		corner sherd	
2		4		STP 12	1	New York State Deer Licence		orange	circular	#50329-A, "CITIZEN RESIDENT SPECIAL DEER LICENSE", 1930	hunting licence	TPQ 1930
2		4		STP 12	10	architectural	nail		square			
2		4		STP 12	1	metal	staple					
2		4		STP 12	3	metal	fragment					
2		4		STP 12	1	ceramic	semi-porcelain	dark blue	TP, makers mark	"MAYER CHINA EST. 1881 MARION"	1/2 of complete bowl	TPQ 1881
2		4		STP 13	1	canning jar lid liner	milk glass			"Genuine Boyd's Cap for Mason Jar"		TPQ 1869

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 13	1	glass	bottle	clear	Owens diamond makers mark in center	"10"		TPQ 1929
2		4		STP 13	1	glass	bottle	amber				
2		4		STP 13	1	architectural	window glass	clear				
2		4		STP 13	1	glass	bottle	aqua tint				
2		4		STP 13	58	glass	mason jar		makers mark on base	"STR.."/"N.."/"N.."/"..DER"/"..SON"/"ER"/"LU.."/"..ON"		
2		4		STP 13	1	glass	bottle	clear	makers mark, embossed numbers, stippled			
2		4		STP 13	6	ceramic	ironstone					
2		4		STP 13	1	ceramic	semi-porcelain					
2		4		STP 13	1	ceramic	SP porcelain		pink "cloudy" decoration on exterior			
2		4		STP 13	3	shell	clam					
2		4		STP 14	1	metal	bolt					
2		4		STP 14	1	architectural	nail		round			
2		4		STP 14	1	metal	screw					
2		4		STP 14	4	architectural	nail		square			
2		4		STP 14	9	metal	can fragments					
2		4		STP 14	1	glass	bottle	clear		"TABL../2.."	medicine bottle	
2		4		STP 14	1	shell	clam					
2		4		STP 14	1	glass	bottle	aqua tint		"33"		
2		4		STP 14	1	glass	bottle lid	pink tint		"PA"		

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 14	3	ceramic	ironstone				plate	
2		4		STP 14	1	glass	bottle	olive				
2		4		STP 14	3	architectural	window glass	clear				
2		4		STP 14	9	glass	bottle	clear	makers mark w/M	"4/5 QUAR../..WINE "		TPQ 1913
2		4		STP 15	1	bone	rodent					
2		4		STP 15	1	glass	bottle	clear				
2		4		STP 15	6	architectural	nail		square			
2		4		STP 15	1	leather	fragment		discarded due to mold			
2		4		STP 15	4	ceramic	ironstone					
2		4		STP 15	2	ceramic	ironstone		scalloped rim		platter	
2		4		STP 15	2	ceramic	whiteware	blue	hand paint			mid 19th century
2		4		STP 15	2	glass	milk glass					
2		4		STP 15	1	ceramic	whiteware	blue	TP			mid 19th century
2		4		STP 15	1	ceramic	stoneware		buff w/Albany slip interior		crock	
2		4		STP 16	1	glass	jar	clear				
2		4		STP 16	14	glass	bottle	clear				
2		4		STP 16	1	glass	bottle	amber				
2		4		STP 16	2	architectural	window glass	clear				
2		4		STP 16	1	ceramic	whiteware	blue	floral TP, interior and exterior			mid/late 19th century
2		4		STP 16	2	ceramic	whiteware					
2		4		STP 16	2	ceramic	ironstone					
2		4		STP 16	2	shell	clam					
2		4		STP 16	2	architectural	nail		square			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 16	2	architectural	nail		round			
2		4		STP 16	1	bone						
2		4		STP 16	3	ceramic	pearlware		green shell edge, scalloped rim			1780-1840
2		4		STP 17	11	ceramic	whiteware					
2		4		STP 17	1	shotgun shell casing				"XTRA RANGE/12/12/ S.R.& Co"	Sears and Roebuck Co.	
2		4		STP 17	20	glass	bottle	clear				
2		4		STP 17	1	ceramic	ironstone				plate	
2		4		STP 17	1	smoking pipe	bowl		kaolin			
2		4		STP 17	1	ceramic	stoneware		red glaze interior and exterior			
2		4		STP 17	1	glass	bottle	aqua tint				
2		4		STP 17	1	ceramic	stoneware		cream w/olive, brown, and black glazed interior		crock	
2		4		STP 17	2	architectural	nail		square			
2		4		STP 17	2	architectural	nail		round			
2		4		STP 17	1	jewelry	glass bead	opaque				
2		4		STP 17	1	architectural	tile	white	square, ceramic			
2		4		STP 17	1	architectural	tile	black	square, ceramic			
2		4		STP 17	18	metal	container fragment					
2		4		STP 17	9	glass	bottle	amber	stippled	"..URN"		
2		4		STP 17	7	architectural	window glass	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 17	1	glass	bottle	olive				
2		4		STP 18	6	glass	bottle	green		"..TU.."		
2		4		STP 18	3	bone						
2		4		STP 18	1	metal	container fragment					
2		4		STP 18	1	metal	bolt		screwed to attachment			
2		4		STP 18	22	glass	bottle					
2		4		STP 18	5	shell	clam					
2		4		STP 18	1	glass	bottle	amber				
2		4		STP 18	6	architectural	window glass	clear				
2		4		STP 18	1	glass	bottle					
2		4		STP 18	1	glass	vessel	clear	scalloped			
2		4		STP 18	1	glass	bottle	aqua tint				
2		4		STP 18	1	furnishing	lamp glass	clear				
2		4		STP 18	1	metal	bottle cap					
2		4		STP 18	7	architectural	nail		square			
2		4		STP 18	5	architectural	nail		round			
2		4		STP 18	1	furnishing	mirror glass					
2		4		STP 18	1	glass	bottle	clear				TPQ 1905
2		4		STP 18	1	glass	vessel		green tinted milk glass			
2		4		STP 19	1	glass	milk glass					
2		4		STP 19	1	architectural	window glass	clear				
2		4		STP 19	30	glass	bottle	clear				
2		4		STP 19	1	glass	bottle	amber				
2		4		STP 19	2	glass	bottle	green				
2		4		STP 19	1	toy	marble		glass			
2		4		STP 19	1	clothing	shoe fragment		leather upper w/ grommets			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 19	1	toy	wheel with axel		metal			
2		4		STP 19	10	shell	clam					
2		4		STP 19	3	bone						
2		4		STP 19	19	metal	container fragment					
2		4		STP 19	5	architectural	nail		square			
2		4		STP 19	3	furnishing	flower pot		redware/terra cotta			
2		4		STP 19	2	ceramic	ironstone		reddish orange glaze		bowl	late 19th century/early 20th century
2		4		STP 20	1	metal	rod		carbon?			
2		4		STP 20	9	architectural	nail		square			
2		4		STP 20	6	metal	container fragment					
2		4		STP 20	1	metal	wire					
2		4		STP 20	29	architectural	nail		square			
2		4		STP 20	1	metal	circular piece		silver colored, dense	"CAB"		
2		4		STP 20	4	ceramic	unidentifie d		unglazed, impressed markings, buff paste		flooring?	
2		4		STP 20	3	glass	bottle	amber	stippled			
2		4		STP 20	1	ceramic	whiteware				plate	
2		4		STP 20	2	architectural	window glass	clear				
2		4		STP 20	1	ceramic	whiteware	blue glaze				
2		4		STP 20	1	ceramic	ironstone		floral decal: blue, green, red			late 19th century/early 20th century
2		4		STP 20	10	ceramic	ironstone					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 20	2	shell	clam					
2		4		STP 20	1	glass	bottle	clear	green paint			
2		4		STP 20	1	glass	bottle	clear	yellow paint			
2		4		STP 20	1	glass	bottle	clear	blue painted or glued stripes			
2		4		STP 20	1	bone	long bone					
2		4		STP 20	18	glass	bottle	clear		"FEDER../Y PROD.."	liquor bottle	TPQ 1935
2		4		STP 20	1	glass	milk glass				bowl	
2		4		STP 20	4	glass	bottle	green	stippled			
2		4		STP 21	1	clothing	button		4 holes, small			
2		4		STP 21	1	clothing	button		2 holes			
2		4		STP 21	1	bone			calcined			
2		4		STP 21	1	clothing	shoe fragment		leather and rubber sole			
2		4		STP 21	12	bone						
2		4		STP 21	1	metal	spring					
2		4		STP 21	1	metal	wheel		for small "office" type cart			
2		4		STP 21	1	metal	bottle top w/cap					
2		4		STP 21	1	spice container	metal		rectangular			
2		4		STP 21	2	metal	bottle cap					
2		4		STP 21	1	metal	ring					
2		4		STP 21	1	metal	screw					
2		4		STP 21	15	architectural	nail					
2		4		STP 21	20	metal	container fragment					
2		4		STP 21	1	glass	drinking glass	clear				
2		4		STP 21	1	ceramic	porcelain		pink "cloudy" decoration on exterior			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 21	7	ceramic	ironstone				plate	
2		4		STP 21	1	ceramic	semi-porcelain		decal print: yellow, green, gilt, pink		cylindrical vessel	
2		4		STP 21	1	ceramic	SP porcelain		decal print: green and red foliage		bowl	late 19th century/early 20th century
2		4		STP 21	1	ceramic	stoneware		gray salt glaze			
2		4		STP 21	2	ceramic	ironstone		blue hand paint			
2		4		STP 21	3	ceramic	porcelain		figurine fragments			
2		4		STP 21	3	glass	milk glass					
2		4		STP 21	1	ceramic	whiteware		green band around rim			
2		4		STP 21	1	ceramic	whiteware	blue	TP			mid 19th century
2		4		STP 21	1	ceramic	ironstone	black	TP			1879-1890
2		4		STP 21	1	ceramic	ironstone	green	makers mark	"A.."		late 19th century/early 20th century
2		4		STP 21	1	ceramic	ironstone	blue	makers mark: smeared			late 19th century/early 20th century
2		4		STP 21	2	canning jar lid liner	milk glass			"..LAIN LINED C.."		TPQ 1869
2		4		STP 21	1	ceramic	ironstone		black bands, grooved rim for lid		bowl	
2		4		STP 21	2	ceramic	whiteware		molded rim			
2		4		STP 21	1	ceramic	semi-porcelain		gilt print			late 19th century/early 20th century
2		4		STP 21	1	ceramic	export porcelain		blue hand paint			
2		4		STP 21	1	ceramic	whiteware	blue	TP			mid 19th century

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 21	1	ceramic	semi-porcelain		floral decal: green, tan			late 19th century/early 20th century
2		4		STP 21	1	ceramic	ironstone				platter	
2		4		STP 21	1	ceramic	whiteware		green hand paint			mid 19th century
2		4		STP 21	1	ceramic	SP porcelain				bowl	
2		4		STP 21	1	ceramic	ironstone		decal print: green foliage			late 19th century/early 20th century
2		4		STP 21	1	ceramic	ironstone		floral decal: red, brown, gilt rim			late 19th century/early 20th century
2		4		STP 21	1	architectural	drain pipe		redware w/brown glaze			
2		4		STP 21	2	ceramic	ironstone		gilt floral pattern around rim, scalloped rim		plate	late 19th century/early 20th century
2		4		STP 21	1	ceramic	whiteware	red	hand paint			mid 19th century
2		4		STP 21	1	ceramic	ironstone		makers mark	"..RG.."		
2		4		STP 21	1	ceramic	ironstone					
2		4		STP 21	1	ceramic	whiteware	blue-green glaze				late 19th century/early 20th century
2		4		STP 21	1	ceramic	ironstone	green	makers mark, embossed numbers			
2		4		STP 21	35	ceramic	ironstone					
2		4		STP 21	16	furnishing	flower pot		redware			
2		4		STP 21	2	ceramic	ironstone		heavy thick base			
2		4		STP 21	2	ceramic	ironstone	red	TP			mid 19th century

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 21	2	ceramic	ironstone					
2		4		STP 21	3	ceramic	whiteware		gilt band			late 19th century/early 20th century
2		4		STP 21	1	ceramic	SP porcelain					
2		4		STP 21	3	ceramic	ironstone					
2		4		STP 21	1	ceramic	ironstone				cup	
2		4		STP 21	6	ceramic	ironstone					
2		4		STP 21	50	glass	bottle	clear				
2		4		STP 21	17	architectural	window glass	clear				
2		4		STP 21	1	glass	bottle	green	stippled			
2		4		STP 21	1	glass	bottle	olive				
2		4		STP 21	1	canning jar lid liner	milk glass			"GENUINE PORCEL.."		TPQ 1869
2		4		STP 21	1	glass	jug	amber	4 fragments of metal lid, screw thread			
2		4		STP 21	1	glass	bottle	clear	rectangular			TPQ 1905
2		4		STP 21	2	glass	milk glass					
2		4		STP 21	7	furnishing	lamp glass	clear				
2		4		STP 21	3	glass	bottle	clear	embossed lattice design			
2		4		STP 21	3	glass	bottle	aqua tint				
2		4		STP 21	1	glass	bottle	clear		"dura.." (Duraglas)		TPQ 1940
2		4		STP 21	1	glass	bottle	clear		"Karo/1 1/2 LBS NET.."		TPQ 1913
2		4		STP 21	1	glass	bottle	clear		"..LEYS/..03"		
2		4		STP 21	2	glass	bottle	clear	stippled			
2		4		STP 21	2	glass	bottle	clear				TPQ 1905
2		4		STP 21	1	glass	bottle	clear				
2		4		STP 21	1	glass	bottle	aqua tint	crown finish			TPQ 1905

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 21	1	glass	bottle	clear	embossed diamond decoration, makers mark with "K"	"P-118/6"		TPQ 1905
2		4		STP 21	1	glass	bottle	clear	finish angled downward		medicine bottle?	TPQ 1905
2		4		STP 21	1	glass	bottle	clear	triangle makers symbol, polygonal bottle	"973 W 7"		
2		4		STP 21	1	glass	bottle	clear	rectangular, small	"KREML"	hair tonic	TPQ 1905
2		4		STP 21	1	glass	bottle	clear		"622-9"		TPQ 1905
2		4		STP 21	2	glass	bottle	olive		"HUNYADI JANOS, SAXLEHNERS, BITTERQUELLE"	medicine bottle	
2		4		STP 21	1	glass	bottle	clear		"GUILDENS MUSTARD, BOTTLE 1, RED.U.S.PAT. OFF."		TPQ 1905
2		4		STP 21	1	glass	jar	clear	makers mark: B in circle	"HELLMANS BLUE RIBBON"	mayonaise	TPQ 1905
2		4		STP 21	1	glass	bottle	clear		"..E.."		
2		4		STP 21	1	glass	bottle	clear	decorative lettering	"..NDA../A.."		
2		4		STP 21	10	glass	bottle	clear	embossed lattice design			
2		4		STP 21	2	glass	bottle	clear	zig zag decoration around rim			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 21	1	glass	bottle	clear	anchor symbol, stippled, embossed numbers			
2		4		STP 21	2	glass	bottle	clear	polygonal			
2		4		STP 21	1	glass	bottle	clear		"LU../REM../KAN.."		
2		4		STP 21	7	glass	bottle	clear				
2		4		STP 21	4	glass	bottle	clear				
2		4		STP 21	100	glass	bottle	clear				
2		4		STP 21	1	glass	canning jar lid	clear				
2		4		STP 21	1	glass	bottle	clear		"..D OZ"		
2		4		STP 21	1	glass	bottle	clear	diamond shaped makers mark (Owens)			TPQ 1929
2		4		STP 21	1	glass	bottle	clear		"Du.." (Duraglas)		TPQ 1940
2		4		STP 21	1	glass	bottle	clear				
2		4		STP 21	2	glass	candy dish	clear	ornate			
2		4		STP 21	1	glass	bottle	clear				
2		4		STP 21	1	glass	bottle	pink tint				
2		4		STP 21	2	glass	bottle	green tint		"..4/5.."		
2		4		STP 21	1	glass	bottle		decorated			
2		4		STP 21	1	glass	bottle	clear	worn label			
2		4		STP 21	5	glass	bottle	clear				TPQ 1930
2		4		STP 21	2	glass	jar	clear				TPQ 1905
2		4		STP 21	1	glass	vessel	green tint	polygonal, etched floral design,			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		4		STP 21	11	glass	bottle	amber	Owens diamond makers mark, embossed numbers, stippled	"DURAGLAS"		TPQ 1940
2		4		STP 21	8	glass	bottle	aqua tint	mouth blown, applied rim, bead finish			mid 19th century
2		4		STP 21	2	furnishing	lamp glass	amber tint				
2		4		STP 21	1	glass	bottle	clear	mouth blown, tooled rim, patent finish			1870-1930
2		4		STP 21	3	glass	bottle	green	stippled			
2		4		STP 21	9	glass	mason jar	aqua tint				
2		4		STP 21	30	architectural	window glass	clear				
2		4		STP 21	3	architectural	window glass	clear	thick body			
2		4		STP 21	3	glass	milk glass					
2		4		STP 21	9	furnishing	lamp glass	clear				
2		4		STP 21	1	canning jar lid liner	milk glass		makers mark	"..AP BOYD'S GENUINE P.."		TPQ 1869
2		4		STP 21	1	glass	candy dish	clear	stippled rim			
2		4		STP 21	4	metal	wire					
2		4		STP 21	1	metal	cap	silver colored	decorated			
2		4		STP 21	1	metal	plate		perforated			
2		4		STP 21	3	metal	jar lid					
2		4		STP 21	1	metal	can base					
2		5		STP 01	2	architectural	nail		large			
2		5		STP 01	1	glass	bottle	aqua tint				
2		5		STP 01	1	glass	bottle	clear				
2		5		STP 01	1	ceramic	ironstone					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		5		STP 01	10	architectural	nail		square			
2		5		STP 01	7	ceramic	Rockingham ware					TPQ 1850
2		5		STP 03	1	ceramic	whiteware	blue	hand paint			mid 19th century
2		5		STP 04	1	metal	fragment					
2		5		STP 04	18	architectural	window glass	clear				
2		5		STP 04	1	metal	staple					
2		5		STP 04	3	architectural	nail					
2		5		STP 05	1	architectural	window glass	clear				
2		5		STP 05	2	architectural	nail		round			
2		5		STP 05	3	architectural	nail		square			
2		5		STP 05	20	architectural	window glass	clear				
2		5		STP 05	2	glass	bottle	aqua tint				
2		5		STP 05	1	clothing	button		metal			
2		5		STP 05	1	glass	bottle	green	label in gold	"LIK.."		
2		5		STP 05	1	glass	bottle	aqua tint				
2		5		STP 05	1	ceramic	whiteware	blue-green glaze				late 19th century/early 20th century
2		5		STP 05	1	shotgun shell casing						
2		5		STP 05	9	glass	bottle	clear				
2		5		STP 05	11	architectural	nail					
2		5		STP 05	2	ceramic	semi-porcelain		green bands			
2		5		STP 06	2	architectural	window glass	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		5		STP 06	1	glass	bottle	clear				
2		5		STP 09	1	architectural	nail		round			
2		5		STP 10	1	architectural	window glass	clear				
2		5		STP 10	3	architectural	nail					
2		5		STP 11	1	glass	bottle	clear				
2		5		STP 11	4	architectural	nail					
2		5		STP 13	4	architectural	nail		square			
2		5		STP 14	1	architectural	nail		square			
2		5		STP 14	3	metal	container fragment					
2		5		STP 14	1	architectural	window glass	clear				
2		5		STP 14	1	ceramic	ironstone					
2		5		STP 15	2	architectural	nail		square			
2		5		STP 16	1	furnishing	lamp glass	clear				
2		5		STP 16	9	architectural	nail		square			
2		5		STP 17	1	metal	fence post					
2		5		STP 17	1	metal	fragment					
2		5		STP 17	3	glass	bottle	aqua tint	rectangular			
2		5		STP 17	8	glass	bottle	clear				
2		5		STP 17	2	architectural	window glass	clear				
2		5		STP 17	2	glass	bottle	green tint				
2		5		STP 18	9	glass	bottle	clear				
2		5		STP 18	2	architectural	window glass	clear				
2		5		STP 18	2	glass	bottle	aqua tint				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		5		STP 18	1	architectural	nail					
2		5		STP 18	1	metal	fragment					
2		5		STP 18	1	metal	bar		circular			
2		5		STP 18	1	metal	rod		carbon?			
2		5		STP 19	1	ceramic	annular ware		dark brown band			
2		5		STP 19	1	architectural	tile	dark blue glaze	square, ceramic			
2		5		STP 19	2	architectural	window glass	clear				
2		5		STP 19	6	architectural	nail					
2		5		STP 19	1	ceramic	whiteware					
2		5		STP 19	2	glass	bottle	clear				
2		5		STP 20	1	glass	bottle	clear				
2		5		STP 20	3	architectural	window glass	clear				
2		5		STP 20	1	shotgun shell casing						
2		5		STP 20	3	architectural	nail					
2		5		STP 20	1	architectural	nail		square			
2		5		STP 21	2	glass	bottle	clear				
2		5		STP 21	2	glass	bottle	blue-green tint				
2		5		STP 21	1	architectural	nail		square			
2		5		STP 21	1	metal	fragment					
2		5		STP 21	2	architectural	nail					
2		5		STP 22	1	glass						
2		5		STP 22	1	glass	bottle	aqua tint				
2		5		STP 22	4	architectural	window glass	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		5		STP 22	3	architectural	nail					
2		5		STP 23	3	architectural	nail					
2		5		STP 23	2	metal			circular, dense			
2		5		STP 23	4	ceramic	stoneware		gray salt glazed w/Albany slip interior		crock	
2		5		STP 23	1	ceramic	Rockingham ware					TPQ 1850
2		5		STP 23	3	architectural	window glass	clear				
2		5		STP 23	12	glass	bottle	clear				
2		5		STP 24	1	ceramic	ironstone					
2		5		STP 24	1	architectural	nail		round			
2		5		STP 25	7	architectural	nail		square			
2		5		STP 25	2	glass	bottle	clear				
2		6		STP 01	1	glass	milk glass		vessel fragment			
2		6		STP 01	1	architectural	window glass	clear				
2		6		STP 01	1	shotgun shell casing				"R P/ SPRG/ 30 06		
2		6		STP 02	1	metal	rod					
2		6		STP 02	5	architectural	window glass	clear				
2		6		STP 02	1	metal	fragment					
2		6		STP 02	1	architectural	nail					
2		6		STP 02	1	metal	plate		triangular			
2		6		STP 02	1	architectural	window glass	clear				
2		6		STP 02	2	glass	vessel					
2		6		STP 02	2	architectural	nail		round			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		6		STP 03	1	ceramic	whiteware		scalloped rim			
2		6		STP 04	1	metal	plate		triangular w/ bolts			
2		6		STP 04	1	metal	fragment					
2		6		STP 04	7	architectural	nail		square			
2		6		STP 04	1	glass	bottle	amber				
2		6		STP 04	1	metal	bolt					
2		6		STP 04	9	architectural	window glass	clear				
2		6		STP 05	1	ceramic	whiteware	red	hand paint			mid 19th century
2		6		STP 05	3	architectural	window glass	clear				
2		6		STP 05	1	glass	milk glass					
2		6		STP 05	1	pocket knife			Popeye picture	"copyright King Features S.."		
2		6		STP 06	2	architectural	nail		square			
2		6		STP 06	4	architectural	window glass	clear				
2		6		STP 07	1	architectural	nail		square			
2		6		STP 09	2	glass						
2		6		STP 09	3	architectural	nail		square			
2		6		STP 10	1	ceramic	SP porcelain					
2		6		STP 10	1	glass	bottle	pink tint				
2		6		STP 10	6	metal	fragment					
2		6		STP 10	6	architectural	nail					
2		6		STP 11	6	metal	barbed wire					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		6		STP 14	1	architectural	nail					
2		6		STP 15	2	architectural	nail		square			
2		6		STP 15	1	metal	fragment					
2		6		STP 16	1	metal	bolt		square head			
2		6		STP 17	1	ceramic	ironstone					
2		6		STP 22	1	metal	axe head					
2		6		STP 24	1	glass	bottle	aqua tint				
2		6		STP 25	1	glass	bottle	olive				
2		6		STP 25	1	architectural	window glass	clear				
2		6		STP 25	1	architectural	nail					
2		6		STP 26	1	glass	bottle	clear				
2		6		STP 26	1	ceramic	ironstone		floral decal: green			late 19th century/early 20th century
2		6		STP 26	1	metal	fragment					
2		6		STP 26	3	architectural	nail		square			
2		6		STP 26	1	metal	staple					
2		6		STP 27	1	bone						
2		6		STP 27	1	architectural	nail		square			
2		6		STP 29	5	architectural	nail		square			
2		6		STP 29	2	metal	fragment					
2		6		STP 30	1	architectural	window glass	clear				
2		6		STP 30	3	metal	fragment					
2		6		STP 30	1	architectural	nail		square			
2		6		STP 31	6	architectural	nail		square			
2		6		STP 31	1	metal	can base					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		6		STP 31	1	glass	bottle	clear				
2		6		STP 33	2	architectural	nail		square			
2		6		STP 33	1	architectural	window glass	clear				
2		6		STP 33	5	architectural	nail		square			
2		6		STP 33	1	metal	fragment					
2		6		STP 36	4	architectural	nail		square			
2		6		STP 36	3	architectural	window glass	clear				
2		6		STP 38	4	glass		clear				
2		6		STP 38	1	architectural	nail		square			
2		6		STP 38	6	architectural	window glass	clear				
2		6		STP 39	2	architectural	nail					
2		6		STP 39	2	metal	plate					
2		6		STP 39	1	metal	pipe fragment					
2		6		STP 39	1	metal	bar		bent twice 90 degrees, contains bolt holes and bolts			
2		6		STP 40	3	modern	beer bottle	amber				
2		6		STP 42	1	architectural	nail		square			
2		6		STP 42	9	glass	bottle	amber				
2		6		STP 42	1	metal	fragment					
2		6		STP 43	35	architectural	nail		square			
2		6		STP 43	1	metal	chain link		4" long, thick body, C-shaped			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		6		STP 43	1	metal	bolt					
2		6		STP 43	1	metal	bar		T-shaped			
2		6		STP 43	1	metal	rod		15" long, bent			
2		6		STP 44	6	architectural	nail		square			
2		6		STP 45	2	architectural	nail		square			
2		7		STP 01	1	glass	bottle	amber				
2		7		STP 01	2	architectural	nail					
2		7		STP 03	1	architectural	nail					
2		7		STP 04	2	architectural	nail		square			
2		7		STP 05	5	glass						
2		7		STP 05	7	architectural	nail		square			
2		7		STP 07	4	architectural	nail		square			
2		7		STP 07	1	glass	bottle	aqua tint				
2		7		STP 11	1	metal	fragment					
2		7		STP 11	1	architectural	window glass	clear				
2		7		STP 13	1	metal	bar		hemispherical		pipe connector	
2		7		STP 15	8	architectural	nail		square			
2		7		STP 16	1	architectural	nail		square			
2		7		STP 18	1	architectural	nail		square			
2		7		STP 19	1	glass	bottle	clear				
2		7		STP 21	1	metal	equipment part		bar w/crank on one end and bolt on other, 8" long			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		7		STP 21	1	glass	bottle	clear				
2		7		STP 22	3	architectural	nail		square			
2		7		STP 32	1	glass		clear				
2		7		STP 32	1	metal	clamp		with bolts			
2		7		STP 33	2	architectural	nail		square			
2		7		STP 34	1	glass	drinking glass	clear				
2		7		STP 36	1	architectural	nail		square			
2		7		STP 36	1	metal	bolt					
2		7		STP 41	1	metal	fragment					
2		7		STP 41	1	metal	nut					
2		7		STP 41	3	architectural	nail		square			
2		7		STP 41	1	metal	wire					
2		7		STP 42	2	architectural	window glass	clear				
2		7		STP 42	10	architectural	nail		square			
2		7		STP 43	3	architectural	nail		square			
2		7		STP 44	1	glass	milk glass					
2		7		STP 44	20	architectural	window glass	clear				
2		7		STP 44	3	glass	bottle	clear				
2		7		STP 44	2	glass	bottle	aqua tint				
2		7		STP 44	6	ceramic	whiteware					
2		7		STP 44	1	shell	clam					
2		7		STP 44	4	architectural	nail					
2		7		STP 44	1	metal	fragment		circular			
2		7		STP 45	4	architectural	drain pipe		redware w/brown glaze			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		7		STP 45	6	architectural	window glass	clear				
2		7		STP 45	3	architectural	window glass	aqua tint				
2		7		STP 45	1	glass	bottle	amber				
2		7		STP 45	1	architectural	nail					
2		7		STP 45	1	ceramic	whiteware					
2		7		STP 46	1	architectural	nail		square			
2		7		STP 48	1	glass	bottle	aqua tint				
2		7		STP 48	1	architectural	window glass	clear				
2		7		STP 48	3	glass	bottle	clear				
2		7		STP 49	1	architectural	drain pipe		redware w/brown glaze			
2		7		STP 49	1	metal	fragment					
2		7		STP 49	6	architectural	nail		square			
2		7		STP 49	7	glass	bottle	clear				
2		7		STP 49	3	glass	bottle	aqua tint				
2		7		STP 49	4	ceramic	whiteware					
2		7		STP 49	14	architectural	window glass	clear				
2		7		STP 49	1	metal	blade		curved			
2		7		STP 50	3	glass	bottle	aqua tint				
2		7		STP 51	2	glass		aqua tint				
2		7		STP 51	7	glass	bottle	clear				
2		7		STP 51	8	architectural	window glass	clear				
2		7		STP 51	22	glass	bottle	aqua tint				
2		7		STP 52	1	architectural	nail					
2		7		STP 52	2	architectural	window glass	clear				
2		7		STP 52	1	glass	bottle	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		7		STP 53	2	glass	bottle	aqua tint				
2		7		STP 53	5	glass	bottle	clear				
2		7		STP 59	2	architectural	nail		square			
2		7		STP 64	1	glass	bottle	aqua tint				
2		7		STP 64	2	metal	fragment					
2		7		STP 64	2	architectural	nail		square			
2		7		STP 64	1	metal	wire					
2		7		STP 65	1	architectural	nail		square			
2		7		STP 66	1	architectural	nail		square			
2		7		STP 66	1	glass	bottle	amber				
2		7		STP 66	1	architectural	drain pipe		redware w/brown glaze			
2		7		STP 67	2	architectural	window glass	clear				
2		7		STP 70	2	architectural	window glass	clear				
2		7		STP 70	1	architectural	nail		square			
2		7		STP 71	1	glass	bottle	aqua tint				
2		7		STP 73	2	architectural	nail		square			
2		7		STP 74	1	architectural	window glass	clear				
2		7		STP 74	1	architectural	nail		square			
2		7		STP 76	1	metal	fragment					
2		7		STP 77	3	architectural	window glass	clear				
2		7		STP 80	5	architectural	nail		square			
2		7		STP 81	1	architectural	window glass	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		7		STP 81	3	architectural	nail		square			
2		7		STP 81	2	glass	bottle	clear				
2		7		STP 82	2	architectural	nail		square			
2		7		STP 82	1	glass	bottle	clear				
2		7		STP 83	8	metal	light bulb parts					
2		7		STP 83	1	metal	fragment					
2		7		STP 83	4	architectural	nail		square			
2		7		STP 84	1	architectural	window glass	clear				
2		7		STP 84	1	glass	bottle	clear				
2		7		STP 84	4	architectural	nail		square			
2		7		STP 84	1	metal	fragment					
2		7		STP 84	1	architectural	nail		round			
2		7		STP 85	2	glass	bottle	amber				
2		7		STP 85	1	architectural	nail		square			
2		7		STP 86	1	glass	bottle	amber				
2		7		STP 86	1	architectural	nail		round			
2		7		STP 88	1	glass	bottle	clear				
2		7		STP 88	1	glass	bottle	amber				
2		7		STP 88	4	architectural	nail		square			
2		7		STP 88	1	metal	fragment					
2		7		STP 88	3	architectural	window glass	clear				
2		7		STP 89	1	metal	rod					
2		7		STP 89	1	architectural	nail		square			
2		7		STP 90	1	metal	screw					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2		7		STP 90	2	architectural	nail		square			
2		7		STP 90	1	ceramic	whiteware					
2		7		STP 90	1	ceramic	SP porcelain					
2		7		STP 90	1	metal	bolt		6 inches long			
2		8		STP 10	1	glass	bottle	clear				
2		8		STP 10	7	ceramic	ironstone		decal print: pink roses, green leaves			late 19th century/early 20th century
2	1			STP 07	1	ceramic	SP porcelain					
2	3			STP 01	1	architectural	window glass	clear				
2	3			STP 01	1	architectural	nail		square			
2	3			STP 01	1	glass	bottle	clear				
2	3			STP 01	1	ceramic	ironstone	red	TP			mid 19th century
2	3			STP 01	12	ceramic	ironstone					
2	3			STP 02	2	ceramic	stoneware		gray salt glazed w/Albany slip interior		crock	
2	3			STP 02	5	metal	wire					
2	3			STP 02	1	glass	bottle	olive				
2	3			STP 02	1	ceramic	SP porcelain				tea cup handle	
2	3			STP 02	1	ceramic	whiteware					
2	3			STP 02	1	glass	jar	clear				
2	4			STP 01	2	architectural	window glass	clear				
2	4			STP 01	1	metal	washer					
2	4			STP 01	12	glass	bottle	clear				TPQ 1905
2	5			STP 02	1	ceramic	semi-porcelain		decorated rim: pink and gilt		sanitary ware/basin rim?	

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2	7			STP 04	1	glass	bottle	amber				
2	7			STP 04	1	glass	bottle	clear				
2	8			STP 01	1	ceramic	whiteware					
2	8			STP 01	1	architectural	window glass	clear				
2	8			STP 01	1	glass	bottle	pink tint	rectangular			
2	8			STP 01	1	glass		black				
2	8			STP 01	4	glass	bottle	clear		"DUR.." (Duraglas)		TPQ 1940
2	8			STP 02	1	ceramic	whiteware	blue	TP			mid 19th century
2	9			STP 01	1	metal	washer					
2	9			STP 01	1	metal	pipe					
2	9			STP 01	1	metal	staple					
2	9			STP 01	36	architectural	nail		square			
2	9			STP 01	1	bone	long bone		butchering marks			
2	9			STP 01	1	architectural	window glass	clear				
2	9			STP 01	1	glass	bottle	amber				
2	9			STP 01	7	glass	bottle	clear				
2	9			STP 01	2	glass	bottle	pink tint				
2	9			STP 01	1	glass	bottle	clear	makers mark w/"A", embossed numbers			
2	9			STP 01	1	glass	milk glass				vessel fragment	
2	9			STP 01	2	ceramic	ironstone		green print w/gilt band			late 19th century/early 20th century
2	9			STP 01	8	ceramic	whiteware					
2	9			STP 01	2	shell	clam					
2	9			STP 02	1	glass	bottle	pink tint				
2	9			STP 02	1	bone						

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2	9			STP 02	1	architectural	nail					
2	9			STP 02	1	ceramic	whiteware	red and green	hand paint			mid 19th century
2	9			STP 02	1	glass	bottle	green				
2	9			STP 02	4	glass	bottle	clear				
2	9			STP 02	2	architectural	window glass	clear				
2	9			STP 02	1	furnishing	lamp glass	clear				
2	9			STP 03	1	architectural	nail					
2	9			STP 03	1	metal	bolt					
2	9			STP 03	2	glass	bottle	clear				
2	9			STP 04	1	architectural	nail					
2	9			STP 04	3	ceramic	ironstone					
2	9			STP 04	1	architectural	slate					
2	9			STP 04	1	furnishing	flower pot		redware/terra cotta			
2	9			STP 04	1	glass	milk glass					
2	9			STP 04	1	glass	bottle	aqua tint				
2	10			STP 01	1	ceramic	whiteware	blue	hand paint			mid 19th century
2	10			STP 01	1	ceramic	yellow ware					TPQ 1840
2	10			STP 01	2	ceramic	whiteware					
2	10			STP 01	1	ceramic	SP porcelain		green floral print			late 19th century/early 20th century
2	10			STP 01	8	glass	bottle	clear				
2	10			STP 01	4	architectural	nail		square			
2	10			STP 02	1	architectural	window glass	clear				
2	10			STP 02	1	glass	bottle	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2	10			STP 02	5	architectural	drain pipe		redware w/brown glaze			
2	10			STP 02	1	metal	strap loop					
2	10			STP 03	1	ceramic	yellow ware					TPQ 1840
2	11			STP 01	1	architectural	nail					
2	11			STP 01	1	architectural	window glass	clear				
2	11			STP 01	2	furnishing	flower pot		redware/terra cotta			
2	11			STP 01	1	glass	bottle	clear				
2	12			STP 01	1	clothing	button		milk glass			
2	13			STP 02	3	ceramic	whiteware					
2	13			STP 03	6	architectural	window glass	clear				
2	13			STP 03	11	glass	bottle	clear				
2	13			STP 03	1	glass	bottle	amber				
2	13			STP 03	24	architectural	window glass	clear				
2	13			STP 04	1	glass	bottle	olive			wine bottle	
2	13			STP 04	7	glass	bottle	clear				
2	14			STP 02	2	ceramic	whiteware					
2	14			STP 02	1	glass	bottle	clear				
2	14			STP 02	1	architectural	nail		square			
2	14			STP 02	1	architectural	window glass	clear				
2	14			STP 04	2	architectural	drain pipe		redware w/brown glaze			
2	16			STP 01	2	metal	wire					
2	16			STP 01	1	glass	bottle	clear				
2	16			STP 01	1	glass	bottle	amber				
2	16			STP 01	1	ceramic	ironstone					
2	16			STP 01	1	metal	strip					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2	16			STP 01	4	architectural	nail		square			
2	20			STP 01	1	metal	bar		irregular shaped			
2	20			STP 01	1	metal	fragment					
2	20			STP 01	1	architectural	nail		square			
2	24			STP 02	1	horse accessory	horse shoe					
2	28			STP 02	13	glass	bottle	clear				
2	28			STP 02	1	glass	bottle	amber				
2	28			STP 09	5	ceramic	whiteware					
2	29			STP 01	3	architectural	window glass	clear				
2	29			STP 01	3	shell	clam					
2	29			STP 01	1	architectural	nail					
2	29			STP 01	1	ceramic	whiteware					
2	29			STP 03	1	metal	fragment					
2	29			STP 03	2	glass	bottle	cobalt blue				
2	29			STP 03	2	glass	bottle	clear				
2	29			STP 03	7	ceramic	whiteware	blue	hand paint			mid 19th century
2	29			STP 03	1	glass	bottle	olive				
2	29			STP 03	1	architectural	nail		square			
2	29			STP 03	5	shell	clam					
2	29			STP 03	1	ceramic	Rockingham ware					TPQ 1850
2	29			STP 06	1	architectural	nail					
2	30			STP 06	3	architectural	nail					
2	30			STP 06	2	ceramic	whiteware					
2	30			STP 06	2	glass	bottle	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2	30			STP 06	1	architectural	window glass	clear				
2	30			STP 07	3	architectural	nail		square			
2	30			STP 07	1	architectural	nail					
2	30			STP 07	6	ceramic	ironstone		blue-green glaze			late 19th century/early 20th century
2	30			STP 12	3	metal	bolt					
2	30			STP 12	1	metal	plyers					
2	30			STP 12	2	metal	plate		rectangular w/ bolt holes			
2					1	glass	jar					TPQ 1905
2					1	electrical part			metal and ceramic			
2					7	glass	bottle	clear				
2					1	glass	vessel	clear	small, less than 1" wide base or lid			
2					1	jewelry	cufflink		gold or brass w/ initials in script			
2					1	metal	bottle cap					
2					1	glass	bottle	clear		"OUNC.."		TPQ 1913
2					3	architectural	nail					
2					1	canning jar lid liner	milk glass			"GEN.."		TPQ 1869
2					1	furnishing	lamp glass	clear				
2					2	glass	bottle	aqua tint				
2					2	glass	bottle	clear	stippled			

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
2					1	glass	bottle	clear		"GUILDEN'S MUSTARD/BOTTLE 13/REG. U.S. PAT. OFF."		TPQ 1905
2					1	ceramic	whiteware					
3		1		STP 01	2	architectural	nail					
3		1		STP 03	1	architectural	nail		round			
3		1		STP 05	1	metal	plate					
3		1		STP 05	1	metal	fragment					
4		2		STP 02	2	glass	bottle	clear				
4		2		STP 03	3	furnishing	door knob		agate ware			late 19th century
4		2		STP 03	3	architectural	window glass	clear				
4		2		STP 03	1	glass	bottle	clear				
4		2		STP 03	2	architectural	window glass	clear				
4		2		STP 04	1	architectural	window glass	clear				
4		2		STP 05	1	metal	bolt		~10 inches length			
4		2		STP 05	1	metal	bolt					
4		2		STP 05	5	architectural	window glass	clear				
4		2		STP 06	3	glass	bottle	clear				
4		2		STP 06	4	architectural	window glass	clear				
4		2		STP 06	2	glass	bottle	clear				
4		2		STP 07	4	architectural	window glass	clear				
4		2		STP 08	2	metal	spring					
4		2		STP 08	11	architectural	window glass	clear				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
4		2		STP 08	2	architectural	nail		square			
4		2		STP 09	2	architectural	window glass	clear				
4		2		STP 10	3	glass	bottle	clear				
4		2		STP 10	1	ceramic	whiteware		paste only			
4		2		STP 10	1	ceramic	porcelain				small dish or saucer	
4		2		STP 13	1	ceramic	ironstone					
4		2		STP 16	1	metal	fragment					
4		2		STP 16	1	architectural	nail					
4		2		STP 16	1	glass	bottle	clear				
4		2		STP 16	1	architectural	nail					
4		2		STP 20	1	ceramic	ironstone					
4		2		STP 20	1	architectural	nail		square			
4		2		STP 20	2	architectural	window glass	clear				
4		2		STP 20	3	glass	bottle	clear				
4		2		STP 20	1	glass	bottle	aqua tint				
4		2		STP 21	4	architectural	nail		square			
4		2		STP 21	1	glass	bottle	aqua tint				
4		2		STP 23	12	glass	bottle	clear				
4		2		STP 24	7	glass	bottle	clear				
4		2		STP 24	2	architectural	window glass	clear				
4		2		STP 24	1	glass	bottle	olive				
4		2		STP 24	1	glass	bottle	aqua tint				
4		2		STP 25	1	glass	bottle	olive				
4		2		STP 25	8	architectural	window glass	clear				
4		2		STP 25	2	glass	bottle	aqua tint				
4		2		STP 25	1	ceramic	whiteware					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
4		2		STP 25	1	ceramic	redware		black glaze			
4		2		STP 27	4	ceramic	whiteware	blue	TP			mid 19th century
4		2		STP 28	1	glass	bottle	aqua tint				
4		2		STP 28	2	ceramic	whiteware	brown	hand paint			
4		2		STP 29	2	glass	bottle	clear				
4		2		STP 29	7	ceramic	whiteware					
4		2		STP 29	1	glass	bottle	clear				
4		2		STP 30	1	ceramic	ironstone	blue	TP			mid 19th century
4		2		STP 33	1	glass	bottle					
4		2		STP 33	2	ceramic	ironstone					
4		2		STP 33	2	architectural	window glass	clear				
4		2		STP 33	1	ceramic	porcelain		gilt floral pattern			late 19th century/early 20th century
4		2		STP 36	5	ceramic	whiteware					
4		2		STP 36	1	canning jar lid liner	milk glass			"MASON JAR"		TPQ 1869
4		2		STP 37	1	architectural	window glass	clear				
4		2		STP 37	1	ceramic	porcelain					
4		2		STP 37	1	architectural	nail		square			
4		2		STP 37	2	ceramic	whiteware					
4		2		STP 38	4	ceramic	porcelain					
4		2		STP 38	1	architectural	window glass	clear				
4		2		STP 38	13	ceramic	whiteware					
4		2		STP 38	1	ceramic	porcelain					
4		2		STP 38	1	architectural	nail		round			
4		2		STP 38	1	architectural	nail					

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
4		2		STP 39	2	architectural	nail		square			
4		2		STP 39	4	architectural	nail					
4		2		STP 40	23	architectural	window glass	clear				
5		3		STP 01	1	ceramic	yellow ware					TPQ 1840
5		3		STP 01	1	ceramic	whiteware		heavy foot ring			
5		3		STP 02	4	ceramic	whiteware					
5		3		STP 02	1	architectural	window glass	clear				
5		3		STP 02	3	glass	candy dish	clear	ornate			
5		3		STP 03	1	metal	fragment					
5		3		STP 03	1	ceramic	whiteware					
5		3		STP 05	2	architectural	nail					
5		3		STP 05	1	bone						
5		3		STP 05	1	glass	bottle	olive				
5		3		STP 05	1	glass	bottle	cobalt blue				
5		3		STP 05	2	architectural	window glass	clear				
5		3		STP 05	1	glass	bottle	aqua tint				
5		3		STP 05	7	furnishing	lamp glass	clear				
5		3		STP 05	1	architectural	window glass	clear				
5		3		STP 05	1	glass	bottle	olive				
5		3		STP 05	6	glass	bottle	aqua tint				

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
5		3		STP 06	5	ceramic	whiteware		floral decal: pink roses, green leaves			late 19th century/early 20th century
5		3		STP 06	3	glass	bottle	aqua tint				
5		3		STP 06	23	glass	jar	clear				
5		3		STP 07	5	architectural	nail		square			
5		3		STP 07	4	architectural	nail		round			
5		3		STP 07	4	ceramic	SP porcelain		floral decal: pink roses, green leaves, gilt band			late 19th century/early 20th century
5		3		STP 07	1	furnishing	lamp glass	clear				
5		3		STP 08	3	architectural	nail		square			
5		3		STP 08	1	architectural	nail		round			
5		3		STP 08	1	glass	bottle	clear				
5		3		STP 08	1	ceramic	whiteware				plate	
5		3		STP 08	4	ceramic	SP porcelain		floral decal: pink roses, green leaves, green rim w/white stipples, scalloped rim		sugar bowl	late 19th century/early 20th century
5		3		STP 12	2	glass	candy dish	clear	ornate			
5		3		STP 12	1	ceramic	yellow ware					TPQ 1840
5		3		STP 13	1	metal	fragment		small bolt holes			
5		3		STP 13	2	ceramic	whiteware					
5		3		STP 13	2	ceramic	stoneware		gray salt glazed w/brown interior		crock	

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
5		3		STP 13	2	ceramic	stoneware		gray salt glazed w/Albany slip interior		crock	
5		3		STP 13	1	shell	clam					
5		3		STP 13	4	architectural	nail		square			
5		3		STP 13	1	glass	bottle	clear				
5		3		STP 14	7	glass	bottle	aqua tint	rectangular small bottle	"..R's.."		
5		3		STP 14	3	ceramic	whiteware	yellow glaze				late 19th century/early 20th century
5		3		STP 14	1	ceramic	whiteware	flow blue	TP			mid/late 19th century
5		3		STP 14	1	glass	mason jar	aqua tint				
5		3		STP 14	28	glass	bottle	clear		"..STEA.."		
5		3		STP 14	2	ceramic	whiteware	brown	TP			1873-1895
5		3		STP 14	1	architectural	nail		square			
5		3		STP 14	5	metal	fragment					
5		3		STP 14	1	ceramic	redware		black glaze			
5		3		STP 14	26	ceramic	whiteware					
5		3		STP 14	3	glass	bottle	pink tint	double ring finish			
5		3		STP 14	2	ceramic	whiteware	turquoise	TP			late 19th century/early 20th century
5		3		STP 15	4	glass	bottle	clear				
5		3		STP 16	1	ceramic	ironstone	red	TP			mid 19th century
5		3		STP 16	5	glass	bottle	clear				
5		3		STP 16	1	ceramic	ironstone	blue	TP			mid 19th century
5		3		STP 16	2	ceramic	whiteware					
5		3		STP 16	2	bone						

Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
5		3		STP 16	13	architectural	nail		square			
5		3		STP 16	1	glass	jar	clear	ribbed			
5		3		STP 16	1	glass	bottle	aqua tint				
5		3		STP 16	3	architectural	window glass	clear				
5		3		STP 16	1	metal	vessel top				salt or spice shaker	
5		3		STP 16	1	ceramic	SP porcelain		pink decal print			late 19th century/early 20th century
5		3		STP 16	1	glass	jar	clear	ribbed			TPQ 1905
5		3		STP 20	3	shell	clam					
5		3		STP 20	2	bone	long bone					
5		3		STP 20	1	bone			butchering marks			
5		3		STP 20	1	tooth		large animal				
5		3		STP 20	1	ceramic	pearlware					1780-1840
5		3		STP 20	1	glass	bottle	amber				
5		3		STP 20	2	architectural	window glass	clear				
6		4	TR 1	STP 1	1	glass	bottle	clear				
6		4	TR 2	STP 1	6	glass	bottle	clear				
6		4	TR 4	STP 1	1	architectural	nail		square			
6		4	TR 2	STP 3	1	glass	bottle	aqua tint				
6		4	TR 2	STP 3	1	furnishing	lamp glass	clear				
no provenience					10	ceramic	ironstone		green print, gilt band, scalloped rim, makers mark	"SEMI VITREOUS, WALDORF, MERCER CHINA"		late 19th century/early 20th century
no provenience					10	metal	container fragment					

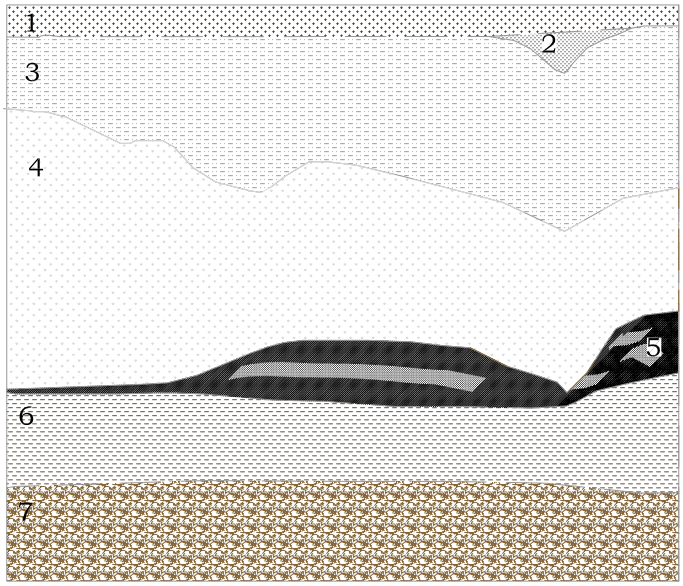
Historic Complex	Yard	Foundation Feature	Block	Unit	Count	Artifact	Type	Color	Design	Labelling	ID	Age
no provenience					24	architectural	nail		square			
no provenience					1	ceramic	ironstone		green print			late 19th century/early 20th century
no provenience					6	architectural	nail					
no provenience					7	metal	canning jar lid					
no provenience					1	canning jar lid liner	milk glass		makers mark	"Genuine Boyd's Cap for Mason"		TPQ 1869
	TR 235			STP 02	1	architectural	nail		square			
	TR 235			STP 02	2	metal	fragment					
	TR 235			STP 02	2	glass	bottle	clear				
	TR 239			STP 04	1	metal	hook					
	TR 245			STP 02	1	furnace scale						
	TR 248			STP 02	1	glass	bottle	clear				
	TR 248			STP 02	1	glass	bottle	green				

APPENDIX F

TRENCH PROFILES

(HISTORIC COMPLEX 1/TRENCH 1 & 2)

Trench 1 North Wall Profile



1: Blk Brn Si Lo w/ Ash

2: Brn Si Lo

3:Lt Gry Ash & Cinder

4: Pl Gry Fine Ash & Cinder

5: Blk Cinder

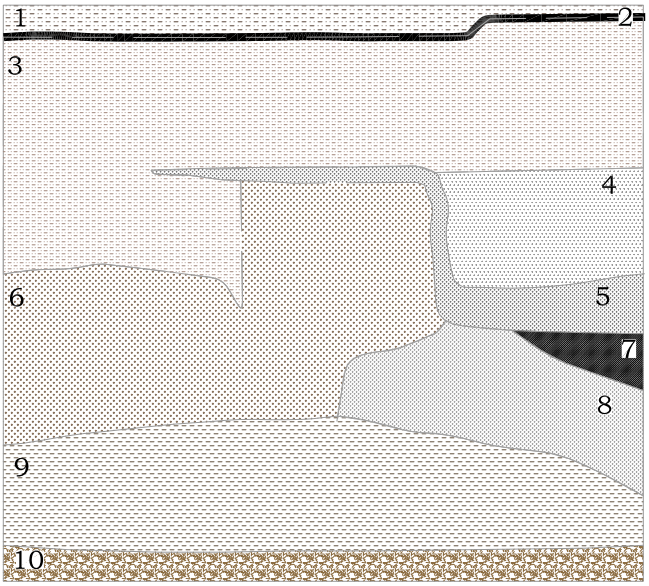
6: Brn Fine Si & Gravel

7: Lt Brn Si & Coarse Gravel

GRAPHIC SCALE

(IN FEET)
1 inch = 1 ft.

Trench 2 West Wall Profile



1: Blk Brn Si Lo w/ Ash
2: Blk Cinder
3: Brn Gry Ash & Cinder

4: Pl Gry Fine Ash

5: Dk Gry Coarse Ash & Cinder
6: Dk Gry Brn Coarse Ash & Cinder
7: Blk Cinder
8: Dk Gry Coarse Ash & Cinder

9: Brn Fine Si & Gravel
10: Lt Brn Ylw Coarse Sa & Gravel

GRAPHIC SCALE

(IN FEET)
1 inch = 1 ft.

Young's Grove Site.

(Formerly Craigville Site)

Phase 2 Archaeological Investigation
J. Boettner House Site

Craigville Road and Hasbrouck Road
Town of Goshen, Orange County New York

Prepared for:

Rieger Homes
6 Old North Plank Road
Newburgh, New York 12550

By:

CITY/SCAPE: Cultural Resource Consultants
166 Hillair Circle
White Plains NY 10605

December 2008

YOUNGS GROVE SITE
PHASE 2 INVESTIGATION OF THE J. BOETTNER HOUSE SITE

Craigville Road and Hasbrouck Road
Town of Goshen, Orange County, New York

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Management Summary

SHPO Project Review Number (if available):

Involved State and Federal Agencies (DEC, CORPS, FHWA, etc): **ACOE**

Phase of Survey: **Phase 2 Archaeological Investigation**

Location Information:

Location: **Craigville and Hasbrouck Roads**

Minor Civil Division: **Town of Goshen**

County: **Orange**

Survey Area (Metric & English)

Length:

Width:

Depth (when appropriate):

Number of Acres Surveyed: **< 3 acres (Phase 2 only)**

Number of Square Meters & Feet Excavated (Phase II, Phase III only): **4 1 meter square units.**

Percentage of the Site Excavated (Phase II, Phase III only):

USGS 7.5 Minute Quadrangle Map: **Goshen**

Archaeological Survey Overview

Number & Interval of Shovel Tests: **21 @ 25'**

Number & Size of Units: N/A

Width of Plowed Strips: N/A

Surface Survey Transect Interval: N/A

Results of Archaeological Survey

Number & name of prehistoric sites identified: 0

Number & name of historic sites identified: **J. Boettner House**

Number & name of sites recommended for Phase II/Avoidance: Results of Architectural Survey

Number of buildings/structures/cemeteries within project area: **0**

Number of buildings/structures/cemeteries adjacent to project area: 0

Number of previously determined NR listed or eligible buildings/structures/cemeteries/districts: N/A

Number of identified eligible buildings/structures/cemeteries/districts: N/A

Report Author (s): **Stephanie Roberg-Lopez M.A., R.P.A., Gail T. Guillet and Beth Selig**

Date of Report: **December 2008**

Young's Grove
J. Boettner House Site (H4)

Craigville Road & Hasbrouck Road
Town of Goshen, Orange County, New York

Introduction

The following report presents the results of a Phase 2 Archaeological Investigation for Rieger Homes, Inc. by CITY/SCAPE: Cultural Resource Consultants. The Phase 2 work was performed in accordance with the requirements of the State Environmental Quality Review Act (SEQRA) 6NYCRR, part 617 of the New York State Environmental Conservation Law and to meet the standards of the New York Archaeological Council (1994), as well as relevant federal standards (36 CFR 61).

Project Description

The J. Boettner House site (H4) is part of a larger parcel of land now referred to as the Young's Grove (formerly Craigville) site, located in the Town of Goshen, Orange County, New York. (Map 1 & 2) The Young's Grove site is an approximately ±354.01 acre (143.26 hectares) parcel located on the north and south side of Craigville Road, west of the intersection with Hasbrouck Road. The Young's Grove site was investigated at the Phase 1 level in 2007 (CITY/SCAPE: Cultural Resource Consultants 2007). The Phase 1A Literature Review and Sensitivity Analysis and Phase 1B Field Reconnaissance Survey identified a series of historic complexes attributed to the Young family, early settlers in Orange County. Historic Complex 1 and Historic Complex 2, located in the interior of the Young's Grove site, have been determined eligible for listing on the National Register of Historic Places by Douglas Mackey, Program Analyst at OPRHP, eliminating the need for either complex to be examined at the level of a Phase 2 Archaeological Investigation.

Historic Complex 3, Historic Complex 4 and Historic Complex 5 represent single foundations located outside the perimeters of the Young Farm complex (H1 & H2), but within the boundaries of the Young's Grove project area. Historic Complex 3 and Historic Complex 5 were determined, in consultation with Doug Mackey, to be outside the boundaries of the Area of Potential Effect (APE), and it was agreed that no additional investigation of these two foundations would be required. Douglas Mackey determined, in conjunction with CITY/SCAPE Cultural Resource Consultants, that Historic Complex 4, the location of the J. Boettner House (Historic Complex 4), would be impacted by the proposed project, and that a Phase 2 Archaeological Investigation was required to determine its eligibility for nomination to the National Historic Register. The Phase 2 Archaeological Investigation reported on in this report is, therefore, limited to Historic Complex 4, the J. Boettner House. The results of the Phase 2 investigation, as they pertain to Historic Complex 4, are summarized below.

The Phase 2 Archaeological Investigation of the J. Boettner House site (H4) was designed to:

- identify the boundaries of the historic site, which included the house foundation and three shaft features;
- examine the surrounding yard area in an effort to locate midden or dump deposits;
- assess the site's integrity and the significance of the resources with respect to their potential to provide significant cultural information relating to the owners of the J. Boettner House site throughout its occupation, the date and circumstances surrounding the abandonment of the site, and the relationship of the J. Boettner House site to the larger Young's Grove site;
- evaluate the impact of the proposed project on the historic resources present within the project area;
- and, determine whether the resources present met the criteria for nomination to the National Register of Historic Places.

Background Information

Historic Complex 4 (H4) is located on the south side of Craigville Road, east of Pleasant Ridge Road. The complex consists of a single foundation, two wells that were identified in the Phase 1B survey, and a cement and stone-capped feature. Although the shaft features were identified in the Phase 1B they were not tested during the Phase 1B survey because of safety concerns. The foundation is located on land that slopes down to a stream, located southeast of the foundation. The foundation measures 25' by 30' (7.6 m by 9.14 m). The foundation is divided into a series of rooms by interior stonewalls. Forty (40) shovel tests were excavated around the perimeter of the foundation at 5' intervals, and another 20 shovel test were excavated at 25' (7.5 m) intervals in the year area. Architectural materials were represented by window glass, nails, a bolt, a metal plate, a spring and an agate door handle. Numerous fragments of glass were recovered, including clear, aqua and olive container and bottle glass. A milk glass canning jar lid provides a *Terminus Post Quem* (TPQ) of 1869. Ceramics recovered from shovel tests around the perimeter of the foundation included minimal amounts of ironstone, blue transfer print whiteware and porcelain. All shovel tests excavated in the yard area were sterile of cultural material of any kind.

As noted above, in addition to the foundation, there were three shaft features. The first was located some distance southeast of the house foundation; this shaft feature was identified as Well 1. The second was located near the northwest corner of the house; this was identified as Well 2. The final feature, located southeast of the house foundation, was rectangular in shape and covered by a cement slab that was flush with the ground; this was thought to be a privy.

Methodology

The methodology for the Phase 2 Archaeological Investigation of the J. Boettner House site (H4) consisted of the following tasks: 1) the excavation of close interval shovel tests around the perimeter of the house and within the yard area to determine the location of artifacts densities and to identify, if present, a kitchen midden or additional shaft features (i.e., privy and/or well), 2) the excavation of four 1 by 1 meter square units placed adjacent to and in the interior of the house foundation, and 3) the mechanical excavation of a series of trenches in the yard area to identify, if present, yard middens or dump sites. The rational for placing all of the units adjacent to or within the house foundation was that the shovel testing of the yard area in both the Phase 1B survey and Phase 2 investigation

had failed to identify any significant concentrations of artifacts. Based on the results of the close interval shovel tests around the perimeter of the house foundation, a single unit (Unit 1) was placed on the exterior western wall of the foundation. The three remaining units (Unit 2-4) were placed in the interior of the house foundation, one in each of the three rooms identified in the Phase 1B survey.

Once the hand excavation was completed, a backhoe was used to disassemble two of the shaft features identified during the Phase 1B survey. Both shaft features were confirmed to be wells, but no cultural material was recovered from either. The field crew then turned to the third shaft feature, which had been identified during the Phase 1B survey, but not investigated due to the presence of the cement slab. The cement slab was removed, revealing cultural deposits suggestive of a privy. This shaft feature was sampled, but not disassembled. Once the sample had been taken, the feature was covered with a plastic tarp to protect it. The final task was to excavate a series of trenches in the rear yard of the house area in an attempt to identify any midden deposits. The two trenches were placed 50' (15 m) off the rear of the house and 50' (15 m) apart. No cultural material of any kind was identified in the trenches.

Laboratory Methods

All artifacts recovered from the shovel testing and unit excavation at the J. Boettner House site (H4) were bagged and labeled with their provenience and the stratum from which they were recovered. All shovel test and unit locations were recorded on a large scale map. Materials were processed in the CITY/SCAPE laboratory, where they were washed, or, in the case of bone, leather, and textile materials, dried and brushed, and then rebagged. The artifacts identified were then entered into an EXCEL database according to the provenance from which they were recovered. The database is included in this report as Appendix E: Artifact Catalog. At the conclusion of the analysis, the artifacts were packed in cardboard cartons for storage.

Field Results

As previously stated, the yard area and perimeter of the J. Boettner House (H4) foundation were tested during the Phase 1B Archaeological Field Reconnaissance Survey in 2007. The Phase 2 Archaeological Investigation at the J. Boettner House site began with the excavation of additional shovel tests around the foundation and within the yard area in an effort to identify areas of artifact concentration. Minimal amounts of cultural material were recovered from the shovel tests, while the shovel tests in the yard area failed to identify cultural material of any kind.

Testing then moved to the excavation of four 1 by 1 meter square units adjacent to and within the house foundation. In an effort to determine if a builder's trench was present, Unit 1 was placed adjacent to the exterior of the western foundation wall. Because the Phase 1B shovel testing had failed to identify any areas of artifact concentration on the exterior of the house, the remainder of the units was placed in the interior of the foundation. As noted above, the house foundation is divided into several rooms by interior walls, so to test each of these areas the units were placed as follows: Unit 2 was placed in the northeastern portion of the foundation , Unit 3 was placed adjacent to the southwestern corner, and Unit 4 was placed in the southeastern portion on the house foundation. The results of the unit excavations are discussed below. Information regarding depth of excavation levels, soils and

generalized results are included in tabular form in Appendix D. The artifacts recovered have been analyzed and included in Appendix E.

Unit 1

Unit 1 was placed adjacent to the west wall of the house foundation near the Phase 1B/STP 21. The datum was placed in the southeast corner of the unit, measured for its depth above ground surface. Due to the nature of the soils in the area, the unit was excavated in arbitrary 10 cm levels within the natural strata. A total of five levels were excavated in Unit 1. Sterile subsoil was encountered at a depth of 56 cm. Level 1 through 5 produced 364 artifacts in the form of glass, ceramics, nails, shell, metal fragments and plastic. Level 5 was sterile for all cultural materials. The soils within the unit consisted of a 10YR3/2 silty loam overlying a 10YR 6/3 silty clay.

Unit 2

Unit 2 was placed inside northeastern portion of the foundation. The datum was placed in the southwest corner of the unit, measured for its depth above ground surface. Again, due to the nature of the soils in the area, the unit was excavated in discrete 10 cm levels, within the natural strata. A total of three levels were excavated within this unit. Sterile subsoil was encountered at a depth of 33.5 cm. Level 1 through 3 produced 489 artifacts in the form of glass, metal fragments, nails, and shell. Artifacts and soils exhibited evidence of burning. Much of the glass recovered from Unit 2 exhibited evidence of fire, being melted. Level 3 was sterile for all cultural materials. The soils within the unit consisted of a 10YR3/2 silty loam, overlying a mortar and ash floor, underlain by a 10YR6/3 silty clay.

Unit 3

Unit 3 was placed inside southwestern portion of the house foundation adjacent to the southwestern corner. The datum was placed in the northwest corner of the unit, measured for its depth above ground surface. Due to the nature of the soils in the area, the unit was excavated in discrete 10 cm levels, within the natural strata. A total of five levels were excavated within this unit. Sterile subsoil was encountered at a depth of 50 cm. Level 1 through 5 produced 647 artifacts in the form of window glass, melted bottle glass, ceramics, nails and metal fragments. Level 5 was sterile for all cultural materials. The soils within the unit consisted of a 10YR3/2 silty loam, over a mortar and ash floor, underlain by a 10YR 6/3 silty clay.

Unit 4

Unit 4 was placed in southern portion of the foundation due south of Unit 2. The datum was placed in the southeast corner of the unit, measured for its depth above ground surface. Due to the nature of the soils in the area, the unit was excavated in discrete 10 cm levels, within the natural strata. A total of six levels were excavated within this unit. Sterile subsoil was encountered at a depth of 90 cm. Level 1 through 6 produced 239 artifacts in the form of glass, bone, ceramics, nails, metal fragments, a metal door handle, and a metal spring. Level 2 produced 192 fragments of glass, a fragment of plain whiteware and 132 rusted metal pieces. Due the quantity of unidentifiable materials, the artifacts from this level were noted, but not collected for processing in the laboratory. Level 6 was sterile for all cultural materials. The soils within the unit consisted of a 10YR 3/2 silty loam overlying a 10YR 6/3 gravely clay.

Once the hand excavations were complete, testing moved to the mechanical excavation of two of the three shaft features identified during the Phase 1B survey. The first feature to be excavated, identified as Well 1, was filled with debris that was mechanically removed. Well 1 measured 6' 4" (1.9 m) deep and contained large loose stones. There was approximately 6" of pooled water at the base of Well 1. No cultural material was recovered from Well 1.

Testing then moved to a concrete rectangle located southwest of Well 1. The concrete slab was flush with the ground surface. Once the cement cap was removed, a stone lined privy was revealed. The top portion of the privy was filled with debris, a small sample of which was recovered. The soils in this feature were black with a very pungent odor. Artifacts recovered in this sample included a blue enamelware pot, a clear jar, a spoon and two bottles that had blown in mold rim and neck fragments. (Appendix E: Artifact Catalog) After the soils and artifacts had been sampled, the privy feature was covered with a plastic tarp and recovered. It is thought that the strong odor emanating from the privy feature is due to its have been capped, which may have slowed the breakdown of organic materials.

The second well (Well 2) was the last to be tested. This feature, which is located on the north side of the house foundation, was identified by a series of concrete slabs and stones in a roughly circular shape on the surface of the ground. Once these stones were removed, a stone-lined well was revealed. This feature measured 12' (3.6 m) deep with approximately 1'6" (45 cm) of water at the bottom. As this feature was clearly a well that proved to be empty it was not mechanically disassembled. The feature was recovered as a safety precaution.

The last task to be completed on the J. Boettner House site was the machine excavation of two trenches in the rear of the house in an attempt to identify midden deposits. The first trench was placed outside the yard envelope previously tested by close interval shovel testing. Trench 1 was located 50' (15 m) south of the house foundation and was approximately 50' in length. A second trench, Trench 2, placed 50'(15 m) south of Trench 1, was equally long. These trenches, which were excavated to identify midden deposits, were excavated to a shallow depth of 3', rather than to glacial soils.

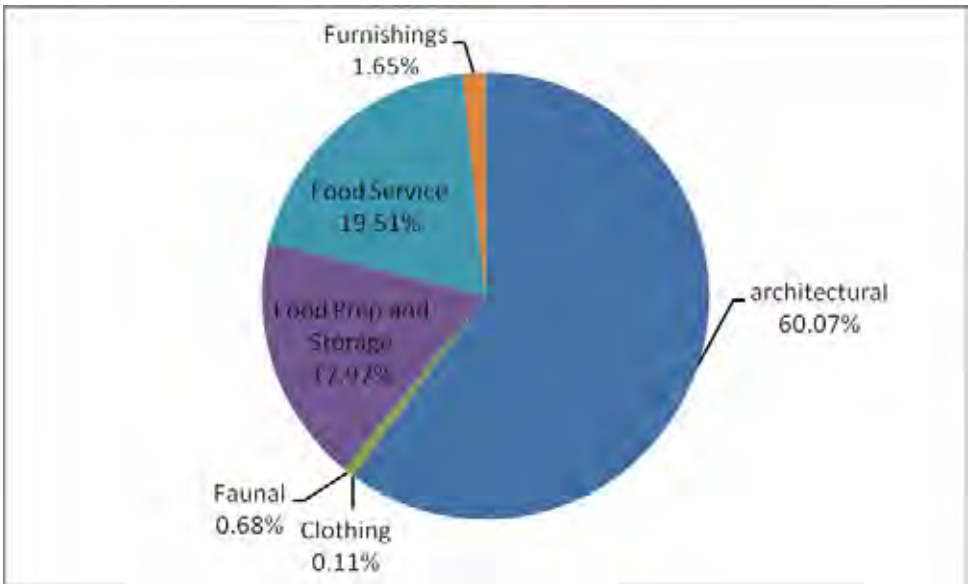
The Artifact Assemblage from the J. Boettner House (H4)

As described above, the Phase 2 Archaeological Investigation of the J. Boettner House site (H4) included shovel testing, unit excavation and trenching in an effort to identify features and recover artifacts that could aid in making a determination concerning the date of the Boettner House and its eligibility for listing on the National Register of Historic Place. Obtaining an answer to these two questions was the principal goal of the Phase 2 Archaeological Investigation.

The artifacts recovered from the J. Boettner House site (Historic Complex 4) date from the early 19th into the mid-20th century. Ceramics are often the most diagnostic artifacts recovered from an historic archaeological site; in this case, the earliest ceramic recovered was creamware, which might suggest that the occupation of the house dated from that time period. However, for the reasons discussed below, it appears that the house itself dates from the mid-19th century, and that the creamware was an heirloom or curated item that was brought to the site from elsewhere. Whiteware and stoneware were recovered from the site, both of which have a long date range from the early 19th through the early 20th century, however, in the case of the stoneware, most of it had an Albany slip, which generally is dated to the mid through the late 19th century. The presence of ironstone (TPQ 1850) suggests that the

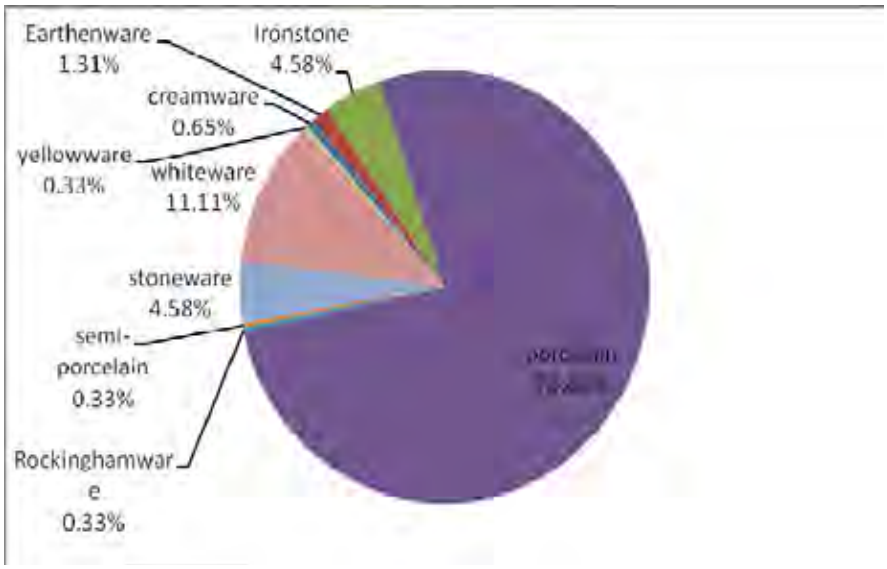
house was occupied in the mid 19th century. Despite indications that the artifact assemblage dates to the mid-19th century, the presence of a porcelain tea set marked "Hand Painted, Trico, Nagoya-Japan" indicates that the site may have been occupied until sometime after 1954. The porcelain tea set represents 76% of the porcelain recovered from the site. Research indicates that the Trico mark was used by Tashiro Shorten, Ltd. from World War II through 1954, an indication that the J. Boettner house was occupied in the second half of the 20th century.

Chart 1: Distribution of Artifact Classes Recovered from the J. Boettner House Site



A wide range of artifacts were recovered from the J. Boettner house, but, as it is the case on most historic archaeological sites, the predominant artifact class was architectural materials. Architectural materials, which include metals, glass and construction materials, accounts for 60% of the assemblage. Food service, meaning tablewares, such as plates, saucers, cups, bowls, and serving vessels, represent just under 20% of the collection, while food preparation and vessels associated with food storage account for 18%. The remaining artifacts include faunal material, bone and/or shell, clothing and furnishings.

Chart 2: Distribution of Ceramic Types within the Boettner Artifact Assemblage.



Looking at the ceramics, which are generally more diagnostic than glass or many other items, porcelain, as noted above, comprises over 70% of the ceramic assemblage. However, as discussed above, a significant percentage of the porcelain is associated with a 20th century Japanese tea set. The remaining ceramics recovered consist largely of ironstone and stoneware (9.16%) collectively.

Whiteware accounts for 11% of the assemblage, while creamware, Rockinghamware and yellowware are minimally represented in the assemblage. As stated, creamware dates to the late 18th and early 19th century, being replaced by whiteware after 1830, while Rockinghamware dates to 1830 and yellowware to 1840.

Taken as a whole, the analysis of the artifacts recovered from the J. Boettner House site (H4) indicate that it dates from the mid-19th century through the second half of the 20th century. Map research supports the dates associated with the artifact assemblage. Map research indicates that the earliest map on which the house appears is the 1875 Beers' *Atlas of Orange County*, at which time it was owned d by J. Boettner. The 1903 Lathrop *Map of Orange County* indicates that in that year the house was owned by Mrs. Jno Boettner, presumably the widow of J. Boettner. The fact that the map research clearly indicates that the house dates to sometime after 1851, but before 1875, is the reason that the creamware recovered from the site it considered to be a curated item, rather than an indication of the date of the site. In addition to providing supporting evidence for the date of the site, the artifact assemblage recovered from the site can be confidently associated with the Boettner family, who occupied the house for over a quarter of a century.

The Artifact Assemblage from the Privy Sample

The third shaft feature investigated at the J. Boettner House site (H4) during the Phase 2 Archaeological Investigation has been identified as a privy. The soils encountered in the feature, which was covered with a concrete slab, were dark, organic and odiferous. The artifacts recovered from the top portion of the privy represent a "grab" sample that was collected to establish a time frame for the deposit. It is possible that artifacts were deposited over a longer time period, but the "grab" sample, which included a molded apothecary jar, two blown in mold bottle fragments, clear container and bottle glass, a metal spoon, and an enamelware pot lid, indicate that the privy was closed sometime after 1940. While it is possible that older deposits may be located in the lower strata, it seems most likely that the deposit in the privy is related to its being taken out of use and sealed with a cement slab. For this reason, it is not considered likely that the privy deposit will significantly increase our understanding or interpretation of the J. Boettner House site (H4).

Census Data for the J. Boettner House Site (H4)

In an effort to determine the date of the occupation of the site, and to determine if the Boettner family was related in some way to the Young family, census research was undertaken for the site. John Boettner and his wife Anna first appear in the United States Federal Census in the year 1870, when John is listed as a farmer with a property value of $6000 and a personal value of $3000. William Voght (Wright), who is listed as farm laborer, resided in the household. In addition to the farm help, the Boettner's also employed a domestic servant, Anna Cheeseman. Also living in the house were also two brothers, Jason and William Martin, who were identified as boarders. Also residing with the Boettner's was Hellan [sic] Monell, a school teacher. The Boettner's are listed in the 1880 census as the Betner's. Residing with them in that year was Jacob and Elise Carpton and their two children, Mary and Sophia. Jacob Carpton is listed as a farmer. In 1900, Anna Boettner, who was then 68 years old and a widow, appears in the United Stated Federal census as the head of household. Her occupation was given as a "capitalist". The census indicates that the farm was owned by her, was mortgage free, and that Anna Boettner lived alone. Neither the Boettner's nor the Carpton's are listed in the 1910 census. The census data appears to be supported by the map research, which indicates that the house was not built prior to 1851, but had been built by

1975. The Boettner's occupied the house until at least 1903. We know that the house was occupied until sometime after World War II, but after 1903 we do not know the names of its occupants.

Based on the results of the census data, the artifact collection was reviewed to determine if concentrations in specific area presented a different date range of artifact type. It was thought possible that by examining the recovery from each room within the foundation it might be possible to determine whether there was a portion of the house that was occupied by the Boettner's, while another portion was occupied by the boarders. Looking at the ceramics recovered the greatest variation was from Unit 1, located outside the west wall of the house foundation. Unit 2, in the northeast portion of the foundation, yielded ceramics and a significant amount of nails. Unit 3 placed in the southwestern portion of the foundation recovered the Trico Porcelain tea set and more than 300 nails. Unit 4 located in the southern most room of the foundation contained ironstones and whitewares, with a mix of metal hardwares. Based on these results, it is not possible to determine whether the hypothesis that the house contained two separate living spaces is valid. It is possible that the Boettner's arrangement was more traditional, with family members and boarders living together, rather than occupying separate living quarters.

Summary and Conclusions

From the data collected and analyzed in the Phase 2 investigations of the J. Boettner House site (H4), it is possible to draw several conclusions concerning the date of occupation of the house. Material recovered from the house foundation indicates that it was occupied into the second half of the 20th century, as is demonstrated by the recovery of the Japanese tea set, which, given the war time relations with Japan, probably dates to some years after the end of World War II. Census information indicates that the property was owned by the Boettner family in the second half of the 19th century, and that after his death, the house was occupied by his widow into the early 20th century. The ownership of the property after 1903 has not been determined. The census information indicates that the families were farmers. It indicates that they employed farm labor and domestic help, but that they also took in boarders, including a school teacher, who could have taught at the nearby school. The historic maps suggest that the house was not constructed prior to 1851, since it does not appear on the historic maps of that year. The house does appear on the 1875 Beer's map, when it was owned by the Boettner family. The Boettner's first appear in Goshen in 1870, when they are listed in the Federal Census. The artifact collection contains whiteware, which could date to as early as 1820, but the majority of the assemblage dates to the mid to late 19th century, with some material dating to as late as the 1950's. We conclude, based on this information, that the house was constructed between 1851 and 1870, the first year that the Boettner family appears in the census records, and that the family continued to occupy the house for over a quarter of a century. We do not know who occupied the house into the mid-20th century, but we conclude that the majority of the artifacts recovered from around the house can be firmly associated with the Boettner family and their boarders.

While the privy feature might have the potential to contain earlier deposits, but the impression gained from the "grab" sample from the privy, which included an enamelware lid (TPQ 1940), is that the privy was filled at the time that it was taken out of use and sealed, which would have taken place sometime after 1940. It could be that the closing of the privy dates to the time when indoor plumbing was installed in the Boettner house, which could have taken place shortly after the end of World War II, or perhaps as later as the 1950's.

Having completed the Phase 2 Investigation of the J. Boettner House site (H4), it was possible to answer some, but not all, of the questions posed at the beginning of the Phase 2 investigation. We were able to confirm the

boundaries of the historic site, and to determine that no additional shaft features were present. The lack of cultural material in the yard area confirmed that no sheet midden or dump sites were present. The date of the house was confirmed, based on the map research, census data, and artifact assemblage, to be 1870, or slightly before, through the second half of the 20th century. We were unable to learn the circumstances surrounding the abandonment of the site, though it is possible that the house burned, and the debris cleared away. We were unable to determine any relationship between the J. Boettner House site (H4) and the Young farm complex (H1 & H2).

Taking the information obtained from the Phase 1B survey and Phase 2 Archaeological Investigation into consideration, it is the opinion of CITY/SCAPE: Cultural Resource Consultants that the J. Boettner House site (H4) is not eligible for nomination to the National Register of Historic Places, and, for this reason, we recommend that no further work be required on the J. Boettner House site (H4).

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APPENDICES

LIST OF APPENDICES

Appendix A: Maps & Figures
Appendix B: Photographs
Appendix C: Shovel Test Records
Appendix D: Unit Records
Appendix E: Artifact Catalog
Appendix F: Unit Profiles

APPENDIX A

MAPS & FIGURES

MAP LIST

Maps

Map 1: Location Map including Project Area. USGS Topographical Map. 7.5 Minute Series. Orange Lake Quadrangle. Scale: ¾” = ½ mile.

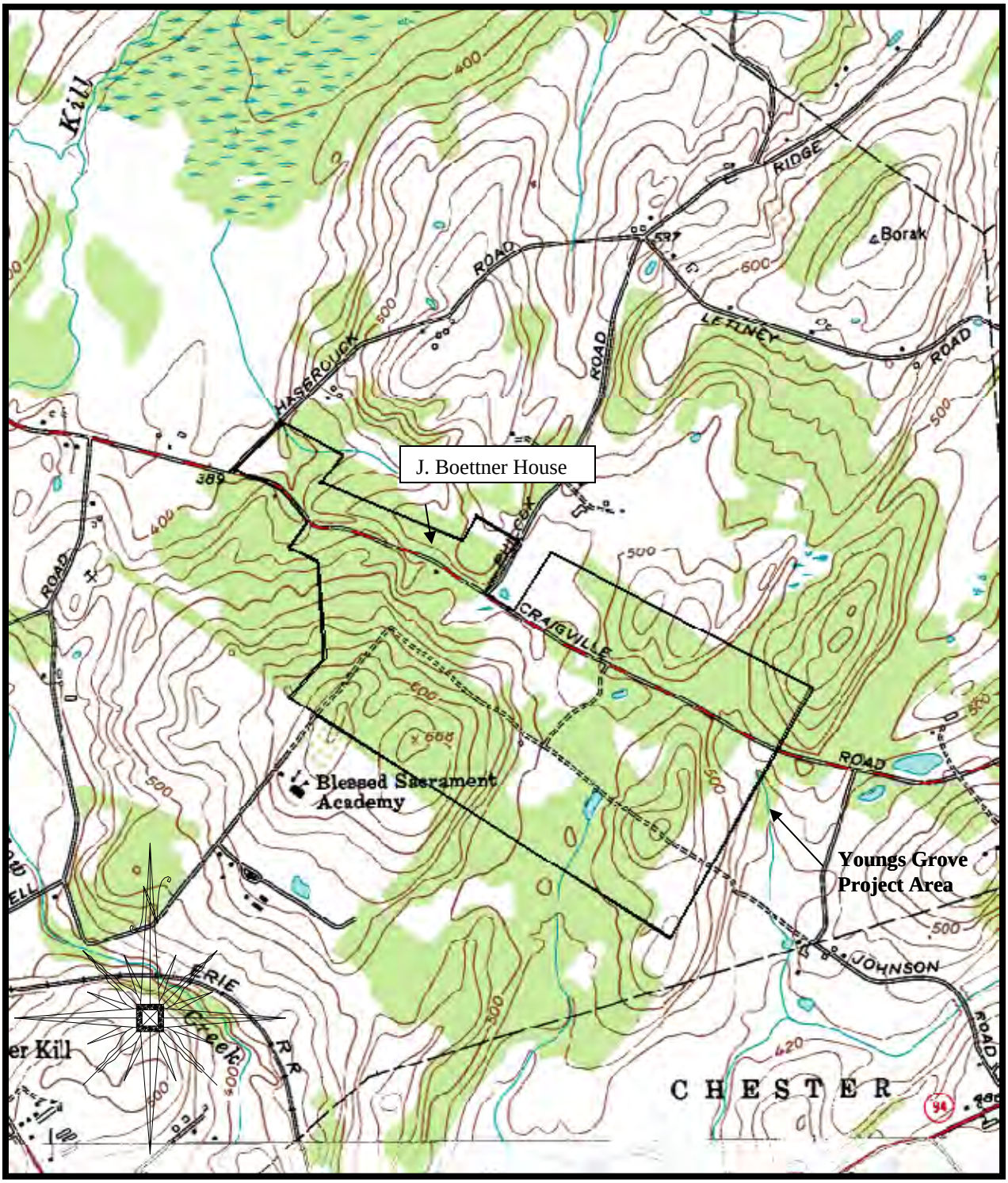
Map 2: Locator Map of the project area. (Source: Rand McNally *Hudsan Valley Street Atlas* 2006). 1 ¼ ”= ½ mile

Figures

Fig. 1: Location Map of Phase 2 Investigations at J.Boettner House site.

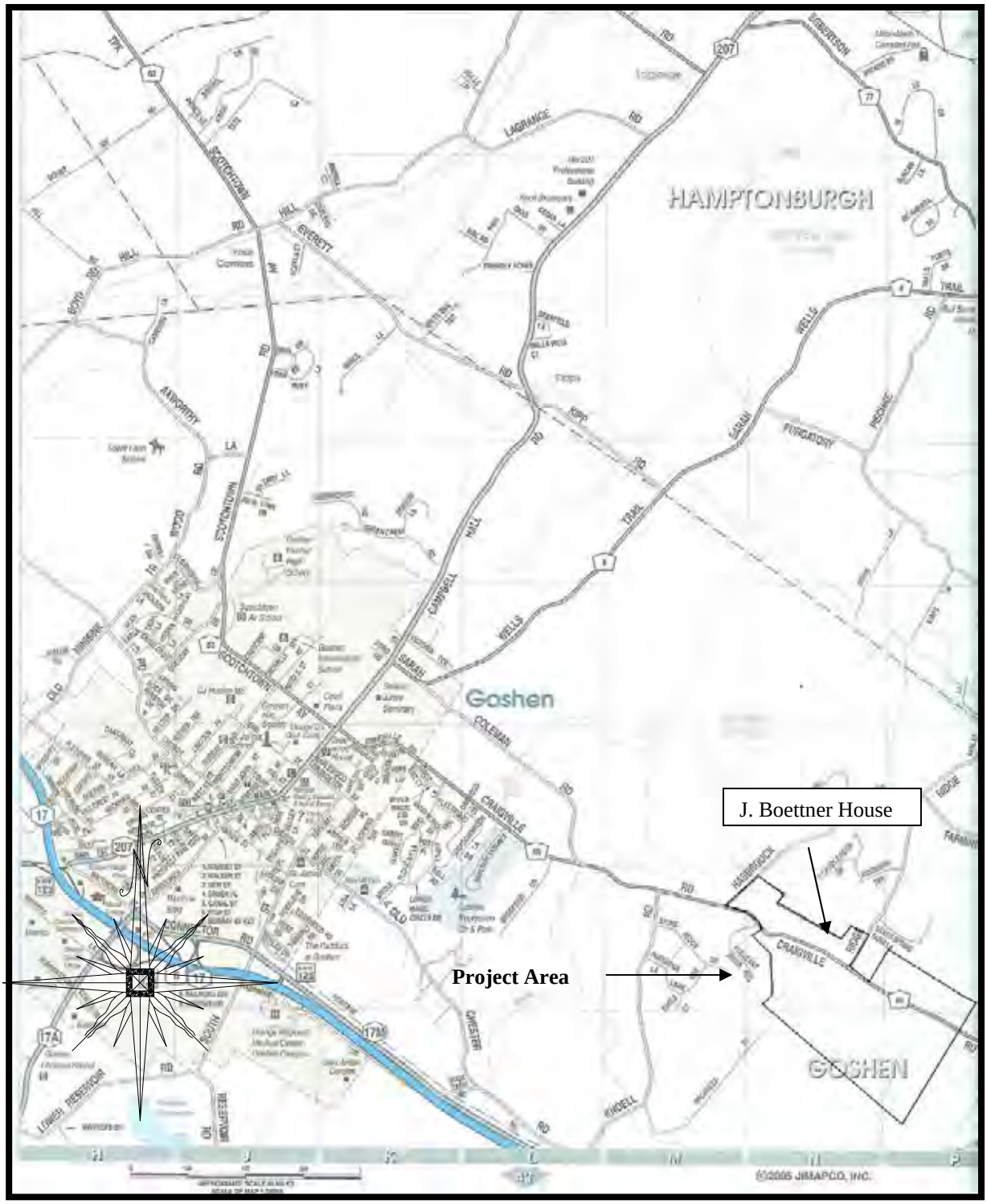
Map 1: 1957 USGS Topographical Map. 7.5 Minute Series. Goshen Quadrangle 1:24,000 Current Scale: 1 ¾"= 3180'

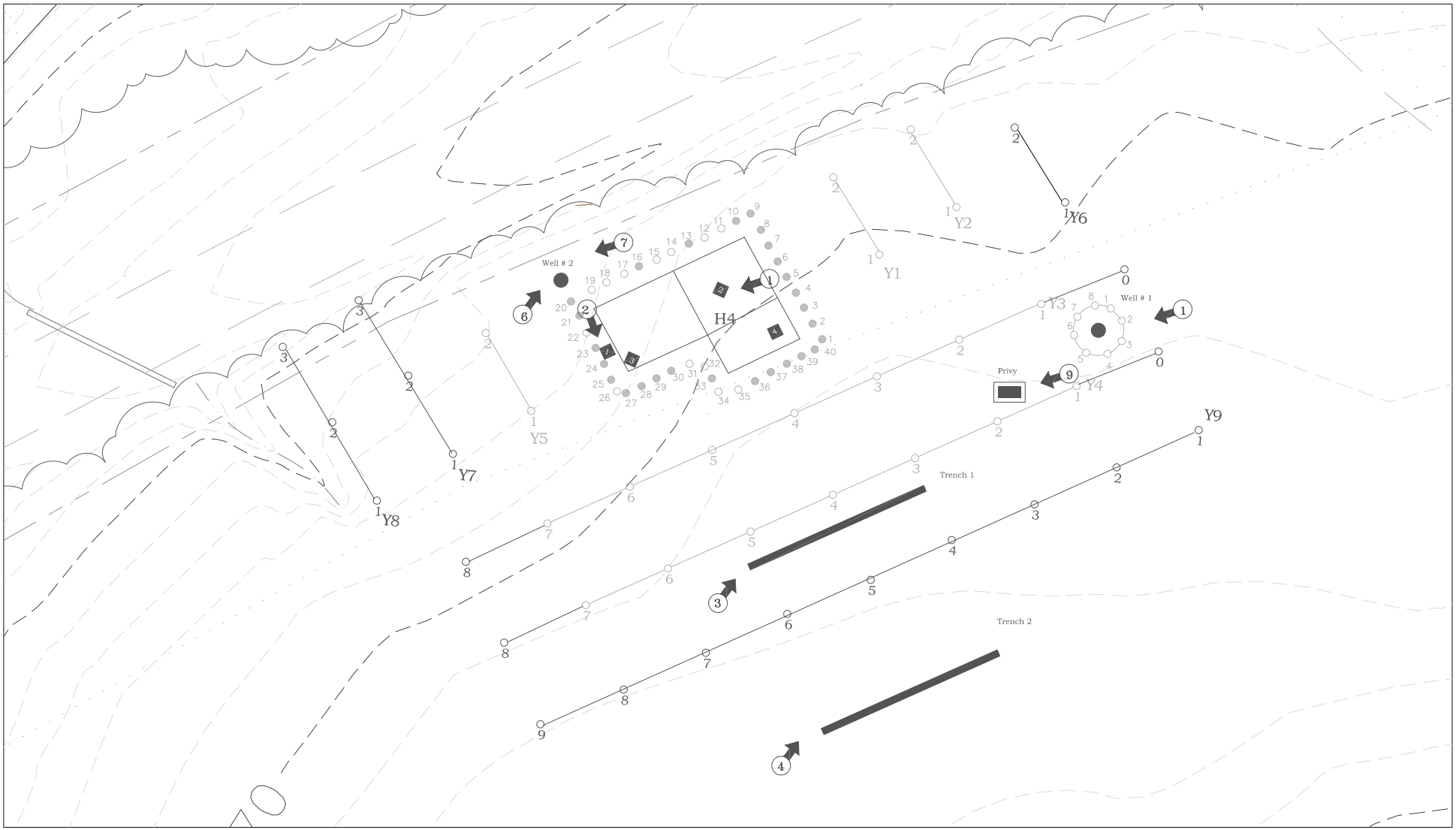
Young's Grove Site (formerly Craigville Site) Craigville & Hasbrouck Roads. Town of Goshen. Orange County, NY



Map 2: Location Map including the Project Area. Taken From Jimapco's Hudson Valley Street Atlas Current Scale: 1"= 3533

Young's Grove Site (formerly Craigville Site). Craigville & Hasbrouck Roads. Town of Goshen. Orange County, NY





CITY/SCAPE Cultural Resource Consultants
166 Hillair Circle, White Plains NY 10605

Figure 1: Young's Grove Historic Complex 4 J. Boettner House Site Phase 2 Archaeological Investigation

LEGEND

ST Phase 1B Shovel Test Location

ST Positive Shovel Test Location

ST Negative Shovel Test Location

GRAPHIC SCALE

40 0 20 40 50 80

(IN FEET)
1 inch = 40 ft.

APPENDIX B

PHOTOGRAPHS

Photo 1: Field crew excavating Unit 2, which was placed in southeast corner of house foundation. View to west.

Photo 2: Field crew excavating Unit 1, which was placed on exterior west wall of house foundation in effort to identify builder's trench. View to south.

Photo 3: Trench 1 was excavated 50' south of house foundation. View to east.

Photo 4: Trench 2 was located 100' south of foundation. View to east.

Photo 5: Mechanical equipment was used to open and excavate shaft features, including Well 1, Well 2 and Privy. View to north.

Photo 6: Well 2 was covered by capstones that were removed to permit examination of feature. View to northeast.

Photo 7: Interior of stone-lined well (Well 2). Well 2 was re-covered upon completion of examination. View to west.

Photo 8: View of interior of Well 1. Stones and debris were mechanically removed from interior. As excavation progressed, pooled water was observed. View to southeast.

Photo 9: Backhoe removed cement slab that covered privy feature. View to west.

Photo 10: Kris Mierisch, crew chief, inspecting privy feature. "Grab" sample was recovered to date closure of feature. View to southwest.

APPENDIX C

SHOVEL TEST RECORDS

Transect	STP	Level	Depth (in)	Depth (cm)	Munsell	Soil Description	Cultural Material
Y 3	0	1	0-7	0-18	10YR5/3	Dk Brn Si Lo	NCM
		2	7-8	18-20	10YR6/3	Y Brn Si Cl, terminated at rock obstruction	NCM
	8	1	0-12	0-30	10YR5/3	Dk Brn Si Lo	NCM
		2	12-16	30-41	10YR6/3	Y Brn Si Cl	NCM
Y4	0	1	0-10	0-25	10YR5/3	Dk Brn Si Lo	NCM
		2	10-14	25-36	10YR6/3	Y Brn Si Cl	NCM
	8	1	0-9	0-23	10YR5/3	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR6/3	Y Brn Si Cl	NCM
Y6	1	1	0-9	0-23	10YR3/2	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR6/3	Y Brn Si Cl	NCM
	2	1	0-8	0-20	10YR3/2	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR6/3	Y Brn Si Cl	NCM
Y7	1	1	0-9	0-23	10YR3/2	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR6/3	Y Brn Si Cl	NCM
	2	1	0-7	0-18	10YR3/2	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR6/3	Y Brn Si Cl	NCM
	3	1	0-8	0-20	10YR3/2	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR6/3	Y Brn Si Cl	NCM
Y8	1	1	0-11	0-28	10YR3/2	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR6/3	Y Brn Si Cl	NCM
	2	1	0-11	0-28	10YR3/2	Dk Brn Si Lo, terminated at rock obstruction	NCM
	3	1	0-6	0-15	10YR6/3	Dk Brn Si Lo, terminated at rock obstruction	NCM
Y9	1	1	0-14	0-35	10YR5/3	Dk Brn Si Lo	NCM
		2	14-15	35-38	10YR6/3	Y Brn Si Cl, terminated at rock obstruction	NCM
	2	1	0-10	0-25	10YR5/3	Dk Brn Si Lo	NCM
		2	10-12	25-30	10YR6/3	Y Brn Si Cl, terminated at rock obstruction	NCM
	3	1	0-14	0-36	10YR5/3	Dk Brn Si Lo	NCM
		2	14-17	36-43	10YR6/3	Y Brn Si Cl	NCM
	4	1	0-9	0-23	10YR5/3	Dk Brn Si Lo	NCM
		2	9-10	23-25	10YR6/3	Y Brn Si Cl, terminated at rock obstruction	NCM
	5	1	0-9	0-23	10YR5/3	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR6/3	Y Brn Si Cl	NCM
	6	1	0-14	0-35	10YR5/3	Dk Brn Si Lo	NCM
		2	14-15	35-38	10YR6/3	Y Brn Si Cl, terminated at rock obstruction	NCM
	7	1	0-8	0-20	10YR5/3	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR6/3	Y Brn Si Cl	NCM
	8	1	0-8	0-20	10YR5/3	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR6/3	Y Brn Si Cl	NCM
	9	1	0-10	0-25	10YR5/3	Dk Brn Si Lo	NCM
		2	10-13	25-33	10YR6/3	Y Brn Si Cl	NCM

APPENDIX D

UNIT RECORDS

EU	Level	Depth (cm)	Depth (in)	Munsell	Soil Description	Cultural Material
1	1	7-20	3-8	10YR3/2	Dk Brn Si Lo	ceramic, glass, metal, plaster, nails
	2	20-30	8-12	10YR3/2	Dk Brn Si Lo	ceramic, glass, metal, shell, nails
	3	30-36	12-14	10YR5/4	Dk Brn Si Lo	ceramic, glass, metal, shell, metal button, nails
	4	36-46	14-18	10YR6/3	Dk Gry Brn Grav Cl	ceramic, glass, metal, shell, bone, nails
	5	46-56	18-22	10YR6/3	Dk Gry Brn Grav Cl	NCM
2	1	2-13	0-5	10YR3/2	Dk Brn Si Lo	glass,metal, nails
	2	13-23	5-9	n/a	Mortar/Ash	glass, metal,shell, nails
	3	23-33	9-13	10YR6/3	Dk Y Brn Si Cl	NCM
3	1	3-10	1-4	10YR3/2	Dk Brn Si Lo	ceramic, metal
	2	10-20	4-8	10YR3/2	Dk Brn Si Lo	ceramic, metal, nails, metal buckle
	3	20-30	8-12	10YR5/4	Lt Y Brn Si Lo	ceramic, glass, shell, bone, nails
	4	30-40	12-16	10YR5/4	Lk Y Brn Si Lo	ceramic, glass, shell, bone, nails
	5	40-50	16-20	10YR6/4	Dk Y Brn Si Cl	NCM
4	1	13-34	5-13	10YR3/2	Dk Brn Si Lo	ceramic, glass, metal, bone
	2	34-45	13-18	10YR3/2	Dk Brn Si Lo	ceramic, glass, metal (not collected : noted only)
	3	45-55	18-22	10YR6/3	Dk Gry Brn Grav Cl	ceramic, glass, metal
	4	55-65	22-26	10YR6/3	Dk Gry Brn Grav Cl	ceramic, glass, metal, faunal
	5	65-75	26-30	10YR6/3	Dk Gry Brn Grav Cl	ceramic, metal, bone
	6	75-90	30-45	10YR6/3	Dk Gry Brn Grav Cl	NCM

APPENDIX E

ARTIFACT CATALOG

Unit	Strat	Level	Count	Material	Type	Color	Design	Interpretation	Age	Comments
1	1	2	3	ceramic	whiteware	white		1 w/partial maker's mark "H"	1830-2000	
1	1	2	3	ceramic	stoneware	buff	Albany slip			
1	1	2	1	ceramic	Rockinghamware	dk brown			1812-1900	
1	1	2	2	ceramic	Ironstone	white			1850-2000	
1	1	2	1	ceramic	porcelain	white				
1	1	2	7	glass	container	clear				
1	1	3	7	glass	container	aqua				
1	1	3	9	glass	container	clear				
1	1	3	2	glass	pressed container	clear				
1	1	3	22	metal	unclear nails			heavily rusted		
1	2	1	2	metal	screws					
1	2	1	1	metal	washer					
1	2	1	5	metal	unidentifiable					
1	2	1	4	ceramic	whiteware	white			1830-2000	
1	2	6	1	ceramic	Ironstone	white			1850-2000	
1	3	1/2	1	ceramic	semi-porcelain	white			1890-200	
1	3	1/2	3	glass	flat/window	clear				
1	3	1/2	8	ceramic	stoneware	buff	Albany slip			
1	3	1/2	1	bone	animal					burned
1	3	1/2	2	shell	clam	white				
1	3	1/2	2	metal	unidentifiable					heavily rusted
1	1/2	4	2	shell	clam	white				
1	1/2	4	1	brick						sample
1	1/2	4	70	metal	cut nails					
1	1/2	4	14	metal	round nails					
1	wall	scrap.	1	ceramic	flowerpot	terracotta				
1	wall	scrap.	1	plaster						

Unit	Strat	Level	Count	Material	Type	Color	Design	Interpretation	Age	Comments
1	wall	scrap.	19	glass	container	clear				
2	3	1/2	13	metal	unidentifiable					heavily rusted
2	3	1/2	18	glass	container	clear				melted
2	3	1/2	3	glass	container	white				melted
2	3	1/2	2	glass	container	aqua				
2	3	1/2	2	ceramic	porcelain	white				
2	3	1/2	1	glass	bottle	clear		BIM		melted
2	4	2	2	plaster						
2	4	2	24	metal	round nails					
2	4	2	1	metal	screw					
2	4	2	88	metal	cut nails					
2	4	2	9	glass	container	clear				
2	4	2	1	glass		aqua				
2	4	2	1	glass	milk	white				melted
2	4	2	28	metal	cut nails					
2	4	2	2	metal	round nails					
2	4	2	5	metal	unidentifiable					heavily rusted
2	4	2	17	metal	round nails					
2	4	2	177	metal	cut nails					heavily rusted
2	4	2	2	glass	container	clear				
2	4	2	4	glass	milk	white		canning jar lid fragment		melted
2	4	2	1	glass	container	amber				
2	4	2	58	metal	cut nails					heavily rusted
2	4	2	3	shell	claim	white				
2	4	2	23	glass	container	clear				
2	4	2	2	glass	container	aqua				
2	4	2	1	glass	milk bottle	clear				

Unit	Strat	Level	Count	Material	Type	Color	Design	Interpretation	Age	Comments
2	4	2	1	glass	container	clear		BIM		
3	1	1	19	glass	container	clear				
3	1	1	5	glass	container	aqua				
3	1	1	1	glass	bottle	olive				
3	1	1	1	glass	broken marble	blue				
3	1	1	11	ceramic	porcelain	white	hand painted floral design			
3	1	1	1	ceramic	whiteware	white			1830-2000	
3	1	1	2	ceramic	porcelain	white	hand painted floral design			
3	1	1	1	metal	unidentifiable					
3	1	1	1	bone	animal					
3	4	2	127	ceramic	porcelain	white	hand painted floral design			
3	4	2	3	glass		clear				melted
3	4	2	114	metal	cut nails					
3	4	2	2	metal	wire/spring					
3	4	2	8	metal	unidentifiable					
3	5	2	230	metal	cut nails					heavily rusted
3	5	2	5	metal	unidentifiable					heavily rusted
3	5	2	1	metal	buckle					
3	5	2	1	metal	strap					
3	5	2	10	metal	furniture spring					
3	5	2	82	ceramic	porcelain	white	hand painted floral design	maker's mark "Hand Painted, Trico, Nagoya-Japan"		
3	5	2	15	metal	unclear nails					heavily rusted
3	5	2	1	metal	bolt					
3	6	2	6	metal	unidentifiable					heavily rusted
4	1	1	19	metal	cut nails					
4	1	1	3	metal	round nails					

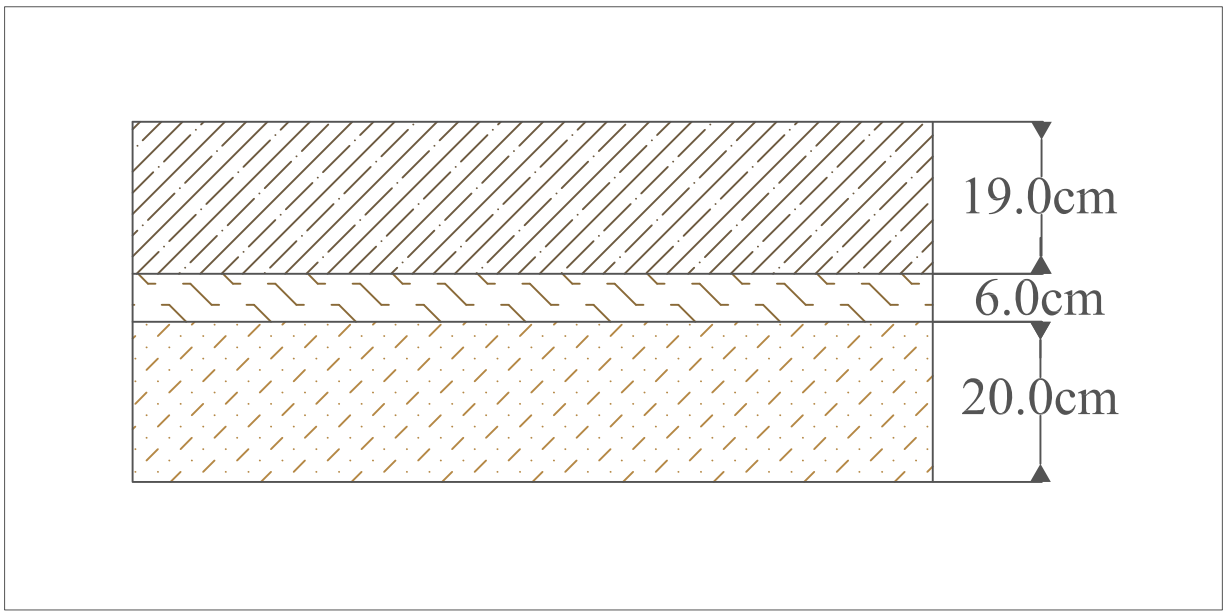
Unit	Strat	Level	Count	Material	Type	Color	Design	Interpretation	Age	Comments
4	1	1	6	metal	metal scrap					
4	1	1	1	metal	bar					
4	1	1	1	metal	furniture spring					
4	1	1	1	metal	door handle					
4	1	1	1	metal	hinge					
4	1	1	16	glass	milk	pink				
4	1	1	6	glass	flat glass	clear				
4	1	1	157	glass	container	clear				
4	1	1	1	glass	bottle	amber				
4	3	1	1	metal	screw					
4	3	1	1	metal	cut nail					
4	3	1	1	glass	container	clear				
4	3	1	1	ceramic	Ironstone	white			1850-2000	
4	3	1	1	metal	round nail					
4	3	2	4	ceramic	Earthenware	yellow			1830-1900	
4	3	2	2	ceramic	whiteware	white			1830-1997	
4	3	2	3	glass	container	clear				
4	3	2	1	glass	flat glass	clear				
4	3	2	2	metal	cut nails					
4	3	2	1	animal	claw					
4	3	3	6	ceramic	Ironstone	white			1850-2000	
4	3	3	2	animal	bone					
4	3	3	1	metal	cut nail					
Privy Sample	1	1	1	glass	molded apothicary jar	clear				
Privy Sample	1	1	3	glass	bottle	clear				

Unit	Strat	Level	Count	Material	Type	Color	Design	Interpretation	Age	Comments
Privy Sample	1	1	1	glass	pressed	clear				
Privy Sample	1	1	1	glass	bottle neck/rim	amber		BIM		
Privy Sample	1	1	1	glass	bottle neck/rim	olive		BIM		
Privy Sample	1	1	1	glass	condiment bottle					
Privy Sample	1/2	2	1	glass	container	clear				
Privy Sample	1/2	2	1	metal	spoon					
Privy Sample	1/2	2	2	metal	enamelware	blue				
Privy Sample	1/2	2	2	metal	bar					

APPENDIX F

UNIT PROFILES

Excavation Unit 1 North Wall Profile



10YR3/2 Dark Grayish Brown Silt Loam

10YR5/4 Dark Yellowish Brown Silt Clay with Mortar

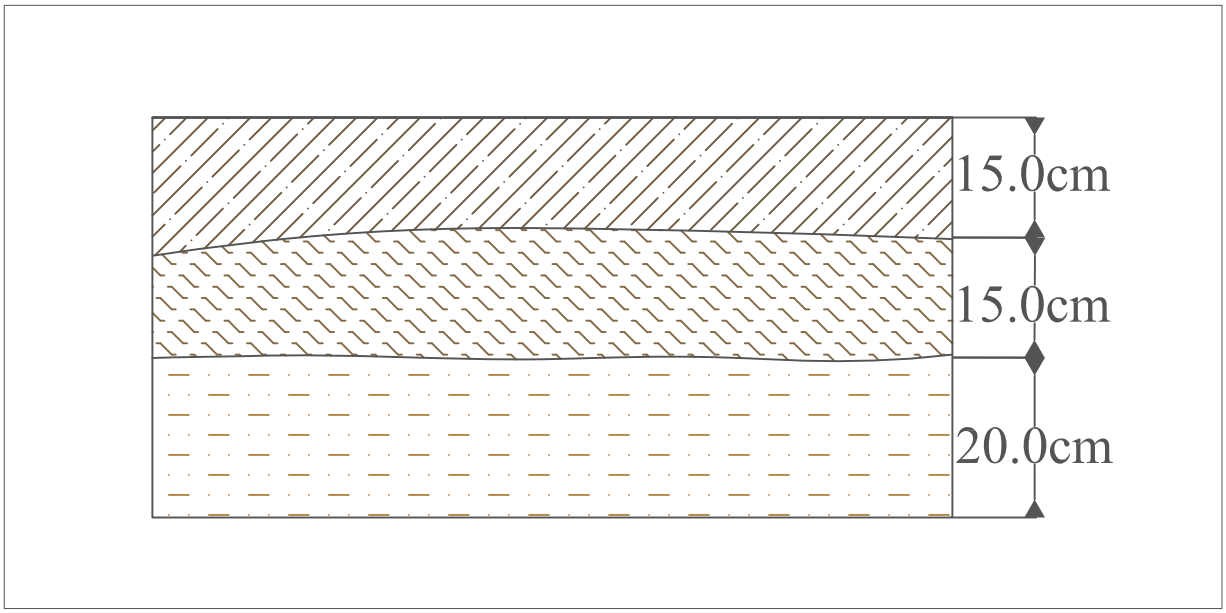
10YR6/4 Yellow Brown Silty Clay

GRAPHIC SCALE

12 0 6 12 24 48

(IN FEET)
1 inch = 2 ft.

Excavation Unit 3 North Wall Profile



10YR3/2 Dark Grayish Brown Silt Loam

10YR5/4 Dark Yellowish Brown Silt Clay with Mortar

10YR6/4 Yellow Brown Silty Clay

GRAPHIC SCALE

12 0 6 12 24 48

(IN FEET)
1 inch = 2 ft.