APPENDIX E
NATURAL RESOURCES

IPaC Trust Resources Report

U.S. Fish & Wildlife Service

Stony Lodge

IPaC Trust Resources Report

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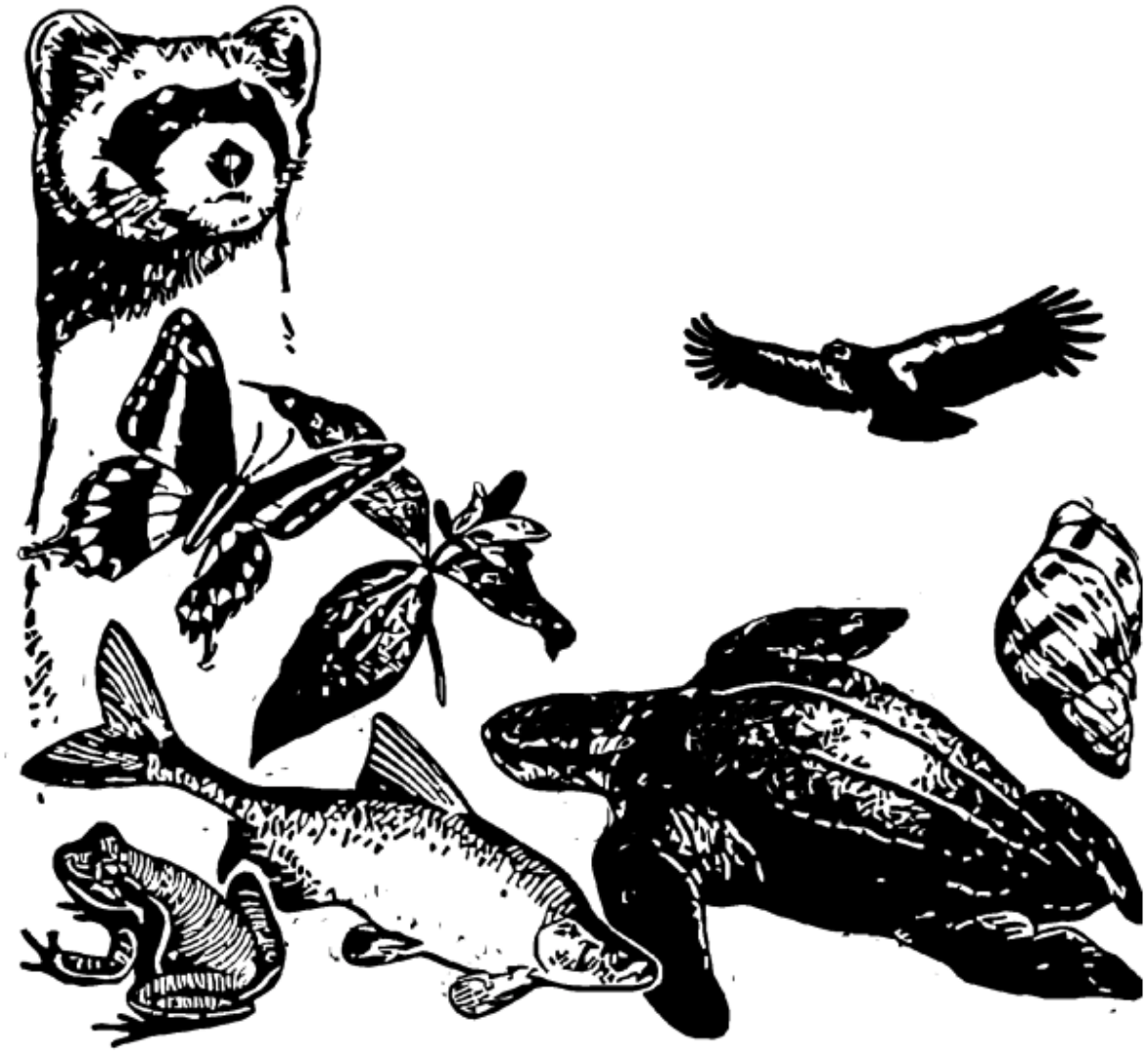
This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

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U.S. Fish & Wildlife Service

IPaC Trust Resources Report

NAME

Stony Lodge

LOCATION

Westchester County, New York

IPAC LINK

https://ecos.fws.gov/ipac/project/ZYGDL-ZADEF-CM7PA-X4FC6-EWZVYQ

U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967
(631) 286-0485

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9349
(607) 753-9334

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

There are no endangered species in this location

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

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1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The following species of migratory birds could potentially be affected by activities in this location:

American Bittern Botaurus lentiginosus — Bird of conservation concern
On Land Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F3

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
On Land Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Black-billed Cuckoo Coccyzus erythropthalmus — Bird of conservation concern
On Land Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HI

Blue-winged Warbler Vermivora pinus — Bird of conservation concern
On Land Season: Breeding

Canada Warbler Wilsonia canadensis — Bird of conservation concern
On Land Season: Breeding

Cerulean Warbler Dendroica cerulea — Bird of conservation concern
On Land Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09I

Fox Sparrow Passerella iliaca — Bird of conservation concern
On Land Season: Wintering

Golden-winged Warbler Vermivora chrysoptera — Bird of conservation concern
On Land Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0G4

Hudsonian Godwit Limosa haemastica — Bird of conservation concern
At Sea Season: Migrating

Kentucky Warbler Oporornis formosus — Bird of conservation concern
On Land Season: Breeding

Least Bittern Ixobrychus exilis
On Land Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B092

Olive-sided Flycatcher Contopus cooperi — Bird of conservation concern
On Land Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0AN

Peregrine Falcon Falco peregrinus — Bird of conservation concern
On Land Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Pied-billed Grebe Podilymbus podiceps — Bird of conservation concern
On Land Season: Year-round

Prairie Warbler Dendroica discolor — Bird of conservation concern
On Land Season: Breeding

Purple Sandpiper Calidris maritima — Bird of conservation concern
On Land Season: Wintering

Rusty Blackbird Euphagus carolinus — Bird of conservation concern
On Land Season: Wintering

Short-eared Owl Asio flammeus — Bird of conservation concern
On Land Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Snowy Egret Egretta thula — Bird of conservation concern
On Land Season: Breeding

Upland Sandpiper Bartramia longicauda — Bird of conservation concern
On Land Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HC

Willow Flycatcher Empidonax traillii — Bird of conservation concern
On Land Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F6

Wood Thrush Hylocichla mustelina — Bird of conservation concern

On Land Season: Breeding

Worm Eating Warbler Helmitheros vermivorum — Bird of conservation concern

On Land Season: Breeding

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands in this location

Natural Heritage Program

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.ny.gov

November 14, 2016

James Nash
AKRF, Inc.
34 South Broadway, Suite 401
White Plains, NY 10601

Re: River Knoll - residential development
Town/City: Ossining. County: Westchester.

Dear James Nash:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at your site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significan natural communities, and other significant habitats maintained in the Natural Heritage database. 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, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Andrea Chaloux

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program

1406

Wetland Delineation

AKRF

Environmental and Planning Consultants

440 Park Avenue South
7th Floor
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

Memorandum

To:	Glenco Ossining, LLC
From:	Jesse Moore, Sarah Bray (AKRF)
Date:	September 17, 2015; *rev 5.4.17*
Re:	River Knoll – Ossining, NY – Wetland Delineation Report and Functional Assessment
cc:	Nannette Bourne, Jim Nash (AKRF)

A. WETLAND DELINEATION (9.17.15)

INTRODUCTION

Glenco Ossining, LLC is evaluating the Stony Lodge Hospital property in Ossining, New York, as the future location of four (4) multi-family residential buildings (see **Figure 1**). AKRF delineated wetlands on the project site on September 14, 2015 to identify wetland areas with the potential to be regulated by the US Army Corps of Engineers (USACE) as waters of the US, and their boundaries. This memorandum outlines the details of the wetland delineation.

The wetland was reexamined in on April 21 2017 to document wetland hydrology conditions for the purpose of completing a functional assessment.

METHODOLOGY

Prior to the wetlands investigation, the New York State Department of Environmental Conservation (NYSDEC) and United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps were reviewed to determine locations of state-mapped or NWI-mapped wetlands on and in the vicinity of the project site. The Natural Resources Conservation Service (NRCS) soils maps were also reviewed to determine soil types within the project site, particularly with respect to soil series identified as hydric soils. An AKRF wetland scientist conducted a wetland delineation of the project on September 14, 2015, using the United States Army Corps of Engineers (USACE) wetland delineation methodology.[1] Methodology pertaining to the three USACE wetland indicators (i.e., hydrology, soils, and hydrophytic

[1] Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Miss; U.S. Army Corps of Engineers. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (version 2.0), ed. J.S. Wakeley, R.W. Lichvar, C.V. Noble, and J.F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

vegetation) is described below. The USACE "Wetland Determination Data Form – Northcentral and Northeast Region" (2012) was used to document the wetlands observed on the project site, and photographs were taken of observed wetland areas.

HYDROLOGY AND SOILS

The hydrology of the site was characterized using aerial photographs, site observations, and an auger to determine soil saturation and/or a high water table. Soils were characterized with the use of an auger and a Munsell Soil Color Chart. During the wetlands assessment, both hydrology and soils observations were made during a period of dry weather.

VEGETATION

The USACE *Northcentral and Northeast 2014 Regional Wetland Plant List* was used to determine the wetland/upland status of the plant identified on the project site. Percent cover was documented in the tree, vine, shrub, and herbaceous strata. A 30-foot (ft) radius plot was established to document percent cover of the tree and vine strata. Within this 30-ft plot, a 15-ft radius plot was established for the measurement of shrubs and saplings. For species in the herbaceous stratum, five 3.28-ft by 3.28-ft square plots were sampled within the 30-ft tree and vine plot and averaged together.

EXISTING CONDITIONS

MAPPING

National Wetlands Inventory-Mapped Wetlands

There are no NWI-mapped wetlands within the Stony Lodge Hospital property (see **Figure 1**).

New York State Department of Environmental Conservation-Mapped Wetlands

There are no NYSDEC-mapped freshwater wetlands within the Stony Lodge Hospital property (see **Figure 2**).

Natural Resources Conservation Service -Mapped Soils

Within the Stony Lodge Hospital property soils are mapped as "ChE – Charlton loam, 25 to 35 percent slopes," "CrC – Charlton-Chatfield complex, rolling, very rocky," "CsD – Chatfield-Charlton complex, hilly, very rocky," "HrF – Hollis-Rock outcrop complex, very steep," and "LcB – Leicester loam, 3 to 8 percent slopes, stony" by NRCS. The NRCS lists one of the series mapped for the Stony Lodge Hospital property as hydric: LcB – Leicester loam, 3 to 8 percent slopes, stony, one of the three parameters that determine whether an area falls under USACE jurisdiction as a wetland.

ONSITE DELINEATION

One wetland (A) was delineated on September 14, 2015 on the Stony Lodge Hospital property (see **Figure 3**).

Wetland A

Wetland A is a relatively small depressional freshwater wetland located along the northeastern boundary of the Stony Lodge Hospital property, at the toe of a slope. It is vegetated with a mixture of herbaceous species (see **Figure 5a**). The soils, hydrology, and hydrophytic vegetation of Wetland A were documented by sampling point "Wetland A", and are described below.

The Data Form for Wetland A depicts the dominant species associated with this sampling point. The species is sweet flag (*Acorus calamus*) (OBL) found in the herbaceous layer.

Soils of this wetland meet the criteria of "F6 Redox Dark Surface." The primary hydrology indicators are "A3 Saturation," which occurs starting at a depth of 0 inches, and "C3 Oxidized Rhizospheres on Living Roots" and the secondary hydrology indicator is "D2 Geomorphic Position," since the elevation of the wetland was in a depression compared to the surrounding area (see Data Form Wetland A).

Upland A

The upland area is located to the west and up-slope from Wetland A. The dominant species associated with the upland area include black locust (*Robinia pseudoacacia*) (FACU), in the tree layer, black walnut (*Juglans nigra*) (FACU) and multiflora rose (*Rosa multiflora*) (FACU) in the sapling/shrub layer, Japanese stiltgrass (*Microstegium vimineum*) (FAC) in the herb layer, and porcelainberry (*Ampelopsis brevipedunculata*) (UPL) in both the herb and woody vine layer. The vegetation, soils, and hydrology of this area do not meet the USACE criteria for a wetland. For these reasons, this area was documented as upland (see Data Form for Upland A).

The uplands throughout the rest of the Stony Lodge Hospital property would be best described according to Edinger et al. (2014) as mowed lawn[2] and successional southern hardwoods[3] ecological communities. The mowed lawn community is dominated by Kentucky bluegrass (*Poa pratensis*), crabgrass (*Digitaria* sp), common plantain (*Plantago major*), English plantain (*Plantago lanceolata*), and red clover (*Trifolium pratense*) in the herbaceous layer. The successional southern hardwoods community is dominated by Norway maple (*Acer platanoides*), black locust, and black walnut in the tree layer; multiflora rose and black locust in the shrub layer; porcelainberry and Asiatic bittersweet (*Celastrus orbiculatus*) in the vine layer; and Japanese stiltgrass and goldenrods (*Solidago* spp) in the herbaceous layer.

SUMMARY

As described above, one vegetated depressional freshwater wetland (A) was identified, as per the USACE wetland delineation methodology, within the Stony Lodge Hospital property. This wetland would be expected to be under the jurisdiction of the USACE. Any disturbance to this wetland would be expected to require Section 401 and 404 permits. Wetland A would require a Jurisdictional Determination site inspection from the USACE to make the determination. AKRF will coordinate with USACE to facilitate the necessary site inspection. Once the wetland/waters boundaries are confirmed by the USACE, they are valid for a period of five (5) years. As federal wetlands only, the USACE and NYSDEC do not regulate a 100 foot adjacent area (buffer) around them.

REGULATORY DISCUSSION

FEDERAL WETLANDS

The onsite wetlands delineated by AKRF meet the definition of "wetlands": "those areas that are inundated or saturated by surface or ground water (hydrology) at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation (hydrophytes) typically adapted for life in saturated soil conditions (hydric soils). Wetlands generally include swamps, marshes, bogs, and similar areas." 40 CFR 232.2(r). Although the onsite wetland meets the federal definition of "wetland" (outlined in the Corps/EPA methodologies), the issue of whether the onsite wetland is subject to jurisdiction under Sections 404/401 of the Clean Water Act is a separate matter requiring review and likely onsite inspection by the Corps. It is AKRF's opinion that the onsite wetland may not meet the "significant nexus" requirement for federal wetland jurisdiction because the wetland does not have a permanent connection to other waters of the U.S., aside from the broken storm drain manhole. Regardless, the proposed site plan would not disturb the wetland or any lands within 100-feet of the wetland. Therefore, no federal jurisdictional determination site inspection is required.

[2] Edinger et al. (2014) define this community as "residential, recreational, or commercial land, or unpaved airport runways in which the groundcover is dominated by clipped grasses and there is less than 30 percent cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50 percent cover. The groundcover is maintained by mowing and broadleaf herbicide application."

[3] Edinger et al. (2014) define this community as "a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed."

TOWN OF OSSINING

The Town of Ossining regulates wetlands and a 100-foot buffer around wetlands in accordance with Ossining Town Code, Chapter 105: Freshwater Wetlands, Watercourses and Water Body Protection. Regulated activities, such as the construction of any structure, filling, and excavation activities within a wetland or a wetland buffer, or any other that may impair the natural wetland functions as described in Town Code Section 105-1C, require a permit from the Town. No jurisdictional determination has been made by the Town at this time.

VILLAGE OF OSSINING

The Village of Ossining has no wetland protection ordinance.

B. WETLAND FUNCTIONAL ASSESSMENT

As discussed below, the onsite wetland serves primarily "modification of groundwater discharge" and "modification of water quality" wetland functions. Wetland functional categories are taken from Hollands and Magee[4], with values rated low/medium/high based on data collected during site inspection (9.14.15 and 4.21.17) and through examination of additional resources, including existing drainage plans, topographic maps, soil maps, and historic maps/aerials of the project site.

HYDROLOGY

The onsite wetland is located in a topographically low area at the southwest corner of the intersection of Grandview Avenue and Narragansett Avenue. Field inspection indicates the wetland receives surface water inputs from a number of drain pipes conveying runoff from adjacent properties to the east and north and from the project site. Drain outlets discharging to the wetland are shown in Figure 7 (photos 5-8). Most notable is the 18-to-24-inch storm drain pipe running beneath the wetland that receives stormwater inputs from catch basins along Grandview Avenue and additional lands to the north. As shown in photo 8, one of the manholes for this pipe is located within the wetland itself and is in disrepair. During site inspection (4.21.17) which occurred the day following ¼-inch of rain in the previous 24 hours, water was observed flowing directly into the broken concrete base of one of the manholes. During rain events, this broken pipe likely serves as a substantial source of surface water inputs to the wetland as well.

Topographic maps indicate that the wetland's drainage area is roughly 10 acres in size, most of which is offsite to the north and east. However, the current extent of development (roads/houses/sewers) surrounding the wetland has substantially modified patterns of surface drainage which may have increased/descreased the size of the wetland's contributory drainage area. Historic maps of the area (circa 1900) show a linear drainage feature running through the current wetland, draining southwards to a larger network of drainageways along Pine Avenue to the south, which eventually discharge to the Hudson River as "Sing Sing Creek" by the Ossining Railroad Station. This drainage network no longer exists. Historic farming/grading of the land and more recent fill and piping of stormwater runoff for residential development have removed all evidence of the original surface drainage features.

The wetland's landscape position in a low valley historically mapped as a surface drainageway and its persistent hydrophytic vegetation, including most importantly sweetflag (*Acorus americanus*) and tussock sedge (*Carex stricta*) both obligate wetland species, indicate that groundwater plays an important role in

[4] "A Rapid Procedure for Assessing Wetland Functional Capacity based on Hydrogeomorphic (HGM) Classification, February 1998" (manual) by Dennis W. Magee with technical contributions from Garrett G. Hollands.

sustaining wetland hydrology. The wetland is underlain by LcB: Leicester loam soils, a "somewhat poorly drained" soil. This too indicates that this wetland is less likely to be the result of recent hydrologic inputs from the surrounding roadway network and more likely to be a long-standing wetland feature.

- *Modification of Groundwater Discharge* – ***medium/high***

  As discussed above, the wetland's landscape position, historic mapping of drainageways, and persistence of obligate wetland plant species indicates this wetland serves groundwater discharge functions. These conditions sustain wetland plants and sustain downstream surface water flows.

- *Modification of Groundwater Recharge* – ***low***

  The presence of the sewer and drain lines mapped beneath the wetland convey surface water rapidly away from this wetland. Although the wetland undoubtedly serves groundwater recharge functions at least seasonally, it is not a primary function.

- *Storm and Floodwater Storage* – ***low/medium***

  Due to its low, depressional landscape position, the onsite wetland serves some stormwater storage functions. However, site inspection indicates there is no sustained flooding (no watermarks or drift lines) and the wetland drains to the existing roadway network storm drain through a broken manhole and likely through preferential pathways (seep) along the outside of these pipes judging by its lack of ponding. Therefore, stormwater storage functions are minimized.

- *Modification of Stream Flow* – ***low***

  The wetland is small in size (1/4 acre) and has no surface outlet. Instead it discharges to the underlying storm drain, dissipates through evapotranspiration, and infiltrates to groundwater during periods of depressed groundwater elevation. As such, its ability to modify downstream flows is limited.

- *Modification of Water Quality* – ***medium***

  The onsite wetland sustains water temporarily during rain events, although this function is limited due to the wetland's small size and outflows to the broken stormdrain manhole within the wetland. Nutrient and sediment removal processes within the wetland and wetland soils add some amount of water quality improvement function beneficial to downstream surface waters.

- *Export of Detritus* – ***low/medium***

  The turnover of senesced vegetation as a source of carbon and nutrients for flora/fauna occupying downstream receiving waters is expected to be minimal. The wetland has no established outlet, only the broken storm drain manhole that effectively drains the wetland during a short period of time after rain events. Therefore export of significant amounts of detrital plant material is not occurring.

FLORA/FAUNA

Examination of wetland and upland plants and animals onsite has occurred on multiple occasions, including the initial wetland delineation effort (9.14.15), a fall season ecological inventory (10.17.16), and a supplemental wetland functional assessment site visit (4.21.17). As discussed in the DEIS, only one amphibian species was noted onsite, the red backed salamander (*Plethodon cinereus)* an upland species found in wooded habitat. Standing water in the wetland occurs sporadically and temporarily during and immediately following rain storms. Water depths and period of inundation in the wetland are not sufficient to provide breeding habitat for any wetland dependent amphibian species and for most aquatic invertebrate species (dragonflies, mosquitos, etc.).

The wetland's lack of trees or shrubs is due to intermittent mowing which is likely undertaken in summer during dry periods. Wetland vegetation is dominated by sweet flag (*Acorus calamus*), with lesser occurrence of sensitive fern (*Osmunda sensibilis*), tussock sedge (*Carex stricta*), and New York Aster (*Symphyotrichum novi-belgii*), and Japanese stilt grass (*Microstegium japonica*).

- *Contribution of Abundance and Diversity of Wetland Vegetation* - ***low***

> As discussed above, wetland vegetation is limited to a few herbaceous species which do not provide significant food, forage, denning or nesting habitat for wetland-dependent wildlife. Nor are any of the species of plants identified within the wetland uncommon or NYS-listed.

- *Contribution of Abundance and Diversity of Wetland Fauna* - ***low***

> As discussed above, the wetland does not retain water for sufficient periods to serve as breeding habitat for wetland-dependent amphibians or aquatic invertebrates. No amphibian egg masses or individual amphibians or other animals were identified in the wetland during the Summer 2015 and Spring 2017 site inspections.

IMPACT ASSESSMENT

The proposed site plan requires no disturbance to the onsite wetland or 100-foot Town-regulated wetland buffer. As such, wetland impacts are avoided. The buffer consists primarily of low-quality maintained lawn habitat with some wooded patches along the periphery of the parcel. These would be preserved. No wetland-dependent vegetation or wildlife would be adversely affected by the proposed site plan.

The wetland's principal functions are "modification of groundwater discharge" and "modification of water quality". Stormwater runoff from onsite and offsite lands contributing hydrology to the wetland will be maintained with the proposed site plan. As discussed, a majority of the wetland's hydrologic budget is supplied by offsite lands, including inputs from the broken storm drain manhole. In addition, its landscape position and persistence of obligate hydrophytic vegetation indicates that groundwater is a primary source of wetland hydrology. None of these hydrologic inputs would be modified by the proposed project. A small portion of the property (drainage area DA-2A on the SWPPP) contributes overland flow to the wetland during larger storm events. Implementation of the onsite stormwater management plan would reduce the size of this drainage area a small amount, by approximately 1.3 acres. This drainage area represents a small fraction of the wetland's overall drainage area. Therefore, the hydrologic budget and wetland hydrology will be sustained in this wetland with the propose site plan. No

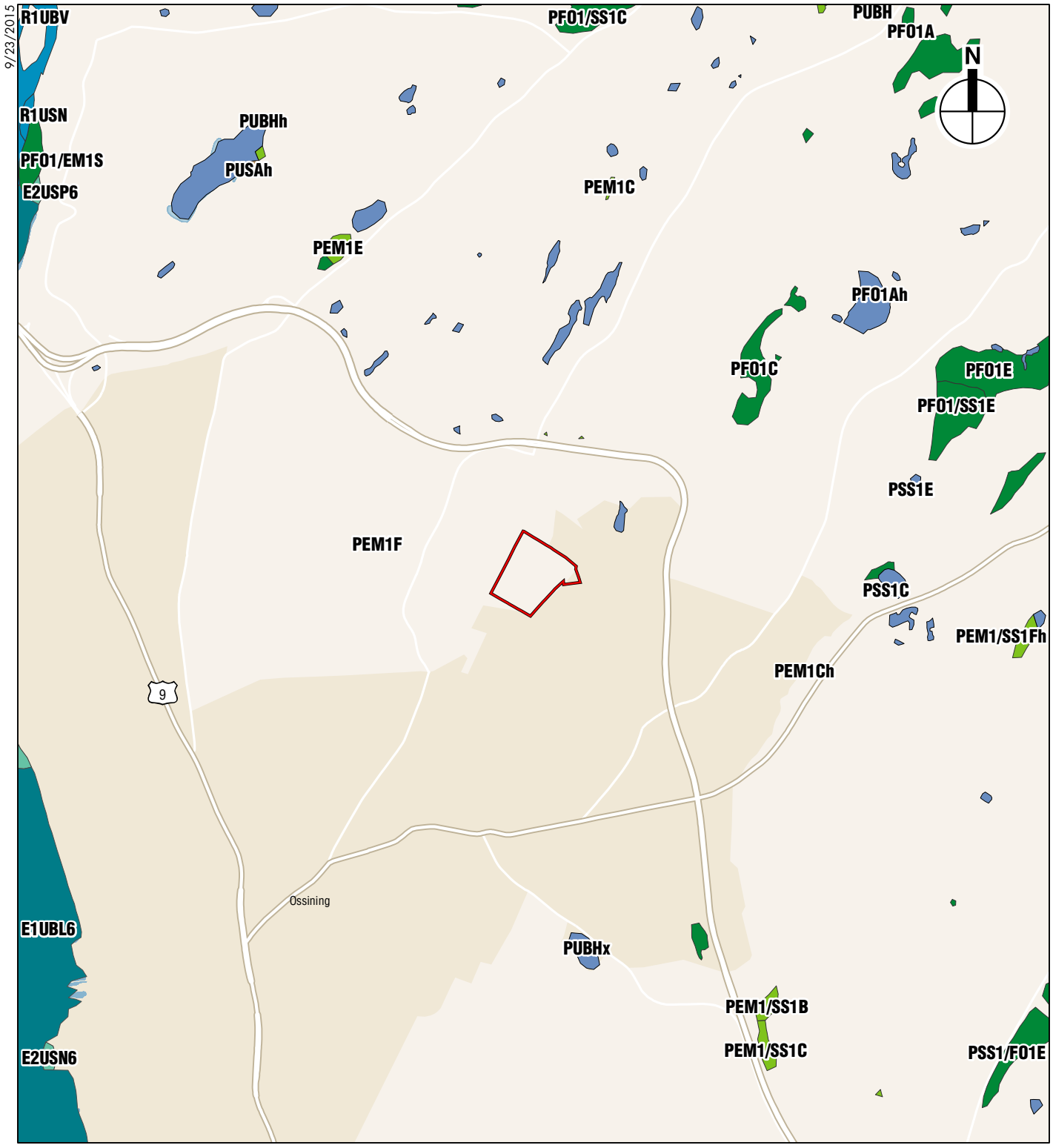
impacts to the groundwater discharge and water quality functions of the wetland will occur under the site plan proposed in the May, 2017 DEIS.

Figures:

1. NWI Wetlands
2. NYSDEC Freshwater Wetlands
3. Surveyed Wetlands
4. Photograph Key
5. Representative Site Photographs
6. Wetland Functional Assessment Photo Key
7. Wetland Functional Assessment Photos

Attachments:

USACE Wetland Determination Data Forms

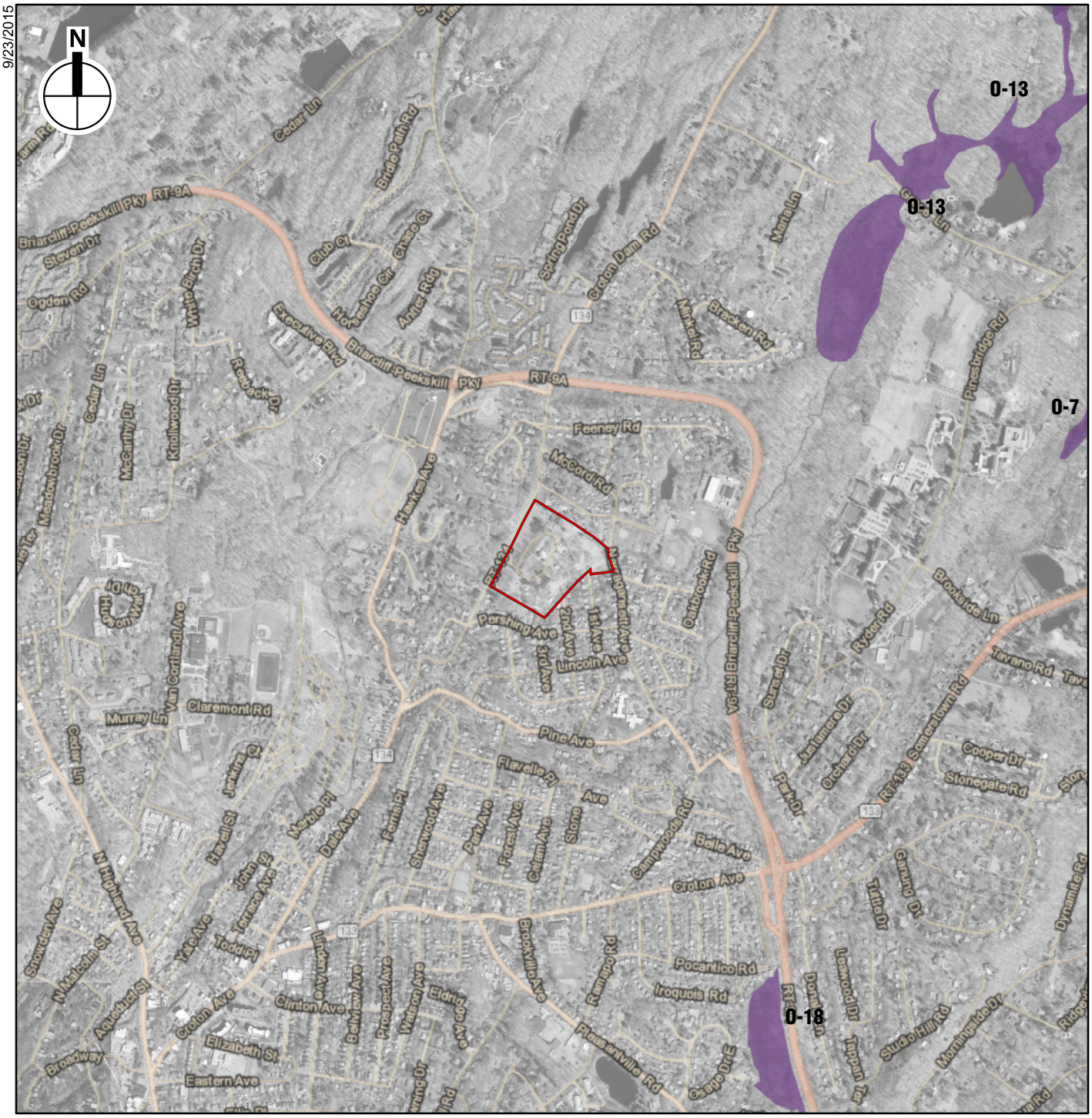


Stony Lodge Hospital

NWI Wetlands

Figure 1

9/23/2015

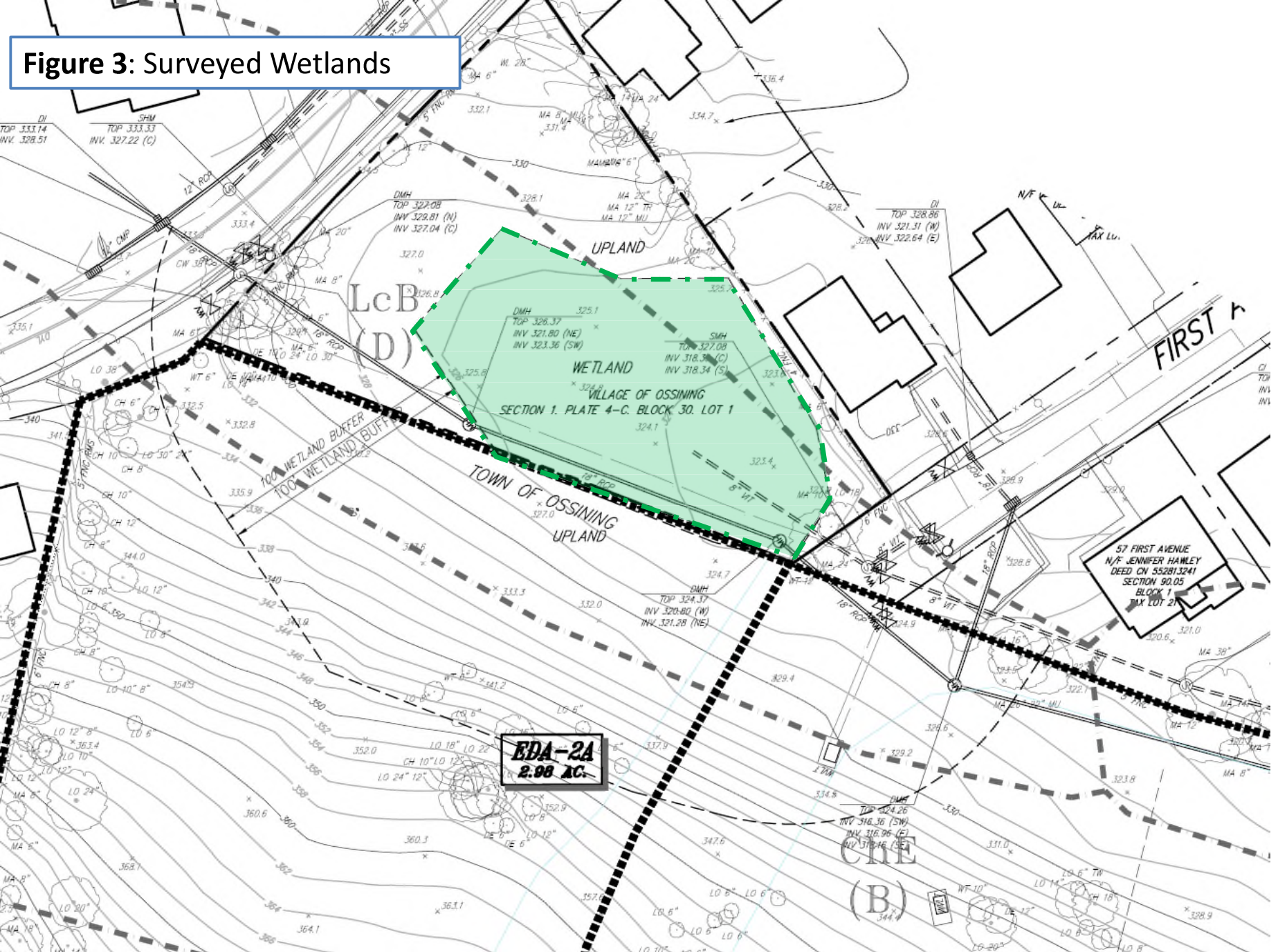


NYSDEC Freshwater Wetlands

Stony Lodge Hospital

Figure 2

Figure 3: Surveyed Wetlands



9/23/2015

Project Site

Photograph View Direction and Reference Number

0 400 FEET

Stony Lodge Hospital

Photograph Key
Figure 4

9.21.15

View of Wetland A, facing north **1**

View of Wetland A and the adjacent upland hillslope, facing northwest **2**

Stony Lodge Hospital

Representative Site Photographs

Figure 5a

View of the southern boundary of Wetland A and the adjacent upland hillslope, facing west **3**

View of Wetland A and the adjacent property, facing east **4**

Representative Site Photographs

Figure 5b

Figure 6: Wetland Functional Assessment - Photo Location Key

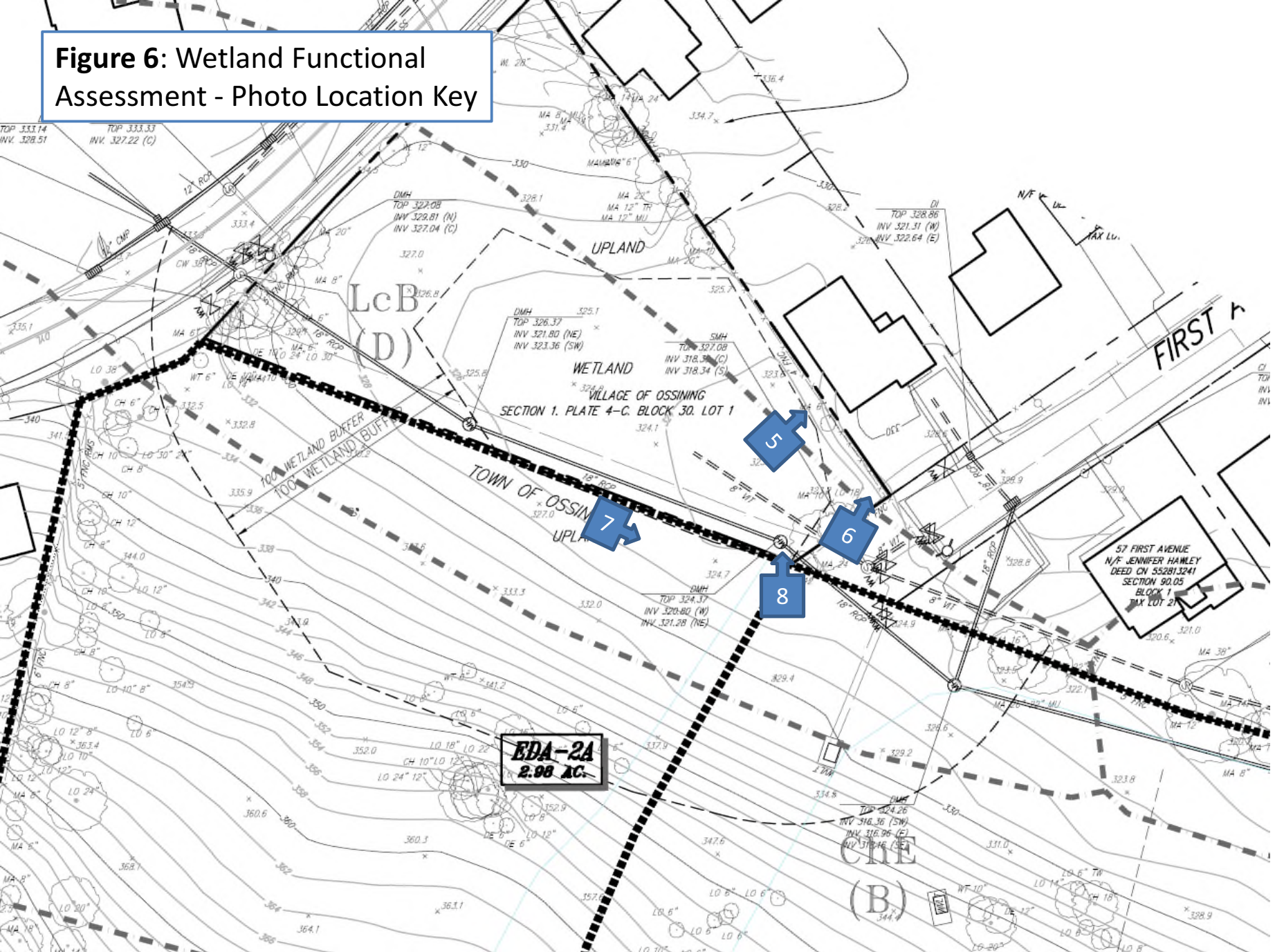


Figure 7: Wetland Functional Photos

Photo 5: Drainage Pipe from Adjacent Property to Wetland (4.21.17)

Photo 7: Drainage Pipe from upslope onsite parcel to Wetland (4.21.17)

Photo 6: Drainage Pipes from Adjacent Property to Wetland (4.21.17)

Photo 8: Broken storm drain within wetland (4.21.17)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Stony Lodge Hospital City/County: Ossining/Westchester Sampling Date: 9/14/15

Applicant/Owner: Glenco Ossining, LLC State: NY Sampling Point: Wetland A

Investigator(s): Jesse Moore Section, Township, Range: Ossining

Landform (hillslope, terrace, etc.): Depression at toe of slope Local relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR R Lat: N 41.177220 Long: W 73.844945 Datum:

Soil Map Unit Name: LcB – Leicester loam, 3 to 8 percent slopes, stony NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):	
Water Table Present?	Yes	No	Depth (inches):	
Saturation Present?	Yes X	No	Depth (inches):	0

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: The soil was saturated at the surface.

VEGETATION – Use scientific names of plants. Sampling Point: Wetland A

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
2.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot Size: 3.28' x 3.28')			
1. *Acorus calamus*	65	Y	OBL
2. *Symphyotrichum novi-belgii*	3	N	FACW
3. *Persicaria sagittata*	1	N	OBL
4.			
5.			
6.			
7.			
8.			
9..			
10.			
11.			
12.			
	69	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by	
OBL species		x1=	
FACW species		x2=	
FAC species		x3=	
FACU species		x4=	
UPL species		x5=	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 – Rapid Test for Hydrophytic Vegetation
- X 2 – Dominance Test is >50%
- ___ 3 – Prevalence Index is #3.0[1]
- ___ 4 – Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: Wetland A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	10YR 2/2	93	5YR 4/6	7	C	PL	Loam	Saturated, fibric organic matter
3-8	10YR 3/1	97	%YR 4/6	3	C	M	Clayey loam	
8-18	10YR 3/1	100					Clayey loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (s7) (**LRR, MLRA, 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR, K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Field Observations:
Type: Saturation
Depth (inches): 0

Hydric Soil Present? **Yes** X **No**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Stony Lodge Hospital City/County: Ossining/Westchester Sampling Date: 9/14/15

Applicant/Owner: Glenco Ossining, LLC State: NY Sampling Point: Upland A

Investigator(s): Jesse Moore Section, Township, Range: Ossining

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): slope Slope (%):

Subregion (LRR or MLRA): LRR R Lat: N 41.177220 Long: W 73.844945 Datum:

Soil Map Unit Name: LcB – Leicester loam, 3 to 8 percent slopes, stony NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	
Hydric Soil Present?	Yes	No	X
Wetland Hydrology Present?	Yes	No	X

Is the Sampled Area within a Wetland? **Yes** **No** X

If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):
Water Table Present?	Yes	No	Depth (inches):
Saturation Present?	Yes	No	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: Upland A

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Robinia pseudoacacia*	8	Y	FACU
2.			
4.			
5.			
6.			
7.			
	8	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
Juglans nigra	15	Y	FACU
2. *Rosa multiflora*	10	Y	FACU
Morus alba	1	N	FACU
4.			
5.			
6.			
7.			
	26	=Total Cover	
Herb Stratum (Plot Size: 3.28' x 3.28')			
1. *Microstegium vimineum*	90	Y	FAC
2. *Ampelopsis brevipedunculata*	40	Y	UPL
3. *Symphyotrichum dumosum*	4	N	FAC
4.			
5.			
6.			
7.			
8.			
9..			
10.			
11.			
12.			
	134	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Ampelopsis brevipedunculata*	40	Y	UPL
2.			
3.			
4.			
	40	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.67 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by	
OBL species		x1=	
FACW species		x2=	
FAC species		x3=	
FACU species		x4=	
UPL species		x5=	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 – Rapid Test for Hydrophytic Vegetation

___ 2 – Dominance Test is >50%

___ 3 – Prevalence Index is #3.0[1]

___ 4 – Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: Upland A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-16	10YR 4/3	100					Loam	
16-18	10YR 4/3	70					Loam	
	10YR 7/6	30						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (s7) (**LRR, MLRA, 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR, K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Field Observations:
Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** **No** X

Remarks:

Table 3D
Vegetation Identified within the Project Area and Study Area

Common Name	Scientific Name	Stratum
Norway spruce	*Picea aibes*	Tree
poison ivy	*Taxicodendron radicans*	Vine
yellow foxtail grass	*Setaria pumila*	Herb
Kentucky bluegrass	*Poa pratensis*	Herb
showy goldenrod	*Solidago speciosa*	Herb
crabgrass	*Digitaria sp.*	Herb
common plantain	*Plantago major*	Herb
English plantain	*Plantago lanceolata*	Herb
Virginia creeper	*Parthenocissus quinquefolia*	Vine
white snakeroot	*Ageratina altissima*	Herb
heart-leaved aster	*Symphyotrichum cordifolium*	Herb
bushy aster	*Symphyotrichum dumosum dumosum*	Herb
Indian strawberry	*Duchesnea indica*	Herb
sugar maple	*Acer saccharum*	Tree
Eastern white pine	*Pinus strobus*	Tree
Eastern red cedar	*Juniperus virginiana*	Tree
common lilac	*Syringa vulgaris*	Shrub
forsythia	*Forsythis sp.*	Shrub
star magnolia	*Magnolia stellata*	Tree
American redbud	*Cercus canadensis*	Tree
Japanese knotweed	*Polygonum cuspidatum*	Herb
dogbane	*Apocynum cannabinum*	Herb
Japanese honeysuckle	*Lonicera japonica*	Vine
Asiatic bittersweet	*Celastrus orbiculatus*	Vine
mugwort	*Artemesia vulgaris*	Herb
Northern Red Oak	*Quercus rubra*	Tree
black birch	*Betula lenta*	Tree
Yellow birch	*Betula sp.*	Tree
black cherry	*Prunus serotina*	Tree
pennsylvania sedge	*Carex pensylvanica*	Herb
eastern hemlock	*Tsuga canadensis*	Tree
hackberry	*Celtis occidentalis*	Tree
pignut hickory	*Carya glabra*	Tree
black locust	*Robinia pseudoacacia*	Tree
Norway maple	*Acer platanoides*	Tree
American hop hornbeam	*Ostrya virginiana*	Tree
Burning bush	*Euonymous alatus*	Shrub
white wood aster	*Eurybia divaricata*	Herb
marginal shield fern	*Dryopteris marginalis*	Herb
Christmas fern	*Polystichum acrostichoides*	Herb
Eastern cottonwood	*Populus deltiodes*	Tree

Table 9-1 (cont'd)
Vegetation Identified within the Project Area and Study Area

black walnut	*Juglans nigra*	Tree
multiflora rose	*Rosa multiflora*	Shrub
Japanese stiltgrass	*Microstegium vimineum*	Herb
orchard grass	*Dactylis glomerata*	Herb
little bluestem	*Schizachyrium scoparium*	Herb
ground cherry	*Physalis sp.*	Herb
wild carrot	*Daucus carrota*	Herb
black raspberry	*Rubus occidentalis*	Shrub
porcelainberry	*Ampelopsis brevipedunculata*	Vine
wine raspberry	*Rubus phoenicolasius*	Vine
umbrella sedge	*Cyperus strigosus*	Herb
white mulberry	*Morus alba*	Tree
sweet flag	*Acorus calamus*	Herb
New York Aster	*Symphyotrichum novi-belgii*	Herb
arrowleaf tearthumb	*Persicaria sagittaria*	Herb
wool grass	*Scirpus cyperinus*	Herb
ground ivy	*Glechoma hederacea*	Herb
Canada goldenrod	*Solidago canadensis*	Herb
blue flag iris	*Iris versicolor*	Herb
Switchgrass	*Panicum virgatum*	Herb
spotted ladies thumb	*Polygonum persicaria*	Herb
beggertick	*bidens sp.*	Herb
burdock	*Arctium sp.*	Herb
sensitive fern	*Onoclea sensibilis*	Herb
Rough bedstraw	*galium sp.*	Herb
wood sorrel	*oxalissp.*	Herb
sasafrass	*Sasafras alba*	Tree
Bamboo	*Bambusa sp.*	Shrub
bull thistle	*Cirsium vulgare*	Herb
tulip tree	*Liriodendron tulipifera*	Tree
sweet cherry	*Prunus avium*	Tree
common mullein	*Verbascum thapsus*	Herb
garlic mustard	*Alliaria petiolata*	Herb

Table 9-1 (cont'd)
Vegetation Identified within the Project Area and Study Area

Tussock sedge	*Carex stricta*	Herb
Jewelweed	*Impatiens*	Herb
Rock polypody	*Polypodium virginianum*	Herb
Purple violet	*Viola sp.*	Herb
White violet	*Viola sp.*	Herb
Wild garlic	*Allium vineale*	Herb
Wild madder	*Galium sp.*	Herb
Scilla	*Scila sp.*	Herb
American beech	*Fagus grandifolia*	Tree
Solomon's seal	*Polygonatum Mill.*	Herb
Common yarrow	*Achillea millefolium*	Herb
Narrowleaf plantain	*Plantago lanceolata*	Herb
Common dandelion	*Taraxicum officinale*	Herb
Leafy spurge	*Euphorbia esula*	Herb

Notes: Boldface type denotes New York state-listed endangered species.
Sources: AKRF, Inc. reconnaissance investigation on June 22, 2016 and April 21, 2017

Table 3D
Birds Documented during the 2000-2005 New York State Breeding Bird Atlas in Block 5955A

Common Name	Scientific Name
Canada Goose	Branta canadensis
Mute Swan	Cygnus olor
Wood Duck	Aix sponsa
Wild Turkey	Meleagris gallopavo
Great Blue Heron	Ardea herodias
Green Heron	Butorides virescens
Turkey Vulture	Cathartes aura
Sharp-shinned Hawk	Accipiter striatus
Cooper's Hawk	Accipiter cooperii
Broad-winged Hawk	Buteo platypterus
Red-tailed Hawk*	Buteo jamaicensis
Killdeer	Charadrius vociferus
Rock Pigeon	Columba livia
Mourning Dove	Zenaida macroura
Yellow-billed Cuckoo	Coccyzus americanus
Eastern Screech-Owl	Megascops asio
Great Horned Owl	Bubo virginianus
Chimney Swift	Chaetura pelagica
Ruby-throated Hummingbird	Archilochus colubris
Red-bellied Woodpecker	Melanerpes carolinus
Downy Woodpecker*	Picoides pubescens
Hairy Woodpecker	Picoides villosus
Northern Flicker*	Colaptes auratus
Eastern Wood-Pewee	Contopus virens
Alder Flycatcher	Empidonax alnorum
Willow Flycatcher	Empidonax traillii
Least Flycatcher	Empidonax minimus
Eastern Phoebe	Sayornis phoebe
Great Crested Flycatcher	Myiarchus crinitus
Eastern Kingbird	Tyrannus tyrannus
Yellow-throated Vireo	Vireo flavifrons
Blue-headed Vireo	Vireo solitarius
Warbling Vireo	Vireo gilvus
Red-eyed Vireo	Vireo olivaceus
Blue Jay*	Cyanocitta cristata
American Crow	Corvus brachyrhynchos
Tree Swallow	Tachycineta bicolor
Northern Rough-winged Swallow	Stelgidopteryx serripennis
Bank Swallow	Riparia riparia
Barn Swallow	Hirundo rustica
Black-capped Chickadee	Poecile atricapillus
Tufted Titmouse*	Baeolophus bicolor

Table 9-2 (cont'd)
2000-2005 NYS Breeding Bird Atlas (Block 5955A)

White-breasted Nuthatch	Sitta carolinensis
Carolina Wren	Thryothorus ludovicianus
House Wren	Troglodytes aedon
Blue-gray Gnatcatcher	Polioptila caerulea
Eastern Bluebird	Sialia sialis
Veery	Catharus fuscescens
Wood Thrush	Hylocichla mustelina
American Robin*	Turdus migratorius
Gray Catbird	Dumetella carolinensis
Northern Mockingbird*	Mimus polyglottos
European Starling*	Sturnus vulgaris
Cedar Waxwing	Bombycilla cedrorum
Blue-winged Warbler	Vermivora pinus
Yellow Warbler	Dendroica petechia
Chestnut-sided Warbler	Dendroica pensylvanica
Prairie Warbler	Dendroica discolor
Black-and-white Warbler	Mniotilta varia
American Redstart	Setophaga ruticilla
Worm-eating Warbler	Helmitheros vermivorum
Ovenbird	Seiurus aurocapilla
Louisiana Waterthrush	Seiurus motacilla
Common Yellowthroat	Geothlypis trichas
Scarlet Tanager	Piranga olivacea
Eastern Towhee	Pipilo erythrophthalmus
Chipping Sparrow*	Spizella passerina
Field Sparrow	Spizella pusilla
Song Sparrow*	Melospiza melodia
Swamp Sparrow	Melospiza georgiana
White-crowned Sparrow**	Zonotrichia leucophrys
White-throated Sparrow**	Zonotrichia albicollis
Northern Cardinal*	Cardinalis cardinalis
Rose-breasted Grosbeak	Pheucticus ludovicianus
Indigo Bunting	Passerina cyanea
Red-winged Blackbird	Agelaius phoeniceus
Common Grackle	Quiscalus quiscula
Brown-headed Cowbird*	Molothrus ater
Orchard Oriole	Icterus spurius
Baltimore Oriole	Icterus galbula
American Goldfinch*	Carduelis tristis
House Finch*	Carpodacus mexicanus
House Sparrow	Passer domesticus

Notes: Boldface denotes state-listed species of special concern.
*Species observed on site
**Species observed on site but not listed as Breeding Bird

Sources: 2000-2005 New York State Breeding Bird Atlas Block 5955A

Table 3D

New York State Herp Atlas Project (1990-1999)

Common Name	Scientific Name
Spotted Salamander	Ambystoma maculatum
Northern Redback Salamander	Plethodon c. cinereus
Northern Two-lined Salamander	Eurycea bislineata
Eastern American Toad	Bufo a. americanus
Fowler's Toad	Bufo fowleri
Northern Spring Peeper	Pseudacris c. crucifer
Bullfrog	Rana catesbeiana
Green Frog	Rana clamitans melanota
Wood Frog	Rana sylvatica
Northern Water Snake	Nerodia s. sipedon
Northern Brown Snake	Storeria d. dekayi
Common Snapping Turtle	Chelydra s. serpentina
Eastern Box Turtle	Terrapene c. carolina
Painted Turtle	Chrysemys picta

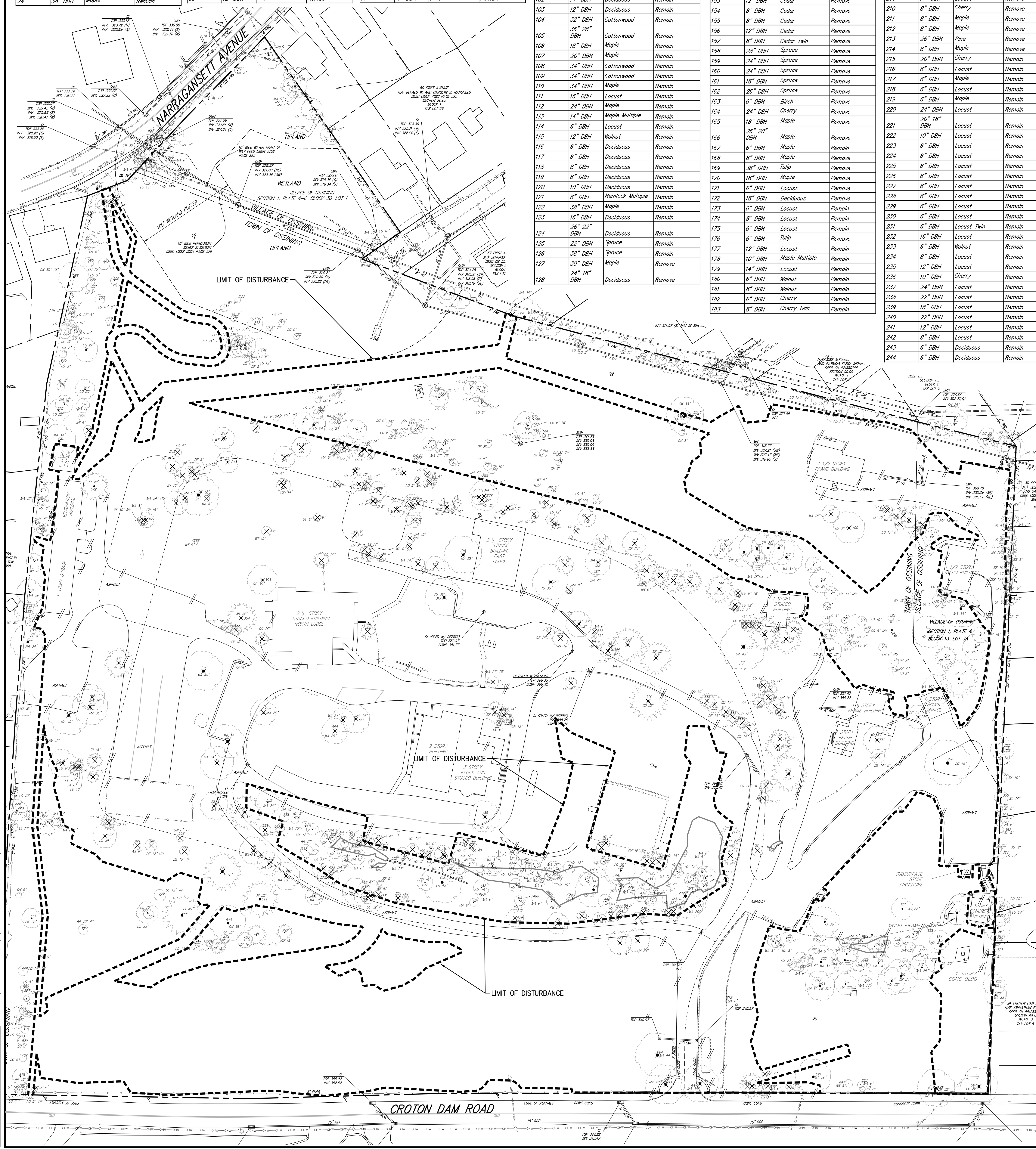
Notes: Boldface denotes state-listed species of special concern.
*Species identified on site

Sources: New York State Herp Atlas Project (1990-1999)

Tree Survey

TREE PRESERVATION PLAN

Tree Number	Size	Common Name	Remain/Remove
1	28" DBH	Willow	Remain
2	8" DBH	Maple	Remain
3	14" DBH	Maple	Remain
4	14" DBH	Maple	Remain
5	24" DBH	Maple	Remain
6	6" DBH	Maple	Remain
7	6" DBH	Maple	Remain
8	6" DBH	Maple	Remain
9	22" DBH	Maple	Remain
10	12" DBH	Maple	Remain
11	12" DBH	Maple	Remain
12	10" DBH	Maple	Remain
13	20" DBH	Maple	Remain
14	6" DBH	Maple	Remain
15	18" DBH	Locust	Remain
16	10" DBH	Maple	Remain
17	24" DBH	Maple	Remain
18	12" DBH	Walnut	Remain
19	12" DBH	Maple	Remain
20	16" DBH	Maple	Remain
21	26" DBH	Maple Multiple	Remain
22	22" DBH	Deciduous	Remain
23	12" DBH	Maple	Remain
24	38" DBH	Maple	Remain
25	14" DBH	Maple	Remain
26	8" DBH	Maple	Remain
27	14" DBH	Maple	Remain
28	24" DBH	Maple	Remain
29	6" DBH	Cherry	Remain
30	6" DBH	Locust	Remain
31	8" DBH	Locust	Remain
32	8" DBH	Locust	Remain
33	26" DBH	Maple	Remain
34	12" DBH	Locust	Remain
35	22" DBH	Locust	Remain
36	6" DBH	Maple	Remain
37	10" DBH	Cherry	Remain
38	8" DBH	Maple	Remain
39	28" DBH	Locust	Remain
40	6" DBH	Maple	Remain
41	14" DBH	Cherry	Remain
42	12" DBH	Cherry	Remain
43	6" DBH	Maple	Remain
44	18" DBH	Locust	Remain
45	14" DBH	Maple	Remain
46	18" DBH	Locust	Remain
47	12" DBH	Cherry	Remain
48	12" DBH	Maple	Remain
49	10" DBH	Maple	Remain
50	12" DBH	Maple	Remain
51	14" DBH	Maple	Remain
52	38" DBH	Cottonwood	Remain
53	16" DBH	Deciduous	Remain
54	6" DBH	Cherry	Remain
55	6" DBH	Cherry	Remain
56	12" DBH	Locust	Remain
57	20" DBH	Locust	Remain
58	24" DBH	Locust	Remain
59	18" DBH	Locust	Remain
60	6" DBH	Cherry	Remain
61	16" DBH	Maple	Remain
62	18" DBH	Maple	Remain
63	24" DBH	Locust	Remain
64	26" DBH	Cherry	Remain
65	22" DBH	Locust	Remain
66	12" DBH	Maple	Remain
68	24" DBH	Locust	Remain
69	24" DBH	Maple	Remain
70	8" DBH	Maple	Remain
71	18" DBH	Maple	Remain
72	24" DBH	Maple	Remain
73	18" DBH	Pine	Remain
74	12" DBH	Maple	Remain
75	8" DBH	Pine	Remain
76	18" DBH	Pine	Remain
77	16" DBH	Pine	Remain
78	16" DBH	Spruce	Remain
79	8" DBH	Spruce	Remain
80	10" DBH	Spruce	Remain
81	10" DBH	Spruce	Remain
82	12" DBH	Spruce	Remain
83	8" DBH	Spruce	Remain
84	6" DBH	Spruce	Remain
85	16" DBH	Maple	Remain
86	6" DBH	Spruce	Remain
87	6" DBH	Spruce	Remain
88	12" DBH	Japanese Maple Twin	Remain
89	14" DBH	Locust	Remain
90	14" DBH	Maple	Remove
91	6" DBH	Locust	Remove
92	10" DBH	Locust	Remove
93	10" DBH	Locust	Remove
94	16" DBH	Cherry	Remove
95	12" 6" DBH	Locust	Remove
96	12" DBH	Maple	Remove
97	6" DBH	Maple	Remove
98	10" DBH	Locust	Remove
99	6" DBH	Locust	Remove
100	32" DBH	Maple	Remove
101	18" 10" DBH	Maple	Remove
102	14" DBH	Deciduous	Remain
103	12" DBH	Deciduous	Remain
104	32" DBH	Cottonwood	Remain
105	36" 28" DBH	Cottonwood	Remain
106	18" DBH	Maple	Remain
107	20" DBH	Maple	Remain
108	34" DBH	Cottonwood	Remain
109	34" DBH	Cottonwood	Remain
110	34" DBH	Maple	Remain
111	16" DBH	Locust	Remain
112	24" DBH	Maple	Remain
113	14" DBH	Maple Multiple	Remain
114	6" DBH	Locust	Remain
115	12" DBH	Walnut	Remain
116	6" DBH	Deciduous	Remain
117	6" DBH	Deciduous	Remain
118	8" DBH	Deciduous	Remain
119	6" DBH	Deciduous	Remain
120	10" DBH	Deciduous	Remain
121	6" DBH	Hemlock Multiple	Remain
122	38" DBH	Maple	Remain
123	16" DBH	Deciduous	Remain
124	26" 22" DBH	Deciduous	Remain
125	22" DBH	Spruce	Remain
126	38" DBH	Spruce	Remain
127	30" DBH	Maple	Remove
128	24" 18" DBH	Deciduous	Remove
129	6" DBH	Locust	Remain
130	6" DBH	Deciduous	Remain
131	8" DBH	Deciduous	Remain
132	8" DBH	Birch Multiple	Remain
133	32" 30" DBH	Maple	Remain
134	6" DBH	Walnut	Remain
135	6" DBH	Cedar Multiple	Remain
136	10" DBH	Locust	Remain
137	6" DBH	Locust	Remain
138	6" DBH	Maple	Remain
139	6" DBH	Maple	Remain
140	8" DBH	Deciduous	Remain
141	6" DBH	Locust	Remain
142	8" DBH	Deciduous	Remain
143	8" DBH	Locust	Remain
144	6" DBH	Locust	Remain
145	16" DBH	Deciduous	Remain
146	24" 22" 12"DBH	Locust	Remain
147	18" DBH	Cedar	Remove
148	30" DBH	Spruce	Remove
149	32" DBH	Spruce	Remove
150	46" DBH	Oak	Remove
151	10" DBH	Cedar	Remove
152	6" DBH	Cedar	Remove
153	12" DBH	Cedar	Remove
154	8" DBH	Cedar	Remove
155	8" DBH	Cedar	Remove
156	12" DBH	Cedar	Remove
157	8" DBH	Cedar Twin	Remove
158	28" DBH	Spruce	Remove
159	24" DBH	Spruce	Remove
160	24" DBH	Spruce	Remove
161	18" DBH	Spruce	Remove
162	26" DBH	Spruce	Remove
163	6" DBH	Birch	Remove
164	24" DBH	Cherry	Remove
165	18" DBH	Maple	Remove
166	26" 20" DBH	Maple	Remove
167	6" DBH	Maple	Remain
168	8" DBH	Maple	Remove
169	36" DBH	Tulip	Remove
170	18" DBH	Maple	Remove
171	6" DBH	Locust	Remove
172	18" DBH	Deciduous	Remove
173	6" DBH	Locust	Remain
174	8" DBH	Locust	Remain
175	6" DBH	Locust	Remain
176	6" DBH	Tulip	Remove
177	12" DBH	Locust	Remain
178	10" DBH	Maple Multiple	Remain
179	14" DBH	Locust	Remain
180	6" DBH	Walnut	Remain
181	8" DBH	Walnut	Remain
182	6" DBH	Cherry	Remain
183	8" DBH	Cherry Twin	Remain
184	8" DBH	Cherry	Remain
185	8" DBH	Locust	Remain
186	6" DBH	Locust	Remain
187	6" DBH	Deciduous Twin	Remain
188	8" DBH	Locust	Remain
189	28" DBH	Walnut	Remain
190	8" DBH	Locust	Remain
191	8" DBH	Deciduous	Remain
192	8" DBH	Locust	Remain
193	8" DBH	Locust	Remain
194	6" DBH	Locust	Remain
195	18" DBH	Cherry	Remain
196	6" DBH	Locust	Remain
197	14" DBH	Locust	Remain
198	10" DBH	Walnut	Remain
199	12" DBH	Deciduous	Remain
200	20" DBH	Locust	Remain
201	12" DBH	Cherry	Remain
202	10" DBH	Deciduous	Remain
203	16" DBH	Cherry	Remain
204	6" DBH	Locust	Remain
205	6" DBH	Locust	Remain
206	6" DBH	Deciduous	Remain
207	6" DBH	Locust	Remain
208	10" DBH	Locust	Remove
209	14" DBH	Locust	Remove
210	8" DBH	Cherry	Remove
211	8" DBH	Maple	Remove
212	8" DBH	Maple	Remove
213	26" DBH	Pine	Remove
214	8" DBH	Maple	Remove
215	20" DBH	Cherry	Remain
216	6" DBH	Locust	Remain
217	6" DBH	Maple	Remain
218	6" DBH	Locust	Remain
219	6" DBH	Maple	Remain
220	24" DBH	Locust	Remain
221	20" 18" DBH	Locust	Remain
222	10" DBH	Locust	Remain
223	6" DBH	Locust	Remain
224	6" DBH	Locust	Remain
225	6" DBH	Locust	Remain
226	6" DBH	Locust	Remain
227	6" DBH	Locust	Remain
228	6" DBH	Locust	Remain
229	6" DBH	Locust	Remain
230	6" DBH	Locust	Remain
231	6" DBH	Locust Twin	Remain
232	16" DBH	Locust	Remain
233	6" DBH	Walnut	Remain
234	8" DBH	Locust	Remain
235	12" DBH	Locust	Remain
236	10" DBH	Cherry	Remain
237	24" DBH	Locust	Remain
238	22" DBH	Locust	Remain
239	18" DBH	Locust	Remain
240	22" DBH	Locust	Remain
241	12" DBH	Locust	Remain
242	8" DBH	Locust	Remain
243	6" DBH	Deciduous	Remain
244	6" DBH	Deciduous	Remain
245	6" DBH	Locust	Remain
246	8" DBH	Cherry	Remove
247	22" DBH	Walnut	Remove
248	22" DBH	Walnut	Remove
249	8" DBH	Locust	Remove
250	14" DBH	Deciduous	Remove
251	22" DBH	Deciduous	Remove
252	6" DBH	Deciduous	Remove
253	16" DBH	Walnut	Remove
254	10" DBH	Locust	Remove
255	24" DBH	Maple Multiple	Remove
256	6" DBH	Maple	Remove
257	42" DBH	Cottonwood	Remove
258	6" DBH	Maple	Remove
259	14" DBH	Tree of Heaven	Remove
260	8" DBH	Tree of Heaven	Remove
261	22" DBH	Walnut	Remove
262	20" DBH	Ash	Remove
263	8" DBH	Cherry	Remove
264	6" DBH	Maple	Remove
265	14" DBH	Cherry	Remove
266	10" DBH	Locust	Remove
267	10" DBH	Locust	Remove
268	18" DBH	Locust	Remove
269	8" DBH	Locust	Remove
270	8" DBH	Locust	Remove
271	16" DBH	Maple	Remove
272	16" DBH	Locust	Remove
273	10" DBH	Maple	Remove
274	22" DBH	Locust	Remove
275	6" DBH	Maple	Remove
276	6" DBH	Maple	Remove
277	6" DBH	Cherry	Remain
278	6" DBH	Locust Multiple	Remove
279	6" DBH	Locust	Remove
280	6" DBH	Maple	Remove
281	12" DBH	Locust	Remove
282	14" DBH	Locust	Remain
283	12" DBH	Maple Twin	Remain
284	14" DBH	Cherry	Remain
285	8" DBH	Cherry	Remain
286	8" DBH	Cherry	Remain
287	10" DBH	Cherry	Remain
288	6" DBH	Maple	Remain
289	30" DBH	Maple	Remove
290	16" DBH	Maple	Remove
291	8" DBH	Maple	Remove
292	10" DBH	Maple	Remove
293	8" DBH	Maple	Remove
294	10" DBH	Maple	Remove
295	6" DBH	Maple	Remove
296	8" DBH	Locust	Remove
297	8" DBH	Deciduous Multiple	Remove
298	10" DBH	Walnut	Remove
299	6" DBH	Walnut	Remain
300	16" DBH	Cherry	Remove
301	10" DBH	Maple	Remove
302	8" DBH	Deciduous Multiple	Remove
303	30" DBH	Deciduous	Remove
304	30" DBH	Spruce	Remove
305	12" DBH	Cedar Twin	Remove
306	12" DBH	Cedar	Remove
307	14" DBH	Cedar	Remove
308	16" DBH	Spruce	Remove
309	16" DBH	Cedar	Remove
310	8" DBH	Maple	Remove
311	14" DBH	Ash	Remove
312	12" DBH	Maple	Remove
313	10" DBH	Maple	Remove
314	14" DBH	Maple	Remove
315	20" DBH	Maple	Remove
316	38" DBH	Maple	Remove
317	38" DBH	Tulip	Remove
318	12" DBH	Maple Twin	Remove
319	12" DBH	Deciduous	Remove
320	16" DBH	Maple	Remove
321	26" 20" DBH	Deciduous	Remove
322	6" DBH	Maple	Remove
323	6" DBH	Maple	Remove
324	18" DBH	Maple	Remove
325	16" DBH	Deciduous	Remove
326	6" DBH	Maple	Remain
327	34" DBH	Spruce	Remove
328	32" DBH	Spruce	Remove
329	22" DBH	Spruce	Remove
330	14" DBH	Spruce	Remove
331	6" DBH	Cedar	Remove
332	12" DBH	Spruce	Remove
333	12" DBH	Deciduous Triple	Remove
334	38" DBH	Cedar	Remove
335	16" DBH	Cedar	Remove
336	18" DBH	Deciduous	Remove
337	12" DBH	Cedar	Remove
338	14" DBH	Cedar	Remove
339	12" DBH	Cedar	Remove
340	14" DBH	Cedar	Remove
341	12" DBH	Cedar	Remove
342	14" DBH	Cedar Twin	Remove
343	36" DBH	Pine	Remove
344	26" DBH	Pine	Remove
345	20" DBH	Pine	Remove
346	8" DBH	Cedar	Remove
347	18" DBH	Hemlock	Remove
348	12" DBH	Cedar	Remove
349	14" DBH	Cedar	Remove
350	12" DBH	Cedar	Remove
351	14" DBH	Cedar	Remove
352	28" DBH	Maple	Remove
353	14" 8" DBH	Deciduous	Remove
354	48" DBH	Locust	Remain
355	24" DBH	Locust	Remain
356	12" DBH	Maple	Remain
357	11" DBH	Sassafras	Remain
358	14" DBH	Sassafras	Remain
359	6" DBH	Sassafras	Remain
360	6" DBH	Sassafras	Remain
361	6" DBH	Sassafras	Remain
362	6" DBH	Sassafras	Remain
363	6" DBH	Sassafras	Remain
364	12" DBH	Sassafras	Remain
365	20" DBH	Locust	Remain
366	22" DBH	Maple	Remain
367	24" DBH	Locust	Remain
368	26" DBH	Locust	Remain
369	12" DBH	Maple	Remain
370	6" DBH	Walnut	Remain
371	24" DBH	Maple	Remain
372	22" DBH	Ash	Remain
373	6" DBH	Maple	Remain
374	20" DBH	Maple	Remain
375	20" DBH	Birch	Remain
376	26" DBH	Maple	Remain
377	16" DBH	Maple	Remain
378	10" DBH	Maple	Remain
379	10" DBH	Maple	Remain
380	10" DBH	Maple	Remain
381	12" DBH	Maple	Remain
382	34" DBH	Oak	Remain
383	28" DBH	Maple	Remain
384	24" DBH	Oak	Remain
385	10" DBH	Maple	Remain
386	12" DBH	Maple	Remain
387	14" DBH	Maple	Remain
388	10" DBH	Maple	Remain
389	14" DBH	Mape	Remain
390	22" DBH	Maple	Remain
391	6" DBH	Maple	Remain
392	28" DBH	Pine	Remain
393	22" DBH	Oak	Remain
394	10" DBH	Hickory	Remain
395	6" DBH	Maple Twin	Remain
396	10" DBH	Hickory	Remain
397	30" DBH	Hickory	Remain
398	8" DBH	Maple	Remain
399	6" DBH	Maple	Remain
400	34" DBH	Maple	Remain
401	6" DBH	Maple	Remain
402	8" DBH	Maple	Remain
403	30" DBH	Oak	Remain
404	16" DBH	Birch	Remain
405	6" DBH	Maple	Remain
406	12" DBH	Birch	Remain
407	8" DBH	Maple	Remain
408	12" DBH	Maple	Remain
409	6" DBH	Maple	Remain
410	8" DBH	Maple	Remain
411	12" DBH	Maple	Remain
412	6" DBH	Maple	Remain
413	12" DBH	Maple	Remove
414	22" DBH	Pine	Remain
415	20" DBH	Pine	Remove
416	12" DBH	Pine	Remain
417	8" DBH	Maple	Remain
418	6" DBH	Maple	Remain
419	24" DBH	Oak	Remain
420	12" DBH	Oak	Remain
421	20" DBH	Maple	Remove
422	8" DBH	Maple	Remove
423	16" DBH	Maple	Remove
424	12" DBH	Maple	Remain
425	10" DBH	Maple	Remain
426	48" DBH	Oak	Remain
427	12" DBH	Maple	Remain
428	14" DBH	Maple	Remain
429	12" DBH	Maple	Remain
430	10" DBH	Maple	Remain
431	6" DBH	Maple	Remain
432	18" DBH	Maple	Remove
433	24" DBH	Pine	Remove
434	12" DBH	Maple Twin	Remove
435	18" DBH	Maple	Remain
436	6" DBH	Maple	Remain
437	12" DBH	Maple	Remain
438	14" DBH	Maple	Remain
439	6" DBH	Maple	Remove
440	10" DBH	Maple	Remove
441	24" DBH	Maple	Remove
442	24" DBH	Maple	Remove
443	6" DBH	Maple	Remain
444	6" DBH	Maple	Remain
445	6" DBH	Maple	Remove
446	12" DBH	Maple	Remove
447	14" DBH	Maple	Remove
448	14" DBH	Maple	Remain
449	12" DBH	Maple	Remain
450	10" DBH	Maple	Remain
451	6" DBH	Maple	Remain
452	30" DBH	Locust	Remain
453	8" DBH	Maple	Remove
454	10" DBH	Locust	Remove
455	6" DBH	Birch	Remain
456	6" DBH	Birch Twin	Remain
457	36" DBH	Oak	Remain
458	10" DBH	Maple	Remove
459	14" DBH	Maple	Remain
460	12" DBH	Maple	Remain
461	18" DBH	Maple	Remain
462	14" DBH	Maple	Remain
463	10" DBH	Birch	Remain
464	10" DBH	Maple	Remain
465	8" DBH	Hickory	Remain
466	10" DBH	Elm	Remain
467	22" DBH	Birch	Remove
468	6" DBH	Maple	Remain
469	6" DBH	Maple	Remain
470	6" DBH	Maple	Remain
471	12" DBH	Maple	Remain
472	8" DBH	Maple	Remain
473	18" DBH	Maple	Remain
474	12" DBH	Maple Triple	Remain
475	12" DBH	Maple	Remain
476	14" DBH	Maple	Remain
477	10" DBH	Maple	Remain
478	6" DBH	Maple	Remain
479	18" DBH	Maple	Remove
480	20" DBH	Birch	Remain
481	8" DBH	Maple	Remain
482	16" DBH	Maple	Remain
483	6" DBH	Maple	Remain
484	8" DBH	Maple	Remain
485	8" DBH	Elm	Remain
486	32" DBH	Chestnut	Remove
487	6" DBH	Cedar	Remove
488	6" DBH	Cedar	Remain
489	14" DBH	Maple	Remain
490	12" DBH	Maple	Remain
491	24" DBH	Maple	Remain
492	10" DBH	Maple	Remain
493	6" DBH	Maple	Remain
494	6" DBH	Maple	Remove
495	18" DBH	Maple	Remove
496	42" DBH	Oak	Remain
497	16" DBH	Birch	Remain
498	6" DBH	Maple Twin	Remove
499	8" DBH	Maple	Remove
500	12" DBH	Maple	Remove
501	12" DBH	Oak	Remove
502	10" DBH	Maple	Remain
503	6" DBH	Beech	Remove
504	6" DBH	Beech	Remove
505	6" DBH	Beech	Remain
506	8" DBH	Beech	Remove
507	32" DBH	Beech	Remove
508	14" DBH	Beech	Remove
509	6" DBH	Beech	Remove
510	28" DBH	Maple	Remove
511	6" DBH	Maple	Remain
512	8" DBH	Maple	Remove
513	8" DBH	Maple	Remove
514	12" DBH	Maple	Remove
515	6" DBH	Maple	Remove
516	6" DBH	Maple	Remove
517	18" DBH	Maple	Remain
518	6" DBH	Maple	Remain
519	8" DBH	Maple	Remain
520	6" DBH	Maple	Remain
521	6" DBH	Maple	Remain
522	6" DBH	Maple	Remove
523	22" DBH	Locust	Remove
524	18" DBH	Maple	Remove
525	22" DBH	Locust	Remove
526	14" DBH	Maple	Remain
527	8" DBH	Maple	Remain
528	6" DBH	Maple	Remain
529	16" DBH	Oak	Remain
530	6" DBH	Elm	Remain
531	12" DBH	Birch	Remain
532	12" DBH	Ash	Remain
533	12" DBH	Maple	Remain
534	10" DBH	Maple	Remain
535	8" DBH	Maple	Remain
536	10" DBH	Maple	Remain
537	10" DBH	Hemlock	Remain
538	12" DBH	Oak	Remove
539	24" DBH	Maple	Remain
540	34" DBH	Pine	Remove
541	28" DBH	Maple	Remove
542	24" DBH	Maple	Remove
543	28" DBH	Maple	Remove
544	36" DBH	Pine	Remain
545	16" DBH	Hemlock	Remain
546	20" DBH	Hemlock	Remain
547	16" DBH	Birch	Remain
548	36" DBH	Oak	Remain
549	10" DBH	Cedar	Remain
550	16" DBH	Cedar	Remain
551	8" DBH	Cedar	Remain
552	12" 8" 6" DBH	Cedar	Remain
553	40" DBH	Pine	Remain
554	10" DBH	Deciduous	Remain
555	22" DBH	Deciduous	Remain
556	12" DBH	Deciduous Triple	Remain
557	38" DBH	Pine	Remove
558	10" DBH	Deciduous Triple	Remove
559	8" DBH	Dw Twin	Remove
560	12" DBH	Deciduous Multiple	Remove
561	8" DBH	Ash	Remove
562	28" DBH	Maple	Remove
563	34" DBH	Maple	Remove
564	34" DBH	Maple	Remove
565	26" DBH	Maple	Remove
566	29" DBH	Maple	Remove
567	24" DBH	Maple	Remove
568	26" DBH	Maple	Remove
569	8" DBH	Deciduous	Remain
570	40" DBH	Maple	Remove
571	30" DBH	Pine	Remove
572	28" DBH	Pine	Remain
573	6" DBH	Maple	Remain
574	12" DBH	Willow	Remain
575	20" DBH	Maple	Remain
576	8" DBH	Maple	Remain
577	30" DBH	Locust	Remain
578	38" DBH	Cottonwood	Remain
579	6" DBH	Maple	Remain
580	6" DBH	Maple	Remain
581	24" DBH	Locust	Remain
582	14" DBH	Maple	Remain
583	10" DBH	Maple	Remain
584	10" DBH	Deciduous	Remain
585	14" DBH	Locust	Remain
586	6" DBH	Maple	Remain
587	6" DBH	Walnut	Remain
588	38" DBH	Locust	Remain
589	6" DBH	Cherry	Remain
590	30" DBH	Locust	Remain
591	6" DBH	Cherry	Remain
592	10" DBH	Cherry	Remain
593	8" DBH	Cherry	Remain
594	10" DBH	Cherry	Remain
595	12" DBH	Cherry	Remain
596	8" DBH	Cherry	Remain
597	12" DBH	Locust	Remain
598	10" DBH	Cherry	Remain
599	30" 26" DBH	Oak	Remain
600	8" DBH	Locust	Remain
601	8" DBH	Cherry	Remain
602	8" DBH	Locust	Remain
603	10" 8" DBH	Locust	Remain
604	6" DBH	Locust	Remain
605	8" DBH	Cherry	Remain
606	12" DBH	Tree of Heaven	Remain
607	12" 8" DBH	Locust	Remain
608	10" DBH	Locust	Remain
609	12" DBH	Locust	Remain
610	10" DBH	Locust	Remain
611	12" DBH	Locust	Remain
612	10" DBH	Locust	Remain
613	24" DBH	Locust	Remain
614	8" DBH	Maple	Remain
615	6" DBH	Maple	Remain
616	8" DBH	Maple	Remain
617	20" DBH	Locust	Remain
618	14" DBH	Maple	Remain
619	18" DBH	Maple	Remain
620	22" DBH	Locust	Remain
621	6" DBH	Walnut	Remain
622	10" DBH	Locust	Remove
623	34" DBH	Maple	Remain
624	14" DBH	Locust Triple	Remain
625	12" DBH	Maple	Remain
626	8" DBH	Maple Triple	Remain
627	8" DBH	Maple	Remain
628	8" DBH	Locust	Remain
629	6" DBH	Cherry	Remain
630	16" DBH	Walnut	Remain
631	26" DBH	Maple	Remain
632	18" DBH	Maple	Remain
633	20" DBH	Maple	Remain
634	6" DBH	Deciduous	Remain
635	34" DBH	Maple	Remain
636	26" DBH	Maple	Remain
637	26" DBH	Maple	Remove
638	36" DBH	Maple	Remove
639	40" DBH	Maple	Remove
640	12" DBH	Hemlock	Remain
641	28" DBH	Locust	Remove
642	8" DBH	Cedar	Remove
643	6" DBH	Cedar	Remove
644	10" DBH	Cedar	Remove
645	6" DBH	Sassafras	Remove
646	16" DBH	Cedar	Remove
647	12" DBH	Pine	Remove
648	10" DBH	Locust	Remain
649	22" DBH	Locust	Remain
650	6" DBH	Locust	Remain
651	12" DBH	Sassafras	Remain
652	6" DBH	Birch	Remain
653	6" DBH	Cherry	Remain
654	8" 6" 6" DBH	Maple	Remain
655	10" DBH	Maple	Remain
656	8" 6" DBH	Maple	Remain
657	14" DBH	Cedar	Remove
658	14" DBH	Cedar	Remove
659	24" DBH	Deciduous	Remove
660	6" DBH	Cherry	Remain
661	20" DBH	Oak	Remain
662	10" 6" DBH	Birch	Remain
663	6" DBH	Oak	Remain
664	10" DBH	Locust Twin	Remain
665	8" DBH	Locust	Remain
666	8" DBH	Locust	Remain
667	6" DBH	Locust	Remain
668	8" DBH	Locust	Remain
669	6" DBH	Locust	Remain
670	6" DBH	Locust	Remain
671	6" DBH	Cherry	Remain
672	8" DBH	Locust	Remain
673	6" DBH	Locust	Remain
674	8" DBH	Locust	Remain
675	8" DBH	Locust	Remain
676	16" DBH	Birch	Remain
677	6" DBH	Locust Twin	Remain
678	6" DBH	Locust	Remain
679	6" DBH	Locust	Remain
680	6" DBH	Locust Twin	Remain
681	6" DBH	Locust	Remove
682	44" DBH	Maple	Remove
683	40" DBH	Maple	Remove
684	38" DBH	Maple	Remove
685	8" 6" DBH	Maple	Remove
686	25" DBH	Pine	Remove
687	6" DBH	Deciduous	Remove
688	6" DBH	Maple	Remain
689	6" DBH	Maple	Remove
690	6" DBH	Walnut	Remain
691	36" DBH	Maple	Remove
692	8" DBH	Birch	Remain
693	6" DBH	Maple	Remain
694	6" DBH	Cedar	Remain
695	8" DBH	Deciduous	Remain
696	38" DBH	Deciduous	Remove
697	38" DBH	Deciduous	Remove
698	22" DBH	Maple	Remain
699	22" DBH	Maple	Remain
700	6" DBH	Locust	Remain
701	6" DBH	Tulip	Remain
702	6" DBH	Elm	Remain



TREE ABBREVIATIONS

AS	ASH
BE	BEECH
BR	BRICH
CD	CEDAR
CH	CHERRY
CT	CHESTNUT
CW	COTTON WOOD
DE	DECIDUOUS
DO	DOGWOOD
EM	ELM
HI	HICKORY
HM	HEMLOCK
JMA	JAPANESE MAPLE
LO	LOCUST
MA	MAPLE
MU	MULTIPLE
OK	OAK
PI	PINE
SA	SASSAFRAS
SR	SPRUCE
TOH	TREE OF HEAVEN
TR	TRIPLE
TW	TWIN
TU	TULIP
WT	WALNUT

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING TREE AND DESIGNATION
- EXISTING TREE LINE
- EXISTING DIRECTIONAL ARROWS
- EXISTING PAINT
- EXISTING STORM DRAIN LINE AND SIZE
- EXISTING SANITARY LINE AND SIZE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY PREPARED BY JMC, PLLC.

NOT FOR CONSTRUCTION

No.	Revision	Date	By

APPLICANT/OWNER: GLENCO 9 RIDGE ROAD BRONXVILLE, NY 10708

ARCHITECT: MINNO WASKO 80 LAMBERT LANE LAMBERTVILLE, NEW JERSEY 08530

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TREE PRESERVATION PLAN

RIVER KNOLL
40 CROTON DAM ROAD
TOWN OF OSSINING, NEW YORK

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

Drawn: JSJ Approved: AG
Scale: 1" = 40'
Date: 05/15/2017
Project No: 15064
Drawing No: SP-5

Biologist’s Resumes

SARAH A. BRAY

SENIOR ENVIRONMENTAL SCIENTIST

Ms. Bray is an environmental scientist and landscape designer with over seven years of experience in conducting wetland delineations, wetland restoration, permitting, creating upland and wetland planting plans, preparation of environmental review documents, and conducting avian monitoring surveys. Ms. Bray holds a Master's Degree in Ecological Landscape Planning and Design, is an ISA certified Arborist, and holds a certification in Wetland Science and Management. She is a NYSDEC Certified Erosion and Sediment Control Inspector. She has provided wetland and upland restoration specialist and construction monitoring services on NYCDEP and NYCDDC projects, including the OGI New York City-wide Bioswale project, assisted in the preparation of cultural landscape review documents, provided Arborist services, and has worked on Draft EIS documents. She is proficient in the identification of plant species native to New York and New Jersey. She is also experiences in the identification of invasive species and has identified and overseen implementation of measures to eradicate invasive species. She is experienced in design and oversight of installation of restoration plans in accordance with state wetland permit requirements and overseen the implementation of projects in accordance with USACE and state wetland permit conditions. Ms. Bray has contributed to the design and installation of soil erosion and sediment control measures and native plant landscape designs in both highly disturbed as well as pristine environments.

BACKGROUND

Education

M.A. Ecological Landscape Planning and Design, Conway School of Landscape Design

B.A., Environmental Studies, (Studio Art, Minor), Oberlin College

Wetland Science and Management Certification, University of Washington Seattle

Certifications

NYSDEC Certified Erosion & Sediment Control Inspector (SWT# 15T-120513-5)

ISA Certified Arborist (#NJ-1084A)

Wetland Science and Management Certification, University of Washington, Seattle, WA, 2003.

OSHA 10 hour Construction Industry Outreach , November 2010

OSHA 40-hour Hazwoper training, December 2010

OSHA 8-Hour Hazwoper refresher, March 2011 thru 2016

Urban Stormwater Management and Low Impact Development webinar, February 2014

RELEVANT EXPERIENCE

Newtown Creek, DEP Office of Green Infrastructure (OGI) – Right of Way Bioswale (ROWB) and Stormwater Green Streets (SGS) Project (Contract #53320002)

As the prime consultant to the New York City Economic Development Corporation (EDC) and DEP, AKRF is working with EDC Capital Projects and DEP's Office of Green Infrastructure (OGI) on Right-of-Way Bioswale (ROWB) and Stormwater Green Streets (SGS) projects in the Newtown Creek tributary area. Our contract area covers approximately 510 acres in the Bedford Stuyvescent neighborhood of Brooklyn, NY. AKRF is leading the effort on all aspects of the project including hydraulic analysis, site assessment, soil testing and field exploration,

design, permitting and construction monitoring. To meet DEP's Consent Order deadlines, AKRF understands DEP's need to meet planning, design and construction milestones. Our thorough knowledge of green infrastructure, ROWB standards, multiple agency/utility requirements and design criteria has provided DEP with the highest level of technical and project management skills. Out of several contract areas, AKRF's contract area was chosen by EDC/DEP to be bid first due to our expedited project management process. We are currently in design for over 400 ROWBs and approximately 10 SGS areas. Ms. Bray is conducting landscape review and approval of constructed bioswales.

Amy's Kitchen Manufacturing Facility, Goshen, NY

Amy's Kitchen—a family-owned business that has been manufacturing organize vegetarian convenience and frozen foods since 1987—plans to build an approximately 600,000-square-foot manufacturing facility in the Town of Goshen, New York. Amy's Kitchen retained AKRF to estimate the economic and fiscal benefits that would be generated by the proposed facility, and to examine whether the local labor and housing markets can meet the projected labor demand. AKRF also provided geotechnical engineering services as well. Ms. Bray conducted preliminary wetland investigation and habitat assessment services for this project.

Village Planning Services, Irvington, NY

AKRF was retained to serve as the Village planner. As part of our scope services, AKRF is responsible for providing site plan and subdivision application review on as-requested basis. In addition, the firm manages the Environmental Impact Statement (EIS) under SEQRA for site plans or subdivisions that do not receive a Negative Declaration. The firm also advises on application or other planning needs to the Village Board, Council, and Committees. Ms. Bray reviewed the Draft EIS or this project.

Merestead Site Development, Mount Kisco, NY

Ms. Bray assisted in the development of the Cultural Landscape Report for this project. In addition to the report, AKRF was also retained to analyze the septic and water systems, as well as, traffic circulation and parking.

Steiner NYC - HUB, New York, NY

AKRF provided site/civil design services for Steiner NYC's 54-story development located at 333 Schermerhorn Street in Downtown Brooklyn. Design and permitting tasks included obtaining the following agency approvals: Site Connection Proposal from NYC Department of Environmental Protection (DEP), Builders Pavement Plan and Curb Cut Applications from NYC Department of Buildings (DOB), Street Tree Plan from NYC Department of Parks and Recreation (DPR), and approval from NYC Transit related to proposed modifications to existing MTA infrastructure. AKRF is currently providing construction administration services related to utility installation and sidewalk/roadway improvements. Ms. Bray provided on-site Arborist services for construction for this project.

Ethical Culture Fieldston School, Bronx, NY

At the Fieldston School Campus, located in the Bronx, NY, AKRF provided site/civil design services related to sidewalk and stairway replacement as well as the installation of a new synthetic turf field. AKRF worked closely with the school to design a multiuse turf field with an expedited design and construction schedule. AKRF's oversight during the construction phase has assisted in keeping the project on schedule to open for the Spring sports season in 2016. Ms. Bray provided on-site Arborist services for construction for this project.

JESSE I. MOORE

NATURAL RESOURCES

Jesse Moore has a background in terrestrial and aquatic ecology, with practical experience in wetland delineation, threatened and endangered species surveys, habitat assessment, vegetation surveys, ecological restoration, hydrologic monitoring, sedimentation monitoring, and acoustic tracking. Prior to entering the environmental consulting field he worked for the New York City Department of Parks and Recreation's Natural Resources Group, where Mr. Moore was involved in a variety of ecological restoration activities. He has worked on restoration projects related to the Bronx River including: an alewife reintroduction program, oyster reef habitat restorations, bank stabilization and erosion control, and reforestation within the Bronx River floodplain. Most recently, Jesse Moore has been involved in wetland delineations, environmental permitting, and preparation of National Environmental Policy Act (NEPA) documents for projects related to transportation infrastructure.

BACKGROUND

Education

B.S. Environmental and Forest Biology, Magna Cum Laude, State University of New York, Syracuse, NY

M.S. Aquatic Science, University of Michigan, Ann Arbor, MI

Years of Experience

Year started in company: 2012
Year started in industry: 2005

Certifications

Rutgers University Wetland Delineation Series Certificate, 2012

RELEVANT EXPERIENCE

Tappan Zee Hudson River Crossing Project, Rockland and Westchester Counties, NY

AKRF was brought on board by the office of the New York State Governor to prepare the environmental impact statement (EIS) for the replacement of the Tappan Zee Bridge, which carries the New York State Thruway (Interstate 87/287) across the Hudson River between Rockland and Westchester Counties, New York. The bridge, which is owned and maintained by the New York State Thruway Authority (NYSTA), is a critical link in the local and regional transportation network. The existing bridge was built in the 1950s and does not meet current seismic and operational design standards. The replacement bridge would include two new parallel structures having a total of eight travel lanes, full width shoulders and travel lanes, emergency access, and a shared-use pedestrian/bicycle path. The EIS was prepared in accordance with the National Environmental Policy Act (NEPA) and the State Environmental Quality Review Act (SEQRA) with the Federal Highway Administration (FHWA) as the federal lead agency and the New York State Department of Transportation (NYSDOT) and NYSTA as joint lead agencies.

After ten years of project development by others, AKRF was selected to lead the environmental review process at a critical point when the project was fast-tracked by President Barack Obama as one of 14 high-priority infrastructure projects across the country. AKRF staff worked intensively to complete a Draft EIS in about four months, meeting all schedule targets. Following a robust public review, AKRF prepared the Final EIS in three

months with the overall schedule resulting in a Record of Decision less than 11 months following the Notice of Intent. The EIS analyses cover the full range of issues associated with a major bridge replacement project, including noise, air quality, ecology, water quality, and construction impacts. The efforts to complete the EIS were coordinated with permitting requirements, including a biological assessment, essential fish habitat assessment, Phase I and Phase II site assessments, pile installation demonstration project, and development of a memorandum of agreement under Section 106 of the National Historic Preservation Act.

AKRF continues to work on the Tappan Zee Hudson River Crossing Project as lead environmental consultant to the project team, with responsibility for securing all environmental permits, providing environmental oversight to the procurement of a design-build contract, and for ensuring that the mitigation and other requirements of the EIS are carried forward.

Mr. Moore conducts mobile tracking via boat of acoustic-tagged Atlantic and shortnose sturgeon within the Hudson River from the George Washington Bridge north to Peekskill, NY. He also monitors movement of sturgeon within the construction zone of the Tappan Zee Bridge using an array of acoustic receivers, and monitors sedimentation on Piermont Marsh, south of the Tappan Zee Bridge.

Marine Parkway Gil Hodges Memorial Bridge, Brooklyn and Queens, NY

The Triborough Bridge and Tunnel Authority (TBTA) is proposing to implement scour protection measures at the Marine Parkway Gil Hodges Memorial Bridge piers to mitigate the scour risk at the facility over Rockaway Inlet. AKRF prepared an Environmental Assessment Form (EAF) with supplemental studies, including potential impacts during operation and construction, as well as an evaluation of alternatives that resulted in selection of a preferred alternative for the project. The EAF and supplemental studies focused on the analyses of cultural resources, water quality, and natural resources. The firm prepared documentation for the Consistency Determination with the New York State Department of State (NYSDOS) in coordination with the New York City Department of City Planning (NYCDCP) and concurrent with the environmental review process. Potential impacts during construction that required evaluation included: resuspension of sediments which could introduce contaminants into the water column or smother bottom dwelling organisms; loss of bottom or water column habitat; and impacts to fish species that migrate through Rockaway Inlet. AKRF coordinated all environmental services needed for procurement of permits and approvals from the New York State Department of Environmental Conservation (NYSDEC) and U.S. Army Corps of Engineers (USACE) associated with the construction of the proposed project. AKRF also coordinated the selection of a mitigation site at Rulers Bar Marsh, part of the National Park Service's Gateway National Recreation Area (GNRA), and continues to provide wetland monitoring services per NYSDEC and USACE permit conditions.

Mr. Moore conducted wetland monitoring at the Rulers Bar mitigation site and the control site. Wetland monitoring included the collection of soil samples, site photographs, vegetation monitoring of plots and subplots, and benthic macroinvertebrates.

DEP Delaware Aqueduct Rondout-West Branch Tunnel Repair Program Environmental Impact Statement (EIS) and Permitting, Various Locations, NY

AKRF led the environmental assessment and permitting efforts for the Delaware Aqueduct Rondout-West Branch Tunnel (RWBT) Repair Program, in association with the Joint Venture (JV) engineering team of Hatch Mott McDonald and Malcolm Pirnie/Arcadis. The preparation of the first Environmental Impact Statement (EIS 1) for the program and the federal, state and local permits and approvals proceeded simultaneously, to ensure that the program meets a 2013 date for groundbreaking.

The construction of the bypass tunnel involves multiple geographic and jurisdictional challenges and complex project phasing. It required extensive permit and approval requirements and detailed technical analyses in a number of environmental areas, including traffic, air quality, noise, visual impacts, and impacts to historic and natural resources.

Working in close collaboration with DEP's Bureau of Environmental Planning and Analysis (BEPA) and the Bureau of Engineering Design and Construction (BEDC) Permit Resource Division (PRD), AKRF led the effort to identify all necessary federal, state and local permits and approvals necessary to begin site preparation and shaft construction for the RWBT bypass tunnel, as well as to construct the tunnel itself and connect it to the existing aqueduct. As per PRD procedure, AKRF completed a Permit Identification Checklist to ensure that all requisite permits had been identified, and tracked each permit in the Permit Tracking Database throughout the application process. In cooperation with PRD and BEPA, AKRF continuously engaged project designers from DEP In-House Design (IHD) and the JV to ensure that all design decisions, information and materials necessary for permit applications were developed in a timely manner while minimizing environmental impacts and the need for mitigation.

In parallel with the permits and approvals process, AKRF prepared a City Environmental Quality Review (CEQR)/State Environmental Quality Review Act (SEQRA) EIS to evaluate potential impacts resulting from construction of the shafts and bypass tunnel. As with permitting, it was essential to work closely with project designers to achieve consensus on the design decisions and information necessary to complete the EIS analyses. Constant communication with BEPA, PRD, BCIA, IHD and the JV kept the necessary information flowing and the EIS process on track.

During the preparation of the EIS and permit applications, AKRF helped address a number of critical issues in order to prevent delays and other adverse effects to the project. One example was the identification and characterization of potential Indiana Bat habitat on both shaft sites, which allowed trees to be cleared before the April 1st seasonal deadline imposed by New York State Department of Environmental Conservation (NYSDEC) and US Fish and Wildlife (USFWS), so that the geotechnical boring program and the essential design tasks that depend on it could proceed without delay. In another instance, AKRF identified the importance of noise abatement measures for the geotechnical boring program at Shaft 6, conducted extensive noise modeling and monitoring to quantify the performance of such measures, and helped project designers incorporate them into the bid documents. This was a critical component of obtaining site plan approval from the Town of Wappinger for the geotechnical boring program.

With the issuance of DEP's Notice of Completion and Statement of Findings on the Final EIS, and with the receipt of the permits needed to achieve groundbreaking in 2013, AKRF turned its efforts to completing a number of transition documents to prepare the project for the start of construction. Most recently, AKRF began work on a Regulatory Transition Plan from Design to Construction, which outlines the project's environmental commitments and obligations, including permit conditions, establishes procedures for document transfer, and assigns roles for permit and regulatory compliance.

Mr. Moore conducted surveys for Indiana bat habitat, vegetation, and ecological communities within Newburg, New York. He also conducted onsite wetland investigations within the area of disturbance.

National Grid Wildwood Substation, Brookhaven, NY

AKRF conducted an ecological assessment for the Wildwood Substation Environmental Assessment. Mr. Moore performed a threatened and endangered plant species survey and identified two species and numerous plants throughout the project site. Following the identification, stem counts, and flagging of these plants, he coordinated and provided oversight to the landscaping team to ensure the survival of the plants during the transplanting process.

New York City Department of Design and Construction (DDC)

The firm was retained by the New York City Department of Design and Construction (DDC) to assist in the preparationof EASs for DDCs proposal to install separate sewer system components and outfalls in the following areas: City Island,Bronx, Todt Hill, Staten Island, and Ozone Park, Hammels, Edgemere, and Bayswater, Queens.

Mr. Moore conducts the natural resources investigations and authors the natural resource sections for the Environmental Assessment Statements (EASs). The most recent projects are located in the Amboy-Huguenot, Bradley-Willowbrook, and South-Forest locations of Staten Island and Hook Creek-Brookville section of Queens. Mr. Moore conducted a threatened and endangered plantspecies survey for the Hook Creek-Brookville project.

City of New York Department of Parks and Recreation (DPR)/United States Tennis Center Association National Tennis Center, Incorporated (USTA)

AKRF is preparing a Draft Environmental Impact Statement (DEIS) to improve the site plan of the National Tennis Center within Flushing Meadows Corona Park in Queens. Mr. Moore conducted onsite ecological communities surveys and contributed text for the Existing Conditions and Proposed Impacts sections of the DEIS.

Stony Brook University/Dormitory Authority of the State of New York (DASNY)

AKRF was retained by Stony Brook University/Dormitory Authority of the State of New York (DASNY) to prepare an Environmental Assessment for a proposed dining and dormitory facility with a parking lot on the Stony Brook campus. Mr. Moore conducted onsite ecological communities surveys for the parking lot site and contributed text for the Existing Conditions and Proposed Impacts sections of the EA.

NYCDOT Belt Parkway Bridges Project, Brooklyn, NY

AKRF was retained to assist the New York City Department of Transportation (NYCDOT) in its proposal to rehabilitate and ensure the structural integrity of 10 bridges along the Belt Parkway in Brooklyn. Because the various locations required individual approaches and time schedules, and varied ranges of environmental impacts, the firm prepared a Generic Environmental Impact Statement (GEIS) for the overall assignment.

Since the preparation of the GEIS for the Belt Parkway Bridges Project, the firm has been retained for supplemental work during the final design phase of the project. This included NEPA and SEQRA documentation for three of the bridges — Mill Basin, Gerritsen Inlet, and Paerdegat Basin-which will be federally funded. The additional work included State Pollutant Discharge Elimination System (SPDES) permitting (U.S. Coast Guard Section 9 permits, NYSDEC tidal and freshwater permits, and USACE permits), the design of wetland mitigation areas, and the preparation of Storm Water Pollution Prevention Plans (SWPPP). Supporting analyses included a contaminated materials investigation that included a detailed subsurface contaminated materials assessment, both subaqueous as well as along the upland approaches. A Section 4(f) evaluation for parklands for Gerritsen Inlet and a Section 4(f) evaluation for historic resources for Mill Basin were also prepared.

The services for the 10 bridge projects included:

- CEQR, SEQRA, and NEPA Environmental Impact Statements
- USCG, NYSDEC, and USACE Permitting
- Stormwater Permits and Design
- Contaminated Materials Investigation
- Historic Resources Investigation
- Wetlands Delineation and Mitigation Design
- Threatened and Endangered Species Surveys

Mr. Moore conducted onsite wetland delineations of both the Mill Basin Bridge project site and Marine Park freshwater mitigation site, and following the field work contributed to both wetland delineation reports. He also oversaw the installation of piezometers within the Marine Park freshwater mitigation site, and conducted a year-long hydrologic study to help determine the feasibility of the site for freshwater wetland creation. Mr. Moore contributed to the Categorical Exclusion documentation, Final Design Report, Joint Application for Permits for work in tidal and freshwater wetlands and the NYSDEC regulated adjacent area, USCG permit modification, and other documentation for the Mill Basin Bridge project.

NYCEDC/DPR Rockaway Boardwalk Reconstruction, Queens, NY

AKRF is part of a team working with NYCEDC and DPR to provide Engineering and Design Services related to the repair of damage to the Rockaway Beach boardwalk caused by Hurricane Sandy, as well as the implementation of resiliency measures. The project is being funded by a U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant funds for disaster recovery (CDBG-DR), and entails the incorporation of various resiliency elements, making the boardwalk able to withstand storm and tidal forces which will impact the coastline in future years. The Project Site is approximately 4.7 Miles of shoreline in the Rockaways. In addition, the proposed project includes providing new temporary beach access across dunes being constructed by the US Army Corps of Engineers within a portion of the beach where there is no boardwalk. The design of the replacement boardwalk may incorporate a baffle-wall underneath the boardwalk that would prevent sand migration and help to protect the adjacent community.

AKRF is preparing environmental review documents consistent with NEPA, SEQRA, and CEQR. AKRF is also preparing the Joint Application for permit under the NYSDEC tidal wetlands and coastal erosion management regulations.

Mr. Moore conducted threatened and endangered plant species surveys, and vegetation and ecological community characterizations for the project site. Following the field work he contributed to the environmental review documents and Joint Application for permit under the NYSDEC tidal wetlands and coastal erosion management regulations.

NYCDEP Van Cortlandt Park Bluebelt, Bronx, NY

AKRF has been retained to prepare the EAS for the Van Cortlandt Park Bluebelt Project in the Bronx, NY. The firm is responsible for the natural resources field surveys, threatened and endangered plant species surveys, coordination with the New York City Department of Parks and Recreation, and authoring the Natural Resources chapter of the EAS.

Mr. Moore conducted vegetation and ecological community characterization surveys, as well as threatened and endangered plant species surveys within the project site. Following the field work he contributed to environmental review documentation.

New York State Office of Parks, Recreation and Historic Preservation (OPRHP) Heckscher State Park Field 7 Site Design, East Islip, NY

The OPRHP is proposing the Heckscher State Park Field 7 Site Design in East Islip, NY. The proposed project would include improvements to Heckscher State Park's Field 7 with park uses (plantings, bike paths, etc.). AKRF is focusing on natural resources issues associated with this project including the delineation of wetlands and threatened and endangered species surveys. Mr. Moore conducted onsite wetland delineations, and threatened and endangered plant species surveys for the project site. Following the field work he contributed the wetland delineation report, threatened and endangered species memoranda, and final design selection.

St. George Waterfront Redevelopment, Staten Island, NY

AKRF was retained by the New York City Economic Development Corporation (EDC) to assist in the preparation of the Final Environmental Impact Statement (FEIS) and environmental permitting for the St. George Waterfront Redevelopment project.

Mr. Moore conducted onsite ecological community surveys for the project site and contributed text for the Existing Conditions and Proposed Impacts sections of the FEIS. Mr. Moore also contributed to the Joint Application for Permits for work in tidal wetlands and the NYSDEC regulated adjacent area.

Department of Parks and Recreation (DPR) Forestry Technician, New York, NY

Before joining AKRF, Mr. Moore provided services for the NYDPR that included implementing management plans for project sites throughout the five boroughs of New York City, utilizing best management practices to improve and restore native plant communities and instructing volunteers as part of the Million Trees NYC program.

Department of Parks and Recreation (DPR) Fisheries & Marine Ecologist, New York, NY

Before joining AKRF, Mr. Moore provided services for the NYDPR that included conducting habitat monitoring, assessment, restoration within New York City parks and preparation of reports. He also coordinated the reintroduction of alewife to the Bronx River with stakeholders.

AKRF

Environmental and Planning Consultants

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Memorandum

To:	Glenco Ossining, LLC
From:	Jesse Moore, Sarah Bray (AKRF)
Date:	September 17, 2015; *rev 5.4.17*
Re:	River Knoll – Ossining, NY – Wetland Delineation Report and Functional Assessment
cc:	Nannette Bourne, Jim Nash (AKRF)

A. WETLAND DELINEATION (9.17.15)

INTRODUCTION

Glenco Ossining, LLC is evaluating the Stony Lodge Hospital property in Ossining, New York, as the future location of four (4) multi-family residential buildings (see **Figure 1**). AKRF delineated wetlands on the project site on September 14, 2015 to identify wetland areas with the potential to be regulated by the US Army Corps of Engineers (USACE) as waters of the US, and their boundaries. This memorandum outlines the details of the wetland delineation.

The wetland was reexamined in on April 21 2017 to document wetland hydrology conditions for the purpose of completing a functional assessment.

METHODOLOGY

Prior to the wetlands investigation, the New York State Department of Environmental Conservation (NYSDEC) and United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps were reviewed to determine locations of state-mapped or NWI-mapped wetlands on and in the vicinity of the project site. The Natural Resources Conservation Service (NRCS) soils maps were also reviewed to determine soil types within the project site, particularly with respect to soil series identified as hydric soils. An AKRF wetland scientist conducted a wetland delineation of the project on September 14, 2015, using the United States Army Corps of Engineers (USACE) wetland delineation methodology.[1] Methodology pertaining to the three USACE wetland indicators (i.e., hydrology, soils, and hydrophytic

[1] Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Miss; U.S. Army Corps of Engineers. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (version 2.0), ed. J.S. Wakeley, R.W. Lichvar, C.V. Noble, and J.F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

vegetation) is described below. The USACE "Wetland Determination Data Form – Northcentral and Northeast Region" (2012) was used to document the wetlands observed on the project site, and photographs were taken of observed wetland areas.

HYDROLOGY AND SOILS

The hydrology of the site was characterized using aerial photographs, site observations, and an auger to determine soil saturation and/or a high water table. Soils were characterized with the use of an auger and a Munsell Soil Color Chart. During the wetlands assessment, both hydrology and soils observations were made during a period of dry weather.

VEGETATION

The USACE *Northcentral and Northeast 2014 Regional Wetland Plant List* was used to determine the wetland/upland status of the plant identified on the project site. Percent cover was documented in the tree, vine, shrub, and herbaceous strata. A 30-foot (ft) radius plot was established to document percent cover of the tree and vine strata. Within this 30-ft plot, a 15-ft radius plot was established for the measurement of shrubs and saplings. For species in the herbaceous stratum, five 3.28-ft by 3.28-ft square plots were sampled within the 30-ft tree and vine plot and averaged together.

EXISTING CONDITIONS

MAPPING

National Wetlands Inventory-Mapped Wetlands

There are no NWI-mapped wetlands within the Stony Lodge Hospital property (see **Figure 1**).

New York State Department of Environmental Conservation-Mapped Wetlands

There are no NYSDEC-mapped freshwater wetlands within the Stony Lodge Hospital property (see **Figure 2**).

Natural Resources Conservation Service -Mapped Soils

Within the Stony Lodge Hospital property soils are mapped as "ChE – Charlton loam, 25 to 35 percent slopes," "CrC – Charlton-Chatfield complex, rolling, very rocky," "CsD – Chatfield-Charlton complex, hilly, very rocky," "HrF – Hollis-Rock outcrop complex, very steep," and "LcB – Leicester loam, 3 to 8 percent slopes, stony" by NRCS. The NRCS lists one of the series mapped for the Stony Lodge Hospital property as hydric: LcB – Leicester loam, 3 to 8 percent slopes, stony, one of the three parameters that determine whether an area falls under USACE jurisdiction as a wetland.

ONSITE DELINEATION

One wetland (A) was delineated on September 14, 2015 on the Stony Lodge Hospital property (see **Figure 3**).

Wetland A

Wetland A is a relatively small depressional freshwater wetland located along the northeastern boundary of the Stony Lodge Hospital property, at the toe of a slope. It is vegetated with a mixture of herbaceous species (see **Figure 5a**). The soils, hydrology, and hydrophytic vegetation of Wetland A were documented by sampling point "Wetland A", and are described below.

The Data Form for Wetland A depicts the dominant species associated with this sampling point. The species is sweet flag (*Acorus calamus*) (OBL) found in the herbaceous layer.

Soils of this wetland meet the criteria of "F6 Redox Dark Surface." The primary hydrology indicators are "A3 Saturation," which occurs starting at a depth of 0 inches, and "C3 Oxidized Rhizospheres on Living Roots" and the secondary hydrology indicator is "D2 Geomorphic Position," since the elevation of the wetland was in a depression compared to the surrounding area (see Data Form Wetland A).

Upland A

The upland area is located to the west and up-slope from Wetland A. The dominant species associated with the upland area include black locust (*Robinia pseudoacacia*) (FACU), in the tree layer, black walnut (*Juglans nigra*) (FACU) and multiflora rose (*Rosa multiflora*) (FACU) in the sapling/shrub layer, Japanese stiltgrass (*Microstegium vimineum*) (FAC) in the herb layer, and porcelainberry (*Ampelopsis brevipedunculata*) (UPL) in both the herb and woody vine layer. The vegetation, soils, and hydrology of this area do not meet the USACE criteria for a wetland. For these reasons, this area was documented as upland (see Data Form for Upland A).

The uplands throughout the rest of the Stony Lodge Hospital property would be best described according to Edinger et al. (2014) as mowed lawn[2] and successional southern hardwoods[3] ecological communities. The mowed lawn community is dominated by Kentucky bluegrass (*Poa pratensis*), crabgrass (*Digitaria* sp), common plantain (*Plantago major*), English plantain (*Plantago lanceolata*), and red clover (*Trifolium pratense*) in the herbaceous layer. The successional southern hardwoods community is dominated by Norway maple (*Acer platanoides*), black locust, and black walnut in the tree layer; multiflora rose and black locust in the shrub layer; porcelainberry and Asiatic bittersweet (*Celastrus orbiculatus*) in the vine layer; and Japanese stiltgrass and goldenrods (*Solidago* spp) in the herbaceous layer.

SUMMARY

As described above, one vegetated depressional freshwater wetland (A) was identified, as per the USACE wetland delineation methodology, within the Stony Lodge Hospital property. This wetland would be expected to be under the jurisdiction of the USACE. Any disturbance to this wetland would be expected to require Section 401 and 404 permits. Wetland A would require a Jurisdictional Determination site inspection from the USACE to make the determination. AKRF will coordinate with USACE to facilitate the necessary site inspection. Once the wetland/waters boundaries are confirmed by the USACE, they are valid for a period of five (5) years. As federal wetlands only, the USACE and NYSDEC do not regulate a 100 foot adjacent area (buffer) around them.

REGULATORY DISCUSSION

FEDERAL WETLANDS

The onsite wetlands delineated by AKRF meet the definition of "wetlands": "those areas that are inundated or saturated by surface or ground water (hydrology) at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation (hydrophytes) typically adapted for life in saturated soil conditions (hydric soils). Wetlands generally include swamps, marshes, bogs, and similar areas." 40 CFR 232.2(r). Although the onsite wetland meets the federal definition of "wetland" (outlined in the Corps/EPA methodologies), the issue of whether the onsite wetland is subject to jurisdiction under Sections 404/401 of the Clean Water Act is a separate matter requiring review and likely onsite inspection by the Corps. It is AKRF's opinion that the onsite wetland may not meet the "significant nexus" requirement for federal wetland jurisdiction because the wetland does not have a permanent connection to other waters of the U.S., aside from the broken storm drain manhole. Regardless, the proposed site plan would not disturb the wetland or any lands within 100-feet of the wetland. Therefore, no federal jurisdictional determination site inspection is required.

[2] Edinger et al. (2014) define this community as "residential, recreational, or commercial land, or unpaved airport runways in which the groundcover is dominated by clipped grasses and there is less than 30 percent cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50 percent cover. The groundcover is maintained by mowing and broadleaf herbicide application."

[3] Edinger et al. (2014) define this community as "a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed."

TOWN OF OSSINING

The Town of Ossining regulates wetlands and a 100-foot buffer around wetlands in accordance with Ossining Town Code, Chapter 105: Freshwater Wetlands, Watercourses and Water Body Protection. Regulated activities, such as the construction of any structure, filling, and excavation activities within a wetland or a wetland buffer, or any other that may impair the natural wetland functions as described in Town Code Section 105-1C, require a permit from the Town. No jurisdictional determination has been made by the Town at this time.

VILLAGE OF OSSINING

The Village of Ossining has no wetland protection ordinance.

B. WETLAND FUNCTIONAL ASSESSMENT

As discussed below, the onsite wetland serves primarily "modification of groundwater discharge" and "modification of water quality" wetland functions. Wetland functional categories are taken from Hollands and Magee[4], with values rated low/medium/high based on data collected during site inspection (9.14.15 and 4.21.17) and through examination of additional resources, including existing drainage plans, topographic maps, soil maps, and historic maps/aerials of the project site.

HYDROLOGY

The onsite wetland is located in a topographically low area at the southwest corner of the intersection of Grandview Avenue and Narragansett Avenue. Field inspection indicates the wetland receives surface water inputs from a number of drain pipes conveying runoff from adjacent properties to the east and north and from the project site. Drain outlets discharging to the wetland are shown in Figure 7 (photos 5-8). Most notable is the 18-to-24-inch storm drain pipe running beneath the wetland that receives stormwater inputs from catch basins along Grandview Avenue and additional lands to the north. As shown in photo 8, one of the manholes for this pipe is located within the wetland itself and is in disrepair. During site inspection (4.21.17) which occurred the day following ¼-inch of rain in the previous 24 hours, water was observed flowing directly into the broken concrete base of one of the manholes. During rain events, this broken pipe likely serves as a substantial source of surface water inputs to the wetland as well.

Topographic maps indicate that the wetland's drainage area is roughly 10 acres in size, most of which is offsite to the north and east. However, the current extent of development (roads/houses/sewers) surrounding the wetland has substantially modified patterns of surface drainage which may have increased/descreased the size of the wetland's contributory drainage area. Historic maps of the area (circa 1900) show a linear drainage feature running through the current wetland, draining southwards to a larger network of drainageways along Pine Avenue to the south, which eventually discharge to the Hudson River as "Sing Sing Creek" by the Ossining Railroad Station. This drainage network no longer exists. Historic farming/grading of the land and more recent fill and piping of stormwater runoff for residential development have removed all evidence of the original surface drainage features.

The wetland's landscape position in a low valley historically mapped as a surface drainageway and its persistent hydrophytic vegetation, including most importantly sweetflag (*Acorus americanus*) and tussock sedge (*Carex stricta*) both obligate wetland species, indicate that groundwater plays an important role in

[4] "A Rapid Procedure for Assessing Wetland Functional Capacity based on Hydrogeomorphic (HGM) Classification, February 1998" (manual) by Dennis W. Magee with technical contributions from Garrett G. Hollands.

sustaining wetland hydrology. The wetland is underlain by LcB: Leicester loam soils, a "somewhat poorly drained" soil. This too indicates that this wetland is less likely to be the result of recent hydrologic inputs from the surrounding roadway network and more likely to be a long-standing wetland feature.

- *Modification of Groundwater Discharge* – ***medium/high***

  As discussed above, the wetland's landscape position, historic mapping of drainageways, and persistence of obligate wetland plant species indicates this wetland serves groundwater discharge functions. These conditions sustain wetland plants and sustain downstream surface water flows.

- *Modification of Groundwater Recharge* – ***low***

  The presence of the sewer and drain lines mapped beneath the wetland convey surface water rapidly away from this wetland. Although the wetland undoubtedly serves groundwater recharge functions at least seasonally, it is not a primary function.

- *Storm and Floodwater Storage* – ***low/medium***

  Due to its low, depressional landscape position, the onsite wetland serves some stormwater storage functions. However, site inspection indicates there is no sustained flooding (no watermarks or drift lines) and the wetland drains to the existing roadway network storm drain through a broken manhole and likely through preferential pathways (seep) along the outside of these pipes judging by its lack of ponding. Therefore, stormwater storage functions are minimized.

- *Modification of Stream Flow* – ***low***

  The wetland is small in size (1/4 acre) and has no surface outlet. Instead it discharges to the underlying storm drain, dissipates through evapotranspiration, and infiltrates to groundwater during periods of depressed groundwater elevation. As such, its ability to modify downstream flows is limited.

- *Modification of Water Quality* – ***medium***

  The onsite wetland sustains water temporarily during rain events, although this function is limited due to the wetland's small size and outflows to the broken stormdrain manhole within the wetland. Nutrient and sediment removal processes within the wetland and wetland soils add some amount of water quality improvement function beneficial to downstream surface waters.

- *Export of Detritus* – ***low/medium***

  The turnover of senesced vegetation as a source of carbon and nutrients for flora/fauna occupying downstream receiving waters is expected to be minimal. The wetland has no established outlet, only the broken storm drain manhole that effectively drains the wetland during a short period of time after rain events. Therefore export of significant amounts of detrital plant material is not occurring.

FLORA/FAUNA

Examination of wetland and upland plants and animals onsite has occurred on multiple occasions, including the initial wetland delineation effort (9.14.15), a fall season ecological inventory (10.17.16), and a supplemental wetland functional assessment site visit (4.21.17). As discussed in the DEIS, only one amphibian species was noted onsite, the red backed salamander (*Plethodon cinereus)* an upland species found in wooded habitat. Standing water in the wetland occurs sporadically and temporarily during and immediately following rain storms. Water depths and period of inundation in the wetland are not sufficient to provide breeding habitat for any wetland dependent amphibian species and for most aquatic invertebrate species (dragonflies, mosquitos, etc.).

The wetland's lack of trees or shrubs is due to intermittent mowing which is likely undertaken in summer during dry periods. Wetland vegetation is dominated by sweet flag (*Acorus calamus*), with lesser occurrence of sensitive fern (*Osmunda sensibilis*), tussock sedge (*Carex stricta*), and New York Aster (*Symphyotrichum novi-belgii*), and Japanese stilt grass (*Microstegium japonica*).

- *Contribution of Abundance and Diversity of Wetland Vegetation* - ***low***

> As discussed above, wetland vegetation is limited to a few herbaceous species which do not provide significant food, forage, denning or nesting habitat for wetland-dependent wildlife. Nor are any of the species of plants identified within the wetland uncommon or NYS-listed.

- *Contribution of Abundance and Diversity of Wetland Fauna* - ***low***

> As discussed above, the wetland does not retain water for sufficient periods to serve as breeding habitat for wetland-dependent amphibians or aquatic invertebrates. No amphibian egg masses or individual amphibians or other animals were identified in the wetland during the Summer 2015 and Spring 2017 site inspections.

IMPACT ASSESSMENT

The proposed site plan requires no disturbance to the onsite wetland or 100-foot Town-regulated wetland buffer. As such, wetland impacts are avoided. The buffer consists primarily of low-quality maintained lawn habitat with some wooded patches along the periphery of the parcel. These would be preserved. No wetland-dependent vegetation or wildlife would be adversely affected by the proposed site plan.

The wetland's principal functions are "modification of groundwater discharge" and "modification of water quality". Stormwater runoff from onsite and offsite lands contributing hydrology to the wetland will be maintained with the proposed site plan. As discussed, a majority of the wetland's hydrologic budget is supplied by offsite lands, including inputs from the broken storm drain manhole. In addition, its landscape position and persistence of obligate hydrophytic vegetation indicates that groundwater is a primary source of wetland hydrology. None of these hydrologic inputs would be modified by the proposed project. A small portion of the property (drainage area DA-2A on the SWPPP) contributes overland flow to the wetland during larger storm events. Implementation of the onsite stormwater management plan would reduce the size of this drainage area a small amount, by approximately 1.3 acres. This drainage area represents a small fraction of the wetland's overall drainage area. Therefore, the hydrologic budget and wetland hydrology will be sustained in this wetland with the propose site plan. No

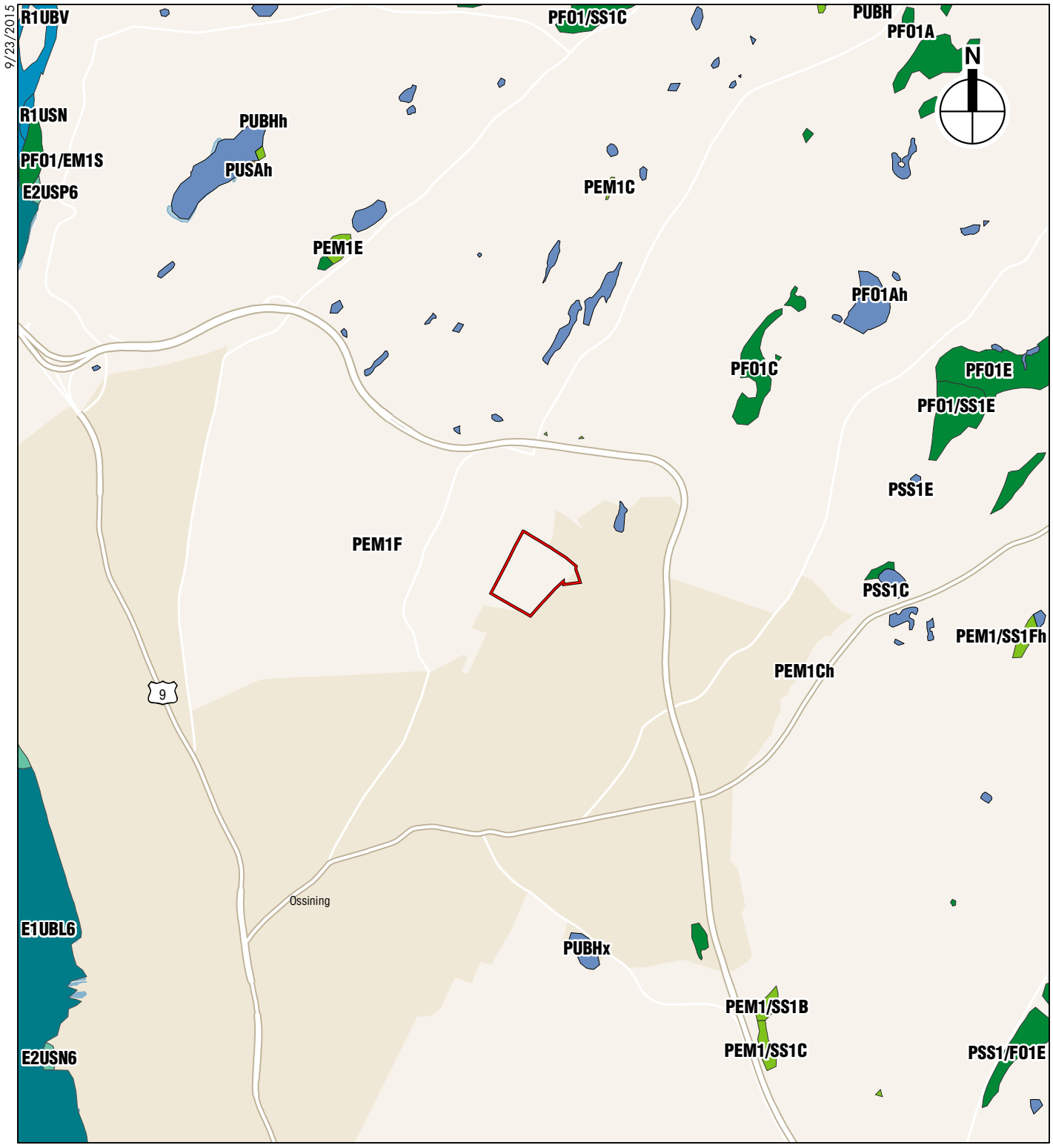
impacts to the groundwater discharge and water quality functions of the wetland will occur under the site plan proposed in the May, 2017 DEIS.

Figures:

1. NWI Wetlands
2. NYSDEC Freshwater Wetlands
3. Surveyed Wetlands
4. Photograph Key
5. Representative Site Photographs
6. Wetland Functional Assessment Photo Key
7. Wetland Functional Assessment Photos

Attachments:

USACE Wetland Determination Data Forms

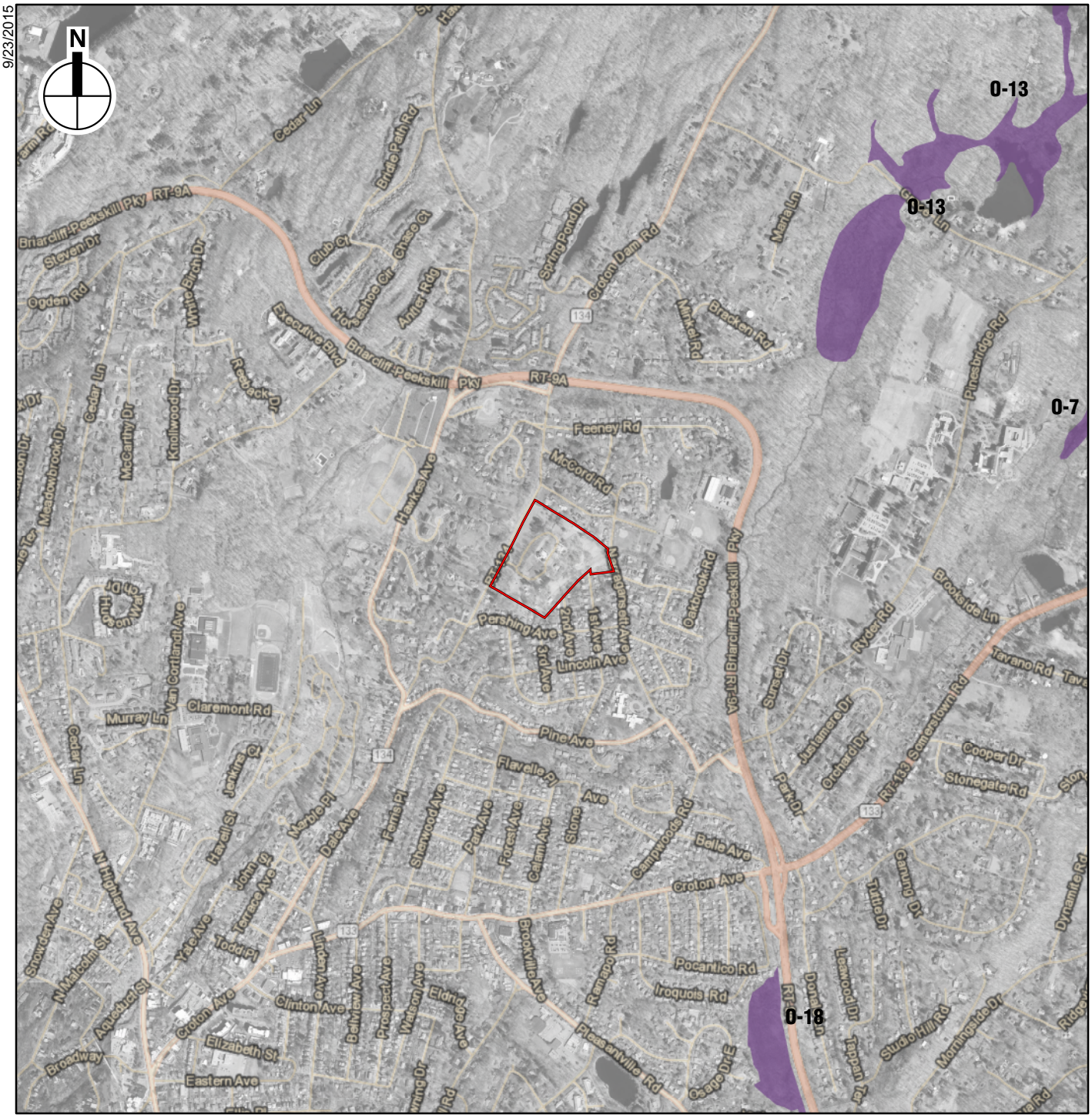


Stony Lodge Hospital

NWI Wetlands

Figure 1

9/23/2015

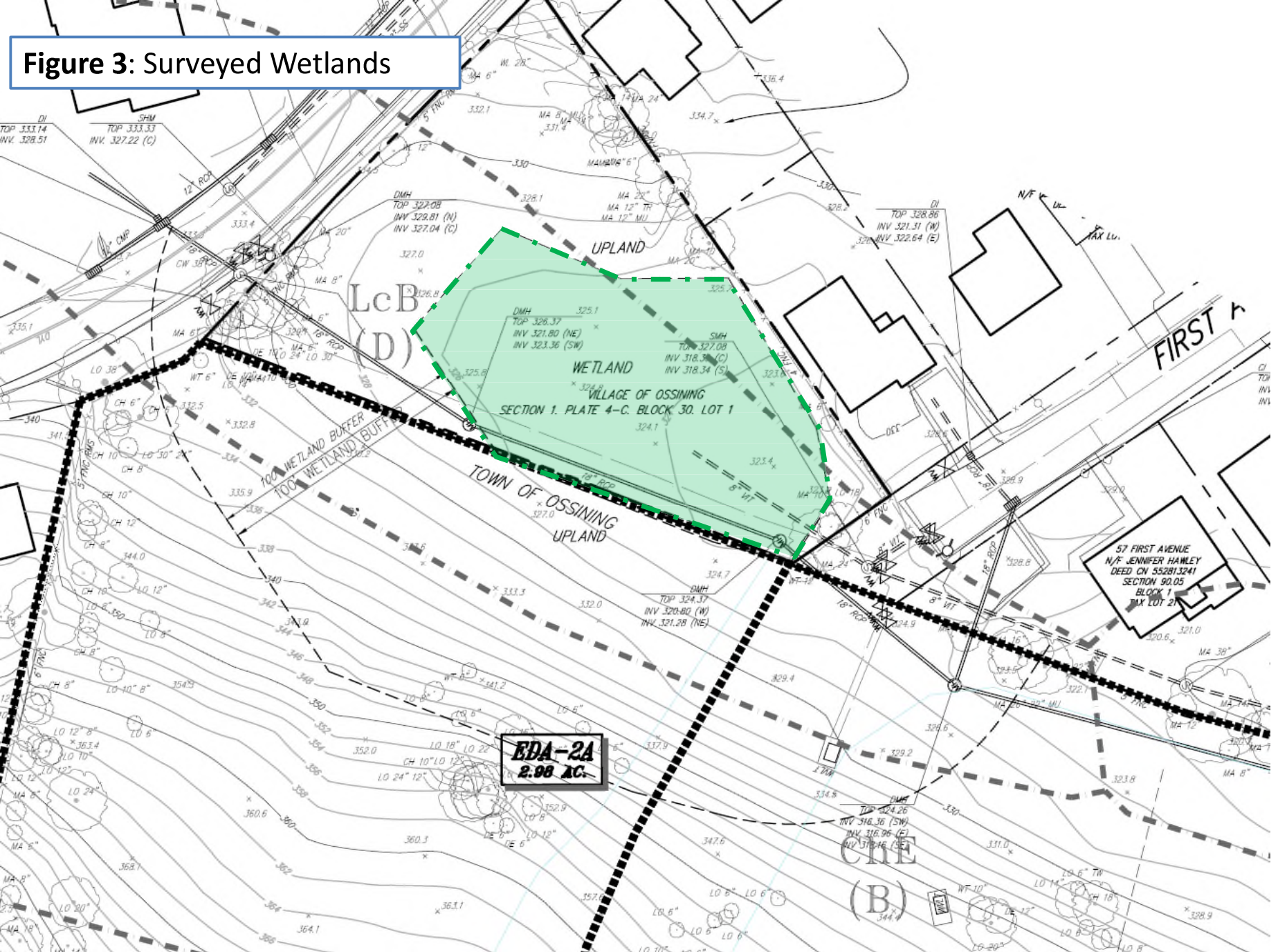


NYSDEC Freshwater Wetlands

Stony Lodge Hospital

Figure 2

Figure 3: Surveyed Wetlands



9/23/2015

Project Site

Photograph View Direction and Reference Number

0 400 FEET

Stony Lodge Hospital

Photograph Key
Figure 4

9.21.15

View of Wetland A, facing north **1**

View of Wetland A and the adjacent upland hillslope, facing northwest **2**

Stony Lodge Hospital

Representative Site Photographs

Figure 5a

View of the southern boundary of Wetland A and the adjacent upland hillslope, facing west **3**

View of Wetland A and the adjacent property, facing east **4**

Representative Site Photographs

Figure 5b

Figure 6: Wetland Functional Assessment - Photo Location Key

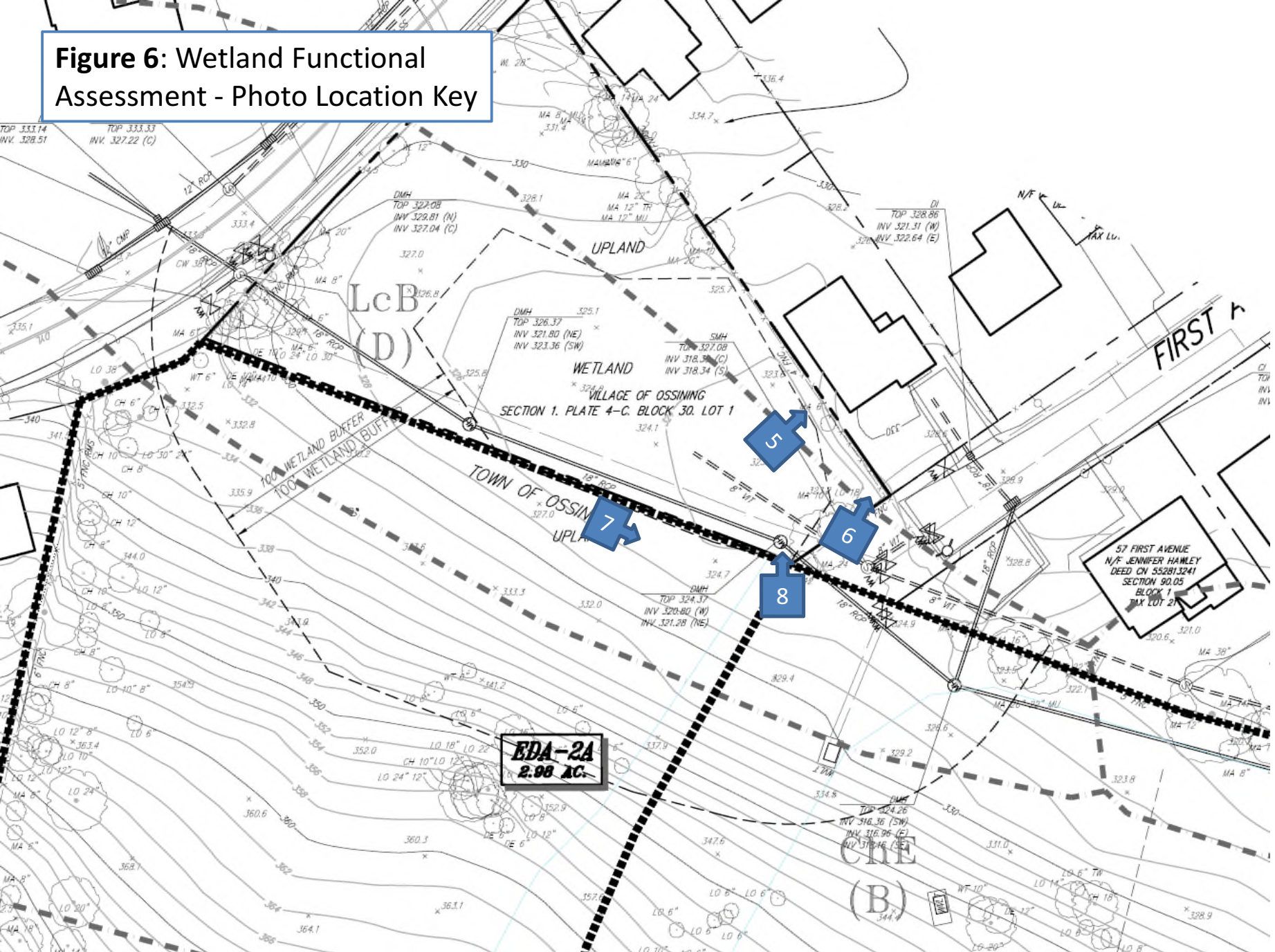


Figure 7: Wetland Functional Photos

Photo 5: Drainage Pipe from Adjacent Property to Wetland (4.21.17)

Photo 7: Drainage Pipe from upslope onsite parcel to Wetland (4.21.17)

Photo 6: Drainage Pipes from Adjacent Property to Wetland (4.21.17)

Photo 8: Broken storm drain within wetland (4.21.17)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Stony Lodge Hospital City/County: Ossining/Westchester Sampling Date: 9/14/15

Applicant/Owner: Glenco Ossining, LLC State: NY Sampling Point: Wetland A

Investigator(s): Jesse Moore Section, Township, Range: Ossining

Landform (hillslope, terrace, etc.): Depression at toe of slope Local relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR R Lat: N 41.177220 Long: W 73.844945 Datum:

Soil Map Unit Name: LcB – Leicester loam, 3 to 8 percent slopes, stony NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):	
Water Table Present?	Yes	No	Depth (inches):	
Saturation Present?	Yes X	No	Depth (inches):	0

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: The soil was saturated at the surface.

VEGETATION – Use scientific names of plants. Sampling Point: Wetland A

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
2.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot Size: 3.28' x 3.28')			
1. *Acorus calamus*	65	Y	OBL
2. *Symphyotrichum novi-belgii*	3	N	FACW
3. *Persicaria sagittata*	1	N	OBL
4.			
5.			
6.			
7.			
8.			
9..			
10.			
11.			
12.			
	69	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by	
OBL species		x1=	
FACW species		x2=	
FAC species		x3=	
FACU species		x4=	
UPL species		x5=	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 – Rapid Test for Hydrophytic Vegetation
- X 2 – Dominance Test is >50%
- ___ 3 – Prevalence Index is #3.0[1]
- ___ 4 – Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: Wetland A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	10YR 2/2	93	5YR 4/6	7	C	PL	Loam	Saturated, fibric organic matter
3-8	10YR 3/1	97	%YR 4/6	3	C	M	Clayey loam	
8-18	10YR 3/1	100					Clayey loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (s7) (**LRR, MLRA, 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR, K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Field Observations:
Type: Saturation
Depth (inches): 0

Hydric Soil Present? **Yes** X **No**

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Stony Lodge Hospital City/County: Ossining/Westchester Sampling Date: 9/14/15

Applicant/Owner: Glenco Ossining, LLC State: NY Sampling Point: Upland A

Investigator(s): Jesse Moore Section, Township, Range: Ossining

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): slope Slope (%):

Subregion (LRR or MLRA): LRR R Lat: N 41.177220 Long: W 73.844945 Datum:

Soil Map Unit Name: LcB – Leicester loam, 3 to 8 percent slopes, stony NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	
Hydric Soil Present?	Yes	No	X
Wetland Hydrology Present?	Yes	No	X

Is the Sampled Area within a Wetland? **Yes** **No** X

If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):
Water Table Present?	Yes	No	Depth (inches):
Saturation Present?	Yes	No	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: Upland A

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Robinia pseudoacacia*	8	Y	FACU
2.			
4.			
5.			
6.			
7.			
	8	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
Juglans nigra	15	Y	FACU
2. *Rosa multiflora*	10	Y	FACU
Morus alba	1	N	FACU
4.			
5.			
6.			
7.			
	26	=Total Cover	
Herb Stratum (Plot Size: 3.28' x 3.28')			
1. *Microstegium vimineum*	90	Y	FAC
2. *Ampelopsis brevipedunculata*	40	Y	UPL
3. *Symphyotrichum dumosum*	4	N	FAC
4.			
5.			
6.			
7.			
8.			
9..			
10.			
11.			
12.			
	134	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Ampelopsis brevipedunculata*	40	Y	UPL
2.			
3.			
4.			
	40	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.67 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by	
OBL species		x1=	
FACW species		x2=	
FAC species		x3=	
FACU species		x4=	
UPL species		x5=	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 – Rapid Test for Hydrophytic Vegetation

___ 2 – Dominance Test is >50%

___ 3 – Prevalence Index is #3.0[1]

___ 4 – Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: Upland A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-16	10YR 4/3	100					Loam	
16-18	10YR 4/3	70					Loam	
	10YR 7/6	30						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (s7) (**LRR, MLRA, 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR, K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

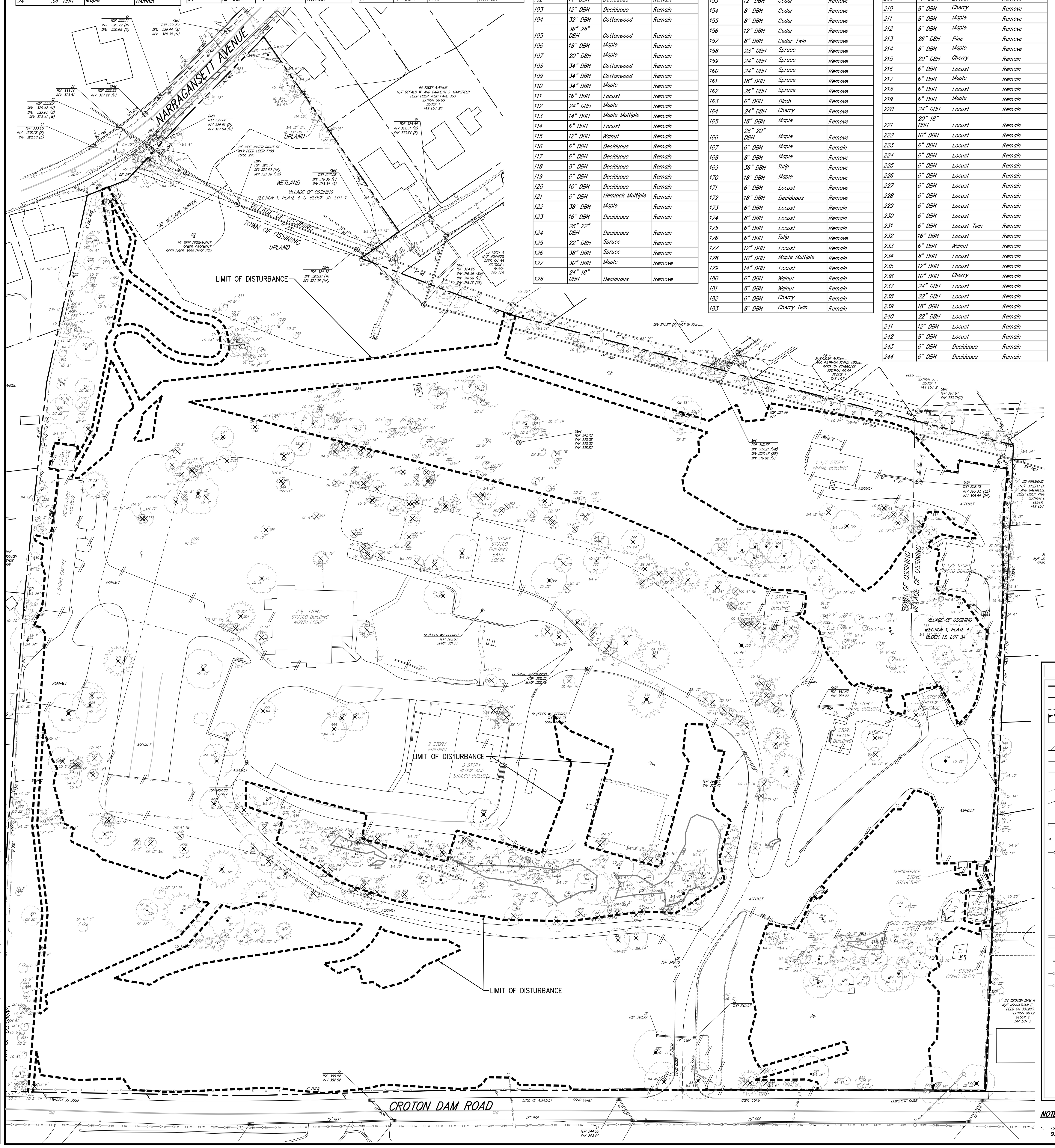
Field Observations:
Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** **No** X

Remarks:

TREE PRESERVATION PLAN

Tree Number	Size	Common Name	Remain/Remove
1	28" DBH	Willow	Remain
2	8" DBH	Maple	Remain
3	14" DBH	Maple	Remain
4	14" DBH	Maple	Remain
5	24" DBH	Maple	Remain
6	6" DBH	Maple	Remain
7	6" DBH	Maple	Remain
8	6" DBH	Maple	Remain
9	22" DBH	Maple	Remain
10	12" DBH	Maple	Remain
11	12" DBH	Maple	Remain
12	10" DBH	Maple	Remain
13	20" DBH	Maple	Remain
14	6" DBH	Maple	Remain
15	18" DBH	Locust	Remain
16	10" DBH	Maple	Remain
17	24" DBH	Maple	Remain
18	12" DBH	Walnut	Remain
19	12" DBH	Maple	Remain
20	16" DBH	Maple	Remain
21	26" DBH	Maple Multiple	Remain
22	22" DBH	Deciduous	Remain
23	12" DBH	Maple	Remain
24	38" DBH	Maple	Remain
25	14" DBH	Maple	Remain
26	8" DBH	Maple	Remain
27	14" DBH	Maple	Remain
28	24" DBH	Maple	Remain
29	6" DBH	Cherry	Remain
30	6" DBH	Locust	Remain
31	8" DBH	Locust	Remain
32	8" DBH	Locust	Remain
33	26" DBH	Maple	Remain
34	12" DBH	Locust	Remain
35	22" DBH	Locust	Remain
36	6" DBH	Maple	Remain
37	10" DBH	Cherry	Remain
38	8" DBH	Maple	Remain
39	28" DBH	Locust	Remain
40	6" DBH	Maple	Remain
41	14" DBH	Cherry	Remain
42	12" DBH	Cherry	Remain
43	6" DBH	Maple	Remain
44	18" DBH	Locust	Remain
45	14" DBH	Maple	Remain
46	18" DBH	Locust	Remain
47	12" DBH	Cherry	Remain
48	12" DBH	Maple	Remain
49	10" DBH	Maple	Remain
50	12" DBH	Maple	Remain
51	14" DBH	Maple	Remain
52	38" DBH	Cottonwood	Remain
53	16" DBH	Deciduous	Remain
54	6" DBH	Cherry	Remain
55	6" DBH	Cherry	Remain
56	12" DBH	Locust	Remain
57	20" DBH	Locust	Remain
58	24" DBH	Locust	Remain
59	18" DBH	Locust	Remain
60	6" DBH	Cherry	Remain
61	16" DBH	Maple	Remain
62	18" DBH	Maple	Remain
63	24" DBH	Locust	Remain
64	26" DBH	Cherry	Remain
65	22" DBH	Locust	Remain
66	12" DBH	Maple	Remain
68	24" DBH	Locust	Remain
69	24" DBH	Maple	Remain
70	8" DBH	Maple	Remain
71	18" DBH	Maple	Remain
72	24" DBH	Maple	Remain
73	18" DBH	Pine	Remain
74	12" DBH	Maple	Remain
75	8" DBH	Pine	Remain
76	18" DBH	Pine	Remain
77	16" DBH	Pine	Remain
78	16" DBH	Spruce	Remain
79	8" DBH	Spruce	Remain
80	10" DBH	Spruce	Remain
81	10" DBH	Spruce	Remain
82	12" DBH	Spruce	Remain
83	8" DBH	Spruce	Remain
84	6" DBH	Spruce	Remain
85	16" DBH	Maple	Remain
86	6" DBH	Spruce	Remain
87	6" DBH	Spruce	Remain
88	12" DBH	Japanese Maple Twin	Remain
89	14" DBH	Locust	Remain
90	14" DBH	Maple	Remove
91	6" DBH	Locust	Remove
92	10" DBH	Locust	Remove
93	10" DBH	Locust	Remove
94	16" DBH	Cherry	Remove
95	12" 6" DBH	Locust	Remove
96	12" DBH	Maple	Remove
97	6" DBH	Maple	Remove
98	10" DBH	Locust	Remove
99	6" DBH	Locust	Remove
100	32" DBH	Maple	Remove
101	18" 10" DBH	Maple	Remove
102	14" DBH	Deciduous	Remain
103	12" DBH	Deciduous	Remain
104	32" DBH	Cottonwood	Remain
105	36" 28" DBH	Cottonwood	Remain
106	18" DBH	Maple	Remain
107	20" DBH	Maple	Remain
108	34" DBH	Cottonwood	Remain
109	34" DBH	Cottonwood	Remain
110	34" DBH	Maple	Remain
111	16" DBH	Locust	Remain
112	24" DBH	Maple	Remain
113	14" DBH	Maple Multiple	Remain
114	6" DBH	Locust	Remain
115	12" DBH	Walnut	Remain
116	6" DBH	Deciduous	Remain
117	6" DBH	Deciduous	Remain
118	8" DBH	Deciduous	Remain
119	6" DBH	Deciduous	Remain
120	10" DBH	Deciduous	Remain
121	6" DBH	Hemlock Multiple	Remain
122	38" DBH	Maple	Remain
123	16" DBH	Deciduous	Remain
124	26" 22" DBH	Deciduous	Remain
125	22" DBH	Spruce	Remain
126	38" DBH	Spruce	Remain
127	30" DBH	Maple	Remove
128	24" 18" DBH	Deciduous	Remove
129	6" DBH	Locust	Remain
130	6" DBH	Deciduous	Remain
131	8" DBH	Deciduous	Remain
132	8" DBH	Birch Multiple	Remain
133	32" 30" DBH	Maple	Remain
134	6" DBH	Walnut	Remain
135	6" DBH	Cedar Multiple	Remain
136	10" DBH	Locust	Remain
137	6" DBH	Locust	Remain
138	6" DBH	Maple	Remain
139	6" DBH	Maple	Remain
140	8" DBH	Deciduous	Remain
141	6" DBH	Locust	Remain
142	8" DBH	Deciduous	Remain
143	8" DBH	Locust	Remain
144	6" DBH	Locust	Remain
145	16" DBH	Deciduous	Remain
146	24" 22" 12"DBH	Locust	Remain
147	18" DBH	Cedar	Remove
148	30" DBH	Spruce	Remove
149	32" DBH	Spruce	Remove
150	46" DBH	Oak	Remove
151	10" DBH	Cedar	Remove
152	6" DBH	Cedar	Remove
153	12" DBH	Cedar	Remove
154	8" DBH	Cedar	Remove
155	8" DBH	Cedar	Remove
156	12" DBH	Cedar	Remove
157	8" DBH	Cedar Twin	Remove
158	28" DBH	Spruce	Remove
159	24" DBH	Spruce	Remove
160	24" DBH	Spruce	Remove
161	18" DBH	Spruce	Remove
162	26" DBH	Spruce	Remove
163	6" DBH	Birch	Remove
164	24" DBH	Cherry	Remove
165	18" DBH	Maple	Remove
166	26" 20" DBH	Maple	Remove
167	6" DBH	Maple	Remain
168	8" DBH	Maple	Remove
169	36" DBH	Tulip	Remove
170	18" DBH	Maple	Remove
171	6" DBH	Locust	Remove
172	18" DBH	Deciduous	Remove
173	6" DBH	Locust	Remain
174	8" DBH	Locust	Remain
175	6" DBH	Locust	Remain
176	6" DBH	Tulip	Remove
177	12" DBH	Locust	Remain
178	10" DBH	Maple Multiple	Remain
179	14" DBH	Locust	Remain
180	6" DBH	Walnut	Remain
181	8" DBH	Walnut	Remain
182	6" DBH	Cherry	Remain
183	8" DBH	Cherry Twin	Remain
184	8" DBH	Cherry	Remain
185	8" DBH	Locust	Remain
186	6" DBH	Locust	Remain
187	6" DBH	Deciduous Twin	Remain
188	8" DBH	Locust	Remain
189	28" DBH	Walnut	Remain
190	8" DBH	Locust	Remain
191	8" DBH	Deciduous	Remain
192	8" DBH	Locust	Remain
193	8" DBH	Locust	Remain
194	6" DBH	Locust	Remain
195	18" DBH	Cherry	Remain
196	6" DBH	Locust	Remain
197	14" DBH	Locust	Remain
198	10" DBH	Walnut	Remain
199	12" DBH	Deciduous	Remain
200	20" DBH	Locust	Remain
201	12" DBH	Cherry	Remain
202	10" DBH	Deciduous	Remain
203	16" DBH	Cherry	Remain
204	6" DBH	Locust	Remain
205	6" DBH	Locust	Remain
206	6" DBH	Deciduous	Remain
207	6" DBH	Locust	Remain
208	10" DBH	Locust	Remove
209	14" DBH	Locust	Remove
210	8" DBH	Cherry	Remove
211	8" DBH	Maple	Remove
212	8" DBH	Maple	Remove
213	26" DBH	Pine	Remove
214	8" DBH	Maple	Remove
215	20" DBH	Cherry	Remain
216	6" DBH	Locust	Remain
217	6" DBH	Maple	Remain
218	6" DBH	Locust	Remain
219	6" DBH	Maple	Remain
220	24" DBH	Locust	Remain
221	20" 18" DBH	Locust	Remain
222	10" DBH	Locust	Remain
223	6" DBH	Locust	Remain
224	6" DBH	Locust	Remain
225	6" DBH	Locust	Remain
226	6" DBH	Locust	Remain
227	6" DBH	Locust	Remain
228	6" DBH	Locust	Remain
229	6" DBH	Locust	Remain
230	6" DBH	Locust	Remain
231	6" DBH	Locust Twin	Remain
232	16" DBH	Locust	Remain
233	6" DBH	Walnut	Remain
234	8" DBH	Locust	Remain
235	12" DBH	Locust	Remain
236	10" DBH	Cherry	Remain
237	24" DBH	Locust	Remain
238	22" DBH	Locust	Remain
239	18" DBH	Locust	Remain
240	22" DBH	Locust	Remain
241	12" DBH	Locust	Remain
242	8" DBH	Locust	Remain
243	6" DBH	Deciduous	Remain
244	6" DBH	Deciduous	Remain
245	6" DBH	Locust	Remain
246	8" DBH	Cherry	Remove
247	22" DBH	Walnut	Remove
248	22" DBH	Walnut	Remove
249	8" DBH	Locust	Remove
250	14" DBH	Deciduous	Remove
251	22" DBH	Deciduous	Remove
252	6" DBH	Deciduous	Remove
253	16" DBH	Walnut	Remove
254	10" DBH	Locust	Remove
255	24" DBH	Maple Multiple	Remove
256	6" DBH	Maple	Remove
257	42" DBH	Cottonwood	Remove
258	6" DBH	Maple	Remove
259	14" DBH	Tree of Heaven	Remove
260	8" DBH	Tree of Heaven	Remove
261	22" DBH	Walnut	Remove
262	20" DBH	Ash	Remove
263	8" DBH	Cherry	Remove
264	6" DBH	Maple	Remove
265	14" DBH	Cherry	Remove
266	10" DBH	Locust	Remove
267	10" DBH	Locust	Remove
268	18" DBH	Locust	Remove
269	8" DBH	Locust	Remove
270	8" DBH	Locust	Remove
271	16" DBH	Maple	Remove
272	16" DBH	Locust	Remove
273	10" DBH	Maple	Remove
274	22" DBH	Locust	Remove
275	6" DBH	Maple	Remove
276	6" DBH	Maple	Remove
277	6" DBH	Cherry	Remain
278	6" DBH	Locust Multiple	Remove
279	6" DBH	Locust	Remove
280	6" DBH	Maple	Remove
281	12" DBH	Locust	Remove
282	14" DBH	Locust	Remain
283	12" DBH	Maple Twin	Remain
284	14" DBH	Cherry	Remain
285	8" DBH	Cherry	Remain
286	8" DBH	Cherry	Remain
287	10" DBH	Cherry	Remain
288	6" DBH	Maple	Remain
289	30" DBH	Maple	Remove
290	16" DBH	Maple	Remove
291	8" DBH	Maple	Remove
292	10" DBH	Maple	Remove
293	8" DBH	Maple	Remove
294	10" DBH	Maple	Remove
295	6" DBH	Maple	Remove
296	8" DBH	Locust	Remove
297	8" DBH	Deciduous Multiple	Remove
298	10" DBH	Walnut	Remove
299	6" DBH	Walnut	Remain
300	16" DBH	Cherry	Remove
301	10" DBH	Maple	Remove
302	8" DBH	Deciduous Multiple	Remove
303	30" DBH	Deciduous	Remove
304	30" DBH	Spruce	Remove
305	12" DBH	Cedar Twin	Remove
306	12" DBH	Cedar	Remove
307	14" DBH	Cedar	Remove
308	16" DBH	Spruce	Remove
309	16" DBH	Cedar	Remove
310	8" DBH	Maple	Remove
311	14" DBH	Ash	Remove
312	12" DBH	Maple	Remove
313	10" DBH	Maple	Remove
314	14" DBH	Maple	Remove
315	20" DBH	Maple	Remove
316	38" DBH	Maple	Remove
317	38" DBH	Tulip	Remove
318	12" DBH	Maple Twin	Remove
319	12" DBH	Deciduous	Remove
320	16" DBH	Maple	Remove
321	26" 20" DBH	Deciduous	Remove
322	6" DBH	Maple	Remove
323	6" DBH	Maple	Remove
324	18" DBH	Maple	Remove
325	16" DBH	Deciduous	Remove
326	6" DBH	Maple	Remain
327	34" DBH	Spruce	Remove
328	32" DBH	Spruce	Remove
329	22" DBH	Spruce	Remove
330	14" DBH	Spruce	Remove
331	6" DBH	Cedar	Remove
332	12" DBH	Spruce	Remove
333	12" DBH	Deciduous Triple	Remove
334	38" DBH	Cedar	Remove
335	16" DBH	Cedar	Remove
336	18" DBH	Deciduous	Remove
337	12" DBH	Cedar	Remove
338	14" DBH	Cedar	Remove
339	12" DBH	Cedar	Remove
340	14" DBH	Cedar	Remove
341	12" DBH	Cedar	Remove
342	14" DBH	Cedar Twin	Remove
343	36" DBH	Pine	Remove
344	26" DBH	Pine	Remove
345	20" DBH	Pine	Remove
346	8" DBH	Cedar	Remove
347	18" DBH	Hemlock	Remove
348	12" DBH	Cedar	Remove
349	14" DBH	Cedar	Remove
350	12" DBH	Cedar	Remove
351	14" DBH	Cedar	Remove
352	28" DBH	Maple	Remove
353	14" 8" DBH	Deciduous	Remove
354	48" DBH	Locust	Remain
355	24" DBH	Locust	Remain
356	12" DBH	Maple	Remain
357	11" DBH	Sassafras	Remain
358	14" DBH	Sassafras	Remain
359	6" DBH	Sassafras	Remain
360	6" DBH	Sassafras	Remain
361	6" DBH	Sassafras	Remain
362	6" DBH	Sassafras	Remain
363	6" DBH	Sassafras	Remain
364	12" DBH	Sassafras	Remain
365	20" DBH	Locust	Remain
366	22" DBH	Maple	Remain
367	24" DBH	Locust	Remain
368	26" DBH	Locust	Remain
369	12" DBH	Maple	Remain
370	6" DBH	Walnut	Remain
371	24" DBH	Maple	Remain
372	22" DBH	Ash	Remain
373	6" DBH	Maple	Remain
374	20" DBH	Maple	Remain
375	20" DBH	Birch	Remain
376	26" DBH	Maple	Remain
377	16" DBH	Maple	Remain
378	10" DBH	Maple	Remain
379	10" DBH	Maple	Remain
380	10" DBH	Maple	Remain
381	12" DBH	Maple	Remain
382	34" DBH	Oak	Remain
383	28" DBH	Maple	Remain
384	24" DBH	Oak	Remain
385	10" DBH	Maple	Remain
386	12" DBH	Maple	Remain
387	14" DBH	Maple	Remain
388	10" DBH	Maple	Remain
389	14" DBH	Mape	Remain
390	22" DBH	Maple	Remain
391	6" DBH	Maple	Remain
392	28" DBH	Pine	Remain
393	22" DBH	Oak	Remain
394	10" DBH	Hickory	Remain
395	6" DBH	Maple Twin	Remain
396	10" DBH	Hickory	Remain
397	30" DBH	Hickory	Remain
398	8" DBH	Maple	Remain
399	6" DBH	Maple	Remain
400	34" DBH	Maple	Remain
401	6" DBH	Maple	Remain
402	8" DBH	Maple	Remain
403	30" DBH	Oak	Remain
404	16" DBH	Birch	Remain
405	6" DBH	Maple	Remain
406	12" DBH	Birch	Remain
407	8" DBH	Maple	Remain
408	12" DBH	Maple	Remain
409	6" DBH	Maple	Remain
410	8" DBH	Maple	Remain
411	12" DBH	Maple	Remain
412	6" DBH	Maple	Remain
413	12" DBH	Maple	Remove
414	22" DBH	Pine	Remain
415	20" DBH	Pine	Remove
416	12" DBH	Pine	Remain
417	8" DBH	Maple	Remain
418	6" DBH	Maple	Remain
419	24" DBH	Oak	Remain
420	12" DBH	Oak	Remain
421	20" DBH	Maple	Remove
422	8" DBH	Maple	Remove
423	16" DBH	Maple	Remove
424	12" DBH	Maple	Remain
425	10" DBH	Maple	Remain
426	48" DBH	Oak	Remain
427	12" DBH	Maple	Remain
428	14" DBH	Maple	Remain
429	12" DBH	Maple	Remain
430	10" DBH	Maple	Remain
431	6" DBH	Maple	Remain
432	18" DBH	Maple	Remove
433	24" DBH	Pine	Remove
434	12" DBH	Maple Twin	Remove
435	18" DBH	Maple	Remain
436	6" DBH	Maple	Remain
437	12" DBH	Maple	Remain
438	14" DBH	Maple	Remain
439	6" DBH	Maple	Remove
440	10" DBH	Maple	Remove
441	24" DBH	Maple	Remove
442	24" DBH	Maple	Remove
443	6" DBH	Maple	Remain
444	6" DBH	Maple	Remain
445	6" DBH	Maple	Remove
446	12" DBH	Maple	Remove
447	14" DBH	Maple	Remove
448	14" DBH	Maple	Remain
449	12" DBH	Maple	Remain
450	10" DBH	Maple	Remain
451	6" DBH	Maple	Remain
452	30" DBH	Locust	Remain
453	8" DBH	Maple	Remove
454	10" DBH	Locust	Remove
455	6" DBH	Birch	Remain
456	6" DBH	Birch Twin	Remain
457	36" DBH	Oak	Remain
458	10" DBH	Maple	Remove
459	14" DBH	Maple	Remain
460	12" DBH	Maple	Remain
461	18" DBH	Maple	Remain
462	14" DBH	Maple	Remain
463	10" DBH	Birch	Remain
464	10" DBH	Maple	Remain
465	8" DBH	Hickory	Remain
466	10" DBH	Elm	Remain
467	22" DBH	Birch	Remove
468	6" DBH	Maple	Remain
469	6" DBH	Maple	Remain
470	6" DBH	Maple	Remain
471	12" DBH	Maple	Remain
472	8" DBH	Maple	Remain
473	18" DBH	Maple	Remain
474	12" DBH	Maple Triple	Remain
475	12" DBH	Maple	Remain
476	14" DBH	Maple	Remain
477	10" DBH	Maple	Remain
478	6" DBH	Maple	Remain
479	18" DBH	Maple	Remove
480	20" DBH	Birch	Remain
481	8" DBH	Maple	Remain
482	16" DBH	Maple	Remain
483	6" DBH	Maple	Remain
484	8" DBH	Maple	Remain
485	8" DBH	Elm	Remain
486	32" DBH	Chestnut	Remove
487	6" DBH	Cedar	Remove
488	6" DBH	Cedar	Remain
489	14" DBH	Maple	Remain
490	12" DBH	Maple	Remain
491	24" DBH	Maple	Remain
492	10" DBH	Maple	Remain
493	6" DBH	Maple	Remain
494	6" DBH	Maple	Remove
495	18" DBH	Maple	Remove
496	42" DBH	Oak	Remain
497	16" DBH	Birch	Remain
498	6" DBH	Maple Twin	Remove
499	8" DBH	Maple	Remove
500	12" DBH	Maple	Remove
501	12" DBH	Oak	Remove
502	10" DBH	Maple	Remain
503	6" DBH	Beech	Remove
504	6" DBH	Beech	Remove
505	6" DBH	Beech	Remain
506	8" DBH	Beech	Remove
507	32" DBH	Beech	Remove
508	14" DBH	Beech	Remove
509	6" DBH	Beech	Remove
510	28" DBH	Maple	Remove
511	6" DBH	Maple	Remain
512	8" DBH	Maple	Remove
513	8" DBH	Maple	Remove
514	12" DBH	Maple	Remove
515	6" DBH	Maple	Remove
516	6" DBH	Maple	Remove
517	18" DBH	Maple	Remain
518	6" DBH	Maple	Remain
519	8" DBH	Maple	Remain
520	6" DBH	Maple	Remain
521	6" DBH	Maple	Remain
522	6" DBH	Maple	Remove
523	22" DBH	Locust	Remove
524	18" DBH	Maple	Remove
525	22" DBH	Locust	Remove
526	14" DBH	Maple	Remain
527	8" DBH	Maple	Remain
528	6" DBH	Maple	Remain
529	16" DBH	Oak	Remain
530	6" DBH	Elm	Remain
531	12" DBH	Birch	Remain
532	12" DBH	Ash	Remain
533	12" DBH	Maple	Remain
534	10" DBH	Maple	Remain
535	8" DBH	Maple	Remain
536	10" DBH	Maple	Remain
537	10" DBH	Hemlock	Remain
538	12" DBH	Oak	Remove
539	24" DBH	Maple	Remain
540	34" DBH	Pine	Remove
541	28" DBH	Maple	Remove
542	24" DBH	Maple	Remove
543	28" DBH	Maple	Remove
544	36" DBH	Pine	Remain
545	16" DBH	Hemlock	Remain
546	20" DBH	Hemlock	Remain
547	16" DBH	Birch	Remain
548	36" DBH	Oak	Remain
549	10" DBH	Cedar	Remain
550	16" DBH	Cedar	Remain
551	8" DBH	Cedar	Remain
552	12" 8" 6" DBH	Cedar	Remain
553	40" DBH	Pine	Remain
554	10" DBH	Deciduous	Remain
555	22" DBH	Deciduous	Remain
556	12" DBH	Deciduous Triple	Remain
557	38" DBH	Pine	Remove
558	10" DBH	Deciduous Triple	Remove
559	8" DBH	Dw Twin	Remove
560	12" DBH	Deciduous Multiple	Remove
561	8" DBH	Ash	Remove
562	28" DBH	Maple	Remove
563	34" DBH	Maple	Remove
564	34" DBH	Maple	Remove
565	26" DBH	Maple	Remove
566	29" DBH	Maple	Remove
567	24" DBH	Maple	Remove
568	26" DBH	Maple	Remove
569	8" DBH	Deciduous	Remain
570	40" DBH	Maple	Remove
571	30" DBH	Pine	Remove
572	28" DBH	Pine	Remain
573	6" DBH	Maple	Remain
574	12" DBH	Willow	Remain
575	20" DBH	Maple	Remain
576	8" DBH	Maple	Remain
577	30" DBH	Locust	Remain
578	38" DBH	Cottonwood	Remain
579	6" DBH	Maple	Remain
580	6" DBH	Maple	Remain
581	24" DBH	Locust	Remain
582	14" DBH	Maple	Remain
583	10" DBH	Maple	Remain
584	10" DBH	Deciduous	Remain
585	14" DBH	Locust	Remain
586	6" DBH	Maple	Remain
587	6" DBH	Walnut	Remain
588	38" DBH	Locust	Remain
589	6" DBH	Cherry	Remain
590	30" DBH	Locust	Remain
591	6" DBH	Cherry	Remain
592	10" DBH	Cherry	Remain
593	8" DBH	Cherry	Remain
594	10" DBH	Cherry	Remain
595	12" DBH	Cherry	Remain
596	8" DBH	Cherry	Remain
597	12" DBH	Locust	Remain
598	10" DBH	Cherry	Remain
599	30" 26" DBH	Oak	Remain
600	8" DBH	Locust	Remain
601	8" DBH	Cherry	Remain
602	8" DBH	Locust	Remain
603	10" 8" DBH	Locust	Remain
604	6" DBH	Locust	Remain
605	8" DBH	Cherry	Remain
606	12" DBH	Tree of Heaven	Remain
607	12" 8" DBH	Locust	Remain
608	10" DBH	Locust	Remain
609	12" DBH	Locust	Remain
610	10" DBH	Locust	Remain
611	12" DBH	Locust	Remain
612	10" DBH	Locust	Remain
613	24" DBH	Locust	Remain
614	8" DBH	Maple	Remain
615	6" DBH	Maple	Remain
616	8" DBH	Maple	Remain
617	20" DBH	Locust	Remain
618	14" DBH	Maple	Remain
619	18" DBH	Maple	Remain
620	22" DBH	Locust	Remain
621	6" DBH	Walnut	Remain
622	10" DBH	Locust	Remove
623	34" DBH	Maple	Remain
624	14" DBH	Locust Triple	Remain
625	12" DBH	Maple	Remain
626	8" DBH	Maple Triple	Remain
627	8" DBH	Maple	Remain
628	8" DBH	Locust	Remain
629	6" DBH	Cherry	Remain
630	16" DBH	Walnut	Remain
631	26" DBH	Maple	Remain
632	18" DBH	Maple	Remain
633	20" DBH	Maple	Remain
634	6" DBH	Deciduous	Remain
635	34" DBH	Maple	Remain
636	26" DBH	Maple	Remain
637	26" DBH	Maple	Remove
638	36" DBH	Maple	Remove
639	40" DBH	Maple	Remove
640	12" DBH	Hemlock	Remain
641	28" DBH	Locust	Remove
642	8" DBH	Cedar	Remove
643	6" DBH	Cedar	Remove
644	10" DBH	Cedar	Remove
645	6" DBH	Sassafras	Remove
646	16" DBH	Cedar	Remove
647	12" DBH	Pine	Remove
648	10" DBH	Locust	Remain
649	22" DBH	Locust	Remain
650	6" DBH	Locust	Remain
651	12" DBH	Sassafras	Remain
652	6" DBH	Birch	Remain
653	6" DBH	Cherry	Remain
654	8" 6" 6" DBH	Maple	Remain
655	10" DBH	Maple	Remain
656	8" 6" DBH	Maple	Remain
657	14" DBH	Cedar	Remove
658	14" DBH	Cedar	Remove
659	24" DBH	Deciduous	Remove
660	6" DBH	Cherry	Remain
661	20" DBH	Oak	Remain
662	10" 6" DBH	Birch	Remain
663	6" DBH	Oak	Remain
664	10" DBH	Locust Twin	Remain
665	8" DBH	Locust	Remain
666	8" DBH	Locust	Remain
667	6" DBH	Locust	Remain
668	8" DBH	Locust	Remain
669	6" DBH	Locust	Remain
670	6" DBH	Locust	Remain
671	6" DBH	Cherry	Remain
672	8" DBH	Locust	Remain
673	6" DBH	Locust	Remain
674	8" DBH	Locust	Remain
675	8" DBH	Locust	Remain
676	16" DBH	Birch	Remain
677	6" DBH	Locust Twin	Remain
678	6" DBH	Locust	Remain
679	6" DBH	Locust	Remain
680	6" DBH	Locust Twin	Remain
681	6" DBH	Locust	Remove
682	44" DBH	Maple	Remove
683	40" DBH	Maple	Remove
684	38" DBH	Maple	Remove
685	8" 6" DBH	Maple	Remove
686	25" DBH	Pine	Remove
687	6" DBH	Deciduous	Remove
688	6" DBH	Maple	Remain
689	6" DBH	Maple	Remove
690	6" DBH	Walnut	Remove
691	36" DBH	Maple	Remain
692	8" DBH	Birch	Remain
693	6" DBH	Maple	Remain
694	6" DBH	Cedar	Remain
695	8" DBH	Deciduous	Remain
696	38" DBH	Deciduous	Remove
697	38" DBH	Deciduous	Remove
698	22" DBH	Maple	Remain
699	22" DBH	Maple	Remain
700	6" DBH	Locust	Remain
701	6" DBH	Tulip	Remain
702	6" DBH	Elm	Remain



TREE ABBREVIATIONS

AS	ASH
BE	BEECH
BR	BRICH
CD	CEDAR
CH	CHERRY
CT	CHESTNUT
CW	COTTON WOOD
DE	DECIDUOUS
DO	DOGWOOD
EM	ELM
HI	HICKORY
HM	HEMLOCK
JMA	JAPANESE MAPLE
LO	LOCUST
MA	MAPLE
MU	MULTIPLE
OK	OAK
PI	PINE
SA	SASSAFRAS
SR	SPRUCE
TOH	TREE OF HEAVEN
TR	TRIPLE
TW	TWIN
TU	TULIP
WT	WALNUT

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING TREE AND DESIGNATION
- EXISTING TREE LINE
- EXISTING DIRECTIONAL ARROWS
- EXISTING PAINT
- EXISTING STORM DRAIN LINE AND SIZE
- EXISTING SANITARY LINE AND SIZE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY PREPARED BY JMC, PLLC.

NOT FOR CONSTRUCTION

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TREE PRESERVATION PLAN

RIVER KNOLL
40 CROTON DAM ROAD
TOWN OF OSSINING, NEW YORK

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Drawn: JSJ Approved: AG
Scale: 1" = 40'
Date: 05/15/2017
Project No: 15064
15064-BASE | TREE | EXIST.scr
Drawing No: SP-5