Briarcliff Solar, LLC

Project Application Book

PREPARED FOR
VILLAGE OF BRIARCLIFF MANOR

BRIARCLIFF SOLAR, LLC

79 Madison Ave., 8th Floor, New York, NY 10016

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Table of Contents

1.0 INTRODUCTION 1
1.1 Purpose and Statutory Authority 1
1.2 Project Overview/Key Project Elements 2
1.2.1 Public Notice and Outreach 2
2.0 LEGAL NAME AND ADDRESS OF APPLICANT & CONTACT INFORMATION 4
3.0 DESCRIPTION OF PROPOSED PROJECT 4
3.1 Project Site Description and Site Selection 5
3.1.1 Site Description 5
3.1.2 Site Selection 6
3.2 Proposed Project Description 7
3.2.1 Solar Panels and Related Ground Equipment 7
3.2.2 Service Life and Capacity Factor 7
3.2.3 Site Access 7
3.2.4 Interconnection 7
3.2.5 Construction Schedule and Phasing 7
3.2.6 Project Maintenance 8
3.2.7 Project Decommissioning 10
4.0 PROJECT PURPOSE AND NEED 10
5.0 PROJECT BENEFITS 10
6.0 POTENTIAL ENVIRONMENTAL IMPACTS 11
6.1 Public Health and Safety 11
6.1.1 Public Health 11
6.1.2 Site Safety 12
6.1.3 Emergency Access/Training 12
6.1.4 Electric and Magnetic Fields 13
6.2 Federal, Local and State Land Use, Conservation and Development Plans 14
6.3 Ecological, Vegetation, Wildlife Habitat, and Natural Diversity Database and Endangered Species 14
6.3.1 Threatened and Endangered Wildlife 15
6.3.2 Phase 1 ESA 17
6.3.3 Geology 18
6.3.4 Forest and Meadow Implementation 18
6.3.5 Prime Farmland Soils and Farmland Soils of Statewide Importance 19
6.4 Wetlands 19
6.4.1 Identified Wetlands and Regulating Agencies 19
6.4.2 Impacts on Wetlands 21
6.5 Water Resources and Stormwater Management 21
6.5.1 Floodplain Areas 22
6.5.2 Pollution 22
6.5.3 Stormwater Management 23
6.6 Air Quality 24
6.7 Historic and Archaeological Resources 24

6.8 Noise **26**
6.9 Lighting **27**
6.10 FAA Determination **27**
6.11 Project Visibility **27**
7.0 CONCLUSION **28**

LIST OF FIGURES

Figure 1 - Site Location (Scale 1:2000) 3
Figure 2 - Existing Site Photos 6

LIST OF TABLES

Table 1 – Scheduled Maintenance 10
Table 2 – Emergency Contacts 13
Table 3 – Threatened & Endangered Species 16

APPENDICES

Appendix A	Neighbor Notification Letter
Appendix B	Asbestos Report
Appendix C	Project Site Plans
Appendix D	O&M Plan
Appendix E	Decommissioning Plan
Appendix F	Existing Conditions Photos
Appendix G	IPaC Official Species List
Appendix H	SEQR FEAF
Appendix I	Natural Heritage
Appendix I-1	Notification Letter
Appendix I-2	Response Letter
Appendix J	NYSDEC Wildlife
Appendix J-1	Notification Letter
Appendix J-2	NYSDEC Response
Appendix K	IPaC Biological Assessment
Appendix L	USFWS Species Data
Appendix M	Phase 1 ESA
Appendix N	Site Soils
Appendix O	Wetlands
Appendix O-1	Map with Wetland Flagging
Appendix O-2	Environmental Resource Mapper
Appendix O-3	USACE Federal Wetlands Notification Letter
Appendix O-4	USACE Federal Wetlands Response
Appendix O-5	NYSDEC Wetlands Notification Letter
Appendix O-6	NYSDEC Response
Appendix P	Stormwater Pollution Prevention Plan
Appendix Q	Floodplain Management
Appendix Q-1	FIRMette
Appendix Q-2	Floodplain Management Response Letter
Appendix R	State Historic Preservation Office
Appendix R-1	OPRHP Notification Letter
Appendix R-2	Identification of SHPO as Regulating Agency
Appendix R-3	SHPO Initial Submission Approval
Appendix R-4	SHPO Solar Project Survey Guidance - Response
Appendix R-5	Briarcliff Manor ZVI Response
Appendix R-6	SHPO Consolidated Response
Appendix R-7	Litigation Reports
Appendix R-8	Response to Sarah McIvor (Draft)
Appendix S	FAA Determination

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1.0 INTRODUCTION

Briarcliff Solar, LLC ("Briarcliff Solar") is affiliate of YSG Solar Development Company, LLC. ("YSG" or the "Applicant") is a national renewable energy development company established in 2010, based in New York, New York. YSG is responsible for developing, constructing, structuring financing, and working with community-based organizations to build portfolios of successful clean energy projects across the country.

1.1 Purpose and Statutory Authority

Pursuant to Village of Briarcliff Manor §178 "Solar and Alternative Energy" and §220 "Zoning", Briarcliff Solar LLC (the "Applicant"; or "Briarcliff Solar") respectfully petitions the Village of Briarcliff Manor Village Board for a Special Use Permit for the proposed construction, operation, and maintenance of two, co-located 5.0 megawatt-alternating current ("MW_{AC}") solar-based electric generating facilities (the "Project") located at 345 Scarborough Road, Briarcliff Manor, New York (the "Project Site"; or the "Site").

Briarcliff Manor §178-1-A states, in relevant part:

> *Solar energy collectors shall be permitted (a) to provide power for use by owners, lessees, tenants, residents, or other occupants of the premises on which they are erected; (b) to capture solar energy and convert it to electrical energy for interconnection to the utility grid under New York State regulations for remote net-metering and/or community distributed generation (CDG or community solar) or (c) to promote usage of alternate energy sources consistent with any solar energy programs approved by the New York State Energy Research and Development Authority (NYSERDA) in accordance with New York Public Service Law § 66-j or similar state or federal statute.*

As demonstrated by the information included herein, the proposed Project will result in no air emissions, has been designed to minimize natural resource impact(s), and complies with the applicable air and water quality standards of the New York State Department of Environmental Protection ("NYSDEC"). In addition, the Project will not have an adverse environmental effect in the State of New York and will contribute to the State's efforts in promoting the deployment of clean, renewable energy sources. In accordance with the above and 6 NYCRR Part 617, State Environmental Quality Review ("SEQR") Briarcliff Solar respectfully requests that the Village of Briarcliff Manor declare themselves as Lead Agency.

1.2 Project Overview/Key Project Elements

The proposed Briarcliff Community Solar Garden project is located at 345 Scarborough Rd, Briarcliff Manor, NY 10510 (Parcel IDs: 97.16-1-1 & 97.12-1-9). The parcels encompass ~95.5 acres and housed the former Philips Research Facility (see Figure 1). The project will raze the dilapidated Philips Research Facility and construct a pair of co-located 5-MW_{AC} Community Solar facilities. The Community Solar Garden makes use of approximately 28,000 solar panels to generate electricity that can power over 2,500 residential homes.

1.2.1 Public Notice and Outreach

Briarcliff Solar and YSG have been proactive in their attempts to inform members of the community of our intentions for the property. The initial public outreach campaign for the Project began in November of 2021. By way of example, Briarcliff Solar has:

- Mailed certified letters to the Facility's neighbors notifying them about the project. In total 12 certified letters were sent out to the neighbors and only two were returned as undeliverable. Please refer to Appendix A for an example of the letter sent to the neighbors as well as the certified mail receipts.
- Engaged in a virtual meeting with neighbors on December 3, 2021 to discuss the project.
- Engaged in regular discussions with local officials about the Project;

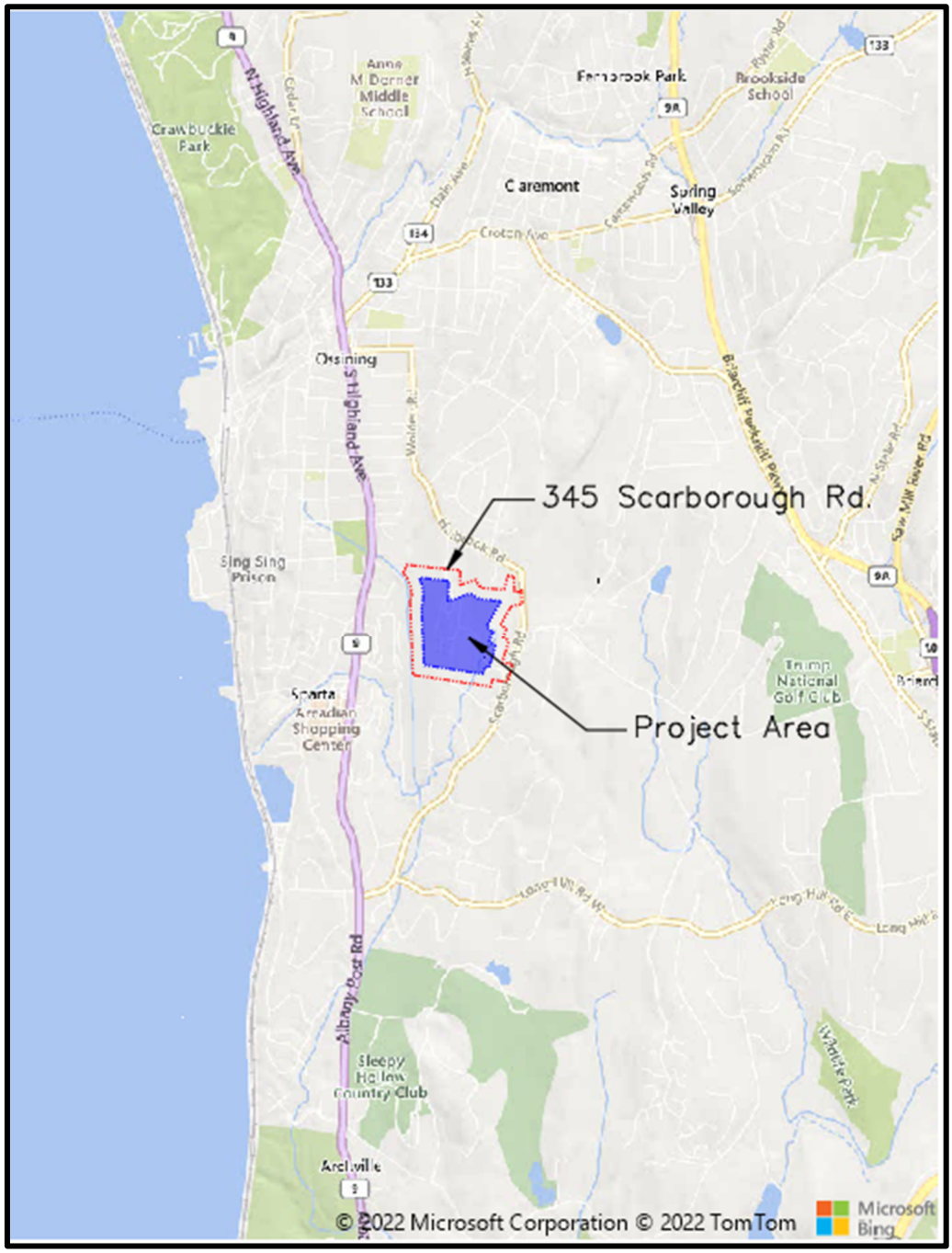


Figure 1 - Site Location (Scale 1:2000)

2.0 Legal Name and Address of Applicant & Contact Information

The legal name of the Applicant is Briarcliff Solar LLC. Briarcliff Solar is a New York limited liability company with its principal place of business in New York, New York. Briarcliff Solar is in affiliate of YSG Solar Development Company LLC ("YSG"). YSG is a professional renewable energy business with a decade of experience in the solar industry; the core of its business is developing, financing, constructing, managing, and operating solar projects.

Mailing Address: Briarcliff Solar LLC
79 Madison Ave, 8th Floor
New York, NY 10016

Correspondence and other communications concerning the Project are to be addressed to, and notices, orders and other papers may be served upon the following:

David Magid
Managing Partner
Briarcliff Solar LLC
79 Madison Ave, 8th Floor
New York, NY 10016
DMG@YSGSolar.com
(212) 389-9215

Jim Taravella, P.E.
Project Developer
Briarcliff Solar LLC
79 Madison Ave, 8th Floor
New York, NY 10016
James.T@YSGSolar.com
(212) 389-9215

Nadia Jagdat
Development Associate
Briarcliff Solar LLC
79 Madison Ave, 8th Floor
New York, NY 10016
Nadia.Jagdat@YSGSolar.com
(212) 389-9215

All three individuals consent to electronic mailings of all Council and Application-related correspondence.

3.0 Description of Proposed Project

The Briarcliff Community Solar Garden will be located within the Complimentary Use Transition (CT1) District, and is one of the few large commercial zoned parcels in the Village of Briarcliff Manor. The project will result in the redevelopment of a dilapidated and underutilized site within the Village. Maintaining the quantity of commercially zoned parcels within the Briarcliff Manor is a key component for the community and local economy. Additionally, the proposed solar garden is consistent with the community's and State's clean energy goals. It will generate clean electricity that will be fully exported into Con Edison's existing infrastructure.

To facilitate this development, Briarcliff Solar LLC has engaged with several demolition and abatement companies to prepare for the razing of the former Research Facility. The goal is to remove the facility while maintaining the integrity of Shadow Brook Lane for use as the project's access. No new roads or entrances will be required for this project. By abating and razing the existing facility, the project will improve the property's appearance and increase the permeability

of the site.

Concurrent with the plans to reclaim the site, two active projects have been initiated with Con Edison's Distributed Generation department for this project. The project initiated with Con Edison consist of two co-located 5 MW_{AC} Community Solar facilities. Each project has a total of approximately 14,000 solar panels.

The solar panels will be mounted on a steel racking structure that tracks the direction of the sun on a single axis. The maximum height of the solar equipment is approximately 9ft and the lowest point is approximately 3ft. The solar equipment will be protected with a security fence that reached a height of 7ft. The equipment is accessed from an existing private roadway accessed from Holbrook Road. Each solar facility will be connected to its own electrical service. The electrical service and metering equipment will be set by Con Edison.

3.1 Project Site Description and Site Selection

3.1.1 Site Description

The proposed project parcels encompass 95.5 acres and housed the former Philips Research Facility. The Research Facility consists of four main interconnected buildings designated as Buildings A, B, C, and D and related improvements including a Maintenance Garage, basketball court, tennis courts, volleyball courts, helipad, and patio area. The property is accessed by a private drive. Asphalt paved parking is present to the north and south of the Research Facility. The remainder of the Site is either grass field or wooded. Water and power easements are present in the area occupied by Shadow Brook Lane and a sewer easement runs north/south.

Philips lighting constructed the original buildings (A and B) in 1964 for use as a research facility and office building. Philips added building C in 1980 and building D in 1988. The facility has been vacant since Philips ceased their operations at the site in 2015.

Site security has been a challenge due to large area of open area creating numerous points of entry to unauthorized individuals. The community, residents, and neighboring properties are eager to see the building removed. As shown in the photos below the Research Facility is in a state of disrepair and has been the subject of extensive vandalization. In addition to the damages done to the facility's interior and exterior, an asbestos report completed in 2017 (see Appendix B) indicates that an extensive abatement will be required prior to any activity within the Research Facility.

Photos of 345 Scarborough Rd



East facing wall (looking west)



North facing wall (looking south)



South facing wall (looking north)



West facing (looking south)

Figure 2 - Existing Site Photos

The proposed project will abate the asbestos containing materials within the Research Facility, razing of the structure, removal of the demolished structure, regrading of the former building footprint, and the installation of two 7.5MW_{DC} solar arrays for a total of 15MW_{DC} of power generation.

The current state of the economy and allowed uses of the land limit the ability for an investment on the premises and has left the parcel with an abandoned commercial building that has been plagued with vandalism. The vandals have posed a safety threat to themselves and the community.

3.1.2 Site Selection

The Site is suitable for the Project for a variety of reasons, including

- It is near an existing Con Edison distribution center.
- Due to existing vegetation, it is largely shielded from public views and neighborhoods.
- The facility's construction and subsequent operation is not expected to have undue adverse environmental impacts on the surrounding area.

3.2 Proposed Project Description

3.2.1 Solar Panels and Related Ground Equipment

As currently designed, the proposed Project will consist of approximately 28,000 ET Solar ET-M772BH540TW 540W bifacial solar modules; 100 Solectria 1500V 125kW (XGI 1500-125/125) inverters; Single-axis tracker racking in 2-high portrait orientation; a switchgear, transformers, and electrical systems interconnected to the utility grid along Scarborough Rd. The Project also includes the installation of access roads and an NEC-compliant, seven (7)-foot safety and security fencing system.

For more detail(s) regarding the Project's design, please refer to Appendix C, Project Site Plans.

3.2.2 Service Life and Capacity Factor

The Facility's panels and inverters have an anticipated service life of thirty-five (35) years.

3.2.3 Site Access

The Facility will be accessed via an existing private road, Shadow Brook Lane, accessed from Scarborough Road.

3.2.4 Interconnection

The direct current ("DC") electricity generated by the solar panels will be converted to AC and stepped up to 13.2-kilovolts (kV) at two transformers and associated inverters centrally located within the Project Area. From the transformers, the AC power from the Project will be carried underground, following the existing access road, to connect to an existing Con Edison 13.2-kV distribution line along Holbrook Rd.

Briarcliff Solar will conduct the interconnection in accordance with Con Edison's technical standards, and State of New York requirements, and Federal Energy Regulatory Commission ("FERC") requirements.

3.2.5 Construction Schedule and Phasing

Construction Schedule and Phasing Construction activities within the Project Area will include asbestos abatement, building demolition, tree clearing, grading, incorporating stormwater best management practices, installing erosion and sedimentation ("E&S") control measures, racking and module installation, electrical trenching, Tree clearing beyond the fenced area will be required to facilitate construction of the Project. Existing grades throughout the Project Area

will be modified which will require some manipulation (cuts/fills) and regrading.

The "Erosion and Sediment Control Plan" in the accompanying drawings identifies the major construction activities that are the subject of this SWPPP. The order (or sequence) in which the major activities are expected to performed/undertaken is as follows:

- Install temporary erosion and sediment control features, ex. silt fencing;
- Demo building and surrounding building infrastructure, grade and stabilize disturbed area. Disturbed area associated with demolition phase shall not exceed 5 acres,
- Clear, grub, and grade in 5 acre increments, stabilizing disturbed area prior to moving on to the next;
- Install solar facility (panel arrays and supporting surface and subsurface infrastructure) maintaining 5 acres or less of disturbance. Stabilization to be completed following work areas being completed;
- Erosion and sediment control features shall be maintained and not removed by the contractor until "final stabilization" (as defined in GP-0-20-002) has been achieved.

Each activity will not necessarily be completed before the next begins. In addition, these activities could occur in a different order if necessary to maintain adequate erosion and sediment control. If this is the case, the contractor shall notify the Owner's/Operator's Engineer overseeing the implementation of the SWPPP. The approximate disturbance area for the project is 47.6 acres.

3.2.6 Project Maintenance

Throughout operation of the Project, periodic inspections and maintenance will be performed as required. Required maintenance of the Project, however, will be minimal. Briarcliff Solar will designate an Operations & Maintenance ("O&M") Service Provider. The maintenance service provider and/or its authorized subcontractors will visit the Site monthly to assess site conditions and perform maintenance as needed. Signage and egress functionality will be inspected during this time and repaired, if necessary. Other anticipated management/maintenance activities for the Project are as follows:

1. **Equipment Maintenance**: The maintenance service provider and/or its authorized subcontractors will inspect and maintain electrical and PV equipment

in accordance with the manufacturers' respective requirements to maintain proper operation and warranty status of the equipment. The maintenance service provider will also perform the following inspections: (a) the operation of all safety devices will be reviewed and corrected to maintain proper function; (b) full visual inspection of all equipment, subassemblies, wiring, connectors, etc.; (c) thermal scanning of electronic equipment, wiring terminations, connectors, etc.; (d) mechanical inspection, including torque verification of critical connections; (e) String Testing (IV curve test); and, (f) air filter elements.

2. **Grass Management**: Grass around and under the array will be mowed in accordance with the schedule provided below and will be maintained at a height intended to mitigate the risk of fire. Grass will be re-planted in bare areas onsite to ensure that erosion control is maintained.

3. **Panel Cleaning**: Although panel cleaning is rarely necessary in the Northeast, in the event that the panels were to experience enough soiling to adversely affect production, the panels will be cleaned using water brought in by tanker truck(s) and soft bristle brooms. No chemicals will be used in connection with panel cleaning.

4. **Snow Maintenance/Removal**: The maintenance service provider and/or its authorized subcontractors will clear snow from the access roads to all the electrical equipment pads onsite. Snow will be plowed or removed in a manner to maintain emergency turnarounds. Briarcliff Solar does not intend to remove snow from the panels. The angle of the panels relative to the ground which will allow any accumulating snow to sheet off.

5. **Long-Term Stormwater Maintenance Plan**: The O&M team will provide maintenance in accordance with the approved stormwater maintenance plan produced by the Project's engineer of record.

Table 1, below, summarizes the anticipated scheduled maintenance activities for the Project. For additional information regarding the expected maintenance of the Project, please refer to Appendix D - Operations and Maintenance Plan.

Table 1 – Scheduled Maintenance

Task	Frequency
On-Site Ground Inspection	Monthly
Visual Array & Equipment Inspection	1x per year or per equipment manufacturer requirements
Mechanical & Electrical Inspections	1x per year or per equipment manufacturer requirements
Panel Cleaning	As Needed
Mowing and Trimming	2-3x per year or more as required to maintain a safe site
Snow Removal	As Needed
Perimeter Fence Inspection	1x per year
Stormwater Management System Inspection	1x per year or per engineer's stormwater management plan

3.2.7 Project Decommissioning

At the end of its lifespan, the Project will be fully decommissioned and removed from the Site in accordance with the project Decommissioning Plan in Appendix E.

4.0 Project Purpose and Need

The Project meets a clear public need. Global climate change has become a real and dire threat on the regional, national, and international scale(s). In New York, the effects of climate change are already being felt, and expected to worsen if not attended to immediately.

Clean renewable energy resources, such as the proposed Project, are integral to New York's success in mitigating climate change. To that end, the Project is consistent with New York's long-range strategy to reduce greenhouse gas ("GHG") emissions and increase the deployment of renewable resources in the state.

5.0 Project Benefits

The Project creates several benefits with local, statewide, and regional significance - including supporting renewable energy development and construction related jobs and contributing to New York's statewide renewable energy goals.

The Briarcliff Community Solar Garden will provide community members access to clean renewable energy through a subscription arrangement that Briarcliff Solar will market. As part of the NYS Public Service Commission's Order on Community Distributed Generation, Con

Edison will provide a monetary credit, known as "solar credits," for each unit of electricity that is exported into their electrical grid.

Briarcliff Solar, and its local partners will be responsible for marketing the "solar credits" to local homeowners, renters, small businesses, and municipalities. Recipients of the "solar credits" are considered subscribers and will receive a benefit that ranges from 5%-10% based on the subscriber's rate structure, and NYS PSC's Value of Distributed Generation Order. Subscribers can save an average of $500 each year. The Solar Garden will enable renters and homeowners who do not have the proper roof orientation or load bearing capacity the ability to access the benefit of solar power.

Given the Project's size, it can be expected to generate enough energy to power 2,500 homes for a year, while generating zero pollution or carbon emissions. Moreover, Briarcliff Solar will be an economic contributor to the Village of Briarcliff Manor. Once operational, the Village of Briarcliff Manor will receive annual tax revenues from the Project Briarcliff Solar also intends to use, where appropriate, local and regional labor for the construction and subsequent operation of the Project and expects that approximately twenty-one (21) new jobs will be created (19 construction jobs and two (2) new full-time job positions). Moreover, there will be no additional burdens placed on municipal infrastructure or demands on Village of Briarcliff Manor services due to the development of the Project.

Importantly, the Project will generate the majority of its power during the summer electrical peak, thereby providing peaking resources when the State has its greatest need for energy.

6.0 Potential Environmental Impacts

As is evidenced by the information provided below, the Project has been designed to avoid or minimize impact(s) to public health and safety, the existing environment, wildlife, and habitat on and around the Site; and, in accordance with NYSDEC and USACE regulations, will not have an adverse effect on scenic, historical, or recreational areas within and surrounding the project site area.

6.1 Public Health and Safety

6.1.1 Public Health

As a Renewable Energy Source, Briarcliff Solar represents a clean and safe method of electricity generation in the State. The Project will contribute to reducing greenhouse gas emissions to the extent it displaces the fossil-fueled generating resources, and the Project, once operational, will not create any waste or other emissions that would be detrimental to the public health and safety. In addition, the Project will not consume any water or produce any wastewater or otherwise involve the injection of waste or harmful or toxic substances into ground water or wells.

6.1.2 Site Safety

The Philips Research Facility building on site has been vacant since Philips ceased their operations at the site in 2015. The abandoned building has since faced an ongoing issue with loitering, vandalism, and trespassing. Refer to current existing condition photos of the site in Appendix F – Existing Conditions Photos. The implementation of Briarcliff Solar on the property will secure the site with reinforced fencing and security measures and make it a safe place for the community and neighbors.

Right now, the site is of access to trespassers via the Old Croton Aqueduct Trail that is adjacent to the West side of the Project site. The Project has been designed resolve the trespassing issue through the implementation of numerous security techniques and demolition of the existing building. Briarcliff Solar will meet or exceed applicable local, state, national and industry health and safety standards and requirements related to electric power generation, including the National Electrical Safety Code ("NESC"), and those codes and standards promulgated by the National Fire Protection Association ("NFPA"). In accordance therewith, all of the Project's electrical equipment will be secured by a seven 7-foot high locked security gate that is National Electric Code ("NEC")-compliant to ensure that the Facility is not readily accessible to the public. The property line that faces the public Old Croton Aqueduct Trail will also be equipped with chain link security fencing that is equipped with barbed wire which will prevent future trespassers and vandalism in the area. As a result. the security measures will not only be protecting the Project site, but all neighbors immediately adjacent to the property as well who have a direct view of the site.

6.1.3 Emergency Access/Training

On May 9th, 2022, YSG conducted an in-person meeting with Mr. John Wynne, the Police Chief for the Briarcliff Manor Police Department. On the same day, YSG scheduled an in-

person meeting with Mr. Vincent Caruso, the Fire Chief for the Briarcliff Manor Fire Department, but plans to reschedule the fire department meeting for a date in the future. The purpose of the meeting was to discuss emergency services regarding access to the Facility and emergency shutoff switches. YSG Presented the Site Plan Set (Appendix C) to the Police Department and verified that our site map complied with NFPA standards, incorporated a 20' wide driveway with a minimum 45' radius. Each of the entrance gates to the Facility will have a universal key lock for emergency responders. Below, Table 2 provides an emergency contact list for the Village of Briarcliff Manor. The project is designed to comply with all local and state emergency access standards and Briarcliff Solar does not anticipate any emergency access issues for the Project or the Village of Briarcliff Manor.

Table 2 – Emergency Contacts

Department	Contact Information
Emergencies	Dial 911
Briarcliff Manor Fire Department	(914) 941-4440 Fire Chief: (914) 941-0879 Alternate: (914) 944-2762 Briarcliff Manor Village Hall 1111 Pleasantville Road Briarcliff Manor, NY 10510
Briarcliff Manor Police Department	Non-Emergency: (914) 941-2130 Briarcliff Manor Village Hall 1111 Pleasantville Road Briarcliff Manor, NY 10510

6.1.4 Electric and Magnetic Fields

Existing sources of electric and magnetic fields ("EMF") along the boundaries of the Project Site include the 60-Hz AC fields associated with the Con Edison 13-kV overhead distribution line along Holbrook Road and Scarborough Road, to which the electricity from the solar arrays will connect.

During Project operation, electric and magnetic fields on the Project Site are expected to derive from the following sources: (1) the DC solar panels; (2) the DC cables that connect the solar

arrays to the power inverters; (3) the AC power inverters that convert the DC power to AC power; and, (4) the underground 13-kV interconnection and existing Con Edison 13-kV distribution line along Holbrook Road and Scarborough Road, to which the Project will connect.

The proposed DC solar panels, AC power inverters, and AC transformers will be located more than 500 feet from the boundaries of the Site, with the nearest residences even further away. DC magnetic-field levels from cables connecting the solar arrays to the inverters will produce a DC magnetic field, however at the northern site boundary, would represent a small fraction of the earth's natural static (i.e., DC) geomagnetic field. The higher-frequency AC fields from the inverters, like the DC fields from the solar panels, generally decrease to near background levels within a few tens of feet or less. Thus, the operation of these sources would not appreciably change the EMF levels outside the Project Site.

The Project's solar arrays and related equipment in the Project Area will be sufficiently far from the Project Site's boundaries, and therefore, sufficiently far from the nearest residences such that the AC EMF levels from the solar equipment would be negligible off-site and far below the exposure limits for the general public recommended by the ICNIRP and ICES.

6.2 Federal, Local and State Land Use, Conservation and Development Plans

The Project plans are consistent with the goals, policies and implementation strategies contained in the Village of Briarcliff Manor's zoning regulations (the "Zoning Regulations"), Comprehensive Plan and Special Use Permit requirements (Ch. 220-6). Local, State and Federal land use policies and conservation recommendations have been implemented within the plans also to ensure that construction follows all conservation and development prerequisites.

6.3 Ecological, Vegetation, Wildlife Habitat, and Natural Diversity Database and Endangered Species

Provided in the following sections is information summarizing potential threatened and endangered wildlife (Indiana Bat and Monarch Butterfly); Phase 1 ESA; Geology; Forest and Meadow Implementation; and Prime Farmland Soils/Farmland Soils of Statewide Importance.

6.3.1 Threatened and Endangered Wildlife

The Project Area is located entirely within three (3) non-wetland habitats: Mixed Hardwood Forest, Grasslands and Commercial Yard space. Findings obtained from The USFWS Ecological Services Program IPaC Official Species List (Appendix G) combined with the data generated from NYSDEC's SEQR FEAF (Appendix H) provide a baseline inventory of all ecological, vegetation, wildlife habitat and endangered species that exist at the site. The following sections outline how YSG has determined the Project will not have any adverse impacts on Natural Diversity around the Project site.

On April 1, 2022, YSG received an email response (Appendix I-2) to an environmental due diligence notification letter (Appendix I-1) sent to NYSDEC Natural Heritage along with a copy of the site plan set and SEQR FEAF. The response from Heidi Krahling, Environmental Review Specialist, from the NY Natural Heritage Program confirmed the results of the SEQR FEAF, indicating that there are not any known records of rare or endangered species, or significant habitats, at or in the vicinity of the proposed project site, so further action involving NYSDEC Natural Heritage is not necessary.

Additional correspondences with the Region 3 Wildlife department at NYSDEC further confirms the findings from the Natural Heritage Program. On May 10th, 2022, Lisa Masi, Senior Wildlife Biologist at the Region 3 Field Office provided a response email (Appendix J-2) to the notification letter (Appendix J-1) stating "no impacts to these species are anticipated and a NYSDEC endangered and threatened species permit will not be needed. The FEAF also indicated no ETS are known on the project site."

On May 11, 2022, YSG conducted a virtual meeting with Sandra Doran and Tim Sullivan, Biologists at USFWS New York Ecological Services Field Office to review the IPaC Official Species List for the Project generated through the USFWS website[1]. According to the Species List, there is a total of two (2) threatened, endangered, or candidate species potentially present at the project site. Table 3 lists the species as per the Biological Assessment (Appendix J) results obtained from IPaC. The Species List also confirms that there are no critical habitats within the project area under USFWS jurisdiction. The Official Species list, Biological Assessment and YSG's determination was generated and submitted to the NY field office on May 13, 2022 and no impact findings are expected to be verified by the assigned biologist within 90 days. If the NY Field Office determines that further study is required for any USFWS

[1] https://ipac.ecosphere.fws.gov/location/index

regulated species, YSG is prepared to conduct Phase 1 Habitat Surveys during the necessary survey periods.

Table 3 – Threatened & Endangered Species

Classification	Species Name	Status	Present In Action Area	Effect Determination
Mammal	Indiana Bat *(Myotis sodalist)*	Endangered	No	No Effect
Insect	Monarch Butterfly *(Danaus plexippus)*	Candidate	Excluded from Analysis	Excluded from Analysis

6.3.1.1 Indiana Bat

Information and data provided by Biologist, Sandra Doran from USFWS NY Field Office via email (Appendix L – USFWS Species Data) confirmed that the distance to the nearest Indiana bat roost tree is approximately 26 miles. The distance to the nearest hibernaculum (overwinter site) is approximately 23 miles. The project will not have any remote wildlife impacts that will reach distances past the site boundaries and therefore impacts to the Indiana Bat species are not anticipated.

6.3.1.2 Monarch Butterfly

Information and data provided by Biologist, Sandra Doran from USFWS NY Field Office via email (Appendix L – USFWS Species Data) confirmed that the monarch butterfly is currently a candidate species for listing under the Endangered Species Act. While the monarch butterfly may be identified through the U.S. Fish and Wildlife (Service) Information, Planning and Consultation (IPaC) program official species list requests, there is no requirement under section 10 (non-federal agency involvement) to coordinate with the Service on candidate, proposed, or listed species. However, as encouraged by USFWS, the Project will take advantage of any opportunity we may have to conserve the monarch butterfly and implement construction to support the growth of the species. We also continue consider incorporating habitat restoration or enhancement measures into project plans that benefits the monarch butterfly and other similar pollinator species.

6.3.1.3 Migratory Birds

The migratory list reveals the presence of the bald eagle habitat located near the project site. Information and data provided by Biologist, Sandra Doran from USFWS NY Field Office via email (Appendix L – USFWS Species Data) confirmed that the nearest bald eagles nest is located on the Hudson River, approximately 2.6 miles from the center of the project site, and

therefore, will not be impacted by the Project. Ms. Doran confirmed that there is no permit required for disturbing bald eagles or take of a bald eagle nest.

The conference call with USFWS NY Field Office confirmed that the migratory birds listed on the Official Species List provides recommendations for site preparation time frames based on probability of presence and breeding seasons of each bird species. YSG intends to conduct all site preparation and construction activities outside the threshold timeframes listed in the species list.

6.3.2 Phase 1 ESA

Prior to the Project being proposed, the owners of the site, Ridgewood Briarcliff Owner, LLC conducted a Phase 1 Environmental Site Assessment (Phase 1 ESA) in May 2017 which provides an in-depth summary of the site's historical environmental conditions. GZA GeoEnvironmental Inc. performed the Phase 1 ESA in general conformance with the scope and limitation of ASTM E1527-13 for the Project property located at 345 Scarborough Road in Briarcliff Manor, NY. The results revealed that there is no evidence of Recognized Environmental Conditions (REC) or Controlled Recognized Environmental Conditions (CREC). One Historic Recognized Environmental Condition (HREC) was identified on site regarding four underground storage tanks (UST) that were removed from the Site from 1998 to 2004 and replaced by a one 20,000-gallon UST. Additionally, the Site was listed in the database[2] report for at lease five petroleum-related spills and one complaint of a leaking drum. The spills and tank removals were listed as closed indicated that they were resolved to the satisfaction of the applicable regulatory agencies. The proof closed spill incidents are included at the end of the SEQR FEAF (Appendix H) as attachments, showing that there is no further action required to remediate these findings. One *de minimus* condition present on site included staining in the parking lot associated with parked vehicles and within various locations of the Site building. These stains are associated with property and equipment operations and repairs. The observed staining does not appear to be significant or pervasive and constitutes a *de minimus* condition. The results of this report that there are no significant environmental concerns related to the project site.

A new ESA Phase 1 was conducted in general conformance with the scope and limitation of ASTM E1527-13 by Environmental Affiliates, Inc. on April 4th, 2022. The updated report

[2] https://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=2

(Appendix M) was provided on April 26th, 2021. The results revealed that there is no evidence of Recognized Environmental Conditions (REC) or Controlled Recognized Environmental Conditions (CREC). The report detailed the Historic Recognized Environmental Conditions (HREC) regarding the UST on site. Two of the three fuel oil tanks were removed, and the larger 20,000-gallon tank was abandoned by filling the tank with a slurry of concrete. The tank closures were overseen by either the NYSDEC or the Westchester County Health Department, and the regulatory agency provided written notification to Philips that no further action was required to address residual impacts, and the spill files established for these tanks were subsequently closed. The fourth underground storage tank containing fuel oil was successfully removed from the Holbrook residence in 1998. Visual inspection of the tank at the time of closure indicated that it was in sound condition and post-excavations sampling completed during the removal did not detect petroleum impacts. The spill and *de minimis* findings were consistent with the report from GZA, indicating that all spills were officially closed by NYSDEC and that staining due in the parking lot areas were due to property and equipment operations and repairs. The observed staining does not appear to be significant or pervasive and constitutes a *de minimus* condition. The results of the updated report therefore verify that there are no significant environmental concerns related to the project site. Briarcliff Solar intends to follow all recommendations as outlined in the April 26th, 2022 ESA Phase 1 Report provided by Environmental Affiliates, Inc during construction and operation of the facility.

6.3.3 Geology

Although a Geotechnical report of the site has not been conducted yet. The Project has gathered quotes from accredited Geotechnical surveyors such as GZA GeoEnvironmental Inc. and Foundation Design P.C. in preparation for the project. Prior to scheduling the geotechnical investigation. Briarcliff Solar plans to review the scope of Geotechnical work required for engineering design and environmental due diligence to ensure that all required data is gathered, and necessary precautions are implemented. The project intends to evaluate all site preparation, design and equipment recommendations based on the geotechnical report findings once it is received to minimize any impacts on the Briarcliff solar and its surrounding soils and geologic environment.

6.3.4 Forest and Meadow Implementation

The total parcel area of the property is ~95.5 acres. The proposed project will cause

ground disturbance on approximately +/ 47.6 acres of this land or ~50%. The Project will result in the conversion of approximately ~19.69 acres of mixed forest to meadows and grasslands to support the installation of the solar facility and prevent shading on the solar panels after installation. To mitigate the loss of forest habitat, Briarcliff Solar proposes establishing areas of native meadow habitat through planting and landscaping. Small tree and grass plantings will be established at the outer limits of the Project Area and the perimeter fence surrounding the Project's arrays. The landscaping will be well maintained to prevent panel shading.

While these plantings do not necessarily "replace" forest loss, they will serve to increase early-successional/forest edge habitat value—particularly for species like the Indiana Bat and Monarch Butterfly.

6.3.5 Prime Farmland Soils and Farmland Soils of Statewide Importance

According to the NRCS Web Soil Survey[3] Map and Soil Data Access[4] (Appendix N – Site Soils), the Project area lays on six (6) soil types: PnD, PnC, PnB, RdB, WdB and Ub, in order of most to least prominent on site. PnC and RdB is Farmland of Statewide importance and makes up ~23.2% and ~10.2% of the site respectively. PnB and WdB are prime farmland and makes up ~10.7% and 8.9% of the site respectively. All soils on the site consist of generally low slopes between 3 to 15 percent and are moderately well drained. The only disturbance to the soil will be for grading (site preparation) and piling (installation of helical piles). No soils will be removed from the site.

6.4 Wetlands

This Section describes the wetlands identified at the Site, including anticipated Project-related impacts to these resources. As discussed below, the Project has been successful in avoiding all direct impacts to the identified wetlands, and adverse impacts to these resources is not expected.

6.4.1 Identified Wetlands and Regulating Agencies

The property contains two wetland areas identified per the delineation: (i) Freshwater Pond, which is Federally regulated by the US Army Corps of Engineers (USACE) and listed within the National Wetland Inventory; and (ii) Riverine, which is also federally regulated by USACE and listed within the National Wetland Inventory. Only a portion of the pond and stream

[3] https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx
[4] https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1338623.html

are located on the Project Site, with a total size of approximately ~0.50 acres going through the Project Site.

JMC Planning, Engineering & Land Surveying, PLLC completed drawing number C-010B, Wetland Flagged Map, dated 06/08/2018 (Appendix O-1). The drawing contains wetland flags that have been identified and flagged by Ecological Solutions, LLC who was contracted to visit the Project site as a wetland delineator on January 26, 2017.

The wetlands are illustrated on the Environmental Resource Mapper (Appendix O-2). The Riverine runs North/South through the East side of the Site and discharging at the freshwater pond on the Northeast corner of the site. No wetlands on site are regulated by the NYSDEC according to the NYSDEC and as reflected in the SEQR FEAF.

6.4.1.1 Federal Wetlands: USACE

On March 28th, 2022, Briarcliff Solar notified the NY Regulatory District of USACE of its intentions to develop a solar facility on the Site via notification letter (Appendix O-3) along with an attached SEQR FEAF and site map. Briarcliff Solar intends to make use of the existing on-site infrastructure (i.e., roadways) and construct the solar arrays without disturbing the stream that runs through the site, as a roadway crossing through the stream is pre-existing. The roads on site will stay in place and the work will not involve discharging dredges or fill material into waters.

On May 3rd, 2022, Ms. Alexandra Ryan, General Engineer/Project Manager for USACE, provided a no impact response letter (Appendix O-4) stating that no permit would be required for the site as the wetlands will remain undisturbed as per the project Site plan set.

6.4.1.2 State Wetlands: NYSDEC

As mentioned above, the NYSDEC Environmental Resource Mapper does not show any State regulated wetlands on Site. On March 28th, 2022, Briarcliff Solar issued a notification letter (Appendix O-5) to the NYSDEC Region 3 Field Office along with the SEQR FEAF and Site Plan sets. On the same day, Rebecca Crist, Deputy Permit Administrator of the Division of Environmental Permits, provided a response (Appendix O-6) indicating that there are no NYSDEC regulated wetlands on the Project Site, confirming the findings of the NYSDEC Environmental Resource Mapper. As a result, there is no further action required for State wetland regulations on site

6.4.2 Impacts on Wetlands

The fundamental concept of wetland impact analysis is based on the precept that wetland impacts should first be avoided where possible. Secondly, if practicable alternatives do not exist to avoid wetland impacts, then such impacts should be minimized. Thirdly, unavoidable wetland impacts should be mitigated.

The Project has been successful in avoiding all direct impacts to the identified wetlands, as no tree-clearing, construction or other vegetation alteration will occur within these areas and the Project maintains substantial buffers from all wetlands and watercourses. Because development activity is proposed adjacent to the wetlands, there is the potential for secondary impacts to these resources. However, the potential for such secondary impacts will be minimized through the implementation of best management practices.

The principal protection measure proposed for the Project is the preservation of substantial and undisturbed wetland and stream buffers. These buffers will not be affected by the Project, and the width of these buffers will allow for the preservation of the existing watershed drainage patterns, the natural infiltration of surface water runoff, as well as the preservation of stream-shading and temperature-sensitive stream micro-climates.

Nonetheless, to minimize the potential for soil erosion and sedimentation during development, a full SWPPP (Appendix P) has been provided by the Project's civil engineers, Labella Associates and outlines all recommended measures that will be implemented to minimize any adverse impact on the wetland.

As demonstrated by the foregoing, the Project will not adversely affect any identified wetlands.

6.5 Water Resources and Stormwater Management

The Project is not expected to have an adverse impact on the State or Federal water resources, as the Facility operations are passive by nature. The Facility, once operable, will be unstaffed, no potable water uses or sanitary discharges are planned, and no liquid fuels are associated with the operation of the Facility. The demolition of the existing building on site will result in a net decrease of impervious area which will positively impact stormwater flows and minimize runoff. Regarding potential stormwater issues, and as discussed in greater detail below, the stormwater generated by the proposed development, once operative, will be properly handled and treated as per SWPPP recommendations. The SWPPP has been developed in accordance

with the "New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity," Permit No. GP-0-20-00. The SWPPP includes the elements necessary to comply with the national baseline general permit for construction activities enacted by the U.S. Environmental Protection Agency (EPA) under the National Pollutant Discharge Elimination System (NPDES) program and all local governing agency requirements. As a result, the Project is not expected to have an adverse impact on any State or Federal water resources, and therefore, there will not be any impact on the site or surrounding wetlands.

6.5.1 Floodplain Areas

Briarcliff Solar reviewed the United States Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Maps ("FIRM") for the Site. The Project Site is mapped on FIRM PANEL #36119C0138F, dated September 28, 2007 (Appendix Q-1). Based upon the reviewed mapping, the Site is classified as an unshaded "Zone X," which is defined as an area of minimal flooding, typically above the 500-year flood level. The Project is outside the influence of 100- and 500-year floodplains and will have no effect on these resources. On April 11th, 2022, Briarcliff Solar received an email correspondence from NYSDEC's assistant engineer in floodplain management, Geoff Golick. Mr. Golick provided a no impact response letter (Appendix Q-2) which confirmed the FIRM data for the site. As a result, no special considerations, or precautions relative to flooding are therefore required for the Project.

6.5.2 Pollution

The site is located adjacent to the Old Croton Aqueduct, and it is a priority for Briarcliff Solar to ensure that no pollution will occur as a result of the Project. The impervious area of the site is expected to decrease after construction. Runoff and stormwater management practices will be implemented to avoid pollution. Water quality will be enhanced through the implementation of temporary and permanent erosion and sediment control measures and peak rate control practices as outlined in the Stormwater Pollution Prevention Plan (Appendix P). The approach consists of pipes and open drainage ways to adequately collect, treat, and convey runoff safely; sufficient setbacks from the identified wetlands and water resources onsite have been established in the Site Plan set; erosion and sediment controls will be installed and maintained during construction; and, once the Facility becomes operative, all water resources will be managed in accordance with local, State and Federal water resource and water quality

laws. Once operational, the facility will not have potable water uses, liquid fuels or sanitary, eliminating concern for water contamination. Collectively, the above-mentioned plans will ensure that the Project will have no adverse effect on ground and surface water quality.

6.5.3 Stormwater Management

The NYSDEC requirements for new development states that runoff reduction shall be achieved through infiltration, groundwater recharge, reuse, recycle and/or evaporation/evapotranspiration of 100-percent of the post-development water quality volume to replicate pre-development hydrology. The Project will ultimately result in a net decrease of impervious surface area and is expected to have a positive impact on stormwater flows in the area.

A detailed stormwater management plan, SWPPP (Appendix P), was developed for the Project. This plan was reviewed for adherence with best design practices proven to prevent degradation of downstream waters from stormwater runoff. Additionally, the proposed stormwater system is designed to manage the water quality volume ("WQV") through removal of impervious surfaces and the slow release of water in a manner that will not increase peak flow rates—thereby reducing the likelihood of downstream erosion or increased flooding. Runoff control techniques provide treatment in a distributed manner before runoff reaches the collection system, by maintaining pre-construction infiltration, peak runoff flow, discharge volume, as well as minimizing concentrated flow. This can be accomplished by applying a combination of Runoff Reduction Techniques, standard Stormwater Management Practices (SMPs) with RRv capacity, and good operation and maintenance.

According to the SWPPP Runoff from the project site will discharge to the Sparta Brook on the east side of the project and an unnamed tributary of Sparta Brook on the west side of the project. Project construction activities will consist primarily of site grading, and the installation of storm drainage infrastructure necessary to support the proposed redevelopment project with no increase in impervious area. Construction phase pollutant sources anticipated at the site are disturbed (exposed) soil, vehicle fuels and lubricants, and building materials. Without adequate control there is the potential for each type of pollutant to be transported by stormwater. Stormwater quality will be enhanced through the implementation of temporary and permanent erosion and sediment control measures, the proposed stormwater management practices, and other construction-phase pollution controls outlined within the SWPPP. The proposed stormwater management approach consisting of on-site stormwater management practices will

adequately collect, treat, and convey the stormwater runoff. Grass filter strips will be used to manage and treat stormwater runoff generated by the proposed redevelopment project with no increase in impervious area. Pre- and post-development surface runoff rates have been evaluated for the 1-, 10-, and 100-year 24-hour storm events. Comparison of pre- and post-development watershed conditions demonstrates that the peak rate of runoff from the project site will not be increased.

Briarcliff Solar also notes that, due to the land use proposed, high pollutant loads (i.e., nutrients, petroleum hydrocarbons and liquid fuels, etc.) from stormwater runoff are not expected to result from the Project—especially when compared to a residential or commercial development of similar scale. These conventional types of development include higher vehicular traffic, septic systems effluent, and manicured lawns which are the primary sources of stormwater pollutants. Nevertheless, the stormwater management measures proposed for the Project have been designed in a manner to maximize pollutant removal, and are designed to capture and sequester sediment.

Implementation of these measures will ensure that any stormwater generated from the Project will not result in harm to the surrounding area or the degradation of downstream waters.

6.6 Air Quality

Due to the nature of solar energy generating facilities, the Project, once operational, will not generate any air emissions onsite. While Briarcliff Solar acknowledges that there is the potential for temporary, mobile source emissions associated with the construction of the Project resulting from vehicles and related construction equipment, any such potential air quality impacts resulting therefrom are considered minimal.

Nonetheless, Briarcliff Solar will mitigate such construction-related emissions by utilizing a series of protective measures, including, (i) limiting idling times of equipment; (ii) properly maintaining all vehicles and equipment; and, (iii) watering/spraying construction equipment to minimize dust and particulate releases. In addition, Briarcliff Solar will ensure that all on-site and off-road equipment will meet the latest standards for diesel emissions (as proscribed by the United States Environmental Protection Agency).

6.7 Historic and Archaeological Resources

On March 28th, 2022 Briarcliff Solar issued a notification letter (Appendix R-1) to the

NYS Office of Parks, Recreation and Historic Preservation Tectonic Region Office. On April 6th, 2022, the Director of the Technical Preservation Services Bureau, Nancy Herter, Ph.D, provided a response (Appendix R-2) stating that the NYSHPO needs to complete the review of the Project prior to provide an official effect opinion.

The NY State Historic Preservation Offices (SHPO) Cultural Resource Information System (CRIS)[5] submission was submitted and accepted on March 14th, 2022 (Appendix R-3) and was assigned a project number of 22PR01760. On the same day, SHPO issued a first response (Appendix R-4) requesting a Project Zone of Visual Impact ("ZVI") analysis according to the SHPO guidelines for Solar Facility Development Cultural Resources Survey Work. YSG issued a response (Appendix R-5) to SHPO on April 14th, 2022 including photos and property details of each adjacent property to the site that is knowingly 50 years or older, including the Project site itself.

On May 5th, 2022, SHPO issued a second response (Appendix R-6) asking Briarcliff Solar to reconsider the demolition of the Philips Research Facility that is currently on site. However, Briarcliff Solar stands behind the decision to demolish the existing facility due to a number of safety hazards and concerns that has raised as a result of the building remaining standing. The abandoned building has been known to be a danger to local in the past as it attracts trespassers who have vandalized property and partaken in illegal activities on site. Refer to site photos. The current building condition is less than standard for any other potential use. Briarcliff Solar has ensured that all site plans were updated as per SHPO requirements to show the Old Croton Aqueduct boundaries on the site plans as well as all proposed fencing and screening methods.

YSG believes that it is in the best interest of the Project and local community members to demolish the existing facility due to the crime occurrences that have taken place as recently as May 2022. As indicated in "People vs Ridgewood Real Estate Partners (345 Scarborough Rd)", see Appendix R-7, the facility has been subject of litigation between the village of Briarcliff Manor and the previous owner. In the time since the building's occupancy the facility has fallen into disrepair and has been subject to repeated incidents of trespassing. On October 1, 2020 "as a result of the trespassers, a fire broke out in the main building and on its roof which required the

[5] https://cris.parks.ny.gov/

immediate response of village fire personnel as well as mutual aid response from as many as four surrounding municipalities involving 9 fire vehicles and approximately 80 volunteer firefighters."

Further, the premises has been deemed an unsafe structure, riddled with unsafe and/or vandalized equipment that results in the structure being unfit for human occupancy, in accordance with the 2020 Property Maintenance Code of New York State Section 107 "Unsafe Structures and Equipment".

During the week of May 2, 2022, the property management company has reported additional trespassing violations that has necessitated the resecuring of points of entry. Photos of the damage incurred to the building over the building's vacancy are provided in Appendix F.

In order to receive a final determination, Briarcliff Solar intends to draft and submit documentation (Appendix R-8), including existing conditions photographs and an engineer's report documenting structural failures, that will provide SHPO with proof that there are no other feasible locations for the proposed solar arrays that do not require the demolition of the on-site Philips Facility. SHPO's final determination is pending the review of the abovementioned material and data that prove demolition should be allowed for the safety of the community and implementation of renewable energy project within the village of Briarcliff Manor.

6.8 Noise

As abovementioned, the Project is located in Briarcliff Manor's Business district classified as a CT1 (Complementary Transition Use 1) Zone, with Residential Zones surrounding the property. Pursuant to the Village of Briarcliff Manor's Noise Control Law §146-5, in an emitter in a nonresidential zone cannot exceed, 65 dBA during the hours of 8:00 a.m. to 6:00 p.m. on weekdays and Saturdays; and ii) 50 dBA during the hours of 6:00 p.m. to 8:00 a.m. on weekdays and Saturdays, and at all times on Sundays and holidays.

The Facility will have limited noise-producing equipment onsite, consisting of the inverters and transformers. The Facility's noise levels are not anticipated to be greater than ~15 dBA, which is considerably quiet.

During the short-term construction period, Briarcliff Solar expects that some typical construction equipment noise will occur. However, such noise will in accordance Village of Briarcliff Manor's Noise Control Law §146-6, regulated activities, and will be limited to weekday, daytime construction hours, and will not exceed the Village's 65 dBA threshold.

6.9 Lighting

No exterior lighting is planned for the Facility. There will be some small, non-intrusive lighting fixtures within the equipment to aid in maintenance; however, Briarcliff Solar expects that such lighting will be minimal and will not impact nearby residences.

6.10 FAA Determination

The Federal Aviation Administration (the "FAA") conducted an aeronautical study for the Project under the provisions of 49 U.S.C., Section 44718 and Title 14 of the Code of Federal Regulations, part 77 by utilizing the online Notice Criteria Tool[6]. The Notice Criteria Tool results (Appendix S) dated March 10, 2022 revealed that the Project does not exceed obstruction standards and would not be a hazard to air navigation. No further filing was required by the FAA to study the Project further.

6.11 Project Visibility

The Project will have limited year- round visibility in areas within the immediate vicinity of the Site—primarily, those abutting properties to the northeast along Holbrook Road. These limited year-round visibilities will depend on the height of vegetation along the site perimeter. Briarcliff Solar has been proactively developing a detailed landscaping plan that will address any potential views from surrounding properties. In general, views of the Project will be limited due to the relatively low height of the Facility (the proposed panels are only nine feet tall), in conjunction with the existing, dense vegetation along the perimeter of the site being maintained.

Briarcliff Solar also notes that the proposed solar modules are designed to absorb incoming solar radiation and minimize reflectivity, such that only a small percentage (approximately two (2%) percent) of incidental light will be reflected off the panels. This incidental light is significantly less reflective than common building materials, such as steel, or the surface of smooth water. The panels will be tilted up toward the southern sky, thereby further reducing reflectivity/visibility of the Project in certain areas.

As such, Briarcliff Solar does not anticipate any adverse visual impacts will result from the development of the Project.

[6] https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm

7.0 CONCLUSION

As demonstrated by the foregoing, Briarcliff Solar's proposed Project will result in no air emissions, has been carefully designed to minimize natural resource impact(s), and complies with the applicable air and water quality standards of the Village of Briarcliff Manor, New York State DEC, New York SHPO, United States ACE, and United States FWS.

The Project satisfies the requisite standards, and in light of the benefits this Project will provide to the State of New York and the Village of Briarcliff Manor, Briarcliff Solar LLC respectfully requests that the Village of Briarcliff Manor declare the Village as Lead Agency in accordance with 6 NYCRR Part 617, State Environmental Quality Review and respectfully petitions the Village of Briarcliff Manor for a Special Use Permit or the proposed construction, operation and maintenance of two 5.0 megawatt-alternating current solar-based electric generating facilities located at 345 Scarborough Road, Briarcliff Manor, NY 10510, parcel number: 97.16-1-1.

BRIARCLIFF MANOR SOLAR

345 SCARBOROUGH RD
BRIARCLIFF MANOR, NY 10510

PROJECT DATA

PARCEL INFORMATION

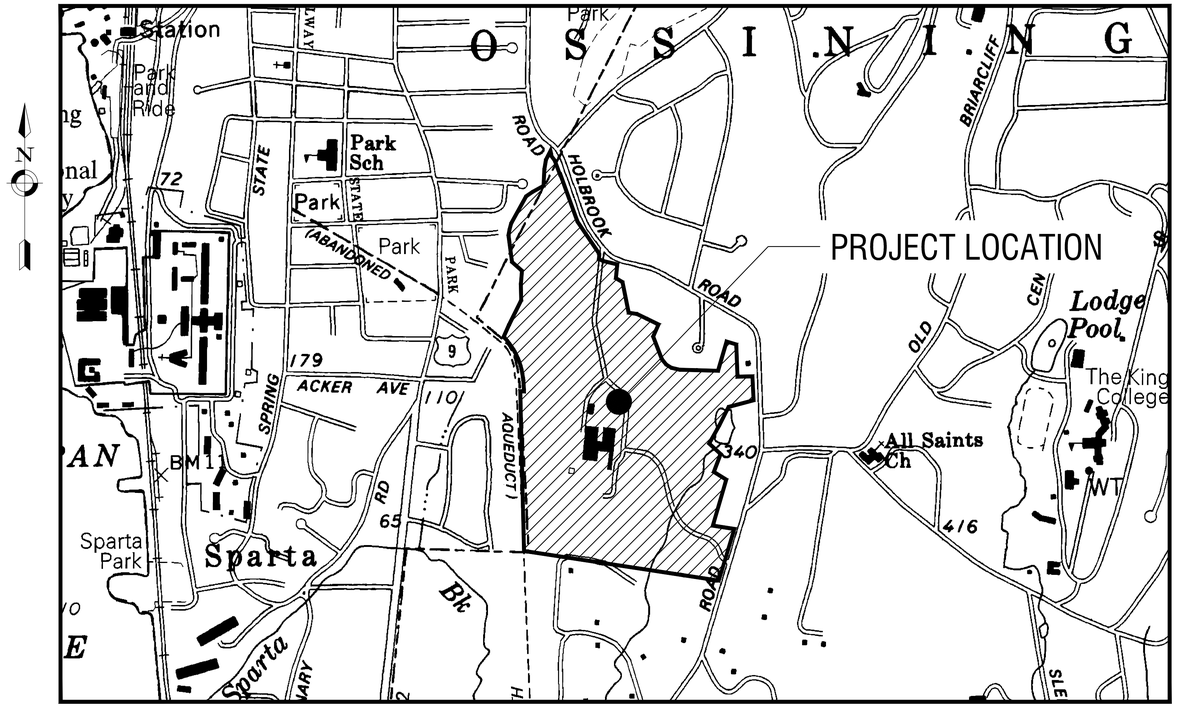
APPLICANT	YSG SOLAR
PARCEL ADDRESS	345 SCARBOROUGH ROAD, BRIARCLIFF MANOR, NY 10510
TAX NUMBER	97.16-1-1 & 97.12-1-9
GPS COORDINATES	N: 41.14807° N W: 73.85505° W
AVERAGE SITE ELEVATION	265'
PARCEL AREA	± 95.5 ACRES
DISTURBANCE AREA	±47.6 ACRES
EQUIPMENT PAD AREA	±800 SF
FENCED AREA	±45.8 ACRES
DRIVEN POST CROSS SECTIONAL AREA	4 SF
DRIVEN POST QUANTITY	±3,326
DRIVEN POST CROSS SECTIONAL AREA (TOTAL)	±13,304
ROAD LENGTH	±1,700 FT
SILT FENCE	±4,885 FT
CHAIN LINK FENCE	±8,466 FT
GATE COUNT	3 - 20' WIDE DOUBLE SWING GATE

SYSTEM SUMMARY (TOTAL)

	NORTH	SOUTH
SYSTEM AC SIZE (MW)	5.0	5.0
SYSTEM DC SIZE (MW)	7.511	7.511
MODULE COUNT	13,910	13,910
INVERTER COUNT	50	50
SWITCH GEAR COUNT	1	1
TRANSFORMER COUNT	5	5
EQUIPMENT PAD COUNT	2	2

ZONING INFORMATION

	REQUIRED	PROPOSED
CODE APPLIED	VILLAGE OF BRIARCLIFF MANOR	
WEBSITE	HTTPS://ECODE360.COM/7690937 REFER TO CHAPTERS 178 & 220	
CLASSIFICATION	COMPLEMENTARY USE TRANSITION 1 (CT1)	
FRONT SETBACK	200 FT	200 FT
SIDE SETBACK	200 FT	200 FT
REAR SETBACK	200 FT	200 FT
DWELLING SETBACK	N/A	N/A
MIN FENCE HEIGHT	6 FT	7 FT



LOCATION MAP
1"=600'

YSG SOLAR
79 MADISON AVE, 8TH FLOOR
NEW YORK, NY 10016
PROJECT NO: 2221884
08/10/2022

YSG SOLAR

LaBella
Powered by partnership.
300 State Street, Suite 201
Rochester, NY 14614
585-454-6110
labellapc.com

ISSUED FOR REVIEW
08/10/2022

BRIARCLIFF MANOR SOLAR
345 SCARBOROUGH RD BRIARCLIFF MANOR, NY 10510
YSG SOLAR
PROJECT NO: 2221884

GENERAL NOTES

1. THE CONTRACTOR ALONE SHALL BE RESPONSIBLE TO LOCATE UTILITIES OUTSIDE THE RIGHT-OF-WAY INCLUDING PRIVATE ROADS.
2. SITE DRAINAGE, INCLUDING THE PROJECT SITE AND ADJACENT PRIVATE AND PUBLIC ROADWAYS, DRIVES, PARKING AREAS OR PROPERTIES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL MATERIALS, TOOLS AND EQUIPMENT, INCLUDING SPECIAL CUTTING DEVICES, NECESSARY TO PERFORM THE WORK CONTAINED IN THIS CONTRACT.
4. THE SIZES AND MATERIAL OF CONSTRUCTION OF WATER MAINS, SANITARY SEWERS AND STORM SEWERS TO REMAIN ARE REPUTED. THE CONTRACTOR SHALL VERIFY SIZES OF ALL UTILITIES WHERE CONNECTIONS TO SAID EXISTING UTILITIES ARE REQUIRED. EXCAVATION TO VERIFY THESE UTILITIES SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL PROTECT ALL EXISTING SITE AMENITIES NOT DESIGNATED FOR REMOVAL.
6. UNLESS OTHERWISE INDICATED ON THE PLANS OR DIRECTED BY THE ARCHITECT/ENGINEER, THE CONTRACTOR IS RESPONSIBLE FOR PRESERVING AND PROTECTING FROM DAMAGE ALL TREES, SHRUBS AND PLANTS IN THE VICINITY OF THE PROPOSED WORK.
7. THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL EXISTING UTILITIES DESIGNATED TO REMAIN FOR THE DURATION OF THE CONTRACT.
8. ANY SITE AMENITY, UTILITY, STREET APPURTENANCE, OR OTHER ITEM WHICH BECOMES DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND BY THE CONTRACTOR AS DETERMINED BY THE PROJECT MANAGER OR ARCHITECT/ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER.

SURVEY NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. NO ALLOWANCE WILL BE MADE FOR ADDITIONAL COSTS DUE TO CONTRACTOR'S FAILURE TO VERIFY EXISTING CONDITIONS.
2. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD AND PRESERVE ALL SURVEY MARKERS AND RIGHT-OF-WAY MARKERS IN THE AREA OF CONSTRUCTION.
3. ANY IRON PINS, MONUMENTS OR OTHER ITEMS DEFINING PROPERTY LINES WHICH ARE DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE PROPERLY TIED AND ACCURATELY RESET BY A NYS LICENSED SURVEYOR UPON COMPLETION OF THE WORK.
4. THE HORIZONTAL DATUM IS REFERENCED TO NORTH AMERICAN DATUM 83 (NAD 83) - STATE PLANE NEW YORK CENTRAL.
5. THE VERTICAL DATUM IS REFERENCED TO NORTH AMERICAN VERTICAL DATUM 88 (NAVD 88).

DEMOLITION NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. NO ALLOWANCE WILL BE MADE FOR ADDITIONAL COSTS DUE TO CONTRACTOR'S FAILURE TO VERIFY EXISTING CONDITIONS AND DIMENSIONS.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY DIG SAFE NEW YORK AT 811 TO REQUEST UTILITY STAKEOUT OF ALL PUBLIC UTILITIES.
3. WORK ASSOCIATED WITH THIS CONTRACT WILL OCCUR AT AN ACTIVE AND FUNCTIONAL FACILITY. CONTRACTOR SHALL COORDINATE WITH THE OWNER TO MINIMIZE DISRUPTION TO THE OPERATIONS OF THE FACILITY. CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO PROVIDE A SAFE WORK SITE AND TO PROTECT THE PUBLIC, VISITORS AND EMPLOYEES FROM HARM AS A RESULT OF HIS CONSTRUCTION ACTIVITIES.
4. THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING ABOVE GROUND AND BELOW GROUND UTILITIES, STRUCTURES, AND APPURTENANCES SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES, STRUCTURES, AND APPURTENANCES IN THE PATH OF AND ADJACENT TO THE PROPOSED WORK.
5. SITE DRAINAGE, INCLUDING THE PROJECT SITE AND ADJACENT PRIVATE AND PUBLIC ROADWAYS, DRIVES, PARKING AREAS OR PROPERTIES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
6. CONTRACTOR SHALL PROTECT AND SUPPORT ALL EXISTING UTILITIES DESIGNATED TO REMAIN FOR THE DURATION OF THE CONTRACT.
7. THE CONTRACTOR SHALL NOTIFY THE LOCAL GOVERNMENT, LOCAL FIRE DEPARTMENT AND THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) AS NECESSARY AND SHALL OBTAIN ANY REQUIRED PERMITS PRIOR TO BEGINNING WORK. COPIES OF ANY REQUIRED PERMITS SHALL BE PROVIDED TO THE OWNER PRIOR TO BEGINNING THE WORK.
8. CONTRACTOR SHALL REMOVE FROM SITE, MATERIALS NOT INDICATED TO BE SALVAGED INCLUDING ALL DEBRIS. ALL REMOVED MATERIALS SHALL BECOME THE PROPERTY OF CONTRACTOR WHO SHALL LEGALLY DISPOSE OF SAME.
9. ALL TREES, SHRUBS AND PLANTS DESIGNATED TO REMAIN AND DISTURBED BY CONSTRUCTION OPERATIONS, SHALL BE REPLACED IN-KIND AS DIRECTED BY THE ARCHITECT/ENGINEER AND/OR OWNER'S DESIGNATED REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR SHALL MAINTAIN SAFE VEHICULAR AND PEDESTRIAN ACCESS TO THE EXISTING BUILDINGS FOR THE DURATION OF THE CONTRACT.
11. WHEN EXISTING CONSTRUCTION WHICH IS TO REMAIN IS DAMAGED DURING THE COURSE OF CONSTRUCTION AS A RESULT OF CONTRACTORS WORK, IT SHALL BE REPAIRED AND/OR REPLACED WITH SIMILAR OR LIKE MATERIALS AS MUCH AS POSSIBLE, AT NO COST TO THE OWNER. ALL REPAIRS AND/OR REPLACEMENTS WILL BE SUBJECT TO OWNERS APPROVAL.
12. COORDINATE LOCATION OF TEMPORARY CONSTRUCTION FENCE AND TEMPORARY STONE STAGING AREA WITH OWNER

SITE NOTES

1. WELL COMPACTED SUBGRADE SHALL BE UTILIZED UNDERNEATH CONSTRUCTION OF PAVEMENT AND CONCRETE BASES.
2. ALL STAKEOUT FOR THE PROPOSED SITE IMPROVEMENTS SHALL BE COMPLETED BY A NEW YORK STATE LICENSED LAND SURVEYOR.
3. IF ANY DISCREPANCIES ARE NOTED BETWEEN THESE CONSTRUCTION DOCUMENTS AND INFORMATION PROVIDED OR AN ERROR IS SUSPECT, IT SHALL BE IMMEDIATELY REPORTED TO THE CONSTRUCTION MANAGER AND LABELLA ASSOCIATES PROJECT MANAGER IN WRITING.
4. ANY PROOF-ROLLING OF EXPOSED SUBBASE BY A MINIMUM 10 TON SMOOTH DRUM ROLLER SHALL BE DONE UNDER THE GUIDANCE OF, AND OBSERVED BY, QUALIFIED ENGINEERING PERSONNEL PRIOR TO PLACEMENT OF SUBBASE MATERIAL. THE ROLLER SHOULD BE OPERATED IN THE STATIC MODE AND COMPLETE AT LEAST TWO (2) PASSES OVER THE EXPOSED SUBGRADES.
5. EXISTING WETLANDS DELINEATED BY ECOLOGICAL SOLUTIONS, LLCS. ON 08/24/2017.
6. PARCEL LINES AS SHOWN BY WESTCHESTER COUNTY GIS DATABASE, FOR THE VILLAGE OF BRIARCLIFF MANOR.

GRADING NOTES

1. THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF OSHA, AND ANY OTHER AGENCY HAVING JURISDICTION WITH REGARD TO SAFETY PRECAUTIONS WITH TRENCHING OPERATIONS. THE REQUIREMENTS SET FORTH HEREIN ARE INTENDED TO SUPPLEMENT REQUIREMENTS ESTABLISHED BY THESE AGENCIES. IN THE CASE OF A CONFLICT BETWEEN REQUIREMENTS OF OTHER JURISDICTIONAL AGENCIES AND THESE DOCUMENTS, THE MORE STRINGENT REQUIREMENT ON THE CONTRACTOR SHALL APPLY.
2. SHEETING, IF REQUIRED DURING CONSTRUCTION, IS CONSIDERED TO BE PART OF THIS CONTRACT AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
3. ALL TRENCHES THROUGH PAVEMENT SHALL BE SAW CUT PRIOR TO EXCAVATION AND AGAIN PRIOR TO PAVEMENT RESTORATION.
4. CONTRACTOR SHALL ADJUST THE RIMS OF ALL MANHOLES, CATCH BASINS, VALVE BOXES AND OTHER UTILITY SITE STRUCTURES TO MEET FINISHED GRADE IN AREAS REQUIRING REPAVING OR REGRADING AS PART OF THE WORK, INCLUDING THOSE THAT MAY NOT BE SHOWN ON THE PLANS.
5. VOIDS LEFT BY UTILITY OR STRUCTURE REMOVAL OR GRUBBING OPERATIONS SHALL BE BACKFILLED AND PROPERLY COMPACTED WITH STRUCTURAL FILL (NYSDOT ITEM 304.12) IN AREAS UNDER AND WITHIN 5 FEET HORIZONTALLY OF ALL STRUCTURES, BUILDINGS AND PAVEMENTS. IN GRASSED AREAS, VOIDS LEFT SHALL BE FILLED AND PROPERLY COMPACTED WITH SUITABLE ON-SITE OR IMPORTED EARTHEN BACKFILL. ALL DISTURBED AREAS SHALL BE RESTORED.
6. THE CONTRACTOR SHALL DEWATER ALL EXCAVATIONS TO PREVENT THE INTRODUCTION OF GROUNDWATER INTO THE TRENCHES/EXCAVATIONS. PROVIDE ALL EQUIPMENT NECESSARY TO MAINTAIN THE GROUNDWATER LEVEL AS NECESSARY.
7. THE CONTRACTOR SHALL PLACE AT MINIMUM 6 INCHES OF CLEANED SCREENED TOPSOIL IN ALL DISTURBED AREAS PRIOR TO SEEDING.

EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, AND LOCAL GOVERNING SOIL AND WATER CONSERVATION AGENCY RECOMMENDATIONS AND STANDARDS. CONTRACTOR SHALL SUBMIT PROPOSED EROSION CONTROL PLAN INCLUDING SEQUENCING OF WORK TO THE ENGINEER FOR REVIEW PRIOR TO START OF WORK.
2. UTILIZE CONSTRUCTION METHODS/TECHNIQUES, WHICH WILL LIMIT THE EXPOSED EARTHEN AREAS AND MINIMIZE THE EFFECT OF EARTH DISTURBANCE ACTIVITIES ON SOIL EROSION. THE AREA OF DISTURBANCE SHALL BE LIMITED TO A MAXIMUM OF 5 ACRES UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. REMOVAL OF ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE COMPLETED AT THE APPROVAL OF THE OWNER AND ENGINEER. THE COST OF REMOVING THESE MEASURES SHALL ALSO BE INCLUDED IN THE BID PRICE.
4. FOR THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL PROTECT ALL ON-SITE, ADJACENT AND/OR DOWNSTREAM STORM/SANITARY SEWERS, AND/OR OTHER WATER COURSES FROM CONTAMINATION BY WATER BORNE SILTS, SEDIMENTS, FUELS, SOLVENTS, LUBRICANTS OR OTHER POLLUTANTS ORIGINATING FROM ANY WORK DONE ON, OR IN SUPPORT OF THIS PROJECT.
5. DURING CONSTRUCTION NO WET OR FRESH CONCRETE OR LEACHATE SHALL BE ALLOWED TO ESCAPE INTO STORM/SANITARY SEWERS, DITCHES OR OTHER WATERS OF NEW YORK STATE, NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS OR OTHER DEVICES BE ALLOWED TO ENTER ANY STORM/SANITARY SEWERS, DITCHES, RIVERS, OR WATER COURSES.
6. ALL EXCAVATED OR IMPORTED EARTHEN STOCKPILES SHALL BE SUITABLY STABILIZED AND PROTECTED BY SILT FENCE SO THAT IT CANNOT REASONABLY ENTER ANY WATER BODY, OR STORM OR SANITARY SEWER.
7. ALL METHODS AND EQUIPMENT PROPOSED BY THE CONTRACTOR TO ACCOMPLISH THE WORK FOR EROSION AND POLLUTION CONTROL SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
8. THE CONTRACTOR SHALL BE REQUIRED TO TREAT TRAVELED AREAS TO CONTROL DUST. WATER SHALL BE APPLIED TO SUCH TRAVELED AREAS AS THE ARCHITECT/ENGINEER OR OWNER'S DESIGNATED REPRESENTATIVE MAY DESIGNATE. THE NUMBER OF APPLICATIONS AND THE AMOUNT OF WATER SHALL BE BASED UPON FIELD AND WEATHER CONDITIONS.
9. ALL AREAS OF SOIL DISTURBANCE RESULTING FROM THIS PROJECT WHICH WILL NOT BE SUBJECT TO FURTHER EARTHWORK OR CONSTRUCTION ACTIVITIES SHALL BE PERMANENTLY SEEDED TO ESTABLISH GRASS, AND MULCHED WITH HAY OR STRAW WITHIN ONE WEEK OF FINAL DISTURBANCE. MULCH SHALL BE MAINTAINED UNTIL A SUITABLE VEGETATIVE COVER IS ESTABLISHED.
10. CONTRACTOR STAGING AREAS AND CONSTRUCTION ENTRANCE LOCATIONS SHALL BE COORDINATED WITH THE OWNER PRIOR TO START OF CONSTRUCTION. STABILIZED CONSTRUCTION ENTRANCE(S), AS SHOWN ON THE PLANS SHALL BE PROVIDED. ALL DISTURBED AREAS SHALL BE RESTORED.
11. ALL CATCH BASINS/DRAINAGE INLETS SHALL HAVE STONED INLET PROTECTION AROUND THEM AND GEOTEXTILE FABRIC OVER THE GRATE TO PREVENT SEDIMENTATION FROM ENTERING THE STORM SYSTEM.
12. TILL ALL COMPACTED SOILS LOCATED IN LAWN AREAS TO RESTORE THE ORIGINAL PROPERTIES OF THE SOIL PRIOR TO SEEDING.

LEGEND

EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION
		PROJECT BENCHMARK / CONTROL POINTS			END SECTION
		WETLAND			CATCH BASIN
		WETLAND BUFFER			DRAIN BASIN
		BORING LOCATIONS			INLET MANHOLE
		OBJECT REMOVAL			MANHOLE (SOLID COVER)
		TREE REMOVAL			INLET DRYWELL
		- REMOVAL UTILITY			CLEAN OUT
		- REMOVAL FENCE			DOWN SPOUT
		SAWCUT			HYDRANT
		PROTECTION (OBJECT)			VALVE
		TREE PROTECTION			SAMPLING TAP
		FENCE, CHAIN LINK			(OTHER) FLOW ARROW
		FENCE, AGRICULTURAL	CTV	CTV	CATV
		FENCE, ORNAMENTAL	COMM	COMM	COMMUNICATIONS
		FENCE, GUIDE RAIL	FO	FO	FIBER OPTICS
		TREE/VEGETATION LIMIT	SIG	SIG	SIGNAL LINE
BLDG	BLDG	BUILDING/STRUCTURE	T	T	TELEPHONE LINE
		PROPERTY LINE	OE	OE	OVERHEAD ELECTRIC
		SETBACK LINE	P	P	POWER LINE
PE	PE	EASEMENTS	UE	UE	UNDERGROUND ELECTRIC
ROW	ROW	RIGHT-OF-WAY	G	G	GAS LINE
		RETAINING WALL	SA	SA	SANITARY LINE
		BOLLARD	FM	FM	SANITARY FORCEMAIN
		FLAG POLE	ST	ST	STORM LINE
		SIGN			STORM UNDERDRAIN PIPE
		DECIDUOUS TREE	FS	FS	WATER FIRE SERVICE LINE
		CONIFEROUS TREE	W	W	WATER LINE
		TREE STUMP	ST-SA	ST-SA	COMBINED SANITARY AND STORM
		OUTLET PROTECTION			FUEL LINES (DIESEL/UNLEADED)
		BIORETENTION	-510-	510	MAJOR CONTOUR
		BOLLARD LIGHT POLE	-509-	509	MINOR CONTOUR
		LIGHT POLE SINGLE			℄ OF DRAINAGE SWALE
		LIGHT POLE DOUBLE			SILT SOCK
		LIGHT POLE TRIPLE			EROSION FENCE
		LIGHT POLE QUAD			FLOW/SLOPE DIRECTION
		UTILITY POLE			SILT SOCK INLET PROTECTION
		UTILITY POLE WITH LIGHT			SILT FENCE INLET PROTECTION
HH	HH	HANDHOLE			CHECK DAM
E	E	MANHOLE			STABILIZED CONSTRUCTION ENTRANCE (TEMPORARY)

DRAWING INDEX

C000 COVER SHEET
C001 GENERAL NOTES, LEGEND, AND DRAWING INDEX
C002 EXISTING/DEMO FEATURES HEAT MAP
C003 PROPOSED FEATURES HEAT MAP
C004 TURNING MOVEMENTS
C005 TREE SURVEY
CD101 EXISTING CONDITIONS AND DEMOLITION PLAN
CD102 EXISTING CONDITIONS AND DEMOLITION PLAN
CD103 EXISTING CONDITIONS AND DEMOLITION PLAN
C200 OVERALL SITE PLAN
C201 SITE AND UTILITY PLAN
C202 SITE AND UTILITY PLAN
C203 SITE AND UTILITY PLAN
C401 GRADING AND EROSION CONTROL PLAN
C402 GRADING AND EROSION CONTROL PLAN
C403 GRADING AND EROSION CONTROL PLAN
C404 ACCESS ROAD PROFILE
C501 CONSTRUCTION DETAILS
C502 CONSTRUCTION DETAILS
C503 CONSTRUCTION DETAILS
C601 LANDSCAPE PLAN
C602 LANDSCAPE PLAN
C603 LANDSCAPING PLAN
C701 DECOMMISSIONING PLAN - PHASE I
C702 DECOMMISSIONING PLAN - PHASE I
C703 DECOMMISSIONING PLAN - PHASE I
C704 DECOMMISSIONING PLAN - PHASE II
C705 DECOMMISSIONING PLAN - PHASE II
C706 DECOMMISSIONING PLAN - PHASE II

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REVIEWED BY: EP
ISSUED FOR: REVIEW
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GENERAL NOTES LEGEND AND DRAWING INDEX

DRAWING NUMBER:

C001

VERSION 21.1
8/23/2022 3:52:41 PM

HEAT MAP LEGEND

COLOR ID	SLOPE	PARCEL AREA	PARCEL PERCENT	PROJECT AREA	PROJECT PERCENT
	0-15%	57.8 AC	60.5%	32.6 AC	68.5%
	15-25%	25.6 AC	26.8%	13.8 AC	29.0%
	>25%	12.1 AC	12.7%	2.5 AC	2.5%
	TOTAL	95.5 AC	100%	47.6 AC	100%



1 C002 SLOPE MAP EXISTING CONDITIONS



2 C002 SLOPE MAP PROPOSED DEMOLITION

N

0' 200' 400' 600'

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EXISTING FEATURES SLOPE MAP

DRAWING NUMBER:

C002



HEAT MAP LEGEND

COLOR ID	SLOPE	PARCEL AREA	PARCEL PERCENT	PROJECT AREA	PROJECT PERCENT
	0-15%	57.8 AC	60.5%	32.6 AC	68.5%
	15-25%	25.6 AC	26.8%	13.8 AC	29.0%
	>25%	12.1 AC	12.7%	2.5 AC	2.5%
	TOTAL	95.5 AC	100%	47.6 AC	100%

N

0' 200' 400' 600'

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PROPOSED FEATURES SLOPE MAP

DRAWING NUMBER:

C003



1 C004 FIRE TRUCK TURNING PLAN

SCALE: 1" = 100'



2 C004 WB-67 TURNING PLAN

SCALE: 1" = 100'

N

0' 200' 400' 600'

VEHICLE TRACKING LEGEND

- AERIAL FIRE TRUCK (FORWARD MOVEMENT)
- AERIAL FIRE TRUCK (BACKWARDS MOVEMENT)
- INTERSTATE SEMI-TRAILER (FORWARD MOVEMENT)
- INTERSTATE SEMI-TRAILER (BACKWARDS MOVEMENT)
- VEHICLE BODY PATH (FORWARD MOVEMENT)
- VEHICLE BODY ENVELOPE (FORWARD MOVEMENT)
- VEHICLE BODY PATH (BACKWARDS MOVEMENT)
- VEHICLE BODY ENVELOPE (BACKWARDS MOVEMENT)
- SIGHT TRIANGLE

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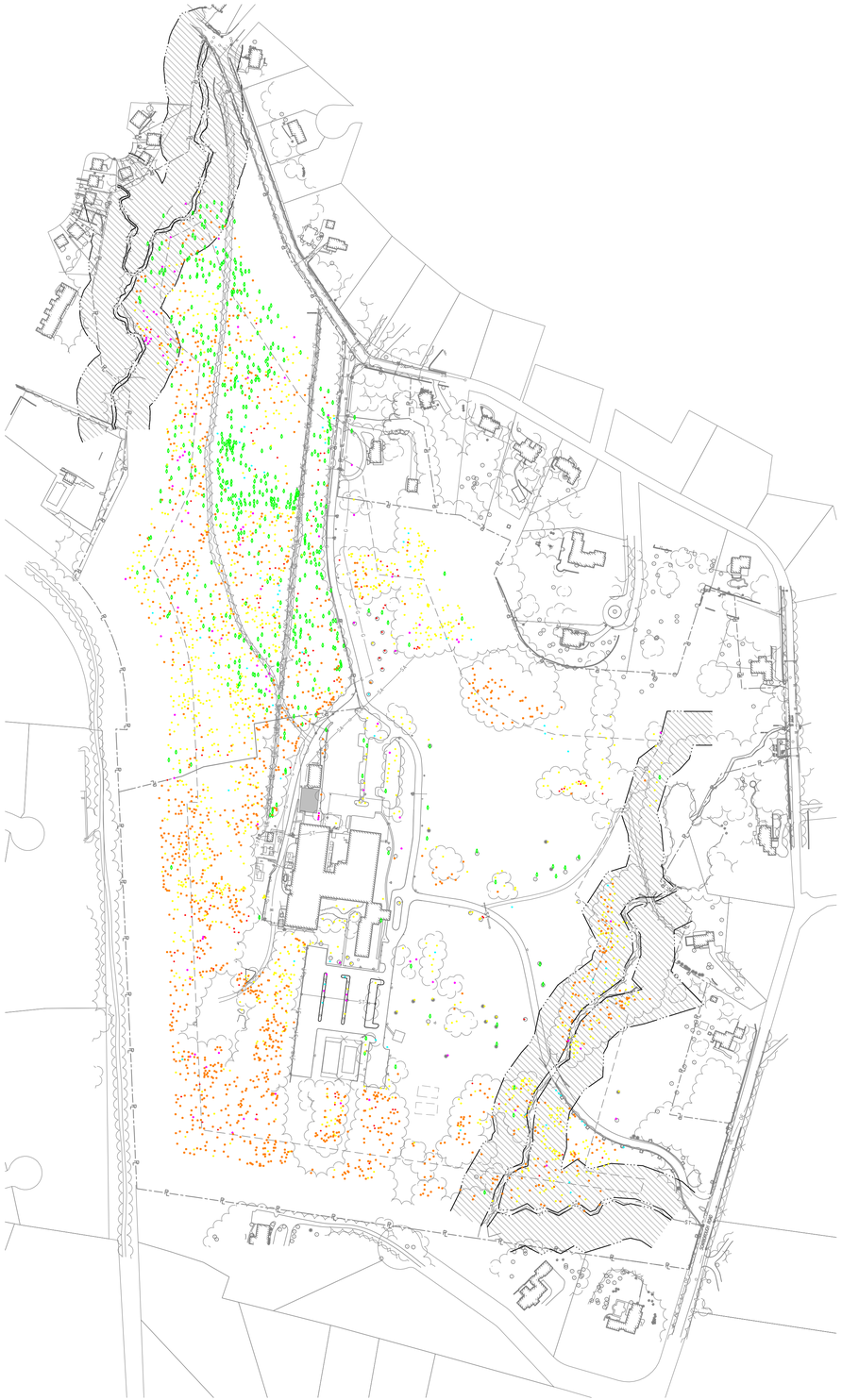
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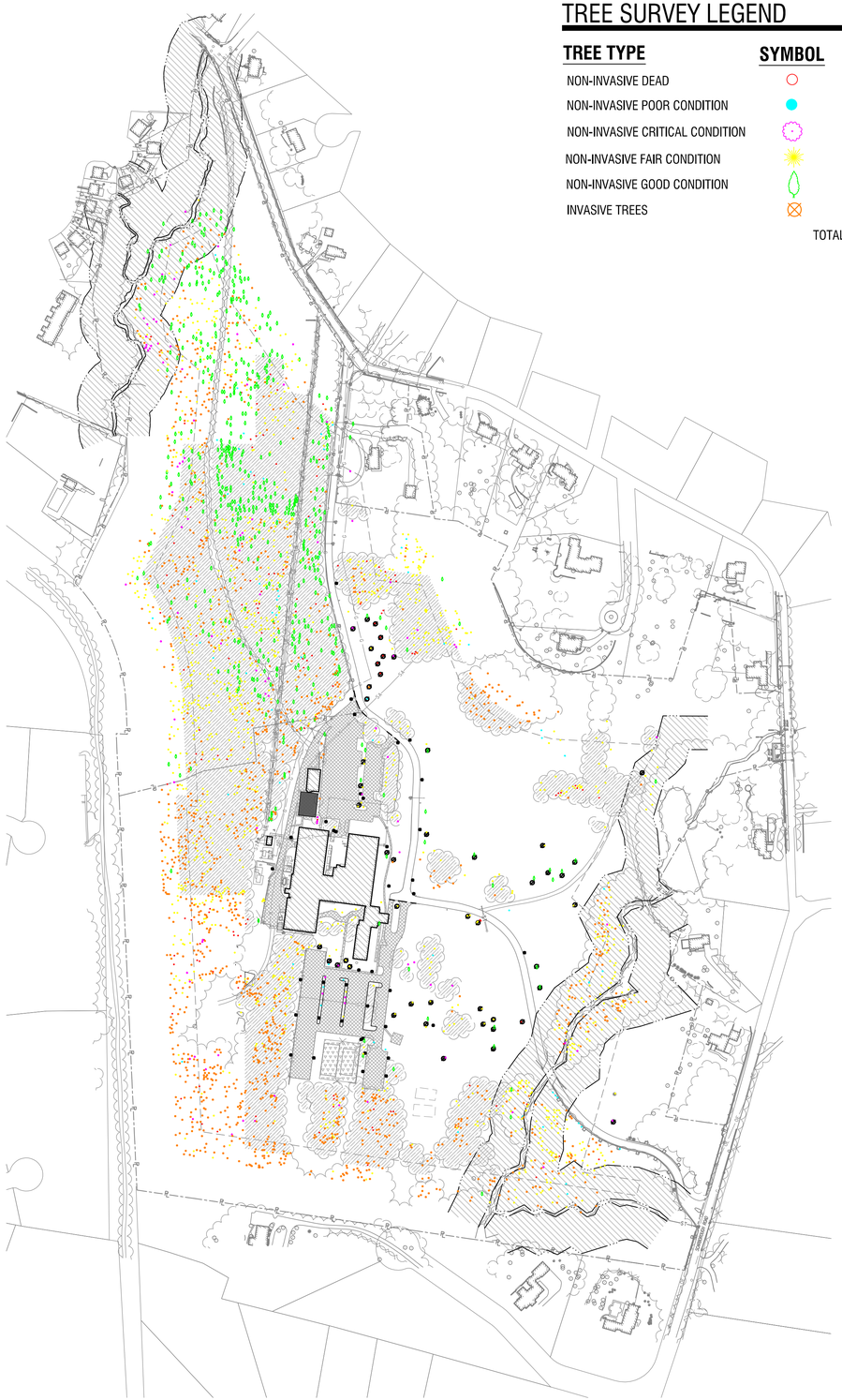
TURNING MOVEMENTS

DRAWING NUMBER:

C004



1 C005 TREE SURVEY EXISTING CONDITIONS



2 C005 TREE SURVEY PROPOSED DEMOLITION

TREE SURVEY LEGEND

TREE TYPE	SYMBOL	EXISTING	PROPOSED DEMO
NON-INVASIVE DEAD		138	100
NON-INVASIVE POOR CONDITION		67	44
NON-INVASIVE CRITICAL CONDITION		102	52
NON-INVASIVE FAIR CONDITION		1,288	814
NON-INVASIVE GOOD CONDITION		553	364
INVASIVE TREES		1,447	765
	TOTAL	3,595	2,139

TREE CLEARING

ASPHALT DEMO

BUILDING DEMO

ATHLETIC DEMO

N

0' 200' 400' 600'

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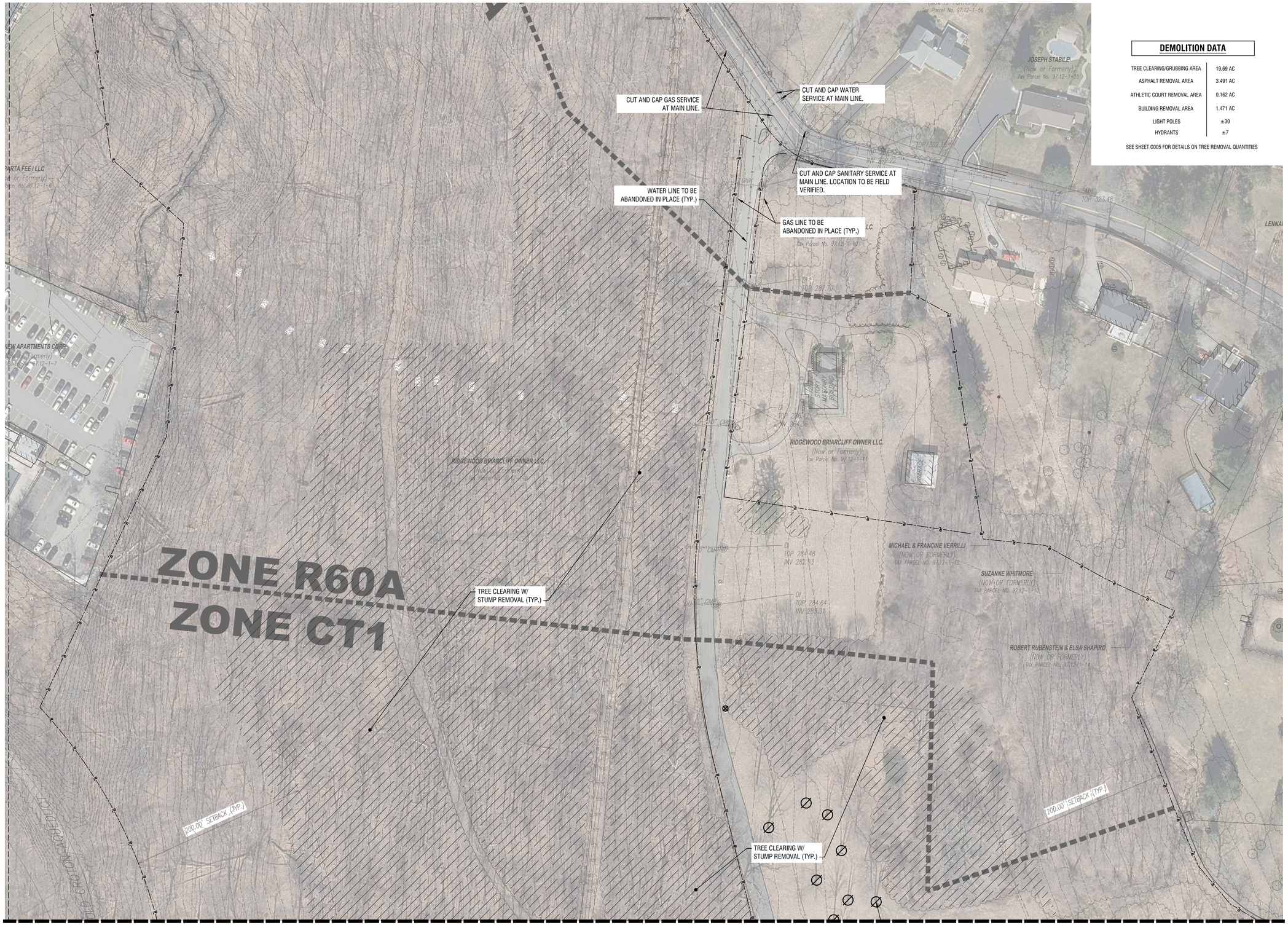
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DRAWING NAME: TREE SURVEY

DRAWING NUMBER: C005



DEMOLITION DATA

TREE CLEARING/GRUBBING AREA	19.69 AC
ASPHALT REMOVAL AREA	3.491 AC
ATHLETIC COURT REMOVAL AREA	0.162 AC
BUILDING REMOVAL AREA	1.471 AC
LIGHT POLES	±30
HYDRANTS	±7

SEE SHEET C005 FOR DETAILS ON TREE REMOVAL QUANTITIES

1 CD101 EXISTING CONDITIONS AND DEMOLITION PLAN
SCALE: 1" = 50'

N

0' 50' 100' 150'

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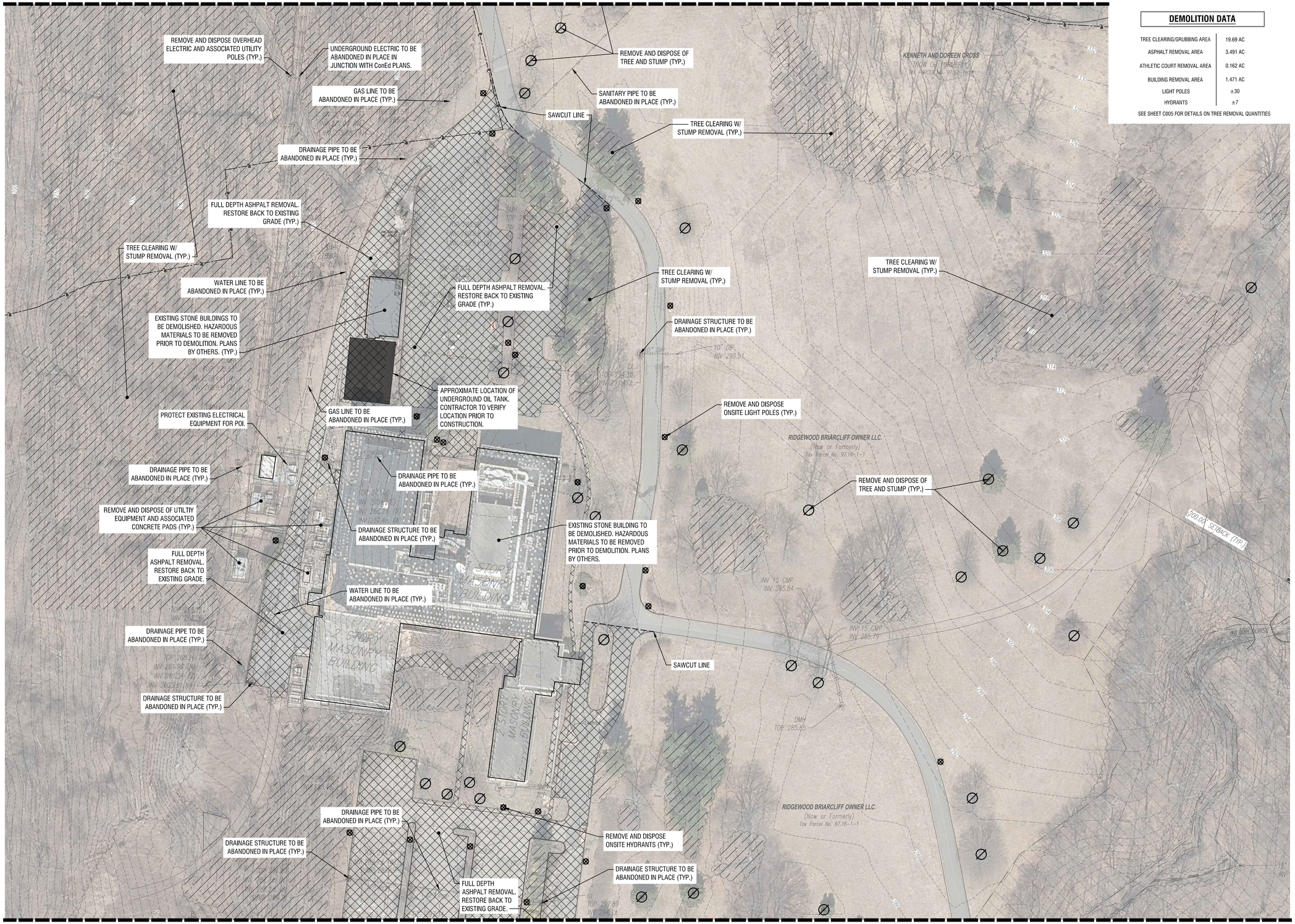
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DATE: 8/10/2022
DRAWING NAME:

EXISTING CONDITIONS AND DEMOLITION PLAN

DRAWING NUMBER:

CD101

MATCHLINE SEE SHEET CD101



MATCHLINE SEE SHEET CD103

1 CD102 EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: 1" = 50'

N

0' 50' 100' 150'

DEMOLITION DATA

TREE CLEARING/GRUBBING AREA	19.69 AC
ASPHALT REMOVAL AREA	3.491 AC
ATHLETIC COURT REMOVAL AREA	0.162 AC
BUILDING REMOVAL AREA	1.471 AC
LIGHT POLES	±30
HYDRANTS	±7

SEE SHEET C005 FOR DETAILS ON TREE REMOVAL QUANTITIES

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EXISTING CONDITIONS AND DEMOLITION PLAN

DRAWING NUMBER:

CD102

MATCHLINE SEE SHEET CD102



DEMOLITION DATA

TREE CLEARING/GRUBBING AREA	19.69 AC
ASPHALT REMOVAL AREA	3.491 AC
ATHLETIC COURT REMOVAL AREA	0.162 AC
BUILDING REMOVAL AREA	1.471 AC
LIGHT POLES	±30
HYDRANTS	±7

SEE SHEET C005 FOR DETAILS ON TREE REMOVAL QUANTITIES

1 CD103 EXISTING CONDITIONS AND DEMOLITION PLAN
SCALE: 1" = 50'

N

0' 50' 100' 150'

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8/23/2022 1:53:46 PM

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BRIARCLIFF SOLAR ARRAY
345 SCARBOROUGH RD,
BRIARCLIFF MANOR, NY, 10510

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2221884
DRAWN BY: CC
REVIEWED BY: EP
ISSUED FOR: REVIEW
DATE: 8/10/2022
DRAWING NAME:

EXISTING CONDITIONS AND DEMOLITION PLAN

DRAWING NUMBER:

CD103



1 C200 OVERALL SITE PLAN

SCALE: 1" = 200'

N

0' 200' 400' 600'

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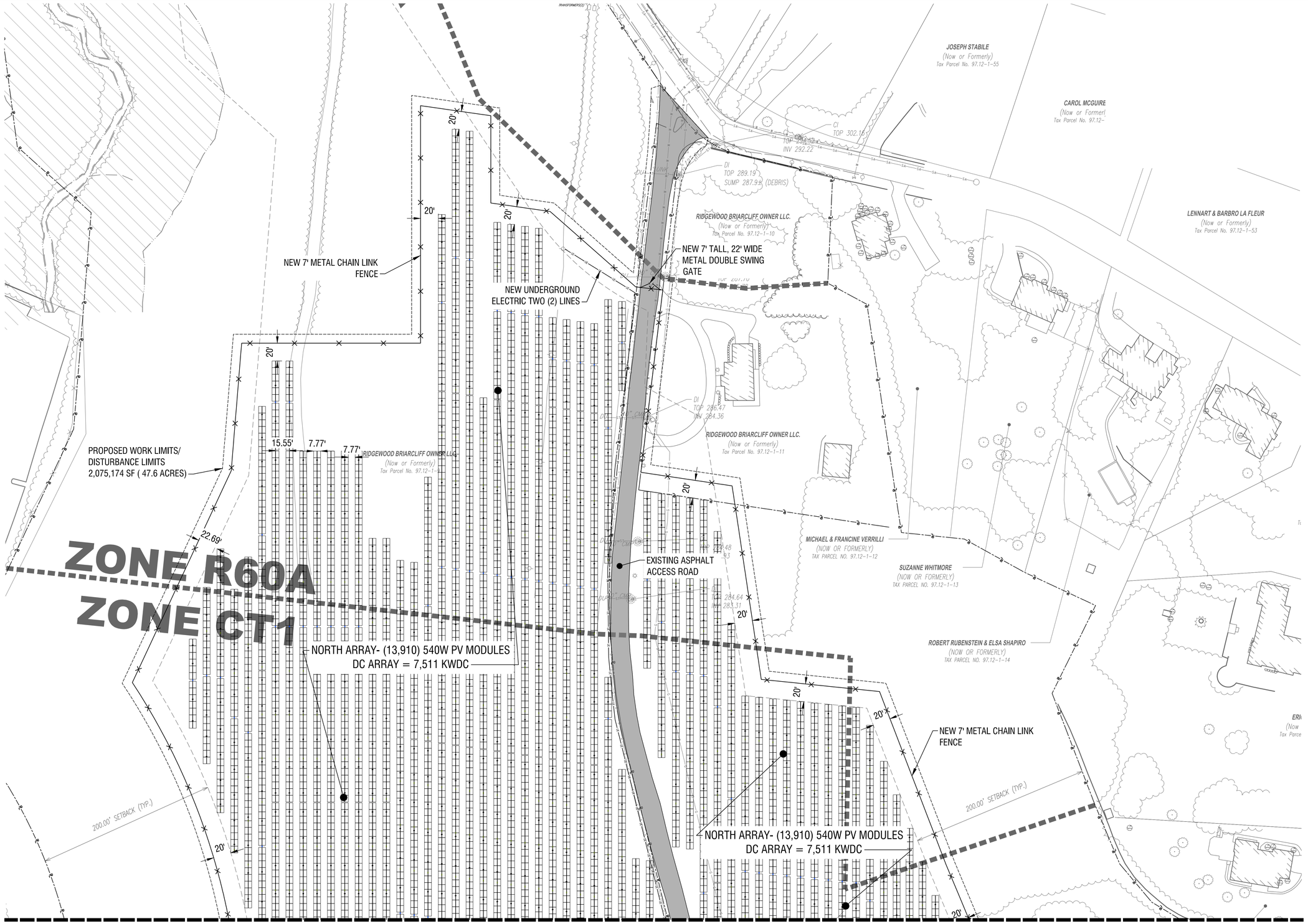
PROJECT NUMBER: 2221884
DRAWN BY: CC
REVIEWED BY: EP
ISSUED FOR: REVIEW
DATE: 8/10/2022
DRAWING NAME:

OVERALL SITE PLAN

DRAWING NUMBER:

C200

VERSION 21.1
8/23/2022 1:54:36 PM



1 C201 SITE AND UTILITY PLAN
SCALE: 1" = 50'

N

0' 50' 100' 150'

PROJECT DISTURBANCE

DISTURBANCE AREA	±47.5 AC
FENCED AREA	±45.7 AC

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Revisions		

PROJECT NUMBER: 2221884
DRAWN BY: CC
REVIEWED BY: EP
ISSUED FOR: REVIEW
DATE: 8/10/2022
DRAWING NAME:

SITE AND UTILITY PLAN

DRAWING NUMBER:

C201

MATCHLINE SEE SHEET C201

20'

NEW 7' METAL CHAIN LINK FENCE

NEW UNDERGROUND ELECTRIC TWO (2) LINES

EXISTING ASPHALT ACCESS ROAD

NORTH ARRAY- (13,910) 540W PV MODULES
DC ARRAY = 7,511 KWDC

RACKING IN AREA OF APPROXIMATE UNDERGROUND OIL TANK MUST BE INSTALLED ON CONCRETE BALLASTS.

15.55' 7.77' 7.77'

NEW UNDERGROUND ELECTRIC LINE

NEW 7' TALL, 22' WIDE METAL DOUBLE SWING GATE

NEW UNDERGROUND ELECTRIC LINE

NEW 50' TURNAROUND. RECYCLED ASPHALT MILLINGS.

POINT OF INTERCONNECTION

RECYCLED ASPHALT MILLINGS.

NEW EQUIPMENT PADS (TYP.)

POINT OF INTERCONNECTION

NEW 7' METAL CHAIN LINK FENCE

PROPOSED WORK LIMITS/
DISTURBANCE LIMITS
2,075,174 SF (47.6 ACRES)

KENNETH AND DOREEN CROSS
(NOW OR FORMERLY)
TAX PARCEL NO. 97.12-1-18

PROPOSED WORK LIMITS/
DISTURBANCE LIMITS
2,075,174 SF (47.6 ACRES)

20.66'

23.77'

31.52'

12.04'

SOUTH ARRAY- (13,910) 540W PV MODULES
DC ARRAY = 7,511 KWDC

SOUTH ARRAY- (13,910) 540W PV MODULES
DC ARRAY = 7,511 KWDC

RIDGEWOOD BRIARCLIFF OWNER LLC.
(NOW OR FORMERLY)
TAX PARCEL NO. 97.17-1-11

200.00' SETBACK (TYP.)

21.4'

RIDGEWOOD BRIARCLIFF OWNER LLC.
(NOW OR FORMERLY)
TAX PARCEL NO. 97.16-1-1

MATCHLINE SEE SHEET C203

1 C201 SITE AND UTILITY PLAN
SCALE: 1" = 50'

N

0' 50' 100' 150'

PROJECT DISTURBANCE

DISTURBANCE AREA	±47.5 AC
FENCED AREA	±45.7 AC

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Revisions		

PROJECT NUMBER: 2221884
DRAWN BY: CC
REVIEWED BY: EP
ISSUED FOR: REVIEW
DATE: 8/10/2022
DRAWING NAME:

SITE AND UTILITY PLAN

DRAWING NUMBER:

C202

MATCHLINE SEE SHEET C202

SOUTH ARRAY- (13,910) 540W PV MODULES
DC ARRAY = 7,511 KWDC

NEW 7' METAL CHAIN LINK FENCE

NEW DOUBLE SWING SITE ACCESS GATE

15.55'
7.77'
7.77'

20'
20'
20'

200.00' SETBACK (TYP.)

WOODEN GUIDERAIL ALONG ROAD

WOODEN GUIDERAIL ALONG ROAD

CT1

R40A

5" RCP
291.34

DI
TOP 317.46

CI
TOP 31

SCARBOROUGH ROAD

KENNETH DENGLER
(Now or Formerly)
Tax Parcel No. 97.16-1-8

KENNETH DENGLER
(Now or Formerly)
Tax Parcel No. 97.16-1-9

MICHAEL & NANCY MEZZACAPPA
(Now or Formerly)
Tax Parcel No. 97.16-1-7

PROJECT DISTURBANCE

DISTURBANCE AREA	±47.5 AC
FENCED AREA	±45.7 AC

1 / C203 SITE AND UTILITY PLAN
SCALE: 1" = 50'

N

0' 50' 100' 150'

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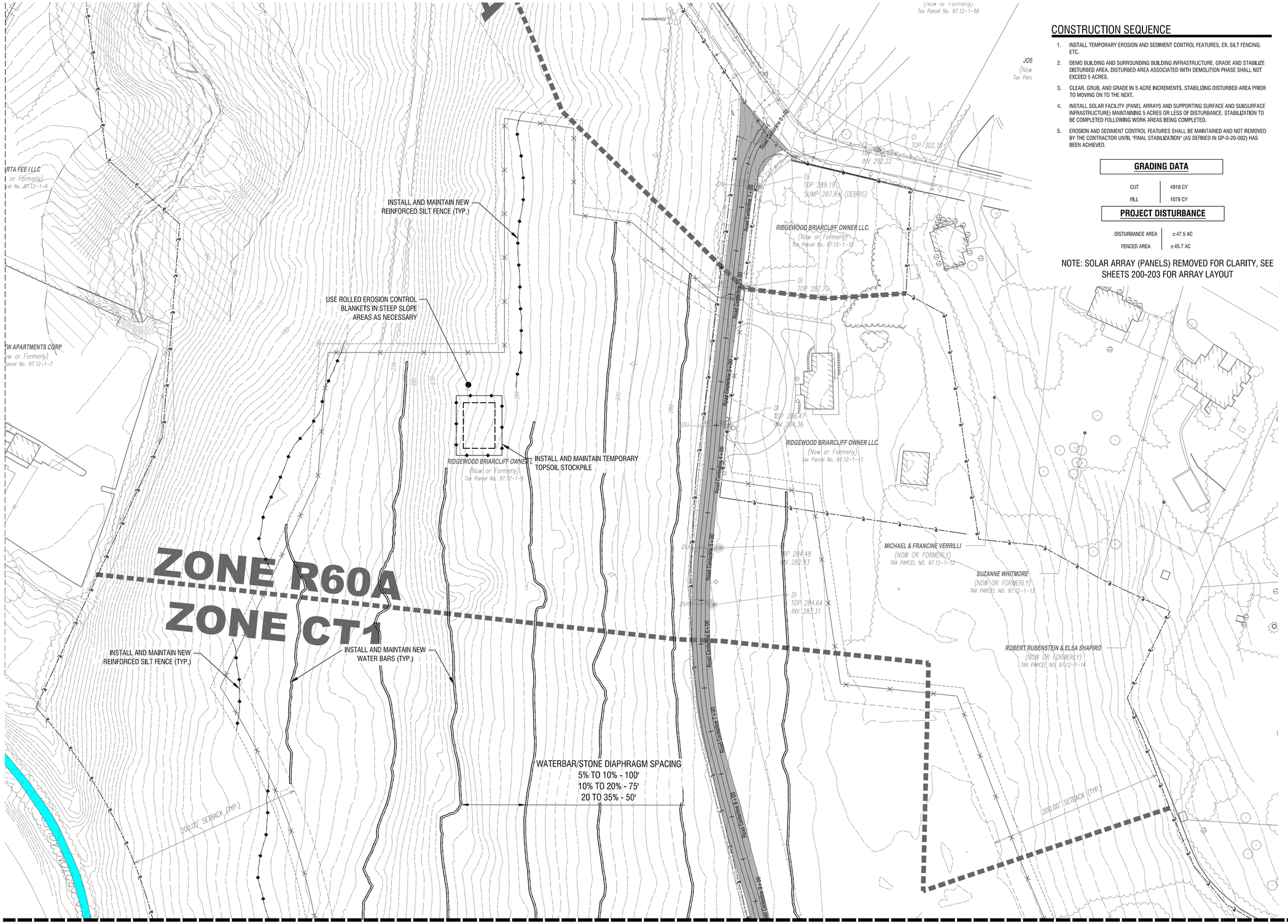
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Revisions		

PROJECT NUMBER: 2221884
DRAWN BY: CC
REVIEWED BY: EP
ISSUED FOR: REVIEW
DATE: 8/10/2022
DRAWING NAME:

SITE AND UTILITY PLAN

DRAWING NUMBER:

C203



1 C401 GRADING AND EROSION CONTROL PLAN
SCALE: 1" = 50'

CONSTRUCTION SEQUENCE

1. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL FEATURES, EX. SILT FENCING; ETC.
2. DEMO BUILDING AND SURROUNDING BUILDING INFRASTRUCTURE, GRADE AND STABILIZE DISTURBED AREA. DISTURBED AREA ASSOCIATED WITH DEMOLITION PHASE SHALL NOT EXCEED 5 ACRES.
3. CLEAR, GRUB, AND GRADE IN 5 ACRE INCREMENTS, STABILIZING DISTURBED AREA PRIOR TO MOVING ON TO THE NEXT.
4. INSTALL SOLAR FACILITY (PANEL ARRAYS AND SUPPORTING SURFACE AND SUBSURFACE INFRASTRUCTURE) MAINTAINING 5 ACRES OR LESS OF DISTURBANCE. STABILIZATION TO BE COMPLETED FOLLOWING WORK AREAS BEING COMPLETED.
5. EROSION AND SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED AND NOT REMOVED BY THE CONTRACTOR UNTIL "FINAL STABILIZATION" (AS DEFINED IN GP-0-20-002) HAS BEEN ACHIEVED.

GRADING DATA

CUT	4918 CY
FILL	1078 CY

PROJECT DISTURBANCE

DISTURBANCE AREA	±47.5 AC
FENCED AREA	±45.7 AC

NOTE: SOLAR ARRAY (PANELS) REMOVED FOR CLARITY, SEE SHEETS 200-203 FOR ARRAY LAYOUT

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DATE: 8/10/2022
DRAWING NAME:

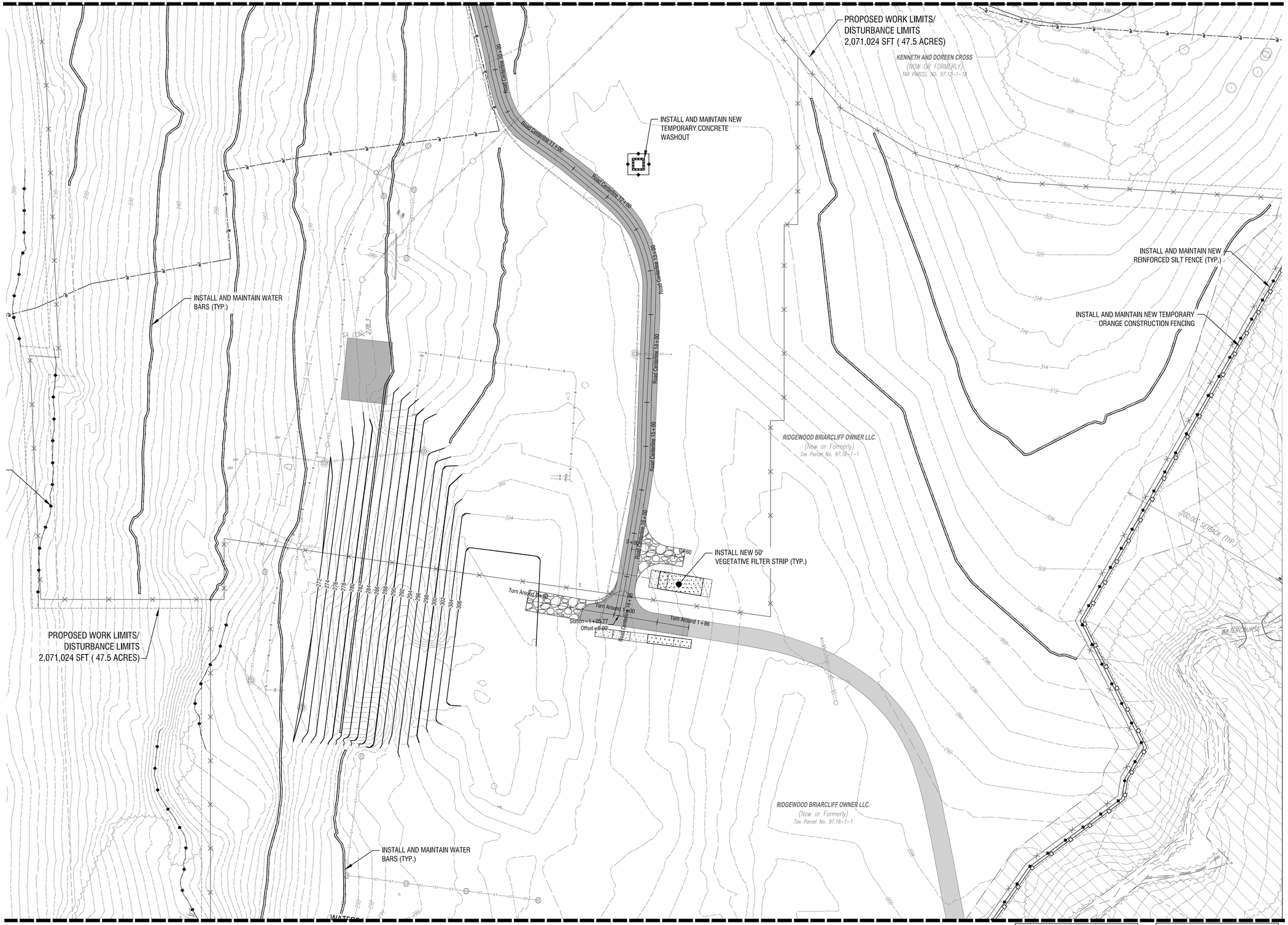
GRADING AND EROSION CONTROL PLAN

DRAWING NUMBER:

C401

VERSION 21.1
8/23/2022 1:56:25 PM

MATCHLINE SEE SHEET C401



MATCHLINE SEE SHEET C403

NOTE: SOLAR ARRAY (PANELS) REMOVED FOR CLARITY, SEE SHEETS 200-203 FOR ARRAY LAYOUT

1 / C402 GRADING AND EROSION CONTROL PLAN

SCALE: 1" = 50'

N

0' 50' 100' 150'

PROJECT DISTURBANCE		GRADING DATA	
DISTURBANCE AREA	±47.5 AC	CUT	4918 CY
FENCED AREA	±45.7 AC	FILL	1078 CY

VERSION 21.1
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Revisions		

PROJECT NUMBER: 2221884

DRAWN BY: CC

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ISSUED FOR: REVIEW

DATE: 8/10/2022

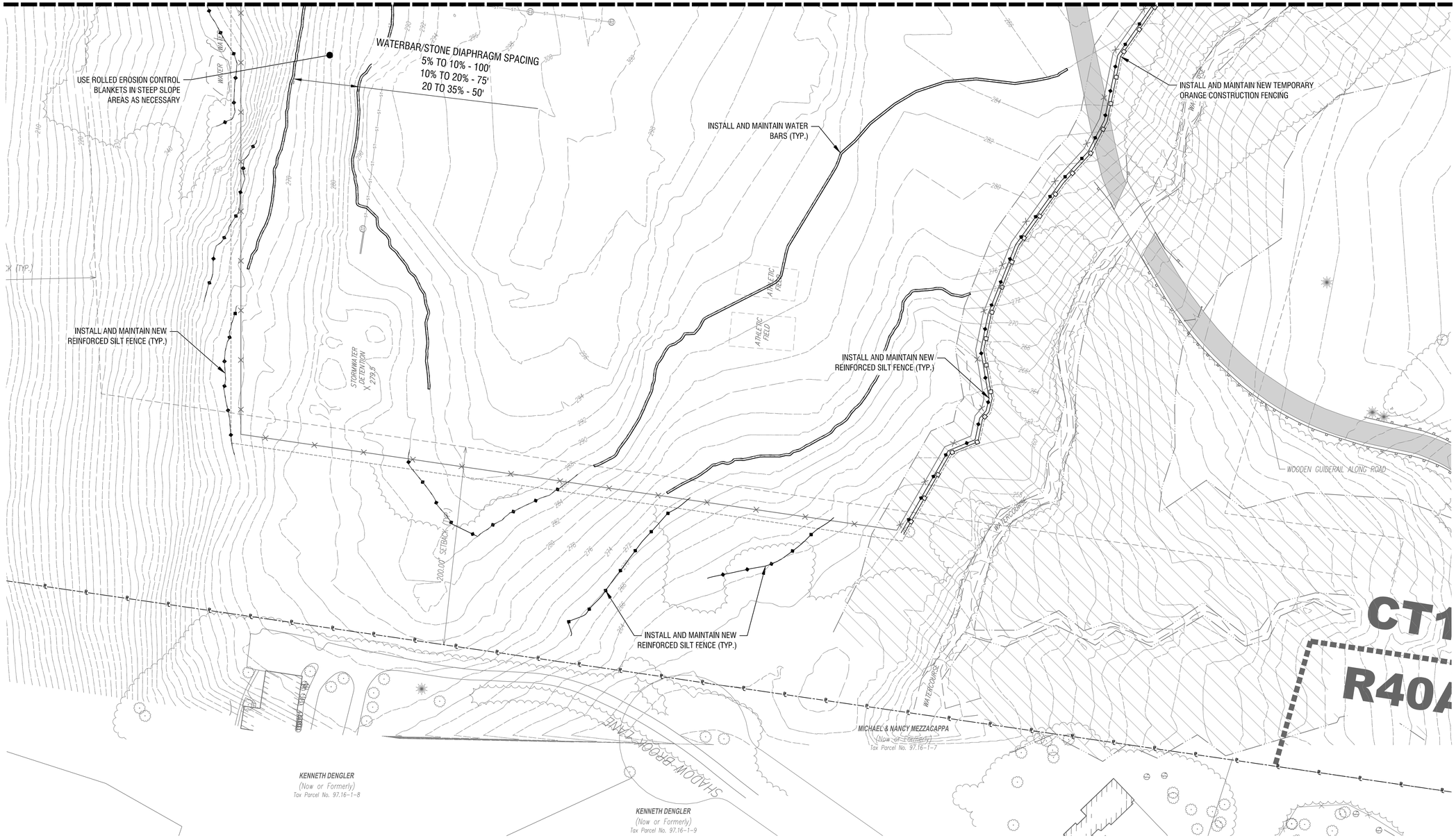
DRAWING NAME:

GRADING AND EROSION CONTROL PLAN

DRAWING NUMBER:

C402

MATCHLINE SEE SHEET C402



NOTE: SOLAR ARRAY (PANELS) REMOVED FOR CLARITY, SEE SHEETS 200-203 FOR ARRAY LAYOUT

1 / C403 GRADING AND EROSION CONTROL PLAN

SCALE: 1" = 50'

N

0' 50' 100' 150'

PROJECT DISTURBANCE	
DISTURBANCE AREA	±47.5 AC
FENCED AREA	±45.7 AC

GRADING DATA	
CUT	4918 CY
FILL	1078 CY

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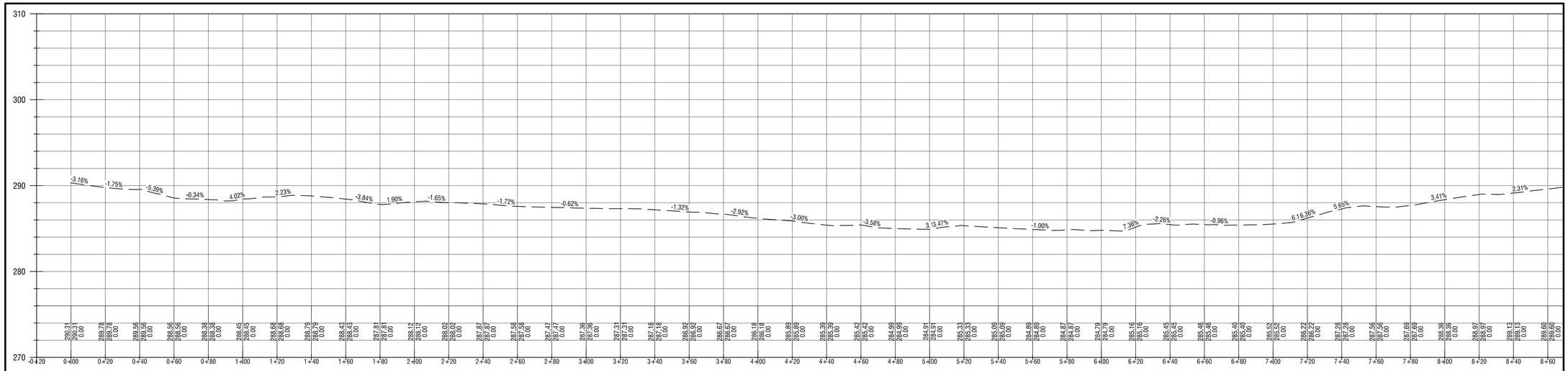
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Revisions		

PROJECT NUMBER: 2221884
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DATE: 8/10/2022
DRAWING NAME:

GRADING AND EROSION CONTROL PLAN

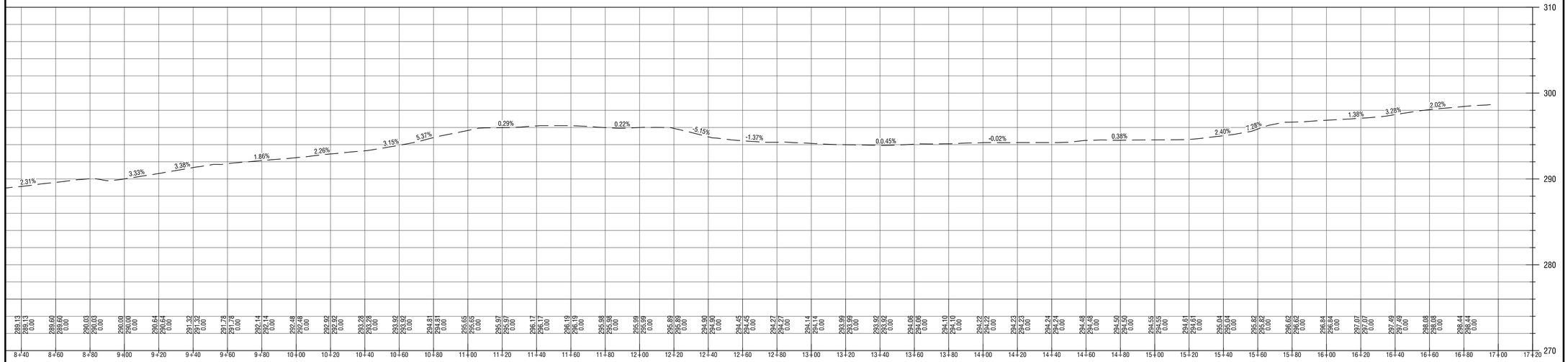
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C403



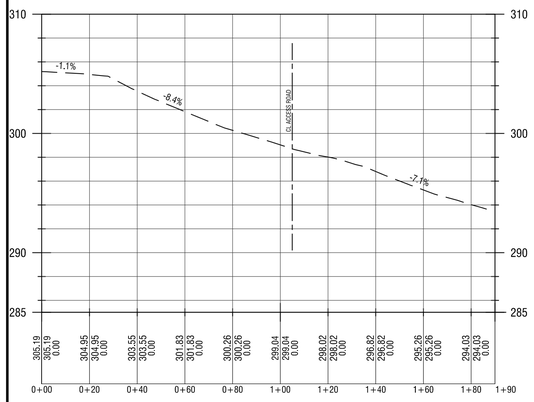
2 C404 ACCESS ROAD PROFILE STA. 0+00 TO 8+40

SCALE: 1" = 30'



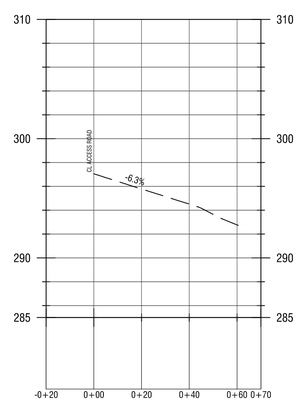
2 C404 ACCESS ROAD PROFILE STA. 8+40 TO 16+80

SCALE: 1" = 30'



3 C404 TURN AROUND PROFILE

SCALE: 1" = 30'



4 C404 PAD DRIVE PROFILE

SCALE: 1" = 30'

0' 30' 60' 90'

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PROJECT NUMBER: 2221884

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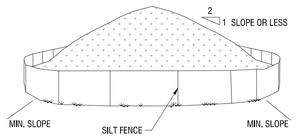
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DRAWING NAME:

ACCESS ROAD PROFILE

DRAWING NUMBER:

C404

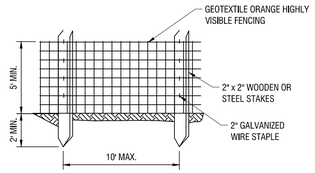


NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1V:2H.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE SPECIFICATIONS AND DETAIL FOR INSTALLATION OF SILT FENCE.

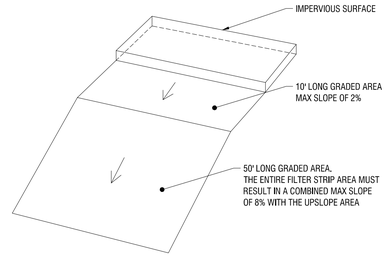
1 C501 — TEMPORARY SOIL STOCKPILE

N.T.S.



2 C501 — ORANGE CONSTRUCTION FENCE

N.T.S.

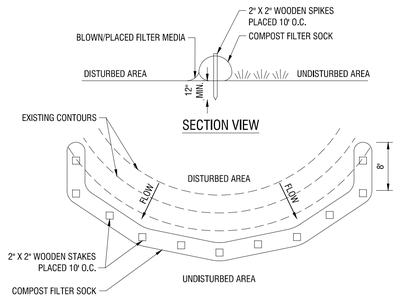


NOTES:

1. NO FUTURE DEVELOPMENT IS ALLOWED ON FILTER STRIP AREA.
2. AREAS TO BE SEEDED USING SPECIFIED SEED MIXTURE ON THE LANDSCAPING PLAN.

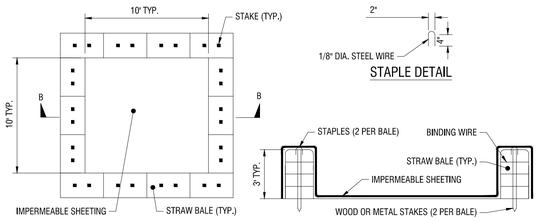
3 C501 — VEGETATIVE FILTER STRIP

N.T.S.



4 C501 — COMPOST FILTER SOCK

NYS DEC DETAIL: COMPOST FILTER SOCK



NOTE:

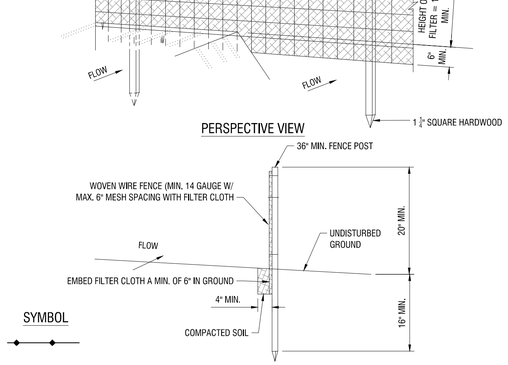
1. CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 100 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT, REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER, PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

5 C501 — CONCRETE WASHOUT AREA WITH STRAW BALES

N.T.S.

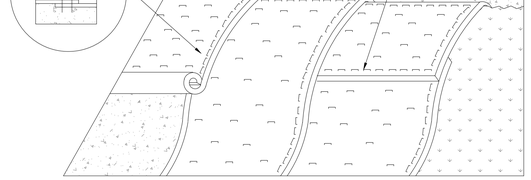


NOTES:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABLINKA 140N, OR APPROVED EQUAL.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

6 C501 — SILT FENCE

NYS DEC DETAIL: SILT FENCE



APPLICATION NOTES:

A. THE PURPOSE OF EROSION MATTING ON SLOPES IS TO REDUCE EROSION AND AID THE ESTABLISHMENT OF VEGETATION.
B. EROSION CONTROL MATTING SHALL BE USED FOR THE FOLLOWING REASONS:
*SLOPES GREATER THAN 3H:1V OR WHERE ORDERED BY ENGINEER
*AREAS WHERE SEED AND MULCH WILL NOT STAY IN PLACE ALONE
*WHERE SEEDING IS OUTSIDE THE GROWING SEASON

GENERAL NOTES:

1. GRADE AND SMOOTH THE SLOPE TO PROVIDE GOOD MATTING TO SOIL SURFACE CONTACT.
2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.
3. ANCHOR MATTING AS SHOWN, UTILIZING ANCHOR STAPLES. STAPLE PLACEMENT SHALL BE DETERMINED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. UNROLL EROSION MATTING VERTICALLY DOWN SLOPE IN THE DIRECTION OF WATER FLOW.
5. OVERLAP UPPER MATTING OVER LOWER MATTING AS SHOWN, AND AS DIRECTED BY MANUFACTURER.
6. OVERLAP ADJACENT MATTING AS SHOW, AND AS DIRECTED BY MANUFACTURER.
7. CUT EXCESS MATTING AT END OF SLOPE AND ANCHOR THE END.
8. EROSION MATTING SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVEN OF ½" OR GREATER.
9. EROSION MATTING SHALL BE REPAIRED AND RESTAPLED AS NECESSARY TO ENSURE PROPER FUNCTION.

7 C501 — ROLLED EROSION CONTROL PRODUCT

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Revisions		

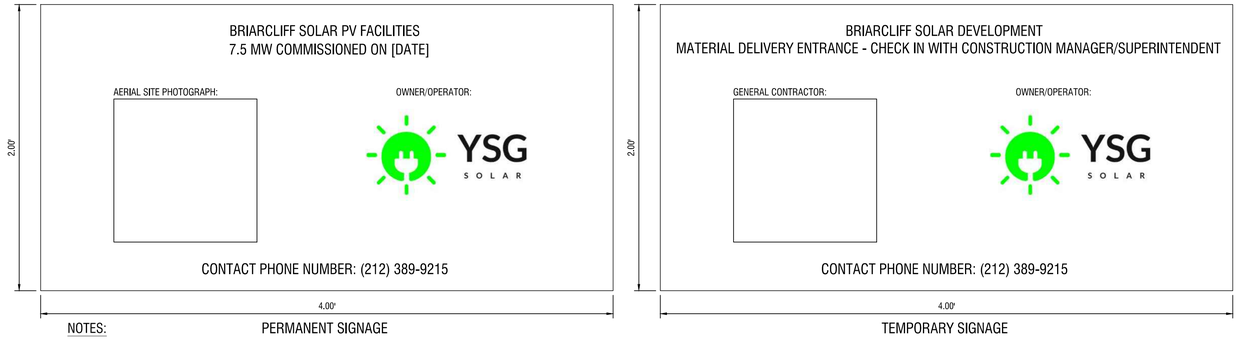
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DRAWING NAME:

CONSTRUCTION DETAILS

DRAWING NUMBER:

C501

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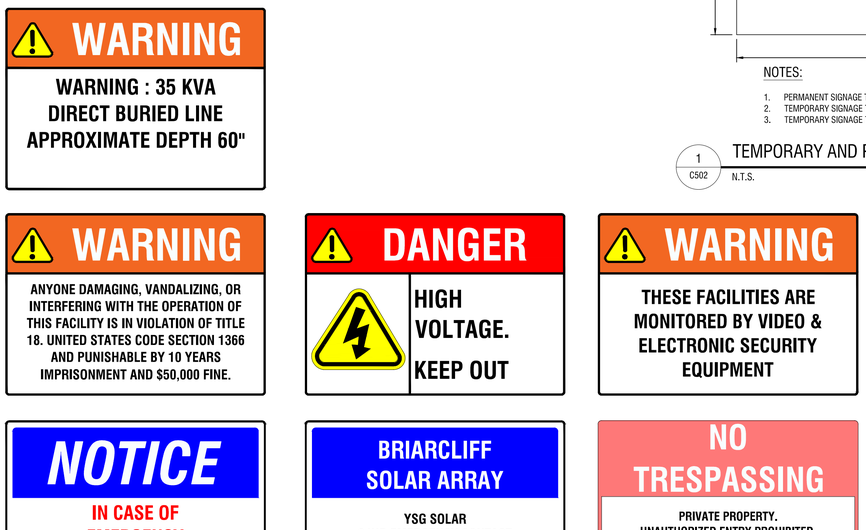


NOTES: PERMANENT SIGNAGE | TEMPORARY SIGNAGE

1. PERMANENT SIGNAGE TO BE INSTALLED ON GATE AFTER ARRAY HAS BEEN COMMISSIONED.
2. TEMPORARY SIGNAGE TO BE INSTALLED ALONG GRAVEL DRIVE PRIOR TO CONSTRUCTION.
3. TEMPORARY SIGNAGE TO BE REMOVED AFTER ARRAY HAS BEEN COMMISSIONED AND BEFORE PERMANENT SIGNAGE IS INSTALLED.

1 / C502 TEMPORARY AND PERMANENT SIGNAGE

N.T.S.

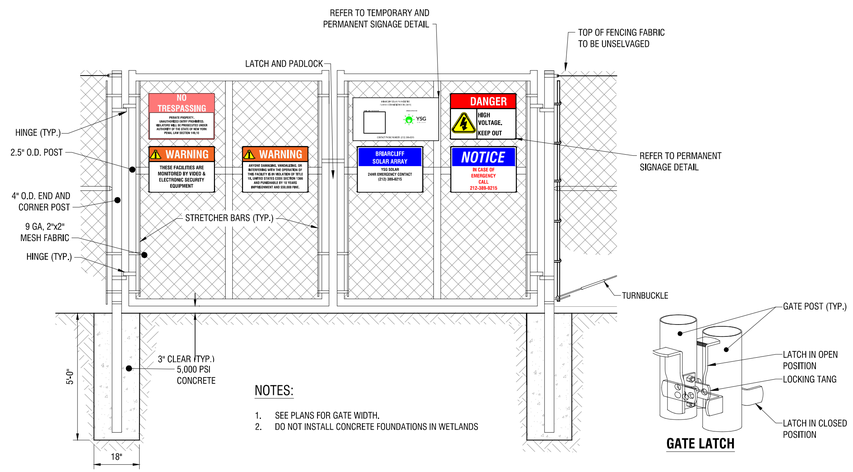


NOTES:

1. ALL SIGNS TO BE 18" x 24" IN SIZE
2. SIGNS SHALL BE UV RESISTANT AND IN COLOR. SIGN MATERIAL SHALL BE HDPE OR LIGHT GAGE GALVANIZED STEEL.
3. SIGNS TO BE ATTACHED TO FENCING WITH PERMANENT FASTENERS OR INSTALLED IN SIGN POST

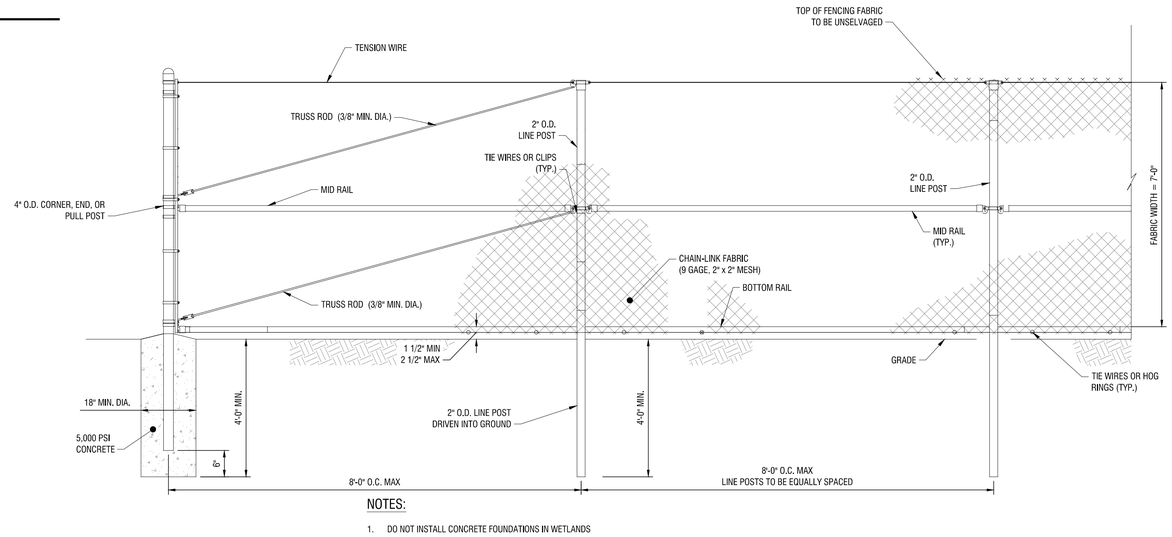
2 / C502 PERMANENT SIGNAGE

N.T.S.



3 / C502 7' TALL DOUBLE SWING GATE

N.T.S.



4 / C502 7' HIGH BARBED WIRE HIGH SECURITY FENCE

N.T.S.

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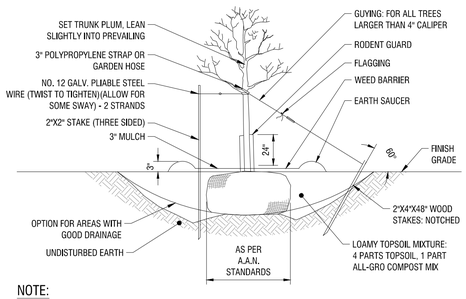
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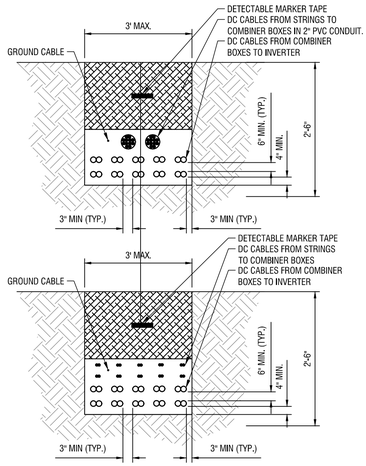


NOTE:

1. STAKING: FOR ALL TREES 4" CALIPER OR LESS. REMOVE STAKES ONE YEAR AFTER PLANTING.
2. USE 8' STAKES DRIVE 4' BELOW GROUND SURFACE.
3. GUYING: FOR ALL EVERGREEN TREES AND ALL TREES TALLER THAN 12'. USE SAME WIRE AS FOR STAKING. USE THREE PER TREE, EQUALLY SPACED. DO NOT TWIST WIRE TO TIGHTEN: USE 1/2"X6" TURNBUCKLE.
4. ROOT COLLAR TO BE SLIGHLY ABOVE SURROUNDING GRADE.
5. MULCH CAN NOT BE MORE THAN 1" THICK AT ROOT COLLAR EXTENDING OUT AT LEAST 6" FROM THE BARK, THEN IT CAN BE THICKENED.
6. MULCH IS TO BE PLACED 3 TO 6 INCHES AWAY FROM THE TRUNK.
7. KRAFT WRAP PAPER SHALL NOT BE PERMITTED FOR RODENT GUARD.

1 / C503 — TREE PLANTING

N.T.S.



TRENCH NOTES:

1. ADDITIONAL MISCELLANEOUS CABLES FROM FIELD DEVICES SUCH AS TEMPERATURE TRANSMITTERS, METEOROLOGICAL STATIONS, REFERENCE MODULES, SIGNAL, GROUND SHALL UTILIZE THE UNDERGROUND TRENCH SYSTEM WHERE IT IS APPLICABLE. CABLES SHALL BE INSTALLED AT LAYERS AS INDICATED.
2. THE TRENCH DETAIL BELOW SHOWS A SAMPLE NUMBER OF DC FEEDER CABLES FROM DC COMBINER BOXES. SPECIFIC CABLE QUANTITIES ARE SHOWN IN RESPECTIVE DETAIL SECTION.
3. TRENCHING MUST COMPLY WITH THE LATEST STANDARDS.
4. CLEAN FILL REQUIREMENTS: TRENCHING BEDDING SHALL BE SAND OR ROCK-FEE FILL SCREENED TO A MAXIMUM 1/4" SIZE AS A CUSHING (FREE OF SHARP EDGE MATERIAL, ROTTING WOOD OR ORGANIC MATTER THAT MIGHT ATTRACT INSECTS).
   THE CABLES SHALL BE COVERED WITH "CLEAN FILL" SAND OR SOFT EARTH, FREE FROM STONES, ROCKS OR OTHER MATERIAL THAT MAY DAMAGE THE CABLE DURING BACKFILL.
5. THE CABLES CROSS-SECTION AND THE NUMBER SHOWN IS ONLY AN EXAMPLE. ALL CABLES SHALL BE IN ACCORDANCE WITH STANDARDS AND SHALL BE SIZED ACCORDING TO USE AND TYPE OF INSTALLATION.

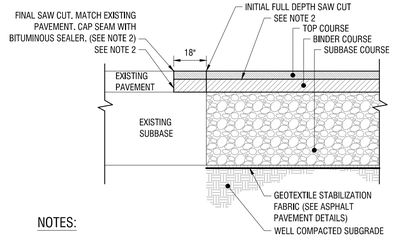
UNTREATED NATIVE SOIL
CLEAN, DRY BACKFILL CUSHION
EARTH UNDISTURBED

NOTES:

1. CONDUCTORS TO BE 1000V RATED FOR DIRECT BURIAL. MEDIUM VOLTAGE CONDUCTORS FROM PS1 TO BE RATED FOR CLASS 35KV, AND MEDIUM VOLTAGE CONDUCTORS FROM PS2 TO BE RATED FOR CLASS 15KV.
2. CONDUCTORS OF THE SAME CIRCUIT TO BE NEXT TO EACH OTHER; COMBINER CIRCUITS TO BE SPACED 4.5" FROM EACH OTHER UNLESS POSTED OTHERWISE (HORIZONTAL/VERTICAL DIRECTIONS).
3. COMMUNICATIONS TO BE BURIED 1' AWAY FROM ALL POWER CONDUCTORS. USE DIRECT BURY RATED FIBER CABLE.
4. 3" OR 4" PVC SCH80 JUMP-CONDUIT SHALL BE UTILIZED FOR ROW-TO-ROW STRING CIRCUITS WIRING.
5. POWER SUPPLY CABLES TO ARC FAULT CIRCUIT INTERRUPTION CIRCUITS SHALL BE LOCATED AT A MINIMUM 1' FROM DC CIRCUITS.
6. CONTRACTOR SHALL SIZE THE ROW-TO-ROW JUMPER CONDUIT FOR THE CONDUCTORS USED, WITH PVC SCHEDULE 80. A TOTAL OF 60 #10 HOMERUN CABLES CAN FIT INTO A STANDARD 4" PVC CONDUIT. CONTACT THE ENGINEER IF ADDITIONAL GUIDANCE IS REQUIRED.

5 / C503 — TYPICAL TRENCH DETAILS

N.T.S.

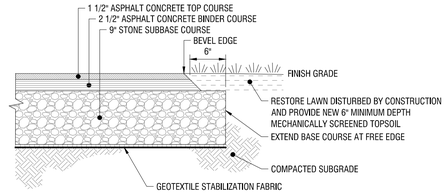


NOTES:

1. VERTICALLY SAW CUT ALL ASPHALT FULL DEPTH.
2. BLOW CLEAN AND APPLY TACK COAT 0,050 GAL/SY AT ALL ASPHALT TO ASPHALT SURFACES.
3. REFER TO STANDARD DUTY PAVEMENT SECTION DETAIL FOR COURSE THICKNESS.

2 / C503 — STANDARD DUTY PAVEMENT JOINT

N.T.S.



NOTES:

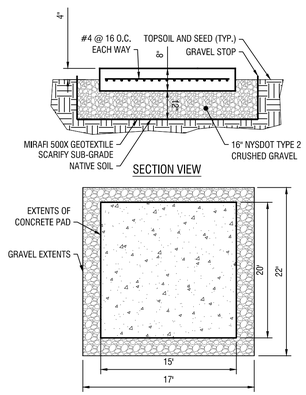
1. PROVIDE ADDITIONAL SUBBASE MATERIAL WHERE FILL IS REQUIRED TO OBTAIN PROPER SUBGRADE ELEVATION, OR TO REPLACE UNSUITABLE SUBGRADE MATERIAL.

3 / C503 — STANDARD DUTY ASPHALT PAVEMENT SECTION

N.T.S.

4 / C503 — TYPICAL SITE LAYOUT

N.T.S.

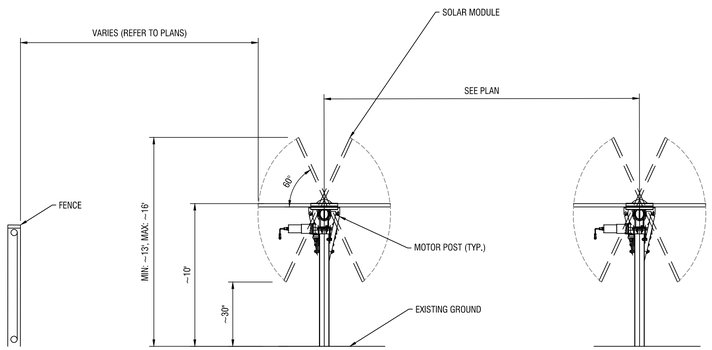


EQUIPMENT PAD NOTES:

1. ALL ELECTRICAL EQUIPMENT IS TO BE SITUATED ON A CONCRETE PAD AS SHOWN ON THE SITE PLANS.
2. CONCRETE STRENGTH: CLASS B CONCRETE. CONTRACTOR SHALL ALLOW 3 DAYS CURING TIME PRIOR TO INSTALLATION OF EQUIPMENT ON CONCRETE PAD.
3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, Fy=65,000 PSI, AND SHALL BE HOT-DIPPED GALVANIZED OR EPOXY COATED AFTER FABRICATION TO PRODUCE A CLASS 2 COATING EQUAL TO THAT SPECIFIED IN ASTM A641, TABLE 1.
4. ANCHOR BOLTS SHALL BE DRILLED AND SET IN FIELD AFTER INSTALLATION ON FOOTING AS PER MANUFACTURER'S SPECIFICATIONS.
5. LOCATION OF ALL ELECTRICAL EQUIPMENT AND CONCRETE PADS SHALL BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION.
6. COMPACTED STONE SHALL BE NYSDOT TYPE 2 CRUSHED GRAVEL OR APPROVED EQUAL BY THE ENGINEER OF RECORD.
7. ANCHOR BOLTS SHALL BE $\frac{3}{4}$" DIA. HILTI HSE ADHESIVE ANCHOR RODS WITH 4-1/2" EMBEDMENT DEPTH OR APPROVED EQUAL.
8. REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.
9. VERIFY ALL DIMENSIONS WITH THOSE ON EQUIPMENT SKID SHOP DRAWINGS AND ADJUST ACCORDINGLY. LOCATE CHASES AND CONDUIT STUB-UPS PER EQUIPMENT SKID SHOP DRAWINGS.

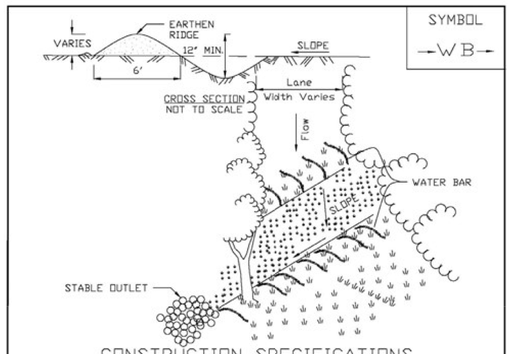
6 / C503 — CONCRETE PAD

N.T.S.



7 / C503 — TYPICAL SOLAR ARRAY SIDE PROFILE DETAIL

N.T.S.



CONSTRUCTION SPECIFICATIONS

1. INSTALL THE WATER BAR AS SOON AS THE RIGHT OF WAY IS CLEARED AND GRADED.
2. DISK OR STRIP THE SOD FROM THE BASE FOR THE CONSTRUCTED RIDGE BEFORE PLACING FILL.
3. TRACK THE RIDGE TO COMPACT IT TO THE DESIGN CROSS SECTION.
4. THE UNRESTRICTED OUTLET SHALL BE LOCATED ON AN UNDISTURBED AREA. FIELD SPACING WILL BE ADJUSTED TO USE THE MOST STABLE OUTLET AREAS. OUTLET PROTECTION WILL BE PROVIDED WHEN NATURAL AREAS ARE NOT ADEQUATE.
5. VEHICLE CROSSING SHALL BE STABILIZED WITH GRAVEL. EXPOSED AREAS SHALL BE SEEDED AND MULCHED WITHIN 2 DAYS.
6. PERIODICALLY INSPECT WATER BARS FOR EROSION DAMAGE AND SEDIMENT. CHECK OUTLET AREAS AND MAKE REPAIRS AS NEEDED TO RESTORE OPERATION.

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

WATER BARS

New York State Standards and Specifications For Erosion and Sediment Control — Page 3.53 — November 2016

8 / C503 — WATER BARS

N.T.S.

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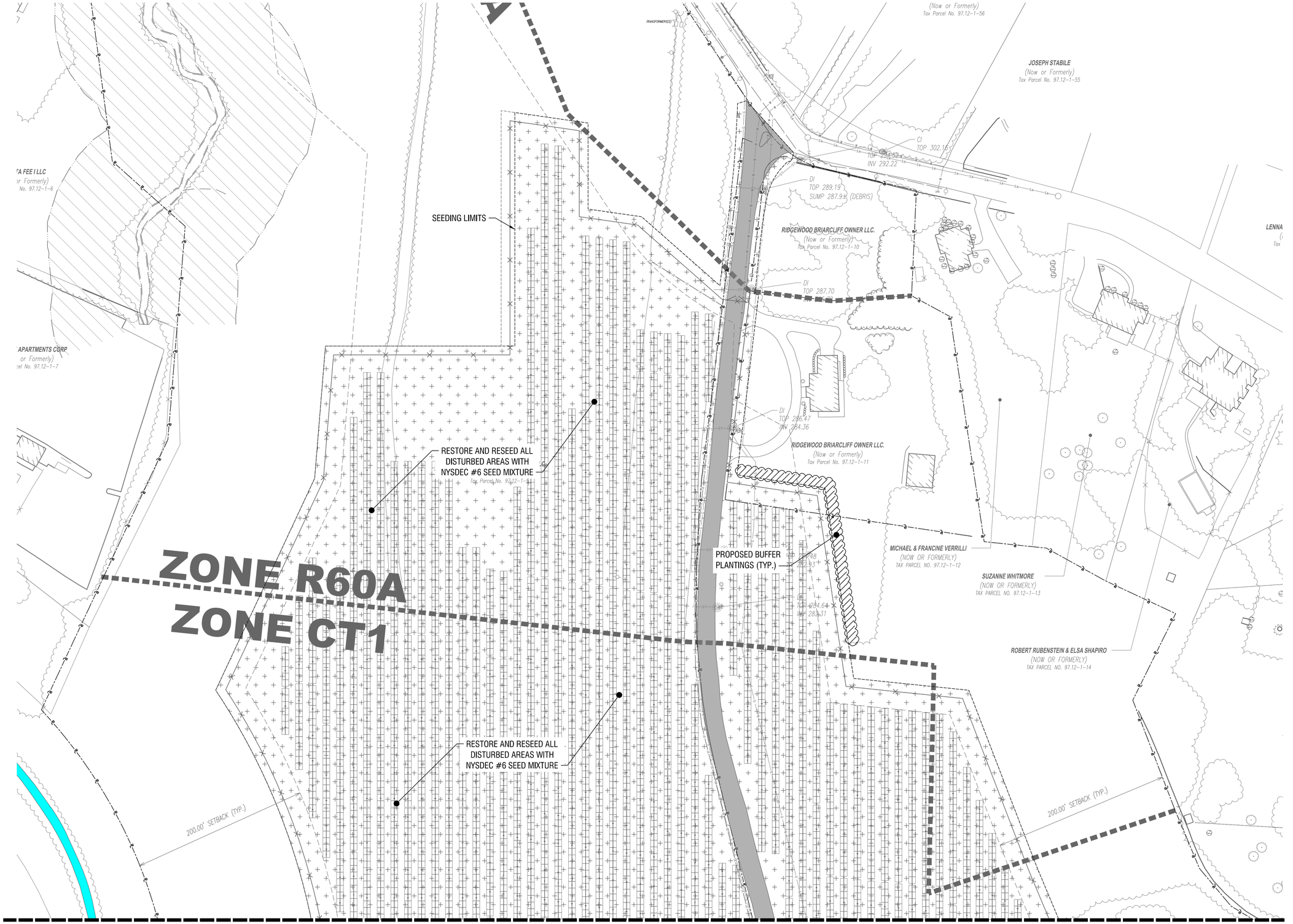
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CONSTRUCTION DETAILS

DRAWING NUMBER:

C503



1 C601 LANDSCAPE PLAN
SCALE: 1" = 50'

N

0' 50' 100' 150'

SEEDING TYPE AREAS

NYSDEC #6	±44.7 AC
POLLINATOR MIX	±1.7 AC

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LANDSCAPE PLAN

DRAWING NUMBER:

C601

MATCHLINE SEE SHEET C601

SEEDING LIMITS

PROPOSED WORK LIMITS/
DISTURBANCE LIMITS
2,071,024 SFT (47.5 ACRES)

KENNETH AND DOREEN CROSS
(NOW OR FORMERLY)
TAX PARCEL NO. 97.12-1-18

RESTORE AND RESEED ALL
DISTURBED AREAS WITH
NYSDEC #6 SEED MIXTURE

PROPOSED BUFFER
PLANTINGS (TYP.)

RESTORE AND RESEED ALL
DISTURBED AREAS 50' FROM
AND WITHIN ANY WETLAND
BUFFER ZONE WITH AN
APPROVED NYSDEC
POLINATOR MIXTURE

RESTORE AND RESEED ALL
DISTURBED AREAS WITH
NYSDEC #6 SEED MIXTURE

RIDGEWOOD BRIARCLIFF OWNER LLC
(NOW OR FORMERLY)
TAX PARCEL NO. 97.16-1-1

200.00' SETBACK (TYP.)

RESTORE AND RESEED ALL
DISTURBED AREAS WITH
NYSDEC #6 SEED MIXTURE

PROPOSED WORK LIMITS/
DISTURBANCE LIMITS
2,071,024 SFT (47.5 ACRES)

RESTORE AND RESEED ALL
DISTURBED AREAS WITH
NYSDEC #6 SEED MIXTURE

RESTORE AND RESEED ALL
DISTURBED AREAS WITH
NYSDEC #6 SEED MIXTURE

MATCHLINE SEE SHEET C603

1 C602 LANDSCAPE PLAN
SCALE: 1" = 50'

N

0' 50' 100' 150'

SEEDING TYPE AREAS

NYSDEC #6	±44.7 AC
POLLINATOR MIX	±1.7 AC

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LANDSCAPE PLAN

DRAWING NUMBER:

C602

MATCHLINE SEE SHEET C602



1 C603 LANDSCAPE PLAN
SCALE: 1" = 50'

N

0' 50' 100' 150'

SEEDING TYPE AREAS

NYSDEC #6	±44.7 AC
POLLINATOR MIX	±1.7 AC

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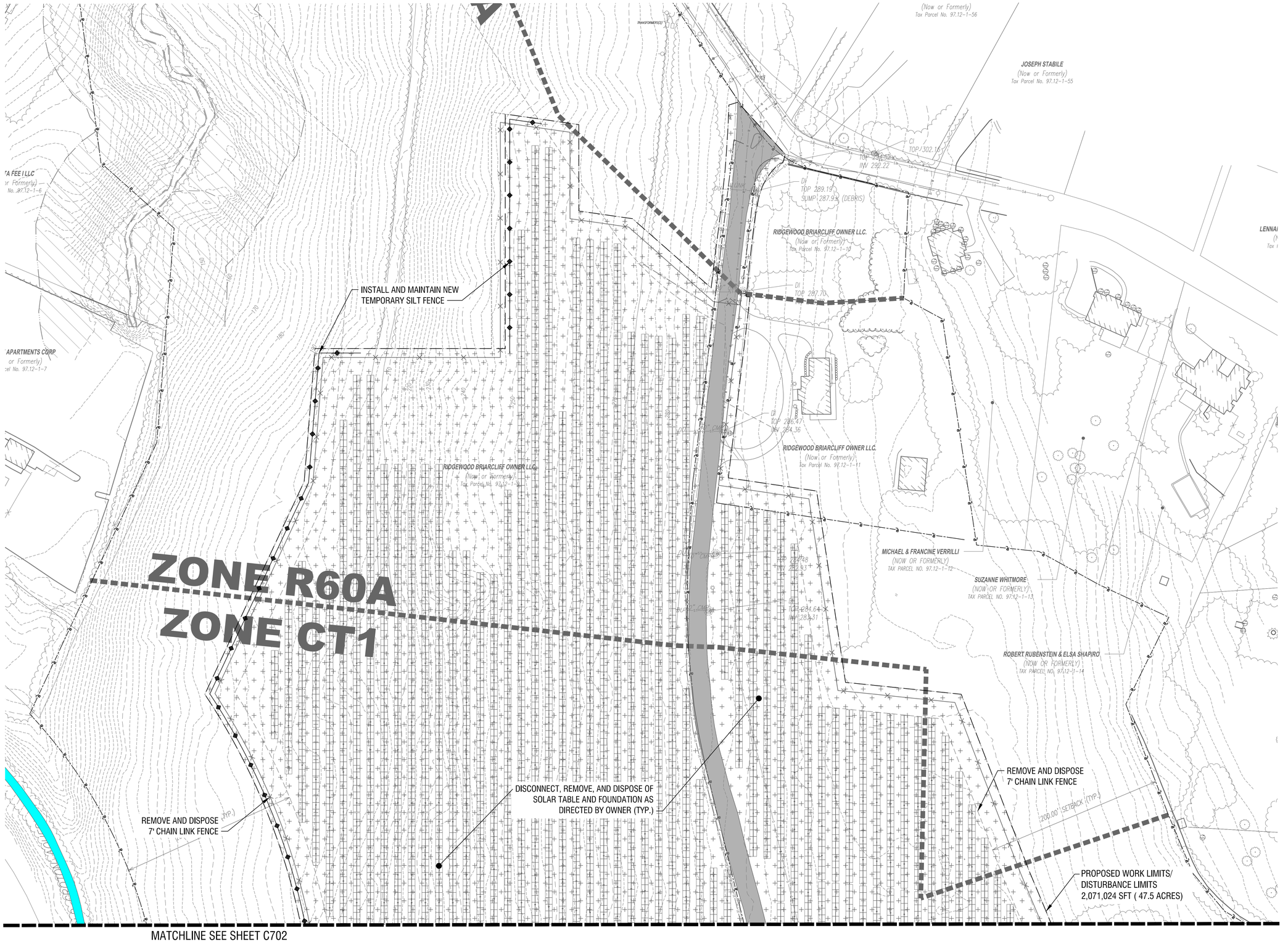
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LANDSCAPE PLAN

DRAWING NUMBER:

C603



1 / C701 DECOMMISSIONING PLAN - PHASE I

SCALE: 1" = 50'

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DECOMMISSIONING PLAN - PHASE I

DRAWING NUMBER:

C701

MATCHLINE SEE SHEET C701

INSTALL AND MAINTAIN NEW TEMPORARY SILT FENCE

INSTALL AND MAINTAIN NEW TEMPORARY SILT FENCE

DISCONNECT, REMOVE, AND DISPOSE OF SOLAR TABLE AND FOUNDATION AS DIRECTED BY OWNER (TYP.)

DISCONNECT UNDERGROUND ELECTRIC CONNECTION

REMOVE AND DISPOSE OF UNDERGROUND ELECTRICAL SERVICE (TYP.)

REMOVE AND DISPOSE OF 20' WIDE SECURITY GATE (TYP.)

REMOVE AND DISPOSE OF GRAVEL TURNAROUND

REMOVE AND DISPOSE OF GRAVEL TURNAROUND

REMOVE AND RETURN ELECTRICAL EQUIPMENT TO POWER AUTHORITY. REMOVE AND DISPOSE OF EQUIPMENT SKIDS. (TYP.)

REMOVE AND DISPOSE 7' CHAIN LINK FENCE

KENNETH AND DOREEN CROSS
(NOW OR FORMERLY)
TAX PARCEL NO. 97.12-1-18

RIDGEWOOD BRIARCLIFF OWNER LLC.
(NOW OR FORMERLY)
TAX PARCEL NO. 97.16-1-1

DISCONNECT, REMOVE, AND DISPOSE OF SOLAR TABLE AND FOUNDATION AS DIRECTED BY OWNER (TYP.)

200.00' SETBACK (TYP.)

REMOVE AND DISPOSE 7' CHAIN LINK FENCE

WATERCOURSE

INSTALL AND MAINTAIN NEW TEMPORARY SILT FENCE

RIDGEWOOD BRIARCLIFF OWNER LLC.
(NOW OR FORMERLY)
TAX PARCEL NO. 97.16-1-1

MATCHLINE SEE SHEET C703

1 C702 DECOMMISSIONING PLAN - PHASE I
SCALE: 1" = 50'

N

0' 50' 100' 150'

VERSION 21.1
8/23/2022 2:01:22 PM

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NEW YORK, NY 10016

YSG SOLAR

BRIARCLIFF SOLAR ARRAY
345 SCARBOROUGH RD,
BRIARCLIFF MANOR, NY, 10510

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2221884
DRAWN BY: CC
REVIEWED BY: EP
ISSUED FOR: REVIEW
DATE: 8/10/2022
DRAWING NAME:

DECOMMISSIONING PLAN - PHASE I

DRAWING NUMBER:

C702

MATCHLINE SEE SHEET C702

PROPOSED WORK LIMITS/
DISTURBANCE LIMITS
2,071,024 SFT (47.5 ACRES)

DUCT

DISCONNECT, REMOVE, AND DISPOSE OF SOLAR TABLE AND FOUNDATION AS DIRECTED BY OWNER (TYP.)

DISCONNECT, REMOVE, AND DISPOSE OF SOLAR TABLE AND FOUNDATION AS DIRECTED BY OWNER (TYP.)

INSTALL AND MAINTAIN NEW TEMPORARY SILT FENCE

REMOVE AND DISPOSE 7' CHAIN LINK FENCE

INSTALL AND MAINTAIN NEW REINFORCED SILT FENCE (TYP.)

200.00' SETBACK (TYP.)

LLC

KENNETH DENGLER
(Now or Formerly)
Tax Parcel No. 97.16-1-8

KENNETH DENGLER
(Now or Formerly)
Tax Parcel No. 97.16-1-9

MICHAEL & NANCY MEZZACAPPA
(Now or Formerly)
Tax Parcel No. 97.16-1-7

SHADOW BROOK LANE

WETLAND LINE

W/ TERCONTEC

W/ TEP

1 C703 DECOMMISSIONING PLAN - PHASE I
SCALE: 1" = 50'

N

0' 50' 100' 150'

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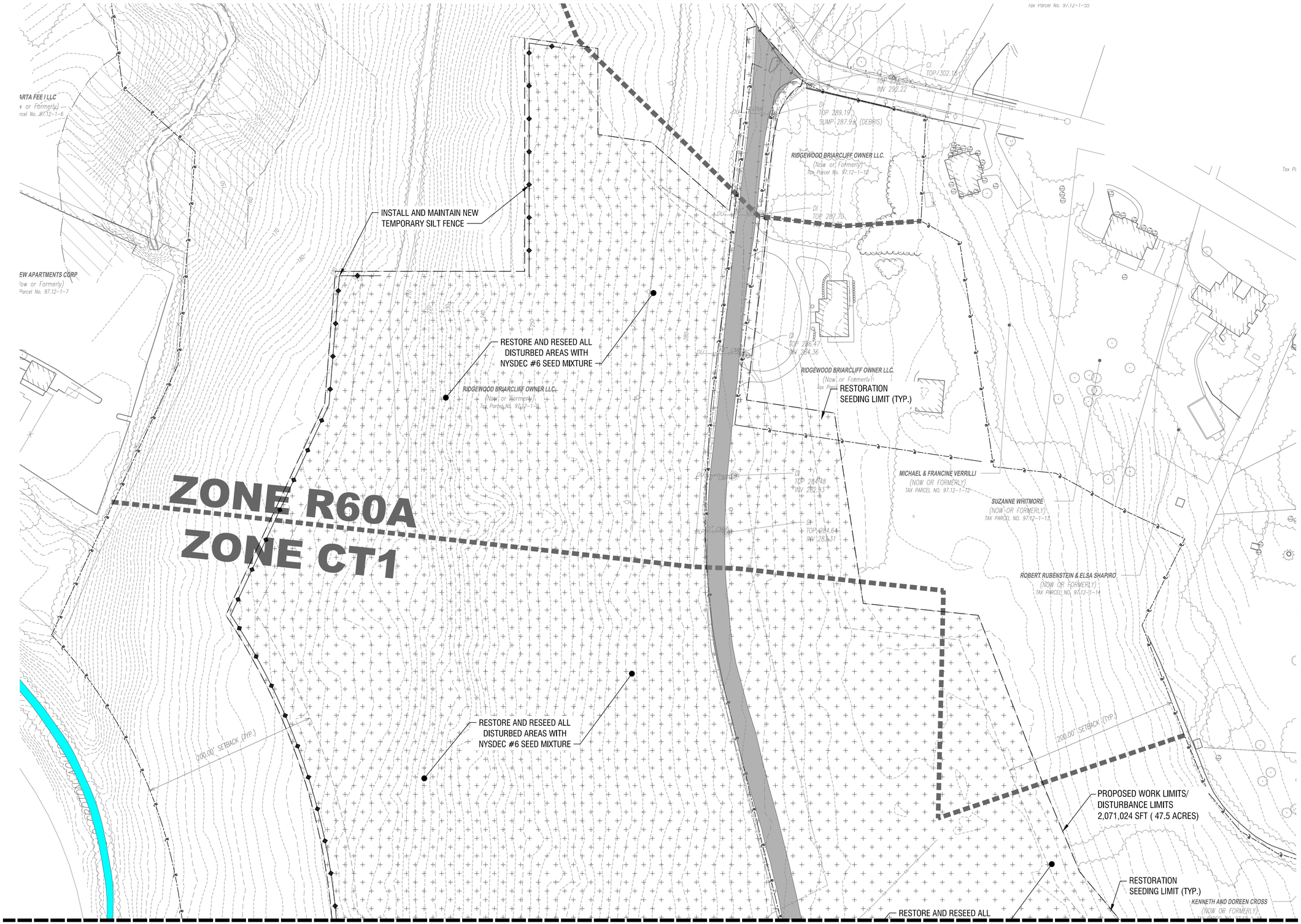
NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2221884
DRAWN BY: CC
REVIEWED BY: EP
ISSUED FOR: REVIEW
DATE: 8/10/2022
DRAWING NAME:

DECOMMISSIONING PLAN - PHASE I

DRAWING NUMBER:

C703



1 C704 DECOMMISSIONING PLAN - PHASE II

SCALE: 1" = 50'

N

0' 50' 100' 150'

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NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2221884
DRAWN BY: CC
REVIEWED BY: EP
ISSUED FOR: REVIEW
DATE: 8/10/2022
DRAWING NAME:

DECOMMISSIONING PLAN - PHASE II

DRAWING NUMBER:

C704

MATCHLINE SEE SHEET C704

INSTALL AND MAINTAIN NEW TEMPORARY SILT FENCE

INSTALL AND MAINTAIN NEW TEMPORARY SILT FENCE

RESTORE AND RESEED ALL DISTURBED AREAS WITH NYSDEC #6 SEED MIXTURE

RESTORATION SEEDING LIMIT (TYP.)

KENNETH AND DOREEN CROSS
(NOW OR FORMERLY)
TAX PARCEL NO. 97.12-1-18

RESTORE AND RESEED ALL DISTURBED AREAS WITH NYSDEC #6 SEED MIXTURE

RIDGEWOOD BRIARCLIFF OWNER LLC.
(Now or Formerly)
Tax Parcel No. 97.16-1-1

RESTORE AND RESEED ALL DISTURBED AREAS WITH NYSDEC #6 SEED MIXTURE

200.0' SETBACK (TYP.)

WATERCOURSE

ORATION
IT (TYP.)

RESTORE AND RESEED ALL DISTURBED AREAS WITH NYSDEC #6 SEED MIXTURE

INSTALL AND MAINTAIN NEW TEMPORARY SILT FENCE

RIDGEWOOD BRIARCLIFF OWNER LLC.
RESTORE AND RESEED ALL DISTURBED AREAS WITH NYSDEC #6 SEED MIXTURE

MATCHLINE SEE SHEET C706

1 / C705 DECOMMISSIONING PLAN - PHASE II
SCALE: 1" = 50'

N

0' 50' 100' 150'

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Revisions		

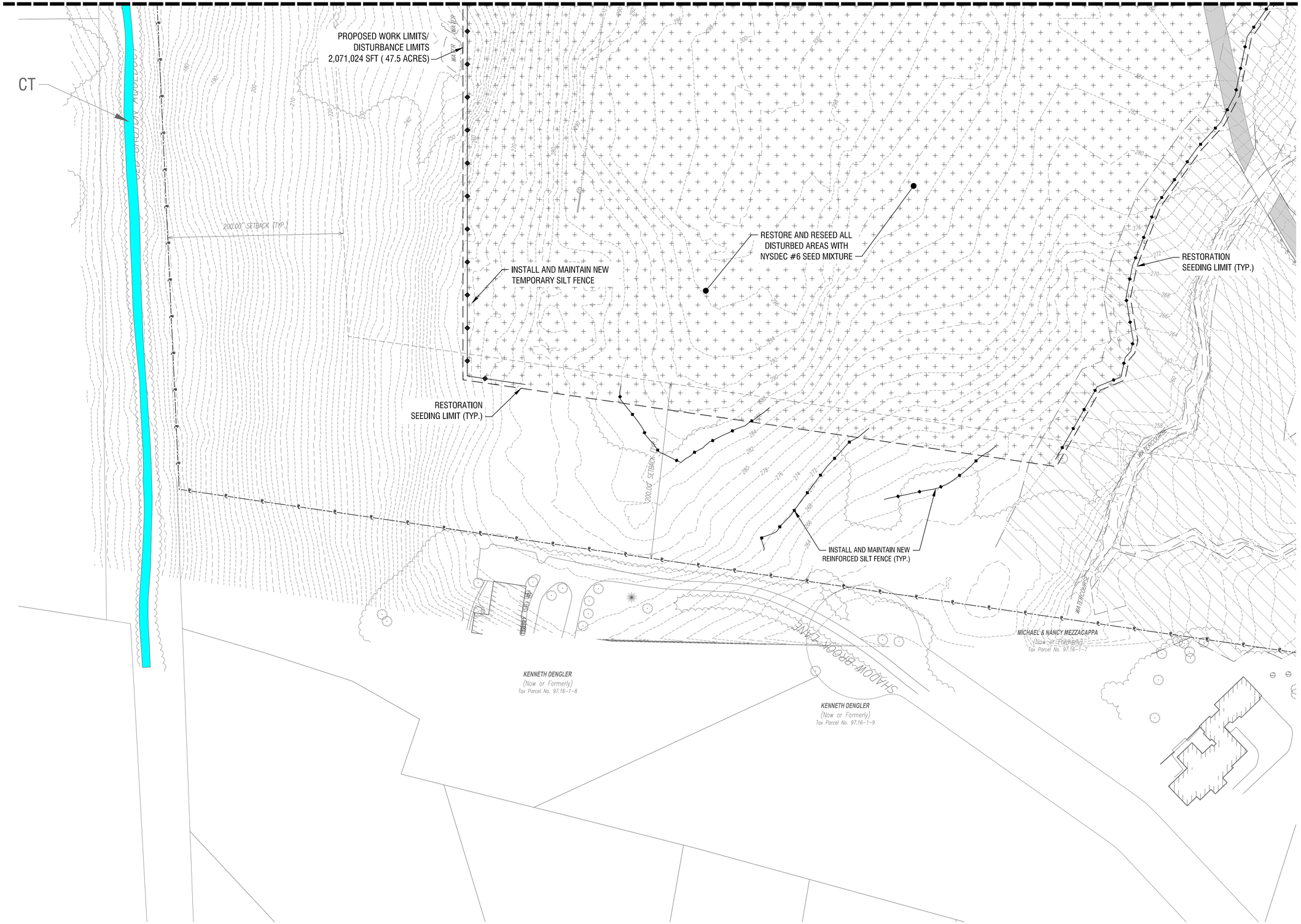
PROJECT NUMBER: 2221884
DRAWN BY: CC
REVIEWED BY: EP
ISSUED FOR: REVIEW
DATE: 8/10/2022
DRAWING NAME:

DECOMMISSIONING PLAN - PHASE II

DRAWING NUMBER:

C705

MATCHLINE SEE SHEET C705



1 C706 DECOMMISSIONING PLAN - PHASE II

SCALE: 1" = 50'

N

0' 50' 100' 150'

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345 SCARBOROUGH RD,
BRIARCLIFF MANOR, NY, 10510

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2221884

DRAWN BY: CC

REVIEWED BY: EP

ISSUED FOR: REVIEW

DATE: 8/10/2022

DRAWING NAME:

DECOMMISSIONING PLAN - PHASE II

DRAWING NUMBER:

C706

YSG Solar Development Company, LLC
79 Madison Avenue, 8th Floor
New York, NY 10016
(212) 389-9215

BFJ Planning
Sarah K Yackel, AICP
115 Fifth Ave.
New York, NY 10003

August 24, 2022

RE: Briarcliff Solar Steep Slope Discussion

Dear Ms. Yackel,

We have reviewed your July 22, 2022 memorandum addressed to Mayor Vescio and the Village of Briarcliff Manor Board of trustees. We are providing this letter to further the discussion of our proposed solar development as it pertains to steep slopes within the Village.

The stated goal of §220-15 Protection of Steep Slopes is "*to preserve, protect and conserve its steep slopes so as to maintain and protect the natural terrain and its vegetative features, protect wetlands, water bodies and watercourses, prevent flooding, provide safe building sites and protect adjoining property by preventing surface erosion and sudden slope failure.*"

The limitations of work within steep slope areas are described as follows within §220-15.D:

> *(1) Slopes 25% or more. No land shown on either the Village of Briarcliff Manor Slopes Map or a site-specific steep slopes map shown as having slopes of 25% or more shall be developed or in any way physically modified, except when, in the opinion of the Planning Board, said development or modification is deemed necessary for access, land or natural terrain preservation or enhancement, or some other necessary purpose. These steep lands may be used as or may comprise a portion of development areas so long as such development areas have sufficient "nonsteep" space for the particular type of development proposed and in accordance with the requirements of this chapter.*
>
> *(2) Slopes 15% to 25%. No land shown on either the Village of Briarcliff Manor Slopes Map or a site-specific steep slopes map shown as having slopes of 15% to 25% shall be developed or in any way physically modified, except when, in the opinion of the Planning Board, said land may be used for a use permitted within the zoning district within which it is located, without creating an adverse impact on the natural terrain ("Natural resources" is not defined herein and above in "Protection of Steep Slopes" the term "natural terrain" is used.) of the Village of Briarcliff Manor, including but not limited to land erosion and flooding. In the review and approval procedures established in this chapter, the Planning Board is further empowered to mandate development techniques which in its opinion may preserve the steep slopes.*

As shown in Figure 1, the western portion of the site is a part of a system of slopes that vary in steepness. Within the project area there are slopes in excess of 15% located on the site. Per §220-15.D.(2) the development or modification of lands with slopes between 15-25% is permitted for this project as solar farms are a permitted use within the CT1 and R60A zoning districts. Please note that one of the parcels is also zoned as R20B, however, the proposed development lies outside of this zoning district.

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(212) 389-9215

Figure 1 also identifies three areas where the project proposes to complete work within areas designated as having slopes in excess of 25%. Per §220-15.D.(1) these steep lands may "comprise a portion of development areas so long as such development areas have sufficient "non-steep" space for the particular type of development proposed" (see Figure 5).

It is our intent to show that the proposed development complies with the above referenced standards. The three areas identified in Figure 1 and depicted with the proposed clearing limits in Figure 2 can be described as follows:

- **Area 1 – Northern Slope**
  The northern slope is part of a system of slopes that exceed 25% and extend off the property. The disturbance of this area is limited to approximately 8,300 square feet and will be limited to the clearing and grubbing of the area. It is the project's intent to maintain the current grading and seed it with a NYSDEC erosion control mix. Once established, the NYSDEC erosion control mix will enhance infiltration in addition to slowing and reducing stormwater runoff from this area, thus benefitting adjacent properties.

  No solar structures will be erected in this area (see Figure 5).

- **Area 2 – Central Slope**
  This central slope lies within the existing building's footprint. During demolition this area will be regraded to blend into the existing topography (see Figure 3). For this reason, we propose that this area of the site is not encumbered by the provisions of §220-15.

- **Area 3 – Southern Slope**
  This southern slope is located on the southwestern corner of the site adjacent to an existing parking lot. It appears that this area has been previously disturbed during the construction of the existing parking lot. This is further evidenced by the quantity and density of invasive trees that have been planted within this area (see Figure 4).

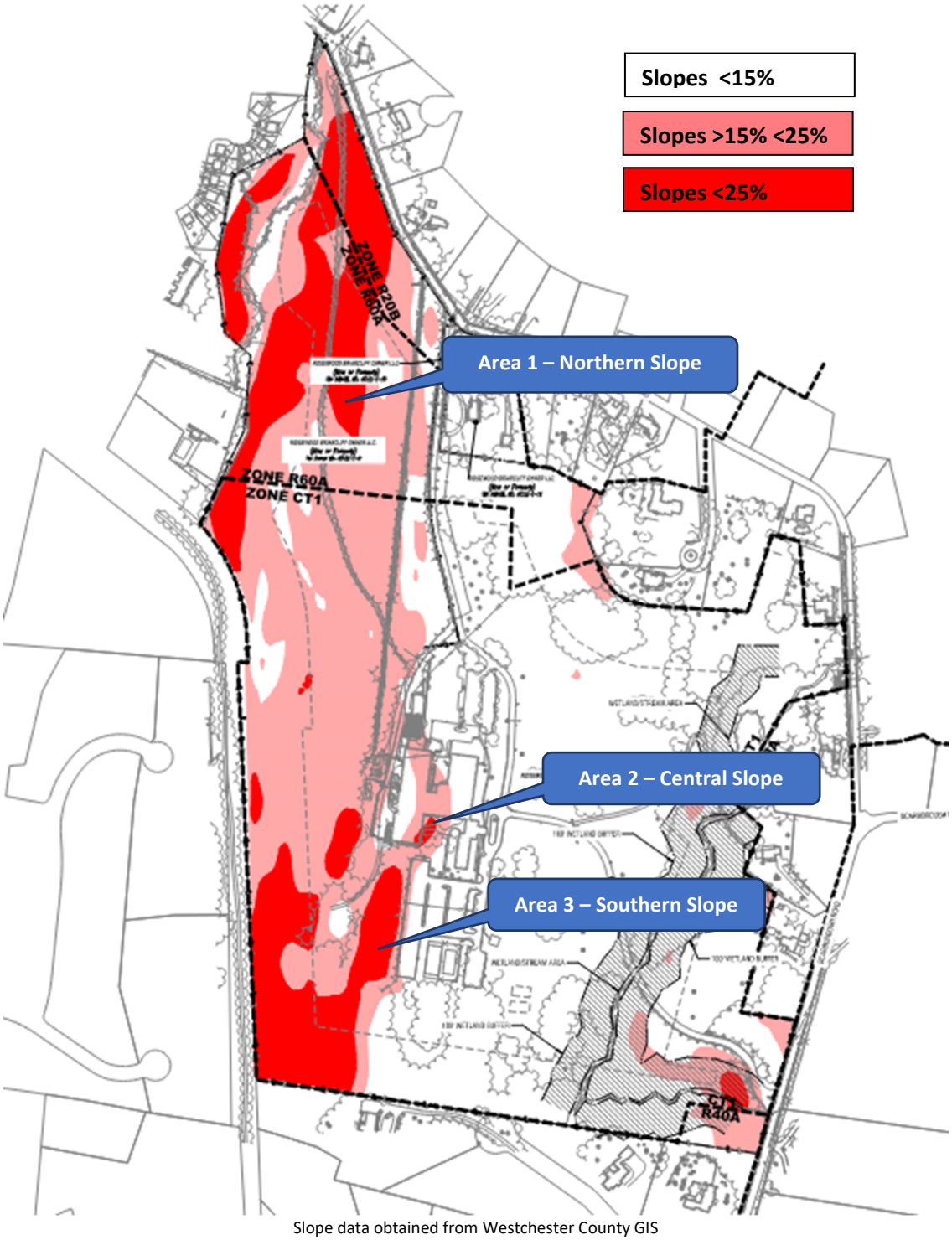
  The Property maintenance provisions within §161-2.C states that:

  > *It shall be unlawful for the owner, tenant, or occupant of any property to foster or promote the growth of poison ivy, ragweed, plants detrimental to health, or other poisonous or invasive plant species, as defined by the State of New York, or the County of Westchester, or as otherwise adopted by the Village of Briarcliff Manor through resolution of the Board of Trustees. Any such hazardous or invasive plants located within 30 feet of any property line must be promptly removed by the current owner or his designee, on notification from a neighboring property owner or Code Enforcement Officer.*

  While the invasive trees are located greater than 30 feet from the property line, the proposed development presents an opportunity to remove a significant colony of invasive species within the Village. All removals will be done solely by mechanical means without the use of herbicides. Following the removal of the invasive colony of trees, the area will be seeded and stabilized to mitigate potential erosion.

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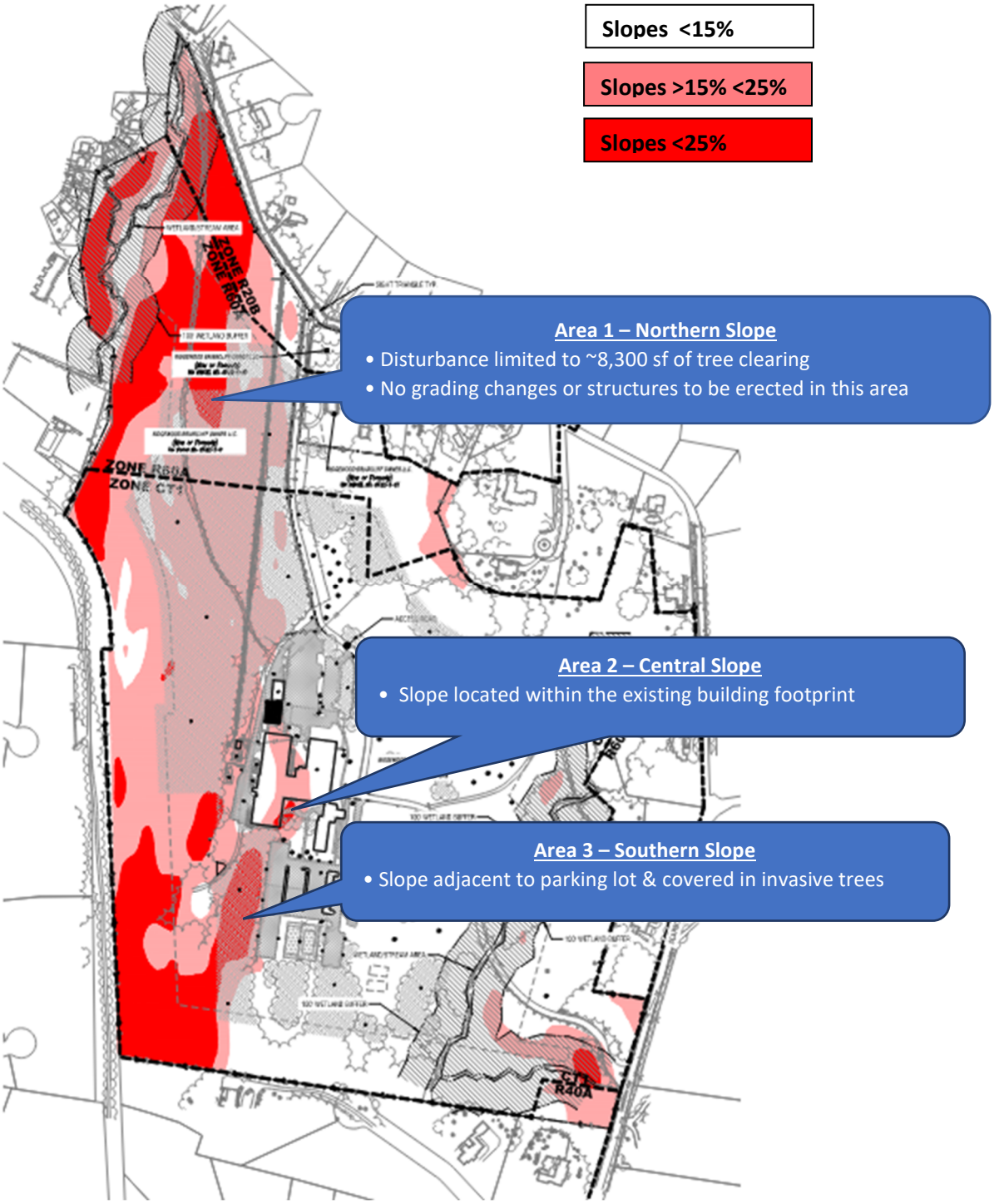
All areas described above, will be stabilized in accordance with the project SWPPP (before, during, & after construction) and seeded with a NYSDEC erosion control mix. As with the rest of the site, the seeding will be maintained until it has established the coverage required by the NYSDEC and Village.



Slope data obtained from Westchester County GIS

Figure 1 - County Steep Slope Map

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Slope data obtained from Westchester County GIS

Figure 2- Slope Map with Clearing Limits

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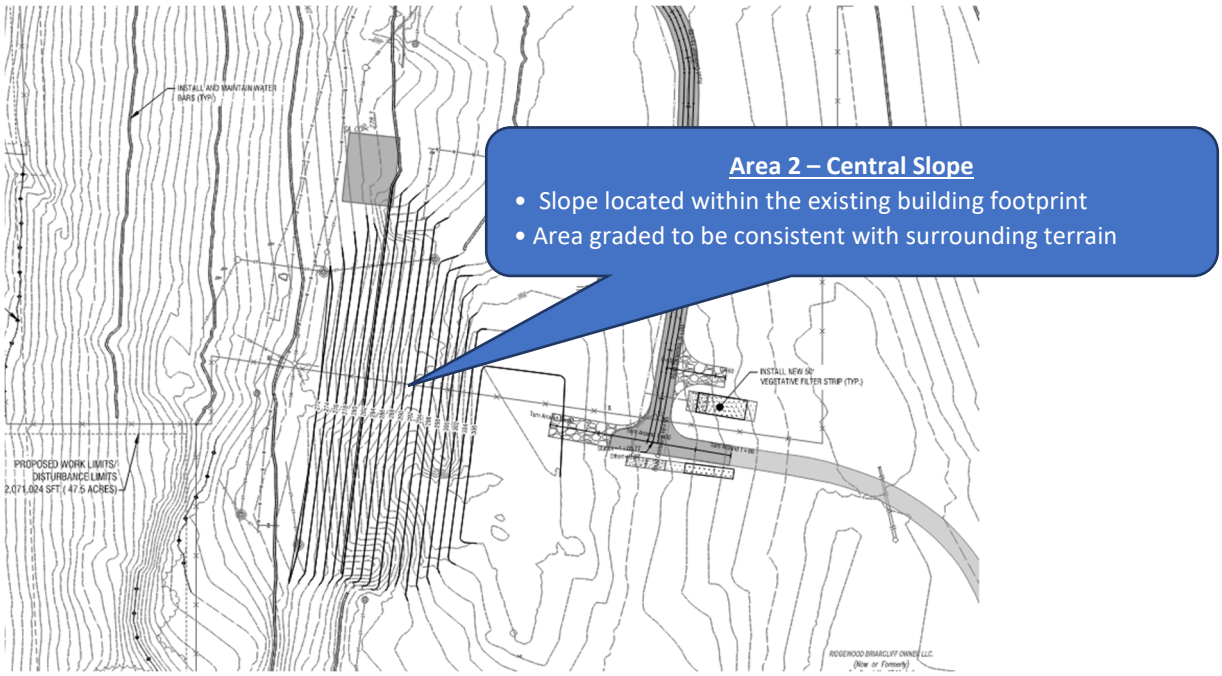


Figure 3 - Grading within Area 2- Central Slope

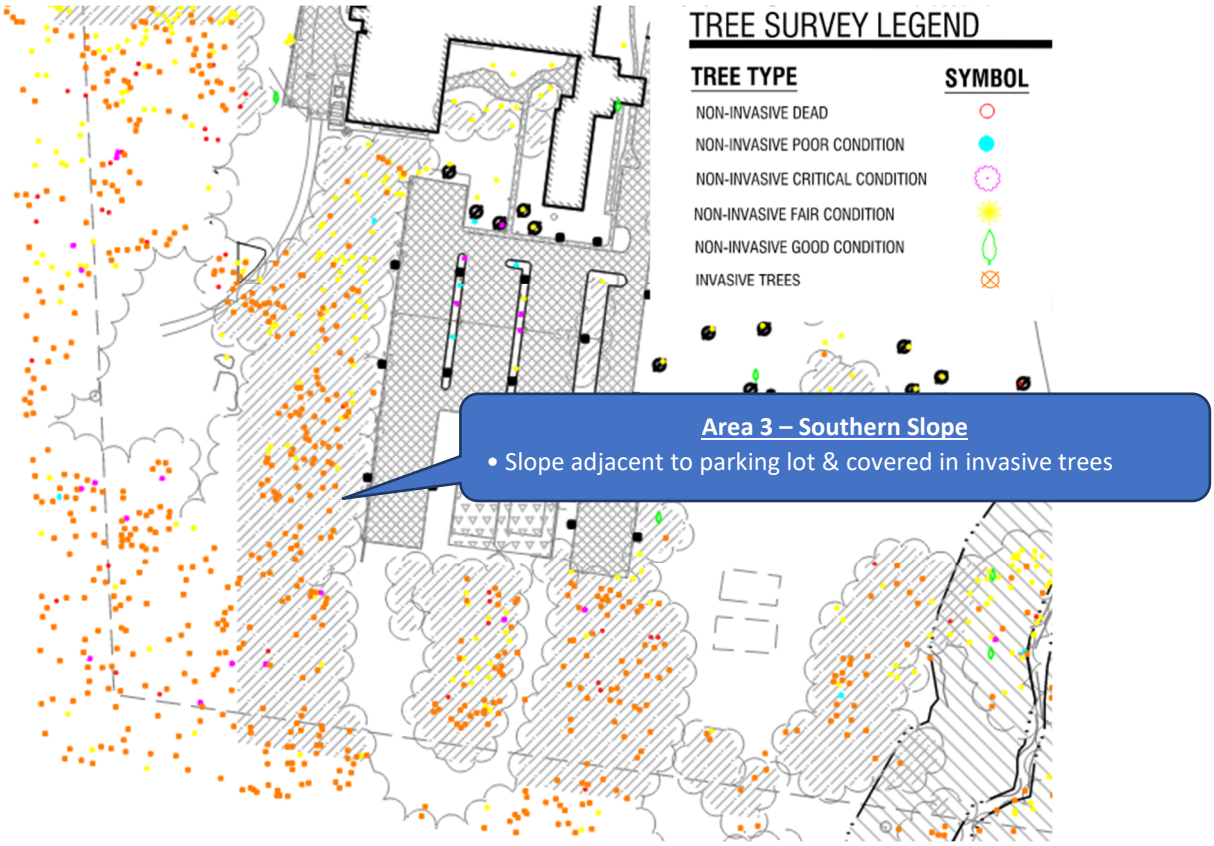


Figure 4 - Tree Survey Data on Slope Area 3.

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Slope data obtained from Westchester County GIS

Figure 5 - Proposed Solar Development

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In summary, §220-6.J.(15) and §220-6.M.(2)(r)[1] permits large scale solar projects on the proposed site and §220-15.D.(2) states that "*said land may be used for use permitted within the zoning district within which it is located, without creating an adverse impact on the natural terrain.*"

Additionally, §220-15.A.(2) of the Village code states that "steep slopes shall not be subject to these regulations if determined by the Planning Board that:

(1) The steep slope is entirely within the subject parcel(s) and the impacts from the proposed disturbance of same do not impact any other parcel of property in the Village or can be addressed wholly within the parcel on which such steep slopes are located; or

(2) The steep slopes are part of a system of steep slopes that extend beyond the boundaries of the subject parcel(s) and it can be demonstrated there are no impacts of disturbance of the steep slope beyond the subject parcel."

As discussed above, the northern slope will not be regraded, preserving the natural terrain in accordance with §220-15.D.(1), will improve stormwater runoff conditions, and will not impact slopes beyond the subject parcel in accordance with §220-15.A.(2).

The central slope lies wholly within the footprint of the existing building, slated for demolition, and its modification will not impact any other parcel within the Village and is wholly addressed within the parcel.

The southern slope will result in the removal of a large stand of invasive trees, the area will be seeded and stabilized to mitigate potential erosion. The removal of the invasive trees will restore the natural terrain in accordance with §220-15.D.(1), will improve stormwater runoff conditions, and will not impact slopes beyond the subject parcel in accordance with §220-15.A.(2).

As the Village acknowledges in §218-3.B., climate change has made it necessary for communities to provide resilience to hazards such as drought conditions, flooding, storm surge and coastal inundation. As a renewable energy source, solar developments are a necessary projects step in the reduction of our reliance on fossil fuels, which comply with the goals of §220-15 and §220-15.D.(1).

Please feel free to reach out to me to discuss further.

Best regards,

Jim Taravella, P.E.
YSG Solar
James.T@YSGSolar.com

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Briarcliff Solar; the development of a ground mounted solar PV facility.		
Project Location (describe, and attach a general location map): 345 Scarborough Rd, Briarcliff Manor, NY 10510, USA ; GPS Coordinates: 41.1481721053998, -73.85501441552442		
Brief Description of Proposed Action (include purpose or need): The overall site is identified on the Briarcliff Manor tax map as Parcel numbers 97.16-1-1 and 97.12-1-9 with a total parcel size of ~95.50 acres. The proposed project consists of the demolition of the existing multi story commercial complex, covering approximately 5.6 acres of the parcel; and the installation of two 5MW(AC) ground mounted solar PV systems covering approximately +/- 45.80 acres of the parcel with a maximum height above grade ~8.5 ft. The Solar PV modules will be mounted on a structural steel frame supported on driven steel piles. Due to the nature of the support system, ground disturbance will be minimal. Natural low growth vegetation around the site will act as a buffer between the array, roads, and adjacent properties. The vegetation will be enhanced in order to retain the present site drainage patterns and runoff quantities. Site Access will be achieved through the use of the existing on-site road. The construction of a new site entrance is not required. The electrical grid interface point and underground cables will be used to connect the solar arrays to the electrical panels, disconnects, and transformer. The installation will be compliant with all local, statewide, and federal permitting standards. There will be no buildings constructed and no regular on-site employees, a maintenance crew will tend to the site as needed.		
Name of Applicant/Sponsor: Nadia Jagdat of Briarcliff Solar LLC	Telephone: 212-389-9215 E-Mail: nadia.jagdat@ysgsolar.com	
Address: 79 Madison Avenue, 8th Floor		
City/PO: New York	State: New York	Zip Code: 10016
Project Contact (if not same as sponsor; give name and title/role): James Taravella of Briarcliff Solar LLC	Telephone: 212-389-9215 E-Mail: james.t@ysgsolar.com	
Address: 79 Madison Avenue, 8th Floor		
City/PO: New York	State: New York	Zip Code: 10016
Property Owner (if not same as sponsor): Briarcliff Land Holdings LLC	Telephone: 212-389-9215 E-Mail: operations@ysgsolar.com	
Address: 79 Madison Avenue, 8th Floor		
City/PO: New York	State: New York	Zip Code: 10016

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☑Yes ☐No	Village Board of Trustees: Special Use Permit	Projected: October 2022
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Village Planning Board: Site Plan Approval	Projected: October 2022
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	Town of Ossining PILOT	Projected: November 2022
e. County agencies ☑Yes ☐No	Westchester County Industrial Development Agency	Actual: November 30, 2021
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	1.NYS Department of Environmental Conservation 2.NYS Parks, Recreation & Historic Preservation	Projected: September 2022
h. Federal agencies ☑Yes ☐No	1. U.S. Fish and Wildlife Service - no impact 2. U.S. Army Corps of Engineers - no impact	Projected: September 2022

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☑Yes ☐No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Village of Briarcliff Manor Zoning: Parcel 97.16-1-1 and Parcel 97.12-1-9 are both zoned as Business District CT1 (Complementary Use Transition 1), R60A and R20B. No work is proposed within zone R20B.

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Briarcliff Manor Union Free School District.

b. What police or other public protection forces serve the project site?
The Village of Briarcliff Manor Police Department.

c. Which fire protection and emergency medical services serve the project site?
The Briarcliff Manor Ambulance Corps in the Fire Department serves the emergency medical needs of the community.

d. What parks serve the project site?
None.

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Commercial Solar Development.

b. a. Total acreage of the site of the proposed action? 95.50 acres
b. Total acreage to be physically disturbed? 47.60 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 97.73 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
_____
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 12 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐ Yes ☑ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase	_____	_____	_____	_____
At completion of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes,

i. Total number of structures TBD

ii. Dimensions (in feet) of largest proposed structure: 8.5 height; TBD width; and TBD length

iii. Approximate extent of building space to be heated or cooled: N/A square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☑ No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

i*v.* Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☐No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☐No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes ☐No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

_____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

_____

_____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 0 acres (impervious surface)

_____ Square feet or 95.50 acres (parcel size)

ii. Describe types of new point sources. None. This project will constitute a reduction of existing impervious surface area on the site.

_____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

On-Site surface water and groundwater.

_____

- If to surface waters, identify receiving water bodies or wetlands: _____

Riverine Classification Code: R3UBH, SC/C, Regulation 864-57

Freshwater Pond Code: PUBHh

- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

_____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8:00AM to 6:00PM
- Saturday: N/A
- Sunday: N/A
- Holidays: N/A

ii. During Operations:

- Monday - Friday: Daylight Hours: Sunrise to Sunset
- Saturday: Daylight Hours: Sunrise to Sunset
- Sunday: Daylight Hours: Sunrise to Sunset
- Holidays: Daylight Hours: Sunrise to Sunset

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

_____

_____

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☐ No

Describe: _____

_____

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

_____

_____

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☐ No

Describe: _____

_____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

_____

_____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:_____

_____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

_____

_____

_____

_____

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☑ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: >1000 tons per Year (unit of time)
- Operation : 0 tons per Year (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: Recyclable materials will be recycled.

  _____
- Operation: N/A - Commercial solar facilities are passive by nature. There will be no on site waste generated during operation.

  _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: General construction and demolition debris will be disposed and/or recycled at a licensed facility.

  _____
- Operation: N/A

  _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

_____

_____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

_____

_____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

_____

_____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

_____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

_____

_____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)

☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

_____

_____

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	~7.3	~2.2	-5.1
• Forested	~64.89	~45.20	-19.69
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	~22.81	~47.60	+24.79
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	~0.5	~0.5	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: _____ _____			

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☑ No

If Yes,

i. Identify Facilities:

_____

_____

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☑ Yes ☐ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☑ Yes ☐ No

☑ Yes – Spills Incidents database — Provide DEC ID number(s): See Spills Incident Attachment.

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:_____

N/A

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? TBD feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site:

PnC Paxton Fine Sandy Loam	23.3 %
PnD Paxton Fine Sandy Loam	32 %
PnB Paxton Fine Sandy Loam	11 %

d. What is the average depth to the water table on the project site? Average: TBD feet

e. Drainage status of project site soils:

☐	Well Drained:	_____% of site
☑	Moderately Well Drained:	100 % of site
☐	Poorly Drained	_____% of site

f. Approximate proportion of proposed action site with slopes:

☑	0-10%:	40 % of site
☑	10-15%:	28.5 % of site
☑	15% or greater:	31.5 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name 864-58, 864-57 Classification B, SC / C
- Lakes or Ponds: Name None. Classification None.
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters,... Approximate Size 0.5 Acres
- Wetland No. (if regulated by DEC) N/A

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

_____ _____ _____

_____ _____ _____

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

_____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑ No

If Yes:

i. Species and listing (endangered or threatened): _____

_____

_____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

If Yes:

i. Species and listing: _____

_____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No

If yes, give a brief description of how the proposed action may affect that use: _____

_____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

_____

_____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☑ Yes ☐ No

If Yes:

i. CEA name: County & State Park Lands

ii. Basis for designation: Exceptional or unique character

iii. Designating agency and date: Agency:Westchester County, Date:1-31-90

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☑ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☑ Archaeological Site ☐ Historic Building or District

ii. Name: Old Croton Aqueduct

iii. Brief description of attributes on which listing is based:

Water distribution system.

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

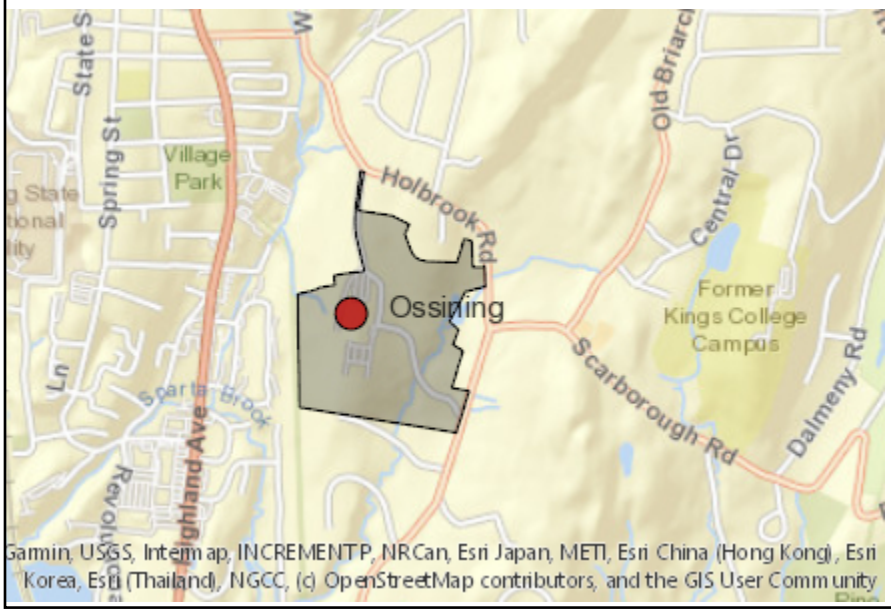
Applicant/Sponsor Name Nadia Jagdat Date 08-25-22

Signature Nadia Jagdat Title Development Associate

PRINT FORM

EAF Mapper Summary Report

Thursday, January 6, 2022 11:20 AM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	Yes
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	864-58, 864-57
E.2.h.iv [Surface Water Features - Stream Classification]	B, SC / C
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No

E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	Yes
E.3.d [Critical Environmental Area - Name]	County & State Park Lands
E.3.d.ii [Critical Environmental Area - Reason]	Exceptional or unique character
E.3.d.iii [Critical Environmental Area – Date and Agency]	Agency:Westchester County, Date:1-31-90
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Old Croton Aqueduct
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1	9108436	11/7/1991	PHILLIPS LABORATORIES	Westchester	BRIARCLIFF	345 SCARBOROUGH RD
2	9109356	12/3/1991	PHILIPS LABS	Westchester	BRIARCLIFF	345 SCARBOROUGH RD
3	9207085	9/18/1992	PHILLIPS LAB	Westchester	BRIARCLIFF MANOR	345 SCARBOROUGH ROAD
4	9211458	1/6/1993	PHILLIPS LABORATORIES	Westchester	BRIARCLIFF MANOR	345 SCARBOROUGH ROAD
5	9503630	6/24/1995	ROADWAY	Westchester	BRIARCLIFF MANOR	345 SCARBOROUGH ROAD
6	9605979	8/8/1996	PHILLIPS LABORATORIES	Westchester	BRIARCLIFF MANOR	345 SCARBOROUGH ROAD
7	9614999	3/27/1997	PHILLIPS LAB	Westchester	BRIARCLIFF	345 SCARBOROUGH RD
8	9703570	6/23/1997	PHILIPS LABORATORIES	Westchester	BRIARCLIFF MANOR	345 SCARBOROUGH ROAD
9	205462	8/24/2002	PHILLIPS RESEARCH	Westchester	BRIARCLIFF	345 SCARBOROUGH RD
10	403556	7/2/2004	PHILLIPS RESEARCH	Westchester	BRIARCLIFF	345 SCARBOROUGH RD
11	410334	12/17/2004	PHILIPS RESEARCH	Westchester	BRIARCLIFF MANOR	345 SCARBOROUGH ROAD
12	701008	4/24/2007	WEST SIDE OF BUILDING	Westchester	BRIARCLIFF MANOR	345 SCARBOROUGH RD
13	1308235	11/13/2013	PHILIPS	Westchester	BRIARCLIFF MANOR	345 SCARBOROUGH RD

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 9108436

Spill Date/Time

Spill Date: 11/07/1991 **Spill Time:** 09:00:00 AM
Call Received Date: 11/07/1991 **Call Received Time:** 10:40:00 AM

Location

Spill Name: PHILLIPS LABORATORIES
Address: 345 SCARBOROUGH RD
City: BRIARCLIFF **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
#2 fuel oil	UNKNOWN	Groundwater

Cause: Tank Failure
Source: Commercial/Industrial
Waterbody:

Record Close

Date Spill Closed: 11/25/1991

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

If you have questions about this reported incident, please contact the Regional Office where the incident occurred.

Return To Results

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 9109356

Spill Date/Time

Spill Date: 11/29/1991 **Spill Time:** 12:00:00 PM
Call Received Date: 12/03/1991 **Call Received Time:** 02:30:00 PM

Location

Spill Name: PHILIPS LABS
Address: 345 SCARBOROUGH RD
City: BRIARCLIFF **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
unknown petroleum	UNKNOWN	Air

Cause: Abandoned Drums
Source: Institutional, Educational, Gov., Other
Waterbody:

Record Close

Date Spill Closed: 03/17/1992

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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Return To Results

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 9207085

Spill Date/Time

Spill Date: 09/18/1992 **Spill Time:** 04:48:00 PM
Call Received Date: 09/18/1992 **Call Received Time:** 04:52:00 PM

Location

Spill Name: PHILLIPS LAB
Address: 345 SCARBOROUGH ROAD
City: BRIARCLIFF MANOR **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
#2 fuel oil	UNKNOWN	Soil

Cause: Tank Test Failure
Source: Commercial/Industrial
Waterbody:

Record Close

Date Spill Closed: 08/27/1993

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 9211458

Spill Date/Time

Spill Date: 01/06/1993 **Spill Time:** 09:20:00 AM
Call Received Date: 01/06/1993 **Call Received Time:** 09:53:00 AM

Location

Spill Name: PHILLIPS LABORATORIES
Address: 345 SCARBOROUGH ROAD
City: BRIARCLIFF MANOR **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
#2 fuel oil	100 Gal.	Soil

Cause: Human Error
Source: Commercial/Industrial
Waterbody:

Record Close

Date Spill Closed: 01/07/1993

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 9503630

Spill Date/Time

Spill Date: 06/23/1995 **Spill Time:** 11:00:00 PM
Call Received Date: 06/24/1995 **Call Received Time:** 01:36:00 AM

Location

Spill Name: ROADWAY
Address: 345 SCARBOROUGH ROAD
City: BRIARCLIFF MANOR **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
unknown petroleum	UNKNOWN	Soil

Cause: Equipment Failure
Source: Commercial Vehicle
Waterbody:

Record Close

Date Spill Closed: 07/07/1995

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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Return To Results

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 9605979

Spill Date/Time

Spill Date: 08/08/1996 **Spill Time:** 12:00:00 PM
Call Received Date: 08/08/1996 **Call Received Time:** 01:18:00 PM

Location

Spill Name: PHILLIPS LABORATORIES
Address: 345 SCARBOROUGH ROAD
City: BRIARCLIFF MANOR **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
#2 fuel oil	UNKNOWN	Soil

Cause: Tank Test Failure
Source: Commercial/Industrial
Waterbody:

Record Close

Date Spill Closed: 01/07/1997

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 9614999

Spill Date/Time

Spill Date: 03/27/1997 **Spill Time:** 12:00:00 PM
Call Received Date: 03/27/1997 **Call Received Time:** 01:31:00 PM

Location

Spill Name: PHILLIPS LAB
Address: 345 SCARBOROUGH RD
City: BRIARCLIFF **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
hydraulic oil	1 Gal.	Soil

Cause: Equipment Failure
Source: Commercial Vehicle
Waterbody:

Record Close

Date Spill Closed: 03/28/1997

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 9703570

Spill Date/Time

Spill Date: 06/23/1997 **Spill Time:** 11:00:00 AM
Call Received Date: 06/23/1997 **Call Received Time:** 12:02:00 PM

Location

Spill Name: PHILIPS LABORATORIES
Address: 345 SCARBOROUGH ROAD
City: BRIARCLIFF MANOR **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
#2 fuel oil	100 Gal.	Soil

Cause: Equipment Failure
Source: Institutional, Educational, Gov., Other
Waterbody:

Record Close

Date Spill Closed: 11/10/1997

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 0205462

Spill Date/Time

Spill Date: 08/24/2002 **Spill Time:** 01:15:00 PM
Call Received Date: 08/24/2002 **Call Received Time:** 01:20:00 PM

Location

Spill Name: PHILLIPS RESEARCH
Address: 345 SCARBOROUGH RD
City: BRIARCLIFF **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
#2 fuel oil	UNKNOWN	Soil

Cause: Tank Test Failure
Source: Commercial/Industrial
Waterbody:

Record Close

Date Spill Closed: 09/26/2002

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 0403556

Spill Date/Time

Spill Date: 07/02/2004 **Spill Time:** 11:30:00 AM
Call Received Date: 07/02/2004 **Call Received Time:** 12:51:00 PM

Location

Spill Name: PHILLIPS RESEARCH
Address: 345 SCARBOROUGH RD
City: BRIARCLIFF **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
#2 fuel oil	UNKNOWN	Soil

Cause: Tank Test Failure
Source: Non Major Facility > 1,100 gal
Waterbody:

Record Close

Date Spill Closed: 12/10/2004

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 0410334

Spill Date/Time

Spill Date: 12/17/2004 **Spill Time:** 08:46:00 AM
Call Received Date: 12/17/2004 **Call Received Time:** 08:46:00 AM

Location

Spill Name: PHILIPS RESEARCH
Address: 345 SCARBOROUGH ROAD
City: BRIARCLIFF MANOR **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
#2 fuel oil	UNKNOWN	Groundwater

Cause: Equipment Failure
Source: Non Major Facility > 1,100 gal
Waterbody:

Record Close

Date Spill Closed: 11/05/2009

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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Return To Results

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 0701008

Spill Date/Time

Spill Date: 04/20/2007 **Spill Time:** 02:10:00 PM
Call Received Date: 04/24/2007 **Call Received Time:** 03:36:00 PM

Location

Spill Name: WEST SIDE OF BUILDING
Address: 345 SCARBOROUGH RD
City: BRIARCLIFF MANOR **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
motor oil	1 Gal.	Soil

Cause: Equipment Failure
Source: Commercial/Industrial
Waterbody:

Record Close

Date Spill Closed: 12/10/2007

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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Return To Results

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3
Spill Number: 1308235

Spill Date/Time

Spill Date: 11/13/2013 **Spill Time:** 07:00:00 AM
Call Received Date: 11/13/2013 **Call Received Time:** 10:05:00 AM

Location

Spill Name: PHILIPS
Address: 345 SCARBOROUGH RD
City: BRIARCLIFF MANOR **County:** Westchester

Spill Description

Material Spilled	Amount Spilled	Resource Affected
#2 fuel oil	10 Gal.	Unknown

Cause: Equipment Failure
Source: Commercial/Industrial
Waterbody:

Record Close

Date Spill Closed: 11/13/2013

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

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Return To Results

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Stormwater Pollution Prevention Plan

Prepared for:
YSG Solar
79 Madison Avenue, 8th Floor
New York, New York 10016

Submitted by:
LaBella Associates
105 N. Tioga Street, Suite 200
Ithaca, New York 14850
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LaBella
Powered by partnership.

Briarcliff Manor Solar

Village of Briarcliff Manor, Westchester County, New York

DATE: MAY 2022
LAST REVISED: AUGUST 2022
PROJECT NO. 2221884

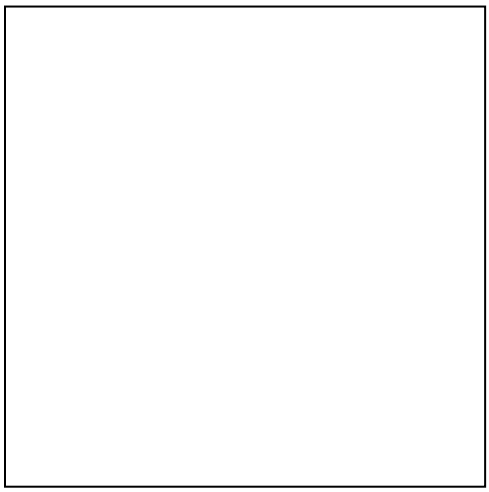
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PREPARER OF THE SWPPP

"I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings."

Name and Title[1]: Michael Mishook, PE

Date: August 11, 2022



[1] *This is a signature of a New York State licensed Professional Engineer employed by LaBella Associates that is duly authorized to sign and seal Stormwater Pollution Prevention Plans (SWPPPs), NOIs, and NOTs prepared under their direct supervision. Refer to Appendix B for the SWPPP Preparer Certification Form, and Appendix I for the LaBella Certifying Professionals Letter.*

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY 1

1.1 Project Description 1

1.2 Stormwater Pollution Controls 2

2.0 SITE CHARACTERISTICS 2

2.1 Land Use and Topography 2

2.2 Soils and Groundwater 2

2.3 Watershed Designation 4

2.4 Receiving Water Bodies 4

2.5 Aquifer Designation 4

2.6 Wetlands 4

2.7 Flood Plains 4

2.8 Listed, Endangered, or Threatened Species 4

2.9 Historic Places 4

2.10 Rainfall Data 5

2.11 Pre-development Watershed Conditions 5

2.12 Post-development Watershed Conditions 5

2.13 Description of Design Points 6

3.0 STORMWATER MANAGEMENT PLANNING 6

3.1 STEP 1 – Site Planning 6

3.2 STEP 2 – Calculate Water Quality Treatment Volume (WQv) 7

3.3 STEP 3 – Apply RR Techniques and Standard SMPs with RRv Capacity to Reduce Total WQv 7

3.4 STEP 4 – Calculate the Minimum RRv Required 8

3.5 STEP 5 – Apply Standard SMPs to Address Remaining Water Quality Volume 8

3.6 STEP 6 - Apply Volume and Peak Rate Control 8

3.7 NYSDEC Solar Guidance 10

4.0 CONSTRUCTION SEQUENCE 10

5.0 CONSTRUCTION-PHASE POLLUTION CONTROL 11

5.1 Temporary Erosion and Sediment Control Measures 12

5.2 Permanent Erosion and Sediment Control Measures 13

5.3 Other Pollutant Controls 13

5.4 Construction Housekeeping Practices 15

6.0 INSPECTIONS, MAINTENANCE, AND REPORTING 16
6.1 Inspection and Maintenance Requirements 16
6.2 Reporting Requirements 18
7.0 SWPPP IMPLEMENTATION RESPONSIBILITIES 19
7.1 Owner's/Operator's Responsibilities 20
7.2 Owner's/Operator's Engineer's Responsibilities 22
7.3 Contractor's Responsibilities 22
7.4 Qualified Inspector's/Qualified Professional's Responsibilities 23
7.5 SWPPP Participants 25

LIST OF TABLES

Table 1: USDA Soil Data 3
Table 2: Project Site HSG Data 3
Table 3: Rainfall Data 5
Table 4: Design Events 9
Table 5: Summary of Pre- and Post-Development Peak Discharge Rates 10
Table 6: Common Construction Pollutants 14

APPENDICES

Appendix A: Figures

- A-1: Site Location Map
- A-2: Soils Map
- A-3: OPRHP Coordination Documentation
- A-4: Environmental Resource Map
- A-5: FEMA Firm Map
- A-6: Pre-Development Watershed Delineation Map
- A-7: Post-Development Watershed Delineation Map

Appendix B: Forms

- Notice of Intent (NOI)
- MS4 SWPPP Acceptance Form
- SWPPP Preparer Certification Form
- Owner/Operator Certification Form
- Contractor and Subcontractor Certification Forms
- Notice of Termination (NOT)

Appendix C: Project Evaluation and Design Calculations

Appendix D: Pre-Development Stormwater Modeling

Appendix E: Post-Development Stormwater Modeling

Appendix F: SWPPP Inspection Report (Sample Form)

Appendix G: Post-Construction Inspections and Maintenance

Appendix H: NYSDEC “Deep-Ripping and Decompaction,” April 2008

Appendix I: LaBella Certifying Professionals Letter

Appendix J: NYSDEC SPDES General Permit GP-0-20-001

Appendix K: NYSDEC Solar Guidance

1.0 EXECUTIVE SUMMARY

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared for major activities associated with construction of Briarcliff Manor Solar in the of . This SWPPP includes the elements necessary to comply with the national baseline general permit for construction activities enacted by the U.S. Environmental Protection Agency (EPA) under the National Pollutant Discharge Elimination System (NPDES) program and all local governing agency requirements. This SWPPP must be executed and permit coverage must be obtained prior to the commencement of construction activity.

This SWPPP has been developed in accordance with the "New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity," Permit No. GP-0-20-001, effective January 29, 2020 through January 28, 2025. The SWPPP and accompanying plans identify and detail stormwater management, pollution prevention, and erosion and sediment control measures necessary during and following completion of construction.

This SWPPP and the accompanying plans entitled "Briarcliff Manor Solar Plan Set" have been submitted as a set. These engineering drawings are considered an integral part of this SWPPP. Therefore, this SWPPP is not considered complete without them. References made herein to "the plans" or to a specific "sheet" refer to these drawings.

This report considers the impacts associated with the intended development with the purpose of:

1. Maintaining existing drainage patterns as much as possible while continuing the conveyance of upland watershed runoff;
2. Controlling increases in the rate of stormwater runoff resulting from the proposed development so as not to adversely alter downstream conditions; and
3. Mitigating potential stormwater quality impacts and preventing soil erosion and sedimentation resulting from stormwater runoff generated both during and after construction.

The analysis and design completed and documented in this report is intended to be part of the application made for a solar redevelopment project with no increase in impervious area completed on behalf of the Owner/Operator.

1.1 Project Description

 is proposing , to include: removal of the existing building structures, athletic courts, concrete sidewalks, and the majority of the existing asphalt pavement and installation of two (2) 5-MW AC solar arrays with tracker solar panels, fencing, total of four (4) concrete equipment pads, and related electrical equipment. The existing paved site access road will be utilized for continued site access. The project will disturb greater than 1-acre of land. A Site Location Map has been provided in Appendix A, as Figure A-1.

This type of project is included in Table 2 of Appendix B of GP-0-20-001; and the project site is not located in one of the watersheds listed in Appendix C of GP-0-20-001. Therefore, this SWPPP includes post-construction stormwater management practices, as well as erosion and sediment controls.

This project is located within the Of regulated, traditional land use control Municipal Separate Stormwater Sewer System (MS4). Therefore, an MS4 SWPPP Acceptance Form is required to accompany NOIs submitted to the NYSDEC.

Runoff from the project site will discharge to the Sparta Brook on the east side of the project and an unnamed tributary of Sparta Brook on the west side of the project, which is not included in the list of Section 303(d) water bodies included in Appendix E of GP-0-20-001.

Project construction activities will consist primarily of site grading, and the installation of storm drainage infrastructure necessary to support the proposed . Construction phase pollutant sources anticipated at the site are disturbed (exposed) soil, vehicle fuels and lubricants, and building materials. Without adequate control there is the potential for each type of pollutant to be transported by stormwater.

1.2 Stormwater Pollution Controls

The stormwater pollution controls outlined herein have been designed and evaluated in accordance with the following standards and guidelines:

- New York State Stormwater Management Design Manual, dated January 2015 (Design Manual).
- New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016 (SSESC).

Stormwater quality will be enhanced through the implementation of temporary and permanent erosion and sediment control measures, the proposed stormwater management practices, and other construction-phase pollution controls outlined herein.

The proposed stormwater management approach consisting of on-site stormwater management practices will adequately collect, treat, and convey the stormwater runoff.

Grass filter strips will be used to manage and treat stormwater runoff generated by the proposed .

Pre- and post-development surface runoff rates have been evaluated for the 1-, 10-, and 100-year 24-hour storm events. Comparison of pre- and post-development watershed conditions demonstrates that the peak rate of runoff from the project site will not be increased.

2.0 SITE CHARACTERISTICS

2.1 Land Use and Topography

The project site is located within the Complementary Use Transition 1 (CT1) zoning district. Solar arrays are subject to a special use permit within this district.

The overall site is slightly sloping, with slopes ranging from 1 to 26 percent. Site elevations range from approximately 118 feet above mean sea level (MSL) to 364 feet MSL. The central portion of the site is the high point of the site, with the western edge of the site steeply sloping from east to west and the mid and eastern portions of the site slightly to moderately sloping from west to east.

2.2 Soils and Groundwater

The US Department of Agriculture (USDA) Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/) was used to obtain surficial soil conditions for the study area, as follows:

Table 1: USDA Soil Data

Map Symbol	Description	Hydrologic Soil Group	Erosion Factor K	Depth to Water Table (feet)
ChE	Charlton loam, 25 to 35 percent slopes	B	0.32	>5.0
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	C	0.28	1.5-3.5
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	C	0.28	1.5-3.5
PnD	Paxton fine sandy loam, 15 to 25 percent slopes	C	0.28	1.5-3.5
RdB	Ridgebury complex, 3 to 8 percent slopes	D		0-0.5
Ub	Udorthents, smoothed		0.20	1.5-4.0
Uf	Urban land			
W	Water			
WdB	Woodbridge loam, 3 to 8 percent slopes	C/D	0.32	1.5-3.5

Upon review of the soil data presented in Table 1, the project site contains soils with a soil slope phase of E or F. This area of soil is in the northwest corner of the parcel and removed completely from the project area.

The project site is composed of HSG B soils, HSG C soils, and HSG D soils, as shown in the table below. For the purposes of this report, HSG C/D soils were modeled as HSG D soils to reflect the undrained condition.

Table 2: Project Site HSG Data

HSG A	HSG B	HSG C	HSG D
0%	1.0%	61.2%	37.7

The Soil Conservation Service defines the hydrologic soil groups as follows:

- Type B Soils: Soils having a moderate infiltration rate when thoroughly wet and consisting mainly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately course textures. These soils have a moderate rate of water transmission.
- Type C Soils: Soils having a low infiltration rate when thoroughly wet and consisting chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine-to-fine texture. These soils have a low rate of water transmission.
- Type D Soils: Soils having a very low infiltration rate and high runoff potential when thoroughly wet. These soils consist chiefly of clays that have high shrink-swell potential, soils that have a permanent high water table, soils that have a clay pan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very low rate of water transmission.

The soils map for the study area is presented in Appendix A, as Figure A-2.

2.3 Watershed Designation

The project site is not located in a restricted watershed identified in Appendix C of GP-0-20-001.

2.4 Receiving Water Bodies

The nearest natural classified water body into which runoff from the project site will discharge is the . The is classified by NYSDEC as a Class SC/C water body, and is not included in the Section 303(d) list of impaired waters found in Appendix E of GP-0-20-001.

2.5 Aquifer Designation

The project site is not located over a US EPA designated Sole Source aquifer; nor is it located over a Primary or Principal aquifer listed in the NYSDEC Technical and Operational Guidance Series (TOGS) 2.1.3 (1980).

2.6 Wetlands

Wetlands depicted on the accompanying plan set were delineated by a separate firm in 2021. The wetland boundary was surveyed by Control Point Associates, Inc., PC in 2022 and presented on the associated plan set. These wetlands are not NYSDEC or Federally Regulated Wetlands.

2.7 Flood Plains

According to the National Flood Insurance Program Flood Insurance Rate Map (FIRM), of , New York, Community Panel Number 36119C0138F, the project site lies within Flood Zone X, areas determined to be outside 500-year floodplain The FEMA Flood Map has been provided in Appendix A, as Figure A-5.

2.8 Listed, Endangered, or Threatened Species

A search was performed on the NYSDEC Environmental Resource Mapper on May 10, 2022, and determined that the project site does not contain any threatened or endangered species, or critical habitat. An Environmental Resource Map has been provided in Appendix A, as Figure A-4.

2.9 Historic Places

A consultation submission was sent to the New York State Office of Parks, Recreation, and Historic Preservation through the New York State Cultural Resource Information System (CRIS) database and received a response letter dated May 5, 2022. The existing facility on the parcel is eligible to be listed on the State and National Registers of Historic Places as well as near the Old Croton Aqueduct which is a National Historic Landmark. A meeting with a NYSOPRHP representative was conducted on May 9, 2022 to discuss the feasibility of demolishing the existing structures and the proximity to the Old Croton

Aqueduct. The Old Croton Aqueduct is over 200 feet from the project site and the solar array will not be visible. The NYSOPRHP response letter is presented in Appendix A, as Figure A-3.

As such, NYSOPRHP coordination has been initiated and a structural analysis of the facility will be conducted as soon as possible by a professional structural engineer to detail the structures' poor condition. Additional correspondence and documentation will be provided in Appendix A as it is generated.

2.10 Rainfall Data

Rainfall data utilized in the modeling and analysis was obtained from the Cornell University online Extreme Precipitation in New York & New England website (http://precip.eas.cornell.edu/). The standard SCS/NRCS rainfall distributions were applied to evaluate the pre- and post-development stormwater runoff characteristics. Rainfall data specific to the portion of Westchester County under consideration, for various 24-hour storm events, is presented in the following Table:

Table 3: Rainfall Data

Storm Event Return Period	24-Hour Rainfall (inches)
1-year	2.78
10-year	5.13
100-year	9.26

2.11 Pre-development Watershed Conditions

The pre-development project site is covered predominantly by established woods, lawn and meadow, and an abandoned research facility and associated parking lots. Analysis of pre-development conditions considered existing drainage patterns, soil types, ground cover, and topography. The Pre-Development Watershed Delineation Map has been provided in Appendix A, as Figure A-6.

The results of the computer modeling used to analyze the overall watershed under pre-development conditions are presented in Appendix D. A summary of the pre-development watershed runoff rates at each design point is presented in Table 5.

2.12 Post-development Watershed Conditions

The post-development project site is covered predominantly by woods and meadow grass under and around the proposed solar arrays. The analysis of post-development conditions considered existing drainage patterns, soil types, ground cover to remain, planned site development, site grading and, stormwater management facilities proposed as part of site improvements. The Post-Development Watershed Delineation Map has been provided in Appendix A, as Figure A-7.

The results of the computer modeling used to analyze the overall watershed under post-development conditions are presented in Appendix E. A summary of the post-development watershed runoff rates at each design point is presented in Table 5.

Due to the decrease in impervious cover in the post-development condition, peak discharge rates from the project site are also decreased. Therefore, stormwater management practices designed to attenuate

stormwater runoff are not required for this project. Grass filter strips per the NYSDEC Stormwater Management Design Manual will be installed around the new concrete equipment pads for stormwater runoff management.

2.13 Description of Design Points

The study area consists of an overall watershed that encompasses approximately 88 acres, including the 46 acre project site and 48 acre area of disturbance. The overall watershed was broken down into smaller watersheds, or subcatchments, to allow for analysis of runoff conditions at several locations throughout the study area. Each of these locations was defined as a Design Point (DP) in order to compare the effects resulting from stormwater management facilities proposed as part of the project. Descriptions of each of the selected design points are provided below.

- Design Point 1: Off-site discharge to ditch running parallel to the Old Croton Aqueduct trail from the northwest portion of the site. This area of the site slopes uniformly east to west.
- Design Point 2: Off-site discharge to the west of the site down the wooded slope from the remaining western portion of the site not captured by Design Point 1. This area of the site slopes uniformly east to west.
- Design Point 3: Off-site discharge to the Sparta Brook. This encompasses the eastern portion of the site which slopes from the west to east from the western half and the east to west from the eastern half towards Sparta Brook.

3.0 STORMWATER MANAGEMENT PLANNING

Chapter 3 of the Design Manual outlines a six-step planning process for site planning and selection of stormwater management practices that must be implemented for both new development and redevelopment projects. This process is intended to develop a design that maintains pre-construction hydrologic conditions through the application of environmentally sound development principles, as well as treatment and control of runoff discharges from the site. The following sections outline the step-by-step process and how it has been applied to this project.

The goals of this Stormwater Management Plan are to analyze the peak rate of runoff under pre- and post-development conditions, to maintain the pre-development rate of runoff in order to minimize impacts to adjacent or downstream properties, and to minimize the impact to the quality of runoff exiting the site.

The Design Manual provides both water quality and water quantity objectives to be met by projects requiring a “Full SWPPP”. These objectives will be met by applying stormwater control practices to limit peak runoff rates and improve the quality of runoff leaving the developed site.

3.1 STEP 1 – Site Planning

During the Site Planning process, the project site is evaluated for implementation of the green infrastructure planning measures identified in Table 3.1 of the Design Manual, in order to preserve natural resources and reduce impervious cover. Table A of Appendix C provides a description of each green infrastructure planning measure, along with a project specific evaluation.

3.2 STEP 2 – Calculate Water Quality Treatment Volume (WQv)

Stormwater runoff from impervious surfaces is recognized as a significant contributor of pollution that can adversely affect the quality of receiving water bodies. Therefore, treatment of stormwater runoff is important since most runoff related water quality contaminants are transported from land, particularly the impervious surfaces, during the initial stages of storm events.

3.2.1 NYSDEC Requirements for Water Quality Volume

The Design Manual requires that water quality treatment be provided for the initial flush of runoff from every storm. The NYSDEC refers to the amount of runoff to be treated as the "Water Quality Volume" (WQv). Section 4.2 of the Design Manual defines the Water Quality Volume as follows:

$$WQv = \frac{[(P)(R_V)(A)]}{12}$$

Where: P = 90% Rainfall Event Number
R_v = 0.05 + 0.009 (I)
I = Impervious Cover (Percent)
A = Contributing Area in Acres

This definition ensures that, all other things being equal, the Water Quality Volume will increase along with the impervious cover percentage.

3.2.2 Methodology for Redevelopment Projects

Chapter 9 of the Design Manual outlines alternative WQv treatment objectives for redevelopment projects.

According to Section 9.2.1.B.I, if redevelopment activities result in a reduction of existing impervious cover by a minimum of 25% of the total disturbed, impervious area, then the stormwater criteria for water quality has been achieved. This project is proposing an 78% reduction of existing impervious cover; thereby, the water quality objective has been met.

3.3 STEP 3 – Apply RR Techniques and Standard SMPs with RRv Capacity to Reduce Total WQv

Land use change and development in the watershed increases the volume of runoff. As such, reductions in the amount of runoff from new development, accomplished through the implementation of a stormwater management plan for the site, will play an important role in the success or failure of the watershed-wide stormwater management plan. Runoff reduction techniques can be applied to manage, reduce, and treat stormwater, while maintaining and restoring natural hydrology through infiltration, evapo-transpiration, and the capture and reuse of stormwater. Volume reduction techniques by themselves typically are not sufficient to provide adequate attenuation of stormwater runoff, but they can decrease the size of the peak runoff rate reduction facilities.

3.3.1 NYSDEC Requirements for Redevelopment

Section 3.2 of the Design Manual indicates, "Although encouraged, meeting the RRv criteria is not required for redevelopment activities that meet the criteria in Chapter 9 of this manual."

3.4 STEP 4 – Calculate the Minimum RRv Required

As previously discussed, meeting the RRv criteria is not required for redevelopment activities with no increase in impervious, that meet the criteria in Chapter 9 of the Design Manual.

3.5 STEP 5 – Apply Standard SMPs to Address Remaining Water Quality Volume

As previously discussed, the water quality objective is being met through impervious cover reduction by greater than 25%. As such, no standard SMPs are required.

3.6 STEP 6 - Apply Volume and Peak Rate Control

This report presents the pre-development and post-development features and conditions associated with the rate of surface water runoff within the study area. For both cases, the drainage patterns, drainage structures, soil types, and ground cover types are considered in this study.

3.6.1 NYSDEC Requirements for Redevelopment

Chapter 9 of the Design Manual provides alternatives to the above quantity criteria, which may be applied to redevelopment projects. As indicated in Section 9.3.2, if redevelopment results in no increase in impervious area or changes to hydrology that increase the discharge rate from the site, then the 10-year and 100-year criteria for quantity control do not apply. In addition, if the hydraulic study shows that the post-construction 1-year 24-hr discharge rate and velocity are less than or equal to the pre-construction discharge rate, then providing 24-hr detention of the 1-year storm to meet channel protection criteria is not required.

The project proposes an 63% decrease in impervious area and will not result in changes to hydrology that increase the discharge rate from the site. Additionally, based upon the hydrologic analysis performed, the discharge rate from the site has been reduced from pre- to post-development conditions for the 1-year storm event. Therefore, the stormwater quantity criteria have been met and stormwater quantity control practices have not been provided for this project. The following Section describes the methodology behind this hydrologic analysis.

3.6.2 Methodology

In order to demonstrate that the NYSDEC detention requirements are being met, the Design Manual requires that a hydrologic and hydraulic analysis of the pre- and post-development conditions be performed using the Natural Resources Conservation Service Technical Release 20 (TR-20) and Technical Release 55 (TR-55) methodologies. HydroCAD, developed by HydroCAD Software Solutions LLC of Tamworth, New Hampshire, is a Computer-Aided-Design (CAD) program for analyzing the hydrologic and hydraulic characteristics of a given watershed and associated stormwater management facilities. HydroCAD uses the TR-20 algorithms and TR-55 methods to create and route runoff hydrographs.

HydroCAD has the capability of computing hydrographs (which represent discharge rates characteristic of specified watershed conditions, precipitation, and geologic factors) combining hydrographs and routing flows though pipes, streams and ponds. HydroCAD can also calculate the center of mass detention time for various hydraulic features. Documentation for HydroCAD can be found on their website: http://www.hydrocad.net/.

For this analysis, the watershed and drainage system was broken down into a network consisting of two types of components as described below:

1. Subcatchment: A relatively homogeneous area of land, which produces a volume and rate of runoff unique to that area.
2. Reach: Uniform streams, channels, or pipes that convey stormwater from one point to another.

Subcatchments and reaches are represented by hexagons and squares respectively, on the watershed routing diagrams provided with the computations included in Appendix D and Appendix E.

The analysis of hydrologic and hydraulic conditions and proposed stormwater management facilities, servicing the study area, was performed by dividing the tributary watershed into relatively homogeneous subcatchments. The separation of the watershed into subcatchments was dictated by watershed conditions, methods of collection, conveyance, and points of discharge. Watershed characteristics for each subcatchment were then assessed from United States Geological Service (USGS) 7.5-minute topographic maps, aerial photographs, a topographical survey, soil surveys, site investigations, and land use maps.

Proposed stormwater management practices were designed and evaluated in accordance with the Design Manual and local regulatory requirements. The hydrologic and hydraulic analysis considered the SCS Type III 24-hour storm events identified in the following Table.

Table 4: Design Events

Facility	24-hour Storm Event
Storm Sewer	10-year
Stormwater Management Practice(s)	1-year
	10-year
	100-year
Flood Conditions	100-year

3.6.3 Performance Summary

The CPv requirement does not apply as the reduction of the entire CPv is achieved by the reduction of impervious area and lack of change in site hydrology.

A comparison of the pre- and post-development watershed conditions was performed for all design points and storm events evaluated herein. For all design points and design storms, this comparison demonstrates that the peak rate of runoff will not be increased. Therefore, the project will not have a significant adverse impact on the adjacent or downstream properties or receiving water courses.

The results of the computer modeling used to analyze the pre- and post-development watersheds are presented in Appendix D and Appendix E, respectively. The following Table summarizes the results of this analysis.

Table 5: Summary of Pre- and Post-Development Peak Discharge Rates

Pre- vs. Post-Development Discharge Rate (cfs)				
Design Point (DP)	10-year 24-hour storm event		100-year 24-hour storm event	
	Pre	Post	Pre	Post
1	29.92	24.67	72.24	60.86
2	73.53	57.02	168.02	147.81
3	60.80	56.94	142.85	138.90
Total	164.25	138.63	383.11	347.57

3.7 NYSDEC Solar Guidance

The NYSDEC released a memorandum entitled Solar Panel Construction Stormwater Permitting/SWPPP Guidance on January 17, 2020 (please see full memo in Appendix K). This memo discusses various scenarios that solar construction may fall under NYSDEC permitting. The project falls under Scenario 2. There are several small areas of new impervious surface to allow for equipment to be installed and for vehicles to turn around to exit the site. The stormwater runoff from these new impervious areas are all being treated through the installation of vegetated filter strips, an approved NYSDEC practice.

The NYSDEC memo also references the Maryland DEP's Stormwater Design Guidance – Solar Panel Installations document, also found in Appendix K. To be in compliance with these guidelines, the panel rows are spaced at least two (2) times their width on center. Water bars are also included on steeper sloped areas of the array, which has been an accepted practice in lieu of level spreaders. Please see the Grading and Erosion Control Plan sheets for location of the water bars and the Construction Detail sheets for detailed information on the water bar construction.

4.0 CONSTRUCTION SEQUENCE

This project has not received written approval from NYSDEC or the of Briarcliff Manor allowing the disturbance of more than five acres of land at any one time. Therefore, if the construction sequence requires the disturbance of more than five acres at any one time, written approval must be obtained from NYSDEC and the Village of Briarcliff Manor prior to disturbing more than five acres at once.

The "Erosion and Sediment Control Plan" in the accompanying drawings identifies the major construction activities that are the subject of this SWPPP. The order (or sequence) in which the major activities are expected to be performed/undertaken is as follows:

- Install temporary erosion and sediment control features, ex. silt fencing;
- Demo building and surrounding building infrastructure, grade and stabilize disturbed area. Disturbed area associated with demolition phase shall not exceed 5 acres,
- Clear, grub, and grade in 5 acre increments, stabilizing disturbed area prior to moving on to the next;
- Install solar facility (panel arrays and supporting surface and subsurface infrastructure) maintaining 5 acres or less of disturbance. Stabilization to be completed following work areas being completed;

- Erosion and sediment control features shall be maintained and not removed by the contractor until "final stabilization" (as defined in GP-0-20-002) has been achieved.

Each activity will not necessarily be completed before the next begins. In addition, these activities could occur in a different order if necessary to maintain adequate erosion and sediment control. If this is the case, the contractor shall notify the Owner's/Operator's Engineer overseeing the implementation of the SWPPP. The approximate disturbance area for the project is 47.6 acres.

The Contractor will be responsible for implementing the erosion and sediment control measures identified on the plans. The Contractor may designate these tasks to certain subcontractors as they see fit, but the ultimate responsibility for implementing these controls and ensuring their proper function remains with the Contractor.

Refer to the accompanying plans for details and specifications regarding the construction sequencing schedule.

5.0 CONSTRUCTION-PHASE POLLUTION CONTROL

The SWPPP and accompanying plans identify the temporary and permanent erosion and sediment control measures that have been incorporated into the design of this project. These measures will be implemented during construction, to minimize soil erosion and control sediment transport off-site, and after construction, to control the quality and quantity of stormwater runoff from the developed site.

Erosion control measures, designed to minimize soil loss, and sediment control measures, intended to retain eroded soil and prevent it from reaching water bodies or adjoining properties, have been developed in accordance with the following documents:

- NYSDEC SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-0-20-001 (effective January 29, 2020 through January 28, 2025)
- New York State Standards and Specifications for Erosion and Sediment Control, NYSDEC (November 2016)

The SWPPP and accompanying plans outline the construction scheduling for implementing the erosion and sediment control measures. These documents include limitations on the duration of soil exposure, criteria and specifications for placement and installation of the erosion and sediment control measures, a maintenance schedule, and specifications for the implementation of erosion and sediment control practices and procedures.

Temporary and permanent erosion and sediment control measures that shall be applied during construction generally include:

1. Minimizing soil erosion and sedimentation by stabilization of disturbed areas and by removing sediment from construction site discharges.
2. Preservation of existing vegetation to the greatest extent practical. Following the completion of construction activities in any portion of the site, permanent vegetation shall be established on all exposed soils.
3. Site preparation activities to minimize the area and duration of soil disruption.
4. Establishment of permanent traffic corridors to ensure that "routes of convenience" are avoided.

5.1 Temporary Erosion and Sediment Control Measures

The temporary erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.1.1 Stabilized Construction Access

Prior to construction, stabilized construction access(es) will be installed, per accompanying plans, to reduce the tracking of sediment onto public roadways.

Construction traffic must enter and exit the site at the stabilized construction access(es). The intent is to trap dust and mud that would otherwise be carried off-site by construction traffic.

The access(es) shall be maintained in a condition, which will control tracking of sediment onto public rights-of-way or streets. When necessary, additional aggregate will be placed atop the filter fabric to assure the minimum thickness is maintained. All sediment and/or soil spilled, dropped, or washed onto public rights-of-way must be removed immediately. Periodic inspection and needed maintenance shall be provided after each substantial rainfall event.

5.1.2 Dust Control

Water trucks shall be used as needed during construction to reduce dust generated on-site. Dust control must be provided by the Contractor(s) to a degree that is acceptable to the Owner, and in compliance with the applicable local and state dust control requirements.

5.1.3 Temporary Soil Stockpile

Materials, such as topsoil, will be temporarily stockpiled (if necessary) on the site during the construction process. Stockpiles shall be located in an area away from storm drainage, water bodies and/or courses, and will be properly protected from erosion by a surrounding silt fence barrier.

5.1.4 Silt Fencing

Prior to the initiation of and during construction activities, a geotextile filter fabric (or silt fence) will be established downgradient of all disturbed areas. These barriers may extend into non-impact areas to provide adequate protection of adjacent lands.

Clearing and grubbing will be performed only as necessary for the installation of the sediment control barrier. To facilitate effectiveness of the silt fencing, daily inspections and inspections immediately after significant storm events will be performed by the Contractor(s). Maintenance of the fence will be performed as needed.

5.1.5 Temporary Seeding

For areas undergoing clearing, grading, and disturbance as part of construction activities, where work has temporarily ceased, temporary soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the soil disturbance activity has temporarily ceased.

Temporary sediment traps depicted on the accompanying plans have been designed to provide 3,600 CF of storage per acre of tributary watershed.

5.1.6 Compost Filter Sock

Prior to the initiation of and during construction activities, a compost filter sock (or silt sock) will be established downgradient of all disturbed areas. These filters may extend into non-impact areas to provide adequate protection of adjacent lands. The spacing of the compost filter sock, which will depend on the ground slope and diameter of the sock, shall be based upon New York State or EPA guidance.

Clearing and grubbing will be performed only as necessary for the installation of the sediment control filter; and unlike sediment control barriers, trenching is not required. The ends of the filter sock should be directed upslope, to prevent stormwater from running around the end of the sock. The preferred anchoring method is to drive stakes through the center of the sock at regular intervals; alternatively, stakes can be placed on the downstream side of the sock. To facilitate effectiveness of the compost filter sock, daily inspections and inspections immediately after significant storm events will be performed by the Contractor(s) to ensure that they are intact and the area behind the sock is not filled with sediment. Maintenance of the sock will be performed as needed.

5.2 Permanent Erosion and Sediment Control Measures

The permanent erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.2.1 Establishment of Permanent Vegetation

Disturbed areas that will be vegetated must be seeded in accordance with the contract documents. The type of seed, mulch, and maintenance measures as described in the contract documents shall also be followed.

Permanent soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the soil disturbance activity has permanently ceased.

Final site stabilization is achieved when all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of 80 percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

5.3 Other Pollutant Controls

Part I.B.1.e of GP-0-20-001 prohibits discharges from construction material wastewater, pollutants used in vehicle and equipment operation and maintenance, vehicle and equipment washing and toxic or hazardous substances.

The following table identifies materials and/or chemicals commonly used and/or stored on construction sites and should be addressed in the site-specific spill prevention and response plan:

Table 6: Common Construction Pollutants

Material/Chemical	Physical Description	Stormwater Pollutants	Location*
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Various colored to colorless liquid, powder, pellets, or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic	Herbicides used for noxious weed control
Fertilizer	Liquid or solid grains	Nitrogen, phosphorous	Newly seeded areas
Cleaning solvents	Colorless, blue, or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	No equipment cleaning allowed in project limits
Asphalt	Black solid	Oil, petroleum distillates	Streets and roofing
Concrete	White solid/grey liquid	Limestone, sand, pH, chromium	Curb and gutter, building construction
Curing compounds	Creamy white liquid	Naphtha	Curb and gutter
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil	Leaks or broken hoses from equipment
Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE	Secondary containment / staging area
Diesel Fuel	Clear, blue-green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes	Secondary containment / staging area
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates	Secondary containment / staging area
Antifreeze/coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	Leaks or broken hoses from equipment
Sanitary toilets	Various colored liquid	Bacteria, parasites, and viruses	Staging area
Construction materials			
Granular fill	Various colored solids	Sediment	Stockpile / fill areas
Subbase course	Gray/brown solid	Sediment, dust	Stockpile
Topsoil	Brown solid	Sediment	Stockpile
Mulch	Various colored solid	Sediment, debris	Staging area
Seed	Brown/yellow solid	Nutrients, debris	Staging area
HDPE Storm Pipe	Black solid		Staging area
SDR-35, SDR-21 PVC Pipe	Various colored solid		Staging area
Metals Frames and Grates	Gray solid		Staging area
Joint Sealant	Light gray viscous solid	Polyurethane	Staging area

*(Area where material/chemical is used on-site)

5.4 Construction Housekeeping Practices

During the construction phase, the Contractor(s) will implement the following measures:

5.4.1 Sediment Sweeping/Vacuuming

Any sediment that is tracked by construction vehicles or erosion onto adjacent public or private impervious surfaces must be swept or vacuumed, utilizing self-propelled and/or walk-behind equipment, and removed on a daily basis. Kick brooms and sweeper attachments are not an acceptable means of sweeping. Sweeping or vacuuming should not take place while tracked sediment is wet. If tracked sediment is compacted, the sediment must be scraped loose prior to sweeping or vacuuming.

5.4.2 Material Stockpiles

Material resulting from clearing and grubbing operations that will be stockpiled on-site, must be adequately protected with downgradient erosion and sediment controls.

5.4.3 Equipment Cleaning and Maintenance

The Contractor(s) will designate areas for equipment cleaning, maintenance, and repair. The Contractor(s) and subcontractor(s) will utilize those areas. The areas will be protected by a temporary perimeter berm.

5.4.4 Detergents

The use of detergents for large-scale washing is prohibited (i.e., vehicles, buildings, pavement surfaces, etc.).

5.4.5 Spill Prevention and Response

A Spill Prevention and Response Plan shall be developed, for the pollutants identified in Section 5.3, for the site by the Contractor(s) that addresses the following:

1. Reducing chance of spills
2. Stopping the source of spills
3. Containing and cleaning up spills
4. Disposing of materials contaminated by spills
5. Training personnel responsible for spill prevention/response
6. Material handling procedures
7. Material storage requirements

The plan shall detail the steps required in the event of an accidental spill and shall identify contact names and phone numbers of people and agencies that must be notified.

The plan shall include Safety Data Sheets (SDS) for all materials to be stored on-site. All workers on-site will be required to be trained on safe handling and spill prevention procedures for all materials used during construction. Regular tailgate safety meetings shall be held and all workers that are expected on the site during the week shall be required to attend.

5.4.6 Concrete Washout Areas

A temporary concrete washout area shall be provided for every project where concrete will be poured or otherwise formed on-site and shall consist of an excavated or above-ground lined construction pit where concrete trucks or equipment can be washed out after their loads have been discharged. Waste generated from concrete wash water that shall not be allowed to flow into drainage ways, inlets, receiving

waters, highway right-of-way, or any location other than the designated concrete washout area(s). Proper signage shall be placed adjacent to the facility to designate the "Concrete Washout Area". Locate the facility a minimum of 100-feet from drainage swales, storm drain inlets, wetlands, streams, and other surface waters. Prevent surface water from entering the washout area.

The hardened residue from the concrete wash areas will be disposed of in the same manner as other non-hazardous construction waste materials. Maintenance of the washout area shall include removal of hardened material when 75% of the storage capacity is filled, and a minimum freeboard of 12 inches shall be maintained. The Contractor will be responsible for seeing that these procedures are followed. The project may require the use of multiple concrete washout areas based on the frequency of concrete pours.

5.4.7 Material Storage

Construction materials shall be stored in a dedicated staging area. The staging area shall be located in an area that prevents negative impacts of construction materials on stormwater quality.

Chemicals, paints, solvents, fertilizers, and other toxic material must be stored in waterproof containers. Except during application, the contents must be kept in trucks or within storage facilities. Runoff containing such material must be collected, removed from the site, treated, and disposed of at an approved solid waste or chemical disposal facility.

6.0 INSPECTIONS, MAINTENANCE, AND REPORTING

6.1 Inspection and Maintenance Requirements

6.1.1 Pre-Construction Inspection and Certification

Prior to the commencement of construction, the Qualified Inspector/Qualified Professional shall conduct an assessment of the site and certify that the appropriate erosion and sediment control measures have been adequately installed and implemented. The Contractor shall contact the Qualified Inspector/Qualified Professional once the erosion and sediment control measures have been installed.

6.1.2 Construction Phase Inspections and Maintenance

A Qualified Inspector/Qualified Professional, as defined in Appendix A of the General Permit GP-0-20-001, shall conduct regular site inspections between the time this SWPPP is implemented and final site stabilization. Site inspections shall occur at an interval of at least once every seven (7) calendar days.

The purpose of site inspections is to assess performance of pollutant controls. Based on these inspections, the Qualified Inspector/Qualified Professional will decide whether it is necessary to modify this SWPPP, add or relocate sediment barriers, or whatever else may be needed in order to prevent pollutants from leaving the site via stormwater runoff. The general contractor has the duty to cause pollutant control measures to be repaired, modified, maintained, supplemented, or whatever else is necessary in order to achieve effective pollutant control.

Examples of particular items to evaluate during site inspections are listed below. This list is not intended to be comprehensive. During each inspection the inspector must evaluate overall pollutant control system performance as well as particular details of individual system components. Additional factors should be considered as appropriate to the circumstances.

1. Locations where vehicles enter and exit the site must be inspected for evidence of off-site sediment tracking. A stabilized construction access will be constructed where vehicles enter and exit. This access will be maintained or supplemented as necessary to prevent sediment from leaving the site on vehicles.
2. Sediment barriers must be inspected and, if necessary, they must be enlarged or cleaned in order to provide additional capacity. All material from behind sediment barriers will be stockpiled on the up slope side. Additional sediment barriers must be constructed as needed.
3. Inspections will evaluate disturbed areas and areas used for storing materials that are exposed to rainfall for evidence of, or the potential for, pollutants entering the drainage system. If necessary, the materials must be covered or original covers must be repaired or supplemented. Also, protective berms must be constructed, if needed, in order to contain runoff from material storage areas.
4. Grassed areas will be inspected to confirm that a healthy stand of grass is maintained. The site has achieved final stabilization once all areas are covered with building foundation or pavement, or have a stand of grass with at least 80 percent density. The density of 80 percent or greater must be maintained to be considered as stabilized. Areas must be watered, fertilized, and reseeded as needed to achieve this goal.
5. All discharge points must be inspected to determine whether erosion control measures are effective in preventing significant impacts to receiving waters.

The inspection reports must be completed entirely and additional remarks should be included if needed to fully describe a situation. An important aspect of the inspection report is the description of additional measures that need to be taken to enhance plan effectiveness. The inspection report must identify whether the site was in compliance with the SWPPP at the time of inspection and specifically identify all incidents of non-compliance.

Within one (1) business day of the completion of an inspection, the *Qualified Inspector/Qualified Professional* shall notify the Owner/Operator and appropriate contractor or subcontractor of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one (1) business day of the notification and shall complete the corrective actions in a reasonable time frame.

In addition to the inspections performed by the *Qualified Inspector/Qualified Professional*, the Contractor shall perform routine inspections that include a visual check of all erosion and sediment control measures. All inspections and maintenance shall be performed in accordance with the inspection and maintenance schedule provided on the accompanying plans. Sediment removed from erosion and sediment control measures will be exported from the site, stockpiled for later use, or used immediately for general non-structural fill.

It is the responsibility of the general contractor to assure the adequacy of site pollutant discharge controls. Actual physical site conditions or contractor practices could make it necessary to install more structural controls than are shown on the accompanying plans. (For example, localized concentrations of runoff could make it necessary to install additional sediment barriers, sediment traps, etc.) Assessing the need for additional controls and implementing them or adjusting existing controls will be a continuing aspect of this SWPPP until the site achieves final stabilization.

6.1.3 Temporary Suspension of Construction Activities

For construction sites where soil disturbance activities have been temporarily suspended (e.g. Winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the frequency

of Qualified Inspector/Qualified Professional inspections can be reduced to once every 30 calendar days. Prior to reducing the frequency of inspections, the Owner/Operator shall notify the NYSDEC Region 3 stormwater contact person and the of in writing.

6.1.4 Partial Project Completion

For construction sites where soil disturbance activities have been shut down with partial project completion, all areas disturbed as of the project shutdown date have achieved final stabilization, and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational, the inspections by the Qualified Inspector/Qualified Professional can stop. Prior to the shutdown, the Owner/Operator shall notify the NYSDEC Region 3 stormwater contact person and the of in writing.

If soil disturbance activities have not resumed within two years from the date of shutdown, a Notice of Termination (NOT) shall be properly completed and submitted to the NYSDEC.

6.1.5 Post-Construction Inspections and Maintenance

Inspections and maintenance of final stabilization measures and post-construction stormwater management practices shall be performed in accordance with Appendix G, once all disturbed areas are stabilized and all stormwater management systems are in place and operable.

6.2 Reporting Requirements

6.2.1 Inspection Reports

Pursuant to Part IV.C of GP-0-20-001, inspection reports shall be prepared for the duration of construction, as outlined herein, and shall be signed by the *Qualified Inspector* or *Qualified Professional*. A sample inspection form is provided in Appendix F.

At a minimum, each inspection report shall record the following information:

1. Date and time of inspection.
2. Name and title of person(s) performing inspection.
3. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection.
4. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow.
5. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface waterbody.
6. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance.
7. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced.

8. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection.
9. Indication of the current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards.
10. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s).
11. Identification and status of all corrective actions that were required by previous inspection.
12. Color photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *Qualified Inspector/Qualified Professional* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *Qualified Inspector/Qualified Professional* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *Qualified Inspector/Qualified Professional* shall attach the paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

6.2.2 Site Log Book

Pursuant to Part II.D.2 of GP-0-20-001, the Owner/Operator shall retain a copy of the General Permit, NOI, NOI Acknowledgment Letter, MS4 SWPPP Acceptance Form (if applicable), inspection reports, contractor and subcontractor certification forms, and all documentation necessary to demonstrate eligibility under the permit, at the construction site from commencement of construction activity until the date that all areas of disturbance have achieved final stabilization and the Notice of Termination has been submitted to the NYSDEC.

The Site Log Book shall be maintained on-site in a secure location (i.e. job trailer, on-site construction office, or mailbox with lock) and must be accessible during normal business hours to an individual performing a compliance inspection.

6.2.3 Post Construction Records and Archiving

Following construction, the Owner/Operator shall retain copies of the SWPPP, the complete construction Site Log Book, and records of all data used to complete the NOI to be covered by this permit, for a period of at least five years from the date that the site is finally stabilized. This period may be extended by the NYSDEC, at its sole discretion, at any time upon written notification.

Records shall be maintained of all post construction inspections and maintenance work performed in accordance with the requirements outlined in Appendix G.

7.0 SWPPP IMPLEMENTATION RESPONSIBILITIES

A summary of the responsibilities and obligations of all parties involved with compliance with the NYSDEC SPDES General Permit GP-0-20-00 conditions is outlined in the subsequent sections. For a complete listing of the definitions, responsibilities, and obligations, refer to the SPDES General Permit GP-0-20-001 presented in Appendix J.

7.1 Owner's/Operator's Responsibilities

1. Ensure that control measures are selected, designed, installed, implemented and maintained to minimize the discharge of pollutants and prevent a violation of the water quality standards, meeting the non-numeric effluent limitations in Part I.B.1.(a)-(f) of the SPDES General Permit and in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

2. Retain the services of a "Qualified Inspector" or "Qualified Professional" as defined under Section 2.1, to provide the services outlined in Section 2.5 "Qualified Inspector's/Qualified Professional's Responsibilities."

3. Retain the services of a "Qualified Professional," as defined under Section 2.1, to provide the services outlined in Section 2.3 "Owner's/Operator's Engineers Responsibilities."

4. Have an authorized corporate officer sign the Owner/Operator Certification Form to accompany the eNOI. A copy of the completed NOI is included in Appendix B.

5. Submit the electronic version of the NOI (eNOI) along with the MS4 SWPPP acceptance form using the NYSDEC's website (http://www.dec.ny.gov/chemical/43133.html).

6. Pay the required initial and annual fees upon receipt of invoices from NYSDEC. These invoices are generally issued in the fall of each year. The initial fee is calculated as $110.00 per acre disturbed plus $675.00 per acre of net increase in impervious cover, and the annual fee is $110.00.

7. Prior to the commencement of construction activity, identify the contractor(s) and subcontractor(s) that will be responsible for implementing the erosion and sediment control measures and stormwater management practices described in this SWPPP. Have each of these contractors and subcontractors identify at least one "Trained Contractor", as defined under Section 2.1 that will be responsible for the implementation of the SWPPP. Ensure that the Contractor has at least one "Trained Contractor" on site on a daily basis when soil disturbance activities are being performed.

8. Schedule a pre-construction meeting which shall include the of representative, Owner's/Operator's Engineer, Qualified Inspector, Contractor, and their sub-contractors to discuss responsibilities as they relate to the implementation of this SWPPP.

9. Require the Contractor to fully implement the SWPPP prepared for the site by the Owner/Operator's Engineer to ensure that the provisions of the SWPPP are implemented from the commencement of construction activity until all areas of disturbance have achieved final stabilization and the Notice of Termination (NOT) has been submitted to the NYSDEC.

10. Forward a copy of the NOI Acknowledgement Letter received from the regulatory agency to the Owner's/Operator's Engineer for project records, and to the Contractor for display at the construction site.

11. Maintain a copy of the General Permit (GP-0-20-001), NOI, NOI Acknowledgement Letter, SWPPP, MS4 SWPPP Acceptance Form, inspection reports, Spill Prevention, Countermeasures, Cleanup ("SPCC") Plan, and all documentation in accordance with Part I.F.8.a.-d of GP-0-20-001 necessary to demonstrate eligibility with the permit at the construction site, until all disturbed areas have achieved final stabilization and the NOT has been submitted to the NYSDEC. Place

documents in a secure location that must be accessible during normal business hours to an individual performing a compliance inspection.

12. Submit a Notice of Termination (NOT) form (see Appendix B) within 48 hours of receipt of the Owner's/Operator's Engineer's certification of final site stabilization to the following:

    NOTICE OF TERMINATION
    NYS DEC, Bureau of Water Permits
    625 Broadway, 4th Floor
    Albany, New York 12233-3505

    of
    1111 Pleasantville Road
    Briarcliff Manor, New York 10510

13. Request and receive all SWPPP records from the Owner's/Operator's Engineer and archive those records for a minimum of five (5) years after the NOT is filed.

14. Implement the Post-Construction Inspections and Maintenance procedures outlined in Appendix G.

15. The NOI, SWPPP, and inspection reports required by GP-0-20-001 are public documents that the Owner/Operator must make available for review and copying by any person within five (5) business days of the Owner/Operator receiving a written request by any such person to review the NOI, SWPPP, or inspection reports. Copying of documents will be done at the requester's expense.

16. The Owner/Operator must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the Owner/Operator shall amend the SWPPP, including construction drawings:

    a) Whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharges from the project site;

    b) Whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the discharge of pollutants; and

    c) To address issues or deficiencies identified during an inspection by the "Qualified Inspector," the Department, or other Regulatory Authority.

    d) To document the final construction conditions.

17. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original owner or operator must notify the new owner or operator, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For construction activities subject to the requirements of a regulated, traditional land use control MS4, the original owner or operator must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.

    a) Once the new owner or operator obtains permit coverage, the original owner or operator shall then submit a completed NOT with the name and permit identification number of the new owner or operator to the Department at the address in Part II.B.1. of the permit.

If the original owner or operator maintains ownership of a portion of the construction activity and will disturb soil, they must maintain their coverage under the permit.

b) Permit coverage for the new owner or operator will be effective as of the date the Department receives a complete NOI, provided the original owner or operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new owner or operator.

7.2 Owner's/Operator's Engineer's Responsibilities

1. Prepare the SWPPP using good engineering practices, best management practices, and in compliance with all federal, state, and local regulatory requirements.

2. Prepare the electronic Notice of Intent (eNOI) (see Appendix B) and sign the "SWPPP Preparer Certification Form." Forward the Owner/Operator Certification Form to the Owner/Operator for signature.

3. Provide copies of the SWPPP to the of once all signatures and attachments are complete.

4. Enter Contractor's information in Section 2.5 "SWPPP Participants" once a Contractor is selected by the Owner/Operator.

5. Participate in a pre-construction meeting which shall include the of representative, Owner/Operator, Qualified Inspector, Contractor, and all subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

6. Update the SWPPP each time there is a significant modification to the pollution prevention measures or a change of the principal Contractor working on the project who may disturb site soil.

7.3 Contractor's Responsibilities

1. Sign the SWPPP Contractor's Certification Form contained within Appendix B and forward to the Owner's/Operator's Engineer for inclusion in the Site Log Book.

2. Identify at least one Trained Contractor that will be responsible for implementation of this SWPPP. Ensure that at least one Trained Contractor is on site on a daily basis when soil disturbance activities are being performed. The Trained Contractor shall inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating conditions at all times. If deficiencies are identified, the contractor shall begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

3. Provide the names and addresses of all subcontractors working on the project site. Require all subcontractors who will be involved with construction activities that will result in soil disturbance to identify at least one Trained Contractor that will be on site on a daily basis when soil disturbance activities are being performed; and to sign a copy of the Subcontractor's Certification Form contained within Appendix B, then forward to the Owner's/Operator's Engineer for inclusion into the Site Log Book. This information must be retained as part of the Site Log Book.

4. Maintain a Spill Prevention and Response Plan in accordance with requirements outlined in Section 5 of this SWPPP. This plan shall be provided to the Owner's/Operator's Engineer for inclusion in the Site Log Book, prior to mobilization on-site.

5. Participate in a pre-construction meeting which shall include the of representative, Owner/Operator, Owner's/Operator's Engineer, Qualified Inspector, and all subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

6. If Contractor plans on utilizing adjacent properties for material, waste, borrow, or equipment storage areas, or if Contractor plans to engage in industrial activity other than construction (such as operating asphalt and/or concrete plants) at the site, Contractor shall submit appropriate documentation to the Owner's/Operator's Engineer so that the SWPPP can be modified accordingly.

7. Implement site stabilization, erosion and sediment control measures, and other requirements of the SWPPP.

8. In accordance with the requirements in the most current version of the NYS Standards and Specifications for Erosion and Sediment Control, conduct inspections of erosion and sediment control measures installed at the site to ensure that they remain in effective operating condition at all times. Prepare and retain written documentation of inspections as well as of all repairs/maintenance activities performed. This information must be retained as part of the Site Log Book.

9. Begin implementing corrective actions within one (1) business day of receipt of notification by the Qualified Inspector/Qualified Professional that deficiencies exist with the erosion and sediment control measures employed at the site. Corrective actions shall be completed within a reasonable time frame.

10. Maintain a record of the date(s) and location(s) that soil restoration is performed in accordance with the accompanying plans and NYSDEC Division of Water's publication "Deep-Ripping and Decompaction," dated April 2008. A copy of this is publication is provided in Appendix H. The record that is to be maintained shall be a copy of the overall site grading plan delineating the area(s) and date(s) that the soil was restored.

11. Upon completion of all construction at the site, the contractor responsible for overall SWPPP Compliance shall sign the certification on their Contractor Certification Form indicating that: a.) all temporary erosion and sediment control measures have been removed from the site, b.) the on-site soils disturbed by construction activity have been restored in accordance with the SWPPP and the NYSDEC Division of Water's publication "Deep-Ripping and Decompaction," and c.) all permanent stormwater management practices required by the SWPPP have been installed in accordance with the contract documents.

7.4 Qualified Inspector's/Qualified Professional's Responsibilities

1. Participate in a pre-construction meeting with the of representative, Owner/Operator, Owner/Operator's Engineer, Contractor, and their subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

2. Conduct an initial assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment control measures described

within this SWPPP have been adequately installed and implemented to ensure overall preparedness of the site.

3. Provide on-site inspections to determine compliance with the SWPPP. Site inspections shall occur at an interval of at least once every seven calendar days. A written inspection report shall be provided to the Owner/Operator and general contractor within one business day of the completion of the inspection, with any deficiencies identified. A sample inspection form is provided in Appendix F.

4. Prepare an inspection report subsequent to each and every inspection that shall include/address the items listed in Part IV.C.4.a-k of GP-0-20-001. Sign all inspection reports and maintain on site with the SWPPP.

5. Notify the owner/operator and appropriate contractor or subcontractor of any corrective actions that need to be taken.

6. Prepare a construction Site Log Book to be used as a record of all inspection reports generated throughout the duration of construction. Ensure that the construction Site Log Book is maintained and kept up-to-date throughout the duration of construction.

7. Review the Contractor's SWPPP records on a periodic basis to ensure compliance with the requirements for daily reports, soil restoration, inspections, and maintenance logs.

8. Prepare the Notice of Termination (NOT). The Qualified Professional shall sign the NOT Certifications VI (Final Stabilization) and VII (Post-construction Stormwater Management Practices), and forward the NOT to the Owner/Operator for signature on Certification VIII (Owner/Operator Certification).

9. Transfer the SWPPP documents, along with all NOI's, permit certificates, NOT's, construction Site Log Book, and written records required by the General Permit to the Owner/Operator for archiving.

7.5 SWPPP Participants

1. Owner's/Operator's Engineer [2]: Michael Mishook, PE
   LaBella Associates, DPC
   100 West Water Street, Suite 101
   Elmira, New York 14901
   Phone: (607) 319-4136

2. Owner/Operator [3]: David Magid
   YSG Solar

   New York, New York 10016
   Phone: (212) 389-9215

3. Contractor[4,6]: Name and Title: _____

   Company Name: _____

   Mailing Address: _____

   _____

   Phone: _____

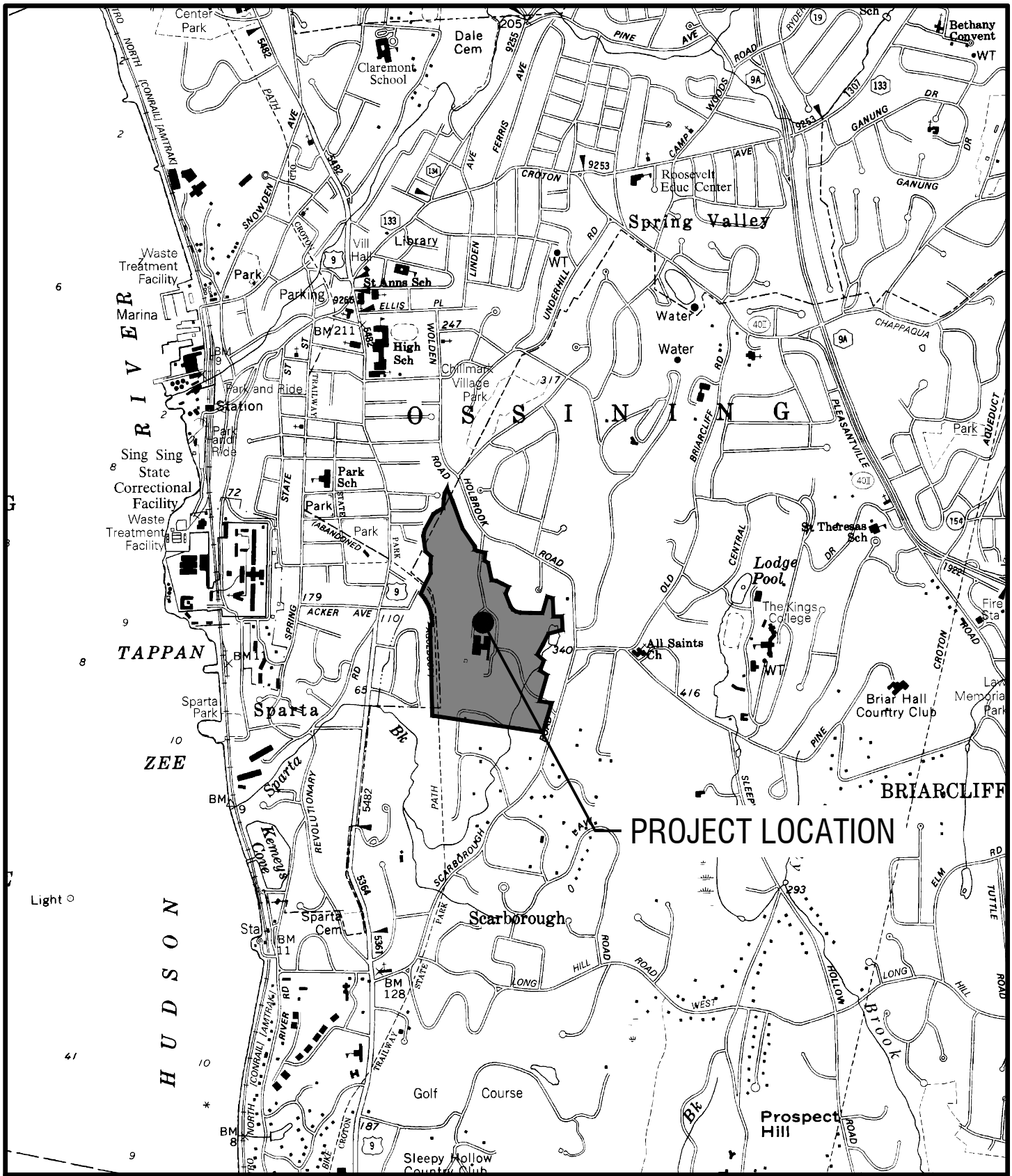
   Fax: _____

[2] Refer to Appendix B for the SWPPP Preparer Certification Form.
[3] Refer to Appendix B for the Owner/Operator Certification Form.
[5] Refer to Appendix B for Contractor and Subcontractor Certification Form.
[6] Contractor's information to be entered once the Contractor has been selected.

APPENDIX A:
FIGURES

A-1: Site Location Map
A-2: Soils Map
A-3: OPRHP Coordination Documentation
A-4: Environmental Resource Map
A-5: FEMA Firm Map
A-6: Pre-Development Watershed Delineation Map
A-7: Post-Development Watershed Delineation Map

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ISSUED FOR: SWPPP

DRAWING NAME: **SITE LOCATION MAP**

DRAWN BY:

DATE: MAY 2022

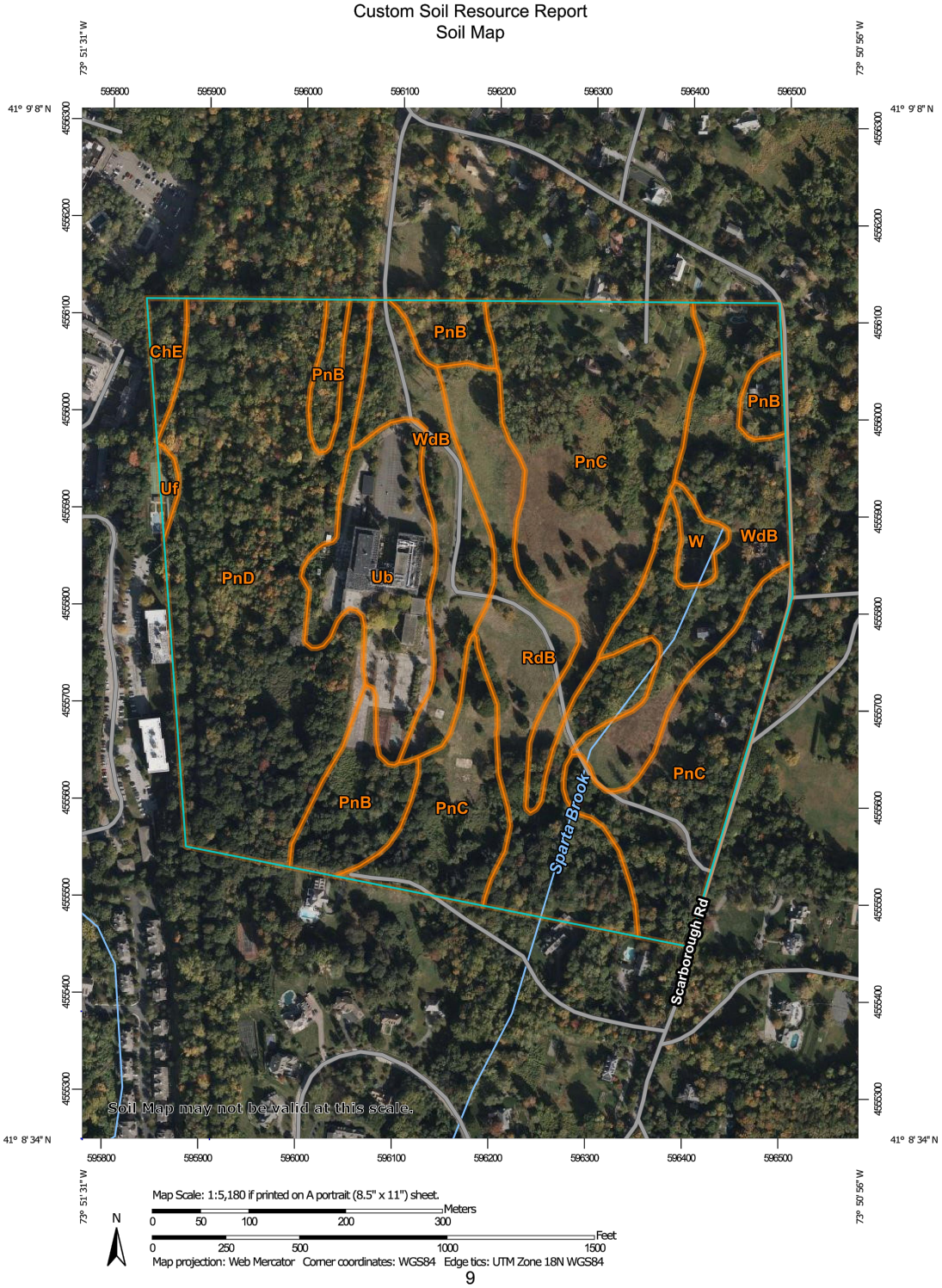
PROJECT NO.: 2221884

PROJECT NAME: **BRIARCLIFF SOLAR**
345 SCARBOROUGH RD, BRIARCLIFF MANOR, NY

DRAWING NUMBER: **A-1**

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Custom Soil Resource Report
Soil Map



9

VERSION 21.1
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ISSUED FOR: SWPPP

DRAWING NAME: **HYDROLOGIC SOIL GROUP MAP**

DRAWN BY:

DATE: MAY 2022

PROJECT NO.: 2221884

PROJECT NAME: **BRIARCLIFF SOLAR**
345 SCARBOROUGH RD, BRIARCLIFF MANOR, NY

DRAWING NUMBER: **A-2a**

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Westchester County, New York
Survey Area Data: Version 17, Sep 1, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 4, 2020—Oct 31, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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ISSUED FOR: SWPPP

DRAWING NAME: **HYDROLOGIC SOIL GROUP LEGEND**

DRAWN BY:

DATE: MAY 2022

PROJECT NO.: 2221884

PROJECT NAME: **BRIARCLIFF SOLAR**
345 SCARBOROUGH RD, BRIARCLIFF MANOR, NY

DRAWING NUMBER: **A-2b**

VERSION 21.1
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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ChE	Charlton loam, 25 to 35 percent slopes	1.0	1.0%
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	6.4	6.7%
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	28.1	29.8%
PnD	Paxton fine sandy loam, 15 to 25 percent slopes	23.3	24.7%
RdB	Ridgebury complex, 3 to 8 percent slopes	11.3	11.9%
Ub	Udorthents, smoothed	7.1	7.6%
Uf	Urban land	0.3	0.3%
W	Water	0.9	0.9%
WdB	Woodbridge loam, 3 to 8 percent slopes	16.1	17.0%
Totals for Area of Interest		**94.4**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a

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ISSUED FOR: SWPPP

DRAWING NAME: HYDROLOGIC SOIL GROUP TABLE

DRAWN BY:

DATE: MAY 2022

PROJECT NO.: 2221884

PROJECT NAME: BRIARCLIFF SOLAR
345 SCARBOROUGH RD, BRIARCLIFF MANOR, NY

DRAWING NUMBER: A-2c

VERSION 21.1
5/11/2022 1:37:20 PM

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

May 5, 2022

Nadia Jagdat
Development Associate
YSG Solar Development Company LLC
79 Madison Avenue
8th Floor
New York, NY 10016

Re: DEC
Briarcliff Solar/5MW/40 of 78 acres
345 Scarborough Rd, Briarcliff Manor, Westchester County
22PR01760

Dear Nadia Jagdat:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6NYCRR Part 617).

We note the project site is located where the Philips Research North America Campus is currently located, eligible to be listed on the State and National Registers of Historic Places (S/NRHP) and within 350 feet of Holly Hill, a S/NRHP-Eligible Building District and the Old Croton Aqueduct, a National Historic Landmark. We have reviewed the solar array drawings dated November 18, 2021, and the documentation of all properties 50-years of age or older located adjacent or within the project boundaries dated April 14, 2022, for the proposed 40-acre, 5,000 KWAC solar photovoltaic array system located within the Town of Briarcliff Manor along Scarborough Road.

The project site is located within a former research campus that features a combination of open lawn areas surrounded by more densely wooded areas. Surrounding the former campus are residential neighborhoods, which are also surrounded by dense vegetation. The project description calls for the demolition of the Philips Research North America Campus. Please note that in accordance with Section 14.09 of the New York State Historic Preservation Act of 1980, demolition of a historic building constitutes an Adverse Impact to the resource. This is an action that can only move forward after all prudent and feasible alternatives to demolition have been considered. At this time, we urge you to reconsider demolition of the research campus. In order to continue our review of the proposed work, the OPRHP requests the following information:

1. Design drawings for the proposed solar facility, including the existing and proposed site plans. The Old Croton Aqueduct boundaries should be noted on the site plan, as well as all proposed fencing and screening methods.
2. Documentation of the Philips Research North America Campus, including existing conditions photographs of the interior and exterior and an engineer's report documenting any potential structural failures that may currently exist.
3. Alternatives exploring locations for the proposed solar arrays that do not require the demolition of the Philips Research North America Campus.

Please submit the requested information via our Cultural Resource Information System (CRIS) at www.nysparks.com/shpo/online-tools/. To submit, log into CRIS as a guest, choose "submit" at the very top of the menu, and then choose "submit new information for an existing project" You will need this project number and your email address.

If you have any questions, please feel free to reach out via email.

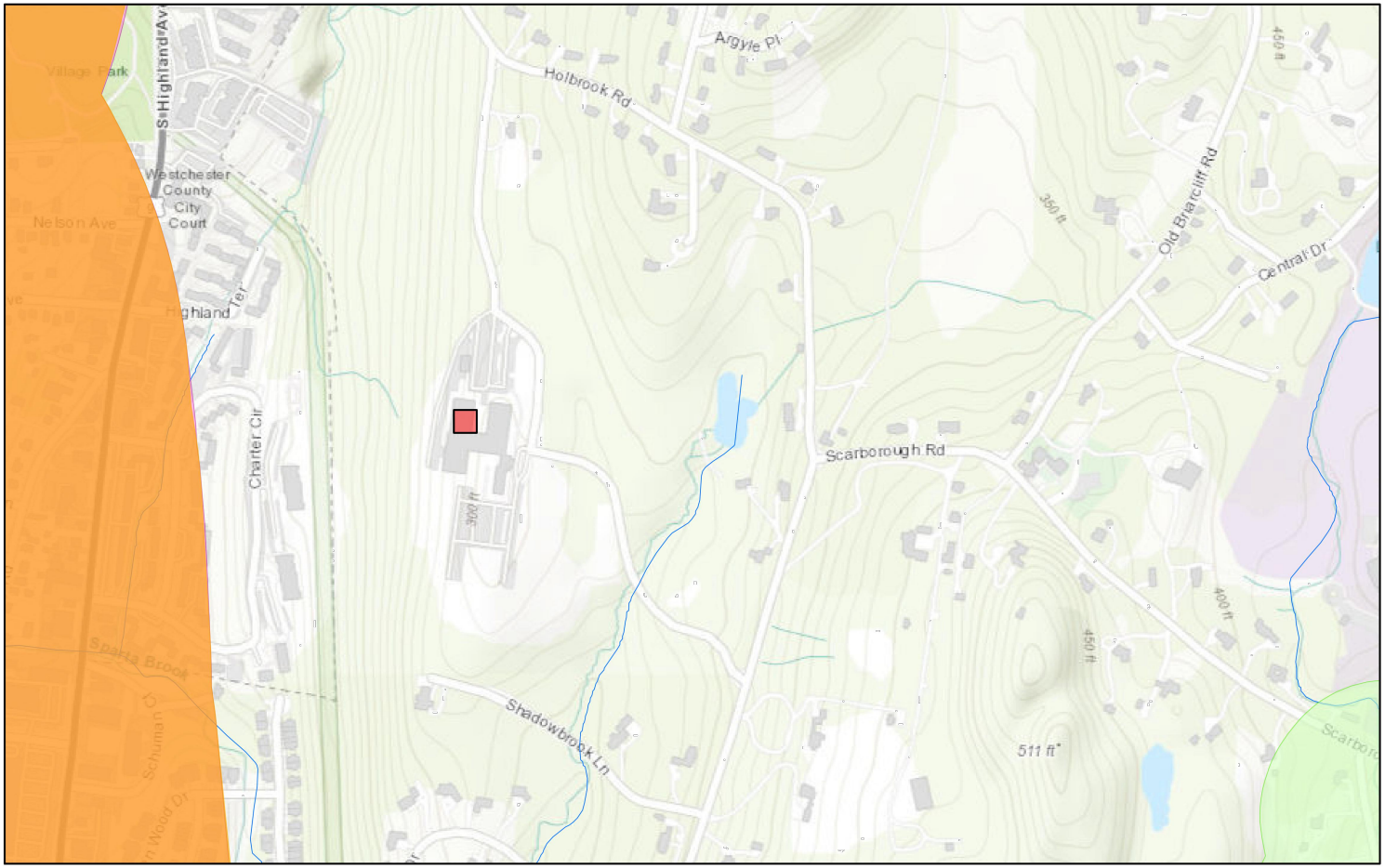
Sincerely,



Sara McIvor
Historic Preservation Technical Specialist
E-mail: sara.mcivor@parks.ny.gov

cc: C. Vandrei – NYS DEC

Environmental Resource Mapper - Briarcliff



May 11, 2022

1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

NYS Department of Environmental Conservation

Not a legal document

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ISSUED FOR: SWPPP

DRAWING NAME: **ENVIRONMENTAL RESOURCE MAP**

DRAWN BY:

DATE: MAY 2022

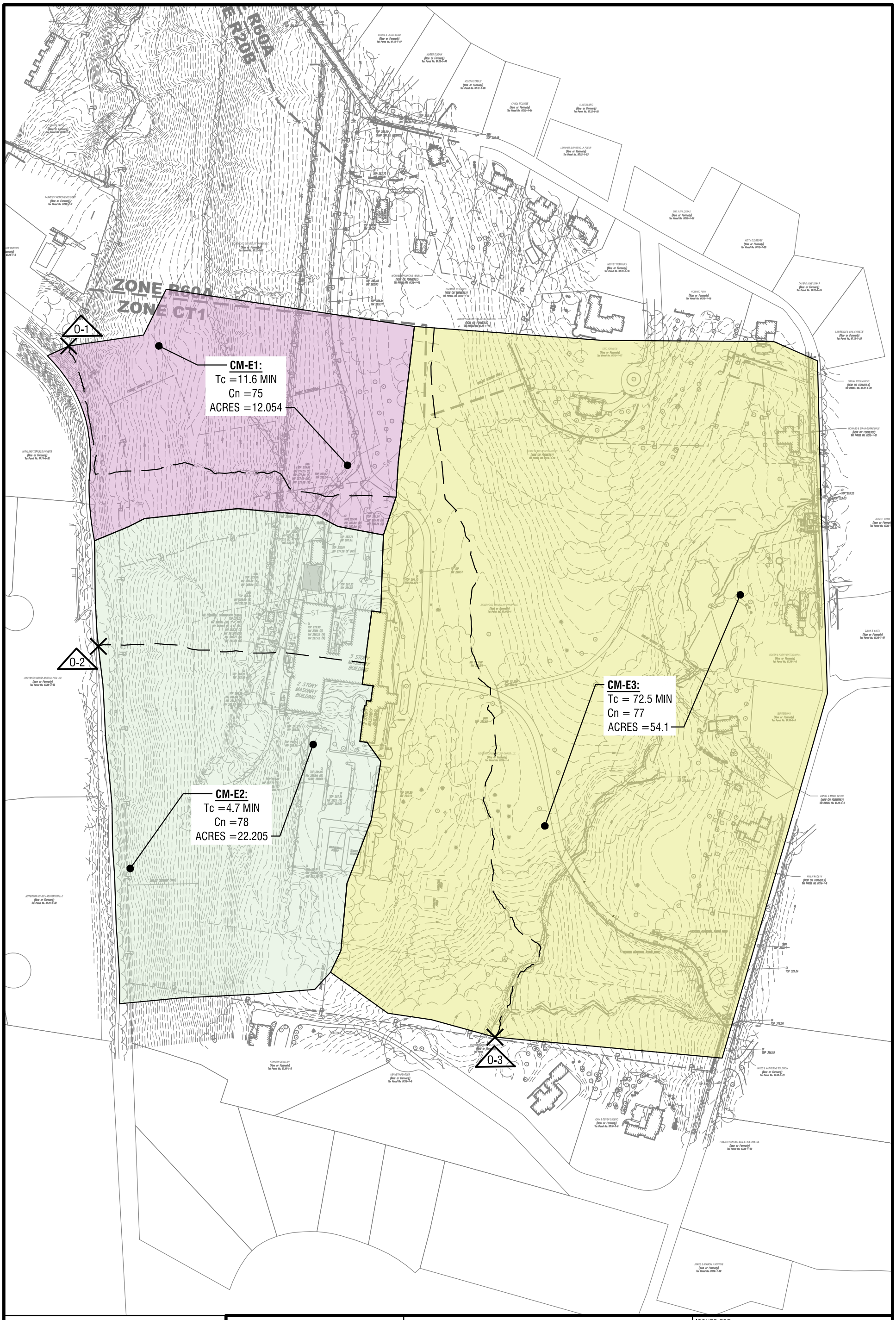
PROJECT NO.: 2221884

PROJECT NAME: **BRIARCLIFF SOLAR**

345 SCARBOROUGH RD, BRIARCLIFF MANOR, NY

DRAWING NUMBER: **A-4**

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ISSUED FOR: SWPPP

DRAWING NAME: EXISTING DRAINAGE MAP

DRAWN BY:

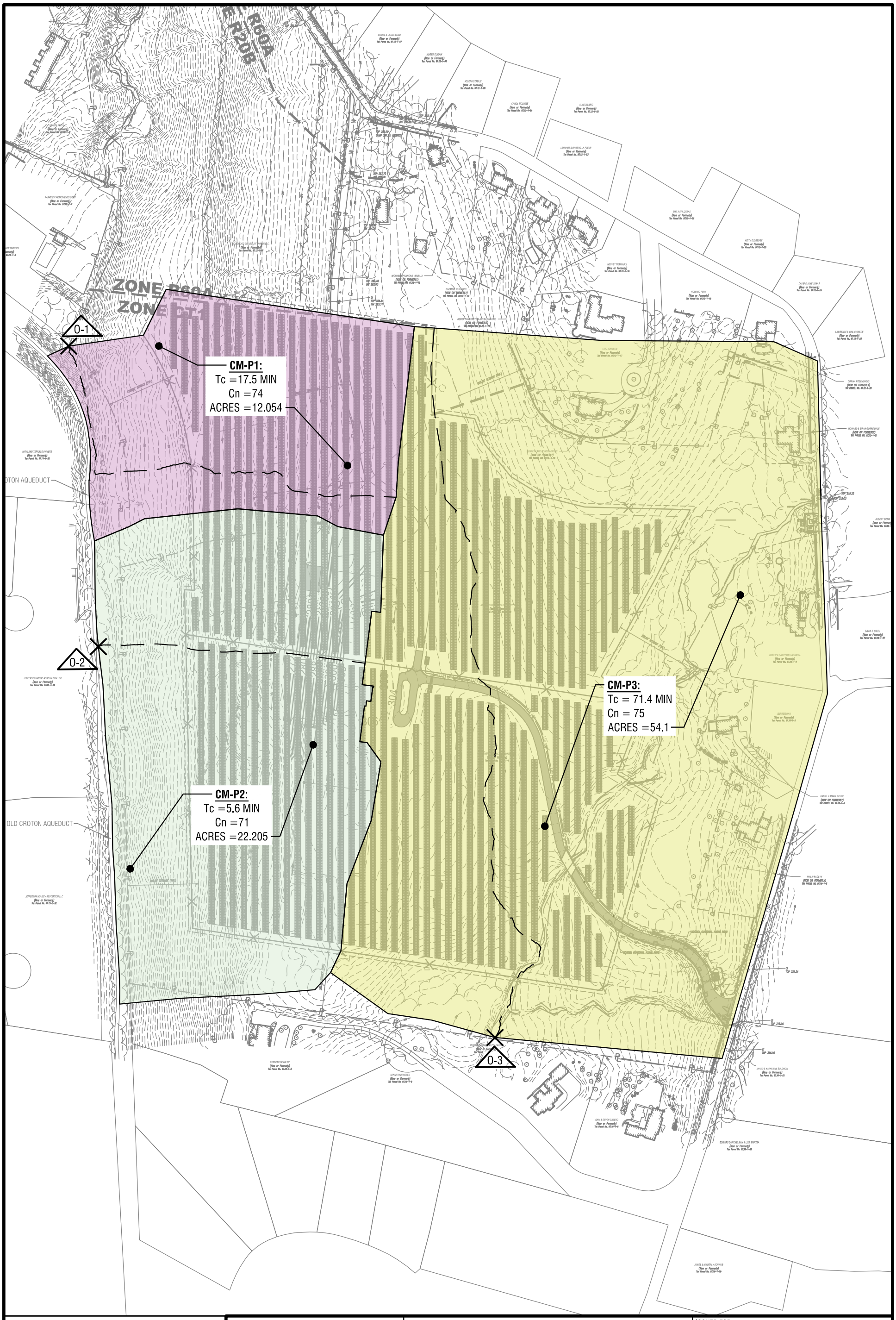
DATE: 5/10/2022

PROJECT NO.: 2221884

PROJECT NAME: **BRIARCLIFF SOLAR ARRAY**
345 SCARBOROUGH RD, BRIARCLIFF MANOR, NY 10510

DRAWING NUMBER: **A-6**

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ISSUED FOR: SWPPP

DRAWING NAME: PROPOSED DRAINAGE MAP

DRAWN BY:

DATE: 5/10/2022

PROJECT NO.: 2221884

PROJECT NAME: **BRIARCLIFF SOLAR ARRAY**
345 SCARBOROUGH RD, BRIARCLIFF MANOR, NY 10510

DRAWING NUMBER: **A-7**

APPENDIX B:
FORMS

Notice of Intent (NOI)
MS4 SWPPP Acceptance Form
SWPPP Preparer Certification Form
Owner/Operator Certification Form
Contractor and Subcontractor Certification Forms
Notice of Termination (NOT)

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NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit

*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information	
1. Owner/Operator Name:	YSG Solar
2. Contact Person:	David Magid
3. Street Address:	79 Madison Avenue, 8th Floor
4. City/State/Zip:	New York, New York 10016
II. Project Site Information	
5. Project/Site Name:	Briarcliff Solar
6. Street Address:	354 Scarborogh Road
7. City/State/Zip:	Briarcliff Manor, New York 10510
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information	
8. SWPPP Reviewed by:	
9. Title/Position:	
10. Date Final SWPPP Reviewed and Accepted:	
IV. Regulated MS4 Information	
11. Name of MS4:	VIllage of Briarcliff Manor
12. MS4 SPDES Permit Identification Number: NYR20A	315
13. Contact Person:	Joshua Ringel
14. Street Address:	1111 Pleasantville Road
15. City/State/Zip:	Briarcliff Manor, New York 10510
16. Telephone Number:	

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges From Construction Activity (GP-0-20-001)

Project Site Information

Project/Site Name

Briarcliff Solar

Owner/Operator Information

Owner/Operator (Company Name/Private Owner/Municipality Name)

YSG Solar

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Michael	M	Mishook
First name	MI	Last Name

Signature

Date

Revised: January 2020

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Owner/Operator Certification Form

SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name: Briarcliff Solar

eNOI Submission Number: _____

eNOI Submitted by: ☐ **Owner/Operator** ☑ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Owner/Operator First Name M.I. Last Name

_____

Signature

_____

Date

Stormwater Pollution Prevention Plan
Contractor Certification Statement
(Responsible for overall SWPPP Compliance)

Briarcliff Solar
354 Scarborogh Road, Village of Briarcliff Manor, Westchester County, New York

This is to certify that the following contracting firm will be responsible for installing, constructing, repairing, inspecting and/or maintaining the erosion and sediment control practices and post-construction stormwater management control practices required by the SWPPP.

Contracting Firm Information

Name: _____

Address: _____

Telephone & Fax: _____

Trained Contractor(s)[1] Responsible for SWPPP Implementation (Provide name, title, and date of last training)

_____

_____

Prior to commencement of construction activity, the following certification shall be issued:

I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharges* from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations.

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

Upon completion of construction activities, the following certification shall be issued, prior to issuance of the NOT:

I hereby certify that that all permanent stormwater management practices required by the SWPPP have been installed in accordance with the contract documents. I further certify that all temporary erosion and sediment control measures have been removed from the site, and that the on-site soils disturbed by construction activity have been restored in accordance with the SWPPP and the NYSDEC Division of Water's publication "Deep-Ripping and Decompaction".

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

[1] "Trained Contractor" means an employee from a contracting (construction) company that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the "trained contractor" shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company that meets the "qualified inspector" qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity). The "Trained Contractor" will be responsible for the day to day implementation of the SWPPP.

[2] Signatory Requirements:

a. For a corporation, this form shall be signed by (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principle business function, or any other person who performs similar policy or decision-making functions for the corporation; or (ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. For a partnership or sole proprietorship, this form shall be signed by a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency, this form shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrators of EPA).

Stormwater Pollution Prevention Plan
Subcontractor Certification Statement
(whose work involves soil disturbance)

Briarcliff Solar
354 Scarborogh Road, Village of Briarcliff Manor, Westchester County, New York

Each Subcontractor whose work will involve soil disturbance of any kind is required to complete and sign this Certification Statement before commencing any construction activity at the site. This completed Certification Statement(s) shall be maintained at the construction site in the Site Log Book.

Subcontracting Firm Information

Name: _____

Address: _____

_____

Telephone & Fax: _____

Trained Contractor(s)[2] Responsible for SWPPP Implementation (Provide name, title, and date of last training)

_____

_____

Prior to commencement of construction activities, the following certification shall be issued:

I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharges* from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations.

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

[2] "Trained Contractor" means an employee from a contracting (construction) company that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the "trained contractor" shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company that meets the "qualified inspector" qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity). The "Trained Contractor" will be responsible for the day to day implementation of the SWPPP.

[2] Signatory Requirements:

a. For a corporation, this form shall be signed by (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principle business function, or any other person who performs similar policy or decision-making functions for the corporation; or (ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. For a partnership or sole proprietorship, this form shall be signed by a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency, this form shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrators of EPA).

APPENDIX C:
PROJECT EVALUATION AND DESIGN CALCULATIONS

Six Step Process Calculation Worksheet

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Appendix C - Table A
Step 1 - Evaluation of Green Infrastructure Planning Measures

Group	Practice	Description	Applicable	Project Specific Evaluation
Preservation of Natural Resources	**Preservation of Undisturbed Areas**	Delineate and place into permanent conservation undisturbed forests, native vegetated areas, riparian corridors, wetlands, and natural terrain.	**N/A**	The proposed site layout has been designed to limit land disturbance to the greatest extent practical.
	Preservation of Buffers	Define, delineate and preserve naturally vegetated buffers along perennial streams, rivers, shorelines and wetlands.	**Yes**	There is a perennial stream located on the project site. For the area adjacent to this water body, a 10-ft naturally vegetated buffer will be applied. No disturbance will occur within this buffer.
	Reduction of Clearing and Grading	Limit clearing and grading to the minimum amount needed for roads, driveways, foundations, utilities and stormwater management facilities.	**Yes**	As a Redevelopment Project, the majority of the land in question had been previously cleared or graded for construction of the existing buildings, roadways, etc. Site clearing and grading required for redevelopment will be minor in nature. The limits of all proposed clearing will be demarcated in the field with orange construction fencing, prior to construction, to prevent unnecessary removal of trees.
	Locating Development in Less Sensitive Areas	Avoid sensitive resource areas such as floodplains, steep slopes, erodible soils, wetlands, mature forests and critical habitats by locating development to fit the terrain in areas that will create the least impact.	**Yes**	There are no floodplains, erodible soils, wetlands, mature forests and critical habitats located on the project site. As such, this green planning measure does not apply.
	Open Space Design	Use clustering, conservation design or open space design to reduce impervious cover, preserve more open space and protect water resources.	**N/A**	The site layout has been designed to maximize open space. Impervious surfaces have been minimized to the greatest extent practical.
	Soil Restoration	Restore the original properties and porosity of the soil by deep till and amendment with compost to reduce the generation of runoff and enhance the runoff reduction performance of practices such as downspout disconnections, grass channels, filter strips, and tree clusters.	**Yes**	Full soil restoration is proposed for all areas of disturbance that will not become hardscape. All areas will be stabilized with seed & mulch, and landscaped areas will be provided.
	Roadway Reduction	Minimize roadway widths and lengths to reduce site impervious area	**N/A**	No new roadways are proposed as part of this project.

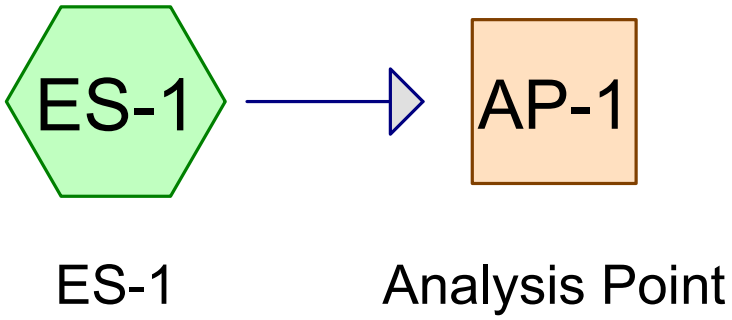
Reduction of Impervious Cover	**Sidewalk Reduction**	Minimize sidewalk lengths and widths to reduce site impervious area	N/A	No new sidewalks are proposed as part of this project.
	Driveway Reduction	Minimize driveway lengths and widths to reduce site impervious area	N/A	No new driveways are proposed as part of this project.
	Cul-de-sac Reduction	Minimize the number of cul-de-sacs and incorporate landscaped areas to reduce their impervious cover.	N/A	No cul-de-sacs are proposed as part of this project.
	Building Footprint Reduction	Reduce the impervious footprint of residences and commercial buildings by using alternate or taller buildings while maintaining the same floor to area ratio.	N/A	No new buildings are proposed as part of this project.
	Parking Reduction	Reduce imperviousness on parking lots by eliminating unneeded spaces, providing compact car spaces and efficient parking lanes, minimizing stall dimensions, using porous pavement surfaces in overflow parking areas, and using multi-storied parking decks where appropriate.	N/A	No new parking is proposed as part of this project.

APPENDIX D:
PRE-DEVELOPMENT STORMWATER MODELING

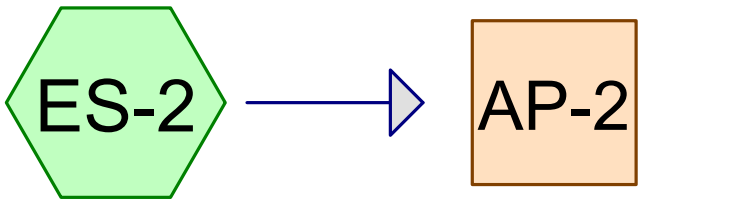
Existing Conditions HydroCAD Report

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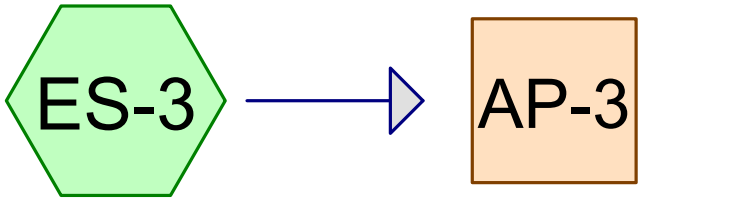
EXISTING



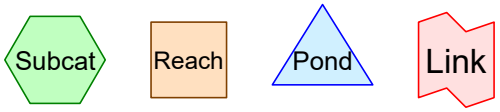
ES-1 Analysis Point



ES-2 Analysis Point



ES-3 Analysis Point



Project Notes

Defined 9 rainfall events from NY-Briarcliff IDF
Copied 9 events from NY-Briarcliff 24-hr S1 storm

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	Type III 24-hr		Default	24.00	1	2.78	2
2	10-yr	Type III 24-hr		Default	24.00	1	5.13	2
3	100-yr	Type III 24-hr		Default	24.00	1	9.26	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
9.882	74	>75% Grass cover, Good, HSG C (ES-3)
11.552	80	>75% Grass cover, Good, HSG D (ES-1, ES-2, ES-3)
1.229	98	Paved parking, HSG C (ES-2, ES-3)
4.176	98	Paved parking, HSG D (ES-1, ES-2)
1.791	98	Unconnected pavement, HSG D (ES-3)
0.108	60	Woods, Fair, HSG B (ES-1)
45.663	73	Woods, Fair, HSG C (ES-1, ES-2, ES-3)
13.958	79	Woods, Fair, HSG D (ES-1, ES-2, ES-3)
88.359	**77**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.108	HSG B	ES-1
56.774	HSG C	ES-1, ES-2, ES-3
31.477	HSG D	ES-1, ES-2, ES-3
0.000	Other	
88.359		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	9.882	11.552	0.000	21.434	>75% Grass cover, Good	ES-1, ES-2, ES-3
0.000	0.000	1.229	4.176	0.000	5.405	Paved parking	ES-1, ES-2, ES-3
0.000	0.000	0.000	1.791	0.000	1.791	Unconnected pavement	ES-3
0.000	0.108	45.663	13.958	0.000	59.729	Woods, Fair	ES-1, ES-2, ES-3
0.000	**0.108**	**56.774**	**31.477**	**0.000**	**88.359**	**TOTAL AREA**	

Notes Listing (all nodes)

Line#	Node Number	Notes
1	Project	Defined 9 rainfall events from NY-Briarcliff IDF
2		Copied 9 events from NY-Briarcliff 24-hr S1 storm

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES-1: ES-1 Runoff Area=12.054 ac 5.62% Impervious Runoff Depth=0.82"
Flow Length=1,299' Tc=11.6 min CN=75 Runoff=8.87 cfs 0.824 af

Subcatchment ES-2: ES-2 Runoff Area=22.205 ac 15.92% Impervious Runoff Depth=0.97"
Flow Length=780' Tc=6.0 min CN=78 Runoff=24.41 cfs 1.804 af

Subcatchment ES-3: ES-3 Runoff Area=54.100 ac 5.52% Impervious Runoff Depth=0.92"
Flow Length=2,210' Tc=72.5 min CN=77 Runoff=19.22 cfs 4.154 af

Reach AP-1: Analysis Point Inflow=8.87 cfs 0.824 af
Outflow=8.87 cfs 0.824 af

Reach AP-2: Analysis Point Inflow=24.41 cfs 1.804 af
Outflow=24.41 cfs 1.804 af

Reach AP-3: Analysis Point Inflow=19.22 cfs 4.154 af
Outflow=19.22 cfs 4.154 af

Total Runoff Area = 88.359 ac Runoff Volume = 6.782 af Average Runoff Depth = 0.92"
91.86% Pervious = 81.163 ac 8.14% Impervious = 7.196 ac

Summary for Subcatchment ES-1: ES-1

Runoff = 8.87 cfs @ 12.18 hrs, Volume= 0.824 af, Depth= 0.82"
Routed to Reach AP-1 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-yr Rainfall=2.78"

Area (ac)	CN	Description
0.677	98	Paved parking, HSG D
0.108	60	Woods, Fair, HSG B
10.159	73	Woods, Fair, HSG C
0.540	79	Woods, Fair, HSG D
0.570	80	>75% Grass cover, Good, HSG D
12.054	75	Weighted Average
11.377		94.38% Pervious Area
0.677		5.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	100	0.0400	1.87		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 3.41"
0.3	100	0.0700	5.37		**Shallow Concentrated Flow, SCF1** Paved Kv= 20.3 fps
1.6	175	0.1300	1.80		**Shallow Concentrated Flow, SCF2** Woodland Kv= 5.0 fps
2.2	300	0.2000	2.24		**Shallow Concentrated Flow, SCF3** Woodland Kv= 5.0 fps
1.6	191	0.1500	1.94		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
0.2	40	0.3700	3.04		**Shallow Concentrated Flow, SCF5** Woodland Kv= 5.0 fps
3.3	223	0.0500	1.12		**Shallow Concentrated Flow, SCF6** Woodland Kv= 5.0 fps
1.5	170	0.1500	1.94		**Shallow Concentrated Flow, SCF7** Woodland Kv= 5.0 fps
11.6	1,299	Total			

Summary for Subcatchment ES-2: ES-2

Runoff = 24.41 cfs @ 12.09 hrs, Volume= 1.804 af, Depth= 0.97"
Routed to Reach AP-2 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-yr Rainfall=2.78"

Area (ac)	CN	Description
0.035	98	Paved parking, HSG C
3.499	98	Paved parking, HSG D
16.693	73	Woods, Fair, HSG C
0.878	79	Woods, Fair, HSG D
1.100	80	>75% Grass cover, Good, HSG D
22.205	78	Weighted Average
18.671		84.08% Pervious Area
3.534		15.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	100	0.2400	3.84		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 3.41"
0.2	100	0.2400	9.94		**Shallow Concentrated Flow, SCF1** Paved Kv= 20.3 fps
0.4	80	0.0250	3.21		**Shallow Concentrated Flow, SCF2** Paved Kv= 20.3 fps
0.8	105	0.2000	2.24		**Shallow Concentrated Flow, SCF3** Woodland Kv= 5.0 fps
2.9	395	0.2000	2.24		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
4.7	780	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment ES-3: ES-3

Runoff = 19.22 cfs @ 13.05 hrs, Volume= 4.154 af, Depth= 0.92"
Routed to Reach AP-3 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-yr Rainfall=2.78"

Area (ac)	CN	Description
1.194	98	Paved parking, HSG C
1.791	98	Unconnected pavement, HSG D
18.811	73	Woods, Fair, HSG C
12.540	79	Woods, Fair, HSG D
9.882	74	>75% Grass cover, Good, HSG C
9.882	80	>75% Grass cover, Good, HSG D
54.100	77	Weighted Average
51.115		94.48% Pervious Area
2.985		5.52% Impervious Area
1.791		60.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.2	100	0.0200	0.05		**Sheet Flow, SF** Woods: Dense underbrush n= 0.800 P2= 3.41"
3.8	160	0.0200	0.71		**Shallow Concentrated Flow, SCF1** Woodland Kv= 5.0 fps
9.0	465	0.0150	0.86		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
8.7	365	0.0100	0.70		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
8.9	460	0.0150	0.86		**Shallow Concentrated Flow, SCF4** Short Grass Pasture Kv= 7.0 fps
3.7	350	0.1000	1.58		**Shallow Concentrated Flow, SCF5** Woodland Kv= 5.0 fps
2.2	310	0.0250	2.37		**Shallow Concentrated Flow, SCF6** Grassed Waterway Kv= 15.0 fps
72.5	2,210	Total			

Summary for Reach AP-1: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 12.054 ac, 5.62% Impervious, Inflow Depth = 0.82" for 1-yr event
Inflow = 8.87 cfs @ 12.18 hrs, Volume= 0.824 af
Outflow = 8.87 cfs @ 12.18 hrs, Volume= 0.824 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-2: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 22.205 ac, 15.92% Impervious, Inflow Depth = 0.97" for 1-yr event
Inflow = 24.41 cfs @ 12.09 hrs, Volume= 1.804 af
Outflow = 24.41 cfs @ 12.09 hrs, Volume= 1.804 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-3: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 54.100 ac, 5.52% Impervious, Inflow Depth = 0.92" for 1-yr event
Inflow = 19.22 cfs @ 13.05 hrs, Volume= 4.154 af
Outflow = 19.22 cfs @ 13.05 hrs, Volume= 4.154 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES-1: ES-1 Runoff Area=12.054 ac 5.62% Impervious Runoff Depth=2.56"
Flow Length=1,299' Tc=11.6 min CN=75 Runoff=29.92 cfs 2.567 af

Subcatchment ES-2: ES-2 Runoff Area=22.205 ac 15.92% Impervious Runoff Depth=2.82"
Flow Length=780' Tc=6.0 min CN=78 Runoff=73.53 cfs 5.223 af

Subcatchment ES-3: ES-3 Runoff Area=54.100 ac 5.52% Impervious Runoff Depth=2.73"
Flow Length=2,210' Tc=72.5 min CN=77 Runoff=60.80 cfs 12.317 af

Reach AP-1: Analysis Point Inflow=29.92 cfs 2.567 af
Outflow=29.92 cfs 2.567 af

Reach AP-2: Analysis Point Inflow=73.53 cfs 5.223 af
Outflow=73.53 cfs 5.223 af

Reach AP-3: Analysis Point Inflow=60.80 cfs 12.317 af
Outflow=60.80 cfs 12.317 af

Total Runoff Area = 88.359 ac Runoff Volume = 20.107 af Average Runoff Depth = 2.73"
91.86% Pervious = 81.163 ac 8.14% Impervious = 7.196 ac

Summary for Subcatchment ES-1: ES-1

Runoff = 29.92 cfs @ 12.16 hrs, Volume= 2.567 af, Depth= 2.56"
Routed to Reach AP-1 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.13"

Area (ac)	CN	Description
0.677	98	Paved parking, HSG D
0.108	60	Woods, Fair, HSG B
10.159	73	Woods, Fair, HSG C
0.540	79	Woods, Fair, HSG D
0.570	80	>75% Grass cover, Good, HSG D
12.054	75	Weighted Average
11.377		94.38% Pervious Area
0.677		5.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	100	0.0400	1.87		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 3.41"
0.3	100	0.0700	5.37		**Shallow Concentrated Flow, SCF1** Paved Kv= 20.3 fps
1.6	175	0.1300	1.80		**Shallow Concentrated Flow, SCF2** Woodland Kv= 5.0 fps
2.2	300	0.2000	2.24		**Shallow Concentrated Flow, SCF3** Woodland Kv= 5.0 fps
1.6	191	0.1500	1.94		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
0.2	40	0.3700	3.04		**Shallow Concentrated Flow, SCF5** Woodland Kv= 5.0 fps
3.3	223	0.0500	1.12		**Shallow Concentrated Flow, SCF6** Woodland Kv= 5.0 fps
1.5	170	0.1500	1.94		**Shallow Concentrated Flow, SCF7** Woodland Kv= 5.0 fps
11.6	1,299	Total			

Summary for Subcatchment ES-2: ES-2

Runoff = 73.53 cfs @ 12.09 hrs, Volume= 5.223 af, Depth= 2.82"
Routed to Reach AP-2 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.13"

Area (ac)	CN	Description
0.035	98	Paved parking, HSG C
3.499	98	Paved parking, HSG D
16.693	73	Woods, Fair, HSG C
0.878	79	Woods, Fair, HSG D
1.100	80	>75% Grass cover, Good, HSG D
22.205	78	Weighted Average
18.671		84.08% Pervious Area
3.534		15.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	100	0.2400	3.84		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 3.41"
0.2	100	0.2400	9.94		**Shallow Concentrated Flow, SCF1** Paved Kv= 20.3 fps
0.4	80	0.0250	3.21		**Shallow Concentrated Flow, SCF2** Paved Kv= 20.3 fps
0.8	105	0.2000	2.24		**Shallow Concentrated Flow, SCF3** Woodland Kv= 5.0 fps
2.9	395	0.2000	2.24		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
4.7	780	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment ES-3: ES-3

Runoff = 60.80 cfs @ 12.97 hrs, Volume= 12.317 af, Depth= 2.73"
Routed to Reach AP-3 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.13"

Area (ac)	CN	Description
1.194	98	Paved parking, HSG C
1.791	98	Unconnected pavement, HSG D
18.811	73	Woods, Fair, HSG C
12.540	79	Woods, Fair, HSG D
9.882	74	>75% Grass cover, Good, HSG C
9.882	80	>75% Grass cover, Good, HSG D
54.100	77	Weighted Average
51.115		94.48% Pervious Area
2.985		5.52% Impervious Area
1.791		60.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.2	100	0.0200	0.05		**Sheet Flow, SF** Woods: Dense underbrush n= 0.800 P2= 3.41"
3.8	160	0.0200	0.71		**Shallow Concentrated Flow, SCF1** Woodland Kv= 5.0 fps
9.0	465	0.0150	0.86		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
8.7	365	0.0100	0.70		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
8.9	460	0.0150	0.86		**Shallow Concentrated Flow, SCF4** Short Grass Pasture Kv= 7.0 fps
3.7	350	0.1000	1.58		**Shallow Concentrated Flow, SCF5** Woodland Kv= 5.0 fps
2.2	310	0.0250	2.37		**Shallow Concentrated Flow, SCF6** Grassed Waterway Kv= 15.0 fps
72.5	2,210	Total			

Summary for Reach AP-1: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 12.054 ac, 5.62% Impervious, Inflow Depth = 2.56" for 10-yr event
Inflow = 29.92 cfs @ 12.16 hrs, Volume= 2.567 af
Outflow = 29.92 cfs @ 12.16 hrs, Volume= 2.567 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-2: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 22.205 ac, 15.92% Impervious, Inflow Depth = 2.82" for 10-yr event
Inflow = 73.53 cfs @ 12.09 hrs, Volume= 5.223 af
Outflow = 73.53 cfs @ 12.09 hrs, Volume= 5.223 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-3: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 54.100 ac, 5.52% Impervious, Inflow Depth = 2.73" for 10-yr event
Inflow = 60.80 cfs @ 12.97 hrs, Volume= 12.317 af
Outflow = 60.80 cfs @ 12.97 hrs, Volume= 12.317 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES-1: ES-1 Runoff Area=12.054 ac 5.62% Impervious Runoff Depth=6.19"
Flow Length=1,299' Tc=11.6 min CN=75 Runoff=72.24 cfs 6.219 af

Subcatchment ES-2: ES-2 Runoff Area=22.205 ac 15.92% Impervious Runoff Depth=6.57"
Flow Length=780' Tc=6.0 min CN=78 Runoff=168.02 cfs 12.150 af

Subcatchment ES-3: ES-3 Runoff Area=54.100 ac 5.52% Impervious Runoff Depth=6.44"
Flow Length=2,210' Tc=72.5 min CN=77 Runoff=142.85 cfs 29.040 af

Reach AP-1: Analysis Point Inflow=72.24 cfs 6.219 af
Outflow=72.24 cfs 6.219 af

Reach AP-2: Analysis Point Inflow=168.02 cfs 12.150 af
Outflow=168.02 cfs 12.150 af

Reach AP-3: Analysis Point Inflow=142.85 cfs 29.040 af
Outflow=142.85 cfs 29.040 af

Total Runoff Area = 88.359 ac Runoff Volume = 47.410 af Average Runoff Depth = 6.44"
91.86% Pervious = 81.163 ac 8.14% Impervious = 7.196 ac

Summary for Subcatchment ES-1: ES-1

Runoff = 72.24 cfs @ 12.16 hrs, Volume= 6.219 af, Depth= 6.19"
Routed to Reach AP-1 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-yr Rainfall=9.26"

Area (ac)	CN	Description
0.677	98	Paved parking, HSG D
0.108	60	Woods, Fair, HSG B
10.159	73	Woods, Fair, HSG C
0.540	79	Woods, Fair, HSG D
0.570	80	>75% Grass cover, Good, HSG D
12.054	75	Weighted Average
11.377		94.38% Pervious Area
0.677		5.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	100	0.0400	1.87		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 3.41"
0.3	100	0.0700	5.37		**Shallow Concentrated Flow, SCF1** Paved Kv= 20.3 fps
1.6	175	0.1300	1.80		**Shallow Concentrated Flow, SCF2** Woodland Kv= 5.0 fps
2.2	300	0.2000	2.24		**Shallow Concentrated Flow, SCF3** Woodland Kv= 5.0 fps
1.6	191	0.1500	1.94		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
0.2	40	0.3700	3.04		**Shallow Concentrated Flow, SCF5** Woodland Kv= 5.0 fps
3.3	223	0.0500	1.12		**Shallow Concentrated Flow, SCF6** Woodland Kv= 5.0 fps
1.5	170	0.1500	1.94		**Shallow Concentrated Flow, SCF7** Woodland Kv= 5.0 fps
11.6	1,299	Total			

Summary for Subcatchment ES-2: ES-2

Runoff = 168.02 cfs @ 12.09 hrs, Volume= 12.150 af, Depth= 6.57"
Routed to Reach AP-2 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-yr Rainfall=9.26"

Area (ac)	CN	Description
0.035	98	Paved parking, HSG C
3.499	98	Paved parking, HSG D
16.693	73	Woods, Fair, HSG C
0.878	79	Woods, Fair, HSG D
1.100	80	>75% Grass cover, Good, HSG D
22.205	78	Weighted Average
18.671		84.08% Pervious Area
3.534		15.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	100	0.2400	3.84		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 3.41"
0.2	100	0.2400	9.94		**Shallow Concentrated Flow, SCF1** Paved Kv= 20.3 fps
0.4	80	0.0250	3.21		**Shallow Concentrated Flow, SCF2** Paved Kv= 20.3 fps
0.8	105	0.2000	2.24		**Shallow Concentrated Flow, SCF3** Woodland Kv= 5.0 fps
2.9	395	0.2000	2.24		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
4.7	780	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment ES-3: ES-3

Runoff = 142.85 cfs @ 12.97 hrs, Volume= 29.040 af, Depth= 6.44"
Routed to Reach AP-3 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-yr Rainfall=9.26"

Area (ac)	CN	Description
1.194	98	Paved parking, HSG C
1.791	98	Unconnected pavement, HSG D
18.811	73	Woods, Fair, HSG C
12.540	79	Woods, Fair, HSG D
9.882	74	>75% Grass cover, Good, HSG C
9.882	80	>75% Grass cover, Good, HSG D
54.100	77	Weighted Average
51.115		94.48% Pervious Area
2.985		5.52% Impervious Area
1.791		60.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.2	100	0.0200	0.05		**Sheet Flow, SF** Woods: Dense underbrush n= 0.800 P2= 3.41"
3.8	160	0.0200	0.71		**Shallow Concentrated Flow, SCF1** Woodland Kv= 5.0 fps
9.0	465	0.0150	0.86		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
8.7	365	0.0100	0.70		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
8.9	460	0.0150	0.86		**Shallow Concentrated Flow, SCF4** Short Grass Pasture Kv= 7.0 fps
3.7	350	0.1000	1.58		**Shallow Concentrated Flow, SCF5** Woodland Kv= 5.0 fps
2.2	310	0.0250	2.37		**Shallow Concentrated Flow, SCF6** Grassed Waterway Kv= 15.0 fps
72.5	2,210	Total			

Summary for Reach AP-1: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 12.054 ac, 5.62% Impervious, Inflow Depth = 6.19" for 100-yr event
Inflow = 72.24 cfs @ 12.16 hrs, Volume= 6.219 af
Outflow = 72.24 cfs @ 12.16 hrs, Volume= 6.219 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-2: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 22.205 ac, 15.92% Impervious, Inflow Depth = 6.57" for 100-yr event
Inflow = 168.02 cfs @ 12.09 hrs, Volume= 12.150 af
Outflow = 168.02 cfs @ 12.09 hrs, Volume= 12.150 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-3: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 54.100 ac, 5.52% Impervious, Inflow Depth = 6.44" for 100-yr event
Inflow = 142.85 cfs @ 12.97 hrs, Volume= 29.040 af
Outflow = 142.85 cfs @ 12.97 hrs, Volume= 29.040 af, Atten= 0%, Lag= 0.0 min

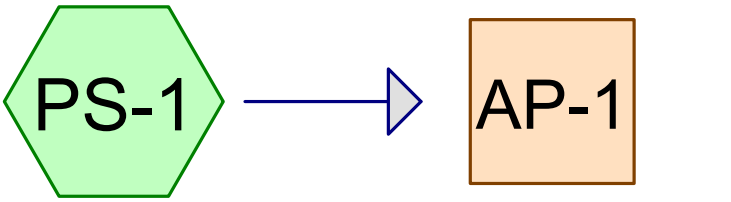
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

APPENDIX E:
POST-DEVELOPMENT STORMWATER MODELING

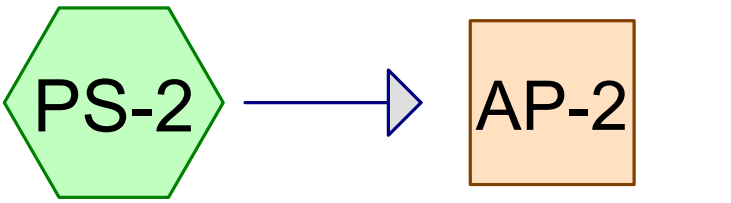
Proposed Conditions HdyroCAD Report

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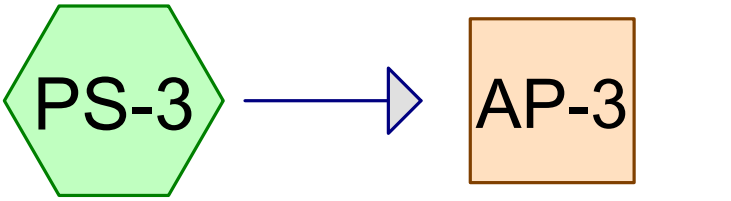
PROPOSED



PS-1 Analysis Point



PS-2 Analysis Point



PS-3 Analysis Point

Subcat Reach Pond Link

Routing Diagram for 3_App E_Post-Development Model
Prepared by LaBella Associates, Printed 5/11/2022
HydroCAD® 10.10-6a s/n 09582 © 2020 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	Type III 24-hr		Default	24.00	1	2.78	2
2	10-yr	Type III 24-hr		Default	24.00	1	5.13	2
3	100-yr	Type III 24-hr		Default	24.00	1	9.26	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
5.206	61	>75% Grass cover, Good, HSG B (PS-2)
41.478	74	>75% Grass cover, Good, HSG C (PS-1, PS-2, PS-3)
5.649	80	>75% Grass cover, Good, HSG D (PS-3)
0.267	98	Paved parking, HSG C (PS-1)
2.395	98	Paved parking, HSG D (PS-3)
33.364	73	Woods, Fair, HSG C (PS-1, PS-2, PS-3)
88.359	**74**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
5.206	HSG B	PS-2
75.109	HSG C	PS-1, PS-2, PS-3
8.044	HSG D	PS-3
0.000	Other	
88.359		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	5.206	41.478	5.649	0.000	52.333	>75% Grass cover, Good	PS-1, PS-2, PS-3
0.000	0.000	0.267	2.395	0.000	2.662	Paved parking	PS-1, PS-3
0.000	0.000	33.364	0.000	0.000	33.364	Woods, Fair	PS-1, PS-2, PS-3
0.000	**5.206**	**75.109**	**8.044**	**0.000**	**88.359**	**TOTAL AREA**	

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PS-1: PS-1 Runoff Area=12.054 ac 2.22% Impervious Runoff Depth=0.77"
Flow Length=1,299' Tc=17.5 min CN=74 Runoff=7.03 cfs 0.775 af

Subcatchment PS-2: PS-2 Runoff Area=22.205 ac 0.00% Impervious Runoff Depth=0.64"
Flow Length=780' Tc=6.0 min CN=71 Runoff=14.23 cfs 1.179 af

Subcatchment PS-3: PS-3 Runoff Area=54.100 ac 4.43% Impervious Runoff Depth=0.82"
Flow Length=2,210' Tc=71.4 min CN=75 Runoff=16.77 cfs 3.697 af

Reach AP-1: Analysis Point Inflow=7.03 cfs 0.775 af
Outflow=7.03 cfs 0.775 af

Reach AP-2: Analysis Point Inflow=14.23 cfs 1.179 af
Outflow=14.23 cfs 1.179 af

Reach AP-3: Analysis Point Inflow=16.77 cfs 3.697 af
Outflow=16.77 cfs 3.697 af

Total Runoff Area = 88.359 ac Runoff Volume = 5.651 af Average Runoff Depth = 0.77"
96.99% Pervious = 85.697 ac 3.01% Impervious = 2.662 ac

Summary for Subcatchment PS-1: PS-1

Runoff = 7.03 cfs @ 12.27 hrs, Volume= 0.775 af, Depth= 0.77"
Routed to Reach AP-1 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-yr Rainfall=2.78"

Area (ac)	CN	Description
8.621	74	>75% Grass cover, Good, HSG C
0.267	98	Paved parking, HSG C
3.166	73	Woods, Fair, HSG C
12.054	74	Weighted Average
11.787		97.78% Pervious Area
0.267		2.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0400	0.23		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 3.41"
0.9	100	0.0700	1.85		**Shallow Concentrated Flow, SCF1** Short Grass Pasture Kv= 7.0 fps
1.2	175	0.1300	2.52		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
1.6	300	0.2000	3.13		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
1.6	191	0.1500	1.94		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
0.2	40	0.3700	3.04		**Shallow Concentrated Flow, SCF5** Woodland Kv= 5.0 fps
3.3	223	0.0500	1.12		**Shallow Concentrated Flow, SCF6** Woodland Kv= 5.0 fps
1.5	170	0.1500	1.94		**Shallow Concentrated Flow, SCF7** Woodland Kv= 5.0 fps
17.5	1,299	Total			

Summary for Subcatchment PS-2: PS-2

Runoff = 14.23 cfs @ 12.10 hrs, Volume= 1.179 af, Depth= 0.64"
Routed to Reach AP-2 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-yr Rainfall=2.78"

Area (ac)	CN	Description
5.206	61	>75% Grass cover, Good, HSG B
8.845	74	>75% Grass cover, Good, HSG C
8.154	73	Woods, Fair, HSG C
22.205	71	Weighted Average
22.205		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	100	0.2400	3.84		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 3.41"
0.5	100	0.2400	3.43		**Shallow Concentrated Flow, SCF1** Short Grass Pasture Kv= 7.0 fps
1.2	80	0.0250	1.11		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
0.6	105	0.2000	3.13		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
2.9	395	0.2000	2.24		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
5.6	780	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment PS-3: PS-3

Runoff = 16.77 cfs @ 13.02 hrs, Volume= 3.697 af, Depth= 0.82"
Routed to Reach AP-3 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-yr Rainfall=2.78"

Area (ac)	CN	Description
24.012	74	>75% Grass cover, Good, HSG C
2.395	98	Paved parking, HSG D
5.649	80	>75% Grass cover, Good, HSG D
22.044	73	Woods, Fair, HSG C
54.100	75	Weighted Average
51.705		95.57% Pervious Area
2.395		4.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.2	100	0.0200	0.05		**Sheet Flow, SF** Woods: Dense underbrush n= 0.800 P2= 3.41"
3.8	160	0.0200	0.71		**Shallow Concentrated Flow, SCF1** Woodland Kv= 5.0 fps
9.0	465	0.0150	0.86		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
8.7	365	0.0100	0.70		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
8.9	460	0.0150	0.86		**Shallow Concentrated Flow, SCF4** Short Grass Pasture Kv= 7.0 fps
2.6	350	0.1000	2.21		**Shallow Concentrated Flow, SCF5** Short Grass Pasture Kv= 7.0 fps
2.2	310	0.0250	2.37		**Shallow Concentrated Flow, SCF6** Grassed Waterway Kv= 15.0 fps
71.4	2,210	Total			

Summary for Reach AP-1: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 12.054 ac, 2.22% Impervious, Inflow Depth = 0.77" for 1-yr event
Inflow = 7.03 cfs @ 12.27 hrs, Volume= 0.775 af
Outflow = 7.03 cfs @ 12.27 hrs, Volume= 0.775 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-2: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 22.205 ac, 0.00% Impervious, Inflow Depth = 0.64" for 1-yr event
Inflow = 14.23 cfs @ 12.10 hrs, Volume= 1.179 af
Outflow = 14.23 cfs @ 12.10 hrs, Volume= 1.179 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-3: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 54.100 ac, 4.43% Impervious, Inflow Depth = 0.82" for 1-yr event
Inflow = 16.77 cfs @ 13.02 hrs, Volume= 3.697 af
Outflow = 16.77 cfs @ 13.02 hrs, Volume= 3.697 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PS-1: PS-1 Runoff Area=12.054 ac 2.22% Impervious Runoff Depth=2.47"
Flow Length=1,299' Tc=17.5 min CN=74 Runoff=24.67 cfs 2.479 af

Subcatchment PS-2: PS-2 Runoff Area=22.205 ac 0.00% Impervious Runoff Depth=2.22"
Flow Length=780' Tc=6.0 min CN=71 Runoff=57.02 cfs 4.099 af

Subcatchment PS-3: PS-3 Runoff Area=54.100 ac 4.43% Impervious Runoff Depth=2.56"
Flow Length=2,210' Tc=71.4 min CN=75 Runoff=56.94 cfs 11.519 af

Reach AP-1: Analysis Point Inflow=24.67 cfs 2.479 af
Outflow=24.67 cfs 2.479 af

Reach AP-2: Analysis Point Inflow=57.02 cfs 4.099 af
Outflow=57.02 cfs 4.099 af

Reach AP-3: Analysis Point Inflow=56.94 cfs 11.519 af
Outflow=56.94 cfs 11.519 af

Total Runoff Area = 88.359 ac Runoff Volume = 18.098 af Average Runoff Depth = 2.46"
96.99% Pervious = 85.697 ac 3.01% Impervious = 2.662 ac

Summary for Subcatchment PS-1: PS-1

Runoff = 24.67 cfs @ 12.24 hrs, Volume= 2.479 af, Depth= 2.47"
Routed to Reach AP-1 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.13"

Area (ac)	CN	Description
8.621	74	>75% Grass cover, Good, HSG C
0.267	98	Paved parking, HSG C
3.166	73	Woods, Fair, HSG C
12.054	74	Weighted Average
11.787		97.78% Pervious Area
0.267		2.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0400	0.23		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 3.41"
0.9	100	0.0700	1.85		**Shallow Concentrated Flow, SCF1** Short Grass Pasture Kv= 7.0 fps
1.2	175	0.1300	2.52		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
1.6	300	0.2000	3.13		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
1.6	191	0.1500	1.94		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
0.2	40	0.3700	3.04		**Shallow Concentrated Flow, SCF5** Woodland Kv= 5.0 fps
3.3	223	0.0500	1.12		**Shallow Concentrated Flow, SCF6** Woodland Kv= 5.0 fps
1.5	170	0.1500	1.94		**Shallow Concentrated Flow, SCF7** Woodland Kv= 5.0 fps
17.5	1,299	Total			

Summary for Subcatchment PS-2: PS-2

Runoff = 57.02 cfs @ 12.09 hrs, Volume= 4.099 af, Depth= 2.22"
Routed to Reach AP-2 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.13"

Area (ac)	CN	Description
5.206	61	>75% Grass cover, Good, HSG B
8.845	74	>75% Grass cover, Good, HSG C
8.154	73	Woods, Fair, HSG C
22.205	71	Weighted Average
22.205		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	100	0.2400	3.84		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 3.41"
0.5	100	0.2400	3.43		**Shallow Concentrated Flow, SCF1** Short Grass Pasture Kv= 7.0 fps
1.2	80	0.0250	1.11		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
0.6	105	0.2000	3.13		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
2.9	395	0.2000	2.24		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
5.6	780	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment PS-3: PS-3

Runoff = 56.94 cfs @ 12.94 hrs, Volume= 11.519 af, Depth= 2.56"
Routed to Reach AP-3 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.13"

Area (ac)	CN	Description
24.012	74	>75% Grass cover, Good, HSG C
2.395	98	Paved parking, HSG D
5.649	80	>75% Grass cover, Good, HSG D
22.044	73	Woods, Fair, HSG C
54.100	75	Weighted Average
51.705		95.57% Pervious Area
2.395		4.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.2	100	0.0200	0.05		**Sheet Flow, SF** Woods: Dense underbrush n= 0.800 P2= 3.41"
3.8	160	0.0200	0.71		**Shallow Concentrated Flow, SCF1** Woodland Kv= 5.0 fps
9.0	465	0.0150	0.86		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
8.7	365	0.0100	0.70		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
8.9	460	0.0150	0.86		**Shallow Concentrated Flow, SCF4** Short Grass Pasture Kv= 7.0 fps
2.6	350	0.1000	2.21		**Shallow Concentrated Flow, SCF5** Short Grass Pasture Kv= 7.0 fps
2.2	310	0.0250	2.37		**Shallow Concentrated Flow, SCF6** Grassed Waterway Kv= 15.0 fps
71.4	2,210	Total			

Summary for Reach AP-1: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 12.054 ac, 2.22% Impervious, Inflow Depth = 2.47" for 10-yr event
Inflow = 24.67 cfs @ 12.24 hrs, Volume= 2.479 af
Outflow = 24.67 cfs @ 12.24 hrs, Volume= 2.479 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-2: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 22.205 ac, 0.00% Impervious, Inflow Depth = 2.22" for 10-yr event
Inflow = 57.02 cfs @ 12.09 hrs, Volume= 4.099 af
Outflow = 57.02 cfs @ 12.09 hrs, Volume= 4.099 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-3: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 54.100 ac, 4.43% Impervious, Inflow Depth = 2.56" for 10-yr event
Inflow = 56.94 cfs @ 12.94 hrs, Volume= 11.519 af
Outflow = 56.94 cfs @ 12.94 hrs, Volume= 11.519 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PS-1: PS-1 Runoff Area=12.054 ac 2.22% Impervious Runoff Depth=6.07"
Flow Length=1,299' Tc=17.5 min CN=74 Runoff=60.86 cfs 6.094 af

Subcatchment PS-2: PS-2 Runoff Area=22.205 ac 0.00% Impervious Runoff Depth=5.69"
Flow Length=780' Tc=6.0 min CN=71 Runoff=147.81 cfs 10.529 af

Subcatchment PS-3: PS-3 Runoff Area=54.100 ac 4.43% Impervious Runoff Depth=6.19"
Flow Length=2,210' Tc=71.4 min CN=75 Runoff=138.90 cfs 27.914 af

Reach AP-1: Analysis Point Inflow=60.86 cfs 6.094 af
Outflow=60.86 cfs 6.094 af

Reach AP-2: Analysis Point Inflow=147.81 cfs 10.529 af
Outflow=147.81 cfs 10.529 af

Reach AP-3: Analysis Point Inflow=138.90 cfs 27.914 af
Outflow=138.90 cfs 27.914 af

Total Runoff Area = 88.359 ac Runoff Volume = 44.537 af Average Runoff Depth = 6.05"
96.99% Pervious = 85.697 ac 3.01% Impervious = 2.662 ac

Summary for Subcatchment PS-1: PS-1

Runoff = 60.86 cfs @ 12.23 hrs, Volume= 6.094 af, Depth= 6.07"
Routed to Reach AP-1 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-yr Rainfall=9.26"

Area (ac)	CN	Description
8.621	74	>75% Grass cover, Good, HSG C
0.267	98	Paved parking, HSG C
3.166	73	Woods, Fair, HSG C
12.054	74	Weighted Average
11.787		97.78% Pervious Area
0.267		2.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0400	0.23		**Sheet Flow, SF** Grass: Short n= 0.150 P2= 3.41"
0.9	100	0.0700	1.85		**Shallow Concentrated Flow, SCF1** Short Grass Pasture Kv= 7.0 fps
1.2	175	0.1300	2.52		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
1.6	300	0.2000	3.13		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
1.6	191	0.1500	1.94		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
0.2	40	0.3700	3.04		**Shallow Concentrated Flow, SCF5** Woodland Kv= 5.0 fps
3.3	223	0.0500	1.12		**Shallow Concentrated Flow, SCF6** Woodland Kv= 5.0 fps
1.5	170	0.1500	1.94		**Shallow Concentrated Flow, SCF7** Woodland Kv= 5.0 fps
17.5	1,299	Total			

Summary for Subcatchment PS-2: PS-2

Runoff = 147.81 cfs @ 12.09 hrs, Volume= 10.529 af, Depth= 5.69"
Routed to Reach AP-2 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-yr Rainfall=9.26"

Area (ac)	CN	Description
5.206	61	>75% Grass cover, Good, HSG B
8.845	74	>75% Grass cover, Good, HSG C
8.154	73	Woods, Fair, HSG C
22.205	71	Weighted Average
22.205		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	100	0.2400	3.84		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 3.41"
0.5	100	0.2400	3.43		**Shallow Concentrated Flow, SCF1** Short Grass Pasture Kv= 7.0 fps
1.2	80	0.0250	1.11		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
0.6	105	0.2000	3.13		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
2.9	395	0.2000	2.24		**Shallow Concentrated Flow, SCF4** Woodland Kv= 5.0 fps
5.6	780	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment PS-3: PS-3

Runoff = 138.90 cfs @ 12.93 hrs, Volume= 27.914 af, Depth= 6.19"
Routed to Reach AP-3 : Analysis Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-yr Rainfall=9.26"

Area (ac)	CN	Description
24.012	74	>75% Grass cover, Good, HSG C
2.395	98	Paved parking, HSG D
5.649	80	>75% Grass cover, Good, HSG D
22.044	73	Woods, Fair, HSG C
54.100	75	Weighted Average
51.705		95.57% Pervious Area
2.395		4.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.2	100	0.0200	0.05		**Sheet Flow, SF** Woods: Dense underbrush n= 0.800 P2= 3.41"
3.8	160	0.0200	0.71		**Shallow Concentrated Flow, SCF1** Woodland Kv= 5.0 fps
9.0	465	0.0150	0.86		**Shallow Concentrated Flow, SCF2** Short Grass Pasture Kv= 7.0 fps
8.7	365	0.0100	0.70		**Shallow Concentrated Flow, SCF3** Short Grass Pasture Kv= 7.0 fps
8.9	460	0.0150	0.86		**Shallow Concentrated Flow, SCF4** Short Grass Pasture Kv= 7.0 fps
2.6	350	0.1000	2.21		**Shallow Concentrated Flow, SCF5** Short Grass Pasture Kv= 7.0 fps
2.2	310	0.0250	2.37		**Shallow Concentrated Flow, SCF6** Grassed Waterway Kv= 15.0 fps
71.4	2,210	Total			

Summary for Reach AP-1: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 12.054 ac, 2.22% Impervious, Inflow Depth = 6.07" for 100-yr event
Inflow = 60.86 cfs @ 12.23 hrs, Volume= 6.094 af
Outflow = 60.86 cfs @ 12.23 hrs, Volume= 6.094 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-2: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 22.205 ac, 0.00% Impervious, Inflow Depth = 5.69" for 100-yr event
Inflow = 147.81 cfs @ 12.09 hrs, Volume= 10.529 af
Outflow = 147.81 cfs @ 12.09 hrs, Volume= 10.529 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach AP-3: Analysis Point

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 54.100 ac, 4.43% Impervious, Inflow Depth = 6.19" for 100-yr event
Inflow = 138.90 cfs @ 12.93 hrs, Volume= 27.914 af
Outflow = 138.90 cfs @ 12.93 hrs, Volume= 27.914 af, Atten= 0%, Lag= 0.0 min

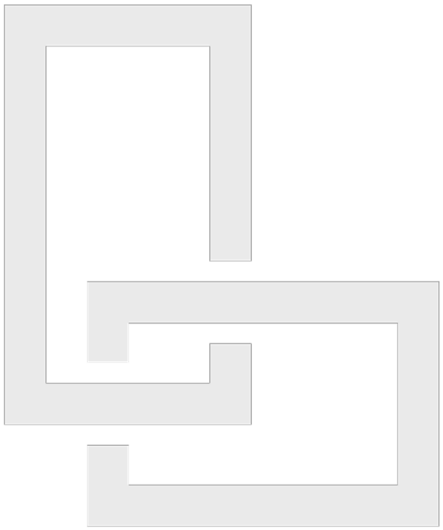
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

APPENDIX F:
SWPPP INSPECTION REPORT
(SAMPLE FORM)

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Prepared by:
Choose an item.
Choose an item.
Choose an item.
Choose an item.

SWPPP INSPECTION REPORT NUMBER XX
YSG SOLAR
BRIARCLIFF SOLAR PROJECT
354 SCARBOROGH ROAD, VILLAGE OF BRIARCLIFF MANOR, WESTCHESTER COUNTY, NY



Performed: 9/29/2021 @ 12:00 AM
Report Issued: 9/29/2021

Status: SATISFACTORY (All erosion control measures are installed and in working order)

Qualified Inspector (name and title)	Qualified Professional (name and title)
Date	Date
Signature	Signature

NYSDEC Documentation and SWPPP Forms

NYSDEC Issued Permit Identification Number: NYRXXXXXX

5-Acre Waiver: N/A (No 5-acre waiver for this project - Contractor not authorized to disturb >5 acres)

303d Status: Project does not directly discharge to a 303d impaired waterbody

Number of Inspections required: Monthly

Location of SWPPP and Site Log Book on-site:

YES	NO	N/A	CONTAINED IN SITE LOG BOOK?
☐	☐	☐	Preconstruction Assessment
☐	☐	☐	NOI Acknowledgement letter
☐	☐	☐	Copy of eNOI
☐	☐	☐	Owner / Operator Certification
☐	☐	☐	SWPPP Preparer Certification
☐	☐	☐	MS4 SWPPP Acceptance Form
☐	☐	☐	Contractor and Subcontractor Certifications
☐	☐	☐	SPDES General Permit
☐	☐	☐	5 Acre Waiver
☐	☐	☐	NOT

Comments:

Site Conditions

Approximate Disturbed Area at Time of Inspection: XX Acres			
Allowable Disturbed Area Per NOI and/or 5-acre waiver: XX Acres			
Current Status of Construction: Description			
Weather Conditions: Conditions		**Temperature:** XX °F	**Soil Conditions:** Choose an item.

Description of Discharge Point/Natural Surface Waterbody	Condition of Runoff	Sediment Discharge Noted Y / N	Corrective Action

Erosion and Sediment Control Deficiencies and Corrective Actions

SWPPP Component	Functional Y / N / NA	Deficiency (See Checklist and/or note)	Deficiency Location	Initial Date	Corrective Action	Corrected Y / N
General Site Conditions						
Silt Fence						
Stabilized Construction Access						
Compost Filter Sock						
Inlet Protection						
Soil Stockpiles						
Temporary Stabilization						
Permanent Stabilization						
Dewatering Operations						
Stone Check Dams						
Rock Outlet Protection						
Sediment Traps and Basins						
Temporary Stream Crossing						
Pavement Sweeping						
Concrete Washout						
Filter Strips						
Slope Protection Measures						
Temporary Swales and Berms						
Temporary Parking Areas						
Fiber Roll						
Permanent Turf Reinforcement						
Water Bars						
Flow Diffusers						
Other:						

Stormwater Management Practice Deficiencies and Corrective Actions

Practice	Sign Y / N	Current Phase of Construction	Items Not in Conformance with SWPPP	Deficiency Location	Initial Date	Corrective Action	Corrected Y / N
Practice 1:							
Practice 2:							
Practice 3:							
Practice 4:							
Practice 5:							
Practice 6:							

SWPPP Inspection Checklist and Deficiency Numbers

1	General Site Conditions
1A	Adjoining properties are not protected from erosion and sediment deposition
1B	Downstream waterways are not protected from erosion and sediment deposition
1C	All E&SC measures have not been constructed as detailed in the SWPPP
1D	Dust is not adequately controlled
1E	Storage areas contain spills, leaks, or harmful materials
1F	Garbage and waste building materials are not being managed properly
1G	Temporary control measures that are no longer needed have not been removed
1H	Permanent SWM practices not constructed per plans

2	Silt Fence
2A	Silt fence not installed on contour
2B	Silt fence not across conveyance channels
2C	Silt fence not at least 10 feet from toe of slope
2D	Silt fence not at appropriate spacing intervals based on slope
2E	Silt fence ends are not wrapped for continuous support
2F	Silt fence fabric is loose or contains rips or frayed areas
2G	Silt fence posts are unstable
2H	Silt fence is not buried 6 inches minimum
2I	Silt fence contains bulges or material buildup

3	Stabilized Construction Access
3A	Temporary construction access not installed or not per NYS standards
3B	Other access areas have not been stabilized immediately as work takes place
3C	Sediment has tracked onto public streets and is not being cleaned daily
3D	Stone is not clean enough to effectively remove mud from vehicles
3E	Adequate drainage not provided to prevent ponding

4	Compost Filter Sock
4A	Filter sock not installed on contour
4B	Filter sock terminal ends do not extended 8' upslope at 45˚ angle
4C	Inappropriate diameter based on slope steepness and slope length
4D	Filter sock not anchored at 10' intervals
4E	More than 50% sediment has built up

5	Inlet Protection
5A	Inlet protection not installed or installation is not per SWPPP or Blue Book specifications
5B	Incorrect type(s) of inlet control installed or is inappropriate for location
5C	Drainage area for inlet protection is greater than 1 acre
5D	Sediment has not been removed when 50% of storage volume has been achieved
5E	A 2" x 4" wood frame and wood posts has not been installed
5F	Filter fabric is not buried a minimum of 1 foot below ground or secured to frame/posts
5G	Posts are unstable, fabric is loose, and contains rips or frayed areas
5H	Post spacing exceeds maximum 3' spacing

6	Soil Stockpiles
6A	No sediment controls at downhill slope

7	Temporary Stabilization
7A	Areas inactive for 14 days or more have not been stabilized (If <5 acres disturbed)
7B	Areas inactive for 7 days or more have not been stabilized (If >5 acres disturbed or 303d)
7C	Soil preparation has not been applied as specified in the SWPPP or the Blue Book
7D	Rolled EC products specified for steep slopes or channels have not been installed

8	Permanent Stabilization
8A	Lawn in disturbed areas has not been established to 80% germination
8B	Soil preparation has not been applied as specified in the SWPPP or the Blue Book
8C	Rolled EC products specified for steep slopes or channels have not been installed

9	Dewatering Operations
9A	Upstream and downstream berms are not installed or functioning poorly
9B	Clean water from upstream pool is not being pumped to the downstream pool
9C	Sediment laden water from work area is not being discharged to a silt-trapping device
9D	Groundwater from excavations managed improperly (No sumps/sediment control)

10	Stone Check Dam
10A	Not installed per standards
10B	Channel is unstable (flow is eroding soil underneath or around the structure)
10C	Check dam in poor condition (rocks not in place or lack of geotextile fabric)
10D	Sediment needs to be removed

11	Rock Outlet Protection
11A	Rock outlet protection not installed per plan or Blue Book
11B	Rock outlet protection not installed concurrently with pipe installation

12	Sediment Traps and Basins
12A	Outlet structure constructed improperly
12B	Geotextile fabric has not been placed beneath rock fill
12C	Depth of sediment in basin has exceeded allowable threshold
12D	Basin and outlet structure not constructed per the approved plan
12E	Basin side slopes are not stabilized with seed/mulch
12F	More than 50% capacity has built up

13	Temporary Stream Crossing
13A	Construction crossings at concentrated flow areas have not been culverted

14	Pavement Sweeping
14A	Pavement has not been swept daily and sediment has traveled into road

Photo Log

Photo 1 *Date – Item in need of repair or maintenance:*	***Photo 1A*** *Date – Corrected Action:*
Photo 2 *Date – Item in need of repair or maintenance:*	***Photo 2A*** *Date – Corrected Action:*
Photo 3 *Date – Item in need of repair or maintenance:*	***Photo 3A*** *Date – Corrected Action:*

Photo Log (continued)

Photo 4	***Photo 4A***
Date – Item in need of repair or maintenance:	*Date – Corrected Action:*
Photo 5	***Photo 5A***
Date – Item in need of repair or maintenance:	*Date – Corrected Action:*
Photo 6	***Photo 6A***
Date – Item in need of repair or maintenance:	*Date – Corrected Action:*

APPENDIX G:
POST-CONSTRUCTION INSPECTIONS AND MAINTENANCE

NYS Maintenance Guidance

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Disconnection and Sheetflow (Rooftop Disconnection, Filter Strip, Riparian Buffer)

Table 2.4.1 D&S Drainage Area

Problem (Check if Present)		Follow-Up Actions
	☐ Changes in flow; more runoff; runoff bypassing the practice	☐ For rooftop areas, make sure downspouts are still disconnected and conveying water into the treatment area. ☐ Look for and remove any "dams" of sediment and grass clippings that prevent water from entering the treatment area as sheet flow. ☐ Other:
		☐ Kick-Out to Level 2 Inspection: Changes to drainage area size or amount of runoff due to construction, tillage, etc.
	☐ For parking lots in the drainage area—sediment, grass clippings, or other debris has accumulated at pavement edge.	☐ For small, isolated amounts of debris, sweep up by hand and dispose properly so that it will not be exposed to runoff. ☐ Other:
		☐ Kick-Out to Level 2 Inspection: Sediment is widespread and cannot be removed by manual sweeping.
	☐ For parking lots in the drainage area—dips or damage at pavement edge caused flow to concentrate.	☐ Kick-Out to Level 2 Inspection: This will likely require special expertise to diagnose and fix pavement edge.

Table 2.4.2 D&S Level Spreader/Energy Dissipator		
Problem (Check if Present)		**Follow-Up Actions**
	☐ Debris and/or sediment accumulated behind or around the level spreader.	☐ Remove debris and sediment by hand and ensure that the area behind the level spreader is relatively flat. Too much debris and sediment can cause runoff to bypass the level spreader structure. ☐ Other:
	☐ Sinking, cracking, sloughing, or other structural problem makes the energy dissipator no longer level.	☐ For stone/gravel spreaders, add new material or rake out as needed to make it even. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Structural issues that cannot be easily fixed by hand

Table 2.4.3 D&S Treatment Area	
Problem (Check if Present)	**Follow-Up Actions**
☐ Trash and/or debris in the treatment area	☐ Collect trash/debris and dispose of properly.
 ☐ Grass filter strip has grown very tall, to the point that runoff cannot easily enter or is getting concentrated.	☐ Mow filter strip twice a year or more frequently in a residential yard.
☐ Sparse vegetation or bare spots	☐ For grassy areas, add topsoil (as needed), grass seed mulch, and water during the growing season to re-establish consistent vegetation cover. ☐ Other:
 ☐ Rills or gullies are forming in treatment area where flow has become concentrated	☐ For minor rills, fill in with soil, compact, and add seed and straw to establish vegetation. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Rills are more than 2" to 3" deep and require more than just hand raking and re-seeding.

APPENDIX H:
NYSDEC "DEEP-RIPPING AND DECOMPACTION," APRIL 2008

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New York State
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water

Deep-Ripping and Decompaction

April 2008

Document Prepared by:

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Land Resource Consultant and Environmental Compliance Monitor
(Formerly with the Division of Agricultural Protection and Development Services,
NYS Dept. of Agriculture & Markets)

New York State
Department of Environmental Conservation

Alternative Stormwater Management
Deep-Ripping and Decompaction

Description

The two-phase practice of 1) "Deep Ripping;" and 2) "Decompaction" (deep subsoiling), of the soil material as a step in the cleanup and restoration/landscaping of a construction site, helps mitigate the physically induced impacts of soil compression; i.e.: soil compaction or the substantial increase in the bulk density of the soil material.

Deep Ripping and Decompaction are key factors which help in restoring soil pore space and permeability for water infiltration. Conversely, the physical actions of cut-and-fill work, land grading, the ongoing movement of construction equipment and the transport of building materials throughout a site alter the architecture and structure of the soil, resulting in: the mixing of layers (horizons) of soil materials, compression of those materials and diminished soil porosity which, if left unchecked, severely impairs the soil's water holding capacity and vertical drainage (rainfall infiltration), from the surface downward.

In a humid climate region, compaction damage on a site is virtually guaranteed over the duration of a project. Soil in very moist to wet condition when compacted, will have severely reduced permeability. Figure 1 displays the early stage of the deep-ripping phase (Note that all topsoil was stripped prior to construction access, and it remains stockpiled until the next phase – decompaction – is complete). A heavy-duty tractor is pulling a three-shank ripper on the first of several series of incrementally deepening passes through the construction access corridor's densely compressed subsoil material. Figure 2 illustrates the approximate volumetric composition of a loam surface soil when conditions are good for plant growth, with adequate natural pore space for fluctuating moisture conditions.



Fig. 1. A typical deep ripping phase of this practice, during the first in a series of progressively deeper "rips" through severely compressed subsoil.

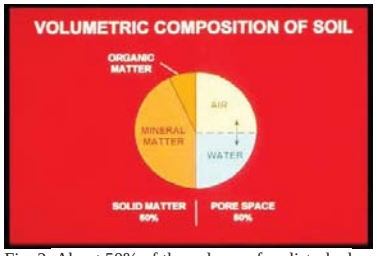


Fig. 2. About 50% of the volume of undisturbed loam surface soil is pore space, when soil is in good condition for plant growth. Brady, 2002.

Recommended Application of Practice

The objective of Deep Ripping and Decompaction is to effectively fracture (vertically and laterallly) through the thickness of the physically compressed subsoil material (see Figure 3), restoring soil porosity and permeability and aiding infiltration to help reduce runoff. Together with topsoil stripping, the "two-phase" practice of Deep Ripping and Decompaction first became established as a "best management practice" through ongoing success on commercial farmlands affected by heavy utility construction right-of-way projects (transmission pipelines and large power lines).



Fig. 3. Construction site with significant compaction of the deep basal till subsoil extends 24 inches below this exposed cut-and-fill work surface.

Soil permeability, soil drainage and cropland productivity were restored. For broader construction application, the two-phase practice of Deep Ripping and Decompaction is best adapted to areas impacted with significant soil compaction, on contiguous open portions of large construction sites and inside long, open construction corridors used as temporary access over the duration of construction. Each mitigation area should have minimal above-and-below-ground obstructions for the easy avoidance and maneuvering of a large tractor and ripping/decompacting implements. Conversely, the complete two-phase practice is not recommended in congested or obstructed areas due to the limitations on tractor and implement movement.

Benefits

Aggressive "deep ripping" through the compressed thickness of exposed subsoil before the replacement/respreading of the topsoil layer, followed by "decompaction," i.e.: "sub-soiling," through the restored topsoil layer down into the subsoil, offers the following benefits:

- Increases the project (larger size) area's direct surface infiltration of rainfall by providing the open site's mitigated soil condition and lowers the demand on concentrated runoff control structures
- Enhances direct groundwater recharge through greater dispersion across and through a broader surface than afforded by some runoff-control structural measures
- Decreases runoff volume generated and provides hydrologic source control
- May be planned for application in feasible open locations either alone or in

conjunction with plans for structural practices (e.g., subsurface drain line or infiltration basin) serving the same or contiguous areas

- Promotes successful long-term revegetation by restoring soil permeability, drainage and water holding capacity for healthy (rather than restricted) root-system development of trees, shrubs and deep rooted ground cover, minimizing plant drowning during wet periods and burnout during dry periods.

Feasibility / Limitations

The effectiveness of Deep Ripping and Decompaction is governed mostly by site factors such as: the original (undisturbed) soil's hydrologic characteristics; the general slope; local weather/timing (soil moisture) for implementation; the space-related freedom of equipment/implement maneuverability (noted above in **Recommended Application of Practice**), and by the proper selection and operation of tractor and implements (explained below in **Design Guidance**). The more notable site-related factors include:

Soil
In the undisturbed condition, each identified soil type comprising a site is grouped into one of four categories of soil hydrology, Hydrologic Soil Group A, B, C or D, determined primarily by a range of characteristics including soil texture, drainage capability when thoroughly wet, and depth to water table. The natural rates of infiltration and transmission of soil-water through the undisturbed soil layers for Group A is "high" with a low runoff potential while soils in Group B are moderate in infiltration and the transmission of soil-water with a moderate runoff potential, depending somewhat on slope. Soils in Group C have slow rates of infiltration and transmission of soil-water and a moderately high runoff potential influenced by soil texture and slope; while soils in Group D have exceptionally slow rates of infiltration and transmission of soil-water, and high runoff potential.

In Figure 4, the profile displays the undisturbed horizons of a soil in Hydrologic Soil Group C and the naturally slow rate of infiltration through the subsoil. The slow rate of infiltration begins immediately below the topsoil horizon (30 cm), due to the limited amount of macro pores, e.g.: natural subsoil fractures, worm holes and root channels. Infiltration after the construction-induced mixing and compression of such subsoil material is virtually absent; but can be restored back to this natural level with the two-phase practice of deep ripping and decompaction, followed by the permanent establishment of an appropriate, deep taproot

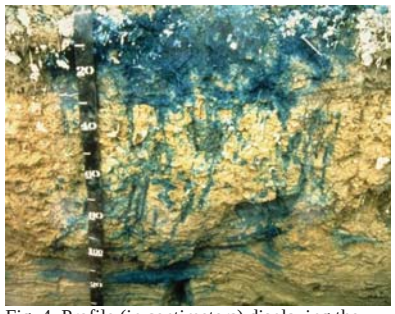


Fig. 4. Profile (in centimeters) displaying the infiltration test result of the natural undisturbed horizons of a soil in Hydrologic Soil Group C.

lawn/ground cover to help maintain the restored subsoil structure. Infiltration after construction-induced mixing and compression of such subsoil material can be notably rehabilitated with the Deep Ripping and Decompaction practice, which prepares the site for the appropriate long-term lawn/ground cover mix including deep taproot plants such as clover, fescue or trefoil, etc. needed for all rehabilitated soils.

Generally, soils in Hydrologic Soil Groups A and B, which respectively may include deep, well-drained, sandy-gravelly materials or deep, moderately well-drained basal till materials, are among the easier ones to restore permeability and infiltration, by deep ripping and decompaction. Among the many different soils in Hydrologic Soil Group C are those unique glacial tills having a natural fragipan zone, beginning about 12 to 18 inches (30 – 45cm), below surface. Although soils in Hydrologic Soil Group C do require a somewhat more carefully applied level of the Deep Ripping and Decompaction practice, it can greatly benefit such affected areas by reducing the runoff and fostering infiltration to a level equal to that of pre-disturbance.

Soils in Hydrologic Soil Group D typically have a permanent high water table close to the surface, influenced by a clay or other highly impervious layer of material. In many locations with clay subsoil material, the bulk density is so naturally high that heavy trafficking has little or no added impact on infiltration; and structural runoff control practices rather than Deep Ripping and Decompaction should be considered.

The information about Hydrologic Soil Groups is merely a general guideline. Site-specific data such as limited depths of cut-and-fill grading with minimal removal or translocation of the inherent subsoil materials (as analyzed in the county soil survey) or, conversely, the excavation and translocation of deeper, unconsolidated substratum or consolidated bedrock materials (unlike the analyzed subsoil horizons' materials referred to in the county soil survey) should always be taken into account.

Sites made up with significant quantities of large rocks, or having a very shallow depth to bedrock, are not conducive to deep ripping and decompation (subsoiling); and other measures may be more practical.

Slope
The two-phase application of 1) deep ripping and 2) decompaction (deep subsoiling), is most practical on flat, gentle and moderate slopes. In some situations, such as but not limited to temporary construction access corridors, inclusion areas that are moderately steep along a project's otherwise gentle or moderate slope may also be deep ripped and decompacted. For limited instances of moderate steepness on other projects, however, the post-construction land use and the relative alignment of the potential ripping and decompaction work in relation to the lay of the slope should be reviewed for safety and practicality. In broad construction areas predominated by moderately steep or steep slopes, the practice is generally not used.

Local Weather/Timing/Soil Moisture
Effective fracturing of compressed subsoil material from the exposed work surface, laterally and vertically down through the affected zone is achieved only when the soil material is moderately dry to moderately moist. Neither one of the two-phases, deep ripping nor decompaction (deep

subsoiling), can be effectively conducted when the soil material (subsoil or replaced topsoil) is in either a “plastic” or “liquid” state of soil consistency. Pulling the respective implements legs through the soil when it is overly moist only results in the “slicing and smearing” of the material or added “squeezing and compression” instead of the necessary fracturing. Ample drying time is needed for a “rippable” soil condition not merely in the material close to the surface, but throughout the material located down to the bottom of the physically compressed zone of the subsoil.

The “poor man’s Atterberg field test” for soil plasticity is a simple “hand-roll” method used for quick, on-site determination of whether or not the moisture level of the affected soil material is low enough for: effective deep ripping of subsoil; respreading of topsoil in a friable state; and final decompaction (deep subsoiling). Using a sample of soil material obtained from the planned bottom depth of ripping, e.g.: 20 - 24 inches below exposed subsoil surface, the sample is hand rolled between the palms down to a 1/8-inch diameter thread. (Use the same test for stored topsoil material before respreading on the site.) If the respective soil sample crumbles apart in segments no greater than 3/8 of an inch long, by the time it is rolled down to 1/8 inch diameter, it is low enough in moisture for deep ripping (or topsoil replacement), and decompaction. Conversely, as shown in Figure 5, if the rolled sample stretches out in increments greater than 3/8 of an inch long before crumbling, it is in a “plastic” state of soil consistency and is too wet for subsoil ripping (as well as topsoil replacement) and final decompaction.



Fig. 5. Augered from a depth of 19 inches below the surface of the replaced topsoil, this subsoil sample was hand rolled to a 1/8-inch diameter. The test shows the soil at this site stretches out too far without crumbling; it indicates the material is in a plastic state of consistence, too wet for final decompaction (deep subsoiling) at this time.

Design Guidance

Beyond the above-noted site factors, a vital requirement for the effective Deep Ripping and Decompaction (deep subsoiling), is implementing the practice in its distinct, two-phase process:

1) Deep rip the affected thickness of exposed subsoil material (see Figure 10 and 11), aggressively fracturing it before the protected topsoil is reapplied on the site (see Figure 12); and

2) Decompact (deep subsoil), simultaneously through the restored topsoil layer and the upper half of the affected subsoil (Figure 13). The second phase, “decompaction,” mitigates the partial recompaction which occurs during the heavy process of topsoil spreading/grading. Prior to deep ripping and decompacting the site, all construction activity, including construction equipment and material storage, site cleanup and trafficking (Figure 14), should be finished; and the site closed off to further disturbance. Likewise, once the practice is underway and the area’s soil permeability and

rainfall infiltration are being restored, a policy limiting all further traffic to permanent travel lanes is maintained.

The other critical elements, outlined below, are: using the proper implements (deep, heavy-duty rippers and subsoilers), and ample pulling-power equipment (tractors); and conducting the practice at the appropriate speed, depth and pattern(s) of movement.

Note that an appropriate plan for the separate practice of establishing a healthy perennial ground cover, with deep rooting to help maintain the restored soil structure, should be developed in advance. This may require the assistance of an agronomist or landscape horticulturist.

Implements

Avoid the use of all undersize implements. The small-to-medium, light-duty tool will, at best, only “scarify” the uppermost surface portion of the mass of compacted subsoil material. The term “chisel plow” is commonly but incorrectly applied to a broad range of implements. While a few may be adapted for the moderate subsoiling of non-impacted soils, the majority are less durable and used for only lighter land-fitting (see Figure 6).



Fig. 6. A light duty chisel implement, not adequate for either the deep ripping or decompaction (deep subsoiling) phase.



Fig. 7. One of several variations of an agricultural ripper. This unit has long, rugged shanks mounted on a steel V-frame for deep, aggressive fracturing through Phase 1.

Use a “heavy duty” agricultural-grade, deep ripper (see Figures 7,9,10 and 11) for the first phase: the lateral and vertical fracturing of the mass of exposed and compressed subsoil, down and through, to the bottom of impact, prior to the replacement of the topsoil layer. (Any oversize rocks which are uplifted to the subsoil surface during the deep ripping phase are picked and removed.) Like the heavy-duty class of implement for the first phase, the decompaction (deep subsoiling) of Phase 2 is conducted with the heavy-duty version of the deep subsoiler. More preferable is the angled-leg variety of deep subsoiler (shown in Figures 8 and 13). It minimizes the inversion of the subsoil and topsoil layers while laterally and vertically fracturing the upper half of the previously ripped subsoil layer and all of the topsoil layer by delivering a momentary, wave-like “lifting and shattering” action up through the soil layers as it is pulled.

Pulling-Power of Equipment
Use the following rule of thumb for tractor horsepower (hp) whenever deep ripping and decompacting a significantly impacted site: For both types of implement, have at least 40 hp of tractor pull available for each mounted shank/ leg.

Using the examples of a 3-shank and a 5-shank implement, the respective tractors should have 120 and 200 hp available for fracturing down to the final depth of 20-to-24 inches per phase. Final depth for the deep ripping in Phase 1 is achieved incrementally by a progressive series of passes (see Depth and Patterns of Movement, below); while for Phase 2, the full operating depth of the deep subsoiler is applied from the beginning.

The operating speed for pulling both types of implement should not exceed 2 to 3 mph. At this slow and managed rate of operating speed, maximum functional performance is sustained by the tractor and the implement performing the soil fracturing. Referring to Figure 8, the implement is the 6-leg version of the deep angled-leg subsoiler. Its two outside legs are "chained up" so that only four legs will be engaged (at the maximum depth), requiring no less than 160 hp, (rather than 240 hp) of pull. The 4-wheel drive, articulated-frame tractor in Figure 8 is 174 hp. It will be decompacting this unobstructed, former construction access area simultaneously through 11 inches of replaced topsoil and the upper 12 inches of the previously deep-ripped subsoil. In constricted areas of Phase 1) Deep Ripping, a medium-size tractor with adequate hp, such as the one in Figure 9 pulling a 3-shank deep ripper, may be more maneuverable.


Fig. 8. A deep, angled-leg subsoiler, ideal for Phase 2 decompaction of after the topsoil layer is graded on top of the ripped subsoil.


Fig. 9. This medium tractor is pulling a 3-shank deep ripper. The severely compacted construction access corridor is narrow, and the 120 hp tractor is more maneuverable for Phase 1 deep ripping (subsoil fracturing), here.

Some industrial-grade variations of ripping implements are attached to power graders and bulldozers. Although highly durable, they are generally not recommended. Typically, the shanks or "teeth" of these rippers are too short and stout; and they are mounted too far apart to achieve the well-distributed type of lateral and vertical fracturing of the soil materials necessary to restore soil permeability and infiltration. In addition, the power graders and bulldozers, as pullers, are far less maneuverable for turns and patterns than the tractor.

Depth and Patterns of Movement
As previously noted both Phase 1 Deep Ripping through significantly compressed, exposed subsoil and Phase 2 Decompaction (deep subsoiling) through the replaced topsoil and upper subsoil need to be performed at maximum capable depth of each implement. With an implement's guide wheels attached, some have a "normal" maximum operating depth of 18 inches, while others may go deeper. In many situations, however, the tractor/implement operator must first remove the guide wheels and other non essential elements from the implement. This adapts the ripper or the deep subsoiler for skillful pulling with its frame only a few inches above surface, while the shanks or legs, fracture the soil material 20-to-24 inches deep.

There may be construction sites where the depth of the exposed subsoil's compression is moderate, e.g.: 12 inches, rather than deep. This can be verified by using a ¾ inch cone penetrometer and a shovel to test the subsoil for its level of compaction, incrementally, every three inches of increasing depth. Once the full thickness of the subsoil's compacted zone is finally "pieced" and there is a significant drop in the psi measurements of the soil penetrometer, the depth/thickness of compaction is determined. This is repeated at several representative locations of the construction site. If the thickness of the site's subsoil compaction is verified as, for example, ten inches, then the Phase 1 Deep Ripping can be correspondingly reduced to the implement's minimum operable depth of 12 inches. However, the Phase 2 simultaneous Decompation (subsoiling) of an 11 inch thick layer of replaced topsoil and the upper subsoil should run at the subsoiling implements full operating depth.


Fig. 10. An early pass with a 3-shank deep ripper penetrating only 8 inches into this worksite's severely compressed subsoil.


Fig. 11. A repeat run of the 3-shank ripper along the same patterned pass area as Fig. 9; here, incrementally reaching 18 of the needed 22 inches of subsoil fracture.

Typically, three separate series (patterns) are used for both the Phase 1 Deep Ripping and the Phase 2 Decompaction on significantly compacted sites. For Phase 1, each series begins with a moderate depth of rip and, by repeat-pass, continues until full depth is reached. Phase 2 applies the full depth of Decompation (subsoiling), from the beginning.

Every separate series (pattern) consists of parallel, forward-and-return runs, with each progressive

pass of the implement's legs or shanks evenly staggered between those from the previous pass. This compensates for the shank or leg-spacing on the implement, e.g., with 24-to-30 inches between each shank or leg. The staggered return pass ensures lateral and vertical fracturing actuated every 12 to 15 inches across the densely compressed soil mass.

Large, Unobstructed Areas
For larger easy areas, use the standard patterns of movement:

- The first series (pattern) of passes is applied lengthwise, parallel with the longest spread of the site; gradually progressing across the site's width, with each successive pass.

- The second series runs obliquely, crossing the first series at an angle of about 45 degrees.

- The third series runs at right angle (or 90 degrees), to the first series to complete the fracturing and shattering on severely compacted sites, and avoid leaving large unbroken blocks of compressed soil material. (In certain instances, the third series may be optional, depending on how thoroughly the first two series loosen the material and eliminate large chunks/blocks of material as verified by tests with a ¾-inch cone penetrometer.)



Fig. 12. Moderately dry topsoil is being replaced on the affected site now that Phase 1 deep ripping of the compressed subsoil is complete.



Fig. 13. The same deep, angled-leg subsoiler shown in Fig. 7 is engaged at maximum depth for Phase 2, decompaction (deep soiling), of the replaced topsoil and the upper subsoil materials.

Corridors
In long corridors of limited width and less maneuverability than larger sites, e.g.: along compacted areas used as temporary construction access, a modified series of pattern passes are used.

- First, apply the same initial lengthwise, parallel series of passes described above.

- A second series of passes makes a broad "S" shaped pattern of rips, continually and gradually alternating the "S" curves between opposite edges inside the compacted corridor.

- The third and final series again uses the broad, alternating S pattern, but it is "flip-flopped" to continually cross the previous S pattern along the corridor's centerline. This final series of the S pattern curves back along the edge areas skipped by the second series.

Maintenance and Cost

Once the two-phase practice of Deep Ripping and Decompation is completed, two items are essential for maintaining a site's soil porosity and permeability for infiltration. They are: planting and maintaining the appropriate ground cover with deep roots to maintain the soil structure (see Figure 15); and keeping the site free of traffic or other weight loads.

Note that site-specific choice of an appropriate vegetative ground-cover seed mix, including the proper seeding ratio of one or more perennial species with a deep taproot system and the proper amount of lime and soil nutrients (fertilizer mix) adapted to the soil-needs, are basic to the final practice of landscaping, i.e: surface tillage, seeding/planting/fertilizing and culti-packing or mulching is applied. The "maintenance" of an effectively deep-ripped and decompacted area is generally limited to the successful perennial (long-term) landscape ground cover; as long as no weight-bearing force of soil compaction is applied.



Fig. 14. The severely compacted soil of a temporary construction yard used daily by heavy equipment for four months; shown before deep ripping, topsoil replacement, and decompaction.



Fig. 15. The same site as Fig. 14 after deep ripping of the exposed subsoil, topsoil replacement, decompaction through the topsoil and upper subsoil and final surface tillage and revegetation to maintain soil permeability and infiltration.

The Deep Ripping and Decompaction practice is, by necessity, more extensive than periodic subsoiling of farmland.The cost of deep ripping and decompacting (deep subsoiling), will vary according to the depth and severity of soil-material compression and the relative amount of tractor and implement time that is required. In some instances, depending on open maneuverability, two-to-three acres of compacted project area may be deep-ripped in one day. In other situations of more severe compaction and - or less maneuverability, as little as one acre may be fully ripped in a day. Generally, if the Phase 1) Deep Ripping is fully effective, the Phase 2) Decompaction should be completed in 2/3 to 3/4 of the time required for Phase 1.

Using the example of two acres of Phase 1) Deep Ripping in one day, at $1800 per day, the net cost is $900 per acre. If the Phase 2) Decompacting or deep subsoiling takes 3/4 the time as Phase 1, it costs $675 per acre for a combined total of $1575 per acre to complete the practice (these figures do not include the cost of the separate practice of topsoil stripping and replacement). Due to the many variables, it must be recognized that cost will be determined by the specific conditions or constraints of the site and the availability of proper equipment.

Resources

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- US Department of Agriculture in cooperation with Cornell University Agricultural Experiment Station. Various years. *Soil Survey of (various names) County, New York.* USDA.

Internet Access:

- Examples of implements:

V-Rippers. Access by internet search of *John Deere Ag -New Equipment for 915* (larger-frame model) *V-Rippe*; and, *for 913* (smaller-frame model) *V-Ripper*. Deep, angled-leg subsoiler. Access by internet search of: B*igham Brothers Shear Bolt Paratill-Subsoiler.* http://salesmanual.deere.com/sales/salesmanual/en_NA/primary_tillage/2008/feature/rippers/915v_pattern_frame.html?sbu=ag&link=prodcat Last visited March 08.

- Soils data of USDA Natural Resources Conservation Service. *NRCS Web Soil Survey.* http://websoilsurvey.nrcs.usda.gov/app/ and *USDA-NRCS Official Soil Series Descriptions; View by Name.* http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdname.cgi . *Last visited Jan. 08.*
- Soil penetrometer information. Access by internet searches of: *Diagnosing Soil Compaction using a Penetrometer (soil compaction tester), PSU Extension;* as well as *Dickey-john Soil Compaction Tester.* http://www.dickey-johnproducts.com/pdf/SoilCompactionTest.pdf and http://cropsoil.psu.edu/Extension/Facts/uc178pdf Last visited Sept. 07

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APPENDIX I:
LABELLA CERTIFYING PROFESSIONALS LETTER

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February 17, 2022

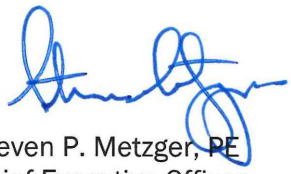
RE: LaBella Certifying Professionals for NYSDEC SPDES GP-20-001

To Whom it May Concern:

In accordance with the NYSDEC SPDES General Permit GP 0-20-001, part VII.H.2, the New York State licensed Professional Engineers employed by LaBella Associates and listed on the attachment to this letter are duly authorized to sign and seal Stormwater Pollution Prevention Plans (SWPPPs), NOIs, and NOTs prepared under their direct supervision.

Respectfully submitted,

LaBella Associates



Steven P. Metzger, PE
Chief Executive Officer

300 State Street, Suite 201 | Rochester, NY 14614 | p (585) 454-6110 | f (585) 454-3066
www.labellapc.com

LaBella Professional Engineers duly authorized to sign and seal SWPPPs, NOIs, and NOTs:

Name:	Title:	Signature:	Date:
Kyle Ahearn, PE	Senior Civil Engineer		2/9/22
Jody Allen, PE	Senior Civil Engineer		2/24/2022
Anthony Bernardi, PE	Senior Civil Engineer		
Christian Bertram, PE	Senior Civil Engineer		2/9/2022
Brendan Bystrak, PE	Vice President		
Steven Calocerinos, PE	Senior Civil Engineer		2/9/2022
Sean Doty, PE	Senior Civil Engineer		2/24/2022
Jason Ebbs, PE	Municipal Group Leader		
Michael Flanagan, PE	Senior Civil Engineer		2/10/22
Don Hoefler, PE	Senior Project Engineer		
Reuben Hull, PE	Senior Civil Engineer		2/9/2002
Eric Johnson, PE	Senior Civil Engineer		2/9/2002
Roger Keating, PE	Senior Civil Engineer		2/9/2022
Walter Kubow, PE	Senior Civil Engineer		2/9/2022
Christopher Lapine, PE	Senior Civil Engineer		2/9/22
Joseph Lanaro, PE	Vice President		2/9/2022
Michael Mishook, PE	Vice President		2/10/22
Lauren Rodriquez, PE	Civil Engineer		2/9/2022
Jonathan Spurr, PE	Civil Engineer		2/10/22
Mary Steblein, PE	Senior Civil Engineer		2/9/2022
Robert Steehler, PE	Vice President		2/9/2022
Timothy Webber, PE	Vice President		2/9/2022
Kristopher Winkler, PE	Senior Civil Engineer		2/14/2022

APPENDIX J:
NYSDEC SPDES GENERAL PERMIT GP-0-20-001

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2020 Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator

1-23-20

Authorized Signature Date

Address: NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System ("NPDES")* permit or by a state permit program. New York administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

Table of Contents

Part 1. PERMIT COVERAGE AND LIMITATIONS 1
A. Permit Application 1
B. Effluent Limitations Applicable to Discharges from Construction Activities 1
C. Post-construction Stormwater Management Practice Requirements 4
D. Maintaining Water Quality 8
E. Eligibility Under This General Permit 9
F. Activities Which Are Ineligible for Coverage Under This General Permit 9
Part II. PERMIT COVERAGE 12
A. How to Obtain Coverage 12
B. Notice of Intent (NOI) Submittal 13
C. Permit Authorization 13
D. General Requirements For Owners or Operators With Permit Coverage 15
E. Permit Coverage for Discharges Authorized Under GP-0-15-002 17
F. Change of Owner or Operator 17
Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) 18
A. General SWPPP Requirements 18
B. Required SWPPP Contents 20
C. Required SWPPP Components by Project Type 24
Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS 24
A. General Construction Site Inspection and Maintenance Requirements 24
B. Contractor Maintenance Inspection Requirements 24
C. Qualified Inspector Inspection Requirements 25
Part V. TERMINATION OF PERMIT COVERAGE 29
A. Termination of Permit Coverage 29
Part VI. REPORTING AND RETENTION RECORDS 31
A. Record Retention 31
B. Addresses 31
Part VII. STANDARD PERMIT CONDITIONS 31
A. Duty to Comply 31
B. Continuation of the Expired General Permit 32
C. Enforcement 32
D. Need to Halt or Reduce Activity Not a Defense 32
E. Duty to Mitigate 33
F. Duty to Provide Information 33
G. Other Information 33
H. Signatory Requirements 33
I. Property Rights 35
J. Severability 35
K. Requirement to Obtain Coverage Under an Alternative Permit 35
L. Proper Operation and Maintenance 36
M. Inspection and Entry 36
N. Permit Actions 37
O. Definitions 37
P. Re-Opener Clause 37
Q. Penalties for Falsification of Forms and Reports 37
R. Other Permits 38
APPENDIX A – Acronyms and Definitions 39
Acronyms 39
Definitions 40
APPENDIX B – Required SWPPP Components by Project Type 48
Table 1 48
Table 2 50
APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal 52
APPENDIX D – Watersheds with Lower Disturbance Threshold 58
APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s) 59
APPENDIX F – List of NYS DEC Regional Offices 65

Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;

2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants* to *surface waters of the State.*

3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. These limitations represent the degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in the *Stormwater Pollution Prevention Plan* (“SWPPP”) the reason(s) for the

deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:

   (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s;

   (ii) Control stormwater *discharge*s, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;

   (iii) *Minimize* the amount of soil exposed during *construction activity*;

   (iv) *Minimize* the disturbance of *steep slopes*;

   (v) *Minimize* sediment *discharge*s from the site;

   (vi) Provide and maintain *natural buffer*s around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharge*s, unless *infeasible*;

   (vii) *Minimize* soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted;

   (viii) Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

   (ix) *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged from the site.

b. **Soil Stabilization**. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily Ceased*.

c. **Dewatering**. *Discharge*s from *dewatering* activities, including *discharge*s from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. Design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:

(i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;

(ii) *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use) ; and

(iii) Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Prohibited *Discharge*s.** The following *discharge*s are prohibited:

(i) Wastewater from washout of concrete;

(ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

(iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;

(iv) Soaps or solvents used in vehicle and equipment washing; and

(v) Toxic or hazardous substances from a spill or other release.

f. Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-construction Stormwater Management Practice Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices ("SMPs") are not designed in conformance with the *performance criteria* in the Design Manual, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. Sizing Criteria for New Development

(i) Runoff Reduction Volume ("RRv"): Reduce the total Water Quality Volume ("WQv") by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP.

For each impervious area that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered infeasible.

In no case shall the runoff reduction achieved from the newly constructed impervious areas be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
(2) The site discharges directly to tidal waters, or fifth order or larger streams.

(iv) *Overbank* Flood Control Criteria ("Qp"): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
(1) the site discharges directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) Extreme Flood Control Criteria ("Qf"): Requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
(1) the site discharges directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watershed

(i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (WQv) by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24 hour design storm over the post-developed watershed and shall be

calculated in accordance with the criteria in Section 10.3 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
(2) The site *discharge*s directly to tidal waters, or fifth order or larger streams.

(iv) *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

c. Sizing Criteria for Redevelopment Activity

(i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.

(1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or

(2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or

(3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or

(4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 – 4 above.

(ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iii) *Overbank* Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site

d. Sizing Criteria for Combination of Redevelopment Activity and New Development

Construction projects that include both New Development and Redevelopment Activity shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions of this permit will control *discharge*s necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any discharge to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;

2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the stormwater *discharge*s authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general permit it is demonstrated that the stormwater *discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standard*s, the authorized *discharge*s will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.

2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharge*s; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.

3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharge*s from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.

4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

1. *Discharge*s after *construction activities* have been completed and the site has undergone *final stabilization*;

2. *Discharge*s that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;

3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;

4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;

6. *Construction activities* for residential, commercial and institutional projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which are undertaken on land with no existing *impervious cover*; and

   c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.

7. *Construction activities* for linear transportation projects and linear utility projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which are undertaken on land with no existing *impervious cover*; and

   c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase "D" (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.

8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:

   a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant.

      - 1-5 acres of disturbance - 20 feet
      - 5-20 acres of disturbance - 50 feet
      - 20+ acres of disturbance - 100 feet, or

   b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
      (i) the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
      (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
      (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
      (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or

   c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

      (i) No Affect
      (ii) No Adverse Affect
      (iii) Executed Memorandum of Agreement, or

   d. Documentation that:

      (i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.

9. *Discharge*s from *construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.

2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the "MS4 SWPPP Acceptance" form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.

3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4* . This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (http://www.dec.ny.gov/). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

   NOTICE OF INTENT
   NYS DEC, Bureau of Water Permits
   625 Broadway, 4th Floor
   Albany, New York 12233-3505

2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.

3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.

4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

C. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.

2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:

   a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (http://www.dec.ny.gov/) for more information,

   b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators* of *construction activities* that are required to obtain *UPA* permits

must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

   c. the final SWPPP has been prepared, and

   d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.

3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

   a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:

      (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or

      (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has not been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;

      (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:

(i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed "*MS4* SWPPP Acceptance" form, or

(ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed "MS4 SWPPP Acceptance" form.

4. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.C. of this permit.

D. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination ("NOT") has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.

2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor's or subcontractor's certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.

3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

use control MS4, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*). At a minimum, the *owner or operator* must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

a. The *owner or operator* shall have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.

e. The *owner or operator* shall include the requirements above in their SWPPP.

4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..

5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

regulated, traditional land use control MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice.

E. Permit Coverage for Discharges Authorized Under GP-0-15-002

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of *a construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, unless otherwise notified by the Department.

   An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

F. Change of Owner or Operator

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For *construction activities* subject to the requirements of a *regulated, traditional land use control MS4,* the original *owner or operator* must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.

2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.

3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.

2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.

3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.

4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP, including construction drawings:

   a. whenever the current provisions prove to be ineffective in minimizing *pollutants* in stormwater *discharges* from the site;

b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*;

c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* the Department or other regulatory authority; and

d. to document the final construction conditions.

5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4. of this permit.

6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor.* The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

   The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

   "I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with

the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharge*s from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:

   a. Background information about the scope of the project, including the location, type and size of project

b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours ; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge*(s);

c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);

d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;

e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;

f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;

g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;

i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;

k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the *construction site*; and

l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

   Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

   The post-construction stormwater management practice component of the SWPPP shall include the following:

   a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;

c. A Stormwater Modeling and Analysis Report that includes:
   (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;

   (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;

   (iii) Results of stormwater modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre and post-development runoff rates and volumes for the different storm events;

   (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;

   (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and

   (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;

d. Soil testing results and locations (test pits, borings);

e. Infiltration test results, when required; and

f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria,* Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *owners or operators* of *construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of this permit. *Owners or operators* of the *construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.

2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York or protect the public health and safety and/or the environment.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor shall

begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.

3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. Qualified Inspector Inspection Requirements

The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- New York State Erosion and Sediment Control Certificate Program holder
- Registered Landscape Architect, or
- someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].

1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:

   a. the construction of a single family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located

in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

   b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

   c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and

   d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:

   a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.

   b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

   c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization,* and all temporary, structural erosion and sediment control measures have been removed*;* and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.B.1 of this permit.

e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization,* all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site*, and all points of *discharge* from the *construction site*.

4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

a. Date and time of inspection;

b. Name and title of person(s) performing inspection;

c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;

d. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This shall include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;

f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;

g. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

h. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;

i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;

j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);

k. Identification and status of all corrective actions that were required by previous inspection; and

l. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

6. All inspection reports shall be signed by the *qualified inspector.* Pursuant to Part II.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.

2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:

   a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

   b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;

   c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.F. of this permit.

   d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.

3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice certification statements on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.

4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the "MS4 Acceptance" statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) required in Part V.A.3. of this permit.

5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:

   a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),

c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record,

d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION RECORDS

A. Record Retention

The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator,* its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit , or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:

    a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

(ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(i) the chief executive officer of the agency, or

(ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:

    a. The authorization is made in writing by a person described in Part VII.H.1. of this permit;

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,

c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.

3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.

4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4,* or by a duly authorized representative of that person.

   It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge*(s), the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the owner's or operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.

4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.

2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

APPENDIX A – Acronyms and Definitions

Acronyms

APO – Agency Preservation Officer
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
Cpv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DOW – Division of Water
EAF – Environmental Assessment Form
ECL - Environmental Conservation Law
EPA – U. S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review
SEQRA - State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property –means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

Alter Hydrology from Pre to Post-Development Conditions - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both "sewage" and "stormwater".

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for "*Construction Activity(ies)*" also.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Construction Site – means the land area where *construction activity(ies)* will occur. See definition for "*Commence (Commencement of) Construction Activities"* and "*Larger Common Plan of Development or Sale" also.*

Dewatering – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Direct Discharge (to a specific surface waterbody) - means that runoff flows from a *construction site* by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system

and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or *point source*.

Embankment –means an earthen or rock slope that supports a road/highway.

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department's rules and regulations for definition of terms and requirements.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Historic Property – means any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term "plan" in "larger common plan of development or sale" is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Minimize – means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State*;*
(ii) Designed or used for collecting or conveying stormwater;
(iii) Which is not a *combined sewer*; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

Natural Buffer –means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Nonpoint Source - means any source of water pollution or pollutants which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

Performance Criteria – means the design criteria listed under the "Required Elements" sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Point Source - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be discharged.

Pollutant - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq .

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – means the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical site limitations include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of site limitations shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Steep Slope – means land area designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%) , or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Streambank – as used in this permit, means the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – means a project specific report, including construction drawings, that among other things: describes the construction activity(ies), identifies the potential sources of pollution at the *construction site*; describes and shows the stormwater controls that will be used to control the pollutants (i.e. erosion and sediment controls; for many projects, includes post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions of the permit. See Part III of the permit for a complete description of the information that must be included in the SWPPP.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and *nonpoint source*s. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet *water quality standard*s, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint source*s, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* is responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
Construction Activities that Require the Preparation of a SWPPP That Only Includes Erosion and Sediment Controls

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres: • Single family home not located in one of the watersheds listed in Appendix C or not *directly discharging* to one of the 303(d) segments listed in Appendix E • Single family residential subdivisions with 25% or less impervious cover at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E • Construction of a barn or other *agricultural building*, silo, stock yard or pen.
The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land: All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
The following construction activities that involve soil disturbances of one (1) or more acres of land: • Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains • Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects • Pond construction • Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover • Cross-country ski trails and walking/hiking trails • Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development; • Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path. • Slope stabilization projects • Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

Table 1 (Continued) CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *alter hydrology from pre to post development* conditions,
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family home that disturbs five (5) or more acres of land
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover,* and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed -Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

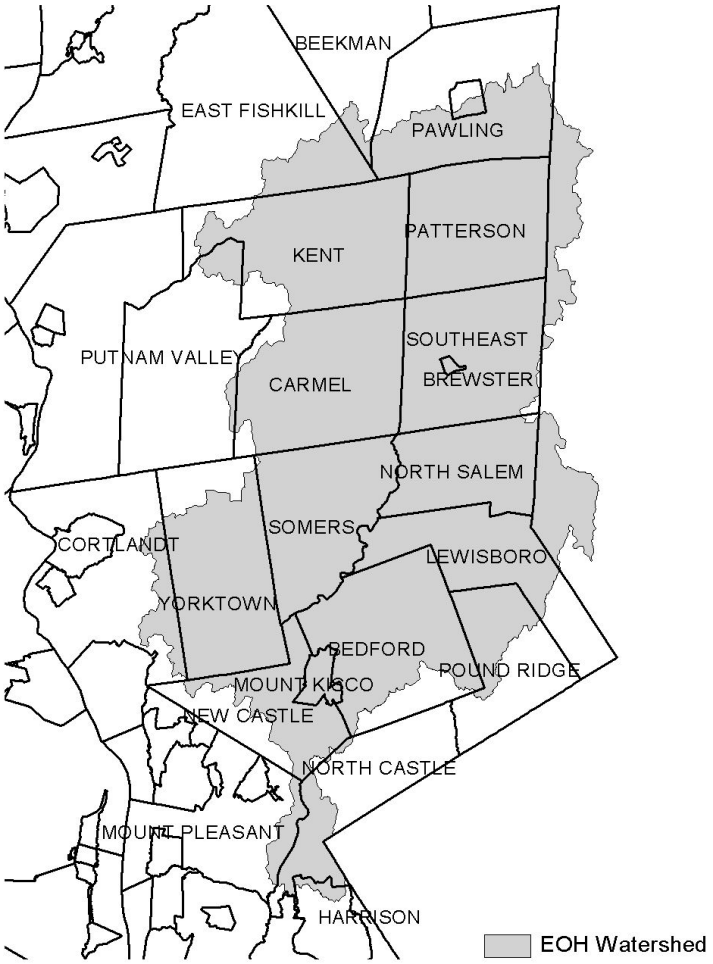


Figure 2 - Onondaga Lake Watershed



Figure 3 - Greenwood Lake Watershed

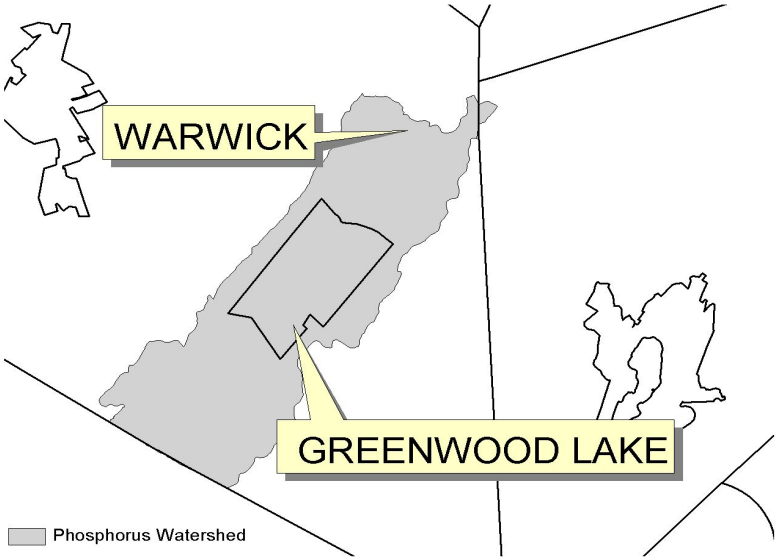


Figure 4 - Oscawana Lake Watershed

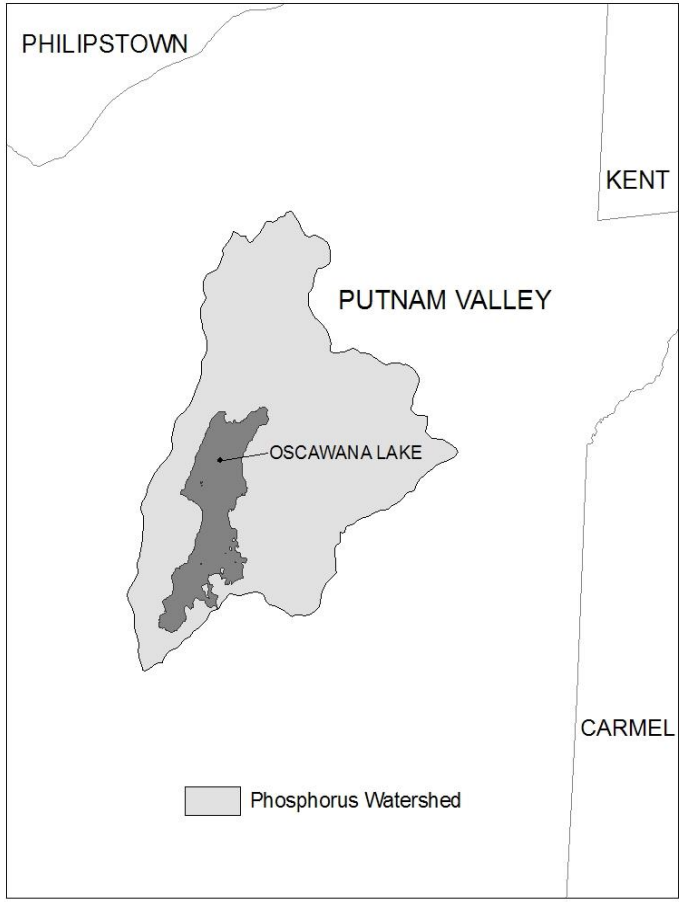
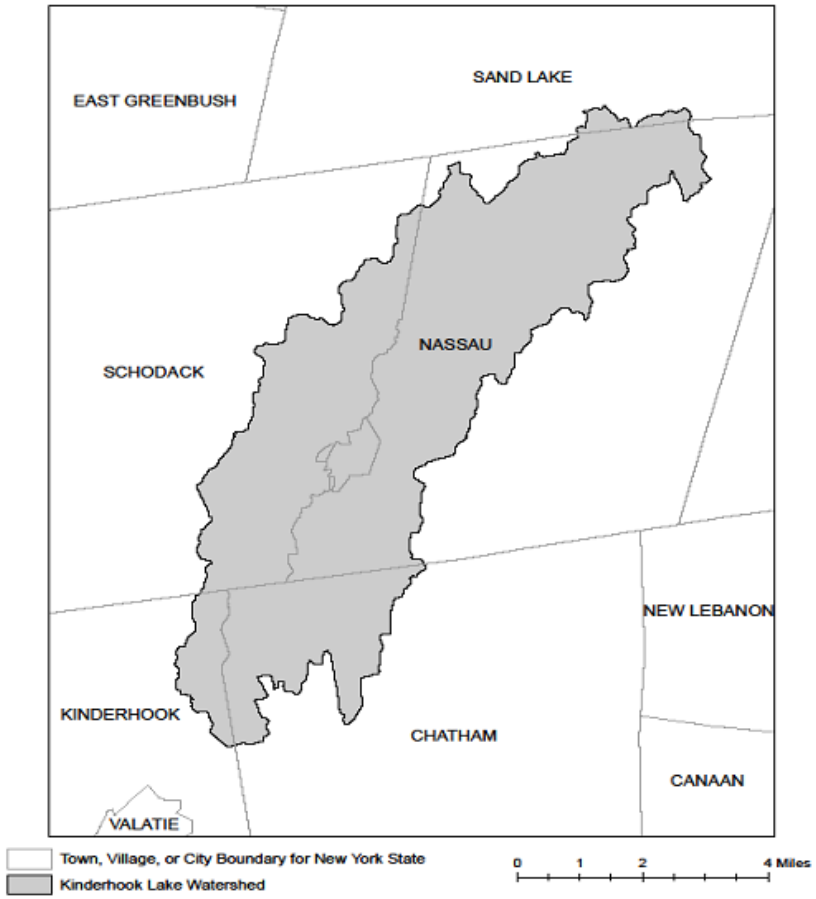


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

APPENDIX F – List of NYS DEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	100 Hillside Avenue, Suite 1w White Plains, NY 10603 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1150 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

APPENDIX K:
NYSDEC SOLAR GUIDANCE

NYSDEC Memorandum - Solar Panel Construction Stormwater Permitting/SWPPP Guidance
MDE – Stormwater Design Guidance – Solar Panel Installations

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505
P: (518) 402-8111 | F: (518) 402-9029
www.dec.ny.gov

MEMORANDUM

TO: Regional Water Engineers

FROM: Robert Wither, Chief, South Permit Section

SUBJECT: Solar Panel Construction Stormwater Permitting/SWPPP Guidance

DATE: January 17, 2020

Issue

The Department is seeing an increase in the number of solar panel construction projects across New York State. This has resulted in an increase in the number of questions on Construction General Permit (CGP) and Stormwater Pollution Prevention Plan (SWPPP) requirements from design professionals because the current CGP (GP-0-15-002) does not include a specific reference to the SWPPP requirements for solar panel projects in Tables 1 and 2 of Appendix B. To address this issue, the Division of Water (DOW) has developed the following guidance on CGP/SWPPP requirements for the different types of solar panel projects.

Scenario 1

The DOW considers solar panel projects designed and constructed in accordance with the following criteria to be a "*Land clearing and grading for the purposes of creating vegetated open space (i.e. recreational parks, lawns, meadows, fields)*" type project as listed in Table 1, Appendix B of the CGP. Therefore, the SWPPP for this type of project will typically just need to address erosion and sediment controls.

1. Solar panels are constructed on post or rack systems and elevated off the ground surface,
2. The panels are spaced apart so that rain water can flow off the down gradient side of the panel and continue as sheet flow across the ground surface*,
3. For solar panels constructed on slopes, the individual rows of solar panels are generally installed along the contour so rain water sheet flows down slope*,
4. The ground surface below the panels consist of a well-established vegetative cover (see "Final Stabilization" definition in Appendix A of the CGP),
5. The project does not include the construction of any traditional impervious areas (i.e. buildings, substation pads, gravel access roads or parking areas, etc.),
6. Construction of the solar panels will not alter the hydrology from pre-to post development conditions (see Appendix A of the CGP, for definition of "Alter the hydrology…"). Note: The design professional shall perform the necessary site assessment/hydrology analysis to make this determination.

*Refer to Maryland's "Stormwater Design Guidance- Solar Panel Installations" attached for guidance on panel installation.
**See notes below for additional criteria.

Scenario 2

If the design and construction of the solar panels meets all the criteria above, except for item 6, the project will fall under the "*All other construction activities that include the construction or reconstruction of impervious area or alter the hydrology from pre-to post development conditions, and are not listed in Table 1*" project type as listed in Table 2, Appendix B of the CGP. Therefore, the SWPPP for this type of project must address post-construction stormwater practices designed in accordance with the sizing criteria in Chapter 4 of the NYS Stormwater Management Design Manual, dated January 2015 (Note: Chapter 10 for projects in NYC EOH Watershed). The Water Quality Volume (WQv)/Runoff Reduction Volume (RRv) sizing criteria can be addressed by designing and constructing the solar panels in accordance with the criteria in items 1 – 4 above, however, the quantity control sizing criteria (Cpv, Qp and Qf) from Chapter 4 (or 10) of the Design Manual must still be addressed, unless one of the waiver criteria from Chapter 4 can be applied. **See notes below for additional criteria.

**** Notes**

- Item 1: For solar panel projects where the panels are mounted directly to the ground (i.e. no space below panel to allow for infiltration of runoff), the SWPPP must address post-construction stormwater management controls designed in accordance with the sizing criteria in Chapter 4 of the NYS Stormwater Management Design Manual, dated January 2015 (Note: Chapter 10 for projects in NYC EOH Watershed).

- Item 5: For solar panel projects that include the construction of traditional impervious areas (i.e. buildings, substation pads, gravel access roads or parking areas, etc.), the SWPPP must address post-construction stormwater management controls for those areas of the project. This applies to both Scenario 1 and 2 above.

cc: Carol Lamb-Lafay, BWP
Dave Gasper, BWP

Stormwater Design Guidance – Solar Panel Installations

Revisions to Maryland's stormwater management regulations in 2010 require that environmental site design (ESD) be used to the maximum extent practicable (MEP) to mimic natural hydrology, reduce runoff to reflect forested wooded conditions, and minimize the impact of land development on water resources. This applies to any residential, commercial, industrial, or institutional development where more than 5,000 square feet of land area is disturbed. Consequently, stormwater management must be addressed even when permeable features like solar panel installations exceed 5,000 square feet of land disturbance.

Depending on local soil conditions and proposed imperviousness, the amount of rainfall that stormwater requirements are based on varies from 1.0 to 2.6 inches. However, addressing stormwater management does not mean that structural or micro-scale practices must be constructed to capture and treat large volumes of runoff. Using nonstructural techniques like disconnecting impervious cover reduces runoff by promoting overland filtering and infiltration. Commonly used with smaller or narrower impervious areas like driveways or open roads, the Disconnection of Non-Rooftop Runoff technique (see pp. 5.61 to 5.65 of the **2000 Maryland Stormwater Design Manual**[1]) is a low cost alternative for treating runoff in situations like rows of solar panels.

When non-rooftop disconnection is used to treat runoff, the following factors should be considered:

- The vegetated area receiving runoff must be equal to or greater in length than the disconnected surface (e.g., width of the row of solar panels)
- Runoff must sheet flow onto and across vegetated areas to maintain the disconnection
- Disconnections should be located on gradual slopes (≤ 5%) to maintain sheetflow. Level spreaders, terraces, or berms may be used to maintain sheetflow conditions if the average slope is steeper than 5%. However, installations on slopes greater than 10% will require an engineered plan that ensures adequate treatment and the safe and non-erosive conveyance of runoff to the property line or downstream stormwater management practice.
- Disconnecting impervious surfaces works best in undisturbed soils. To minimize disturbance and compaction, construction vehicles and equipment should avoid areas used for disconnection during installation of the solar panels.
- Groundcover vegetation must be maintained in good condition in those areas receiving disconnected runoff. Typically this maintenance is no different than other lawn or landscaped areas. However, areas receiving runoff should be protected (e.g., planting shrubs or trees along the perimeter) from future compaction.

Depending on the layout and number of panels installed, the disconnection of non-rooftop runoff technique may address some or all of the stormwater management requirements for an individual project. Where the imperviousness is high or there is other infrastructure (e.g., access roads, transformers), additional runoff may need to be treated. In these situations, other ESD techniques or micro-scale practices may be needed to provide stormwater management for these features.

Example 1 – Using Non-Rooftop Disconnection Where the Average Slope ≤ 5%

Several rows of solar panels will be installed in an existing meadow. The soils within the meadow are hydrologic soil group (HSG) B and the average slope does not exceed 5%. Each row of panels is 10 feet wide and the distance between rows is 20 feet. The rows of solar panels will be installed according to Figure 1 below. In this scenario, the disconnection length is the same as the distance between rows (20 feet) and is greater than the width of each row (10 feet). Therefore, each row of panels is adequately disconnected and the runoff from 1.0 inch of rainfall is treated.

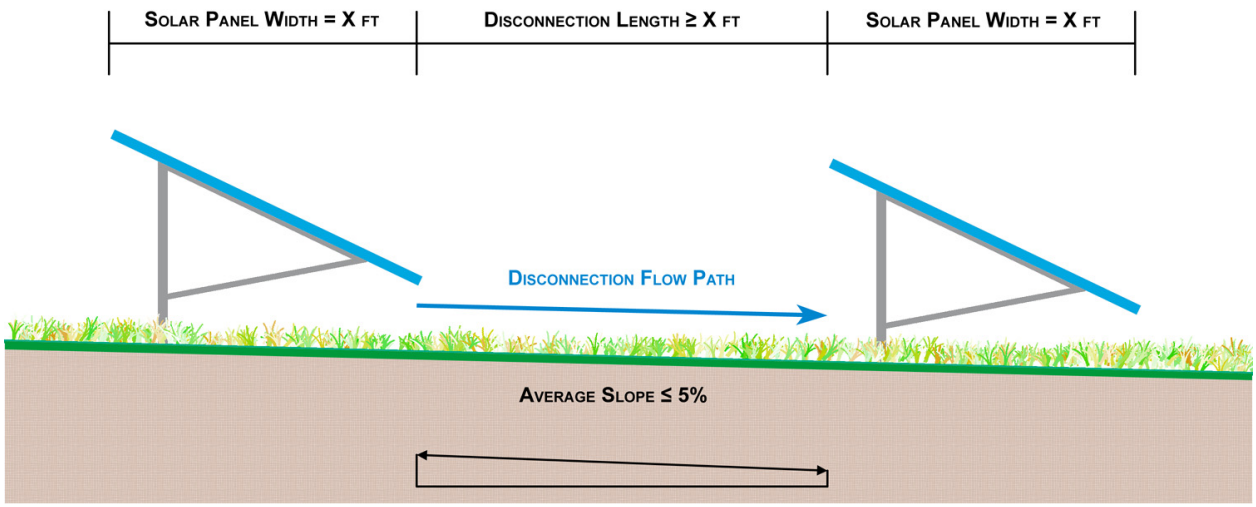


Figure 1. Typical Installation - Slope ≤ 5%

Example 2 – Using Non-Rooftop Disconnection Where the Average Slope ≥ 5% but ≤ 10%

Several rows of solar panels will be installed in an existing meadow. The soils within the meadow are hydrologic soil group (HSG) B and the average slope is greater than 5% but less than 10%. Each row of panels is 10 feet wide and the distance between rows is 20 feet. The rows of solar panels will be installed as shown in Figure 2 below. The disconnection length is the same as the distance between rows (20 feet) and is greater than the width of each row (10 feet). However, in this example, a level spreader (typically 1 to 2-foot wide and 1 foot deep) has been located at the drip edge of each row of panels to dissipate energy and maintain sheetflow.

Discussion

To meet State and local stormwater management requirements, ESD must be used to the MEP to reduce runoff to reflect forested conditions. While all reasonable options for implementing ESD must be investigated, minimally, the runoff from 1 inch of rainfall must be treated. In each of the examples above, there may be additional opportunities to implement ESD techniques or practices and reduce runoff that should be explored. However, simply disconnecting the runoff from the solar panel arrays captures and treats the runoff from 1.0 inch of rainfall. Where imperviousness is low and soil conditions less optimal (e.g., HSG C or D), this may be sufficient to completely address stormwater management requirements. In more dense applications or in sandy soils, additional stormwater management may be required.

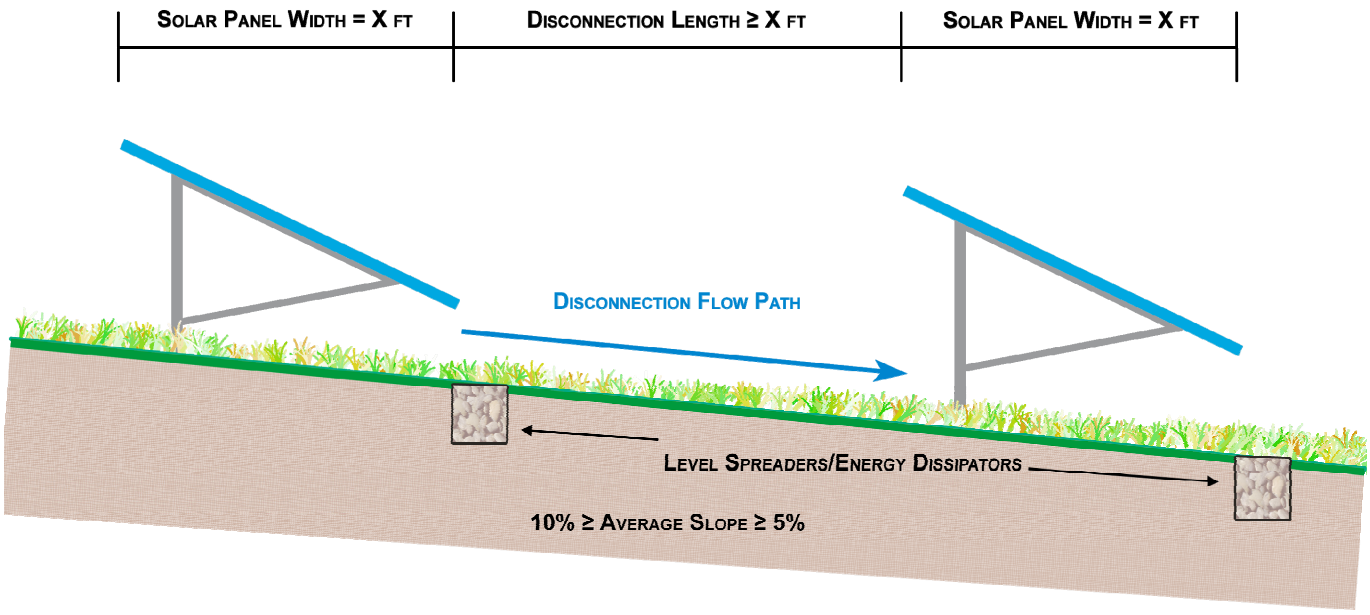


Figure 2. Typical Installation – Slope ≥ 5% but ≤ 10%

Conclusion

The primary purpose of Maryland's stormwater management program is to mimic natural hydrologic runoff characteristics and minimize the impact of land development on water resources. Any land development project that exceeds 5,000 square feet of disturbance, including solar panel projects, must address stormwater management. However, for solar panels, stormwater management may be provided in a cost-effective manner by disconnecting each row of panels and directing runoff over the vegetated areas between the individual rows.

Resources

[1] 2000 Maryland Stormwater Design Manual, Volumes I and II, MDE, October 2000 (http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/MarylandStormwaterDesignManual/Pages/Programs/WaterPrograms/SedimentandStormwater/stormwater_design/index.aspx)

DATE

Sarah McIvor
Historic Preservation Technical Specialist
New York State Office of Parks, Recreation and Historic Preservation
Division for Historic Preservation, Peebles Island
PO Box 189 Waterford, NY 12188-0189
Sara.McIvor@parks.ny.gov

Re: Briarcliff Solar/5MW/40 of 78 acres
345 Scarborough Rd, Briarcliff Manor, Westchester County
22PR01760

Dear Ms. McIvor,

This letter provides the alternatives analysis requested by your May 5, 2022 letter. As discussed below, the YSG's proposed solar farm represents the best use of the project site.

Alternatives Analysis

Introduction:

The action triggering the alternatives analysis is Applicant YSG Solar's proposed Briarcliff Community Solar Project to be located at 345 Scarborough Road, in Briarcliff Manor, Westchester County, NY (SBLs: 97.16-1-1- and 97.12-1-9). The project site contains the former Philips Research North America Campus. The campus is eligible to be listed on the State and National Registers of Historic Places (S/NRHP). This analysis will evaluate YSG's solar farm as a potential development alternative.

Project Description:

YSG's proposed 5MW AC solar project consists of a north and south array and includes approximately 29,808 modules, including 100 inverters, 4 equipment pads, and 2 utility poles. The maximum depth of excavation for this project will not exceed 4 feet, but the helix screws (or h-piles) of the solar tables will be installed at depth of approximately 8 to 10 feet. See attached site plan.

The fenced in area of the project covers approximately 47.14 acres. The project will be funded through the NY-SUN Commercial Solar Incentive MW Block Program. The project site is owned by Ridgewood Briarcliff Owner LLC.

Project Site:

The project site consists of tax parcels 97.16-1-1- and 97.12-1-9. It is approximately 95.5 acres and is heavily wooded and is surrounded by commercial and residential developments. It is largely undeveloped.

The Phillips Research North American Campus ("campus") consists of four main interconnected buildings designated as Buildings A, B, C, and D and related improvements including a Maintenance Garage, basketball court, tennis courts, volleyball courts, helipad, and patio area. Philips Lighting constructed the original buildings (A and B) in 1964 for use as a research facility and office building. Philips added building C in 1980 and building D in 1988. The property is accessed by a private drive known as Shadow Brook Lane. Asphalt paved parking is present to the north and south of the Research Facility.

Water and power easements are present in the area occupied by Shadow Brook Lane and a sewer easement runs north/south.

The project site is located within 350 feet of Holly Hill, a S/NRHP-Eligible Building District and the Old Croton Aqueduct, a National Historic Landmark. The project will not impact Holly Hill or the Old Croton Aqueduct, and the project will not be visible from the adjacent walking trail.

Zoning:

The project site is currently zoned for commercial purposes. Its zoning designation is Complementary Transition 1 or CTU-1. Principal uses allowed with a special use permit in this zone include:

1. Clubs, Lodges, recreational facilities
2. Conference center/event space
3. Data Storage
4. Fitness Clubs, training facilities
5. Hotels
6. Light manufacturing
7. Medical Office, outpatient and ambulatory care facilities
8. Museum or Art Gallery
9. Office
10. Private institutions of higher learning
11. Research laboratory, biomedical and biotech facilities
12. Solar Farms

As indicated above, Solar Farms are principal uses permitted with a special use permit in the zoning district where the project is located.

Historic Resource Background:

The project proposes to demolish the Philips Research North America Campus ("campus"), which is eligible to be listed on the State and National Registers of Historic Places. The campus contains a 3-story commercial building constructed in 1964. The campus was occupied for 50 years by Royal Philips N.V., a global technology company headquartered in the Netherlands. Researchers at the project site developed technological innovations for health care systems and lighting. Phillip's Intellectual Property and Standards division was also based at the site.

The facility has been vacant since Philips ceased their operations at the site in 2015 and relocated 125 employees to Cambridge, Massachusetts.

The previous owner purchased the property in 2017 and had planned to develop multifamily housing on the site. The Village rezoned the property for commercial use (Complementary Transition Use District 1), limiting the potential uses of the site. The issue is the subject of litigation between the Village of Briarcliff Manor and the previous owner.

Condition and Security Concerns:

Philips Research North America Campus building is generally comprised of steel framing (steel columns, beams and girders) with composite metal deck and concrete floor slabs, metal roof deck, concrete masonry unit (CMU) partition and backup walls with cast-in-place concrete shallow foundations and aluminum storefront assemblies along the building perimeter. The interior finishes are generally in poor condition and not salvageable due to moisture damage. However, the damage appears limited to finishes as the structural systems appear to be in good and stable condition. See attached structural assessment report..

After the building became vacant, the facility has been subject to repeated incidents of trespassing and vandalism. See attached photographs of the interior and exterior of the structure. On October 1, 2020, a fire broke out in the main building and roof as a result of trespassing activities. During the week of May 2, 2022, the property management company reported additional trespassing violations that necessitated the resecuring of points of entry.

Alternatives Analysis:

Below, find a discussion of alternatives, including a no action alternative.

No Action Alternative – The project site would remain vacant and underutilized. Trespassing and vandalism would continue. The Phillips Research North America campus building would continue to deteriorate and could create health and safety issues for the community. Property management would continue to spend money on

upkeep and repairs for the property until another economically viable development opportunity materialized.

Residential Development Alternative – While the Philips Research North America campus building could be redeveloped into housing, the project site would have to be rezoned from a commercial use to a residential use. It is highly unlikely that Village would entertain a residential rezoning for the project site given its stated interest in maintaining commercial zoning at the site for tax revenues. See attached Village of Briarcliff zoning primer for the CT Zones.

Of note, A previous owner presented a residential plan to Village Board which was rejected. The previous owner is currently litigating this matter with the Village.

Commercial Development Alternative—No economically viable commercial developments which would allow reuse or redevelopment of the campus building structure have been proposed for the site. Demand for large campus style developments has decreased during COVID-19. Potential redevelopment of the site will grow more expensive and difficult as time goes on and will place significant financial burden on the owner's property management company.

Solar Farm Alternative – Solar Farms are principal uses allowed with a special use permit in the CTU-1 District. Applicant's proposed solar farm is currently under review by the Village and if built, would be a code compliant use. While development of the solar farm as designed would require demolishing the Phillips Research North America Building, its unlikely that the building would be usable for future commercial use given its condition, zoning restrictions, and the expense associated with upkeeping a vacant building. Applicant's proposed solar farm represents an economically viable, code compliant use that will provide green energy in area little available land for the development of few large-scale solar installations.

This project has significant long-term benefits to the ConEdison market which has been significantly underserved when it comes to the generation of renewable energy resources. According to the NY System Operator, 77% of energy generated downstate comes from fossil fuel generation compared to 90% of energy update coming from renewable sources. This project contributes to a healthier environment by improving air quality and cleaner electrical grid.

Summary of Findings and Conclusion:

YSG's proposes a 5MW AC solar project on the former Phillips Research North America Campus. The campus is eligible to be listed on the State and National Registers of Historic Places (S/NRHP). The project site is currently zoned for commercial purposes, Complementary Transition 1 or CTU-1. Solar Farms are permitted as a principal use in this zoning district with a special use permit.

The Village of Briarcliff Manor is reviewing YSG's application for a site plan and special use permit for this project. While development of the solar farm as designed would require demolishing the Phillips Research North America Campus Building, it's unlikely that the building would usable for future commercial use given its condition, zoning restrictions, and the expense associated with upkeeping a vacant building. It is highly unlikely that Village would entertain a residential rezoning for the project site given its stated interest in maintaining commercial zoning for tax revenues. No other economically viable commercial uses have been proposed for the site.

Therefore, Applicant's proposed Solar Farm represents the best use for the project site.

Respectfully Submitted,

LABELLA ASSOCIATES, D.P.C.



Frances Kabat
Environmental Impact Group Manager

SAVATREE
Consulting Group

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July 29, 2022

Jim Taravella, PE
Project Developer, YSG Solar
79 Madison Ave, 8th Floor
New York, NY 10016

Re: Assessment of trees at 345 Scarborough Rd in Briarcliff Manor, NY

Dear Mr. Taravella:

The SavATree Consulting Group was retained to perform an inventory and assessment of trees measuring 7-inches and larger growing within a 55-acre proposed limit of disturbance and its 50-foot buffer (total area ~67 acres). Trees 6-inches and larger were included in wetland buffers and 4-inches and larger on significant slopes. The area is planned for development of a large solar field. Field work was performed over the last 2.5 weeks of July. For each tree fitting the above criteria, the following data points were collected:

- Species, common and scientific names;
- Diameter at breast height, in inches;
- Condition: Good, Fair, Poor, Critical, Dead;
- Observations;
- Whether the tree is invasive in NY State, and;
- Additional notes.

The full dataset has been provided as a separate Excel file. An online map of the inventory can be found here: https://arcg.is/1ieiGT. The map can be searched by tag number by using the text box at the top of the page. Trees that are in critical condition, dead, and/or invasive species are red circles; all other trees are green.

There are 3600 trees included in the inventory. Prior to performing the inventory, I was provided a kml file of the 55-acre LOD. I used ArcGIS Online to create the 50-foot buffer around the LOD to determine the limits of our assessment.

In order to assign the condition ratings for the assessment, we considered the health and structure of each tree in the inventory. Trees rated as Good have no significant issues. Fair trees have minor defects (deadwood, minor dieback, codominant stems, non-fatal insect/disease issue) that could be addressed and corrected via management. Trees in Poor condition have noticeable defects but could likely be

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saved via action. Critical trees have significant health, structural issues, and/or pest issues and cannot be saved. For example, all ash trees at the site have either been killed or are currently infested with emerald ash borer. In addition, woolly adelgid was observed in each hemlock, and beech leaf disease was observed on most of the American beech trees. This is a fairly new pest that currently has no provided treatment. The disease typically kills infected beech trees within 5 years. It is likely that even the beech trees with no visible infection at this time will be infected in the near future. All critical trees should be removed. Of the 3600 trees in this inventory, 682 are in Good condition; 2454 are Fair; 130 are Poor; 151 are Critical; and 183 are standing dead trees. Considering the trees in the woodlands at the site have never been maintained, it is not surprising that Fair is the most common condition class.

To determine whether trees are invasive to New York, we used the NY Department of Environmental Conservation list of prohibited and regulated species. Any tree species on this list was recorded as invasive. The species in the inventory that are this list are: ailanthus, Norway maple, sycamore maple, black locust, and buckthorn. Using these species, there are 1449 invasive trees in the inventory and 2151 that are not invasive.

Species composition is typical for natural forests in the area. The most common species are Norway maple (1273 trees; 35.4% of the population); sugar maple (676 trees; 18.8%); tulip poplar (254 trees; 7.1%); and red maple (246 trees; 6.9%).

Overall, 1690 trees in the inventory are either invasive species or in critical or dead condition (note: there are some invasive species that are dead or critical, which is why this number is less than the number of invasive trees combined with critical and dead trees). I believe that the removal of these trees should be exempt from the replacement requirement of the Village. There are 1910 trees in the inventory that are non-invasive and in poor and better condition.

Please let me know if you have any questions regarding my findings.

Thank you,

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ID	Common Name	Latin Name	DBH	Cond.	NY Invasive Species	Observations	Long	Lat
1	Red oak	Quercus rubra	34	Fair	No	Large deadwood	-73.85425	41.147932
2	Weeping cherry	Prunus pendula	13	Fair	No	Deadwood. Minor decay	-73.85443	41.147964
3	Norway maple	Acer platanoides	21	Good	Yes	Small deadwood	-73.8543	41.148293
4	Littleleaf linden	Tilia cordata	30	Good	No	Small deadwood. Aphids	-73.85436	41.148322
5	Crabapple	Malus spp.	15	Critical	No	Broken top at 6 feet. Sap rot. Very little canopy remains	-73.85422	41.148373
6	Green ash	Fraxinus pennsylvanica	17	Critical	No	Emerald ash borer infested. Little canopy remains	-73.85424	41.148625
7	Pin oak	Quercus palustris	20	Fair	No	Deadwood	-73.8543	41.148658
8	Pin oak	Quercus palustris	29	Fair	No	Deadwood	-73.85424	41.148673
9	Norway spruce	Picea abies	16	Fair	No	Deadwood	-73.85427	41.148807
10	Norway spruce	Picea abies	18	Good	No	Small deadwood	-73.85439	41.148825
11	Norway spruce	Picea abies	8	Fair	No	Overtopped	-73.85437	41.148918
12	Norway spruce	Picea abies	21	Fair	No	Small deadwood	-73.85437	41.148946
13	Norway spruce	Picea abies	15	Fair	No	Small deadwood	-73.85436	41.148988
14	Norway spruce	Picea abies	17	Fair	No	Small deadwood	-73.85425	41.149002
15	White pine	Pinus strobus	15	Fair	No	Deadwood	-73.85435	41.149024
16	White pine	Pinus strobus	16	Fair	No	Deadwood	-73.85435	41.14906
17	White pine	Pinus strobus	19	Fair	No	Deadwood	-73.85429	41.149088
18	White pine	Pinus strobus	20	Fair	No	Deadwood	-73.85427	41.149127
19	White pine	Pinus strobus	21	Fair	No	Deadwood	-73.85428	41.149182
20	White pine	Pinus strobus	16	Critical	No	Very large deadwood. Little canopy remains	-73.85434	41.149153
21	White pine	Pinus strobus	22	Fair	No	Deadwood	-73.85444	41.149276
22	White pine	Pinus strobus	19	Poor	No	Large deadwood	-73.8545	41.149291
23	White pine	Pinus strobus	18	Fair	No	Deadwood	-73.85448	41.149369
24	White ash	Fraxinus americana	17	Critical	No	Emerald ash borer infested. Very little canopy remains	-73.85447	41.149389
25	White pine	Pinus strobus	15	Fair	No	Deadwood	-73.85458	41.149437
26	White pine	Pinus strobus	19	Fair	No	Deadwood	-73.8546	41.149351
27	Littleleaf linden	Tilia cordata	18	Good	No	Aphids	-73.85462	41.149238
28	Littleleaf linden	Tilia cordata	14	Good	No	Aphids	-73.85459	41.149195
29	Littleleaf linden	Tilia cordata	12	Fair	No	Aphids	-73.85459	41.149143
30	Littleleaf linden	Tilia cordata	17	Fair	No	Aphids	-73.8546	41.149098
31	Littleleaf linden	Tilia cordata	16	Good	No	Aphids	-73.85464	41.148949
32	Littleleaf linden	Tilia cordata	13	Fair	No	Aphids	-73.85462	41.148907
33	Littleleaf linden	Tilia cordata	8	Critical	No	Broken top. Column of decay along trunk. Aphids	-73.85462	41.14885
34	Littleleaf linden	Tilia cordata	9	Fair	No	Aphids	-73.85463	41.148781
35	Littleleaf linden	Tilia cordata	11	Fair	No	Aphids	-73.85461	41.148745
36	Littleleaf linden	Tilia cordata	10	Fair	No	Aphids	-73.85467	41.14875
37	Red pine	Pinus resinosa	23	Fair	No	Small deadwood	-73.85492	41.148582
38	Norway maple	Acer platanoides	8	Fair	Yes	Codominant at 3 feet	-73.85504	41.14918
39	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85506	41.149152
40	Black locust	Robinia pseudoacacia	7	Fair	Yes	None	-73.85508	41.148816
41	Canadian hemlock	Tsuga canadensis	7	Critical	No	Hemlock woolly adelgid. Very little canopy remains	-73.85511	41.148664
42	Canadian hemlock	Tsuga canadensis	7	Dead	No	Standing dead tree	-73.85511	41.148644
43	Canadian hemlock	Tsuga canadensis	8	Critical	No	Hemlock woolly adelgid. Very little canopy remains	-73.85511	41.148631
44	Canadian hemlock	Tsuga canadensis	7	Critical	No	Hemlock woolly adelgid. Very little canopy remains	-73.85511	41.148616
45	Black walnut	Juglans nigra	13	Good	No	Vines along trunk	-73.85576	41.147805
46	Black walnut	Juglans nigra	10	Fair	No	None	-73.85571	41.14798
47	Mulberry	Morus spp.	10	Fair	No	Leans over pavement	-73.85569	41.147983
48	Mulberry	Morus spp.	9	Fair	No	None	-73.8557	41.147989
49	Mulberry	Morus spp.	11	Fair	No	None	-73.8557	41.147998
50	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85506	41.149267
51	Red oak	Quercus rubra	9	Good	No	None	-73.85502	41.149326
52	Crabapple	Malus spp.	9	Good	No	None	-73.85391	41.149186
53	Crabapple	Malus spp.	7	Fair	No	None	-73.85392	41.149257
54	White pine	Pinus strobus	19	Fair	No	Deadwood	-73.85413	41.149348
55	White pine	Pinus strobus	14	Fair	No	Deadwood	-73.85412	41.149403
56	White pine	Pinus strobus	25	Fair	No	Deadwood	-73.8542	41.149385
57	White pine	Pinus strobus	21	Fair	No	Deadwood	-73.85421	41.149438
58	White pine	Pinus strobus	16	Fair	No	Deadwood	-73.8543	41.149445
59	Mulberry	Morus spp.	24	Poor	No	Dieback. Deadwood	-73.85456	41.14963
60	Norway maple	Acer platanoides	21	Critical	Yes	Dieback. Deadwood	-73.85454	41.149726
61	White ash	Fraxinus americana	20	Dead	No	Standing dead tree. Emerald ash borer	-73.85442	41.149838
62	White ash	Fraxinus americana	19	Dead	No	Standing dead tree. Emerald ash borer	-73.85444	41.149923

63	White ash	Fraxinus americana	29	Critical	No	Emerald ash borer. Very little canopy remains. Codominant at 3 feet	-73.85427	41.149981
64	White ash	Fraxinus americana	18	Dead	No	Standing dead tree. Emerald ash borer	-73.85439	41.149983
65	Tulip polplar	Liriodendron tulipifera	26	Fair	No	Small deadwood	-73.85452	41.150046
66	Red oak	Quercus rubra	21	Fair	No	Small deadwood	-73.85428	41.150039
67	Black walnut	Juglans nigra	15	Fair	No	Small deadwood	-73.85431	41.150108
68	White ash	Fraxinus americana	31	Dead	No	Standing dead tree. Emerald ash borer. Codominant near base	-73.85441	41.150134
69	Red oak	Quercus rubra	19	Good	No	Small deadwood	-73.85435	41.150194
70	White ash	Fraxinus americana	25	Critical	No	Emerald ash borer. Very little canopy remains	-73.85471	41.150212
71	White ash	Fraxinus americana	26	Dead	No	Emerald ash borer. Standing dead tree. Codominant at 3 feet	-73.85447	41.150247
72	Sugar maple	Acer saccharum	18	Good	No	None	-73.85441	41.150278
73	White ash	Fraxinus americana	15	Dead	No	Emerald ash borer. Standing dead tree. Codominant at 3 feet	-73.8544	41.15033
74	White ash	Fraxinus americana	12	Dead	No	Emerald ash borer. Standing dead tree. Codominant at 3 feet	-73.85438	41.150353
75	Black walnut	Juglans nigra	17	Good	No	Small deadwood	-73.85455	41.150293
76	Tulip polplar	Liriodendron tulipifera	25	Fair	No	Small deadwood	-73.85476	41.150346
77	Black oak	Quercus velutina	37	Fair	No	Deadwood	-73.85483	41.150606
78	Sugar maple	Acer saccharum	17	Dead	No	Standing dead tree	-73.85487	41.150722
79	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85476	41.150763
80	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85474	41.150772
81	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85473	41.150772
82	Red maple	Acer rubrum	12	Fair	No	None	-73.85474	41.150751
83	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85468	41.150698
84	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.8547	41.150698
85	Red oak	Quercus rubra	12	Fair	No	Leans	-73.85472	41.150625
86	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.8547	41.150634
87	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85469	41.1506
88	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85467	41.150563
89	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85468	41.150541
90	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8547	41.150538
91	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.8547	41.150506
92	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85468	41.150507
93	White ash	Fraxinus americana	9	Dead	No	Standing dead tree. Emerald ash borer	-73.85463	41.150503
94	Red maple	Acer rubrum	21	Fair	No	None	-73.85466	41.150488
95	Red maple	Acer rubrum	21	Fair	No	None	-73.85465	41.150452
96	American elm	Ulmus americana	7	Fair	No	None	-73.85465	41.150433
97	Red maple	Acer rubrum	8	Fair	No	None	-73.85465	41.150421
98	White ash	Fraxinus americana	10	Dead	No	Standing dead tree. Emerald ash borer	-73.85463	41.150407
99	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85462	41.15042
100	Red maple	Acer rubrum	37	Fair	No	Quad lead at 4 feet	-73.85456	41.150441
101	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85457	41.150509
102	American elm	Ulmus americana	8	Fair	No	None	-73.8546	41.150509
103	Red maple	Acer rubrum	18	Fair	No	None	-73.85461	41.150569
104	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85458	41.1506
105	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85459	41.150613
106	Black cherry	Prunus serotina	7	Fair	No	None	-73.85461	41.150631
107	Red maple	Acer rubrum	26	Fair	No	None	-73.85458	41.150649
108	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85462	41.150663
109	Red maple	Acer rubrum	9	Fair	No	None	-73.85461	41.150701
110	Red maple	Acer rubrum	24	Fair	No	None	-73.85465	41.150727
111	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85464	41.150755
112	Sugar maple	Acer saccharum	14	Fair	No	None	-73.85459	41.150757
113	White ash	Fraxinus americana	13	Dead	No	Standing dead tree. Emerald ash borer.	-73.85455	41.150757
114	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85451	41.150763
115	Red maple	Acer rubrum	16	Fair	No	None	-73.85447	41.150715
116	Red maple	Acer rubrum	12	Fair	No	None	-73.85445	41.150726
117	White ash	Fraxinus americana	18	Dead	No	Standing dead tree. Emerald ash borer.	-73.85442	41.150708
118	Sugar maple	Acer saccharum	18	Fair	No	None	-73.8544	41.150679
119	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85442	41.150639
120	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85445	41.15065
121	Red maple	Acer rubrum	27	Fair	No	Codominant near base	-73.85452	41.150647
122	Red maple	Acer rubrum	25	Fair	No	Codominant at 3 feet	-73.85448	41.150575
123	American elm	Ulmus americana	8	Fair	No	None	-73.85453	41.150503
124	Sugar maple	Acer saccharum	16	Fair	No	None	-73.8545	41.150485
125	Sugar maple	Acer saccharum	11	Fair	No	None	-73.8545	41.15051

126	Black cherry	Prunus serotina	7	Fair	No	None	-73.85448	41.1505
127	Black cherry	Prunus serotina	7	Fair	No	None	-73.85447	41.150494
128	Black cherry	Prunus serotina	12	Fair	No	None	-73.85443	41.150467
129	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85444	41.150515
130	Red maple	Acer rubrum	16	Fair	No	Codominant at 3 feet	-73.85445	41.150527
131	Red maple	Acer rubrum	31	Fair	No	Tri lead at 3 feet	-73.85441	41.150534
132	Black walnut	Juglans nigra	10	Fair	No	None	-73.85434	41.150512
133	Black cherry	Prunus serotina	11	Fair	No	None	-73.85434	41.15052
134	Red maple	Acer rubrum	30	Fair	No	Codominant at 4 feet	-73.8543	41.150541
135	Red maple	Acer rubrum	10	Fair	No	Codominant at 4 feet	-73.85439	41.150551
136	Tulip polplar	Liriodendron tulipifera	23	Critical	No	Basal decay. Column of decay along trunk. Broken top	-73.8543	41.150584
137	White ash	Fraxinus americana	13	Dead	No	Emerald ash borer. Standing dead tree. Codominant at 3 feet	-73.85429	41.150605
138	Red maple	Acer rubrum	7	Fair	No	Codominant at 4 feet	-73.85436	41.150602
139	Sugar maple	Acer saccharum	15	Fair	No	None	-73.85432	41.150621
140	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85435	41.150639
141	White ash	Fraxinus americana	8	Dead	No	Standing dead tree. Emerald ash borer.	-73.85435	41.150668
142	Sugar maple	Acer saccharum	14	Fair	No	None	-73.85431	41.150692
143	Black walnut	Juglans nigra	7	Fair	No	None	-73.85427	41.150686
144	White ash	Fraxinus americana	12	Dead	No	Standing dead tree. Emerald ash borer.	-73.85425	41.15064
145	White ash	Fraxinus americana	14	Dead	No	Standing dead tree. Emerald ash borer.	-73.85424	41.150591
146	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85423	41.150783
147	Black cherry	Prunus serotina	17	Fair	No	None	-73.85414	41.150763
148	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85414	41.150794
149	Black cherry	Prunus serotina	7	Fair	No	None	-73.85418	41.150821
150	Pin oak	Quercus palustris	21	Fair	No	None	-73.85413	41.150838
151	Eastern red cedar	Juniperus virginiana	18	Poor	No	Overtopped. Dieback. Deadwood	-73.85418	41.150866
152	Red maple	Acer rubrum	13	Fair	No	None	-73.85411	41.150854
153	White ash	Fraxinus americana	13	Dead	No	Standing dead tree. Emerald ash borer	-73.85413	41.150862
154	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85412	41.150886
155	Crabapple	Malus spp.	15	Poor	No	Deadwood. Broken limbs	-73.85412	41.150937
156	Red maple	Acer rubrum	18	Fair	No	None	-73.85416	41.150976
157	Red maple	Acer rubrum	21	Fair	No	None	-73.8541	41.150974
158	Red maple	Acer rubrum	20	Fair	No	Codominat at 3 feet	-73.85402	41.150935
159	Red maple	Acer rubrum	22	Fair	No	Codominat near base	-73.85401	41.150917
160	Red maple	Acer rubrum	17	Fair	No	None	-73.85401	41.150868
161	Red maple	Acer rubrum	9	Fair	No	None	-73.85397	41.150868
162	Red maple	Acer rubrum	13	Fair	No	Tri lead	-73.85396	41.150848
163	Red maple	Acer rubrum	11	Fair	No	None	-73.85398	41.150836
164	Red maple	Acer rubrum	8	Fair	No	None	-73.85401	41.150832
165	Red maple	Acer rubrum	14	Fair	No	None	-73.85391	41.150816
166	Red maple	Acer rubrum	11	Fair	No	None	-73.85384	41.150793
167	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85392	41.150791
168	Red maple	Acer rubrum	7	Fair	No	None	-73.85393	41.150757
169	Red maple	Acer rubrum	8	Fair	No	None	-73.85394	41.150743
170	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85399	41.150687
171	Red maple	Acer rubrum	12	Fair	No	None	-73.854	41.150701
172	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85397	41.150703
173	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85398	41.150709
174	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85399	41.150717
175	Red maple	Acer rubrum	8	Fair	No	None	-73.85399	41.150768
176	Black walnut	Juglans nigra	15	Fair	No	None	-73.85405	41.150747
177	Tulip polplar	Liriodendron tulipifera	19	Fair	No	Deadwood	-73.85411	41.150708
178	Tulip polplar	Liriodendron tulipifera	12	Fair	No	Deadwood	-73.85411	41.150705
179	Tulip polplar	Liriodendron tulipifera	9	Fair	No	None	-73.85413	41.150705
180	Tulip polplar	Liriodendron tulipifera	48	Poor	No	Tri lead. One lead almost dead	-73.8541	41.150665
181	Red maple	Acer rubrum	37	Fair	No	Codominant near base	-73.85406	41.150632
182	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85405	41.150641
183	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85402	41.150639
184	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85398	41.150659
185	Silver maple	Acer saccharinum	23	Fair	No	None	-73.85399	41.1506
186	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85399	41.150562
187	Red maple	Acer rubrum	10	Fair	No	None	-73.85399	41.150526
188	Sugar maple	Acer saccharum	22	Fair	No	Deadwood	-73.85402	41.150516
189	Red maple	Acer rubrum	11	Fair	No	None	-73.85401	41.150498
190	White oak	Quercus alba	23	Fair	No	Deadwood	-73.85411	41.150485

191	White oak	Quercus alba	38	Fair	No	Large deadwood	-73.85409	41.150446
192	Red maple	Acer rubrum	11	Fair	No	None	-73.85402	41.150442
193	Red maple	Acer rubrum	10	Fair	No	None	-73.85399	41.150431
194	Red maple	Acer rubrum	9	Fair	No	None	-73.85403	41.150414
195	Upright yew	Taxus cupidata	9	Fair	No	None	-73.85419	41.150427
196	Upright yew	Taxus cupidata	7	Fair	No	None	-73.8542	41.150384
197	Ailanthus	Ailanthus altissima	19	Fair	Yes	None	-73.85417	41.150361
198	Red maple	Acer rubrum	28	Fair	No	Trunk decay	-73.85417	41.150273
199	Black oak	Quercus velutina	16	Fair	No	None	-73.85399	41.150284
200	Red maple	Acer rubrum	7	Fair	No	None	-73.85392	41.150358
201	Red maple	Acer rubrum	12	Fair	No	None	-73.85391	41.150353
202	Red maple	Acer rubrum	16	Fair	No	Codominant near base	-73.85392	41.150347
203	Red maple	Acer rubrum	8	Fair	No	None	-73.85391	41.150339
204	Sugar maple	Acer saccharum	10	Fair	No	None	-73.854	41.150251
205	American linden	Tilia americana	7	Fair	No	None	-73.85398	41.150232
206	Red maple	Acer rubrum	32	Fair	No	None	-73.85405	41.150204
207	Red maple	Acer rubrum	8	Critical	No	Sap rot along trunk	-73.85401	41.15019
208	Red maple	Acer rubrum	29	Fair	No	Multi lead near base	-73.85404	41.150166
209	Red maple	Acer rubrum	27	Fair	No	Codominant at 6 feet	-73.85407	41.150162
210	White ash	Fraxinus americana	18	Critical	No	Emerald ash borer. Very little canopy remains	-73.85412	41.150127
211	Red maple	Acer rubrum	15	Fair	No	Codominant at 6 feet	-73.85405	41.150127
212	American elm	Ulmus americana	30	Fair	No	Codominant at 6 feet	-73.854	41.150122
213	Red maple	Acer rubrum	14	Fair	No	None	-73.85392	41.150173
214	Red maple	Acer rubrum	8	Fair	No	None	-73.85393	41.150163
215	Red maple	Acer rubrum	7	Fair	No	None	-73.85389	41.150163
216	Eastern cottonwood	Populus deltoides	20	Fair	No	None	-73.85394	41.150129
217	Eastern cottonwood	Populus deltoides	44	Fair	No	Deadwood	-73.85391	41.150104
218	Red maple	Acer rubrum	23	Fair	No	None	-73.85405	41.150068
219	Sugar maple	Acer saccharum	20	Good	No	None	-73.85412	41.150013
220	White ash	Fraxinus americana	21	Dead	No	Emerald ash borer. Standing dead tree	-73.85407	41.149999
221	White ash	Fraxinus americana	15	Dead	No	Emerald ash borer. Standing dead tree	-73.85403	41.15001
222	White ash	Fraxinus americana	11	Dead	No	Emerald ash borer. Standing dead tree	-73.85404	41.149995
223	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85401	41.150003
224	Red maple	Acer rubrum	33	Fair	No	Multi lead	-73.85398	41.150028
225	Red maple	Acer rubrum	15	Fair	No	None	-73.85391	41.150011
226	Red maple	Acer rubrum	11	Fair	No	Multi lead	-73.85393	41.150071
227	Red maple	Acer rubrum	15	Fair	No	None	-73.85389	41.150072
228	Red maple	Acer rubrum	18	Fair	No	None	-73.85384	41.150114
229	Red maple	Acer rubrum	19	Fair	No	None	-73.85383	41.150102
230	Red maple	Acer rubrum	8	Fair	No	None	-73.85378	41.150085
231	Red maple	Acer rubrum	8	Fair	No	None	-73.85378	41.15011
232	Red maple	Acer rubrum	15	Poor	No	Decay in trunk	-73.85372	41.150077
233	Red maple	Acer rubrum	9	Fair	No	None	-73.8537	41.150084
234	Tulip polplar	Liriodendron tulipifera	38	Fair	No	Deadwood	-73.85366	41.150072
235	Red maple	Acer rubrum	9	Fair	No	None	-73.85369	41.150125
236	Red maple	Acer rubrum	23	Fair	No	None	-73.85367	41.150138
237	Red maple	Acer rubrum	12	Fair	No	None	-73.85376	41.150177
238	Red maple	Acer rubrum	7	Fair	No	None	-73.85379	41.150168
239	Red maple	Acer rubrum	14	Fair	No	None	-73.85378	41.150194
240	Red maple	Acer rubrum	11	Fair	No	None	-73.85374	41.150199
241	Red maple	Acer rubrum	9	Fair	No	None	-73.8537	41.150191
242	Red maple	Acer rubrum	13	Fair	No	None	-73.8537	41.150212
243	Red maple	Acer rubrum	19	Fair	No	None	-73.85367	41.150207
244	Red maple	Acer rubrum	10	Fair	No	None	-73.85366	41.150169
245	Red maple	Acer rubrum	8	Fair	No	None	-73.85365	41.150178
246	Black birch	Betula lenta	16	Dead	No	Standing dead tree	-73.85359	41.150196
247	Sycamore	Platanus occidentalis	22	Good	No	Small deadwood	-73.85355	41.150223
248	Red maple	Acer rubrum	18	Fair	No	None	-73.85362	41.150227
249	Black birch	Betula lenta	15	Fair	No	None	-73.85352	41.150204
250	Red maple	Acer rubrum	12	Fair	No	None	-73.85349	41.150163
251	Red maple	Acer rubrum	11	Fair	No	None	-73.85347	41.150162
252	Red maple	Acer rubrum	19	Fair	No	None	-73.85343	41.150169
253	Red maple	Acer rubrum	59	Poor	No	Large deadwood. Decay. Dieback	-73.85346	41.150068
254	Red maple	Acer rubrum	10	Fair	No	None	-73.85355	41.150101
255	Red maple	Acer rubrum	7	Fair	No	None	-73.85355	41.150072

256	Green ash	Fraxinus pennsylvanica	14	Critical	No	Emerald ash borer infested.	-73.85361	41.150068
257	Black cherry	Prunus serotina	8	Critical	No	Covered in vines. Little canopy remains	-73.85359	41.150049
258	Black locust	Robinia pseudoacacia	18	Good	Yes	Small deadwood	-73.85344	41.149832
259	Black locust	Robinia pseudoacacia	19	Fair	Yes	Small deadwood	-73.85342	41.149781
260	Black locust	Robinia pseudoacacia	17	Fair	Yes	Small deadwood	-73.85342	41.149741
261	Black locust	Robinia pseudoacacia	15	Fair	Yes	Small deadwood	-73.85344	41.149715
262	Black locust	Robinia pseudoacacia	24	Fair	Yes	Small deadwood	-73.85348	41.149709
263	Black locust	Robinia pseudoacacia	15	Fair	Yes	Small deadwood	-73.85344	41.149676
264	Black locust	Robinia pseudoacacia	16	Fair	Yes	Small deadwood	-73.85345	41.149632
265	Black locust	Robinia pseudoacacia	21	Fair	Yes	Small deadwood	-73.85349	41.149593
266	Red maple	Acer rubrum	27	Fair	No	Small deadwood	-73.85342	41.149625
267	Black locust	Robinia pseudoacacia	16	Fair	Yes	Small deadwood	-73.85339	41.149644
268	Black locust	Robinia pseudoacacia	15	Fair	Yes	Small deadwood	-73.85339	41.149654
269	Black locust	Robinia pseudoacacia	15	Fair	Yes	Small deadwood	-73.85332	41.149672
270	Black locust	Robinia pseudoacacia	20	Fair	Yes	Small deadwood	-73.8533	41.149688
271	Black locust	Robinia pseudoacacia	17	Fair	Yes	Small deadwood	-73.85329	41.149677
272	Black locust	Robinia pseudoacacia	17	Fair	Yes	Small deadwood	-73.85324	41.14965
273	Black locust	Robinia pseudoacacia	25	Fair	Yes	Small deadwood	-73.85325	41.149637
274	Black locust	Robinia pseudoacacia	19	Poor	Yes	Decay fungi at base	-73.85341	41.149569
275	Black locust	Robinia pseudoacacia	18	Fair	Yes	None	-73.85344	41.149521
276	Black locust	Robinia pseudoacacia	18	Fair	Yes	None	-73.85338	41.149495
277	Black locust	Robinia pseudoacacia	17	Fair	Yes	None	-73.85338	41.149543
278	Black locust	Robinia pseudoacacia	16	Fair	Yes	None	-73.85329	41.149581
279	Black locust	Robinia pseudoacacia	11	Poor	Yes	None	-73.85325	41.149589
280	Black locust	Robinia pseudoacacia	16	Fair	Yes	None	-73.85317	41.149587
281	Black locust	Robinia pseudoacacia	36	Fair	Yes	Codominant near base	-73.85324	41.149527
282	Black locust	Robinia pseudoacacia	29	Fair	Yes	Codominant at 3 feet	-73.85333	41.14948
283	Black locust	Robinia pseudoacacia	20	Fair	Yes	Codominant at 3 feet	-73.85329	41.149459
284	Black locust	Robinia pseudoacacia	23	Fair	Yes	Codominant at 3 feet	-73.85319	41.149448
285	Black locust	Robinia pseudoacacia	25	Fair	Yes	Codominant at 3 feet	-73.85324	41.149391
286	Black locust	Robinia pseudoacacia	26	Fair	Yes	Codominant at 3 feet	-73.85312	41.149383
287	Black locust	Robinia pseudoacacia	28	Fair	Yes	Codominant at 3 feet	-73.85302	41.149391
288	Black locust	Robinia pseudoacacia	24	Fair	Yes	Codominant at 3 feet	-73.85291	41.149426
289	Black locust	Robinia pseudoacacia	18	Fair	Yes	Codominant at 3 feet	-73.85282	41.149437
290	Black locust	Robinia pseudoacacia	23	Fair	Yes	Codominant at 3 feet	-73.8528	41.149437
291	Blue spruce	Picea pungens	14	Poor	No	Covered in vines	-73.85268	41.149362
292	Blue spruce	Picea pungens	13	Poor	No	Covered in vines	-73.85267	41.149299
293	Blue spruce	Picea pungens	13	Fair	No	Covered in vines	-73.8526	41.149257
294	Mulberry	Morus spp.	15	Fair	No	Vines in canopy	-73.85254	41.149353
295	Boxelder maple	Acer negundo	15	Fair	No	None	-73.85247	41.149281
296	Black walnut	Juglans nigra	19	Fair	No	Vines	-73.85252	41.148983
297	Red maple	Acer rubrum	23	Fair	No	Vines	-73.85268	41.148932
298	Red oak	Quercus rubra	16	Fair	No	Vines	-73.85269	41.148873
299	Red maple	Acer rubrum	14	Good	No	None	-73.85394	41.148688
300	White pine	Pinus strobus	15	Fair	No	Small deadwood	-73.85393	41.148535
301	Crabapple	Malus spp.	9	Good	No	None	-73.85395	41.148437
302	Crabapple	Malus spp.	10	Fair	No	None	-73.85396	41.14837
303	Crimson King maple	Acer platanoides 'Crimson King'	10	Fair	Yes	None	-73.854	41.148312
304	Blue spruce	Picea pungens	7	Fair	No	None	-73.85385	41.148383
305	Red oak	Quercus rubra	43	Fair	No	Deadwood	-73.85378	41.148304
306	Norway maple	Acer platanoides	29	Critical	Yes	Large cavity with significant decay. Dieback	-73.85385	41.148217
307	Norway maple	Acer platanoides	22	Fair	Yes	Deadwood	-73.85389	41.148173
308	Norway maple	Acer platanoides	21	Critical	Yes	Broken top with decay at 15 feet	-73.85385	41.148078
309	Norway maple	Acer platanoides	26	Fair	Yes	Deadwood	-73.85381	41.1481
310	Norway maple	Acer platanoides	19	Poor	Yes	Broken top	-73.85379	41.148088
311	Norway maple	Acer platanoides	18	Fair	Yes	Minor basal decay	-73.85373	41.148129
312	Norway maple	Acer platanoides	18	Critical	Yes	Little canopy remains	-73.85364	41.148113
313	Norway maple	Acer platanoides	22	Fair	Yes	None	-73.85368	41.14816
314	Shagbark hickory	Carya ovata	17	Fair	No	Small deadwood	-73.85352	41.14818
315	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85356	41.148262
316	Sycamore	Platanus occidentalis	25	Good	No	None	-73.85341	41.148332
317	American linden	Tilia americana	24	Good	No	None	-73.85321	41.148078
318	Sassafras	Sassafras albidum	21	Fair	No	Minor decay	-73.85322	41.148131
319	Sassafras	Sassafras albidum	23	Fair	No	Minor decay	-73.85319	41.148166

320	Shagbark hickory	Carya ovata	23	Fair	No	Small deadwood	-73.85314	41.148185
321	Red oak	Quercus rubra	66	Fair	No	Large deadwood	-73.85312	41.148063
322	Norway maple	Acer platanoides	25	Fair	Yes	None	-73.85319	41.148015
323	Crabapple	Malus spp.	13	Poor	No	Deadwood. Dieback	-73.85304	41.14789
324	Sassafras	Sassafras albidum	17	Fair	No	Minor decay	-73.85301	41.148031
325	Sassafras	Sassafras albidum	15	Fair	No	Minor decay. Overtopped	-73.853	41.148048
326	Pin oak	Quercus palustris	19	Good	No	None	-73.85277	41.148136
327	Shagbark hickory	Carya ovata	22	Fair	No	Small deadwood	-73.85349	41.147849
328	Shagbark hickory	Carya ovata	23	Fair	No	Deadwood	-73.85347	41.147852
329	Shagbark hickory	Carya ovata	20	Fair	No	Deadwood	-73.85339	41.147793
330	Shagbark hickory	Carya ovata	19	Fair	No	Deadwood	-73.85338	41.1478
331	Shagbark hickory	Carya ovata	19	Dead	No	Standing dead tree with broken top	-73.85336	41.147814
332	Shagbark hickory	Carya ovata	17	Dead	No	Standing dead tree with broken top	-73.85335	41.147806
333	Weeping beech	Fagus sylvatica 'Pendula'	18	Fair	No	Covered in vines	-73.85234	41.147925
334	Ginkgo	Ginkgo biloba	7	Good	No	None	-73.85256	41.148122
335	Norway spruce	Picea abies	14	Good	No	None	-73.8526	41.148201
336	Pin oak	Quercus palustris	17	Good	No	None	-73.85247	41.148191
337	Pin oak	Quercus palustris	16	Good	No	None	-73.85232	41.148278
338	Norway spruce	Picea abies	13	Fair	No	Covered in vines	-73.85265	41.148419
339	Sugar maple	Acer saccharum	49	Fair	No	Codominant at 2 feet	-73.85264	41.148875
340	White ash	Fraxinus americana	21	Dead	No	Standing dead tree. Emerald ash borer	-73.85252	41.14883
341	White ash	Fraxinus americana	19	Dead	No	Standing dead tree. Emerald ash borer	-73.85249	41.148846
342	Black cherry	Prunus serotina	8	Fair	No	None	-73.85248	41.148827
343	White ash	Fraxinus americana	13	Dead	No	Standing dead tree. Emerald ash borer	-73.85247	41.148851
344	Red maple	Acer rubrum	14	Fair	No	None	-73.85246	41.148867
345	Red maple	Acer rubrum	12	Fair	No	None	-73.85243	41.148844
346	Norway maple	Acer platanoides	21	Fair	Yes	Codominant at base	-73.85239	41.148808
347	Red maple	Acer rubrum	11	Fair	No	None	-73.85241	41.148857
348	Red maple	Acer rubrum	7	Fair	No	None	-73.85238	41.148887
349	Red maple	Acer rubrum	26	Fair	No	None	-73.85234	41.1489
350	Red maple	Acer rubrum	10	Fair	No	None	-73.85232	41.148887
351	White ash	Fraxinus americana	15	Dead	No	Standing dead tree. Emerald ash borer	-73.85231	41.148907
352	White ash	Fraxinus americana	10	Dead	No	Standing dead tree. Emerald ash borer	-73.85229	41.148886
353	Red maple	Acer rubrum	9	Fair	No	None	-73.85229	41.148902
354	Black cherry	Prunus serotina	13	Fair	No	None	-73.85227	41.148911
355	Red maple	Acer rubrum	9	Fair	No	None	-73.85226	41.148892
356	Red maple	Acer rubrum	9	Fair	No	None	-73.85225	41.148896
357	Red maple	Acer rubrum	14	Fair	No	None	-73.85225	41.148892
358	Red maple	Acer rubrum	10	Fair	No	None	-73.85225	41.1489
359	White ash	Fraxinus americana	10	Dead	No	Standing dead tree. Emerald ash borer	-73.85223	41.148872
360	White ash	Fraxinus americana	19	Dead	No	Standing dead tree. Emerald ash borer	-73.85206	41.148806
361	Red maple	Acer rubrum	9	Fair	No	None	-73.85207	41.14885
362	Black walnut	Juglans nigra	15	Fair	No	Vines	-73.85206	41.148865
363	Red maple	Acer rubrum	24	Fair	No	None	-73.85209	41.148899
364	Mulberry	Morus spp.	12	Poor	No	Covered in vines	-73.85242	41.149153
365	Norway spruce	Picea abies	26	Fair	No	Covered in vines	-73.85199	41.148566
366	Red oak	Quercus rubra	25	Fair	No	None	-73.85199	41.148929
367	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.8516	41.148911
368	Pin oak	Quercus palustris	28	Fair	No	Deadwood	-73.85155	41.148983
369	Silver maple	Acer saccharinum	53	Fair	No	Multi lead	-73.85148	41.14919
370	Green ash	Fraxinus pennsylvanica	39	Critical	No	Multi lead. Emerald ash borer. Significant dieback	-73.85143	41.149299
371	Red oak	Quercus rubra	31	Fair	No	None	-73.8515	41.149288
372	Red maple	Acer rubrum	8	Fair	No	None	-73.85198	41.149064
373	Black walnut	Juglans nigra	7	Fair	No	None	-73.85205	41.149085
374	Red maple	Acer rubrum	9	Fair	No	None	-73.85193	41.149201
375	Red maple	Acer rubrum	7	Fair	No	None	-73.85201	41.149257
376	Red maple	Acer rubrum	14	Fair	No	None	-73.85208	41.149296
377	Black cherry	Prunus serotina	9	Fair	No	None	-73.85142	41.149053
378	Shagbark hickory	Carya ovata	11	Good	No	None	-73.85144	41.14892
379	Red oak	Quercus rubra	22	Fair	No	None	-73.85147	41.148896
380	Tulip polplar	Liriodendron tulipifera	23	Fair	No	None	-73.8515	41.148832
381	Shagbark hickory	Carya ovata	17	Fair	No	None	-73.85148	41.148746
382	Red maple	Acer rubrum	15	Fair	No	None	-73.85155	41.148708
383	American beech	Fagus grandifolia	10	Fair	No	None	-73.85196	41.148108

384	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85196	41.148073
385	Red oak	Quercus rubra	28	Fair	No	None	-73.85195	41.148049
386	Mockernut hickory	Carya tomentosa	14	Poor	No	Column of decay along trunk	-73.85201	41.14806
387	Black oak	Quercus velutina	13	Fair	No	None	-73.85194	41.147992
388	Norway maple	Acer platanoides	19	Fair	Yes	None	-73.85198	41.147989
389	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85208	41.147965
390	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85204	41.147942
391	Black oak	Quercus velutina	29	Fair	No	None	-73.85205	41.147909
392	Red oak	Quercus rubra	21	Fair	No	None	-73.852	41.147945
393	Black oak	Quercus velutina	27	Fair	No	None	-73.85196	41.147936
394	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85201	41.147888
395	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85197	41.147877
396	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85201	41.147846
397	Black cherry	Prunus serotina	8	Fair	No	None	-73.85197	41.147843
398	Red oak	Quercus rubra	9	Fair	No	None	-73.85205	41.147841
399	Red oak	Quercus rubra	34	Fair	No	None	-73.85207	41.14782
400	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85203	41.147806
401	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85207	41.147781
402	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85203	41.147772
403	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85211	41.147771
404	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85204	41.147737
405	Sugar maple	Acer saccharum	12	Fair	No	None	-73.8521	41.14771
406	Black oak	Quercus velutina	22	Fair	No	None	-73.852	41.147729
407	American beech	Fagus grandifolia	7	Critical	No	Beech leaf disease	-73.85198	41.147768
408	Black oak	Quercus velutina	23	Fair	No	None	-73.85195	41.147764
409	Black oak	Quercus velutina	16	Fair	No	None	-73.85193	41.147744
410	Black oak	Quercus velutina	21	Fair	No	None	-73.85184	41.147762
411	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85181	41.147756
412	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85189	41.147734
413	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85197	41.14771
414	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85201	41.147707
415	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85208	41.14769
416	Shagbark hickory	Carya ovata	7	Fair	No	None	-73.85211	41.147656
417	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85208	41.147666
418	Black oak	Quercus velutina	32	Fair	No	None	-73.85206	41.147671
419	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85203	41.147671
420	Red oak	Quercus rubra	21	Fair	No	None	-73.85201	41.147674
421	Red oak	Quercus rubra	23	Fair	No	None	-73.85196	41.14767
422	Sugar maple	Acer saccharum	16	Fair	No	None	-73.85181	41.147644
423	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85191	41.147648
424	Red oak	Quercus rubra	32	Fair	No	None	-73.85191	41.147603
425	Sugar maple	Acer saccharum	20	Fair	No	None	-73.85184	41.147554
426	Red oak	Quercus rubra	17	Fair	No	None	-73.85198	41.14763
427	Red oak	Quercus rubra	32	Fair	No	None	-73.85203	41.147637
428	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85198	41.147604
429	Red oak	Quercus rubra	24	Fair	No	None	-73.85195	41.147573
430	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85197	41.147556
431	Red oak	Quercus rubra	20	Fair	No	None	-73.85198	41.147538
432	Red oak	Quercus rubra	30	Fair	No	None	-73.85201	41.147558
433	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8521	41.147566
434	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85206	41.147545
435	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.8521	41.147526
436	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85203	41.147527
437	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85207	41.147517
438	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85205	41.147514
439	Red oak	Quercus rubra	39	Fair	No	None	-73.85195	41.147467
440	White oak	Quercus alba	28	Fair	No	None	-73.85189	41.147452
441	Sugar maple	Acer saccharum	13	Fair	No	None	-73.8519	41.147432
442	White oak	Quercus alba	37	Fair	No	None	-73.8519	41.147378
443	Sugar maple	Acer saccharum	15	Fair	No	None	-73.8519	41.147346
444	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85192	41.147326
445	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85194	41.14729
446	Sugar maple	Acer saccharum	19	Fair	No	None	-73.85197	41.14725
447	Tulip polplar	Liriodendron tulipifera	30	Poor	No	Decay in lower trunk	-73.85203	41.147386
448	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85203	41.147439

449	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85209	41.14744
450	Tulip polplar	Liriodendron tulipifera	46	Fair	No	Large deadwood	-73.8522	41.14742
451	Norway maple	Acer platanoides	21	Fair	Yes	None	-73.85218	41.147374
452	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85214	41.147382
453	Sugar maple	Acer saccharum	20	Fair	No	None	-73.85204	41.147339
454	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85205	41.147271
455	Red maple	Acer rubrum	13	Fair	No	None	-73.85206	41.147198
456	Red maple	Acer rubrum	16	Fair	No	None	-73.85211	41.147158
457	Norway maple	Acer platanoides	28	Fair	Yes	Tri lead	-73.85217	41.147181
458	Tulip polplar	Liriodendron tulipifera	24	Poor	No	Large deadwood. Broken top	-73.85218	41.147296
459	Red oak	Quercus rubra	8	Fair	No	None	-73.85217	41.147271
460	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85222	41.147348
461	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85223	41.14732
462	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85228	41.147307
463	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85226	41.147282
464	Norway maple	Acer platanoides	26	Fair	Yes	None	-73.85232	41.147274
465	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85237	41.147272
466	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85238	41.14725
467	Black cherry	Prunus serotina	21	Fair	No	None	-73.8524	41.147228
468	Sugar maple	Acer saccharum	14	Fair	No	None	-73.85226	41.147167
469	Shagbark hickory	Carya ovata	16	Fair	No	None	-73.85224	41.147139
470	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85233	41.147165
471	Sugar maple	Acer saccharum	15	Fair	No	None	-73.8523	41.147058
472	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85236	41.147174
473	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85239	41.147181
474	Red oak	Quercus rubra	6	Fair	No	None	-73.8524	41.147156
475	Norway maple	Acer platanoides	25	Fair	Yes	None	-73.85247	41.147106
476	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85241	41.147088
477	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85238	41.147036
478	Norway maple	Acer platanoides	18	Critical	Yes	Column of significant decay. Broken top	-73.8524	41.146967
479	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85241	41.146953
480	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85243	41.146988
481	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85251	41.147067
482	Norway maple	Acer platanoides	26	Fair	Yes	None	-73.85253	41.147039
483	Red oak	Quercus rubra	31	Fair	No	None	-73.85252	41.146981
484	Red maple	Acer rubrum	29	Fair	No	None	-73.85255	41.146912
485	Shagbark hickory	Carya ovata	13	Fair	No	None	-73.85251	41.146925
486	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.8525	41.146948
487	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85247	41.146923
488	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85243	41.146894
489	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85244	41.146882
490	Norway maple	Acer platanoides	23	Fair	Yes	None	-73.8525	41.146833
491	Red maple	Acer rubrum	8	Fair	No	None	-73.85243	41.146826
492	Green ash	Fraxinus pennsylvanica	15	Critical	No	Emerald ash borer	-73.85244	41.146799
493	Green ash	Fraxinus pennsylvanica	10	Dead	No	Emerald ash borer	-73.85246	41.146793
494	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8525	41.146725
495	Shagbark hickory	Carya ovata	10	Fair	No	None	-73.85241	41.146767
496	Tulip polplar	Liriodendron tulipifera	17	Fair	No	Large deadwood	-73.85242	41.146729
497	Black oak	Quercus velutina	32	Fair	No	None	-73.85236	41.146762
498	Shagbark hickory	Carya ovata	6	Fair	No	None	-73.85238	41.146727
499	Black walnut	Juglans nigra	10	Fair	No	None	-73.85239	41.146665
500	Shagbark hickory	Carya ovata	9	Fair	No	None	-73.85239	41.146698
501	Shagbark hickory	Carya ovata	17	Fair	No	None	-73.85235	41.146701
502	Black cherry	Prunus serotina	18	Critical	No	Partially uprooted	-73.85231	41.146735
503	Red oak	Quercus rubra	21	Fair	No	None	-73.85234	41.146752
504	Red oak	Quercus rubra	6	Fair	No	None	-73.85239	41.146783
505	American linden	Tilia americana	23	Fair	No	Deadwood	-73.85237	41.146795
506	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85235	41.146789
507	American linden	Tilia americana	14	Fair	No	Deadwood	-73.8523	41.146781
508	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85228	41.146772
509	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85237	41.146836
510	American linden	Tilia americana	41	Fair	No	Codominant at base. Vines	-73.85218	41.146818
511	American linden	Tilia americana	10	Fair	No	Codominant at base. Vines	-73.85221	41.146832
512	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85219	41.146893
513	Shagbark hickory	Carya ovata	24	Fair	No	None	-73.85222	41.146892

514	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85228 41.146924
515	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85229 41.146958
516	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85224 41.147016
517	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.8522 41.146961
518	Black cherry	Prunus serotina	16	Fair	No	Leans	-73.8522 41.14693
519	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85217 41.146997
520	Norway maple	Acer platanoides	21	Fair	Yes	None	-73.85211 41.146944
521	Tulip polplar	Liriodendron tulipifera	49	Fair	No	Deadwood	-73.85214 41.146962
522	American elm	Ulmus americana	6	Fair	No	None	-73.85211 41.146972
523	Black walnut	Juglans nigra	19	Fair	No	Vines	-73.85205 41.146908
524	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85209 41.147049
525	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85201 41.146986
526	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85198 41.146979
527	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85201 41.14701
528	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85199 41.147015
529	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85202 41.147068
530	Black cherry	Prunus serotina	13	Fair	No	None	-73.85189 41.146996
531	Sugar maple	Acer saccharum	19	Fair	No	None	-73.85202 41.147122
532	Sugar maple	Acer saccharum	20	Fair	No	None	-73.85193 41.147138
533	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85193 41.147101
534	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85187 41.147064
535	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85184 41.147059
536	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85186 41.147084
537	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85188 41.147082
538	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85189 41.147119
539	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85186 41.147114
540	Sugar maple	Acer saccharum	6	Fair	No	None	-73.85183 41.1471
541	Sugar maple	Acer saccharum	6	Fair	No	None	-73.8518 41.14709
542	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85179 41.147113
543	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85181 41.147133
544	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85181 41.147146
545	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85179 41.147142
546	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85189 41.147203
547	Sugar maple	Acer saccharum	20	Fair	No	None	-73.85182 41.147212
548	Sugar maple	Acer saccharum	22	Fair	No	None	-73.85174 41.147156
549	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85173 41.14713
550	Sugar maple	Acer saccharum	6	Fair	No	None	-73.85165 41.147132
551	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85156 41.147134
552	Norway spruce	Picea abies	19	Fair	No	Vines	-73.85191 41.146384
553	White ash	Fraxinus americana	28	Critical	No	Emerald ash borer	-73.85194 41.146162
554	Copper beech	Fagus sylvatica 'Purpurea'	38	Good	No	None	-73.85271 41.147245
555	Copper beech	Fagus sylvatica 'Purpurea'	37	Good	No	None	-73.85274 41.147407
556	Saucer magnolia	Magnolia x soulangeana	22	Good	No	Codominant	-73.85445 41.147773
557	Red maple	Acer rubrum	11	Fair	No	None	-73.85478 41.147441
558	Red maple	Acer rubrum	18	Fair	No	None	-73.85482 41.147492
559	Littleleaf linden	Tilia cordata	12	Fair	No	None	-73.85471 41.147842
560	Littleleaf linden	Tilia cordata	12	Fair	No	None	-73.85474 41.147821
561	Honeylocust	Gleditsia triacanthos	16	Fair	No	None	-73.8547 41.147908
562	Honeylocust	Gleditsia triacanthos	13	Fair	No	Deadwood	-73.85485 41.147884
563	Honeylocust	Gleditsia triacanthos	14	Fair	No	Deadwood	-73.85493 41.147909
564	Honeylocust	Gleditsia triacanthos	16	Fair	No	Deadwood	-73.85508 41.147807
565	Honeylocust	Gleditsia triacanthos	19	Fair	No	Deadwood	-73.85501 41.147753
566	Honeylocust	Gleditsia triacanthos	15	Fair	No	Deadwood	-73.85495 41.147781
567	Honeylocust	Gleditsia triacanthos	14	Fair	No	Deadwood	-73.85489 41.147792
568	Honeylocust	Gleditsia triacanthos	13	Fair	No	Deadwood	-73.85484 41.147787
569	Honeylocust	Gleditsia triacanthos	15	Fair	No	Deadwood	-73.85485 41.147734
570	Japanese tree lilac	Syringa reticulata	7	Fair	No	Deadwood	-73.85492 41.147578
571	Callery pear	Pyrus calleryana	8	Critical	No	Large column of decay along trunk	-73.85489 41.147448
572	Callery pear	Pyrus calleryana	9	Poor	No	Dieback	-73.855 41.147459
573	Callery pear	Pyrus calleryana	10	Fair	No	Dieback	-73.85499 41.147528
574	White pine	Pinus strobus	19	Fair	No	Deadwood	-73.85509 41.147625
575	Honeylocust	Gleditsia triacanthos	15	Fair	No	Deadwood	-73.85518 41.147611

576	Mulberry	Morus spp.	20	Fair	No	Deadwood	-73.85521	41.147601
577	Callery pear	Pyrus calleryana	10	Critical	No	Large column of decay along trunk. Significant dieback	-73.85504	41.147353
578	Callery pear	Pyrus calleryana	10	Poor	No	Dieback. Deadwood	-73.85506	41.147273
579	Callery pear	Pyrus calleryana	12	Critical	No	Significant dieback. Deadwood	-73.85507	41.14722
580	Callery pear	Pyrus calleryana	11	Poor	No	Dieback. Deadwood	-73.85509	41.147123
581	Japanese zelkova	Zelkova serrata	8	Fair	No	Small deadwood	-73.85485	41.147031
582	Callery pear	Pyrus calleryana	14	Critical	No	Significant dieback. Deadwood	-73.85483	41.14714
583	Callery pear	Pyrus calleryana	13	Critical	No	Significant dieback. Deadwood	-73.85482	41.147187
584	Japanese zelkova	Zelkova serrata	7	Fair	No	Small deadwood	-73.85481	41.147233
585	Callery pear	Pyrus calleryana	10	Poor	No	Dieback. Deadwood	-73.85484	41.147332
586	Norway spruce	Picea abies	17	Fair	No	Vines	-73.85451	41.147282
587	White pine	Pinus strobus	20	Good	No	None	-73.85462	41.146815
588	White pine	Pinus strobus	15	Poor	No	Large deadwood	-73.85452	41.146818
589	White pine	Pinus strobus	14	Fair	No	None	-73.85462	41.146778
590	White pine	Pinus strobus	15	Fair	No	None	-73.85463	41.146724
591	White pine	Pinus strobus	19	Good	No	None	-73.85463	41.146693
592	White pine	Pinus strobus	16	Fair	No	None	-73.85464	41.14644
593	White pine	Pinus strobus	15	Fair	No	None	-73.85446	41.146425
594	White pine	Pinus strobus	14	Fair	No	None	-73.8544	41.14642
595	White pine	Pinus strobus	15	Fair	No	None	-73.85437	41.146441
596	White pine	Pinus strobus	18	Fair	No	None	-73.85438	41.146493
597	Norway maple	Acer platanoides	28	Fair	Yes	None	-73.85428	41.146539
598	Red oak	Quercus rubra	31	Good	No	None	-73.8543	41.146582
599	Black cherry	Prunus serotina	28	Poor	No	Codominant at base. Thin canopy	-73.85439	41.146758
600	Norway spruce	Picea abies	18	Fair	No	Vines	-73.85428	41.147049
601	Horse chestnut	Aesculus hippocastanum	22	Good	No	None	-73.85413	41.147399
602	White ash	Fraxinus americana	22	Critical	No	Emerald ash borer	-73.85414	41.147454
603	White ash	Fraxinus americana	23	Critical	No	Emerald ash borer	-73.85407	41.14747
604	White pine	Pinus strobus	22	Fair	No	Deadwood	-73.85421	41.147562
605	White pine	Pinus strobus	24	Fair	No	Deadwood	-73.85396	41.147601
606	White pine	Pinus strobus	33	Fair	No	Deadwood	-73.85385	41.147581
607	White pine	Pinus strobus	13	Poor	No	Significant lean	-73.85387	41.147526
608	White pine	Pinus strobus	29	Fair	No	Deadwood	-73.85393	41.1475
609	White pine	Pinus strobus	18	Fair	No	Deadwood	-73.85389	41.147471
610	White pine	Pinus strobus	26	Fair	No	Deadwood	-73.8539	41.147424
611	White pine	Pinus strobus	25	Fair	No	Deadwood	-73.8539	41.147372
612	Black cherry	Prunus serotina	7	Critical	No	Covered in vines. Little canopy remains	-73.8539	41.147285
613	Norway spruce	Picea abies	16	Fair	No	Vines	-73.85409	41.147142
614	Norway spruce	Picea abies	13	Fair	No	Vines	-73.8539	41.14715
615	Red oak	Quercus rubra	59	Critical	No	Prior failure of codominant lead with decay	-73.85366	41.147278
616	Norway maple	Acer platanoides	23	Good	Yes	None	-73.85358	41.14719
617	Chinese chestnut	Castanea mollissima	22	Good	No	Codominant at 4 feet	-73.85393	41.146991
618	Chinese chestnut	Castanea mollissima	19	Fair	No	Deadwood	-73.85395	41.14694
619	Red oak	Quercus rubra	20	Fair	No	None	-73.8536	41.147119
620	Black cherry	Prunus serotina	10	Fair	No	None	-73.85366	41.147099
621	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85367	41.147065
622	Red oak	Quercus rubra	61	Fair	No	Deadwood	-73.85356	41.147005
623	Red oak	Quercus rubra	65	Fair	No	Deadwood	-73.85364	41.146964
624	Shagbark hickory	Carya ovata	21	Fair	No	None	-73.85369	41.146953
625	Black cherry	Prunus serotina	9	Fair	No	None	-73.85376	41.146905
626	Canadian hemlock	Tsuga canadensis	21	Critical	No	Codominant at base. Hemlock woolly adelgid	-73.85374	41.146689
627	Norway spruce	Picea abies	18	Good	No	None	-73.85321	41.146761
628	Norway spruce	Picea abies	17	Good	No	None	-73.85321	41.146919
629	Blue spruce	Picea pungens	12	Fair	No	None	-73.85332	41.146965
630	Blue spruce	Picea pungens	14	Fair	No	None	-73.85322	41.146998
631	Blue spruce	Picea pungens	9	Fair	No	None	-73.85334	41.147086
632	Purple leaf plum	Prunus cerasifera	8	Dead	No	Standing dead tree	-73.85292	41.146976
633	Norway spruce	Picea abies	14	Poor	No	Covered in vines	-73.85258	41.146396
634	Norway spruce	Picea abies	12	Poor	No	Covered in vines	-73.85255	41.146371
635	Norway spruce	Picea abies	9	Poor	No	Covered in vines	-73.85253	41.146354
636	Norway maple	Acer platanoides	26	Fair	Yes	Codominant near base	-73.85244	41.146248
637	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85239	41.146198
638	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85238	41.146184
639	Norway spruce	Picea abies	9	Poor	No	Covered in vines	-73.8523	41.146142

640	Norway spruce	Picea abies	7	Poor	No	Covered in vines	-73.85227 41.146113
641	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85215 41.146013
642	Norway spruce	Picea abies	7	Poor	No	Covered in vines	-73.85186 41.14593
643	Black walnut	Juglans nigra	12	Good	No	None	-73.85469 41.151866
644	Star magnolia	Magnolia stellata	11	Good	No	None	-73.85472 41.151756
645	Taxus	Taxus spp.	7	Critical	No	Covered in vines. Little canopy remains	-73.85473 41.151495
646	White pine	Pinus strobus	23	Fair	No	Deadwood	-73.85471 41.151214
647	White ash	Fraxinus americana	33	Critical	No	Emerald ash borer. Multi lead. Little canopy remains	-73.85471 41.151088
648	Red maple	Acer rubrum	17	Good	No	None	-73.85374 41.15059
649	Red maple	Acer rubrum	7	Fair	No	None	-73.85379 41.150475
650	Red maple	Acer rubrum	15	Fair	No	None	-73.85375 41.150308
651	Red maple	Acer rubrum	14	Fair	No	None	-73.85376 41.150329
652	Red maple	Acer rubrum	7	Fair	No	None	-73.8537 41.150348
653	Red maple	Acer rubrum	13	Fair	No	None	-73.8536 41.150343
654	Red maple	Acer rubrum	7	Fair	No	None	-73.85358 41.150326
655	Red maple	Acer rubrum	9	Fair	No	None	-73.85356 41.150274
656	Black locust	Robinia pseudoacacia	18	Fair	Yes	Small deadwood	-73.85327 41.149722
657	Black locust	Robinia pseudoacacia	14	Fair	Yes	Small deadwood	-73.85325 41.149832
658	Black locust	Robinia pseudoacacia	15	Poor	Yes	Broken Codominant lead	-73.85324 41.149739
659	Black locust	Robinia pseudoacacia	19	Fair	Yes	None	-73.8532 41.149715
660	Black locust	Robinia pseudoacacia	23	Poor	Yes	One lead previously failed	-73.85315 41.149684
661	Black locust	Robinia pseudoacacia	23	Fair	Yes	None	-73.85313 41.149736
662	Black locust	Robinia pseudoacacia	24	Critical	Yes	Broken top	-73.8531 41.149682
663	Black locust	Robinia pseudoacacia	27	Fair	Yes	None	-73.85305 41.149616
664	Black locust	Robinia pseudoacacia	17	Fair	Yes	None	-73.85302 41.149642
665	Black locust	Robinia pseudoacacia	15	Fair	Yes	None	-73.85293 41.149566
666	Black locust	Robinia pseudoacacia	17	Fair	Yes	None	-73.85291 41.149568
667	Black locust	Robinia pseudoacacia	18	Fair	Yes	None	-73.85283 41.149502
668	Black locust	Robinia pseudoacacia	22	Fair	Yes	None	-73.85288 41.149592
669	Black locust	Robinia pseudoacacia	13	Fair	Yes	None	-73.85275 41.149508
670	Black locust	Robinia pseudoacacia	15	Fair	Yes	None	-73.85275 41.149491
671	Black locust	Robinia pseudoacacia	29	Fair	Yes	None	-73.85271 41.149464
672	Black locust	Robinia pseudoacacia	14	Fair	Yes	None	-73.8527 41.149524
673	Black locust	Robinia pseudoacacia	32	Fair	Yes	Codominant at 2 feet	-73.85249 41.149512
674	Red maple	Acer rubrum	10	Fair	No	None	-73.85197 41.149432
675	Sugar maple	Acer saccharum	21	Fair	No	None	-73.85175 41.147234
676	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85169 41.147188
677	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.8527 41.146296
678	Norway maple	Acer platanoides	23	Fair	Yes	None	-73.85277 41.146298
679	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85267 41.146272
680	Red maple	Acer rubrum	15	Fair	No	None	-73.85265 41.146249
681	American elm	Ulmus americana	8	Fair	No	None	-73.85263 41.146244
682	American elm	Ulmus americana	7	Fair	No	None	-73.85264 41.146176
683	Red maple	Acer rubrum	17	Fair	No	None	-73.85265 41.146193
684	Red maple	Acer rubrum	16	Fair	No	None	-73.85263 41.146194
685	Red maple	Acer rubrum	21	Fair	No	None	-73.85257 41.146254
686	Red maple	Acer rubrum	8	Fair	No	None	-73.85256 41.146232
687	Red maple	Acer rubrum	14	Fair	No	None	-73.85254 41.146249
688	Red maple	Acer rubrum	11	Fair	No	None	-73.85251 41.14625
689	Red maple	Acer rubrum	20	Fair	No	None	-73.8525 41.146227
690	Red maple	Acer rubrum	9	Fair	No	None	-73.85254 41.146197
691	Red maple	Acer rubrum	13	Fair	No	None	-73.85257 41.146197
692	Red maple	Acer rubrum	7	Fair	No	None	-73.85257 41.146168
693	Red maple	Acer rubrum	12	Fair	No	None	-73.8526 41.146142
694	Red maple	Acer rubrum	12	Fair	No	None	-73.85259 41.146106
695	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85253 41.146141
696	Red maple	Acer rubrum	14	Fair	No	None	-73.85255 41.146121
697	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85253 41.146064
698	Red maple	Acer rubrum	13	Fair	No	None	-73.8525 41.146098
699	Red maple	Acer rubrum	16	Fair	No	None	-73.85243 41.146173
700	Red maple	Acer rubrum	9	Fair	No	None	-73.85243 41.146097
701	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85245 41.145996
702	Red maple	Acer rubrum	14	Fair	No	None	-73.85229 41.145976
703	Red maple	Acer rubrum	17	Fair	No	None	-73.85226 41.145988
704	Black locust	Robinia pseudoacacia	13	Dead	Yes	Standing dead tree	-73.85237 41.145955

705	American elm	Ulmus americana	11	Fair	No	None	-73.85243	41.145893
706	Red maple	Acer rubrum	23	Fair	No	Codominant at 3 feet	-73.8524	41.1459
707	Black locust	Robinia pseudoacacia	10	Critical	Yes	Decay fungi. Little canopy remains	-73.85242	41.145877
708	Red maple	Acer rubrum	14	Fair	No	Codominant at 3 feet	-73.85241	41.145869
709	Black locust	Robinia pseudoacacia	15	Fair	Yes	None	-73.85239	41.145887
710	Black locust	Robinia pseudoacacia	14	Fair	Yes	None	-73.85238	41.145875
711	Black locust	Robinia pseudoacacia	17	Fair	Yes	None	-73.85239	41.145857
712	American elm	Ulmus americana	10	Fair	No	None	-73.85234	41.145882
713	Red maple	Acer rubrum	16	Fair	No	None	-73.85226	41.145836
714	Red maple	Acer rubrum	9	Fair	No	None	-73.85227	41.145923
715	Red maple	Acer rubrum	11	Fair	No	None	-73.85225	41.145936
716	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.8522	41.145955
717	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85211	41.145983
718	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.8522	41.145886
719	Black locust	Robinia pseudoacacia	20	Fair	Yes	None	-73.85207	41.145962
720	Tulip polplar	Liriodendron tulipifera	15	Fair	No	None	-73.8521	41.145929
721	Norway maple	Acer platanoides	22	Fair	Yes	None	-73.85215	41.14591
722	Red maple	Acer rubrum	13	Fair	No	None	-73.85221	41.145798
723	Red maple	Acer rubrum	28	Fair	No	None	-73.85211	41.145811
724	American elm	Ulmus americana	7	Fair	No	None	-73.85226	41.145731
725	American elm	Ulmus americana	9	Fair	No	None	-73.85221	41.145719
726	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85214	41.145699
727	Red maple	Acer rubrum	19	Fair	No	None	-73.85214	41.145755
728	White ash	Fraxinus americana	13	Dead	No	Standing dead tree. Emerald ash borer	-73.85209	41.145845
729	Red maple	Acer rubrum	7	Fair	No	None	-73.85205	41.145877
730	Red maple	Acer rubrum	9	Fair	No	None	-73.85206	41.145899
731	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85195	41.145909
732	American elm	Ulmus americana	7	Fair	No	None	-73.85202	41.145836
733	Red maple	Acer rubrum	23	Fair	No	None	-73.85193	41.145824
734	Red maple	Acer rubrum	7	Fair	No	None	-73.85203	41.145797
735	Red maple	Acer rubrum	14	Fair	No	None	-73.85207	41.14578
736	Black locust	Robinia pseudoacacia	9	Dead	Yes	Standing dead tree	-73.85234	41.145838
737	Black locust	Robinia pseudoacacia	13	Fair	Yes	None	-73.85241	41.145827
738	Red maple	Acer rubrum	12	Fair	No	Codominant at 3 feet	-73.85244	41.145822
739	Black locust	Robinia pseudoacacia	8	Poor	Yes	None	-73.85236	41.145779
740	Black locust	Robinia pseudoacacia	26	Poor	Yes	None	-73.85235	41.145741
741	Black cherry	Prunus serotina	7	Fair	No	None	-73.85234	41.145716
742	Black cherry	Prunus serotina	8	Fair	No	None	-73.85236	41.145701
743	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85223	41.14566
744	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85247	41.145731
745	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85252	41.145732
746	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85259	41.145749
747	Black cherry	Prunus serotina	14	Fair	No	None	-73.85257	41.145691
748	Red maple	Acer rubrum	11	Poor	No	Covered in vines	-73.85244	41.145647
749	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85266	41.145728
750	Tulip polplar	Liriodendron tulipifera	38	Fair	No	None	-73.85266	41.145683
751	Black cherry	Prunus serotina	7	Fair	No	None	-73.85265	41.145662
752	Red maple	Acer rubrum	9	Fair	No	Codominant at 3 feet	-73.85261	41.14566
753	Black locust	Robinia pseudoacacia	18	Fair	Yes	None	-73.85261	41.145612
754	Red maple	Acer rubrum	13	Fair	No	Codominant at 3 feet	-73.85263	41.145601
755	Red maple	Acer rubrum	30	Fair	No	Codominant at 3 feet	-73.85253	41.145544
756	Red maple	Acer rubrum	12	Poor	No	Covered in vines	-73.85243	41.145565
757	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85211	41.145574
758	Black locust	Robinia pseudoacacia	24	Fair	Yes	None	-73.85234	41.145533
759	Black walnut	Juglans nigra	13	Fair	No	Vines	-73.85227	41.145509
760	Black locust	Robinia pseudoacacia	14	Poor	Yes	Vines	-73.85234	41.145473
761	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85212	41.145464
762	Black cherry	Prunus serotina	12	Fair	No	None	-73.85244	41.145457
763	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85229	41.145413
764	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85254	41.145493
765	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85259	41.145496
766	Tulip polplar	Liriodendron tulipifera	35	Fair	No	None	-73.85272	41.145577
767	Red maple	Acer rubrum	11	Fair	No	Codominant at 3 feet	-73.8527	41.145591
768	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85276	41.145566
769	Black locust	Robinia pseudoacacia	10	Fair	Yes	None	-73.85273	41.145621

770	Black locust	Robinia pseudoacacia	13	Fair	Yes	None	-73.85277	41.145628
771	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.8528	41.145619
772	Black locust	Robinia pseudoacacia	18	Fair	Yes	None	-73.85272	41.14546
773	Black locust	Robinia pseudoacacia	15	Critical	Yes	Broken top. Little canopy remains	-73.85275	41.14547
774	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85287	41.145584
775	Red maple	Acer rubrum	14	Fair	No	Codominant at 3 feet	-73.85299	41.145538
776	Tulip polplar	Liriodendron tulipifera	22	Fair	No	None	-73.85301	41.145496
777	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85307	41.145526
778	Norway maple	Acer platanoides	34	Fair	Yes	Tri lead at 3 feet	-73.85307	41.145588
779	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85317	41.145559
780	Shagbark hickory	Carya ovata	10	Fair	No	None	-73.853	41.145602
781	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85309	41.145686
782	Norway maple	Acer platanoides	19	Fair	Yes	None	-73.85296	41.145683
783	Norway maple	Acer platanoides	20	Fair	Yes	None	-73.85302	41.145744
784	Black cherry	Prunus serotina	18	Fair	No	None	-73.85295	41.145733
785	Black cherry	Prunus serotina	21	Fair	No	None	-73.85295	41.145741
786	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85295	41.145772
787	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85291	41.1458
788	Mockernut hickory	Carya tomentosa	18	Fair	No	None	-73.85289	41.145764
789	Mockernut hickory	Carya tomentosa	9	Fair	No	None	-73.85288	41.145746
790	Shagbark hickory	Carya ovata	19	Fair	No	None	-73.85282	41.145839
791	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85278	41.145842
792	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.8528	41.145786
793	White ash	Fraxinus americana	23	Dead	No	Standing dead tree. Emerald ash borer	-73.85277	41.145703
794	Tulip polplar	Liriodendron tulipifera	47	Critical	No	Very large deadwood. Little canopy remains	-73.85269	41.145785
795	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85271	41.145777
796	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85268	41.145816
797	Tulip polplar	Liriodendron tulipifera	13	Dead	No	Standing dead tree	-73.85252	41.145873
798	Tulip polplar	Liriodendron tulipifera	20	Fair	No	None	-73.85254	41.145868
799	Tulip polplar	Liriodendron tulipifera	24	Fair	No	None	-73.85255	41.145889
800	Tulip polplar	Liriodendron tulipifera	17	Fair	No	None	-73.85256	41.145866
801	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85255	41.145866
802	Tulip polplar	Liriodendron tulipifera	22	Fair	No	None	-73.85256	41.145843
803	Tulip polplar	Liriodendron tulipifera	21	Fair	No	None	-73.85259	41.145837
804	Tulip polplar	Liriodendron tulipifera	31	Fair	No	None	-73.85258	41.145901
805	Red maple	Acer rubrum	7	Fair	No	None	-73.8526	41.145901
806	Red maple	Acer rubrum	9	Fair	No	None	-73.8526	41.145883
807	Tulip polplar	Liriodendron tulipifera	10	Fair	No	None	-73.85262	41.145835
808	Tulip polplar	Liriodendron tulipifera	21	Fair	No	None	-73.85261	41.145913
809	Tulip polplar	Liriodendron tulipifera	21	Fair	No	None	-73.85262	41.145901
810	Tulip polplar	Liriodendron tulipifera	16	Fair	No	None	-73.85265	41.145928
811	Tulip polplar	Liriodendron tulipifera	7	Fair	No	None	-73.8527	41.145925
812	Tulip polplar	Liriodendron tulipifera	22	Fair	No	None	-73.85271	41.145959
813	Tulip polplar	Liriodendron tulipifera	29	Fair	No	None	-73.8527	41.145998
814	Tulip polplar	Liriodendron tulipifera	11	Fair	No	None	-73.85274	41.145982
815	Tulip polplar	Liriodendron tulipifera	13	Fair	No	None	-73.85272	41.146026
816	Red maple	Acer rubrum	13	Fair	No	None	-73.85272	41.146066
817	American elm	Ulmus americana	8	Fair	No	None	-73.85266	41.146087
818	American elm	Ulmus americana	7	Fair	No	None	-73.85273	41.146101
819	Red maple	Acer rubrum	27	Poor	No	Basal decay	-73.85269	41.146114
820	Norway maple	Acer platanoides	14	Poor	Yes	Large deadwood. Dieback	-73.85278	41.146052
821	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85281	41.146067
822	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85281	41.146096
823	Red maple	Acer rubrum	9	Fair	No	None	-73.85278	41.146117
824	American elm	Ulmus americana	7	Fair	No	None	-73.85276	41.146162
825	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85284	41.146369
826	Red maple	Acer rubrum	12	Fair	No	None	-73.85282	41.146388
827	Red oak	Quercus rubra	14	Fair	No	None	-73.85281	41.1464
828	Black cherry	Prunus serotina	19	Fair	No	None	-73.8528	41.146431
829	Sassafras	Sassafras albidum	11	Fair	No	None	-73.85286	41.146447
830	Sassafras	Sassafras albidum	17	Fair	No	None	-73.85284	41.146478
831	Sassafras	Sassafras albidum	11	Fair	No	None	-73.85287	41.146473
832	Sassafras	Sassafras albidum	15	Fair	No	None	-73.85287	41.146493
833	Norway maple	Acer platanoides	13	Fair	Yes	Codominant at 2 feet	-73.8529	41.146446
834	Sassafras	Sassafras albidum	22	Fair	No	None	-73.85293	41.146435

835	Mockernut hickory	Carya tomentosa	8	Fair	No	None	-73.85292 41.146495
836	Sassafras	Sassafras albidum	17	Fair	No	None	-73.85293 41.146472
837	Sassafras	Sassafras albidum	11	Fair	No	None	-73.85293 41.146482
838	Sassafras	Sassafras albidum	15	Fair	No	None	-73.85294 41.146481
839	Sassafras	Sassafras albidum	15	Fair	No	None	-73.85295 41.146475
840	Red maple	Acer rubrum	6	Fair	No	None	-73.85295 41.146448
841	Red maple	Acer rubrum	29	Fair	No	Codominant at 5 feet	-73.85288 41.146401
842	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85296 41.146414
843	Black cherry	Prunus serotina	16	Fair	No	None	-73.85296 41.146386
844	Red maple	Acer rubrum	9	Fair	No	None	-73.85301 41.146416
845	Shagbark hickory	Carya ovata	9	Good	No	None	-73.85303 41.146406
846	Red maple	Acer rubrum	11	Fair	No	None	-73.85305 41.146411
847	Black cherry	Prunus serotina	10	Fair	No	None	-73.85304 41.146432
848	Red maple	Acer rubrum	21	Fair	No	None	-73.85309 41.146407
849	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.8533 41.146413
850	Norway maple	Acer platanoides	26	Fair	Yes	None	-73.85339 41.146452
851	Sweet cherry	Prunus avium	25	Dead	No	Standing dead tree	-73.85348 41.146457
852	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85349 41.146363
853	Red maple	Acer rubrum	35	Fair	No	Codominant at 5 feet	-73.85363 41.14633
854	Red maple	Acer rubrum	42	Fair	No	Tri lead at base	-73.8536 41.146296
855	Norway maple	Acer platanoides	10	Good	Yes	None	-73.85351 41.146191
856	Black locust	Robinia pseudoacacia	10	Dead	Yes	Broken top	-73.85357 41.146184
857	Black locust	Robinia pseudoacacia	9	Dead	Yes	Broken top	-73.8536 41.146184
858	Black locust	Robinia pseudoacacia	10	Fair	Yes	Vines	-73.85358 41.146169
859	Black locust	Robinia pseudoacacia	11	Critical	Yes	Covered in vines	-73.85363 41.146136
860	Black locust	Robinia pseudoacacia	11	Dead	Yes	Broken top	-73.85364 41.146118
861	Black cherry	Prunus serotina	7	Fair	No	Vines	-73.85362 41.146111
862	Black locust	Robinia pseudoacacia	7	Dead	Yes	Broken top	-73.85361 41.146123
863	Black locust	Robinia pseudoacacia	12	Poor	Yes	Decay fungi	-73.85361 41.146144
864	Black locust	Robinia pseudoacacia	11	Poor	Yes	Decay fungi	-73.85358 41.146113
865	Black cherry	Prunus serotina	8	Poor	No	Covered in vines	-73.85361 41.146078
866	Black locust	Robinia pseudoacacia	9	Critical	Yes	Covered in vines. Decay	-73.85363 41.146052
867	Black locust	Robinia pseudoacacia	9	Poor	Yes	Vines	-73.85365 41.146005
868	Black locust	Robinia pseudoacacia	8	Poor	Yes	Vines	-73.85363 41.14602
869	Black locust	Robinia pseudoacacia	10	Poor	Yes	Vines	-73.85357 41.146007
870	Black locust	Robinia pseudoacacia	8	Poor	Yes	Vines	-73.85356 41.146048
871	Black locust	Robinia pseudoacacia	12	Poor	Yes	Vines	-73.85359 41.145964
872	Black locust	Robinia pseudoacacia	14	Critical	Yes	Covered in vines. Little canopy remains	-73.85352 41.145977
873	Norway maple	Acer platanoides	23	Fair	Yes	None	-73.85352 41.146138
874	Ailanthus	Ailanthus altissima	14	Fair	Yes	None	-73.85348 41.145896
875	American linden	Tilia americana	7	Fair	No	None	-73.8534 41.146164
876	Shagbark hickory	Carya ovata	11	Fair	No	None	-73.85342 41.146138
877	Red oak	Quercus rubra	32	Fair	No	None	-73.8534 41.146129
878	Red oak	Quercus rubra	29	Fair	No	None	-73.85333 41.146144
879	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85327 41.146185
880	Norway maple	Acer platanoides	25	Fair	Yes	None	-73.85336 41.146224
881	Shagbark hickory	Carya ovata	7	Fair	No	None	-73.85345 41.146394
882	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.8534 41.1464
883	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85335 41.146373
884	Norway maple	Acer platanoides	25	Fair	Yes	None	-73.85332 41.146342
885	Shagbark hickory	Carya ovata	11	Fair	No	None	-73.85326 41.146348
886	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85327 41.14625
887	Mockernut hickory	Carya tomentosa	12	Fair	No	None	-73.85319 41.146251
888	White ash	Fraxinus americana	6	Dead	No	Emerald ash borer	-73.85319 41.146289
889	Mockernut hickory	Carya tomentosa	23	Fair	No	None	-73.85312 41.146369
890	Red maple	Acer rubrum	22	Fair	No	Tri lead at base	-73.85304 41.146356
891	Red oak	Quercus rubra	7	Fair	No	None	-73.85305 41.146338
892	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85308 41.146324
893	Mockernut hickory	Carya tomentosa	7	Fair	No	None	-73.85312 41.146287
894	Sugar maple	Acer saccharum	18	Fair	No	None	-73.85312 41.146228
895	Bitternut hickory	Carya cordiformis	21	Good	No	None	-73.85304 41.14618
896	Black cherry	Prunus serotina	24	Critical	No	Long column of decay along trunk. Basal decay	-73.85302 41.146236
897	Red maple	Acer rubrum	17	Fair	No	None	-73.85304 41.146245
898	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85299 41.146268
899	Bitternut hickory	Carya cordiformis	14	Fair	No	None	-73.85296 41.146197

900	Norway maple	Acer platanoides	13	Poor	Yes	Covered in vines	-73.85304	41.146044
901	Norway maple	Acer platanoides	8	Poor	Yes	Covered in vines	-73.85303	41.146071
902	American linden	Tilia americana	13	Fair	No	None	-73.85299	41.146083
903	Shagbark hickory	Carya ovata	11	Fair	No	None	-73.85292	41.146099
904	Black walnut	Juglans nigra	28	Fair	No	None	-73.85292	41.146183
905	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8529	41.146195
906	Sassafras	Sassafras albidum	6	Poor	No	Decay in trunk	-73.85291	41.146201
907	Red maple	Acer rubrum	6	Fair	No	None	-73.85288	41.146247
908	Red maple	Acer rubrum	14	Fair	No	None	-73.85287	41.146252
909	Mockernut hickory	Carya tomentosa	10	Fair	No	None	-73.85286	41.146285
910	Green ash	Fraxinus pennsylvanica	71	Dead	No	Standing dead tree. Tri lead. Emerald ash borer	-73.85286	41.146302
911	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.8529	41.146313
912	Red maple	Acer rubrum	11	Fair	No	Codominant at 5 feet	-73.85285	41.1463
913	Ailanthus	Ailanthus altissima	13	Fair	Yes	None	-73.85322	41.145699
914	Ailanthus	Ailanthus altissima	8	Fair	Yes	None	-73.85327	41.145681
915	Ailanthus	Ailanthus altissima	11	Fair	Yes	None	-73.85324	41.145674
916	Ailanthus	Ailanthus altissima	9	Fair	Yes	None	-73.85322	41.145673
917	Horse chestnut	Aesculus hippocastanum	26	Fair	No	None	-73.85327	41.145501
918	Ailanthus	Ailanthus altissima	11	Fair	Yes	None	-73.85327	41.145645
919	Ailanthus	Ailanthus altissima	9	Fair	Yes	None	-73.85328	41.145597
920	Black birch	Betula lenta	14	Good	No	None	-73.85336	41.145555
921	Ailanthus	Ailanthus altissima	14	Fair	Yes	None	-73.8534	41.145691
922	Ailanthus	Ailanthus altissima	8	Fair	Yes	None	-73.85339	41.145881
923	Norway maple	Acer platanoides	30	Fair	Yes	None	-73.85347	41.145542
924	Norway maple	Acer platanoides	31	Fair	Yes	None	-73.85348	41.145515
925	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85362	41.145593
926	Black locust	Robinia pseudoacacia	13	Poor	Yes	Vines. Leans	-73.85381	41.145607
927	Norway maple	Acer platanoides	28	Fair	Yes	None	-73.85385	41.145612
928	Black locust	Robinia pseudoacacia	22	Fair	Yes	None	-73.85393	41.145578
929	Black locust	Robinia pseudoacacia	28	Poor	Yes	Decay in lower trunk	-73.85397	41.145548
930	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85402	41.145564
931	Black locust	Robinia pseudoacacia	25	Poor	Yes	Decay	-73.85404	41.145555
932	Black locust	Robinia pseudoacacia	27	Fair	Yes	None	-73.854	41.145597
933	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.854	41.145635
934	Ailanthus	Ailanthus altissima	18	Poor	Yes	Covered in vines	-73.854	41.145698
935	Ailanthus	Ailanthus altissima	22	Poor	Yes	Covered in vines	-73.85393	41.145704
936	Black locust	Robinia pseudoacacia	10	Fair	Yes	Vines	-73.85378	41.145978
937	Black locust	Robinia pseudoacacia	13	Poor	Yes	Vines	-73.85382	41.145974
938	Ailanthus	Ailanthus altissima	17	Poor	Yes	Covered in vines	-73.8539	41.145913
939	Ailanthus	Ailanthus altissima	15	Poor	Yes	Covered in vines	-73.8539	41.145865
940	Ailanthus	Ailanthus altissima	16	Poor	Yes	Covered in vines	-73.85394	41.145842
941	Ailanthus	Ailanthus altissima	15	Poor	Yes	Covered in vines	-73.854	41.145807
942	Sycamore	Platanus occidentalis	24	Fair	No	Vines	-73.85411	41.145979
943	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85413	41.145971
944	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85412	41.145954
945	Norway maple	Acer platanoides	32	Fair	Yes	None	-73.85434	41.145977
946	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85438	41.145921
947	Norway maple	Acer platanoides	7	Critical	Yes	Broken top	-73.85439	41.145903
948	Sugar maple	Acer saccharum	14	Fair	No	Minor wounds	-73.85492	41.151897
949	Sugar maple	Acer saccharum	14	Poor	No	Large wounds. Dieback	-73.85491	41.151875
950	Sugar maple	Acer saccharum	13	Fair	No	Dieback	-73.85495	41.15188
951	Sugar maple	Acer saccharum	9	Good	No	None	-73.85498	41.151874
952	Sugar maple	Acer saccharum	25	Critical	No	Large wound. Hollow. Decay.	-73.85497	41.151901
953	Sugar maple	Acer saccharum	10	Good	No	None	-73.85503	41.151897
954	Sugar maple	Acer saccharum	15	Good	No	None	-73.85504	41.15193
955	Sugar maple	Acer saccharum	17	Good	No	None	-73.85496	41.151838
956	Sugar maple	Acer saccharum	11	Good	No	None	-73.85496	41.151803
957	Sugar maple	Acer saccharum	11	Good	No	None	-73.85496	41.151803
958	White ash	Fraxinus americana	17	Poor	No	Dieback	-73.85504	41.151801
959	Sugar maple	Acer saccharum	26	Fair	No	None	-73.85502	41.151771
960	Sugar maple	Acer saccharum	13	Good	No	None	-73.85499	41.151755
961	Sugar maple	Acer saccharum	7	Good	No	None	-73.85499	41.151755
962	Sugar maple	Acer saccharum	19	Good	No	None	-73.85495	41.151774
963	Sugar maple	Acer saccharum	8	Good	No	None	-73.85506	41.151712

964	Sugar maple	Acer saccharum	14	Good	No	Double leader	-73.85513 41.151724
965	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85501 41.151706
966	Sugar maple	Acer saccharum	26	Poor	No	Double leader, one is dead.	-73.85501 41.151676
967	Sugar maple	Acer saccharum	19	Good	No	None	-73.85497 41.151693
968	Sugar maple	Acer saccharum	7	Good	No	None	-73.85497 41.15166
969	Sugar maple	Acer saccharum	13	Good	No	None	-73.85498 41.151591
970	White ash	Fraxinus americana	18	Dead	No	None	-73.85502 41.151592
971	Sugar maple	Acer saccharum	9	Dead	No	None	-73.85506 41.151592
972	Sugar maple	Acer saccharum	10	Good	No	None	-73.85512 41.151589
973	Sugar maple	Acer saccharum	16	Good	No	None	-73.85515 41.151569
974	Sugar maple	Acer saccharum	19	Good	No	None	-73.85509 41.151561
975	Black locust	Robinia pseudoacacia	12	Good	Yes	None	-73.85507 41.151534
976	Sugar maple	Acer saccharum	13	Good	No	None	-73.85502 41.151514
977	Unknown	Unknown	24	Dead	No	None	-73.85509 41.151458
978	Black walnut	Juglans nigra	20	Good	No	None	-73.85503 41.15133
979	Black locust	Robinia pseudoacacia	25	Good	Yes	None	-73.85499 41.15133
980	Sugar maple	Acer saccharum	7	Good	No	None	-73.85509 41.15133
981	Black locust	Robinia pseudoacacia	18	Good	Yes	None	-73.85515 41.151329
982	Sugar maple	Acer saccharum	8	Good	No	None	-73.85511 41.151259
983	Sugar maple	Acer saccharum	13	Dead	No	None	-73.85505 41.151212
984	Pin oak	Quercus palustris	32	Good	No	None	-73.85512 41.151168
985	Sugar maple	Acer saccharum	8	Good	No	None	-73.8551 41.151128
986	Sugar maple	Acer saccharum	10	Good	No	None	-73.85506 41.151157
987	Sugar maple	Acer saccharum	7	Good	No	None	-73.85501 41.151143
988	Black walnut	Juglans nigra	21	Good	No	None	-73.85505 41.151092
989	Norway maple	Acer platanoides	14	Dead	Yes	Standing dead tree	-73.85436 41.146055
990	Sugar maple	Acer saccharum	10	Dead	No	None	-73.85514 41.151079
991	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85438 41.146042
992	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.8544 41.146051
993	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85446 41.146064
994	Sugar maple	Acer saccharum	10	Poor	No	None	-73.85517 41.151122
995	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85449 41.14607
996	Sugar maple	Acer saccharum	7	Dead	No	None	-73.85518 41.151127
997	White ash	Fraxinus americana	16	Dead	No	Standing dead tree. Emerald ash borer	-73.85453 41.146098
998	White ash	Fraxinus americana	15	Dead	No	Standing dead tree. Emerald ash borer	-73.85454 41.146119
999	Norway maple	Acer platanoides	7	Critical	Yes	Significant dieback	-73.85449 41.1461
1000	Sugar maple	Acer saccharum	13	Good	No	None	-73.85521 41.151077
1001	Norway maple	Acer platanoides	7	Critical	Yes	Significant dieback	-73.85447 41.146104
1002	Sugar maple	Acer saccharum	14	Good	No	None	-73.85521 41.151042
1003	Norway maple	Acer platanoides	23	Critical	Yes	Significant dieback. Large deadwood	-73.85443 41.146147
1004	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85435 41.14614
1005	Sugar maple	Acer saccharum	13	Fair	No	Large wound on trunk.	-73.85519 41.15105
1006	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85431 41.146133
1007	Norway maple	Acer platanoides	17	Dead	Yes	Standing dead tree	-73.85427 41.146154
1008	Pin oak	Quercus palustris	15	Good	No	None	-73.85512 41.151035
1009	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85445 41.146183
1010	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85438 41.14618
1011	White ash	Fraxinus americana	26	Dead	No	None	-73.85516 41.151001
1012	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85436 41.146228
1013	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85432 41.14622
1014	Sugar maple	Acer saccharum	12	Good	No	None	-73.8551 41.150988
1015	Norway maple	Acer platanoides	7	Poor	Yes	Significant lean	-73.85429 41.146229
1016	Sugar maple	Acer saccharum	11	Good	No	None	-73.85506 41.150986
1017	White ash	Fraxinus americana	17	Dead	No	Standing dead tree. Emerald ash borer	-73.85431 41.146249
1018	White ash	Fraxinus americana	9	Dead	No	Standing dead tree. Emerald ash borer	-73.85434 41.14625
1019	Sugar maple	Acer saccharum	23	Fair	No	Large wound on trunk.	-73.85517 41.150941
1020	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85431 41.146346
1021	Black cherry	Prunus serotina	12	Fair	No	Deadwood	-73.85434 41.14635
1022	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85437 41.146339
1023	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85439 41.146325
1024	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85442 41.146352
1025	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85444 41.146339
1026	American linden	Tilia americana	17	Good	No	None	-73.85511 41.150948
1027	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85446 41.146373
1028	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85449 41.146387

1029	Sugar maple	Acer saccharum	15	Critical	No	None	-73.85508 41.150916
1030	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85451 41.146368
1031	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.8545 41.146357
1032	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85452 41.146358
1033	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85453 41.14634
1034	Sugar maple	Acer saccharum	14	Good	No	Double leader	-73.85524 41.150883
1035	Norway maple	Acer platanoides	16	Critical	Yes	Codominant at 1 foot. Column of decay along both leads. Broken top	-73.8545 41.146315
1036	Sugar maple	Acer saccharum	10	Good	No	None	-73.85523 41.150908
1037	Sugar maple	Acer saccharum	11	Good	No	None	-73.85524 41.150865
1038	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85453 41.146391
1039	Sugar maple	Acer saccharum	9	Good	No	None	-73.85524 41.150846
1040	Norway maple	Acer platanoides	17	Critical	Yes	Significant dieback. Large deadwood	-73.85454 41.14637
1041	Sugar maple	Acer saccharum	8	Good	No	None	-73.85519 41.150834
1042	Sycamore maple	Acer pseudoplatanus	38	Fair	Yes	Quad lead	-73.85464 41.146407
1043	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85463 41.146398
1044	Black locust	Robinia pseudoacacia	27	Good	Yes	None	-73.85516 41.150832
1045	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85465 41.146372
1046	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85461 41.146337
1047	Sugar maple	Acer saccharum	9	Good	No	None	-73.85507 41.150812
1048	Sugar maple	Acer saccharum	17	Poor	No	None	-73.85507 41.150795
1049	Black cherry	Prunus serotina	55	Critical	No	Significant dieback. Little canopy remains. Very large deadwood. Multi lead	-73.85459 41.14633
1050	Sugar maple	Acer saccharum	16	Good	No	None	-73.8552 41.150808
1051	Norway maple	Acer platanoides	10	Dead	Yes	Standing dead tree	-73.85463 41.146243
1052	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85465 41.146242
1053	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85527 41.150767
1054	Sugar maple	Acer saccharum	7	Good	No	None	-73.85527 41.150742
1055	Bitternut hickory	Carya cordiformis	12	Fair	No	None	-73.85458 41.146255
1056	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85456 41.146261
1057	Sugar maple	Acer saccharum	13	Good	No	None	-73.85524 41.150762
1058	White ash	Fraxinus americana	11	Dead	No	Standing dead tree. Emerald ash borer	-73.85452 41.146269
1059	Black locust	Robinia pseudoacacia	28	Good	Yes	None	-73.85518 41.150751
1060	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85458 41.146198
1061	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85467 41.146168
1062	Black locust	Robinia pseudoacacia	26	Good	Yes	None	-73.85518 41.150778
1063	Norway maple	Acer platanoides	35	Fair	Yes	None	-73.85465 41.146116
1064	Pin oak	Quercus palustris	10	Good	No	None	-73.85515 41.15076
1065	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85461 41.146105
1066	Sugar maple	Acer saccharum	9	Good	No	None	-73.85511 41.150778
1067	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85458 41.146076
1068	Sugar maple	Acer saccharum	12	Good	No	None	-73.85508 41.150773
1069	Sugar maple	Acer saccharum	14	Fair	No	None	-73.85508 41.150734
1070	Norway maple	Acer platanoides	31	Poor	Yes	Codominant. Large broken limbs	-73.85465 41.146015
1071	Norway maple	Acer platanoides	19	Fair	Yes	None	-73.85465 41.145983
1072	Sugar maple	Acer saccharum	13	Good	No	None	-73.85513 41.150711
1073	Norway maple	Acer platanoides	20	Fair	Yes	None	-73.85448 41.146007
1074	Sugar maple	Acer saccharum	10	Good	No	None	-73.85522 41.150697
1075	Norway maple	Acer platanoides	17	Dead	Yes	Standing dead tree	-73.85444 41.145963
1076	Sugar maple	Acer saccharum	7	Good	No	None	-73.85517 41.150688
1077	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85452 41.145841
1078	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85447 41.145809
1079	Sugar maple	Acer saccharum	12	Good	No	None	-73.85512 41.150671
1080	Black cherry	Prunus serotina	7	Good	No	None	-73.85508 41.150674
1081	Norway maple	Acer platanoides	11	Poor	Yes	Covered in vines	-73.85443 41.145786
1082	Sugar maple	Acer saccharum	17	Good	No	None	-73.85511 41.150605
1083	Pignut hickory	Carya glabra	8	Good	No	None	-73.85507 41.15059
1084	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85458 41.145827
1085	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85459 41.145887
1086	Sugar maple	Acer saccharum	25	Good	No	None	-73.85505 41.150565
1087	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.8546 41.145831
1088	White ash	Fraxinus americana	10	Dead	No	Standing dead tree. Emerald ash borer	-73.85459 41.145812
1089	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85458 41.145774
1090	Sugar maple	Acer saccharum	17	Fair	No	None	-73.85454 41.145746
1091	Sugar maple	Acer saccharum	23	Fair	No	None	-73.85461 41.145695

1092	Norway maple	Acer platanoides	9	Poor	Yes	Covered in vines	-73.85457 41.145699
1093	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8546 41.14577
1094	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85467 41.145753
1095	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85466 41.145715
1096	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8547 41.145713
1097	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85463 41.145688
1098	Norway maple	Acer platanoides	18	Poor	Yes	None	-73.85469 41.145767
1099	Norway maple	Acer platanoides	19	Dead	Yes	Standing dead tree	-73.85471 41.145786
1100	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.8547 41.14584
1101	Norway maple	Acer platanoides	19	Fair	Yes	None	-73.85474 41.145777
1102	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85482 41.145792
1103	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85482 41.14581
1104	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85483 41.145751
1105	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85482 41.145744
1106	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85486 41.14569
1107	Norway maple	Acer platanoides	19	Critical	Yes	Codominant at base. Both leads broken	-73.85488 41.145723
1108	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85485 41.145732
1109	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85486 41.145742
1110	Tulip polplar	Liriodendron tulipifera	24	Fair	No	Vines	-73.85497 41.145763
1111	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85498 41.145704
1112	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85521 41.145767
1113	Norway maple	Acer platanoides	24	Fair	Yes	None	-73.85522 41.14574
1114	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.8555 41.145833
1115	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85553 41.145823
1116	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85555 41.145839
1117	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85553 41.145872
1118	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85549 41.145866
1119	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85548 41.145891
1120	Black birch	Betula lenta	16	Fair	No	None	-73.85545 41.145915
1121	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85543 41.145916
1122	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85547 41.145911
1123	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.8555 41.145907
1124	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.8555 41.14593
1125	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85549 41.145986
1126	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.8556 41.146002
1127	Norway maple	Acer platanoides	7	Dead	Yes	Standing dead tree	-73.8556 41.145991
1128	Norway maple	Acer platanoides	7	Dead	Yes	Standing dead tree	-73.85561 41.145973
1129	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.8556 41.145946
1130	Norway maple	Acer platanoides	10	Dead	Yes	Standing dead tree. Broken top	-73.85562 41.145947
1131	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85562 41.145922
1132	Norway maple	Acer platanoides	30	Fair	Yes	Codominant at 3 feet	-73.85565 41.145837
1133	Norway maple	Acer platanoides	44	Fair	Yes	Tri lead	-73.85568 41.145833
1134	Norway maple	Acer platanoides	22	Fair	Yes	None	-73.85567 41.145893
1135	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85571 41.145876
1136	Black locust	Robinia pseudoacacia	22	Good	Yes	None	-73.85508 41.150489
1137	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85573 41.145894
1138	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85571 41.145895
1139	Sugar maple	Acer saccharum	8	Good	No	None	-73.85511 41.150486
1140	Bitternut hickory	Carya cordiformis	23	Fair	No	None	-73.85568 41.145919
1141	Norway maple	Acer platanoides	10	Poor	Yes	Decay in trunk	-73.85573 41.145941
1142	Norway maple	Acer platanoides	13	Poor	Yes	Dieback	-73.85571 41.145943
1143	Norway maple	Acer platanoides	15	Dead	Yes	Standing dead tree	-73.85572 41.145985
1144	Norway maple	Acer platanoides	14	Critical	Yes	Little canopy remains	-73.85568 41.14599
1145	Norway maple	Acer platanoides	8	Critical	Yes	Top half dead	-73.85569 41.14601
1146	Norway maple	Acer platanoides	26	Fair	Yes	Vines	-73.85568 41.146032
1147	Black walnut	Juglans nigra	18	Good	No	None	-73.855 41.150435
1148	Norway maple	Acer platanoides	19	Fair	Yes	Vines	-73.85566 41.146051
1149	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.8558 41.145949
1150	White oak	Quercus alba	13	Good	No	None	-73.85496 41.15046
1151	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85581 41.145893
1152	Norway maple	Acer platanoides	19	Critical	Yes	Little foliage remains	-73.85573 41.145799
1153	Norway maple	Acer platanoides	21	Dead	Yes	Standing dead tree	-73.85576 41.145802
1154	Norway maple	Acer platanoides	24	Fair	Yes	None	-73.85498 41.1504
1155	Norway maple	Acer platanoides	12	Critical	Yes	Little foliage remains	-73.85577 41.145816
1156	Norway maple	Acer platanoides	9	Poor	Yes	Dieback	-73.85577 41.145801

1157	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8558 41.145832
1158	Norway maple	Acer platanoides	22	Dead	Yes	Standing dead tree	-73.85585 41.145812
1159	Norway maple	Acer platanoides	11	Dead	Yes	Standing dead tree	-73.85586 41.145819
1160	Norway maple	Acer platanoides	13	Dead	Yes	Standing dead tree	-73.85587 41.145824
1161	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.8559 41.145819
1162	Sugar maple	Acer saccharum	36	Dead	No	None	-73.85511 41.15041
1163	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85581 41.145928
1164	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85517 41.150377
1165	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85587 41.145983
1166	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85587 41.145999
1167	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85582 41.146053
1168	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85594 41.146107
1169	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85598 41.146036
1170	Norway maple	Acer platanoides	23	Good	Yes	None	-73.85502 41.150393
1171	Norway maple	Acer platanoides	12	Dead	Yes	Standing dead tree	-73.85593 41.146002
1172	Norway maple	Acer platanoides	20	Good	Yes	None	-73.85507 41.150352
1173	Norway maple	Acer platanoides	25	Critical	Yes	Partially uprooted and leaning in nearby tree	-73.85599 41.145852
1174	Sugar maple	Acer saccharum	7	Good	No	None	-73.85498 41.150277
1175	Sugar maple	Acer saccharum	34	Fair	No	None	-73.85609 41.145984
1176	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85611 41.145878
1177	Red oak	Quercus rubra	16	Fair	No	None	-73.85514 41.15026
1178	Norway maple	Acer platanoides	25	Fair	Yes	None	-73.85616 41.145918
1179	Sugar maple	Acer saccharum	9	Good	No	None	-73.85505 41.150251
1180	Sugar maple	Acer saccharum	24	Fair	No	None	-73.85627 41.145883
1181	Sugar maple	Acer saccharum	17	Fair	No	None	-73.85518 41.150314
1182	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85625 41.145925
1183	Sugar maple	Acer saccharum	16	Good	No	None	-73.85524 41.150259
1184	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85615 41.145975
1185	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85606 41.146018
1186	White oak	Quercus alba	13	Good	No	None	-73.85533 41.150293
1187	Norway maple	Acer platanoides	20	Fair	Yes	None	-73.85606 41.14606
1188	White ash	Fraxinus americana	14	Critical	No	Emerald ash borer	-73.85606 41.146072
1189	Sugar maple	Acer saccharum	12	Good	No	None	-73.85529 41.150547
1190	Norway maple	Acer platanoides	13	Poor	Yes	Prior failure of codominant lead with decay	-73.85608 41.146133
1191	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85601 41.146152
1192	Sugar maple	Acer saccharum	113	Good	No	None	-73.85524 41.150584
1193	Norway maple	Acer platanoides	20	Fair	Yes	None	-73.856 41.146166
1194	Tulip polplar	Liriodendron tulipifera	33	Dead	No	Multi stem	-73.85531 41.150451
1195	Green ash	Fraxinus pennsylvanica	14	Critical	No	Emerald ash borer	-73.85594 41.146183
1196	White oak	Quercus alba	12	Good	No	None	-73.85533 41.150386
1197	Green ash	Fraxinus pennsylvanica	16	Critical	No	Emerald ash borer	-73.85581 41.146181
1198	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.8558 41.146178
1199	Sugar maple	Acer saccharum	9	Dead	No	None	-73.85533 41.150349
1200	Green ash	Fraxinus pennsylvanica	21	Dead	No	Standing dead tree. Emerald ash borer	-73.8558 41.146219
1201	Sugar maple	Acer saccharum	11	Dead	No	None	-73.85533 41.150349
1202	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85591 41.146227
1203	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.8559 41.146241
1204	Sugar maple	Acer saccharum	22	Fair	No	Multistem	-73.85535 41.150321
1205	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85596 41.146215
1206	Norway maple	Acer platanoides	15	Poor	Yes	Decay in trunk	-73.85599 41.146214
1207	White oak	Quercus alba	8	Good	No	None	-73.85536 41.150246
1208	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85535 41.150208
1209	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85587 41.146287
1210	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85597 41.146281
1211	Sugar maple	Acer saccharum	18	Good	No	Multistem	-73.85535 41.150168
1212	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85596 41.146295
1213	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85597 41.146308
1214	Norway maple	Acer platanoides	10	Dead	Yes	Standing dead tree	-73.85599 41.146298
1215	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85597 41.14633
1216	Red maple	Acer rubrum	15	Good	No	None	-73.85529 41.150248
1217	Norway maple	Acer platanoides	19	Fair	Yes	None	-73.85594 41.146343
1218	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85595 41.146403
1219	Norway maple	Acer platanoides	10	Dead	Yes	Standing dead tree with broken top	-73.85592 41.146413
1220	Red oak	Quercus rubra	22	Good	No	None	-73.85523 41.15021
1221	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85591 41.146429

1222	Red oak	Quercus rubra	25	Good	No	None	-73.85519	41.150212
1223	Norway maple	Acer platanoides	20	Fair	Yes	None	-73.856	41.146519
1224	Norway maple	Acer platanoides	21	Critical	Yes	Broken top. Little canopy remains	-73.85604	41.146487
1225	Norway maple	Acer platanoides	21	Fair	Yes	None	-73.85602	41.14645
1226	American linden	Tilia americana	8	Good	No	None	-73.85516	41.150177
1227	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85609	41.146462
1228	Norway maple	Acer platanoides	16	Poor	Yes	None	-73.8551	41.150181
1229	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85613	41.14646
1230	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85611	41.146425
1231	Norway maple	Acer platanoides	27	Fair	Yes	None	-73.85612	41.146383
1232	Norway maple	Acer platanoides	14	Dead	Yes	None	-73.85506	41.150187
1233	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85611	41.146294
1234	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85613	41.146266
1235	Norway maple	Acer platanoides	28	Fair	Yes	None	-73.85618	41.146253
1236	Norway maple	Acer platanoides	26	Fair	Yes	None	-73.8561	41.146214
1237	Norway maple	Acer platanoides	17	Dead	Yes	Standing dead tree with broken top	-73.85612	41.146155
1238	Norway maple	Acer platanoides	32	Fair	Yes	None	-73.85619	41.146111
1239	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85622	41.146034
1240	Red oak	Quercus rubra	18	Good	No	None	-73.85491	41.150214
1241	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85635	41.145931
1242	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85641	41.14594
1243	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85644	41.145947
1244	Red oak	Quercus rubra	20	Good	No	None	-73.85494	41.150211
1245	Tulip polplar	Liriodendron tulipifera	30	Fair	No	None	-73.85648	41.145937
1246	Sugar maple	Acer saccharum	12	Good	No	None	-73.85497	41.150186
1247	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85636	41.145965
1248	Norway maple	Acer platanoides	21	Fair	Yes	None	-73.85634	41.145997
1249	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85639	41.146061
1250	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85641	41.146114
1251	White ash	Fraxinus americana	38	Dead	No	Standing dead tree. Emerald ash borer	-73.85638	41.146159
1252	Norway maple	Acer platanoides	19	Fair	Yes	None	-73.85492	41.150153
1253	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85637	41.146107
1254	Norway maple	Acer platanoides	21	Poor	Yes	None	-73.85497	41.150156
1255	Norway maple	Acer platanoides	21	Fair	Yes	None	-73.85627	41.146121
1256	White ash	Fraxinus americana	19	Dead	No	Standing dead tree. Emerald ash borer	-73.85622	41.146096
1257	Pignut hickory	Carya glabra	31	Good	No	None	-73.85496	41.15014
1258	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85632	41.146212
1259	Norway maple	Acer platanoides	21	Dead	Yes	Standing dead tree	-73.85635	41.14628
1260	Red oak	Quercus rubra	22	Good	No	None	-73.85489	41.150108
1261	Sugar maple	Acer saccharum	14	Fair	No	None	-73.85626	41.146227
1262	Sugar maple	Acer saccharum	13	Good	No	None	-73.8549	41.150071
1263	Norway maple	Acer platanoides	11	Good	Yes	None	-73.85489	41.150058
1264	White oak	Quercus alba	37	Good	No	None	-73.85483	41.150008
1265	Tulip polplar	Liriodendron tulipifera	21	Fair	No	None	-73.85608	41.146578
1266	White oak	Quercus alba	38	Good	No	None	-73.85492	41.149988
1267	Sweet cherry	Prunus avium	25	Fair	No	None	-73.85615	41.146589
1268	Sugar maple	Acer saccharum	9	Good	No	None	-73.85494	41.149996
1269	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85618	41.146575
1270	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85618	41.14661
1271	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85617	41.146624
1272	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85489	41.149956
1273	Norway maple	Acer platanoides	34	Fair	Yes	Codominant at 2 feet	-73.85621	41.14664
1274	Norway maple	Acer platanoides	14	Good	Yes	None	-73.85491	41.149914
1275	Green ash	Fraxinus pennsylvanica	19	Critical	No	Emerald ash borer	-73.8562	41.146721
1276	Norway maple	Acer platanoides	24	Fair	Yes	Vines	-73.85618	41.146744
1277	Red oak	Quercus rubra	22	Good	No	None	-73.85486	41.14986
1278	Norway maple	Acer platanoides	18	Fair	Yes	Vines	-73.85619	41.146766
1279	Norway maple	Acer platanoides	21	Critical	Yes	Little canopy remains. Basal decay	-73.85622	41.146768
1280	Red oak	Quercus rubra	19	Good	No	None	-73.85486	41.149877
1281	Norway maple	Acer platanoides	14	Poor	Yes	Decay. Vines	-73.85624	41.146749
1282	Norway maple	Acer platanoides	18	Dead	Yes	None	-73.85489	41.14986
1283	Norway maple	Acer platanoides	29	Fair	Yes	None	-73.85635	41.146684
1284	Norway maple	Acer platanoides	22	Fair	Yes	None	-73.85629	41.146623
1285	Norway maple	Acer platanoides	10	Good	Yes	None	-73.8549	41.149843
1286	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85625	41.146626

1287	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85626	41.146615
1288	Norway maple	Acer platanoides	8	Poor	Yes	None	-73.85493	41.149835
1289	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85623	41.146565
1290	Sugar maple	Acer saccharum	8	Good	No	None	-73.8549	41.149822
1291	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85625	41.146574
1292	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85631	41.146576
1293	Sugar maple	Acer saccharum	7	Good	No	None	-73.85488	41.149819
1294	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85635	41.146666
1295	Red oak	Quercus rubra	23	Good	No	None	-73.85486	41.149844
1296	Green ash	Fraxinus pennsylvanica	12	Critical	No	Emerald ash borer	-73.85634	41.146607
1297	Norway maple	Acer platanoides	14	Dead	Yes	Standing dead tree. Broken top	-73.85636	41.146599
1298	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85488	41.149766
1299	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85635	41.146577
1300	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85636	41.146558
1301	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85636	41.146542
1302	Norway maple	Acer platanoides	17	Good	Yes	None	-73.85486	41.149751
1303	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85636	41.146526
1304	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85633	41.146546
1305	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85633	41.14656
1306	Norway maple	Acer platanoides	25	Poor	Yes	Double leader	-73.8549	41.149749
1307	Norway maple	Acer platanoides	20	Fair	Yes	None	-73.85632	41.14653
1308	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85628	41.146526
1309	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85627	41.146518
1310	Norway maple	Acer platanoides	13	Good	Yes	None	-73.85488	41.149732
1311	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85623	41.146517
1312	White ash	Fraxinus americana	9	Dead	No	None	-73.85493	41.149738
1313	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85627	41.14648
1314	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85629	41.146448
1315	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85636	41.146421
1316	Norway maple	Acer platanoides	18	Good	Yes	None	-73.85485	41.14969
1317	Bitternut hickory	Carya cordiformis	21	Fair	No	None	-73.85638	41.146407
1318	Norway maple	Acer platanoides	7	Poor	Yes	None	-73.85639	41.14638
1319	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85633	41.146373
1320	Norway maple	Acer platanoides	24	Fair	Yes	None	-73.85626	41.146358
1321	Black walnut	Juglans nigra	22	Fair	No	None	-73.85485	41.149643
1322	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85636	41.146353
1323	Norway maple	Acer platanoides	11	Good	Yes	None	-73.8549	41.149651
1324	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85638	41.146343
1325	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85495	41.149642
1326	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85494	41.149609
1327	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85636	41.146288
1328	Norway maple	Acer platanoides	7	Good	Yes	None	-73.85498	41.149636
1329	Norway maple	Acer platanoides	25	Fair	Yes	None	-73.85645	41.14628
1330	Sugar maple	Acer saccharum	8	Good	No	None	-73.85499	41.149656
1331	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.8565	41.146255
1332	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85651	41.146219
1333	White ash	Fraxinus americana	14	Critical	No	Emerald ash borer	-73.85648	41.146201
1334	Ailanthus	Ailanthus altissima	10	Good	Yes	None	-73.85496	41.149589
1335	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85644	41.146174
1336	Ailanthus	Ailanthus altissima	9	Good	Yes	None	-73.85494	41.149588
1337	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85638	41.146229
1338	Norway maple	Acer platanoides	11	Critical	Yes	Little canopy remains	-73.8564	41.146177
1339	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85649	41.146175
1340	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85649	41.146136
1341	Ailanthus	Ailanthus altissima	11	Good	Yes	None	-73.85495	41.149598
1342	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85649	41.146101
1343	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85655	41.146079
1344	Black oak	Quercus velutina	18	Fair	No	None	-73.85657	41.146042
1345	Norway maple	Acer platanoides	22	Fair	Yes	None	-73.85656	41.145941
1346	Ailanthus	Ailanthus altissima	12	Good	Yes	None	-73.85498	41.149566
1347	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85648	41.145898
1348	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85652	41.145907
1349	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85658	41.145913
1350	Norway maple	Acer platanoides	10	Good	Yes	None	-73.85502	41.149566
1351	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85666	41.145985

1352	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85667	41.146071
1353	Norway maple	Acer platanoides	15	Good	Yes	None	-73.85504	41.149571
1354	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85663	41.146085
1355	Ailanthus	Ailanthus altissima	9	Fair	Yes	None	-73.855	41.149545
1356	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.8566	41.146195
1357	Black locust	Robinia pseudoacacia	7	Fair	Yes	None	-73.85497	41.149549
1358	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85667	41.146225
1359	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85662	41.146293
1360	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85506	41.149534
1361	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85666	41.146322
1362	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85665	41.146348
1363	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85667	41.146381
1364	Norway maple	Acer platanoides	12	Good	Yes	None	-73.85508	41.149517
1365	White ash	Fraxinus americana	11	Dead	No	Standing dead tree	-73.85661	41.146368
1366	Norway maple	Acer platanoides	11	Good	Yes	None	-73.8551	41.149511
1367	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85657	41.146376
1368	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.8565	41.146376
1369	Norway maple	Acer platanoides	16	Good	Yes	None	-73.8551	41.149474
1370	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85642	41.14642
1371	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85647	41.146427
1372	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85644	41.146461
1373	White ash	Fraxinus americana	19	Dead	No	None	-73.85512	41.149487
1374	White ash	Fraxinus americana	14	Dead	No	Standing dead tree	-73.85641	41.146468
1375	Black walnut	Juglans nigra	23	Fair	No	None	-73.85512	41.149503
1376	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85643	41.146537
1377	Sugar maple	Acer saccharum	7	Good	No	None	-73.85513	41.149447
1378	Norway maple	Acer platanoides	11	Dead	Yes	Standing dead tree. Broken top	-73.85656	41.146505
1379	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85653	41.146556
1380	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85662	41.146551
1381	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85513	41.149464
1382	Tulip polplar	Liriodendron tulipifera	39	Fair	No	None	-73.85667	41.146565
1383	Sycamore	Platanus occidentalis	40	Fair	No	None	-73.85519	41.149431
1384	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8552	41.149413
1385	White ash	Fraxinus americana	38	Dead	No	None	-73.85524	41.149394
1386	Norway maple	Acer platanoides	12	Good	Yes	None	-73.85529	41.149389
1387	Red oak	Quercus rubra	7	Good	No	None	-73.85528	41.149372
1388	Norway maple	Acer platanoides	13	Good	Yes	None	-73.85532	41.149378
1389	White oak	Quercus alba	31	Good	No	None	-73.85537	41.149439
1390	Black locust	Robinia pseudoacacia	18	Good	Yes	None	-73.85549	41.149522
1391	Black locust	Robinia pseudoacacia	19	Good	Yes	None	-73.85549	41.149522
1392	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85666	41.146656
1393	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85668	41.146671
1394	Norway maple	Acer platanoides	10	Good	Yes	None	-73.8555	41.149487
1395	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85662	41.146657
1396	Norway maple	Acer platanoides	11	Good	Yes	None	-73.8555	41.149447
1397	Norway maple	Acer platanoides	10	Good	Yes	None	-73.85546	41.149458
1398	Black gum	Nyssa sylvatica	16	Poor	No	Dieback	-73.8566	41.14667
1399	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85659	41.146695
1400	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85544	41.149429
1401	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85657	41.146669
1402	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85653	41.146666
1403	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85655	41.146622
1404	Norway maple	Acer platanoides	8	Good	Yes	None	-73.8555	41.149447
1405	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85654	41.146601
1406	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85646	41.146559
1407	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85647	41.146634
1408	Norway maple	Acer platanoides	13	Good	Yes	None	-73.8555	41.149376
1409	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85643	41.146684
1410	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85647	41.14669
1411	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85547	41.149344
1412	White ash	Fraxinus americana	15	Critical	No	Emerald ash borer	-73.85646	41.14671
1413	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85649	41.146718
1414	Norway maple	Acer platanoides	12	Good	Yes	None	-73.85551	41.149284
1415	White ash	Fraxinus americana	17	Critical	No	Emerald ash borer	-73.85651	41.146693
1416	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85653	41.146692

1417	Sugar maple	Acer saccharum	14	Good	No	None	-73.85547 41.149299
1418	Norway maple	Acer platanoides	10	Poor	Yes	Vines. Decay	-73.85653 41.14673
1419	Sugar maple	Acer saccharum	8	Good	No	None	-73.85547 41.149264
1420	Norway maple	Acer platanoides	7	Fair	Yes	Vines	-73.85658 41.146735
1421	Sugar maple	Acer saccharum	13	Fair	No	Vines	-73.85663 41.146726
1422	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85554 41.149215
1423	Norway maple	Acer platanoides	8	Fair	Yes	Vines	-73.85669 41.146731
1424	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85543 41.149253
1425	Norway maple	Acer platanoides	8	Fair	Yes	Vines	-73.8567 41.146777
1426	Norway maple	Acer platanoides	7	Poor	Yes	Vines	-73.85664 41.146805
1427	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85539 41.149235
1428	Norway maple	Acer platanoides	10	Fair	Yes	Vines	-73.85672 41.146908
1429	Norway maple	Acer platanoides	9	Fair	Yes	Vines	-73.85669 41.146912
1430	Norway maple	Acer platanoides	11	Good	Yes	None	-73.85535 41.149232
1431	Norway maple	Acer platanoides	13	Fair	Yes	Vines	-73.8567 41.146943
1432	Norway maple	Acer platanoides	13	Fair	Yes	Vines	-73.85672 41.146951
1433	Norway maple	Acer platanoides	7	Fair	Yes	Vines	-73.8567 41.146972
1434	Norway maple	Acer platanoides	15	Good	Yes	None	-73.85532 41.149275
1435	Norway maple	Acer platanoides	7	Fair	Yes	Vines	-73.85665 41.146984
1436	Norway maple	Acer platanoides	9	Critical	Yes	Uprooted	-73.85669 41.147012
1437	Norway maple	Acer platanoides	7	Good	Yes	None	-73.85534 41.149249
1438	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85656 41.147076
1439	Norway maple	Acer platanoides	10	Fair	Yes	Uprooted	-73.85663 41.147061
1440	Norway maple	Acer platanoides	14	Fair	Yes	Uprooted	-73.85671 41.147036
1441	White ash	Fraxinus americana	11	Dead	No	Emerald ash borer	-73.8567 41.147064
1442	Norway maple	Acer platanoides	23	Fair	Yes	None	-73.85535 41.149213
1443	Norway maple	Acer platanoides	9	Poor	Yes	Vines	-73.85655 41.147115
1444	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85661 41.147099
1445	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85535 41.149196
1446	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85668 41.147126
1447	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85653 41.1472
1448	Norway maple	Acer platanoides	27	Dead	Yes	None	-73.85536 41.149175
1449	White oak	Quercus alba	62	Fair	No	Large deadwood	-73.85659 41.147233
1450	Norway maple	Acer platanoides	26	Good	Yes	None	-73.85548 41.149179
1451	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85665 41.147233
1452	Norway maple	Acer platanoides	23	Fair	Yes	None	-73.85672 41.147193
1453	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85667 41.147264
1454	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85658 41.147274
1455	Norway maple	Acer platanoides	12	Good	Yes	None	-73.85548 41.149122
1456	Norway maple	Acer platanoides	20	Fair	Yes	None	-73.85651 41.147281
1457	Black birch	Betula lenta	14	Fair	No	None	-73.85656 41.147315
1458	Norway maple	Acer platanoides	11	Good	Yes	None	-73.85556 41.149019
1459	Black birch	Betula lenta	14	Critical	No	Significant basal and sap rot decay.	-73.8565 41.147327
1460	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85554 41.149021
1461	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85648 41.147316
1462	Norway maple	Acer platanoides	10	Good	Yes	None	-73.85554 41.149041
1463	Black birch	Betula lenta	7	Fair	No	None	-73.85649 41.147339
1464	Black birch	Betula lenta	21	Fair	No	Codominant at 3 feet	-73.85651 41.147341
1465	Unknown	Unknown	18	Dead	No	None	-73.85541 41.149037
1466	White oak	Quercus alba	16	Fair	No	None	-73.85662 41.147336
1467	White oak	Quercus alba	18	Fair	No	None	-73.85665 41.147372
1468	White oak	Quercus alba	13	Fair	No	None	-73.85668 41.147349
1469	Sugar maple	Acer saccharum	13	Good	No	None	-73.85546 41.149001
1470	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85672 41.147301
1471	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8567 41.147394
1472	Sugar maple	Acer saccharum	14	Good	No	None	-73.85546 41.148984
1473	Norway maple	Acer platanoides	14	Good	Yes	None	-73.85549 41.148983
1474	White ash	Fraxinus americana	7	Dead	No	Standing dead tree	-73.85668 41.147468
1475	Sugar maple	Acer saccharum	13	Poor	No	None	-73.85551 41.148949
1476	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8567 41.147515
1477	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85675 41.147544
1478	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85672 41.147546
1479	White ash	Fraxinus americana	10	Dead	No	Standing dead tree	-73.85667 41.147539
1480	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85664 41.147556
1481	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85658 41.147533

1482	Black birch	Betula lenta	16	Critical	No	Significant basal and sap rot decay.	-73.85653	41.147399
1483	Crabapple	Malus spp.	9	Fair	No	Codominant near base	-73.85646	41.147409
1484	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85649	41.147463
1485	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.8564	41.147376
1486	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85639	41.147355
1487	Red oak	Quercus rubra	9	Fair	No	None	-73.85637	41.147338
1488	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85637	41.147385
1489	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85633	41.147384
1490	Norway maple	Acer platanoides	12	Dead	Yes	Standing dead tree	-73.85629	41.147388
1491	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85626	41.147394
1492	White ash	Fraxinus americana	8	Dead	No	Emerald ash borer	-73.85625	41.147405
1493	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85627	41.14741
1494	Black cherry	Prunus serotina	10	Good	No	None	-73.85561	41.148633
1495	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85622	41.147434
1496	Norway maple	Acer platanoides	11	Good	Yes	None	-73.85561	41.148653
1497	Norway maple	Acer platanoides	11	Critical	Yes	Partially uprooted	-73.85618	41.147398
1498	Shagbark hickory	Carya ovata	12	Good	No	None	-73.85563	41.148636
1499	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85617	41.147414
1500	Sugar maple	Acer saccharum	12	Good	No	None	-73.85561	41.148666
1501	Sycamore maple	Acer pseudoplatanus	14	Fair	Yes	None	-73.85615	41.147431
1502	Sycamore maple	Acer pseudoplatanus	10	Fair	Yes	None	-73.85611	41.147448
1503	Eastern cottonwood	Populus deltoides	30	Fair	No	None	-73.85602	41.147561
1504	Red oak	Quercus rubra	23	Good	No	None	-73.8556	41.148684
1505	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85556	41.148691
1506	Norway maple	Acer platanoides	7	Good	Yes	None	-73.85557	41.148705
1507	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85598	41.147357
1508	Norway maple	Acer platanoides	16	Good	Yes	None	-73.85559	41.148711
1509	White ash	Fraxinus americana	14	Dead	No	Emerald ash borer	-73.85595	41.147368
1510	London plane	Platanus acerifolia	24	Good	No	None	-73.85556	41.14872
1511	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85597	41.147323
1512	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85599	41.147321
1513	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.856	41.147312
1514	White ash	Fraxinus americana	11	Dead	No	Emerald ash borer	-73.85598	41.147272
1515	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85595	41.147229
1516	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85593	41.147265
1517	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85591	41.147284
1518	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85592	41.147317
1519	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.8559	41.147304
1520	Mulberry	Morus spp.	17	Fair	No	None	-73.85589	41.147321
1521	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85591	41.147344
1522	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85588	41.147345
1523	Mulberry	Morus spp.	9	Fair	No	None	-73.85587	41.147351
1524	Norway maple	Acer platanoides	26	Fair	Yes	None	-73.85572	41.147373
1525	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85576	41.147342
1526	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85582	41.147296
1527	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85585	41.147254
1528	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85588	41.147243
1529	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85592	41.1472
1530	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85588	41.147221
1531	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85586	41.147206
1532	Norway maple	Acer platanoides	7	Dead	Yes	Standing dead tree	-73.85585	41.147229
1533	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85584	41.147223
1534	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85583	41.147217
1535	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85581	41.147223
1536	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85579	41.147225
1537	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85577	41.147265
1538	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85574	41.147275
1539	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85567	41.147308
1540	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85566	41.147307
1541	Eastern cottonwood	Populus deltoides	11	Fair	No	None	-73.8556	41.147357
1542	Black birch	Betula lenta	9	Fair	No	None	-73.8556	41.147371
1543	Red oak	Quercus rubra	13	Fair	No	None	-73.85558	41.147367
1544	Tulip polplar	Liriodendron tulipifera	10	Fair	No	None	-73.85559	41.147447
1545	Tulip polplar	Liriodendron tulipifera	10	Fair	No	None	-73.85558	41.147455
1546	Eastern cottonwood	Populus deltoides	8	Fair	No	None	-73.85554	41.147425

1547	Ailanthus	Ailanthus altissima	11	Fair	Yes	None	-73.85555	41.147478
1548	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85553	41.14753
1549	Black locust	Robinia pseudoacacia	7	Fair	Yes	None	-73.85548	41.147576
1550	Shagbark hickory	Carya ovata	11	Fair	No	Codominant at base	-73.85545	41.147542
1551	Pin oak	Quercus palustris	8	Fair	No	None	-73.85542	41.147596
1552	American elm	Ulmus americana	8	Fair	No	None	-73.8554	41.147684
1553	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85536	41.147646
1554	Black locust	Robinia pseudoacacia	18	Fair	Yes	None	-73.85535	41.147641
1555	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85533	41.147631
1556	Eastern cottonwood	Populus deltoides	21	Fair	No	None	-73.85532	41.147632
1557	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85529	41.147614
1558	Ailanthus	Ailanthus altissima	14	Fair	Yes	Codominant at 2 feet	-73.85527	41.147599
1559	Black birch	Betula lenta	12	Fair	No	None	-73.85528	41.147593
1560	Honeylocust	Gleditsia triacanthos	9	Fair	No	None	-73.85527	41.147588
1561	Honeylocust	Gleditsia triacanthos	21	Fair	No	Codominant at base	-73.85528	41.147538
1562	Mulberry	Morus spp.	8	Fair	No	Codominant near base	-73.8553	41.147539
1563	Eastern cottonwood	Populus deltoides	23	Fair	No	None	-73.85534	41.147589
1564	Mulberry	Morus spp.	7	Fair	No	None	-73.85535	41.147576
1565	Mulberry	Morus spp.	7	Fair	No	None	-73.85533	41.147551
1566	Ailanthus	Ailanthus altissima	9	Fair	Yes	Codominant at 2 feet	-73.85533	41.147544
1567	Shagbark hickory	Carya ovata	7	Fair	No	None	-73.85544	41.147525
1568	Mulberry	Morus spp.	14	Poor	No	Covered in vines	-73.85538	41.147462
1569	Shagbark hickory	Carya ovata	7	Fair	No	None	-73.85539	41.14743
1570	Bitternut hickory	Carya cordiformis	12	Fair	No	None	-73.85539	41.147352
1571	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85542	41.147356
1572	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85547	41.147359
1573	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85548	41.14739
1574	Sugar maple	Acer saccharum	14	Fair	No	None	-73.85551	41.147361
1575	Sugar maple	Acer saccharum	13	Fair	No	None	-73.8555	41.147345
1576	Shagbark hickory	Carya ovata	7	Fair	No	None	-73.85553	41.14735
1577	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85554	41.147337
1578	White oak	Quercus alba	8	Fair	No	None	-73.85552	41.147315
1579	Red oak	Quercus rubra	8	Fair	No	None	-73.85544	41.147329
1580	White oak	Quercus alba	7	Fair	No	None	-73.85543	41.147317
1581	Red oak	Quercus rubra	13	Fair	No	None	-73.85542	41.147286
1582	Bitternut hickory	Carya cordiformis	9	Fair	No	None	-73.85552	41.147296
1583	Eastern cottonwood	Populus deltoides	7	Fair	No	None	-73.85558	41.147261
1584	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85547	41.147264
1585	Red oak	Quercus rubra	22	Fair	No	None	-73.85546	41.14726
1586	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85545	41.147257
1587	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85549	41.147245
1588	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85544	41.147228
1589	Sugar maple	Acer saccharum	16	Fair	No	None	-73.85542	41.147213
1590	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85542	41.147184
1591	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85547	41.147186
1592	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85554	41.147218
1593	Red oak	Quercus rubra	23	Fair	No	None	-73.85557	41.147201
1594	Shagbark hickory	Carya ovata	19	Fair	No	None	-73.85558	41.147179
1595	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85559	41.147193
1596	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85558	41.14721
1597	Eastern cottonwood	Populus deltoides	14	Fair	No	None	-73.85567	41.147188
1598	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85573	41.147213
1599	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85575	41.147223
1600	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8558	41.147196
1601	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85577	41.147185
1602	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85579	41.147172
1603	Eastern cottonwood	Populus deltoides	7	Fair	No	None	-73.85578	41.147167
1604	Eastern cottonwood	Populus deltoides	9	Fair	No	None	-73.85577	41.147157
1605	Eastern cottonwood	Populus deltoides	7	Fair	No	None	-73.85576	41.147161
1606	Black birch	Betula lenta	8	Fair	No	None	-73.85579	41.147141
1607	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85576	41.147129
1608	Mulberry	Morus spp.	8	Fair	No	None	-73.85597	41.147135
1609	Willow	Salix spp.	9	Fair	No	None	-73.85595	41.14707
1610	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8557	41.147136
1611	American elm	Ulmus americana	9	Fair	No	None	-73.85562	41.147082

1612	Sugar maple	Acer saccharum	8	Fair	No	None	-73.8556 41.147099
1613	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85557 41.14712
1614	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85559 41.147147
1615	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85553 41.147157
1616	Sugar maple	Acer saccharum	15	Fair	No	None	-73.85546 41.14712
1617	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85552 41.147081
1618	Norway maple	Acer platanoides	21	Fair	Yes	None	-73.85548 41.147058
1619	American elm	Ulmus americana	9	Fair	No	None	-73.85547 41.147045
1620	Ailanthus	Ailanthus altissima	15	Fair	Yes	Vines	-73.85539 41.146965
1621	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85548 41.146963
1622	Sassafras	Sassafras albidum	16	Fair	No	None	-73.85547 41.146935
1623	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.8555 41.14693
1624	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85549 41.14691
1625	Sassafras	Sassafras albidum	12	Fair	No	None	-73.85549 41.146901
1626	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.8555 41.146897
1627	White ash	Fraxinus americana	9	Dead	No	Standing dead tree. Emerald ash borer	-73.85551 41.146924
1628	Sassafras	Sassafras albidum	10	Fair	No	None	-73.85551 41.146892
1629	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85553 41.146958
1630	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85557 41.146944
1631	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85559 41.146975
1632	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8556 41.14699
1633	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85561 41.14701
1634	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85561 41.147029
1635	American elm	Ulmus americana	13	Fair	No	None	-73.85567 41.146996
1636	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85568 41.146981
1637	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85567 41.14698
1638	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85563 41.146963
1639	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85567 41.146952
1640	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85573 41.146927
1641	Ailanthus	Ailanthus altissima	9	Fair	Yes	None	-73.85575 41.146906
1642	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85571 41.1469
1643	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85569 41.146909
1644	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85568 41.146903
1645	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85567 41.146918
1646	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85562 41.146896
1647	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85558 41.146879
1648	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85553 41.146859
1649	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85552 41.14681
1650	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85556 41.146809
1651	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85559 41.14682
1652	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85562 41.14681
1653	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85564 41.146829
1654	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85565 41.146834
1655	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85565 41.146849
1656	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85566 41.146865
1657	American elm	Ulmus americana	14	Fair	No	None	-73.85572 41.146814
1658	American elm	Ulmus americana	12	Fair	No	None	-73.85579 41.146812
1659	Black cherry	Prunus serotina	7	Fair	No	None	-73.8558 41.146797
1660	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8558 41.146778
1661	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.8558 41.146772
1662	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8558 41.146766
1663	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85578 41.146757
1664	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85571 41.146788
1665	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.8557 41.146803
1666	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85569 41.146776
1667	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85566 41.146774
1668	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85569 41.146749
1669	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85562 41.146774
1670	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85563 41.146762
1671	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85557 41.146765
1672	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85555 41.14676
1673	Red oak	Quercus rubra	33	Fair	No	None	-73.85553 41.146748
1674	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85558 41.146733
1675	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85554 41.146695
1676	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85559 41.146691

1677	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85564 41.146669
1678	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85568 41.146695
1679	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85571 41.146655
1680	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85576 41.146668
1681	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85576 41.146672
1682	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85578 41.146681
1683	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8558 41.146714
1684	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85582 41.146702
1685	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85582 41.146669
1686	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85577 41.146659
1687	Norway maple	Acer platanoides	22	Fair	Yes	None	-73.85556 41.146624
1688	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85555 41.146567
1689	Ailanthus	Ailanthus altissima	13	Fair	Yes	None	-73.85556 41.146549
1690	Ailanthus	Ailanthus altissima	13	Fair	Yes	None	-73.8556 41.146547
1691	Norway maple	Acer platanoides	21	Fair	Yes	None	-73.85568 41.146579
1692	Norway maple	Acer platanoides	28	Fair	Yes	None	-73.85573 41.14656
1693	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85569 41.14655
1694	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85569 41.146525
1695	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85571 41.146516
1696	Norway maple	Acer platanoides	22	Fair	Yes	None	-73.85568 41.146504
1697	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8557 41.146485
1698	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85578 41.146503
1699	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85579 41.146528
1700	Norway maple	Acer platanoides	21	Fair	Yes	None	-73.85586 41.146498
1701	Norway maple	Acer platanoides	20	Fair	Yes	None	-73.85583 41.146489
1702	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85582 41.146439
1703	Norway maple	Acer platanoides	19	Fair	Yes	None	-73.85579 41.146443
1704	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85575 41.146362
1705	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85572 41.146371
1706	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85567 41.146423
1707	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85569 41.146405
1708	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85563 41.146389
1709	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85564 41.146377
1710	Pignut hickory	Carya glabra	8	Fair	No	None	-73.85562 41.146377
1711	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85562 41.146387
1712	White ash	Fraxinus americana	14	Critical	No	Emerald ash borer. Little canopy remains	-73.8556 41.146385
1713	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85558 41.146369
1714	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85558 41.146354
1715	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85559 41.146343
1716	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85563 41.146314
1717	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85559 41.146292
1718	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85569 41.146265
1719	Norway maple	Acer platanoides	20	Fair	Yes	Vines	-73.85567 41.146141
1720	Norway maple	Acer platanoides	7	Fair	Yes	Vines	-73.85561 41.146162
1721	American elm	Ulmus americana	8	Fair	No	Vines	-73.8556 41.146178
1722	Norway maple	Acer platanoides	20	Fair	Yes	None	-73.85504 41.146423
1723	American elm	Ulmus americana	13	Fair	No	None	-73.85504 41.146383
1724	Norway maple	Acer platanoides	28	Fair	Yes	None	-73.85504 41.146359
1725	American elm	Ulmus americana	10	Fair	No	None	-73.85503 41.146351
1726	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85506 41.146243
1727	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85507 41.146193
1728	American elm	Ulmus americana	7	Fair	No	None	-73.85505 41.146193
1729	American elm	Ulmus americana	9	Fair	No	None	-73.85504 41.14615
1730	American elm	Ulmus americana	10	Fair	No	None	-73.8551 41.146133
1731	American elm	Ulmus americana	11	Dead	No	Standing dead tree. Broken top	-73.85511 41.146082
1732	Norway maple	Acer platanoides	10	Dead	Yes	Standing dead tree. Broken top	-73.85516 41.146062
1733	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85515 41.146047
1734	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85517 41.146039
1735	Black locust	Robinia pseudoacacia	15	Critical	Yes	Little foliage remains	-73.8551 41.146018
1736	Black locust	Robinia pseudoacacia	19	Fair	Yes	None	-73.85508 41.146004
1737	Black locust	Robinia pseudoacacia	20	Fair	Yes	None	-73.85507 41.145994
1738	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85505 41.146003
1739	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85503 41.146027
1740	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85496 41.146003
1741	Black locust	Robinia pseudoacacia	18	Fair	Yes	None	-73.85501 41.146035

1742	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85492	41.146034
1743	American elm	Ulmus americana	8	Fair	No	None	-73.85495	41.146042
1744	Black locust	Robinia pseudoacacia	8	Critical	Yes	Leans. Decay along trunk. Little canopy	-73.85498	41.146034
1745	Black locust	Robinia pseudoacacia	15	Fair	Yes	None	-73.85497	41.146043
1746	American elm	Ulmus americana	7	Fair	No	None	-73.85497	41.146054
1747	Black locust	Robinia pseudoacacia	27	Critical	Yes	Little foliage remains. Broken tops	-73.85507	41.146044
1748	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85505	41.146056
1749	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85505	41.146116
1750	American elm	Ulmus americana	7	Fair	No	None	-73.85502	41.146122
1751	American elm	Ulmus americana	8	Fair	No	None	-73.85501	41.14625
1752	Green ash	Fraxinus pennsylvanica	9	Dead	No	Standing dead tree. Emerald ash borer	-73.85496	41.146294
1753	American elm	Ulmus americana	7	Fair	No	None	-73.85496	41.14631
1754	American elm	Ulmus americana	8	Dead	No	Standing dead tree	-73.85495	41.146357
1755	American elm	Ulmus americana	10	Dead	No	Standing dead tree	-73.85495	41.146382
1756	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85493	41.146394
1757	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85492	41.146375
1758	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85492	41.146348
1759	Norway maple	Acer platanoides	23	Fair	Yes	Codominant near base	-73.85485	41.146363
1760	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85486	41.146354
1761	American elm	Ulmus americana	7	Fair	No	None	-73.85489	41.146326
1762	Green ash	Fraxinus pennsylvanica	14	Critical	No	Emerald ash borer	-73.8549	41.146304
1763	Norway maple	Acer platanoides	19	Fair	Yes	Codominant at base	-73.85487	41.146282
1764	American elm	Ulmus americana	7	Fair	No	None	-73.85489	41.146267
1765	American elm	Ulmus americana	16	Fair	No	None	-73.85488	41.146243
1766	Black locust	Robinia pseudoacacia	12	Fair	Yes	None	-73.85485	41.146208
1767	Norway maple	Acer platanoides	13	Fair	Yes	Codominant at base	-73.8549	41.146209
1768	Norway maple	Acer platanoides	14	Fair	Yes	Codominant at base	-73.85492	41.146199
1769	American elm	Ulmus americana	7	Fair	No	None	-73.85495	41.146178
1770	American elm	Ulmus americana	7	Fair	No	None	-73.855	41.146165
1771	Norway maple	Acer platanoides	7	Fair	Yes	Codominant at base	-73.85493	41.146165
1772	Norway maple	Acer platanoides	8	Fair	Yes	Codominant at base	-73.85491	41.14617
1773	Norway maple	Acer platanoides	7	Fair	Yes	Codominant at base	-73.85492	41.146156
1774	Norway maple	Acer platanoides	9	Fair	Yes	Codominant at base	-73.8549	41.146145
1775	Sugar maple	Acer saccharum	17	Fair	No	None	-73.85496	41.146137
1776	Black locust	Robinia pseudoacacia	18	Fair	Yes	Leans	-73.85498	41.146072
1777	Norway maple	Acer platanoides	8	Fair	Yes	Codominant at base	-73.85494	41.146065
1778	Black locust	Robinia pseudoacacia	19	Fair	Yes	Leans	-73.85492	41.146068
1779	Black locust	Robinia pseudoacacia	16	Fair	Yes	Vines	-73.85482	41.146073
1780	White ash	Fraxinus americana	14	Dead	No	Emerald ash borer	-73.85642	41.1475
1781	White ash	Fraxinus americana	10	Dead	No	Emerald ash borer	-73.8564	41.147493
1782	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85635	41.147527
1783	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85636	41.147554
1784	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85628	41.147577
1785	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85632	41.147609
1786	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85638	41.14757
1787	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85641	41.147579
1788	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85643	41.147547
1789	Buckthorn	Rhamnus spp	7	Fair	Yes	None	-73.85646	41.14758
1790	Red maple	Acer rubrum	13	Fair	No	None	-73.8565	41.147643
1791	Tulip polplar	Liriodendron tulipifera	8	Fair	No	None	-73.85656	41.14763
1792	Tulip polplar	Liriodendron tulipifera	10	Fair	No	None	-73.85658	41.147636
1793	Red maple	Acer rubrum	9	Fair	No	None	-73.8566	41.147669
1794	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85642	41.147631
1795	White ash	Fraxinus americana	12	Dead	No	Emerald ash borer	-73.85639	41.147635
1796	White ash	Fraxinus americana	13	Critical	No	Emerald ash borer	-73.85637	41.147651
1797	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85634	41.147659
1798	White ash	Fraxinus americana	8	Dead	No	Emerald ash borer	-73.85635	41.147667
1799	White ash	Fraxinus americana	7	Critical	No	Emerald ash borer	-73.85636	41.147666
1800	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85632	41.147759
1801	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85629	41.147728
1802	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85629	41.147745
1803	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85628	41.147759
1804	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85626	41.147789
1805	Boxelder maple	Acer negundo	10	Fair	No	None	-73.85622	41.147789
1806	Norway maple	Acer platanoides	11	Critical	Yes	Covered in vines. Decay	-73.85617	41.147784

1807	Norway maple	Acer platanoides	28	Fair	Yes	Codominant at base. Vines	-73.8561	41.147767
1808	Sycamore	Platanus occidentalis	13	Fair	No	Vines	-73.85608	41.147742
1809	White ash	Fraxinus americana	9	Dead	No	Emerald ash borer	-73.85603	41.147731
1810	White ash	Fraxinus americana	10	Dead	No	Emerald ash borer	-73.85602	41.147702
1811	White ash	Fraxinus americana	8	Dead	No	Emerald ash borer	-73.85598	41.1477
1812	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85604	41.147826
1813	Norway maple	Acer platanoides	21	Fair	Yes	Codominant at 3 feet	-73.85596	41.147798
1814	Ailanthus	Ailanthus altissima	24	Fair	Yes	Codominant at 3 feet	-73.85595	41.147787
1815	White pine	Pinus strobus	14	Dead	No	Standing dead tree	-73.85589	41.147795
1816	White pine	Pinus strobus	13	Dead	No	Standing dead tree	-73.85587	41.147831
1817	Norway maple	Acer platanoides	9	Fair	Yes	Codominant at 3 feet	-73.85592	41.147845
1818	Norway maple	Acer platanoides	11	Fair	Yes	Codominant at 3 feet	-73.85597	41.147864
1819	Norway maple	Acer platanoides	18	Fair	Yes	Codominant at 3 feet	-73.85598	41.147869
1820	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.856	41.147837
1821	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85602	41.147865
1822	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85604	41.147891
1823	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85605	41.147914
1824	Norway maple	Acer platanoides	7	Critical	Yes	Broken top	-73.85607	41.147901
1825	Bitternut hickory	Carya cordiformis	12	Fair	No	None	-73.85614	41.147925
1826	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.8562	41.147897
1827	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85624	41.147913
1828	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85626	41.147913
1829	White ash	Fraxinus americana	9	Dead	No	Standing dead tree	-73.85628	41.147921
1830	White ash	Fraxinus americana	7	Dead	No	Standing dead tree	-73.85629	41.147892
1831	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85634	41.147873
1832	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85632	41.147868
1833	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85631	41.147853
1834	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85633	41.147842
1835	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85635	41.147839
1836	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85634	41.147814
1837	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85637	41.147804
1838	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85639	41.147798
1839	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85641	41.147814
1840	Green ash	Fraxinus pennsylvanica	10	Dead	No	Standing dead tree	-73.85648	41.147831
1841	Green ash	Fraxinus pennsylvanica	10	Dead	No	Standing dead tree	-73.85655	41.147843
1842	Red maple	Acer rubrum	8	Fair	No	None	-73.8565	41.147749
1843	Red maple	Acer rubrum	7	Fair	No	None	-73.85651	41.147716
1844	Red maple	Acer rubrum	17	Fair	No	None	-73.85667	41.1477
1845	Red maple	Acer rubrum	8	Fair	No	None	-73.85668	41.14763
1846	Tulip polplar	Liriodendron tulipifera	8	Fair	No	None	-73.85663	41.14789
1847	Tulip polplar	Liriodendron tulipifera	16	Fair	No	None	-73.85667	41.147891
1848	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85668	41.147816
1849	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85672	41.147848
1850	Tulip polplar	Liriodendron tulipifera	20	Fair	No	None	-73.85669	41.14796
1851	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85645	41.147853
1852	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8564	41.147871
1853	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8564	41.147894
1854	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85638	41.147903
1855	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85634	41.147955
1856	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85636	41.14797
1857	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85639	41.147962
1858	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85641	41.147939
1859	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85643	41.14796
1860	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85645	41.147953
1861	Norway maple	Acer platanoides	16	Dead	Yes	Standing dead tree. Codominant near base	-73.85648	41.147911
1862	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85648	41.147967
1863	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85649	41.147947
1864	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85644	41.148003
1865	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85648	41.148002
1866	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85654	41.148003
1867	Tulip polplar	Liriodendron tulipifera	19	Fair	No	None	-73.85663	41.147991
1868	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8566	41.148019
1869	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85663	41.148028
1870	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85672	41.148044
1871	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85674	41.148045

1872	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85676 41.148057
1873	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85678 41.148074
1874	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85678 41.148097
1875	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85678 41.148126
1876	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85679 41.148164
1877	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85671 41.148167
1878	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85662 41.148123
1879	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85662 41.148093
1880	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85659 41.148113
1881	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85659 41.148089
1882	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85658 41.148079
1883	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85657 41.148093
1884	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85654 41.148075
1885	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85654 41.148111
1886	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85655 41.148134
1887	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85653 41.148165
1888	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85652 41.148142
1889	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85647 41.148151
1890	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85647 41.148117
1891	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85646 41.148123
1892	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85643 41.148102
1893	Sugar maple	Acer saccharum	24	Fair	No	None	-73.85639 41.148129
1894	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85636 41.148102
1895	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85632 41.147989
1896	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8563 41.148028
1897	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85627 41.148043
1898	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85625 41.14804
1899	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85625 41.148017
1900	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85625 41.147996
1901	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85627 41.147979
1902	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85621 41.148027
1903	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85618 41.148019
1904	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85616 41.148027
1905	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85615 41.148009
1906	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85616 41.147985
1907	Black locust	Robinia pseudoacacia	14	Fair	Yes	None	-73.85609 41.14799
1908	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85607 41.147946
1909	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85606 41.147963
1910	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85601 41.147914
1911	White ash	Fraxinus americana	12	Dead	No	None	-73.856 41.147915
1912	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85601 41.147943
1913	Sugar maple	Acer saccharum	10	Fair	No	None	-73.856 41.147954
1914	Black locust	Robinia pseudoacacia	17	Fair	Yes	None	-73.85595 41.147967
1915	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.856 41.147971
1916	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85603 41.148003
1917	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85595 41.14805
1918	Black locust	Robinia pseudoacacia	16	Fair	Yes	None	-73.85592 41.148038
1919	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85593 41.148059
1920	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85591 41.148056
1921	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85591 41.148062
1922	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85592 41.148069
1923	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85597 41.148039
1924	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.856 41.148047
1925	Sycamore maple	Acer pseudoplatanus	11	Fair	Yes	None	-73.85607 41.148039
1926	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85608 41.148061
1927	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85607 41.148082
1928	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85609 41.148095
1929	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85612 41.148084
1930	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85612 41.148064
1931	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85614 41.14805
1932	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85617 41.148043
1933	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85618 41.148058
1934	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85621 41.148064
1935	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85623 41.14808
1936	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85622 41.148097

1937	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85619 41.148101
1938	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85616 41.148135
1939	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85616 41.148152
1940	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85625 41.148101
1941	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85632 41.148116
1942	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85637 41.148153
1943	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85636 41.14818
1944	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85636 41.148209
1945	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85634 41.148207
1946	Sugar maple	Acer saccharum	11	Fair	No	None	-73.8563 41.148226
1947	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85628 41.148245
1948	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85627 41.148246
1949	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85641 41.14835
1950	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85642 41.14834
1951	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85644 41.148322
1952	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85651 41.148307
1953	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85654 41.148284
1954	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85657 41.148294
1955	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85655 41.148249
1956	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.8566 41.148253
1957	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85663 41.148215
1958	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85674 41.148178
1959	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85676 41.148203
1960	White oak	Quercus alba	10	Fair	No	None	-73.8568 41.148199
1961	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85678 41.148236
1962	Shagbark hickory	Carya ovata	16	Good	No	None	-73.8567 41.148217
1963	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85668 41.148269
1964	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85674 41.148294
1965	Silver maple	Acer saccharinum	12	Fair	No	None	-73.85676 41.148346
1966	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85679 41.148314
1967	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.8568 41.1484
1968	Norway maple	Acer platanoides	9	Critical	Yes	Broken and dead top	-73.8567 41.148422
1969	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85667 41.148395
1970	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85661 41.14838
1971	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85662 41.14835
1972	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85665 41.148343
1973	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85669 41.148325
1974	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85666 41.148302
1975	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85661 41.148319
1976	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85657 41.148339
1977	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85654 41.148341
1978	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85655 41.148364
1979	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85653 41.148379
1980	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85653 41.148414
1981	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85654 41.148435
1982	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85658 41.148431
1983	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85659 41.148402
1984	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85662 41.148434
1985	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85661 41.148463
1986	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85661 41.148486
1987	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85667 41.148489
1988	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85675 41.148449
1989	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85679 41.148476
1990	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8568 41.148493
1991	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85677 41.14851
1992	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85679 41.148614
1993	Tulip polplar	Liriodendron tulipifera	23	Fair	No	None	-73.85677 41.148632
1994	Tulip polplar	Liriodendron tulipifera	28	Fair	No	Codominant at 4 feet	-73.85674 41.148624
1995	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85681 41.148553
1996	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85672 41.148507
1997	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85659 41.148514
1998	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85655 41.148518
1999	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85653 41.148486
2000	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85651 41.14847
2001	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85644 41.14852

2002	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85646	41.148461
2003	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85642	41.148475
2004	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85642	41.148448
2005	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85641	41.148397
2006	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85643	41.148417
2007	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85637	41.148369
2008	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85635	41.148341
2009	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85634	41.148301
2010	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85632	41.1483
2011	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85628	41.148312
2012	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85623	41.148296
2013	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85605	41.148363
2014	Eastern cottonwood	Populus deltoides	24	Fair	No	None	-73.85592	41.14826
2015	Eastern cottonwood	Populus deltoides	20	Fair	No	None	-73.85595	41.148317
2016	Tulip polplar	Liriodendron tulipifera	14	Fair	No	Vines	-73.85609	41.148403
2017	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85617	41.148343
2018	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.8562	41.148329
2019	Norway maple	Acer platanoides	20	Fair	Yes	None	-73.85623	41.14833
2020	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85626	41.148361
2021	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85628	41.148381
2022	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85631	41.14839
2023	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.8563	41.148424
2024	Tulip polplar	Liriodendron tulipifera	10	Fair	No	Vines	-73.85625	41.148459
2025	Sycamore	Platanus occidentalis	15	Fair	No	None	-73.85627	41.148504
2026	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85631	41.148466
2027	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85634	41.148493
2028	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85637	41.148519
2029	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8564	41.148498
2030	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85636	41.148595
2031	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85638	41.148599
2032	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85638	41.148552
2033	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85647	41.148564
2034	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85649	41.148546
2035	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85653	41.148569
2036	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85665	41.148668
2037	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85672	41.148687
2038	Tulip polplar	Liriodendron tulipifera	20	Fair	No	Codominant at 4 feet	-73.85672	41.148737
2039	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85672	41.14878
2040	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85682	41.148797
2041	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85665	41.148786
2042	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85661	41.148667
2043	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85659	41.148693
2044	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85658	41.14867
2045	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85661	41.148732
2046	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85658	41.148765
2047	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85656	41.148741
2048	Black cherry	Prunus serotina	22	Fair	No	Codominant at 3 feet	-73.85651	41.148713
2049	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85648	41.14877
2050	Tulip polplar	Liriodendron tulipifera	10	Fair	No	Codominant at 4 feet	-73.85642	41.148732
2051	Tulip polplar	Liriodendron tulipifera	11	Fair	No	Codominant at 4 feet	-73.85641	41.148729
2052	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85643	41.148699
2053	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85645	41.148704
2054	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85649	41.148708
2055	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85645	41.148673
2056	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85647	41.148686
2057	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85645	41.148642
2058	Ailanthus	Ailanthus altissima	7	Fair	Yes	None	-73.85638	41.14866
2059	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85576	41.148541
2060	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85577	41.148547
2061	White ash	Fraxinus americana	13	Critical	No	Emerald ash borer	-73.85577	41.148579
2062	Sugar maple	Acer saccharum	14	Fair	No	None	-73.85577	41.1486
2063	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85578	41.148567
2064	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85588	41.148657
2065	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85587	41.148624
2066	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85584	41.148595

2067	Sycamore	Platanus occidentalis	7	Fair	No	None	-73.85584	41.148554
2068	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85587	41.148576
2069	Sugar maple	Acer saccharum	7	Fair	No	None	-73.8559	41.148524
2070	Sycamore	Platanus occidentalis	13	Fair	No	None	-73.85591	41.148506
2071	Red oak	Quercus rubra	12	Fair	No	None	-73.8559	41.148553
2072	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85593	41.148605
2073	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85595	41.148613
2074	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85598	41.148559
2075	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85597	41.148512
2076	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85597	41.148434
2077	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85595	41.148408
2078	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.856	41.148498
2079	Norway maple	Acer platanoides	13	Dead	Yes	Standing dead tree	-73.85601	41.148539
2080	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.856	41.148583
2081	Red maple	Acer rubrum	12	Fair	No	None	-73.85603	41.148632
2082	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85606	41.148576
2083	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85608	41.148593
2084	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85608	41.148564
2085	Sugar maple	Acer saccharum	7	Fair	No	None	-73.8561	41.148604
2086	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85617	41.148653
2087	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85622	41.148685
2088	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85627	41.148597
2089	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85629	41.148621
2090	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85631	41.148651
2091	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85629	41.148676
2092	Tulip polplar	Liriodendron tulipifera	24	Fair	No	None	-73.85627	41.148714
2093	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85631	41.148712
2094	Red maple	Acer rubrum	22	Fair	No	None	-73.85626	41.148795
2095	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85637	41.148767
2096	Red maple	Acer rubrum	18	Fair	No	None	-73.8563	41.148856
2097	Red maple	Acer rubrum	9	Fair	No	None	-73.8563	41.148882
2098	Red maple	Acer rubrum	10	Fair	No	None	-73.85635	41.148905
2099	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85635	41.148862
2100	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85633	41.148797
2101	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85638	41.14881
2102	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85642	41.148805
2103	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85647	41.148809
2104	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85651	41.148843
2105	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85648	41.148865
2106	Red oak	Quercus rubra	18	Fair	No	None	-73.85653	41.148906
2107	Black oak	Quercus velutina	22	Fair	No	None	-73.85662	41.148904
2108	Tulip polplar	Liriodendron tulipifera	7	Fair	No	None	-73.85656	41.148904
2109	Tulip polplar	Liriodendron tulipifera	12	Fair	No	None	-73.85658	41.148933
2110	Tulip polplar	Liriodendron tulipifera	8	Fair	No	None	-73.8566	41.14894
2111	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85662	41.148934
2112	Tulip polplar	Liriodendron tulipifera	20	Fair	No	None	-73.8567	41.148893
2113	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85672	41.148861
2114	American beech	Fagus grandifolia	7	Critical	No	Beech leaf disease	-73.85666	41.148959
2115	Black cherry	Prunus serotina	21	Dead	No	Standing dead tree	-73.85673	41.148944
2116	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85679	41.148898
2117	Tulip polplar	Liriodendron tulipifera	21	Fair	No	None	-73.85667	41.149035
2118	Shagbark hickory	Carya ovata	7	Good	No	None	-73.8566	41.148999
2119	White oak	Quercus alba	31	Fair	No	None	-73.85652	41.149101
2120	Red oak	Quercus rubra	7	Fair	No	None	-73.8566	41.14908
2121	Tulip polplar	Liriodendron tulipifera	10	Fair	No	None	-73.8566	41.149102
2122	Shagbark hickory	Carya ovata	7	Good	No	None	-73.85664	41.149154
2123	Shagbark hickory	Carya ovata	8	Good	No	None	-73.85672	41.149091
2124	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85669	41.149204
2125	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85672	41.149228
2126	Red maple	Acer rubrum	10	Fair	No	None	-73.85659	41.149195
2127	White oak	Quercus alba	35	Fair	No	None	-73.85652	41.149194
2128	Norway maple	Acer platanoides	9	Dead	Yes	Standing dead tree	-73.85649	41.149116
2129	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.8565	41.149046
2130	Norway maple	Acer platanoides	14	Critical	Yes	Column of dead bark and decay. Little canopy	-73.85649	41.149067
2131	Shagbark hickory	Carya ovata	7	Good	No	None	-73.85648	41.149052

2132	Black oak	Quercus velutina	23	Fair	No	None	-73.85642	41.149101
2133	Norway maple	Acer platanoides	7	Dead	Yes	Standing dead tree	-73.85644	41.149123
2134	Shagbark hickory	Carya ovata	10	Dead	No	Standing dead tree	-73.85636	41.149144
2135	Black oak	Quercus velutina	13	Fair	No	None	-73.85628	41.149129
2136	Black oak	Quercus velutina	15	Fair	No	None	-73.85623	41.149148
2137	Black oak	Quercus velutina	10	Dead	No	Standing dead tree	-73.85618	41.149174
2138	Red oak	Quercus rubra	15	Dead	No	Standing dead tree	-73.85642	41.14919
2139	Tulip polplar	Liriodendron tulipifera	21	Fair	No	None	-73.85644	41.149311
2140	Tulip polplar	Liriodendron tulipifera	10	Fair	No	None	-73.85644	41.149343
2141	Tulip polplar	Liriodendron tulipifera	22	Fair	No	None	-73.85641	41.149377
2142	Tulip polplar	Liriodendron tulipifera	23	Fair	No	None	-73.85666	41.149338
2143	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8567	41.149315
2144	Red maple	Acer rubrum	9	Fair	No	None	-73.85661	41.149394
2145	Norway maple	Acer platanoides	7	Dead	Yes	Standing dead tree	-73.85636	41.149292
2146	Norway maple	Acer platanoides	13	Dead	Yes	Standing dead tree	-73.85635	41.149184
2147	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85635	41.149204
2148	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85625	41.149224
2149	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85623	41.149236
2150	Bitternut hickory	Carya cordiformis	10	Fair	No	None	-73.85618	41.149227
2151	Red oak	Quercus rubra	11	Fair	No	None	-73.85617	41.149142
2152	Black gum	Nyssa sylvatica	12	Fair	No	None	-73.85605	41.149052
2153	Black gum	Nyssa sylvatica	10	Fair	No	None	-73.85604	41.149047
2154	Shagbark hickory	Carya ovata	13	Dead	No	Standing dead tree	-73.85608	41.149144
2155	Red oak	Quercus rubra	10	Fair	No	None	-73.85607	41.14917
2156	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85604	41.149179
2157	Norway maple	Acer platanoides	8	Dead	Yes	Standing dead tree	-73.85604	41.149218
2158	Shagbark hickory	Carya ovata	22	Fair	No	None	-73.85603	41.149227
2159	Norway maple	Acer platanoides	24	Critical	Yes	Significant dieback. Little canopy remains	-73.8559	41.149241
2160	American elm	Ulmus americana	10	Fair	No	None	-73.8559	41.149285
2161	Black oak	Quercus velutina	15	Fair	No	None	-73.85586	41.149145
2162	Tulip polplar	Liriodendron tulipifera	33	Fair	No	None	-73.85583	41.149194
2163	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85579	41.149112
2164	Norway maple	Acer platanoides	12	Dead	Yes	Standing dead tree	-73.85574	41.149112
2165	Norway maple	Acer platanoides	20	Critical	Yes	Little canopy remains	-73.8557	41.149088
2166	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85588	41.149061
2167	Black cherry	Prunus serotina	7	Fair	No	None	-73.85589	41.149049
2168	Sycamore maple	Acer pseudoplatanus	7	Fair	Yes	None	-73.85587	41.149042
2169	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85592	41.149026
2170	Shagbark hickory	Carya ovata	8	Fair	No	None	-73.85595	41.149043
2171	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85582	41.149037
2172	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85578	41.149002
2173	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85581	41.148975
2174	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85584	41.148992
2175	Shagbark hickory	Carya ovata	9	Fair	No	None	-73.85592	41.148974
2176	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85585	41.148945
2177	Sugar maple	Acer saccharum	14	Fair	No	None	-73.85576	41.148915
2178	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85576	41.148881
2179	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85578	41.148876
2180	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85579	41.148887
2181	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85581	41.148897
2182	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85584	41.148902
2183	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85586	41.148905
2184	Black oak	Quercus velutina	16	Fair	No	None	-73.85595	41.148922
2185	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85596	41.148917
2186	Sugar maple	Acer saccharum	8	Fair	No	None	-73.856	41.148927
2187	Red oak	Quercus rubra	11	Fair	No	None	-73.85598	41.148868
2188	Sycamore	Platanus occidentalis	23	Fair	No	None	-73.85601	41.148858
2189	Red maple	Acer rubrum	7	Poor	No	Vines	-73.85608	41.148856
2190	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85586	41.148774
2191	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85581	41.148743
2192	Norway maple	Acer platanoides	7	Dead	Yes	Standing dead tree	-73.85582	41.148733
2193	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85593	41.148723
2194	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.8559	41.148735
2195	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85587	41.148712
2196	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85603	41.14869

2197	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85612 41.148694
2198	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85577 41.148649
2199	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85578 41.148661
2200	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85581 41.148664
2201	Tulip polplar	Liriodendron tulipifera	30	Fair	No	None	-73.85576 41.148744
2202	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85572 41.148728
2203	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85577 41.148752
2204	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85572 41.148781
2205	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85579 41.148805
2206	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85587 41.148811
2207	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85572 41.148829
2208	Sugar maple	Acer saccharum	13	Fair	No	None	-73.8557 41.149008
2209	Norway maple	Acer platanoides	12	Critical	Yes	Little canopy remains	-73.85568 41.149036
2210	Norway maple	Acer platanoides	12	Critical	Yes	Little canopy remains	-73.85569 41.149054
2211	Norway maple	Acer platanoides	12	Critical	Yes	Broken top. Covered in vines	-73.85574 41.149174
2212	Tulip polplar	Liriodendron tulipifera	38	Fair	No	Codominant at 4 feet	-73.85576 41.149267
2213	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85582 41.149278
2214	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85582 41.149321
2215	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85574 41.149347
2216	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85576 41.149349
2217	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85577 41.14936
2218	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85569 41.149368
2219	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85565 41.14937
2220	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85567 41.149382
2221	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85565 41.149387
2222	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85566 41.149409
2223	Norway maple	Acer platanoides	29	Poor	Yes	None	-73.85568 41.14944
2224	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85567 41.149475
2225	Black walnut	Juglans nigra	13	Good	No	None	-73.85566 41.14949
2226	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85562 41.149488
2227	Tulip polplar	Liriodendron tulipifera	14	Poor	No	Decay. Dieback	-73.85559 41.149546
2228	Norway maple	Acer platanoides	8	Fair	Yes	Leans	-73.85563 41.149535
2229	Norway maple	Acer platanoides	10	Fair	Yes	Leans	-73.8557 41.149523
2230	Tulip polplar	Liriodendron tulipifera	16	Fair	No	None	-73.8557 41.149553
2231	Norway maple	Acer platanoides	15	Fair	Yes	Leans	-73.85573 41.149552
2232	Tulip polplar	Liriodendron tulipifera	17	Fair	No	None	-73.85575 41.149542
2233	American elm	Ulmus americana	17	Fair	No	None	-73.85577 41.149552
2234	American elm	Ulmus americana	9	Fair	No	None	-73.85584 41.149509
2235	Norway maple	Acer platanoides	9	Fair	Yes	Leans	-73.85584 41.149535
2236	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85586 41.149523
2237	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85589 41.149559
2238	Tulip polplar	Liriodendron tulipifera	18	Fair	No	None	-73.85592 41.149566
2239	Red oak	Quercus rubra	17	Fair	No	None	-73.85597 41.149567
2240	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85599 41.149553
2241	Sugar maple	Acer saccharum	10	Fair	No	None	-73.856 41.149569
2242	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85604 41.149552
2243	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85604 41.149536
2244	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85602 41.149514
2245	Red maple	Acer rubrum	13	Fair	No	None	-73.856 41.149467
2246	Tulip polplar	Liriodendron tulipifera	15	Fair	No	None	-73.85598 41.149465
2247	White oak	Quercus alba	32	Fair	No	None	-73.85599 41.149398
2248	Norway maple	Acer platanoides	9	Fair	Yes	Leans	-73.85592 41.149517
2249	Norway maple	Acer platanoides	8	Fair	Yes	Leans	-73.85586 41.149456
2250	White oak	Quercus alba	33	Poor	No	Basal decay. Large deadwood	-73.85585 41.149447
2251	Tulip polplar	Liriodendron tulipifera	21	Fair	No	None	-73.8558 41.149479
2252	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85581 41.149463
2253	Tulip polplar	Liriodendron tulipifera	19	Fair	No	None	-73.8558 41.149453
2254	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85581 41.14942
2255	Pignut hickory	Carya glabra	22	Fair	No	None	-73.85585 41.14939
2256	Red maple	Acer rubrum	9	Fair	No	None	-73.8559 41.149388
2257	Pignut hickory	Carya glabra	10	Fair	No	None	-73.85586 41.149361
2258	American elm	Ulmus americana	9	Fair	No	None	-73.85596 41.149362
2259	Tulip polplar	Liriodendron tulipifera	13	Fair	No	None	-73.85596 41.149328
2260	White oak	Quercus alba	34	Fair	No	None	-73.85606 41.149301
2261	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85603 41.14937

2262	Red maple	Acer rubrum	12	Fair	No	None	-73.8562	41.149351
2263	Sycamore	Platanus occidentalis	26	Fair	No	None	-73.85627	41.149448
2264	Red maple	Acer rubrum	7	Fair	No	None	-73.85624	41.14933
2265	Red maple	Acer rubrum	7	Fair	No	None	-73.85629	41.149309
2266	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85628	41.149341
2267	Shagbark hickory	Carya ovata	7	Fair	No	None	-73.85626	41.149353
2268	Sugar maple	Acer saccharum	9	Dead	No	Standing dead tree	-73.85638	41.149385
2269	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85639	41.149405
2270	Sugar maple	Acer saccharum	9	Fair	No	Codominant near base	-73.85642	41.149462
2271	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85643	41.14947
2272	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85639	41.149487
2273	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85645	41.149443
2274	Sugar maple	Acer saccharum	14	Fair	No	None	-73.85647	41.1495
2275	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85654	41.14945
2276	White oak	Quercus alba	36	Fair	No	None	-73.85668	41.149412
2277	Pignut hickory	Carya glabra	8	Fair	No	None	-73.85671	41.149352
2278	Sugar maple	Acer saccharum	7	Critical	No	Little canopy remains	-73.85665	41.149474
2279	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85655	41.149479
2280	Red maple	Acer rubrum	16	Fair	No	None	-73.85657	41.149528
2281	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85654	41.14954
2282	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85651	41.149524
2283	Sugar maple	Acer saccharum	8	Fair	No	None	-73.8565	41.149556
2284	Sugar maple	Acer saccharum	7	Fair	No	None	-73.8565	41.149583
2285	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85654	41.149596
2286	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85656	41.149574
2287	Shagbark hickory	Carya ovata	8	Fair	No	None	-73.8566	41.149554
2288	Shagbark hickory	Carya ovata	8	Fair	No	None	-73.85667	41.149541
2289	Tulip polplar	Liriodendron tulipifera	17	Fair	No	None	-73.85666	41.149588
2290	American elm	Ulmus americana	16	Fair	No	None	-73.85669	41.149623
2291	Tulip polplar	Liriodendron tulipifera	16	Fair	No	None	-73.8566	41.149623
2292	Tulip polplar	Liriodendron tulipifera	14	Fair	No	None	-73.85655	41.149642
2293	Tulip polplar	Liriodendron tulipifera	9	Fair	No	None	-73.85655	41.149626
2294	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85649	41.149608
2295	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85646	41.149603
2296	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85644	41.149612
2297	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85643	41.149632
2298	Sugar maple	Acer saccharum	17	Fair	No	Codominant at 3 feet	-73.85639	41.149626
2299	Sugar maple	Acer saccharum	8	Fair	No	Codominant at 3 feet	-73.8564	41.149596
2300	Sugar maple	Acer saccharum	9	Fair	No	Codominant at 3 feet	-73.85638	41.14959
2301	Sugar maple	Acer saccharum	10	Fair	No	Codominant at 3 feet	-73.85637	41.149571
2302	American elm	Ulmus americana	7	Fair	No	None	-73.85634	41.149562
2303	Shagbark hickory	Carya ovata	12	Fair	No	None	-73.85631	41.149585
2304	Sugar maple	Acer saccharum	10	Fair	No	Codominant at 3 feet	-73.85627	41.14959
2305	Sugar maple	Acer saccharum	7	Fair	No	Codominant at 3 feet	-73.85625	41.149542
2306	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85639	41.149665
2307	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85629	41.149649
2308	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85617	41.149616
2309	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85618	41.149665
2310	Red maple	Acer rubrum	19	Fair	No	None	-73.85623	41.149679
2311	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85622	41.149768
2312	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85614	41.14972
2313	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85611	41.149759
2314	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85615	41.149776
2315	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85619	41.149785
2316	American elm	Ulmus americana	11	Fair	No	None	-73.85628	41.149803
2317	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85625	41.14984
2318	Red oak	Quercus rubra	15	Fair	No	None	-73.85621	41.149893
2319	Tulip polplar	Liriodendron tulipifera	10	Fair	No	None	-73.85628	41.149838
2320	Pin oak	Quercus palustris	22	Fair	No	None	-73.85639	41.149934
2321	Sassafras	Sassafras albidum	8	Fair	No	None	-73.85642	41.149943
2322	Sassafras	Sassafras albidum	8	Fair	No	None	-73.85647	41.149938
2323	Sassafras	Sassafras albidum	7	Fair	No	None	-73.85646	41.149917
2324	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8565	41.149902
2325	Pin oak	Quercus palustris	24	Fair	No	None	-73.85644	41.149869
2326	American elm	Ulmus americana	8	Fair	No	None	-73.85637	41.149846

2327	Pin oak	Quercus palustris	25	Dead	No	Standing dead tree	-73.85654	41.149878
2328	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85646	41.14984
2329	Sassafras	Sassafras albidum	8	Fair	No	None	-73.85647	41.149834
2330	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85647	41.149789
2331	Sassafras	Sassafras albidum	9	Fair	No	None	-73.85646	41.149753
2332	Sassafras	Sassafras albidum	7	Fair	No	None	-73.85648	41.149744
2333	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85651	41.149743
2334	Sassafras	Sassafras albidum	8	Fair	No	None	-73.8565	41.149763
2335	Sassafras	Sassafras albidum	8	Fair	No	None	-73.85653	41.149732
2336	Sassafras	Sassafras albidum	9	Fair	No	None	-73.85663	41.149743
2337	Red maple	Acer rubrum	15	Fair	No	None	-73.85668	41.149773
2338	Bitternut hickory	Carya cordiformis	20	Fair	No	None	-73.85657	41.149795
2339	Sassafras	Sassafras albidum	13	Fair	No	None	-73.85659	41.149848
2340	Norway maple	Acer platanoides	14	Fair	Yes	Codominant at 3 feet	-73.85667	41.149878
2341	Norway maple	Acer platanoides	15	Fair	Yes	Codominant at 3 feet	-73.85676	41.149904
2342	Tulip polplar	Liriodendron tulipifera	29	Fair	No	None	-73.85666	41.149901
2343	Norway maple	Acer platanoides	14	Fair	Yes	Codominant at 3 feet	-73.85666	41.149922
2344	Sassafras	Sassafras albidum	12	Fair	No	None	-73.8566	41.149975
2345	Norway maple	Acer platanoides	13	Fair	Yes	Codominant at 3 feet	-73.85666	41.149985
2346	Sassafras	Sassafras albidum	12	Fair	No	None	-73.85666	41.15004
2347	Norway maple	Acer platanoides	9	Fair	Yes	Codominant at 3 feet	-73.85668	41.150074
2348	Norway maple	Acer platanoides	10	Fair	Yes	Codominant at 3 feet	-73.85668	41.150091
2349	Tulip polplar	Liriodendron tulipifera	27	Fair	No	None	-73.85683	41.150045
2350	Sassafras	Sassafras albidum	8	Fair	No	None	-73.85649	41.150025
2351	Pin oak	Quercus palustris	21	Fair	No	None	-73.85645	41.15004
2352	Sassafras	Sassafras albidum	8	Fair	No	None	-73.85645	41.150018
2353	Red oak	Quercus rubra	19	Fair	No	None	-73.85625	41.149951
2354	White oak	Quercus alba	25	Poor	No	Dieback	-73.85623	41.149975
2355	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8556	41.149608
2356	Red maple	Acer rubrum	7	Fair	No	Leans	-73.8556	41.149634
2357	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85558	41.149711
2358	American beech	Fagus grandifolia	7	Critical	No	Beech leaf disease	-73.85563	41.14966
2359	Tulip polplar	Liriodendron tulipifera	13	Fair	No	None	-73.85562	41.149707
2360	Tulip polplar	Liriodendron tulipifera	15	Good	No	None	-73.85561	41.149737
2361	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85558	41.149748
2362	Sassafras	Sassafras albidum	7	Critical	No	Significant lean	-73.85563	41.149804
2363	Red maple	Acer rubrum	20	Critical	No	Broken top at 20 feet with decay	-73.85566	41.149779
2364	American beech	Fagus grandifolia	24	Critical	No	Beech leaf disease	-73.85566	41.149677
2365	Sugar maple	Acer saccharum	8	Good	No	None	-73.85568	41.149615
2366	Sugar maple	Acer saccharum	8	Good	No	None	-73.85572	41.149642
2367	Norway maple	Acer platanoides	13	Good	Yes	None	-73.85574	41.1496
2368	Black oak	Quercus velutina	14	Good	No	None	-73.85574	41.149649
2369	Bitternut hickory	Carya cordiformis	13	Good	No	None	-73.85578	41.149694
2370	Black oak	Quercus velutina	18	Good	No	None	-73.85575	41.149778
2371	Bitternut hickory	Carya cordiformis	8	Good	No	None	-73.85579	41.149777
2372	Sugar maple	Acer saccharum	13	Good	No	None	-73.85581	41.149784
2373	Sugar maple	Acer saccharum	19	Poor	No	Dieback	-73.85587	41.149848
2374	Tulip polplar	Liriodendron tulipifera	9	Fair	No	None	-73.85588	41.149779
2375	Tulip polplar	Liriodendron tulipifera	8	Fair	No	None	-73.85592	41.149783
2376	Tulip polplar	Liriodendron tulipifera	8	Fair	No	None	-73.85593	41.149803
2377	Red oak	Quercus rubra	9	Good	No	None	-73.85595	41.149847
2378	Bitternut hickory	Carya cordiformis	10	Good	No	None	-73.85596	41.149795
2379	Bitternut hickory	Carya cordiformis	9	Good	No	None	-73.85594	41.149758
2380	Bitternut hickory	Carya cordiformis	13	Fair	No	None	-73.85594	41.149743
2381	Sugar maple	Acer saccharum	9	Fair	No	None	-73.8559	41.14971
2382	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85581	41.149682
2383	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85581	41.149621
2384	Tulip polplar	Liriodendron tulipifera	19	Fair	No	Exposed roots over ditch	-73.85585	41.149604
2385	Norway maple	Acer platanoides	14	Good	Yes	Exposed roots over ditch	-73.85588	41.149596
2386	American elm	Ulmus americana	11	Fair	No	None	-73.85592	41.149589
2387	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85594	41.149602
2388	Tulip polplar	Liriodendron tulipifera	15	Fair	No	Exposed roots over ditch	-73.85597	41.14963
2389	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85605	41.149618
2390	Norway maple	Acer platanoides	8	Good	Yes	Exposed roots over ditch	-73.85605	41.14964
2391	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85606	41.149656

2392	White oak	Quercus alba	22	Good	No	None	-73.85608 41.149701
2393	Norway maple	Acer platanoides	16	Good	Yes	None	-73.85537 41.149408
2394	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85605 41.149683
2395	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85602 41.149666
2396	White oak	Quercus alba	36	Fair	No	None	-73.85529 41.149457
2397	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85599 41.149657
2398	Tulip polplar	Liriodendron tulipifera	10	Fair	No	Exposed roots over ditch	-73.85597 41.149667
2399	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85594 41.14966
2400	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85593 41.14967
2401	Red maple	Acer rubrum	13	Good	No	None	-73.85532 41.149508
2402	Tulip polplar	Liriodendron tulipifera	13	Good	No	Exposed roots over ditch	-73.85595 41.149705
2403	Tulip polplar	Liriodendron tulipifera	7	Good	No	Exposed roots over ditch	-73.85597 41.149686
2404	Red maple	Acer rubrum	13	Good	No	None	-73.85525 41.149508
2405	Red maple	Acer rubrum	9	Fair	No	Exposed roots over ditch	-73.85598 41.1497
2406	Red oak	Quercus rubra	9	Fair	No	Exposed roots over ditch	-73.85598 41.149718
2407	Norway maple	Acer platanoides	11	Good	Yes	None	-73.85523 41.149482
2408	Norway maple	Acer platanoides	11	Good	Yes	None	-73.85538 41.149527
2409	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85539 41.149545
2410	Tulip polplar	Liriodendron tulipifera	14	Fair	No	Exposed roots over ditch	-73.85604 41.149752
2411	Norway maple	Acer platanoides	14	Good	Yes	None	-73.85543 41.149547
2412	Tulip polplar	Liriodendron tulipifera	7	Fair	No	Exposed roots over ditch	-73.85606 41.149767
2413	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85545 41.149516
2414	Red oak	Quercus rubra	13	Good	No	None	-73.85553 41.149597
2415	Red maple	Acer rubrum	12	Fair	No	None	-73.85602 41.14983
2416	Tulip polplar	Liriodendron tulipifera	16	Good	No	None	-73.856 41.149881
2417	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85544 41.149612
2418	Tulip polplar	Liriodendron tulipifera	15	Good	No	None	-73.85595 41.149892
2419	Tulip polplar	Liriodendron tulipifera	12	Good	No	None	-73.85606 41.149848
2420	White oak	Quercus alba	22	Fair	No	None	-73.8561 41.14987
2421	Red oak	Quercus rubra	10	Good	No	None	-73.85536 41.149594
2422	Tulip polplar	Liriodendron tulipifera	7	Good	No	Exposed roots over ditch	-73.85617 41.149846
2423	Norway maple	Acer platanoides	7	Good	Yes	None	-73.85527 41.149648
2424	Tulip polplar	Liriodendron tulipifera	13	Fair	No	None	-73.85604 41.149925
2425	White oak	Quercus alba	21	Dead	No	Standing dead tree	-73.85606 41.14997
2426	Red oak	Quercus rubra	12	Fair	No	None	-73.85598 41.149936
2427	Red oak	Quercus rubra	8	Fair	No	None	-73.85594 41.149942
2428	White oak	Quercus alba	46	Good	No	None	-73.85532 41.149696
2429	White oak	Quercus alba	29	Fair	No	None	-73.85589 41.149962
2430	White oak	Quercus alba	26	Fair	No	None	-73.85582 41.149912
2431	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85521 41.149656
2432	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85581 41.149929
2433	Norway maple	Acer platanoides	11	Poor	Yes	None	-73.85576 41.149944
2434	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85516 41.149619
2435	Sugar maple	Acer saccharum	14	Good	No	None	-73.85573 41.14993
2436	Black oak	Quercus velutina	20	Fair	No	None	-73.85575 41.149907
2437	Norway maple	Acer platanoides	10	Good	Yes	None	-73.85513 41.149598
2438	Sassafras	Sassafras albidum	12	Critical	No	Decay in base and lower trunk	-73.85576 41.149869
2439	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85509 41.149604
2440	Red oak	Quercus rubra	13	Good	No	None	-73.85516 41.149657
2441	Norway maple	Acer platanoides	14	Good	Yes	None	-73.85511 41.149634
2442	Norway maple	Acer platanoides	8	Poor	Yes	None	-73.85507 41.149644
2443	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85503 41.149653
2444	Sugar maple	Acer saccharum	21	Fair	No	Codominant at 4 feet	-73.85571 41.149834
2445	Red maple	Acer rubrum	14	Good	No	None	-73.85567 41.149847
2446	Red maple	Acer rubrum	7	Fair	No	None	-73.85509 41.149685
2447	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85583 41.14997
2448	Sugar maple	Acer saccharum	14	Good	No	None	-73.85582 41.149995
2449	American elm	Ulmus americana	11	Fair	No	None	-73.85592 41.150014
2450	Black walnut	Juglans nigra	27	Fair	No	None	-73.85513 41.149713
2451	Sugar maple	Acer saccharum	8	Good	No	None	-73.8559 41.150059
2452	Sugar maple	Acer saccharum	8	Good	No	None	-73.85595 41.150085
2453	Red maple	Acer rubrum	9	Good	No	None	-73.85514 41.149733
2454	White oak	Quercus alba	30	Good	No	None	-73.85594 41.150099
2455	Sugar maple	Acer saccharum	12	Good	No	None	-73.85599 41.150099
2456	Norway maple	Acer platanoides	12	Good	Yes	None	-73.85532 41.149735

2457	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85595 41.150132
2458	White oak	Quercus alba	29	Fair	No	None	-73.85594 41.150131
2459	Norway maple	Acer platanoides	13	Good	Yes	None	-73.85542 41.149775
2460	Tulip polplar	Liriodendron tulipifera	25	Fair	No	None	-73.85601 41.150171
2461	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85603 41.150198
2462	Tulip polplar	Liriodendron tulipifera	24	Fair	No	None	-73.85609 41.150229
2463	Tulip polplar	Liriodendron tulipifera	16	Fair	No	None	-73.85533 41.149788
2464	Sugar maple	Acer saccharum	13	Good	No	None	-73.85605 41.15025
2465	Tulip polplar	Liriodendron tulipifera	23	Good	No	None	-73.85609 41.150263
2466	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8553 41.149814
2467	Red oak	Quercus rubra	9	Fair	No	None	-73.85603 41.150293
2468	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85601 41.150289
2469	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85523 41.149829
2470	Tulip polplar	Liriodendron tulipifera	30	Fair	No	None	-73.85603 41.150314
2471	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85604 41.150331
2472	White oak	Quercus alba	17	Fair	No	None	-73.85608 41.150302
2473	Black walnut	Juglans nigra	14	Fair	No	None	-73.85518 41.149795
2474	Black oak	Quercus velutina	32	Fair	No	None	-73.85607 41.150359
2475	Norway maple	Acer platanoides	12	Good	Yes	None	-73.85511 41.14982
2476	Sugar maple	Acer saccharum	12	Good	No	None	-73.8552 41.149867
2477	Tulip polplar	Liriodendron tulipifera	45	Fair	No	None	-73.85606 41.150438
2478	White oak	Quercus alba	36	Dead	No	None	-73.85525 41.149889
2479	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85528 41.149865
2480	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85616 41.150451
2481	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85622 41.150478
2482	Tulip polplar	Liriodendron tulipifera	11	Good	No	None	-73.8553 41.149893
2483	Sassafras	Sassafras albidum	9	Good	No	None	-73.85631 41.150505
2484	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85616 41.150414
2485	Sugar maple	Acer saccharum	10	Good	No	None	-73.85625 41.150427
2486	Sugar maple	Acer saccharum	14	Fair	No	Tri lead near base	-73.85624 41.1504
2487	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85625 41.150373
2488	White oak	Quercus alba	32	Fair	No	None	-73.85615 41.15029
2489	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85624 41.150291
2490	American linden	Tilia americana	7	Good	No	None	-73.85533 41.149873
2491	Tulip polplar	Liriodendron tulipifera	25	Fair	No	None	-73.85621 41.150262
2492	Sugar maple	Acer saccharum	7	Good	No	None	-73.85622 41.15024
2493	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85538 41.149944
2494	White oak	Quercus alba	28	Poor	No	None	-73.85527 41.149975
2495	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85614 41.150267
2496	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85612 41.150231
2497	White oak	Quercus alba	31	Dead	No	None	-73.85525 41.149963
2498	White oak	Quercus alba	31	Fair	No	None	-73.8561 41.150195
2499	Tulip polplar	Liriodendron tulipifera	34	Fair	No	None	-73.85614 41.150169
2500	Red oak	Quercus rubra	14	Dead	No	None	-73.85521 41.149947
2501	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85623 41.150206
2502	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85621 41.150184
2503	White oak	Quercus alba	42	Dead	No	None	-73.85516 41.149987
2504	Sugar maple	Acer saccharum	11	Good	No	None	-73.85627 41.150149
2505	American linden	Tilia americana	16	Good	No	None	-73.85523 41.149965
2506	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85627 41.150103
2507	Norway maple	Acer platanoides	8	Good	Yes	None	-73.8553 41.149971
2508	American beech	Fagus grandifolia	7	Critical	No	Beech leaf disease	-73.85624 41.150152
2509	Norway maple	Acer platanoides	7	Good	Yes	None	-73.85524 41.150006
2510	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85618 41.150157
2511	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85613 41.150119
2512	Red oak	Quercus rubra	8	Fair	No	None	-73.85609 41.150119
2513	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85606 41.150138
2514	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85607 41.150082
2515	Pignut hickory	Carya glabra	7	Good	No	None	-73.85534 41.150003
2516	Red maple	Acer rubrum	12	Good	No	None	-73.85534 41.150041
2517	American linden	Tilia americana	8	Good	No	None	-73.85537 41.150068
2518	Tulip polplar	Liriodendron tulipifera	10	Good	No	None	-73.85535 41.150108
2519	American linden	Tilia americana	12	Good	No	None	-73.85537 41.150133
2520	Tulip polplar	Liriodendron tulipifera	10	Good	No	None	-73.85529 41.150085
2521	American beech	Fagus grandifolia	7	Good	No	None	-73.85529 41.15012

2522	Sugar maple	Acer saccharum	26	Good	No	None	-73.85529	41.15014
2523	Norway maple	Acer platanoides	11	Good	Yes	None	-73.85521	41.150119
2524	Red oak	Quercus rubra	17	Good	No	None	-73.85519	41.150073
2525	White oak	Quercus alba	38	Good	No	None	-73.85505	41.150015
2526	American beech	Fagus grandifolia	7	Critical	No	Beech leaf disease	-73.85614	41.150093
2527	Red oak	Quercus rubra	8	Fair	No	None	-73.85616	41.150079
2528	Norway maple	Acer platanoides	24	Good	Yes	None	-73.85507	41.149886
2529	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85616	41.150058
2530	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85615	41.15004
2531	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85625	41.150076
2532	American elm	Ulmus americana	23	Fair	No	None	-73.85621	41.150065
2533	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8562	41.150055
2534	White oak	Quercus alba	43	Fair	No	Codominant at 3 feet	-73.85622	41.150029
2535	Bitternut hickory	Carya cordiformis	12	Poor	No	Dieback	-73.85637	41.150101
2536	Sugar maple	Acer saccharum	10	Fair	No	None	-73.8564	41.150081
2537	Sugar maple	Acer saccharum	20	Fair	No	Codominant at 3 feet	-73.85645	41.150089
2538	Sugar maple	Acer saccharum	10	Dead	No	Standing dead tree	-73.85641	41.150155
2539	Red maple	Acer rubrum	12	Fair	No	None	-73.85637	41.15017
2540	Red maple	Acer rubrum	18	Good	No	None	-73.85634	41.150177
2541	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85636	41.150233
2542	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85633	41.150261
2543	White oak	Quercus alba	38	Fair	No	None	-73.85639	41.15026
2544	Red maple	Acer rubrum	7	Fair	No	None	-73.85637	41.150286
2545	Sassafras	Sassafras albidum	8	Fair	No	None	-73.85638	41.150317
2546	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85635	41.150338
2547	Bitternut hickory	Carya cordiformis	9	Good	No	None	-73.85641	41.150386
2548	Sassafras	Sassafras albidum	10	Fair	No	None	-73.85641	41.15044
2549	Sugar maple	Acer saccharum	38	Good	No	Double leader. 22 & 16	-73.85493	41.151988
2550	Red maple	Acer rubrum	9	Fair	No	None	-73.8564	41.150483
2551	Norway maple	Acer platanoides	11	Dead	Yes	None	-73.85499	41.152003
2552	Unknown	Unknown	17	Dead	No	None	-73.85501	41.152046
2553	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85649	41.150498
2554	Sugar maple	Acer saccharum	10	Good	No	None	-73.8565	41.150449
2555	Sugar maple	Acer saccharum	13	Good	No	None	-73.85497	41.152081
2556	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85664	41.150466
2557	Sugar maple	Acer saccharum	17	Good	No	None	-73.85667	41.150414
2558	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85668	41.150383
2559	Tulip polplar	Liriodendron tulipifera	48	Good	No	Multistem. 16 & 16 & 16	-73.85506	41.1521
2560	Red maple	Acer rubrum	10	Critical	No	Broken top with decay	-73.85661	41.150346
2561	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85661	41.150311
2562	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85657	41.150301
2563	Red oak	Quercus rubra	29	Fair	No	None	-73.85649	41.150276
2564	Red maple	Acer rubrum	7	Fair	No	None	-73.85647	41.150246
2565	Tulip polplar	Liriodendron tulipifera	18	Fair	No	None	-73.8565	41.150223
2566	Sugar maple	Acer saccharum	8	Fair	No	Standing dead tree	-73.85647	41.150205
2567	Sugar maple	Acer saccharum	9	Fair	No	Standing dead tree	-73.85646	41.15017
2568	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85655	41.150221
2569	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85654	41.150182
2570	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85654	41.150149
2571	Sassafras	Sassafras albidum	8	Fair	No	Standing dead tree	-73.85651	41.150121
2572	Sugar maple	Acer saccharum	10	Fair	No	Standing dead tree	-73.85658	41.150101
2573	Sugar maple	Acer saccharum	10	Fair	No	Standing dead tree	-73.85659	41.150141
2574	Sugar maple	Acer saccharum	9	Fair	No	Standing dead tree	-73.85663	41.150139
2575	Norway maple	Acer platanoides	12	Good	Yes	None	-73.85662	41.150226
2576	Norway maple	Acer platanoides	13	Good	Yes	None	-73.85669	41.150317
2577	Tulip polplar	Liriodendron tulipifera	26	Good	No	None	-73.8567	41.150283
2578	Tulip polplar	Liriodendron tulipifera	21	Good	No	None	-73.85672	41.15026
2579	Norway maple	Acer platanoides	10	Good	Yes	None	-73.85676	41.150277
2580	Norway maple	Acer platanoides	10	Good	Yes	None	-73.8568	41.150259
2581	Sassafras	Sassafras albidum	15	Fair	No	None	-73.85685	41.150211
2582	Red oak	Quercus rubra	20	Fair	No	None	-73.85689	41.150223
2583	American beech	Fagus grandifolia	7	Critical	No	Beech leaf disease	-73.85679	41.150113
2584	Norway maple	Acer platanoides	16	Good	Yes	None	-73.85692	41.150264
2585	Red maple	Acer rubrum	14	Poor	No	Codominant at 3 feet. One lead broken	-73.85688	41.150303
2586	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85675	41.150318

2587	White oak	Quercus alba	27	Dead	No	Standing dead tree	-73.85679 41.150347
2588	Red maple	Acer rubrum	12	Fair	No	None	-73.8568 41.150377
2589	Red maple	Acer rubrum	13	Fair	No	None	-73.85691 41.150357
2590	Norway maple	Acer platanoides	15	Good	Yes	None	-73.85687 41.150394
2591	Red maple	Acer rubrum	24	Fair	No	None	-73.85686 41.150481
2592	Red maple	Acer rubrum	14	Fair	No	None	-73.85697 41.150471
2593	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85693 41.150411
2594	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85699 41.150381
2595	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85695 41.150494
2596	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85695 41.150538
2597	White oak	Quercus alba	10	Good	No	None	-73.85682 41.150549
2598	Norway maple	Acer platanoides	19	Good	Yes	None	-73.85675 41.150588
2599	Norway maple	Acer platanoides	7	Good	Yes	None	-73.85669 41.150526
2600	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85667 41.150558
2601	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85664 41.150573
2602	Norway maple	Acer platanoides	7	Good	Yes	None	-73.8566 41.150579
2603	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8566 41.150605
2604	Unknown	Unknown	25	Dead	No	Standing dead tree with no bark	-73.85672 41.150654
2605	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85704 41.150526
2606	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85707 41.150512
2607	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85703 41.150477
2608	Sugar maple	Acer saccharum	12	Good	No	None	-73.85613 41.152949
2609	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85696 41.150584
2610	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85692 41.150593
2611	Sugar maple	Acer saccharum	7	Good	No	None	-73.85615 41.152932
2612	White oak	Quercus alba	44	Fair	No	None	-73.85694 41.150623
2613	Sugar maple	Acer saccharum	10	Good	No	None	-73.85697 41.150656
2614	Black walnut	Juglans nigra	25	Fair	No	None	-73.85613 41.153027
2615	Sugar maple	Acer saccharum	10	Good	No	None	-73.85704 41.150616
2616	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85707 41.150588
2617	Sugar maple	Acer saccharum	12	Good	No	None	-73.85613 41.153085
2618	Norway maple	Acer platanoides	14	Poor	Yes	Dieback	-73.85712 41.150591
2619	White ash	Fraxinus americana	24	Critical	No	Emerald ash borer	-73.85717 41.150581
2620	Sugar maple	Acer saccharum	10	Fair	No	None	-73.8571 41.150651
2621	Tulip polplar	Liriodendron tulipifera	36	Good	No	None	-73.85609 41.153135
2622	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85714 41.150666
2623	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85709 41.150685
2624	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85702 41.150715
2625	Red oak	Quercus rubra	50	Fair	No	None	-73.85704 41.150773
2626	Sugar maple	Acer saccharum	8	Good	No	None	-73.85611 41.15312
2627	Sugar maple	Acer saccharum	18	Fair	No	None	-73.857 41.15077
2628	Sugar maple	Acer saccharum	8	Poor	No	None	-73.85611 41.15315
2629	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85702 41.150807
2630	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85708 41.150796
2631	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85697 41.150809
2632	Tulip polplar	Liriodendron tulipifera	31	Good	No	None	-73.85605 41.153185
2633	Tulip polplar	Liriodendron tulipifera	29	Good	No	None	-73.85606 41.1532
2634	Pignut hickory	Carya glabra	7	Fair	No	None	-73.85689 41.150806
2635	Tulip polplar	Liriodendron tulipifera	10	Good	No	None	-73.85609 41.153232
2636	Pignut hickory	Carya glabra	27	Fair	No	None	-73.85685 41.150761
2637	Red oak	Quercus rubra	17	Good	No	None	-73.8561 41.153424
2638	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.8569 41.150648
2639	Norway maple	Acer platanoides	28	Fair	Yes	None	-73.85675 41.150753
2640	Norway maple	Acer platanoides	11	Good	Yes	None	-73.85607 41.153444
2641	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85677 41.15073
2642	American beech	Fagus grandifolia	26	Good	No	Disease present.	-73.85606 41.15347
2643	Norway maple	Acer platanoides	27	Poor	Yes	Basal decay	-73.85669 41.150774
2644	White oak	Quercus alba	37	Fair	No	None	-73.85665 41.150771
2645	Tulip polplar	Liriodendron tulipifera	29	Good	No	None	-73.85597 41.153467
2646	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85668 41.15082
2647	Black locust	Robinia pseudoacacia	11	Dead	Yes	Standing dead tree with broken top	-73.85658 41.150803
2648	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85649 41.150805
2649	Black locust	Robinia pseudoacacia	38	Critical	Yes	Broken top. Little canopy remains	-73.85648 41.15077
2650	Norway maple	Acer platanoides	20	Good	Yes	None	-73.85596 41.153345
2651	Tulip polplar	Liriodendron tulipifera	38	Fair	No	None	-73.85592 41.153274

2652	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85663 41.150743
2653	Norway maple	Acer platanoides	14	Good	Yes	None	-73.8559 41.153196
2654	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85662 41.150714
2655	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85662 41.150688
2656	Norway maple	Acer platanoides	30	Fair	Yes	None	-73.85656 41.150662
2657	Sugar maple	Acer saccharum	11	Good	No	None	-73.85597 41.153153
2658	Black locust	Robinia pseudoacacia	37	Poor	Yes	Significant lean	-73.85654 41.150683
2659	Sugar maple	Acer saccharum	10	Good	No	None	-73.85596 41.153132
2660	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85653 41.150706
2661	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8565 41.150698
2662	Sugar maple	Acer saccharum	12	Good	No	None	-73.85591 41.153069
2663	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85648 41.150724
2664	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85643 41.1508
2665	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85644 41.150756
2666	Sugar maple	Acer saccharum	15	Good	No	None	-73.85585 41.15306
2667	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85641 41.150731
2668	Sugar maple	Acer saccharum	11	Good	No	None	-73.85582 41.153062
2669	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85643 41.150697
2670	Sugar maple	Acer saccharum	9	Good	No	None	-73.85596 41.153083
2671	Red maple	Acer rubrum	10	Good	No	None	-73.8565 41.150598
2672	Sugar maple	Acer saccharum	13	Good	No	None	-73.85598 41.153044
2673	Sassafras	Sassafras albidum	7	Fair	No	None	-73.85654 41.150574
2674	Sugar maple	Acer saccharum	10	Good	No	None	-73.85597 41.15301
2675	Sassafras	Sassafras albidum	8	Fair	No	None	-73.85651 41.150541
2676	Sassafras	Sassafras albidum	9	Fair	No	None	-73.85648 41.150546
2677	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85643 41.150585
2678	Sugar maple	Acer saccharum	8	Poor	No	None	-73.8564 41.150604
2679	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85639 41.150647
2680	Black oak	Quercus velutina	38	Fair	No	None	-73.85638 41.150685
2681	Norway maple	Acer platanoides	41	Fair	Yes	Codominant at 3 feet	-73.85635 41.150827
2682	Red oak	Quercus rubra	60	Poor	No	Double leader. One leader broken.	-73.85617 41.153274
2683	Norway maple	Acer platanoides	13	Good	Yes	None	-73.85613 41.153438
2684	Tulip polplar	Liriodendron tulipifera	38	Good	No	None	-73.85615 41.153506
2685	American beech	Fagus grandifolia	23	Good	No	None	-73.85611 41.153558
2686	Black locust	Robinia pseudoacacia	18	Poor	Yes	Leans	-73.85633 41.150879
2687	Black locust	Robinia pseudoacacia	18	Poor	Yes	Leans	-73.85637 41.150889
2688	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85636 41.150892
2689	American beech	Fagus grandifolia	14	Good	No	Disease present.	-73.8561 41.153613
2690	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85632 41.150909
2691	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85633 41.150933
2692	White ash	Fraxinus americana	9	Dead	No	Emerald ash borer	-73.85635 41.150941
2693	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85629 41.150937
2694	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85628 41.150957
2695	Sugar maple	Acer saccharum	34	Good	No	None	-73.85618 41.153624
2696	Black locust	Robinia pseudoacacia	21	Poor	Yes	Leans	-73.85629 41.150957
2697	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85631 41.150969
2698	Tulip polplar	Liriodendron tulipifera	31	Good	No	None	-73.85633 41.15359
2699	Tulip polplar	Liriodendron tulipifera	29	Good	No	None	-73.85624 41.150694
2700	American elm	Ulmus americana	10	Fair	No	None	-73.85616 41.150689
2701	Sugar maple	Acer saccharum	23	Good	No	None	-73.85634 41.153508
2702	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85613 41.150642
2703	Red oak	Quercus rubra	24	Fair	No	None	-73.85616 41.150621
2704	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.8562 41.15053
2705	Norway maple	Acer platanoides	23	Fair	Yes	None	-73.85614 41.150539
2706	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.8561 41.150549
2707	American beech	Fagus grandifolia	17	Good	No	None	-73.85626 41.153592
2708	Norway maple	Acer platanoides	22	Good	Yes	None	-73.85622 41.153568
2709	Sycamore	Platanus occidentalis	44	Good	No	None	-73.85642 41.153538
2710	Tulip polplar	Liriodendron tulipifera	12	Good	No	None	-73.85554 41.149814
2711	American linden	Tilia americana	15	Good	No	None	-73.85553 41.149861
2712	American linden	Tilia americana	14	Good	No	None	-73.85554 41.149863
2713	American linden	Tilia americana	14	Good	No	None	-73.85554 41.149867
2714	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85561 41.149903
2715	White oak	Quercus alba	12	Good	No	None	-73.85563 41.149937
2716	American linden	Tilia americana	18	Fair	No	Codominant at base	-73.85555 41.149988

2717	American linden	Tilia americana	16	Fair	No	Codominant at base	-73.85556	41.149981
2718	American linden	Tilia americana	9	Fair	No	Codominant at base	-73.85556	41.149994
2719	Tulip polplar	Liriodendron tulipifera	14	Fair	No	None	-73.85552	41.150016
2720	Red maple	Acer rubrum	29	Fair	No	Quad lead	-73.85556	41.150025
2721	Shagbark hickory	Carya ovata	8	Good	No	Quad lead	-73.85568	41.149967
2722	Shagbark hickory	Carya ovata	8	Fair	No	Quad lead	-73.85563	41.150012
2723	Red oak	Quercus rubra	8	Fair	No	Quad lead	-73.85559	41.150036
2724	Bitternut hickory	Carya cordiformis	8	Good	No	Quad lead	-73.85556	41.150098
2725	Red maple	Acer rubrum	8	Fair	No	Vines	-73.85552	41.150116
2726	Red maple	Acer rubrum	10	Fair	No	Vines	-73.85554	41.15014
2727	Tulip polplar	Liriodendron tulipifera	15	Good	No	None	-73.85551	41.150168
2728	Red maple	Acer rubrum	10	Fair	No	Vines	-73.85557	41.150171
2729	Red oak	Quercus rubra	14	Fair	No	Vines	-73.8556	41.150155
2730	White oak	Quercus alba	22	Good	No	Vines	-73.85571	41.150105
2731	Shagbark hickory	Carya ovata	7	Good	No	Quad lead	-73.85572	41.150016
2732	Sugar maple	Acer saccharum	9	Good	No	Quad lead	-73.85575	41.150068
2733	White oak	Quercus alba	18	Fair	No	Vines	-73.85576	41.150181
2734	Red maple	Acer rubrum	7	Fair	No	Vines	-73.85588	41.150226
2735	Tulip polplar	Liriodendron tulipifera	14	Fair	No	None	-73.85586	41.150225
2736	Tulip polplar	Liriodendron tulipifera	16	Fair	No	None	-73.8558	41.150245
2737	Tulip polplar	Liriodendron tulipifera	12	Fair	No	None	-73.85578	41.15023
2738	White oak	Quercus alba	32	Fair	No	Vines	-73.85577	41.15027
2739	White oak	Quercus alba	15	Fair	No	Vines	-73.85572	41.150198
2740	Tulip polplar	Liriodendron tulipifera	14	Dead	No	Standing dead tree	-73.8557	41.150177
2741	Red maple	Acer rubrum	10	Fair	No	Vines	-73.8557	41.150209
2742	Red maple	Acer rubrum	9	Fair	No	Vines	-73.85566	41.150209
2743	Red oak	Quercus rubra	8	Fair	No	Vines	-73.8557	41.150239
2744	Red maple	Acer rubrum	9	Fair	No	Vines	-73.85562	41.150209
2745	Norway maple	Acer platanoides	8	Fair	Yes	Vines	-73.85552	41.150212
2746	Black oak	Quercus velutina	32	Fair	No	None	-73.85556	41.150219
2747	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85552	41.150268
2748	Norway maple	Acer platanoides	7	Fair	Yes	Vines	-73.85556	41.150255
2749	Tulip polplar	Liriodendron tulipifera	17	Good	No	None	-73.85558	41.150261
2750	Tulip polplar	Liriodendron tulipifera	8	Fair	No	None	-73.85559	41.150277
2751	Red maple	Acer rubrum	7	Fair	No	None	-73.85558	41.150286
2752	Tulip polplar	Liriodendron tulipifera	12	Fair	No	None	-73.85554	41.150302
2753	Black oak	Quercus velutina	15	Poor	No	Decay	-73.85554	41.150323
2754	Red maple	Acer rubrum	16	Fair	No	None	-73.85551	41.150343
2755	Pignut hickory	Carya glabra	12	Good	No	None	-73.8555	41.150363
2756	Tulip polplar	Liriodendron tulipifera	12	Fair	No	None	-73.85553	41.150393
2757	White oak	Quercus alba	17	Poor	No	Dieback	-73.85553	41.150447
2758	Tulip polplar	Liriodendron tulipifera	16	Poor	No	Dieback	-73.85558	41.150342
2759	Sycamore	Platanus occidentalis	39	Good	No	None	-73.85624	41.153038
2760	Tulip polplar	Liriodendron tulipifera	14	Fair	No	None	-73.85564	41.150277
2761	Red maple	Acer rubrum	7	Fair	No	None	-73.85564	41.150299
2762	Tulip polplar	Liriodendron tulipifera	15	Fair	No	None	-73.8557	41.150299
2763	Tulip polplar	Liriodendron tulipifera	25	Good	No	None	-73.85628	41.15298
2764	Bitternut hickory	Carya cordiformis	27	Good	No	None	-73.85638	41.153021
2765	Tulip polplar	Liriodendron tulipifera	11	Dead	No	Standing dead tree	-73.85573	41.150341
2766	Tulip polplar	Liriodendron tulipifera	13	Fair	No	None	-73.85577	41.150317
2767	American beech	Fagus grandifolia	14	Good	No	Disease present	-73.85645	41.153017
2768	Tulip polplar	Liriodendron tulipifera	11	Fair	No	None	-73.85578	41.150338
2769	White oak	Quercus alba	21	Fair	No	Vines	-73.85587	41.150295
2770	White oak	Quercus alba	37	Good	No	None	-73.85654	41.153021
2771	Tulip polplar	Liriodendron tulipifera	9	Fair	No	None	-73.85586	41.1503
2772	Tulip polplar	Liriodendron tulipifera	11	Fair	No	None	-73.85581	41.150329
2773	Tulip polplar	Liriodendron tulipifera	35	Good	No	None	-73.85672	41.153074
2774	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85585	41.150346
2775	Tulip polplar	Liriodendron tulipifera	10	Fair	No	None	-73.85583	41.150359
2776	Sugar maple	Acer saccharum	9	Good	No	None	-73.85675	41.153076
2777	Tulip polplar	Liriodendron tulipifera	9	Good	No	None	-73.85588	41.150359
2778	Sugar maple	Acer saccharum	11	Good	No	None	-73.85678	41.153055
2779	Red oak	Quercus rubra	7	Fair	No	None	-73.85591	41.150358
2780	White oak	Quercus alba	19	Fair	No	None	-73.85589	41.150375
2781	Sugar maple	Acer saccharum	15	Good	No	None	-73.85687	41.15306

2782	White oak	Quercus alba	28	Dead	No	Standing dead tree	-73.85591	41.150408
2783	Tulip polplar	Liriodendron tulipifera	9	Dead	No	Standing dead tree	-73.85587	41.150384
2784	White oak	Quercus alba	34	Fair	No	None	-73.85586	41.150416
2785	Sugar maple	Acer saccharum	18	Good	No	None	-73.85674	41.153044
2786	Tulip polplar	Liriodendron tulipifera	13	Fair	No	None	-73.85578	41.150437
2787	Tulip polplar	Liriodendron tulipifera	12	Fair	No	None	-73.85575	41.150442
2788	Sugar maple	Acer saccharum	16	Good	No	None	-73.85685	41.153171
2789	Tulip polplar	Liriodendron tulipifera	16	Dead	No	Standing dead tree	-73.85576	41.150414
2790	American beech	Fagus grandifolia	16	Fair	No	None	-73.85667	41.153126
2791	Red maple	Acer rubrum	10	Fair	No	Codominant at 1 foot	-73.85572	41.150432
2792	American beech	Fagus grandifolia	31	Fair	No	Hollow.	-73.85659	41.153134
2793	American elm	Ulmus americana	9	Dead	No	Standing dead tree	-73.85572	41.150417
2794	Tulip polplar	Liriodendron tulipifera	19	Dead	No	Standing dead tree. Codominant at base	-73.85574	41.150379
2795	Tulip polplar	Liriodendron tulipifera	34	Fair	No	Hollow	-73.85668	41.153268
2796	Sugar maple	Acer saccharum	10	Good	No	None	-73.85678	41.15325
2797	Bitternut hickory	Carya cordiformis	15	Poor	No	Dieback	-73.85551	41.150476
2798	Sugar maple	Acer saccharum	10	Good	No	None	-73.85675	41.153294
2799	Tulip polplar	Liriodendron tulipifera	33	Good	No	None	-73.85673	41.153516
2800	White ash	Fraxinus americana	7	Critical	No	Emerald ash borer	-73.85571	41.150492
2801	Tulip polplar	Liriodendron tulipifera	11	Dead	No	Standing dead tree	-73.8557	41.150515
2802	American beech	Fagus grandifolia	25	Critical	No	Beech leaf disease	-73.85666	41.153359
2803	Tulip polplar	Liriodendron tulipifera	44	Good	No	None	-73.85639	41.153335
2804	American linden	Tilia americana	23	Poor	No	Thin canopy.	-73.85572	41.15058
2805	American linden	Tilia americana	14	Fair	No	None	-73.85567	41.150562
2806	American linden	Tilia americana	14	Fair	No	None	-73.85565	41.15057
2807	Sugar maple	Acer saccharum	16	Good	No	None	-73.85629	41.153423
2808	Pignut hickory	Carya glabra	7	Good	No	None	-73.85564	41.150534
2809	Sugar maple	Acer saccharum	12	Good	No	None	-73.85632	41.153442
2810	Sugar maple	Acer saccharum	14	Good	No	None	-73.85628	41.15347
2811	Tulip polplar	Liriodendron tulipifera	22	Fair	No	Codominant at 3 feet	-73.85557	41.150532
2812	Tulip polplar	Liriodendron tulipifera	23	Poor	No	Dieback	-73.85552	41.15052
2813	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85553	41.150535
2814	Black walnut	Juglans nigra	27	Fair	No	None	-73.85635	41.153725
2815	Pignut hickory	Carya glabra	7	Good	No	None	-73.8555	41.150546
2816	Pignut hickory	Carya glabra	8	Good	No	None	-73.85561	41.150562
2817	Tulip polplar	Liriodendron tulipifera	8	Fair	No	None	-73.85557	41.150563
2818	American beech	Fagus grandifolia	28	Good	No	None	-73.85653	41.153271
2819	Pignut hickory	Carya glabra	10	Fair	No	None	-73.85559	41.150606
2820	American beech	Fagus grandifolia	25	Good	No	None	-73.85655	41.153219
2821	Tulip polplar	Liriodendron tulipifera	18	Fair	No	None	-73.85564	41.150611
2822	White oak	Quercus alba	25	Dead	No	Standing dead tree	-73.85562	41.150657
2823	American beech	Fagus grandifolia	11	Good	No	None	-73.85646	41.153172
2824	Tulip polplar	Liriodendron tulipifera	13	Fair	No	None	-73.85571	41.150639
2825	Tulip polplar	Liriodendron tulipifera	19	Fair	No	None	-73.85575	41.150617
2826	Tulip polplar	Liriodendron tulipifera	26	Good	No	None	-73.85638	41.153156
2827	Black walnut	Juglans nigra	17	Good	No	None	-73.85574	41.150687
2828	Tulip polplar	Liriodendron tulipifera	31	Good	No	None	-73.85637	41.153113
2829	Tulip polplar	Liriodendron tulipifera	32	Good	No	None	-73.85632	41.153084
2830	Sugar maple	Acer saccharum	13	Good	No	None	-73.85631	41.153027
2831	Red oak	Quercus rubra	29	Good	No	None	-73.85637	41.153213
2832	Red oak	Quercus rubra	12	Dead	No	Standing dead tree	-73.85582	41.150604
2833	Black walnut	Juglans nigra	25	Fair	No	None	-73.85632	41.153215
2834	Sugar maple	Acer saccharum	11	Good	No	None	-73.85631	41.153154
2835	Norway maple	Acer platanoides	12	Critical	Yes	Little canopy remains	-73.85587	41.150612
2836	Black walnut	Juglans nigra	32	Fair	No	None	-73.85624	41.153155
2837	Norway maple	Acer platanoides	7	Critical	Yes	Little canopy remains	-73.85592	41.150545
2838	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85597	41.150524
2839	Black walnut	Juglans nigra	14	Fair	No	None	-73.85621	41.15308
2840	Black birch	Betula lenta	9	Fair	No	None	-73.85601	41.150546
2841	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85599	41.150584
2842	White oak	Quercus alba	30	Good	No	None	-73.85604	41.150595
2843	Tulip polplar	Liriodendron tulipifera	42	Fair	No	None	-73.85598	41.150631
2844	Norway maple	Acer platanoides	9	Poor	Yes	Dieback	-73.8559	41.150659
2845	White oak	Quercus alba	38	Fair	No	None	-73.85603	41.150689
2846	White oak	Quercus alba	37	Fair	No	None	-73.85599	41.150698

2847	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85596	41.150712
2848	Tulip polplar	Liriodendron tulipifera	40	Fair	No	None	-73.85602	41.150729
2849	Norway maple	Acer platanoides	16	Fair	Yes	Multi lead	-73.85606	41.150784
2850	White oak	Quercus alba	46	Fair	No	None	-73.85605	41.150816
2851	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.856	41.150788
2852	Black locust	Robinia pseudoacacia	11	Poor	Yes	Leans	-73.85597	41.150782
2853	Norway maple	Acer platanoides	12	Fair	Yes	Multi lead	-73.85609	41.150875
2854	White oak	Quercus alba	44	Fair	No	None	-73.85602	41.150882
2855	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85597	41.150879
2856	White oak	Quercus alba	23	Good	No	None	-73.85595	41.150887
2857	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85599	41.150845
2858	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85598	41.150834
2859	White oak	Quercus alba	37	Critical	No	Significant dieback. Little canopy remains	-73.85593	41.150854
2860	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8559	41.150885
2861	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85593	41.150769
2862	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85591	41.150756
2863	Tulip polplar	Liriodendron tulipifera	18	Good	No	None	-73.85584	41.150766
2864	Tulip polplar	Liriodendron tulipifera	18	Good	No	None	-73.85581	41.15087
2865	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85578	41.150754
2866	Sugar maple	Acer saccharum	11	Good	No	None	-73.85574	41.150764
2867	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85573	41.150799
2868	Sugar maple	Acer saccharum	9	Good	No	None	-73.85595	41.150924
2869	Sugar maple	Acer saccharum	7	Good	No	None	-73.85592	41.150933
2870	Sugar maple	Acer saccharum	11	Dead	No	Standing dead tree	-73.8559	41.150909
2871	Sugar maple	Acer saccharum	7	Good	No	None	-73.85589	41.150937
2872	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85585	41.150918
2873	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85582	41.150961
2874	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85581	41.150932
2875	Black locust	Robinia pseudoacacia	18	Fair	Yes	None	-73.8558	41.150944
2876	Tulip polplar	Liriodendron tulipifera	20	Good	No	None	-73.85576	41.150945
2877	Sugar maple	Acer saccharum	19	Fair	No	None	-73.85568	41.150947
2878	Sugar maple	Acer saccharum	17	Good	No	None	-73.85562	41.150904
2879	Sugar maple	Acer saccharum	18	Fair	No	None	-73.85556	41.150935
2880	Ailanthus	Ailanthus altissima	13	Fair	Yes	None	-73.85541	41.150962
2881	Ailanthus	Ailanthus altissima	14	Fair	Yes	None	-73.85538	41.150965
2882	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85538	41.150891
2883	Sugar maple	Acer saccharum	17	Fair	No	None	-73.85556	41.150884
2884	Sugar maple	Acer saccharum	17	Fair	No	None	-73.85542	41.150835
2885	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85541	41.150796
2886	Black locust	Robinia pseudoacacia	14	Critical	Yes	Significant basal decay	-73.85544	41.150758
2887	Black locust	Robinia pseudoacacia	12	Fair	Yes	None	-73.85542	41.150755
2888	Red oak	Quercus rubra	8	Fair	No	None	-73.85545	41.150732
2889	Red oak	Quercus rubra	8	Dead	No	Standing dead tree	-73.85546	41.150694
2890	Black locust	Robinia pseudoacacia	17	Critical	Yes	Prior codominant base with separation	-73.85542	41.15072
2891	Black locust	Robinia pseudoacacia	16	Critical	Yes	Prior codominant base with separation	-73.85543	41.15071
2892	Black locust	Robinia pseudoacacia	8	Fair	Yes	None p	-73.85546	41.150661
2893	Tulip polplar	Liriodendron tulipifera	14	Fair	No	None	-73.85547	41.150638
2894	Red oak	Quercus rubra	14	Fair	No	None	-73.85549	41.150643
2895	Black locust	Robinia pseudoacacia	20	Fair	Yes	None	-73.85552	41.150658
2896	Tulip polplar	Liriodendron tulipifera	7	Fair	No	None	-73.85552	41.150586
2897	Sugar maple	Acer saccharum	7	Dead	No	Standing dead tree	-73.85556	41.150662
2898	Red oak	Quercus rubra	20	Good	No	None	-73.85549	41.150795
2899	Black locust	Robinia pseudoacacia	21	Fair	Yes	None	-73.8555	41.150838
2900	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85556	41.15077
2901	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85562	41.150711
2902	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85562	41.1508
2903	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85565	41.150844
2904	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8557	41.150831
2905	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8557	41.150711
2906	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85611	41.150953
2907	Sugar maple	Acer saccharum	14	Good	No	None	-73.85614	41.150992
2908	Sassafras	Sassafras albidum	8	Fair	No	None	-73.85618	41.151015
2909	Sugar maple	Acer saccharum	7	Good	No	None	-73.85619	41.151054
2910	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.8562	41.151103
2911	Sugar maple	Acer saccharum	7	Good	No	None	-73.85617	41.151115

2912	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85611	41.151109
2913	Tulip polplar	Liriodendron tulipifera	43	Fair	No	None	-73.85608	41.151104
2914	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85609	41.151039
2915	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85607	41.151003
2916	Black locust	Robinia pseudoacacia	7	Fair	Yes	None	-73.85606	41.150959
2917	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.856	41.15097
2918	Sugar maple	Acer saccharum	10	Good	No	None	-73.85598	41.150981
2919	Sugar maple	Acer saccharum	12	Good	No	None	-73.856	41.151086
2920	Sugar maple	Acer saccharum	16	Good	No	None	-73.85596	41.151048
2921	Sugar maple	Acer saccharum	9	Good	No	None	-73.85595	41.151094
2922	Tulip polplar	Liriodendron tulipifera	24	Good	No	None	-73.85592	41.151102
2923	American beech	Fagus grandifolia	8	Critical	No	Beech leaf disease	-73.85592	41.150978
2924	American beech	Fagus grandifolia	7	Critical	No	Beech leaf disease	-73.8559	41.150996
2925	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85587	41.151016
2926	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85587	41.151125
2927	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85581	41.151119
2928	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85584	41.151079
2929	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85582	41.151088
2930	Sugar maple	Acer saccharum	8	Critical	No	Decay. Little canopy remains	-73.85579	41.151107
2931	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85579	41.151033
2932	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85575	41.151023
2933	Black walnut	Juglans nigra	15	Good	No	None	-73.85572	41.150989
2934	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85572	41.151019
2935	Tulip polplar	Liriodendron tulipifera	26	Good	No	None	-73.85566	41.151047
2936	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85572	41.151064
2937	Black locust	Robinia pseudoacacia	18	Fair	Yes	None	-73.8557	41.151082
2938	Black locust	Robinia pseudoacacia	13	Poor	Yes	Significant lean	-73.8557	41.151105
2939	Red maple	Acer rubrum	9	Fair	No	None	-73.85566	41.151089
2940	Sugar maple	Acer saccharum	10	Fair	No	None	-73.8556	41.151117
2941	Black locust	Robinia pseudoacacia	17	Poor	Yes	Significant lean	-73.85559	41.151037
2942	Sugar maple	Acer saccharum	12	Fair	No	None	-73.85561	41.151012
2943	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85556	41.151008
2944	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85554	41.151047
2945	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85556	41.151078
2946	Sugar maple	Acer saccharum	12	Good	No	None	-73.85553	41.15106
2947	Sweet cherry	Prunus avium	12	Poor	No	Dieback	-73.85552	41.151093
2948	Black cherry	Prunus serotina	7	Fair	No	None	-73.8555	41.151105
2949	Black locust	Robinia pseudoacacia	9	Poor	Yes	Dieback	-73.85549	41.151081
2950	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85548	41.151102
2951	Norway maple	Acer platanoides	17	Fair	Yes	None	-73.85544	41.151035
2952	Tulip polplar	Liriodendron tulipifera	23	Fair	No	None	-73.85542	41.151027
2953	Black oak	Quercus velutina	16	Fair	No	None	-73.85541	41.151061
2954	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85542	41.151086
2955	Black locust	Robinia pseudoacacia	12	Fair	Yes	None	-73.85539	41.151074
2956	Tulip polplar	Liriodendron tulipifera	25	Fair	No	Codominant at base	-73.85537	41.151103
2957	Tulip polplar	Liriodendron tulipifera	8	Fair	No	None	-73.85536	41.151115
2958	Tulip polplar	Liriodendron tulipifera	15	Fair	No	None	-73.85535	41.151107
2959	Tulip polplar	Liriodendron tulipifera	37	Fair	No	None	-73.85627	41.151005
2960	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85629	41.15102
2961	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85643	41.150999
2962	Norway maple	Acer platanoides	18	Fair	Yes	None	-73.85646	41.151023
2963	Red oak	Quercus rubra	36	Critical	No	Little canopy remains. Decay along trunk	-73.85656	41.151048
2964	Red maple	Acer rubrum	41	Critical	No	Little canopy remains.	-73.85649	41.151114
2965	Norway maple	Acer platanoides	16	Good	Yes	None	-73.85636	41.151086
2966	Sugar maple	Acer saccharum	15	Good	No	None	-73.85632	41.151158
2967	Tulip polplar	Liriodendron tulipifera	7	Good	No	None	-73.85632	41.151239
2968	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85634	41.151259
2969	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85632	41.151311
2970	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85635	41.151328
2971	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85636	41.151332
2972	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85635	41.151356
2973	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85633	41.151409
2974	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85631	41.151424
2975	Red oak	Quercus rubra	20	Fair	No	None	-73.85637	41.151437
2976	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85631	41.151493

2977	Red oak	Quercus rubra	27	Fair	No	None	-73.85639 41.151279
2978	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85637 41.151269
2979	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85641 41.151255
2980	Norway maple	Acer platanoides	18	Critical	Yes	Little canopy remains	-73.85643 41.151292
2981	White ash	Fraxinus americana	17	Dead	No	Standing dead tree	-73.85646 41.151211
2982	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85655 41.151313
2983	Red maple	Acer rubrum	16	Fair	No	None	-73.85657 41.151294
2984	White oak	Quercus alba	40	Good	No	None	-73.85654 41.151261
2985	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85658 41.151257
2986	Tulip polplar	Liriodendron tulipifera	12	Good	No	None	-73.8565 41.151181
2987	American elm	Ulmus americana	11	Fair	No	None	-73.85652 41.151133
2988	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85662 41.15119
2989	Bitternut hickory	Carya cordiformis	11	Good	No	None	-73.85668 41.151194
2990	White ash	Fraxinus americana	19	Dead	No	Standing dead tree. EAB	-73.85665 41.151141
2991	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85671 41.151105
2992	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85674 41.151111
2993	Sweet cherry	Prunus avium	7	Fair	No	None	-73.85677 41.151118
2994	Norway maple	Acer platanoides	10	Poor	Yes	None	-73.85677 41.151224
2995	Sugar maple	Acer saccharum	21	Good	No	None	-73.85679 41.151198
2996	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85688 41.151149
2997	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85696 41.150844
2998	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85691 41.150855
2999	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85692 41.150912
3000	Pignut hickory	Carya glabra	13	Good	No	None	-73.85691 41.150892
3001	Pignut hickory	Carya glabra	7	Good	No	None	-73.85689 41.150901
3002	White ash	Fraxinus americana	19	Dead	No	Standing dead tree	-73.85664 41.150918
3003	Sugar maple	Acer saccharum	7	Fair	No	Little canopy remains.	-73.85665 41.150972
3004	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85672 41.150966
3005	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85685 41.150997
3006	Sugar maple	Acer saccharum	22	Fair	No	None	-73.85688 41.151028
3007	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85701 41.150938
3008	Sugar maple	Acer saccharum	7	Good	No	None	-73.85678 41.151277
3009	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85669 41.151319
3010	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85666 41.151309
3011	Red maple	Acer rubrum	10	Critical	No	Little canopy remains	-73.85666 41.151334
3012	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85669 41.151383
3013	Sugar maple	Acer saccharum	9	Good	No	None	-73.85667 41.151385
3014	Sugar maple	Acer saccharum	13	Good	No	None	-73.85672 41.151439
3015	Red oak	Quercus rubra	24	Good	No	None	-73.85671 41.151482
3016	Sugar maple	Acer saccharum	26	Good	No	None	-73.85659 41.151461
3017	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85671 41.151509
3018	Norway maple	Acer platanoides	4	Fair	Yes	None	-73.85665 41.151553
3019	American beech	Fagus grandifolia	4	Critical	No	Beech leaf disease	-73.8566 41.151543
3020	American beech	Fagus grandifolia	10	Critical	No	Beech leaf disease	-73.85657 41.15157
3021	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85665 41.15158
3022	Sugar maple	Acer saccharum	9	Good	No	None	-73.8567 41.151606
3023	Red oak	Quercus rubra	38	Fair	No	None	-73.85664 41.151622
3024	Red oak	Quercus rubra	22	Fair	No	None	-73.85661 41.151625
3025	Tulip polplar	Liriodendron tulipifera	27	Fair	No	None	-73.85661 41.151658
3026	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85664 41.15168
3027	Norway maple	Acer platanoides	4	Fair	Yes	None	-73.85667 41.151675
3028	Norway maple	Acer platanoides	4	Fair	Yes	None	-73.85669 41.151715
3029	Red oak	Quercus rubra	12	Good	No	None	-73.85662 41.151731
3030	Red oak	Quercus rubra	21	Fair	No	None	-73.8567 41.151765
3031	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.8567 41.151776
3032	Red oak	Quercus rubra	26	Fair	No	None	-73.85671 41.151797
3033	Sugar maple	Acer saccharum	10	Good	No	None	-73.85662 41.151795
3034	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85665 41.15186
3035	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85663 41.151872
3036	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85661 41.151909
3037	White oak	Quercus alba	35	Good	No	None	-73.85657 41.15192
3038	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85652 41.151919
3039	Sugar maple	Acer saccharum	23	Dead	No	Standing dead tree	-73.85652 41.151896
3040	Sugar maple	Acer saccharum	4	Fair	No	None	-73.85648 41.151917
3041	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85643 41.151898

3042	Sugar maple	Acer saccharum	19	Critical	No	Little canopy remains	-73.85642	41.15192
3043	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.8564	41.15192
3044	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85635	41.151838
3045	Red oak	Quercus rubra	25	Good	No	None	-73.85645	41.151814
3046	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85648	41.151771
3047	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85658	41.151824
3048	Sugar maple	Acer saccharum	11	Good	No	None	-73.85655	41.151799
3049	Sugar maple	Acer saccharum	14	Fair	No	None	-73.85656	41.151767
3050	Red oak	Quercus rubra	22	Fair	No	None	-73.85647	41.151706
3051	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85645	41.151691
3052	Red oak	Quercus rubra	24	Good	No	None	-73.85644	41.151653
3053	Sugar maple	Acer saccharum	14	Good	No	None	-73.85653	41.151649
3054	Red oak	Quercus rubra	13	Fair	No	None	-73.85656	41.151642
3055	American beech	Fagus grandifolia	11	Critical	No	Beech leaf disease	-73.85652	41.151613
3056	American beech	Fagus grandifolia	12	Critical	No	Beech leaf disease	-73.85654	41.151584
3057	Sugar maple	Acer saccharum	8	Good	No	None	-73.85647	41.151582
3058	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85645	41.151555
3059	Sugar maple	Acer saccharum	7	Good	No	None	-73.85647	41.151522
3060	White oak	Quercus alba	43	Fair	No	None	-73.85643	41.151508
3061	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85641	41.151492
3062	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85645	41.151485
3063	Sugar maple	Acer saccharum	8	Good	No	None	-73.85641	41.151446
3064	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85641	41.151417
3065	Sugar maple	Acer saccharum	7	Good	No	None	-73.85644	41.151386
3066	Hophornbeam	Ostrya virginiana	10	Good	No	None	-73.85646	41.151405
3067	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85651	41.151398
3068	Sugar maple	Acer saccharum	13	Good	No	None	-73.85635	41.151599
3069	Red oak	Quercus rubra	21	Good	No	None	-73.85637	41.151629
3070	Red maple	Acer rubrum	13	Fair	No	None	-73.85635	41.15165
3071	Norway maple	Acer platanoides	7	Good	Yes	None	-73.85632	41.15166
3072	Norway maple	Acer platanoides	7	Good	Yes	None	-73.85628	41.151707
3073	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85628	41.15177
3074	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.8563	41.151734
3075	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85633	41.151719
3076	White oak	Quercus alba	32	Fair	No	None	-73.85635	41.151704
3077	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85626	41.151997
3078	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85628	41.152026
3079	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85622	41.152092
3080	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85625	41.15209
3081	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85624	41.152146
3082	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85627	41.152134
3083	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.8563	41.152074
3084	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85632	41.152047
3085	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85634	41.15197
3086	Tulip polplar	Liriodendron tulipifera	43	Fair	No	None	-73.85638	41.152073
3087	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.8564	41.151981
3088	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85645	41.151968
3089	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85643	41.152
3090	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85644	41.152018
3091	Norway maple	Acer platanoides	4	Fair	Yes	None	-73.85651	41.151969
3092	Sugar maple	Acer saccharum	14	Fair	No	None	-73.85654	41.151999
3093	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85661	41.152009
3094	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.8566	41.152061
3095	Red oak	Quercus rubra	37	Good	No	None	-73.85666	41.152137
3096	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85658	41.152118
3097	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85656	41.152155
3098	Sugar maple	Acer saccharum	15	Fair	No	None	-73.85649	41.152112
3099	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85646	41.15208
3100	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85639	41.152123
3101	Norway maple	Acer platanoides	4	Fair	Yes	None	-73.85639	41.152161
3102	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85625	41.152183
3103	Norway maple	Acer platanoides	10	Good	Yes	None	-73.8562	41.152181
3104	White oak	Quercus alba	34	Fair	No	None	-73.85625	41.152228
3105	Sugar maple	Acer saccharum	8	Good	No	None	-73.85622	41.152245
3106	Sugar maple	Acer saccharum	9	Good	No	None	-73.85621	41.152276

3107	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85624	41.152293
3108	White oak	Quercus alba	31	Good	No	None	-73.85626	41.152316
3109	Sugar maple	Acer saccharum	17	Good	No	None	-73.85631	41.15222
3110	Sugar maple	Acer saccharum	20	Good	No	None	-73.85631	41.152299
3111	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85629	41.152358
3112	Red oak	Quercus rubra	18	Fair	No	None	-73.85637	41.152341
3113	Sugar maple	Acer saccharum	8	Good	No	None	-73.85639	41.152368
3114	Red oak	Quercus rubra	21	Good	No	None	-73.85634	41.152393
3115	Norway maple	Acer platanoides	10	Critical	Yes	Little canopy remains	-73.85644	41.152407
3116	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85646	41.152358
3117	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85643	41.152268
3118	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85648	41.152298
3119	Sugar maple	Acer saccharum	14	Dead	No	Standing dead tree	-73.85651	41.152273
3120	American beech	Fagus grandifolia	9	Critical	No	Beech leaf disease	-73.85654	41.152341
3121	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85656	41.152321
3122	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.8566	41.152358
3123	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85662	41.152297
3124	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.8566	41.152262
3125	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85655	41.15224
3126	Norway maple	Acer platanoides	10	Dead	Yes	Standing dead tree	-73.85665	41.152222
3127	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85671	41.152281
3128	Tulip polplar	Liriodendron tulipifera	30	Good	No	None	-73.8567	41.152319
3129	Red oak	Quercus rubra	25	Fair	No	None	-73.8568	41.152335
3130	Sugar maple	Acer saccharum	17	Fair	No	None	-73.85669	41.15238
3131	American beech	Fagus grandifolia	8	Critical	No	Beech leaf disease	-73.85674	41.152397
3132	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.8567	41.152425
3133	Sugar maple	Acer saccharum	10	Good	No	None	-73.85667	41.152461
3134	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85669	41.152487
3135	Tulip polplar	Liriodendron tulipifera	24	Fair	No	None	-73.85675	41.152477
3136	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85678	41.152454
3137	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85678	41.152482
3138	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85676	41.152497
3139	Sugar maple	Acer saccharum	5	Good	No	None	-73.85611	41.152138
3140	American beech	Fagus grandifolia	9	Critical	No	Beech leaf disease	-73.85691	41.152495
3141	American beech	Fagus grandifolia	21	Critical	No	Beech leaf disease	-73.85689	41.152512
3142	American beech	Fagus grandifolia	24	Critical	No	Beech leaf disease	-73.85687	41.152534
3143	American beech	Fagus grandifolia	21	Critical	No	Beech leaf disease	-73.8568	41.152552
3144	Sugar maple	Acer saccharum	7	Good	No	None	-73.85609	41.152136
3145	Red oak	Quercus rubra	18	Fair	No	None	-73.85679	41.152551
3146	American beech	Fagus grandifolia	10	Critical	No	Beech leaf disease	-73.85694	41.152515
3147	Red maple	Acer rubrum	31	Good	No	None	-73.85608	41.152058
3148	American beech	Fagus grandifolia	8	Critical	No	Beech leaf disease	-73.85693	41.152525
3149	American beech	Fagus grandifolia	8	Critical	No	Beech leaf disease	-73.85692	41.152542
3150	Sugar maple	Acer saccharum	5	Dead	No	None	-73.85606	41.152111
3151	Norway maple	Acer platanoides	11	Critical	Yes	Little canopy remains	-73.85695	41.152559
3152	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85688	41.152587
3153	American beech	Fagus grandifolia	23	Dead	No	Standing dead tree	-73.85687	41.152608
3154	White oak	Quercus alba	37	Good	No	None	-73.85602	41.152108
3155	Red maple	Acer rubrum	5	Good	No	None	-73.85598	41.152126
3156	Sugar maple	Acer saccharum	25	Fair	No	None	-73.85692	41.152625
3157	Red maple	Acer rubrum	4	Good	No	None	-73.85598	41.152134
3158	American beech	Fagus grandifolia	5	Critical	No	Beech leaf disease	-73.85693	41.15261
3159	Tulip polplar	Liriodendron tulipifera	24	Fair	No	None	-73.85696	41.152601
3160	Tulip polplar	Liriodendron tulipifera	23	Fair	No	None	-73.857	41.152631
3161	Sugar maple	Acer saccharum	6	Good	No	None	-73.85598	41.152162
3162	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85699	41.152614
3163	Sugar maple	Acer saccharum	8	Good	No	None	-73.85597	41.152185
3164	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85702	41.152657
3165	White oak	Quercus alba	28	Good	No	None	-73.85596	41.1522
3166	American beech	Fagus grandifolia	18	Critical	No	Beech leaf disease	-73.85691	41.152711
3167	Sugar maple	Acer saccharum	25	Poor	No	Many wounds on trunk.	-73.85594	41.152182
3168	Tulip polplar	Liriodendron tulipifera	19	Fair	No	None	-73.85689	41.15268
3169	American beech	Fagus grandifolia	30	Critical	No	Beech leaf disease	-73.85681	41.152731
3170	American beech	Fagus grandifolia	20	Critical	No	Beech leaf disease	-73.85684	41.152752
3171	Tulip polplar	Liriodendron tulipifera	17	Good	No	None	-73.85591	41.15212

3172	Tulip polplar	Liriodendron tulipifera	22	Fair	No	None	-73.85704	41.152767
3173	White oak	Quercus alba	29	Dead	No	None	-73.8559	41.152145
3174	American beech	Fagus grandifolia	9	Critical	No	Beech leaf disease	-73.85695	41.15276
3175	Tulip polplar	Liriodendron tulipifera	20	Good	No	None	-73.85699	41.152819
3176	Sycamore	Platanus occidentalis	40	Good	No	None	-73.857	41.152849
3177	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85703	41.152831
3178	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85702	41.15292
3179	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85698	41.152922
3180	White oak	Quercus alba	26	Good	No	None	-73.8559	41.152077
3181	American beech	Fagus grandifolia	18	Critical	No	Beech leaf disease	-73.85683	41.152953
3182	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85586	41.152069
3183	Sugar maple	Acer saccharum	9	Good	No	None	-73.85693	41.152991
3184	Sugar maple	Acer saccharum	5	Good	No	None	-73.85582	41.152034
3185	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85693	41.153042
3186	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85697	41.153038
3187	Sugar maple	Acer saccharum	5	Fair	No	None	-73.85579	41.152022
3188	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85701	41.153006
3189	American beech	Fagus grandifolia	13	Critical	No	Beech leaf disease	-73.85675	41.153119
3190	Sugar maple	Acer saccharum	27	Good	No	None	-73.85574	41.151957
3191	Sugar maple	Acer saccharum	13	Good	No	None	-73.8569	41.153291
3192	White oak	Quercus alba	23	Good	No	None	-73.85585	41.151956
3193	American beech	Fagus grandifolia	4	Good	No	None	-73.85589	41.151957
3194	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85681	41.152979
3195	Tulip polplar	Liriodendron tulipifera	25	Good	No	None	-73.85601	41.151922
3196	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85673	41.152958
3197	Sugar maple	Acer saccharum	19	Fair	No	None	-73.85671	41.15288
3198	Sugar maple	Acer saccharum	21	Fair	No	None	-73.85664	41.152928
3199	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85604	41.151929
3200	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85663	41.152974
3201	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85652	41.152984
3202	Sugar maple	Acer saccharum	7	Good	No	None	-73.85606	41.151883
3203	Red oak	Quercus rubra	27	Fair	No	None	-73.85655	41.152921
3204	Sugar maple	Acer saccharum	11	Good	No	None	-73.85602	41.151866
3205	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.8565	41.15292
3206	Tulip polplar	Liriodendron tulipifera	39	Fair	No	None	-73.85644	41.152911
3207	Sugar maple	Acer saccharum	4	Fair	No	None	-73.85642	41.152876
3208	Black walnut	Juglans nigra	7	Good	No	None	-73.85602	41.151795
3209	Sugar maple	Acer saccharum	6	Fair	No	None	-73.85637	41.152882
3210	Sugar maple	Acer saccharum	20	Fair	No	None	-73.85632	41.152878
3211	Tulip polplar	Liriodendron tulipifera	28	Fair	No	None	-73.85629	41.152915
3212	Black walnut	Juglans nigra	10	Good	No	None	-73.85603	41.151726
3213	Red oak	Quercus rubra	47	Fair	No	None	-73.85615	41.152816
3214	Sugar maple	Acer saccharum	38	Fair	No	None	-73.8562	41.152896
3215	Sugar maple	Acer saccharum	7	Poor	No	None	-73.85617	41.151759
3216	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85618	41.152813
3217	Red maple	Acer rubrum	19	Good	No	None	-73.85616	41.151662
3218	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85619	41.152769
3219	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85617	41.152755
3220	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85619	41.152726
3221	Sugar maple	Acer saccharum	9	Good	No	None	-73.85612	41.151674
3222	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85621	41.152736
3223	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85627	41.15273
3224	Sugar maple	Acer saccharum	6	Good	No	None	-73.85609	41.151657
3225	Sugar maple	Acer saccharum	13	Good	No	None	-73.85618	41.152683
3226	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85618	41.152552
3227	Sugar maple	Acer saccharum	8	Good	No	None	-73.85617	41.152591
3228	White oak	Quercus alba	25	Good	No	None	-73.85612	41.151623
3229	Sugar maple	Acer saccharum	9	Good	No	None	-73.85617	41.152618
3230	Sugar maple	Acer saccharum	11	Fair	No	None	-73.85621	41.152598
3231	Sugar maple	Acer saccharum	13	Good	No	None	-73.85614	41.1516
3232	Red maple	Acer rubrum	8	Fair	No	None	-73.85634	41.152574
3233	Tulip polplar	Liriodendron tulipifera	33	Good	No	None	-73.85633	41.152615
3234	Sugar maple	Acer saccharum	4	Fair	No	None	-73.85638	41.152638
3235	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85636	41.152663
3236	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85637	41.152731

3237	Tulip polplar	Liriodendron tulipifera	37	Fair	No	None	-73.85625 41.152833
3238	Tulip polplar	Liriodendron tulipifera	29	Fair	No	None	-73.85642 41.15272
3239	Red oak	Quercus rubra	16	Good	No	None	-73.85644 41.152772
3240	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85647 41.152763
3241	Norway maple	Acer platanoides	14	Good	Yes	None	-73.85612 41.151565
3242	Red oak	Quercus rubra	24	Fair	No	None	-73.85651 41.152743
3243	Sugar maple	Acer saccharum	17	Good	No	None	-73.85652 41.152681
3244	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85656 41.152721
3245	White oak	Quercus alba	25	Good	No	None	-73.85617 41.151522
3246	Tulip polplar	Liriodendron tulipifera	26	Fair	No	None	-73.85658 41.152739
3247	Tulip polplar	Liriodendron tulipifera	28	Fair	No	None	-73.85656 41.15285
3248	Sugar maple	Acer saccharum	13	Good	No	None	-73.85615 41.151489
3249	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85659 41.152777
3250	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85663 41.152753
3251	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85613 41.151507
3252	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85676 41.152741
3253	Sugar maple	Acer saccharum	10	Good	No	None	-73.85657 41.152643
3254	Sugar maple	Acer saccharum	11	Good	No	None	-73.85665 41.152691
3255	Sugar maple	Acer saccharum	8	Good	No	None	-73.85666 41.152661
3256	Sugar maple	Acer saccharum	5	Good	No	None	-73.85618 41.151155
3257	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.8567 41.152628
3258	Sugar maple	Acer saccharum	7	Fair	No	None	-73.85657 41.152581
3259	White oak	Quercus alba	15	Good	No	None	-73.85613 41.151203
3260	American beech	Fagus grandifolia	6	Critical	No	Beech leaf disease	-73.85666 41.152528
3261	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.8566 41.152534
3262	Sugar maple	Acer saccharum	27	Good	No	None	-73.85613 41.151255
3263	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85658 41.152524
3264	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85658 41.152502
3265	Tulip polplar	Liriodendron tulipifera	38	Good	No	None	-73.85653 41.1525
3266	White oak	Quercus alba	38	Good	No	Double leader.	-73.85605 41.151209
3267	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85657 41.15246
3268	Sugar maple	Acer saccharum	14	Good	No	None	-73.85659 41.152417
3269	Tulip polplar	Liriodendron tulipifera	31	Fair	No	None	-73.85654 41.152412
3270	Red oak	Quercus rubra	18	Fair	No	None	-73.85653 41.152445
3271	Tulip polplar	Liriodendron tulipifera	33	Good	No	None	-73.85603 41.15121
3272	Sugar maple	Acer saccharum	24	Fair	No	None	-73.85634 41.152442
3273	White oak	Quercus alba	18	Good	No	None	-73.85601 41.15118
3274	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85637 41.152468
3275	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85639 41.152501
3276	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85637 41.152508
3277	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85642 41.152551
3278	Sugar maple	Acer saccharum	14	Fair	No	Double leader	-73.856 41.151144
3279	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85648 41.152569
3280	Sugar maple	Acer saccharum	15	Good	No	None	-73.85642 41.152587
3281	Sugar maple	Acer saccharum	5	Good	No	None	-73.85595 41.151138
3282	Sugar maple	Acer saccharum	7	Good	No	None	-73.85638 41.152572
3283	Sugar maple	Acer saccharum	6	Good	No	None	-73.85633 41.152546
3284	Sugar maple	Acer saccharum	11	Good	No	None	-73.85592 41.151164
3285	Red oak	Quercus rubra	22	Fair	No	None	-73.85634 41.152521
3286	Sugar maple	Acer saccharum	11	Good	No	None	-73.85631 41.152483
3287	White oak	Quercus alba	12	Good	No	None	-73.85593 41.151185
3288	White oak	Quercus alba	40	Good	No	None	-73.85626 41.152525
3289	Sugar maple	Acer saccharum	5	Good	No	None	-73.85597 41.151171
3290	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85622 41.152509
3291	Norway maple	Acer platanoides	4	Fair	Yes	None	-73.85619 41.152521
3292	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85618 41.152502
3293	Red oak	Quercus rubra	29	Fair	No	None	-73.85621 41.152469
3294	Sugar maple	Acer saccharum	7	Good	No	None	-73.85601 41.151237
3295	Black walnut	Juglans nigra	11	Good	No	None	-73.85598 41.151236
3296	Black oak	Quercus velutina	36	Good	No	None	-73.85623 41.152422
3297	Tulip polplar	Liriodendron tulipifera	9	Good	No	None	-73.85619 41.152387
3298	White oak	Quercus alba	40	Poor	No	Hollow trunk	-73.85594 41.151225
3299	Sugar maple	Acer saccharum	10	Good	No	None	-73.85592 41.151237
3300	Sugar maple	Acer saccharum	4	Good	No	None	-73.85626 41.152419
3301	Sugar maple	Acer saccharum	6	Fair	No	None	-73.8563 41.15242

3302	Sugar maple	Acer saccharum	8	Good	No	None	-73.85592 41.151256
3303	Tulip polplar	Liriodendron tulipifera	24	Good	No	None	-73.85609 41.151279
3304	Norway maple	Acer platanoides	6	Poor	Yes	None	-73.8561 41.1513
3305	White oak	Quercus alba	26	Good	No	None	-73.85612 41.151306
3306	Sugar maple	Acer saccharum	7	Good	No	None	-73.85614 41.151321
3307	Sugar maple	Acer saccharum	14	Poor	No	Hollow at base	-73.85605 41.151316
3308	Tulip polplar	Liriodendron tulipifera	26	Good	No	None	-73.85602 41.151328
3309	Black walnut	Juglans nigra	5	Good	No	None	-73.85602 41.151353
3310	Sugar maple	Acer saccharum	10	Good	No	None	-73.85606 41.151345
3311	Sugar maple	Acer saccharum	8	Good	No	None	-73.85608 41.15134
3312	Sugar maple	Acer saccharum	25	Good	No	None	-73.85611 41.151355
3313	Black walnut	Juglans nigra	6	Good	No	None	-73.85615 41.151381
3314	Sugar maple	Acer saccharum	25	Good	No	None	-73.85616 41.151423
3315	Sugar maple	Acer saccharum	7	Good	No	None	-73.85617 41.151451
3316	Sugar maple	Acer saccharum	13	Good	No	None	-73.85612 41.15144
3317	Sugar maple	Acer saccharum	9	Good	No	None	-73.85608 41.151573
3318	Red oak	Quercus rubra	28	Good	No	None	-73.85606 41.151533
3319	Sugar maple	Acer saccharum	17	Good	No	Double leader	-73.85607 41.151609
3320	Sugar maple	Acer saccharum	4	Dead	No	None	-73.85607 41.151628
3321	Sugar maple	Acer saccharum	7	Good	No	None	-73.85607 41.151647
3322	Tulip polplar	Liriodendron tulipifera	9	Good	No	None	-73.85603 41.151626
3323	Sugar maple	Acer saccharum	10	Good	No	None	-73.85612 41.151702
3324	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85519 41.152368
3325	Black oak	Quercus velutina	21	Good	No	None	-73.85527 41.152397
3326	Sugar maple	Acer saccharum	13	Good	No	Double leader	-73.85607 41.151676
3327	Sugar maple	Acer saccharum	9	Fair	No	None	-73.85528 41.152411
3328	White oak	Quercus alba	30	Fair	No	None	-73.85535 41.152329
3329	Sugar maple	Acer saccharum	25	Good	No	None	-73.85612 41.151738
3330	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85535 41.152399
3331	Sugar maple	Acer saccharum	9	Fair	No	None	-73.8554 41.152355
3332	Sugar maple	Acer saccharum	13	Fair	No	None	-73.85541 41.152377
3333	Tulip polplar	Liriodendron tulipifera	15	Good	No	None	-73.85605 41.151686
3334	Sugar maple	Acer saccharum	15	Fair	No	None	-73.85531 41.152456
3335	Tulip polplar	Liriodendron tulipifera	11	Good	No	None	-73.85605 41.151669
3336	Sugar maple	Acer saccharum	12	Good	No	None	-73.85545 41.152336
3337	Tulip polplar	Liriodendron tulipifera	14	Good	No	None	-73.85603 41.151677
3338	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85541 41.15226
3339	Red oak	Quercus rubra	23	Good	No	None	-73.85604 41.151651
3340	Tulip polplar	Liriodendron tulipifera	18	Critical	No	Little canopy remains	-73.85544 41.152208
3341	Sugar maple	Acer saccharum	6	Good	No	None	-73.856 41.151638
3342	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85521 41.152226
3343	Sugar maple	Acer saccharum	11	Good	No	None	-73.85601 41.151622
3344	Red oak	Quercus rubra	11	Fair	No	None	-73.85529 41.152188
3345	Sugar maple	Acer saccharum	9	Good	No	None	-73.85602 41.151608
3346	Red oak	Quercus rubra	10	Fair	No	None	-73.85539 41.152179
3347	Tulip polplar	Liriodendron tulipifera	9	Fair	No	None	-73.85543 41.152152
3348	Sugar maple	Acer saccharum	10	Good	No	None	-73.85601 41.151586
3349	White oak	Quercus alba	33	Dead	No	Standing dead tree	-73.85551 41.152165
3350	Sugar maple	Acer saccharum	10	Good	No	None	-73.85599 41.151671
3351	Sugar maple	Acer saccharum	8	Fair	No	None	-73.8555 41.152218
3352	Red maple	Acer rubrum	8	Good	No	None	-73.85597 41.151666
3353	Red oak	Quercus rubra	19	Fair	No	None	-73.85547 41.152098
3354	Norway maple	Acer platanoides	12	Fair	Yes	None	-73.85523 41.152066
3355	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85531 41.152089
3356	Norway maple	Acer platanoides	11	Fair	Yes	None	-73.85534 41.152068
3357	Tulip polplar	Liriodendron tulipifera	17	Fair	No	None	-73.85534 41.151984
3358	Red oak	Quercus rubra	9	Fair	No	None	-73.8554 41.15207
3359	Red oak	Quercus rubra	7	Fair	No	None	-73.85542 41.152054
3360	Red oak	Quercus rubra	11	Fair	No	None	-73.85541 41.152023
3361	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85548 41.152014
3362	Tulip polplar	Liriodendron tulipifera	11	Fair	No	None	-73.85553 41.152136
3363	Red oak	Quercus rubra	10	Fair	No	None	-73.85558 41.152145
3364	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85558 41.152195
3365	Norway maple	Acer platanoides	8	Good	Yes	None	-73.8556 41.152116
3366	Red oak	Quercus rubra	11	Fair	No	None	-73.85559 41.152043

3367	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85555	41.152006
3368	Red oak	Quercus rubra	12	Fair	No	None	-73.85556	41.151919
3369	White oak	Quercus alba	11	Fair	No	None	-73.85553	41.151942
3370	White oak	Quercus alba	9	Fair	No	None	-73.8555	41.151915
3371	White oak	Quercus alba	12	Fair	No	None	-73.85543	41.151871
3372	White oak	Quercus alba	12	Fair	No	None	-73.85538	41.151919
3373	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85529	41.151851
3374	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85534	41.151766
3375	Red oak	Quercus rubra	9	Fair	No	None	-73.85565	41.151937
3376	Red oak	Quercus rubra	13	Fair	No	None	-73.85564	41.151893
3377	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85563	41.151838
3378	White ash	Fraxinus americana	13	Dead	No	Standing dead tree	-73.85566	41.151797
3379	Red oak	Quercus rubra	9	Fair	No	None	-73.8557	41.151814
3380	Red oak	Quercus rubra	29	Fair	No	None	-73.85555	41.151799
3381	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85572	41.152005
3382	White oak	Quercus alba	27	Dead	No	Standing dead tree	-73.85573	41.152054
3383	Norway maple	Acer platanoides	8	Good	Yes	None	-73.85566	41.152111
3384	Tulip polplar	Liriodendron tulipifera	15	Good	No	None	-73.8558	41.15209
3385	Norway maple	Acer platanoides	14	Good	Yes	None	-73.85582	41.152125
3386	White oak	Quercus alba	20	Good	No	None	-73.8558	41.152162
3387	Sugar maple	Acer saccharum	6	Fair	No	None	-73.85584	41.152167
3388	Sugar maple	Acer saccharum	11	Good	No	None	-73.85575	41.152177
3389	Sugar maple	Acer saccharum	7	Good	No	None	-73.85572	41.152177
3390	Sugar maple	Acer saccharum	10	Good	No	None	-73.85573	41.152198
3391	Sugar maple	Acer saccharum	11	Good	No	None	-73.85562	41.152212
3392	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85564	41.152229
3393	White oak	Quercus alba	24	Critical	No	Large basal cavity	-73.85584	41.152211
3394	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85586	41.152202
3395	Sugar maple	Acer saccharum	6	Fair	No	None	-73.85589	41.152228
3396	Norway maple	Acer platanoides	14	Fair	Yes	None	-73.85601	41.152279
3397	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85605	41.152291
3398	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85601	41.152248
3399	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85602	41.152188
3400	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85609	41.152188
3401	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85607	41.152214
3402	Sugar maple	Acer saccharum	5	Fair	No	None	-73.85602	41.152292
3403	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85608	41.152308
3404	Sugar maple	Acer saccharum	6	Fair	No	None	-73.85608	41.152335
3405	Sugar maple	Acer saccharum	7	Fair	No	None	-73.856	41.152297
3406	White oak	Quercus alba	27	Good	No	None	-73.85596	41.152304
3407	Sugar maple	Acer saccharum	4	Fair	No	None	-73.85595	41.152334
3408	White oak	Quercus alba	21	Good	No	None	-73.85595	41.152363
3409	Sugar maple	Acer saccharum	34	Fair	No	None	-73.856	41.152415
3410	White oak	Quercus alba	30	Good	No	None	-73.85603	41.152428
3411	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.85607	41.152398
3412	Norway maple	Acer platanoides	10	Good	Yes	None	-73.85608	41.152462
3413	Tulip polplar	Liriodendron tulipifera	6	Good	No	None	-73.85587	41.152375
3414	Tulip polplar	Liriodendron tulipifera	4	Good	No	None	-73.8559	41.152399
3415	Norway maple	Acer platanoides	5	Good	Yes	None	-73.85603	41.152478
3416	Black oak	Quercus velutina	39	Fair	No	None	-73.85577	41.1524
3417	Sugar maple	Acer saccharum	14	Good	No	None	-73.85582	41.152357
3418	White oak	Quercus alba	21	Good	No	None	-73.85584	41.152283
3419	White oak	Quercus alba	24	Good	No	None	-73.85583	41.152241
3420	Norway maple	Acer platanoides	9	Good	Yes	None	-73.85582	41.152256
3421	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.8558	41.152249
3422	White oak	Quercus alba	39	Good	No	None	-73.85578	41.152299
3423	Sugar maple	Acer saccharum	11	Good	No	None	-73.85572	41.152275
3424	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85575	41.15223
3425	Sugar maple	Acer saccharum	7	Good	No	None	-73.85571	41.152253
3426	Red oak	Quercus rubra	9	Fair	No	None	-73.85564	41.152257
3427	Sugar maple	Acer saccharum	8	Good	No	None	-73.85562	41.152242
3428	Sugar maple	Acer saccharum	7	Good	No	None	-73.8556	41.152249
3429	Tulip polplar	Liriodendron tulipifera	13	Good	No	None	-73.85555	41.15223
3430	White oak	Quercus alba	30	Dead	No	Standing dead tree	-73.85558	41.152293
3431	Sugar maple	Acer saccharum	9	Good	No	None	-73.85562	41.152299

3432	Sugar maple	Acer saccharum	10	Good	No	None	-73.85564 41.152328
3433	Sugar maple	Acer saccharum	9	Good	No	None	-73.85562 41.152348
3434	Sugar maple	Acer saccharum	10	Good	No	None	-73.85588 41.151196
3435	White oak	Quercus alba	20	Fair	No	None	-73.85557 41.15237
3436	Sugar maple	Acer saccharum	12	Good	No	None	-73.85559 41.152388
3437	Black walnut	Juglans nigra	13	Good	No	None	-73.85587 41.151168
3438	Sugar maple	Acer saccharum	13	Good	No	None	-73.85566 41.152434
3439	White oak	Quercus alba	21	Good	No	None	-73.85559 41.152436
3440	Sugar maple	Acer saccharum	11	Good	No	None	-73.85556 41.152468
3441	Tulip polplar	Liriodendron tulipifera	9	Good	No	None	-73.85582 41.151169
3442	Sugar maple	Acer saccharum	15	Good	No	None	-73.85551 41.152437
3443	Sugar maple	Acer saccharum	14	Good	No	None	-73.85545 41.15242
3444	Tulip polplar	Liriodendron tulipifera	8	Good	No	None	-73.85578 41.151154
3445	Shagbark hickory	Carya ovata	11	Good	No	None	-73.85578 41.151189
3446	White oak	Quercus alba	38	Critical	No	Little canopy remains	-73.85534 41.152538
3447	Tulip polplar	Liriodendron tulipifera	49	Fair	No	None	-73.85542 41.152621
3448	White oak	Quercus alba	7	Good	No	None	-73.85575 41.151184
3449	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85547 41.152611
3450	White oak	Quercus alba	37	Good	No	None	-73.85565 41.151168
3451	Tulip polplar	Liriodendron tulipifera	14	Good	No	None	-73.85558 41.15265
3452	Black walnut	Juglans nigra	41	Good	No	None	-73.85551 41.152695
3453	Sugar maple	Acer saccharum	25	Good	No	None	-73.85559 41.151163
3454	Tulip polplar	Liriodendron tulipifera	24	Good	No	None	-73.85558 41.152781
3455	Tulip polplar	Liriodendron tulipifera	28	Good	No	None	-73.85554 41.151154
3456	Sugar maple	Acer saccharum	9	Good	No	None	-73.8556 41.152753
3457	Tulip polplar	Liriodendron tulipifera	13	Good	No	None	-73.8556 41.151191
3458	Sugar maple	Acer saccharum	6	Good	No	None	-73.85562 41.152687
3459	Sugar maple	Acer saccharum	12	Good	No	None	-73.85567 41.152762
3460	Sugar maple	Acer saccharum	25	Fair	No	None	-73.85574 41.152838
3461	Tulip polplar	Liriodendron tulipifera	16	Good	No	Double leader	-73.85556 41.15117
3462	Tulip polplar	Liriodendron tulipifera	26	Good	No	None	-73.85571 41.152895
3463	Pignut hickory	Carya glabra	8	Good	No	None	-73.8556 41.15121
3464	Tulip polplar	Liriodendron tulipifera	15	Good	No	None	-73.85569 41.152658
3465	Sugar maple	Acer saccharum	31	Fair	No	None	-73.8557 41.152586
3466	Tulip polplar	Liriodendron tulipifera	10	Good	No	None	-73.85558 41.151203
3467	Sugar maple	Acer saccharum	34	Dead	No	Standing dead tree	-73.85574 41.152652
3468	Shagbark hickory	Carya ovata	7	Good	No	None	-73.85556 41.151205
3469	Tulip polplar	Liriodendron tulipifera	7	Good	No	None	-73.85573 41.152559
3470	Red maple	Acer rubrum	13	Fair	No	None	-73.85551 41.15115
3471	Sugar maple	Acer saccharum	5	Fair	No	None	-73.85576 41.152676
3472	Sugar maple	Acer saccharum	4	Fair	No	None	-73.85574 41.152696
3473	Sugar maple	Acer saccharum	4	Fair	No	None	-73.85578 41.152551
3474	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.8558 41.152513
3475	Sugar maple	Acer saccharum	4	Fair	No	None	-73.85585 41.152517
3476	Red oak	Quercus rubra	17	Good	No	None	-73.85557 41.151138
3477	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85591 41.152505
3478	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85596 41.152519
3479	Sugar maple	Acer saccharum	4	Fair	No	None	-73.85592 41.152546
3480	Norway maple	Acer platanoides	11	Good	Yes	None	-73.85594 41.152572
3481	Red oak	Quercus rubra	9	Good	No	None	-73.8554 41.151142
3482	Sugar maple	Acer saccharum	35	Critical	No	Little canopy remains. Column of significant decay	-73.85594 41.152624
3483	Sugar maple	Acer saccharum	13	Good	No	None	-73.85603 41.152559
3484	Norway maple	Acer platanoides	13	Good	Yes	None	-73.85604 41.152634
3485	Norway maple	Acer platanoides	17	Good	Yes	None	-73.85605 41.15267
3486	Sugar maple	Acer saccharum	5	Fair	No	None	-73.85603 41.152691
3487	Norway maple	Acer platanoides	4	Fair	Yes	None	-73.85603 41.152717
3488	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85599 41.152716
3489	Tulip polplar	Liriodendron tulipifera	60	Good	No	Triple stem	-73.85543 41.151141
3490	Tulip polplar	Liriodendron tulipifera	46	Good	No	None	-73.85594 41.152689
3491	Sugar maple	Acer saccharum	9	Good	No	None	-73.85534 41.151131
3492	Sugar maple	Acer saccharum	10	Good	No	None	-73.85605 41.152796
3493	Black cherry	Prunus serotina	7	Good	No	None	-73.85536 41.15113
3494	Norway maple	Acer platanoides	15	Fair	Yes	None	-73.85601 41.152849
3495	Sugar maple	Acer saccharum	5	Good	No	None	-73.856 41.152874
3496	Sugar maple	Acer saccharum	6	Good	No	None	-73.856 41.152894

3497	Tulip polplar	Liriodendron tulipifera	8	Good	No	None	-73.85539 41.151169
3498	Sugar maple	Acer saccharum	4	Good	No	None	-73.85597 41.152955
3499	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85599 41.152936
3500	Tulip polplar	Liriodendron tulipifera	15	Good	No	None	-73.85542 41.151179
3501	Sugar maple	Acer saccharum	4	Good	No	None	-73.85598 41.152896
3502	Tulip polplar	Liriodendron tulipifera	23	Good	No	None	-73.85594 41.152897
3503	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85592 41.152923
3504	Sugar maple	Acer saccharum	12	Good	No	None	-73.85535 41.151179
3505	Tulip polplar	Liriodendron tulipifera	16	Good	No	None	-73.85533 41.151207
3506	White oak	Quercus alba	28	Good	No	None	-73.85587 41.152955
3507	Red oak	Quercus rubra	12	Good	No	None	-73.85533 41.15123
3508	Norway maple	Acer platanoides	13	Fair	Yes	None	-73.85577 41.153002
3509	Red maple	Acer rubrum	11	Good	No	None	-73.85533 41.151219
3510	Tulip polplar	Liriodendron tulipifera	24	Good	No	None	-73.85587 41.15291
3511	Shagbark hickory	Carya ovata	6	Good	No	None	-73.85539 41.151204
3512	Tulip polplar	Liriodendron tulipifera	21	Good	No	None	-73.8559 41.152885
3513	Tulip polplar	Liriodendron tulipifera	26	Fair	No	None	-73.8559 41.15282
3514	Tulip polplar	Liriodendron tulipifera	10	Good	No	None	-73.85538 41.151237
3515	Tulip polplar	Liriodendron tulipifera	25	Good	No	None	-73.85533 41.151246
3516	Sugar maple	Acer saccharum	10	Good	No	None	-73.85583 41.152868
3517	Norway maple	Acer platanoides	14	Good	Yes	None	-73.85587 41.152776
3518	Tulip polplar	Liriodendron tulipifera	14	Good	No	None	-73.85532 41.151275
3519	Sugar maple	Acer saccharum	5	Good	No	None	-73.85594 41.15277
3520	Tulip polplar	Liriodendron tulipifera	12	Good	No	None	-73.8553 41.151255
3521	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85593 41.152719
3522	Tulip polplar	Liriodendron tulipifera	11	Good	No	None	-73.85531 41.151238
3523	Black gum	Nyssa sylvatica	17	Good	No	None	-73.85591 41.152746
3524	Norway maple	Acer platanoides	16	Fair	Yes	None	-73.85581 41.15274
3525	Pignut hickory	Carya glabra	9	Good	No	None	-73.85552 41.151201
3526	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85586 41.152718
3527	White oak	Quercus alba	40	Good	No	None	-73.85564 41.151276
3528	Sugar maple	Acer saccharum	5	Good	No	None	-73.85589 41.15304
3529	Sugar maple	Acer saccharum	6	Good	No	None	-73.8559 41.15312
3530	Sugar maple	Acer saccharum	6	Good	No	None	-73.85615 41.153215
3531	Sweet cherry	Prunus avium	5	Good	No	None	-73.85559 41.151272
3532	Tulip polplar	Liriodendron tulipifera	16	Good	No	None	-73.85554 41.1513
3533	Tulip polplar	Liriodendron tulipifera	15	Good	No	None	-73.85546 41.151271
3534	Red oak	Quercus rubra	7	Good	No	None	-73.85568 41.151243
3535	Norway maple	Acer platanoides	5	Good	Yes	None	-73.85622 41.153478
3536	Red oak	Quercus rubra	8	Good	No	None	-73.85572 41.151263
3537	Red oak	Quercus rubra	7	Good	No	None	-73.85583 41.151243
3538	Red oak	Quercus rubra	14	Good	No	None	-73.85578 41.151265
3539	Norway maple	Acer platanoides	6	Good	Yes	None	-73.85635 41.153572
3540	American beech	Fagus grandifolia	14	Critical	No	Beech leaf disease	-73.85649 41.15363
3541	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85651 41.153469
3542	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85641 41.153411
3543	Sugar maple	Acer saccharum	8	Good	No	None	-73.85642 41.153357
3544	Tulip polplar	Liriodendron tulipifera	27	Good	No	None	-73.85578 41.151308
3545	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85646 41.153371
3546	Norway maple	Acer platanoides	5	Fair	Yes	None	-73.85649 41.153339
3547	Norway maple	Acer platanoides	4	Fair	Yes	None	-73.85652 41.153309
3548	White oak	Quercus alba	10	Good	No	None	-73.85565 41.151336
3549	Norway maple	Acer platanoides	9	Fair	Yes	None	-73.8567 41.153334
3550	White oak	Quercus alba	6	Good	No	None	-73.8557 41.151356
3551	Shagbark hickory	Carya ovata	7	Good	No	None	-73.85577 41.151352
3552	American beech	Fagus grandifolia	11	Critical	No	Beech leaf disease	-73.85662 41.15308
3553	Norway maple	Acer platanoides	4	Fair	Yes	None	-73.85654 41.15314
3554	Norway maple	Acer platanoides	4	Fair	Yes	None	-73.85651 41.153173
3555	American beech	Fagus grandifolia	4	Good	No	None	-73.85648 41.153158
3556	White oak	Quercus alba	39	Fair	No	None	-73.85552 41.151369
3557	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85644 41.153219
3558	Norway maple	Acer platanoides	6	Fair	Yes	None	-73.85636 41.153245
3559	Tulip polplar	Liriodendron tulipifera	16	Good	No	None	-73.85555 41.151384
3560	Sugar maple	Acer saccharum	9	Good	No	None	-73.85629 41.153257
3561	Sugar maple	Acer saccharum	8	Good	No	None	-73.85575 41.151393

3562	Tulip polplar	Liriodendron tulipifera	17	Good	No	None	-73.85566	41.15139
3563	American beech	Fagus grandifolia	27	Critical	No	Beech leaf disease	-73.85614	41.153344
3564	Norway maple	Acer platanoides	10	Fair	Yes	None	-73.85631	41.153342
3565	White oak	Quercus alba	26	Good	No	None	-73.85563	41.151407
3566	Norway maple	Acer platanoides	7	Fair	Yes	None	-73.85619	41.153359
3567	Pignut hickory	Carya glabra	7	Poor	No	None	-73.85567	41.15144
3568	White oak	Quercus alba	34	Dead	No	None	-73.85577	41.151466
3569	Sugar maple	Acer saccharum	10	Fair	No	None	-73.85578	41.15141
3570	White oak	Quercus alba	28	Poor	No	None	-73.85588	41.151397
3571	Sugar maple	Acer saccharum	12	Good	No	None	-73.85583	41.151448
3572	Norway maple	Acer platanoides	4	Fair	Yes	None	-73.85634	41.153173
3573	Sugar maple	Acer saccharum	24	Poor	No	None	-73.8558	41.151495
3574	Sugar maple	Acer saccharum	8	Fair	No	None	-73.8559	41.151437
3575	White oak	Quercus alba	35	Good	No	None	-73.85586	41.151482
3576	White oak	Quercus alba	25	Good	No	None	-73.85592	41.151501
3577	Red oak	Quercus rubra	39	Good	No	None	-73.85599	41.151531
3578	Sugar maple	Acer saccharum	8	Good	No	None	-73.85637	41.153036
3579	Sugar maple	Acer saccharum	7	Good	No	None	-73.85591	41.15156
3580	Tulip polplar	Liriodendron tulipifera	16	Good	No	None	-73.8559	41.15162
3581	Black walnut	Juglans nigra	15	Good	No	None	-73.85588	41.151648
3582	Sugar maple	Acer saccharum	7	Good	No	None	-73.85623	41.153131
3583	Sugar maple	Acer saccharum	9	Poor	No	None	-73.85593	41.151685
3584	Sugar maple	Acer saccharum	6	Good	No	None	-73.85619	41.153108
3585	Sugar maple	Acer saccharum	13	Good	No	None	-73.85591	41.151767
3586	White oak	Quercus alba	40	Dead	No	None	-73.85574	41.15179
3587	Sugar maple	Acer saccharum	11	Dead	No	None	-73.8558	41.151762
3588	Sugar maple	Acer saccharum	8	Poor	No	None	-73.85588	41.151812
3589	White oak	Quercus alba	37	Good	No	None	-73.85586	41.15188
3590	White ash	Fraxinus americana	11	Dead	No	None	-73.85579	41.151696
3591	Pignut hickory	Carya glabra	10	Fair	No	None	-73.85577	41.151677
3592	Tulip polplar	Liriodendron tulipifera	16	Good	No	None	-73.85569	41.151599
3593	Tulip polplar	Liriodendron tulipifera	12	Fair	No	None	-73.85559	41.151656
3594	Tulip polplar	Liriodendron tulipifera	20	Good	No	None	-73.8556	41.151624
3595	Sugar maple	Acer saccharum	8	Fair	No	None	-73.85578	41.151673
3596	Unknown	Unknown	37	Dead	No	None	-73.85553	41.151559
3597	Red oak	Quercus rubra	8	Fair	No	None	-73.85543	41.151426
3598	White oak	Quercus alba	10	Fair	No	None	-73.85544	41.15149
3599	Sugar maple	Acer saccharum	10	Good	No	None	-73.85548	41.151716
3600	Norway maple	Acer platanoides	8	Fair	Yes	None	-73.85543	41.151348

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Briarcliff Manor Solar Traffic Analysis

AUGUST 2022

TABLE OF CONTENTS

A. INTRODUCTION 1

B. PROJECT DESCRIPTION, LOCATION AND SCHEDULE 1

C. PRE-CONSTRUCTION SITE CHARACTERISTICS 1
1. Existing Roadway Characteristics 1
2. Existing Traffic Volumes and Operation 2
3. Load Restricted Structures 2

D. TRIP GENERATION, VEHICLE DATA, AND SITE ACCESS 2
1. Construction Traffic Trip Generation 4
2. Maintenance and Operations Traffic Trip Generation 4
3. Site Access 5

E. CAPACITY ANALYSIS 5
1. Linear Roadway Capacity Analysis 5

F. CONCLUSIONS 6

APPENDIX

A. *Briarcliff Manor Traffic Analysis*
B. Linear Roadway Capacity Analysis

A. INTRODUCTION

LaBella Associates DPC has performed a traffic analysis of the proposed YSG Briarcliff Solar Farm (hereafter referred to as the "Project") in the Village of Briarcliff Manor, Westchester County, New York. The analysis provides an overview of the existing site and transportation network, the projected number and type of vehicular trips during construction and future operation of the solar farm, and an assessment of the transportation network's ability to accommodate the site-generated traffic.

B. PROJECT DESCRIPTION, LOCATION AND SCHEDULE

The Project involves constructing a 10 MW solar array on an approximately 95-acre site located at 345 Scarborough Road, Briarcliff Manor, NY. The array would occupy approximately 46 acres of the site. The site was formerly developed as the corporate headquarters of the Philips Corporation, and the existing buildings would be removed as part of this project.

Access to the proposed solar array would be provided via an existing driveway at Holbrook Road. An existing driveway at Scarborough Road would be removed.

Construction is expected to begin in the fall of 2022 and last for approximately fourteen (14) to sixteen (16) months, with completion expected in late 2023.

C. PRE-CONSTRUCTION SITE CHARACTERISTICS

1. Existing Roadway Characteristics

The Project's parcels are located within the Village of Briarcliff Manor, Westchester County, New York. The following table summarizes the existing characteristics of the roadway network that would be used to access parcels associated with the Project:

Table 1: Existing Roadway Characteristics

Roadway	Functional Class	Traffic Volumes (Year, Source) (Note 1)	Percentage of Trucks	Jurisdiction	Speed Limit	Number of Travel Lanes
US Route 9 (Albany Post Road)	Urban Principal Arterial	AADT: 19,330 DHV: 1,486 DDHV: 1,100 (2015, NYSDOT)	5%	NYSDOT	40 mph (Note 2)	4 (two each direction) (Note 2)
Scarborough Road	Urban Major Collector	AADT: 2,393 DHV: 237 DDHV: 156 (2017, NYSDOT)	2%	Village of Briarcliff Manor	30 mph	2 (one each direction)
Holbrook Road	Urban Local	AADT: 2,380 DHV: 238 DDHV: 200 (Note 3)	2%	Village of Briarcliff Manor	30 mph	2 (one each direction)

Note 1: Traffic Volumes include the following:
- AADT: Annual Average Daily Traffic Volume; Typical 24 Hour Traffic Volume
- DHV: Design Hour Volume – Peak Hour of Traffic, Both Directions
- DDHV: Directional Design Hour Volume – Peak Hour of Traffic, One Direction

Note 2: In vicinity of Scarborough Road
Note 3: Estimated from peak hour traffic counts taken as part of *Briarcliff Manor Traffic Analysis*

2. Existing Traffic Volumes and Operation

Traffic volumes on road segments and at intersections within the vicinity of the site were collected by Provident Design Engineering, PLLC as part of the *Briarcliff Manor Traffic Analysis*, dated January 9, 2020 (included as Appendix A to this analysis).

The *Briarcliff Manor Traffic Analysis* analyzed traffic capacity during peak hours at intersections near the site, including Scarborough Road & US Route 9 and Scarborough Road & Holbrook Road. Results of the capacity analysis are presented as Level of Service (LOS), which is reported as a letter ranging from "A" to "F" and corresponds to the average delay that a driver experiences while traveling through an intersection. LOS "A" indicates free-flow traffic with minimal delay, and LOS "F" indicates significant delay and congestion. Typically, a Level of Service "D" or better is considered acceptable traffic operation.

The Briarcliff Manor Traffic Analysis indicates that the intersection of Scarborough Road & Holbrook Road operates at LOS "C" or better during the morning, afternoon and Saturday peak hours, while the intersection of Scarborough Road & US Route 9 operates at LOS "D" during the morning peak hour, LOS "C" during the afternoon peak hour, and LOS "B" during the Saturday peak hour.

3. Load Restricted Structures

Load-restricted bridges and culverts do not have capacity to accommodate vehicles over the identified posted weights, based on inspection reports. Existing bridge posting data was obtained from the New York State Department of Transportation Posted Bridge Interactive Map. There are no weight restricted bridges or culverts within the project area, nor are there any weight restricted structures along routes to nearby Interstate highways.

D. TRIP GENERATION, VEHICLE DATA, AND SITE ACCESS

Vehicular traffic generation from the proposed Project will occur in two phases: Construction Phase and Maintenance & Operation Phase. The Construction Phase occurs first and is the most intensive, involving existing building demolition, site preparation & clearing, construction of the solar infrastructure, removal of construction materials and debris, and site restoration. Following construction, the Maintenance & Operation Phase involves ongoing operation and maintenance of the facility. Solar facilities are relatively passive and will require a minimal number of vehicular trips during the Operation & Maintenance Phase.

Table 2 summarizes the anticipated vehicular trip generation for each phase, broken down by vehicle category and type. The total number of vehicles per day is provided, along with the estimated trips during the typical morning and afternoon peak hours.

Table 2: Vehicular Trip Generation

Project Phase (Duration)	Category	Vehicle Type	Est. Gross Vehicle Weight	Vehicles per Day	AM Peak Hour Trip Gen	PM Peak Hour Trip Gen
Construction						
Building Demolition (3 Months)	Environmental Workers	Passenger Vehicle	2,000 – 10,000 lb	10 veh/day	10 enter 0 exit	0 enter 10 exit
	Environmental Equipment Trucking	Equipment Hauling Truck	20,000 – 40,000 lb	3 veh/day	1 enter 1 exit	1 enter 1 exit
	Environmental Removal Trucking	Equipment Hauling Truck	20,000 – 40,000 lb	10 veh/day	2 enter 2 exit	2 enter 2 exit
	Demolition Workers	Passenger Vehicle	2,000 – 10,000 lb	5 veh/day	5 enter 0 exit	0 enter 5 exit
	Demolition Equipment Trucking	Equipment Hauling Truck	20,000 – 40,000 lb	5 veh/day	2 enter 2 exit	2 enter 2 exit
	Total Trips Building Demo			**33 veh/day**	**20 enter 5 exit**	**5 enter 20 exit**
Site Preparation (6 Months, Begins at Same Time as Building Demo)	Site Workers	Passenger Vehicle	2,000 – 20,000 lb	4 veh/day	4 enter 0 exit	0 enter 4 exit
	Clear & Grub Equipment Trucking	Equipment Hauling Truck	20,000 – 40,000 lb	5 veh/day	2 enter 2 exit	2 enter 2 exit
	Grading Equipment Trucking	Equipment Hauling Truck	20,000 – 40,000 lb	4 veh/day	2 enter 2 exit	2 enter 2 exit
	Site Materials Trucking	Equipment Hauling Truck	20,000 – 40,000 lb	5 veh/day	2 enter 2 exit	2 enter 2 exit
	Total Trips Site Preparation			**18 veh/day**	**10 enter 6 exit**	**6 enter 10 exit**
Solar Panel Equipment Installation (6 Months)	Racking Installers	Passenger Vehicle	2,000 – 10,000 lb	15 veh/day	15 enter 0 exit	0 enter 15 exit
	Panel Delivery Trucking	Material Truck	20,000 – 40,000 lb	39 veh/day	5 enter 5 exit	5 enter 5 exit
	Racking Delivery Trucking	Material Truck	20,000 – 40,000 lb	20 veh/day	4 enter 4 exit	4 enter 4 exit
	Electrical Equipment Trucking	Equipment Hauling Truck	20,000 – 40,000 lb	10 veh/day	2 enter 2 exit	2 enter 2 exit
	Electricians	Passenger Vehicle	2,000 – 10,000 lb	8 veh/day	8 enter 0 exit	0 enter 8 exit
	Total Trips Solar Panel Installation			**92 veh/day**	**34 enter 11 exit**	**11 enter 34 exit**

Table 2: Vehicular Trip Generation (Continued)

Project Phase (Duration)	Category	Vehicle Type	Est. Gross Vehicle Weight	Vehicles per Day	AM Peak Hour Trip Gen	PM Peak Hour Trip Gen
Construction (Continued)						
Site Commissioning (2-4 Months)	Utility Vehicle	Passenger Vehicle	2,000 – 10,000 lb	2 veh/week	0 enter 0 exit	0 enter 0 exit
Maintenance & Operation						
Typical Operation	Utility Vehicle	Passenger Vehicle	2,000 – 10,000 lb	1-2 veh/week	0 enter 0 exit	0 enter 0 exit

1. Construction Traffic Trip Generation

The majority of Project-generated traffic will occur during the Construction Phase, specifically during the Panel Installation work operations. During the anticipated six (6) month period, material & equipment deliveries and panel installation will occur. The traffic generated will primarily be passenger vehicles associated with the construction crews, with lower amounts of trucks associated with material and equipment deliveries. The construction-related trips are temporary in nature and will conclude as the various phases of construction are completed. Approximately 92 vehicles per day are anticipated during the Solar Panel Equipment phase, with approximately 45 total trips (including enter and exit trips) during the morning and afternoon peak hours.

Trucks used for material delivery are expected to be WB-67 size or smaller and will conform to local size, weight, and height restrictions. Permits will be obtained for any deviations to these requirements. Trucks used to transport certain construction equipment may require an oversize load permit, and permits will be obtained as needed.

Deliveries of construction materials and equipment will occur during normal business hours. Wherever possible, deliveries will be scheduled during off-peak times (10:00 AM to 3:30 PM) to minimize impacts during peak travel periods.

In general, traffic impacts on the adjacent roadway network due to proposed construction activities are expected to be minimal.

A linear analysis of roadway capacity was performed for the segment of Scarborough Road between US Route 9 and the project site, as this road segment is expected to experience the highest increase in vehicular trips during the construction phase (worst-case scenario). The capacity analysis is discussed in Section E: Capacity Analysis.

2. Maintenance and Operations Traffic Trip Generation

Typical operation and site maintenance are expected to generate approximately one (1) to two (2) vehicles per week, during off-peak hours. Typical operation and maintenance activities are expected to include:

- Inspection of solar panels at least once per week
- Informal site inspections and corrective maintenance as needed
- Ground maintenance of the facility during the summer growing season

Impacts on the adjacent roadway network due to maintenance & operations-related traffic are expected to be negligible. Linear roadway capacity and intersection capacity analyses were not performed due to the low magnitude of site-generated maintenance & operations traffic.

3. Site Access

The site is located at 345 Scarborough Road in the Village of Briarcliff Manor, Westchester County. Access to the site will be from an existing driveway at Holbrook Road. An existing site driveway at Scarborough Road would be removed. Primary access to the site, including all trucking, will utilize Holbrook Road and Scarborough Road to US Route 9. Traffic associated with the project will be directed to use these roadways. Some workers from more localized areas may use roadways to the north and east of the site, including Old Briarcliff Road.

E. CAPACITY ANALYSIS

1. Linear Roadway Capacity Analysis

A linear capacity analysis was performed for the segment of Scarborough Road between US Route 9 and Holbrook Road to determine if construction of the proposed solar facility would result in traffic-related impacts to the roadway. This segment was selected because it is expected to experience the highest concentration of construction-related traffic (worst-case scenario). The morning and afternoon peak hours were analyzed.

The analysis was performed using HCS7, an industry-standard software that uses methodology of the Transportation Research Board's *Highway Capacity Manual*. Existing peak hour traffic operation was analyzed and compared to operation during the solar panel installation phase of site construction, which is the construction phase with the highest number of anticipated vehicular trips. Existing traffic volumes on Scarborough Road were obtained from the *Briarcliff Manor Traffic Analysis*, Appendix A, Figure 1 (peak hour volumes on the Scarborough Road segment were estimated using the intersection turning movement counts at Scarborough Road & US Route 9).

Linear capacity is reported using Level of Service (LOS), which ranges from "A" through "F" where LOS "A" indicates free-flow traffic with minimal congestion and platooning (groups of vehicles traveling behind slower-moving vehicles), and LOS "F" represents significant congestion. Demand / capacity ratio is a corresponding measure of linear capacity and compares the volume of traffic to the theoretical capacity of the roadway. A demand / capacity ratio less than 1.0 indicates that the roadway has capacity to accommodate the volume of traffic, while a ratio of 1.0 or greater indicates that traffic volumes exceed the roadway capacity.

The linear capacity of Scarborough Road for the Existing and Construction Phase analysis periods is summarized in Table 3. Capacity analysis calculations are included in Appendix B.

Table 3: Linear Roadway Capacity Analysis

Segment	Direction	Analysis Hour	Existing		Construction Phase	
			LOS	Demand/ Capacity Ratio	LOS	Demand/ Capacity Ratio
Scarborough Rd US Route 9 to Holbrook Rd	Northbound	AM	A	0.07	A	0.09
		PM	B	0.12	B	0.13
	Southbound	AM	C	0.21	C	0.22
		PM	A	0.09	B	0.12

The linear capacity analysis indicates that the segment of Scarborough Road currently operates at LOS "C" or better and low capacity (demand / capacity ratio 0.21 or lower) during the morning and afternoon peak hours. The segment will continue to operate at LOS "C" or better with the additional site-generated construction traffic, with negligible increases to the demand / capacity ratio.

F. CONCLUSIONS

The proposed Briarcliff Solar Facility is not expected to result in significant traffic and transportation-related impacts to the surrounding roadway network. Considering the short-duration construction-related traffic as well as the long-term operation & maintenance-related traffic, the following findings and conclusions are presented:

1. The proposed Briarcliff Solar Facility construction is anticipated to begin in fall 2022 and end in the fall of 2023. Solar panel installation is anticipated in the summer of 2023.

2. During the Building Demolition phase, approximately 33 vehicles per day are expected to access the site, including passenger vehicles and equipment hauling trucks. Approximately 25 total site-generated trips are expected during the morning and afternoon peak hours.

3. During the Site Preparation phase, approximately 18 vehicles per day are expected to access the site, including passenger vehicles and equipment hauling trucks. Approximately 16 total site-generated trips are expected during the morning and afternoon peak hours.

4. During the Solar Panel Equipment Installation phase, approximately 92 vehicles per day are expected to access the site, including passenger vehicles and equipment hauling / material delivery trucks. Approximately 45 total site-generated trips are expected during the morning and afternoon peak hours.

5. During the Site Commissioning phase, approximately two vehicles per week are expected to access the site, primarily during off-peak hours.

6. During the solar facility operation, vehicular trip generation is expected to be an average of one to two vehicles per week for maintenance of the equipment and grounds.

7. The primary route for access to the site will utilize Scarborough Road, Holbrook Road and US Route 9.

8. The solar panel installation phase is the most intensive construction activity. The site-generated traffic is not expected to significantly affect traffic operation on the segment of Scarborough Road between US Route 9 and Holbrook Road. The linear roadway analysis indicates traffic operation with minimal delay and Level of Service of "C" or better, and sufficient capacity to accommodate the construction-related traffic.

9. Trucks used during the construction phase are anticipated to be WB-67 size or smaller, and will conform to size, weight, and height requirements. An oversize load permit will be obtained for any vehicle that does not conform to these requirements. The primary access route does not involve conveyance over any weight-restricted or load-restricted structure or roadway.

In summary, as proposed, the Briarcliff Solar Facility is not expected to result in any adverse traffic or transportation-related impacts on roadways within the project area.

APPENDIX A

Briarcliff Manor Traffic Analysis

(Previous Traffic Analysis Completed within Study Area)

TECHNICAL MEMORANDUM

BRIARCLIFF MANOR TRAFFIC ANALYSIS

Village of Briarcliff Manor, Westchester County, NY

Prepared by

Provident Design Engineering, PLLC

7 Skyline Drive

Hawthorne, New York

In Association with

Village of Briarcliff Manor

1111 Pleasantville Road

Briarcliff Manor, NY

January 9, 2020

PDE Project No. 19-032

TABLE OF CONTENTS

DESCRIPTION	PAGE
Introduction	1
Roadway Descriptions	1
Intersections	2
Traffic Volumes	3
Traffic Analyes/Levels of Service	4
Speed Data Analysis	7
Sight Distance Evaluations	8
Conclusions	12

Introduction

Provident Design Engineering, PLLC (Provident), on behalf of the Village of Briarcliff Manor, has prepared this Technical Memorandum – Briarcliff Manor Traffic Analysis to establish base traffic data at various locations within the Village. The analysis includes various roadways and intersections that were considered to be some of the key traffic locations within the Village. These roadways and intersections were determined through discussions with representatives of the Village.

The roadways studied are listed below:

- Pleasantville Road
- Old Briarcliff Road
- Scarborough Road
- Route 9 (South Highland Avenue/Albany Post Road)

Eight (8) Automatic Traffic Recorders (ATRs) were installed along different sections of the above roadways.

The following six (6) intersections were also studied, including traffic counts and Synchro Capacity Analyses:

- Pleasantville Road and Briarcliff High School Driveway
- Pleasantville Road and Poplar Road
- Pleasantville Road and Old Briarcliff Road
- Scarborough Road and Old Briarcliff Road
- Scarborough Road and Holbrook Road
- Scarborough Road and Route 9

These intersections were analyzed for vehicular traffic and pedestrian traffic to determine current traffic operating conditions.

Provident obtained traffic and pedestrian counts as well as existing geometry and traffic signal timings. Additional data was obtained from Westchester County and the New York State Department of Transportation (NYSDOT) including traffic signal timings and traffic volumes.

Roadway Descriptions

Pleasantville Road begins in the west at the signalized T-intersection with Croton Avenue in the Town of Ossining. It then travels southeast past the unsignalized T-intersection with Underhill Road where it enters the Village of Briarcliff Manor. It continues southeast until it hits the signalized T-intersection with South State Road, at which point the road turns and goes east. The

road continues in the eastern direction and enters the Village of Pleasantville after the unsignalized T-intersection with Round Hill Drive. In the Village of Pleasantville, the road continues east and ends at the signalized T-intersection with Bedford Road.

Old Briarcliff Road begins in the north at the unsignalized T-intersection with Pleasantville Road in the Village of Briarcliff. It runs south and ends at the unsignalized T-intersection with Scarborough Road.

Scarborough Road begins in the west at the signalized T-intersection with South Highland Avenue/Albany Post Road in the Village of Briarcliff Manor. The road runs in the northeast direction until it hits the unsignalized T-intersection with Holbrook Road where it turns to the east. From here it continues east until it hits the unsignalized four-way intersection with Dalmeny Road, Pine Road, and Fountain Road, at this point it ends and continues as Dalmeny Road.

South Highland Avenue/Albany Post Road is State Route 9 and it runs in the north/south direction throughout the State of New York. However, in the Village of Briarcliff this road begins in the south at the unsignalized T-intersection with Sleepy Hollow Road. It travels north and ends at the unsignalized T-intersection with Charter Circle at which point it enters the Town of Ossining.

Intersections

Based upon discussions with the Village, it was determined that the following six signalized/unsignalized intersections should be included in the traffic analysis, two (2) of which are signalized and four (4) that are unsignalized.

1. Pleasantville Road and Briarcliff High School Driveway (Signalized)
2. Pleasantville Road and Poplar Road (Unsignalized)
3. Pleasantville Road and Old Briarcliff Road (Unsignalized)
4. Scarborough Road and Old Briarcliff Road (Unsignalized)
5. Scarborough Road and Holbrook Road (Unsignalized)
6. Scarborough Road and Route 9 (Signalized)

The intersection of Pleasantville Road and Briarcliff High School Driveway forms a three-legged signalized intersection. The Briarcliff High School Driveway consists of one lane in each direction and forms the eastbound approach. This eastbound approach provides a left-turn lane and right-turn lane for those going east. Pleasantville Road consists of one lane in each direction and forms the northbound and southbound approaches.

Pleasantville Road and Poplar Road form a three-legged unsignalized intersection controlled by a Stop sign facing the Poplar Road eastbound approach. Poplar Road consists of one lane in each

direction and forms the eastbound approach. While Pleasantville Road consists of one lane in each direction and forms the northbound and southbound approaches.

The intersection of Pleasantville Road and Old Briarcliff Road form a three-legged unsignalized intersection controlled by a Stop sign facing the Old Briarcliff Road northbound approach. Old Briarcliff Road consists of one lane in each direction and forms the northbound approach while Pleasantville Road consists of one lane in each direction and forms the eastbound and westbound approaches.

Scarborough Road and Old Briarcliff Road form a three-legged unsignalized intersection controlled by a Stop sign facing the Old Briarcliff Road southbound approach. Scarborough Road consists of one lane in the eastbound direction and a thru lane and left-turn lane in the westbound direction to form the eastbound and westbound approaches. Old Briarcliff Road consists of one lane in each direction and forms the southbound approach.

The intersection of Scarborough Road and Holbrook Road form a three-legged unsignalized intersection. Holbrook Road consists of one lane in each direction and forms the southbound approach. Scarborough Road consists of one lane in each and forms the westbound and northbound approaches. There is a Stop Sign facing the Holbrook Road southbound approach as well as the Scarborough Road northbound approach. There is no Stop Sign facing the Scarborough Road westbound approach. Thus, this is not a typical intersection control arrangement but there did not appear to be significant driver confusion. Additional signage could be provided.

South Highland Avenue and Scarborough Road form a signalized three-legged intersection. Scarborough Road consists of one lane in each direction and forms the westbound approach. South Highland Avenue consists of two lanes in each direction and forms the southbound and northbound approaches. During field visits it was observed that this intersection is coordinated with the intersection of South Highland Avenue and Scarborough Station Road. As a result, this intersection was also studied. Peak Hour back-ups do occur at various locations along South Highland Avenue.

Traffic Volumes

Provident conducted traffic counts (vehicular and pedestrian) at the six intersections identified above on two weekdays and on one weekend. The list below identifies the time periods counted for each day.

- Thursday, October 17, 2019 – (6:30 AM – 9:30 AM; 2:30 PM – 7:00 PM)
- Saturday, October 19, 2019 – (10:00 AM – 2:00 PM)
- Thursday, October 24, 2019 – (6:30 AM – 9:30 AM; 2:30 PM – 7:00 PM)

Based upon the traffic counts conducted, the following overall Peak Roadway Hours were determined:

- Thursday, October 17, 2019 – (7:00 AM – 8:00 AM; 5:00 PM – 6:00 PM)
- Saturday, October 19, 2019 – (12:00 PM – 1:00 PM)
- Thursday, October 24, 2019 – (7:15 AM – 8:15 AM; 5:00 PM – 6:00 PM)

Since there were two weekdays counted, the weekday with the larger volumes was utilized for analysis purposes. As a result, the data for Thursday, October 24, 2019 was utilized and is summarized in Figure 1 in Appendix A.

Provident also conducted ATR counts at eight (8) locations which are listed below:

1. On Pleasantville Road between Mulberry Road and Central Drive
2. On Pleasantville Road between Central Van Lu Van Road and Southern Van Lu Van Road
3. On Pleasantville Road between Round Hill Drive and Woodfield Road
4. On Old Briarcliff Road between Pleasantville Road and Central Drive West
5. On Scarborough Road between Holbrook Road and Old Briarcliff Road
6. On Scarborough Road between Old Briarcliff Road and Sleepy Hollow Road
7. On Scarborough Road between Sleepy Hollow Road and Lodge Road
8. On South Highland Avenue south of Scarborough Road

The ATR counts were conducted for 24 hours a day for a full week between Saturday, October 19 and Sunday, October 27. It should be noted that for Location 2, there were technical issues (the traffic counting tube became damaged) with the southbound data, and as a result this data was collected between Thursday, December 5 to Tuesday, December 10 (removed one day early due to snow). The data is summarized in Table 1 in Appendix B.

Additional data was obtained from Westchester County and the New York State Department of Transportation (NYSDOT) including traffic signal timings and traffic volumes. In addition, this traffic volume data was then compared to the traffic counts conducted by Provident and the results demonstrated similar volumes. This data is contained in Appendix C.

Traffic Analysis/Levels of Service

Capacity analyses were conducted at the key intersections to identify the existing traffic conditions. Capacity analysis is a method by which traffic volumes are compared to calculated roadway and intersection capacities to evaluate future traffic conditions. The methodology utilized is described in the Highway Capacity Manual published by the Transportation Research Board. In

general, the term "Level of Service" is used to provide a qualitative evaluation based on certain quantitative calculations related to empirical values.

In general, Level of Service A represents the best traffic operating condition. Levels of Service for signalized and unsignalized intersections are defined in terms of average delay. Delay is used as a measure of driver discomfort, frustration, efficiency, etc. The table below breaks out the delay range standards for each Level of Service.

Level of Service	**Signalized Intersection Average Control Delay (sec/veh)**	**Unsignalized Intersection Average Control Delay (sec/veh)**
A	≤10	0 – 10
B	>10 – 20	>10 – 15
C	>20 – 35	>15 – 25
D	>35 – 55	>25 – 35
E	>55 – 80	>35 – 50
F	>80	>50

Capacity analyses were performed for the key locations with the Existing Traffic Volumes for both the Overall Peak Hour and the Individual Intersection Peak Hour utilizing the Highway Capacity Software (Synchro) developed for the FHWA. The Synchro Analyses are contained in Appendix D.

The following tables provide a summary of the Levels of Service (LOS). Levels of Service for signalized intersections are illustrated in Upper Case Letters while lower case letters are utilized for unsignalized intersections (Stop sign control).

Levels of Service Summary Table – Overall Village-wide Peak Hour			
	Peak AM Hour (7:15 – 8:15)	**Peak PM Hour (5:00 – 6:00)**	**Peak SAT Hour (12:00 – 1:00)**
Pleasantville Road and Briarcliff High School Driveway	B 13.2	A 8.7	A 6.5
Pleasantville Road and Poplar Road	c 15.5	b 11.8	b 11.3
Pleasantville Road and Old Briarcliff Road	d 33.1	d 28.1	c 17.4
Scarborough Road and Old Briarcliff Manor	b 10.1	a 9.8	a 9.6
Scarborough Road and Holbrook Road	c 23.2	b 11.6	b 11.0

Scarborough Road and Albany Post Road (Route 9)	C 26.3	C 23.6	B 14.0

As illustrated in the table above, most of the intersection with the exception of Pleasantville Road and Old Briarcliff Road operate at an acceptable overall Level of Service (LOS) of "C" or better.

In order to provide a more conservative analysis, the individual Intersection Peak Hour was also analyzed at each intersection, as different sections of the Village peak at different times. The table below summarizes these results.

Levels of Service Summary Table – Peak Hour by Individual Intersection			
	Peak AM Hour (Varies)	**Peak PM Hour (Varies)**	**Peak SAT Hour (Varies)**
Pleasantville Road and Briarcliff High School Driveway	B 13.2	A 8.7	A 6.5
Pleasantville Road and Poplar Road	c 15.6	b 11.8	b 11.3
Pleasantville Road and Old Briarcliff Road	d 33.1	d 27.1	c 17.4
Scarborough Road and Old Briarcliff Manor	b 10.4	a 9.7	a 9.6
Scarborough Road and Holbrook Road	c 24.0	b 11.8	b 11.0
Scarborough Road and Albany Post Road (Route 9)	D 36.2	C 20.9	B 13.9

Note: The detailed Peak Times for each intersection are illustrated on Figure 2.

As illustrated in the tables above, many of the LOS are very similar to the previous analysis. The one exception is the intersection of Scarborough Road and Albany Post Road in the Peak AM Hour, that shows a LOS "C" when the Overall Village-wide Peak Hour is utilized and a LOS "D" when the Peak Hour by Individual Intersection is utilized. This difference is due to the additional traffic that goes to and from the Scarborough Train Station.

The following intersections have Levels of Service operating at "D" or worse:

- Pleasantville Road and Old Briarcliff Road during the Weekday AM and PM Peak Hours.
- Scarborough Road and Albany Post Road during the Weekday AM Peak Hour. The Scarborough Road approach at this intersection is operating at Level of Service "F" during this time.

In addition to the above intersections, the following individual lane groups at the other intersections currently operate at LOS "D" or worse:

- The left-turn lane on Briarcliff High School Driveway at Pleasantville Road in the Weekday Peak AM Hour.
- The Scarborough Road approach at Albany Post Road during the Weekday PM Peak Hour.
- The Old Briarcliff Road approach to Pleasantville Road.

Speed Data Analysis

Provident determined the Average and 85th Percentile Speeds for the roads where the ATRs were located. The table below summarizes our findings.

Speed Data Summary Table

Location	Posted Speed Limit (mph)	Northbound/Eastbound		Southbound/Westbound	
		Average (mph)	85th Percentile (mph)	Average (mph)	85th Percentile (mph)
1. On Pleasantville Road between Mulberry Road and Central Drive	30	37	43	36	42
2. On Pleasantville Road between Central Van Lu Van Road and Southern Van Lu Van Road	30	29	33	24	28
3. On Pleasantville Road between Round Hill Drive and Woodfield Road	30	41	46	37	43
4. On Old Briarcliff Road between Pleasantville Road and Central Drive West	30	33	39	33	39
5. On Scarborough Road between Holbrook Road and Old Briarcliff Road	30	27	30	31	36
6. On Scarborough Road between Old Briarcliff Road and Sleepy Hollow Road	30	32	38	32	38
7. On Scarborough Road between Sleepy Hollow Road and Lodge Road	30	25	30	29	35
8. On South Highland Avenue south of Scarborough Road	40	38	46	36	42

Note: Speeds that are underlined represent Eastbound/Westbound speeds.

As is illustrated in the table, the majority of the average speeds observed are above the posted speed limit. Two locations on Pleasantville Road experience average speeds that are significantly higher than the posted speed limit.

More detailed speed limit data is contained in Appendix B.

Sight Distance Evaluations

Provident performed Sight Distance Evaluations at each of the intersections. The sight distances evaluated are based upon the American Association of State Highway and Transportation Officials (AASHTO) standards.

Sight distance requirements are different for signalized versus unsignalized intersections. For unsignalized intersection, the following describes each sight line evaluated.

1. Exiting sight line that is 14.5 feet back from the edge of travel way and looking to the right to the approaching vehicle. The Driver's eye is at a height of 3.5 feet and the approaching vehicle's height is 3.5 feet.
2. Exiting sight line that is 14.5 feet from the edge of travel way and looking to the left to the approaching vehicle. The Driver's eye is at a height of 3.5 feet and the approaching vehicle's height is 3.5 feet.
3. Rear end sight line for the left turn entering vehicle from a vehicle approaching from the same direction. The Driver's eye is at a height of 3.5 feet and the approaching vehicle's height is 2 feet.
4. Sight line from the left turn entering vehicle to a vehicle approaching from the opposite direction. The Driver's eye is at a height of 3.5 feet and the approaching vehicle's height is 3.5 feet.
5. Rear end sight line for the right turn entering vehicle from a vehicle approaching from the same direction. The Driver's eye is at a height of 3.5 feet and the approaching vehicle's height is 2 feet.

All roads that were evaluated for unsignalized intersections are signed to have 30 MPH speed limits. The Stopping Sight Distances are the minimum "Required" sight distances. The other sight distances are the 'Recommended" sight distances. The sight distance measurements in comparison to the recommended and required sight distances are summarized in the following tables:

Sight Distance Table 1 – Pleasantville Road and Poplar Road				
Sight Distance Description	**Measured (Feet)**	**30 MPH (Feet)**	**35 MPH (Feet)**	**85th Percentile 43 MPH (Feet)**
1. Left Turn from Stop – Poplar Road Eastbound looking right	~560	335	390	500
2. Right/Left Turn from Stop – Poplar Road Eastbound looking left	+450	290/335	335/390	430/500
3. Stopping Sight Distance – Pleasantville Road Southbound	~400	200	250	360
4. Stopping Sight Distance – Pleasantville Road Northbound	+450	200	250	360
5. Left Turn from Major Road – Pleasantville Road Northbound	~375	245	285	365
6. Stopping Sight Distance – Poplar Road Eastbound	~240	200	250	-

As illustrated above, when the observed sightlines are evaluated using the posted roadway speed limit of 30 MPH, all the sightlines provide sufficient sight distance. When the observed sightlines are evaluated using the observed 85th Percentile speed of 43 MPH along Pleasantville Road, all movements that experience this speed also meet the minimum recommended sight distance, except looking left from Poplar Road is slightly short. All required sight distances are met.

Sight Distance Table 2 – Pleasantville Road and Old Briarcliff Road				
Sight Distance Description	**Measured (Feet)**	**30 MPH (Feet)**	**35 MPH (Feet)**	**85th Percentile 43 MPH (Feet)**
1. Left Turn from Stop – Old Briarcliff Road Eastbound looking right	~215	335	390	500
2. Right/Left Turn from Stop – Old Briarcliff Road looking left	~220	290/335	335/390	430/500
3. Stopping Sight Distance – Pleasantville Road Eastbound	~275	200	250	360
4. Stopping Sight Distance – Pleasantville Road Westbound	~240	200	250	360
5. Left Turn from Major Road – Pleasantville Road Eastbound	~375	245	285	365
6. Stopping Sight Distance – Old Briarcliff Road Northbound	+400	200	250	-

Based on the observations made above, only the Northbound Stopping Sight Distance and the Left Turn from Major Road meet the recommended distances for both the Speed Limit on the road and the observed 85th Percentile Speed. The sight distance limitations are the result of the geometry and the curvature of the roads as well as the vegetation and walls at this intersection. The Stopping Sight Distance for both the Eastbound and Westbound Pleasantville Road are met for the Posted Speed Limit but are not met for the 85th Percentile Speed. Both are signed with "Intersection Ahead" signs. The "Left Turn from Stop" and "Right Turn from Stop" also do not meet the recommended distances. In order to improve these conditions, a potential recommendation is to remove vegetation and cut back rock on the southern side of Pleasantville Road to improve visibility. In addition, painting the word "Stop" on the Old Briarcliff Road approach may be beneficial to alert drivers of the intersection, but will not improve sight distance. It should be noted that the ATR speed data used for this intersection is further east on Pleasantville Road than this location, however it was used in order to be conservative.

Sight Distance Table 3 – Scarborough Road and Old Briarcliff Road				
Sight Distance Description	**Measured (Feet)**	**30 MPH (Feet)**	**35 MPH (Feet)**	**85th Percentile 38 MPH (Feet)**
1. Left Turn from Stop – Old Briarcliff Road Southbound looking right	+450	335	390	445
2. Right/Left Turn from Stop – Old Briarcliff Road Southbound looking left	+450	290/335	335/390	385/445
3. Stopping Sight Distance – Scarborough Westbound	+400	200	250	305

4. Stopping Sight Distance – Scarborough Road Eastbound	~350	200	250	305
5. Left Turn from Major Road – Scarborough Road Eastbound	+450	245	285	325
6. Stopping Sight Distance – Old Briarcliff Road Southbound	~170	200	250	-

At this intersection all sightlines are met for both the Roadway Speed Limit and for the observed 85th Percentile Speed, except for the Southbound Stopping Sight Distance along Old Briarcliff Road. This is due to the curvature of the road and the residence (vegetation and fence) adjacent to the intersection. In order to improve this condition, it is recommended that a "Stop Ahead" sign be installed prior to the intersection on Old Briarcliff Road. At the intersection, the word "Stop" should be painted on the road for the Old Briarcliff Road approach. Removal of the vegetation and fence would also be beneficial but they appear to be on private property.

Sight Distance Table 4 – Scarborough Road and Holbrook Road				
Sight Distance Description	**Measured (Feet)**	**30 MPH (Feet)**	**35 MPH (Feet)**	**85th Percentile 33 MPH (Feet)**
1. Left Turn from Stop - Holbrook Road Southbound (looking straight ahead)	+400	335	390	390
2. Right/Left Turn from Stop – Holbrook Road Southbound (looking left)	~160	290/335	335/390	335/390
3. Right/Left Turn from Stop – Scarborough Road Northbound (looking straight ahead)	+400	290/335	335/390	335/390
4. Left Turn from Stop – Scarborough Road Northbound (looking right)	~390	335	390	390
5. Stopping Sight Distance – Scarborough Road Northbound	+400	200	250	250
6. Stopping Sight Distance – Holbrook Road Southbound	+400	200	250	250
7. Stopping Sight Distance – Scarborough Road Westbound	+400	200	250	250

As illustrated above, all Stopping Sight Distances (the required sight distances) as well as the Southbound "Right Turn from Stop", the Northbound "Left Turn from Stop", and the Northbound "Right Turn from Stop" sightlines meet the recommended distances for both the Roadway Speed Limit and the observed 85th Percentile Speed. However, the southbound Holbrook Road looking left sightline does not meet any of the recommended distances for the Speed Limits evaluated, which is due to the geometry of the roadway and the location of a residential home (wall and vegetation) at the corner of this intersection. As a result, it is recommended that a "Cross Traffic Does Not Stop" on Southbound Holbrook Road and Northbound Scarborough Road be installed. Clearing of some of the vegetation would also be beneficial, but appears to be on private property and the wall also limits the sight distance and would need to be lowered.

For signalized intersections, AASHTO recommends that there be enough sight distance for the first stopped vehicle at one approach to be able to see the first vehicle stopped at all the other approaches. In addition, Left-turning vehicles should have sufficient sight distance to select gaps in oncoming traffic and complete left turns. Lastly, if at an intersection, Right Turns on Red are

allowed, then the sight line looking to the left should be provided to accommodate right turns from that approach.

Sight Distance Table 5 – Pleasantville Road and Briarcliff High School Driveway				
Sight Distance Description	**Measured (Feet)**	**30 MPH (Feet)**	**35 MPH (Feet)**	**85th Percentile 43 MPH (Feet)**
1. Right Turn from Stop – High School Driveway Eastbound	+450	290	335	430
2. Left Turn from Major Road – Pleasantville Road Northbound	+450	245	285	365

At the signalized intersection of Pleasantville Road and Briarcliff High School Driveway, the sightlines for the signal heads were evaluated. For the Southbound Pleasantville Road approach and the High School Driveway, there is sufficient sight distance to see the signal heads. It was observed that there are some issues for the Northbound Pleasantville Road approach, and it is recommended that a "Signal Ahead" sign be installed in advance of the intersection. There is also sufficient sight distance for the first stopped vehicle at any of the approaches to see the first stopped vehicles at all other approaches. In addition, it was observed that it would be beneficial to have the Traffic Signal updated in order to have the appropriate signal head sizes. Based on observations, the intersection currently has 8" signal heads and 12" signal heads are recommended. This traffic signal is under the Village of Briarcliff Manor jurisdiction.

Sight Distance Table 6 – S. Highland Avenue (Route 9) and Scarborough Road				
Sight Distance Description	**Measured (Feet)**	**30 MPH (Feet)**	**35 MPH (Feet)**	**85th Percentile 42 MPH (Feet)**
1. Left Turn from Major Road – S. Highland Avenue Southbound	+450	245	285	365
2. Left Turn from Major Road – S. Highland Avenue Northbound	+450	245	285	365

At the signalized intersection of South Highland Avenue (Route 9) and Scarborough Road, the sightlines for the signal heads were also evaluated. It was observed that all of the approaches have a "No Turn on Red" sign and sufficient sightline distances. There is also sufficient sight distance for the first stopped vehicle at any of the approaches to see the first stopped vehicles at all other approaches. However, it was observed that some of the signal heads at the intersection are the 8" signal head. Thus, these should be updated to be the 12" signal heads. This traffic signal is under the jurisdiction of the NYSDOT and is coordinated with the traffic signal at Scarborough Station Road.

Conclusions

This Study forms a basis of traffic volumes throughout the Village. ATR volume and speed counts were conducted along with intersection traffic counts.

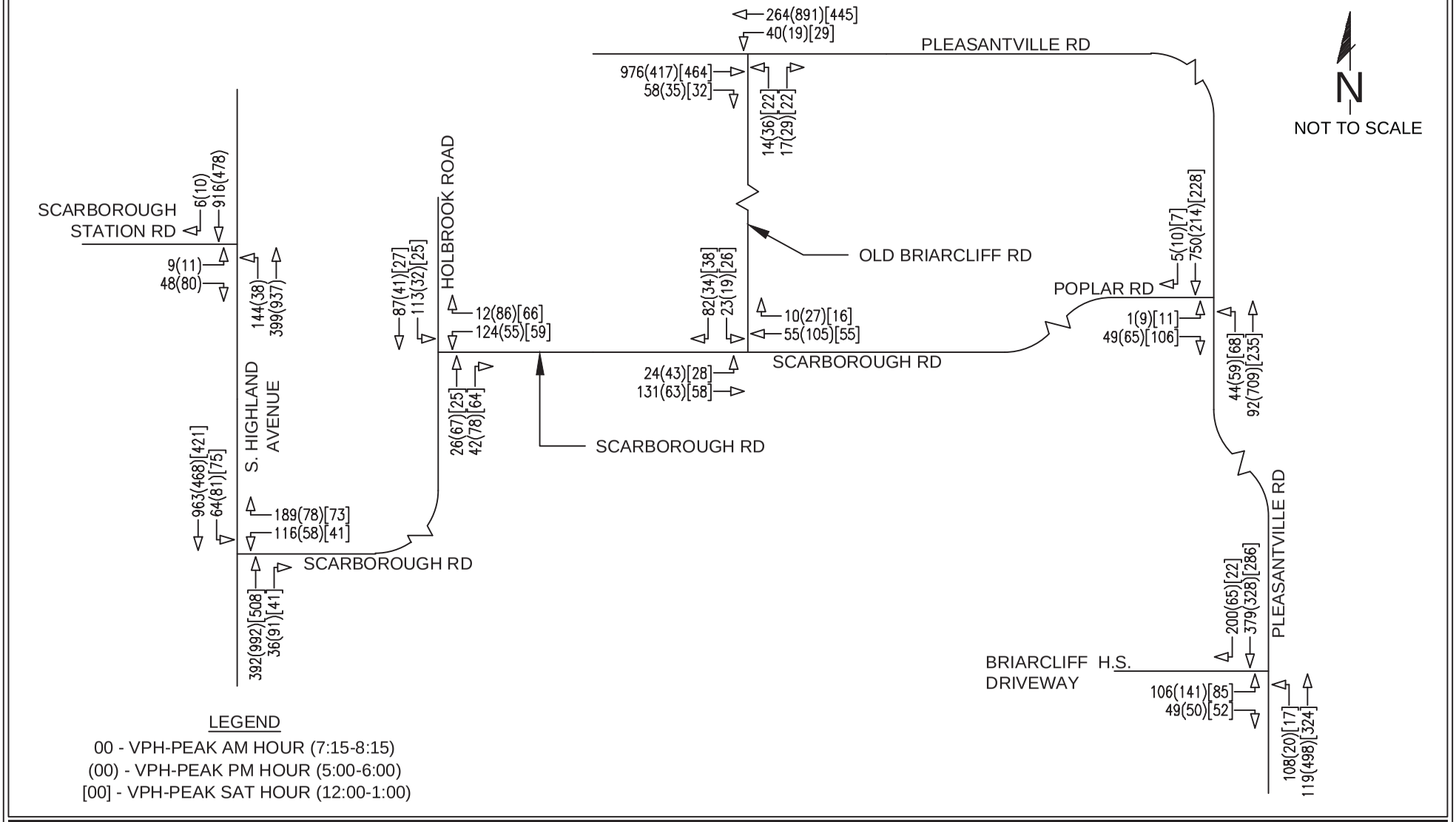
Level of Service intersection Capacity Analyses were also performed which indicated that some intersections and some individual movements currently operate at Level of Service "D" or worse during the Peak Hours.

Sight Distance Analyses were also performed. There are sight distance limitations at various intersections, particularly at some of the unsignalized intersections.

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APPENDIX A
TRAFFIC FIGURES AND LEVELS OF SERVICE TABLES

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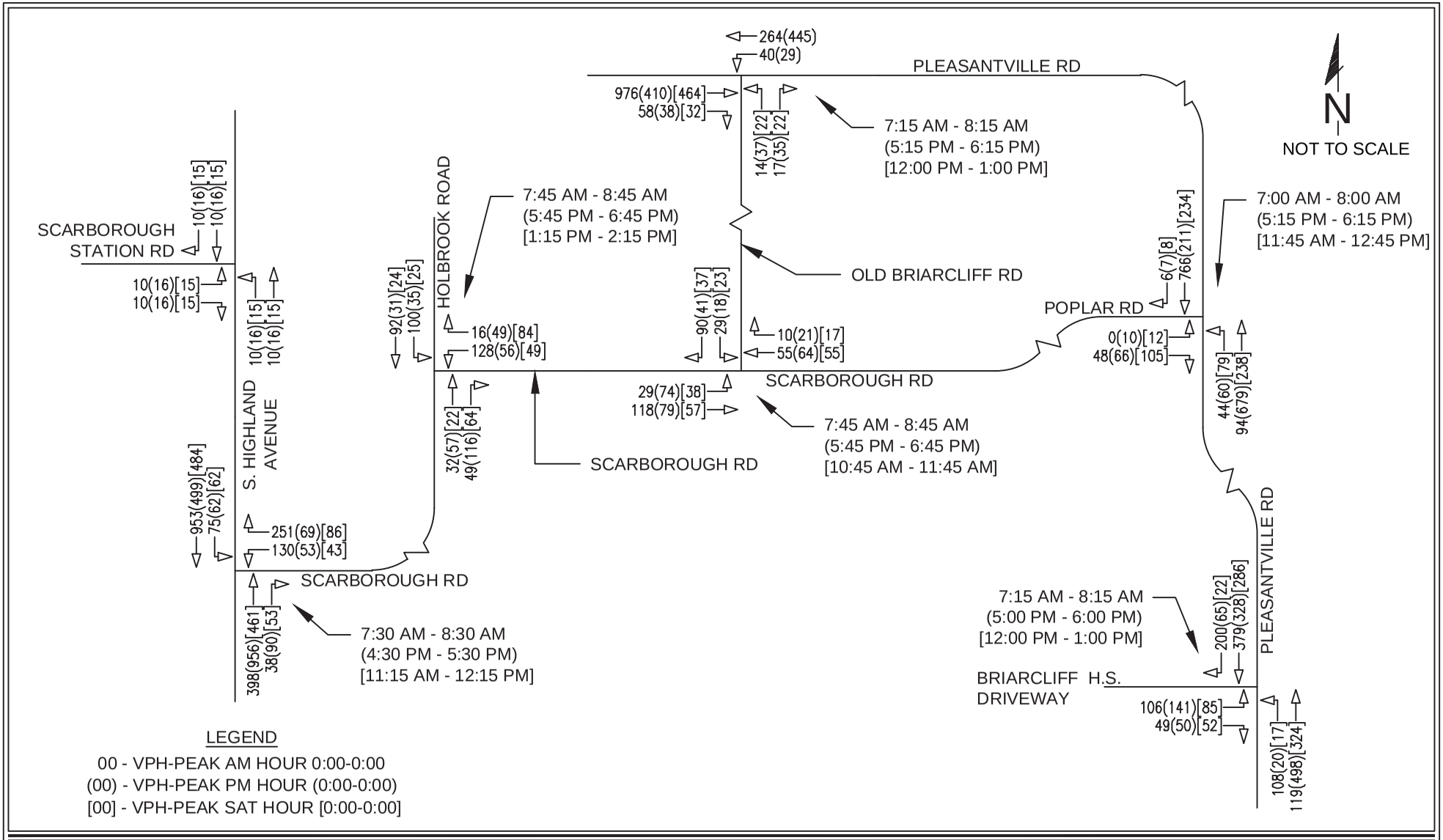
Project No. 19-032
December 2019

Existing Traffic Volumes

Briarcliff Manor, NY

Figure No.01

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Provident design engineering

Project No. 19-032
December 2019

Existing Traffic Volumes by Intersection Peak Hour

Briarcliff Manor, NY

Figure No.02

TABLE NO. 1

PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE

Pleasantville Road & Briarcliff Manor High School Driveway

APPROACH		PEAK AM HOUR (7:15 - 8:15)	PEAK PM HOUR (5:00 - 6:00)	PEAK SAT HOUR (12:00 - 1:00)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Pleasantville Road				
NB	LT	A 9.8	A 8.7	A 6.5
SB	TR	A 9.3	A 7.0	A 6.0
Briarcliff Manor High School Driveway				
EB	L	D 42.9	B 14.1	A 9.4
	R	B 10.4	A 5.6	A 4.2
	OVERALL	C 32.6	B 11.9	A 7.4
INTERSECTION		**B 13.2**	**A 8.7**	**A 6.5**

TABLE NO. 2

PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE

Pleasantville Road and Poplar Road

APPROACH		PEAK AM HOUR (7:15 - 8:15)	PEAK PM HOUR (5:00 - 6:00)	PEAK SAT HOUR (12:00 - 1:00)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Pleasantville Road				
NB	LT	a 9.5	a 7.8	a 8.0
SB	TR	- 0.0	- 0.0	- 0.0
Poplar Road				
EB	LR	c 15.5	b 11.8	b 11.3

TABLE NO. 3

PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE

Pleasantville Road and Old Briarcliff Road

APPROACH		PEAK AM HOUR (7:15 - 8:15)	PEAK PM HOUR (5:00 - 6:00)	PEAK SAT HOUR (12:00 - 1:00)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Old Briarcliff Road				
NB	LR	d 33.1	d 28.1	c 17.4
Pleasantville Road				
EB	TR	- 0.0	- 0.0	- 0.0
WB	LT	b 11.6	a 8.4	a 8.6

TABLE NO. 4

PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE

Scarborough Road and Old Briarcliff Road

APPROACH		PEAK AM HOUR (7:15 - 8:15)	PEAK PM HOUR (5:00 - 6:00)	PEAK SAT HOUR (12:00 - 1:00)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Old Briarcliff Road				
SB	LR	b 10.1	a 9.8	a 9.6
Scarborough Road				
EB	LT	a 7.5	a 7.6	a 7.5
WB	TR	- 0.0	- 0.0	- 0.0

TABLE NO. 5

PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE

Scarborough Road and Holbrook Road

APPROACH		PEAK AM HOUR (7:15 - 8:15)	PEAK PM HOUR (5:00 - 6:00)	PEAK SAT HOUR (12:00 - 1:00)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Scarborough Road				
NB	TR	b 10.4	b 10.3	a 9.4
Holbrook Road				
SB	LT	c 23.2	b 11.6	b 11.0
Scarborough Road				
WB	LR	a 6.9	a 3.0	a 3.6

TABLE NO. 6

PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE

Scarborough Road and Albany Post Road (Route 9)

APPROACH		PEAK AM HOUR (7:15 - 8:15)	PEAK PM HOUR (5:00 - 6:00)	PEAK SAT HOUR (12:00 - 1:00)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Albany Post Road (Route 9)				
NB	TR	C 31.1	C 30.8	C 21.1
SB	LT	B 10.3	A 3.8	A 2.0
Scarborough Road				
WB	LR	E 73.2	D 46.0	C 31.6
INTERSECTION		**C 26.3**	**C 23.6**	**B 14.0**

TABLE NO. 7

PEAK HOUR BY INTERSECTION LEVEL OF SERVICE SUMMARY TABLE

Pleasantville Road & Briarcliff High School Driveway

APPROACH		PEAK AM HOUR (7:15 - 8:15)	PEAK PM HOUR (5:00 - 6:00)	PEAK SAT HOUR (12:00 - 1:00)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Pleasantville Road				
NB	LT	A 9.8	A 8.7	A 6.5
SB	TR	A 9.3	A 7.0	A 6.0
Briarcliff High School Driveway				
EB	L	D 42.9	B 14.1	A 9.4
	R	B 10.4	A 5.6	A 4.2
	OVERALL	C 32.6	B 11.9	A 7.4
INTERSECTION		**B 13.2**	**A 8.7**	**A 6.5**

TABLE NO. 8

PEAK HOUR BY INTERSECTION LEVEL OF SERVICE SUMMARY TABLE

Pleasantville Road and Poplar Road

APPROACH		PEAK AM HOUR (7:00 - 8:00)	PEAK PM HOUR (5:15 - 6:15)	PEAK SAT HOUR (11:45 - 12:45)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Pleasantville Road				
NB	LT	a 9.6	a 7.8	a 8.0
SB	TR	- 0.0	- 0.0	- 0.0
Poplar Road				
EB	LR	c 15.6	b 11.8	b 11.3

TABLE NO. 9

PEAK HOUR BY INTERSECTION LEVEL OF SERVICE SUMMARY TABLE

Pleasantville Road and Old Briarcliff Road

APPROACH		PEAK AM HOUR (7:15 - 8:15)	PEAK PM HOUR (5:15 - 6:15)	PEAK SAT HOUR (12:00 - 1:00)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Old Briarcliff Road				
NB	LR	d 33.1	d 27.1	c 17.4
Pleasantville Road				
EB	TR	- 0.0	- 0.0	- 0.0
WB	LT	b 11.6	a 8.3	a 8.6

TABLE NO. 10

PEAK HOUR BY INTERSECTION LEVEL OF SERVICE SUMMARY TABLE

Scarborough Road and Old Briarcliff Road

APPROACH		PEAK AM HOUR (7:45 - 8:45)	PEAK PM HOUR (5:45 - 6:45)	PEAK SAT HOUR (10:45 - 11:45)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Old Briarcliff Road				
SB	LR	b 10.4	a 9.7	a 9.6
Scarborough Road				
EB	LT	a 7.5	a 7.5	a 7.5
WB	TR	- 0.0	- 0.0	- 0.0

TABLE NO. 11

PEAK HOUR BY INTERSECTION LEVEL OF SERVICE SUMMARY TABLE

Scarborough Road and Holbrook Road

APPROACH		PEAK AM HOUR (7:45 - 8:45)	PEAK PM HOUR (5:45 - 6:45)	PEAK SAT HOUR (1:15 - 2:15)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Scarborough Road				
NB	TR	b 10.8	a 9.9	a 9.4
Holbrook Road				
SB	LT	c 24.0	b 11.8	b 11.0
Scarborough Road				
WB	LR	a 6.8	a 4.0	a 3.6

TABLE NO. 12

PEAK HOUR BY INTERSECTION LEVEL OF SERVICE SUMMARY TABLE

Scarborough Road and Albany Post Road (Route 9)

APPROACH		PEAK AM HOUR (7:30 - 8:30)	PEAK PM HOUR (4:30 - 5:30)	PEAK SAT HOUR (11:15 - 12:15)
		2019 EXISTING	**2019 EXISTING**	**2019 EXISTING**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Albany Post Road (Route 9)				
NB	TR	C 32.1	C 27.8	C 21.8
SB	LT	C 20.5	A 2.8	A 2.3
Scarborough Road				
WB	LR	F 88.3	D 44.3	C 31.1
INTERSECTION		**D** **36.2**	**C** **20.9**	**B** **13.9**

APPENDIX B

Linear Roadway Capacity Analysis

HCS7 Two-Lane Highway Report

Project Information

Analyst	LaBella Associates DPC	Date	8/1/2022
Agency		Analysis Year	2022
Jurisdiction	Village of Briarcliff Manor	Time Analyzed	Existing AM Peak - Northbound
Project Description	Briarcliff Solar	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	30	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	118	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	23.2
Speed Slope Coefficient	1.81942	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.30037	PF Power Coefficient	0.61347
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	22.9

Vehicle Results

Average Speed, mi/h	22.9	Percent Followers, %	29.5
Segment Travel Time, minutes	2.62	Follower Density, followers/mi/ln	1.5
Vehicle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.5	A

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HCS7 Two-Lane Highway Report

Project Information

Analyst	LaBella Associates DPC	Date	8/1/2022
Agency		Analysis Year	2022
Jurisdiction	Village of Briarcliff Manor	Time Analyzed	Existing AM Peak - Southbound
Project Description	Briarcliff Solar	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	30	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	359	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.21

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	23.2
Speed Slope Coefficient	1.81942	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.30037	PF Power Coefficient	0.61347
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	22.2

Vehicle Results

Average Speed, mi/h	22.2	Percent Followers, %	50.0
Segment Travel Time, minutes	2.70	Follower Density, followers/mi/ln	8.1
Vehicle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	8.1	C

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HCS7 Two-Lane Highway Report

Project Information

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Jurisdiction	Village of Briarcliff Manor	Time Analyzed	Existing PM Peak - Northbound
Project Description	Briarcliff Solar	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	30	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	202	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	23.2
Speed Slope Coefficient	1.81942	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.30037	PF Power Coefficient	0.61347
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	22.5

Vehicle Results

Average Speed, mi/h	22.5	Percent Followers, %	38.6
Segment Travel Time, minutes	2.66	Follower Density, followers/mi/ln	3.5
Vehicle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.5	B

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HCS7 Two-Lane Highway Report

Project Information

Analyst	LaBella Associates DPC	Date	8/1/2022
Agency		Analysis Year	2022
Jurisdiction	Village of Briarcliff Manor	Time Analyzed	Existing PM Peak - Southbound
Project Description	Briarcliff Solar	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	30	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	160	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	23.2
Speed Slope Coefficient	1.81942	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.30037	PF Power Coefficient	0.61347
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	22.7

Vehicle Results

Average Speed, mi/h	22.7	Percent Followers, %	34.5
Segment Travel Time, minutes	2.65	Follower Density, followers/mi/ln	2.4
Vehicle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.4	A

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HCS7 Two-Lane Highway Report

Project Information

Analyst	LaBella Associates DPC	Date	8/1/2022
Agency		Analysis Year	2022
Jurisdiction	Village of Briarcliff Manor	Time Analyzed	Construction AM Peak - Northbound
Project Description	Briarcliff Solar	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	30	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	158	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	23.2
Speed Slope Coefficient	1.81942	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.30037	PF Power Coefficient	0.61347
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	22.7

Vehicle Results

Average Speed, mi/h	22.7	Percent Followers, %	34.2
Segment Travel Time, minutes	2.65	Follower Density, followers/mi/ln	2.4
Vehicle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.4	A

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HCS7 Two-Lane Highway Report

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Project Description	Briarcliff Solar	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	30	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	372	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	23.2
Speed Slope Coefficient	1.81942	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.30037	PF Power Coefficient	0.61347
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	22.2

Vehicle Results

Average Speed, mi/h	22.2	Percent Followers, %	50.8
Segment Travel Time, minutes	2.71	Follower Density, followers/mi/ln	8.5
Vehicle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	8.5	C

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HCS7 Two-Lane Highway Report

Project Information

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Project Description	Briarcliff Solar	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	30	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	215	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.13

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	23.2
Speed Slope Coefficient	1.81942	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.30037	PF Power Coefficient	0.61347
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	22.5

Vehicle Results

Average Speed, mi/h	22.5	Percent Followers, %	39.8
Segment Travel Time, minutes	2.67	Follower Density, followers/mi/ln	3.8
Vehicle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.8	B

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HCS7 Two-Lane Highway Report

Project Information

Analyst	LaBella Associates DPC	Date	8/1/2022
Agency		Analysis Year	2022
Jurisdiction	Village of Briarcliff Manor	Time Analyzed	Construction PM Peak - Southbound
Project Description	Briarcliff Solar	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	30	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	200	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.85	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	23.2
Speed Slope Coefficient	1.81942	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.30037	PF Power Coefficient	0.61347
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	22.5

Vehicle Results

Average Speed, mi/h	22.5	Percent Followers, %	38.4
Segment Travel Time, minutes	2.66	Follower Density, followers/mi/ln	3.4
Vehicle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.4	B

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For

Interconnection Customer: Taravella, James

Applicant: Taravella, James

Company: YSG Solar Development Company LLC

5,000 kW Solar Generator System

345 Scarborough RD
Briarcliff Manor , NY 10510

Interconnection to Consolidated Edison Company of New York

Westchester Region

Ossining West Network

Ossining West Substation

13 kV Feeder 6W64

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TABLE OF CONTENTS

1.0 INTRODUCTION

2.0 EXECUTIVE SUMMARY

3.0 COMPANY EPS PARAMETERS

4.0 INTERCONNECTION CUSTOMER SITE

5.0 SYSTEM IMPACT ANALYSIS

6.0 MITIGATION FOR SYSTEM IMPACT ANALYSIS FAILURES

7.0 CONCEPTUAL COST ESTIMATE

8.0 GENERAL REQUIREMENTS FOR ALL DG INTERCONNECTIONS

1.0 INTRODUCTION

This report presents the analysis results of the Consolidated Edison Company of New York (“Consolidated Edison” or the “Company”) interconnection study based on the proposed interconnection and design submittal from the Interconnection Customer in accordance with the Company Engineering Standard EO-2115. The intent of this report is to assess this project’s feasibility, determine its impact to the existing electric power system (EPS), determine interconnection scope and installation requirements, and determine costs associated with interconnecting the Interconnection Customer’s generation to the Company’s Electric Power System (EPS). This Coordinated Electric System Impact Review (CESIR) study; according to the New York State Standardized Interconnection Requirements (NYSSIR) Section I.C Step 6; identifies the scope, schedule, and costs specific to this Interconnection Customer’s installation requirements.

2.0 EXECUTIVE SUMMARY

The interconnection was found to be feasible with modifications to the existing Company EPS and operating conditions, which are described in detail in the body of this Study.

The total estimated planning grade cost of the work associated with the interconnection of the Interconnection Customer is as follows:

- Monitoring and Control - $77,380.86

If utility system or service upgrades are required, the applicant has 90 business days to pay at least 25% of the costs and 120 business days to provide full payment. Upon full payment the utility will commence construction of system modifications. If the Interconnection Solutions above are not amenable to you, you may choose to withdraw your application, in which case your interconnection request will not move forward and no further action on the part of the utility is required. In order to move forward, please log into the Power Clerk Portal within 10 business days to choose the Interconnection Solution that best fits your needs. By selecting an Interconnection Solution presented above, the applicant is committing to the utility upgrades described as well as the project design or document revisions described below.

3.0 COMPANY EPS PARAMETERS

Substation	**Ossining West**
Transformer Name (list multiple where normally tied to common bus)	T1, T2
Transformer Peak Load (kW)	78,000
Contingency Condition Load, N-1 Criteria (kW) (as applicable)	NA
[Daytime, 24 hour] Light Load (kW)	33,960
Generation: Total (kW)	24,381
Generation: Connected (kW)	6,213
Generation: Queued Ahead (kW)	18,168
Contingency Condition Generation: Total (kW)	24,381
Contingency Condition Generation: Connected (kW)	6,213
Contingency Condition Generation: Queued Ahead (kW)	18,168
Supply Voltage (kV)	13.41
Transformer Maximum Nameplate Rating (kVA)	43,000
Distribution Bus Voltage Regulation	Yes
Transmission GFOV Status	Installed
Bus Tie	Closed
Number of Feeders Served from this Bus	10

Connecting Feeder/Line	**6W64 / SCARBOROUGH LOOP**
Peak Load on feeder (kW)	7,232
[Daytime, 24 hour] Light Load on Feeder (kW)	2,169
Feeder Primary Voltage at POI (kV)	13.41
Line Phasing at POI	3
Circuit distance from POI to substation	NA
Distance (miles) from POI to nearest 3-phase, (if applicable)	NA
Line Regulation	Yes
Line/Source Grounding Configuration at POI	Effective
Other Generation: Total (kW)	82.7
Other Generation: Connected (kW)	82.7
Other Generation: Queued Ahead (kW)	0
System Fault Characteristics without Interconnection Customer DG at POI with System Upgrades described in Section 6	
Interconnection Customer POI Location	T8
I 3-phase (3LLL)	6877.5
I Line to Ground (3I0)	3778
Z1 (100 MVA base)	0.584
Z0 (100 MVA base)	2.024

4.0 INTERCONNECTION CUSTOMER SITE

The Interconnection Customer is proposing a new service connection.

The proposed generating system consists of:

The proposed DG system at 345 Scarborough Road consists of 5000 kW solar PV via fifty (50) Chint Power Systems America: Model CPS SCH100KTL-DO / US600 inverters. The DG project is proposing to interconnect to the Ossining West Network via the Scarborough Loop 13kv feeder (6w64). The customer will receive high tension service from pole T8 to the customer pole. An installation of 3-4/0 AL OH primary (6W64 Scarborough loop) and 1-4/0 AL OH secondary neutral from pole T8 to the customer pole is adequate for the DG current contribution.

5.0 SYSTEM IMPACT ANALYSIS

Additional Comments:

The proposed DG system at 345 Scarborough Road consists of 5000 kW solar PV via fifty (50) Chint Power Systems America: Model CPS SCH100KTL-DO / US600 inverters. The DG project is proposing to interconnect to the Ossining West Network via the Scarborough Loop 13kv feeder (6w64). The customer will receive high tension service from pole T8 to the customer pole. An installation of 3-4/0 AL OH primary (6W64 Scarborough loop) and 1-4/0 AL OH secondary neutral from pole T8 to the customer pole is adequate for the DG current contribution. The customer is to install an STS switch (class and stock 530 0562 for use on 15KV OH system) on new customer pole inside customer property which shall be programed by Con Edison and accessible to company forces at all times. This service ruling was used as the basis of this study. If the ruling changes, the results of this study will no longer be valid.
We have completed an analysis of the proposed DER system and reviewed the documents provided. Our study results indicate that the need for SCADA equipment is required. The addition of the DER does not cause any system impacts.

Category	Criteria	Limit	Description	Result
Voltage	Overvoltage	< 105% (ANSI C84.1 and EO2065)	With the addition of the subject generator the maximum voltage as modeled on the POI is 101% of nominal.	Pass
Voltage	Undervoltage	> 95% (ANSI C84.1 and EO2065)	With the addition of the subject generator the minimum voltage as modeled on the POI is 99% of nominal.	Pass
Voltage	Substation Regulation for Reverse Power	<100% minimum load criteria	The total generation on Feeders6W64 is 0.082 MW. The total minimum load on these Feeders is 2.169 MW. Therefore, the generation to load ratio is 3.81%.	Pass
Voltage	Feeder Regulation for Reverse Power	<NA% Minimum load to generation ratio	The total generation downstream of voltage regulator NA is NA MW. The minimum load downstream of the voltage regulator is NA MW. Therefore, the generation to load ratio is NA%.	Pass
Voltage	Fluctuation	<3% steady state from proposed generation on feeder		Pass
Voltage	Fluctuation	<5% steady state from aggregate DER on substation bus		Pass
Voltage	Fluctuation	Regulator tap movement exceeds 1 position, generation change of 75% of nameplate rating does not result in voltage change > ½ the bandwidth of any feeder voltage regulating device.	The greatest voltage fluctuation on the feeder occurs at NA and substation bus occurs at NA. The resulting fluctuation at the feeder location is NA% due to the proposed generation and NA% on the substation bus due to the aggregate generation. Additional details for voltage regulators : NA	NA
Voltage	Flicker	Screen H Flicker	The Pst for the location with the greatest voltage fluctuation is 0.027767 and the emissions limit is 0.9.	Pass
Equipment Ratings	Thermal (continuous current)	<NA% thermal limits assuming no load	The subject generator's full output current is NA A. The total full output current of all DER downstream of NA is NA A. NA thermal capabilities are NA A.	NA
Equipment Ratings	Withstand (fault current)	<90% withstand limits	The additional fault current contribution from the generation contributes to interrupting ratings in excess of existing EPS equipment.	NA
Protection	Unintentional Islanding	Unintentional Islanding Document & Company Guidelines		Pass
Protection	Protective device coordination	Company Guidelines		Pass
Protection	Fault Sensitivity	Rated capabilities of EPS equipment		Pass
Protection	Ground Fault Detection	Reduction of reach > x% (by Utility)	The Interconnection Customer has proposed a grounding bank with an impedance of NA ohms and X/R ratio of NA. To be within Company guidelines the grounding bank shall have an impedance of NA ohms. The Interconnection Customer will contribute approximately NA A of 3I0 current to remote bolted line to ground faults and NA A to faults at the PCC.	NA
Protection	Overvoltage - Transmission System Fault	Company 3V0 criteria	The generation to load ratio on the serving distribution system has failed the Company’s planning threshold in which transmission ground fault overvoltage become an electrical hazard due to the distribution source contribution. An evaluation of the existing EPS has been performed and it has been determined that protection mitigation methods are required.	NA
Protection	Overvoltage - Distribution System Fault	<NA% voltage rise	With subject generator interconnected the modeled voltage rise on the unfaulted phases of the system is NA%.	NA
Protection	Effective Grounding	NA	With subject generator interconnected the modeled R0/X1 is 1.412 PU and the X0/X1 is 3.375 PU.	Pass
SCADA	Required EMS Visibility for Generation Sources	Monitoring & Control Requirements	The 5 MW subject generator triggers the requirement for SCADA reporting to the Utility.	Yes
Other				NA

Project Design/Document Revision Comments:

NA

6.0 MITIGATIONS FOR SYSTEM IMPACT ANALYSIS FAILURES

Detail below is intended to provide sufficient information and clarity to give the Interconnection Customer an understanding to the relationship of costs and scope associated with the DER interconnection and the system modifications due to the DER impact. This includes any required EPS equipment upgrades. Where scope items are identified, associated labor, equipment rentals and indirect project support functions (such as engineering and project management) are intended and implied.

Sl.No	Option	Description	Capacity	Cost
1	Monitoring and Control	- The installation of SCADA is required to monitor the customer's DG export. - The installation of 3-4/0 AL OH primary (6W64 Scarborough Loop) and 1-4/0 AL OH secondary neutral from Pole T8 to customer pole. The customer is to install an STS switch (class and stock 530 0562 for use on 15KV OH system) on new customer pole inside customer property which shall be programed by Con Edison and accessible to company forces at all times.	DER1 : 5,000 kW	$77,380.86

Additional details on the scope of each option can be found below:

Interconnection Solution #1: Monitoring and Control

Distribution Engineering Cost Estimate - System Upgrades Cost

Activity	Material Cost	Labor Cost	Sub Total
SCADA/ Anti-Islanding (E.g.Construction, Installation, Programming, Testing. Etc.)	$889.00	$3,833.00	$4,722.00
Sub Total	$889.00	$3,833.00	$4,722.00

Sub Total (Material & Labor Cost)	Overhead Cost	Contingency Cost	Total Cost
$4,722.00	$486.91	$781.34	$5,990.24

Customer Engineering Cost Estimate - Service Cost

Activity	Labor	Material	Stores & Handling	Transportation	Outside Contract Work	Corporate Overhead	Contingency	Sub Total
INSTALL REPLACE OH PRI COND OPEN WIRE SPAN	$17,629.20	$29,746.00	$2,528.41	$1,762.92		$9,299.97	$9,041.64	$70,008.14
INSTALL REPLACE OH SEC COND SPAN	$849.60	$79.00	$6.72	$84.96		$183.65	$178.55	$1,382.48
							Total Cost	$71,390.62

Per the SIR’s Cost Sharing 2.0 Process, this project does not qualify as a Triggering or Sharing Project based upon the estimated qualifying upgrades contained within the CESIR.

The substation upgrades required to facilitate the proposed installation include the following:
NONE

The Distribution upgrades required to facilitate the proposed installation include the following:
SEE ABOVE

The ability to generate is contingent on this facility being served by the interconnecting circuit during normal Utility operating conditions. Therefore, if the interconnecting circuit is out of service, or if abnormal utility operating conditions of the area EPS are in effect, the Company reserves the right to disengage the facility.

Any change in system size and/or design is subject to the requirements of the NYSSIR, as well as supplemental documents developed by the Interconnection Technical Working Group and Interconnection Policy Working Group.

7.0 CONCEPTUAL COST ESTIMATE

The following items are a good faith estimate for the scope and work required to interconnect the project estimated under rates and schedules in effect at the time of this study in accordance with the most recent version of the NYSSIR.

Planning Grade Estimate

See cost estimates in Section 6

Notes:

- These estimated costs are based upon the results of this study and are subject to change. All costs anticipated to be incurred by the Company are listed.
- The Company will reconcile actual charges upon project completion and the Interconnection Customer will be responsible for all final charges, which may be higher or lower than estimated according to the NYSSIR I.C step 11.
- Upon receipt of additional payments by Sharing Projects the utility shall reconcile with the Triggering Project based on a calculated estimated pro-rata share. Remaining reconciliation for Qualifying Upgrade Cost to occur pursuant to Section I-C of the SIR.
- This estimate does not include the following:
    1. additional interconnection study costs, or study rework
    2. additional application fees,
    3. applicable surcharges,
    4. property taxes,
    5. sales tax,
    6. future operation and maintenance costs,
    7. adverse field conditions such as weather and Interconnection Customer equipment obstructions,
    8. extended construction hours to minimize outage time or Company’s public duty to serve,
    9. the cost of any temporary construction service, or
    10. any required permits.
- Cost adders estimated for overtime would be based on 1.5 and 2 times labor rates if required for work beyond normal business hours. Per Diems are also extra costs potentially incurred for overtime labor.

8.0 GENERAL REQUIREMENTS FOR ALL DG INTERCONNECTIONS

A. Provide the load dispatcher name and phone number you wish to appear in the First Amendment (document to follow). Note that this contact is required to be available at this phone number 24 hours, 7 days a week. The contact will need to be available for communications regarding emergency operation of customer equipment and may need to provide access to their equipment if necessary.

B. The generator disconnect switch (intertie disconnect) shall provide a visible break, manual, gang-operated, loadbreak, lockable, and accessible isolating device.

C. At the location, and on the drawing, identify and clearly label the “GENERATOR DISCONNECT SWITCH 89L” with permanent 3/8 inch letters or larger.

D. The labeling of the “AC Panel” housing the inverter circuit breakers should have additional label that reads; “DEVICE 52IT PANEL” and the individual breakers labeled as 52IT-1, 52IT-2, et cetera, to correspond with the associated inverter (i.e. Inverter 1, Inverter 2…etc.).

E. Labeling of all inverters, junction boxes, combiner boxes, array strings, and fuses at the site is required and shall be consistent as to assist with identifying the circuit runs.

F. Field installation and one/three-line diagram should match 100%. All equipment concerning the DG installation at this site should be shown on this diagram. This includes the incoming service (with cable size and type), end-line-box, the main distribution panel (with all load takeoffs), and the existing electric meter.

G. Any revisions to the one/three-line diagram should include an updated revision number, date, and comments on the diagram that briefly indicate the changes made.

H. Per the NYS SIR, Section II.I., the verification testing procedure will need to be accurate enough to repeat without confusion in upcoming years for periodic performance retesting.

I. All documentation and proper drawings should be submitted and approved prior to the testing and commencement of operation of your equipment. This includes certified relay test reports where applicable.

J. Copies of the three-line circuit diagram shall be laminated and displayed on site within close vicinity of the Con Edison revenue meter and any other generator disconnects downstream. Signage at the revenue meter should include that the meter is fed from two sources. Additional signage shall also be included as to the location of the disconnect switch.

K. Please note if the project site has multiple DERs installed or scheduled to be installed, your request to be interconnected under SIR governance must meet the requirements of the ORDER MODIFYING SEPARATE SITE REQUIREMENTS (Issued and Effective April 15, 2021). Utility construction shall not commence until the project adheres to the requirements of the Order. All SIR guidelines and timers shall remain in effect in parallel with this requirement.

For

Interconnection Customer: Taravella, James

Applicant: Taravella, James

Company: YSG Solar Development Company LLC

5,000 kW Solar Generator System

345 Scarborough RD
Briarcliff Manor , NY 10510

Interconnection to Consolidated Edison Company of New York

Westchester Region

Ossining West Network

OSSINING WEST Substation

13 kV Feeder 6W64

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TABLE OF CONTENTS

1.0 INTRODUCTION

2.0 EXECUTIVE SUMMARY

3.0 COMPANY EPS PARAMETERS

4.0 INTERCONNECTION CUSTOMER SITE

5.0 SYSTEM IMPACT ANALYSIS

6.0 MITIGATION FOR SYSTEM IMPACT ANALYSIS FAILURES

7.0 CONCEPTUAL COST ESTIMATE

8.0 GENERAL REQUIREMENTS FOR ALL DG INTERCONNECTIONS

1.0 INTRODUCTION

This report presents the analysis results of the Consolidated Edison Company of New York (“Consolidated Edison” or the “Company”) interconnection study based on the proposed interconnection and design submittal from the Interconnection Customer in accordance with the Company Engineering Standard EO-2115. The intent of this report is to assess this project’s feasibility, determine its impact to the existing electric power system (EPS), determine interconnection scope and installation requirements, and determine costs associated with interconnecting the Interconnection Customer’s generation to the Company’s Electric Power System (EPS). This Coordinated Electric System Impact Review (CESIR) study; according to the New York State Standardized Interconnection Requirements (NYSSIR) Section I.C Step 6; identifies the scope, schedule, and costs specific to this Interconnection Customer’s installation requirements.

2.0 EXECUTIVE SUMMARY

The interconnection was found to be feasible with modifications to the existing Company EPS and operating conditions, which are described in detail in the body of this Study.

The total estimated planning grade cost of the work associated with the interconnection of the Interconnection Customer is as follows:

- Monitoring and Control - $77,382.09

If utility system or service upgrades are required, the applicant has 90 business days to pay at least 25% of the costs and 120 business days to provide full payment. Upon full payment the utility will commence construction of system modifications. If the Interconnection Solutions above are not amenable to you, you may choose to withdraw your application, in which case your interconnection request will not move forward and no further action on the part of the utility is required. In order to move forward, please log into the Power Clerk Portal within 10 business days to choose the Interconnection Solution that best fits your needs. By selecting an Interconnection Solution presented above, the applicant is committing to the utility upgrades described as well as the project design or document revisions described below.

3.0 COMPANY EPS PARAMETERS

Substation	**OSSINING WEST**
Transformer Name (list multiple where normally tied to common bus)	T1, T2
Transformer Peak Load (kW)	78,000
Contingency Condition Load, N-1 Criteria (kW) (as applicable)	NA
[Daytime, 24 hour] Light Load (kW)	33,960
Generation: Total (kW)	24,381
Generation: Connected (kW)	6,213
Generation: Queued Ahead (kW)	18,168
Contingency Condition Generation: Total (kW)	24,381
Contingency Condition Generation: Connected (kW)	6,213
Contingency Condition Generation: Queued Ahead (kW)	18,168
Supply Voltage (kV)	13.41
Transformer Maximum Nameplate Rating (kVA)	43,000
Distribution Bus Voltage Regulation	Yes
Transmission GFOV Status	Installed
Bus Tie	Closed
Number of Feeders Served from this Bus	10

Connecting Feeder/Line	**6W64 / SCARBOUROUGH LOOP**
Peak Load on feeder (kW)	7,232
[Daytime, 24 hour] Light Load on Feeder (kW)	2,169
Feeder Primary Voltage at POI (kV)	13.41
Line Phasing at POI	3
Circuit distance from POI to substation	NA
Distance (miles) from POI to nearest 3-phase, (if applicable)	NA
Line Regulation	Yes
Line/Source Grounding Configuration at POI	Effective
Other Generation: Total (kW)	82.7
Other Generation: Connected (kW)	82.7
Other Generation: Queued Ahead (kW)	0
System Fault Characteristics without Interconnection Customer DG at POI with System Upgrades described in Section 6	
Interconnection Customer POI Location	T7
I 3-phase (3LLL)	6782
I Line to Ground (3I0)	3721
Z1 (100 MVA base)	0.655
Z0 (100 MVA base)	2.273

4.0 INTERCONNECTION CUSTOMER SITE

The Interconnection Customer is proposing a new service connection.

The proposed generating system consists of:

The proposed DG system at 345 Scarborough Road consists of 5000 kW solar PV via fifty (50) Chint Power Systems America: Model CPS SCH100KTL-DO / US600 inverters. The DG project is proposing to interconnect to the Ossining West Network via the Scarborough 13kv feeder (6w64). The customer will receive high tension service from pole 31 to the customer pole. An installation of 3-4/0 AL OH primary (6W64 Scarborough loop) and 1-4/0 AL OH secondary neutral from pole 31 to the customer pole is adequate for the DG current contribution.

5.0 SYSTEM IMPACT ANALYSIS

Additional Comments:

The proposed DG system at 345 Scarborough Road consists of 5000 kW solar PV via fifty (50) Chint Power Systems America: Model CPS SCH100KTL-DO / US600 inverters. The DG project is proposing to interconnect to the Ossining West Network via the Scarborough 13kv feeder (6w64). The customer will receive high tension service from pole 31 to the customer pole. An installation of 3-4/0 AL OH primary (6W64 Scarborough loop) and 1-4/0 AL OH secondary neutral from pole 31 to the customer pole is adequate for the DG current contribution. This service ruling was used as the basis of this study. If the ruling changes, the results of this study will no longer be valid. The customer is to install an STS switch (class and stock 530 0562 for use on 15KV OH system) on new customer pole inside customer property which shall be programed by Con Edison and accessible to company forces at all times. This service ruling was used as the basis of this study. If the ruling changes, the results of this study will no longer be valid. We have completed an analysis of the proposed der system and reviewed the documents provided. Our study results indicate that the need for SCADA equipment is required. The addition of the DER does not cause any system impacts.

Category	Criteria	Limit	Description	Result
Voltage	Overvoltage	< 105% (ANSI C84.1 and EO2065)	With the addition of the subject generator the maximum voltage as modeled on the POI is 99% of nominal.	Pass
Voltage	Undervoltage	> 95% (ANSI C84.1 and EO2065)	With the addition of the subject generator the minimum voltage as modeled on the POI is 99% of nominal.	Pass
Voltage	Substation Regulation for Reverse Power	<100% minimum load criteria	The total generation on Feeders6W64 is .0827 MW. The total minimum load on these Feeders is 2.169 MW. Therefore, the generation to load ratio is 3.81%.	Pass
Voltage	Feeder Regulation for Reverse Power	<NA% Minimum load to generation ratio	The total generation downstream of voltage regulator NA is NA MW. The minimum load downstream of the voltage regulator is NA MW. Therefore, the generation to load ratio is NA%.	Pass
Voltage	Fluctuation	<3% steady state from proposed generation on feeder		Pass
Voltage	Fluctuation	<5% steady state from aggregate DER on substation bus		Pass
Voltage	Fluctuation	Regulator tap movement exceeds 1 position, generation change of 75% of nameplate rating does not result in voltage change > ½ the bandwidth of any feeder voltage regulating device.	The greatest voltage fluctuation on the feeder occurs at NA and substation bus occurs at NA. The resulting fluctuation at the feeder location is NA% due to the proposed generation and NA% on the substation bus due to the aggregate generation. Additional details for voltage regulators : NA	NA
Voltage	Flicker	Screen H Flicker	The Pst for the location with the greatest voltage fluctuation is 0.0282 and the emissions limit is 0.9.	Pass
Equipment Ratings	Thermal (continuous current)	<NA% thermal limits assuming no load	The subject generator's full output current is NA A. The total full output current of all DER downstream of NA is NA A. NA thermal capabilities are NA A.	NA
Equipment Ratings	Withstand (fault current)	<90% withstand limits	The additional fault current contribution from the generation contributes to interrupting ratings in excess of existing EPS equipment.	NA
Protection	Unintentional Islanding	Unintentional Islanding Document & Company Guidelines		Pass
Protection	Protective device coordination	Company Guidelines		Pass
Protection	Fault Sensitivity	Rated capabilities of EPS equipment		Pass
Protection	Ground Fault Detection	Reduction of reach > x% (by Utility)	The Interconnection Customer has proposed a grounding bank with an impedance of NA ohms and X/R ratio of NA. To be within Company guidelines the grounding bank shall have an impedance of NA ohms. The Interconnection Customer will contribute approximately NA A of 3I0 current to remote bolted line to ground faults and NA A to faults at the PCC.	NA
Protection	Overvoltage - Transmission System Fault	Company 3V0 criteria	The generation to load ratio on the serving distribution system has failed the Company’s planning threshold in which transmission ground fault overvoltage become an electrical hazard due to the distribution source contribution. An evaluation of the existing EPS has been performed and it has been determined that protection mitigation methods are required.	NA
Protection	Overvoltage - Distribution System Fault	<NA% voltage rise	With subject generator interconnected the modeled voltage rise on the unfaulted phases of the system is NA%.	NA
Protection	Effective Grounding	NA	With subject generator interconnected the modeled R0/X1 is 1.416 PU and the X0/X1 is 3.381 PU.	Pass
SCADA	Required EMS Visibility for Generation Sources	Monitoring & Control Requirements	The 5 MW subject generator triggers the requirement for SCADA reporting to the Utility.	Yes
Other				NA

Project Design/Document Revision Comments:

NA

6.0 MITIGATIONS FOR SYSTEM IMPACT ANALYSIS FAILURES

Detail below is intended to provide sufficient information and clarity to give the Interconnection Customer an understanding to the relationship of costs and scope associated with the DER interconnection and the system modifications due to the DER impact. This includes any required EPS equipment upgrades. Where scope items are identified, associated labor, equipment rentals and indirect project support functions (such as engineering and project management) are intended and implied.

Sl.No	Option	Description	Capacity	Cost
1	Monitoring and Control	- The installation of SCADA is required to monitor the customer's DG export. - The installation of 3-4/0 AL OH primary (6W64 Scarborough loop) and 1-4/0 AL OH secondary neutral from Pole 31 to customer pole. The customer is to install an STS switch (class and stock 530 0562 for use on 15KV OH system) on new customer pole inside customer property which shall be programed by Con Edison and accessible to company forces at all times.	DER1 : 5,000 kW	$77,382.09

Additional details on the scope of each option can be found below:

Interconnection Solution #1: Monitoring and Control

Distribution Engineering Cost Estimate - System Upgrades Cost

Activity	Material Cost	Labor Cost	Sub Total
SCADA/ Anti-Islanding (E.g.Construction, Installation, Programming, Testing. Etc.)	$889.00	$3,834.00	$4,723.00
Sub Total	$889.00	$3,834.00	$4,723.00

Sub Total (Material & Labor Cost)	Overhead Cost	Contingency Cost	Total Cost
$4,723.00	$486.98	$781.50	$5,991.47

Customer Engineering Cost Estimate - Service Cost

Activity	Labor	Material	Stores & Handling	Transportation	Outside Contract Work	Corporate Overhead	Contingency	Sub Total
INSTALL REPLACE OH PRI COND OPEN WIRE SPAN	$17,629.20	$29,746.00	$2,528.41	$1,762.92		$9,299.97	$9,041.64	$70,008.14
INSTALL REPLACE OH SEC COND SPAN	$849.60	$79.00	$6.72	$84.96		$183.65	$178.55	$1,382.48
							Total Cost	$71,390.62

Per the SIR’s Cost Sharing 2.0 Process, this project does not qualify as a Triggering or Sharing Project based upon the estimated qualifying upgrades contained within the CESIR.

The substation upgrades required to facilitate the proposed installation include the following:
NONE

The Distribution upgrades required to facilitate the proposed installation include the following:
SEE ABOVE

The ability to generate is contingent on this facility being served by the interconnecting circuit during normal Utility operating conditions. Therefore, if the interconnecting circuit is out of service, or if abnormal utility operating conditions of the area EPS are in effect, the Company reserves the right to disengage the facility.

Any change in system size and/or design is subject to the requirements of the NYSSIR, as well as supplemental documents developed by the Interconnection Technical Working Group and Interconnection Policy Working Group.

7.0 CONCEPTUAL COST ESTIMATE

The following items are a good faith estimate for the scope and work required to interconnect the project estimated under rates and schedules in effect at the time of this study in accordance with the most recent version of the NYSSIR.

Planning Grade Estimate

See cost estimates in Section 6

Notes:

- These estimated costs are based upon the results of this study and are subject to change. All costs anticipated to be incurred by the Company are listed.
- The Company will reconcile actual charges upon project completion and the Interconnection Customer will be responsible for all final charges, which may be higher or lower than estimated according to the NYSSIR I.C step 11.
- Upon receipt of additional payments by Sharing Projects the utility shall reconcile with the Triggering Project based on a calculated estimated pro-rata share. Remaining reconciliation for Qualifying Upgrade Cost to occur pursuant to Section I-C of the SIR.
- This estimate does not include the following:
    1. additional interconnection study costs, or study rework
    2. additional application fees,
    3. applicable surcharges,
    4. property taxes,
    5. sales tax,
    6. future operation and maintenance costs,
    7. adverse field conditions such as weather and Interconnection Customer equipment obstructions,
    8. extended construction hours to minimize outage time or Company’s public duty to serve,
    9. the cost of any temporary construction service, or
    10. any required permits.
- Cost adders estimated for overtime would be based on 1.5 and 2 times labor rates if required for work beyond normal business hours. Per Diems are also extra costs potentially incurred for overtime labor.

8.0 GENERAL REQUIREMENTS FOR ALL DG INTERCONNECTIONS

A. Provide the load dispatcher name and phone number you wish to appear in the First Amendment (document to follow). Note that this contact is required to be available at this phone number 24 hours, 7 days a week. The contact will need to be available for communications regarding emergency operation of customer equipment and may need to provide access to their equipment if necessary.

B. The generator disconnect switch (intertie disconnect) shall provide a visible break, manual, gang-operated, loadbreak, lockable, and accessible isolating device.

C. At the location, and on the drawing, identify and clearly label the “GENERATOR DISCONNECT SWITCH 89L” with permanent 3/8 inch letters or larger.

D. The labeling of the “AC Panel” housing the inverter circuit breakers should have additional label that reads; “DEVICE 52IT PANEL” and the individual breakers labeled as 52IT-1, 52IT-2, et cetera, to correspond with the associated inverter (i.e. Inverter 1, Inverter 2…etc.).

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james.t@ysgsolar.com

From: Lauren Gualdino <lgualdino@briarcliffmanor.gov>
Sent: Monday, August 22, 2022 4:13 PM
To: 'james.t@ysgsolar.com'; David Turiano
Cc: 'David Magid'; 'Peters, Emily'
Subject: RE: Briarcliff Solar

Hi Jim,

Our Wetlands consultant got back to me, so sorry for the delay – I was away for a few days.

We had a discussion with Mike Nowicki about this. They have provided a study which concluded the temperatures over the solar farm is a couple or a few degree higher than the surrounding environment. This create a heat island effect so when the panels are generating/reflecting the solar heat, the heat is passed on storm water when flows over the surfaces. Here is a good reference: https://www.nature.com/articles/srep35070

The same solar farm also came under scrutiny when an increasing number of bird deaths were reported on its premises. Many of their wings had been melted or burned off by heat from the solar farm's mirrors. check:https://sciencing.com/effects-solar-power-farms-environment-13547.html

---

From: james.t@ysgsolar.com <james.t@ysgsolar.com>
Sent: Thursday, August 11, 2022 1:05 PM
To: David Turiano <dturiano@briarcliffmanor.gov>; Lauren Gualdino <lgualdino@briarcliffmanor.gov>
Cc: 'David Magid' <dmg@ysgsolar.com>; 'Peters, Emily' <EPeters@LaBellaPC.com>
Subject: Briarcliff Solar

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

David/Lauren,

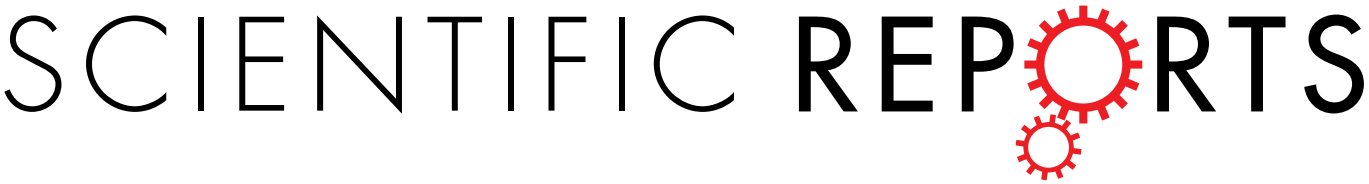
In preparing our responses to the comments provided by the Village consultants, we have been unable to find the study that Aleksandra Moch references in the last bullet on page three of the July 24, 2022 letter. The comment stated *"Study had shown solar farms generate thermal impact on storm water runoff caused by the hot surfaces of solar panels during summer months. How the stormwater will be cooled off before it reaches the watercourse areas?"*. Can you please ask your consultant to provide the name of the study so that we can read it and properly respond to the comment?

Thank you.

Jim Taravella, PE
Project Developer

Ph: (716) 440-8698





OPEN

The Photovoltaic Heat Island Effect: Larger solar power plants increase local temperatures

Received: 26 May 2016
Accepted: 23 September 2016
Published: 13 October 2016

Greg A. Barron-Gafford[1,2], Rebecca L. Minor[1,2], Nathan A. Allen[3], Alex D. Cronin[4], Adria E. Brooks[5] & Mitchell A. Pavao-Zuckerman[6]

While photovoltaic (PV) renewable energy production has surged, concerns remain about whether or not PV power plants induce a "heat island" (PVHI) effect, much like the increase in ambient temperatures relative to wildlands generates an Urban Heat Island effect in cities. Transitions to PV plants alter the way that incoming energy is reflected back to the atmosphere or absorbed, stored, and reradiated because PV plants change the albedo, vegetation, and structure of the terrain. Prior work on the PVHI has been mostly theoretical or based upon simulated models. Furthermore, past empirical work has been limited in scope to a single biome. Because there are still large uncertainties surrounding the potential for a PHVI effect, we examined the PVHI empirically with experiments that spanned three biomes. We found temperatures over a PV plant were regularly 3–4 °C warmer than wildlands at night, which is in direct contrast to other studies based on models that suggested that PV systems should decrease ambient temperatures. Deducing the underlying cause and scale of the PVHI effect and identifying mitigation strategies are key in supporting decision-making regarding PV development, particularly in semiarid landscapes, which are among the most likely for large-scale PV installations.

Electricity production from large-scale photovoltaic (PV) installations has increased exponentially in recent decades[1–3]. This proliferation in renewable energy portfolios and PV powerplants demonstrate an increase in the acceptance and cost-effectiveness of this technology[4,5]. Corresponding with this upsurge in installation has been an increase in the assessment of the impacts of utility-scale PV[4,6–8], including those on the efficacy of PV to offset energy needs[9,10]. A growing concern that remains understudied is whether or not PV installations cause a "heat island" (PVHI) effect that warms surrounding areas, thereby potentially influencing wildlife habitat, ecosystem function in wildlands, and human health and even home values in residential areas[11]. As with the Urban Heat Island (UHI) effect, large PV power plants induce a landscape change that reduces albedo so that the modified landscape is darker and, therefore, less reflective. Lowering the terrestrial albedo from ~20% in natural deserts[12] to ~5% over PV panels[13] alters the energy balance of absorption, storage, and release of short- and longwave radiation[14,15]. However, several differences between the UHI and potential PVHI effects confound a simple comparison and produce competing hypotheses about whether or not large-scale PV installations will create a heat island effect. These include: (*i*) PV installations shade a portion of the ground and therefore could reduce heat absorption in surface soils[16], (*ii*) PV panels are thin and have little heat capacity per unit area but PV modules emit thermal radiation both up and down, and this is particularly significant during the day when PV modules are often 20 °C warmer than ambient temperatures, (*iii*) vegetation is usually removed from PV power plants, reducing the amount of cooling due to transpiration[14], (*iv*) electric power removes energy from PV power plants, and (*v*) PV panels reflect and absorb upwelling longwave radiation, and thus can prevent the soil from cooling as much as it might under a dark sky at night.

Public concerns over a PVHI effect have, in some cases, led to resistance to large-scale solar development. By some estimates, nearly half of recently proposed energy projects have been delayed or abandoned due to local opposition[11]. Yet, there is a remarkable lack of data as to whether or not the PVHI effect is real or simply an issue

[1]School of Geography & Development, University of Arizona, Tucson, AZ, USA. [2]Office of Research & Development; College of Science, Biosphere 2, University of Arizona, Tucson, AZ, USA. [3]Nevada Center of Excellence, Desert Research Institute, Las Vegas, NV, USA. [4]Department of Physics, University of Arizona, Tucson, AZ, USA. [5]Department of Electrical and Computer Engineering, University of Wisconsin-Madison, Madison, WI, USA. [6]Department of Environmental Science & Technology, University of Maryland, College Park, MD, USA. Correspondence and requests for materials should be addressed to G.A.B.-G. (email: gregbg@email.arizona.edu)

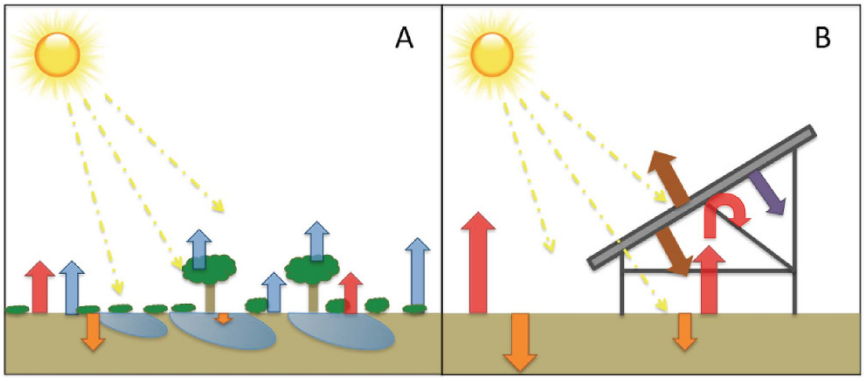


Figure 1. Illustration of midday energy exchange. Assuming equal rates of incoming energy from the sun, a transition from (**A**) a vegetated ecosystem to (**B**) a photovoltaic (PV) power plant installation will significantly alter the energy flux dynamics of the area. Within natural ecosystems, vegetation reduces heat capture and storage in soils (orange arrows), and infiltrated water and vegetation release heat-dissipating latent energy fluxes in the transition of water-to-water vapor to the atmosphere through evapotranspiration (blue arrows). These latent heat fluxes are dramatically reduced in typical PV installations, leading to greater sensible heat fluxes (red arrows). Energy re-radiation from PV panels (brown arrow) and energy transferred to electricity (purple arrow) are also shown.

associated with perceptions of environmental change caused by the installations that lead to "not in my back-yard" (NIMBY) thinking. Some models have suggested that PV systems can actually cause a cooling effect on the local environment, depending on the efficiency and placement of the PV panels[17,18]. But these studies are limited in their applicability when evaluating large-scale PV installations because they consider changes in albedo and energy exchange within an urban environment (rather than a natural ecosystem) or in European locations that are not representative of semiarid energy dynamics where large-scale PV installations are concentrated[10,19]. Most previous research, then, is based on untested theory and numerical modeling. Therefore, the potential for a PHVI effect must be examined with empirical data obtained through rigorous experimental terms.

The significance of a PVHI effect depends on energy balance. Incoming solar energy typically is either reflected back to the atmosphere or absorbed, stored, and later re-radiated in the form of latent or sensible heat (Fig. 1)[20,21]. Within natural ecosystems, vegetation reduces heat gain and storage in soils by creating surface shading, though the degree of shading varies among plant types[22]. Energy absorbed by vegetation and surface soils can be released as latent heat in the transition of liquid water to water vapor to the atmosphere through evapotranspiration – the combined water loss from soils (evaporation) and vegetation (transpiration). This heat-dissipating latent energy exchange is dramatically reduced in a typical PV installation (Fig. 1 transition from A-to-B), potentially leading to greater heat absorption by soils in PV installations. This increased absorption, in turn, could increase soil temperatures and lead to greater sensible heat efflux from the soil in the form of radiation and convection. Additionally, PV panel surfaces absorb more solar insolation due to a decreased albedo[13,23,24]. PV panels will re-radiate most of this energy as longwave sensible heat and convert a lesser amount (~20%) of this energy into usable electricity. PV panels also allow some light energy to pass, which, again, in unvegetated soils will lead to greater heat absorption. This increased absorption could lead to greater sensible heat efflux from the soil that may be trapped under the PV panels. A PVHI effect would be the result of a detectable increase in sensible heat flux (atmospheric warming) resulting from an alteration in the balance of incoming and outgoing energy fluxes due to landscape transformation. Developing a full thermal model is challenging[17,18,25], and there are large uncertainties surrounding multiple terms including variations in albedo, cloud cover, seasonality in advection, and panel efficiency, which itself is dynamic and impacted by the local environment. These uncertainties are compounded by the lack of empirical data.

We addressed the paucity of direct quantification of a PVHI effect by simultaneously monitoring three sites that represent a natural desert ecosystem, the traditional built environment (parking lot surrounded by commercial buildings), and a PV power plant. We define a PVHI effect as the difference in ambient air temperature between the PV power plant and the desert landscape. Similarly, UHI is defined as the difference in temperature between the built environment and the desert. We reduced confounding effects of variability in local incoming energy, temperature, and precipitation by utilizing sites contained within a 1 km area.

At each site, we monitored air temperature continuously for over one year using aspirated temperature probes 2.5 m above the soil surface. Average annual temperature was $22.7 + 0.5$ °C in the PV installation, while the nearby desert ecosystem was only $20.3 + 0.5$ °C, indicating a PVHI effect. Temperature differences between areas varied significantly depending on time of day and month of the year (Fig. 2), but the PV installation was always greater than or equal in temperature to other sites. As is the case with the UHI effect in dryland regions, the PVHI effect delayed the cooling of ambient temperatures in the evening, yielding the most significant difference in overnight temperatures across all seasons. Annual average midnight temperatures were $19.3 + 0.6$ °C in the PV installation, while the nearby desert ecosystem was only $15.8 + 0.6$ °C. This PVHI effect was more significant in terms of actual degrees of warming (+3.5 °C) in warm months (Spring and Summer; Fig. 3, right).

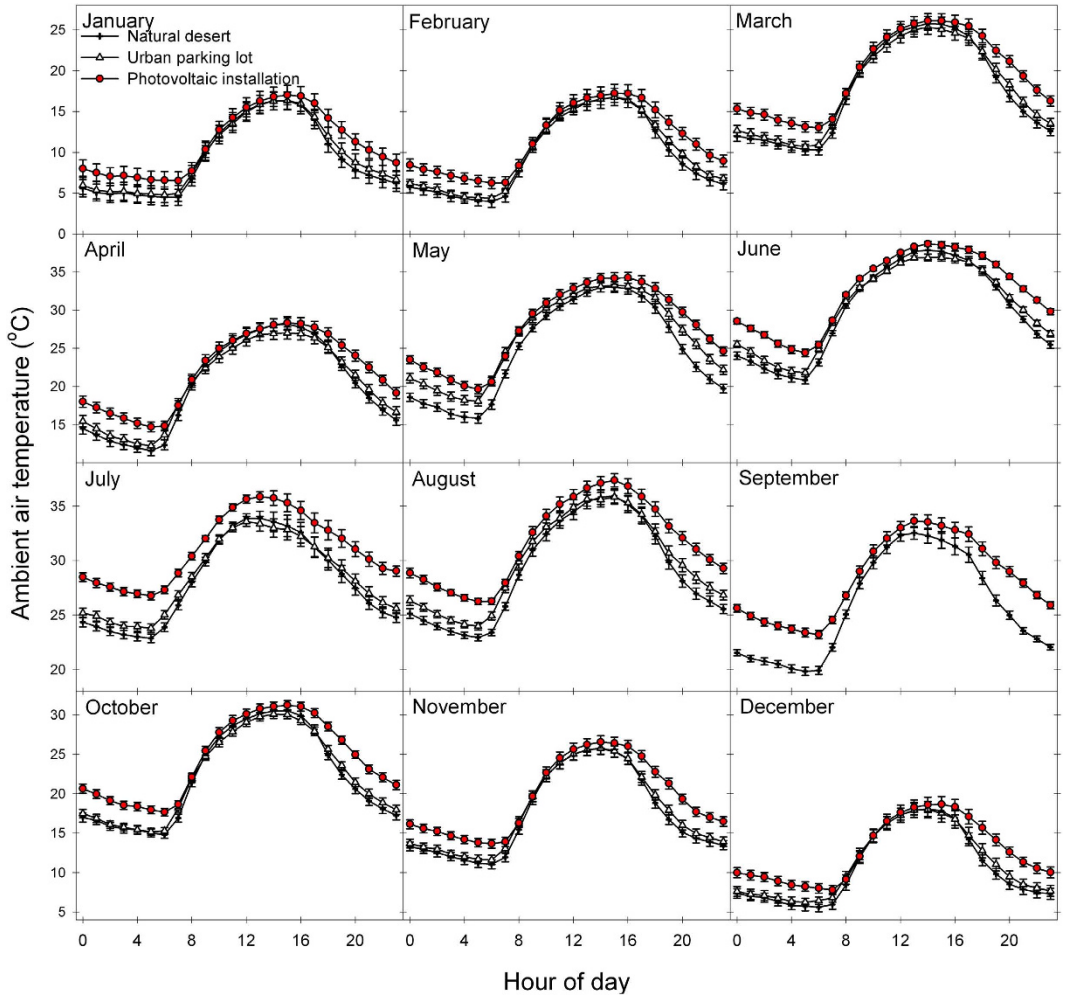


Figure 2. Average monthly ambient temperatures throughout a 24-hour period provide evidence of a photovoltaic heat island (PVHI) effect.

In both PVHI and UHI scenarios, the greater amount of exposed ground surfaces compared to natural systems absorbs a larger proportion of high-energy, shortwave solar radiation during the day. Combined with minimal rates of heat-dissipating transpiration from vegetation, a proportionally higher amount of stored energy is reradiated as longwave radiation during the night in the form of sensible heat (Fig. 1)[15]. Because PV installations introduce shading with a material that, itself, should not store much incoming radiation, one might hypothesize that the effect of a PVHI effect would be lesser than that of a UHI. Here, we found that the difference in evening ambient air temperature was consistently greater between the PV installation and the desert site than between the parking lot (UHI) and the desert site (Fig. 3). The PVHI effect caused ambient temperature to regularly approach or be in excess of 4 °C warmer than the natural desert in the evenings, essentially doubling the temperature increase due to UHI measured here. This more significant warming under the PVHI than the UHI may be due to heat trapping of re-radiated sensible heat flux under PV arrays at night. Daytime differences from the natural ecosystem were similar between the PV installation and urban parking lot areas, with the exception of the Spring and Summer months, when the PVHI effect was significantly greater than UHI in the day. During these warm seasons, average midnight temperatures were 25.5 + 0.5 °C in the PV installation and 23.2 + 0.5 °C in the parking lot, while the nearby desert ecosystem was only 21.4 + 0.5 °C.

The results presented here demonstrate that the PVHI effect is real and can significantly increase temperatures over PV power plant installations relative to nearby wildlands. More detailed measurements of the underlying causes of the PVHI effect, potential mitigation strategies, and the relative influence of PVHI in the context of the intrinsic carbon offsets from the use of this renewable energy are needed. Thus, we raise several new questions and highlight critical unknowns requiring future research.

What is the physical basis of land transformations that might cause a PVHI?

We hypothesize that the PVHI effect results from the effective transition in how energy moves in and out of a PV installation versus a natural ecosystem. However, measuring the individual components of an energy flux model remains a necessary task. These measurements are difficult and expensive but, nevertheless, are indispensable in identifying the relative influence of multiple potential drivers of the PVHI effect found here. Environmental

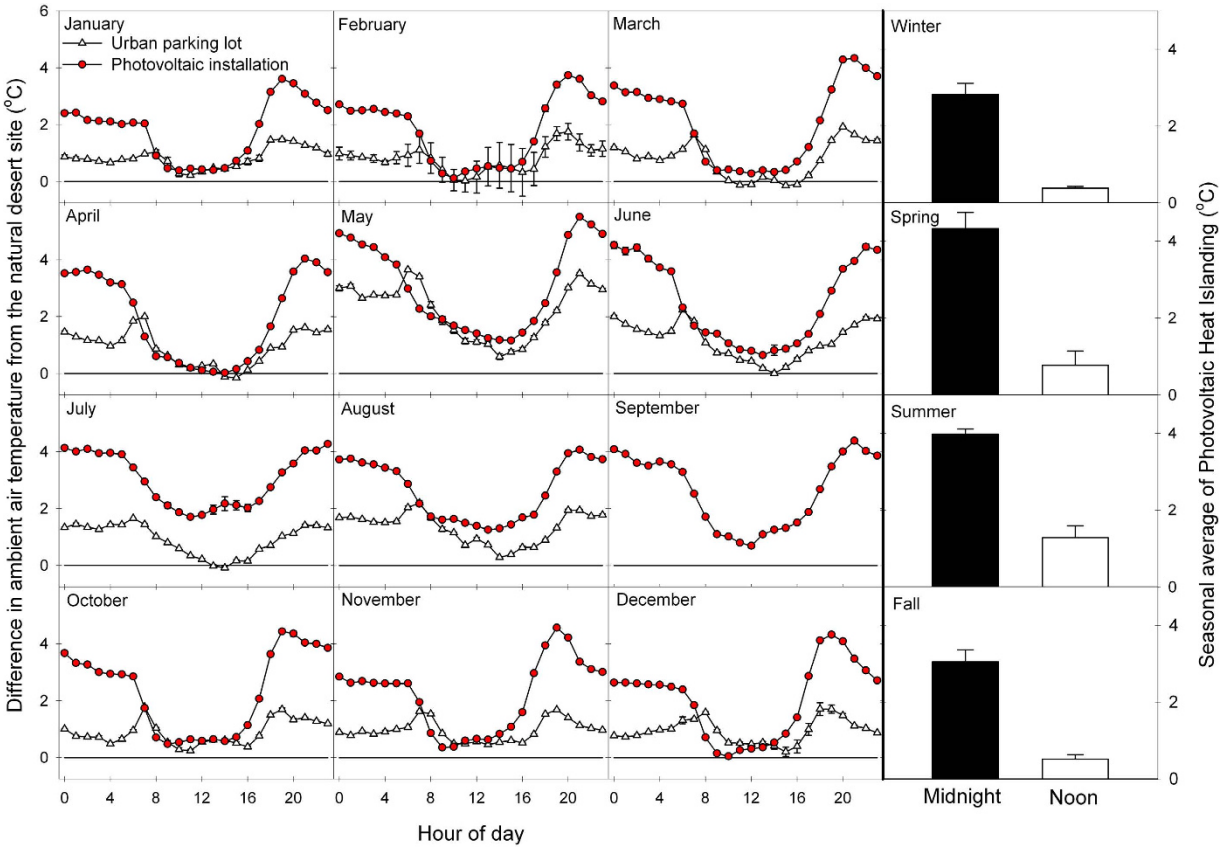


Figure 3. (Left) Average monthly levels of Photovoltaic Heat Islanding (ambient temperature difference between PV installation and desert) and Urban Heat Islanding (ambient temperature difference between the urban parking lot and the desert). (Right) Average night and day temperatures for four seasonal periods, illustrating a significant PVHI effect across all seasons, with the greatest influence on ambient temperatures at night.

conditions that determine patterns of ecosystem carbon, energy, and water dynamics are driven by the means through which incoming energy is reflected or absorbed. Because we lack fundamental knowledge of the changes in surface energy fluxes and microclimates of ecosystems undergoing this land use change, we have little ability to predict the implications in terms of carbon or water cycling[4,8].

What are the physical implications of a PVHI, and how do they vary by region?

The size of an UHI is determined by properties of the city, including total population[26–28], spatial extent, and the geographic location of that city[29–31]. We should, similarly, consider the spatial scale and geographic position of a PV installation when considering the presence and importance of the PVHI effect. Remote sensing could be coupled with ground-based measurements to determine the lateral and vertical extent of the PVHI effect. We could then determine if the size of the PVHI effect scales with some measure of the power plant (for example, panel density or spatial footprint) and whether or not a PVHI effect reaches surrounding areas like wildlands and neighborhoods. Given that different regions around the globe each have distinct background levels of vegetative ground cover and thermodynamic patterns of latent and sensible heat exchange, it is possible that a transition from a natural wildland to a typical PV power plant will have different outcomes than demonstrated here. The paucity in data on the physical effects of this important and growing land use and land cover change warrants more studies from representative ecosystems.

What are the human implications of a PVHI, and how might we mitigate these effects?

With the growing popularity of renewable energy production, the boundaries between residential areas and larger-scale PV installations are decreasing. In fact, closer proximity with residential areas is leading to increased calls for zoning and city planning codes for larger PV installations[32,33], and PVHI-based concerns over potential reductions in real estate value or health issues tied to Human Thermal Comfort (HTC)[34]. Mitigation of a PVHI effect through targeted revegetation could have synergistic effects in easing ecosystem degradation associated with development of a utility scale PV site and increasing the collective ecosystem services associated with an area[4]. But what are the best mitigation measures? What tradeoffs exist in terms of various means of revegetating degraded PV installations? Can other albedo modifications be used to moderate the severity of the PVHI?



Figure 4. Experimental sites. Monitoring a (1) natural semiarid desert ecosystem, (2) solar (PV) photovoltaic installation, and (3) an "urban" parking lot – the typical source of urban heat islanding – within a 1 km^2 area enabled relative control for the incoming solar energy, allowing us to quantify variation in the localized temperature of these three environments over a year-long time period. The Google Earth image shows the University of Arizona's Science and Technology Park's Solar Zone.

To fully contextualize these findings in terms of global warming, one needs to consider the relative significance of the (globally averaged) decrease in albedo due to PV power plants and their associated warming from the PVHI against the carbon dioxide emission reductions associated with PV power plants. The data presented here represents the first experimental and empirical examination of the presence of a heat island effect associated with PV power plants. An integrated approach to the physical and social dimensions of the PVHI is key in supporting decision-making regarding PV development.

Methods

Site Description. We simultaneously monitored a suite of sites that represent the traditional built urban environment (a parking lot) and the transformation from a natural system (undeveloped desert) to a 1 MW PV power plant (Fig. 4; Map data: Google). To minimize confounding effects of variability in local incoming energy, temperature, and precipitation, we identified sites within a 1 km area. All sites were within the boundaries of the University of Arizona Science and Technology Park Solar Zone (32.092150°N, 110.808764°W; elevation: 888 m ASL). Within a 200 m diameter of the semiarid desert site's environmental monitoring station, the area is composed of a sparse mix of semiarid grasses (*Sporobolus wrightii, Eragrostis lehmanniana*, and *Muhlenbergia porteri*), cacti (*Opuntia* spp. and *Ferocactus* spp.), and occasional woody shrubs including creosote bush (*Larrea tridentata*), whitethorn acacia (*Acacia constricta*), and velvet mesquite (*Prosopis velutina*). The remaining area is bare soil. These species commonly co-occur on low elevation desert bajadas, creosote bush flats, and semiarid grasslands. The photovoltaic installation was put in place in early 2011, three full years prior when we initiated monitoring at the site. We maintained the measurement installations for one full year to capture seasonal variation due to sun angle and extremes associated with hot and cold periods. Panels rest on a single-axis tracker system that pivot east-to-west throughout the day. A parking lot with associated building served as our "urban" site and is of comparable spatial scale as our PV site.

Monitoring Equipment & Variables Monitored. Ambient air temperature (°C) was measured with a shaded, aspirated temperature probe 2.5 m above the soil surface (Vaisala HMP60, Vaisala, Helsinki, Finland in the desert and Microdaq U23, Onset, Bourne, MA in the parking lot). Temperature probes were cross-validated for precision (closeness of temperature readings across all probes) at the onset of the experiment. Measurements of temperature were recorded at 30-minute intervals throughout a 24-hour day. Data were recorded on a data-logger (CR1000, Campbell Scientific, Logan, Utah or Microstation, Onset, Bourne, MA). Data from this

instrument array is shown for a yearlong period from April 2014 through March 2015. Data from the parking lot was lost for September 2014 because of power supply issues with the datalogger.

Statistical analysis. Monthly averages of hourly (on-the-hour) data were used to compare across the natural semiarid desert, urban, and PV sites. A Photovoltaic Heat Island (PVHI) effect was calculated as differences in these hourly averages between the PV site and the natural desert site, and estimates of Urban Heat Island (UHI) effect was calculated as differences in hourly averages between the urban parking lot site and the natural desert site. We used midnight and noon values to examine maximum and minimum, respectively, differences in temperatures among the three measurement sites and to test for significance of heat islanding at these times. Comparisons among the sites were made using Tukey's honestly significant difference (HSD) test[35]. Standard errors to calculate HSD were made using pooled midnight and noon values across seasonal periods of winter (January-March), spring (April-June), summer (July-September), and fall (October-December). Seasonal analyses allowed us to identify variation throughout a yearlong period and relate patterns of PVHI or UHI effects with seasons of high or low average temperature to examine correlations between background environmental parameters and localized heat islanding.

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Author Contributions

G.A.B.-G., R.L.M. and N.A.A. established research sites and installed monitoring equipment. G.A.B.-G. directed research and R.L.M. conducted most site maintenance. G.A.B.-G., N.A.A., A.D.C. and M.A.P.-Z. led efforts to secure funding for the research. All authors discussed the results and contributed to the manuscript.

Additional Information

Competing financial interests: The authors declare no competing financial interests.

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Effects of Solar Power Farms on the Environment



Updated April 24, 2017
By David C. Laine

Solar farms harness energy from the sun to create clean, renewable electrical energy. Unlike fossil fuels such as coal, generating electricity from renewable sources like solar power creates no emissions that are harmful to human health and the environment. However, solar farms also pose real environmental challenges, including habitat degradation and harm to wildlife.

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Reduced Emissions

Almost 70 percent of electrical power in the U.S. came from fossil fuels like coal, natural gas and petroleum as of 2010. Burning these substances releases chemicals into the atmosphere, including greenhouse gases that drive climate change, and toxic chemicals like mercury and arsenic. In contrast, solar power produces little to no emissions, because it does not use chemical fuels. As electricity from solar farms supplants energy from coal plants, they reduce overall chemical output into the environment.

Harm to Wildlife

In order to provide a significant amount of electrical energy, solar farms require large tracts of land. Western states like California have deserts with abundant space and sunshine, but these areas are also natural habitats that support wildlife. For example, environmental reports underestimated the number of desert tortoises that would be displaced by the Ivanpah Solar Generating System in California's Mojave Desert. The same solar farm also came under scrutiny when an increasing number of bird deaths were reported on its premises. Many of their wings had been melted or burned off by heat from the solar farm's mirrors.

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Desert rely on burrows dug by desert tortoises for shelter (See Reference 4). When solar farms harm or remove species within a habitat, they also remove the valuable ecosystem services that they provide to the habitat. The habitat becomes less livable for plants and wildlife that have adapted to its specific conditions.

Environmental Debate

The controversy surrounding solar projects has caused division among environmentalists. Renewable energy development and the reduction of greenhouse gas emissions are important goals for many environmental advocates, but so is conservation of habitat and species diversity. These stances offer valid environmental arguments both for and against solar power farms. There may not be a perfect answer to this problem, but it is important to recognize both views in the debate to find reasonable solutions.

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Updated April 24, 2017
By Kevin Lee

Silicon, found in sand, has the remarkable ability to generate electricity when light strikes it. This "photovoltaic" effect enables sunlight to operate watches, power spacecraft, run pumps and provide electricity for homes and businesses. Clean, renewable energy from the sun seems like the perfect alternative to "dirty," nonrenewable fossil fuel, but under some conditions, that free energy impacts your environment.

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Secrets to Harvesting Electricity From Sunbeams

If you were to own a solar energy business, you might market two types of technologies that produce electricity: photovoltaic, which uses silicon or other conductive substances, and solar-thermal. Solar panels containing small solar cells are good examples of photovoltaic products. Devices that use solar thermal technology focus sunlight on liquid that warms water to produce steam. Energy from the steam turns a generator that produces electricity. Solar power plants generate electricity for customers using this method.

Minor Solar Power Impacts

A solar-powered parking meter, such as one you might find in Washington, D.C., requires no fuel, and it releases no toxins into the environment. When companies create photovoltaic wafers that go into solar cells, the production process generates a small amount of hazardous material. Workers must manage it carefully to prevent environmental and health problems. When some solar cells break, they become hazardous waste and must also be handled with caution.

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Homes and small businesses often install solar panels on roofs. Because that installation occurs on existing developments, photovoltaic systems do not usually consume large amounts of land that you could use for something else. Solar-thermal systems, on the other hand, could use a large amount of land depending on the type of technology you use and the facility's size. If a new solar energy installation requires land use, it could have a negative impact on wildlife habitat in the area. Off-grid PV systems often have disposable batteries that store energy when the sun shines so you can use it at night. These batteries can harm the environment unless you dispose of them properly because some of them can leak toxins such as lead and sulfuric acid.

Solar Power Plants Produce More Than Electricity

Solar energy devices may not harm the environment, but operations and maintenance activities at solar energy facilities might. Excess noise, for instance, could disturb wildlife around a power plant. Equipment and structures at a facility itself could cause problems. Focused sun rays at a solar thermal plant might burn birds. Workers at solar energy facilities must also use and dispose of cleaning agents carefully to protect the environment as well as life that lives in it. Finally, concentrating solar power technologies (parabolic trough and power tower) may also generate substantial amounts of heat transfer fluids and industrial solid wastes, such as:

- lubricating oils
- compressor oils
- hydraulic fluids

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August 15, 2022

Aleksandra Moch
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RE: Briarcliff Manor Solar Project – Solar Farm Heat Island Discussion

Dear Ms. Moch,

This letter is in response to a letter dated July 24, 2022, in which you have outlined comments and concerns of the Briarcliff Manor Solar Project located at 345 Scarborough Road on behalf of the Village of Briarcliff Manor. The letter indicates concerns regarding the effects of solar farm heat islands and how the stormwater runoff will become a source of thermal pollution to the receiving streams. We believe this concern to be unwarranted for the following reasons:

Even if there is an increase to ambient temperatures due to the proposed installation of the solar array, we believe that this will be offset by the removal of approximately 4.1- acres of asphalt from the existing site. The asphalt has a much higher impact on thermal pollution than is possible with solar panels due to the fact that it is impervious, the higher temperature it reaches, and the longer and more direct contact it has with stormwater. Even if this asphalt was not being removed to mitigate the potential thermal pollution concern, we still do not believe this concern is merited as the solar panels are designed for water to runoff to the ground very quickly, where stormwater is then infiltrated naturally into the ground. Solar panels are going to have far less thermal impact than something such as road runoff, due to a much shorter contact time. This issue is not something that is being discussed for solar development in NYS and the likely reason why NYSDEC has not yet determined that solar panels require stormwater treatment for water quality or thermal discharges. With over 100 feet that separates the array from any wetland or watercourse, any potential impact on thermal pollution that may be generated from the solar array would be mitigated, as the stormwater temperatures would be lowered to the ambient temperature outside of the array area by the time it reaches any wetland or watercourse.

Lastly, the science is quite inconsistent and unsettled in terms of solar farms even having a heat island effect at all. Scholarly articles on the topic have resulted in vastly different conclusions over the past decade, ranging from articles showing a 1. 9°C increase in ambient air temperature, like the article shared by Mr. Taravella, to concluding that solar arrays decrease ambient air temperatures and heat island effects. One thing to question is the methods of these scientific studies. The ground temperature is far more likely to have an impact on thermal pollution to stormwater than the air temperature air at the height of the panels, as stormwater will have much longer and more direct contact with the ground, but studies do not seem to take ground temperature into consideration. Because heat rises, one would expect that the heat generated from the panels would be released and raise into the atmosphere, rather than sinking and heating up the ground below. Combined with the effects of shading, one would reasonably expect the ground under a panel to be a cooler temperature than the ambient ground temperature outside of the array area, even though the ambient temperature 1.5-2.5 meters above ground may be higher than the ambient air temperature of the same height outside of the array area. Because of the lack of scientific testing

and the questionable nature of the methods for current testing that exists, claiming this project would cause a heat island and would result in thermal pollution is unwarranted. It would be quite rational to make the exact opposite argument that the solar arrays, although increasing ambient air temperature, would decrease ground temperature from shading and thus result in a decrease in the temperature of stormwater entering local wetlands and watercourses.

Respectfully submitted,
LaBella Associates



Jay Kaminski, MS, WPIT, CERP
Environmental Renewable Project Manager