CONSTRUCTION DOCUMENTS: December 19, 2022

PROJECT MANUAL

VOLUME 3 OF 3 : APPENDIX

NEW HAMPTON FIRE DEPARTMENT

New Fire Station

CSArch Project No. 840-2101

Architect's Seal

The design of this project conforms to applicable provisions of the New York State Uniform Fire Prevention and Building Code, the New York State Energy Conservation Construction Code, and the Manual of Planning Standards of the New York State Education Department

CSARCH

QuES&T

Quality Environmental Solutions & Technologies, Inc.

PRE-DEMOLITION SURVEY REPORT

Prepared for:

NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

at

NEW HAMPTON FIRE DEPEARTMENT
&
P & M ACCOUNTING LLC.
5024 & 5030 NY-17M
New Hampton, NY 10958

April 6, 2022

QuES&T Project #Q21-4327

1376 Route 9, Wappingers Falls, NY 12590 Phone (845) 298-6031 Fax (845) 298-6251
NYS MWBD MBE Cert # 49952-2006 NYSUCP DBE Certified NJUCP DBE Certified www.Qualityenv.com

QuES&T

Quality Environmental Solutions & Technologies, Inc.

April 6, 2022

NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

Via E-mail: brianhc63@frontiernet.net

Re: 5024 & 530 NY-17M
New Hampton, NY 10958
Pre-Demolition Asbestos Inspection
QuES&T Project #Q21-4327

Dear Mr. Corwin,

Please find attached Pre-Demolition Inspection Report for Asbestos-containing Materials (ACM) throughout interior and exterior areas included within the above-referenced project. **Qu**ality **E**nvironmental **S**olutions **& T**echnologies, Inc. **(QuES&T)** performed visual assessments, along with proper, representative bulk sample analysis performed for the detection of ACM in compliance with the requirements of 12 NYCRR Part 56 and all other applicable local, state and federal regulations.

As per 12 NYCRR Part 56-5.5.1(g), upon receipt of this report, Building Owner's must provide:

1) One (1) copy of this completed report shall be retained by the Owner for a period of "life of building" plus thirty (30) years.
2) One (1) copy shall be submitted to the NYSDOL Asbestos Control Bureau, State Campus Bldg. 12, Room #154, Albany, NY 12240.
3) One (1) copy shall be submitted to the local Municipality issuing all work permits.
4) One (1) copy shall be kept on the construction site, with the asbestos abatement project notification(s)/variance(s), as required, throughout the duration of asbestos abatement, as well as any demolition, renovation, remodeling, repair or addition activities.

The attached report summarizes the inspection protocol and inspection results for your review. **QuES&T** believes this report accurately reflects the material condition existing in the functional spaces at the time of our inspection.

Should you wish to discuss this matter further or require additional information concerning this submittal, please contact us at (845) 298-6031. **QuES&T** appreciates the opportunity to assist you in the environmental services area.

Sincerely,

Nicholas Salerno

Nicholas Salerno
Field & Technical Services
NYS/AHERA Inspector/Project Monitor Cert. #AH 16-10091
NYS Mold Assessor Cert. #MA01571
Niton-Certified XRF Technician

Cc: QuES&T File
Cc: gdean@qualityenv.com

TABLE OF CONTENTS

I. INTRODUCTION:

Quality **E**nvironmental **S**olutions **&** **T**echnologies, Inc. **(QuES&T)** performed a Pre-Demolition Asbestos Survey, in conformance with Title 12 NYCRR Part 56-5.1, on October 22nd, 2021 & March 28th, 2022 for New Hampton Fire Department in support of the planned demolition of the fire house and adjacent property, located at 5024 & 5030 NY-17M, New Hampton, NY 10958. The survey included a visual inspection / assessment for Presumed Asbestos-containing Materials (PACM) and suspect miscellaneous Asbestos-containing Materials (ACM) throughout accessible interior and exterior locations to be affected by future renovation activities.

QuES&T established functional spaces based either on physical barriers (i.e. walls, doors, etc.) or homogeneity of material. Within each functional space identified, a visual inspection was performed using reasonable care and judgment, to identify and assess location, quantity, friability and condition of all accessible installed ACM building materials observed at the affected portion of the building/structure.

Limited localized demolition of building surfaces was performed, as part of this survey, to access concealed surfaces. No disassembly of installed equipment was conducted as part of this inspection. ACM concealed within structural components and equipment interiors or that is accessible only through extensive mechanical or structural demolition may not have been identified as part of this survey. When any construction activity, such as demolition, remodeling, renovation or repair work, reveals PACM or suspect miscellaneous ACM that has not been identified, as part of this survey, all construction activities shall cease in the affected area.

The survey included both visual inspection of accessible spaces and representative sampling of suspect building materials for ACM. Samples collected were analyzed by a laboratory approved under the New York State Department of Health Environmental Laboratory Approval Program (NYSDOH ELAP). Samples were analyzed in the laboratory by Polarized Light Microscopy (PLM), Polarized Light Microscopy-NOB (PLM-NOB) and/or Quantitative Transmission Electron Microscopy (QTEM), as required. Sample collection and laboratory analysis were conducted in compliance with the requirements of Title 12 NYCRR Part 56-5.1, 29 CFR 1926.1101 and standard EPA & OSHA accepted methods. Samples consisting of multiple layers were separated and analyzed independently in the laboratory.

Certified **QuES&T** personnel (Appendix C), Mr. Nicholas Salerno (Cert. #AH 16-10091) & Mr. Shannon Talsma (Cert. #AH 16-07559) performed visual assessments throughout the building interior and exterior. A total of one hundred fifty-two **(152)** samples of installed and accessible suspect building materials were analyzed by a laboratory approved under the NYSDOH ELAP. Sixty-Seven **(67)** samples were analyzed using Polarized Light Microscopy (PLM) for friable materials; forty-six **(46)** samples were analyzed using Polarized Light Microscopy (PLM-NOB) for non-friable organically bound materials; and thirty-nine **(39)** samples were analyzed by Confirmatory-QTEM following negative-determinations using PLM-NOB protocols.

II. INSPECTION SUMMARY:

A visual inspection was performed and homogenous material types were established based on appearance, color and texture. The findings presented in this report are based upon reasonably available information and observed site conditions at the time the assessment was performed. The findings and conclusions of this report are not meant to be indicative of future conditions at the site and does not warrant against conditions that were not evident from visual observations or historical information obtained from others.

Representative bulk sampling was performed on suspect building materials for laboratory analysis using PLM, PLM-NOB, and/or QTEM. The following is a summary of installed building materials sampled:

- Wall Materials – Stucco, Joint Compound, Sheetrock, Cementitious Block, Mortar, Brick, Plaster, Joint Tape, Wallpaper, Insulation Board.

- Ceiling Materials – Sheetrock, 2'x4' Ceiling Tile, 2'x4' Dot Canyon Ceiling Tile, Joint Compound, 12"x12" Ceiling Tile, Glue Dab.

- Flooring Materials – Cementitious Slab, Epoxy, Concrete, Ceramic Floor Tile, Grout, Mudset, Setting Bed, Floor Tile, Mastic.

- Roofing Materials – Tar Paper Vapor Barrier, Shingle, EPDM, Perlite, Isofoam, Rolled Roof, Tar Paper Vapor Barrier.

- Thermal Systems Insulation (TSI) – Insulation.

- Miscellaneous Materials – Glazing, Caulk, Tar Flashing.

III. IDENTIFIED ASBESTOS-CONTAINING MATERIALS (ACM):

IDENTIFIED ACM
NEW HAMPTON FIRE DEPARTMENT & P&M ACCOUNTING LLC.
5024 & 5030 NY-17M
New Hampton, NY 10958
(Refer to Appendix A for details)

KEY: **ACM** = Materials containing greater than 1% of asbestos;
LF = Linear Feet; **SF** = Square Feet; **PACM** = Presumed Asbestos-containing Materials;
Friable = ACM capable of being released into air, and which can be crumbled, pulverized, powdered, crushed or exposed by hand-pressure.

Location	Material	Approximate Quantity	Friable?	Condition
5024 NY-17M – New Hampton Fire Department				
Exterior, Window, Metal to Glass	Window Glazing	200 LF	No	Good

NOTE:

1. OSHA does not recognize a minimum concentration of asbestos for a material to be considered asbestos containing. Employees whose work practices involve disturbance of any amount of asbestos should be monitored to determine occupational exposure.

IV. GENERAL DISCUSSION:

All construction personnel as well as individuals who have access to locations where asbestos containing materials (ACM) exists should be informed of its presence and the proper work practices in these areas. Conspicuous labeling of all ACM is suggested to ensure personnel are adequately informed. Personnel should be informed not to rest, lean or store material or equipment on or near these surfaces and not to cut, saw, drill, sand or disturb ACM. All removal, disturbance, and repair of ACM should be performed in compliance with Title 12 NYCRR Part 56 by persons properly trained to handle ACM. Facility custodial and maintenance personnel should receive training commensurate with their work activities as defined in 29 CFR 1910.1001.

The findings presented in this report are based upon reasonably available information and observed site conditions at the time the assessment was performed. Conditions may have changed since that time and the findings and conclusions of this report are not meant to be indicative of future conditions at the Site. This report does not warrant against conditions that were not evident from visual observations or historical information obtained, or conditions that could only be determined by physical sampling or other intrusive investigation techniques that are outside the proposed scope of work.

V. TRANSMITTAL OF BUILDING SURVEY INFORMATION:

As specified in Title 12 NYCRR Part 56 5.1 (g), information derived from this building survey shall be immediately transmitted by the building owner or his/her agent to the commissioner through the Department's Division of Safety and Health, Asbestos Control Bureau, and to the local government entity charged with issuing a permit for such demolition under applicable State or local laws or, if no such permit is required, to the town or city clerk where the building is located.

VI. ABATEMENT REQUIRED:

As specified in Title 12 NYCRR Part 56-5.1 (h) and (i), "If the building/structure asbestos survey finds that the portion of the building/structure to be demolished, renovated, remodeled, or have repair work contains ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material, which is impacted by the work, the owner or the owner's agent shall conduct, or cause to have conducted, asbestos removal performed by a licensed asbestos abatement contractor in conformance with all standards set forth in this Part. All ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material impacted by the demolition, renovation, remodeling or repair project shall be removed as per this Part, prior to access or disturbance by other uncertified trades or personnel. No demolition, renovation, remodeling or repair work shall be commenced by any owner or the owner's agent prior to the completion of the asbestos abatement in accordance with the notification requirements of this Part…All building/structure owners and asbestos abatement contractors on a demolition, renovation, remodeling, or repair project, which includes work covered by this part, shall inform all trades on the work site about PACM, ACM, asbestos material and suspect miscellaneous ACM…Bids may be advertised and contracts awarded for demolition, remodeling, renovation, or repair work, but no work on the current intermediate portion of the project shall commence on the demolition, renovation, remodeling or repair work by any owner or agent prior to completion of all necessary asbestos abatement work for the current intermediate portion of the entire project, in conformance with all standards set forth in this Part."

Prior to conducting demolition or construction work at the building, all ACM affected/impacted by such activities shall be removed utilizing a licensed asbestos abatement contractor and NYSDOL/EPA/NYC certified personnel prior to construction/demolition activities. All work conducted should be in accordance with all legal requirements, including but not limited to U.S. Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) [40 CFR Part 61], New York State Industrial Code Rule 56 Asbestos Regulations (ICR 56) and Chapter 1 of Title 15 of the Rules of the City of New York Regulations, as applicable. Advance notification of the asbestos project to the USEPA, NYSDOL, and NYCDEP may be required.

All suspect building materials not sampled during this survey should be considered ACM until these materials are sampled and analyzed for ACM in the laboratory. Concealed ACM: In addition to the ACMs identified at the site, there is a possibility that concealed ACM may exist at the subject facility. As such, if any concealed suspect ACM is encountered during future construction related activities, the work should immediately stop. Prior to resuming the work, the suspect ACM should either be 1) Sampled by an appropriately certified asbestos professional and submitted to an Approved NYSDOH ELAP laboratory for asbestos analysis or 2) Presumed to be ACM (PACM) and removed by a licensed asbestos abatement contractor for disposal in accordance with all applicable regulations.

VII. DISCLAIMERS

It should be noted that the information contained within this report is based solely upon site observations and the results of laboratory analysis for samples collected by **QuES&T.** These observations and results are time dependent, subject to changing site conditions and revisions to Federal, State and Local regulations. **QuES&T** warrants that these findings have been promulgated after being prepared in general accordance with generally accepted practices in the abatement industries. **QuES&T** also recognizes that inspection laboratory data is not usually sufficient to make all abatement and management decisions.

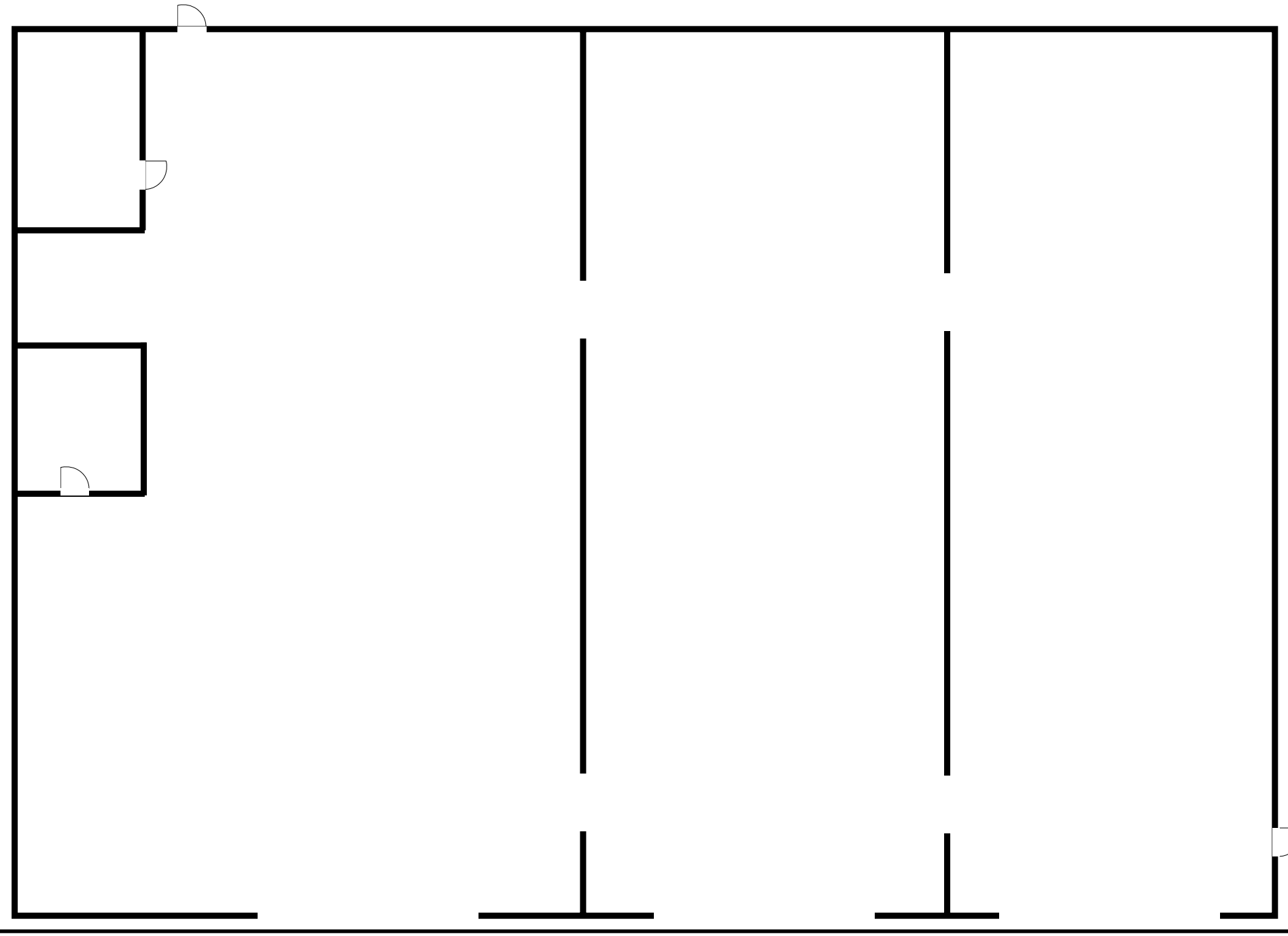
Due to the potential for concealed Asbestos-containing Materials (ACM) or other regulated materials, this report should not be construed to represent all ACM or regulated materials within the site(s). All quantities of ACM or other regulated materials identified, and all dimensions listed within this report are approximate and should be verified On-site.

This inspection report is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or Variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project. The Linear and/or Square Footages (LF / SF) listed within this Report are only approximates. Abatement Contractor(s) are required to visit the building(s) in order to take actual field measurements within each listed location.

QuES&T
Quality Environmental Solutions & Technologies, Inc.

Appendix A:
ACM LOCATION DRAWINGS

1376 Route 9, Wappingers Falls, NY 12590 Phone (845) 298-6031 Fax (845) 298-6251
NYS MWBD MBE Cert # 49952-2006 NYSUCP DBE Certified NJUCP DBE Certified www.Qualityenv.com



ACM LOCATION KEY (Refer to Report for Details)

No Asbestos-containing Materials (ACM) identified upon PLM & QTEM/PLM analysis

N

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: Q21-4327	
Project Manager: GD	**Prepared By:** NDS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

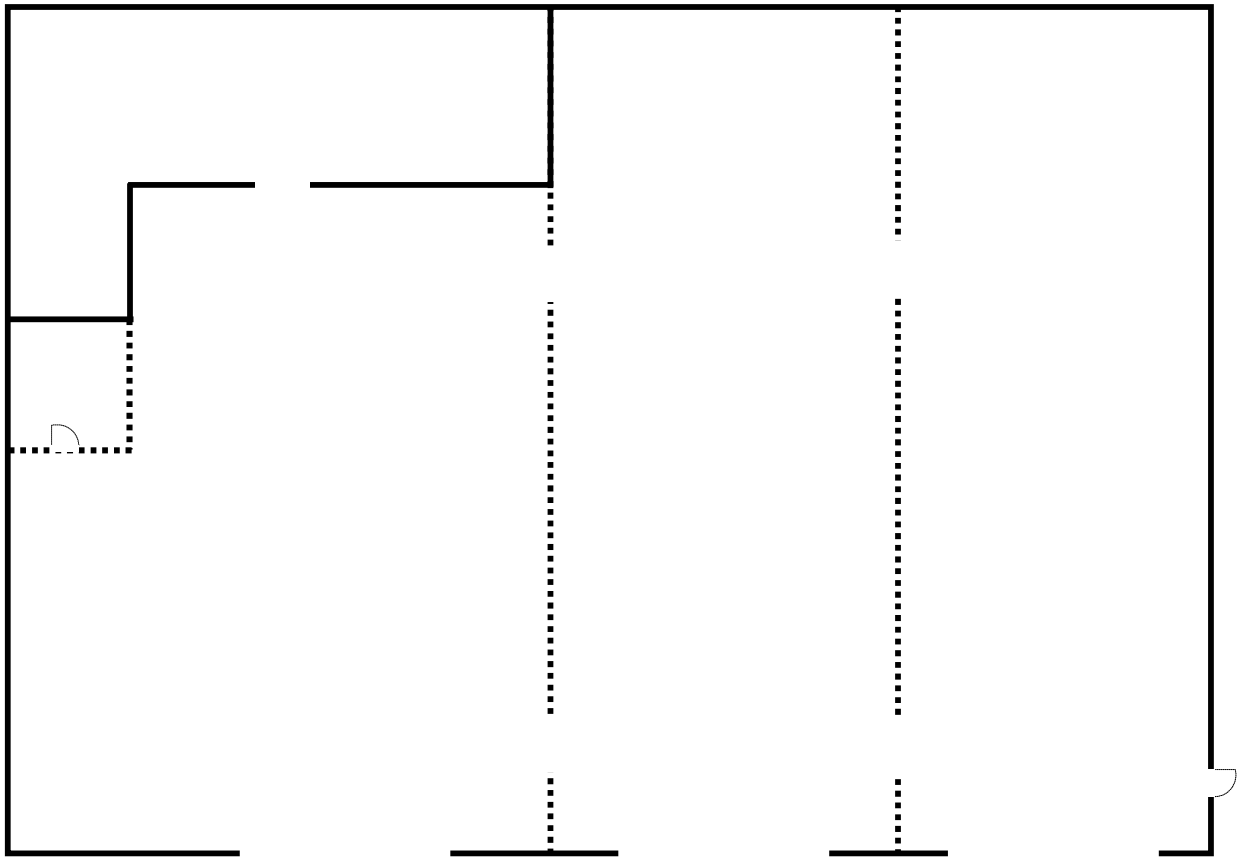
NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

GROUND FLOOR PLAN ASBESTOS LOCATIONS

ASB-01



No Asbestos-containing Materials (ACM) identified uponPLM & QTEM/PLM analysis

N

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: Q21-4327	
Project Manager: GD	Prepared By: NDS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

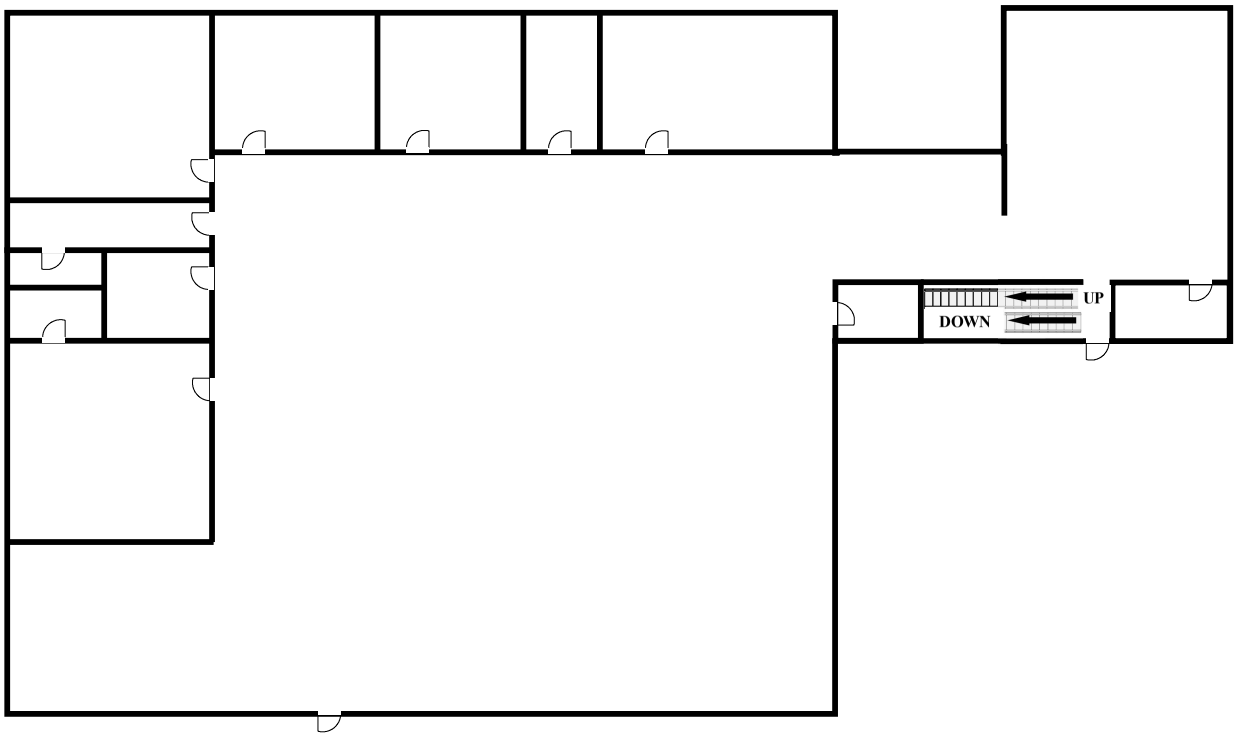
NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

ATTIC FLOOR PLAN ASBESTOS LOCATIONS

ASB-02



No Asbestos-containing Materials (ACM) identified uponPLM & QTEM/PLM analysis

N

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: Q21-4327	
Project Manager: GD	**Prepared By:** NDS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

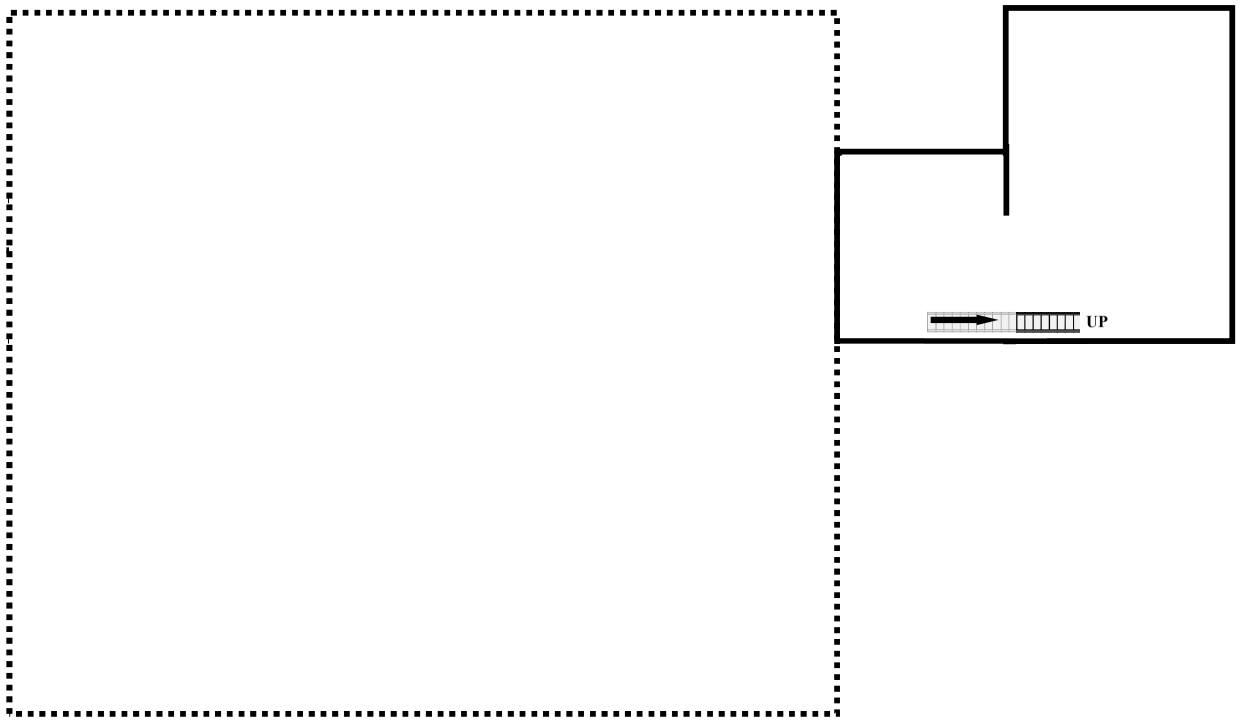
NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

P&M ACCOUNTING LLC.
5030 NY-17M
New Hampton, NY 10958

FIRST FLOOR PLAN ASBESTOS LOCATIONS

ASB-03



No Asbestos-containing Materials (ACM) identified uponPLM & QTEM/PLM analysis

N

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: Q21-4327	
Project Manager: GD	Prepared By: NDS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

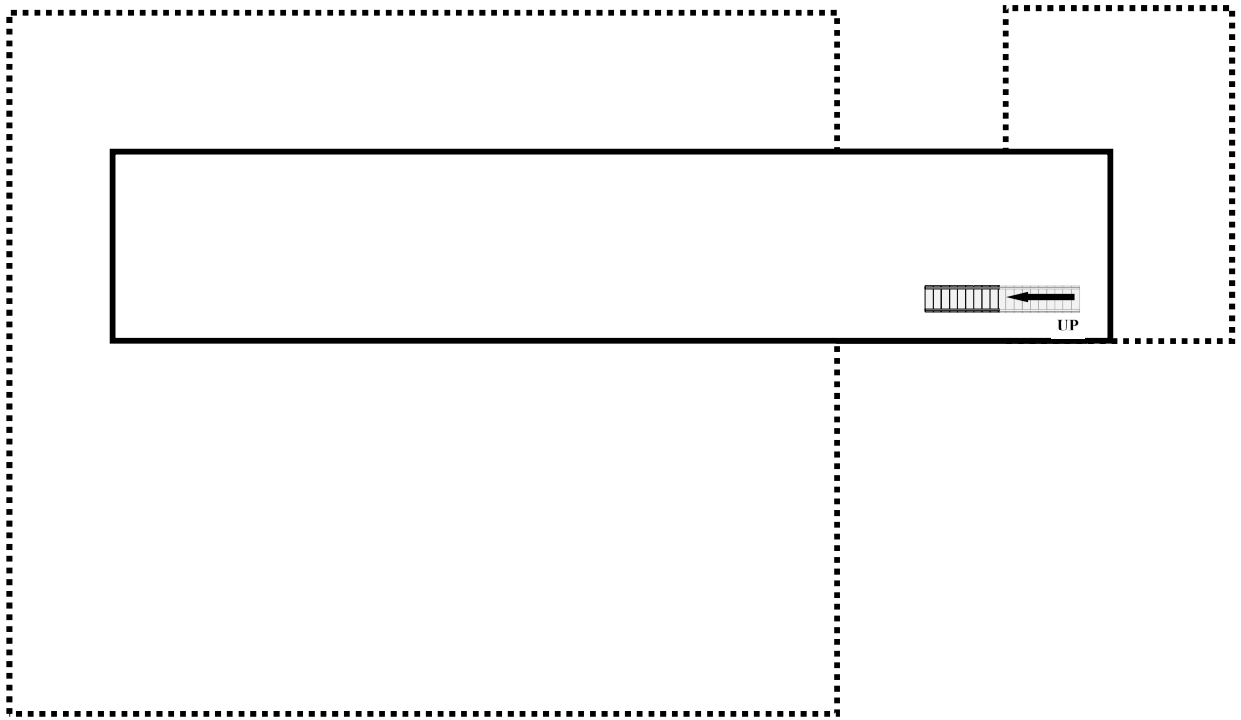
NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

P&M ACCOUNTING LLC.
5030 NY-17M
New Hampton, NY 10958

BASEMENT FLOOR PLAN ASBESTOS LOCATIONS

ASB-04



No Asbestos-containing Materials (ACM) identified uponPLM & QTEM/PLM analysis

N

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: Q21-4327	
Project Manager: GD	**Prepared By:** NDS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

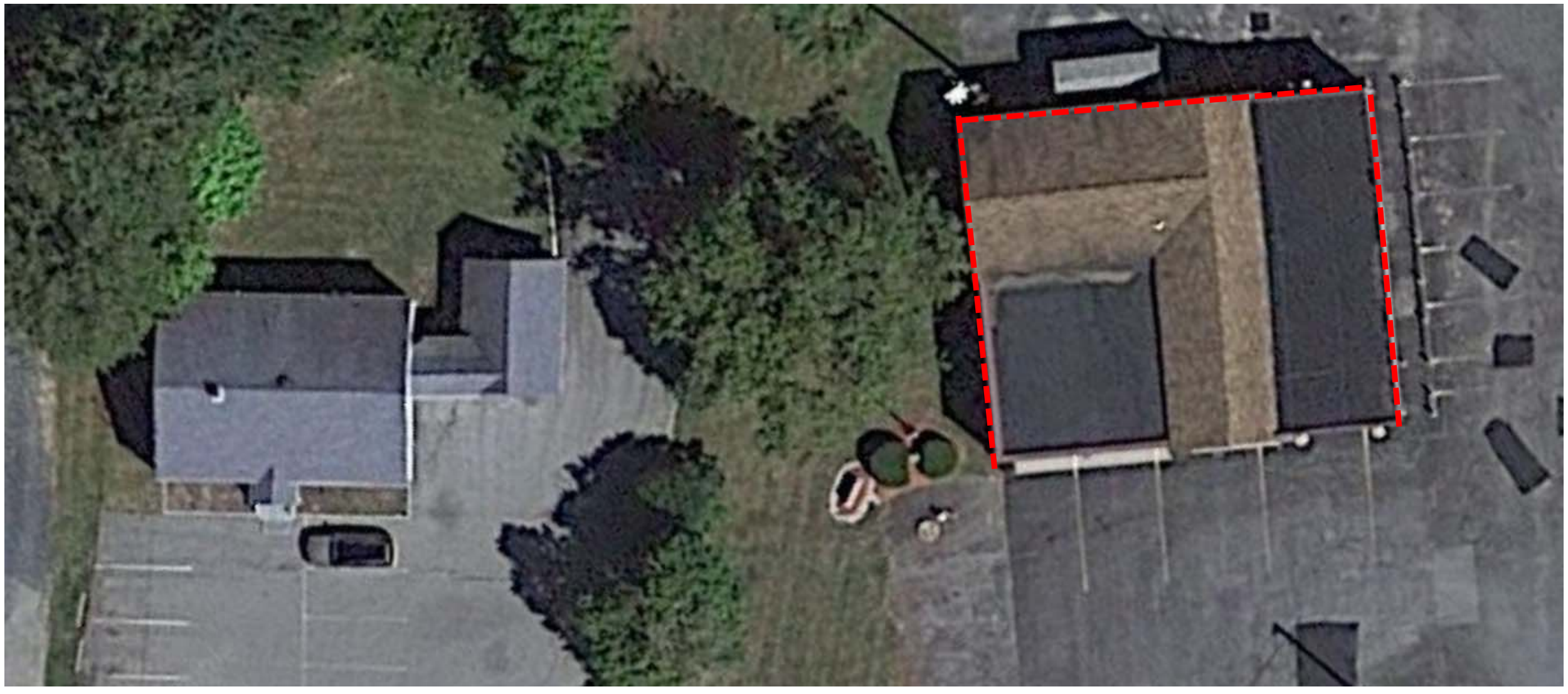
NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

P&M ACCOUNTING LLC.
5030 NY-17M
New Hampton, NY 10958

ATTIC FLOOR PLAN ASBESTOS LOCATIONS

ASB-05



ACM LOCATION KEY (Refer to Report for Details)	
	ACM Window Caulk (15 Windows)

N

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project # : Q21-4327	
Project Manager: GD	**Prepared By:** NDS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

MULTIPLE LOCATIONS
5024 & 5030 NY-17M
New Hampton, NY 10958

EXTERIOR ASBESTOS LOCATIONS

ASB-06

Appendix B:
SAMPLE LOCATIONS & ANALYTICAL DATA

Eastern Analytical Services, Inc.

Phone (914) 592-8380

4 Westchester Plaza
Elmsford, New York 10523-1610
http://www.EASInc.com

Fax (914) 592-8956

November 05, 2021

Mr. Lawrence J. Holzapfel
QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY
EAS Batch No. 2108775

Dear Mr. Holzapfel:

Enclosed please find the laboratory results for the 65 bulk sample(s) received by Eastern Analytical Services, Inc. October 28, 2021.

Thank you for allowing EAS, Inc. to provide QuES&T, Inc. with professional analytical services. If you have any questions or require additional information or assistance, please feel free to contact me at the number above or e-mail Lab@EASInc.com.

Sincerely,

EASTERN ANALYTICAL SERVICES, INC.

Paul Stascavage
Laboratory Director

PS:om

Enclosures

Electronically Transmitted
November 05, 2021

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-01	4327-FH-02	4327-FH-03	4327-FH-04
Layer Number					
Lab ID Number		2795730	2795731	2795732	2795733
Sample Location		Exterior, Foundation	Exterior, Foundation	Exterior, Foundation	Exterior, Foundation
Sample Description		Stucco (Only)	Stucco (Only)	Stucco (Only)	Stucco (Only)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	Gray	Gray	Gray	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	20.0	25.0	25.0	20.0
	% Carbonates	25.0	25.0	25.0	30.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	55.0	50.0	50.0	50.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-05	4327-FH-06	4327-FH-07	4327-FH-08
Layer Number					
Lab ID Number		2795734	2795735	2795736	2795737
Sample Location		Exterior, Foundation	Main Level, Bathroom, Wall, Partition, On Sheetrock	Main Level, Bathroom, Wall, Partition, On Sheetrock	Main Level btwn Apparatus Bays #2 & #3, Doorway/ Threshold, On Cem Block
Sample Description		Stucco (Only)	Joint Compound	Joint Compound	Joint Compound
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	Gray	White/Gray	White/Gray	White/Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	25.0	30.0	30.0	35.0
	% Carbonates	25.0	30.0	30.0	30.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	50.0	40.0	40.0	35.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-09	4327-FH-10	4327-FH-11	4327-FH-11
Layer Number				1	2
Lab ID Number		2795738	2795739	2795740	2795740
Sample Location		Attic, Ceiling	Main Level, Bathroom, Wall, Partition	Attic, Wall	Attic, Wall
Sample Description		Sheetrock	Sheetrock	Cementitious Block & Mortar (Block Layer)	Cementitious Block & Mortar (Mortar Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	No	No
	Color	White/Brown	Gray/Brown	Gray	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	15.0	10.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	25.0	25.0	25.0	30.0
	% Carbonates	30.0	30.0	25.0	25.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	30.0	35.0	50.0	45.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-12	4327-FH-12	4327-FH-13	4327-FH-13
Layer Number		1	2	1	2
Lab ID Number		2795741	2795741	2795742	2795742
Sample Location		Main Level, Apparatus Bay, Wall, Partition	Main Level, Apparatus Bay, Wall, Partition	Main Level, Apparatus Bay #3, South Wall, Partition, Window Sill	Main Level, Apparatus Bay #3, South Wall, Partition, Window Sill
Sample Description		Cementitious Block & Mortar (Block Layer)	Cementitious Block & Mortar (Mortar Layer)	Brick & Mortar (Brick Layer)	Brick & Mortar (Mortar Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	Yes	No
	Homogenous	No	No	No	Yes
	Fibrous	No	No	No	No
	Color	Gray	Gray	Rust/White	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	None
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	20.0	30.0	25.0	35.0
	% Carbonates	25.0	20.0	0.0	25.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	55.0	50.0	75.0	40.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-14	4327-FH-14	4327-FH-15	4327-FH-15
Layer Number		1	2	1	2
Lab ID Number		2795743	2795743	2795744	2795744
Sample Location		Main Level, Apparatus Bay #3, South Wall, Partition, Window Sill	Main Level, Apparatus Bay #3, South Wall, Partition, Window Sill	Exterior, Window Sill	Exterior, Window Sill
Sample Description		Brick & Mortar (Brick Layer)	Brick & Mortar (Mortar Layer)	Brick & Mortar (Brick Layer)	Brick & Mortar (Mortar Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	No	No	No
	Homogenous	No	Yes	No	Yes
	Fibrous	No	No	No	No
	Color	Rust/White	Gray	Red	Gray
Sample Treatment		Homogenized	None	Homogenized	None
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	25.0	35.0	30.0	30.0
	% Carbonates	0.0	20.0	0.0	25.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	75.0	45.0	70.0	45.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-16	4327-FH-16	4327-FH-17	4327-FH-18
Layer Number		1	2		
Lab ID Number		2795745	2795745	2795746	2795747
Sample Location		Exterior, Window Sill	Exterior, Window Sill	Main Level, Apparatus Bay, Floor	Main Level, Apparatus Bay, Floor
Sample Description		Brick & Mortar (Brick Layer)	Brick & Mortar (Mortar Layer)	Cementitious Slab	Cementitious Slab
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No	No
	Homogenous	No	Yes	No	No
	Fibrous	No	No	No	No
	Color	Red	Gray	Gray	Gray
Sample Treatment		Homogenized	None	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	30.0	30.0	25.0	30.0
	% Carbonates	0.0	25.0	35.0	30.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	70.0	45.0	40.0	40.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-19	4327-FH-19	4327-FH-20	4327-FH-20
Layer Number		1	2	1	2
Lab ID Number		2795748	2795748	2795749	2795749
Sample Location		Attic, Wall	Attic, Wall	Attic, Wall	Attic, Wall
Sample Description		Brick & Mortar (Brick Layer)	Brick & Mortar (Mortar Layer)	Brick & Mortar (Brick Layer)	Brick & Mortar (Mortar Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No	No
	Homogenous	No	Yes	No	Yes
	Fibrous	No	No	No	No
	Color	Red	Gray	Red	Gray
Sample Treatment		Homogenized	None	Homogenized	None
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	25.0	35.0	25.0	35.0
	% Carbonates	10.0	20.0	10.0	25.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	65.0	45.0	65.0	40.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-23	4327-FH-24	4327-FH-27	4327-FH-28
Layer Number					
Lab ID Number		2795750	2795751	2795752	2795753
Sample Location		North Truck Bay, Suspended Ceiling, 2' x 4'	North Truck Bay, Suspended Ceiling, 2' x 4'	Attic, Wall, Exposed, Yellow	Attic, Wall, Exposed, Yellow
Sample Description		Ceiling Tile	Ceiling Tile	Insulation	Insulation
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Yellow/White	Yellow/White	Yellow	Gray/Brown
Sample Treatment		Homogenized	Homogenized	None	None
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	60.0	60.0	75.0	70.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	10.0	10.0	5.0	5.0
	% Carbonates	0.0	0.0	0.0	5.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	30.0	30.0	20.0	20.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-29	4327-FH-30	4327-FH-37	4327-37
Layer Number				1	2
Lab ID Number		2795754	2795755	2795756	2795756
Sample Location		Attic, Ceiling, Sheetrock, Pink	Attic, Ceiling, Sheetrock, Pink	First Floor, File Room, Ceiling	First Floor, File Room, Ceiling
Sample Description		Insulation	Insulation	Plaster (Plaster Layer)	Plaster (Scratch Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	Yes	No
	Homogenous	Yes	Yes	No	No
	Fibrous	Yes	Yes	No	No
	Color	Pink/Gray	Pink/Gray	White/Blue	Gray
Sample Treatment		None	None	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	65.0	70.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	5.0	5.0	5.0	30.0
	% Carbonates	0.0	0.0	50.0	25.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	30.0	25.0	45.0	45.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-38	4327-38	4327-39	4327-39
Layer Number		1	2	1	2
Lab ID Number		2795757	2795757	2795758	2795758
Sample Location		First Floor, Main Lobby, Front Wall, Perimeter	First Floor, Main Lobby, Front Wall, Perimeter	First Floor, Back Left Office, Ceiling	First Floor, Back Left Office, Ceiling
Sample Description		Plaster (Plaster Layer)	Plaster (Scratch Layer)	Plaster (Plaster Layer)	Plaster (Scratch Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	White/Gray	Gray/Brown	White/Green	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	5.0	30.0	5.0	30.0
	% Carbonates	45.0	20.0	50.0	25.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	50.0	50.0	45.0	45.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-40	4327-40	4327-41	4327-41
Layer Number		1	2	1	2
Lab ID Number		2795759	2795759	2795760	2795760
Sample Location		First Floor, Back Left Office, Wall, Perimeter	First Floor, Back Left Office, Wall, Perimeter	First Floor, Back Office, Wall, Perimeter	First Floor, Back Office, Wall, Perimeter
Sample Description		Plaster (Plaster Layer)	Plaster (Scratch Layer)	Plaster (Plaster Layer)	Plaster (Scratch Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	No	No	No
	Fibrous	No	Yes	No	No
	Color	White/Gray	Gray	White/Gray	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	2.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	5.0	35.0	10.0	35.0
	% Carbonates	50.0	25.0	50.0	20.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	45.0	38.0	40.0	45.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-42	4327-42	4327-43	4327-43
Layer Number		1	2	1	2
Lab ID Number		2795761	2795761	2795762	2795762
Sample Location		First Floor, Front Left Office, Ceiling	First Floor, Front Left Office, Ceiling	First Floor, Front Left Office, Wall, Perimeter	First Floor, Front Left Office, Wall, Perimeter
Sample Description		Plaster (Plaster Layer)	Plaster (Scratch Layer)	Plaster (Plaster Layer)	Plaster (Scratch Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	No	No	No
	Fibrous	No	No	No	No
	Color	White/Green	Gray	White	Gray
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	10.0	30.0	10.0	30.0
	% Carbonates	45.0	20.0	45.0	25.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	45.0	50.0	45.0	45.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-44	4327-44	4327-45	4327-45
Layer Number		1	2	1	2
Lab ID Number		2795763	2795763	2795764	2795764
Sample Location		Exterior, Lower Facade, Wall	Exterior, Lower Facade, Wall	Exterior, Lower Facade, Wall	Exterior, Lower Facade, Wall
Sample Description		Stucco (Gray Layer)	Stucco (Brown Layer)	Stucco (Gray Layer)	Stucco (Brown Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	Yes	No	Yes
	Fibrous	No	No	No	No
	Color	Gray	Brown	Gray	Brown
Sample Treatment		Homogenized	None	Homogenized	None
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	20.0	35.0	20.0	30.0
	% Carbonates	30.0	20.0	30.0	20.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	50.0	45.0	50.0	50.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-46	4327-46	4327-47	4327-47
Layer Number		1	2	1	2
Lab ID Number		2795765	2795765	2795766	2795766
Sample Location		Exterior, Lower Facade, Wall	Exterior, Lower Facade, Wall	Exterior, Lower Facade, Wall	Exterior, Lower Facade, Wall
Sample Description		Stucco (Gray Layer)	Stucco (Brown Layer)	Stucco (Gray Layer)	Stucco (Brown Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	Yes	No	Yes
	Fibrous	No	No	No	No
	Color	Gray	Brown	Gray	Brown
Sample Treatment		Homogenized	None	Homogenized	None
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	25.0	30.0	25.0	30.0
	% Carbonates	25.0	25.0	25.0	20.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	50.0	45.0	50.0	50.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-48	4327-48	4327-49	4327-49
Layer Number		1	2	1	2
Lab ID Number		2795767	2795767	2795768	2795768
Sample Location		Exterior, Lower Facade, Wall	Exterior, Lower Facade, Wall	Exterior, Lower Facade, Wall	Exterior, Lower Facade, Wall
Sample Description		Stucco (Gray Layer)	Stucco (Brown Layer)	Stucco (Gray Layer)	Stucco (Brown Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	Yes	No	Yes
	Fibrous	No	No	No	No
	Color	Gray	Brown	Gray	Brown
Sample Treatment		Homogenized	None	Homogenized	None
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	20.0	25.0	25.0	30.0
	% Carbonates	25.0	30.0	25.0	25.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	55.0	45.0	50.0	45.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-50	4327-50	4327-51	4327-52
Layer Number		1	2		
Lab ID Number		2795769	2795769	2795770	2795771
Sample Location		Exterior, Lower Facade, Wall	Exterior, Lower Facade, Wall	First Floor, Back Left, North Room, Wall, Perimeter	First Floor, Back Right, North East Room, Ceiling, On Sheetrock
Sample Description		Stucco (Gray Layer)	Stucco (Brown Layer)	Joint Compound	Joint Compound
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	No	Yes	Yes
	Homogenous	No	Yes	No	No
	Fibrous	No	No	No	No
	Color	Gray	Brown	White	White
Sample Treatment		Homogenized	None	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	25.0	30.0	30.0	30.0
	% Carbonates	25.0	25.0	25.0	30.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	50.0	45.0	45.0	40.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-53	4327-54	4327-55	4327-56
Layer Number					
Lab ID Number		2795772	2795773	2795774	2795775
Sample Location		First Floor, Back Right, North East Room, Partition, On Sheetrock	First Floor, Back, Hall, Partition, On Sheetrock	First Floor, Main Lobby, Ceiling, On Sheetrock	Basement, Wall, Partition, On Sheetrock
Sample Description		Joint Compound	Joint Compound	Joint Compound	Joint Compound
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	No	Yes	No
	Homogenous	No	No	No	Yes
	Fibrous	No	No	No	No
	Color	White	White	White	White
Sample Treatment		Homogenized	Homogenized	Homogenized	None
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	30.0	30.0	30.0	25.0
	% Carbonates	25.0	30.0	30.0	30.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	45.0	40.0	40.0	45.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-57	4327-58	4327-59	4327-60
Layer Number					
Lab ID Number		2795776	2795777	2795778	2795779
Sample Location		Basement, Wall, Partition, On Sheetrock	First Floor, IT Closet, Wall, Partition	First Floor, IT Closet, Ceiling	Basement, Wall, Partition, On Sheetrock
Sample Description		Joint Compound	Sheetrock	Sheetrock	Joint Tape
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	Yes	Yes	Yes
	Homogenous	Yes	No	No	No
	Fibrous	No	Yes	Yes	Yes
	Color	White	White/Brown	White/Brown	Beige/White
Sample Treatment		None	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	15.0	15.0	45.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	30.0	20.0	20.0	20.0
	% Carbonates	25.0	30.0	35.0	15.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	45.0	35.0	30.0	20.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-61	4327-64	4327-64	4327-65
Layer Number			1	2	1
Lab ID Number		2795780	2795781	2795781	2795782
Sample Location		Basement, Stairwell, Wall, Partition, On Sheetrock	Basement, Chimney	Basement, Chimney	Basement, Chimney
Sample Description		Joint Tape	Cementitious Block & Mortar (Block Layer)	Cementitious Block & Mortar (Mortar Layer)	Cementitious Block & Mortar (Block Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	No	No	No
	Homogenous	No	No	Yes	No
	Fibrous	Yes	No	No	No
	Color	Beige/White	Gray	Gray/Brown	Gray
Sample Treatment		Homogenized	Homogenized	None	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	55.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	10.0	20.0	35.0	15.0
	% Carbonates	10.0	30.0	20.0	30.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	25.0	50.0	45.0	55.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-65	4327-66	4327-66	4327-67
Layer Number		2	1	2	1
Lab ID Number		2795782	2795783	2795783	2795784
Sample Location		Basement, Chimney	Basement, Foundation Wall	Basement, Foundation Wall	Basement, Foundation Wall
Sample Description		Cementitious Block & Mortar (Mortar Layer)	Cementitious Block & Mortar (Block Layer)	Cementitious Block & Mortar (Mortar Layer)	Cementitious Block & Mortar (Block Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	Yes	No	Yes
	Homogenous	Yes	No	No	No
	Fibrous	No	No	No	No
	Color	Gray/Brown	Gray/Black/White	Gray/Brown	Gray/Black/White
Sample Treatment		None	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	35.0	15.0	30.0	15.0
	% Carbonates	25.0	35.0	25.0	30.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	40.0	50.0	45.0	55.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-67	4327-68	4327-68	4327-69
Layer Number		2	1	2	1
Lab ID Number		2795784	2795785	2795785	2795786
Sample Location		Basement, Foundation Wall	Attic, Chimney	Attic, Chimney	Attic, Chimney
Sample Description		Cementitious Block & Mortar (Mortar Layer)	Brick & Mortar (Brick Layer)	Brick & Mortar (Mortar Layer)	Brick & Mortar (Brick Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No	No
	Homogenous	No	No	Yes	No
	Fibrous	No	No	No	No
	Color	Gray/Brown	Red	Gray	Red
Sample Treatment		Homogenized	Homogenized	None	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	30.0	25.0	35.0	25.0
	% Carbonates	25.0	0.0	20.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	45.0	75.0	45.0	75.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-69	4327-70	4327-71	4327-72
Layer Number		2			
Lab ID Number		2795786	2795787	2795788	2795789
Sample Location		Attic, Chimney	Basement, Floor	Basement, Floor	Basement, Equipment Pad
Sample Description		Brick & Mortar (Mortar Layer)	Cementitious Slab	Cementitious Slab	Concrete
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No	Yes
	Homogenous	Yes	No	No	No
	Fibrous	No	No	No	No
	Color	Gray	Brown/Gray	Brown/Gray	Gray/Black
Sample Treatment		None	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	35.0	20.0	25.0	15.0
	% Carbonates	20.0	35.0	35.0	35.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	45.0	45.0	40.0	50.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-73	4327-74	4327-74	4327-74
Layer Number			1	2	3
Lab ID Number		2795790	2795791	2795791	2795791
Sample Location		Basement, Equipment Pad	First Floor, Bathroom, Floor, On Slab	First Floor, Bathroom, Floor, On Slab	First Floor, Bathroom, Floor, On Slab
Sample Description		Concrete	Ceramic Floor Tile, Grout & Mudset (Tile Layer)	Ceramic Floor Tile, Grout & Mudset (Grout Layer)	Ceramic Floor Tile, Grout & Mudset (Mudset Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	No	No	No	No
	Color	Gray/Black	Red/Gray	Brown	White
Sample Treatment		Homogenized	Homogenized	None	None
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	15.0	40.0	15.0	10.0
	% Carbonates	35.0	10.0	30.0	35.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	50.0	50.0	55.0	55.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-75	4327-75	4327-75	4327-76
Layer Number		1	2	3	1
Lab ID Number		2795792	2795792	2795792	2795793
Sample Location		First Floor, Bathroom, Floor, On Slab	First Floor, Bathroom, Floor, On Slab	First Floor, Bathroom, Floor, On Slab	First Floor, Bathroom, Floor, Under Peel & Stick Floor Tile
Sample Description		Ceramic Floor Tile, Grout & Mudset (Tile Layer)	Ceramic Floor Tile, Grout & Mudset (Grout Layer)	Ceramic Floor Tile, Grout & Mudset (Mudset Layer)	Ceramic Floor Tile, Grout, Mudset & Setting Bed (Tile Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	Yes	No	No	Yes
	Homogenous	No	Yes	Yes	No
	Fibrous	No	No	No	No
	Color	Red/Gray	Brown	White	Gray/Blue
Sample Treatment		Homogenized	None	None	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	40.0	15.0	10.0	40.0
	% Carbonates	10.0	30.0	40.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	50.0	55.0	50.0	60.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-76	4327-76	4327-76	4327-77
Layer Number		2	3	4	1
Lab ID Number		2795793	2795793	2795793	2795794
Sample Location		First Floor, Bathroom, Floor, Under Peel & Stick Floor Tile	First Floor, Bathroom, Floor, Under Peel & Stick Floor Tile	First Floor, Bathroom, Floor, Under Peel & Stick Floor Tile	First Floor, Bathroom, Floor, Under Peel & Stick Floor Tile
Sample Description		Ceramic Floor Tile, Grout, Mudset & Setting Bed (Grout Layer)	Ceramic Floor Tile, Grout, Mudset & Setting Bed (Mudset Layer)	Ceramic Floor Tile, Grout, Mudset & Setting Bed (Setting Bed Layer)	Ceramic Floor Tile, Grout, Mudset & Setting Bed (Tile Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	No	No
	Color	Brown	White	Gray	Tan/Blue
Sample Treatment		None	None	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	20.0	15.0	30.0	40.0
	% Carbonates	30.0	30.0	20.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	50.0	55.0	50.0	60.0

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

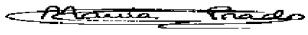
Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/04/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-77	4327-77	4327-77
Layer Number		2	3	4
Lab ID Number		2795794	2795794	2795794
Sample Location		First Floor, Bathroom, Floor, Under Peel & Stick Floor Tile	First Floor, Bathroom, Floor, Under Peel & Stick Floor Tile	First Floor, Bathroom, Floor, Under Peel & Stick Floor Tile
Sample Description		Ceramic Floor Tile, Grout, Mudset & Setting Bed (Grout Layer)	Ceramic Floor Tile, Grout, Mudset & Setting Bed (Mudset Layer)	Ceramic Floor Tile, Grout, Mudset & Setting Bed (Setting Bed Layer)
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No
	Homogenous	Yes	Yes	No
	Fibrous	No	No	No
	Color	Brown	White	Gray
Sample Treatment		None	None	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0
	% Other	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0
	% Cellulose	0.0	0.0	0.0
	% Other	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	20.0	20.0	35.0
	% Carbonates	30.0	30.0	25.0
	% Other	0.0	0.0	0.0
	% Unidentified	50.0	50.0	40.0

Eastern Analytical Services, Inc.
Chain of Custody Form

EAS Client:	QuES&T, Inc. 1376 Route 9 Wappingers Falls, NY 12590	EAS Batch No.	2108775
		Turn-Around:	5 Day
		Shipped Via:	NY DB004
Analyte:	% Asb	State of Origin:	NY
No. of Samples Received:	65	Sample Disposition:	Standard x Return
No. of Samples Analyzed:	65		
Client Project Number/Name:	RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY		
Lab ID Numbers:	2795730-2795749;2795750-2795751;2795752-2795755;2795756-2795780;2795781-2795794		

Collected By:	S. Talsma/N. Salerno		Date: 10/22/2021	
Received By:	Joseph B. LaPuebla		Date: 10/28/2021	Time: 2047
Logged In By:	Marita Prado		Date: 11/02/2021	
Prepped By:	Marita Prado		Date: 11/03-04/2021	
Analyzed By :	George Htay		Date: 11/04/2021	Time: 1240
Re-Analyzed By:			Date:	
Checked By:	Damien Warner		Date: 11/05/2021	
E-Transmitted By:	Damien Warner		Date: 11/05/2021	Time: 1542
Logged Out By:			Date:	

PLM Analysis Memo

Non-Friable Organically Bound (NOB) Materials - This term refers to a wide variety of building materials, such as vinyl or asphalt floor tile, resilient floor covering, mastic, asphalt shingle, roofing material, caulk, putty, etc.. Polarized Light Microscopy (PLM) analysis has limitations when NOB materials are encountered. These limitations, such as the inability to detect thin or extremely short fibers (less than 1 micrometer in length) generated during the milling process and/or the difficulty of separating asbestos fibers and bundles from the resinous matrix, may lead to false negatives or underestimates of the amount of asbestos fibers present in the sample. Recently, NYS DOH added **Ceiling Tiles with Cellulose** to the list of materials to be analyzed via the NOB methods. For these reasons, when analysis by PLM yields negative results for the presence of asbestos in NOB materials, The State of New York Department of Health (DOH) has issued the following requirements as of April 8, 2011: **NOBs and ceiling tiles with cellulose must be analyzed by both of the gravimetric matrix reduction methods (ELAP Item 198.6 and 198.4) to be deemed negative for asbestos.**

EAS is approved by the NYS-DOH to perform analysis of NOB materials via Transmission Electron Microscopy (ELAP Item 198.4). The superior resolution of Transmission Electron Microscopy can detect the presence of asbestos fibers well beyond the range of PLM. In addition, the use of selected-area electron diffraction (SAED) and energy-dispersive spectroscopy (EDS) can positively identify asbestos fibers in the sample. **NOB samples determined to contain less than 1% asbestos via the TEM method, must also be analyzed via PLM (198.6) to verify the absence of large amphibole fibers which may not have been successfully transferred to the EM Grids.**

The State of New Jersey recently adopted amendments to their regulations requiring gravimetric reduction followed by PLM and TEM analysis for NOB building materials. The regulations can be found at http://lwd.dol.state.nj.us/labor/lsse/laws/Asbestos_law.html#5a39.

Recently (April 3, 2011), Maine DEP revised their regulations to require gravimetric reduction of NOBs https://www1.maine.gov/dep/waste/asbestos/documents/asbbulksampanalysisprotocolsformYenabled.pdf.

Vermiculite - As of July 9, 2013, NYS has issued new guidance on Vermiculite loose bulk materials and insulation materials which contain Vermiculite. The following quotes have been taken from their guidance letter: *"If material is attic fill, block fill or other loose bulk vermiculite materials, it must be designated and treated as ACM. No approved analytical method currently exists to reliably confirm such vermiculite material as non-ACM." "Where thermal systems insulation (TSI), *, or other presumed ACM (PACM) or miscellaneous suspect ACM contain 10% vermiculite or less, certified laboratories may use ELAP Certification Manual Item 198.1 to determine the asbestos content of the material. Where TSI, *, or other PACM or miscellaneous suspect ACM contain greater than 10% vermiculite, Item 198.6 may be used to evaluate the asbestos content of the material; provided, however, that any test results using this method must be reported with the following conspicuous disclaimer:"*

"This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite."

See the EPA website at https://www.epa.gov/asbestos/protect-your-family-asbestos-contaminated-vermiculite-insulation

* Surfacing Material Containing Vermiculite - As of May 6, 2016, NYS has issued new guidance regarding Surfacing Material containing vermiculite (essentially expanding the previous requirements for spray-on fireproofing to apply to all surfacing materials). If a surfacing material contains *any* vermiculite, it must be analyzed via NYS-DOH Method 198.8 (or RJ Lee Group Method 055) to be deemed negative for asbestos.

Surface Wipe Samples - Due to the fact that a large percentage of asbestos fibers released from deteriorating asbestos-containing materials or from improperly performed abatement activities are on the order of 5 micrometers or less and are near or below the resolution of a Polarized Light Microscope, Eastern Analytical Services, Inc. recommends that negative surface wipe samples be confirmed utilizing Transmission Electron Microscopy.

Point Counting - New York State Department of Health regulations require quantification of asbestos via the "Stratified Point Count" Method for all bulk samples originating from New York State. Please indicate the state of origin on the Chain of Custody form for all samples submitted to the laboratory. There is no additional charge for quantification using this method.

Layered Samples - NESHAP policy regarding layered bulk samples has changed. In the past, laboratories were required to analyze individual layers of multi-layered bulk samples separately, but report the results in terms of quantity of asbestos for the composite sample. This policy change requires that the layers be analyzed separately and reported as such. Additionally, materials are to be characterized as asbestos or non-asbestos based on the results of the individual layers.
As a result of this policy, EAS will be reporting the results of the individual layers of multi-layered bulk samples submitted for asbestos analysis UNLESS COMPOSITE RESULTS ARE SPECIFICALLY REQUESTED BY THE CLIENT. Additional layers for all bulk samples will be billed as separate samples.

If you have any questions concerning the above, please feel free to contact EAS.

Eastern Analytical Services, Inc.

Phone (914) 592-8380

4 Westchester Plaza
Elmsford, New York 10523-1610
http://www.EASInc.com

Fax (914) 592-8956

November 05, 2021

Mr. Lawrence J. Holzapfel
QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY
EAS Batch No. 2108776

Dear Mr. Holzapfel:

Enclosed please find the laboratory results for the 32 bulk sample(s) received by Eastern Analytical Services, Inc. October 28, 2021. The analysis was performed in accordance with NYS-DOH Item 198.6.

Thank you for allowing EAS, Inc. to provide QuES&T, Inc. with professional analytical services. If you have any questions or require additional information or assistance, please feel free to contact me at the number above or e-mail Lab@EASInc.com.

Sincerely,

EASTERN ANALYTICAL SERVICES, INC.

Paul Stascavage
Laboratory Director

PS:om

Enclosures

Electronically Transmitted
November 05, 2021

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/02/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-21	4327-FH-22	4327-FH-25	4327-FH-26
Layer Number					
Lab ID Number		2795087	2795088	2795089	2795090
Sample Location		Main Level, Apparatus Bay, Floor	Main Level, Apparatus Bay, Floor	Middle Truck Bay, Suspended Ceiling, 2' x 4', Dot Canyon	Middle Truck Bay, Suspended Ceiling, 2' x 4', Dot Canyon
Sample Description		Epoxy	Epoxy	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	No	No	Yes	Yes
	Color	Red/Beige	Red/Beige	Gray/White	Gray/White
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	18.7	20.2	13.1	13.6
	% Carbonates	9.8	4.8	4.3	2.3
	% Other Inorganic	71.5	75.0	82.6	84.1

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/02/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-31	4327-FH-32	4327-FH-33	4327-FH-34
Layer Number					
Lab ID Number		2795091	2795092	2795093	2795094
Sample Location		Exterior, Window, Metal to Glass	Exterior, Window, Metal to Glass	Exterior, Roof, Pitched, Bottom Layer, On Wood	Exterior, Roof, Pitched, Bottom Layer, On Wood
Sample Description		Glazing	Glazing	Tar Paper/Vapor Barrier	Tar Paper/Vapor Barrier
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	Yes	Yes
	Color	Gray	Gray	Black	Black
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	< 0.1	< 0.1	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	< 0.1	< 0.1	0.0	0.0
Other Materials Present	% Organic	5.5	4.3	97.9	98.3
	% Carbonates	90.1	93.7	1.9	1.2
	% Other Inorganic	4.4	2.0	0.2	0.5

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/02/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-35	4327-FH-36	4327-62	4327-63
Layer Number					
Lab ID Number		2795095	2795096	2795097	2795098
Sample Location		Exterior, Roof, Pitched, Top Layer	Exterior, Roof, Pitched, Top Layer	Small Private Bathroom, Wall	Small Private Bathroom, Wall
Sample Description		Shingle	Shingle	Wallpaper	Wallpaper
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray/Black	Gray/Black	White	White
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	25.4	22.8	60.4	69.4
	% Carbonates	46.1	42.3	10.2	21.5
	% Other Inorganic	28.5	34.9	29.4	9.1

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/02/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-78	4327-78	4327-79	4327-79
Layer Number		1	2	1	2
Lab ID Number		2795099	2795099	2795100	2795100
Sample Location		First Floor, Bathroom, Floor, Peel & Stick	First Floor, Bathroom, Floor, Peel & Stick	First Floor, Private Bathroom, Floor, Peel & Stick	First Floor, Private Bathroom, Floor, Peel & Stick
Sample Description		Floor Tile & Mastic (Tile Layer)	Floor Tile & Mastic (Mastic Layer)	Floor Tile & Mastic (Tile Layer)	Floor Tile & Mastic (Mastic Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	Yes	No
	Homogenous	Yes	Yes	No	Yes
	Fibrous	No	No	No	No
	Color	Gray/Beige	Tan	Gray/Beige	Black
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	31.6	93.3	32.5	96.3
	% Carbonates	60.3	5.7	61.8	3.3
	% Other Inorganic	8.1	1.0	5.7	0.4

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/02/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-80	4327-80	4327-81	4327-81
Layer Number		1	2	1	2
Lab ID Number		2795101	2795101	2795102	2795102
Sample Location		Office, Floor, Under Carpet, Under 12" x 12" Floor Tile	Office, Floor, Under Carpet, Under 12" x 12" Floor Tile	Office, Floor, Under Carpet, Under 12" x 12" Floor Tile	Office, Floor, Under Carpet, Under 12" x 12" Floor Tile
Sample Description		Floor Tile & Mastic (Tile Layer)	Floor Tile & Mastic (Mastic Layer)	Floor Tile & Mastic (Tile Layer)	Floor Tile & Mastic (Mastic Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	White	Black	White	Black
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	< 0.1	0.0	< 0.1	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	< 0.1	0.0	< 0.1	0.0
Other Materials Present	% Organic	19.5	81.9	19.3	81.4
	% Carbonates	78.4	10.1	78.8	15.7
	% Other Inorganic	2.1	8.0	1.9	2.9

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/02/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-82	4327-82	4327-83	4327-83
Layer Number		1	2	1	2
Lab ID Number		2795103	2795103	2795104	2795104
Sample Location		Office, Floor, On Floor Tile, Under Carpet, Purple	Office, Floor, On Floor Tile, Under Carpet, Purple	Office, Floor, On Floor Tile, Under Carpet, Purple	Office, Floor, On Floor Tile, Under Carpet, Purple
Sample Description		12" x 12" Floor Tile & Mastic (Tile Layer)	12" x 12" Floor Tile & Mastic (Mastic Layer)	12" x 12" Floor Tile & Mastic (Tile Layer)	12" x 12" Floor Tile & Mastic (Mastic Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Purple	Tan	Purple	Tan
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	22.6	86.0	23.6	76.1
	% Carbonates	77.3	13.2	76.3	23.4
	% Other Inorganic	0.1	0.8	0.1	0.5

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/02/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-84	4327-85	4327-86	4327-87
Layer Number					
Lab ID Number		2795105	2795106	2795107	2795108
Sample Location		Exterior, Behind Siding, On Concrete	Exterior, Behind Siding, On Concrete	Exterior, Roof, Chimney, Brick to Metal, Clear	Exterior, Roof, Chimney, Brick to Metal, Clear
Sample Description		Insulation Board	Insulation Board	Caulk	Caulk
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Blue	Blue	Clear	Clear
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	94.2	96.9	72.2	77.3
	% Carbonates	5.0	2.3	14.4	9.6
	% Other Inorganic	0.8	0.8	13.4	13.1

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/02/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-88	4327-89	4327-90	4327-91
Layer Number					
Lab ID Number		2795109	2795110	2795111	2795112
Sample Location		First Floor, Bathroom, Wall, Partition, On Sheetrock	First Floor, Bathroom, Wall, Partition, On Sheetrock	First Floor, File Room, Ceiling, 12" x 12", Splined	First Floor, File Room, Ceiling, 12" x 12", Splined
Sample Description		Caulk	Caulk	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	Yes	Yes
	Color	White/Tan	White/Tan	White/Brown	White/Brown
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	37.4	41.8	65.7	81.1
	% Carbonates	35.1	38.3	12.0	9.8
	% Other Inorganic	27.5	19.9	22.3	9.1

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/02/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-92	4327-93	4327-94	4327-95
Layer Number					
Lab ID Number		2795113	2795114	2795115	2795116
Sample Location		First Floor, File Room, Ceiling, Behind 12" x 12", Splined, On Plaster	First Floor, File Room, Ceiling, Behind 12" x 12", Splined, On Plaster	Exterior	Exterior
Sample Description		Glue Dab	Glue Dab	Asphalt Shingle	Asphalt Shingle
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	Yes	Yes
	Color	Brown	Brown	Gray/Black	Gray/Black
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	49.7	51.0	22.9	21.9
	% Carbonates	0.5	0.7	33.7	41.9
	% Other Inorganic	49.8	48.3	43.4	36.2

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

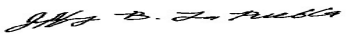
Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/02/2021
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Sample ID Number		4327-96	4327-97
Layer Number			
Lab ID Number		2795117	2795118
Sample Location		Exterior, Roof, On Metal	Exterior, Roof, On Metal
Sample Description		Tar Paper/Vapor Barrier	Tar Paper/Vapor Barrier
Analytical Method		NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes
	Homogenous	No	No
	Fibrous	Yes	Yes
	Color	Black	Black
Asbestos Content	% Amosite	0.0	0.0
	% Chrysotile	0.0	0.0
	% Other	0.0	0.0
	% Total Asbestos	0.0	0.0
Other Materials Present	% Organic	55.0	54.1
	% Carbonates	17.0	15.4
	% Other Inorganic	28.0	30.5

Eastern Analytical Services, Inc.
Chain of Custody Form

EAS Client:	QuES&T, Inc. 1376 Route 9 Wappingers Falls, NY 12590	EAS Batch No.	2108776
		Turn-Around:	5 Day
		Shipped Via:	NY DB004
Analyte:	Grav Plm	State of Origin:	NY
No. of Samples Received:	32	Sample Disposition:	Standard x Return
No. of Samples Analyzed:	32		
Client Project Number/Name:	RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY		
Lab ID Numbers:	2795087-2795088;2795089-2795090;2795091-2795096;2795097-2795098;2795099-2795118		

Collected By:	S. Talsma/N. Salerno		Date: 10/22/2021	
Received By:	Joseph B. LaPuebla		Date: 10/28/2021	Time: 2047
Logged In By:	Jeffrey B. LaPuebla		Date: 10/28/2021	
Prepped By:	Johnathon Lapuebla		Date: 10/29/2021	
Analyzed By :	George Htay		Date: 11/02/2021	Time: 1210
Re-Analyzed By:			Date:	
Checked By:	Damien Warner		Date: 11/05/2021	
E-Transmitted By:	Damien Warner		Date: 11/05/2021	Time: 1542
Logged Out By:			Date:	

PLM Analysis Memo

Non-Friable Organically Bound (NOB) Materials - This term refers to a wide variety of building materials, such as vinyl or asphalt floor tile, resilient floor covering, mastic, asphalt shingle, roofing material, caulk, putty, etc.. Polarized Light Microscopy (PLM) analysis has limitations when NOB materials are encountered. These limitations, such as the inability to detect thin or extremely short fibers (less than 1 micrometer in length) generated during the milling process and/or the difficulty of separating asbestos fibers and bundles from the resinous matrix, may lead to false negatives or underestimates of the amount of asbestos fibers present in the sample. Recently, NYS DOH added **Ceiling Tiles with Cellulose** to the list of materials to be analyzed via the NOB methods. For these reasons, when analysis by PLM yields negative results for the presence of asbestos in NOB materials, The State of New York Department of Health (DOH) has issued the following requirements as of April 8, 2011: **NOBs and ceiling tiles with cellulose must be analyzed by both of the gravimetric matrix reduction methods (ELAP Item 198.6 and 198.4) to be deemed negative for asbestos.**

EAS is approved by the NYS-DOH to perform analysis of NOB materials via Transmission Electron Microscopy (ELAP Item 198.4). The superior resolution of Transmission Electron Microscopy can detect the presence of asbestos fibers well beyond the range of PLM. In addition, the use of selected-area electron diffraction (SAED) and energy-dispersive spectroscopy (EDS) can positively identify asbestos fibers in the sample. **NOB samples determined to contain less than 1% asbestos via the TEM method, must also be analyzed via PLM (198.6) to verify the absence of large amphibole fibers which may not have been successfully transferred to the EM Grids.**

The State of New Jersey recently adopted amendments to their regulations requiring gravimetric reduction followed by PLM and TEM analysis for NOB building materials. The regulations can be found at http://lwd.dol.state.nj.us/labor/lsse/laws/Asbestos_law.html#5a39.

Recently (April 3, 2011), Maine DEP revised their regulations to require gravimetric reduction of NOBs https://www1.maine.gov/dep/waste/asbestos/documents/asbbulksampanalysisprotocolsformYenabled.pdf.

Vermiculite - As of July 9, 2013, NYS has issued new guidance on Vermiculite loose bulk materials and insulation materials which contain Vermiculite. The following quotes have been taken from their guidance letter: *"If material is attic fill, block fill or other loose bulk vermiculite materials, it must be designated and treated as ACM. No approved analytical method currently exists to reliably confirm such vermiculite material as non-ACM." "Where thermal systems insulation (TSI), *, or other presumed ACM (PACM) or miscellaneous suspect ACM contain 10% vermiculite or less, certified laboratories may use ELAP Certification Manual Item 198.1 to determine the asbestos content of the material. Where TSI, *, or other PACM or miscellaneous suspect ACM contain greater than 10% vermiculite, Item 198.6 may be used to evaluate the asbestos content of the material; provided, however, that any test results using this method must be reported with the following conspicuous disclaimer:"*

"This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite."

See the EPA website at https://www.epa.gov/asbestos/protect-your-family-asbestos-contaminated-vermiculite-insulation

* Surfacing Material Containing Vermiculite - As of May 6, 2016, NYS has issued new guidance regarding Surfacing Material containing vermiculite (essentially expanding the previous requirements for spray-on fireproofing to apply to all surfacing materials). If a surfacing material contains *any* vermiculite, it must be analyzed via NYS-DOH Method 198.8 (or RJ Lee Group Method 055) to be deemed negative for asbestos.

Surface Wipe Samples - Due to the fact that a large percentage of asbestos fibers released from deteriorating asbestos-containing materials or from improperly performed abatement activities are on the order of 5 micrometers or less and are near or below the resolution of a Polarized Light Microscope, Eastern Analytical Services, Inc. recommends that negative surface wipe samples be confirmed utilizing Transmission Electron Microscopy.

Point Counting - New York State Department of Health regulations require quantification of asbestos via the "Stratified Point Count" Method for all bulk samples originating from New York State. Please indicate the state of origin on the Chain of Custody form for all samples submitted to the laboratory. There is no additional charge for quantification using this method.

Layered Samples - NESHAP policy regarding layered bulk samples has changed. In the past, laboratories were required to analyze individual layers of multi-layered bulk samples separately, but report the results in terms of quantity of asbestos for the composite sample. This policy change requires that the layers be analyzed separately and reported as such. Additionally, materials are to be characterized as asbestos or non-asbestos based on the results of the individual layers.
As a result of this policy, EAS will be reporting the results of the individual layers of multi-layered bulk samples submitted for asbestos analysis UNLESS COMPOSITE RESULTS ARE SPECIFICALLY REQUESTED BY THE CLIENT. Additional layers for all bulk samples will be billed as separate samples.

If you have any questions concerning the above, please feel free to contact EAS.

Eastern Analytical Services, Inc.

Phone (914) 592-8380

4 Westchester Plaza
Elmsford, New York 10523-1610
http://www.EASInc.com

Fax (914) 592-8956

November 05, 2021

Mr. Lawrence J. Holzapfel
QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY
EAS Batch No. 2108777

Dear Mr. Holzapfel:

Enclosed please find the laboratory results for the 25 bulk sample(s) received by Eastern Analytical Services, Inc. October 28, 2021. The analysis was performed in accordance with NYS-DOH Item 198.4.

Thank you for allowing EAS, Inc. to provide QuES&T, Inc. with professional analytical services. If you have any questions or require additional information or assistance, please feel free to contact me at the number above or e-mail Lab@EASInc.com.

Sincerely,

EASTERN ANALYTICAL SERVICES, INC.

Paul Stascavage
Laboratory Director

PS:om

Enclosures

Electronically Transmitted
November 05, 2021

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/03/2021
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-21	4327-FH-22	4327-FH-25	4327-FH-26
Layer Number					
Lab ID Number		2795087	2795088	2795089	2795090
Sample Location		Main Level, Apparatus Bay, Floor	Main Level, Apparatus Bay, Floor	Middle Truck Bay, Suspended Ceiling, 2' x 4', Dot Canyon	Middle Truck Bay, Suspended Ceiling, 2' x 4', Dot Canyon
Sample Description		Epoxy	Epoxy	Ceiling Tile	Ceiling Tile
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	No	No	Yes	Yes
	Color	Red/Beige	Red/Beige	Gray/White	Gray/White
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	18.7	20.2	13.1	13.6
	% Carbonates	9.8	4.8	4.3	2.3
	% Other Inorganic	71.5	75.0	82.6	84.1

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/03/2021
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-31	4327-FH-32	4327-FH-35	4327-FH-36
Layer Number					
Lab ID Number		2795091	2795092	2795095	2795096
Sample Location		Exterior, Window, Metal to Glass	Exterior, Window, Metal to Glass	Exterior, Roof, Pitched, Top Layer	Exterior, Roof, Pitched, Top Layer
Sample Description		Glazing	Glazing (Prepped, not Analyzed)	Shingle	Shingle
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	Yes	Yes
	Color	Gray	Gray	Gray/Black	Gray/Black
Asbestos Content	% Amosite	0.0	NA	0.0	0.0
	% Chrysotile	2.2	NA	0.0	0.0
	% Other	0.0	NA	0.0	0.0
	% Total Asbestos	2.2	NA	0.0	0.0
Other Materials Present	% Organic	5.5	NA	25.4	22.8
	% Carbonates	90.1	NA	46.1	42.3
	% Other Inorganic	2.2	NA	28.5	34.9

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/03/2021
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-62	4327-63	4327-78	4327-79
Layer Number				1	1
Lab ID Number		2795097	2795098	2795099	2795100
Sample Location		Small Private Bathroom, Wall	Small Private Bathroom, Wall	First Floor, Bathroom, Floor, Peel & Stick	First Floor, Private Bathroom, Floor, Peel & Stick
Sample Description		Wallpaper	Wallpaper	Floor Tile & Mastic (Tile Layer)	Floor Tile & Mastic (Tile Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	Yes
	Homogenous	Yes	Yes	Yes	No
	Fibrous	Yes	Yes	No	No
	Color	White	White	Gray/Beige	Gray/Beige
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	60.4	69.4	31.6	32.5
	% Carbonates	10.2	21.5	60.3	61.8
	% Other Inorganic	29.4	9.1	8.1	5.7

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/03/2021
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-80	4327-80	4327-81	4327-81
Layer Number		1	2	1	2
Lab ID Number		2795101	2795101	2795102	2795102
Sample Location		Office, Floor, Under Carpet, Under 12" x 12" Floor Tile	Office, Floor, Under Carpet, Under 12" x 12" Floor Tile	Office, Floor, Under Carpet, Under 12" x 12" Floor Tile	Office, Floor, Under Carpet, Under 12" x 12" Floor Tile
Sample Description		Floor Tile & Mastic (Tile Layer)	Floor Tile & Mastic (Mastic Layer)	Floor Tile & Mastic (Tile Layer)	Floor Tile & Mastic (Mastic Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	White	Black	White	Black
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.8	0.0	0.8	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.8	0.0	0.8	0.0
Other Materials Present	% Organic	19.5	81.9	19.3	81.4
	% Carbonates	78.4	10.1	78.8	15.7
	% Other Inorganic	1.3	8.0	1.1	2.9

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/03/2021
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-86	4327-87	4327-88	4327-89
Layer Number					
Lab ID Number		2795107	2795108	2795109	2795110
Sample Location		Exterior, Roof, Chimney, Brick to Metal, Clear	Exterior, Roof, Chimney, Brick to Metal, Clear	First Floor, Bathroom, Wall, Partition, On Sheetrock	First Floor, Bathroom, Wall, Partition, On Sheetrock
Sample Description		Caulk	Caulk	Caulk	Caulk
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Clear	Clear	White/Tan	White/Tan
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	72.2	77.3	37.4	41.8
	% Carbonates	14.4	9.6	35.1	38.3
	% Other Inorganic	13.4	13.1	27.5	19.9

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/03/2021
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-90	4327-91	4327-92	4327-93
Layer Number					
Lab ID Number		2795111	2795112	2795113	2795114
Sample Location		First Floor, File Room, Ceiling, 12" x 12", Splined	First Floor, File Room, Ceiling, 12" x 12", Splined	First Floor, File Room, Ceiling, Behind 12" x 12", Splined, On Plaster	First Floor, File Room, Ceiling, Behind 12" x 12", Splined, On Plaster
Sample Description		Ceiling Tile	Ceiling Tile	Glue Dab	Glue Dab
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	No	No
	Homogenous	No	No	Yes	Yes
	Fibrous	Yes	Yes	No	No
	Color	White/Brown	White/Brown	Brown	Brown
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	65.7	81.1	49.7	51.0
	% Carbonates	12.0	9.8	0.5	0.7
	% Other Inorganic	22.3	9.1	49.8	48.3

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

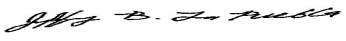
Date Collected : 10/22/2021
Collected By : S. Talsma/N. Salerno
Date Received : 10/28/2021
Date Analyzed : 11/03/2021
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-94	4327-95	4327-96	4327-97
Layer Number					
Lab ID Number		2795115	2795116	2795117	2795118
Sample Location		Exterior	Exterior	Exterior, Roof, On Metal	Exterior, Roof, On Metal
Sample Description		Asphalt Shingle	Asphalt Shingle	Tar Paper/Vapor Barrier	Tar Paper/Vapor Barrier
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Gray/Black	Gray/Black	Black	Black
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	22.9	21.9	55.0	54.1
	% Carbonates	33.7	41.9	17.0	15.4
	% Other Inorganic	43.4	36.2	28.0	30.5

Eastern Analytical Services, Inc.
Chain of Custody Form

EAS Client:	QuES&T, Inc. 1376 Route 9 Wappingers Falls, NY 12590	EAS Batch No.	2108777
		Turn-Around:	Five Day
		Shipped Via:	NY DB004
Analyte:	Grav Tem	State of Origin:	NY
No. of Samples Received:	32	Sample Disposition:	Standard x Return
No. of Samples Analyzed:	25		
Client Project Number/Name:	RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY		
Lab ID Numbers:	2795087-2795088;2795089-2795090;2795091-2795096;2795097-2795098;2795099-2795118		

Collected By:	S. Talsma/N. Salerno		Date: 10/22/2021	
Received By:	Joseph B. LaPuebla		Date: 10/28/2021	Time: 2047
Logged In By:	Jeffrey B. LaPuebla		Date: 10/28/2021	
Prepped By:	Joseph B. LaPuebla		Date: 11/02/2021	
Analyzed By :	Fahrudin Lalic		Date: 11/03/2021	Time: 0830
Re-Analyzed By:			Date:	
Checked By:	Damien Warner		Date: 11/05/2021	
E-Transmitted By:	Damien Warner		Date: 11/05/2021	Time: 1542
Logged Out By:			Date:	

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department

ADDRESS: 5024 NY-17M
New Hampton, NY 10958

CONTACT: Brian Corwin

PROJECT ID: Asbestos Survey- New Hampton Fire Department
5024 NY-17M New Hampton, NY 10958

PROJECT # : Q21-4327

SAMPLED BY: S. Talsma & N. Salerno

DATE SAMPLED: 22-Oct-21

ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required

TURN-AROUND TIME: _____ HOURS
5 DAYS
_____ OTHER

SAMPLE # LAB#	*LOCATION*	*SAMPLE DESCRIPTION*	*COMMENTS*
4327-FH-01	Exterior, Foundation	Stucco (ONLY)	
4327-FH-02	Exterior, Foundation	Stucco (ONLY)	
4327-FH-03	Exterior, Foundation	Stucco (ONLY)	
4327-FH-04	Exterior, Foundation	Stucco (ONLY)	
4327-FH-05	Exterior, Foundation	Stucco (ONLY)	
4327-FH-06	Main Level, Bathroom, Wall, Partition, On Sheetrock	Joint Compound	
4327-FH-07	Main Level, Bathroom, Wall, Partition, On Sheetrock	Joint Compound	
4327-FH-08	Main Level In Between Apparatus Bays #2 & #3, Doorway/ Threshold, On Cementitious Block	Joint Compound	
4327-FH-09	Attic, Ceiling	Sheetrock	STOP AT FIRST POSITIVE
4327-FH-10	Main Level, Bathroom, Wall, Partition	Sheetrock	

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: _____ DATE: 28-Oct-21

RECEIVED BY: _____ DATE: OCT 29 '21 AM

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department

ADDRESS: 5024 NY-17M
New Hampton, NY 10958

CONTACT: Brian Corwin

PROJECT ID: Asbestos Survey- New Hampton Fire Department
5024 NY-17M New Hampton, NY 10958

PROJECT # : Q21-4327

SAMPLED BY: S. Talsma & N. Salerno

DATE SAMPLED: 22-Oct-21

ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required

TURN-AROUND TIME: _____ HOURS
5 DAYS
_____ OTHER

SAMPLE # LAB#	*LOCATION*	*SAMPLE DESCRIPTION*	*COMMENTS*
4327-FH-11	Attic, Wall	Cementitious Block & Mortar (SEPARATE LAYERS)	STOP AT FIRST POSITIVE EACH LAYER
4327-FH-12	Main Level, Apparatus Bay, Wall, Partition	Cementitious Block & Mortar (SEPARATE LAYERS)	
4327-FH-13	Main Level, Apparatus Bay #3, South Wall, Partition, Window Sill	Brick & Mortar (SEPARATE LAYERS)	STOP AT FIRST POSITIVE EACH LAYER
4327-FH-14	Main Level, Apparatus Bay #3, South Wall, Partition, Window Sill	Brick & Mortar (SEPARATE LAYERS)	
4327-FH-15	Exterior, Window Sill	Brick & Mortar (SEPARATE LAYERS)	STOP AT FIRST POSITIVE EACH LAYER
4327-FH-16	Exterior, Window Sill	Brick & Mortar (SEPARATE LAYERS)	
4327-FH-17	Main Level, Apparatus Bay, Floor	Cementitious Slab	STOP AT FIRST POSITIVE
4327-FH-18	Main Level, Apparatus Bay, Floor	Cementitious Slab	
4327-FH-19	Attic, Wall	Brick & Mortar (SEPARATE LAYERS)	STOP AT FIRST POSITIVE EACH LAYER
4327-FH-20	Attic, Wall	Brick & Mortar (SEPARATE LAYERS)	

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: [signature] DATE: 28-Oct-21

RECEIVED BY: [signature] DATE: 10/28/21 10:04

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department

ADDRESS: 5024 NY-17M
New Hampton, NY 10958

CONTACT: Brian Corwin

PROJECT ID: Asbestos Survey- New Hampton Fire Department
5024 NY-17M New Hampton, NY 10958

PROJECT # : Q21-4327

SAMPLED BY: S. Talsma & N. Salerno

DATE SAMPLED: 22-Oct-21

ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required

TURN-AROUND TIME: _____ HOURS
5 DAYS
_____ OTHER

SAMPLE # LAB#	LOCATION	SAMPLE DESCRIPTION	COMMENTS
4327-FH-21 2795087	Main Level, Apparatus Bay, Floor	Epoxy	STOP AT FIRST POSITIVE
4327-FH-22 2795088	Main Level, Apparatus Bay, Floor	Epoxy	
4327-FH-23	North Truck Bay, Suspended Ceiling, 2' x 4'	Ceiling Tile	STOP AT FIRST POSITIVE
4327-FH-24	North Truck Bay, Suspended Ceiling, 2' x 4'	Ceiling Tile	
4327-FH-25 2795089	Middle Truck Bay, Suspended Ceiling, 2' x 4', Dot Canyon	Ceiling Tile	STOP AT FIRST POSITIVE
4327-FH-26 2795090	Middle Truck Bay, Suspended Ceiling, 2' x 4', Dot Canyon	Ceiling Tile	
4327-FH-27	Attic, Wall, Exposed, Yellow	Insulation	STOP AT FIRST POSITIVE
4327-FH-28	Attic, Wall, Exposed, Yellow	Insulation	
4327-FH-29	Attic, Ceiling, Sheetrock, Pink	Insulation	STOP AT FIRST POSITIVE
4327-FH-30	Attic, Ceiling, Sheetrock, Pink	Insulation	

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: David Kelly DATE: 28-Oct-21

RECEIVED BY: [signature] DATE: OCT 28 21 2021

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department
SAMPLED BY: S. Talsma & N. Salerno
ADDRESS: 5024 NY-17M
DATE SAMPLED: 22-Oct-21
New Hampton, NY 10958
CONTACT: Brian Corwin
ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required
PROJECT ID: Asbestos Survey- New Hampton Fire Department
TURN-AROUND TIME: _____ HOURS
5024 NY-17M New Hampton, NY 10958
5 DAYS
PROJECT # : Q21-4327
_____ OTHER

SAMPLE # LAB#	LOCATION	SAMPLE DESCRIPTION	COMMENTS
4327-FH-31 2795091	Exterior, Window, Metal To Glass	Glazing	STOP AT FIRST POSITIVE
4327-FH-32 2795092	Exterior, Window, Metal To Glass	Glazing	
4327-FH-33 2795093	Exterior, Roof, Pitched, Bottom Layer, On Wood	Tar Paper / Vapor Barrier	STOP AT FIRST POSITIVE
4327-FH-34 2795094	Exterior, Roof, Pitched, Bottom Layer, On Wood	Tar Paper / Vapor Barrier	
4327-FH-35 2795095	Exterior, Roof, Pitched, Top Layer	Shingle	STOP AT FIRST POSITIVE
4327-FH-36 2795096	Exterior, Roof, Pitched, Top Layer	Shingle	

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: Paul Kelly
DATE: 28-Oct-21
RECEIVED BY:
DATE: OCT 29 2021

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department

ADDRESS: 5024 NY-17M
New Hampton, NY 10958

CONTACT: Brian Corwin

PROJECT ID: Asbestos Survey- New Hampton Fire Department
5024 NY-17M New Hampton, NY 10958

PROJECT # : Q21-4327

SAMPLED BY: S. Talsma & N. Salerno

DATE SAMPLED: 22-Oct-21

ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required

TURN-AROUND TIME: _____ HOURS
5 DAYS
_____ OTHER

SAMPLE # LAB#	*LOCATION*	*SAMPLE DESCRIPTION*	*COMMENTS*
4327-37	First Floor, File Room, Ceiling	Plaster (SEPARATE LAYERS)	
4327-38	First Floor, Main Lobby, Front Wall, Perimeter	Plaster (SEPARATE LAYERS)	
4327-39	First Floor, Back Left Office, Ceiling	Plaster (SEPARATE LAYERS)	
4327-40	First Floor, Back Left Office, Wall, Perimeter	Plaster (SEPARATE LAYERS)	

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: _____ DATE: 28-Oct-21

RECEIVED BY: _____ DATE: OCT 29 '21 PM

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department

SAMPLED BY: S. Talsma & N. Salerno

ADDRESS: 5024 NY-17M
New Hampton, NY 10958

DATE SAMPLED: 22-Oct-21

CONTACT: Brian Corwin

ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required

PROJECT ID: Asbestos Survey- New Hampton Fire Department
5024 NY-17M New Hampton, NY 10958

TURN-AROUND TIME: _____ HOURS
5 DAYS
_____ OTHER

PROJECT # : Q21-4327

SAMPLE # LAB#	*LOCATION*	*SAMPLE DESCRIPTION*	*COMMENTS*
4327-41	First Floor, Back Office, Wall, Perimeter	Plaster (SEPARATE LAYERS)	
4327-42	First Floor, Front Left Office, Ceiling	Plaster (SEPARATE LAYERS)	
4327-43	First Floor, Front Left Office, Wall, Perimeter	Plaster (SEPARATE LAYERS)	
4327-44	Exterior, Lower Façade, Wall	Stucco (SEPARATE LAYERS)	
4327-45	Exterior, Lower Façade, Wall	Stucco (SEPARATE LAYERS)	
4327-46	Exterior, Lower Façade, Wall	Stucco (SEPARATE LAYERS)	
4327-47	Exterior, Lower Façade, Wall	Stucco (SEPARATE LAYERS)	
4327-48	Exterior, Lower Façade, Wall	Stucco (SEPARATE LAYERS)	
4327-49	Exterior, Lower Façade, Wall	Stucco (SEPARATE LAYERS)	
4327-50	Exterior, Lower Façade, Wall	Stucco (SEPARATE LAYERS)	

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: David Kelly DATE: 28-Oct-21

RECEIVED BY: _____ DATE: _____

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department

ADDRESS: 5024 NY-17M
New Hampton, NY 10958

CONTACT: Brian Corwin

PROJECT ID: Asbestos Survey- New Hampton Fire Department
5024 NY-17M New Hampton, NY 10958

PROJECT # : Q21-4327

SAMPLED BY: S. Talsma & N. Salerno

DATE SAMPLED: 22-Oct-21

ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required

TURN-AROUND TIME: _____ HOURS
5 DAYS
_____ OTHER

SAMPLE # LAB#	*LOCATION*	*SAMPLE DESCRIPTION*	*COMMENTS*
4327-51	First Floor, Back Left, North Room, Wall, Perimeter	Joint Compound	
4327-52	First Floor, Back Right, North East Room, Ceiling, On Sheetrock	Joint Compound	
4327-53	First Floor, Back Right, North East Room, Wall, Partition, On Sheetrock	Joint Compound	
4327-54	First Floor, Back, Hall, Wall, Partition, On Sheetrock	Joint Compound	
4327-55	First Floor, Main Lobby, Ceiling, On Sheetrock	Joint Compound	
4327-56	Basement, Wall, Partition, On Sheetrock	Joint Compound	
4327-57	Basement, Wall, Partition, On Sheetrock	Joint Compound	
4327-58	First Floor, IT Closet, Wall, Partition	Sheetrock	STOP AT FIRST POSITIVE
4327-59	First Floor, IT Closet, Ceiling	Sheetrock	
4327-60	Basement, Wall, Partition, On Sheetrock	Joint Tape	STOP AT FIRST POSTIVE

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: David Kelly DATE: 28-Oct-21

RECEIVED BY: [signature] DATE: OCT 28 2021

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department
SAMPLED BY: S. Talsma & N. Salerno

ADDRESS: 5024 NY-17M
DATE SAMPLED: 22-Oct-21

New Hampton, NY 10958

CONTACT: Brian Corwin
ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required

PROJECT ID: Asbestos Survey- New Hampton Fire Department
TURN-AROUND TIME: _____ HOURS

5024 NY-17M New Hampton, NY 10958
5 DAYS

PROJECT # : Q21-4327
_____ OTHER

SAMPLE # LAB#	*LOCATION*	*SAMPLE DESCRIPTION*	*COMMENTS*
4327-61	Basement, Stairwell, Wall, Partition, On Sheetrock	Joint Tape	STOP AT FIRST POSTIVE
4327-62 2795097	Small Private Bathroom, Wall	Wallpaper	STOP AT FIRST POSITIVE
4327-63 2795098	Small Private Bathroom, Wall	Wallpaper	
4327-64	Basement, Chimney	Cementitious Block & Mortar (SEPARATE LAYERS)	STOP AT FIRST POSITIVE EACH LAYER
4327-65	Basement, Chimney	Cementitious Block & Mortar (SEPARATE LAYERS)	
4327-66	Basement, Foundation Wall	Cementitious Block & Mortar (SEPARATE LAYERS)	STOP AT FIRST POSITIVE EACH LAYER
4327-67	Basement, Foundation Wall	Cementitious Block & Mortar (SEPARATE LAYERS)	
4327-68	Attic, Chimney	Brick & Mortar (SEPARATE LAYERS)	STOP AT FIRST POSITIVE EACH LAYER
4327-69	Attic, Chimney	Brick & Mortar (SEPARATE LAYERS)	
4327-70	Basement, Floor	Cementitious Slab	STOP AT FIRST POSTIVE

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: _____ DATE: 28-Oct-21

RECEIVED BY: _____ DATE: _____

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department
SAMPLED BY: S. Talsma & N. Salerno
ADDRESS: 5024 NY-17M
DATE SAMPLED: 22-Oct-21
New Hampton, NY 10958
CONTACT: Brian Corwin
ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required
PROJECT ID: Asbestos Survey- New Hampton Fire Department
TURN-AROUND TIME: _____ HOURS
5024 NY-17M New Hampton, NY 10958
5 DAYS
PROJECT # : Q21-4327
_____ OTHER

SAMPLE # LAB#	*LOCATION*	*SAMPLE DESCRIPTION*	*COMMENTS*
4327-71	Basement, Floor	Cementitious Slab	STOP AT FIRST POSTIVE
4327-72	Basement, Equipment Pad	Concrete	STOP AT FIRST POSITIVE
4327-73	Basement, Equipment Pad	Concrete	
4327-74	First Floor, Bathroom, Floor, On Slab	Ceramic Floor Tile, Grout & Mudset (SEPARATE LAYERS)	STOP AT FIRST POSITIVE EACH LAYER
4327-75	First Floor, Bathroom, Floor, On Slab	Ceramic Floor Tile, Grout & Mudset (SEPARATE LAYERS)	
4327-76	First Floor, Bathroom, Floor, Under Peel & Stick Floor Tile	Ceramic Floor Tile, Grout, Mudset & Setting Bed (SEPARATE LAYERS)	STOP AT FIRST POSITIVE EACH LAYER
4327-77	First Floor, Bathroom, Floor, Under Peel & Stick Floor Tile	Ceramic Floor Tile, Grout, Mudset & Setting Bed (SEPARATE LAYERS)	
4327-78 2795099	First Floor, Bathroom, Floor, Peel & Stick	Floor Tile & Mastic (SEPARATE LAYERS)	STOP AT FIRST POSITIVE EACH LAYER
4327-79 2795100	First Floor, Private Bathroom, Floor, Peel & Stick	Floor Tile & Mastic (SEPARATE LAYERS)	
4327-80 2795101	Office, Floor, Under Carpet, Under 12" x 12" Floor Tile	Floor Tile & Mastic (SEPARATE LAYERS)	STOP AT FIRST POSTIVE

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: _____ DATE: 28-Oct-21

RECEIVED BY: _____ DATE: _____

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department

ADDRESS: 5024 NY-17M
New Hampton, NY 10958

CONTACT: Brian Corwin

PROJECT ID: Asbestos Survey- New Hampton Fire Department
5024 NY-17M New Hampton, NY 10958

PROJECT # : Q21-4327

SAMPLED BY: S. Talsma & N. Salerno

DATE SAMPLED: 22-Oct-21

ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required

TURN-AROUND TIME: _____ HOURS
5 DAYS
_____ OTHER

SAMPLE # LAB#	LOCATION	SAMPLE DESCRIPTION	COMMENTS
4327-81 2795102	Office, Floor, Under Carpet, Under 12" x 12" Floor Tile	Floor Tile & Mastic (SEPARATE LAYERS)	STOP AT FIRST POSTIVE
4327-82 2795103	Office, Floor, On Floor Tile, Under Carpet, Purple	12" x 12" Floor Tile & Mastic (SEPARATE LAYERS)	STOP AT FIRST POSITIVE EACH LAYER
4327-83 2795104	Office, Floor, On Floor Tile, Under Carpet, Purple	12" x 12" Floor Tile & Mastic (SEPARATE LAYERS)	
4327-84 2795105	Exterior, Behind Siding, On Concrete	Insulation Board	STOP AT FIRST POSITIVE
4327-85 2795106	Exterior, Behind Siding, On Concrete	Insulation Board	
4327-86 2795107	Exterior, Roof, Chimney, Brick To Metal, Clear	Caulk	STOP AT FIRST POSITIVE
4327-87 2795108	Exterior, Roof, Chimney, Brick To Metal, Clear	Caulk	
4327-88 2795109	First Floor, Bathroom, Wall, Partition, On Sheetrock	Caulk	STOP AT FIRST POSITIVE
4327-89 2795110	First Floor, Bathroom, Wall, Partition, On Sheetrock	Caulk	
4327-90 2795111	First Floor, File Room, Ceiling, 12' x 12", Splined	Ceiling Tile	STOP AT FIRST POSTIVE

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: _____ DATE: 28-Oct-21

RECEIVED BY: _____ DATE: _____

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department
SAMPLED BY: S. Talsma & N. Salerno

ADDRESS: 5024 NY-17M
New Hampton, NY 10958
DATE SAMPLED: 22-Oct-21

CONTACT: Brian Corwin
ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required

PROJECT ID: Asbestos Survey- New Hampton Fire Department
5024 NY-17M New Hampton, NY 10958
TURN-AROUND TIME: _____ HOURS
5 DAYS
_____ OTHER

PROJECT # : Q21-4327

SAMPLE # LAB#	LOCATION	SAMPLE DESCRIPTION	COMMENTS
4327-91 2795112	First Floor, File Room, Ceiling, 12' x 12", Splined	Ceiling Tile	STOP AT FIRST POSTIVE
4327-92 2795113	First Floor, File Room, Ceiling, Behind 12" x 12', Splined, On Plaster	Glue Dab	STOP AT FIRST POSITIVE
4327-93 2795114	First Floor, File Room, Ceiling, Behind 12" x 12', Splined, On Plaster	Glue Dab	
4327-94 2795115	Exterior	Asphalt Shingle	STOP AT FIRST POSITIVE
4327-95 2795116	Exterior	Asphalt Shingle	
4327-96 2795117	Exterior, Roof, On Metal	Tar Paper / Vapor Barrier	STOP AT FIRST POSITIVE
4327-97 2795118	Exterior, Roof, On Metal	Tar Paper / Vapor Barrier	

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: _____ DATE: 28-Oct-21

RECEIVED BY: _____ DATE: OCT 28 '21

EAS®

Eastern Analytical Services, Inc.

Phone (914) 592-8380

4 Westchester Plaza
Elmsford, New York 10523-1610
http://www.EASInc.com

Fax (914) 592-8956

April 01, 2022

Mr. Lawrence J. Holzapfel
QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY
EAS Batch No. 2201960

Dear Mr. Holzapfel:

Enclosed please find the laboratory results for the 2 bulk sample(s) received by Eastern Analytical Services, Inc. March 28, 2022.

Thank you for allowing EAS, Inc. to provide QuES&T, Inc. with professional analytical services. If you have any questions or require additional information or assistance, please feel free to contact me at the number above or e-mail Lab@EASInc.com.

Sincerely,

EASTERN ANALYTICAL SERVICES, INC.

Paul Stascavage
Laboratory Director

PS:om

Enclosures

Electronically Transmitted
April 01, 2022

EAS Batch No. 2201960

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Client: QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Date Collected : 03/28/2022
Collected By : N. Salerno
Date Received : 03/28/2022
Date Analyzed : 03/31/2022
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.1
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Sample ID Number		4327-FH-100	4327-FH-101
Layer Number			
Lab ID Number		2819392	2819393
Sample Location		East Roof, Field Cut, Second Layer, On Wood Deck	East Roof, Perimeter Cut, Second Layer, On Wood Deck
Sample Description		Perlite	Perlite
Method of Quantification		Visual Estimation	Visual Estimation
Appearance	Layered	No	No
	Homogenous	No	No
	Fibrous	Yes	Yes
	Color	Brown	Brown
Sample Treatment		Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0
	% Chrysotile	0.0	0.0
	% Other	0.0	0.0
	% Total Asbestos	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0
	% Cellulose	50.0	55.0
	% Other	0.0	0.0
	% Unidentified	0.0	0.0
Non-Fibrous Materials Present	% Silicates	10.0	10.0
	% Carbonates	0.0	0.0
	% Other	5.0 Perlite	5.0 Perlite
	% Unidentified	35.0	30.0

Eastern Analytical Services, Inc.
Chain of Custody Form

EAS Client:	QuES&T, Inc. 1376 Route 9 Wappingers Falls, NY 12590	EAS Batch No.	2201960
		Turn-Around:	5 Day
		Shipped Via:	NY DB004
Analyte:	% Asb	State of Origin:	NY
No. of Samples Received:	2	Sample Disposition:	Standard x Return
No. of Samples Analyzed:	2		
Client Project Number/Name:	RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY		

Lab ID Numbers: 2819392-2819393

Collected By:	N. Salerno		Date: 03/28/2022	
Received By:	Joseph B. LaPuebla		Date: 03/28/2022	Time: 2011
Logged In By:	Marita Prado		Date: 03/31/2022	
Prepped By:	Marita Prado		Date: 03/31/2022	
Analyzed By :	George Htay		Date: 03/31/2022	Time: 1140
Re-Analyzed By:			Date:	
Checked By:	Damien Warner		Date: 04/01/2022	
E-Transmitted By:	Damien Warner		Date: 04/01/2022	Time: 1125
Logged Out By:			Date:	

Phone 914-592-8380 e-mail Lab@EASInc.com Fax 914-592-8956

EAS®

Eastern Analytical Services, Inc.

Phone (914) 592-8380 | 4 Westchester Plaza, Elmsford, New York 10523-1610, http://www.EASInc.com | Fax (914) 592-8956

April 01, 2022

Mr. Lawrence J. Holzapfel
QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY
EAS Batch No. 2201961

Dear Mr. Holzapfel:

Enclosed please find the laboratory results for the 14 bulk sample(s) received by Eastern Analytical Services, Inc. March 28, 2022. The analysis was performed in accordance with NYS-DOH Item 198.6.

Thank you for allowing EAS, Inc. to provide QuES&T, Inc. with professional analytical services. If you have any questions or require additional information or assistance, please feel free to contact me at the number above or e-mail Lab@EASInc.com.

Sincerely,

EASTERN ANALYTICAL SERVICES, INC.

Paul Stascavage
Laboratory Director

PS:om

Enclosures

Electronically Transmitted
April 01, 2022

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 03/28/2022
Collected By : N. Salerno
Date Received : 03/28/2022
Date Analyzed : 03/31/2022
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-98	4327-FH-99	4327-FH-102	4327-FH-103
Layer Number					
Lab ID Number		2818951	2818952	2818953	2818954
Sample Location		East Roof, Field Cut, Top Layer, On Perlite	West Roof, Perimeter Cut, Top Layer, On Isofoam	West Roof, Field Cut, Second Layer, On Metal Deck	West Roof, Field Cut, Second Layer, On Metal Deck
Sample Description		EPDM	EPDM	Isofoam	Isofoam
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	Yes	Yes
	Color	Black	Black	Brown/Beige	Brown/Beige
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	78.4	77.1	97.2	94.8
	% Carbonates	5.7	7.2	1.0	1.9
	% Other Inorganic	15.9	15.7	1.8	3.3

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 03/28/2022
Collected By : N. Salerno
Date Received : 03/28/2022
Date Analyzed : 03/31/2022
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-104	4327-FH-105	4327-FH-106	4327-FH-106
Layer Number				1	2
Lab ID Number		2818955	2818956	2818957	2818957
Sample Location		East Roof, Parapet Wall Top Cap, Metal to Metal, Red	East Roof, Parapet Wall Top Cap, Metal to Metal, Red	East Roof, Perimeter Wall Cut, On Parapet Wall on Tar Flashing	East Roof, Perimeter Wall Cut, On Parapet Wall on Tar Flashing
Sample Description		Caulk	Caulk	Rolled Roof & Tar Paper Vapor Barrier (Rolled Roof Layer)	Rolled Roof & Tar Paper Vapor Barrier (Tar Paper Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	Yes	Yes
	Color	Brown	Brown	Black/Silver	Black
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	22.0	21.4	89.2	97.1
	% Carbonates	75.7	76.5	1.7	1.5
	% Other Inorganic	2.3	2.1	9.1	1.4

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 03/28/2022
Collected By : N. Salerno
Date Received : 03/28/2022
Date Analyzed : 03/31/2022
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-107	4327-FH-107	4327-FH-108	4327-FH-109
Layer Number		1	2		
Lab ID Number		2818958	2818958	2818959	2818960
Sample Location		East Roof, Perimeter Wall Cut, On Parapet Wall on Tar Flashing	East Roof, Perimeter Wall Cut, On Parapet Wall on Tar Flashing	East Roof, Perimeter Wall Cut, On Parapet Wall, Behind Rolled Roof & Tar Paper VB	East Roof, Perimeter Wall Cut, On Parapet Wall, Behind Rolled Roof & Tar Paper VB
Sample Description		Rolled Roof & Tar Paper Vapor Barrier (Rolled Roof Layer)	Rolled Roof & Tar Paper Vapor Barrier (Tar Paper Layer)	Tar Flashing	Tar Flashing
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Black/Silver	Black	Black	Black
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	89.3	97.9	78.7	77.3
	% Carbonates	1.8	1.0	6.5	6.0
	% Other Inorganic	8.9	1.1	14.8	16.7

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 03/28/2022
Collected By : N. Salerno
Date Received : 03/28/2022
Date Analyzed : 03/31/2022
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-110	4327-FH-111	4327-FH-112	4327-FH-112
Layer Number				1	2
Lab ID Number		2818961	2818962	2818963	2818963
Sample Location		Pitched Roof, On Vent, White	Pitched Roof, On Vent, White	Interior, Chief's Office, Floor, On Slab, Beige	Interior, Chief's Office, Floor, On Slab, Beige
Sample Description		Caulk	Caulk	12" x 12" Floor Tile & Mastic (Tile Layer)	12" x 12" Floor Tile & Mastic (Mastic Layer)
Analytical Method		NOB Plm	NOB Plm	NOB Plm	NOB Plm
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Clear/White	Clear/White	Tan	Beige
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	75.7	76.0	19.2	24.5
	% Carbonates	8.9	7.3	76.8	37.9
	% Other Inorganic	15.4	16.7	4.0	37.6

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 03/28/2022
Collected By : N. Salerno
Date Received : 03/28/2022
Date Analyzed : 03/31/2022
Analyzed By : George Htay
Signature :
Analytical Method : NYS-DOH 198.6
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

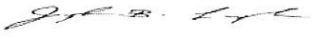
Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-113	4327-FH-113
Layer Number		1	2
Lab ID Number		2818964	2818964
Sample Location		Interior, Chief's Office, Floor, On Slab, Beige	Interior, Chief's Office, Floor, On Slab, Beige
Sample Description		12" x 12" Floor Tile & Mastic (Tile Layer)	12" x 12" Floor Tile & Mastic (Mastic Layer)
Analytical Method		NOB Plm	NOB Plm
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	No	No
	Color	Tan	Beige
Asbestos Content	% Amosite	0.0	0.0
	% Chrysotile	0.0	0.0
	% Other	0.0	0.0
	% Total Asbestos	0.0	0.0
Other Materials Present	% Organic	19.6	27.0
	% Carbonates	76.2	27.5
	% Other Inorganic	4.2	45.5

Eastern Analytical Services, Inc.
Chain of Custody Form

EAS Client:	QuES&T, Inc. 1376 Route 9 Wappingers Falls, NY 12590	EAS Batch No.	2201961
		Turn-Around:	5 Day
		Shipped Via:	NY DB004
Analyte:	Grav Plm	State of Origin:	NY
No. of Samples Received:	14	Sample Disposition:	Standard x Return
No. of Samples Analyzed:	14		
Client Project Number/Name:	RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY		

Lab ID Numbers: 2818951-2818952;2818953-2818964

Collected By:	N. Salerno		Date: 03/28/2022	
Received By:	Joseph B. LaPuebla		Date: 03/28/2022	Time: 2011
Logged In By:	Johnathon Lapuebla		Date: 03/28/2022	
Prepped By:	Johnathon Lapuebla		Date: 03/30/2022	
Analyzed By :	George Htay		Date: 03/31/2022	Time: 0820
Re-Analyzed By:			Date:	
Checked By:	Damien Warner		Date: 04/01/2022	
E-Transmitted By:	Damien Warner		Date: 04/01/2022	Time: 1125
Logged Out By:			Date:	

Phone 914-592-8380 e-mail Lab@EASInc.com Fax 914-592-8956

EAS®

Eastern Analytical Services, Inc.

Phone (914) 592-8380 | 4 Westchester Plaza, Elmsford, New York 10523-1610, http://www.EASInc.com | Fax (914) 592-8956

April 01, 2022

Mr. Lawrence J. Holzapfel
QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY
EAS Batch No. 2201962

Dear Mr. Holzapfel:

Enclosed please find the laboratory results for the 14 bulk sample(s) received by Eastern Analytical Services, Inc. March 28, 2022. The analysis was performed in accordance with NYS-DOH Item 198.4.

Thank you for allowing EAS, Inc. to provide QuES&T, Inc. with professional analytical services. If you have any questions or require additional information or assistance, please feel free to contact me at the number above or e-mail Lab@EASInc.com.

Sincerely,

EASTERN ANALYTICAL SERVICES, INC.

Paul Stascavage
Laboratory Director

PS:om

Enclosures

Electronically Transmitted
April 01, 2022

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 03/28/2022
Collected By : N. Salerno
Date Received : 03/28/2022
Date Analyzed : 04/01/2022
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-98	4327-FH-99	4327-FH-102	4327-FH-103
Layer Number					
Lab ID Number		2818951	2818952	2818953	2818954
Sample Location		East Roof, Field Cut, Top Layer, On Perlite	West Roof, Perimeter Cut, Top Layer, On Isofoam	West Roof, Field Cut, Second Layer, On Metal Deck	West Roof, Field Cut, Second Layer, On Metal Deck
Sample Description		EPDM	EPDM	Isofoam	Isofoam
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	Yes	Yes
	Color	Black	Black	Brown/Beige	Brown/Beige
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	78.4	77.1	97.2	94.8
	% Carbonates	5.7	7.2	1.0	1.9
	% Other Inorganic	15.9	15.7	1.8	3.3

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 03/28/2022
Collected By : N. Salerno
Date Received : 03/28/2022
Date Analyzed : 04/01/2022
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-104	4327-FH-105	4327-FH-106	4327-FH-106
Layer Number				1	2
Lab ID Number		2818955	2818956	2818957	2818957
Sample Location		East Roof, Parapet Wall Top Cap, Metal to Metal, Red	East Roof, Parapet Wall Top Cap, Metal to Metal, Red	East Roof, Perimeter Wall Cut, On Parapet Wall on Tar Flashing	East Roof, Perimeter Wall Cut, On Parapet Wall on Tar Flashing
Sample Description		Caulk	Caulk	Rolled Roof & Tar Paper Vapor Barrier (Rolled Roof Layer)	Rolled Roof & Tar Paper Vapor Barrier (Tar Paper Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	Yes	Yes
	Homogenous	Yes	Yes	No	No
	Fibrous	No	No	Yes	Yes
	Color	Brown	Brown	Black/Silver	Black
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	22.0	21.4	89.2	97.1
	% Carbonates	75.7	76.5	1.7	1.5
	% Other Inorganic	2.3	2.1	9.1	1.4

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 03/28/2022
Collected By : N. Salerno
Date Received : 03/28/2022
Date Analyzed : 04/01/2022
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-107	4327-FH-107	4327-FH-108	4327-FH-109
Layer Number		1	2		
Lab ID Number		2818958	2818958	2818959	2818960
Sample Location		East Roof, Perimeter Wall Cut, On Parapet Wall on Tar Flashing	East Roof, Perimeter Wall Cut, On Parapet Wall on Tar Flashing	East Roof, Perimeter Wall Cut, On Parapet Wall, Behind Rolled Roof & Tar Paper VB	East Roof, Perimeter Wall Cut, On Parapet Wall, Behind Rolled Roof & Tar Paper VB
Sample Description		Rolled Roof & Tar Paper Vapor Barrier (Rolled Roof Layer)	Rolled Roof & Tar Paper Vapor Barrier (Tar Paper Layer)	Tar Flashing	Tar Flashing
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	Yes	Yes	Yes	Yes
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Black/Silver	Black	Black	Black
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	89.3	97.9	78.7	77.3
	% Carbonates	1.8	1.0	6.5	6.0
	% Other Inorganic	8.9	1.1	14.8	16.7

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 03/28/2022
Collected By : N. Salerno
Date Received : 03/28/2022
Date Analyzed : 04/01/2022
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-110	4327-FH-111	4327-FH-112	4327-FH-112
Layer Number				1	2
Lab ID Number		2818961	2818962	2818963	2818963
Sample Location		Pitched Roof, On Vent, White	Pitched Roof, On Vent, White	Interior, Chief's Office, Floor, On Slab, Beige	Interior, Chief's Office, Floor, On Slab, Beige
Sample Description		Caulk	Caulk	12" x 12" Floor Tile & Mastic (Tile Layer)	12" x 12" Floor Tile & Mastic (Mastic Layer)
Analytical Method		NOB Tem	NOB Tem	NOB Tem	NOB Tem
Appearance	Layered	No	No	No	No
	Homogenous	Yes	Yes	Yes	Yes
	Fibrous	No	No	No	No
	Color	Clear/White	Clear/White	Tan	Beige
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Materials Present	% Organic	75.7	76.0	19.2	24.5
	% Carbonates	8.9	7.3	76.8	37.9
	% Other Inorganic	15.4	16.7	4.0	37.6

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY

Date Collected : 03/28/2022
Collected By : N. Salerno
Date Received : 03/28/2022
Date Analyzed : 04/01/2022
Analyzed By : Fahrudin Lalic
Signature :
Analytical Method : NYS-DOH 198.4
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Client QuES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590

Sample ID Number		4327-FH-113	4327-FH-113
Layer Number		1	2
Lab ID Number		2818964	2818964
Sample Location		Interior, Chief's Office, Floor, On Slab, Beige	Interior, Chief's Office, Floor, On Slab, Beige
Sample Description		12" x 12" Floor Tile & Mastic (Tile Layer)	12" x 12" Floor Tile & Mastic (Mastic Layer)
Analytical Method		NOB Tem	NOB Tem
Appearance	Layered	No	No
	Homogenous	Yes	Yes
	Fibrous	No	No
	Color	Tan	Beige
Asbestos Content	% Amosite	0.0	0.0
	% Chrysotile	0.0	0.0
	% Other	0.0	0.0
	% Total Asbestos	0.0	0.0
Other Materials Present	% Organic	19.6	27.0
	% Carbonates	76.2	27.5
	% Other Inorganic	4.2	45.5

Eastern Analytical Services, Inc.
Chain of Custody Form

EAS Client:	QuES&T, Inc. 1376 Route 9 Wappingers Falls, NY 12590	EAS Batch No.	2201962
		Turn-Around:	Five Day
		Shipped Via:	NY DB004
Analyte:	Grav Tem	State of Origin:	NY
No. of Samples Received:	14	Sample Disposition:	Standard x Return
No. of Samples Analyzed:	14		
Client Project Number/Name:	RE: CPN Q21-4327 - New Hampton Fire Department - Asbestos Survey - 5024 NY-17M - New Hampton, NY		

Lab ID Numbers: 2818951-2818952;2818953-2818964

Collected By:	N. Salerno		Date: 03/28/2022	
Received By:	Joseph B. LaPuebla		Date: 03/28/2022	Time: 2011
Logged In By:	Johnathon Lapuebla		Date: 03/28/2022	
Prepped By:	Johnathon Lapuebla		Date: 03/31/2022	
Analyzed By :	Fahrudin Lalic		Date: 04/01/2022	Time: 0050
Re-Analyzed By:			Date:	
Checked By:	Damien Warner		Date: 04/01/2022	
E-Transmitted By:	Damien Warner		Date: 04/01/2022	Time: 1125
Logged Out By:			Date:	

Phone 914-592-8380 e-mail Lab@EASInc.com Fax 914-592-8956

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department

ADDRESS: 5024 NY-17M
New Hampton, NY 10958

CONTACT: Brian Corwin

PROJECT ID: Asbestos Survey- New Hampton Fire Department
5024 NY-17M New Hampton, NY 10958

PROJECT # : Q21-4327

SAMPLED BY: N. Salerno

DATE SAMPLED: 28-Mar-22

ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required

TURN-AROUND TIME: _____ HOURS
5 DAYS
_____ OTHER

SAMPLE # LAB#	LOCATION	SAMPLE DESCRIPTION	COMMENTS
4327-FH-98 2818951	East Roof, Field Cut, Top Layer, on Perlite	EPDM	
4327-FH-99 2818952	West Roof, Perimeter Cut, Top Layer, on Isofoam	EPDM	
4327-FH-100	East Roof, Field Cut, Second Layer, on Wood Deck	Perlite	
4327-FH-101	East Roof, Perimeter Cut, Second Layer, on Wood Deck	Perlite	
4327-FH-102 2818953	West Roof, Field Cut, Second Layer, on Metal Deck	Isofoam	
4327-FH-103 2818954	West Roof, Field Cut, Second Layer, on Metal Deck	Isofoam	
4327-FH-104 2818955	East Roof, Parapit Wall Top Cap, Metal to Metal, Red	Caulk	
4327-FH-105 2818956	East Roof, Parapit Wall Top Cap, Metal to Metal, Red	Caulk	
4327-FH-106 2818957	East Roof, Perimeter Wall Cut, on Parapit Wall on Tar Flashing	Rolled Roof & Tar Paper Vapor Barrier (Please Separate)	
4327-FH-107 2818958	East Roof, Perimeter Wall Cut, on Parapit Wall on Tar Flashing	Rolled Roof & Tar Paper Vapor Barrier (Please Separate)	

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: Nicholas Salerno DATE: 28-Oct-21

RECEIVED BY: [signature] DATE: MAR 28 '22 20:11

QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

BULK SAMPLE FORM

CLIENT: New Hampton Fire Department

ADDRESS: 5024 NY-17M
New Hampton, NY 10958

CONTACT: Brian Corwin

PROJECT ID: Asbestos Survey- New Hampton Fire Department
5024 NY-17M New Hampton, NY 10958

PROJECT # : Q21-4327

SAMPLED BY: N. Salerno

DATE SAMPLED: 28-Mar-22

ANALYSIS METHOD: PLM, PLM-NOB, QTEM as required

TURN-AROUND TIME: _____ HOURS
5 DAYS
_____ OTHER

SAMPLE # LAB#	LOCATION	SAMPLE DESCRIPTION	COMMENTS
4327-FH-108 2818959	East Roof, Perimeter Wall Cut, on Parapit Wall, Behind Rolled Roof & Tar Paper Vapor Barrier	Tar Flashing	
4327-FH-109 2818960	East Roof, Perimeter Wall Cut, on Parapit Wall, Behind Rolled Roof & Tar Paper Vapor Barrier	Tar Flashing	
4327-FH-110 2818961	Pitched Roof, on Vent, White	Caulk	
4327-FH-111 2818962	Pitched Roof, on Vent, White	Caulk	
4327-FH-112 2818963	Interior, Chief's Office, Floor, on Slab, Beige	12'x12' Floor Tile & Mastic (Please Separate)	
4327-FH-113 2818964	Interior, Chief's Office, Floor, on Slab, Beige	12'x12' Floor Tile & Mastic (Please Separate)	

CHAIN OF CUSTODY (SEE LAST PAGE)

SUBMITTED BY: N. Salerno DATE: 28-Oct-21

RECEIVED BY: DATE: MAR 28 '22 20:11

PLM Analysis Memo

Non-Friable Organically Bound (NOB) Materials - This term refers to a wide variety of building materials, such as vinyl or asphalt floor tile, resilient floor covering, mastic, asphalt shingle, roofing material, caulk, putty, etc.. Polarized Light Microscopy (PLM) analysis has limitations when NOB materials are encountered. These limitations, such as the inability to detect thin or extremely short fibers (less than 1 micrometer in length) generated during the milling process and/or the difficulty of separating asbestos fibers and bundles from the resinous matrix, may lead to false negatives or underestimates of the amount of asbestos fibers present in the sample. Recently, NYS DOH added **Ceiling Tiles with Cellulose** to the list of materials to be analyzed via the NOB methods. For these reasons, when analysis by PLM yields negative results for the presence of asbestos in NOB materials, The State of New York Department of Health (DOH) has issued the following requirements as of April 8, 2011: **NOBs and ceiling tiles with cellulose must be analyzed by both of the gravimetric matrix reduction methods (ELAP Item 198.6 and 198.4) to be deemed negative for asbestos.**

EAS is approved by the NYS-DOH to perform analysis of NOB materials via Transmission Electron Microscopy (ELAP Item 198.4). The superior resolution of Transmission Electron Microscopy can detect the presence of asbestos fibers well beyond the range of PLM. In addition, the use of selected-area electron diffraction (SAED) and energy-dispersive spectroscopy (EDS) can positively identify asbestos fibers in the sample. **NOB samples determined to contain less than 1% asbestos via the TEM method, must also be analyzed via PLM (198.6) to verify the absence of large amphibole fibers which may not have been successfully transferred to the EM Grids.**

The State of New Jersey recently adopted amendments to their regulations requiring gravimetric reduction followed by PLM and TEM analysis for NOB building materials. The regulations can be found at http://lwd.dol.state.nj.us/labor/lsse/laws/Asbestos_law.html#5a39.

Recently (April 3, 2011), Maine DEP revised their regulations to require gravimetric reduction of NOBs https://www1.maine.gov/dep/waste/asbestos/documents/asbbulksampanalysisprotocolsformYenabled.pdf.

Vermiculite - As of July 9, 2013, NYS has issued new guidance on Vermiculite loose bulk materials and insulation materials which contain Vermiculite. The following quotes have been taken from their guidance letter: *"If material is attic fill, block fill or other loose bulk vermiculite materials, it must be designated and treated as ACM. No approved analytical method currently exists to reliably confirm such vermiculite material as non-ACM" "Where thermal systems insulation (TSI), *, or other presumed ACM (PACM) or miscellaneous suspect ACM contain 10% vermiculite or less, certified laboratories may use ELAP Certification Manual Item 198.1 to determine the asbestos content of the material. Where TSI, *, or other PACM or miscellaneous suspect ACM contain greater than 10% vermiculite, Item 198.6 may be used to evaluate the asbestos content of the material; provided, however, that any test results using this method must be reported with the following conspicuous disclaimer:"*

"This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite."

See the EPA website at https://www.epa.gov/asbestos/protect-your-family-asbestos-contaminated-vermiculite-insulation

* Surfacing Material Containing Vermiculite - As of May 6, 2016, NYS has issued new guidance regarding Surfacing Material containing vermiculite (essentially expanding the previous requirements for spray-on fireproofing to apply to all surfacing materials). If a surfacing material contains *any* vermiculite, it must be analyzed via NYS-DOH Method 198.8 (or RJ Lee Group Method 055) to be deemed negative for asbestos.

Surface Wipe Samples - Due to the fact that a large percentage of asbestos fibers released from deteriorating asbestos-containing materials or from improperly performed abatement activities are on the order of 5 micrometers or less and are near or below the resolution of a Polarized Light Microscope, Eastern Analytical Services, Inc. recommends that negative surface wipe samples be confirmed utilizing Transmission Electron Microscopy.

Point Counting - New York State Department of Health regulations require quantification of asbestos via the "Stratified Point Count" Method for all bulk samples originating from New York State. Please indicate the state of origin on the Chain of Custody form for all samples submitted to the laboratory. There is no additional charge for quantification using this method.

Layered Samples - NESHAP policy regarding layered bulk samples has changed. In the past, laboratories were required to analyze individual layers of multi-layered bulk samples separately, but report the results in terms of quantity of asbestos for the composite sample. This policy change requires that the layers be analyzed separately and reported as such. Additionally, materials are to be characterized as asbestos or non-asbestos based on the results of the individual layers.
As a result of this policy, EAS will be reporting the results of the individual layers of multi-layered bulk samples submitted for asbestos analysis UNLESS COMPOSITE RESULTS ARE SPECIFICALLY REQUESTED BY THE CLIENT. Additional layers for all bulk samples will be billed as separate samples.

If you have any questions concerning the above, please feel free to contact EAS.

PLM Analysis Memo

Non-Friable Organically Bound (NOB) Materials - This term refers to a wide variety of building materials, such as vinyl or asphalt floor tile, resilient floor covering, mastic, asphalt shingle, roofing material, caulk, putty, etc.. Polarized Light Microscopy (PLM) analysis has limitations when NOB materials are encountered. These limitations, such as the inability to detect thin or extremely short fibers (less than 1 micrometer in length) generated during the milling process and/or the difficulty of separating asbestos fibers and bundles from the resinous matrix, may lead to false negatives or underestimates of the amount of asbestos fibers present in the sample. Recently, NYS DOH added **Ceiling Tiles with Cellulose** to the list of materials to be analyzed via the NOB methods. For these reasons, when analysis by PLM yields negative results for the presence of asbestos in NOB materials, The State of New York Department of Health (DOH) has issued the following requirements as of April 8, 2011: **NOBs and ceiling tiles with cellulose must be analyzed by both of the gravimetric matrix reduction methods (ELAP Item 198.6 and 198.4) to be deemed negative for asbestos.**

EAS is approved by the NYS-DOH to perform analysis of NOB materials via Transmission Electron Microscopy (ELAP Item 198.4). The superior resolution of Transmission Electron Microscopy can detect the presence of asbestos fibers well beyond the range of PLM. In addition, the use of selected-area electron diffraction (SAED) and energy-dispersive spectroscopy (EDS) can positively identify asbestos fibers in the sample. **NOB samples determined to contain less than 1% asbestos via the TEM method, must also be analyzed via PLM (198.6) to verify the absence of large amphibole fibers which may not have been successfully transferred to the EM Grids.**

The State of New Jersey recently adopted amendments to their regulations requiring gravimetric reduction followed by PLM and TEM analysis for NOB building materials. The regulations can be found at http://lwd.dol.state.nj.us/labor/lsse/laws/Asbestos_law.html#5a39.

Recently (April 3, 2011), Maine DEP revised their regulations to require gravimetric reduction of NOBs https://www1.maine.gov/dep/waste/asbestos/documents/asbbulksampanalysisprotocolsformYenabled.pdf.

Vermiculite - As of July 9, 2013, NYS has issued new guidance on Vermiculite loose bulk materials and insulation materials which contain Vermiculite. The following quotes have been taken from their guidance letter: *"If material is attic fill, block fill or other loose bulk vermiculite materials, it must be designated and treated as ACM. No approved analytical method currently exists to reliably confirm such vermiculite material as non-ACM." "Where thermal systems insulation (TSI), *, or other presumed ACM (PACM) or miscellaneous suspect ACM contain 10% vermiculite or less, certified laboratories may use ELAP Certification Manual Item 198.1 to determine the asbestos content of the material. Where TSI, *, or other PACM or miscellaneous suspect ACM contain greater than 10% vermiculite, Item 198.6 may be used to evaluate the asbestos content of the material; provided, however, that any test results using this method must be reported with the following conspicuous disclaimer:"*

"This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite."

See the EPA website at https://www.epa.gov/asbestos/protect-your-family-asbestos-contaminated-vermiculite-insulation

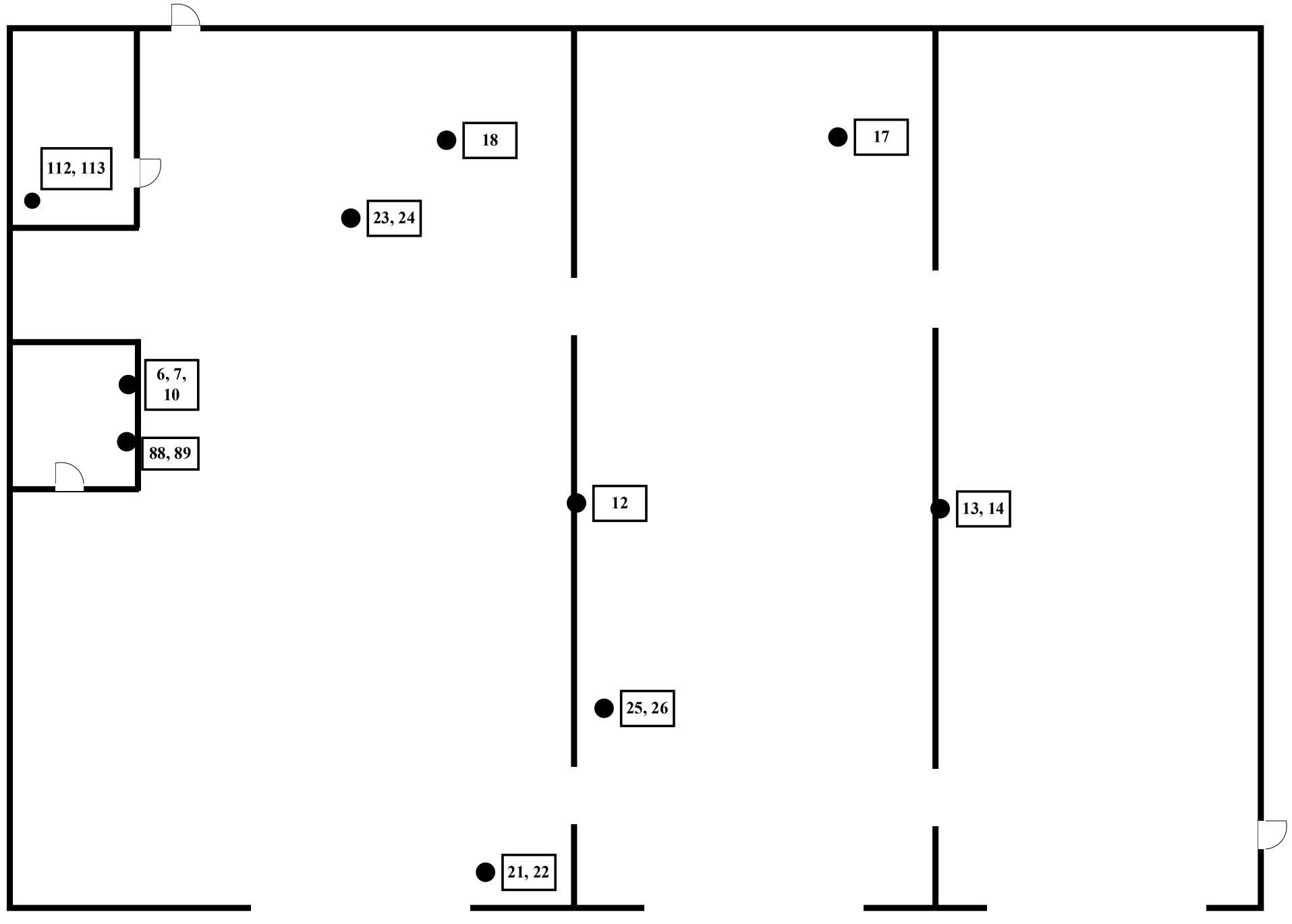
* Surfacing Material Containing Vermiculite - As of May 6, 2016, NYS has issued new guidance regarding Surfacing Material containing vermiculite (essentially expanding the previous requirements for spray-on fireproofing to apply to all surfacing materials). If a surfacing material contains *any* vermiculite, it must be analyzed via NYS-DOH Method 198.8 (or RJ Lee Group Method 055) to be deemed negative for asbestos.

Surface Wipe Samples - Due to the fact that a large percentage of asbestos fibers released from deteriorating asbestos-containing materials or from improperly performed abatement activities are on the order of 5 micrometers or less and are near or below the resolution of a Polarized Light Microscope, Eastern Analytical Services, Inc. recommends that negative surface wipe samples be confirmed utilizing Transmission Electron Microscopy.

Point Counting - New York State Department of Health regulations require quantification of asbestos via the "Stratified Point Count" Method for all bulk samples originating from New York State. Please indicate the state of origin on the Chain of Custody form for all samples submitted to the laboratory. There is no additional charge for quantification using this method.

Layered Samples - NESHAP policy regarding layered bulk samples has changed. In the past, laboratories were required to analyze individual layers of multi-layered bulk samples separately, but report the results in terms of quantity of asbestos for the composite sample. This policy change requires that the layers be analyzed separately and reported as such. Additionally, materials are to be characterized as asbestos or non-asbestos based on the results of the individual layers.
As a result of this policy, EAS will be reporting the results of the individual layers of multi-layered bulk samples submitted for asbestos analysis UNLESS COMPOSITE RESULTS ARE SPECIFICALLY REQUESTED BY THE CLIENT. Additional layers for all bulk samples will be billed as separate samples.

If you have any questions concerning the above, please feel free to contact EAS.



SAMPLE LOCATION KEY	
●	Sample Location (Non-ACM)
●	Sample Location (ACM)

N

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: Q21-4327	
Project Manager: GD	**Prepared By:** NDS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

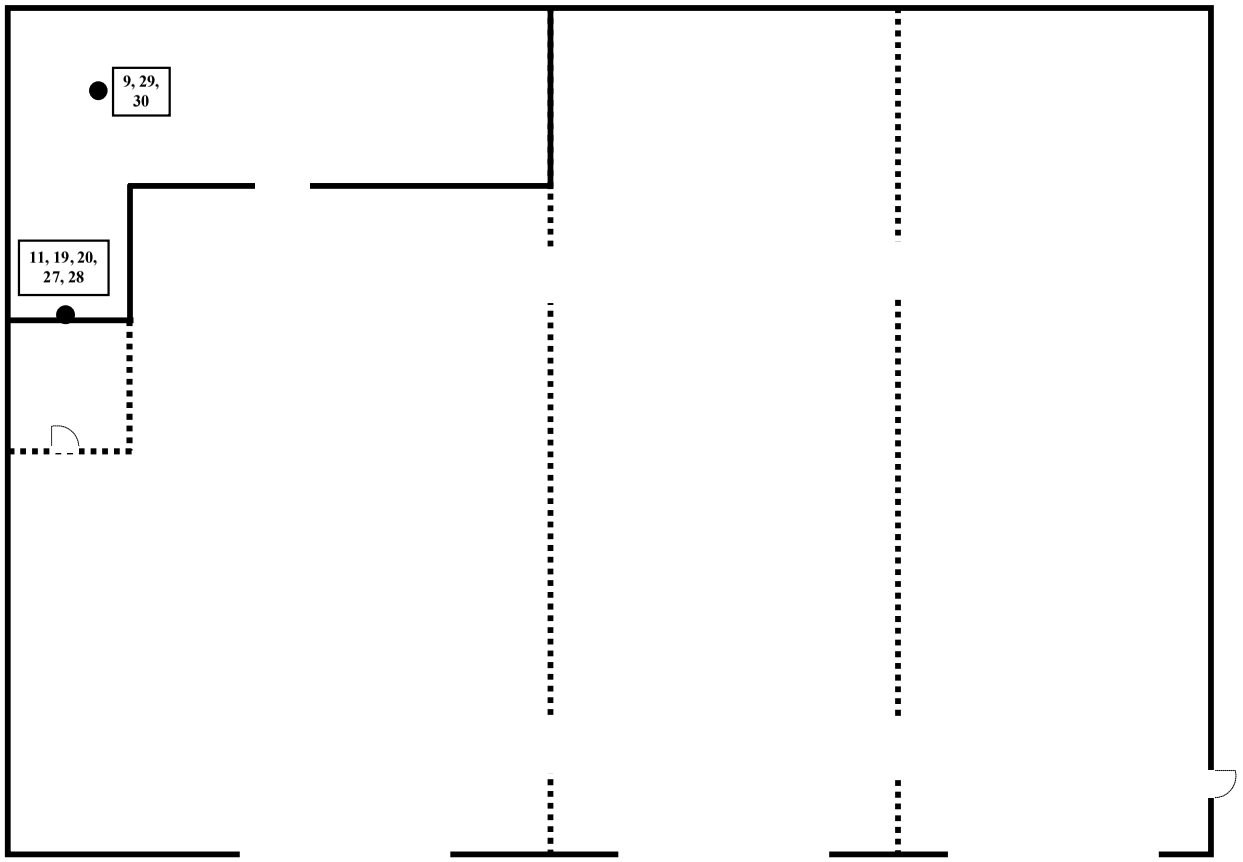
NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

GROUND FLOOR PLAN SAMPLE LOCATIONS

SL-01



SAMPLE LOCATION KEY	
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●	Sample Location (ACM)

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Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: Q21-4327	
Project Manager: GD	**Prepared By:** NDS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

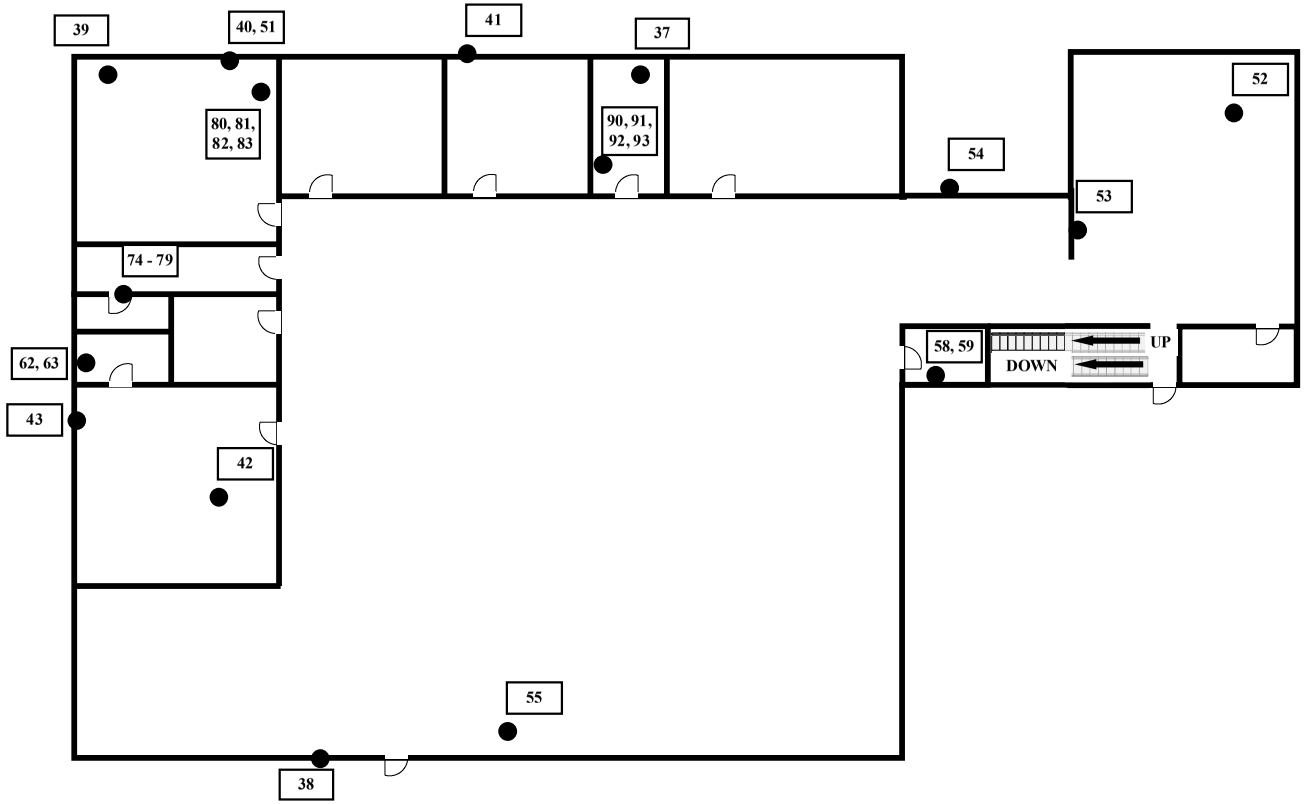
NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

ATTIC FLOOR PLAN SAMPLE LOCATIONS

SL-02



SAMPLE LOCATION KEY	
●	Sample Location (Non-ACM)
●	Sample Location (ACM)

N

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: Q21-4327	
Project Manager: GD	**Prepared By:** NDS

QuES&T

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

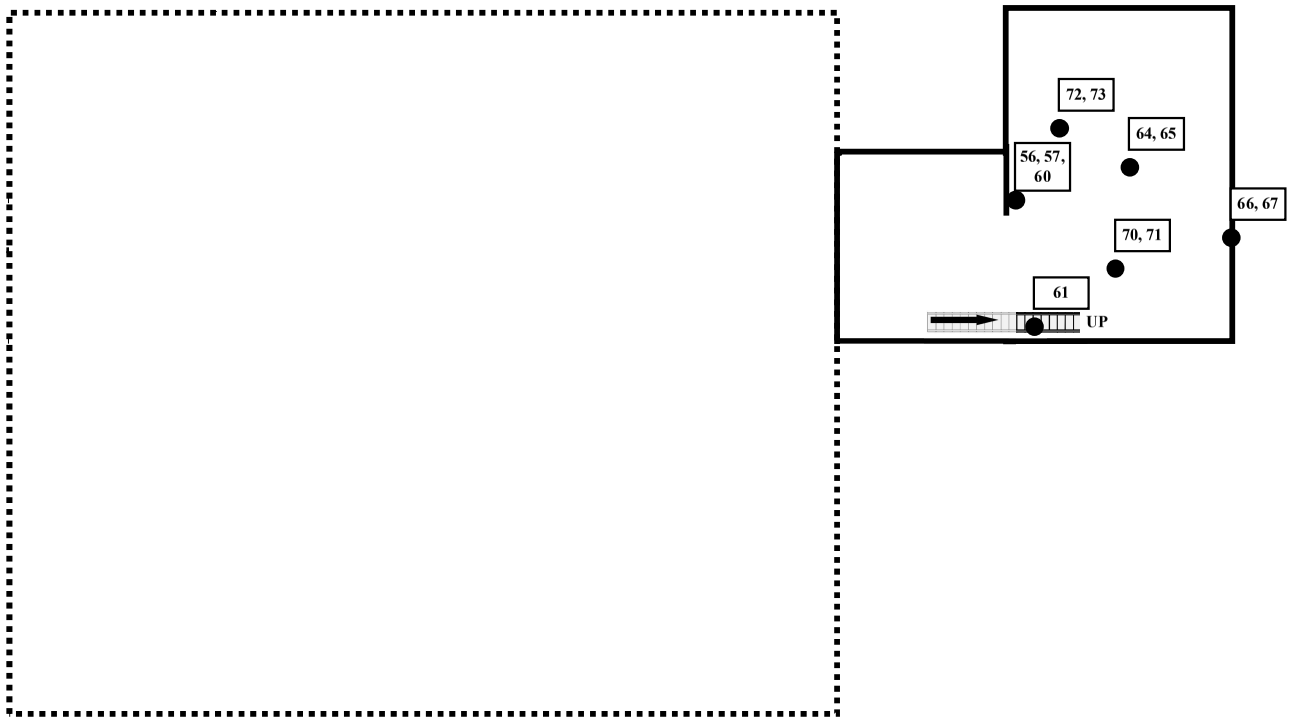
NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

P&M ACCOUNTING LLC.
5030 NY-17M
New Hampton, NY 10958

FIRST FLOOR PLAN SAMPLE LOCATIONS

SL-03



SAMPLE LOCATION KEY	
●	Sample Location (Non-ACM)
●	Sample Location (ACM)

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Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: Q21-4327	
Project Manager: GD	**Prepared By:** NDS

QuES&T

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

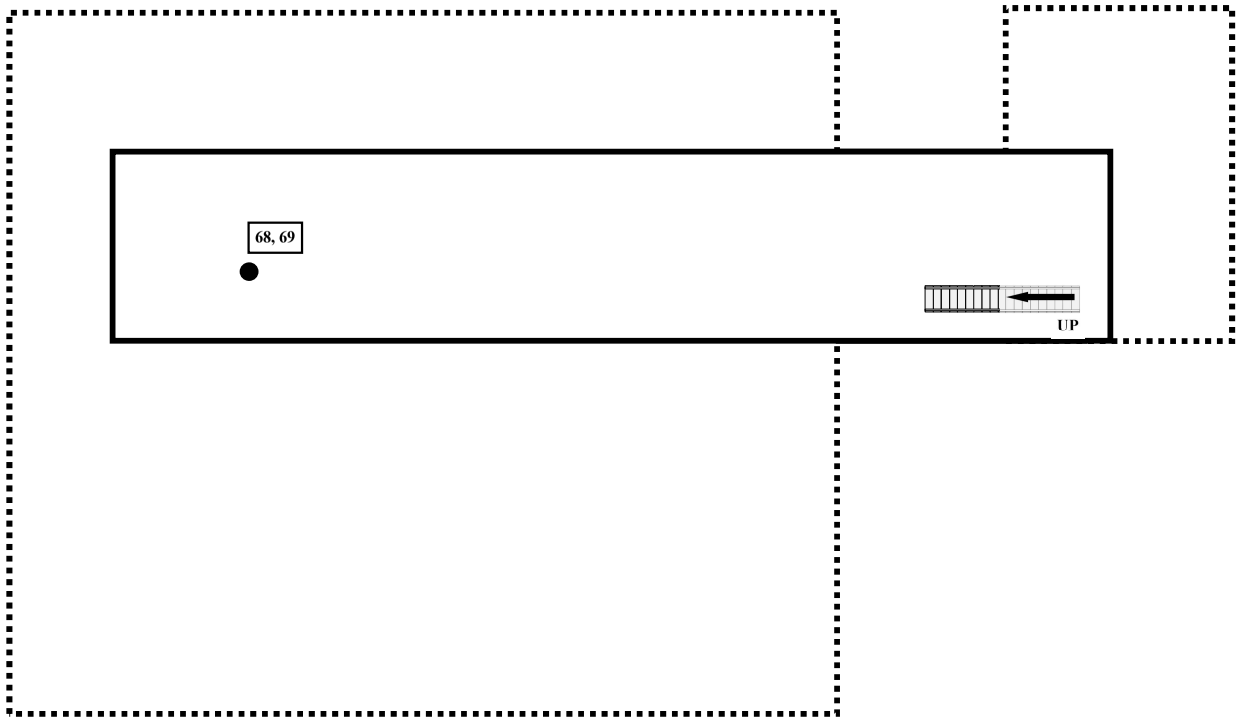
NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

P&M ACCOUNTING LLC.
5030 NY-17M
New Hampton, NY 10958

BASEMENT FLOOR PLAN SAMPLE LOCATIONS

SL-04



SAMPLE LOCATION KEY	
●	Sample Location (Non-ACM)
●	Sample Location (ACM)

N

Drawing Not to Scale
This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	**Version #** 1
Issued For: Asbestos Survey	
QuES&T Project #: Q21-4327	
Project Manager: GD	**Prepared By:** NDS

QuES&T

Quality Environmental
Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

P&M ACCOUNTING LLC.
5030 NY-17M
New Hampton, NY 10958

ATTIC FLOOR PLAN SAMPLE LOCATIONS

SL-05

SAMPLE LOCATION KEY	
●	Sample Location (Non-ACM)
●	Sample Location (ACM)

N

Drawing Not to Scale

This Drawing is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project.

Date: 11/12/2021	Version # 1
Issued For: Asbestos Survey	
QuES&T Project #: Q21-4327	
Project Manager: GD	**Prepared By:** NDS

QuES&T

Quality Environmental Solutions & Technologies, Inc.
1376 Route 9
Wappingers Falls, NY 12590
Phone: (845) 298- 6031
Fax: (845) 298-6251

CLIENT

NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
New Hampton, NY 10958

PROJECT LOCATION

MULTIPLE LOCATIONS
5024 & 5030 NY-17M
New Hampton, NY 10958

EXTERIOR SAMPLE LOCATIONS

SL-06

Appendix C:
LABORATORY, COMPANY & PERSONNEL LICENSES & CERTIFICATIONS

NEW YORK STATE

MINORITY- AND WOMEN-OWNED BUSINESS ENTERPRISE ("MWBE")

CERTIFICATION

Empire State Development's Division of Minority and Women's Business Development grants a

Women Business Enterprise (WBE)

pursuant to New York State Executive Law, Article 15-A to:

Quality Environmental Solutions & Technologies Inc.

Certification Awarded on: March 28, 2019
Expiration Date: March 28, 2022
File ID#: WBE- 49952

NEW YORK STATE OF OPPORTUNITY. | Division of Minority and Women's Business Development

A Division of Empire State Development

NEW YORK STATE OF OPPORTUNITY | Division of Minority and Women's Business Development

New York State Department of Economic Development
633 Third Avenue New York New York 10017 Tel 212 803 2414
Web Site: www.esd.ny.gov/MWBE/html

March 28, 2019

File ID: 49952

Quality Environmental Solutions & Technologies Inc. will be listed in New York State's Directory of Certified Businesses with the following list of codes for products and services:

NAICS 541620: ENVIRONMENTAL CONSULTING SERVICES
NIGP 91843: ENVIRONMENTAL CONSULTING

New York State – Department of Labor
Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

Quality Environmental Solutions & Technologies, Inc.

1376 Route 9

Wappinger Falls, NY 12590

FILE NUMBER: 99-0018
LICENSE NUMBER: 29085
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 01/26/2021
EXPIRATION DATE: 01/31/2022

Duly Authorized Representative – Lawrence J Holzapfel:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Eileen M. Franko, Director
For the Commissioner of Labor

SH 432 (8/12)

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE

N.Y.S

NICHOLAS D SALERNO
CLASS(EXPIRES)
C ATEC(06/22) D INSP(06/22)
H PM (06/22)

CERT# 16-10991
DMV# 102522202

MUST BE CARRIED ON ASBESTOS PROJECTS

01213 005957258 60

EYES BRO
HAIR BRO
HGT 6' 00"

IF FOUND RETURN TO:
NYSDOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

OSHA Occupational Safety and Health Administration

This card acknowledges that the recipient has successfully completed a 10-hour Occupational Safety and Health Training Course in

Construction Safety and Health

NICHOLAS SALERNO

CURTIS CHAMBERS — (Trainer name – print or type)

11/1/2018 — (Course end date)

OSHA recommends Outreach Training Courses as an orientation to occupational safety and health for workers. Participation is voluntary. Workers must receive additional training on specific hazards of their job. This course completion card does not expire.

Use or distribution of this card for fraudulent purposes, including false claims of having received training, may result in prosecution under 18 U.S.C. 1001. Potential penalties include substantial criminal fines, imprisonment up to five years, or both.

For OSHA Outreach Training Program go to "Training" at www.osha.gov

Rev. 9/2009

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE

N.Y.S

SHANNON D TALSMA
CLASS(EXPIRES)
C ATEC(10/22) D INSP(10/22)
H PM (10/22)

CERT# 16-07559
DMV# 963348232

MUST BE CARRIED ON ASBESTOS PROJECTS

01213 006064490 39

EYES GRN
HAIR BLN
HGT 6' 00"

IF FOUND RETURN TO:
NYSDOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

OSHA
Occupational Safety and Health Administration

12-006010504

This card acknowledges that the recipient has successfully completed:

10-hour Construction Safety and Health

This card issued to:

Shannon D. Talsma

David Veit — Trainer Name

04/22/2016 — Date of Issue

Atlantic OSHA Training Center
An Authorized OSHA Training Institute Education Center

732.235.9450
aotc.sph.rutgers.edu

OSHA recommends Outreach Training Courses as an orientation to occupational safety and health for workers. Participation is voluntary. Workers must receive additional training on specific hazards of their job. This course completion card does not expire.

Use or distribution of this card for fraudulent purposes, including false claims of having received training, may result in prosecution under 18 U.S.C. 1001. Potential penalties include substantial criminal fines, imprisonment up to 5 years, or both.

To verify this training, scan the QR code with your mobile device.

Rev. 1/2016

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2022
Issued April 01, 2021

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL STASCAVAGE
EAS INC - EASTERN ANALYTICAL SERVICES INC
4 WESTCHESTER PLAZA
ELMSFORD, NY 10523-1610

NY Lab Id No: 10851

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Asbestos in Friable Material	Item 198.1 of Manual
	EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Asbestos-Vermiculite-Containing Material	Item 198.8 of Manual
Lead in Dust Wipes	EPA 7000B
Lead in Paint	EPA 7000B

Sample Preparation Methods

	EPA 3050B

Serial No.: 62796

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

Geotechnical Interpretive Report for

New Hampton Fire District

5024 NY-17M
New Hampton
Orange County, New York

May 21, 2019

THE Chazen COMPANIES®
Proud to be Employee Owned

Civil Engineers
Land Surveyors
Planners
Environmental & Safety Professionals
Landscape Architects
Transportation Planners & Engineers

Prepared for:

Mr. Warren D. Tompkins, Chairman
New Hampton Fire District
5024 NY Route 17M
New Hampton, New York, 10658

Geotechnical Interpretive Report for

New Hampton Fire District

5024 NY-17M
New Hampton
Orange County, New York

May 21, 2019

THE Chazen COMPANIES®
Proud to be Employee Owned

Civil Engineers
Land Surveyors
Planners
Environmental & Safety Professionals
Landscape Architects
Transportation Planners & Engineers

Prepared by:

Chazen Engineering, Land Surveying & Landscape Architecture Co., D.P.C.
547 River Street
Troy, New York 12180
(518) 273-0055

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

The Chazen Companies (Chazen) was retained by the North Hampton Fire District to prepare a geotechnical interpretive report. This report discusses our investigation, analyses, and recommendations relative to the design parameters in support of future foundation work at the New Hampton Fire District facility located at 5024 NY-17M in the Town of New Hampton, Orange County, New York, herein after referred to as the "project site."

The subsurface exploration program included three test borings performed on April 25, 2019 to obtain representative subsurface information near the existing firehouse. Subsurface stratigraphy across the project site consists of Fill overlying Till and Bedrock. Groundwater was observed at depths between 2.5-feet and 8.5-feet below the ground surface.

Shallow reinforced concrete continuous strip footing foundations are recommended to support future foundation systems. If necessary, isolated spread footing foundations are recommended to support column loads. An allowable bearing capacity of 2 kips per square foot (ksf) is recommended for footings founded on 8-inches of crush stone over lightly disturbed compacted native soils. An allowable bearing capacity of 2 ksf is recommended for the soil supported slabs with a modulus of soil reaction (k) of 180 pci over selected subbase. Based on existing site conditions the Site Class for the project site is "D".

Provided this geotechnical interpretive report is read in its entirety and recommendations and construction considerations outlined in this report are incorporated in the design and during construction activities, the project site is considered suitable for the future foundation work.

2.0 PHYSICAL SETTING

The project site is located at 5024 NY-17M in the Town of New Hampton, Orange County, New York. The project site is a developed parcel bounded by NY-17M to the south, undeveloped land the north, a church to the east, and a commercial building to the west. The developed parcel contains two single story buildings; the existing firehouse (southern building) and the administration building (northern building) with associated asphalt parking areas. Existing site conditions are depicted in **Figure 1, Exploration Location Plan**.

No topographic survey information was provided to Chazen prior to the submission of this report. Elevations noted herein are based on publicly available information, using the World Geodetic System 1984 (WGS84) Earth Gravitational Model 1996 (EGM96 Geoid).

3.0 SUBSURFACE EXPLORATIONS

This section summarizes the results of the subsurface explorations performed at the project site on April 25, 2019 by Chazen, and in support of the interpretations made herein.

3.1 Test Explorations

Chazen conducted subsurface explorations to characterize the in-situ conditions and to collect representative soil samples in the vicinity of the existing firehouse. Samples were visually classified as a basis for determining design criteria cited in this report. Three (3) test boring explorations designated B-

1 through B-3 were performed at the project site. The explorations were performed to obtain subsurface information at specific points based on the site plan. As-drilled locations are documented on **Figure 1**: **Exploration Location Plan**.

Test boring explorations were performed by Core Down Drilling of Brewster, New York utilizing a GeoProbe 7822DT drill rig capable of spinning a 4 1/4-inch internal diameter (I.D.) hollow stem auger. Test explorations were advanced to depths ranging from 16.4-feet to 25.4-feet below existing site grades. Soil samples were continuously collected for the first 12-feet and 5-foot intervals thereafter in test boring explorations.

Explorations were monitored by a Chazen representative to advise the driller regarding location and depth, to record activities, and to modify the subsurface exploration as necessary. During soil sample collection, a 2-inch split spoon sampler was driven approximately 2-feet and the number of blows required to drive the sampler every 6-inches was recorded in accordance with ASTM D 1586 to measure the resistance of the soil to penetration of the sampler. Soil samples collected during the subsurface explorations were visually classified in the field in accordance with the Unified Soil Classification System (USCS) and ASTM D 2488. Logs detailing the explorations were prepared by Chazen to document subsurface conditions and are included in **Appendix A**.

3.2 Subsurface Stratigraphy

Subsurface explorations indicate at least three distinct strata are present within the depth of explorations at the project site. The sequence of observed strata, working downward from existing grade is generally Fill, Till, and Bedrock. Each stratum is described in greater detail below using the percentage descriptions per ASTM D2488.

Fill: Underlying between 2-inches and 12-inches of asphalt and concrete, this stratum was observed in all explorations ranging in thickness from 3-feet to 5-feet. This fill material was classified as Poorly Graded Sand with Gravel (SP) or Clayey Sand with Gravel (SC), consisting of dark gray to black, dry to wet, mostly sand with some percentages of clay, and some to a little percentage of gravel.

Till: Underlying the fill was a stratum generally classified as a Lean Clay (CL), consisting of dark gray to brown, moist to wet, mostly Clay with some to no percentage of Silt, a trace to some percentage of gravel, and a trace to a little percentage of sand. The strata ranged between 8-feet in boring B-1 and 20.4-feet in thickness in B-3. Test boring B-2 did not fully penetrate the residual clay strata.

In boring B-1 a layer of Sandy Silt with Gravel (ML) was encountered. This layer consisted of brown, moist to wet, mostly Silt with some percentage of sand, a little percentage of fine gravel and a trace percentage of clay. This layer was 5-feet in thickness.

Bedrock: The Bedrock at the project site is mapped as the Normanskill formation of the Ordovician period and consisting of shale, argillite, and siltstone according to a review of the Geologic Map of New York (Lower Hudson Sheet, 1995). Bedrock was encountered in boring B-1 and B-3 at approximate elevations El. 1352 and E. 1342, respectively. Rock core samples were not obtained during the exploration due to our understanding of the planned expansion, therefore detailed and site-specific information regarding Bedrock lithology is not available.

3.3 Groundwater Conditions

Groundwater was observed within all test borings ranging in depth from 2.5-feet (El. 1366.5) to 8.5-feet (El. 1360.5) below the ground surface elevation. Groundwater readings were taken at the termination of the explorations and are typically considered unstabilized readings and may not represent the true groundwater elevation. Levels recorded on the exploration logs are based on field observations and visual classification of the soil samples. Groundwater will fluctuate with season, precipitation, nearby construction activity, and other factors.

3.4 Site Seismic Characterizations

Using an accepted procedure to determine liquefaction potential at the project site, soils are judged as not susceptible to liquefaction when examined under the following conditions: USGS published mean peak ground acceleration (0.166 g), a maximum earthquake magnitude of 5.0, site recorded standard blow count values, percentage of fine-grained material, and depth to groundwater.

The soils across the subject area have been characterized for seismic conditions in accordance with ASCE/SEI 7-10, "Minimum Design Loads for Buildings and Other Structures", using the acceptable standard penetration resistance method. Based on the subsurface conditions observed, and our analysis and interpretation, Chazen calculated the project site as a Site Class D, with an S_S of 0.279 g and S_1 of 0.073 g.

4.0 RECOMMENDATIONS

This section presents our geotechnical recommendations for future foundation work based on the subsurface investigation. Our recommendations are in accordance with the related provisions of the 2017 Uniform Code of New York State which adopts the 2015 International Building Code (2015 IBC).

4.1 Structure Foundations

4.1.1 Foundation

Based on the observed subsurface conditions, shallow reinforced concrete continuous footings are a suitable foundation system for future foundation work. If necessary, Isolated spread footing foundations are recommended to support interior column loads.

Chazen recommends an allowable bearing capacity of **2 ksf** when bearing foundations on an 8-inch layer of properly placed and compacted Stone Fill, overlaying in-situ soils. The Stone Fill shall extend a minimum of 6-inches from each edge of the footing. In addition, we recommend use of a non-woven, geotextile fabric such as Mirafi 500X, located between prepared subgrade and the Stone Fill. The bottom of all exterior continuous footing foundations should be located a minimum of 4-feet below the lowest adjacent ground surface exposed to freezing. Additionally, the subgrade must be protected from freezing during construction. Foundations not exposed to freezing temperatures during construction (temporary condition) and located beneath continuously heated interior spaces should bear at least 18-inches below the top of the soil supported slab (final condition). We recommend that installed continuous strip footing foundations and isolated spread footing foundations have minimum lateral dimensions of at least 2-feet. Foundation elements must be constructed in accordance with IBC Sections 1807-1809.

Care should be taken to not disturb soils at the bearing surface or within the zone of influence of the foundations. The "zone of influence" is defined as a line drawn outward and downward from the lower edge of the footing at 1 Horizontal: 1 Vertical (1H: 1V) slope. Exposed soil subgrades should be lightly compacted (proof rolled), prior to placement of foundation elements using appropriate construction equipment in large accessible excavations and compacted using hand-guided compaction equipment in smaller excavations where access is limited. As discussed further in Section 5.1, during site preparation, unsuitable soils should be removed and replaced with material meeting the gradation for Granular Fill and compacted as defined in Section 4.3.3.

Total long-term settlements for statically loaded footings founded on properly placed Fill of lightly disturbed in-situ soils and designed using the recommended allowable bearing capacity are expected to be less than **1-inch** and differential (non-uniform settlements) are anticipated to be less than **0.5-inches**.

4.1.2 Building Ground Floor Slab

While preparing the slab subgrade, we recommend utilizing an allowable bearing capacity of **2 ksf** for the soil supported slabs and a modulus of subgrade reaction (k) of **180 pci**. At least 6-inches of well graded gravel or crushed stone (stone fill) should be placed over the prepared subgrade for the slab to bear on. For a moisture sensitive slab, and in accordance with 2015 IBC Section 1805.2.1, a damp proofing material (vapor barrier) should be installed.

If the slab is expected to have a bonded overlay finish (such as floor tile) an underdrain system should be installed below the slab and vapor barrier, and within the subbase described above. The underdrain system should consist of 4-inch diameter perforated pipe around the perimeter of the slab and within intermediate lengths with 4-inch diameter perforated laterals connecting perpendicularly and spaced at a maximum of 20-feet on center. The perforated underdrains should connect to a sump pit with a sump pump to support drainage and discharge to an approved site drainage system.

In accordance with 2015 IBC Section 1910 and to account for ACI allowable construction tolerances, the minimum slab on grade thickness should be 4-inches. Additionally, the design and construction of the slab should consider potential differential shrinkage between the top and bottom surfaces of the slab that could result in curling. A coefficient of friction of 0.20 is recommended for use between the slab and vapor barrier and 0.40 should be used for concrete cast directly against proof rolled compacted Stone Fill.

4.2 Utilities

In general, utility trenches and established trench invert elevations should be located outside the "zone of influence" of foundation elements. Trench excavation widths should extend a minimum of 12-inches beyond the outer edges of the utility elements to be installed. Exposed subgrades should be lightly compacted (proof rolled) and filled with placed and compacted Pipe Bedding Fill extending 6-inches (minimum) below and above each utility.

When utilities are located in trenches below slabs and/or pavements, Chazen recommends trenches are backfilled with a Granular Fill above the pipe bedding up to the exposed subgrade. In landscaped areas, utility trenches, above this point, may be backfilled with compacted Common Fill. Installation of visible markers at the surface and an underground trace line are recommended along the utility line to facilitate location of the utility in the future.

4.3 Fill Materials

Fill materials shall be free of unsuitable material such as organics, construction debris, cobbles/boulders, frozen material, or any other deleterious material. Fill areas shall be cleared of vegetation, roots, and other organic materials prior to placement of fill. Stockpiled soils may require installation of run-off protection between drainage channels and the stockpile.

The recommended compaction consists of at least 4 systematic passes using a sheepsfoot type roller, or a smooth drum roller operating in static mode. In confined areas, hand guided equipment shall be utilized to compact the soil to the specified criteria. If soil weaving or other disturbance is noticed during compaction, compaction should be discontinued. Heavy compaction equipment shall not be utilized within 3-feet of foundation walls. Compaction shall meet the requirements stated below or as approved by a qualified engineer.

4.3.1 Stone Fill

Stone Fill with not more than 10 percent material passing the number 4 sieve, such as a well graded ¾ inch crushed stone, is recommended for prepared subgrades for footings and slab construction. Stone Fill should be placed in loose lifts not to exceed 12-inches in thickness for heavy compaction equipment and up to 8 inches for lighter compaction equipment.

When Stone Fill is used as a drainage medium, it should be uniformly graded. A non-woven, geotextile meeting AASHTO M288 Survivability Class 3, such as a Mirafi 140N or equivalent, should be placed between the Stone Fill and adjacent soils to prevent the migration of fines into the stone void space.

4.3.2 Pipe Bedding Fill

Pipe Bedding Fill (e.g. pipe zone bedding and backfill) should be provided and compacted as recommended by the pipe manufacturer for backfill around utilities. If the manufacturer does not provide recommendations for pipe bedding material, a clean, granular, bedding fill meeting the following suggested gradation should be placed in lifts not exceeding 9-inches loose measure and compacted to 95% of maximum dry density as defined by ASTM D 1557:

Sieve Size	Percent Passing by Weight
¾ inch	100
No. 40	0-70
No. 200	0-10

4.3.3 Granular Fill

Granular Fill should consist of inorganic, granular sols, free of debris and other deleterious material that meet the following gradation:

Sieve Size	Percent Passing by Weight
3 inch	100
¼ inch	30 to 100
No. 40	0-50
No. 200	0-10

Granular Fill should be placed in lifts not exceeding 10-inches loose measure and compacted to 95% of the maximum dry density as determined by ASTM D 1557. Within the zone of influence of foundations, granular fill shall be utilized within 3 feet of the bottom subgrade (footing and ground floor slab).

4.3.4 Common Fill

Common Fil should consist of inorganic, sand based, granular soils, free of debris and other deleterious material that meet the following gradation:

Sieve Size	Percent Passing by Weight
4 inch	100
No. 40	0-70
No. 200	0-15

Common Fill used for general site grading and landscaping should be placed in lifts not exceeding 12-inches loose measure and compacted to 90% of the maximum dry density as determined by ASTM D 1557. Fill should be placed to promote positive drainage away from structures.

4.3.5 On-Site Soils

Based on Chazen's visual classification of the on-site soils that are anticipated to be excavated, the majority of the soil (SC, SM and CL) does not meet the Granular Fill gradation above due to the percentage of fine-grained material. These soils can be stockpiled and reused in landscape areas as Common Fill if screened to remove any 4-inch or greater particles, and any deleterious materials and debris. Where encountered the Poorly Graded Sand (SP) may be utilized as Granular Fill.

Due to the high percentage of fine-grained material and high liquid limit, the moisture content should stay within approximately 2% of the tested optimum and be placed in lifts not exceeding 8-inches loose measured and compacted to 90% of the maximum dry density as determined by ASTM D1557. Additionally, workability and earthwork activities will be affected during wet weather.

5.0 OTHER CONSIDERATIONS

This section presents our preliminary construction considerations to address excavation and groundwater conditions.

5.1 Site Preparation

After completion of general site demolition and grading activities at the project site, the area should be restored to an acceptable baseline condition. We recommend proof rolling lightly disturbed natural soils

left in-place after excavation activities are complete. However, if during foundation preparation the Special Inspector determines, subgrade materials are unsatisfactory (i.e. pumping, weaving, frozen, becoming saturated, organics or cobbles/boulders present); we recommend over excavation of the area by up to 12-inches and backfilling with Granular Fill to achieve a proper bearing area.

5.2 Excavation

We anticipate that excavations for foundation preparation can be accomplished using conventional earthwork equipment and techniques (i.e. backhoes, scrapers, excavators, or dozers) based on the physical characteristics, relative density of the stratum observed and the anticipated excavation limits.

Temporary cut slope excavations should not be left open or unbraced for extended periods of time. Temporary cuts should be sloped as required for stability in accordance with OSHA regulations and protected from erosion. OSHA requires each type of material be benched at the following slope for temporary excavations:

- Type “A” – 3/4 Horizontal: 1 Vertical (3/4H: 1V),
- Type “B” – 1 Horizontal: 1 Vertical (1H: 1V), and
- Type “C” – 1-1/2 Horizontal: 1 Vertical (1-1/2H: 1V).

Based on the subsurface explorations, overburden soil above the groundwater are to be considered OSHA Type “B”. When below the groundwater soils are to be considered OSHA Type “C”. However, this should be verified for each excavation by an OSHA competent person.

5.3 Control of Water

Based on the depth to groundwater in the subsurface investigation, groundwater seepage into open excavations may occur depending on bearing elevation of the foundation elements. Therefore, dewatering measures (e.g., sumps, barriers) should be readily available during construction to remove surface and water runoff and groundwater as necessary in open excavations.

Surface water must be controlled during foundation construction and earthwork operations by using temporary swales, ditches or other means necessary to prevent runoff into open excavations and to maintain a dry excavation for foundation construction.

Upon completion of rough grading activities, the final grade should be set to promote positive drainage away from building foundations. Topsoil with more than 20% fines is recommended for grading near structures as this material will limit infiltration of surface water into the subgrade.

5.4 Earthwork Special Inspections

In accordance with the 2015 IBC Section 1705.6, the Owner shall employ a Special Inspector to provide special inspections and verification of existing site soil conditions, fill placement and load-bearing capacity at the structure as outlined in Table 1705.6 *Required Special Inspections and Tests of Soils*. During fill placement, the Special Inspector shall determine that proper materials and procedures are used in accordance with the provisions of this geotechnical report.

6.0 CLOSURE

This report and the recommendations contained herein have been prepared for the exclusive use by the New Hampton Fire District and their representatives for specific application to the design and construction future foundations work located on 5024 NY-17M in the city of New Hampton, Orange County, New York

This report was prepared in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made. The analysis, designs and recommendations presented in this report are based in part upon the data obtained from subsurface explorations available at the time of this investigation. The nature and extent of variations between these explorations may not become evident until construction. If significant variations appear, it may be necessary to reevaluate the recommendations cited in this report. We also recommend Chazen is hired to evaluate foundation design to ensure recommendations in this report were followed.

Prepared by,

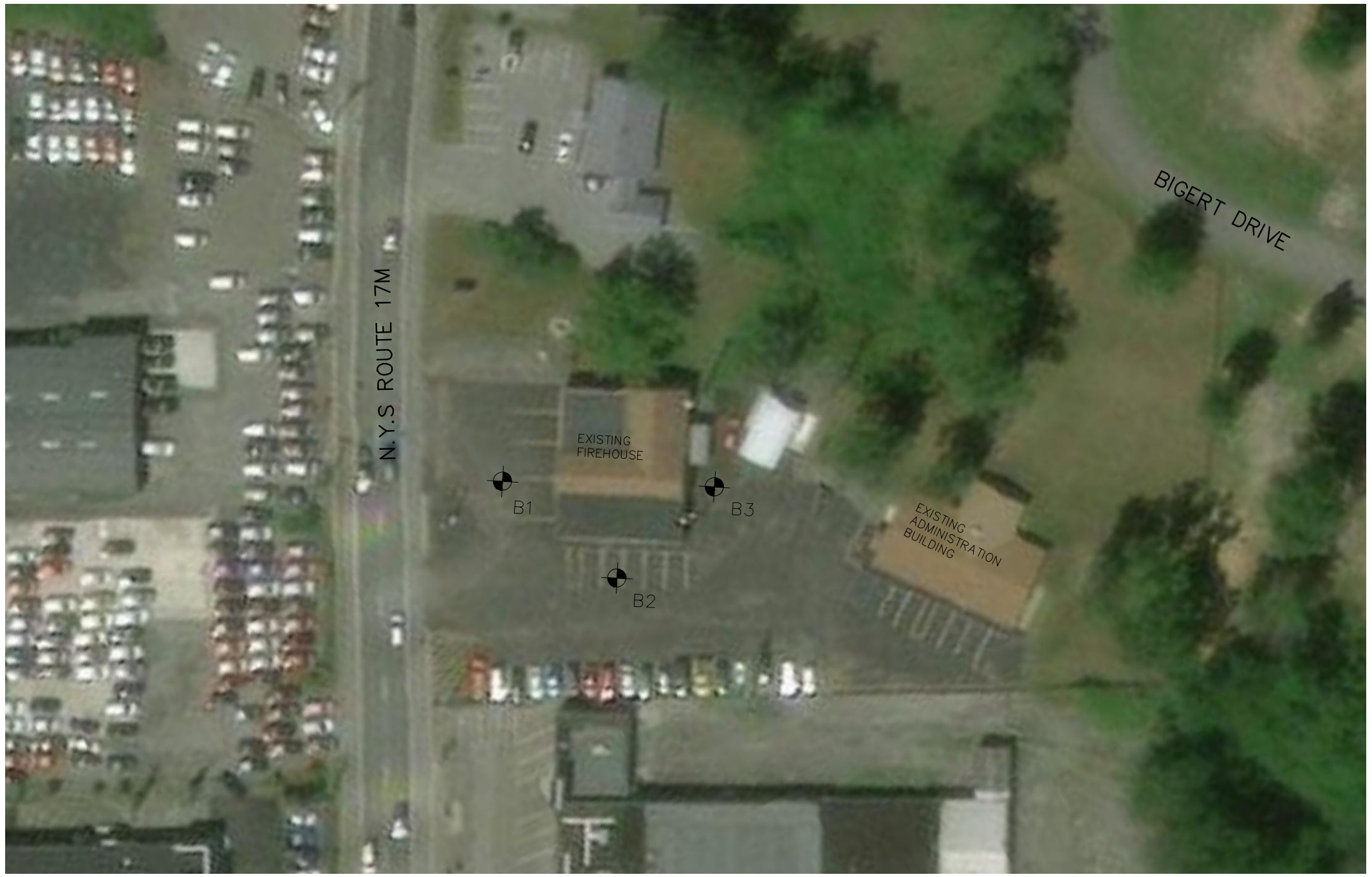
Ben Graves, P.E. (TN)
Geotechnical Project Engineer

Reviewed and approved by;

Matthew A. Korn, P.E. (NY)
Principal
Manager, Geotechnical Engineering Services

Figure 1:

Exploration Location Plan



NOTES:

1. SOIL BORING LOCATIONS SHOWN HERON WERE WITNESSED BY CHAZEN ENGINEERING CONSULTANTS ON APRIL 25, 2019

B1 SOIL BORING LOCATION

0 1 2 3

ORIGINAL SCALE IN INCHES

CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C.

Office Locations:

☐ Hudson Valley Office:
21 Fox Street
Poughkeepsie, New York 12601
Phone: (845) 454-3980

☐ North Country Office:
20 Elm Street (Suite 110)
Glens Falls, New York 12801
Phone: (518) 812-0513

☒ Capital District Office:
547 River Street
Troy, New York 12180
Phone: (518) 273-0055

☐ Westchester NY Office:
1 North Broadway, Suite 803
White Plains, New York 10601
Phone: (914) 997-8510

Nashville Tennessee Office:
2416 21st Ave S. (Suite 103)
Nashville, Tennessee 37212
Phone: (615) 380-1359

Chattanooga Tennessee Office:
427 E. 5TH ST. (Suite 201)
Chattanooga, Tennessee 37403
Phone: (423) 241-6575

NEW HAMPTON FIRE DISTRICT

EXPLORATION LOCATION PLAN

TOWN OF NEW HAMPTON, ORANGE COUNTY, NEW YORK

designed	checked
TCC	MAK
date	scale
5/20/19	1" = 60'
project no.	
41916.00	
sheet no.	
FIG 1	

Drawing Name: Z:\projects\41900-41999\41916_00_NewHamptonFireDistrict\DWG\41916-00_EXPLORATION PLAN.dwg Date Printed: May 20, 2019, 5:16pm

Appendix A:
Exploration Logs

INTERPRETATION OF SUBSURFACE LOGS

The Exploration Logs present observations and the results of tests performed in the field by the Driller, Technician, Geologists, and Geotechnical Engineers as noted. Soil/Rock classifications are made visually and modified accordingly based on laboratory results. The classification of soils or soil like material is subject to limitations imposed by the size of the sampler, the size of the sample and it's degree of disturbance and moisture.

The following defines some of the terms utilized in the preparation of the Subsurface Logs.

SOIL CLASSIFICATIONS

Soil classifications are visual descriptions on the basis of the Unified Soil Classification ASTM D-2488. The soil density or consistency is based on the penetration resistance determined by ASTM D 1586. Soil Moisture of the recovered materials is described as DRY, MOIST, WET or SATURATED.

SIZE DESCRIPTION		RELATIVE DENSITY/CONSISTENCY (BASIS ASTM D1586)			
Soil Type	Particle Size	Granular Soil		Cohesive Soil	
Boulder	>12"	Density	Blows/FT	Consistency	Blows/FT
Cobble	3"- 12"	Very Loose	< 4	Very Soft	< 2
Gravel-Coarse	3" – ¾"	Loose	5 – 10	Soft	2 - 5
Gravel-Fine	¾" - #4	Medium Dense	11 – 30	Medium Stiff	6 – 10
Sand-Coarse	#4 - #10	Dense	31- 50	Stiff	10 – 20
Sand-Medium	#10 - #40	Very Dense	50+	Very Stiff	20 – 30
Sand-Fine	#40 - #200			Hard	>30
Silt/NonPlastic	< #200				
Clay/Plastic	< #200				

SOIL STRUCTURE		RELATIVE PROPORTION OF SOIL TYPES	
Structure	Description	Description	% of Sample by Weight
Layer	6" Thick or Greater	Mostly	50 – 100
Seam	6" Thick or Less	Some	30 – 45
Parting	Less than ¼" thick	Little	15 – 25
Varved	Uniform horizontal partings or seams	Few	5 – 10
		Trace	Less than 5

Additional Notes:

1. Utilized c: coarse, m: medium, and f: fine when describing the size of sand or gravel.
2. WOH – weight of hammer.
3. WOR – weight of rods.
4. bgs – below ground surface
5. NA – Not Available
6. ▼ – Phreatic Surface, if observed

Refusal:

1. Split-spoon refusal is considered 50 blows over six inches.
2. Auger and Casing refusal occurs if the driller is unable to advance the boring.
3. Roller bit refusal occurs if the bit is worn and needs to be replaced or the bedrock is a dense very hard material.

TEST BORING LOG

THE Chazen COMPANIES
547 River Street
Troy, New York 12180
Phn: (518) 273-0055
Fax: (518) 273-8391

PROJECT: New Hampton Fire District
LOCATION: New Hampton, Orange County, New York
CLIENT: CS Arch
PROJECT NO.: 41916.00

Test Boring No.: **B-1**
Total Depth: 16.4 ft.

Contractor: Core Down Drilling
Drill Rig: 7822DT Geoprobe
Driller: Andrew Bellucci
Inspector: Eric Orlowski

Start Date: 25-Apr-2019
Finish Date: 25-Apr-2019
El. Datum: See Notes
G.S. Elevation: 1,369

Northing: See Figure
Easting:
Latitude: -
Longitude: -

Borehole Dia.: 4.5 in.
Water Depth: 8.5 ft.
Bedrock Depth: 16.4 ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-1	42	21			6" Asphalt	
1	1368		14			SP	Poorly Graded Sand w/ Gravel (SP): Mostly fine to medium Sand, little sub-rounded Gravel, trace silt, brown, dry (FILL)	
			7					
2	1367		7					
		SS-2	2	17		SP	13"-Poorly Graded Sand (SP): Mostly fine to medium Sand, little sub-rounded Gravel, trace Silt, brown, moist	
3	1366		2					Approximate strata change
			2			CL	4"-Lean Clay (CL): Mostly Clay, little Silt, few Gravel, trace Sand, dark gray, wet (TILL)	
4	1365		1					
		SS-3	2	12		CL	Lean Clay (CL): Mostly Clay, little Silt, few Gravel, trace Sand, gray/blue, wet	
5	1364		3					
			4					
6	1363		5					
		SS-4	4	17		CL	7"- Sandy Lean Clay w/ Gravel (CL): Mostly Clay, little Sand, little Gravel, dark gray, wet	
7	1362		32					
			15			CL	Lean Clay w/ Gravel (CL): Mostly Clay, some Silt, little fine Gravel, brown to grayish brown, moist	
8	1361		12					
		SS-5	6	16	▼	CL	6" - Lean Clay w/ Gravel (CL): Mostly Clay, some Silt, little Gravel, wet	
9	1360		8			CL	Lean Clay w/ Gravel (CL): Mostly Clay, some Silt, little fine rounded Gravel, brown to grayish brown, moist	
			10					
10	1359		16					
		SS-6	9	24		CL	4" - Lean Clay w/ Gravel (CL): Mostly Clay, some Silt, little fine rounded Gravel, brown to grayish brown, moist	
11	1358		10					
			13			ML	Sandy Silt w/ Gravel (ML): Mostly Silt, some Sand, little angular fine Gravel, brown, wet	
12	1357		16					
13	1356							
14	1355							
15	1354							
		SS-7	12	16		ML	Sandy Silt w/ Gravel (ML): Mostly Silt, some Sand, little fine gravel, trace Clay, brown, moist to wet, containts shale fragments	
16	1353		27					
			50/5"					
17	1352						Test boring terminated at 16.4-feet due to Split Spoon Refusal on Bedrock	
18	1351							
19	1350							
20	1349							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push

SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**

STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.

NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.

3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.

ADDITIONAL NOTES: Ground surface elevation approximated from available sources(Google Earth).

DRILLING INFORMATION

Method:	HA	0 to	15.0
		Sample	
Type		SS	
Int Diam.		1.5	
Weight		140 lb	
Fall		30"	

TEST BORING LOG

THE Chazen COMPANIES
547 River Street
Troy, New York 12180
Phn: (518) 273-0055
Fax: (518) 273-8391

PROJECT: New Hampton Fire District
LOCATION: New Hampton, Orange County, New York
CLIENT: CS Arch
PROJECT NO.: 41916.00

Test Boring No.: **B-2**
Total Depth: 17 ft.

Contractor: Core Down Drilling
Drill Rig: 7822DT Geoprobe
Driller: Andrew Bellucci
Inspector: Eric Orlowski

Start Date: 25-Apr-2019
Finish Date: 25-Apr-2019
El. Datum: See Notes
G.S. Elevation: 1,369

Northing: See Figure
Easting:
Latitude: -
Longitude: -

Borehole Dia.: 4.5 in.
Water Depth: 8 ft.
Bedrock Depth: n/a ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-1	11	15			2" Asphalt	
1	1368		11			SM	Silty Sand w/ Gravel (SM): Mosty Sand, some Gravel, little Silt, brown, dry (FILL)	
			7					
2	1367		8					
		SS-2	5	9		SM	Silty Sand w/ Gravel (SM): Mosty Sand, some Gravel, little Silt, brown, dry, contains concrete fragments	
3	1366		5					
			6					
4	1365		5					
		SS-3	16	14		SM	5" -Silty Sand w/ Gravel (SM): Mosty Sand, some Gravel, little Silt, brown, dry	
5	1364		6					Approximate strata change
			2			CL	Lean Clay (CL): Mostly Clay, trace Gravel, dark gray, moist (TILL)	
6	1363		3					
		SS-4	3	12		CL	Gravelly Lean Clay w/ Sand (CL): Mostly Clay, some to little fine rounded Gravel, little to trace Sand, gray, moist	
7	1362		5					
			6					
8	1361		9		▼			
		SS-5	18	20		CL	4" -Gravelly Lean Clay w/ Sand (CL): Mostly Clay, some to little fine rounded Gravel, little to trace Sand, gray, wet	
9	1360		20					
			18			CL	Sandy Lean Clay w/ Gravel (CL): Mostly Clay, some fine Sand, some subangular Gravel, mottled gray and brown, moist	
10	1359		12					
		SS-6	3	13		CL	Sandy Lean Clay w/ Gravel (CL): Mostly Clay, some fine Sand, some subangular Gravel, mottled gray and brown, moist	
11	1358		9					
			6					
12	1357		10					
13	1356							
14	1355							
15	1354							
		SS-7	28	24		CL	Sandy Lean Clay w/ Gravel (CL): Mostly Clay, some fine Sand, some subangular Gravel, mottled gray and brown, wet, contains shale fragements. Possible weathered rock	
16	1353		21					
			21					
17	1352		21					Difficulty with drilling equipment, test boring terminated.
							Test boring terminated at 17-feet.	
18	1351							
19	1350							
20	1349							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push

SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**

STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.

NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.

3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.

ADDITIONAL NOTES: Ground surface elevation approximated from available sources(Google Earth).
ft-bgs - feet below ground surface

DRILLING INFORMATION

Method:	HA	0 to	15.0
		Sample	
Type		SS	
Int Diam.		1.5	
Weight		140 lb	
Fall		30"	

TEST BORING LOG

THE Chazen COMPANIES
547 River Street
Troy, New York 12180
Phn: (518) 273-0055
Fax: (518) 273-8391

PROJECT: New Hampton Fire District
LOCATION: New Hampton, Orange County, New York
CLIENT: CS Arch
PROJECT NO.: 41916.00

Test Boring No.: **B-3**
Total Depth: 25.4 ft.

Contractor: Core Down Drilling
Drill Rig: 7822DT Geoprobe
Driller: Andrew Bellucci
Inspector: Eric Orlowski

Start Date: 25-Apr-2019
Finish Date: 25-Apr-2019
El. Datum: See Notes
G.S. Elevation: 1,369

Northing: See Figure
Easting: See Figure
Latitude: -
Longitude: -

Borehole Dia.: 4.5 in.
Water Depth: 2.5 ft.
Bedrock Depth: 25.4 ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-1	10	3			12" Asphalt and Concrete	Drove blind point to 12".
1	1368		50					
			8			SC	Clayey Sand w/ Gravel (SC): Mostly Sand, some Clay, little Gravel, dark gray, dry (FILL)	
2	1367		4					
		SS-2	4	8	▼	SC	Clayey Sand w/ Gravel (SC): Mostly Sand, some Clay, little Gravel, dark gray, wet	
3	1366		4					
			6					
4	1365		6					
		SS-3	3	12		SP	4" -Poorly Graded Sand w/ Gravel (SP): Mostly Sand, some Gravel, black, moist	
5	1364		1					Approximate strata Change
			1			CL	Lean Clay (CL): Mostly Clay, dark gray to gray, moist (TILL)	
6	1363		1					
		SS-4	3	16		CL	Lean Clay w/ Gravel (CL): Mostly Clay, little rock fragements, dark gray to gray, wet	Rock fragements angular and shale.
7	1362		3					
			13					
8	1361		8					
		SS-5	9	15		CL	Lean Clay (CL): Mostly Clay, dark gray to gray, wet	Bottom 4" contained some rock fragments.
9	1360		14					
			23					
10	1359		18					
		SS-6	4	16		CL	Lean Clay w/ Gravel (CL): Mostly Clay, little fine subrounded gravel, little rock fragments, brown, wet	
11	1358		5					
			8					
12	1357		10					
13	1356							
14	1355							
15	1354							
		SS-7	11	12		CL	Gravelly Lean Clay w/ Sand (CL): Mostly Clay, little fine subrounded gravel, little sand, little rock fragments, brown, wet	
16	1353		18					
			57					
17	1352		44					
18	1351							
19	1350							
20	1349							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push

SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**

STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.

NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.

3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.

ADDITIONAL NOTES: Ground surface elevation approximated from available sources(Google Earth).
ft-bgs - feet below ground surface

DRILLING INFORMATION

Method:	HA	0 to	25.0
		Sample	
Type		SS	
Int Diam.		1.5	
Weight		140 lb	
Fall		30"	

TEST BORING LOG

THE Chazen COMPANIES
547 River Street
Troy, New York 12180
Phn: (518) 273-0055
Fax: (518) 273-8391

PROJECT: New Hampton Fire District
LOCATION: New Hampton, Orange County, New York
CLIENT: CS Arch
PROJECT NO.: 41916.00

Test Boring No.: **B-3**
Total Depth: 25.4 ft.

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-8	15	20		SP	11" -Poorly Graded Sand (SP): Mostly fine to coarse Sand, wet	
21	1348		27					Approximate strata Change
			27			CL	Sandy Clay w/ Gravel (CL): Mostly Clay, some Sand, little Gravel, grayish brown, wet, few angular rock fragments. (Highly Weathered Bedrock)	
22	1347		30					
23	1346							
24	1345							
25	1344							
		SS-9	50/5"	5		CL	Lean Clay w/ Sand (CL): Mostly Clay, little to trace Sand, gray, wet, few rock fragments.	
26	1343						Test boring terminated at 25.4-feet due to Split Spoon Refusal on Bedrock	
27	1342							
28	1341							
29	1340							
30	1339							
31	1338							
32	1337							
33	1336							
34	1335							
35	1334							
36	1333							
37	1332							
38	1331							
39	1330							
40	1329							
41	1328							
42	1327							
43	1326							
44	1325							
45	1324							

ADDITIONAL NOTES:

SWPPP REPORT

December 16, 2022

PA PN: 20213139.0002

NEW HAMPTON FIRE STATION

NEW HAMPTON, NY

PREPARED FOR:
CSArch
19 Front Street
Newburgh NY 12550

TABLE OF CONTENTS

APPENDICES

1.0 EXECUTIVE SUMMARY

The project Site is located at 5024 NY-17M, New Hampton, New York. The proposed project consists of demolition of the existing fire station and accessory structures and construction of a new fire station and site improvements on a 2.43-acre parcel. This Stormwater Pollution Prevention Plan was developed using the redevelopment guidelines provided in the NYS Stormwater Management Design Manual.

Under existing conditions, stormwater runoff generally flows to the west Site boundary as sheet flow across the parking lot, shallow concentrated flow in a shallow swale between the parking lot and west property boundary, and discharges off-site into a culvert at the west property boundary. The culvert discharges northwest of the Site into the MS4 drainage system. The condition, capacity, and outfall of this culvert are unknown.

Under developed conditions, stormwater runoff is separated into five drainage areas. The stormwater runoff quality and quantity volumes from new development and some redevelopment areas flows to a stormwater management area consisting of a bioretention area and attenuation basin area located in the north portion of the site. The stormwater management area will discharge to the existing NYSDOT drainage system in NYS Route 17M. Additionally, the site uses green infrastructure practices to meet NYSDEC stormwater quality minimum requirements, which include water quality volume, runoff reduction volume, and channel protection volume (Section 5 of this report provides more detail on this subject). The summary table below shows the site water quantity and quality comparisons between existing and proposed conditions:

Summary Table

Water Quantity

	Existing	Proposed	Reduction (%)
1-Year Runoff (cfs)	2.9	2.6	10.34%
10-Year Runoff (cfs)	6.6	5.2	21.21%
100-Year Runoff (cfs)	13.2	10.1	23.48%

Water Quality

	Required	Provided
Water Quality Volume (WQv) (acre-ft)	0.921	0.937
Minimum Allowable Runoff Reduction Volume (RRv) (acre-ft)	0.173	0.183
Channel Protection Volume (CPv) (acre-ft)	0.001	1.130
Qp (cfs)	7.14	5.430
Qf (cfs)	14.000	10.600

Table 1: *Summary Table*

As shown above, the proposed stormwater pollution prevention plan meets the stormwater quality and quantity requirements set forth in NYSDEC GP-0-20-001.

2.0 INTRODUCTION

The project site ("Site") is located at 5024 New York State Route 17M, New Hampton, New York 10958. The Site is situated on a parcel of approximately 2.43 acres. Existing Site improvements include a fire station, social hall, commercial office building, paving, and other associated site improvements and accessory structures. The proposed project includes demolition of the existing fire station, accessory structures and some paving; and construction of an 8,100 square foot fire station, paving, stormwater management area and other associated site improvements. The project consists of approximately two acres of disturbance, including redevelopment of some of the existing impervious areas.

Potable water will be provided from an existing well on the Site. Sanitary sewage will be treated in a new subsurface sewage disposal system (SSDS). All other utilities will be supplied from new and/or existing connection points at the Site entrance.

This Stormwater Pollution Prevention Plan (SWPPP) generally complies with the State Pollutant Discharge Elimination System (SPDES) General Permit (GP-0-20-01) for Stormwater Discharges from Construction Activity. The guidelines specified by the *New York State Stormwater Management Design Manual, January 2015* (SWDM) for redevelopment activity were used to analyze the proposed stormwater management facilities for this project. Erosion and Sediment controls were designed in conformance with New York Standards and Specifications for Erosion and Sediment Controls.

A copy of this SWPPP and associated inspection logs will be kept on site in the proposed office space and job trailer/SWPPP mailbox.

Owner/Operator
CSArch
19 Front Street
Newburgh NY 12550
Thomas M. Ritzenthaler, AIA

SWPPP Preparer
Passero Associates
242 West Main Street. Suite 100
Rochester, NY 14614
(585) 325-1000
Contact: Chris Laporta, P.E.

3.0 EXISTING SITE CONDITIONS

3.1 Topography/ Drainage

Two drainage areas on the Site, totaling approximately 2.43 acres, were delineated for the existing site conditions. An off-site drainage area of approximately 0.17 acres along Route 17M was also delineated.

Existing Drainage Area 1:
Existing Drainage Area 1 (EDA1) is approximately 2.11 acres and includes approximately 1.14 acres of impervious surface. Ground cover in EDA1 is a mix of grass, pavement, and buildings with a calculated weighted Curve Number of 88. Stormwater runoff generally flows to the west as sheet flow across the parking lot and lawn and into a shallow earthen swale located behind the existing commercial/office building. Flow from this swale enters an existing culvert at the west property boundary (Analysis Point 1).

Existing Drainage Area 2:
Existing Drainage Area 2 (EDA2) is approximately 0.32 acre and is located on the north side of the Site. Ground cover in EDA2 is dense grass, no impervious surface, slope <1%, and a calculated weighted curve number of 73. Stormwater runoff in EDA2 discharges at Analysis Point 2 onto an adjacent grassed property and eventually to the Bigert Drive.

Existing Drainage Area 3:
Existing Drainage Area 3 (EDA3) is approximately 0.17 acre of impervious surface. EDA is an off-site drainage area encompassing half of the Route 17M road width and extending from the proposed connection point (Analysis Point 3) to a topographic divide on Route 17M approximately 420 feet southeast of the Site. The topographic divide was located based on field observations and topography derived from LIDAR data obtained from New York State GIS data. Runoff in EDA3 flows along the Route 17M to an existing catch basin located near the southeast Site corner, where it enters an 18- inch diameter pipe under Route 17M, in the NYSDOT Right-of-Way. Using the inverts measured on both sides of the project Site and Manning's equation with a roughness coefficient (n) = 0.012, the flow capacity of this pipe was calculated to be approximately 6.9 CFS for the 25-year design storm.

3.2 Wetlands

Publicly available records were reviewed to determine the presence of federal and state regulated wetlands within the property boundaries. Federal wetlands were researched using the National Wetlands Inventory (NWI) provided by the U.S. Fish and Wildlife Service. State regulated wetlands were researched using the Environmental Resource Mapper provided by the NYSDEC. State and Federal wetland maps are provided in Appendices D and E.

3.3 Floodplains

The presence of floodplains was evaluated using the FEMA Firmette tool. Review of the FEMA Firmette 36071C0226E, dated August 3rd, 2009 indicates that the Site is located in Zone X thus the Site is not in a designated floodplain. The FEMA Firmette is provided in Appendix G.

3.4 NYSDEC Environmental Resources

The NYSDEC Environmental Resource Mapper is an interactive mapping application that can be used to identify some of New York State's natural resources and environmental features that are state protected, or of conservation concern. It displays the following:

- Animals and plants that are rare in New York, including those listed as Endangered or Threatened (generalized locations). [Updated May 2008]
- Significant natural communities, such as rare or high-quality forests, wetlands, and other habitat types.
- New York's streams, rivers, lakes, and ponds; water quality classifications are also displayed

According to this database, there are potential for rare and endangered bats in the vicinity of the project. The Environmental Resource Mapper is provided in Appendix D.

3.5 State Historic Preservation Office Review

The presence of archeo-sensitive areas on the Site was researched using the Cultural Resource Information System (CRIS) provided by the NYS Historic Preservation Office (SHPO). Based on the publicly available mapping, this Site is not located within an archeological-sensitive area.

4.0 DEVELOPED SITE CONDITIONS

Five drainage areas were delineated for the proposed Site redevelopment.

4.1 Proposed Drainage Area 1:

Proposed Drainage Area 1 (PDA1) is approximately 0.19 acre and is located along the west property boundary. Ground cover in PDA1 is grass with a calculated weighted Curve number of 78. Stormwater runoff from this area will be conveyed into the existing culvert located on the west property boundary, designated as Analysis Point 1.

4.2 Proposed Drainage Area 2:

Proposed Drainage Area 2 (PDA2) is approximately 0.32 acre and is located along the north property boundary. Ground cover in PDA2 is grass with a calculated weighted Curve number of 73. Stormwater runoff from this area is conveyed as overland flow to the discharge point (Analysis Point 2) on the north property boundary.

4.3 Proposed Drainage Area 3:

Proposed Drainage Area 3 (PDA3) is approximately 0.55 acre and is located along the east property boundary. Ground cover in PDA3 will be 100% impervious buildings and asphalt parking lot with a calculated weighted Curve number of 98. Stormwater runoff from this area is conveyed as overland flow to a new catch basin at the southeast property boundary. Runoff at Analysis Point 3 will enter a new catch basin which is connected to the existing NYSDOT stormwater conveyance system under Route 17M.

4.4 Proposed Drainage Area 4:

Proposed Drainage Area 4 (PDA4) is approximately 0.25 acre and is located along the south property boundary. Ground cover in PDA4 will be 100% impervious asphalt parking lot with a calculated weighted Curve number of 98. Stormwater runoff from this area is conveyed as overland flow into a trench drain located across the Site entrance, parallel to Route 17M. Runoff in the trench drain is discharged to the existing NYSDOT stormwater conveyance system under Route 17M at Analysis Point 3.

4.5 Proposed Drainage Area 5:

Proposed Drainage Area 5 (PDA5) is approximately one acre and is located in the middle of the Site. Ground cover in PDA5 will include the new fire station building, asphalt parking lot, grass area, and the permanent stormwater management system with a calculated weighted Curve number of 86. Stormwater runoff from this area is conveyed as either overland flow across the parking or concentrated flow in the building gutters and into a stormwater management system that includes a grassed swale, pretreatment basin, bioretention basin, and attenuation basin. Discharge from the attenuation basin flows into a new culvert pipe with discharges to the existing NYSDOT stormwater conveyance system under Route 17M at Analysis Point 3.

5.0 STORMWATER QUALITY

Stormwater quality requirements will be achieved using green infrastructure practices as well as standard stormwater practices based on the 2015 NYSDEC Stormwater Management Design Manual. The design manual outlines which practices are best suited for specific scenarios, and how to properly size these practices. Water Quality Volume (WQv) and Runoff Reduction Volume (RRv) requirements are met using green infrastructure practices as well as other standard stormwater management practices.

As the existing site is partially developed, the redevelopment criteria are applicable to this project. These criteria require water quality treatment for 100% of the stormwater runoff from new impervious area and 25% of the stormwater runoff from existing impervious area. As shown on Plan Sheet C151, Proposed Drainage Area 5 has been delineated to meet these area requirements.

This project will use a bioretention filter system and a volume attenuation basin to meet the applicable NYSDEC requirements for stormwater quality and quantity.

5.1 Bioretention Practice F-5:

The bioretention area shown on the plans (Appendix S) will treat runoff from a portion of the proposed driveway, roof, and parking areas to meet the minimum water quality treatment requirements (see Table 2). The bioretention practice will include 2.75 feet of planting soil, with an underdrain discharging to the existing culvert located at the western property boundary. A grassed overflow weir will be used to convey the water quantity flows to the attenuation basin. The bioretention media was modeled as 40% of the total bioretention area to account for the void space in the soil media.

Water Quality

Description:	Required	Provided
WQv Total (acre-ft)	0.921	0.937
Min RRv Total (acre-ft)	0.173	0.183
CPv Total (acre-ft)	0.001	1.130
Qp Total (cfs)	7.14	5.430
Qf Total (cfs)	14.000	10.600

Table 2: *Stormwater Quality Comparison*

6.0 STORMWATER QUANTITY

The proposed development will increase impervious area on site, which increases the rate of stormwater runoff from the site. This runoff must be reduced to a rate that is less than the offsite flow rate during existing conditions. Reduction for this project is achieved through a new stormwater management area that will be used to release stormwater runoff at a controlled rate via an outlet control structure.

Stormwater runoff was modeled using Hydraflow Hydrographs software, provided by Autodesk. Using data obtained from the NRCC/NRCS precip.net site, Intensity-Duration-Frequency and Precipitation curves were developed for use in the Hydraflow analysis. The full Hydraflow report is provided in Appendix J and summarized in Table 3.

Runoff Comparison Table

Analysis Point:	Condition:	Runoff (cfs)		
		1 year	10 year	100 year
Analysis Point 1 (to 5036 Rt 17M)	EXISTING	2.6	5.9	11.5
	PROPOSED	0.19	0.55	1.2
	PERCENT REDUCTION	**92.69%**	**90.68%**	**89.57%**
Analysis Point 2 (Bigert Drive)	EXISTING	0.13	0.48	1.2
	PROPOSED	0.13	0.48	1.2
	PERCENT REDUCTION	**0.00%**	**0.00%**	**0.00%**
Analysis Point 3 (DOT CB)	EXISTING	0.42	0.76	1.3
	PROPOSED	2.4	4.4	8.2
	PERCENT REDUCTION	**-471.43%**	**-478.95%**	**-530.77%**
Total	EXISTING	2.9	6.6	13.2
	PROPOSED	2.6	5.2	10.1
	PERCENT REDUCTION	**10.34%**	**21.21%**	**23.48%**

Table 3: *Stormwater Quantity Comparison*

As shown above, the post-development runoff rate does not exceed the pre-development runoff rate for the 1, 10 and 100-year design storms at Analysis Point 1 and 2. The post-development runoff rate at Analysis Point 3 exceeds the pre-development condition as discharge from the stormwater management system and existing impervious areas is being redirected into the Route 17M drainage system instead of onto adjacent private property. Based on the Hydraflow model, the discharge to Analysis Point 3 is approximately 4.4 cfs for the 10-year design storm, approximately 5.6 cfs for the 25-year design storm, and approximately 8.1 cfs for the 100-year design storm.

7.0 CONSTRUCTION EROSION CONTROL PRACTICES & INSPECTIONS

The Owner is responsible for having SWPPP inspections completed once per week once disturbance of the site starts. The inspections shall review and document the following at a minimum: visual inspection of the outlet structure, check of the outlets for excessive sediment accumulation, burrowing, vegetation degradation, or any other issues of concern. The SWPPP inspection must be completed by a person qualified to conduct such inspections, as required by the NYSDEC. Copies of the SWPPP inspection reports will be sent to the town, owner, and contractor and deficiencies should be addressed immediately.

These practices are explained below and shown on the Plans attached as Appendix S:

- Silt Fence → Silt fencing shall be installed at the toe of all slopes along the perimeter of the disturbed areas and at the toe of slope for any soil stockpile areas. The fencing will be installed in accordance with the NYSDEC standards and as shown on the attached Plans. The contractor shall provide continued monitoring to ensure the silt fencing remains intact and shall repair as needed. When the silt accumulates to greater than 1/3 the height of the fence the contractor shall remove and dispose of the silt.

- Stabilized Construction Entrance → Due to the phased demolition, two different stabilized construction entrances must be used as shown on the Plans in Appendix K. The stabilized construction entrance (regardless of Phase) must be the only construction entrance to the Site for all vehicles. The contractor is responsible for ensuring that mud/debris is not tracked from the construction site onto the adjacent roadways and that the stabilized construction entrance properly removes mud and debris from construction vehicles. The contractor is responsible for maintaining a clean Site and immediately removing any mud/debris from adjacent roadways.

- Drop Inlet Protection → All field inlets and catch basins shall have inlet protection in accordance the Plans in Appendix K. Drop Inlet protection can be removed from catch basins when the sub base is installed, and from the field inlets when the adjacent area is brought to final grade and stabilized. Any proposed removal is subject to approval by the Engineer.

- Seeding and Stabilization → The contractor shall seed and stabilize all disturbed areas not to be worked for seven days within seven days of the last disturbance. Stabilization measures may include but are not limited to straw mulching, wood chip mulching, jute mesh and hydroseeding. The stormwater management area and adjacent areas shall be stabilized immediately following their shaping and installation. All embankments greater than 3:1 shall be stabilized with jute mesh.

- Winter Shutdown → The contractor may request to enter winter shutdown provided the contractor has fulfilled the requirements set forth in the NYSDEC Blue Book Standard and Specifications for Winter Stabilization. The certified SWPPP inspector will then perform an inspection and upon agreement with the contractor's practice, shall complete the "Notice to reduce Frequency of SPDES Site Inspections" Form. The form will then be submitted to the regulatory MS4 (or NYSDEC regional office should there be no MS4 for the project area) for review. After the regulatory MS4 or NYSDEC regional office has approved the request, the site will enter winter shutdown and SPDES site inspections may be reduced to once per month. Should the certified SWPPP inspector find any problems during winter shutdown, the contractor is liable to correct the issues on site in the same timely manner as an active project

Additional measures may be required during construction at the guidance of the owner or certified SWPPP Inspector. The contractor will begin to make all adjustments to the erosion control within 24 hours of receipt of any deficiencies.

Any modifications to the SWPPP will be reported and approved by the Town in writing prior to implementation. The owner is responsible for always having a qualified operator on site who has at least 4 hours of erosion control training in accordance with the GP-0-20-001. Once the site has been stabilized in accordance with GP-0-20-001, the Town may sign off on the Notice of Termination prior to submission to the NYSDEC. Removal of all temporary erosion and sediment control practices is required prior to demobilization.

8.0 POST CONSTRUCTION

The owner is responsible for operation and maintenance of all post construction stormwater practices, with the exception of those owned by NYSDOT at project completion. The post construction practices include performing annual inspections of the stormwater management system to ensure proper working conditions and ensure continual stabilized cover of all project areas to 80% cover, minimum. All applicable inspection and maintenance activities shall continue until the 80% cover is met. Any silt removal will be disposed either off site or on site and immediately stabilized in accordance with the practices of this plan.

Additionally, annual monitoring of the storm sewer structures will be provided by the owner to ensure that they are functioning properly. All documentation related to this SWPPP and post construction monitoring reports, shall be kept by the owner for five years after project completion. These inspections will be certified by a Professional Engineer and a copy of the inspection report will be furnished to the Owner.

APPENDICES

APPENDIX A: SWPPP CERTIFICATIONS

POLLUTION PREVENTION PLAN CERTIFICATION

I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction site identified in such SWPPP as a condition of authorization to discharge stormwater. I also understand that the operator must comply with the terms and conditions 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.

Signed:_____
Owner

Date:_____

CONTRACTOR'S CERTIFICATION

"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"

Signature	For	Responsible for
Trained Contractor _____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		

Signature	For	Responsible for
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		
_____ Date:_____		

APPENDIX B: AERIAL PHOTOGRAPH

NEW HAMPTON
FIRE STATION

Drawn By: WSZ | Date: 4/14/2022

PASSERO ASSOCIATES
engineering architecture
242 West Main Street, Suite 100
Rochester, NY 14614

Client: NEW HAMPTON FIRE DEPARTMENT
5024 NY-17M
NEW HAMPTON NY 10958

Project Number: 20213139.0002

Scale: 1"=150' | Sheet No: FIG-1

APPENDIX C: USGS QUADRANGLE MAP

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

MIDDLETOWN QUADRANGLE
NEW YORK - ORANGE COUNTY
7.5-MINUTE SERIES

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 18T

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, July 2017 - December 2017
Roads.....U.S. Census Bureau, 2016
Names.....GNIS, 1980 - 2019
Hydrography.....National Hydrography Dataset, 1899 - 2019
Contours.....National Elevation Dataset, 1999 - 2016
Boundaries.....Multiple sources; see metadata file 2017 - 2018

Wetlands.....FWS National Wetlands Inventory 1984

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

KILOMETERS 0 0.5 1 2
METERS 0 1000 2000
MILES 0 0.5 1
FEET 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011. A metadata file associated with this product is draft version 0.6.18

NEW YORK
QUADRANGLE LOCATION

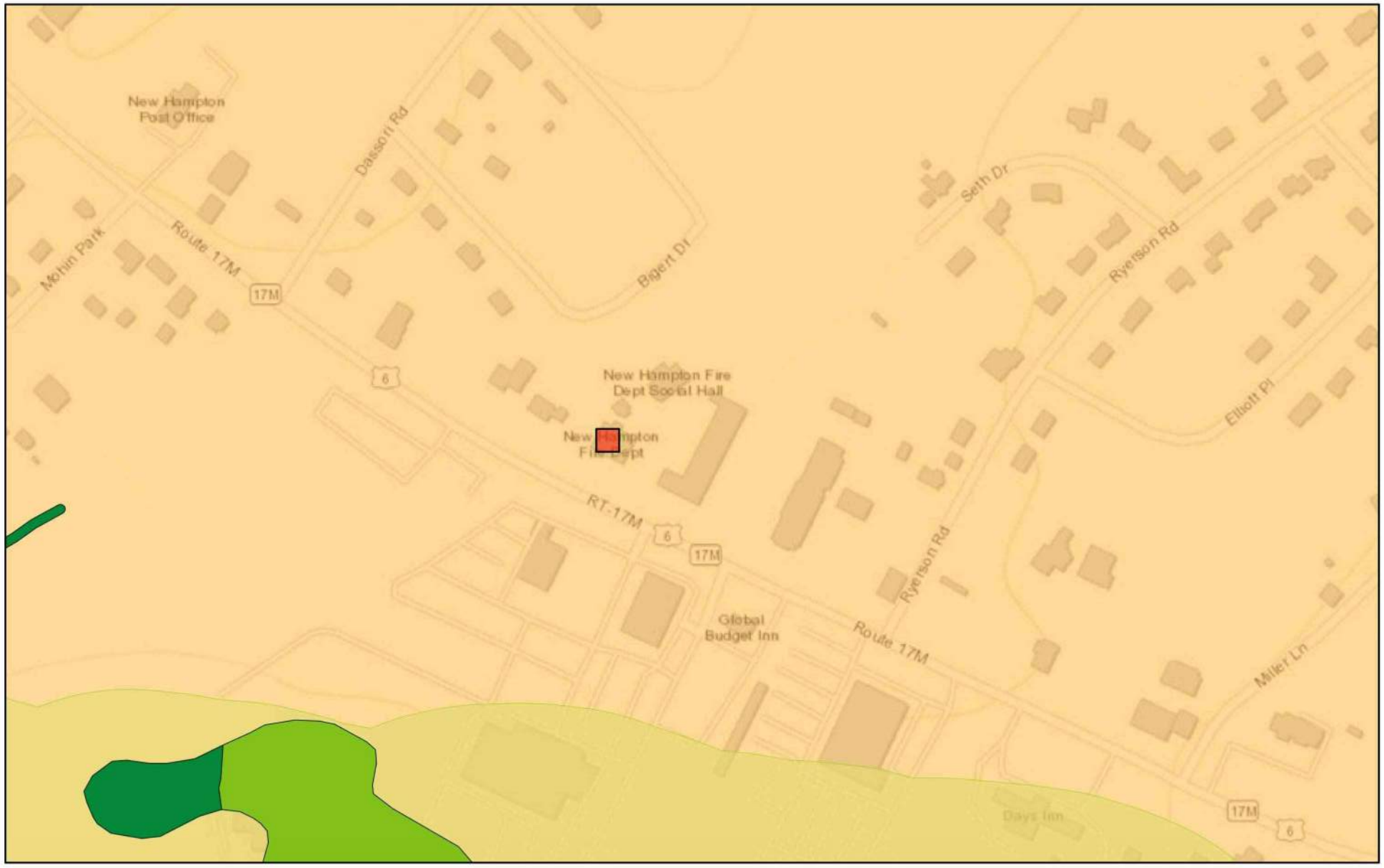
ADJOINING QUADRANGLES
1 Yankee Lake
2 Wurtsboro
3 Pine Bush
4 Otisville
5 Goshen
6 Unionville
7 Pine Island
8 Warwick

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

MIDDLETOWN, NY
2019

APPENDIX D: ENVIRONMENTAL RESOURCE MAPPER

Environmental Resource Mapper



Layers and Legend

- State Regulated Freshwater Wetlands (Outside of the Adirondack Park)
- State Regulated Wetland Checkzone
- Rare Plants or Animals

1:4,514

0 0.03 0.06 0.11 mi

0 0.04 0.09 0.18 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

Author: WSZ

Not a legal document

APPENDIX E: WETLAND MAPPING

U.S. Fish and Wildlife Service

National Wetlands Inventory

New Hampton Fire Station

April 14, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

APPENDIX F: SOILS MAP

Map Scale: 1:1,740 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

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 1:15,800.

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: Orange County, New York
Survey Area Data: Version 22, Aug 29, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ab	Alden silt loam	C/D	3.8	32.3%
ErA	Erie gravelly silt loam, 0 to 3 percent slopes	D	0.8	6.8%
ErB	Erie gravelly silt loam, 3 to 8 percent slopes	D	7.2	61.0%
Totals for Area of Interest			**11.9**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

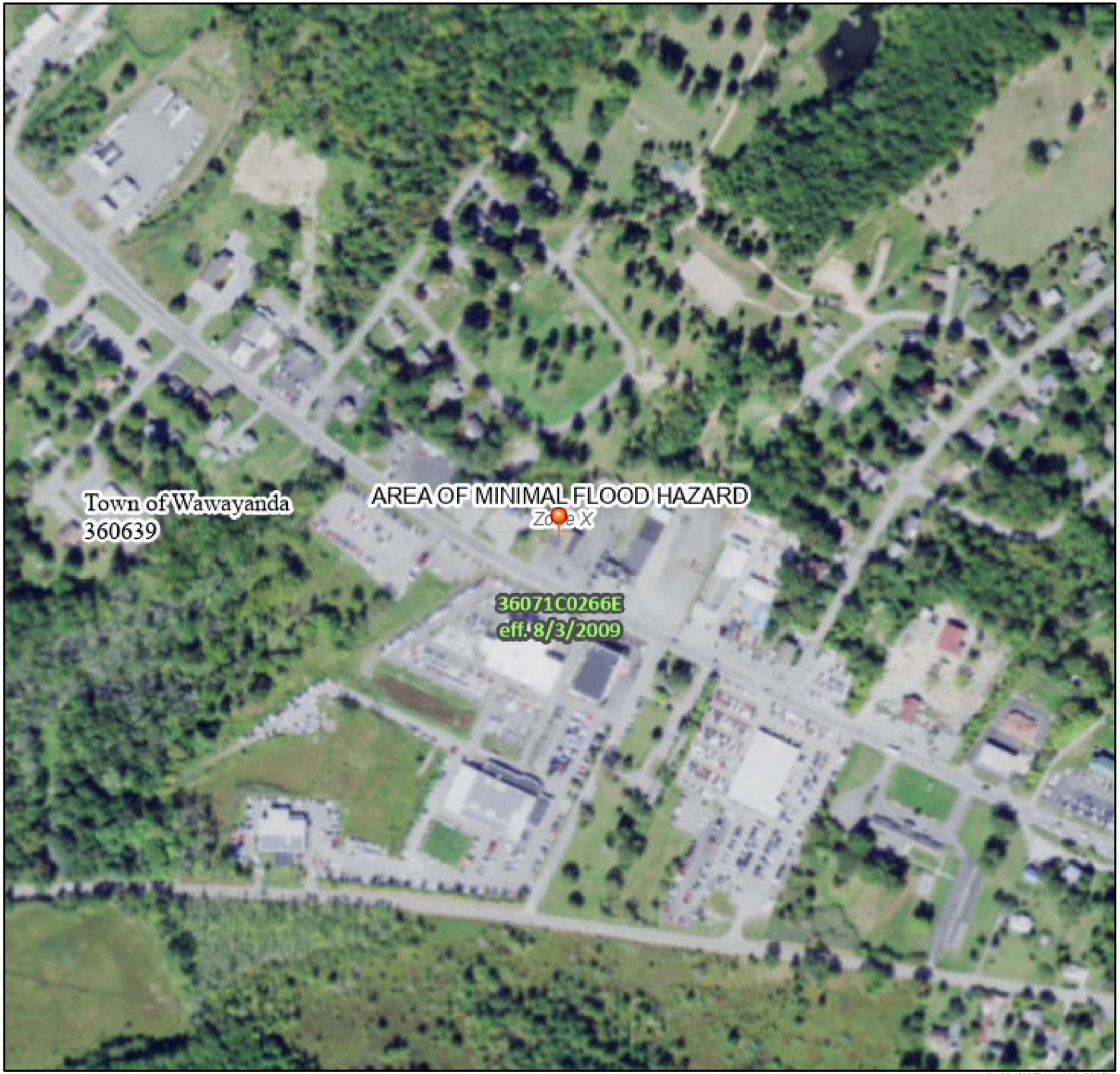
Tie-break Rule: Higher

APPENDIX G: FEMA MAPPING

National Flood Hazard Layer FIRMette

FEMA

74°25'14"W 41°24'50"N



74°24'37"W 41°24'23"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

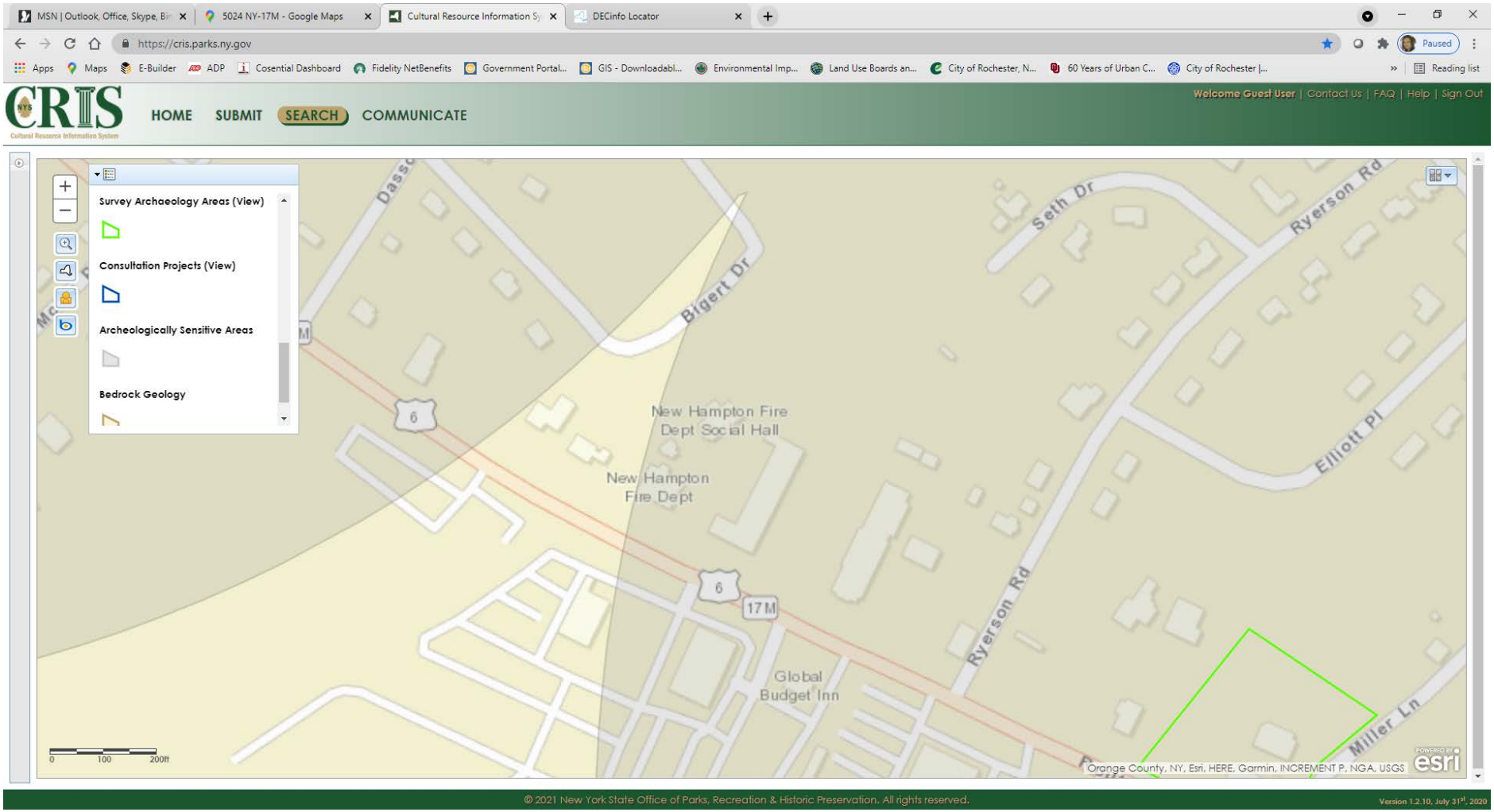
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/14/2022 at 11:57 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX H: ARCHEOLOGICAL SENSITIVE AREAS MAP


MSN | Outlook, Office, Skype, Bi
5024 NY-17M - Google Maps
Cultural Resource Information Sy
DECinfo Locator
https://cris.parks.ny.gov
Paused
Apps
Maps
E-Builder
ADP
Cosential Dashboard
Fidelity NetBenefits
Government Portal...
GIS - Downloadabl...
Environmental Imp...
Land Use Boards an...
City of Rochester, N...
60 Years of Urban C...
City of Rochester |...
Reading list
CRIS
Cultural Resource Information System
HOME
SUBMIT
SEARCH
COMMUNICATE
Welcome Guest User | Contact Us | FAQ | Help | Sign Out
Survey Archaeology Areas (View)
Consultation Projects (View)
Archeologically Sensitive Areas
Bedrock Geology
Bigert Dr
Seth Dr
Ryerson Rd
Elliott Pl
New Hampton Fire Dept Social Hall
New Hampton Fire Dept
6
17M
Global Budget Inn
Miller Ln
0
100
200ft
Orange County, NY, Esri, HERE, Garmin, INCREMENT P, NGA, USGS
esri
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Version 1.2.10, July 31st, 2020

APPENDIX I: CURVE NUMBER CALCULATIONS

Weighted Cn Chart New Hampton Fire Station

EXISTING DRAINAGE AREA 1

New Hampton Fire Station
20213139.0002
11/16/2022

Soil Name	Land Use	Detail	Soil Type	Cn	Area (Acre)	Cn*Area
Impervious	Paved Parking Roofs Driveways Etc	Standard	D	98	1.14	112
ErB	Meadow	Meadow-Good Condition	D	78	0.676	53
Ab	Meadow	Meadow-Good Condition	C	71	0.3	21

Total Area x Cn	186
Total Area	2.12

Weighted CN	**87.8**

Weighted Cn Chart New Hampton Fire Station

EXISTING DRAINAGE AREA 2

New Hampton Fire Station
20213139.0002
11/16/2022

Soil Name	Land Use	Detail	Soil Type	Cn	Area (Acre)	Cn*Area
Ab	Meadow	Meadow-Good Condition	C	71	0.221	16
ErB	Meadow	Meadow-Good Condition	D	78	0.094	7

Total Area x Cn	23
Total Area	0.32

Weighted CN	**73.1**

Weighted Cn Chart New Hampton Fire Station

EXISTING DRAINAGE AREA 4

New Hampton Fire Station
20213139.0002
11/16/2022

Soil Name	Land Use	Detail	Soil Type	Cn	Area (Acre)	Cn*Area
Impervious	Paved Parking Roofs Driveways Etc	Standard	D	98	0.17	17

This is runoff to DOT CB from off-site upland area to determine available flow capacity.

Total Area x Cn	17
Total Area	0.17

Weighted CN	**98.0**

**** EXISTING PIPE CAPACITY CALC using Manning's Equation

DIA= 18 in

Weighted Cn Chart New Hampton Fire Station

PROPOSED DRAINAGE AREA 1

New Hampton Fire Station
20213139.0002
11/16/2022

Soil Name	Land Use	Detail	Soil Type	Cn	Area (Acre)	Cn*Area
ErB	Meadow	Meadow-Good Condition	D	78	0.193	15

Total Area x Cn	15
Total Area	0.19

Weighted CN	**78.0**

Weighted Cn Chart New Hampton Fire Station

PROPOSED DRAINAGE AREA 2

New Hampton Fire Station
20213139.0002
11/16/2022

Soil Name	Land Use	Detail	Soil Type	Cn	Area (Acre)	Cn*Area
Ab	Meadow	Meadow-Good Condition	C	71	0.221	16
ErB	Meadow	Meadow-Good Condition	D	78	0.094	7

Total Area x Cn	23
Total Area	0.32

Weighted CN	**73.1**

Weighted Cn Chart New Hampton Fire Station

PROPOSED DRAINAGE AREA 3

New Hampton Fire Station
20213139.0002
11/16/2022

Soil Name	Land Use	Detail	Soil Type	Cn	Area (Acre)	Cn*Area
Impervious	Paved Parking Roofs Driveways Etc	Standard	D	98	0.553	54

Total Area x Cn	54
Total Area	0.55

Weighted CN	**98.0**

Weighted Cn Chart New Hampton Fire Station

PROPOSED DRAINAGE AREA 4

New Hampton Fire Station
20213139.0002
11/16/2022

Soil Name	Land Use	Detail	Soil Type	Cn	Area (Acre)	Cn*Area
Impervious	Paved Parking Roofs Driveways Etc	Standard	D	98	0.25	24

Total Area x Cn	24
Total Area	0.25

Weighted CN	**98.0**

Weighted Cn Chart New Hampton Fire Station

PROPOSED DRAINAGE AREA 5

New Hampton Fire Station
20213139
44881.51957

Soil Name	Land Use	Detail	Soil Type	Cn	Area (Acre)	Cn*Area
ErB	Meadow	Meadow-Good Condition	D	78	0.284	22
Impervious	Paved Parking Roofs Driveways Etc	Standard	D	98	0.495	49
Ab	Meadow	Meadow-Good Condition	C	71	0.243	17

Total Area x Cn	88
Total Area	1.0

Weighted CN	**86.02**

Weighted Cn Chart New Hampton Fire Station

PROPOSED DRAINAGE AREA 5

New Hampton Fire Station
20213139
44881.51957

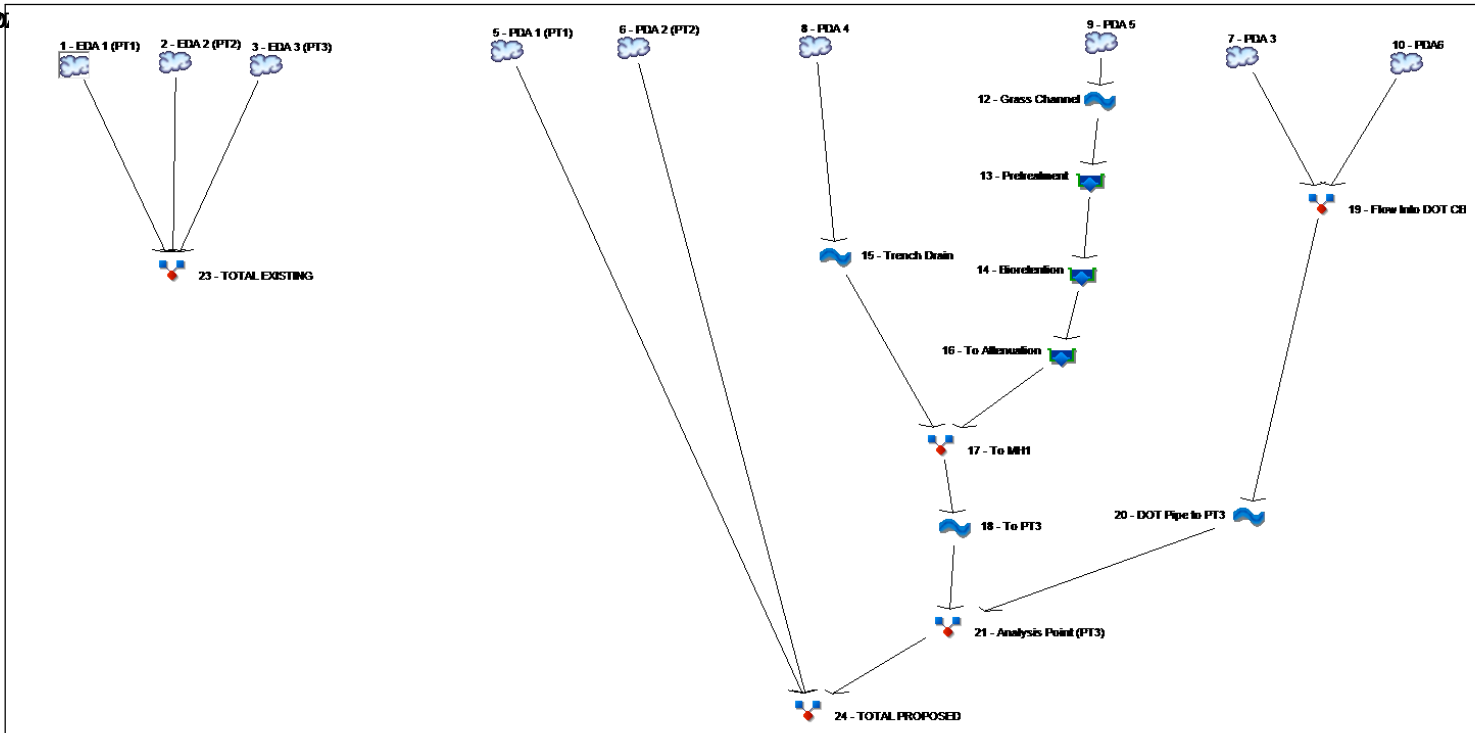
Soil Name	Land Use	Detail	Soil Type	Cn	Area (Acre)	Cn*Area
IMPERVIOUS	Paved Parking Roofs Driveways Etc	Standard	D	98	0.17	17

Total Area x Cn	17
Total Area	0.2

Weighted CN	**98.00**

APPENDIX J: HYDROGRAPH CALCULATIONS

Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	SCS Runoff	EDA 1 (PT1)
2	SCS Runoff	EDA 2 (PT2)
3	SCS Runoff	EDA 3 (PT3)
5	SCS Runoff	PDA 1 (PT1)
6	SCS Runoff	PDA 2 (PT2)
7	SCS Runoff	PDA 3
8	SCS Runoff	PDA 4
9	SCS Runoff	PDA 5
10	SCS Runoff	PDA6
12	Reach	Grass Channel
13	Reservoir	Pretreatment
14	Reservoir	Bioretention
15	Reach	Trench Drain
16	Reservoir	To Attenuation
17	Combine	To MH1
18	Reach	To PT3
19	Combine	Flow Into DOT CB
20	Reach	DOT Pipe to PT3
21	Combine	Analysis Point (PT3)
23	Combine	TOTAL EXISTING
24	Combine	TOTAL PROPOSED

Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)							Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	------	2.631	-------	-------	-------	5.870	-------	-------	11.54	EDA 1 (PT1)
2	SCS Runoff	------	0.133	-------	-------	-------	0.476	-------	-------	1.196	EDA 2 (PT2)
3	SCS Runoff	------	0.419	-------	-------	-------	0.759	-------	-------	1.350	EDA 3 (PT3)
5	SCS Runoff	------	0.186	-------	-------	-------	0.548	-------	-------	1.245	PDA 1 (PT1)
6	SCS Runoff	------	0.133	-------	-------	-------	0.476	-------	-------	1.196	PDA 2 (PT2)
7	SCS Runoff	------	1.357	-------	-------	-------	2.457	-------	-------	4.367	PDA 3
8	SCS Runoff	------	0.617	-------	-------	-------	1.117	-------	-------	1.985	PDA 4
9	SCS Runoff	------	1.587	-------	-------	-------	3.692	-------	-------	7.411	PDA 5
10	SCS Runoff	------	0.419	-------	-------	-------	0.759	-------	-------	1.350	PDA6
12	Reach	9	1.601	-------	-------	-------	3.700	-------	-------	7.449	Grass Channel
13	Reservoir	12	1.611	-------	-------	-------	3.737	-------	-------	7.471	Pretreatment
14	Reservoir	13	0.303	-------	-------	-------	0.604	-------	-------	5.649	Bioretention
15	Reach	8	0.622	-------	-------	-------	1.134	-------	-------	2.024	Trench Drain
16	Reservoir	14	0.159	-------	-------	-------	0.426	-------	-------	2.229	To Attenuation
17	Combine	15, 16	0.622	-------	-------	-------	1.134	-------	-------	2.721	To MH1
18	Reach	17	0.647	-------	-------	-------	1.185	-------	-------	2.732	To PT3
19	Combine	7, 10,	1.776	-------	-------	-------	3.216	-------	-------	5.717	Flow Into DOT CB
20	Reach	19	1.716	-------	-------	-------	3.217	-------	-------	5.731	DOT Pipe to PT3
21	Combine	18, 20	2.362	-------	-------	-------	4.402	-------	-------	8.179	Analysis Point (PT3)
23	Combine	1, 2, 3,	2.920	-------	-------	-------	6.630	-------	-------	13.23	TOTAL EXISTING
24	Combine	5, 6, 21,	2.602	-------	-------	-------	5.198	-------	-------	10.11	TOTAL PROPOSED

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

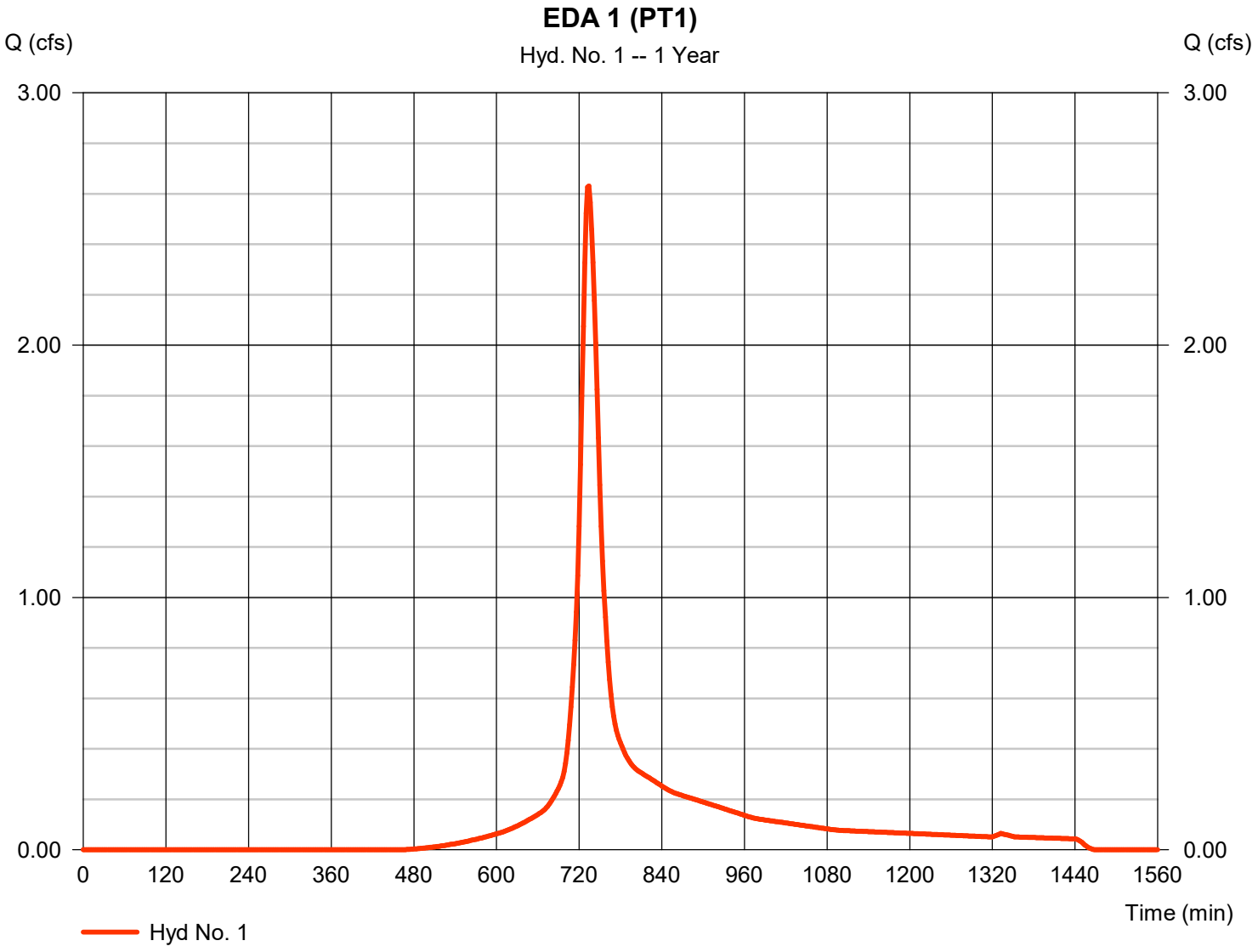
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.631	2	734	11,626	------	------	------	EDA 1 (PT1)
2	SCS Runoff	0.133	2	742	744	------	------	------	EDA 2 (PT2)
3	SCS Runoff	0.419	2	724	1,400	------	------	------	EDA 3 (PT3)
5	SCS Runoff	0.186	2	724	582	------	------	------	PDA 1 (PT1)
6	SCS Runoff	0.133	2	742	744	------	------	------	PDA 2 (PT2)
7	SCS Runoff	1.357	2	724	4,529	------	------	------	PDA 3
8	SCS Runoff	0.617	2	724	2,059	------	------	------	PDA 4
9	SCS Runoff	1.587	2	724	4,745	------	------	------	PDA 5
10	SCS Runoff	0.419	2	724	1,400	------	------	------	PDA6
12	Reach	1.601	2	726	4,745	9	------	------	Grass Channel
13	Reservoir	1.611	2	726	4,516	12	496.96	277	Pretreatment
14	Reservoir	0.303	2	752	3,596	13	494.69	1,893	Bioretention
15	Reach	0.622	2	724	1,988	8	------	------	Trench Drain
16	Reservoir	0.159	2	852	2,675	14	494.31	1,353	To Attenuation
17	Combine	0.622	2	724	4,663	15, 16	------	------	To MH1
18	Reach	0.647	2	726	4,611	17	------	------	To PT3
19	Combine	1.776	2	724	5,929	7, 10,	------	------	Flow Into DOT CB
20	Reach	1.716	2	726	5,928	19	------	------	DOT Pipe to PT3
21	Combine	2.362	2	726	10,539	18, 20	------	------	Analysis Point (PT3)
23	Combine	2.920	2	732	13,770	1, 2, 3,	------	------	TOTAL EXISTING
24	Combine	2.602	2	726	11,866	5, 6, 21,	------	------	TOTAL PROPOSED

Hydrograph Report

Hyd. No. 1

EDA 1 (PT1)

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.631 cfs
Storm frequency	=	1 yrs	Time to peak	=	734 min
Time interval	=	2 min	Hyd. volume	=	11,626 cuft
Drainage area	=	2.120 ac	Curve number	=	88
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	18.30 min
Total precip.	=	2.65 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



TR55 Tc Worksheet

Hyd. No. 1

EDA 1 (PT1)

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.17		0.00		0.00		
Land slope (%)	= 1.25		0.00		0.00		
Travel Time (min)	**= 17.30**	**+**	**0.00**	**+**	**0.00**	**=**	**17.30**
Shallow Concentrated Flow							
Flow length (ft)	= 130.00		35.00		0.00		
Watercourse slope (%)	= 2.87		2.86		0.00		
Surface description	= Unpaved		Unpaved		Paved		
Average velocity (ft/s)	=2.73		2.73		0.00		
Travel Time (min)	**= 0.79**	**+**	**0.21**	**+**	**0.00**	**=**	**1.01**
Channel Flow							
X sectional flow area (sqft)	= 0.00		0.00		0.00		
Wetted perimeter (ft)	= 0.00		0.00		0.00		
Channel slope (%)	= 0.00		0.00		0.00		
Manning's n-value	= 0.015		0.015		0.015		
Velocity (ft/s)	=0.00						
			0.00				
					0.00		
Flow length (ft)	({0})0.0		0.0		0.0		
Travel Time (min)	**= 0.00**	**+**	**0.00**	**+**	**0.00**	**=**	**0.00**

Total Travel Time, Tc ..... 18.30 min

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

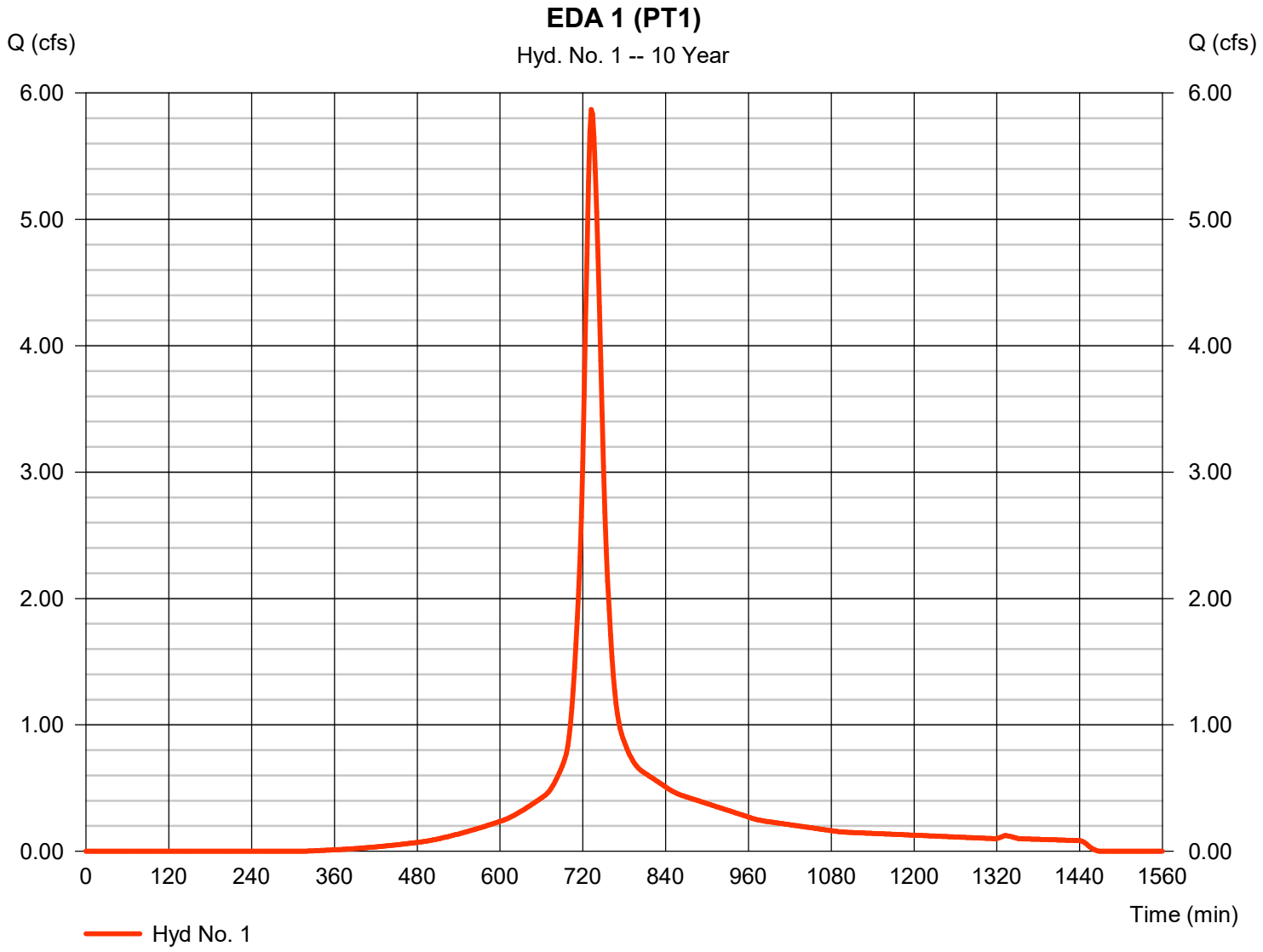
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	5.870	2	732	26,338	------	------	------	EDA 1 (PT1)
2	SCS Runoff	0.476	2	738	2,377	------	------	------	EDA 2 (PT2)
3	SCS Runoff	0.759	2	724	2,605	------	------	------	EDA 3 (PT3)
5	SCS Runoff	0.548	2	724	1,637	------	------	------	PDA 1 (PT1)
6	SCS Runoff	0.476	2	738	2,377	------	------	------	PDA 2 (PT2)
7	SCS Runoff	2.457	2	724	8,429	------	------	------	PDA 3
8	SCS Runoff	1.117	2	724	3,832	------	------	------	PDA 4
9	SCS Runoff	3.692	2	724	11,195	------	------	------	PDA 5
10	SCS Runoff	0.759	2	724	2,605	------	------	------	PDA6
12	Reach	3.700	2	726	11,194	9	------	------	Grass Channel
13	Reservoir	3.737	2	726	10,965	12	497.12	316	Pretreatment
14	Reservoir	0.604	2	754	10,045	13	496.23	4,953	Bioretention
15	Reach	1.134	2	724	3,818	8	------	------	Trench Drain
16	Reservoir	0.426	2	892	9,124	14	495.20	2,731	To Attenuation
17	Combine	1.134	2	724	12,943	15, 16	------	------	To MH1
18	Reach	1.185	2	726	12,901	17	------	------	To PT3
19	Combine	3.216	2	724	11,035	7, 10,	------	------	Flow Into DOT CB
20	Reach	3.217	2	726	11,035	19	------	------	DOT Pipe to PT3
21	Combine	4.402	2	726	23,936	18, 20	------	------	Analysis Point (PT3)
23	Combine	6.630	2	732	31,321	1, 2, 3,	------	------	TOTAL EXISTING
24	Combine	5.198	2	726	27,949	5, 6, 21,	------	------	TOTAL PROPOSED

Hydrograph Report

Hyd. No. 1

EDA 1 (PT1)

Hydrograph type	=	SCS Runoff	Peak discharge	=	5.870 cfs
Storm frequency	=	10 yrs	Time to peak	=	732 min
Time interval	=	2 min	Hyd. volume	=	26,338 cuft
Drainage area	=	2.120 ac	Curve number	=	88
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	18.30 min
Total precip.	=	4.74 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

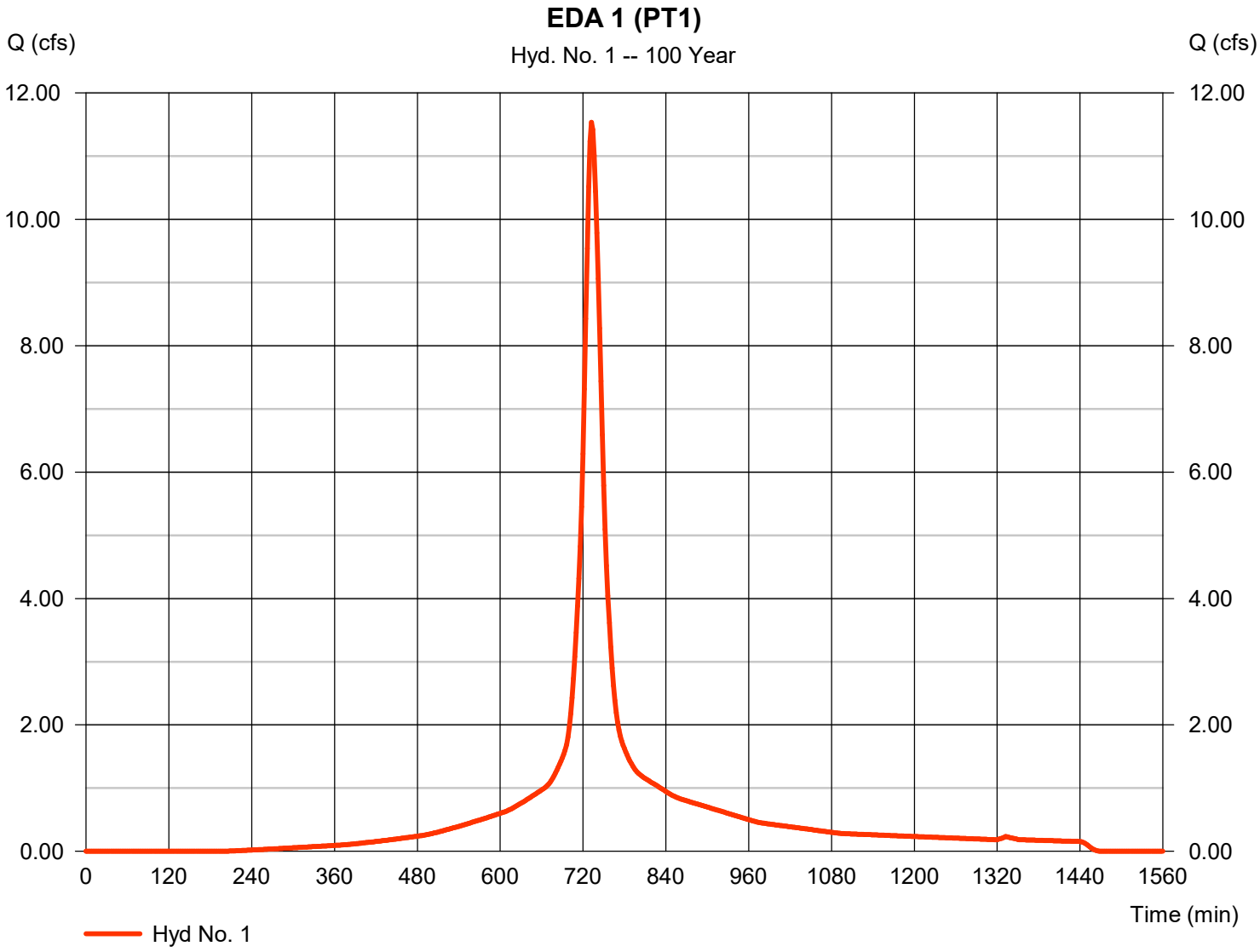
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	11.54	2	732	53,483	------	------	------	EDA 1 (PT1)
2	SCS Runoff	1.196	2	738	5,897	------	------	------	EDA 2 (PT2)
3	SCS Runoff	1.350	2	724	4,715	------	------	------	EDA 3 (PT3)
5	SCS Runoff	1.245	2	724	3,778	------	------	------	PDA 1 (PT1)
6	SCS Runoff	1.196	2	738	5,897	------	------	------	PDA 2 (PT2)
7	SCS Runoff	4.367	2	724	15,254	------	------	------	PDA 3
8	SCS Runoff	1.985	2	724	6,934	------	------	------	PDA 4
9	SCS Runoff	7.411	2	724	23,291	------	------	------	PDA 5
10	SCS Runoff	1.350	2	724	4,715	------	------	------	PDA6
12	Reach	7.449	2	724	23,291	9	------	------	Grass Channel
13	Reservoir	7.471	2	726	23,063	12	497.34	373	Pretreatment
14	Reservoir	5.649	2	728	22,142	13	496.88	6,665	Bioretention
15	Reach	2.024	2	724	6,933	8	------	------	Trench Drain
16	Reservoir	2.229	2	746	21,222	14	496.65	6,039	To Attenuation
17	Combine	2.721	2	746	28,155	15, 16	------	------	To MH1
18	Reach	2.732	2	746	28,122	17	------	------	To PT3
19	Combine	5.717	2	724	19,969	7, 10,	------	------	Flow Into DOT CB
20	Reach	5.731	2	726	19,969	19	------	------	DOT Pipe to PT3
21	Combine	8.179	2	726	48,091	18, 20	------	------	Analysis Point (PT3)
23	Combine	13.23	2	732	64,094	1, 2, 3,	------	------	TOTAL EXISTING
24	Combine	10.11	2	726	57,766	5, 6, 21,	------	------	TOTAL PROPOSED

Hydrograph Report

Hyd. No. 1

EDA 1 (PT1)

Hydrograph type	=	SCS Runoff	Peak discharge	=	11.54 cfs
Storm frequency	=	100 yrs	Time to peak	=	732 min
Time interval	=	2 min	Hyd. volume	=	53,483 cuft
Drainage area	=	2.120 ac	Curve number	=	88
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	18.30 min
Total precip.	=	8.39 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	44.1683	10.3000	0.8861	--------
2	48.5276	10.0000	0.8631	--------
3	0.0000	0.0000	0.0000	--------
5	43.2150	8.6000	0.7901	--------
10	42.5499	7.8000	0.7501	--------
25	42.9807	6.9000	0.7039	--------
50	38.2343	5.3000	0.6405	--------
100	36.6959	4.1000	0.5940	--------

File name: orange.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	3.94	3.07	2.52	2.15	1.88	1.67	1.51	1.37	1.26	1.17	1.09	1.02
2	4.69	3.66	3.02	2.58	2.26	2.01	1.82	1.66	1.53	1.42	1.32	1.24
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	5.50	4.29	3.56	3.05	2.69	2.41	2.19	2.01	1.86	1.73	1.62	1.53
10	6.29	4.91	4.08	3.51	3.10	2.79	2.54	2.34	2.17	2.03	1.91	1.80
25	7.52	5.87	4.89	4.23	3.76	3.39	3.10	2.86	2.67	2.50	2.36	2.23
50	8.58	6.66	5.56	4.83	4.30	3.90	3.58	3.32	3.11	2.93	2.77	2.63
100	9.88	7.62	6.36	5.54	4.96	4.51	4.16	3.87	3.63	3.43	3.25	3.10

Tc = time in minutes. Values may exceed 60.

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Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	2.65	3.19	0.00	4.00	4.74	5.94	7.06	8.39
SCS 6-Hr	1.78	2.17	0.00	2.72	3.24	4.08	4.85	5.78
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hydraflow Table of Contents

APPENDIX K: WATER QUALITY CALCULATIONS

Step 1 - Planning

Green Infrastructure Planning Measures

Practice	Description	Application	Evaluation
Preservation of Undisturbed Areas	Delineate and place into permanent conservation undisturbed forests, native vegetated areas, riparian corridors, wetlands, and natural terrain.	No	This is a single-family home.
Preservation of Buffers	Define, delineate and preserve naturally vegetated buffers along perennial streams, rivers, shorelines and wetlands.	Yes	The house is located well upland of the wetland area.
Reduction of Clearing and Grading	Limit clearing and grading to the minimum amount needed for roads, driveways, foundations, utilities and stormwater management facilities.	Yes	Clearing and grading will be limited to the area of disturbance and will be minimized to the greatest extent practical
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	The site has been designed to avoid sensitive resource areas to the greatest extent practical.
Open Space Design	Use clustering, conservation design or open space design to reduce impervious cover, preserve more open space and protect water resources.	Yes	The abandoned house and gravel roadways will be demolished and removed, reducing impervious cover
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 post construction practices.	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 roadways are proposed.
Sidewalk Reduction	Minimize sidewalk lengths and widths to reduce site impervious area	Yes	Minimal sidewalks are proposed in the house surrounds.
Driveway Reduction	Minimize driveway lengths and widths to reduce site impervious area	Yes	The driveway is the minimum width to allow a vehicle to pass in both directions.
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.
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.	Yes	The proposed home is two story.
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 parking lots are proposed.

Step 2 - Determine Water Quality Treatment Volume

Impervious Cover Summary

Area Description	Area (sf)	Area (ac)
Pre-Development Impervious Area	49,658	1.14
Post-Development Impervious Area	57,063	1.31
Total Area	105,850.00	2.43
Existing Disturbed Impervious Area	46,269	1.06
New Development Impervious Area	7,405	0.17
Redevelopment Impervious Area	11,567	0.27
Redevelopment Impervious %	25%	

*25% for standard practices, 75% for alternative practices, weighted average for combination.

Initital Water Quality Volume (WQ_v)

$$WQ_v = \frac{[(P)(Rv)(A)]}{12}$$

Where:

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

P=	1.35	inch	
I=	18%		
Rv=	0.211		
WQ_v=	2516 cf	=	0.058 ac-ft

Step 3 - Determine Minimum Required Runoff Reduction Volume (RR*v*)

Site Soil Summary

Soil Group	Acres	S
A		55%
B		40%
C	0.52	30%
D	1.91	20%
Total Area	2.43	

Minimum RR_v

$$RRv_{min} = \frac{P * \bar{R}_v * Aic * S}{12}$$

Where:

RRv_{min} =	Minimum runoff reduction volume required from impervious area (acre-feet)
$\bar{R}$ =	0.05 + 0.009 (I)
Aic =	Impervious Cover (Percent)
S =	Contributing Area in Acres

S =	0.221399	
Impervious =	0.17	acre
Precipitation =	1.350	in
R*v* =	0.95	
Minimum RR*v*	**175**	**ft^3**
	0.004	af

Step 3 - Evaluation of Green Infrastructure Techniques

Green Infrastructure Techniques

Design Variant	Practice	Description	Application
RR-1	**Conservation Of Natural Areas**	Retain the pre-development hydrologic and water quality characteristics of undisturbed natural areas, stream and wetland buffers by restoring and/or permanently conserving these areas on a site.	No
RR-2	**Sheet flow to Riparian Buffers or Filter Strips**	Undisturbed natural areas such as forested conservation areas and stream buffers or vegetated filter strips and riparian buffers can be used to treat and control stormwater runoff from some areas of a development project.	No
RR-3	**Tree Planting / Tree Box**	Plant or conserve trees to reduce stormwater runoff, increase nutrient uptake, and provide bank stabilization. Trees can be used for applications such as landscaping, stormwater management practice areas, and conservation areas.	No
RR-4	**Disconnection of Rooftop Runoff**	Direct runoff from residential rooftop areas and upland overland runoff flow to designated pervious areas to reduce runoff volumes and rates.	No
RR-5	**Vegetated Swale**	The natural drainage paths, or properly designed vegetated channels, can be used instead of constructing underground storm sewers or concrete open channels to increase time of concentration, reduce the peak discharge, and provide infiltration.	No
RR-6	**Rain Garden**	Manage and treat small volumes of stormwater runoff using a conditioned planting soil bed and planting materials to filter runoff stored within a shallow depression.	No
RR-7	**Stormwater Planter**	Small landscaped stormwater treatment devices that can be designed as infiltration or filtering practices. Stormwater planters use soil infiltration and biogeochemical processes to decrease stormwater quantity and improve water	No
RR-8	**Rain Barrels / Cisterns**	Capture and store stormwater runoff to be used for irrigation systems or filtered and reused for non-contact activities.	No
RR-9	**Pourous Pavement**	Pervious types of pavements that provide an alternative to conventional paved surfaces, designed to infiltrate rainfall through the surface, thereby reducing stormwater runoff from a site and providing some pollutant uptake in the underlying soils.	No
RR-10	**Green Roof**	Capture runoff by a layer of vegetation and soil installed on top of a conventional flat or sloped roof. The rooftop vegetation allows evaporation and evapotranspiration processes to reduce volume and discharge rate of runoff entering conveyance system.	No
	Stream Daylighting	Stream Daylight previously-culverted/piped streams to restore natural habitats, better attenuate runoff by increasing the storage size, promoting infiltration, and help reduce pollutant loads.	No

Evaluation
Natural Areas are conserved with the exception of a culvert driveway crossing. Earthwork activities for stormwater management practices is located outside of the wetland buffer.
No untreated sheet flow is proposed to flow to a riparian area from the proposed layout.
The project proposes the preservation of existing mature trees, as well as the planting of numerous trees throughout the site, in order to reduce stormwater runoff, increase nutrient uptake, and provide bank stabilization. However, credit for these trees will not be taken toward an area reduction in the RRv calculations.
Disconnected rooftop downspouts are proposed at a number of locations. However, no areas contain a long enough flow path before reconnecting with impervious areas to qualify for the rooftop disconnection credit.
Stormwater practices have been designed to provide management and treatment at the source.
Rain gardens are not proposed on this site.
Stormwater planters are not proposed on this site.
Rain Barrels/Cisterns are not proposed on-site due to the need for active management/maintenance and initial capital cost. In addition, the cold climate of the project area would require additional protection measures from freezing.
Pervious pavement is not proposed on this site.
A green roof is not proposed on-site due to significant structural, insurance, and maintenance considerations.
No stream daylighting opportunities are present on this site.

Runoff Reduction Volume and Treated volumes						
Runoff Reduction Techiques/Standard SMPs			**Total Contributing Area (acres)**	**Total Contributing Impervious Area (acres)**	**WQv Reduced (RRv) cf**	**WQv Treated cf**
Area/Volume Reduction	Conservation of Natural Areas	RR-1	0.00	0.00		
	Sheetflow to Riparian Buffers/Filter Strips	RR-2	0.00	0.00		
	Tree Planting/Tree Pit	RR-3	0.00	0.00		
	Disconnection of Rooftop Runoff	RR-4		0.00		
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	0.00	0.00	0	
	Rain Barrel/Cistern	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	0.00	0.00	0	
	Green Roof (Intensive &	RR-10	0.00	0.00	0	
Standard SMPs w/RRv Capacity	Infiltration Trench	I-1	0.00	0.00	0	0
	Infiltration Basin	I-2	0.00	0.00	0	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4	0.00	0.00	0	
	Bioretention	F-5	0.50	0.50	2309	1230
	Dry swale	O-1	0.00	0.00	0	0
Standard SMPs	Micropool Extended Detention (P-	P-1	0.00	0.00		0
	Wet Pond (P-2)	P-2	0.00	0.00		0
	Wet Extended Detention (P-3)	P-3	0.00	0.00		0
	Multiple Pond system (P-4)	P-4	0.00	0.00		0
	Pocket Pond (p-5)	P-5	0.00	0.00		0
	Surface Sand filter (F-1)	F-1	0.00	0.00		0
	Underground Sand filter (F-2)	F-2	0.00	0.00		0
	Perimeter Sand Filter (F-3)	F-3	0.00	0.00		0
	Organic Filter (F-4	F-4	0.00	0.00		0
	Shallow Wetland (W-1)	W-1	0.00	0.00		0
	Extended Detention Wetland (W-2	W-2	0.00	0.00		0
	Pond/Wetland System (W-3)	W-3	0.00	0.00		0
	Pocket Wetland (W-4)	W-4	0.00	0.00		0
	Wet Swale (O-2)	O-2	0.00	0.00		0
Totals by Area Reduction →			0.00	0.00	0	
Totals by Volume Reduction →			0.00	0.00	0	
Totals by Standard SMP w/RRV →			0.50	0.50	2309	1230
Totals by Standard SMP →			0.00	0.00		0
Totals (Area + Volume + all SMPs) →			0.50	0.50	**2,309**	**1,230**

#	NOI Question	Reported Value	
		cf	af
28	Total Water Quality Volume (WQv) Required	2,516	*0.058*
30	Total RRV Provided	2,309	*0.053*
31	Is RRv Provided ≥WQv Required?	No	
32	Minimum RRv	175	*0.004*
32a	Is RRv Provided ≥ Minimum RRv Required?	Yes	
33a	Total WQv Treated	1,230	*0.028*
34	Sum of Volume Reduced & Treated	3,539	*0.081*
34	Sum of Volume Reduced and Treated	3,539	*0.081*
35	Is Sum RRv Provided and WQv Provided ≥WQv Required?	Yes	

Apply Peak Flow Attenuation			
36	Channel Protection	*Cpv*	
37	Overbank	*Qp*	
37	Extreme Flood Control	*Qf*	
	Are Quantity Control requirements met?		

Bioretention 1

Practice Specific Sizing Calculations

Water Quality Volume

Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
5	0.50	0.50	100%	0.95	2,309	1.35	
Enter Impervious Area Reduced by Disconnection of Rooftops Within this Catchment:		0.00	100%	0.95	2,309	<<WQv after adjusting for Disconnected Rooftops	
Reduced by Tree Planting:	0.00	0.00	100%	0.95	2,309	<<WQv after adjusting for Tree Planting	
Portion of the WQv that is not reduced for all practices routed to this practice:					0	*ft^3*	

Required WQ_v = 2,309 ft^3

Bioretention Sizing

Minimum Filter Area				
		Value	Units	Notes
WQv		2,309	*ft^3*	
Depth of Soil Media	*df*	2.5	*ft*	*2.5-4 ft*
Permeability	*k*	0.5	*ft/day*	*Sizing as Filter*
Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**1924**	***ft^2***	
Provided Filter Area		**2000**	***ft^2***	

Provided Water Quality Volume

WQ_v = $V_{SM} + V_M + V_{pond}$

V_{SM} = $Af * df * P_{SM}$ = 1,250 ft^3

V_M = $Af * dm * P_M$ = 200 ft^3

V_{POND} = $(Af * hf * 2) + (2 * S * hf^2 * Pf)$ = 2,089 ft^3

where:

P_{SM} =	Porosity of soil media - 0.20	0.25	
P_M =	Porosity of mulch - 0.40	0.40	
S =	Bioretention Side Slopes	1.00	:1
Pf =	Bioretention Perimeter	177	ft

WQv Provided = 3,539 ft^3

Runoff Reduction Provided

Underdrains	no	
RRv =	2830.8	ft^3

RRv Applied = 2309 ft^3

Pretreatment Sizing

Required Pretreatment % of WQ_v 25%

Pretreatment Volume Required = 577 ft^3

Pretreatment Volume Provided = 3991 ft^3

Bioretention 2

Practice Specific Sizing Calculations

Water Quality Volume

Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
2	0.00	0.00				1.35	
Enter Impervious Area Reduced by Disconnection of Rooftops Within this Catchment:		0.00				<<WQv after adjusting for Disconnected Rooftops	
Reduced by Tree Planting:	0.00	0.00				<<WQv after adjusting for Tree Planting	
Portion of the WQv that is not reduced for all practices routed to this practice:					0	*ft^3*	

Required WQ_v = ft³

Bioretention Sizing

Minimum Filter Area				
		Value	Units	Notes
WQv			*ft^3*	
Depth of Soil Media	*df*	0	*ft*	*2.5-4 ft*
Hydraulic Conductivity	*k*	0	*ft/day*	
Average Height of Ponding	*hf*	0	*ft*	*6 inches max.*
Filter Time	*tf*	0	*days*	
Required Filter Area	***Af***	**#VALUE!**	***ft^2***	
Provided Filter Area		**0**	***ft^2***	

Provided Water Quality Volume

$WQv = V_{SM} + V_M + Vpond$

$V_{SM} = Af * df * P_{SM}$ = 0 ft^3

$V_M = Af * dm * P_M$ = 0 ft^3

$V_{POND} = (Af * hf * 2) + (2 * S * hf^2 * Pf)$ = 0 ft^3

where:

P_{SM} =	Porosity of soil media - 0.20	0.20	
P_M =	Porosity of mulch - 0.40	0.40	
S =	Bioretention Side Slopes	3.00	:1
Pf =	Bioretention Perimeter	107	ft

WQv Provided = 0 ft³

Runoff Reduction Provided

Underdrains	yes	
RRv =	0	ft^3

RRv Applied = 0 ft³

Pretreatment Sizing

Required Pretreatment % of WQ_v: 25%

Pretreatment Volume Required = #VALUE! ft³

Pretreatment Volume Provided = 3189 ft³

Compute Channel Protection Storage Volume (Pond 1)		
Ia for Drainage Area		
Drainage Area	CN	Area (ac)
3	98.00	0.55
4	98.00	0.25
5	86.02	1.02
6	98.00	0.17
Weighted CN	91.85	
Corresponding Ia = (200/CN)-2		0.177
P, Precipitation, 1yr (in)		1.83
Ia/P		0.097
Tc for Drainage Area (hr)		0.10
From Exhibit 4-II, qu (csm/in)		1000
Figure 8.5, T = 24 hr, qo/qi		0.200
Vs/Vr		0.456
Q		1.08
Cpv Required (ac-ft)		**0.023**

Size of Secondary Orifice	8"
Elevation of Secondary Orifice	278.8
CPv Provided (ac-ft)	1.13

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Friday, 12 / 16 / 2022

Pond No. 2 - Attenuation Area

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 493.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	493.00	688	0	0
1.00	494.00	1,162	915	915
2.00	495.00	1,702	1,423	2,338
3.00	496.00	2,307	1,997	4,335
4.00	497.00	2,976	2,634	6,969
4.50	497.50	3,334	1,576	8,545

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	4.00	0.00	0.00
Span (in)	= 12.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 493.00	494.00	0.00	0.00
Length (ft)	= 237.00	0.10	0.00	0.00
Slope (%)	= 2.00	0.10	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

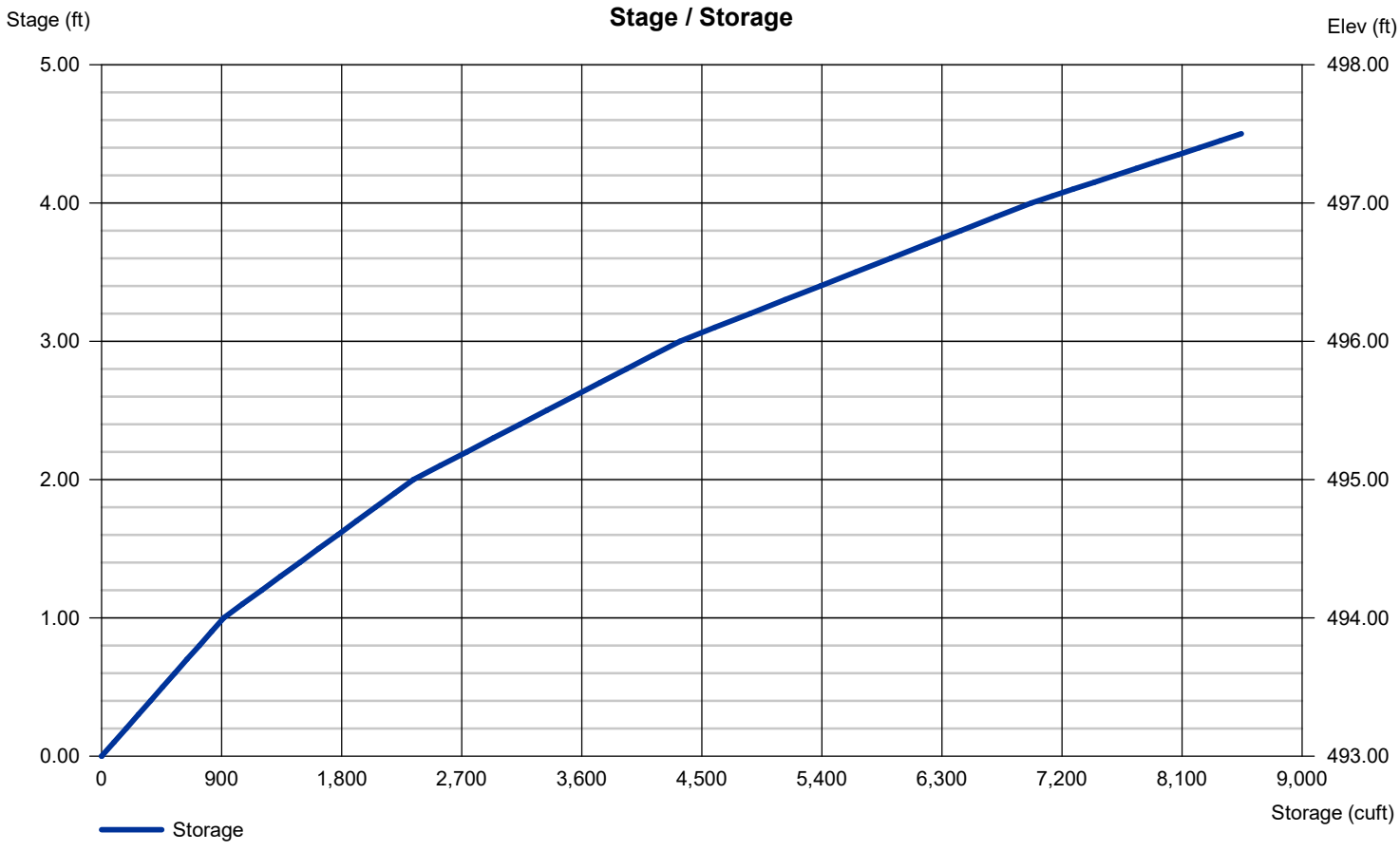
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 8.00	Inactive	0.00	0.00
Crest El. (ft)	= 496.50	496.75	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	Broad	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Friday, 12 / 16 / 2022

Pond No. 3 - Bioretention

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 493.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	493.00	840	0	0
1.00	494.00	840	840	840
2.00	495.00	840	840	1,680
3.00	496.00	840	840	2,520
3.50	496.50	2,100	735	3,255
4.50	497.50	2,400	2,250	5,505

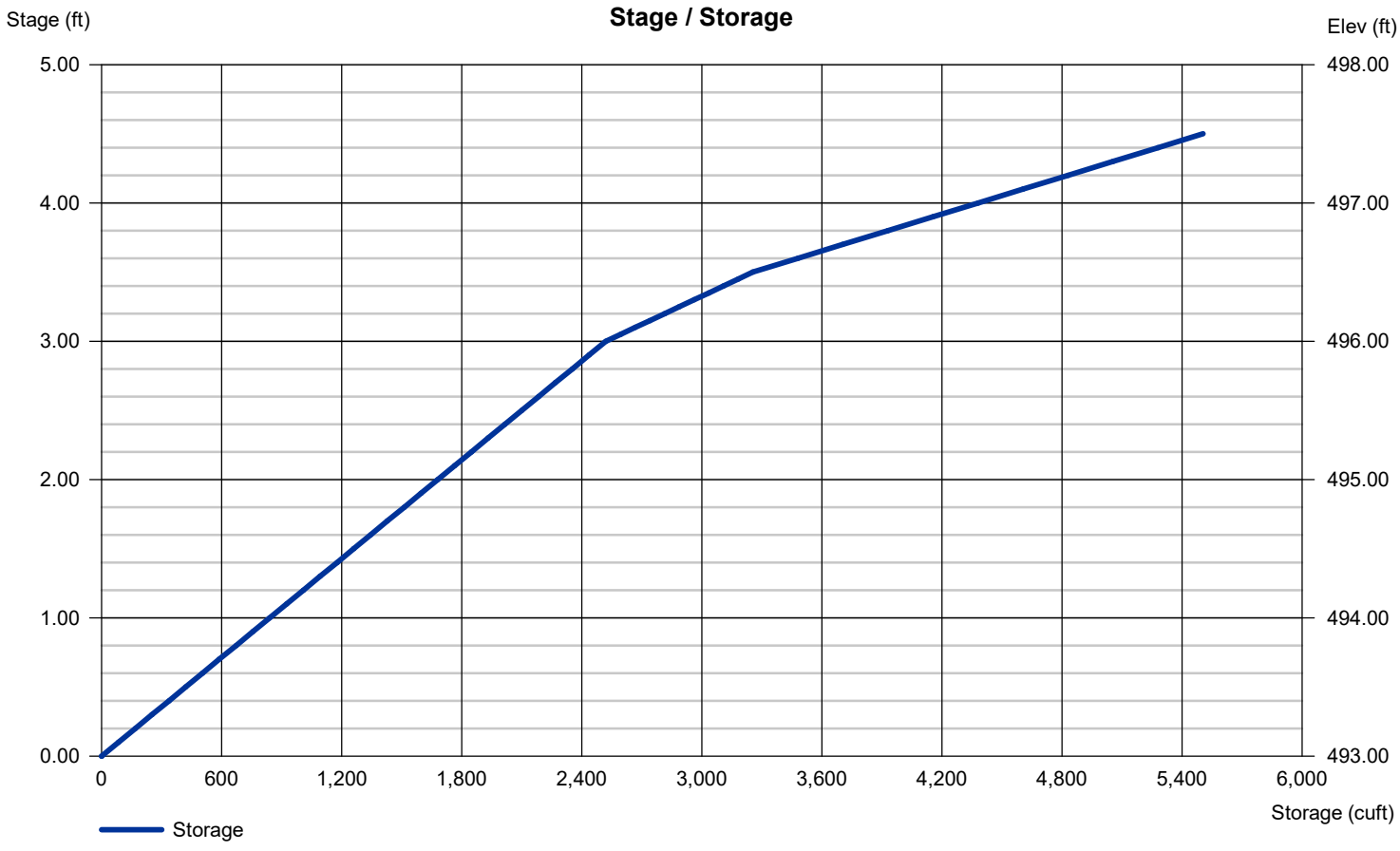
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	Inactive	Inactive	Inactive	Inactive
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	Inactive	5.00	Inactive	Inactive
Crest El. (ft)	= 496.75	496.60	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= Ciplti	Broad	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Contour)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Friday, 12 / 16 / 2022

Pond No. 4 - Pretreatment

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 495.00 ft. Voids = 40.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	495.00	142	0	0
1.00	496.00	346	95	95
2.00	497.00	622	191	286
2.50	497.50	674	130	415

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

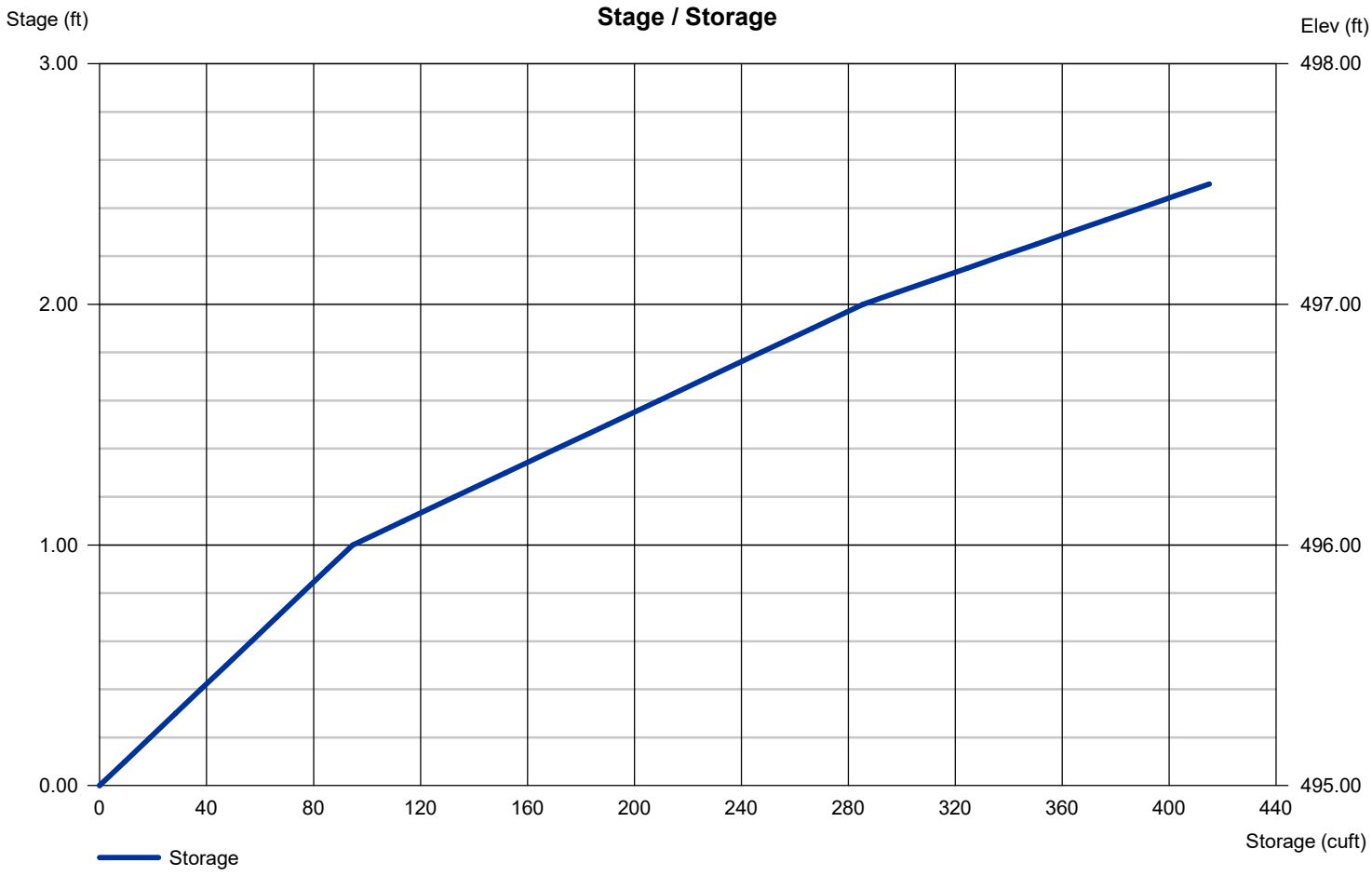
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	Inactive	5.00	0.00	0.00
Crest El. (ft)	= 497.50	496.75	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Ciplti	Ciplti	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



APPENDIX L: NYSDEC SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY (PERMIT NO. GP-0-20-001)

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

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 *Discharges*.** 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 standards*, 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 <u>not</u> 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 <u>not</u> 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 standards*, 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

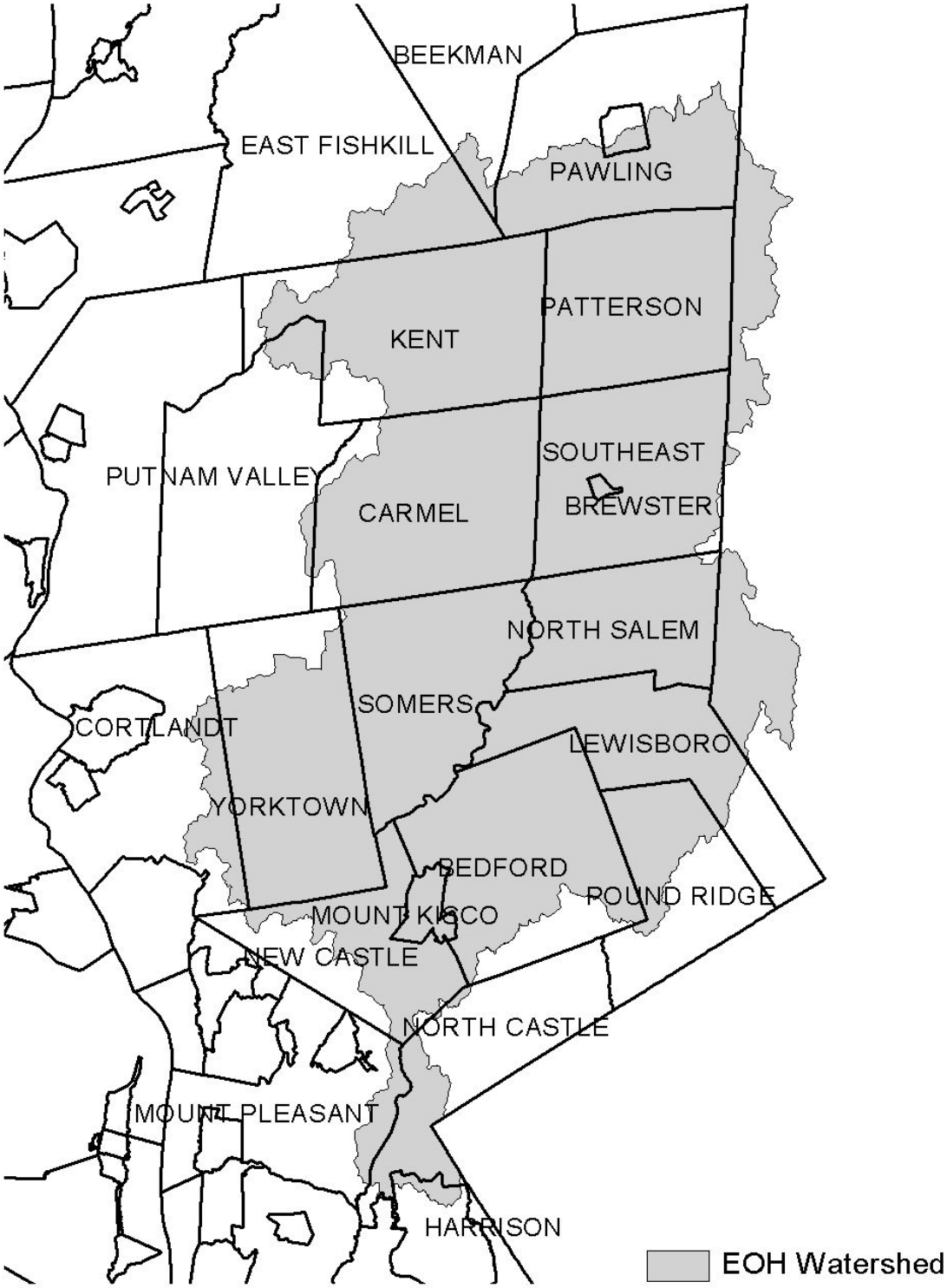


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

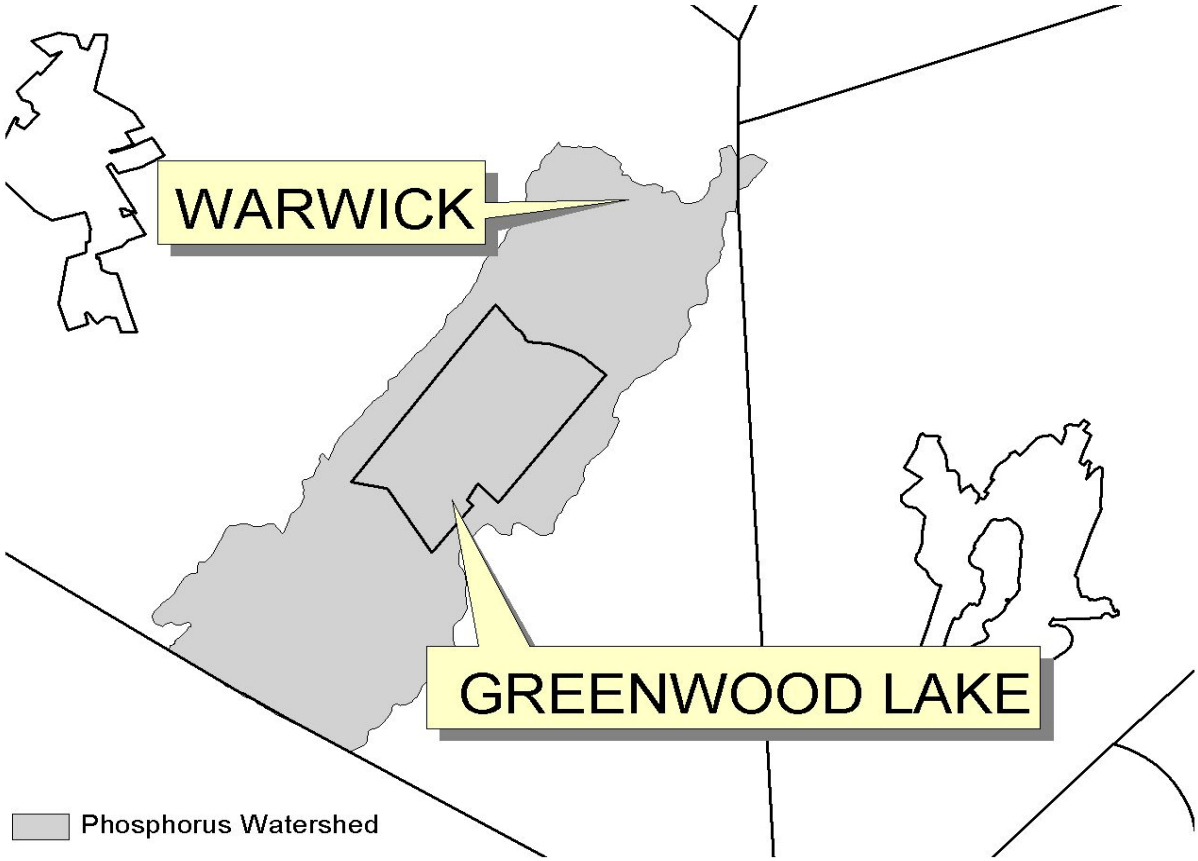


Figure 4 - Oscawana Lake Watershed

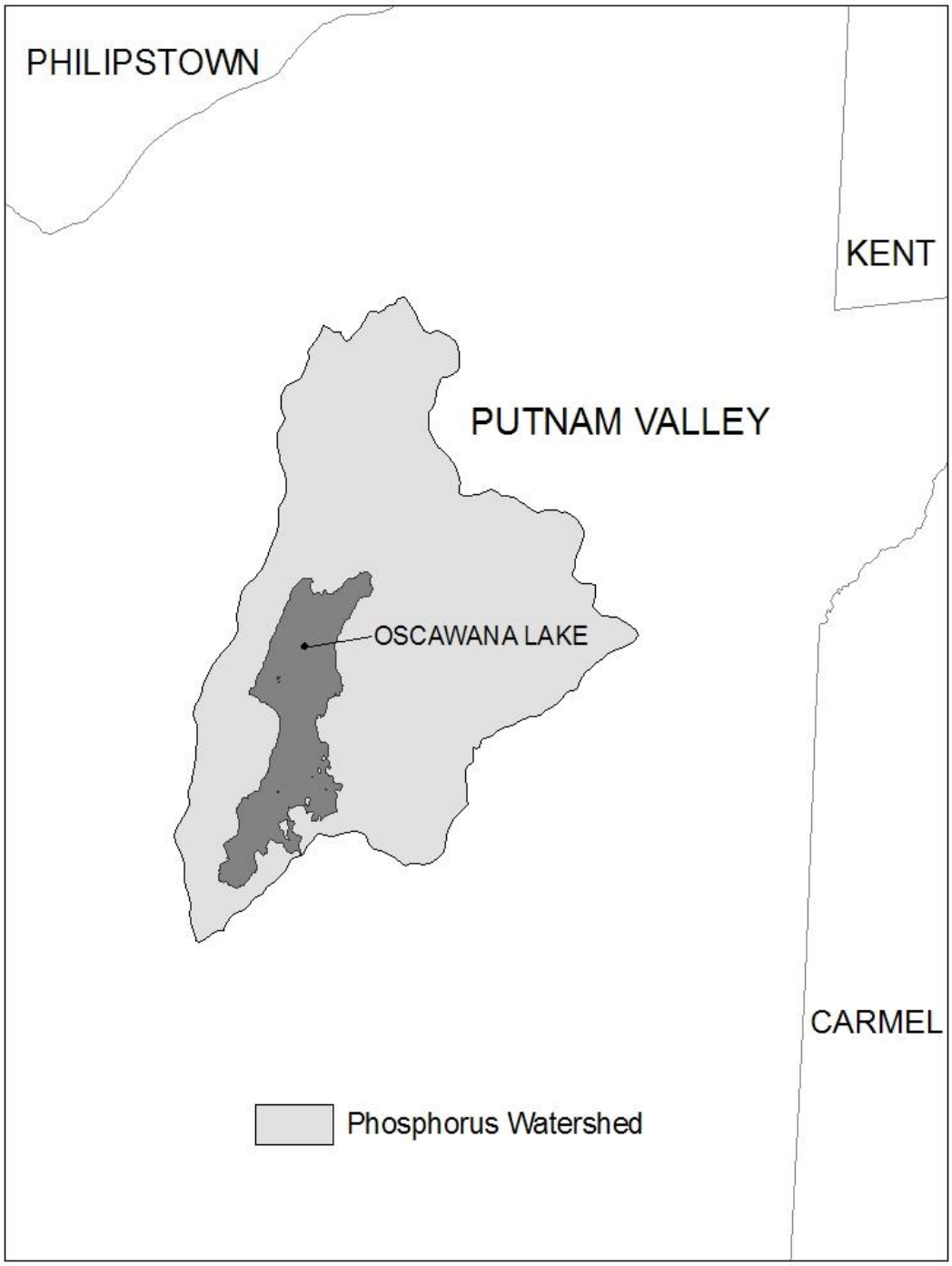
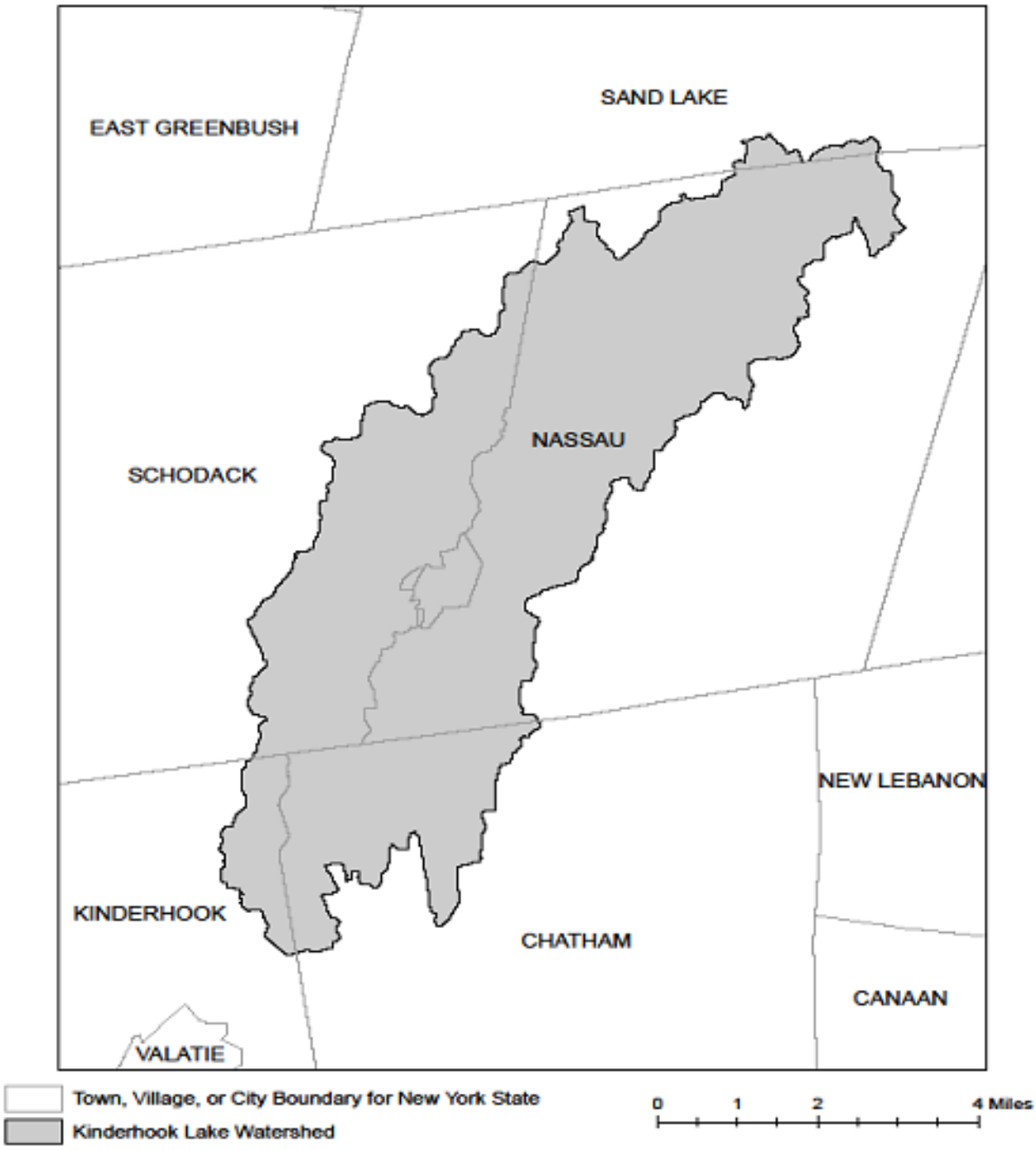


Figure 5 - Kinderhook Lake Watershed



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

303(d) Segments Impaired by Construction Related Pollutant(s)

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 M: CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG SHEETS

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES

Standardized Qualified Inspector Form

Project Name and Location of Project: New Hampton Fire Station Municipality: Waywayanda County: Orange Qualified Inspector: Billy Zaimes Qualified Inspector Title: Civil Engineer I	Date:	Weather:
	Permit #: **NYR10**	
	Entry Time:	Exit Time:

5 Acre Waiver: □ Yes □ No

Name of SPDES Permittee:_____

Phone: _____Fax:_____

Name of Representative on Site: _____

Qualified Inspector's Credentials & Certification

Qualified Inspector (QI) means a person that is knowledgeable in the principles and practices of erosion and sediment control (ESC). A person is considered qualified under the following conditions:

1. A licensed Professional Engineer; licensed Landscape Architect with documented training and education in the principles and practices of ESC;
2. An individual certified in ESC by CPESC, Incorporated or any other agency endorsed by the NYS Department of Environmental Conservation Office of Water Resources;
3. An individual working under the direct supervision of a qualified licensed Professional Engineer or qualified licensed Landscape Architect with documented training and education in the principles and practices of ESC **and has** completed the four (4) hour training program in the principles and practices of erosion and sediment control from either a Soil and Water Conservation District, CPESC or any other agency endorsed by the NYS Department of Environmental Conservation Office of Water Resources. This initial training must be completed no later than May 1, 2010. After receiving the initial training, an individual working under the direct supervision of a qualified licensed Professional Engineer or qualified licensed Landscape Architect must complete four (4) hours of training every three (3) years.
4. Any other individual endorsed by the NYS Department of Environmental Conservation by written documentation.
5. 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.1

Part I. CONSTRUCTION DURATION INSPECTIONS **Page 2 of _____**

a. SITE PLAN/SKETCH OF AREAS DISTURBED AT TIME OF INSPECTION AND AREAS THAT HAVE BEEN STABILIZED (TEMPORARY OR FINAL) SINCE LAST INSPECTION:

b. Other Permit Required Reporting

Maintaining Water Quality - *Attach Color Photographs of the site documenting discharge points and site conditions.*
Describe the condition of runoff at all points of discharge.
Is there an increase in turbidity causing a substantial visible contrast to natural conditions? _____
Is there residue from oil and floating substances, visible oil film, or globules or grease? _____
Is there evidence of silt deposition from project in a stream, wetland, or other water body? _____
If yes, where? _____remedial measure needed? _____
Provide a description of the conditions of all natural water bodies within or immediately adjacent to the project. _____

Area of Disturbance
Total area of disturbance (as shown on sketch plan and not including areas that have temporary or permanent stabilization measures applied) _____
Are all disturbances within the limits of the SWPPP? _____

Weather Conditions
A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
_____
_____

General Housekeeping
Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?_____
Is construction impacting the adjacent property? _____
Is dust adequately controlled?_____
Describe corrective action(s): _____
Date correction needed: _____

c. Runoff Controls *Direct runoff away from exposed soil surfaces and control water that falls onto the site*

Runoff conveyance systems ☐ N A
Are all runoff conveyance systems called for in the SWPPP installed, stabilized and working? _____
If not, what specific areas need detailing?_____
With minimum side slopes 2H:1V or flatter? _____ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring? _____Sediment-laden runoff directed to sediment trapping structure? _____
Describe corrective action(s): _____
Date correction needed: _____

Runoff Control Structures ☐ N A
Have all required runoff control structures (rock outlets and aprons) been installed and constructed per plan and according to the Blue Book?_____ Installed concurrently with pipe installation? _____
Describe corrective action(s): _____
Date correction needed: _____

Temporary Stream or Channel Crossing □ N A
Have construction crossings at concentrated flow areas been culverted?_____
Describe corrective action(s): _____
Date correction needed: _____

Stone Check Dam □ N A
Installed per standards? _____ channel stable (flow is not eroding soil underneath or around the structure). _____does sediment need to be removed? _____
Describe corrective action(s): _____
Date correction needed: _____

Excavation Dewatering □ N A
1. Flowing water □ N A – Upstream berm (sandbags, inflatable dams, etc. with one-foot minimum freeboard) and downstream berms are installed per plan? _____and functioning? (clean water from upstream pool is being pumped to the downstream pool)?
_____
2. Sediment laden water from work area □ N A - Is being discharged to a silt-trapping device? _____
3. Groundwater from excavations □ N A - is being managed properly (sumps and sediment control)? _____
Describe corrective action(s): _____
Date correction needed: _____

d. Soil Stabilization *Basic erosion control is achieved by covering all bare ground areas.*

Topsoil and Spoil Stockpiles □ N A
Stabilized - sediment controls at downhill slope? _____
Describe corrective action(s): _____
Date correction needed: _____

Revegetation/Stabilization □ N A
Has temporary or permanent seeding *and* mulch (as shown on site sketch plan) been applied to areas that have been inactive for 14 days or less (or, inactive for 7 days if over 5 acres disturbed)?_____
Has soil preparation been applied as specified in the SWPPP and in accordance with the Blue Book (Assure that all the necessary soil testing/fertilizer/lime, topsoil, decompaction has been applied)?
_____
Have rolled erosion control products specified for steep slopes or channels been installed? _____
Describe corrective action(s): _____
Date correction needed: _____

e. Sediment Controls

Stabilized Construction Entrance □ N A
Stone is clean and all access areas covered (entrances, construction routes, materials storage areas, equipment parking)?_____ Tracking onto public streets is minimized and cleaned daily? _____
Describe:_____
Date correction needed: _____

Silt Fence □ N A

Installed on contour? not across conveyance channels?_____ At least 10 feet from toe of slope?_____At appropriate spacing intervals based on slope?_____Wrapped ends for continuous support?_____Fabric is tight, without rips or frayed areas?_____Posts are stable?_____ buried 6 inches minimum?_____Any "bulges"?_____
Describe:_____
_____
Date correction needed: _____

Temporary Sediment Trap □ N A

Is outlet structure constructed properly?_____geotextile fabric has been placed beneath rock fill?_____Maintenance – depth of sediment in basin? _____ 50% capacity? _____
Describe:_____
_____
Date correction needed: _____

Temporary Sediment Basin □ N A

Is basin and outlet structure constructed per the approved plan? _____
Are basin side slopes stabilized with seed/mulch? _____
Maintenance – depth of sediment in basin? _____ 50% capacity? _____
Describe:_____
_____
Date correction needed: _____

Drop Inlet Protection □ N A

Type(s) of inlet control? _____
Installed per Blue Book specifications: drainage area (typically 1 acre)? _____
Appropriate for location? _____
Describe:_____
_____
Date correction needed: _____

f. Digital Color Photographs of Deficient BMPs

The *qualified inspector* shall attach paper color copies of the digital photographs to this inspection report of deficient BMPs with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions.

g. Digital Color Photographs of BMPs that have been Corrected

The *qualified inspector* shall attach paper color copies of the digital photographs to this inspection report of corrected BMPs with date stamp, that clearly show the condition of the practice(s) after the corrective actions has been completed.

h. Post-Construction Stormwater Management

Report of any corrective action(s) that must be taken to install, correct, repair, replace or maintain any deficiencies identified with the construction of the post-construction stormwater management practice(s).
Report the current phase of construction of all post-construction stormwater management practice(s) and whether the installation appears to be geometrically consistent with the approved hydraulic design (e.g. the pond, the outlet structure, orifice, pipe sizing and slope is geometrically consistent with the SWPPP):_____

_____
_____
_____

i. Revisions to SWPPP

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 other report, 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 and/or the MS4, they shall promptly submit such facts or information. 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 permit violation (GP-0-10-001 PartVII.G)

_____
_____
_____
_____

j. Inspection Notes and Signature

Inspection Notes:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Standardized Qualified Inspector Form

PART I. j. Signature

GP-0-10-001 Part VII.Q

Articles 175 and 210 of the New York State Penal Law provide for Criminal penalty of a fine and/or imprisonment for falsifying forms and reports required by this permit.

_____ _____

Qualified Inspector (print name) **Date of Inspection**

_____

Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Title: _____ Address: _____

Phone: _____ Email: _____

CPESC#: _____

Stormwater Training Number for *Trained Individuals*: _____
P.E. or L.A. Supervisor Name for *Trained Individuals*:_____

Compliance certification:

Received and reviewed by_____Title:_____

The above signed acknowledges receipt of this inspection report

APPENDIX N: MS4 SWPPP ACCEPTANCE FORM

New York State 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: New Hampton Fire Department
2. Contact Person: brianhc63@frontiernet.net
3. Street Address: 5024 NY-17M
4. City/State/Zip: New Hampton, NY 10958
II. Project Site Information
5. Project/Site Name: New Hampton Fire Station
6. Street Address: 5024 NY-17M
7. City/State/Zip: New Hampton, NY 10958
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:
12. MS4 SPDES Permit Identification Number: NYR20A _____
13. Contact Person:
14. Street Address:
15. City/State/Zip:
16. Telephone Number:

(NYS DEC - MS4 SWPPP Acceptance Form - January 2010)

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

APPENDIX O: NOTICE OF INTENT

0644089821

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR _____
(for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-
RETURN THIS FORM TO THE ADDRESS ABOVE
OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)
New Hampton Fire Department

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

Owner/Operator Contact Person First Name
Brian

Owner/Operator Mailing Address
5024 Route NY17M PO BOX 386

City
New Hampton

State: NY
Zip: 10598-

Phone (Owner/Operator): 914-443-2270
Fax (Owner/Operator): ---

Email (Owner/Operator)
brianhc63@frontiernet.net

FED TX ID
-
(not required for individuals)

Project Site Information

Project/Site Name
New Hampton Fire Department

Street Address (NOT P.O. BOX)
5024 NY-17M

Side of Street
● **North** ○ **South** ○ **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
New Hampton

State NY

Zip 10958-

County Orange

DEC Region

Name of Nearest Cross Street

Distance to Nearest Cross Street (Feet)

Project In Relation to Cross Street
○ **North** ○ **South** ○ **East** ○ **West**

Tax Map Numbers
Section-Block-Parcel

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site. To do this, go to the NYSDEC Stormwater Interactive Map on the DEC website at:

https://gisservices.dec.ny.gov/gis/stormwater/

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located the centroid of your project site, go to the bottom right hand corner of the map for the X, Y coordinates. Enter the coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)
-7
Ex. -73.749

Y Coordinates (Northing)
4
Ex. 42.652

2. What is the nature of this construction project?

○ **New Construction**

○ **Redevelopment with increase in impervious area**

○ **Redevelopment with no increase in impervious area**

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use

- ○ FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION — Number of Lots
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ○ OTHER

***Note**: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	**Total Area To Be Disturbed**	**Existing Impervious Area To Be Disturbed**	**Future Impervious Area Within Disturbed Area**
.	.	.	.

5. Do you plan to disturb more than 5 acres of soil at any one time? ○ **Yes** ○ **No**

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	**B**	**C**	**D**
%	%	%	%

7. Is this a phased project? ○ **Yes** ○ **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date / / - **End Date** / /

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ○ Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001? ○ **Yes** ○ **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001? ○ **Yes** ○ **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ **Yes** ○ **No**
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ○ **No**
If Yes, what is the acreage to be disturbed?

.

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ **Yes** ○ **No**

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ○ **Yes** ○ **No** ○ **Unknown**

16. What is the name of the municipality/entity that owns the separate storm sewer system?

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ **Yes** ○ **No** ○ **Unknown**

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ **Yes** ○ **No**

19. Is this property owned by a state authority, state agency, federal government or local government? ○ **Yes** ○ **No**

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ○ **Yes** ○ **No**

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? ○ **Yes** ○ **No**

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ○ **Yes** ○ **No**
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ○ **Yes** ○ **No**

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ○ **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer

Contact Name (Last, Space, First)

Mailing Address

City

State Zip -

Phone - -

Fax - -

Email

SWPPP Preparer Certification

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.

First Name **MI**

Last Name

Signature

Date / /

25. Has a construction sequence schedule for the planned management practices been prepared? ○ Yes ○ No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ○ Check Dams
- ○ Construction Road Stabilization
- ○ Dust Control
- ○ Earth Dike
- ○ Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ○ Sediment Basin
- ○ Sediment Traps
- ○ Silt Fence
- ○ Stabilized Construction Entrance
- ○ Storm Drain Inlet Protection
- ○ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ○ Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ○ Grassed Waterway
- ○ Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ○ Seeding
- ○ Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ○ Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ○ Riprap Slope Protection
- ○ Rock Outlet Protection
- ○ Streambank Protection

Other

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ○ **Preservation of Undisturbed Areas**
- ○ **Preservation of Buffers**
- ○ **Reduction of Clearing and Grading**
- ○ **Locating Development in Less Sensitive Areas**
- ○ **Roadway Reduction**
- ○ **Sidewalk Reduction**
- ○ **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ○ **Building Footprint Reduction**
- ○ **Parking Reduction**

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

- ○ All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

- ○ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

			.			
			.			**acre-feet**

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing Area (acres)		Total Contributing Impervious Area(acres)
RR Techniques (Area Reduction)			
○ Conservation of Natural Areas (RR-1)	___.___	and/or	___.___
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)	___.___	and/or	___.___
○ Tree Planting/Tree Pit (RR-3)	___.___	and/or	___.___
○ Disconnection of Rooftop Runoff (RR-4)	___.___	and/or	___.___
RR Techniques (Volume Reduction)			
○ Vegetated Swale (RR-5)			___.___
○ Rain Garden (RR-6)			___.___
○ Stormwater Planter (RR-7)			___.___
○ Rain Barrel/Cistern (RR-8)			___.___
○ Porous Pavement (RR-9)			___.___
○ Green Roof (RR-10)			___.___
Standard SMPs with RRv Capacity			
○ Infiltration Trench (I-1)			___.___
○ Infiltration Basin (I-2)			___.___
○ Dry Well (I-3)			___.___
○ Underground Infiltration System (I-4)			___.___
○ Bioretention (F-5)			___.___
○ Dry Swale (O-1)			___.___
Standard SMPs			
○ Micropool Extended Detention (P-1)			___.___
○ Wet Pond (P-2)			___.___
○ Wet Extended Detention (P-3)			___.___
○ Multiple Pond System (P-4)			___.___
○ Pocket Pond (P-5)			___.___
○ Surface Sand Filter (F-1)			___.___
○ Underground Sand Filter (F-2)			___.___
○ Perimeter Sand Filter (F-3)			___.___
○ Organic Filter (F-4)			___.___
○ Shallow Wetland (W-1)			___.___
○ Extended Detention Wetland (W-2)			___.___
○ Pond/Wetland System (W-3)			___.___
○ Pocket Wetland (W-4)			___.___
○ Wet Swale (O-2)			___.___

Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area(acres)
○ **Hydrodynamic**	
○ **Wet Vault**	
○ **Media Filter**	
○ **Other**	

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name

Manufacturer

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

. **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

○ **Yes** ○ **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

. **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

○ **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). [ ][ ][ ].[ ][ ][ ]

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ○ **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

[ ][ ][ ].[ ][ ][ ] **acre-feet**

CPv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

36a. The need to provide channel protection has been waived because:

○ Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

37a. The need to meet the Qp and Qf criteria has been waived because:

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ○ **Yes** ○ **No**

If Yes, Identify the entity responsible for the long term Operation and Maintenance

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP [N][Y][R][ ][ ][ ][ ][ ][ ]
- ○ Other [ ]
- ○ None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ○ **Yes** ○ **No**
If Yes, Indicate Size of Impact. [ ][ ][ ][ ][ ].[ ]

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ○ **Yes** ○ **No**
(If No, skip question 43)

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ○ **Yes** ○ **No**

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. [N][Y][R][ ][ ][ ][ ][ ][ ]

Owner/Operator Certification

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.

Print First Name **MI**

Print Last Name

Owner/Operator Signature

Date / /

APPENDIX P: NOTICE OF TERMINATION

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505
(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ___ ___ ___ ___ ___ ___

I. Owner or Operator Information

1. Owner/Operator Name: New Hampton Fire Department

2. Street Address: 5024 NY-17M

3. City/State/Zip: New Hampton, NY 10958

4. Contact Person:	4a.Telephone: (914)-443-2270

4b. Contact Person E-Mail: brianhc63@frontiernet.net

II. Project Site Information

5. Project/Site Name: New Hampton Fire Station

6. Street Address: 5024 NY-17M

7. City/Zip: New Hampton, NY 10958

8. County: Orange

III. Reason for Termination

9a. □ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ___ ___ ___ ___ ___ ___
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? □ yes □ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? □ yes □ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? □ yes □ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

□ For post-construction stormwater management practices that are privately owned, a mechanism is 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.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? □ yes □ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:	
Title/Position:	
Signature:	Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

APPENDIX Q: MAINTENANCE AND CONSTRUCTION INSPECTION FORMS

Stormwater/Wetland Pond Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Pre-Construction/Materials and Equipment		
Pre-construction meeting		
Pipe and appurtenances on-site prior to construction and dimensions checked		
1. Material (including protective coating, if specified)		
2. Diameter		
3. Dimensions of metal riser or pre-cast concrete outlet structure		
4. Required dimensions between water control structures (orifices, weirs, etc.) are in accordance with approved plans		
5. Barrel stub for prefabricated pipe structures at proper angle for design barrel slope		
6. Number and dimensions of prefabricated anti-seep collars		
7. Watertight connectors and gaskets		
8. Outlet drain valve		
Project benchmark near pond site		
Equipment for temporary de-watering		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
2. Subgrade Preparation		
Area beneath embankment stripped of all vegetation, topsoil, and organic matter		
3. Pipe Spillway Installation		
Method of installation detailed on plans		
A. Bed preparation		
Installation trench excavated with specified side slopes		
Stable, uniform, dry subgrade of relatively impervious material (If subgrade is wet, contractor shall have defined steps before proceeding with installation)		
Invert at proper elevation and grade		
B. Pipe placement		
Metal / plastic pipe		
1. Watertight connectors and gaskets properly installed		
2. Anti-seep collars properly spaced and having watertight connections to pipe		
3. Backfill placed and tamped by hand under “haunches” of pipe		
4. Remaining backfill placed in max. 8 inch lifts using small power tamping equipment until 2 feet cover over pipe is reached		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
3. Pipe Spillway Installation		
Concrete pipe		
1. Pipe set on blocks or concrete slab for pouring of low cradle		
2. Pipe installed with rubber gasket joints with no spalling in gasket interface area		
3. Excavation for lower half of anti-seep collar(s) with reinforcing steel set		
4. Entire area where anti-seep collar(s) will come in contact with pipe coated with mastic or other approved waterproof sealant		
5. Low cradle and bottom half of anti-seep collar installed as monolithic pour and of an approved mix		
6. Upper half of anti-seep collar(s) formed with reinforcing steel set		
7. Concrete for collar of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
8. Forms stripped and collar inspected for honeycomb prior to backfilling. Parge if necessary.		
C. Backfilling		
Fill placed in maximum 8 inch lifts		
Backfill taken minimum 2 feet above top of anti-seep collar elevation before traversing with heavy equipment		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Riser / Outlet Structure Installation		
Riser located within embankment		
A. Metal riser		
Riser base excavated or formed on stable subgrade to design dimensions		
Set on blocks to design elevations and plumbed		
Reinforcing bars placed at right angles and projecting into sides of riser		
Concrete poured so as to fill inside of riser to invert of barrel		
B. Pre-cast concrete structure		
Dry and stable subgrade		
Riser base set to design elevation		
If more than one section, no spalling in gasket interface area; gasket or approved caulking material placed securely		
Watertight and structurally sound collar or gasket joint where structure connects to pipe spillway		
C. Poured concrete structure		
Footing excavated or formed on stable subgrade, to design dimensions with reinforcing steel set		
Structure formed to design dimensions, with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
Forms stripped & inspected for “honeycomb” prior to backfilling; parge if necessary		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
5. Embankment Construction		
Fill material		
Compaction		
Embankment		
1. Fill placed in specified lifts and compacted with appropriate equipment		
2. Constructed to design cross-section, side slopes and top width		
3. Constructed to design elevation plus allowance for settlement		
6. Impounded Area Construction		
Excavated / graded to design contours and side slopes		
Inlet pipes have adequate outfall protection		
Forebay(s)		
Pond benches		
7. Earth Emergency Spillway Construction		
Spillway located in cut or structurally stabilized with riprap, gabions, concrete, etc.		
Excavated to proper cross-section, side slopes and bottom width		
Entrance channel, crest, and exit channel constructed to design grades and elevations		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
8. Outlet Protection		
A. End section		
Securely in place and properly backfilled		
B. Endwall		
Footing excavated or formed on stable subgrade, to design dimensions and reinforcing steel set, if specified		
Endwall formed to design dimensions with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing, if necessary)		
Forms stripped and structure inspected for "honeycomb" prior to backfilling; parge if necessary		
C. Riprap apron / channel		
Apron / channel excavated to design cross-section with proper transition to existing ground		
Filter fabric in place		
Stone sized as per plan and uniformly place at the thickness specified		
9. Vegetative Stabilization		
Approved seed mixture or sod		
Proper surface preparation and required soil amendments		
Excelsior mat or other stabilization, as per plan		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
10. Miscellaneous		
Drain for ponds having a permanent pool		
Trash rack / anti-vortex device secured to outlet structure		
Trash protection for low flow pipes, orifices, etc.		
Fencing (when required)		
Access road		
Set aside for clean-out maintenance		
11. Stormwater Wetlands		
Adequate water balance		
Variety of depth zones present		
Approved pondscaping plan in place Reinforcement budget for additional plantings		
Plants and materials ordered 6 months prior to construction		
Construction planned to allow for adequate planting and establishment of plant community (April-June planting window)		
Wetland buffer area preserved to maximum extent possible		

Comments:

Actions to be Taken:

Infiltration Trench Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Soil permeability tested		
Groundwater / bedrock sufficient at depth		
2. Excavation		
Size and location		
Side slopes stable		
Excavation does not compact subsoils		
3. Filter Fabric Placement		
Fabric specifications		
Placed on bottom, sides, and top		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
4. Aggregate Material		
Size as specified		
Clean / washed material		
Placed properly		
5. Observation Well		
Pipe size		
Removable cap / footplate		
Initial depth =_____feet		
6. Final Inspection		
Pretreatment facility in place		
Contributing watershed stabilized prior to flow diversion		
Outlet		

Comments:

Actions to be Taken:

Infiltration Basin Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Runoff diverted		
Soil permeability tested		
Groundwater / bedrock depth		
2. Excavation		
Size and location		
Side slopes stable		
Excavation does not compact subsoils		
3. Embankment		
Barrel		
Anti-seep collar or Filter diaphragm		
Fill material		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Final Excavation		
Drainage area stabilized		
Sediment removed from facility		
Basin floor tilled		
Facility stabilized		
5. Final Inspection		
Pretreatment facility in place		
Inlets / outlets		
Contributing watershed stabilized before flow is routed to the factility		

Comments:

Actions to be Taken:

Sand/Organic Filter System Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Pre-construction		
Pre-construction meeting		
Runoff diverted		
Facility area cleared		
Facility location staked out		
2. Excavation		
Size and location		
Side slopes stable		
Foundation cleared of debris		
If designed as exfilter, excavation does not compact subsoils		
Foundation area compacted		
3. Structural Components		
Dimensions and materials		
Forms adequately sized		
Concrete meets standards		
Prefabricated joints sealed		
Underdrains (size, materials)		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
4. Completed Facility Components		
24 hour water filled test		
Contributing area stabilized		
Filter material per specification		
Underdrains installed to grade		
Flow diversion structure properly installed		
Pretreatment devices properly installed		
Level overflow weirs, multiple orifices, distribution slots		
5. Final Inspection		
Dimensions		
Surface completely level		
Structural components		
Proper outlet		
Ensure that site is properly stabilized before flow is directed to the structure.		

Comments:

Actions to be Taken:

Bioretention Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility area cleared		
If designed as exfilter, soil testing for permeability		
Facility location staked out		
2. Excavation		
Size and location		
Lateral slopes completely level		
If designed as exfilter, ensure that excavation does not compact susoils.		
Longitudinal slopes within design range		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
3. Structural Components		
Stone diaphragm installed correctly		
Outlets installed correctly		
Underdrain		
Pretreatment devices installed		
Soil bed composition and texture		
4. Vegetation		
Complies with planting specs		
Topsoil adequate in composition and placement		
Adequate erosion control measures in place		
5. Final Inspection		
Dimensions		
Proper stone diaphragm		
Proper outlet		
Soil/ filter bed permeability testing		
Effective stand of vegetation and stabilization		
Construction generated sediments removed		
Contributing watershed stabilized before flow is diverted to the practice		

Comments:

Actions to be Taken:

Open Channel System Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility location staked out		
2. Excavation		
Size and location		
Side slope stable		
Soil permeability		
Groundwater / bedrock		
Lateral slopes completely level		
Longitudinal slopes within design range		
Excavation does not compact subsoils		
3. Check dams		
Dimensions		
Spacing		
Materials		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
4. Structural Components		
Underdrain installed correctly		
Inflow installed correctly		
Pretreatment devices installed		
5. Vegetation		
Complies with planting specifications		
Topsoil adequate in composition and placement		
Adequate erosion control measures in place		
6. Final inspection		
Dimensions		
Check dams		
Proper outlet		
Effective stand of vegetation and stabilization		
Contributing watershed stabilized before flow is routed to the factility		

Comments:

Actions to be Taken:

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Appendix G

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APPENDIX R: MAINTENANCE/CONSTRUCTION INSPECTION REPORT

Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist

Project _____
Location: _____
Site Status: _____

Date: _____
Time: _____

Inspector: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
1. Embankment and emergency spillway (Annual, After Major Storms)		
1. Vegetation and ground cover adequate		
2. Embankment erosion		
3. Animal burrows		
4. Unauthorized planting		
5. Cracking, bulging, or sliding of dam		
a. Upstream face		
b. Downstream face		
c. At or beyond toe		
downstream		
upstream		
d. Emergency spillway		
6.Pond, toe & chimney drains clear and functioning		
7.Seeps/leaks on downstream face		
8.Slope protection or riprap failure		
9. Vertical/horizontal alignment of top of dam “As-Built”		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
10. Emergency spillway clear of obstructions and debris		
11. Other (specify)		
2. Riser and principal spillway (Annual)		
Type: Reinforced concrete _____ Corrugated pipe _____ Masonry _____ 1. Low flow orifice obstructed		
2. Low flow trash rack. a. Debris removal necessary		
b. Corrosion control		
3. Weir trash rack maintenance a. Debris removal necessary		
b. corrosion control		
4. Excessive sediment accumulation insider riser		
5. Concrete/masonry condition riser and barrels a. cracks or displacement		
b. Minor spalling (<1")		
c. Major spalling (rebars exposed)		
d. Joint failures		
e. Water tightness		
6. Metal pipe condition		
7. Control valve a. Operational/exercised		
b. Chained and locked		
8. Pond drain valve a. Operational/exercised		
b. Chained and locked		
9. Outfall channels functioning		
10. Other (specify)		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
3. Permanent Pool (Wet Ponds) (monthly)		
1. Undesirable vegetative growth		
2. Floating or floatable debris removal required		
3. Visible pollution		
4. Shoreline problem		
5. Other (specify)		
4. Sediment Forebays		
1.Sedimentation noted		
2. Sediment cleanout when depth < 50% design depth		
5. Dry Pond Areas		
1. Vegetation adequate		
2. Undesirable vegetative growth		
3. Undesirable woody vegetation		
4. Low flow channels clear of obstructions		
5. Standing water or wet spots		
6. Sediment and / or trash accumulation		
7. Other (specify)		
6. Condition of Outfalls (Annual , After Major Storms)		
1. Riprap failures		
2. Slope erosion		
3. Storm drain pipes		
4.Endwalls / Headwalls		
5. Other (specify)		
7. Other (Monthly)		
1. Encroachment on pond, wetland or easement area		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
2. Complaints from residents		
3.Aesthetics a. Grass growing required		
b. Graffiti removal needed		
c. Other (specify)		
4. Conditions of maintenance access routes.		
5. Signs of hydrocarbon build-up		
6. Any public hazards (specify)		
8. Wetland Vegetation (Annual)		
1. Vegetation healthy and growing Wetland maintaining 50% surface area coverage of wetland plants after the second growing season. (If unsatisfactory, reinforcement plantings needed)		
2. Dominant wetland plants: Survival of desired wetland plant species Distribution according to landscaping plan?		
3. Evidence of invasive species		
4. Maintenance of adequate water depths for desired wetland plant species		
5. Harvesting of emergent plantings needed		
6. Have sediment accumulations reduced pool volume significantly or are plants “choked” with sediment		
7. Eutrophication level of the wetland.		
8. Other (specify)		

Comments:

Actions to be Taken:

Bioretention Operation, Maintenance and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Bioretention and contributing areas clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Plant height not less than design water depth		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
Grass height not greater than 6 inches		
No evidence of erosion		
3. Check Dams/Energy Dissipaters/Sumps (Annual, After Major Storms)		
No evidence of sediment buildup		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Sumps should not be more than 50% full of sediment		
No evidence of erosion at downstream toe of drop structure		
4. Dewatering (Monthly)		
Dewaters between storms		
No evidence of standing water		
5. Sediment Deposition (Annual)		
Swale clean of sediments		
Sediments should not be > 20% of swale design depth		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
7. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Comments:

Actions to be Taken:

APPENDIX S: SITE DEVELOPMENT PLANS