Stormwater Pollution Prevention Plan

For

Caroga Lake Arts Collective, Inc.

At

1989 State Rte. 10

Caroga Lake, NY

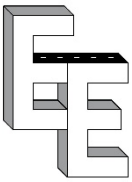
Prepared For:

Rick Ruby

P.O. Box 1048

Caroga Lake, NY 12032

Prepared By:



Empire Engineering, PLLC

1900 Duanesburg Road

Duanesburg, NY 12056

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Project/Site Information

The subject project is the commercial development of a parcel which currently has one existing building predominantly surrounded by trees with some brush. The subject site is located at the Northeast intersection of State Route 10 and County Route 112 in the Town of Caroga Lake, NY. The total parcel area is approximately 10.9 Ac with an initial project site of approximately 1.6 Ac. The property is identified by Tax Map numbers 68.17-2-1 & 68.17-2-2.

Anticipated Construction Start Date: September 2021

Anticipated Completion Date: November 2022 (Phase 1)

Contact Information

Owner/Operator:

Caroga Lake Arts Collective, Inc.
P.O. Box 1048
Caroga Lake, NY 12032
Contact: Rick Ruby (518) 844-2679

Engineer:

Empire Engineering, PLLC
1900 Duanesburg Road
Duanesburg, NY 12056
Contact: Christopher Longo, PE (518) 280-1371

Contractor:

Owner/Operator

Drainage Patterns & Topography

Runoff from the project site drains westerly through surface drainage to federally designated wetlands located along the western property boundary and an existing roadside swale along County Rte.112. Soils on the site are fine sandy loam as identified by the USGS soils classification and on-site test pits. The topography of the site can be generally described as sloped with a high point near the northeastern corner of the site. The site currently exists as a parcel with a vacant carriage house style structure with a small clearing and a paved drive. The site is predominately forested with some brush.

Potential Sources of Pollution

The primary sources of pollution from an active construction site are erosion, siltation, debris transport, and accidental spills or leakage of oils from equipment.

Implementation Schedule

The construction sequence outlined below should be followed or amended as necessary to minimize the susceptibility of the site to erosion and sediment transport during construction.

1. Establish perimeter protections and stabilized construction entrances within work area.
2. Construct temporary sediment traps in the location of permanent stormwater controls.

3. Once all erosion and sediment control measures are constructed and functional, disturbance may begin within that subject area.
4. Rough grade the project area, establish any swales and/or temporary check dams to divert runoff to storage areas.
5. Stabilize cut/fill slopes and stabilize internal roadway areas with subbase course as necessary.
6. Complete demolition, backfill and stabilize with suitable fill soils.
7. If the project is occurring in multiple phases repeat steps 1-4 in any new drainage area.
8. Upon completion of grading, final seeding and full vegetative cover shall be established.
9. Prior to finalizing connection to the storm sewer system, all catch basins and drainage lines shall be cleaned of all silt and sediment.
10. Once final stabilization is achieved remove all temporary erosion and sediment control measures including silt fence, storm structure protections and temporary sediment basin components.

Notice of Intent

The owner shall submit a Notice of Intent (NOI) to the New York State Department of Environmental Conservation and obtain authorization of construction activities before commencing work. A copy of this NOI is included within Appendix A.

Historic Preservation

The Office of Parks, Recreation & Historic Preservation database was reviewed for potential Historic or Cultural significant data at or near the project site. The database revealed that the site is not within an "archeologically sensitive area" and no further review is warranted. The database results are included within Appendix B.

Endangered Species

The NYSDEC Environmental Resource Mapper was reviewed for potential records of state or federally listed threatened or endangered species. The site is not within an area designated as a potential natural community for endangered species and no further review is warranted. The database results are included within Appendix C.

Maps & Figures

Additional Maps indicating the site are included within Appendix D such as:

General Location Map

USGS Soils Map

Best Management Practices

Objectives

The primary objective of the Stormwater Pollution Prevention Plan is protecting adjacent areas from erosion and sediment transport and ensuring the quality of discharge water is acceptable. This is done by minimizing disturbed areas, protecting natural features and soil, phasing construction, stabilizing soils, and protecting storm inlets.

Phasing

Construction of the subject site is intended to be conducted in multiple phases. Within the phases, attention should be paid to the required sequencing to ensure minimal sediment transport.

Good Housekeeping

The owner/operator shall implement the following for the duration of construction:

- All stored materials shall be in a neat, orderly manner and under cover.
- Products shall be kept in original containers with a legible original manufacturer's label.
- Substances shall not be mixed with one another unless recommended by the manufacturer.
- Original labels and material safety data sheets (MSDS) shall be procured and used for each material.
- Whenever possible, the entire product shall be used up before disposing of a container.
- If surplus product must be disposed of, manufacturers or local/state/federal recommended methods for proper disposal shall be followed.
- Manufacturer's recommendations for proper use and disposal shall be followed.
- The job site superintendent shall be responsible for daily inspections to ensure proper use and disposal of materials.

Spill Prevention Controls

The following spill prevention controls shall be implemented for the duration of construction:

- The job site superintendent shall be the spill prevention and cleanup coordinator. He/she shall designate the individuals who will receive spill prevention and cleanup training. These individuals shall each become responsible for a phase of prevention and cleanup. The names of these personnel shall be posted in the material storage area and in the office trailer onsite.
- Manufacturer's recommended methods for spill cleanup shall be clearly posted and site personnel shall be trained regarding these procedures as well as the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup shall be kept in the material storage area onsite in spill control and containment kit (containing, for example, absorbent such as kitty litter or sawdust, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.).
- All spills shall be cleaned up immediately after discovery.
- The spill area shall be kept well ventilated, and personnel shall wear appropriate protective clothing to prevent injury from contact with the hazardous substances.
- Spills of toxic or hazardous materials shall be reported to the appropriate federal, state, and/or local government agency, regardless of the size of the spill. Spills of amounts that exceed Reportable Quantities of certain substances specifically mentioned in federal regulations (40 CFR 302 list and oil) shall be immediately reported to the EPA National Response Center, telephone 1-800-424-8802.

Temporary Erosion & Sediment Controls

Temporary stormwater control measures shall be installed prior to active construction within each tributary area. Such temporary controls include but are not limited to:

- Silt fencing.
- Stabilized construction entrances.
- Once no longer active, disturbed areas shall be mulched to prevent sediment transport. Areas that are at or near finish grade shall be finally stabilized.

- Inlet protection devises shall be installed around all storm basins within active disturbance areas or areas not yet finally stabilized.
- Dust shall be controlled with water on site and adjacent roadways.
- Designate a protected area to stockpile topsoil or other material stripped during excavation. Stockpiles of soil materials shall be stabilized with geotextile or seeding and be surrounded by silt fencing or berming.
- No area shall be left unstabilized more than 14 days after completion of construction activities within that area.
- Erosion control devices should be cleaned and repaired as necessary.
- Other temporary erosion and sediment control devices including catch basin sediment traps as necessary.
- Litter and construction debris shall be collected daily by the contractor, and properly disposed of. Any refuse storage onsite shall be only in designated areas where runoff will not directly discharge through.

Winter Shutdown

The site may be considered within 'winter shutdown' if the following conditions are met. During winter shutdown, the site inspection frequency may be reduced to once per 30-days. All disturbed areas shall be temporarily stabilized, and sediment basins shall be cleaned of silt and debris. During shutdown, access road shall be kept clear of snow and snow shall not be stockpiled in a location which inhibits runoff to sediment basin areas.

Final Stabilization

Prior to the site being operational the following measures shall be implemented:

- All disturbed areas other than structures or pavement shall receive final seeding and vegetative growth.
- Inlets and structures shall be cleaned of silt for proper sump.
- Stormwater practices shall be finally shaped in accordance with the sizing details and shall be vegetated accordingly.
- Maintenance of ponds, swales and vegetative areas shall continue into operation of the site.

Ownership & Maintenance

The owner/operator shall adhere to the Ownership and Maintenance Manual included within Appendix E.

Inspections & Recordkeeping

Inspection Requirements

The owner/operation shall perform routine inspections and either correct or direct the contractor to correct deficiencies as they arise in a timely manner. The contractor shall familiarize themselves with this document and its required components prior to commencing work. Each day that the contractor is performing work on-site there shall be a 'trained individual' who is responsible for implementation of the SWPPP components.

The owner shall have a qualified inspector conduct a site inspection at least once per seven calendar days while disturbance activities are on-going. The inspector shall at a minimum, inspect erosion & 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.

The qualified inspector shall prepare an inspection report in accordance with the General Permit and distribute to the owner and appropriate contractor within 24 hours.

Certifications

The SWPPP preparer, owner and contractor shall sign the applicable certification forms included within Appendix F.

Documents Required On-Site

The owner or operator shall maintain a copy of the current General Permit, NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form, inspection reports, 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.

Drainage Analysis

Existing Runoff Condition

The existing site drainage characteristics including the existing structure and gravel were analyzed to determine baseline peak flow rates for the project. Stormwater runoff from the site was analyzed utilizing software applying the TR-55 hydrologic analysis method. The channel protection volume was determined utilizing the peak discharge from the TR-55 method and the Hydrologic Analysis tolls in Appendix B of the New York State Stormwater Management Design Manual. A summary of these peak flow rates is included below as well as the full drainage map & analysis within Appendix G.

Channel Protection Volume (acre-feet)	
	1-Year (Cpv)
Analysis Point A	0.00

Peak Flow Rates (CFS)		
	10-Year Storm (Qp)	100-Year Storm (Qf)
Analysis Point A	0.01	0.44

Proposed Development Condition

The proposed site drainage characteristics were analyzed in relation to the existing baseline to determine required storage volumes for the site. Changes in impervious cover, sub-catchment area and times of concentration were all considered in conducting the analysis. A summary of these peak flow rates is included below as well as the full drainage map & analysis within Appendix H.

Channel Protection Volume (acre-feet)		
	EX 1-Year Storm (Cpv)	PR 1-Year Storm (Cpv)
Analysis Point A	0.00	0.00

Peak Flow Rates (CFS)				
	EX 10-Year Storm (Qp)	PR 10-Year Storm (Qp)	EX 100-Year Storm (Qf)	PR 100-Year Storm (Qf)
Analysis Point A	0.01	0.01	0.44	0.42

Water Quality & Quantity Controls

Selecting Post-Construction Practices

Post-construction stormwater management practices were carefully selected considering the matrices provided by the NYS DEC Stormwater Management Design Manual. Screening factors included 1. Land Use 2. Physical Feasibility 3. Watershed/Regional Factors 4. Stormwater Management Capability 5. Community & Environmental Factors.

Part of the consideration in selecting stormwater practices was the runoff reduction capacity of the practice. In accordance with the NYSDEC General Permit and Stormwater Design Manual each site must meet the minimum runoff reduction requirement through a combination of Green Infrastructure Practices and SMP's with runoff reduction capacity.

Water Quality

Practices selected for treatment of water quality include:

Dry Swale

All water quality practices have been designed to treat the calculated water quality volume as well as safely convey the 10-year storm event. Worksheets showing sizing criteria and calculations are included within Appendix H.

Water Quantity

Stormwater controls for water quantity include:

Dry Swale

Water quantity practices have been designed to attenuate flows from both the Overbank Flood (10-year) and the Extreme Flood (100-year) storm events. The proposed stormwater detention areas do not meet the requirements for consideration as a "dam" as prescribed by NYSDEC. It can be assumed that in the unlikely event for a failure or misoperation losses would be limited to the owner's property. Pond storage elevation and sizing information is included in the post development drainage calculations within Appendix G.

Conclusion

The subject project includes expansion of the existing structure and construction of driveways, parking, and recreational facilities. This activity is listed within Appendix B Table 2 of the NYSDEC General Permit 0-20-001 for stormwater discharges from construction activities.

Any future modifications made to the plan to accommodate additional structures is not expected to require any impoundments, catch basins or drainage off-site, including the use of culverts on public highways.

Appendix A

Notice of Intent

NOI for coverage under Stormwater General Permit for Construction Activity

version 1.30

(Submission #: HP9-9AR6-81QPM, version 1)

Details

Originally Started By	CHRISTOPHER LONGO
Submission ID	HP9-9AR6-81QPM
Submission Reason	New
Status	Draft

Form Input

Owner/Operator Information

Owner/Operator Name (Company/Private Owner/Municipality/Agency/Institution, etc.)
Caroga Arts Collective, Inc.

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
Ruby

Owner/Operator Contact Person First Name
Rick

Owner/Operator Mailing Address
P.O. Box 1048

City
Caroga Lake

State
NY

Zip
12032

Phone
518-844-2679

Email
rruby@randq.com

Federal Tax ID
NONE PROVIDED

Project Location

Project/Site Name
Caroga Lake Arts Collective

Street Address (Not P.O. Box)
1989 State Hwy 10

Side of Street
East

City/Town/Village (THAT ISSUES BUILDING PERMIT)
Town of Caroga

State
NY

Zip
12032

DEC Region
5

County
FULTON

Name of Nearest Cross Street
County Route 112

Distance to Nearest Cross Street (Feet)
285

Project In Relation to Cross Street
North

Tax Map Numbers Section-Block-Parcel
68.17-2-1, 68.17-2-2

Tax Map Numbers
NONE PROVIDED

1. Coordinates

Provide the Geographic Coordinates for the project site. The two methods are:
- Navigate to the project location on the map (below) and click to place a marker and obtain the XY coordinates.
- The "Find Me" button will provide the lat/long for the person filling out this form. Then pan the map to the correct location and click the map to place a marker and obtain the XY coordinates.

Navigate to your location and click on the map to get the X,Y coordinates
43.1467857,-74.48674009999999

Project Details

2. What is the nature of this project?
Redevelopment with increase in impervious area

3. Select the predominant land use for both pre and post development conditions.

Pre-Development Existing Landuse
Forest

Post-Development Future Land Use
Commercial

3a. If Single Family Subdivision was selected in question 3, enter the number of subdivision lots.
NONE PROVIDED

4. In accordance with the larger common plan of development or sale, enter the total project site acreage, the acreage to be disturbed and the future impervious area (acreage)within the disturbed area.

*** ROUND TO THE NEAREST TENTH OF AN ACRE. ***

Total Site Area (acres)
10.67

Total Area to be Disturbed (acres)
1.4

Existing Impervious Area to be Disturbed (acres)
.13

Future Impervious Area Within Disturbed Area (acres)
.27

5. Do you plan to disturb more than 5 acres of soil at any one time?
No

---

6. Indicate the percentage (%) of each Hydrologic Soil Group(HSG) at the site.

A (%)
0

B (%)
5

C (%)
95

D (%)
0

7. Is this a phased project?
Yes

8. Enter the planned start and end dates of the disturbance activities.

Start Date
9/1/2021

End Date
10/31/2022

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.
Wetland

9a. Type of waterbody identified in question 9?
Wetland/State Jurisdiction On Site (Answer 9b)

Other Waterbody Type Off Site Description
NONE PROVIDED

9b. If "wetland" was selected in 9A, how was the wetland identified?
NONE PROVIDED

10. Has the surface waterbody(ies in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001?
No

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001?
No

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters?
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?
No

If Yes, what is the acreage to be disturbed?
NONE PROVIDED

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area?
No

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?
No

16. What is the name of the municipality/entity that owns the separate storm sewer system?
N/A

17. Does any runoff from the site enter a sewer classified as a Combined Sewer?
No

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?
No

19. Is this property owned by a state authority, state agency, federal government or local government?
No

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.)
No

Required SWPPP Components

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

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

If you answered No in question 22, skip question 23 and the Post-construction Criteria and Post-construction SMP Identification sections.

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

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:
Professional Engineer (P.E.)

SWPPP Preparer
Empire Engineering, PLLC

Contact Name (Last, Space, First)
Longo, Christopher, PE

Mailing Address
1900 Duanesburg Rd.

City
Duanesburg

State
NY

Zip
12056

Phone
518-280-1371

Email
CLongo@EmpireEng.net

Download SWPPP Preparer Certification Form
Please take the following steps to prepare and upload your preparer certification form:

1) Click on the link below to download a blank certification form
2) The certified SWPPP preparer should sign this form

3) Scan the signed form
4) Upload the scanned document
Download SWPPP Preparer Certification Form

Please upload the SWPPP Preparer Certification
NONE PROVIDED
Comment
NONE PROVIDED

Erosion & Sediment Control Criteria

25. Has a construction sequence schedule for the planned management practices been prepared?
Yes

26. Select all of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural
Construction Road Stabilization
Dust Control
Silt Fence
Stabilized Construction Entrance
Temporary Swale

Biotechnical
None

Vegetative Measures
Seeding
Temporary Swale
Mulching

Permanent Structural
Rock Outlet Protection

Other
NONE PROVIDED

Post-Construction Criteria

*** 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 Area
Preservation of Buffers
Reduction of Clearing and Grading
Locating Development in Less Sensitive Areas
Roadway Reduction
Building Footprint 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).

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout). (Acre-feet)
.02

29. Post-construction SMP Identification
Use the Post-construction SMP Identification section to identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity that were used to reduce the Total WQv Required (#28).

Identify the SMPs to be used by providing 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 the Post-Construction SMP Identification section 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.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29. (acre-feet)
.005

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28)?
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)] (acre-feet)
.004

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?
Yes

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; therefore, NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. SMPs
Use the Post-construction SMP Identification section to identify the Standard SMPs and, if applicable, the Alternative SMPs to be used to treat the remaining total WQv (=Total WQv Required in #28 - Total RRv Provided in #30).

Also, provide the total impervious area that contributes runoff to each practice selected.

NOTE: Use the Post-construction SMP Identification section 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. (acre-feet)
.015

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 - 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).
.02

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

If Yes, go to question 36.

If No, sizing criteria has not been met; therefore, 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)
NONE PROVIDED

CPv Provided (acre-feet)
NONE PROVIDED

36a. The need to provide channel protection has been waived because:
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.

Overbank Flood Control Criteria (Qp)

Pre-Development (CFS)
.01

Post-Development (CFS)
.01

Total Extreme Flood Control Criteria (Qf)

Pre-Development (CFS)
.44

Post-Development (CFS)
.42

37a. The need to meet the Qp and Qf criteria has been waived because:
NONE PROVIDED

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?
Yes

If Yes, Identify the entity responsible for the long term Operation and Maintenance
Private Owner

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.
Redevelopment of an existing paved site and existing building.

Post-Construction SMP Identification

Runoff Reduction (RR) Techniques, Standard Stormwater Management Practices (SMPs) and Alternative SMPs
Identify the Post-construction SMPs to be used by providing 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.

RR Techniques (Area Reduction)

Round to the nearest tenth

Total Contributing Acres for Conservation of Natural Area (RR-1)
NONE PROVIDED

Total Contributing Impervious Acres for Conservation of Natural Area (RR-1)
NONE PROVIDED

Total Contributing Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2)
NONE PROVIDED

Total Contributing Impervious Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2)
NONE PROVIDED

Total Contributing Acres for Tree Planting/Tree Pit (RR-3)
NONE PROVIDED

Total Contributing Impervious Acres for Tree Planting/Tree Pit (RR-3)
NONE PROVIDED

Total Contributing Acres for Disconnection of Rooftop Runoff (RR-4)
NONE PROVIDED

RR Techniques (Volume Reduction)

Total Contributing Impervious Acres for Disconnection of Rooftop Runoff (RR-4)
NONE PROVIDED

Total Contributing Impervious Acres for Vegetated Swale (RR-5)
NONE PROVIDED

Total Contributing Impervious Acres for Rain Garden (RR-6)
NONE PROVIDED

Total Contributing Impervious Acres for Stormwater Planter (RR-7)
NONE PROVIDED

Total Contributing Impervious Acres for Rain Barrel/Cistern (RR-8)
NONE PROVIDED

Total Contributing Impervious Acres for Porous Pavement (RR-9)
NONE PROVIDED

Total Contributing Impervious Acres for Green Roof (RR-10)
NONE PROVIDED

Standard SMPs with RRv Capacity

Total Contributing Impervious Acres for Infiltration Trench (I-1)
NONE PROVIDED

Total Contributing Impervious Acres for Infiltration Basin (I-2)
NONE PROVIDED

Total Contributing Impervious Acres for Dry Well (I-3)
NONE PROVIDED

Total Contributing Impervious Acres for Underground Infiltration System (I-4)
NONE PROVIDED

Total Contributing Impervious Acres for Bioretention (F-5)
NONE PROVIDED

Total Contributing Impervious Acres for Dry Swale (O-1)
.27

Standard SMPs

Total Contributing Impervious Acres for Micropool Extended Detention (P-1)
NONE PROVIDED

Total Contributing Impervious Acres for Wet Pond (P-2)
NONE PROVIDED

Total Contributing Impervious Acres for Wet Extended Detention (P-3)
NONE PROVIDED

Total Contributing Impervious Acres for Multiple Pond System (P-4)
NONE PROVIDED

Total Contributing Impervious Acres for Pocket Pond (P-5)
NONE PROVIDED

Total Contributing Impervious Acres for Surface Sand Filter (F-1)
NONE PROVIDED

Total Contributing Impervious Acres for Underground Sand Filter (F-2)
NONE PROVIDED

Total Contributing Impervious Acres for Perimeter Sand Filter (F-3)
NONE PROVIDED

Total Contributing Impervious Acres for Organic Filter (F-4)
NONE PROVIDED

Total Contributing Impervious Acres for Shallow Wetland (W-1)
NONE PROVIDED

Total Contributing Impervious Acres for Extended Detention Wetland (W-2)
NONE PROVIDED

Total Contributing Impervious Acres for Pond/Wetland System (W-3)
NONE PROVIDED

Total Contributing Impervious Acres for Pocket Wetland (W-4)
NONE PROVIDED

Total Contributing Impervious Acres for Wet Swale (O-2)
NONE PROVIDED

Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Total Contributing Impervious Area for Hydrodynamic
NONE PROVIDED

Total Contributing Impervious Area for Wet Vault
NONE PROVIDED

Total Contributing Impervious Area for Media Filter
NONE PROVIDED

"Other" Alternative SMP?
NONE PROVIDED

Total Contributing Impervious Area for "Other"
NONE PROVIDED

Provide the name and manufaturer of the alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

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.

Manufacturer of Alternative SMP
NONE PROVIDED

Name of Alternative SMP
NONE PROVIDED

Other Permits

40. Identify other DEC permits, existing and new, that are required for this project/facility.
None

If SPDES Multi-Sector GP, then give permit ID
NONE PROVIDED

If Other, then identify
NONE PROVIDED

41. Does this project require a US Army Corps of Engineers Wetland Permit?
Yes

If "Yes," then indicate Size of Impact, in acres, to the nearest tenth
.1

42. 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.
NONE PROVIDED

MS4 SWPPP Acceptance

43. Is this project subject to the requirements of a regulated, traditional land use control MS4?
No

If No, skip question 44

44. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI?
NONE PROVIDED

MS4 SWPPP Acceptance Form Download
Download form from the link below. Complete, sign, and upload.
MS4 SWPPP Acceptance Form

MS4 Acceptance Form Upload
NONE PROVIDED
Comment
NONE PROVIDED

Owner/Operator Certification

Owner/Operator Certification Form Download
Download the certification form by clicking the link below. Complete, sign, scan, and upload the form.

Owner/Operator Certification Form (PDF, 45KB)

Upload Owner/Operator Certification Form

NONE PROVIDED

Comment

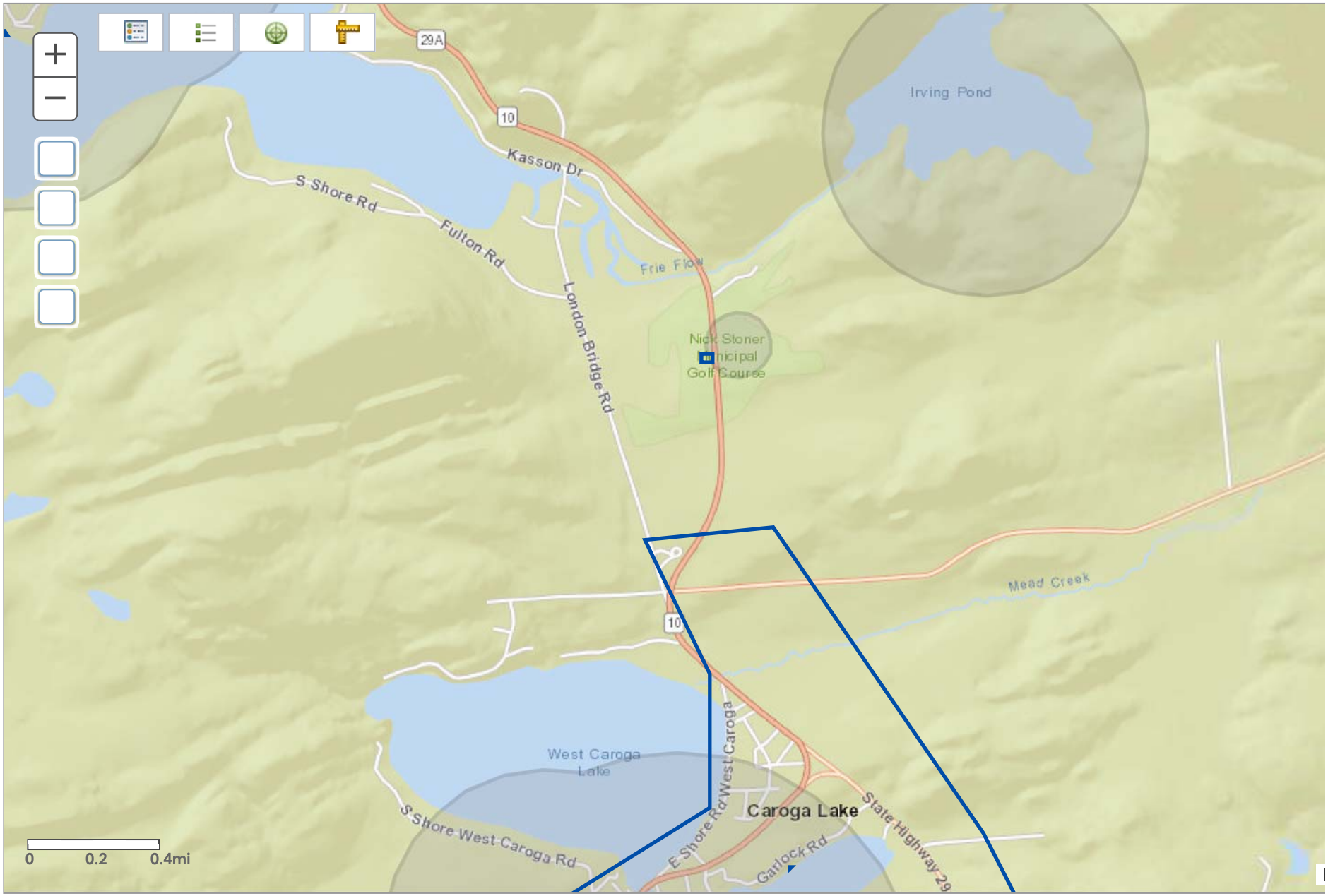
NONE PROVIDED

Appendix B

OPRHP Correspondence

CRIS NYS Cultural Resource Information System

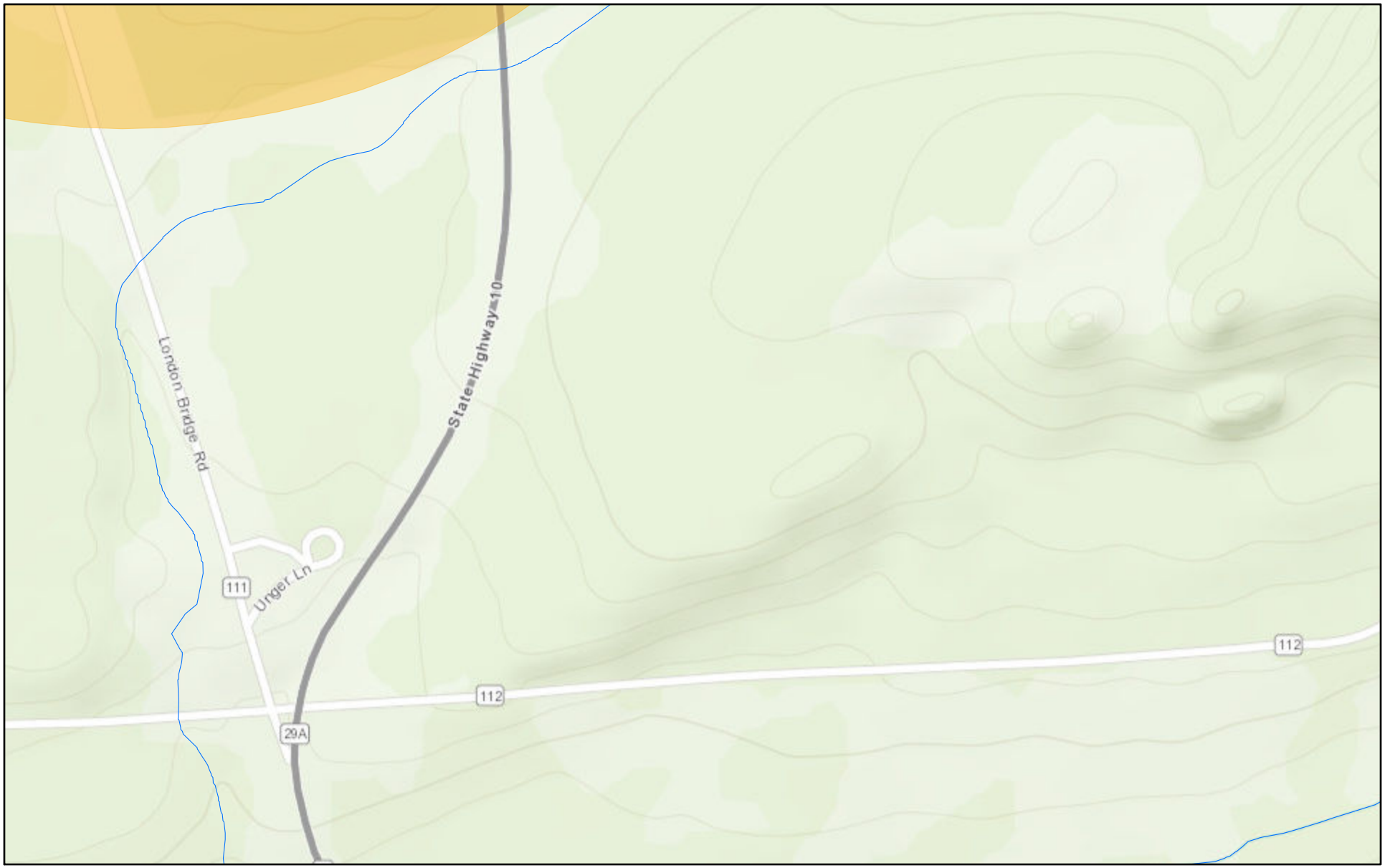
HOME SUBMIT SEARCH COMMUNICATE



Appendix C

T&E Correspondence

Environmental Resource Mapper



June 7, 2021

1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

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

NYS Department of Environmental Conservation
Not a legal document

Appendix D

Maps & Figures

Map Scale: 1:1,980 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 Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Fulton County, New York
Survey Area Data: Version 20, Jun 11, 2020

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

Date(s) aerial images were photographed: May 8, 2019—Aug 2, 2019

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1170C	Henniker fine sandy loam, 8 to 15 percent slopes	12.1	86.9%
1171B	Metacomet fine sandy loam, 3 to 8 percent slopes	1.1	7.6%
1920E	Monadnock fine sandy loam, 15 to 35 percent slopes, very bouldery	0.8	5.4%
Totals for Area of Interest		**14.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Fulton County, New York

1170C—Henniker fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: bqnp
Elevation: 1,000 to 2,820 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 37 to 43 degrees F
Frost-free period: 90 to 130 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Henniker and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Henniker

Setting

Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Friable loamy till underlain by firm sandy lodgment till derived from igneous and metamorphic rock

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
Ap - 2 to 8 inches: fine sandy loam
Bw1 - 8 to 20 inches: gravelly fine sandy loam
Bw2 - 20 to 31 inches: gravelly fine sandy loam
Cd1 - 31 to 52 inches: gravelly loamy fine sand
Cd2 - 52 to 72 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 28 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Becket
Percent of map unit: 8 percent
Hydric soil rating: No

Metacomet
Percent of map unit: 5 percent
Hydric soil rating: No

Skerry
Percent of map unit: 3 percent
Hydric soil rating: No

Monadnock
Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed, stony
Percent of map unit: 1 percent
Hydric soil rating: No

Pillsbury
Percent of map unit: 1 percent
Hydric soil rating: No

1171B—Metacomet fine sandy loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: bqnm
Elevation: 1,000 to 2,820 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 37 to 43 degrees F
Frost-free period: 90 to 130 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Metacomet and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Metacomet

Setting
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Head slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Friable loamy till underlain by firm sandy lodgment till derived from igneous and metamorphic rock

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
Ap - 2 to 8 inches: fine sandy loam
Bw - 8 to 20 inches: fine sandy loam
BC - 20 to 27 inches: fine sandy loam
C - 27 to 31 inches: cobbly loamy sand
Cd - 31 to 45 inches: gravelly loamy sand
C' - 45 to 72 inches: cobbly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 20 to 38 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Pillsbury

Percent of map unit: 8 percent
Landform: Ground moraines
Hydric soil rating: No

Skerry

Percent of map unit: 5 percent
Hydric soil rating: No

Henniker

Percent of map unit: 3 percent
Hydric soil rating: No

Adirondack

Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 2 percent
Hydric soil rating: No

1920E—Monadnock fine sandy loam, 15 to 35 percent slopes, very bouldery

Map Unit Setting

National map unit symbol: bqnv
Elevation: 1,000 to 2,820 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 37 to 43 degrees F
Frost-free period: 90 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Monadnock, very bouldery, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Monadnock, Very Bouldery

Setting

Landform: Moraines, valley sides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: A loamy mantle underlain by acid sandy and gravelly till derived mainly from crystalline rock

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 2 inches: fine sandy loam
E - 2 to 7 inches: sandy loam
Bs - 7 to 14 inches: fine sandy loam
BC - 14 to 27 inches: gravelly fine sandy loam
2C1 - 27 to 41 inches: very gravelly loamy sand
2C2 - 41 to 72 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Adams

Percent of map unit: 9 percent
Hydric soil rating: No

Becket

Percent of map unit: 5 percent
Hydric soil rating: No

Colton

Percent of map unit: 5 percent
Hydric soil rating: No

Skerry

Percent of map unit: 1 percent
Hydric soil rating: No

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New York
Location	
Longitude	74.486 degrees West
Latitude	43.146 degrees North
Elevation	0 feet
Date/Time	Sun, 06 Jun 2021 21:38:34 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.81	1.01	**1yr**	0.70	0.93	1.16	1.44	1.77	2.19	2.50	**1yr**	1.94	2.41	2.84	3.45	4.02	**1yr**
2yr	0.32	0.49	0.60	0.80	1.00	1.24	**2yr**	0.86	1.10	1.42	1.73	2.09	2.52	2.86	**2yr**	2.23	2.75	3.22	3.89	4.46	**2yr**
5yr	0.37	0.58	0.72	0.97	1.24	1.55	**5yr**	1.07	1.37	1.77	2.15	2.57	3.06	3.49	**5yr**	2.71	3.35	3.89	4.59	5.26	**5yr**
10yr	0.42	0.65	0.83	1.12	1.46	1.84	**10yr**	1.26	1.61	2.10	2.53	3.01	3.54	4.05	**10yr**	3.13	3.90	4.50	5.21	5.97	**10yr**
25yr	0.49	0.78	0.99	1.37	1.82	2.29	**25yr**	1.57	1.99	2.62	3.15	3.71	4.30	4.95	**25yr**	3.81	4.76	5.45	6.16	7.04	**25yr**
50yr	0.56	0.89	1.14	1.60	2.15	2.72	**50yr**	1.86	2.34	3.11	3.71	4.34	4.98	5.76	**50yr**	4.41	5.54	6.30	6.99	7.98	**50yr**
100yr	0.63	1.02	1.31	1.86	2.54	3.22	**100yr**	2.19	2.76	3.68	4.38	5.07	5.78	6.71	**100yr**	5.11	6.46	7.29	7.94	9.06	**100yr**
200yr	0.72	1.18	1.52	2.18	3.01	3.82	**200yr**	2.59	3.25	4.36	5.15	5.93	6.70	7.82	**200yr**	5.93	7.52	8.44	9.02	10.28	**200yr**
500yr	0.86	1.42	1.85	2.68	3.76	4.78	**500yr**	3.24	4.04	5.45	6.39	7.30	8.16	9.58	**500yr**	7.22	9.21	10.24	10.68	12.15	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.22	0.35	0.42	0.57	0.70	0.87	**1yr**	0.60	0.85	0.97	1.22	1.58	2.01	2.32	**1yr**	1.78	2.24	2.67	3.22	3.75	**1yr**
2yr	0.30	0.46	0.56	0.76	0.94	1.09	**2yr**	0.81	1.07	1.21	1.58	1.97	2.47	2.78	**2yr**	2.19	2.68	3.16	3.80	4.38	**2yr**
5yr	0.34	0.52	0.65	0.89	1.14	1.29	**5yr**	0.98	1.26	1.46	1.86	2.31	2.90	3.27	**5yr**	2.57	3.14	3.67	4.38	4.99	**5yr**
10yr	0.38	0.58	0.72	1.01	1.30	1.45	**10yr**	1.12	1.42	1.67	2.09	2.59	3.29	3.69	**10yr**	2.92	3.55	4.12	4.86	5.50	**10yr**
25yr	0.44	0.66	0.82	1.18	1.55	1.70	**25yr**	1.34	1.67	1.96	2.40	3.01	3.89	4.31	**25yr**	3.45	4.14	4.78	5.56	6.25	**25yr**
50yr	0.48	0.73	0.91	1.31	1.76	1.92	**50yr**	1.52	1.88	2.23	2.69	3.37	4.40	4.84	**50yr**	3.90	4.65	5.34	6.15	6.88	**50yr**
100yr	0.54	0.81	1.01	1.47	2.01	2.17	**100yr**	1.73	2.12	2.53	3.01	3.77	5.02	5.43	**100yr**	4.44	5.23	6.00	6.81	7.58	**100yr**
200yr	0.60	0.90	1.14	1.65	2.30	2.45	**200yr**	1.98	2.40	2.87	3.38	4.23	5.70	6.10	**200yr**	5.05	5.87	6.69	7.56	8.34	**200yr**
500yr	0.69	1.03	1.33	1.93	2.75	2.89	**500yr**	2.37	2.82	3.40	3.95	4.90	6.78	7.09	**500yr**	6.00	6.82	7.74	8.64	9.45	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.44	0.53	0.72	0.88	1.02	**1yr**	0.76	1.00	1.16	1.51	1.89	2.34	2.68	**1yr**	2.07	2.58	3.03	3.63	4.29	**1yr**
2yr	0.32	0.50	0.62	0.83	1.03	1.16	**2yr**	0.89	1.13	1.31	1.67	2.09	2.58	2.94	**2yr**	2.28	2.83	3.32	3.98	4.57	**2yr**
5yr	0.40	0.62	0.76	1.05	1.33	1.48	**5yr**	1.15	1.45	1.67	2.12	2.60	3.20	3.68	**5yr**	2.84	3.54	4.11	4.83	5.51	**5yr**
10yr	0.48	0.74	0.91	1.28	1.65	1.79	**10yr**	1.42	1.75	2.03	2.53	3.10	3.80	4.39	**10yr**	3.37	4.22	4.86	5.58	6.36	**10yr**
25yr	0.62	0.94	1.17	1.67	2.20	2.30	**25yr**	1.90	2.25	2.66	3.15	3.91	4.74	5.52	**25yr**	4.19	5.31	6.05	6.80	7.68	**25yr**
50yr	0.74	1.13	1.41	2.02	2.72	2.78	**50yr**	2.35	2.72	3.26	3.75	4.66	5.58	6.59	**50yr**	4.94	6.33	7.14	7.89	8.86	**50yr**
100yr	0.90	1.36	1.70	2.46	3.37	3.37	**100yr**	2.91	3.30	3.98	4.47	5.56	6.61	7.88	**100yr**	5.85	7.58	8.47	9.16	10.24	**100yr**
200yr	1.09	1.64	2.07	3.00	4.19	4.09	**200yr**	3.61	4.00	4.88	5.34	6.64	7.80	9.42	**200yr**	6.91	9.06	10.04	10.62	11.84	**200yr**
500yr	1.41	2.10	2.70	3.92	5.57	5.28	**500yr**	4.81	5.16	6.36	6.75	8.40	9.74	11.94	**500yr**	8.62	11.48	12.60	12.94	14.34	**500yr**

Powered by ACIS Northeast Regional Climate Center

Appendix E

O&M Manual

Operation & Maintenance Manual

For

Caroga Arts Collective, Inc.

Stormwater Management Facilities

At

1989 State Highway 10

Caroga, NY

Site Information

The subject project is the commercial development of a parcel which currently has one existing building predominantly surrounded by trees with some brush. The subject site is located at the Northeast intersection of State Route 10 and County Route 112 in the Town of Caroga Lake, NY. The total parcel area is approximately 10.9 Ac with an initial project site of approximately 1.6 Ac. The property is identified by Tax Map numbers 68.17-2-1 & 68.17-2-2.

Engineer of Record

Empire Engineering, PLLC
1900 Duanesburg Road
Duanesburg, NY 12056
Contact: Christopher Longo, PE
Phone: (518) 858-4117

Construction Phase

Submittals

The shop drawing design plans for all structures shall be reviewed by a NYS Licensed Professional Engineer. Specification sheets for all pipe materials and particle analyses for all aggregate to be used on site shall also be approved by the Engineer. Shop drawing and/or submittal approvals will be distributed to the owner and the contractor. No unit shall be constructed without having the Engineer's approval.

Inspections

The Engineer shall inspect and document the installation of any structure, pipe, controlled fill and stormwater management feature. Inspections shall include documentation of the subsurface conditions and/or the soil profile including material thickness. It is the owner's responsibility to contact the engineer to witness construction. Failure to do so may result in the facility not being certified. Additional lab or field geotechnical tests may be specified by the inspecting Engineer to verify conformance with the plans. Such test would be at the owner's expense.

Certifications

The inspecting Engineer shall issue a daily work report to the owner for each occurrence that construction is witnessed. The Engineer shall issue a letter of approval certifying stormwater components which they have witnessed and found to be in conformance with the plans, shop drawings,

and any supplemental documents. If any modifications are made to the plans or stormwater facilities the Engineer shall document such in their certification.

Operation & Maintenance

Recordkeeping

The owner/operation shall keep and maintain all Plans, SWPPP documents, inspection reports, and certifications generated during design and construction. These plans and reports shall be readily accessible for use by any interested party.

Inspections

The owner should check the condition of all devices after each rainfall event for the first 30 days. Issues should be identified such as blockages or obstructions within the inlet or outlet. The owner should also inspect for accumulating sediment and conditions of slopes and embankments.

A comprehensive inspection should be completed at the end of construction in accordance with the enclosed inspection form. During operation, the owner should continue to routinely inspect all stormwater devices weekly during the rainy season. Each devise should be thoroughly inspection annually. A frequency of cleaning should be determined based on the inspection findings.

Maintenance

The owner shall maintain all stormwater devices in perpetuity. Routine maintenance should be scheduled at least annually and should address any issues identified during inspection. The enclosed maintenance checklists should be utilized for each device.

Emergency Action Plan

In the event of an emergency condition resulting from extreme weather or a structural failure, the owner shall be contacted immediately. The local Town officials and emergency response authorities should be contacted if there is immediate danger. If the failure does not pose an immediate threat to the health or welfare of the subject adjacent properties, the engineer of record should be contacted to determine potential remedies.

Construction Inspection Checklists

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:

Maintenance Inspection Checklists

Open Channel Operation, Maintenance, and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Contributing areas clean of debris		
2. Check Dams or Energy Dissipators (Annual, After Major Storms)		
No evidence of flow going around structures		
No evidence of erosion at downstream toe		
Soil permeability		
Groundwater / bedrock		
3. Vegetation (Monthly)		
Mowing done when needed		
Minimum mowing depth not exceeded		
No evidence of erosion		
Fertilized per specification		
4. Dewatering (Monthly)		
Dewaters between storms		

MAINTENANCE ITEM	SATISFACTORY/ UNSATISFACTORY	COMMENTS
5. Sediment deposition (Annual)		
Clean of sediment		
6. Outlet/Overflow Spillway (Annual)		
Good condition, no need for repairs		
No evidence of erosion		

Comments:

Actions to be Taken:

Appendix F

Certifications

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Owner/Operator Certification Form

SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name: Caroga Arts Collective, Inc.

eNOI Submission Number: HP9-9AR6-81QPM

eNOI Submitted by: ☐ **Owner/Operator** ☑ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Richard		Ruby
Owner/Operator First Name	M.I.	Last Name

_____

Signature

_____

Date

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges From Construction Activity (GP-0-20-001)

Project Site Information

Project/Site Name

Caroga Lake Arts Collective, Inc.

Owner/Operator Information

Owner/Operator (Company Name/Private Owner/Municipality Name)

Caroga Lake Arts Collective, Inc.

Certification Statement – SWPPP Preparer

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

Christopher	D	Longo
First name	MI	Last Name

Signature

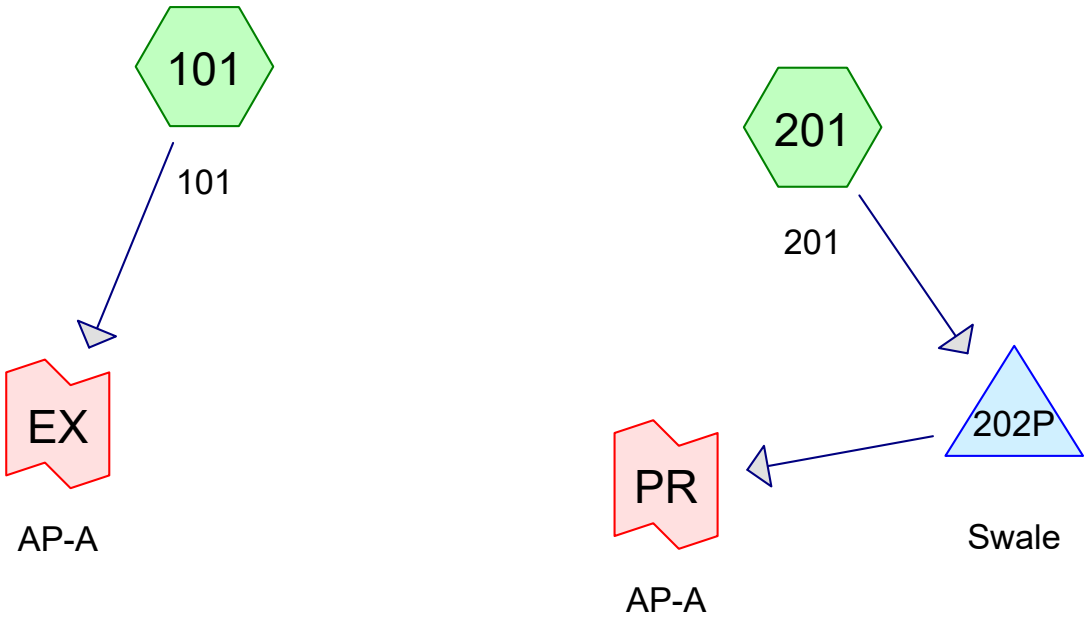
6/23/21

Date

Revised: January 2020

Appendix G

Drainage Calculations



Subcat Reach Pond Link

Routing Diagram for 21028 Ex HydroCAD

Prepared by {enter your company name here}, Printed 6/23/2021

Time span=5.00-36.00 hrs, dt=0.05 hrs, 621 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 101: 101 Runoff Area=61,000 sf 9.59% Impervious Runoff Depth=0.00"
Flow Length=300' Tc=17.4 min CN=42 Runoff=0.00 cfs 0.000 af

Subcatchment 201: 201 Runoff Area=61,000 sf 19.26% Impervious Runoff Depth=0.00"
Flow Length=400' Tc=18.1 min CN=48 Runoff=0.00 cfs 0.000 af

Pond 202P: Swale Peak Elev=94.00' Storage=0 cf Inflow=0.00 cfs 0.000 af
Discarded=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Link EX: AP-A Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link PR: AP-A Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 2.801 ac Runoff Volume = 0.000 af Average Runoff Depth = 0.00"
85.57% Pervious = 2.397 ac 14.43% Impervious = 0.404 ac

Summary for Subcatchment 101: 101

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.20"

	Area (sf)	CN	Description
	55,150	36	Woods, Fair, HSG A
*	5,850	98	Paved roads, HSG A
	61,000	42	Weighted Average
	55,150		90.41% Pervious Area
	5,850		9.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.9	100	0.0500	0.10		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.80"
1.5	200	0.0200	2.28		**Shallow Concentrated Flow, Shallow Flow** Unpaved Kv= 16.1 fps
17.4	300	Total			

Summary for Subcatchment 201: 201

Runoff = 0.00 cfs @ 24.07 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.20"

	Area (sf)	CN	Description
	49,250	36	Woods, Fair, HSG A
*	11,750	98	Paved roads, HSG A
	61,000	48	Weighted Average
	49,250		80.74% Pervious Area
	11,750		19.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.9	100	0.0500	0.10		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.80"
2.2	300	0.0200	2.28		**Shallow Concentrated Flow, Shallow Flow** Unpaved Kv= 16.1 fps
18.1	400	Total			

Summary for Pond 202P: Swale

Inflow Area = 1.400 ac, 19.26% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 24.07 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 24.14 hrs, Volume= 0.000 af, Atten= 6%, Lag= 3.8 min
Discarded = 0.00 cfs @ 24.14 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 24.14 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 94.00' @ 24.14 hrs Surf.Area= 1,500 sf Storage= 0 cf

Plug-Flow detention time= 7.5 min calculated for 0.000 af (100% of inflow)
Center-of-Mass det. time= 7.5 min (1,437.2 - 1,429.6)

Volume	Invert	Avail.Storage	Storage Description
#1	94.00'	17,325 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
94.00	1,500	0	0
95.50	2,000	2,625	2,625
97.00	800	2,100	4,725
98.50	1,600	1,800	6,525
100.00	3,200	3,600	10,125
101.50	6,400	7,200	17,325

Device	Routing	Invert	Outlet Devices
#1	Discarded	94.00'	**6.000 in/hr Exfiltration over Surface area**
#2	Primary	94.00'	**2.0' long x 6.0' breadth Broad-Crested Rectangular Weir X 0.40** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#3	Primary	95.50'	**2.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.21 cfs @ 24.14 hrs HW=94.00' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.21 cfs)

Primary OutFlow Max=0.00 cfs @ 24.14 hrs HW=94.00' (Free Discharge)
├**2=Broad-Crested Rectangular Weir** (Weir Controls 0.00 cfs @ 0.01 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link EX: AP-A

Inflow Area = 1.400 ac, 9.59% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Summary for Link PR: AP-A

Inflow Area = 1.400 ac, 19.26% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 24.14 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 24.14 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Time span=5.00-36.00 hrs, dt=0.05 hrs, 621 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 101: 101 Runoff Area=61,000 sf 9.59% Impervious Runoff Depth=0.04"
Flow Length=300' Tc=17.4 min CN=42 Runoff=0.01 cfs 0.004 af

Subcatchment 201: 201 Runoff Area=61,000 sf 19.26% Impervious Runoff Depth=0.15"
Flow Length=400' Tc=18.1 min CN=48 Runoff=0.04 cfs 0.017 af

Pond 202P: Swale Peak Elev=94.01' Storage=15 cf Inflow=0.04 cfs 0.017 af
Discarded=0.03 cfs 0.014 af Primary=0.01 cfs 0.003 af Outflow=0.03 cfs 0.017 af

Link EX: AP-A Inflow=0.01 cfs 0.004 af
Primary=0.01 cfs 0.004 af

Link PR: AP-A Inflow=0.01 cfs 0.003 af
Primary=0.01 cfs 0.003 af

Total Runoff Area = 2.801 ac Runoff Volume = 0.021 af Average Runoff Depth = 0.09"
85.57% Pervious = 2.397 ac 14.43% Impervious = 0.404 ac

Summary for Subcatchment 101: 101

Runoff = 0.01 cfs @ 18.09 hrs, Volume= 0.004 af, Depth= 0.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Yr Rainfall=3.50"

	Area (sf)	CN	Description
	55,150	36	Woods, Fair, HSG A
*	5,850	98	Paved roads, HSG A
	61,000	42	Weighted Average
	55,150		90.41% Pervious Area
	5,850		9.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.9	100	0.0500	0.10		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.80"
1.5	200	0.0200	2.28		**Shallow Concentrated Flow, Shallow Flow** Unpaved Kv= 16.1 fps
17.4	300	Total			

Summary for Subcatchment 201: 201

Runoff = 0.04 cfs @ 12.53 hrs, Volume= 0.017 af, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Yr Rainfall=3.50"

	Area (sf)	CN	Description
	49,250	36	Woods, Fair, HSG A
*	11,750	98	Paved roads, HSG A
	61,000	48	Weighted Average
	49,250		80.74% Pervious Area
	11,750		19.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.9	100	0.0500	0.10		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.80"
2.2	300	0.0200	2.28		**Shallow Concentrated Flow, Shallow Flow** Unpaved Kv= 16.1 fps
18.1	400	Total			

Summary for Pond 202P: Swale

Inflow Area = 1.400 ac, 19.26% Impervious, Inflow Depth = 0.15" for 10-Yr event
Inflow = 0.04 cfs @ 12.53 hrs, Volume= 0.017 af
Outflow = 0.03 cfs @ 12.68 hrs, Volume= 0.017 af, Atten= 5%, Lag= 8.6 min
Discarded = 0.03 cfs @ 12.68 hrs, Volume= 0.014 af
Primary = 0.01 cfs @ 12.68 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 94.01' @ 12.68 hrs Surf.Area= 1,503 sf Storage= 15 cf

Plug-Flow detention time= 7.7 min calculated for 0.017 af (100% of inflow)
Center-of-Mass det. time= 7.5 min (1,030.7 - 1,023.1)

Volume	Invert	Avail.Storage	Storage Description
#1	94.00'	17,325 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
94.00	1,500	0	0
95.50	2,000	2,625	2,625
97.00	800	2,100	4,725
98.50	1,600	1,800	6,525
100.00	3,200	3,600	10,125
101.50	6,400	7,200	17,325

Device	Routing	Invert	Outlet Devices
#1	Discarded	94.00'	**6.000 in/hr Exfiltration over Surface area**
#2	Primary	94.00'	**2.0' long x 6.0' breadth Broad-Crested Rectangular Weir X 0.40** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#3	Primary	95.50'	**2.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.21 cfs @ 12.68 hrs HW=94.01' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.21 cfs)

Primary OutFlow Max=0.00 cfs @ 12.68 hrs HW=94.01' (Free Discharge)
├**2=Broad-Crested Rectangular Weir** (Weir Controls 0.00 cfs @ 0.10 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link EX: AP-A

Inflow Area = 1.400 ac, 9.59% Impervious, Inflow Depth = 0.04" for 10-Yr event
Inflow = 0.01 cfs @ 18.09 hrs, Volume= 0.004 af
Primary = 0.01 cfs @ 18.09 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Summary for Link PR: AP-A

Inflow Area = 1.400 ac, 19.26% Impervious, Inflow Depth = 0.02" for 10-Yr event
Inflow = 0.01 cfs @ 12.68 hrs, Volume= 0.003 af
Primary = 0.01 cfs @ 12.68 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Time span=5.00-36.00 hrs, dt=0.05 hrs, 621 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 101: 101 Runoff Area=61,000 sf 9.59% Impervious Runoff Depth=0.55"
Flow Length=300' Tc=17.4 min CN=42 Runoff=0.44 cfs 0.064 af

Subcatchment 201: 201 Runoff Area=61,000 sf 19.26% Impervious Runoff Depth=0.91"
Flow Length=400' Tc=18.1 min CN=48 Runoff=1.09 cfs 0.106 af

Pond 202P: Swale Peak Elev=94.35' Storage=552 cf Inflow=1.09 cfs 0.106 af
Discarded=0.22 cfs 0.075 af Primary=0.42 cfs 0.031 af Outflow=0.64 cfs 0.106 af

Link EX: AP-A Inflow=0.44 cfs 0.064 af
Primary=0.44 cfs 0.064 af

Link PR: AP-A Inflow=0.42 cfs 0.031 af
Primary=0.42 cfs 0.031 af

Total Runoff Area = 2.801 ac Runoff Volume = 0.170 af Average Runoff Depth = 0.73"
85.57% Pervious = 2.397 ac 14.43% Impervious = 0.404 ac

Summary for Subcatchment 101: 101

Runoff = 0.44 cfs @ 12.17 hrs, Volume= 0.064 af, Depth= 0.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Yr Rainfall=5.80"

	Area (sf)	CN	Description
	55,150	36	Woods, Fair, HSG A
*	5,850	98	Paved roads, HSG A
	61,000	42	Weighted Average
	55,150		90.41% Pervious Area
	5,850		9.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.9	100	0.0500	0.10		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.80"
1.5	200	0.0200	2.28		**Shallow Concentrated Flow, Shallow Flow** Unpaved Kv= 16.1 fps
17.4	300	Total			

Summary for Subcatchment 201: 201

Runoff = 1.09 cfs @ 12.15 hrs, Volume= 0.106 af, Depth= 0.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Yr Rainfall=5.80"

	Area (sf)	CN	Description
	49,250	36	Woods, Fair, HSG A
*	11,750	98	Paved roads, HSG A
	61,000	48	Weighted Average
	49,250		80.74% Pervious Area
	11,750		19.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.9	100	0.0500	0.10		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.80"
2.2	300	0.0200	2.28		**Shallow Concentrated Flow, Shallow Flow** Unpaved Kv= 16.1 fps
18.1	400	Total			

Summary for Pond 202P: Swale

Inflow Area = 1.400 ac, 19.26% Impervious, Inflow Depth = 0.91" for 100-Yr event
Inflow = 1.09 cfs @ 12.15 hrs, Volume= 0.106 af
Outflow = 0.64 cfs @ 12.32 hrs, Volume= 0.106 af, Atten= 41%, Lag= 10.5 min
Discarded = 0.22 cfs @ 12.32 hrs, Volume= 0.075 af
Primary = 0.42 cfs @ 12.32 hrs, Volume= 0.031 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 94.35' @ 12.32 hrs Surf.Area= 1,618 sf Storage= 552 cf

Plug-Flow detention time= 9.8 min calculated for 0.106 af (100% of inflow)
Center-of-Mass det. time= 9.8 min (925.7 - 915.9)

Volume	Invert	Avail.Storage	Storage Description
#1	94.00'	17,325 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
94.00	1,500	0	0
95.50	2,000	2,625	2,625
97.00	800	2,100	4,725
98.50	1,600	1,800	6,525
100.00	3,200	3,600	10,125
101.50	6,400	7,200	17,325

Device	Routing	Invert	Outlet Devices
#1	Discarded	94.00'	**6.000 in/hr Exfiltration over Surface area**
#2	Primary	94.00'	**2.0' long x 6.0' breadth Broad-Crested Rectangular Weir X 0.40** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#3	Primary	95.50'	**2.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.22 cfs @ 12.32 hrs HW=94.35' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.22 cfs)

Primary OutFlow Max=0.41 cfs @ 12.32 hrs HW=94.35' (Free Discharge)
├**2=Broad-Crested Rectangular Weir** (Weir Controls 0.41 cfs @ 0.59 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link EX: AP-A

Inflow Area = 1.400 ac, 9.59% Impervious, Inflow Depth = 0.55" for 100-Yr event
Inflow = 0.44 cfs @ 12.17 hrs, Volume= 0.064 af
Primary = 0.44 cfs @ 12.17 hrs, Volume= 0.064 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Summary for Link PR: AP-A

Inflow Area = 1.400 ac, 19.26% Impervious, Inflow Depth = 0.27" for 100-Yr event
Inflow = 0.42 cfs @ 12.32 hrs, Volume= 0.031 af
Primary = 0.42 cfs @ 12.32 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Time span=5.00-36.00 hrs, dt=0.05 hrs, 621 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 101: 101 Runoff Area=61,000 sf 9.59% Impervious Runoff Depth=0.00"
Flow Length=300' Tc=17.4 min CN=42 Runoff=0.00 cfs 0.000 af

Subcatchment 201: 201 Runoff Area=61,000 sf 19.26% Impervious Runoff Depth=0.00"
Flow Length=400' Tc=18.1 min CN=48 Runoff=0.00 cfs 0.000 af

Pond 202P: Swale Peak Elev=94.00' Storage=0 cf Inflow=0.00 cfs 0.000 af
Discarded=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Link EX: AP-A Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link PR: AP-A Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 2.801 ac Runoff Volume = 0.000 af Average Runoff Depth = 0.00"
85.57% Pervious = 2.397 ac 14.43% Impervious = 0.404 ac

Summary for Subcatchment 101: 101

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr WQv Rainfall=1.00"

	Area (sf)	CN	Description
	55,150	36	Woods, Fair, HSG A
*	5,850	98	Paved roads, HSG A
	61,000	42	Weighted Average
	55,150		90.41% Pervious Area
	5,850		9.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.9	100	0.0500	0.10		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.80"
1.5	200	0.0200	2.28		**Shallow Concentrated Flow, Shallow Flow** Unpaved Kv= 16.1 fps
17.4	300	Total			

Summary for Subcatchment 201: 201

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr WQv Rainfall=1.00"

	Area (sf)	CN	Description
	49,250	36	Woods, Fair, HSG A
*	11,750	98	Paved roads, HSG A
	61,000	48	Weighted Average
	49,250		80.74% Pervious Area
	11,750		19.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.9	100	0.0500	0.10		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.80"
2.2	300	0.0200	2.28		**Shallow Concentrated Flow, Shallow Flow** Unpaved Kv= 16.1 fps
18.1	400	Total			

Summary for Pond 202P: Swale

Inflow Area = 1.400 ac, 19.26% Impervious, Inflow Depth = 0.00" for WQv event
Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 94.00' @ 5.00 hrs Surf.Area= 1,500 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	94.00'	17,325 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
94.00	1,500	0	0
95.50	2,000	2,625	2,625
97.00	800	2,100	4,725
98.50	1,600	1,800	6,525
100.00	3,200	3,600	10,125
101.50	6,400	7,200	17,325

Device	Routing	Invert	Outlet Devices
#1	Discarded	94.00'	**6.000 in/hr Exfiltration over Surface area**
#2	Primary	94.00'	**2.0' long x 6.0' breadth Broad-Crested Rectangular Weir X 0.40** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#3	Primary	95.50'	**2.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.00 cfs @ 5.00 hrs HW=94.00' (Free Discharge)
└**1=Exfiltration** (Passes 0.00 cfs of 0.21 cfs potential flow)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=94.00' (Free Discharge)
├**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link EX: AP-A

Inflow Area = 1.400 ac, 9.59% Impervious, Inflow Depth = 0.00" for WQv event
Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Summary for Link PR: AP-A

Inflow Area = 1.400 ac, 19.26% Impervious, Inflow Depth = 0.00" for WQv event
Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Appendix H

Water Quality Worksheets

Version 1.8 Total Water Quality Volume Calculation

Last Updated: 11/09/2015 WQv(acre-feet) = [(P)(Rv)(A)] /12

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....	No

Design Point:	A		*Manually enter P, Total Area and Impervious Cover.*
P=	1.15	*inch*	

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	1.20	0.16	13%	0.17	852	Dry Swale
2						
3						
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	1.20	0.16	13%	0.17	**852**	**Subtotal 1**
Total	1.20	0.16	13%	0.17	**852**	**Initial WQv**

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing Area *(Acre)*	Contributing Impervious Area *(Acre)*	Notes
Conservation of Natural Areas	0.00	0.00	*minimum 10,000 sf*
Riparian Buffers	0.00	0.00	*maximum contributing length 75 feet to 150 feet*
Filter Strips	0.00	0.00	
Tree Planting	0.00	0.00	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**0.00**	**0.00**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	1.20	0.16	13%	0.17	852
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**1.20**	**0.16**	13%	0.17	852
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	1.20	0.16	13%	0.17	**852**
WQv reduced by Area Reduction techniques					0

Minimum RRv

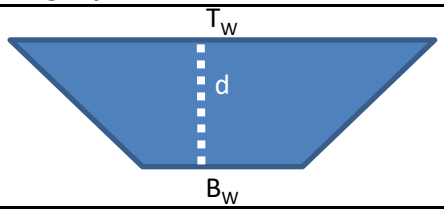
Enter the Soils Data for the site		
Soil Group	Acres	S
A		55%
B		40%
C	1.20	30%
D		20%
Total Area	1.2	
Calculate the Minimum RRv		
S =	**0.30**	
Impervious =	0.16	*acre*
Precipitation	1.15	*in*
Rv	0.95	
Minimum RRv	**190**	***ft3***
	0.00	af

Dry Swale Worksheet

Design Point:	A

Enter 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**
1	1.20	0.16	0.13	0.17	851.60	1.15	Dry Swale
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	13%	0.17	852	<<WQv after adjusting for Disconnected Rooftops	

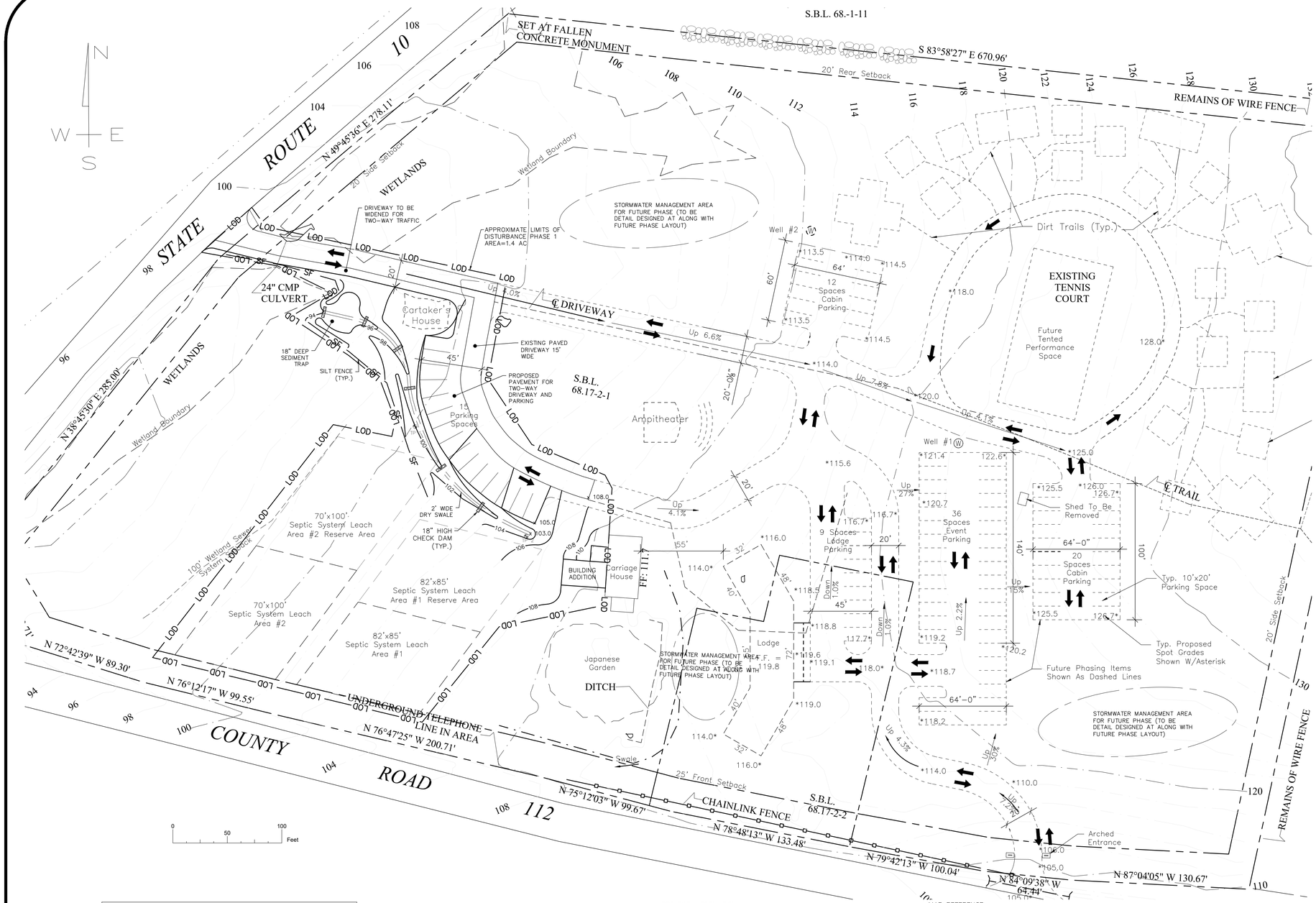
Pretreatment Provided			Pretreatment Technique
Pretreatment (10% of WQv)	85	ft^3	100

Calculate Available Storage Capacity			
Bottom Width	2	*ft*	Design with a bottom width no greater than eight feet to avoid potential gullying and channel braiding, but no less than two feet
Side Slope (X:1)	3	*Okay*	Channels shall be designed with moderate side slopes (flatter than 3:1) for most conditions. 2:1 is the absolute maximum side slope
Longitudinal Slope	1%	*Okay*	*Maximum longitudinal slope shall be 4%*
Flow Depth	0.75	*ft*	*Maximum ponding depth of one foot at the mid-point of the channel, and a maximum depth of 18" at the end point of the channel (for storage of the WQv)*
Top Width	6.5	*ft*	
Area	3.19	*sf*	
Minimum Length	240	*ft*	
Actual Length	288	*ft*	
End Point Depth check	1.50	*Okay*	*A maximum depth of 18" at the end point of the channel (for storage of the WQv)*
Storage Capacity	1,003	ft^3	
Soil Group (HSG)		C	

Runoff Reduction				
Is the Dry Swale contributing flow to another practice?	No	Select Practice	N/A	
RRv	**201**	ft^3	**Runnoff Reduction equals 40% in HSG A and B and 20% in HSG C and D up to the WQv**	
Volume Treated	651	ft^3	This is the difference between the WQv calculated and the runoff reduction achieved in the swale	
Volume Directed	0	ft^3	This volume is directed another practice	
Volume √	*Okay*		Check to be sure that channel is long enough to store WQv	

Appendix I

Project Plan Sheets



TEST PIT LOG		
	PROFILE	STABILIZED INFILTRATION RATE
TP 1	0–12" DARK BROWN LOAMY TOPSOIL 12–32" BROWN, FINE SAND 36–60" GRAY–BROWN COARSE SAND WITH COBBLES	11 MIN/IN
TP2	0–16" DARK BROWN LOAMY TOPSOIL 16–26" BROWN, FINE SAND 26–60" GRAY–BROWN COARSE SAND WITH COBBELS	9 MIN/IN
TEST PITS PERFORMED ON 6/16/20 BY: C. LONGO, PE WITNESSED BY F. SERAFIN OF SCDOH		PT PERFORMED AT 12" DEPTH

PROJECT INFORMATION:

OWNER/APPLICANT:
CAROGA LAKE ARTS COLLECTIVE, INC.
P.O. BOX 1048
CAROGA, NY 12032

PROPERTY TAX MAP NUMBER
68.17–2–1 & 68.17–2–2

PARCEL AREA:
10.9± AC
474,804± SF

MUNICIPALITY:
TOWN OF CAROGA
FULTON COUNTY

ZONING:
H–HAMLET

MAP REFERENCE:

1) MAP ENTITLED "CAROGA ARTS COLLECTIVE, INC. – MY HILL COMPOUND" SITE PLAN – AS PREPARED BY STEVEN E. SMITH, P.E. – CIVIL AND ARCHITECTURAL ENGINEERING – ON MAY 14, 2021. COPY PROVIDED BY CLIENT.

NOTES:

1) SURVEYED PARCEL: TOWN OF DUANESBURG – TAX MAP 74.00, BLOCK 1, PARCEL 27.1.

2) BASE SURVEY PREPARED BY TOWN OF CAROGA, FROM AN OCTOBER 2020 FIELD SURVEY.

3) NORTH IS REFERENCED TO NAD 83 NEW YORK STATE PLANES EAST ZONE. ELEVATIONS AND TOPOGRAPHY BASED UPON NAVD 88 DATUM.

4) SUBJECT TO ALL RIGHTS, EASEMENTS, COVENANTS OR RESTRICTION; RECORDED OR UNRECORDED.

5) SUBJECT TO ANY STATEMENT OF FACT CONTAINED IN AN UP TO DATE ABSTRACT OF TITLE OR TITLE REPORT.

6) UNDERGROUND UTILITIES IF SHOWN HEREON ARE BASED ON VISIBLE PHYSICAL EVIDENCE. THEY SHOULD BE CONSIDERED SCHEMATIC ONLY AND ARE SHOWN TO DEPICT GENERAL UTILITY CONNECTIONS RATHER THAN EXACT UNDERGROUND LOCATIONS. GERALD R GRAY PLS MAKES NO CERTIFICATION AS TO THE ACCURACY OF THE UNDERGROUND UTILITY LOCATIONS AND OTHER UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THIS MAP. CALL DIGSAFE FOR FURTHER VERIFICATION.

7) SURVEY IS PREPARED IN ACCORDANCE WITH THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS CODE OF PRACTICE FOR LAND SURVEYS AS ADOPTED IN OCTOBER OF 1966 AND LAST REVISED ON JULY 18, 1997.

EROSION & SEDIMENT CONTROL GENERAL NOTES:

1. THIS PROJECT QUALIFIES FOR COVERAGE UNDER THE NYSDEC GENERAL PERMIT GP 0–20–001. A NOTICE OF INTENT (NOI) MUST BE FILED WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION AND AUTHORIZATION RECEIVED PRIOR TO CONSTRUCTION ACTIVITIES.

2. A STORMWATER POLLUTION PREVENTION PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES GP 0–20–001 AND SHALL BE CONSIDERED SUPPLEMENTAL TO THESE PLANS.

3. ANY CONTRACTOR INVOLVED IN ANY EARTHWORK ACTIVITY SHALL REVIEW ALL PLANS AND PERMIT CONDITIONS AND CERTIFY ACKNOWLEDGEMENT IN WRITING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT ALL EROSION CONTROLS DESCRIBED IN GP 0–20–001, AND IT IS NOT THE INTENT OF THESE DRAWINGS TO REPLACE OR DISSEMINATE THE PERMIT REQUIREMENTS. THE CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH THE PERMIT AT ALL TIMES.

4. NO MORE THAN FIVE (5) ACRES OF SITE SHALL BE DISTURBED AT ONE TIME. THE CONTRACTOR SHALL COORDINATE EARTHWORK ACTIVITIES AND IMPLEMENTATION OF SOIL STABILIZATION MEASURES TO ENSURE COMPLIANCE WITH THIS REQUIREMENT.

5. DISTURBED AREAS SHALL NOT BE LEFT UNSTABILIZED FOR MORE THAN 14 DAYS AFTER COMPLETION OR SUSPENSION OF GRADING OPERATIONS.

6. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE LATEST EDITION OF NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL." (aka: THE BLUE BOOK) EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES.

7. EROSION CONTROL DEVICES SHALL NOT BE REMOVED UNTIL THE TOWN ENGINEER HAS APPROVED FINAL STABILIZATION.

8. SILT FENCE AND OTHER EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THESE DETAIL SHEETS AND SECTION 7A OF THE BLUE BOOK.

9. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED.

TEMPORARY EROSION AND SEDIMENT CONTROL NOTES:

1. IT IS THE INTENT OF THESE PLANS AND NOTES TO BE USED AS A GUIDE BY THE CONTRACTOR TO ENSURE THAT NO ERODED MATERIAL MIGRATES FROM THE SITE OR ENTERS ANY WATER COURSE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THIS GOAL IS MET, BY IMPLEMENTING THESE PLANS AND ANY ADDITIONAL MEANS THAT MAY BE NECESSARY. FURTHER MEASURES MAY BE REQUIRED BY THE CITY, VILLAGE, OR TOWN ENGINEER. WHILE MANY OF THE EROSION CONTROL DETAILS CONTAINED WITHIN THESE PLANS ARE TAKEN DIRECTLY FROM THE BLUE BOOK, THE CONTRACTOR SHOULD CONSIDER ANY OF THE DETAILS CONTAINED IN SECTION 7A OF THE BLUE BOOK AS ACCEPTABLE PRACTICE IN THE APPROPRIATE APPLICATION.

2. THE OWNER/OPERATOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES DAILY AND AFTER EACH RAINFALL EVENT THROUGH THE ENTIRE DEVELOPMENT PROCESS. TO ASSURE PROPER FUNCTION, SILTATION BARRIERS SHALL BE MAINTAINED IN GOOD CONDITION AND REINFORCED, EXTENDED, REPAIRED, RE–SEEDED AND PROTECTED FROM FURTHER EROSION. ALL SEDIMENT ACCUMULATED SHALL BE REMOVED AND CONTAINED IN APPROPRIATE SPOIL AREAS. WATER SHALL BE APPLIED TO NEWLY SEEDED AREAS AS NEEDED UNTIL GRASS COVER IS WELL ESTABLISHED. DURING THESE PERIODIC INSPECTIONS, THE FOLLOWING ITEMS SHOULD BE PAID PARTICULAR ATTENTION: A. SILT FENCING SHALL BE INSPECTED FOR UNDERMINING AND DETERIORATION. B. SEEDED/MULCHED AREAS SHALL BE INSPECTED TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE REPAIRED AS NECESSARY.

3. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED.

4. SILT FENCE AND OTHER EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THESE DETAIL SHEETS AND SECTION 7A OF THE BLUE BOOK. SILT FENCING SHALL BE INSTALLED AT THE PERIMETER OF ALL SLOPES TO BE GRADED, PRIOR TO GRADING OPERATIONS.

5. CLEARING OPERATIONS SHALL BE LIMITED TO ACTIVE WORK AREAS.

6. CARE SHALL BE TAKEN TO PRESERVE AS MUCH EXISTING VEGETATION AS POSSIBLE AND HEALTHY TREES OF DESIRABLE SPECIES SHALL BE PROTECTED.

7. CONSTRUCTION TRAFFIC SHALL NOT CROSS STREAMS OR DITCHES EXCEPT AT SUITABLE CROSSING FACILITIES. EQUIPMENT SHALL NOT OPERATE, UNNECESSARILY, WITHIN WATERWAYS OR DRAINAGE DITCHES.

8. EXISTING PAVEMENT AREAS SHALL BE CLEANED AT THE DIRECTION OF THE CITY, VILLAGE, OR TOWN ENGINEER.

9. WATER TRUCKS SHALL BE USED TO MINIMIZE DUST POLLUTION ON SITE, AND ON ADJACENT ROADWAY AREAS AS DIRECTED BY THE CITY, VILLAGE, OR TOWN ENGINEER.

10. ANY WATER PUMPED AS A RESULT OF DEWATERING ACTIVITIES SHALL BE PUMPED INTO A DEWATERING PIT.

11. ALL AREAS DISTURBED IN THE CONSTRUCTION PROCESS SHALL BE STABILIZED WITH SEED AND MULCH NO MORE THAN 14 DAYS AFTER THE COMPLETION OF WORK IN SUCH AREA. IT MAY BE NECESSARY TO SEED AND MULCH SOME AREAS SEVERAL TIMES TO MEET THIS REQUIREMENT.

12. ALL EROSION CONTROL DEVICES SHALL BE PLACED IN THE ENTIRE PHASE AS SHOWN ON THE EROSION CONTROL PLAN PRIOR TO ANY WORK ON SUCH PHASE.

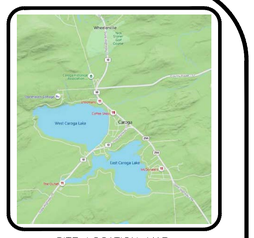
13. STOCK PILES SHALL BE PROTECTED BY SILT FENCE AND SEEDED PER GP 0–20–001. THESE DEVICES SHALL BE MAINTAINED IN GOOD CONDITION UNTIL SAID STOCK PILES ARE REMOVED AND AREAS ARE PERMANENTLY STABILIZED.

14. WHEN RUNOFF IS COLLECTED AND FLOW IS CONCENTRATED IN A SWALE OR DRAINAGE DITCH, THEN CHECK DAMS SHALL BE INSTALLED TO REDUCE VELOCITY UNTIL THE SWALE AND THE AREA DRAINING TO THE SWALE ARE STABILIZED. SEDIMENT SHALL BE REMOVED FROM THE DAM AS NEEDED TO ALLOW THE CHANNEL TO DRAIN THROUGH THE DAM AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM.

15. IN NO CASE SHALL ERODIBLE MATERIALS BE STOCKPILED WITHIN 25 FEET OF ANY DITCH, STREAM OR OTHER SURFACE WATER BODY.

16. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION AND EQUIPMENT ENTRANCE WHENEVER PRACTICABLE.

17. EROSION CONTROL DEVICES SHALL NOT BE REMOVED UNTIL THE CITY, VILLAGE OR TOWN ENGINEER HAS APPROVED FINAL STABILIZATION.



SITE LOCATION MAP
SCALE: N.T.S.

No.	Revision Description	Date

PRIOR TO ANY EARTH DISTURBANCE THE CONTRACTOR SHALL CALL IN A TICKET TO DIG SAFE NY AND OBTAIN A CLEAR TO DIG

IT IS A VIOLATION OF SECTION 7209 OF THE NYS EDUCATION LAW FOR ANY PERSON TO ALTER ANY ITEM ON THIS PLAN IN ANY WAY UNLESS HE/SHE IS ACTING UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER

CHRISTOPHER D. LONGO, PE
N.Y.S. LIC. # 095840

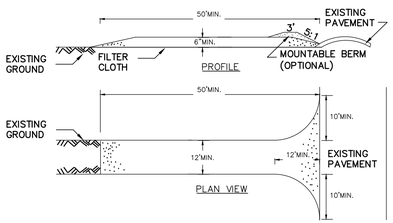
EMPIRE ENGINEERING, PLLC
1900 DUANESBURG ROAD
DUANESBURG, NY 12056
PH: (518) 858–4117
EMAIL: CLONGO@EMPIREENG.NET

PROJECT
CAROGA LAKE ARTS COLLECTIVE, INC.

1989 STATE HWY 10
CAROGA LAKE, NY

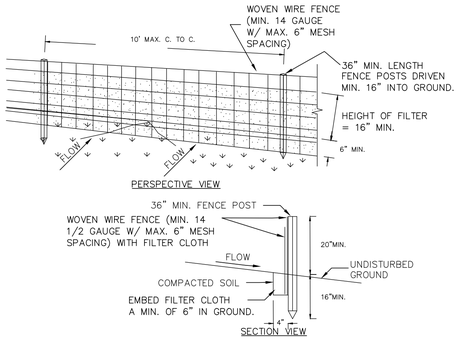
Title
E&SC PLAN

Date 07/21/2021
Scale 1"=40'
Job# 21028
Sheet C101
Sheet 1 of 2



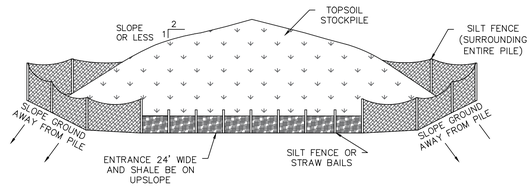
NOTES:
1. STONE SIZE – USE 1–4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY–FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL



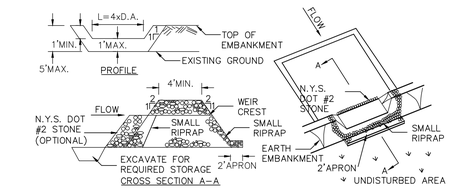
NOTES:
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL



NOTES:
1. SILT FENCE SHALL BE INSTALLED PER DETAIL.
2. IF THE STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, IT SHALL BE STABILIZED WITH SEED AND MULCH IMMEDIATELY AFTER COMPLETION OF STOCKPILING.
3. SILT FENCE SHALL BE INSPECTED WEEKLY AND SEDIMENT TRAPPED BY THE FENCING SHALL BE REMOVED OF AS NECESSARY.
4. SILT FENCE SHALL REMAIN IN PLACE UNTIL THE ENTIRE PILE HAS BEEN ELIMINATED.
5. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.

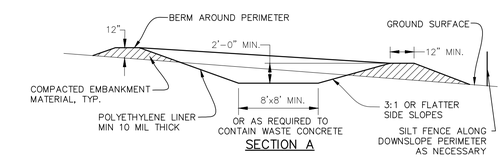
TEMPORARY TOPSOIL STOCKPILE DETAIL



NOTES:
1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER–SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"–8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP–GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

MAXIMUM DRAINAGE AREA 5 ACRES

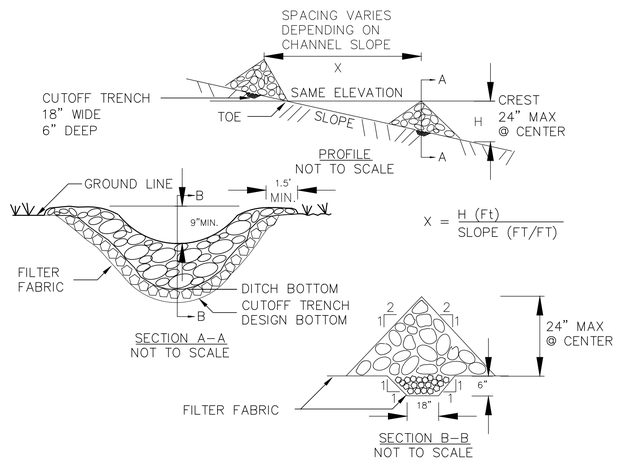
STONE OUTLET SEDIMENT TRAP DETAIL



CONCRETE WASHOUT AREA INSTALLATION NOTES
1. SEE PLAN VIEW FOR LOCATIONS OF CONCRETE WASHOUT AREA.
2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
3. VEHICLE TRACKING CONTROL IS REQUIRED AT THE ACCESS POINT.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. A POLYETHYLENE LINER MINIMUM 10 MIL THICKNESS SHALL BE INSTALLED AND SECURED WITHIN THE WASHOUT AREA.
6. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

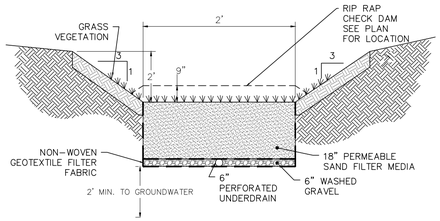
CONCRETE WASHOUT AREA MAINTENANCE NOTES
1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, COVER THE DISTURBED AREA WITH TOPSOIL, SEED AND MULCH OR OTHERWISE STABILIZE IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
4. INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

CONCRETE WASHOUT DETAIL



NOTES:
1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
6. MAXIMUM DRAINAGE AREA 2 ACRES.

CHECK DAM DETAIL



NOTES:
1. DISTURBED AREAS SHALL BE PLANTED WITH ENVIRONMENTAL SEED MIX.
2. VEGETATION SHALL BE MAINTAINED AT 6" HEIGHT.
3. ALL TREES, BRUSH, STUMPS AND OTHER OBSTRUCTIONS SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTION OF THE SWALE.
4. THE SWALE SHALL BE EXCAVATED OR SHAPED TO MEET THE CROSS SECTION SHOWN ABOVE AND SHALL BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES THAT MAY IMPEDE FLOW.
5. NON–WOVEN GEOTEXTILE FABRIC SHALL BE INSTALLED ON THE BOTTOM AND SIDES OF THE TRENCH AS WELL AS BETWEEN THE STONE AND SAND LAYERS.

DRY SWALE DETAIL

No.	Revision Description	Date

PRIOR TO ANY EARTH DISTURBANCE THE CONTRACTOR SHALL CALL IN A TICKET TO DIG SAFE NY AND OBTAIN A CLEAR TO DIG

CHRISTOPHER D. LONGO, PE
N.Y.S. LIC. # 095840

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PROJECT
CAROGA LAKE ARTS COLLECTIVE, INC.

1989 STATE HWY 10
CAROGA LAKE, NY

Title	E&SC DETAILS
Date	06/23/2021
Sheet	C501
Scale	N.T.S.
Job#	21028
	Sheet 2 of 2