Town of Manlius

Planning Board Meeting Agenda

August 8, 2022

6:30PM

1. Zoom Meeting Instructions

   Documents:

   ZOOM PLANNING BOARD MEETING INSTRUCTIONS AUGUST 8, 2022.PDF

2. Pledge Of Allegiance

3. Approval Of Minutes June 25, 2022

4. Twin Shores Properties, LLC - 1333 13th Street, East Moline, IL 61244 - 2nd Presentation For Zone Change - Twin Shores - Fietta Properties - North Burdick Street, Fayetteville, NY 13066 - Tap Map #'s 086.-02-02.1, 086.-02-03.0, 086.-02-04.1, 086.-02-05.1, 086.-02-05.3 And 086.-02-06.1

   Documents:

   2022-06-29 TRANSMITTAL TOWN OF MANLIUS (SIGNED).PDF
   2022-07-18 TWIN SHORES - REZONE PROJECT NARRATIVE DEER.PDF
   2022-07-18 ZN-1 (ZONE CHANGE PLAN) (003).PDF
   2022-07-18 ZN-1 (ZONE CHANGE PLAN).PDF
   LONG SEQR PART 2 (BLANK).PDF
   LONG SEQR PART 3 (BLANK).PDF
   TWIN SHORES - COMPILED APPENDICES [COMPLETE].PDF
   TWIN SHORES - DISCLOSURE AFFIDAVIT.PDF
   TWIN SHORES - OP-1 (OVERALL SITE PLAN).PDF
   TWIN SHORES - SWPPP [DRAFT].PDF
   TWIN SHORES - BOUNDARY SURVEY.PDF
   TWIN SHORES - INITIAL APPEARANCE APPLICATION SUBDIVISION.PDF
   TWIN SHORES - INITIAL APPEARANCE APPLICATION.PDF
   TWIN SHORES - LONG SEQR PART 1.PDF
   TWIN SHORES - SOCPA RESPONSE.PDF
   TWIN SHORES - SP-1 (SUBDIVISION PLAN).PDF
   TWIN SHORES - TWIN LAKES PROPOSED SIGN.PDF

5. Shashank Bhatt - 4579 Southwood Heights Drive, Jamesville, NY 13078 - Recommendation To Town Board For Zone Change (CA & RA To RM) - Seven Pines Project - 8104, 8108, 8112 & 8116 Manlius-Cazenovia Road, Manlius, NY 13104 - Tax Map #'s 112.-02-2.7, 112.-02-06.0, 112.-02-07.0 And 112.-02-2.9

   Documents:

   8104-8110 CAZENOVIA ROAD - LEGAL DESCRIPTION.PDF
   8104-8110 CAZENOVIA ROAD - PHOTOPACKAGE - SEVEN PINES RESIDENTIAL CONVERSION.PDF
   8104-8110 CAZENOVIA ROAD - SURVEY 1.PDF
   8104-8110 CAZENOVIA ROAD - SURVEY 2.PDF

8104-8110 CAZENOVIA ROAD - ZONE CHANGE APP-PB APP-SHORT FORM EAF.PDF
SEVEN PINES - ZONE CHANGE.PDF
SEVEN PINES.PDF

6. Other Business

7. Adjournment

Town of
MANLIUS
New York

August 8, 2022

Virtual Planning Board Meeting

Instructions to attend the August 8, 2022 virtual Planning Board meeting:

The easiest way to join is to go to our website www.TownOfManlius.org and click on the link that is located on the homepage. You can also watch on our Facebook page by searching for "Town of Manlius"

Enter the meeting url web address as listed below:

https://us02web.zoom.us/j/89228289740?

Password to join when prompted:

Password: 523750

Enter your email address and name and join the meeting!

Join by telephone by dialing the number below:

1-(929) -436-2866

When prompted to enter the Webinar ID, use the number below followed by #

Webinar ID: 892 2828 9740

Press # again to skip the personal id and enter the password below followed by #

Password: 523750

TDK Engineering Associates, PC

LETTER OF TRANSMITTAL

To: *Town of Manlius*
301 Brooklea Drive
Fayetteville, NY 13066

Date:	*06/30/22*	Project No.:	*2021054*
Attention:	*Lisa Beeman, Deputy Clerk*		
RE:	*Twin Shore-Twin Lakes Multi-Use Development*		
	Town of Manlius, Onondaga County		
	Preliminary Site Approval		

We are sending you : ☑ attached ☐ under separate cover via *U. S. Mail*

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change Order ☐ Submittals ☑ *See Below*

COPIES	DATE	NO.	DESCRIPTION
12	-	1 Each	Initial Appearance Application
12	-	15 Each	Long Environmental Assessment Form (EAF) Parts I, II, III
12	-	3 Each	Disclosure Affidavit
12	-	1 Each	Overall Site Plan
12	-	1 Each	Property Boundary Survey
12	-	1 Each	Subdivision Application
12	-	1 Each	Preliminary Subdivision Plan
12	-	-	1/19/22 - County Planning Board Comments with Responses
12	-	-	Proposed Monument Signage System
12	-	-	Draft SWPPP Report (2 Full/10 Partial)
1	-	-	Check for Application Fee in the Amount of $2,215 (Initial)

These are transmitted as checked below:

☑ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☑ For review & comment ☐ Prints returned after loan to us ☐ For bids due: _____
☐

REMARKS:

Lisa,

Please review the attached application package and contact us if you have any questions or require additional information.

Sincerely,

cc: *David Neuman, Twin Shores (w/enclosures)*
Tom Cerio, Esq.
Dave Herkala, Esq.

SIGNED:
JOSEPH E. DURAND, P.E.

19 Genesee Street, Camillus New York, 13031 PH: (315) 672-8726 FX: (315) 672-8732

CERIO LAW OFFICES, PLLC

THOMAS J. CERIO* DAVID W. HERKALA MICHAEL D. ROOT RUDOLPH SOHL[‡§]
*ALSO ADMITTED IN WASHINGTON, D.C. ‡ALSO ADMITTED IN FLORIDA §OF COUNSEL

OUR INTEGRITY IS YOUR SECURITY

July 18, 2022

John Deer
Supervisor
Town of Manlius
301 Brooklea Drive
Fayetteville, NY 13066

Re: Twin Shore-Twin Lakes Multi Use Development,
Property Re-Zone Request
N. Burdick St. (Tax Map #'S 086.-02-02.1, 03.0, 04.1,
05.1, 05.3, 06.1)

Dear Mr. Supervisor :

Please accept this letter on behalf of our client, Twin Shores Properties, LLC, in regard to the attached Zone Change Application for the above properties (the "site").

The Town Board initially approved a Zone Change Application with respect to this site on February 23, 2022 after review and receipt of both the Town Planning Board's "positive recommendation" in support of the proposed zone change and the approval of S.O.C.P.A. The zoning of the parcels was changed from RA, R1, RM and NS to RA and CA. The underlying potential development of the site, which essentially remains unchanged, is a mix of residential, light commercial, and municipal uses.

As you know, we have been working on various site plans to accommodate what we understood to be Town plans as well as market conditions and demands. As those have all evolved, we have continued to try to modify our plans based on input from Town officials, business interests and community members. It is our goal to develop this property in a manner that will address those inputs and make us all comfortable with and proud of the project.

Also, on July 11, 2022, we appeared in front of the Town Planning Board and presented an initial site plan for review and comment. Based on comments made by various members of the Board and staff we decided that we should submit this Zone Change Application. A component of the initial site plan included development of Multi-Family Units on a part of the site presently zoned RA. It appeared that the Planning Board would prefer that the development of Multi-Family Units occur under an R5 zoning designation. This is the reason for a modification of part of the present RA zone and part of the CA zone to an R5 zoning designation. We have also proposed that the current CA zone boundary be modified to accommodate the creation of two future parcels, Commercial Tracts 1 and 2, which will be better suited to allow for light commercial and potential municipal use while complying with the Towns' zoning and planning regulations.

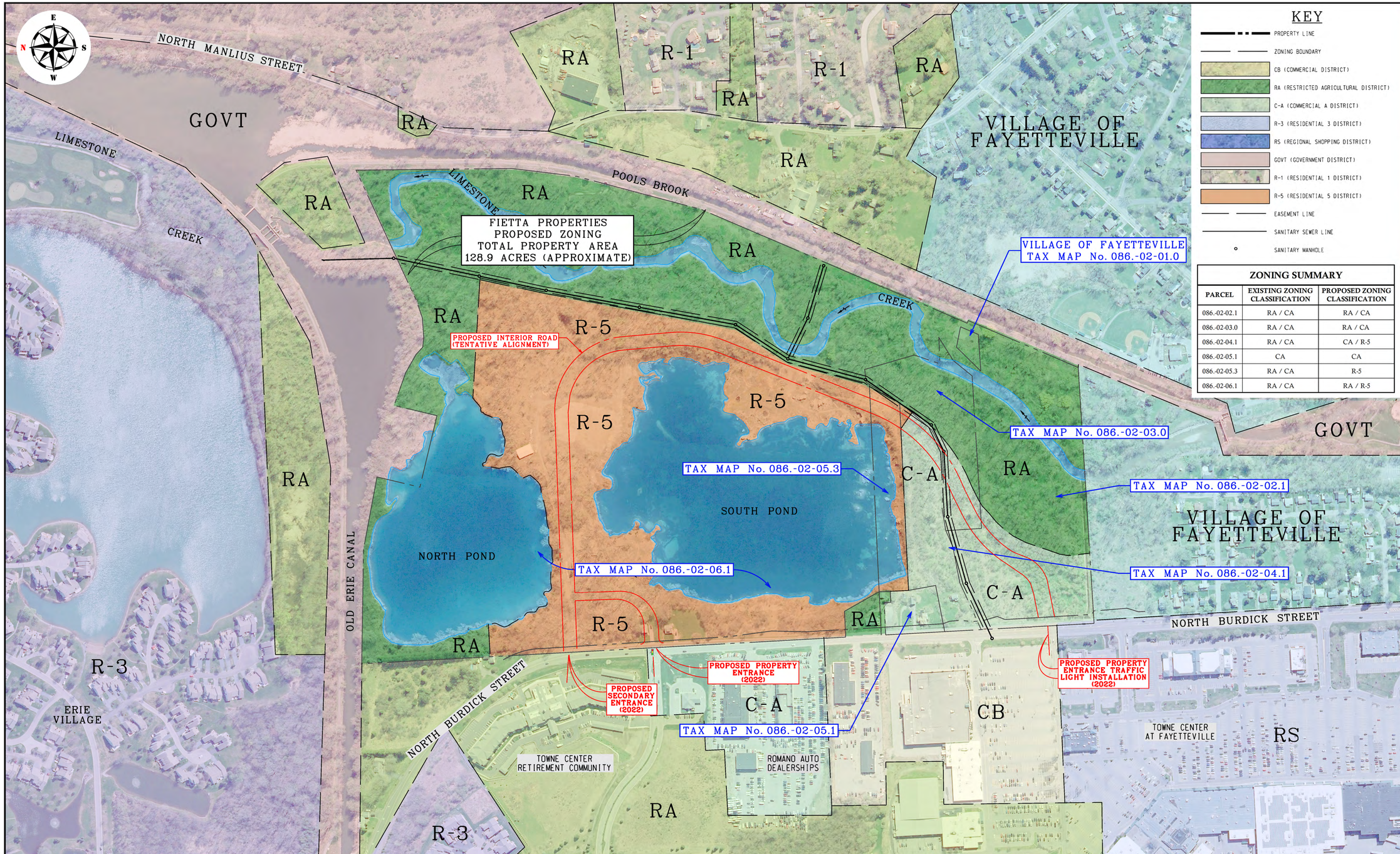
ATTORNEYS AND COUNSELORS AT LAW
407 SOUTH WARREN STREET • 5TH FLOOR • SYRACUSE, NEW YORK 13202
(315) 422-8769 • FAX (315) 476-8002
CERIOLAWOFFICES.COM

We believe that our proposed modifications in the Zone Change Application will address what we interpreted as concerns of various Town officials while essentially maintaining the overall site development as initially presented to both the Town Board and Planning Board.

Thank you.

Very truly yours
Cerio Law Offices

Thomas J. Cerio, Esq.



KEY

- PROPERTY LINE
- ZONING BOUNDARY
- CB (COMMERCIAL DISTRICT)
- RA (RESTRICTED AGRICULTURAL DISTRICT)
- C-A (COMMERCIAL A DISTRICT)
- R-3 (RESIDENTIAL 3 DISTRICT)
- RS (REGIONAL SHOPPING DISTRICT)
- GOVT (GOVERNMENT DISTRICT)
- R-1 (RESIDENTIAL 1 DISTRICT)
- R-5 (RESIDENTIAL 5 DISTRICT)
- EASEMENT LINE
- SANITARY SEWER LINE
- SANITARY MANHOLE

ZONING SUMMARY

PARCEL	EXISTING ZONING CLASSIFICATION	PROPOSED ZONING CLASSIFICATION
086.-02-02.1	RA / CA	RA / CA
086.-02-03.0	RA / CA	RA / CA
086.-02-04.1	RA / CA	CA / R-5
086.-02-05.1	CA	CA
086.-02-05.3	RA / CA	R-5
086.-02-06.1	RA / CA	RA / R-5

ZONE CHANGE PLAN

1" = 200' SCALE — 200 0 200 400 FEET

BASEMAP REFERENCES:

1. TOWN OF MANLIUS ZONING MAP, 2016 ZONING.
2. EXISTING CONDITIONS/ DEMOLITION PLAN, PREPARED BY BERGMANN ASSOCIATES, DATED DECEMBER 6, 2017.
3. NYS DIGITAL ORTHOIMAGERY PROGRAM (NYSDOT): DATED 2021.
4. SYRACUSE-ONONDAGA COUNTY GIS ON THE WEB, DATED 2021.

PRELIMINARY
07-18-2022
NOT FOR CONSTRUCTION

DRAFT

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www.tdkengineering.com
Civil • Marine • Site Development • Geotechnical • Structural • Environmental • Industrial • Lighting

REVISIONS: DATE:

NOTE: NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

PROJECT: TWIN LAKES MULTI-USE DEVELOPMENT

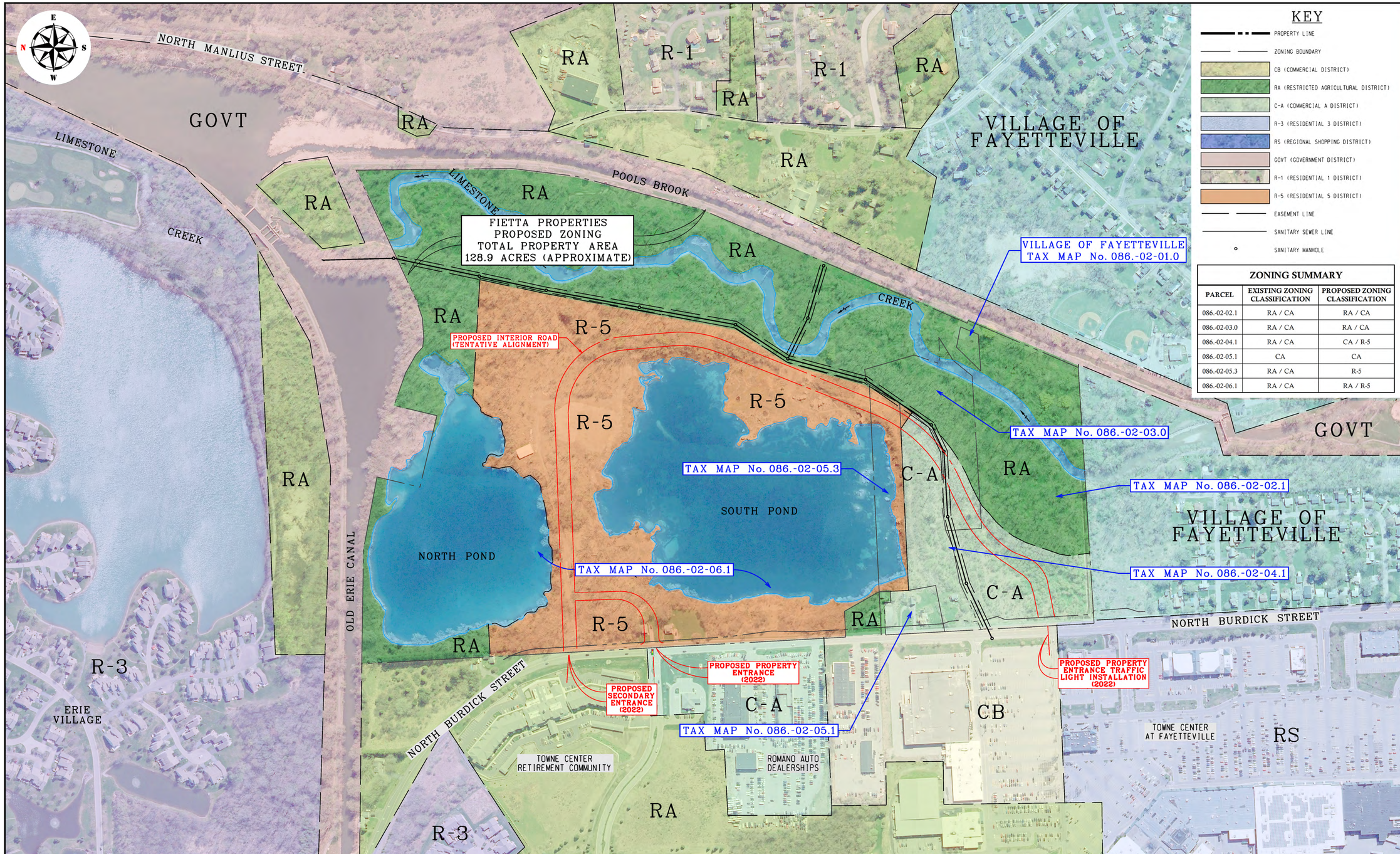
CLIENT: TWIN SHORES PROPERTIES, LLC

LOCATION: N. BURDICK STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

DRAWING TITLE: PROPOSED ZONE CHANGE PLAN

PROJECT No.:	2021054
SCALE:	1" = 200'
DATE:	
ENG'D BY:	SKO
DRAWN BY:	NAR/DKC
CHECKED BY:	JED

SHEET NO. ZN-1



KEY

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- ZONING BOUNDARY
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- RA (RESTRICTED AGRICULTURAL DISTRICT)
- C-A (COMMERCIAL A DISTRICT)
- R-3 (RESIDENTIAL 3 DISTRICT)
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- EASEMENT LINE
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- SANITARY MANHOLE

ZONING SUMMARY

PARCEL	EXISTING ZONING CLASSIFICATION	PROPOSED ZONING CLASSIFICATION
086.-02-02.1	RA / CA	RA / CA
086.-02-03.0	RA / CA	RA / CA
086.-02-04.1	RA / CA	CA / R-5
086.-02-05.1	CA	CA
086.-02-05.3	RA / CA	R-5
086.-02-06.1	RA / CA	RA / R-5

ZONE CHANGE PLAN

1" = 200' SCALE — 200 0 200 400 FEET

BASEMAP REFERENCES:

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DRAWING TITLE: PROPOSED ZONE CHANGE PLAN

PROJECT No.:	2021054
SCALE:	1" = 200'
DATE:	
ENG'D BY:	SKO
DRAWN BY:	NAR/DKC
CHECKED BY:	JED

SHEET NO. ZN-1

Agency Use Only [If applicable]

Project :

Date :

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land

Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1) ☐ NO ☐ YES

If "Yes", answer questions a - j. If "No", move on to Section 2.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☐	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☐	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☐	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☐	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☐	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☐ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☐ NO ☐ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☐ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☐ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☐NO ☐YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☐NO ☐YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☐NO ☐YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.) ☐ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	☐ ☐	☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	☐ ☐	☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.) ☐ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☐ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____ _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☐ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____ _____		☐	☐

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. ☐ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. ☐ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____		☐	☐

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. ☐ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☐ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____		☐	☐

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☐ NO ☐ YES
(See Part 1. C.1, C.2. and C.3.)
If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☐ NO ☐ YES
(See Part 1. C.2, C.3, D.2, E.3)
If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:
To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☐ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☐ Part 1 ☐ Part 2 ☐ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

_____

_____

_____

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the _____ as lead agency that:

☐ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

_____

_____

_____

_____

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action:	
Name of Lead Agency:	
Name of Responsible Officer in Lead Agency:	
Title of Responsible Officer:	
Signature of Responsible Officer in Lead Agency:	Date:
Signature of Preparer (if different from Responsible Officer)	Date:

For Further Information:

Contact Person:

Address:

Telephone Number:

E-mail:

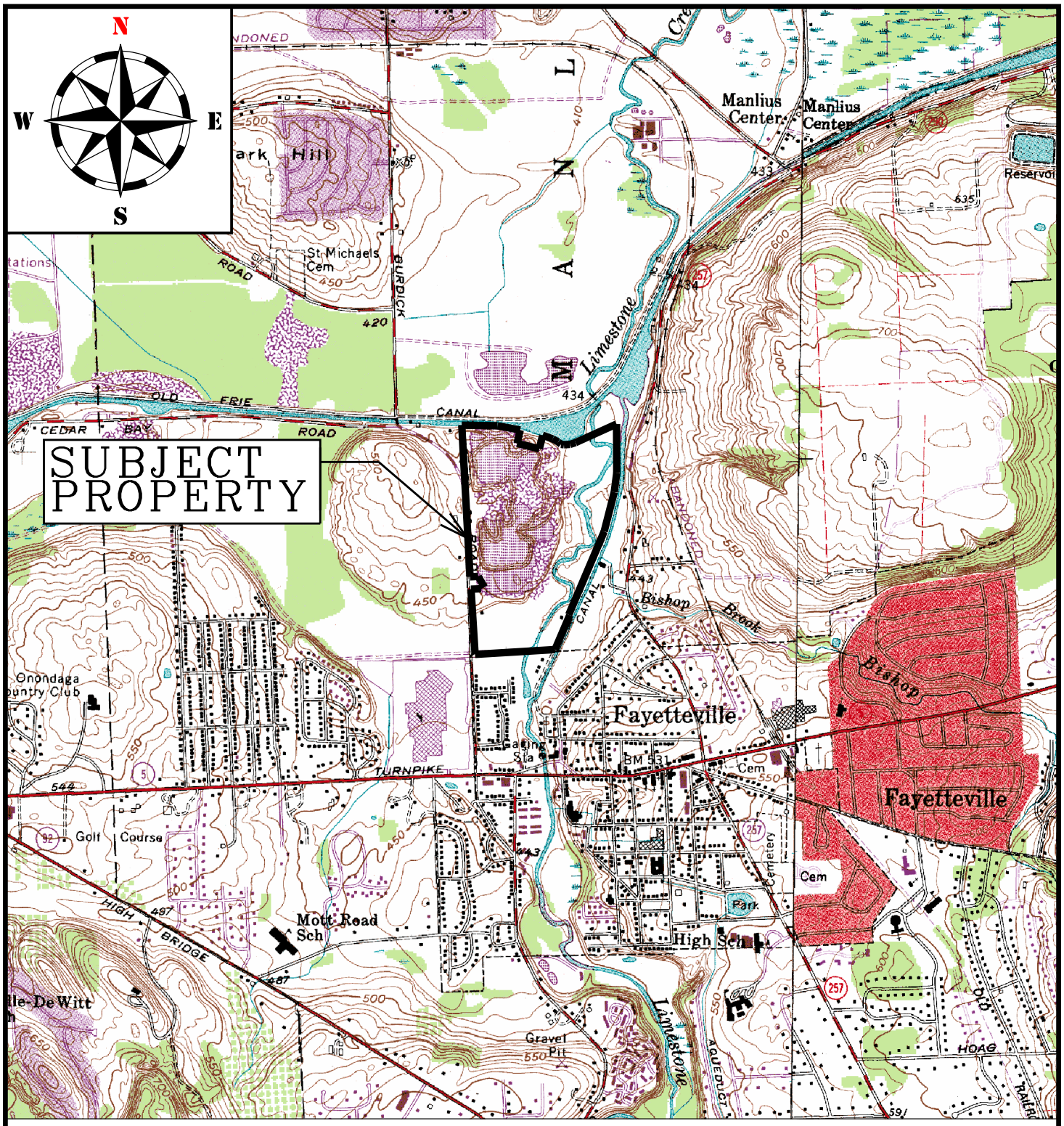
For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

APPENDIX 1

SITE LOCATION MAP



REF: U.S.G.S. SYRACUSE EAST QUAD., 1957, PHOTOREVISED 1978, 7.5 MIN.

TDK Engineering Associates, PC
19 Genesee Street
Camillus, New York 13031
PH: (315) 672-8726 • FX: (315) 672-8732
www.tdkengineering.com

DRAWING TITLE:
SITE LOCATION MAP

PROJECT:
MANLIUS PROJECT

CLIENT:
TWIN SHORES PROPERTIES, LLC

LOCATION:
TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

PROJECT No.:	2021054
SCALE:	1"=2000'
DATE:	10/04/2021
ENG'D BY:	SKO
DRAWN BY:	NAR
CHECKED BY:	JED

SHEET NO.
SLM–1

APPENDIX 2

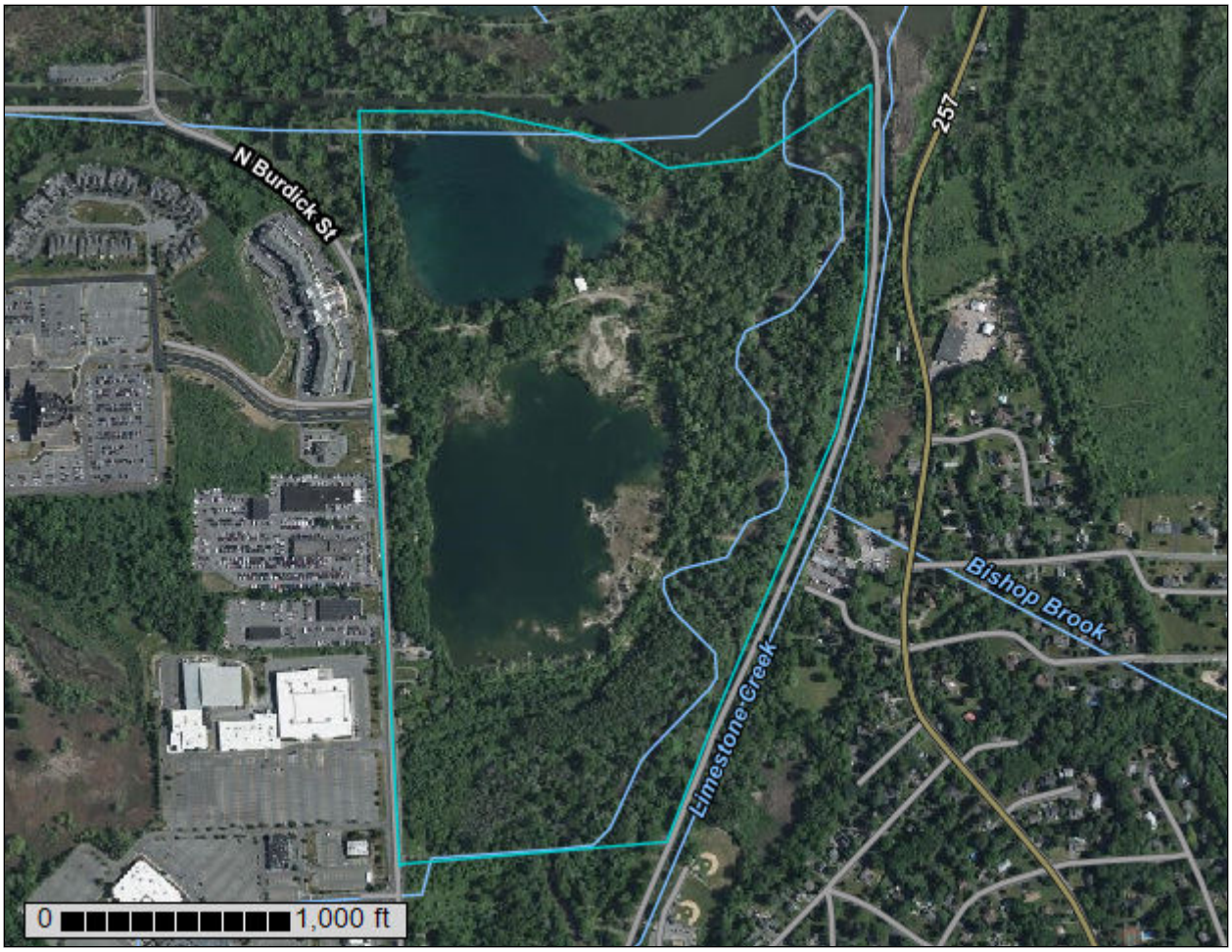
NRCS INFORMATION

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Onondaga County, New York



March 11, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Map Scale: 1:6,100 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

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 1:20,000.

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: Onondaga County, New York
Survey Area Data: Version 16, Sep 1, 2021

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

Date(s) aerial images were photographed: May 21, 2020—Jun 17, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CfB	Cazenovia silt loam, 2 to 8 percent slopes	6.4	4.9%
CgD	Cazenovia soils, 15 to 25 percent slopes	5.2	4.0%
Hb	Hamlin silt loam	11.5	8.7%
PG	Gravel pits	23.1	17.5%
PgB	Palmyra gravelly loam, 3 to 8 percent slopes	4.7	3.5%
Te	Teel silt loam	11.6	8.8%
W	Water	42.7	32.3%
Wn	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	26.8	20.3%
Totals for Area of Interest		**132.0**	**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.

Onondaga County, New York

CfB—Cazenovia silt loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9vg5
Elevation: 380 to 1,690 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cazenovia and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cazenovia

Setting

Landform: Till plains, reworked lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till that contains limestone with an admixture of reddish lake-laid clays or reddish clay shale

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 36 inches: silty clay loam
H3 - 36 to 60 inches: gravelly silty clay loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Ovid

Percent of map unit: 10 percent

Hydric soil rating: No

Unnamed soils

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

CgD—Cazenovia soils, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9vg8
Elevation: 390 to 1,670 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Cazenovia

Setting

Landform: Till plains, reworked lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till that contains limestone with an admixture of reddish lake-laid clays or reddish clay shale

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 36 inches: silty clay loam
H3 - 36 to 60 inches: gravelly silty clay loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

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

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

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

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

Hb—Hamlin silt loam

Map Unit Setting
National map unit symbol: 9vgz
Elevation: 360 to 1,260 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Hamlin and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hamlin

Setting
Landform: Flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Silty alluvium mainly from areas of siltstone, shale, and limestone

Typical profile
H1 - 0 to 9 inches: silt loam
H2 - 9 to 16 inches: silt loam
H3 - 16 to 41 inches: silt loam

H4 - 41 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Herkimer

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

Teel

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

Howard

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

PG—Gravel pits

Map Unit Setting

National map unit symbol: 9vgr
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Gravel pits: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Minor Components

Alton

Percent of map unit: 5 percent

Hydric soil rating: No

Galen

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

Howard

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

Wampsville

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

Fredon

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Lamson

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

PgB—Palmyra gravelly loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9vkh
Elevation: 380 to 1,410 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Palmyra

Setting

Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks

Typical profile

H1 - 0 to 14 inches: gravelly loam
H2 - 14 to 31 inches: gravelly loam
H3 - 31 to 60 inches: stratified very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Phelps

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

Arkport

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

Howard

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

Schoharie

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

Te—Teel silt loam

Map Unit Setting

National map unit symbol: 9vkv
Elevation: 600 to 1,800 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Teel

Setting

Landform: Flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Silty alluvium

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 28 inches: silt loam
H3 - 28 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

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

Minor Components

Hamlin

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

Herkimer

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

Howard

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

Wayland

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

W—Water

Map Unit Setting

National map unit symbol: 9vl1
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Wn—Wayland soils complex, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2srgv
Elevation: 160 to 1,970 feet
Mean annual precipitation: 31 to 68 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Wayland and similar soils: 60 percent
Wayland, very poorly drained, and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wayland

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 6 inches: silt loam
Bg1 - 6 to 12 inches: silt loam
Bg2 - 12 to 18 inches: silt loam
C1 - 18 to 46 inches: silt loam
C2 - 46 to 72 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F139XY009OH - Wet Floodplain
Hydric soil rating: Yes

Description of Wayland, Very Poorly Drained

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 6 inches: mucky silt loam
Bg1 - 6 to 12 inches: silt loam
Bg2 - 12 to 18 inches: silt loam
C1 - 18 to 46 inches: silt loam
C2 - 46 to 72 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F139XY009OH - Wet Floodplain
Hydric soil rating: Yes

Minor Components

Wakeville

Percent of map unit: 10 percent
Landform: Flood plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

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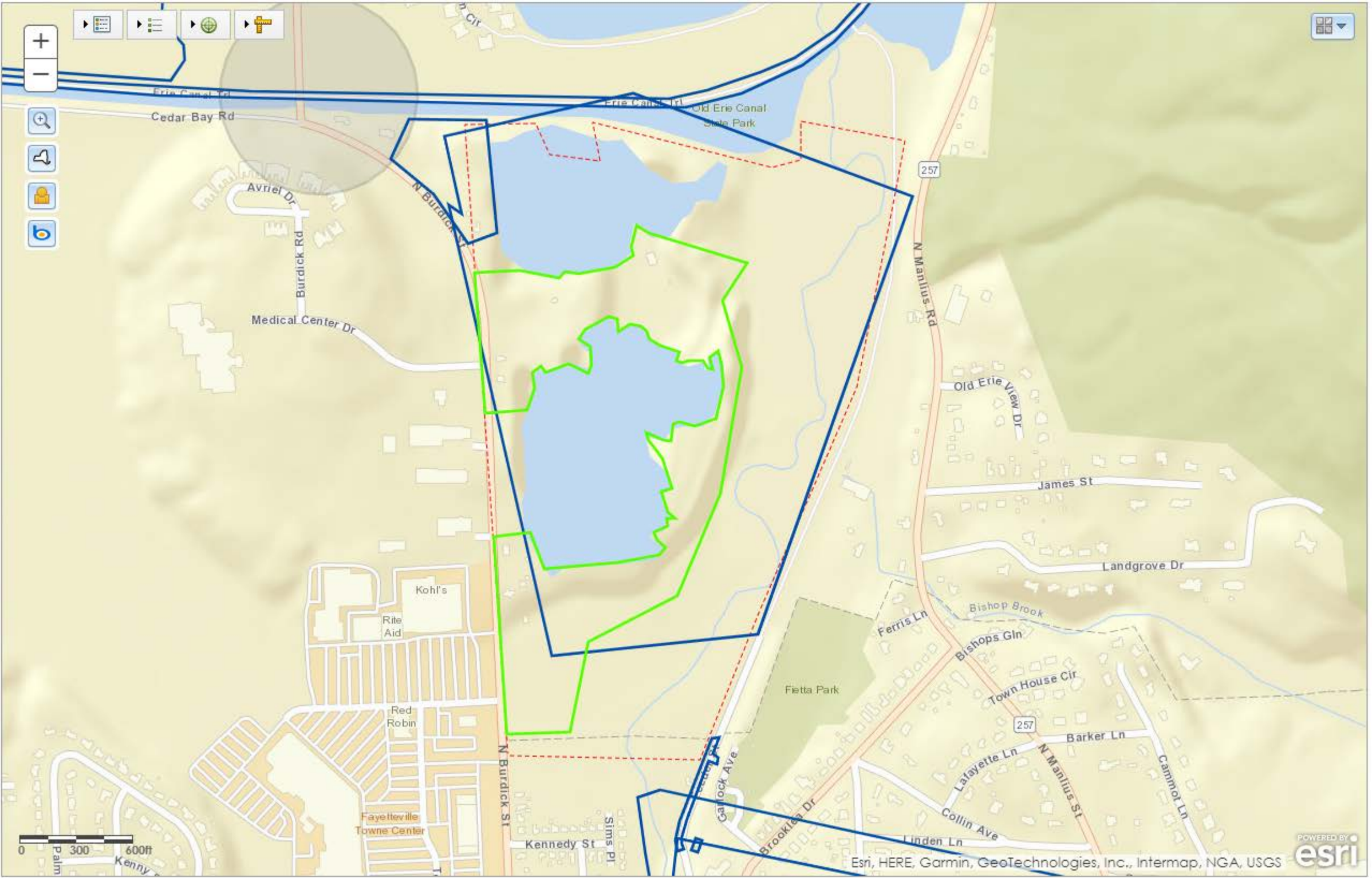
APPENDIX 3

HISTORIC PLACES OR ARCHEOLOGICAL RESOURCES


Erie Canal Trl
Cedar Bay Rd
Old Erie Canal
State Park
Avriel Dr
Burdick Rd
N Burdick St
Medical Center Dr
257
N Manlius Rd
Old Erie View Dr
James St
Landgrove Dr
Bishop Brook
Ferris Ln
Bishops Gln
Town House Cir
Fietta Park
Barker Ln
Lafayette Ln
N Manlius St
Cammot Ln
Collin Ave
Linden Ln
Brooklyn Dr
Gallock Ave
Kennedy St
Sims Pl
Kohl's
Rite Aid
Red Robin
Fayetteville Towne Center
0
300
600ft
Esri, HERE, Garmin, GeoTechnologies, Inc., Intermap, NGA, USGS
esri

Insert OPRHP Review Letter upon receipt and remove this insert

APPENDIX 4

NOTICE OF INTENT (NOI) FOR
CONSTRUCTION ACTIVITIES
&
NYSDEC
ACKNOWLEDGEMENT LETTER

Insert NYSDEC Acknowledgement Letter

upon receipt and remove this insert

APPENDIX 5

DRAINAGE CALCULATIONS
& DRAINAGE PLANS (ED-1 & PD-1)

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	76.015 degrees West
Latitude	43.040 degrees North
Elevation	0 feet
Date/Time	Thu, 21 Apr 2022 14:20:05 -0400

Extreme Precipitation Estimates

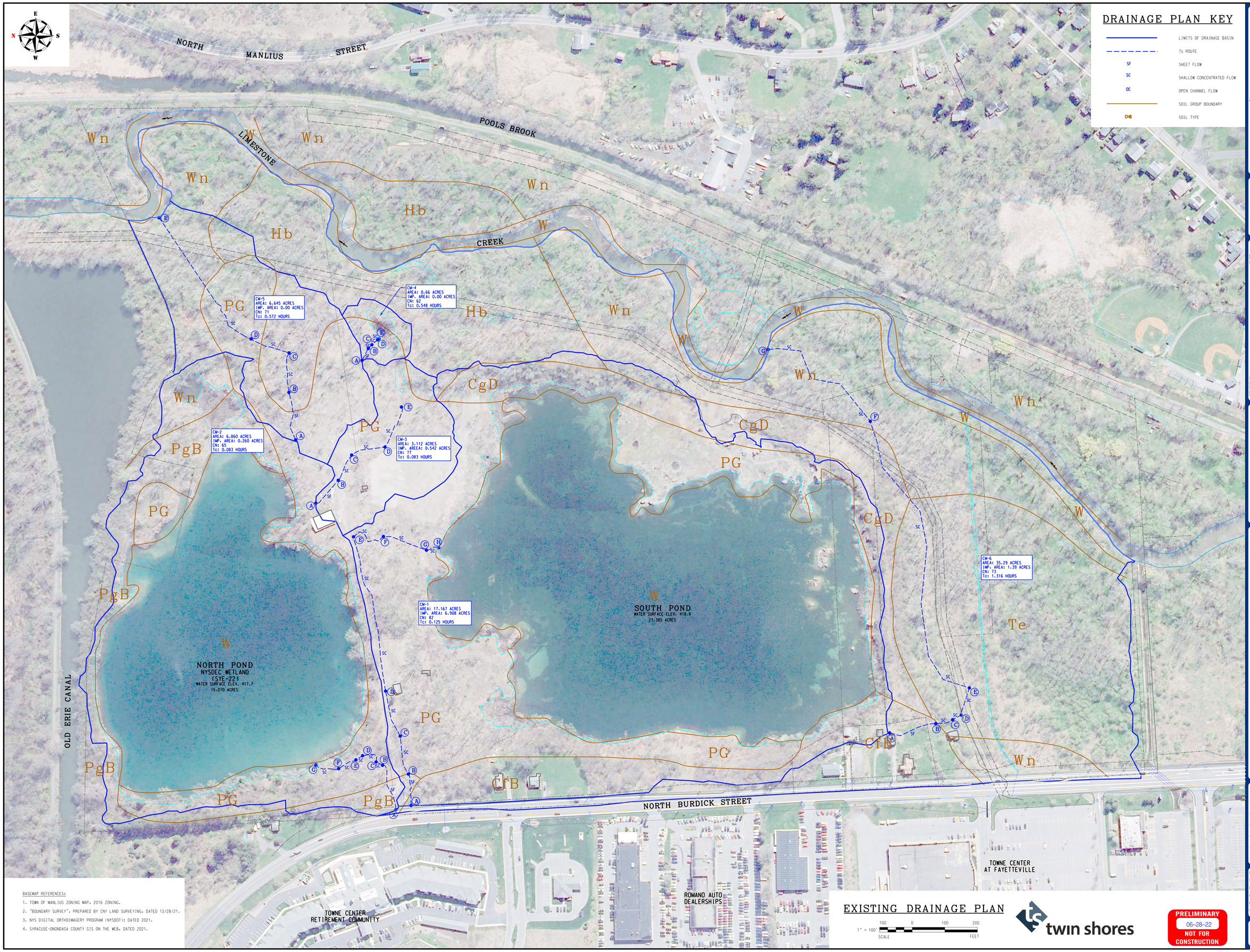
	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.70	0.87	1.07	**1yr**	0.75	0.97	1.21	1.46	1.73	2.05	2.29	**1yr**	1.81	2.20	2.63	3.17	3.69	**1yr**
2yr	0.33	0.50	0.63	0.83	1.04	1.28	**2yr**	0.90	1.16	1.45	1.73	2.04	2.39	2.69	**2yr**	2.11	2.58	3.03	3.64	4.21	**2yr**
5yr	0.39	0.61	0.76	1.02	1.31	1.62	**5yr**	1.13	1.44	1.83	2.17	2.54	2.93	3.32	**5yr**	2.60	3.19	3.71	4.38	5.00	**5yr**
10yr	0.44	0.70	0.88	1.20	1.56	1.93	**10yr**	1.34	1.69	2.19	2.59	3.00	3.43	3.89	**10yr**	3.04	3.74	4.34	5.04	5.70	**10yr**
25yr	0.53	0.84	1.07	1.48	1.96	2.44	**25yr**	1.69	2.10	2.76	3.25	3.73	4.22	4.82	**25yr**	3.73	4.63	5.33	6.08	6.78	**25yr**
50yr	0.60	0.96	1.24	1.74	2.34	2.93	**50yr**	2.02	2.47	3.32	3.87	4.41	4.94	5.66	**50yr**	4.37	5.45	6.22	7.00	7.73	**50yr**
100yr	0.70	1.13	1.45	2.06	2.80	3.50	**100yr**	2.42	2.92	3.96	4.60	5.21	5.78	6.66	**100yr**	5.12	6.40	7.28	8.06	8.82	**100yr**
200yr	0.80	1.30	1.69	2.42	3.35	4.19	**200yr**	2.89	3.45	4.73	5.47	6.15	6.77	7.84	**200yr**	5.99	7.54	8.51	9.28	10.06	**200yr**
500yr	0.97	1.60	2.09	3.03	4.24	5.32	**500yr**	3.66	4.31	5.98	6.87	7.65	8.35	9.73	**500yr**	7.39	9.35	10.48	11.20	11.99	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.25	0.38	0.46	0.63	0.77	0.88	**1yr**	0.66	0.86	0.92	1.10	1.40	1.65	2.04	**1yr**	1.46	1.96	2.39	2.78	3.32	**1yr**
2yr	0.32	0.49	0.61	0.82	1.02	1.14	**2yr**	0.88	1.11	1.27	1.56	1.90	2.32	2.61	**2yr**	2.06	2.51	2.93	3.55	4.10	**2yr**
5yr	0.36	0.55	0.68	0.94	1.19	1.35	**5yr**	1.03	1.32	1.49	1.86	2.27	2.72	3.08	**5yr**	2.41	2.96	3.46	4.10	4.70	**5yr**
10yr	0.39	0.60	0.74	1.04	1.34	1.50	**10yr**	1.16	1.47	1.68	2.08	2.54	3.06	3.47	**10yr**	2.71	3.34	3.90	4.55	5.19	**10yr**
25yr	0.44	0.66	0.83	1.18	1.55	1.73	**25yr**	1.34	1.69	1.97	2.41	2.93	3.54	4.04	**25yr**	3.13	3.88	4.56	5.21	5.94	**25yr**
50yr	0.46	0.71	0.88	1.26	1.70	1.92	**50yr**	1.47	1.87	2.21	2.67	3.25	3.94	4.50	**50yr**	3.49	4.33	5.12	5.78	6.55	**50yr**
100yr	0.50	0.76	0.95	1.38	1.89	2.31	**100yr**	1.63	2.26	2.49	2.96	3.60	4.36	5.01	**100yr**	3.86	4.82	5.75	6.38	7.24	**100yr**
200yr	0.54	0.82	1.03	1.50	2.09	2.63	**200yr**	1.80	2.57	2.78	3.27	3.98	4.83	5.58	**200yr**	4.27	5.37	6.44	7.03	7.98	**200yr**
500yr	0.84	1.25	1.61	2.34	3.33	3.13	**500yr**	2.87	3.06	3.21	3.74	4.55	5.50	6.40	**500yr**	4.87	6.16	7.46	7.96	9.09	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	



DRAINAGE PLAN KEY

	LIMITS OF DRAINAGE BASIN
	Tc ROUTE
SF	SHEET FLOW
SC	SHALLOW CONCENTRATED FLOW
OC	OPEN CHANNEL FLOW
	SOIL GROUP BOUNDARY
CnB	SOIL TYPE

BASEMAP REFERENCES:

1. TOWN OF MANLIUS ZONING MAP. 2016 ZONING.
2. "BOUNDARY SURVEY". PREPARED BY CNY LAND SURVEYING. DATED 12/28/21.
3. NYS DIGITAL ORTHOIMAGERY PROGRAM (NYSDOT): DATED 2021.
4. SYRACUSE-ONONDAGA COUNTY GIS ON THE WEB. DATED 2021.

EXISTING DRAINAGE PLAN

1" = 100' SCALE — 100 0 100 200 FEET

twin shores

PRELIMINARY
06-28-22
NOT FOR CONSTRUCTION

TDK Engineering Associates, PC
19 Genesee Street · Camillus, New York 13031 · PH (315) 672-8726 · FX (315) 672-8732
Civil • Marine • Site Development • Geotechnical • Structural • Environmental • Industrial • Lighting

DATE:

REVISIONS:

NOTE: NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE N.Y. CODE OF EDUCATION LAW.

PROJECT: TWIN LAKES MULTI-USE DEVELOPMENT

CLIENT: TWIN SHORES PROPERTIES, LLC

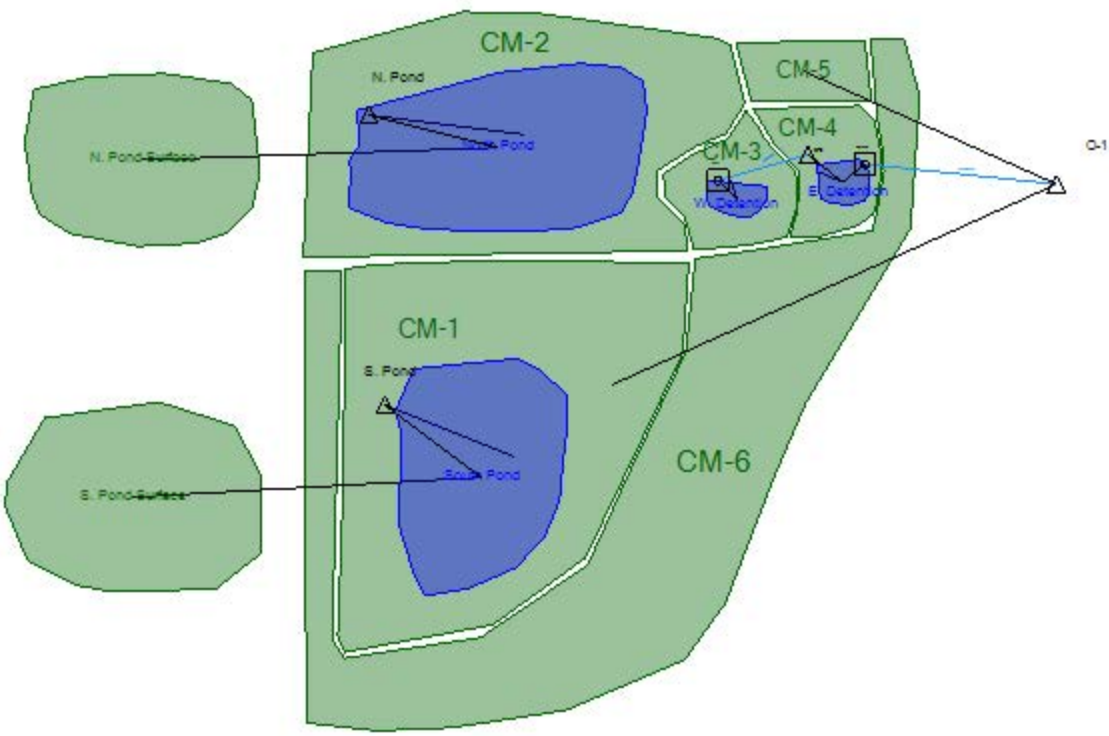
LOCATION: N. BURRIC STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

DRAWING TITLE: EXISTING DRAINAGE PLAN

PROJECT No.:	2021054
SCALE:	1" = 100'
DATE:	
ENG'D BY:	SKO
DRAWN BY:	NAR/DKC
CHECKED BY:	JED

SHEET NO. ED-1

Scenario: Pre-Development 1-yr, 24-hr



Project Summary	
Title	2021054 - Twin Shores - N. Burdick (Existing Conditions)
Engineer	SKO
Company	TDK Engineering Associates. P.C.
Date	4/28/2022

Notes	Existing Conditions

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Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
CM-6	Pre-Development 1-yr, 24-hr	1	0.976	12.850	3.75
CM-6	Pre-Development 2-yr, 24-hr	2	1.454	12.800	6.19
CM-6	Pre-Development 5-yr, 24-hr	5	2.334	12.800	10.89
CM-6	Pre-Development 10-yr, 24-hr	10	3.253	12.800	15.86
CM-6	Pre-Development 25-yr, 24-hr	25	4.854	12.800	24.52
CM-6	Pre-Development 50-yr, 24-hr	50	6.435	12.800	33.00
CM-6	Pre-Development 100-yr, 24-hr	100	8.385	12.650	43.52
CM-1	Pre-Development 1-yr, 24-hr	1	0.973	12.000	16.36
CM-1	Pre-Development 2-yr, 24-hr	2	1.311	11.950	22.52
CM-1	Pre-Development 5-yr, 24-hr	5	1.891	11.950	33.00
CM-1	Pre-Development 10-yr, 24-hr	10	2.464	11.950	43.21
CM-1	Pre-Development 25-yr, 24-hr	25	3.417	11.950	59.92
CM-1	Pre-Development 50-yr, 24-hr	50	4.322	11.950	75.51
CM-1	Pre-Development 100-yr, 24-hr	100	5.407	11.950	93.91
CM-2	Pre-Development 1-yr, 24-hr	1	0.085	12.000	0.74
CM-2	Pre-Development 2-yr, 24-hr	2	0.147	12.000	1.93
CM-2	Pre-Development 5-yr, 24-hr	5	0.271	12.000	4.23
CM-2	Pre-Development 10-yr, 24-hr	10	0.408	12.000	6.68
CM-2	Pre-Development 25-yr, 24-hr	25	0.661	11.950	11.51
CM-2	Pre-Development 50-yr, 24-hr	50	0.921	11.950	16.42
CM-2	Pre-Development 100-yr, 24-hr	100	1.251	11.950	22.57
N. Pond Surface	Pre-Development 1-yr, 24-hr	1	2.573	11.900	39.78
N. Pond Surface	Pre-Development 2-yr, 24-hr	2	2.999	11.900	46.38
N. Pond Surface	Pre-Development 5-yr, 24-hr	5	3.677	11.900	56.85

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
N. Pond Surface	Pre-Development 10-yr, 24-hr	10	4.304	11.900	66.56
N. Pond Surface	Pre-Development 25-yr, 24-hr	25	5.296	11.900	81.89
N. Pond Surface	Pre-Development 50-yr, 24-hr	50	6.199	11.900	95.86
N. Pond Surface	Pre-Development 100-yr, 24-hr	100	7.253	11.900	112.16
S. Pond Surface	Pre-Development 1-yr, 24-hr	1	3.992	11.900	61.73
S. Pond Surface	Pre-Development 2-yr, 24-hr	2	4.654	11.900	71.96
S. Pond Surface	Pre-Development 5-yr, 24-hr	5	5.706	11.900	88.22
S. Pond Surface	Pre-Development 10-yr, 24-hr	10	6.679	11.900	103.28
S. Pond Surface	Pre-Development 25-yr, 24-hr	25	8.218	11.900	127.07
S. Pond Surface	Pre-Development 50-yr, 24-hr	50	9.620	11.900	148.75
S. Pond Surface	Pre-Development 100-yr, 24-hr	100	11.256	11.900	174.04
CM-3	Pre-Development 1-yr, 24-hr	1	0.123	11.950	2.07
CM-3	Pre-Development 2-yr, 24-hr	2	0.174	11.950	3.04
CM-3	Pre-Development 5-yr, 24-hr	5	0.265	11.950	4.75
CM-3	Pre-Development 10-yr, 24-hr	10	0.357	11.950	6.45
CM-3	Pre-Development 25-yr, 24-hr	25	0.514	11.950	9.30
CM-3	Pre-Development 50-yr, 24-hr	50	0.666	11.900	12.06
CM-3	Pre-Development 100-yr, 24-hr	100	0.852	11.900	15.47
CM-4	Pre-Development 1-yr, 24-hr	1	0.005	12.650	0.01
CM-4	Pre-Development 2-yr, 24-hr	2	0.010	12.400	0.04
CM-4	Pre-Development 5-yr, 24-hr	5	0.020	12.350	0.12
CM-4	Pre-Development 10-yr, 24-hr	10	0.032	12.300	0.22
CM-4	Pre-Development 25-yr, 24-hr	25	0.053	12.250	0.43
CM-4	Pre-Development 50-yr, 24-hr	50	0.076	12.250	0.66

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
CM-4	Pre-Development 100-yr, 24-hr	100	0.106	12.200	0.95
CM-5	Pre-Development 1-yr, 24-hr	1	0.156	12.350	0.95
CM-5	Pre-Development 2-yr, 24-hr	2	0.239	12.300	1.69
CM-5	Pre-Development 5-yr, 24-hr	5	0.394	12.300	3.14
CM-5	Pre-Development 10-yr, 24-hr	10	0.559	12.250	4.74
CM-5	Pre-Development 25-yr, 24-hr	25	0.848	12.250	7.55
CM-5	Pre-Development 50-yr, 24-hr	50	1.137	12.250	10.33
CM-5	Pre-Development 100-yr, 24-hr	100	1.495	12.200	13.81

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
O-1	Pre-Development 1-yr, 24-hr	1	1.132	12.800	4.23
O-1	Pre-Development 2-yr, 24-hr	2	1.693	12.800	6.95
O-1	Pre-Development 5-yr, 24-hr	5	2.729	12.650	12.19
O-1	Pre-Development 10-yr, 24-hr	10	3.811	12.650	17.90
O-1	Pre-Development 25-yr, 24-hr	25	5.703	12.650	27.90
O-1	Pre-Development 50-yr, 24-hr	50	7.571	12.650	37.72
O-1	Pre-Development 100-yr, 24-hr	100	9.879	12.650	49.76

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
South Pond (IN)	Pre-Development 1-yr, 24-hr	1	4.965	11.900	74.85	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
South Pond (OUT)	Pre-Development 1-yr, 24-hr	1	0.000	0.000	0.00	419.01	4.965
South Pond (IN)	Pre-Development 2-yr, 24-hr	2	5.965	11.900	90.47	(N/A)	(N/A)
South Pond (OUT)	Pre-Development 2-yr, 24-hr	2	0.000	0.000	0.00	419.05	5.965
South Pond (IN)	Pre-Development 5-yr, 24-hr	5	7.597	11.900	115.99	(N/A)	(N/A)
South Pond (OUT)	Pre-Development 5-yr, 24-hr	5	0.000	0.000	0.00	419.12	7.597
South Pond (IN)	Pre-Development 10-yr, 24-hr	10	9.143	11.900	140.16	(N/A)	(N/A)
South Pond (OUT)	Pre-Development 10-yr, 24-hr	10	0.000	0.000	0.00	419.18	9.143
South Pond (IN)	Pre-Development 25-yr, 24-hr	25	11.635	11.900	178.99	(N/A)	(N/A)
South Pond (OUT)	Pre-Development 25-yr, 24-hr	25	0.000	0.000	0.00	419.29	11.635
South Pond (IN)	Pre-Development 50-yr, 24-hr	50	13.941	11.900	214.79	(N/A)	(N/A)
South Pond (OUT)	Pre-Development 50-yr, 24-hr	50	0.000	0.000	0.00	419.38	13.941
South Pond (IN)	Pre-Development 100-yr, 24-hr	100	16.663	11.900	256.84	(N/A)	(N/A)
South Pond (OUT)	Pre-Development 100-yr, 24-hr	100	0.000	0.000	0.00	419.50	16.663
North Pond (IN)	Pre-Development 1-yr, 24-hr	1	2.657	11.900	39.81	(N/A)	(N/A)
North Pond (OUT)	Pre-Development 1-yr, 24-hr	1	0.000	0.000	0.00	417.87	2.657

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
North Pond (IN)	Pre-Development 2-yr, 24-hr	2	3.146	11.900	47.09	(N/A)	(N/A)
North Pond (OUT)	Pre-Development 2-yr, 24-hr	2	0.000	0.000	0.00	417.91	3.146
North Pond (IN)	Pre-Development 5-yr, 24-hr	5	3.947	11.900	59.86	(N/A)	(N/A)
North Pond (OUT)	Pre-Development 5-yr, 24-hr	5	0.000	0.000	0.00	417.96	3.947
North Pond (IN)	Pre-Development 10-yr, 24-hr	10	4.713	11.900	72.20	(N/A)	(N/A)
North Pond (OUT)	Pre-Development 10-yr, 24-hr	10	0.000	0.000	0.00	418.01	4.713
North Pond (IN)	Pre-Development 25-yr, 24-hr	25	5.957	11.900	92.37	(N/A)	(N/A)
North Pond (OUT)	Pre-Development 25-yr, 24-hr	25	0.000	0.000	0.00	418.09	5.957
North Pond (IN)	Pre-Development 50-yr, 24-hr	50	7.120	11.900	111.30	(N/A)	(N/A)
North Pond (OUT)	Pre-Development 50-yr, 24-hr	50	0.000	0.000	0.00	418.16	7.120
North Pond (IN)	Pre-Development 100-yr, 24-hr	100	8.505	11.900	133.89	(N/A)	(N/A)
North Pond (OUT)	Pre-Development 100-yr, 24-hr	100	0.000	0.000	0.00	418.25	8.505
W. Detention (IN)	Pre-Development 1-yr, 24-hr	1	0.123	11.950	2.07	(N/A)	(N/A)
W. Detention (OUT)	Pre-Development 1-yr, 24-hr	1	0.000	0.000	0.00	421.33	0.123
W. Detention (IN)	Pre-Development 2-yr, 24-hr	2	0.174	11.950	3.04	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
W. Detention (OUT)	Pre-Development 2-yr, 24-hr	2	0.000	0.000	0.00	421.72	0.174
W. Detention (IN)	Pre-Development 5-yr, 24-hr	5	0.265	11.950	4.75	(N/A)	(N/A)
W. Detention (OUT)	Pre-Development 5-yr, 24-hr	5	0.000	0.000	0.00	422.34	0.265
W. Detention (IN)	Pre-Development 10-yr, 24-hr	10	0.357	11.950	6.45	(N/A)	(N/A)
W. Detention (OUT)	Pre-Development 10-yr, 24-hr	10	0.000	0.000	0.00	422.92	0.357
W. Detention (IN)	Pre-Development 25-yr, 24-hr	25	0.514	11.950	9.30	(N/A)	(N/A)
W. Detention (OUT)	Pre-Development 25-yr, 24-hr	25	0.000	0.000	0.00	423.66	0.514
W. Detention (IN)	Pre-Development 50-yr, 24-hr	50	0.666	11.900	12.06	(N/A)	(N/A)
W. Detention (OUT)	Pre-Development 50-yr, 24-hr	50	0.000	0.000	0.00	424.26	0.666
W. Detention (IN)	Pre-Development 100-yr, 24-hr	100	0.852	11.900	15.47	(N/A)	(N/A)
W. Detention (OUT)	Pre-Development 100-yr, 24-hr	100	0.000	0.000	0.00	424.90	0.852
E. Detention (IN)	Pre-Development 1-yr, 24-hr	1	0.005	12.650	0.01	(N/A)	(N/A)
E. Detention (OUT)	Pre-Development 1-yr, 24-hr	1	0.000	0.000	0.00	419.05	0.005
E. Detention (IN)	Pre-Development 2-yr, 24-hr	2	0.010	12.400	0.04	(N/A)	(N/A)
E. Detention (OUT)	Pre-Development 2-yr, 24-hr	2	0.000	0.000	0.00	419.10	0.010

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
E. Detention (IN)	Pre-Development 5-yr, 24-hr	5	0.020	12.350	0.12	(N/A)	(N/A)
E. Detention (OUT)	Pre-Development 5-yr, 24-hr	5	0.000	0.000	0.00	419.20	0.020
E. Detention (IN)	Pre-Development 10-yr, 24-hr	10	0.032	12.300	0.22	(N/A)	(N/A)
E. Detention (OUT)	Pre-Development 10-yr, 24-hr	10	0.000	0.000	0.00	419.32	0.032
E. Detention (IN)	Pre-Development 25-yr, 24-hr	25	0.053	12.250	0.43	(N/A)	(N/A)
E. Detention (OUT)	Pre-Development 25-yr, 24-hr	25	0.000	0.000	0.00	419.53	0.053
E. Detention (IN)	Pre-Development 50-yr, 24-hr	50	0.076	12.250	0.66	(N/A)	(N/A)
E. Detention (OUT)	Pre-Development 50-yr, 24-hr	50	0.000	0.000	0.00	419.76	0.076
E. Detention (IN)	Pre-Development 100-yr, 24-hr	100	0.106	12.200	0.95	(N/A)	(N/A)
E. Detention (OUT)	Pre-Development 100-yr, 24-hr	100	0.000	0.000	0.00	420.03	0.106

Subsection: Time of Concentration Calculations
Label: CM-1
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.011
Slope	0.053 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	1.76 ft/s
Segment Time of Concentration	0.016 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	120.90 ft
Is Paved?	False
Slope	0.047 ft/ft
Average Velocity	3.50 ft/s
Segment Time of Concentration	0.010 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	146.90 ft
Is Paved?	False
Slope	0.014 ft/ft
Average Velocity	1.88 ft/s
Segment Time of Concentration	0.022 hours

Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	487.90 ft
Is Paved?	False
Slope	0.025 ft/ft
Average Velocity	2.53 ft/s
Segment Time of Concentration	0.054 hours

Segment #5: TR-55 Shallow Concentrated Flow	
Hydraulic Length	118.20 ft
Is Paved?	False
Slope	0.042 ft/ft
Average Velocity	3.32 ft/s
Segment Time of Concentration	0.010 hours

Segment #6: TR-55 Shallow Concentrated Flow

Segment #6: TR-55 Shallow Concentrated Flow	
Hydraulic Length	138.80 ft
Is Paved?	False
Slope	0.036 ft/ft
Average Velocity	3.06 ft/s
Segment Time of Concentration	0.013 hours

Segment #7: TR-55 Shallow Concentrated Flow	
Hydraulic Length	40.00 ft
Is Paved?	False
Slope	0.205 ft/ft
Average Velocity	7.31 ft/s
Segment Time of Concentration	0.002 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.125 hours

==== SCS Channel Flow

Tc =

R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:

R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =

Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:

V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations
Label: CM-2
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	150.00 ft
Manning's n	0.011
Slope	0.060 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	2.00 ft/s
Segment Time of Concentration	0.021 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	22.20 ft
Is Paved?	False
Slope	0.473 ft/ft
Average Velocity	11.10 ft/s
Segment Time of Concentration	0.001 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	62.55 ft
Is Paved?	False
Slope	0.208 ft/ft
Average Velocity	7.35 ft/s
Segment Time of Concentration	0.002 hours

Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	23.80 ft
Is Paved?	False
Slope	0.231 ft/ft
Average Velocity	7.76 ft/s
Segment Time of Concentration	0.001 hours

Segment #5: TR-55 Shallow Concentrated Flow	
Hydraulic Length	60.45 ft
Is Paved?	False
Slope	0.099 ft/ft
Average Velocity	5.08 ft/s
Segment Time of Concentration	0.003 hours

Segment #6: TR-55 Shallow Concentrated Flow

Subsection: Time of Concentration Calculations
Label: CM-2
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Segment #6: TR-55 Shallow Concentrated Flow	
Hydraulic Length	75.10 ft
Is Paved?	False
Slope	0.017 ft/ft
Average Velocity	2.12 ft/s
Segment Time of Concentration	0.010 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.083 hours

==== SCS Channel Flow

Tc =

R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:

R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =

Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:

V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations
Label: CM-3
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.011
Slope	0.017 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	1.11 ft/s
Segment Time of Concentration	0.025 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	88.30 ft
Is Paved?	False
Slope	0.026 ft/ft
Average Velocity	2.61 ft/s
Segment Time of Concentration	0.009 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	106.70 ft
Is Paved?	False
Slope	0.047 ft/ft
Average Velocity	3.49 ft/s
Segment Time of Concentration	0.008 hours

Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	139.00 ft
Is Paved?	False
Slope	0.043 ft/ft
Average Velocity	3.35 ft/s
Segment Time of Concentration	0.012 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.083 hours

==== SCS Channel Flow

Tc =

R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:

R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =

Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:

V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations
Label: CM-4
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	42.30 ft
Manning's n	0.400
Slope	0.003 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.03 ft/s
Segment Time of Concentration	0.427 hours

Segment #2: TR-55 Sheet Flow	
Hydraulic Length	16.30 ft
Manning's n	0.400
Slope	0.119 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.10 ft/s
Segment Time of Concentration	0.047 hours

Segment #3: TR-55 Sheet Flow	
Hydraulic Length	23.80 ft
Manning's n	0.400
Slope	0.126 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.11 ft/s
Segment Time of Concentration	0.063 hours

Segment #4: TR-55 Sheet Flow	
Hydraulic Length	5.60 ft
Manning's n	0.400
Slope	0.536 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.14 ft/s
Segment Time of Concentration	0.011 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.548 hours

==== SCS Channel Flow

Tc = R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations
Label: CM-5
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	150.00 ft
Manning's n	0.400
Slope	0.034 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.09 ft/s
Segment Time of Concentration	0.462 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	123.90 ft
Is Paved?	False
Slope	0.042 ft/ft
Average Velocity	3.31 ft/s
Segment Time of Concentration	0.010 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	124.30 ft
Is Paved?	False
Slope	0.014 ft/ft
Average Velocity	1.88 ft/s
Segment Time of Concentration	0.018 hours

Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	481.90 ft
Is Paved?	False
Slope	0.011 ft/ft
Average Velocity	1.65 ft/s
Segment Time of Concentration	0.081 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.572 hours

==== SCS Channel Flow

Tc =

R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:

R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =

Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:

V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations
Label: CM-6
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	150.00 ft
Manning's n	0.800
Slope	0.072 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.07 ft/s
Segment Time of Concentration	0.599 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	67.60 ft
Is Paved?	False
Slope	0.034 ft/ft
Average Velocity	2.96 ft/s
Segment Time of Concentration	0.006 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	29.98 ft
Is Paved?	False
Slope	0.533 ft/ft
Average Velocity	11.78 ft/s
Segment Time of Concentration	0.001 hours

Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	86.80 ft
Is Paved?	False
Slope	0.027 ft/ft
Average Velocity	2.67 ft/s
Segment Time of Concentration	0.009 hours

Segment #5: TR-55 Shallow Concentrated Flow	
Hydraulic Length	941.30 ft
Is Paved?	False
Slope	0.001 ft/ft
Average Velocity	0.43 ft/s
Segment Time of Concentration	0.613 hours

Segment #6: TR-55 Shallow Concentrated Flow

Subsection: Time of Concentration Calculations
Label: CM-6
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Segment #6: TR-55 Shallow Concentrated Flow	
Hydraulic Length	427.75 ft
Is Paved?	False
Slope	0.007 ft/ft
Average Velocity	1.35 ft/s
Segment Time of Concentration	0.088 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	1.316 hours

==== SCS Channel Flow

Tc =

R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:

R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =

Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:

V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Runoff CN-Area
Label: CM-1
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Brush - brush, weed, grass mix - good - Soil C	65.000	1.459	0.0	0.0	65.000
Woods - good - Soil C	70.000	1.784	0.0	0.0	70.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	0.494	0.0	0.0	74.000
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	0.196	0.0	0.0	98.000
Woods - good - Soil D	77.000	0.927	0.0	0.0	77.000
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	6.712	0.0	0.0	98.000
Brush - brush, weed, grass mix - good - Soil D	73.000	5.595	0.0	0.0	73.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	17.167	(N/A)	(N/A)	82.313

Subsection: Runoff CN-Area
Label: CM-2
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil A	98.000	0.099	0.0	0.0	98.000
Brush - brush, weed, grass mix - good - Soil A	30.000	1.699	0.0	0.0	30.000
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	0.161	0.0	0.0	98.000
Woods - good - Soil D	77.000	2.498	0.0	0.0	77.000
Brush - brush, weed, grass mix - good - Soil D	73.000	2.403	0.0	0.0	73.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	6.860	(N/A)	(N/A)	64.754

Subsection: Runoff CN-Area
Label: CM-3
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	0.542	0.0	0.0	98.000
Brush - brush, weed, grass mix - good - Soil D	73.000	2.570	0.0	0.0	73.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	3.112	(N/A)	(N/A)	77.354

Subsection: Runoff CN-Area
Label: CM-4
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Brush - brush, weed, grass mix - good - Soil B	48.000	0.295	0.0	0.0	48.000
Brush - brush, weed, grass mix - good - Soil D	73.000	0.365	0.0	0.0	73.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	0.660	(N/A)	(N/A)	61.826

Subsection: Runoff CN-Area
Label: CM-5
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Brush - brush, weed, grass mix - good - Soil D	73.000	1.856	0.0	0.0	73.000
Woods - good - Soil B	55.000	1.464	0.0	0.0	55.000
Woods - good - Soil D	77.000	3.325	0.0	0.0	77.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	6.645	(N/A)	(N/A)	71.036

Subsection: Runoff CN-Area
Label: CM-6
Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	1.390	0.0	0.0	98.000
Brush - brush, weed, grass mix - good - Soil C	65.000	1.330	0.0	0.0	65.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	0.069	0.0	0.0	74.000
Woods - good - Soil B	55.000	6.426	0.0	0.0	55.000
Woods - good - Soil C	70.000	2.484	0.0	0.0	70.000
Woods - good - Soil D	77.000	23.593	0.0	0.0	77.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	35.292	(N/A)	(N/A)	72.871

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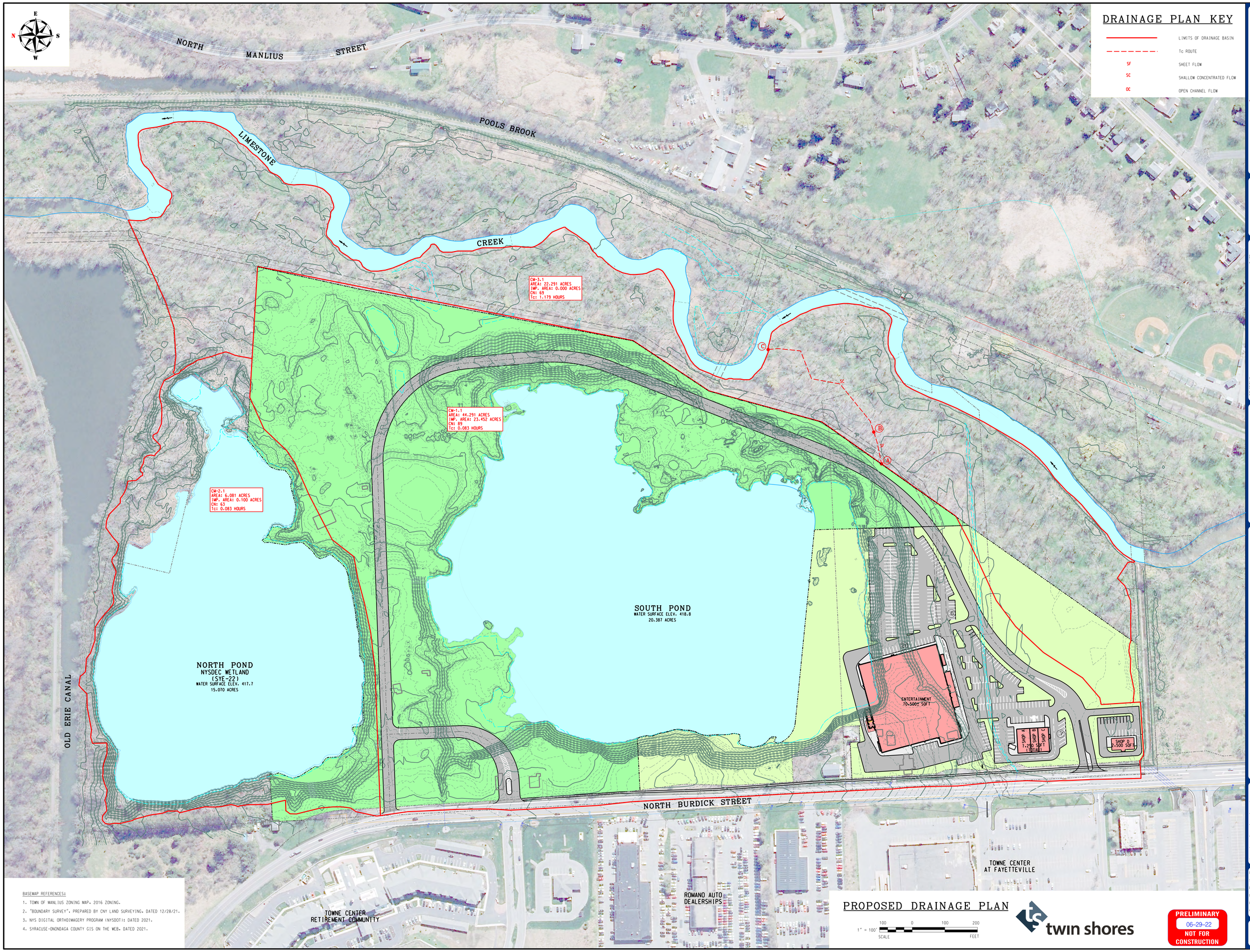

DRAINAGE PLAN KEY

———	LIMITS OF DRAINAGE BASIN
- - - - -	Tc ROUTE
SF	SHEET FLOW
SC	SHALLOW CONCENTRATED FLOW
OC	OPEN CHANNEL FLOW

BASEMAP REFERENCES:

1. TOWN OF MANLIUS ZONING MAP, 2016 ZONING.
2. "BOUNDARY SURVEY", PREPARED BY CNY LAND SURVEYING, DATED 12/28/21.
3. NYS DIGITAL ORTHOIMAGERY PROGRAM (NYSDOT): DATED 2021.
4. SYRACUSE-ONONDAGA COUNTY GIS ON THE WEB, DATED 2021.

PROPOSED DRAINAGE PLAN

1" = 100'
100 0 100 200
SCALE FEET

twin shores

PRELIMINARY
06-29-22
NOT FOR CONSTRUCTION

TDK Engineering Associates, PC
19 Genesee Street • Camillus, New York 13031 • PH (315) 672-8726 • FX (315) 672-8732
Civil • Marine • Site Development • Geotechnical • Structural • Environmental • Industrial • Lighting

REVISIONS: DATE:

NOTES: 1. ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209, SUBDIVISION 2 OF NYS EDUCATION LAW.

PROJECT: TWIN LAKES MULTI-USE DEVELOPMENT
CLIENT: TWIN SHORES PROPERTIES, LLC
LOCATION: N. BURKIG STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

DRAWING TITLE: PROPOSED DRAINAGE PLAN

PROJECT No.: 2021054
SCALE: 1" = 100'
DATE:
ENG'D BY: SKO
DRAWN BY: NAR/DKC
CHECKED BY: JED

SHEET NO. PD-1

Project Summary	
Title	2021054 - Twin Lakes - N. Burdick (Proposed Conditions)
Engineer	SKO
Company	TDK Engineering Associates. P.C.
Date	6/28/2022

Notes	Proposed Conditions

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Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
CM-1.1	Post-Development 1-yr, 24-hr	1	3.943	11.900	71.34
CM-1.1	Post-Development 10-yr, 24-hr	10	8.453	11.900	152.89
CM-1.1	Post-Development 100-yr, 24-hr	100	16.677	11.900	294.31
CM-2.1	Post-Development 1-yr, 24-hr	1	0.057	12.050	0.35
CM-2.1	Post-Development 10-yr, 24-hr	10	0.316	12.000	5.07
CM-2.1	Post-Development 100-yr, 24-hr	100	1.024	11.950	18.37
CM-3.1	Post-Development 1-yr, 24-hr	1	0.422	12.900	1.44
CM-3.1	Post-Development 10-yr, 24-hr	10	1.655	12.700	8.21
CM-3.1	Post-Development 100-yr, 24-hr	100	4.634	12.600	25.75
So. Pond Storage	Post-Development 1-yr, 24-hr	1	3.480	11.900	53.81
So. Pond Storage	Post-Development 10-yr, 24-hr	10	5.823	11.900	90.04
So. Pond Storage	Post-Development 100-yr, 24-hr	100	9.813	11.900	151.73
No. Pond Storage	Post-Development 1-yr, 24-hr	1	2.573	11.900	39.78
No. Pond Storage	Post-Development 10-yr, 24-hr	10	4.304	11.900	66.56
No. Pond Storage	Post-Development 100-yr, 24-hr	100	7.253	11.900	112.16

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
O-1	Post-Development 1-yr, 24-hr	1	0.422	12.900	1.44
O-1	Post-Development 10-yr, 24-hr	10	1.655	12.700	8.21
O-1	Post-Development 100-yr, 24-hr	100	4.634	12.600	25.75

Pond Summary

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
So. Pond (IN)	Post-Development 1-yr, 24-hr	1	7.423	11.900	125.16	(N/A)	(N/A)
So. Pond (OUT)	Post-Development 1-yr, 24-hr	1	0.000	0.000	0.00	419.11	7.423
So. Pond (IN)	Post-Development 10-yr, 24-hr	10	14.276	11.900	242.93	(N/A)	(N/A)
So. Pond (OUT)	Post-Development 10-yr, 24-hr	10	0.000	0.000	0.00	419.40	14.276
So. Pond (IN)	Post-Development 100-yr, 24-hr	100	26.489	11.900	446.04	(N/A)	(N/A)
So. Pond (OUT)	Post-Development 100-yr, 24-hr	100	0.000	0.000	0.00	419.90	26.489
No. Pond (IN)	Post-Development 1-yr, 24-hr	1	2.630	11.900	39.78	(N/A)	(N/A)
No. Pond (OUT)	Post-Development 1-yr, 24-hr	1	0.000	0.000	0.00	417.87	2.630
No. Pond (IN)	Post-Development 10-yr, 24-hr	10	4.621	11.900	70.52	(N/A)	(N/A)
No. Pond (OUT)	Post-Development 10-yr, 24-hr	10	0.000	0.000	0.00	418.00	4.621
No. Pond (IN)	Post-Development 100-yr, 24-hr	100	8.278	11.900	129.63	(N/A)	(N/A)
No. Pond (OUT)	Post-Development 100-yr, 24-hr	100	0.000	0.000	0.00	418.24	8.278

Subsection: Time of Concentration Calculations
Label: CM-3.1
Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.800
Slope	0.008 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.03 ft/s
Segment Time of Concentration	1.065 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	462.70 ft
Is Paved?	False
Slope	0.005 ft/ft
Average Velocity	1.13 ft/s
Segment Time of Concentration	0.114 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	1.179 hours

==== SCS Channel Flow

Tc =

R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:

R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =

Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:

V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Runoff CN-Area
Label: CM-1.1
Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	23.452	0.0	0.0	98.000
Woods - good - Soil C	70.000	0.900	0.0	0.0	70.000
Woods - good - Soil D	77.000	1.009	0.0	0.0	77.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil D	80.000	18.930	0.0	0.0	80.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	44.291	(N/A)	(N/A)	89.259

Subsection: Runoff CN-Area
Label: CM-2.1
Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	0.100	0.0	0.0	98.000
Woods - good - Soil D	77.000	2.498	0.0	0.0	77.000
Brush - brush, weed, grass mix - good - Soil A	30.000	1.699	0.0	0.0	30.000
Brush - brush, weed, grass mix - good - Soil D	73.000	1.784	0.0	0.0	73.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	6.081	(N/A)	(N/A)	63.040

Subsection: Runoff CN-Area
Label: CM-3.1
Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years
Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Brush - brush, weed, grass mix - good - Soil C	65.000	1.330	0.0	0.0	65.000
Woods - good - Soil B	55.000	6.426	0.0	0.0	55.000
Woods - good - Soil C	70.000	2.484	0.0	0.0	70.000
Woods - good - Soil D	77.000	12.051	0.0	0.0	77.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	22.291	(N/A)	(N/A)	69.162

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C

CM-1.1 (Runoff CN-Area, 1 years (Post-Development 1-yr, 24-hr))...6

CM-2.1 (Runoff CN-Area, 1 years (Post-Development 1-yr, 24-hr))...7

CM-3.1 (Runoff CN-Area, 1 years (Post-Development 1-yr, 24-hr))...8

CM-3.1 (Time of Concentration Calculations, 1 years (Post-Development 1-yr, 24-hr))...4, 5

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Master Network Summary...2, 3

APPENDIX 6

CONSTRUCTION INSPECTION CHECKLIST(S)

Bioretention Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility area cleared		
If designed as exfilter, soil testing for permeability		
Facility location staked out		
2. Excavation		
Size and location		
Lateral slopes completely level		
If designed as exfilter, ensure that excavation does not compact susoils.		
Longitudinal slopes within design range		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
3. Structural Components		
Stone diaphragm installed correctly		
Outlets installed correctly		
Underdrain		
Pretreatment devices installed		
Soil bed composition and texture		
4. Vegetation		
Complies with planting specs		
Topsoil adequate in composition and placement		
Adequate erosion control measures in place		
5. Final Inspection		
Dimensions		
Proper stone diaphragm		
Proper outlet		
Soil/ filter bed permeability testing		
Effective stand of vegetation and stabilization		
Construction generated sediments removed		
Contributing watershed stabilized before flow is diverted to the practice		

Comments:

Actions to be Taken:

Open Channel System Construction Inspection Checklist

Project: _____
Location: _____
Site Status: _____

Date: _____

Time: _____

Inspector: _____

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility location staked out		
2. Excavation		
Size and location		
Side slope stable		
Soil permeability		
Groundwater / bedrock		
Lateral slopes completely level		
Longitudinal slopes within design range		
Excavation does not compact subsoils		
3. Check dams		
Dimensions		
Spacing		
Materials		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
4. Structural Components		
Underdrain installed correctly		
Inflow installed correctly		
Pretreatment devices installed		
5. Vegetation		
Complies with planting specifications		
Topsoil adequate in composition and placement		
Adequate erosion control measures in place		
6. Final inspection		
Dimensions		
Check dams		
Proper outlet		
Effective stand of vegetation and stabilization		
Contributing watershed stabilized before flow is routed to the factility		

Comments:

Actions to be Taken:

Stormwater/Wetland Pond Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Pre-Construction/Materials and Equipment		
Pre-construction meeting		
Pipe and appurtenances on-site prior to construction and dimensions checked		
1. Material (including protective coating, if specified)		
2. Diameter		
3. Dimensions of metal riser or pre-cast concrete outlet structure		
4. Required dimensions between water control structures (orifices, weirs, etc.) are in accordance with approved plans		
5. Barrel stub for prefabricated pipe structures at proper angle for design barrel slope		
6. Number and dimensions of prefabricated anti-seep collars		
7. Watertight connectors and gaskets		
8. Outlet drain valve		
Project benchmark near pond site		
Equipment for temporary de-watering		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
2. Subgrade Preparation		
Area beneath embankment stripped of all vegetation, topsoil, and organic matter		
3. Pipe Spillway Installation		
Method of installation detailed on plans		
A. Bed preparation		
Installation trench excavated with specified side slopes		
Stable, uniform, dry subgrade of relatively impervious material (If subgrade is wet, contractor shall have defined steps before proceeding with installation)		
Invert at proper elevation and grade		
B. Pipe placement		
Metal / plastic pipe		
1. Watertight connectors and gaskets properly installed		
2. Anti-seep collars properly spaced and having watertight connections to pipe		
3. Backfill placed and tamped by hand under “haunches” of pipe		
4. Remaining backfill placed in max. 8 inch lifts using small power tamping equipment until 2 feet cover over pipe is reached		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
3. Pipe Spillway Installation		
Concrete pipe		
1. Pipe set on blocks or concrete slab for pouring of low cradle		
2. Pipe installed with rubber gasket joints with no spalling in gasket interface area		
3. Excavation for lower half of anti-seep collar(s) with reinforcing steel set		
4. Entire area where anti-seep collar(s) will come in contact with pipe coated with mastic or other approved waterproof sealant		
5. Low cradle and bottom half of anti-seep collar installed as monolithic pour and of an approved mix		
6. Upper half of anti-seep collar(s) formed with reinforcing steel set		
7. Concrete for collar of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
8. Forms stripped and collar inspected for honeycomb prior to backfilling. Parge if necessary.		
C. Backfilling		
Fill placed in maximum 8 inch lifts		
Backfill taken minimum 2 feet above top of anti-seep collar elevation before traversing with heavy equipment		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Riser / Outlet Structure Installation		
Riser located within embankment		
A. Metal riser		
Riser base excavated or formed on stable subgrade to design dimensions		
Set on blocks to design elevations and plumbed		
Reinforcing bars placed at right angles and projecting into sides of riser		
Concrete poured so as to fill inside of riser to invert of barrel		
B. Pre-cast concrete structure		
Dry and stable subgrade		
Riser base set to design elevation		
If more than one section, no spalling in gasket interface area; gasket or approved caulking material placed securely		
Watertight and structurally sound collar or gasket joint where structure connects to pipe spillway		
C. Poured concrete structure		
Footing excavated or formed on stable subgrade, to design dimensions with reinforcing steel set		
Structure formed to design dimensions, with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
Forms stripped & inspected for “honeycomb” prior to backfilling; parge if necessary		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
5. Embankment Construction		
Fill material		
Compaction		
Embankment		
1. Fill placed in specified lifts and compacted with appropriate equipment		
2. Constructed to design cross-section, side slopes and top width		
3. Constructed to design elevation plus allowance for settlement		
6. Impounded Area Construction		
Excavated / graded to design contours and side slopes		
Inlet pipes have adequate outfall protection		
Forebay(s)		
Pond benches		
7. Earth Emergency Spillway Construction		
Spillway located in cut or structurally stabilized with riprap, gabions, concrete, etc.		
Excavated to proper cross-section, side slopes and bottom width		
Entrance channel, crest, and exit channel constructed to design grades and elevations		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
8. Outlet Protection		
A. End section		
Securely in place and properly backfilled		
B. Endwall		
Footing excavated or formed on stable subgrade, to design dimensions and reinforcing steel set, if specified		
Endwall formed to design dimensions with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing, if necessary)		
Forms stripped and structure inspected for "honeycomb" prior to backfilling; parge if necessary		
C. Riprap apron / channel		
Apron / channel excavated to design cross-section with proper transition to existing ground		
Filter fabric in place		
Stone sized as per plan and uniformly place at the thickness specified		
9. Vegetative Stabilization		
Approved seed mixture or sod		
Proper surface preparation and required soil amendments		
Excelsior mat or other stabilization, as per plan		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
10. Miscellaneous		
Drain for ponds having a permanent pool		
Trash rack / anti-vortex device secured to outlet structure		
Trash protection for low flow pipes, orifices, etc.		
Fencing (when required)		
Access road		
Set aside for clean-out maintenance		
11. Stormwater Wetlands		
Adequate water balance		
Variety of depth zones present		
Approved pondscaping plan in place Reinforcement budget for additional plantings		
Plants and materials ordered 6 months prior to construction		
Construction planned to allow for adequate planting and establishment of plant community (April-June planting window)		
Wetland buffer area preserved to maximum extent possible		

Comments:

Actions to be Taken:

APPENDIX 7

MAINTENANCE AND MANAGEMENT INSPECTION CHECKLIST(S)

Bioretention Operation, Maintenance and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Bioretention and contributing areas clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Plant height not less than design water depth		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
Grass height not greater than 6 inches		
No evidence of erosion		
3. Check Dams/Energy Dissipaters/Sumps (Annual, After Major Storms)		
No evidence of sediment buildup		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Sumps should not be more than 50% full of sediment		
No evidence of erosion at downstream toe of drop structure		
4. Dewatering (Monthly)		
Dewaters between storms		
No evidence of standing water		
5. Sediment Deposition (Annual)		
Swale clean of sediments		
Sediments should not be > 20% of swale design depth		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
7. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Comments:

Actions to be Taken:

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:

Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist

Project _____
Location: _____
Site Status: _____

Date: _____
Time: _____

Inspector: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
1. Embankment and emergency spillway (Annual, After Major Storms)		
1. Vegetation and ground cover adequate		
2. Embankment erosion		
3. Animal burrows		
4. Unauthorized planting		
5. Cracking, bulging, or sliding of dam		
a. Upstream face		
b. Downstream face		
c. At or beyond toe		
downstream		
upstream		
d. Emergency spillway		
6.Pond, toe & chimney drains clear and functioning		
7.Seeps/leaks on downstream face		
8.Slope protection or riprap failure		
9. Vertical/horizontal alignment of top of dam “As-Built”		

Maintenance Item	**Satisfactory/ Unsatisfactory**	**Comments**
10. Emergency spillway clear of obstructions and debris		
11. Other (specify)		
2. Riser and principal spillway (Annual)		
Type: Reinforced concrete _____ Corrugated pipe _____ Masonry _____ 1. Low flow orifice obstructed		
2. Low flow trash rack. a. Debris removal necessary		
b. Corrosion control		
3. Weir trash rack maintenance a. Debris removal necessary		
b. corrosion control		
4. Excessive sediment accumulation insider riser		
5. Concrete/masonry condition riser and barrels a. cracks or displacement		
b. Minor spalling (<1")		
c. Major spalling (rebars exposed)		
d. Joint failures		
e. Water tightness		
6. Metal pipe condition		
7. Control valve a. Operational/exercised		
b. Chained and locked		
8. Pond drain valve a. Operational/exercised		
b. Chained and locked		
9. Outfall channels functioning		
10. Other (specify)		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
3. Permanent Pool (Wet Ponds) (monthly)		
1. Undesirable vegetative growth		
2. Floating or floatable debris removal required		
3. Visible pollution		
4. Shoreline problem		
5. Other (specify)		
4. Sediment Forebays		
1.Sedimentation noted		
2. Sediment cleanout when depth < 50% design depth		
5. Dry Pond Areas		
1. Vegetation adequate		
2. Undesirable vegetative growth		
3. Undesirable woody vegetation		
4. Low flow channels clear of obstructions		
5. Standing water or wet spots		
6. Sediment and / or trash accumulation		
7. Other (specify)		
6. Condition of Outfalls (Annual , After Major Storms)		
1. Riprap failures		
2. Slope erosion		
3. Storm drain pipes		
4.Endwalls / Headwalls		
5. Other (specify)		
7. Other (Monthly)		
1. Encroachment on pond, wetland or easement area		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
2. Complaints from residents		
3.Aesthetics a. Grass growing required		
b. Graffiti removal needed		
c. Other (specify)		
4. Conditions of maintenance access routes.		
5. Signs of hydrocarbon build-up		
6. Any public hazards (specify)		
8. Wetland Vegetation (Annual)		
1. Vegetation healthy and growing Wetland maintaining 50% surface area coverage of wetland plants after the second growing season. (If unsatisfactory, reinforcement plantings needed)		
2. Dominant wetland plants: Survival of desired wetland plant species Distribution according to landscaping plan?		
3. Evidence of invasive species		
4. Maintenance of adequate water depths for desired wetland plant species		
5. Harvesting of emergent plantings needed		
6. Have sediment accumulations reduced pool volume significantly or are plants “choked” with sediment		
7. Eutrophication level of the wetland.		
8. Other (specify)		

Comments:

Actions to be Taken:

APPENDIX 8

STORMWATER DURATION INSPECTIONS

TDK Project Number: _____

Inspections:

Regular ☐ Rainfall ☐

SITE PLAN/SKETCH

_____ _____

Inspector (print name) **Date of Inspection**

_____ _____

Qualified Professional (print name) **Qualified Professional Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality

Yes No NA
[ ] [ ] [ ] Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ] [ ] [ ] Is there residue from oil and floating substances, visible oil film, or globules or grease?
[ ] [ ] [ ] All disturbance is within the limits of the approved plans.
[ ] [ ] [ ] Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions
Yes No NA
[ ] [ ] [ ] Is construction site litter and debris appropriately managed?
[ ] [ ] [ ] Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ] [ ] [ ] Is construction impacting the adjacent property?
[ ] [ ] [ ] Is dust adequately controlled?

2. Temporary Stream Crossing
Yes No NA
[ ] [ ] [ ] Maximum diameter pipes necessary to span creek without dredging are installed.
[ ] [ ] [ ] Installed non-woven geotextile fabric beneath approaches.
[ ] [ ] [ ] Is fill composed of aggregate (no earth or soil)?
[ ] [ ] [ ] Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

Runoff Control Practices

1. Excavation Dewatering
Yes No NA
[ ] [ ] [ ] Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
[ ] [ ] [ ] Clean water from upstream pool is being pumped to the downstream pool.
[ ] [ ] [ ] Sediment laden water from work area is being discharged to a silt-trapping device.
[ ] [ ] [ ] Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader
Yes No NA
[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
[ ] [ ] [ ] Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales
Yes No NA
[ ] [ ] [ ] Installed per plan with minimum side slopes 2H:1V or flatter.
[ ] [ ] [ ] Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
[ ] [ ] [ ] Sediment-laden runoff directed to sediment trapping structure

Runoff Control Practices (continued)

4. Stone Check Dam

Yes No NA

[ ] [ ] [ ] Is channel stable? (flow is not eroding soil underneath or around the structure).
[ ] [ ] [ ] Check is in good condition (rocks in place and no permanent pools behind the structure).
[ ] [ ] [ ] Has accumulated sediment been removed?.

5. Rock Outlet Protection

Yes No NA

[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes No NA

[ ] [ ] [ ] Stockpiles are stabilized with vegetation and/or mulch.
[ ] [ ] [ ] Sediment control is installed at the toe of the slope.

2. Revegetation

Yes No NA

[ ] [ ] [ ] Temporary seedings and mulch have been applied to idle areas.
[ ] [ ] [ ] 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Stabilized Construction Entrance

Yes No NA

[ ] [ ] [ ] Stone is clean enough to effectively remove mud from vehicles.
[ ] [ ] [ ] Installed per standards and specifications?
[ ] [ ] [ ] Does all traffic use the stabilized entrance to enter and leave site?
[ ] [ ] [ ] Is adequate drainage provided to prevent ponding at entrance?

2. Silt Fence

Yes No NA

[ ] [ ] [ ] Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
[ ] [ ] [ ] Joints constructed by wrapping the two ends together for continuous support.
[ ] [ ] [ ] Fabric buried 6 inches minimum.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.
Sediment accumulation is ___% of design capacity.

Sediment Control Practices (continued)

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

Yes No NA

[ ] [ ] [ ] Installed concrete blocks lengthwise so open ends face outward, not upward.
[ ] [ ] [ ] Placed wire screen between No. 3 crushed stone and concrete blocks.
[ ] [ ] [ ] Drainage area is 1acre or less.
[ ] [ ] [ ] Excavated area is 900 cubic feet.
[ ] [ ] [ ] Excavated side slopes should be 2:1.
[ ] [ ] [ ] 2" x 4" frame is constructed and structurally sound.
[ ] [ ] [ ] Posts 3-foot maximum spacing between posts.
[ ] [ ] [ ] Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.

Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

Yes No NA

[ ] [ ] [ ] Outlet structure is constructed per the approved plan or drawing.
[ ] [ ] [ ] Geotextile fabric has been placed beneath rock fill.

Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

Yes No NA

[ ] [ ] [ ] Basin and outlet structure constructed per the approved plan.
[ ] [ ] [ ] Basin side slopes are stabilized with seed/mulch.
[ ] [ ] [ ] Drainage structure flushed and basin surface restored upon removal of sediment basin facility.

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

CONSTRUCTION DURATION INSPECTIONS

b. Modifications to the SWPPP (To be completed as described below)

The Operator shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

Modification & Reason:

III. Monthly Summary of Site Inspection Activities

Name of Permitted Facility:	**Today's Date:**	**Reporting Month:**
Location:	**Permit Identification #:**	
Name and Telephone Number of Site Inspector:		

Date of Inspection	Regular / Rainfall based Inspection	Name of Inspector	Items of Concern

Owner/Operator Certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law."

Signature of Permittee or Duly Authorized Representative

Name of Permittee or Duly Authorized Representative Date

Duly authorized representatives must have written authorization, submitted to DEC, to sign any permit documents.

APPENDIX 9

CONTRACTOR CERTIFICATION STATEMENT

GP-0-15-002

CONTRACTOR/SUBCONTRACTOR CERTIFICATION STATEMENT

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

(Please print)

Name: _____

Title: _____

Firm name: _____

Address: _____

Phone: _____

Signature: _____ _____ Date: _____

APPENDIX 10

OWNER / OPERATOR
CERTIFICATION STATEMENT

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: _____

eNOI Submission Number: _____

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

Certification Statement - Owner/Operator

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

Owner/Operator First Name M.I. Last Name

_____

Signature

_____

Date

APPENDIX 11

SWPPP PREPARER
CERTIFICATION FORM

SWPPP Preparer Certification Form

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

Project Site Information

Project/Site Name

Owner/Operator Information

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

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.

First name MI Last Name

Signature Date

APPENDIX 12

SPDES GENERAL PERMIT

FOR

STORMWATER DISCHARGES FROM

CONSTRUCTION ACTIVITY - GP-0-20-001

APPENDIX 13

MS4 ACCEPTANCE FORM

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit

*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information
8. SWPPP Reviewed by:
9. Title/Position:
10. Date Final SWPPP Reviewed and Accepted:
IV. Regulated MS4 Information
11. Name of MS4:
12. MS4 SPDES Permit Identification Number: NYR20A
13. Contact Person:
14. Street Address:
15. City/State/Zip:
16. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

APPENDIX 14

NOTICE OF TERMINATION (NOT)

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505
(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ___ ___ ___ ___ ___ ___

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person:	4a.Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. □ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ___ ___ ___ ___ ___ ___
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? □ yes □ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? □ yes □ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? □ yes □ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

□ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? □ yes □ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:	Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued	
VII. Qualified Inspector Certification - Final Stabilization:	
I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:
VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):	
I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:
IX. Owner or Operator Certification	
I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

TOWN OF MANLIUS

DISCLOSURE AFFIDAVIT

This affidavit is a part of and must be completed and attached to every application, petition, request submitted for a *site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license* or *permit.*

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

I. David Neuman, being duly sworn, deposes and says that (s) he is:

Applicant
(applicant, petitioner, corporation officer, property owner, *etc.)*

II. That deponent has read and is familiar with the provisions of the General Municipal Law, Section 809 which states:

A. Every application, petition or request submitted for a site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provisions or any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state officer or any officer or employee of such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.

B. For the purpose of this action an officer or employee shall be deemed to have an interest in the applicant when (s)he, his/her spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them:

1) is the applicant, or
2) is an officer, director, partner or employee of the applicant, or
3) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
4) is a party to an agreement with such an applicant, express or implied, whereby (s) he may receive any payment or other benefit, whether or not for services rendered, or contingent upon the favorable approval of such application, petition or request.

C. Ownership of less than five percent (5%) of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.

D. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

III. That no Town of Manlius officer, employee or a relative of either, as defined in Section 809 General Municipal Law has any interest in this application.

-OR-

If a Town of Manlius officer, employee or relative of either as defined in Section 809 General Municipal law has any interest in this application, the full particulars are provided on an attached sheet.

Date: June 30, 20 22.

David Neuman
(Print Name)

(Signature)

Twin Shores Properties, LLC
(Entity Name)

Exec. VP of Development
By (Officer) (Title)

7120 Thorntree Hill Dr, Fayetteville, NY 13066
(Mailing Address of Applicant)

315-729-8459
(Telephone Number)

Date: _____, 20_____.

(Print Name)

(Signature)

(Entity Name)

By (Officer) (Title)

(Mailing Address of Applicant)

(Telephone Number)

ACKNOWLEDGEMENTS

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

On this 30 day of JUNE in the year 20 22, before me, the undersigned, a notary public in and for said state, personally appeared DAVE NEUMAN, _____, and _____ personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within Petition and acknowledged to me the he/she/they executed the same in his/her/their capacity, and that by his/her/their signature(s) on the Petition, the individual or the persons upon behalf of which the individual acted executed the instrument.

Notary Public

THOMAS J. CERIO
Notary Public, State of New York
Qualified in Onondaga Co. No. 02CE5059023
Commission Expires April 22, 24

CORPORATE ACKNOWLEDGEMENT

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

David Weuman, being duly sworn, deposes and says the s(he) is the Executive VP of Development of Twin Shores Properties LLC corporation named in the within Application/Petition, that s(he) has read the foregoing affidavit and knows the contents thereof; that the same is true of s(he) own knowledge, except as to those matters therein stated to be alleged upon information and belief, and as to those matters s(he) believes it to be true.

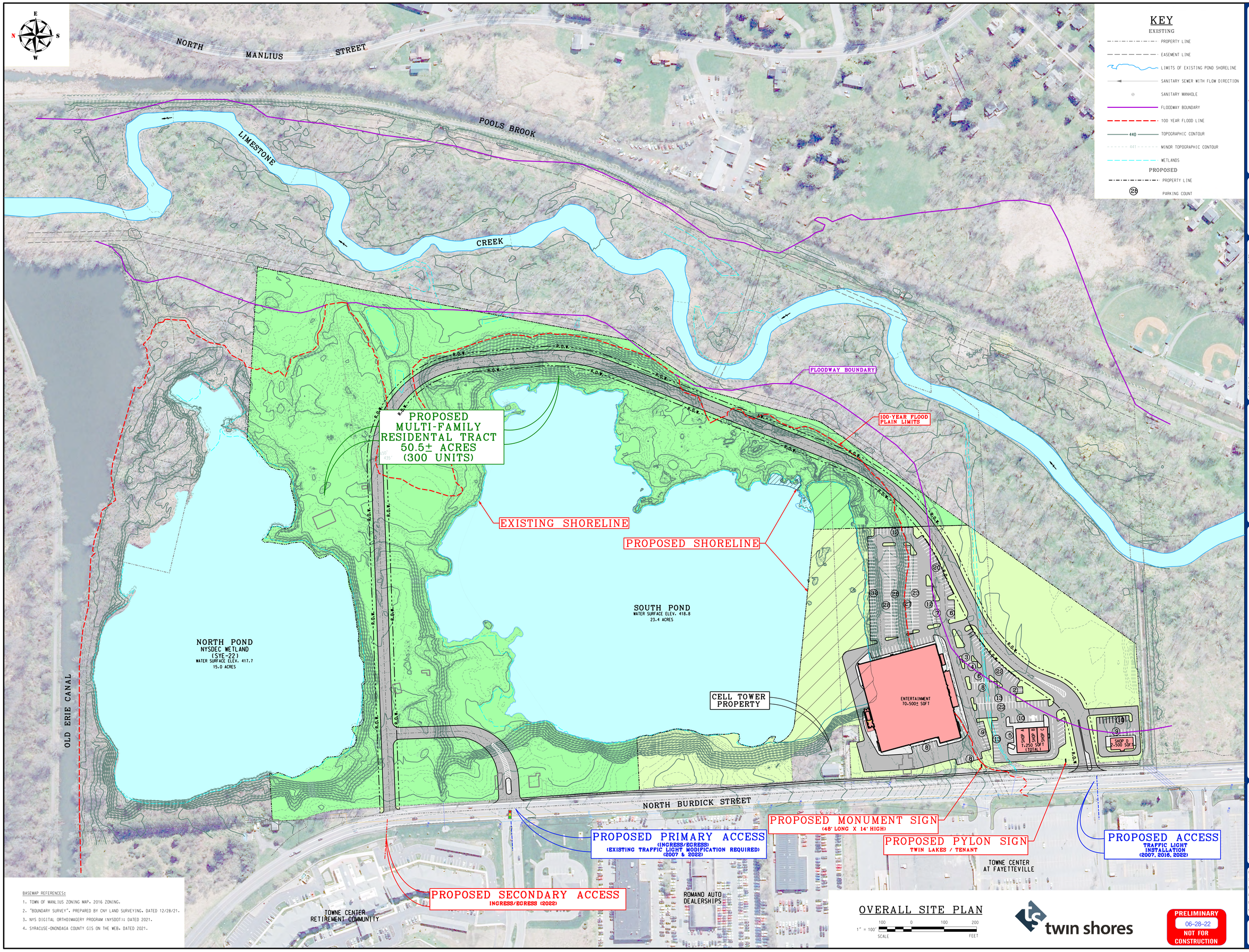
Applicant Signature

Subscribed to me before this day
Of 6/30, 2022

Notary Public

THOMAS J. CERIO
Notary Public, State of New York
Qualified in Onondaga Co. No. 02CE5059023
Commission Expires April 22, 24

06/29/16 LB



BASEMAP REFERENCES:

1. TOWN OF MANLIUS ZONING MAP, 2016 ZONING.
2. "BOUNDARY SURVEY", PREPARED BY CNY LAND SURVEYING, DATED 12/28/21.
3. NYS DIGITAL ORTHOIMAGERY PROGRAM (NYSDOT); DATED 2021.
4. SYRACUSE-ONONDAGA COUNTY GIS ON THE WEB, DATED 2021.

KEY

EXISTING

- PROPERTY LINE
- EASEMENT LINE
- LIMITS OF EXISTING POND SHORELINE
- SANITARY SEWER WITH FLOW DIRECTION
- SANITARY MANHOLE
- FLOODWAY BOUNDARY
- 100 YEAR FLOOD LINE
- 440 TOPOGRAPHIC CONTOUR
- 441 MINOR TOPOGRAPHIC CONTOUR
- WETLANDS

PROPOSED

- PROPERTY LINE
- 28 PARKING COUNT

OVERALL SITE PLAN

1" = 100' SCALE (100 0 100 200 FEET)

twin shores

PRELIMINARY 06-28-22 NOT FOR CONSTRUCTION

TDK Engineering Associates, PC
19 Genesee Street · Camillus, New York 13031 · Ph (315) 672-8726 · FX (315) 672-3722
Civil • Marine • Site Development • Geotechnical • Structural • Environmental • Industrial • Lighting

REVISIONS: DATE:

NOTE: NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE N.Y.S. EDUCATION LAW.

PROJECT: TWIN LAKES MULTI-USE DEVELOPMENT

CLIENT: TWIN SHORES PROPERTIES, LLC

LOCATION: N. BURDICK STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

DRAWING TITLE: OVERALL SITE PLAN

PROJECT No.: 2021054
SCALE: 1" = 100'
DATE:
ENG'D BY: SKO
DRAWN BY: NAR/DKC
CHECKED BY: JED

SHEET NO. OP-1

DRAFT

STORMWATER POLLUTION PREVENTION PLAN FOR CONSTRUCTION ACTIVITIES

TWIN LAKES – PROPOSED MULTI-USE DEVELOPMENT

Town of Manlius, Onondaga County, New York

Prepared for:

Twin Shores Properties, LLC
1333 13th Street
East Moline, IL 61244

Prepared by:

TDK Engineering Associates, PC
19 Genesee Street
Camillus, New York 13031
PH: (315) 672-8726
TDK Project No.: 2021054

June 30, 2022

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INTRODUCTION

Twin Shores Properties, LLC (Twin Shores) proposes to construct a mixed-use development upon a 128.9-acre parcel located on the east side of North Burdick Street (CR 94) and immediately south of the Old Erie Canal in the Town of Manlius, Onondaga County, New York. In general, the project includes the construction of approximately 300 multi-family residential units, a 70,500 square-foot theatre and two (2) commercial buildings that will be occupied by restaurant and retail establishments. This project also includes the reclamation of two (2) former quarries last used in the 1970's. Refer to the *Site Location Map* provided in *Appendix 1* and the attached *Site Plan* (*Sheet SP-1*) for additional information.

This report outlines the methodology for controlling storm water discharges from the site in accordance with the State Pollution Discharge Elimination System's (SPDES) *General Permit for Stormwater Discharges from Construction Activity* (GP-0-20-001) administered by the NYSDEC. It includes storm water design information, erosion and sediment control feature requirements, construction details, and inspection and maintenance procedures to be incorporated into the reclamation of the former quarry site.

According to the State's *Cultural Resource Information System* (*CRIS*) data base, the subject site is not located within an archeologically and culturally sensitive area. Additionally, the site was included in a previous consultation project (18PR00352) and archaeological survey (08SR58835). However, a request for project review has been submitted to the Office of Parks, Recreation and Historic Preservation's (OPRHP) in order to verify that the proposed project will not impact archeological and/or historic resources. Based upon the site's historical land use for surface mining and previously completed investigations, we anticipate that OPRHP will issue a determination of *No Impact* upon archeological and/or historic resources upon the completion of their review. Please refer to A*ppendix 3* for additional information.

PROPOSED SITE DEVELOPMENT INFORMATION

The proposed multi-family residential structures include multiple building sizes with footprints ranging from 8,250 square feet to 19,600 square feet. The proposed buildings will include a total of 300 residential units. The proposed theatre is a single-story structure with an approximate area of 70,500 square feet and two (2) proposed commercial buildings have approximate areas of 7,250 and 2,800 square feet. Related site improvements include the construction of new sanitary and storm sewers, water and natural gas distribution systems, parking and loading areas, drive aisles, and stormwater management facilities. The project will be constructed in substantial conformance with the Town of Manlius zoning ordinances and the New York State building code, as applicable.

The construction of the proposed roadway, buildings, corresponding parking areas and stormwater management practices will impact approximately 36.3 acres (27.9%) of the subject 129.8-acre property. The proposed building, roadways, drive aisles and corresponding parking areas will occupy approximately 22.2 acre (17.1%). Approximately 14.1 acres (10.8%) will be comprised of the south quarry pond, proposed stormwater management practices and landscaped lawn areas. The balance

of the site is comprised of the north quarry pond (~15.0 acres) and the Limestone Creek corridor which will remain largely undisturbed. The proposed site features and lot coverage information is provided on the enclosed *Proposed Drainage Plan* (*Sheet PD-1*).

BACKGROUND INFORMATION

Existing Conditions

The site is located adjacent to the east side of North Burdick Street and south of the Old Erie Canal State Park. Additionally, the site is bordered by Limestone Creek to the east; the Northeast Medical Center, auto dealerships and Fayetteville Towne Center located to the west and on the opposite side of North Burdick Street from the site; and vacant land, residential properties and the municipal boundary between the Town of Manlius and Village of Fayetteville to the south. Existing ground cover includes scrub brush, wooded areas, gravel haul roads and residential lawns and asphalt driveways. The subject property is occupied by two (2) residential homes, eight (8) vacant residential structures and an abandoned mining site that also generated sand and gravel spoils and areas of construction and demolition (C&D) fill. Additionally, the north and south quarry ponds occupy approximately 15.1 and 23.4 acres, respectively.

The property generally slopes from west (N. Burdick St.) to east toward Limestone Creek. Surface slopes range from 0.5% to 10% in undisturbed areas of the site; while mined embankments have slopes approaching 70%. Existing drainage patterns are generally characterized by overland flow toward the quarry ponds and Limestone Creek. Limestone Creek discharges to Chittenango Creek prior to its confluence with Oneida Lake. The proposed site improvements are located within a drainage watershed that contains six (6) sub-catchments identified as *CM-1* to *CM-6* in this report.

Sub-catchments *CM-1* and *2* direct surface runoff toward the south and north quarry ponds, respectively. The quarry ponds are isolated water bodies created during past mining operations that do not discharge to downgradient waterways (e.g., Limestone Creek or Old Erie Canal). As such, the water bodies essentially serve as retention ponds that provide surface storage of stormwater runoff with no outflow other than evaporation. Note that the surface areas of the quarry ponds were modeled as drainage sub-catchments in order to evaluate increases in the water surface elevation (WSEL) of the ponds resulting from stormwater discharges received from contributing drainage areas and the rainfall that lands directly on the surface of the ponds during storm events.

Sub-catchments *CM-3* and *4* direct surface runoff toward detention basins that were excavated during mining operations. The basins appear to have had an outlet structure(s) in the past that are currently partially buried and/or impeded by sedimentation. As such, the detention basins were modeled as inter-connected ponds having broad-crested weirs at their respective top of bank elevation. Discharge from the basins is directed toward Limestone Creek.

Sub-catchments *CM-5* and *6* are located adjacent to the west side of Limestone Creek and direct surface runoff directly to the waterway. Please refer to the *Existing Drainage Plan* (*Sheet ED-1*) provided in *Appendix 3* for additional information.

Proposed Conditions

Proposed drainage patterns will remain generally consistent with existing conditions; with the exception of surface runoff generated under proposed conditions being directed toward a network of open and closed-channel conveyance and stormwater management systems. The stormwater management system within the residential development will be comprised of a network of vegetated swales and *Dry Swales* (*Method O-1*) that will provide pre- and water quality treatment prior to discharging to the south quarry pond. Parking lots within the residential development will direct surface runoff toward a subsurface detention system located upgradient of proprietary water quality filter units that ultimately discharge to the south quarry pond. All stormwater generated by the proposed commercial properties will also be treated by the utilization of subsurface detention and water quality filters that discharge to the south quarry pond.

The quarry pond will retain the *Water Quality Volume* (WQv) and the *Channel Protection Volume* (CPv) with no off-site discharge. As such, the WQv, CPv and *Runoff Reduction Volume* (RRv) criteria are satisfied. Water quantity treatment will be provided by a discharge control structure that will reduce post-developed peak discharge rates to values less than or equal to existing conditions. Refer to the *Proposed Drainage Plan* (*Sheet PD-1*) in *Appendix 4* of this report for more information.

COMPARISON OF PRE-DEVELOPMENT AND POST-DEVELOPMENT RUNOFF CONDITIONS

Methodology

The present hydrology was compared to that of the developed conditions. This was accomplished by using a computer stormwater modeling program produced by Haestad Methods known as *Pond Pack*. The peak discharge from both conditions was calculated by using this software in conjunction with site-specific input. The Pond Pack program is based on the calculation procedure from the United States Department of Agriculture's (USDA's) *TR-55, Urban Hydrology for Small Watersheds*.

As part of this study, the Onondaga County Soil Survey, prepared by the Natural Resources Conservation Service (NRCS), was also reviewed. It indicates that approximately 8.9%, 8.7%, 3.5%, 8.8%, and 20.3% of the proposed site consists of Cazenovia silt loam (CfB and CgD), Hamlin silt loam (Hb), Palmyra gravelly loam (PgB), Teel silt loam (Te) and a Wayland soils complex (Wn), respectively. The balance of the site is occupied by gravel pits (17.5%) and surface water (32.3%).

Soils are assigned a hydrological soil group (HSG) that ranks soil types from A to D, with A having a lower potential for generating storm water runoff and a higher infiltration rate, and D having a higher runoff potential and lower infiltration rate. The Cazenovia, Hamlin and Palmyra loam series have HSG classifications of C, B and A, respectively; while the Teel and Wayland soil series have HSG classifications of D. Note that gravel pits are not assigned a HSG classification by the NRCS. As such, hydrologic calculations performed for this report assumed a HSG D classification for these areas. For additional information please refer to the soil report located in *Appendix 2*.

Rainfall data was obtained from the Northeast Regional Climate Center (NRCC) and utilized in the hydrologic calculations performed for this report. The site-specific *Extreme Precipitation Table* provided in *Appendix 5* provides precipitation estimates for each design storm.

Water Quality and Runoff Reduction Volumes

The Water Quality (WQv) and Runoff Reduction (RRv) volumes associated with the project were calculated based upon the proposed site improvements (e.g., building and parking areas) located within sub-catchment *CM-1.1*; while water quantity calculations account for existing and proposed conditions within the local drainage watershed. The WQv and RRv for the proposed project are 1.812 and 0.704 acre-feet, respectively. The entire WQv associated with the proposed site improvements and new impervious surfaces will be directed toward the south quarry pond and retained without off-site discharge. The WQv routes to an approximate water surface elevation (WSEL) of 419.05.

Water Quantity Controls

The Channel Protection Volume (CPv) is equivalent to the surface runoff volume generated by the post-developed site during the 1-year, 24-hour storm event. The proposed site's CPv of 3.943 acre-feet will be retained within the south quarry pond and route to an approximate WSEL of 419.11. The south quarry pond will also provide controlled discharge of the runoff volumes generated by the 1, 10 and 100-year storm events and satisfy the NYSDEC's Overbank Flood Control (Qp) and Extreme Flood Control (Qf) requirements. *Tables 1* and *2* provided below summarize drainage calculations for existing and proposed conditions; while *Table 3* provides a direct comparison of existing and proposed peak discharge rates.

Peak Discharge Calculation Summary

Table 1: Existing Conditions

	Existing						Watershed Total
	CM-1	CM-2	CM-3	CM-4	CM-5	CM-6	
Area – Total (acres)	17.17	6.86	3.11	0.66	6.65	35.29	69.74
Pervious	10.26	6.60	2.57	0.66	6.65	33.90	60.63
Impervious	6.91	0.26	0.54	0.00	0.00	1.39	9.10
Curve Number	82	65	77	62	71	73	
Time of Concentration (hrs)	0.125	0.083	0.083	0.548	0.572	1.316	
Runoff (acre-feet)							**At Analysis Pt. 1**
1-year/24-hour	0.973	0.085	0.123	0.005	0.156	0.976	1.132
10-year/24-hour	2.464	0.408	0.357	0.032	0.559	3.253	3.811
100-year/24-hour	5.407	1.251	0.852	0.106	1.495	8.385	9.879
Peak Discharge (cfs)							
1-year/24-hour	16.36	0.74	2.07	0.01	0.95	3.75	4.23
10-year/24-hour	43.21	6.68	6.45	0.22	4.74	15.86	17.90
100-year/24-hour	93.91	22.57	15.47	0.95	13.81	43.52	49.76

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Table 2: Proposed Conditions

	Proposed			Watershed Total
	CM-1.1	CM-2.1	CM-3.1	
Area – Total (acres)	44.29	6.08	22.29	72.66
Pervious	20.84	5.98	22.29	49.11
Impervious	23.45	0.10	0.00	23.55
Curve Number	89	63	69	
Time of Con. [Tc] (hrs)	0.083	0.083	1.179	
Runoff (acre-feet)				**Analysis Pt. 1**
1-year/24-hour	3.943	0.057	0.422	0.422
10-year/24-hour	8.453	0.316	1.655	1.655
100-year/24-hour	16.677	1.024	4.634	4.634
Peak Discharge (cfs)				
1-year/24-hour	71.34	0.35	1.44	1.44
10-year/24-hour	152.89	5.07	8.21	8.21
100-year/24-hour	294.31	18.37	25.75	25.75

Table 3: Comparison of Existing and Proposed Conditions

Storm Event	Existing (cfs)	Proposed (cfs)
1-year, 24-hour	4.23	1.44
10-year, 24-hour	17.90	8.21
100-year, 24-hour	49.76	25.75

As indicated in *Tables 1* through *3*, proposed peak discharge rates are less than, or equal to, existing conditions and satisfy both NYSDEC and Town requirements. Please refer to the drainage calculations and *PondPack* reports provided in *Appendix 5* for additional information.

Stormwater Management System

As previously mentioned, the proposed residential development areas will direct stormwater runoff toward a network of vegetated swales and *Dry Swales* (*Method O-1*) that will provide pretreatment and WQv treatment prior to discharging to the south quarry pond. Parking lots within the residential development will direct surface runoff toward a subsurface detention system located upgradient of proprietary water quality filter units that ultimately discharge to the south quarry pond. All stormwater generated by the proposed commercial properties will also be treated by the utilization of subsurface detention and water quality filters that discharge to the south quarry pond.

EROSION & SEDIMENT CONTROL REQUIREMENTS

The erosion and sediment control plan has been developed for the construction activities associated with the proposed project. Both temporary and permanent erosion and sediment control devices will be utilized to reduce the erosion potential from construction and ultimate site use, to decrease water

quality degradation and to protect downstream waterways. The means and methods provided in the erosion and sediment control plan are based upon the *New York State Standards and Specifications for Erosion and Sediment Control (July 2016)* as summarized below and presented on the *Erosion and Sediment Control Plan* and *Construction Details*.

Temporary Erosion and Sediment Control Facilities

The locations and construction specifications for the following temporary erosion and sediment control devices are shown on the erosion and sediment control plan and details:

- *Silt Fence:* Silt fencing will be placed between graded and undisturbed areas to prevent sediment from entering the undisturbed areas. Silt fence will also be placed around stockpile locations and equipment/material staging areas.
- *Stabilized Construction Entrance:* Stabilized construction entrance will prevent sediment from leaving the limits of disturbance.
- *Check Dams:* Temporary stone check dams will be constructed within ditches and swales to decrease flow velocities and allow the settlement of sediment from runoff. The check dams shall be removed upon final stabilization of the channel with vegetation.

Permanent Erosion and Sediment Control Facilities

- *Outlet Protection:* End treatments will be provided at the culvert outlets as shown on the site plan to minimize scour and erosion.
- *Surface Stabilization:* Stabilization will be accomplished with vegetation and mulch, as indicated in the landscaping specifications.

Construction Schedule and Sequence

Construction of the project is expected to begin in the spring of 2023. The general site notes and anticipated construction sequence for the site improvements consist of the following:

General Notes:

1. One (1) week prior to beginning earthwork operations, a pre-construction meeting will be held to discuss the erosion and sediment control plan.
2. Erosion and sediment control measures shall be provided prior to beginning any land disturbance activities. The devices providing protection to a given area shall not be removed until the disturbed lands in that area are stabilized.
3. No disturbed area shall remain exposed for more than 7 calendar days, except for portions of the site in which work will be continuous beyond 7 days (e.g., the building footprint). Temporary vegetation shall be provided in all areas where construction activities have ceased for greater than 7 calendar days.

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4. A trained contractor shall be on-site during all land disturbance construction activities in order to inspect the erosion and sediment control measures specified in this document and the construction drawings. Active construction zones shall be inspected daily to ensure the proper installation and maintenance of all erosion and sediment control practices. Corrective measures to address any deficiencies identified by the trained contractor shall be implemented within 24 hours.

Construction Sequence:

Site Preparation

1. Install temporary erosion and sediment control measures as indicated on the ESC plan.

Site Grading and Building Construction

1. Create equipment staging and material stockpile locations, as indicated on the ESC plan.
2. Strip and stockpile gravel surface and subgrade from proposed building footprint as needed.
   - Stockpile the removed material at the designated spoils area identified on the ESC plan.
   - Cover stockpile and provide silt fencing around the perimeter of staged spoils and/or temporarily staged piles of fill.
3. Install additional silt fence, as needed, down-gradient from localized areas of construction activities.
4. Silt fence shall be installed parallel to elevation contours.
5. Install utilities as indicated on construction drawings. Please note that material excavated from utility trenches shall be placed on the upstream side of the trench and backfilled immediately upon completion of work. Additionally, contractor shall seed, mulch and stabilize the disturbed area as soon as work is complete.
6. Construct the proposed building(s) as specified in contract documents prepared by the project architect.
7. Complete earthwork and grading operations, including placement of fill to limits indicated. Note that final grading of the stormwater management areas shall not be initiated until all upstream disturbed areas are stabilized.
8. Upon the stabilization of all upstream areas, perform final pond and bioretention filter grading and planting per specifications.
9. Continually maintain all erosion and sediment control devices during grading operations.

Restoration

1. Seed, mulch and stabilize all disturbed ground cover (i.e., lawn and detention basin areas).

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2. Install landscaping features (i.e., plants, mulch, etc.).

3. Remove temporary erosion control devices once vegetation has been established.

Inspection Procedures and Maintenance

During construction, the Owner will be responsible for inspecting and maintaining the permanent and temporary erosion control facilities. Also, areas that have been seeded will be inspected regularly after seed germination to ensure complete coverage of exposed areas.

Inspections of all devices should be completed twice per week and after each rainfall event. Repairs should be completed immediately upon discovery.

The inspections shall be performed by a "qualified inspector", as defined by the DEC's GP-0-20-001 General Permit Program. The following items shall be documented and the contractor notified of deficiencies requiring corrective action:

- *Stabilization Measures:* Disturbed areas and areas used for storage of materials that are exposed to precipitation will be inspected for evidence of, or the potential for, pollutants entering the drainage system. After the site is stabilized, inspections will be conducted at least once every month throughout the life of the project.

- *Structural Controls:* Silt fences, straw bale barriers, and all other erosion and sediment control measures identified in the plan will be inspected regularly for proper positioning, anchoring, and effectiveness in trapping sediments. Sediment will be removed from the upstream or up-slope side of the filter fabric and check dams.

- *Discharge Points:* Discharge points, as indicated in the facility's Multi-Sector industrial SPDES permit will be inspected and monitored.

- *Construction Entrances:* Locations where vehicles enter or exit the site will be inspected for evidence of off-site sediment tracking.

- Accumulated sediments in the temporary sediment basins should be removed when 50% of the storage capacity is filled with sediment, as applicable.

- Sediment around the silt fencing should be removed as needed to maintain the functionality of the devices.

- All seeded areas shall be maintained as follows:
  - Identify seeded areas with stakes, string and brightly colored flagging. Protect seeded areas until vegetation has been established.
  - Immediately re-seed areas which do not establish vegetation.
  - Submit maintenance instructions for fertilizing and lawn care.

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- To preserve the functionality of the stormwater management system, a representative of the Owner shall complete the following:
  - Inspect the drainage swales and check dams for subsidence, erosion or tree growth.
  - Coordinate the removal of any accumulated sediment within swales.
  - The inspections will be performed on a monthly basis, or more frequently as weather conditions warrant.
- The Owner will also be responsible for maintaining the lawn areas, in particular the landscaped areas of the swales.

Construction Site Wastes

The following best management practices shall be implemented to ensure proper storage and handling of construction site wastes:

- Non-hazardous construction and demolition material that is suitable for use as fill material shall be transported and placed within the designated stockpile and spoils area identified on the erosion and sediment control plan.
- Designate a waste collection area adjacent to the stockpile and spoils area or within the construction staging area for the management of construction wastes not suitable for use as clean fill material or as deemed appropriate for recycling.
- Ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible.
- Schedule waste collection to prevent the containers from overfilling.
- Clean up spills immediately. For hazardous materials, follow cleanup instructions on package. Use an absorbent material such as sawdust or kitty litter to contain the spill.
  - During the demolition phase of construction, provide extra containers and schedule more frequent pickups.
  - Collect, remove, and dispose of all construction site wastes at authorized disposal areas. A local environmental agency can be contacted to identify these disposal sites.

The following steps should be taken to ensure the proper disposal of hazardous materials:

- Local waste management authorities should be consulted about the requirements for disposing of hazardous materials.
- A hazardous waste container should be emptied and cleaned before it is disposed of to prevent leaks.

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- The original product label should never be removed from the container as it contains important safety information. Follow the manufacturer's recommended method of disposal, which should be printed on the label.
- If excess products need to be disposed of, they should never be mixed during disposal unless specifically recommended by the manufacturer.

The following practices should be used to reduce risks associated with pesticides or to reduce the amount of pesticides that come in contact with storm water:

- Follow all federal, state, and local regulations that apply to the use, handling, or disposal of pesticides.
- Do not handle the materials any more than necessary.
- Store pesticides in a dry, covered area.
- Construct curbs or dikes to contain pesticides in case of spillage.
- Follow the recommended application rates and methods.
- Have equipment and absorbent materials available in areas where pesticides are stored and used in order to contain and clean up any spills that occur.

The following management practices should be followed to reduce the contamination risk associated with petroleum products:

- Store petroleum products and fuel for vehicles in covered areas with dikes in place to contain any spills.
- Immediately contain and clean up any spills with absorbent materials.
- Have equipment available in fuel storage areas and in vehicles to contain and clean up any spills that occur.

To reduce risks of nutrient pollution the following management practices shall apply:

- Have equipment available in fuel storage areas and in vehicles to contain and clean up any spills that occur.
- Apply fertilizers at the minimum rate and to the minimum area needed.
- Work the fertilizer deeply into the soil to reduce exposure of nutrients to storm water runoff.
- Apply fertilizer at lower application rates with a higher application frequency.
- Limit hydro-seeding, which is the simultaneous application of lime and fertilizers.
- Ensure that erosion and sediment controls are in place to prevent fertilizers and sediments from being transported off-site.

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- Use detergents only as recommended, and limit their use onsite. Wash water containing detergents should not be dumped into the storm drain system—it should be directed to a sanitary sewer or be otherwise contained so that it can be treated at a wastewater treatment plant.

RECORD RETENTION

A copy of the SWPPP, signed NOI, and NYSDEC Acknowledgement letter shall be retained at the job site throughout the duration of the project. The Owner shall retain copies of the SWPPP, all reports and records of data used to complete the *Notice of Intent*, for five (5) years from the date the site is finally stabilized.

NOTICE OF TERMINATION

When the project is completed and the site has been stabilized, a *Notice of Termination* (*NOT*) shall be submitted to the NYS Department of Environmental Conservation, certifying completion and final stabilization of the project, and compliance with the approved Storm Water Pollution Plan (SWPPP).

The following general requirements must be completed prior to the submission of a *NOT*:

- The execution of a maintenance agreement with the Town of Manlius (Town) or a recorded deed covenant that ensures long-term maintenance of the post-construction stormwater practices.

- Certification from a qualified inspector that the ground surfaces have achieved final stabilization and verification that post-construction stormwater management practices have been constructed in accordance with the design specifications.

The NOT form shall be submitted to the following address:

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

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LICENSED PROFESSIONAL'S CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Date: _____
Name: Joseph Durand, P.E.
Title: President, Principal
Firm: TDK Engineering Associates, P.C.
Address: 19 Genesee Street, Camillus, New York 13031
Phone: (315) 672-8726

Signature: _____

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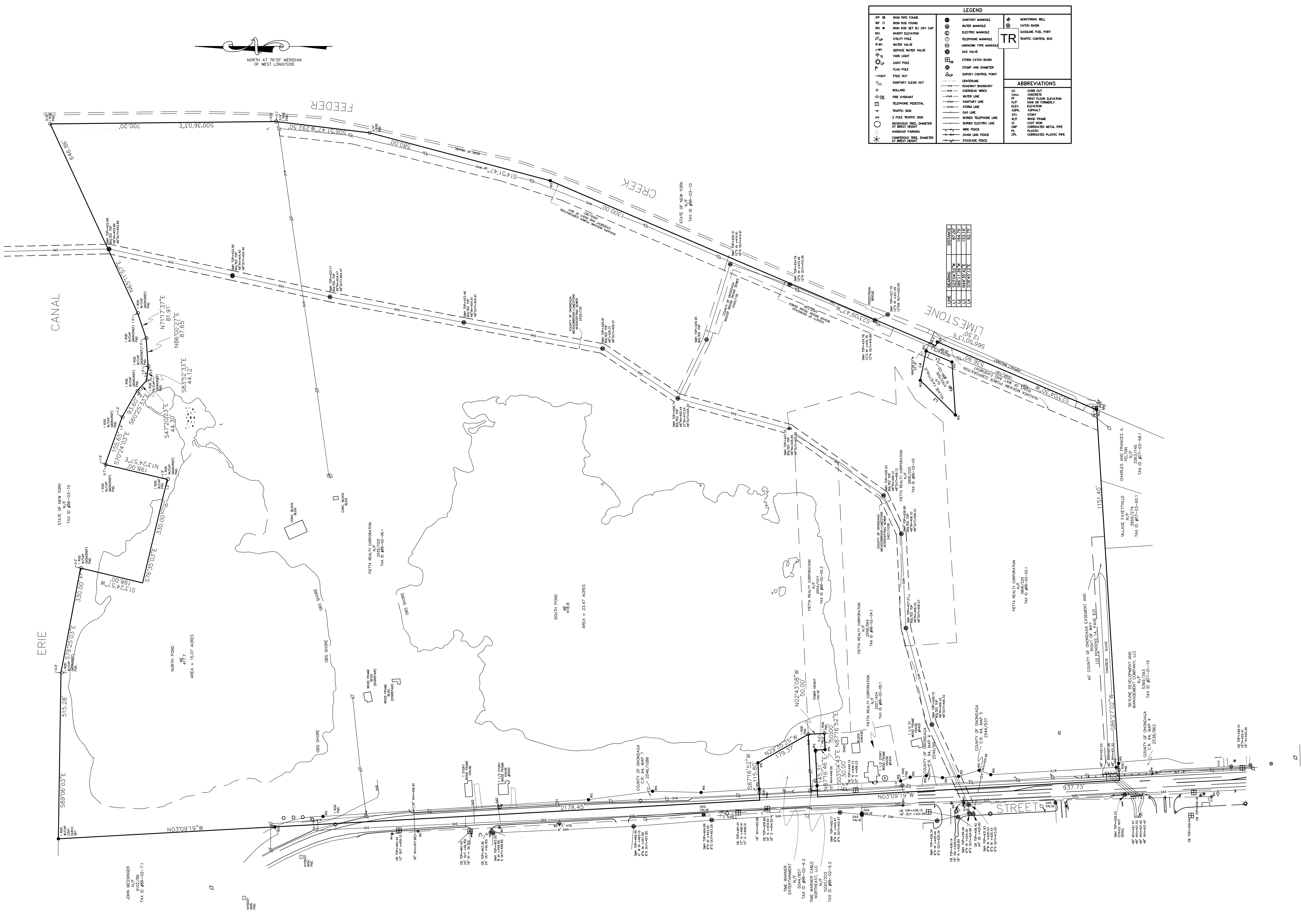

NOTES

SURVEY WAS DONE WITH THE BENEFIT OF AN ABSTRACT OF TITLE PREPARED BY ALLIED AMERICAN ABSTRACT CORP FOR TAX PARCEL 86-02-02.1, ABSTACT FILE NO. 170267, DATED FEBRUARY 20, 2017.

SURVEY WAS DONE WITH THE BENEFIT OF AN ABSTRACT OF TITLE PREPARED BY ALLIED AMERICAN ABSTRACT CORP FOR TAX PARCEL 86-02-04.1, ABSTACT FILE NO. 170270, DATED FEBRUARY 20, 2017.

SURVEY WAS DONE WITH THE BENEFIT OF AN ABSTRACT OF TITLE PREPARED BY ALLIED AMERICAN ABSTRACT CORP FOR TAX PARCEL 86-02-05.1, ABSTACT FILE NO. 170268, DATED FEBRUARY 20, 2017.

SURVEY WAS DONE WITH THE BENEFIT OF AN ABSTRACT OF TITLE PREPARED BY ALLIED AMERICAN ABSTRACT CORP FOR TAX PARCEL 86-02-06.1, ABSTACT FILE NO. 170271, DATED FEBRUARY 20, 2017.

Drawn by D.J. REITH

Checked by D.J. REITH

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

ONLY COPIES OF THE ORIGINAL OF THIS SURVEY, MARKED WITH THE EMBOSSED LAND SURVEYOR'S SEAL, SHALL BE CONSIDERED TO BE TRUE AND VALID COPIES.

STATE OF NEW YORK · DOUGLAS JAY REITH · 049904 · LICENSED LAND SURVEYOR

THE UNDERSIGNED HEREBY CERTIFIES THAT MAP IS MADE FROM AN ACTUAL SURVEY OF THE PROPERTY SHOWN HEREON.

Douglas Jay Reith

DOUGLAS JAY REITH
LICENSED LAND SURVEYOR

CNY LAND SURVEYING
2075 CHURCH ROAD
BALDWINSVILLE, NEW YORK 13027
(315) 635-4614

PART OF LOT 65
TOWN OF MANLIUS
COUNTY OF ONONDAGA
STATE OF NEW YORK

DRAWING TITLE

BOUNDARY SURVEY

Date Issued 12/28/21

Revisions 01/04/22–ADDED ADD. PINS SET AND WALKWAY

FILE NO. 21.213

Scale 1" = 100'

Drawing No. 1 OF 1

Expected Fee: _____

TOWN OF MANLIUS
PLANNING DEPARTMENT
INITIAL APPEARANCE APPLICATION

DATE: 06/23/2022

Name of Project: Twin Shores- Fietta Properties

Applicant must submit 12 copies of all site plans, surveys, and supporting data with the final application before a planning board meeting can be scheduled.

Location of Project: North Burdick Street

Type of Project:

○ Division of Land ☑ Subdivision ○ Accessory Use ○ Zone Change ○ Site Review ○ Other _____

Developer: Twin Shores Properties, LLC Phone: 315-729-8459 (local)

Address: 1333 13th Street, East Moline, IL Zip: 61244

Tax Map Number(#)/s: 086.-02-02.1, 03.0, 04.1, 05.1, 05.3, 06.1

Present Zoning: C-A, RA Desired Zoning: _____

Total Acreage: 128.9 Acres Total Number of Lots: _____

Property Owner/s: Fietta Realty Corporation Phone: (315) 729-1121

Address: P.O. Box 449, Fayetteville, New York Zip: 13066

Tax Map#(s): Same as above Owner's Signature: Peter M. Fietta

Printed Name: PETER M. FIETTA

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Use next page for additional known property owners' information

---

Planning Board Meeting Date Assignment: _____

Fee: _____ Paid: _____ Per: ○ Credit/Debit Card ○ Check ○ Cash

Planning Board - Initial

Expected Fee: _____

TOWN OF MANLIUS
PLANNING DEPARTMENT
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Printed Name: PETER M. FIETTA

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Use next page for additional known property owners' information

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Planning Board Meeting Date Assignment: _____

Fee: _____ Paid: _____ Per: ○ Credit/Debit Card ○ Check ○ Cash

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

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

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

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

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Twin Lakes		
Project Location (describe, and attach a general location map): North Burdick Street, Town of Manlius, Onondaga County, New York		
Brief Description of Proposed Action (include purpose or need): Twin Shores Properties, LLC is proposing to construct a mixed commercial and residential community. Currently proposed residential construction includes a 300-unit multi-family complex (tentative) and proposed commercial development includes a 70,500 square-foot (sf) movie theater, a 3,000 sf coffee shop, a 2,500 sf fast food restaurant and two undetermined retail outlets having footprint areas of approximately 2,400 sf and 1,800 sf. The retail outlets and coffee shop will be located within a common building. The project site encompasses approximately 130 acres and is bounded North Burdick Street to the west, Pools Brook to the east, Erie Canal lands to the north and open land to the south. The residential lot parcel will occupy approximately 51 acres and the commercial lots will occupy approximately 18 acres.		
Name of Applicant/Sponsor: Twin Shores Properties, LLC	Telephone: (563) 449-5541 E-Mail: info@twin-shores.com	
Address: 1333 13th Street		
City/PO: East Moline	State: Illinos	Zip Code: 61244
Project Contact (if not same as sponsor; give name and title/role): David Neuman	Telephone: 315-729-8459 (local) E-Mail: dneuman66@icloud.com	
Address: 7120 Thorntree Hill Drive		
City/PO: Fayetteville	State: New York	Zip Code: 13066
Property Owner (if not same as sponsor): Fietta Reality Corp	Telephone: (315) 729-1121 E-Mail:	
Address: P.O. Box 449		
City/PO: Fayetteville	State: New York	Zip Code: 13066

B. Government Approvals

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

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Town of Manlius Planning Board (Site Plan Approval, Subdivision)	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	Onondaga County DOT, DOH, WEP and OCWA	
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYS DEC (Article 24 Wetland, Construction (SPDES) Stormwater	
h. Federal agencies ☑Yes ☐No	U.S Army Corps of Engineers (NWP-39), FEMA (LOMR)	

i. Coastal Resources.

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

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

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

C. Planning and Zoning

C.1. Planning and zoning actions.

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

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

C.2. Adopted land use plans.

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

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

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

If Yes, identify the plan(s):

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

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
RA (Restricted Agricultural), CA (Commercial)

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

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

C.4. Existing community services.

a. In what school district is the project site located? Fayettville - Manlius School District

b. What police or other public protection forces serve the project site?
Town of Manlius Police Department

c. Which fire protection and emergency medical services serve the project site?
Town of Manlius Fire and CNY EMS

d. What parks serve the project site?
Old Erie Canal State Park, Town of Manlius Parks and Recreation

D. Project Details

D.1. Proposed and Potential Development

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

b. a. Total acreage of the site of the proposed action? 128.9 acres
b. Total acreage to be physically disturbed? TBD acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 128.9 acres

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

d. Is the proposed action a subdivision, or does it include a subdivision? ☑ Yes ☐ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
Mixed Residential and Commercial
ii. Is a cluster/conservation layout proposed? ☑ Yes ☐ No
iii. Number of lots proposed? 3
iv. Minimum and maximum proposed lot sizes? Minimum 17.9 acres Maximum 59.9

e. Will the proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 2
- Anticipated commencement date of phase 1 (including demolition) OCT month 2022 year
- Anticipated completion date of final phase DEC month 2025 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:
Phase I: Development of commercial parcel and earthwork associated with multi-family residential parcels. Phase II: Construction of multi-family residential parcels.

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

If Yes, show numbers of units proposed.

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

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

If Yes,

i. Total number of structures 3

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

iii. Approximate extent of building space to be heated or cooled: 70,500 square feet

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

If Yes,

i. Purpose of the impoundment: Flood Offset Storage

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

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

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

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

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

Earth Excavation/Fill

D.2. Project Operations

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

If Yes:

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

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

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

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

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe. _____

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

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

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

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

ix. Summarize site reclamation goals and plan: _____

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

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): South Pond- Refer to Site Plan

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
The Proposed action includes the regrading of soils along the south shoreline of the South Pond.

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☑ Yes ☐ No
If Yes, describe: See Above

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

- acres of aquatic vegetation proposed to be removed: See Below
- expected acreage of aquatic vegetation remaining after project completion: See Below
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): Reclamation of South Pond shoreline
- proposed method of plant removal: See Below
- if chemical/herbicide treatment will be used, specify product(s): N/A

v. Describe any proposed reclamation/mitigation following disturbance:
Vegetation to be re-established through shoreline reclamation and land stabilization

c. Will the proposed action use, or create a new demand for water? ☑ Yes ☐ No
If Yes:
i. Total anticipated water usage/demand per day: 72,000 gallons/day
ii. Will the proposed action obtain water from an existing public water supply? ☑ Yes ☐ No
If Yes:

- Name of district or service area: WT050 - Manlius Cons Water Supply
- Does the existing public water supply have capacity to serve the proposal? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No
- Do existing lines serve the project site? ☑ Yes ☐ No

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

- Describe extensions or capacity expansions proposed to serve this project:
  west side of North Burdick street. Loop 8" water line through the site (approx. 4,000 LF) along proposed roadway.
- Source(s) of supply for the district: Lake Ontario

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

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

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

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

d. Will the proposed action generate liquid wastes? ☑ Yes ☐ No
If Yes:
i. Total anticipated liquid waste generation per day: 72,000 gallons/day
ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):
Sanitary Wastewater

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

- Name of wastewater treatment plant to be used: Meadowbrook - Limestone WWTP
- Name of district: SW012- Consolidated Sewer
- Does the existing wastewater treatment plant have capacity to serve the project? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No

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

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: Construction of 4,000 LF 8" sanitary sewer along proposed roadway, connections to Meadow Brook Limestone intercepting sewer and Bishop Brook trunk sewer.

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

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

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

_____

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

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

If Yes:

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

Square feet or _____ acres (impervious surface)

_____ Square feet or TBD acres (parcel size)

ii. Describe types of new point sources. Stormwater Conveyance/ Stormwater Management Area outfall pipes and drainage swales

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

On-site stormwater management facilities and surface water

- If to surface waters, identify receiving water bodies or wetlands: South Pond, North Pond and Limestone Creek
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

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

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

If Yes, identify:

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

Heavy equipment during construction and other automotive vehicles

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

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

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

If Yes:

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

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

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

If Yes:

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

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

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

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

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

If Yes:

i. When is the peak traffic expected (Check all that apply): ☑ Morning ☐ Evening ☑Weekend

☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): 10

Restaurant supply deliverers and garbage trucks

iii. Parking spaces: Existing 0 Proposed TBD Net increase/decrease TBD

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

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

Construction of 36 LF wide by approx. 4,000 LF long looped roadway per Town of Manlius standards.

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

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

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

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

If Yes:

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

1,200,000 kWh per year multi-family residential units, 1,575,000 kWh per year commercial development.

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

Grid / local Utilities

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

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

i. During Construction:

- Monday - Friday: 7:00 AM - 5:00 PM
- Saturday: TBD
- Sunday: TBD
- Holidays: TDB

ii. During Operations:

- Monday - Friday: 6:00 AM - 10:00 PM
- Saturday: 6:00 AM - 10:00 PM
- Sunday: 6:00 AM - 9:00 PM
- Holidays: Varies

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

If yes:

i. Provide details including sources, time of day and duration: It is anticipated that noise levels associated with typical site work and building construction activities will exceed ambient levels, generally Monday through Friday, during regular business hours. Typical operations for anticipated post - construction occupancies will not exceed ambient noise levels.

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

Describe: Tree/ stump removal as necessary to facilitate construction.

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

If yes:

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

Roadway and community parcel parking lot lights - Approximate heights 25-30 FT.

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

Describe: Tree and Shrub Removal

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

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

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

If Yes:

i. Product(s) to be stored _____

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

iii. Generally, describe the proposed storage facilities: _____

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

If Yes:

i. Describe proposed treatment(s): _____

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

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

If Yes:

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

- Construction: 2 tons per month (unit of time)
- Operation : 6 tons per month (unit of time)

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

- Construction: Recycling of metal recovered from demolition
- Operation: Recycling paper, cardboard, plastic, etc.

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

- Construction: Collection in roll off containers. Transport to municipal solid waste landfill or permitted recycling facility.
- Operation: Collection in dumpsters/recycling bins. Transport to municipal solid waste landfill or permitted recycling facility.

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

If Yes:

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

ii. Anticipated rate of disposal/processing:

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

iii. If landfill, anticipated site life: _____ years

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

If Yes:

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

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

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

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

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

If Yes: provide name and location of facility: _____

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

E. Site and Setting of Proposed Action

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

a. Existing land uses.

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

☐ Urban ☐ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe: _____

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.2	TBD	TBD
• Forested	67	TBD	TBD
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	12	TBD	TBD
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	42	TBD	TBD
• Wetlands (freshwater or tidal)	0.5	TBD	TBD
• Non-vegetated (bare rock, earth or fill)	6	TBD	TBD
• Other Describe: Residential lawns	1.2	TBD	TBD

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

i. If Yes: explain: The site is adjacent to Pools Brook and Erie Canal Walking Trails

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

If Yes,

i. Identify Facilities:

Town Center Retirement Community and Northeast Medical Center located 200 ft and 1,100 ft, west of the site, respectively.

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

If Yes:

i. Dimensions of the dam and impoundment:

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

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

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

If Yes:

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

- If yes, cite sources/documentation: _____

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

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

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

If Yes:

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

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

If Yes:

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

☑ Yes – Spills Incidents database — Provide DEC ID number(s): 2108871

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

☐ Neither database

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

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

If yes, provide DEC ID number(s): C734106, 734052

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

C734106:Former dry cleaning facility site located 1/4 to 1/2 miles to the south which was entered into the Brownfield Cleanup Program (BCP). Limited site investigation and remediation programs were performed and the BCP agreement terminated in October 2021. No further action required at this time.

C734052: Inactive hazardous waste/BCP site located 3/4 mile to the east/southeast. Remediation/mitigation measures have been performed and site is classified as "active".

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

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

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? Greater than 37 feet

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

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

Gravel Pits	20 %
Silt Loam	80 %
	%

d. What is the average depth to the water table on the project site? Average: 5 - 17 feet

e. Drainage status of project site soils:
☑ Well Drained: 30 % of site
☑ Moderately Well Drained: 40 % of site
☑ Poorly Drained 30 % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 70 % of site
☑ 10-15%: 10 % of site
☑ 15% or greater: 20 % of site

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

h. Surface water features.

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

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

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

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

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

- Streams: Name 899-224, 899-222, 899-296 Classification C
- Lakes or Ponds: Name 899-224.3 Classification C
- Wetlands: Name Federal Waters, NYS Wetland, Federal Waters, Fe... Approximate Size NYS Wetland (in a...
- Wetland No. (if regulated by DEC) SYE-22

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

If yes, name of impaired water body/bodies and basis for listing as impaired:
Name - Pollutants - Uses:Limestone Creek, Lower, and minor tribs – Pathogens;D.O./Oxygen Demand;Aesthetics – Recreation;Aquatic...

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

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

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

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

m. Identify the predominant wildlife species that occupy or use the project site:
Endangered species study pending.

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation):
ii. Source(s) of description or evaluation:
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐ No
If Yes:
i. Species and listing (endangered or threatened):
Northern Long-eared Bat

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

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No
If yes, give a brief description of how the proposed action may affect that use:

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

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

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No
i. If Yes: acreage(s) on project site?
ii. Source(s) of soil rating(s):

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No
If Yes:
i. CEA name:
ii. Basis for designation:
iii. Designating agency and date:

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

If Yes:

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

ii. Name: Eligible property:LIMESTONE CREEK AQUEDUCT & CROSSOVER BRIDGE, Eligible property:101 Garlock Ave, Fayetteville, Eligi...

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

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

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

If Yes:

i. Describe possible resource(s): SHPO No Impact letter issued June 29, 2022.

ii. Basis for identification:

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

If Yes:

i. Identify resource: Erie Canal Historic Park

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

iii. Distance between project and resource: <0.1 miles.

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

If Yes:

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

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

F. Additional Information

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

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

G. Verification

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

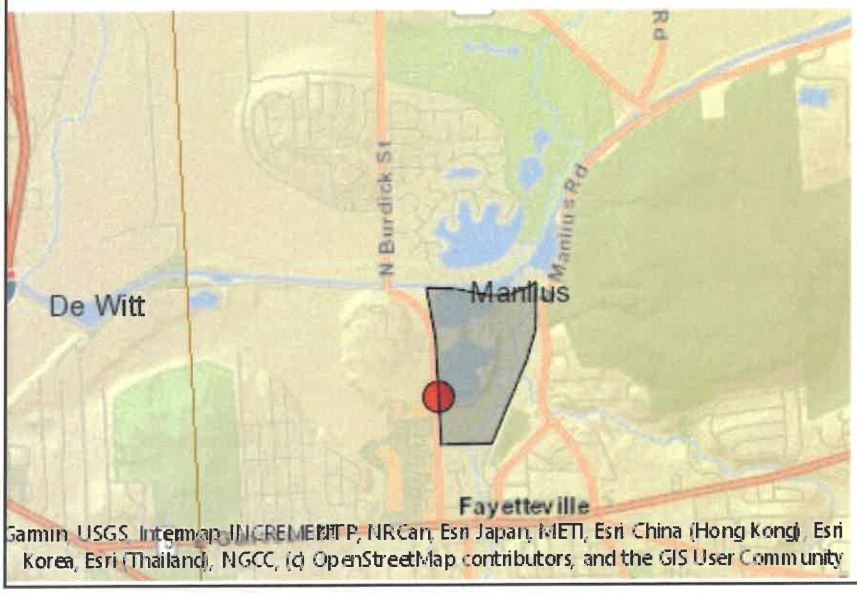
Applicant/Sponsor Name Twin Shores, LLC Date 6/30/22

Signature [signature] Title Exec. VP of Development

PRINT FORM

EAF Mapper Summary Report

Monday, March 7, 2022 3:49 PM



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

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	C734106, 734052
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	899-224, 899-222, 899-296
E.2.h.iv [Surface Water Features - Stream Classification]	C
E.2.h.iv [Surface Water Features - Lake/Pond Name]	899-224.3
E.2.h.iv [Surface Water Features - Lake/Pond Classification]	C

E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters, NYS Wetland
E.2.h.iv [Surface Water Features - Wetlands Size]	NYS Wetland (in acres):892.6
E.2.h.iv [Surface Water Features - DEC Wetlands Number]	SYE-22
E.2.h.v [Impaired Water Bodies]	Yes
E.2.h.v [Impaired Water Bodies - Name and Basis for Listing]	Name - Pollutants - Uses:Limestone Creek, Lower, and minor tribs – Pathogens;D.O./Oxygen Demand;Aesthetics – Recreation;Aquatic Life
E.2.i. [Floodway]	Yes
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	Yes
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Northern Long-eared Bat
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Eligible property:LIMESTONE CREEK AQUEDUCT & CROSSOVER BRIDGE, Eligible property:101 Garlock Ave, Fayetteville, Eligible property:148 North Burdick Street, Eligible property:150 North Burdick Street, Eligible property:146 North Burdick Street, Eligible property:152 North Burdick Street
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

TDK Engineering Associates, PC

June 30, 2022

Dan Kwasnowski, AICP, Planning Director
ONONDAGA COUNTY PLANNING BOARD
1100 Civic Center
421 Montgomery Street
Syracuse, NY 13202

RE: Twin Shores, LLC – Twin Lakes Project
5440 North Burdick Street
Town of Manlius, Onondaga County
OCPB RESOLUTION RESPONSE (CASE # Z-22-6)
TDK Project No: 20021054

Dear Mr. Kwasnowski:

The above-referenced project was presented to the Onondaga County Planning Board for review in connection with a zone change request through the Town of Manlius in January 2022. As part of the County Planning's review at that time, a historical project summary was also provided for background on the subject property, as the property has previously been under potential development considerations through involved agencies in 2007-2008 and 2018.

Specific to the proposed project and in response to your January 19, 2022 resolution letter regarding the zone change application, we offer the following responses to the Onondaga County Planning Board's recommendations to the Town Board of Manlius:

- *Wastewater Services – The Town should have assurances that the proposed zoning and any future development is sensitive to the location of the existing regional wastewater easements and infrastructure on site. Coordinated planning with the Onondaga County Department of Water Environment Protection is strongly advised to ensure the Department is involved at an early stage in the process.*

  TDK Response:

  TDK has been in contact with Onondaga County Department of Water Environment Protection (WEP) throughout the project planning process regarding available capacity and connection details for tying into the existing Bishop Brook and Meadowbrook Limestone trunk sewer(s) that traverse the site. An updated capacity assurance request has been submitted.

- *Potential Floodplain/Floodway Impacts – The site is significantly encumbered by floodplain and floodway areas associated with on- and off-site water courses. The Town should consider the implications of rezoning these sensitive environmental areas to allow for more intense development, particularly within the more restrictive floodway. The applicant should provide a plan for mitigation given any future development in the floodplain and/or floodway.*

TDK Response:

A floodplain analysis has been conducted relative to proposed development of the approximately 36 acres (28%) of the 130-acre site. Provisions for mitigation (offset) of impacts to the floodplain will be incorporated into the earthwork plans such that there will be no increase in the flood elevations resulting from the proposed project.

A flood plain development permit application with corresponding flood plain modeling support information will be provided to the Town for project coordination and approval.

- *Potential Wetland Impacts – The current wetland delineation should be confirmed by the DEC and/or ACOE. Optimally, a DEC-approved mitigation plan will be developed for any wetland disturbance and/or crossings.*

TDK Response:

A wetland study was completed by Shumaker Consulting Engineering on June 8, 2022. The findings from the report will be submitted with the New York State Department of Environmental Conservation (DEC) and Army Corps of Engineers (ACE) along with a request for their representatives to visit the site.

In 2018 a Jurisdictional Determination (JD) was issued by ACE which indicated that no permits were required for work within the two large quarry ponds or four (4) smaller isolated wetlands. In November 2021, TDK confirmed ACE's position in this regard.

It is understood that applications for permits for work within any other designated federal wetland will be made to ACE, in addition to coordination of an Article 24 permit with the DEC for work within the 100-foot adjacent area of the North Pond, as applicable.

- *Potential Stormwater Impacts – The applicant should provide a more detailed analysis of potential regional stormwater impacts and workable on-site accommodations. This is necessary given on- and off-site water courses, the proximity and encroachment into floodplain and floodway areas, and potential state and federal wetlands.*

TDK Response:

A draft Stormwater Pollution Prevention Plan (SWPPP) has been prepared consistent with the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (DEC General Permit #GP-0-20-001). A copy has been submitted to the Town of Manlius (Town) as part of the site plan approval package.

- *Potential Traffic Impacts – The applicant should provide additional detail and coordinated planning to review potential traffic impacts of the project. Additional information should describe new ingress and egress and new traffic signals or intersection locations. The applicant is advised to coordinate with the Onondaga County Department of Transportation (OCDOT) early in the planning process. Traffic data for full build out and a Stormwater Pollution Prevention Plan (SWPPP)will be required as part of the Department's review of any future development of the site.*

TDK Response:

Twin Shores through TDK and GTS Consulting have been in contact with the County DOT. It is understood that as part of the project review and permitting process that a stormwater management report will be prepared and submitted to all involved agencies.

Furthermore, a traffic study was completed on December 4, 2021 by GTS Consulting and a copy of the report was provided to the OCDOT. OCDOT issued comments on January 31, 2022. In response to those comments, and consistent with proposed site development opportunities currently under consideration by Twin Shores, we offer the following responses:

The Onondaga County Department of Transportation (OCDOT) has reviewed the Traffic Impact assessment dated 12/04/2021, and prepared by GTS Consulting. Our comments are as follows:

1. *OCDOT: Has the owner of the property across from the proposed signalized Driveway been consulted? Onondaga County will not approve a signal at this location without a legal agreement between both property owners.*

   TDK: Twin Shores has not been in contact with the owners of the property across from the proposed signalized driveway that was reportedly approved in 2018 by the County. Based on comments from OCDOT, it is our intention to relocate the southern entrance into the Twin Shore property to what we understand was the previously approved signalized intersection into the Towne Center at Fayetteville facility.

   It is also our understanding that there is a formal agreement in place for the traffic signal to have been installed previously by the owner of the Towne Center, but to date, the intersection has not been improved. On behalf of our client, we are requesting a copy of the executed

agreement to fully understand any permit/approval requirements, etc., so we can plan, accordingly.

2. *Through 6.*

TDK - Response to OCDOT's Comments 2 through 6; GTS is currently revising their traffic report to reflect the shift of the signalized intersection to where it was previously approved by the County near the Carrabba's Restaurant.

- *Zoning – The Town should facilitate subdivision of lands to coincide with any future zoning changes, in order to avoid difficulties with split-zoned parcels. TheTown may also wish to consider potential multi-family residential uses for the front of the site rather than interior area, and the applicability of commercial zoning to accomplish any residential development goals.*

TDK Response:

A zone change was approved by the Town Board on February 23, 2022. Updated proposed subdivision limits are under consideration at this time that will reflect a 300-unit residential tract and a commercial track to the south, at a minimum.

- *Coordination with State Parks – Since the proposed project site is located within 500' of the Old Erie Canal State Park and Green Lakes State Park, the Town should coordinate with the Office of Parks, Recreation, and Historic Preservation to ensure any future projects in the proposed zoning areas will not negatively impact nearby parklands.*

TDK Response:

Recommendation noted and we offer the following as an update. Representatives of Twin Shores have been in discussions with State Park officials since the project's inception. These discussions included a site meeting to evaluate the subject property for the potential inclusion of a portion of the subject property along Limestone Creek within an expanded State or local park system.

Twin Shores has also had on-going discussions with Town and more recently Village of Fayetteville representatives to evaluate potential connectivity objectives between the State's Erie Canal Park, the Town and Village's business district along North Burdick Street and Genesee Street, respectively through the creation of a multi-functional park system along the Limestone Creek corridor. We anticipate that there will be further dialogue between the involved parties as the project review process continues to unfold.

We offer the above information for clarification purposes and respectfully request that a copy of this response be included with the Town's submission of this project to County Planning for their consideration.

Sincerely,

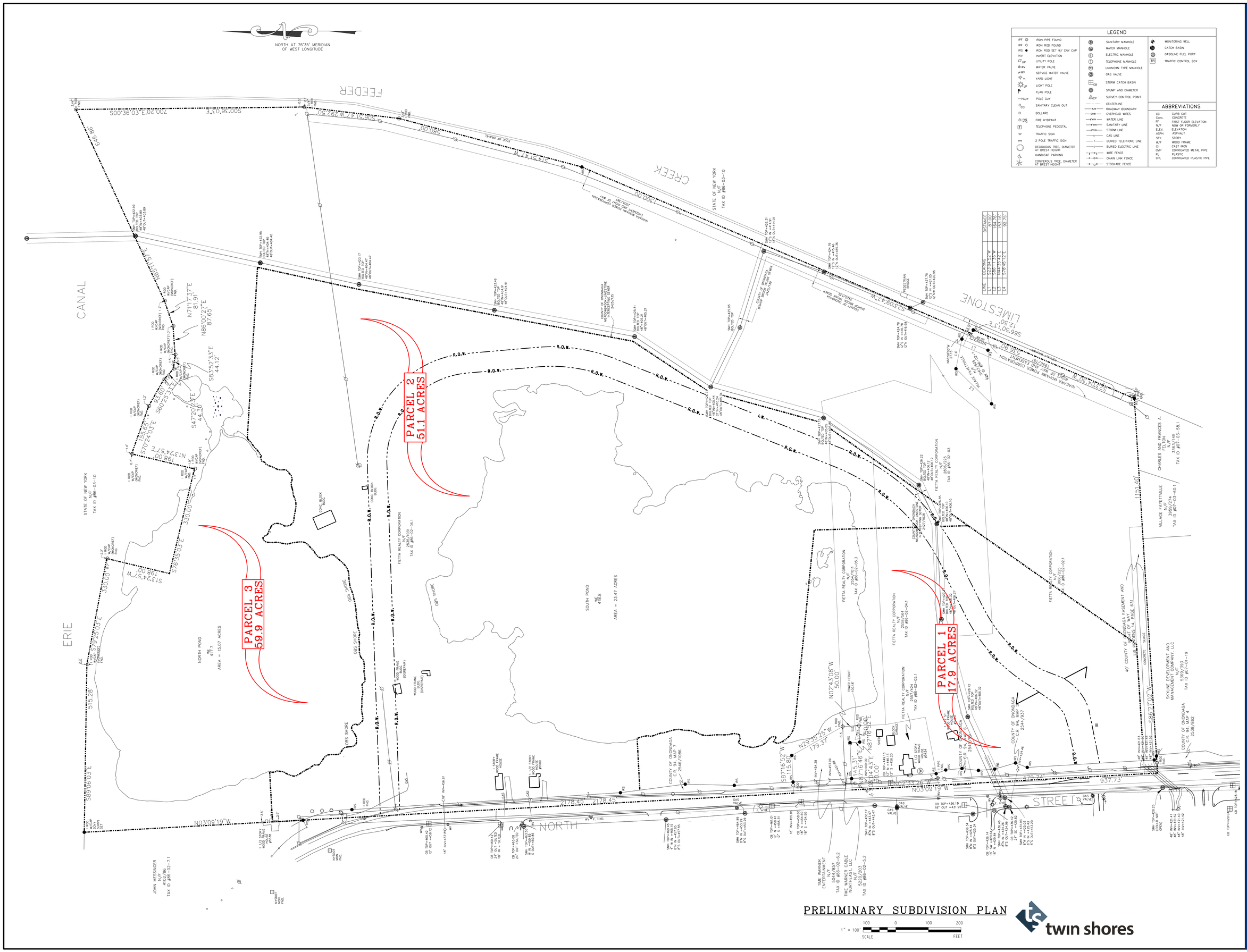
TDK ENGINEERING ASSOCIATES, P.C.

Joseph E. Durand, P.E.

JED

Enclosure(s)

Cc: Town Supervisor John Deer
Mayor Mark Olson, Village of Fayetteville
Dave Neuman, Twin Shores, LLC
John Charters, Twin Shores, LLC
Tom Cerio, Esq.
Dave Herkala, Esq.



TDK Engineering Associates, PC
19 Genesee Street Camillus, New York 13031 PH (315) 672-8726 FX (315) 672-8732
Civil • Marine • Site Development • Geotechnical • Structural • Environmental • Industrial • Lighting

REVISIONS: DATE:

NOTES: NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE N.Y.S. PUBLIC HEALTH LAW.

PROJECT: TWIN LAKES MULTI-USE DEVELOPMENT
CLIENT: TWIN SHORES PROPERTIES, LLC
LOCATION: N. BURDICK STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

DRAWING TITLE: PRELIMINARY SUBDIVISION PLAN

PROJECT No.: 2021054
SCALE: 1" = 100'
DATE:
ENG'D BY: SKO
DRAWN BY: NAR/DKC
CHECKED BY: JED

SHEET NO. SP-1

Twin Lakes Project
Proposed Monument Sign
(Southern Entrance)

James H. Messenger, Jr.
ATTORNEY AT LAW
The Galleries of Syracuse
440 South Warren Street • Suite 703
Syracuse, New York 13202
Tel: 315.471.3030 • Fax: 315.471.0899
jim@messengerlaw.net

May 20, 2022

James Knittel, AIA
in- Architects
239 E. Water Street – 2nd Floor
Syracuse, New York 13202

RE: Hogan DRS, LLC – Seven Pines project
8104, 8112 and 8116 Manlius-Cazenovia Road, and 8108 Manlius-Cazenovia Road Town of Manlius

Dear Jim:

At the request of Dr. Shashank Bhatt, enclosed is a full size survey of 3 buildings (8104, 8112 and 8116 Manlius-Cazenovia Road) and a separate full size survey for 8108 Manlius-Cazenovia Road, all purchased earlier this year. I have requested a pdf versions from D. W. Hannig surveyors and will forward them to you if and when received. Please email me your email address.

Also enclosed are the legal descriptions for all 4 properties. Only 8108 has an expanded metes and bounds description. The others simply reflect a reference to a filed subdivision map.

Please feel free to contact me if you have any questions. Thank you.

Very truly yours,

James H. Messenger, Jr., Esq.

cc: Shashank Bhatt

SCHEDULE "A"
LEGAL DESCRIPTION
[for Mortgage Policy]

Parcel I [8104 Cazenovia Rd; Town of Manlius SBL # 112.-02-02.7]

all that tract or parcel of land situate in the Town of Manlius, County of Onondaga and State of New York being part of Lot 98 in said town and being more particularly described as Lot 4B according to a map entitled Final Plan Resubdivision of Lot 2A into Lots 2B, 3B and 4B Trolley Crossing made by D.W. Hannig L.S., P.C. dated January 10, 2007 and filed in the Onondaga County Clerk's Office on August 2, 2007 as Map No. 10712.

Parcel II [8112 Cazenovia Rd; Town of Manlius SBL # 112.-02-07.0]

all that tract or parcel of land situate in the Town of Manlius, County of Onondaga and State of New York being part of Lot 98 in said town and being more particularly described as Lot 2B according to a map entitled Final Plan Resubdivision of Lot 2A into Lots 2B, 3B and 4B Trolley Crossing made by D.W. Hannig L.S., P.C. dated January 10, 2007 and filed in the Onondaga County Clerk's Office on August 2, 2007 as Map No. 10712.

Together with a right of way, in comon with others, for ingress and egress between Route 92 and said Lot 2B, as more particularly desribed in an Ingress and Egress Easement dated April 6, 2007 and recorded in the Onondaga County Clerk's Office on March 4, 2008 in Book 5036 of Deeds at page 789 &c.

Parcel III [8116 Cazenovia Rd; Town of Manlius SBL # 112.-02-02.9]

All that tract or parcel of land situate in the Town of Manlius, County of Onondaga and State of New York being part of Lot 98 in said town and being more particularly described as Lot 3A according to a map entitled Final Plan Resubdivision of Lot 2 into Lots 2A and 3A Trolley Crossing made by D.W. Hannig, L.S., P.C. dated November 6, 2006 and filed in the Onondaga County Clerk's Office on February 1, 2007 as Map No. 10600.

Together with a right of way, in comon with others, for ingress and egress between Route 92 and said Lot 3A, as more particularly desribed in an Ingress and Egress Easement dated April 6, 2007 and recorded in the Onondaga County Clerk's Office on February 21, 2008 in Book 5034 of Deeds at page 733 &c.

8108 Manlius Cazenovia Road, Manlius, New York 13104

Tax Map No. 112.-02-06.0

ALL THAT TRACT OR PARCEL OF LAND situate in the Town of Manlius, County of Onondaga and State of New York, being part of Farm Lot 98 in said Town, and more particularly described as Lot No. 3B according to a map entitled Rinal Plan Resubdivision of Lot 2A into Lots 2B, 3B & 4B Trolley Crossing made by D. W. Hannig L.S., P.C. dated January 10, 2007 and filed in the Onondaga County Clerk's Office on August 2, 2007 as Map No. 10712 bounded and described as follows:

BEGINNING AT A POINT, said point being the following courses and distances from the easterly line of Whetstone Road: S 44° 10' 42" E 529.22 feet, S 71° 34' 32" W, 34.31 on a curve to left having a radius of 168.00 feet an arc length of 74.60; thence S 46° 08' 06" W 37.67 feet to the point of beginning:

THENCE from said point of beginning along a curve to the left having a radius of 21.00 feet and an arc length of 23.19 feet;

THENCE S 45° 01' 37" E for a distance of 83.52 feet to a point;
THENCE S 43° 16' 39" E for a distance of 12.57 feet to a point;
THENCE S 41° 56' 24" W for a distance of 173.22 feet to a point;
THENCE N 36° 41' 43" W for a distance of 132.00 feet to a point;
THENCE N 53° 08' 09" W for a distance of 25.40 feet to a point;
THENCE N 20° 03' 39" E for a distance of 32.60 feet to a point;
THENCE N 45° 29' 33" E for a distance of 53.32 feet to a point;
THENCE S 89° 30' 27" E for a distance of 19.80 feet to a point;
THENCE N 45° 29' 33" E for a distance of 34.76 feet to a point;
THENCE S 70° 56' 54" E for a distance of 14.46 feet to a point;
THENCE S 44° 58' 14" E for a distance of 16.90 feet to a point;
THENCE N 46° 08' 06" E for a distance of 32.56 feet to a point and place of beginning.

ALSO TOGETHER WITH an ingress and egress easement dated and acknowledged April 6, 2007 and recorded in the Onondaga County Clerk's Office simultaneously herewith, in common with others, over premises more particularly described as follows:

BEGINNING AT A POINT said point being South 44 degrees 10 minutes 42 seconds East, 497.43 feet from the easterly line of Whetstone Road;

THENCE South 44 degrees 10 minutes 42 seconds East for a distance of 31.79 feet along the southerly street line of Manlius-Cazenovia Road to a point;

THENCE South 71 degrees 34 minutes 32 seconds West for a distance of 34.31 feet to a point of a curve;

THENCE along a curve to the left having a radius of 168.02 feet and an arc length of 74.60 feet, being subtended by a chord of South 58 degrees 51 minutes 10 seconds West for a distance of 73.98 feet to a point of tangent;

THENCE South 46 degrees 08 minutes 06 seconds West for a distance of 37.67 feet to a point of curve;

THENCE along a curve to the left having a radius of 21.00 feet and an arc length of 23.19 feet, being subtended by a chord of South 12 degrees 37 minutes 42 seconds West for a distance of 22.21 feet to a point of tangent;

THENCE South 45 degrees 01 minutes 37 seconds East for a distance of 83.52 feet to a point;

THENCE South 43 degrees 16 minutes 39 seconds East for a distance of 64.20 feet to a point;

THENCE South 61 degrees 53 minutes 17 seconds East for a distance of 28.48 feet to a point;

THENCE South 76 degrees 09 minutes 46 seconds East for a distance of 27.83 feet to a point;

THENCE North 88 degrees 07 minutes 19 seconds West for a distance of 62.25 feet to a point;

THENCE North 44 degrees 48 minutes 43 seconds West for a distance of 178.19 feet to a point;

THENCE North 05 degrees 38 minutes 12 seconds East for a distance of 31.25 feet to a point o curve;

THENCE along a curve to the right having a radius of 190.00 feet and an arc length of 84.36 feet, be subtended by a chord of North 58 degrees 51 minutes 12 seconds East for a distance of 83.67 feet to a point of compound curve;

THENCE along a curve to the left having a radius of 35.00 feet and an arc length of 21.90 feet, be subtended by a chord of North 53 degrees 38 minutes 04 seconds East for a distance of 21.54 feet to a point and place of beginning.

ALSO TOGETHER WITH the rights to use and connect to the Drainage, Sanitary Sewer and Water Line Easements and Rights of Way, as they presently exist as shown on the Final Plan Trolley Crossing Amended by David W. Hannig, L.S., P.C. dated December 2, 2005 and filed in the Onondaga County Clerk's Office on April 28, 2006 as Map No. 10409, or as they may exist in the future.

ALSO TOGETHER WITH and subject to a Cross Parking Easement dated and acknowledged April 6, 2007 and recorded in the Onondaga County Clerk's Office on February 21, 2008 in Book 5034 of Deeds at Page 737.

ARCHITECTS

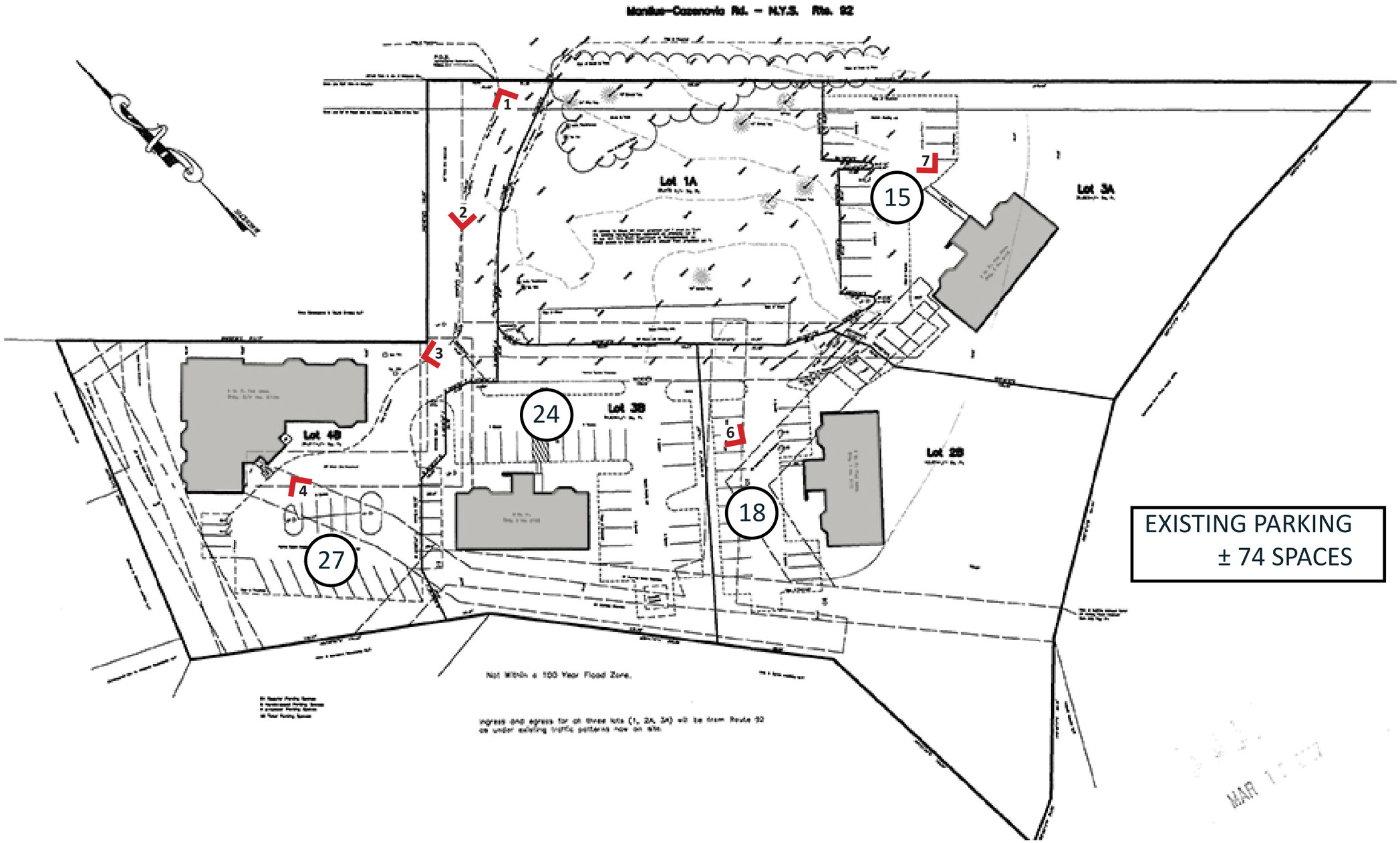
239 E. Water Street - 2nd Fl.
Syracuse, New York 13202
www.in-ARCHITECTS.com

SEVEN PINES RESIDENTIAL CONVERSION

CAZENOVIA ROAD, MANLIUS, NEW YORK

PHOTO PACKAGE

JUNE 3RD, 2022
#22033



DESCRIPTION: SITE PLAN

SEVEN PINES RESIDENTIAL CONVERSION
CAZENOVIA ROAD, MANLIUS, NY

in ARCHITECTS
239 E. Water Street - 2nd Fl.
Syracuse, New York 13202
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239 E. Water Street - 2nd Fl.
Syracuse, New York 13202
www.in-ARCHITECTS.com

SEVEN PINES RESIDENTIAL CONVERSION
CAZENOVIA ROAD, MANLIUS, NY

PHOTO NUMBER: 1 & 2

PHOTO TITLE: SIGNAGE / VIEW OF BUILDING 2

ARCHITECTS
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Syracuse, New York 13202
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SEVEN PINES RESIDENTIAL CONVERSION
CAZENOVIA ROAD, MANLIUS, NY

PHOTO NUMBER: 3 & 4
PHOTO TITLE: VIEWS OF BUILDING '3/4'

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Syracuse, New York 13202
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SEVEN PINES RESIDENTIAL CONVERSION
CAZENOVIA ROAD, MANLIUS, NY

PHOTO NUMBER: 5 & 6

PHOTO TITLE: VIEW OF BUILDING 2 / VIEW OF BUILDING 1

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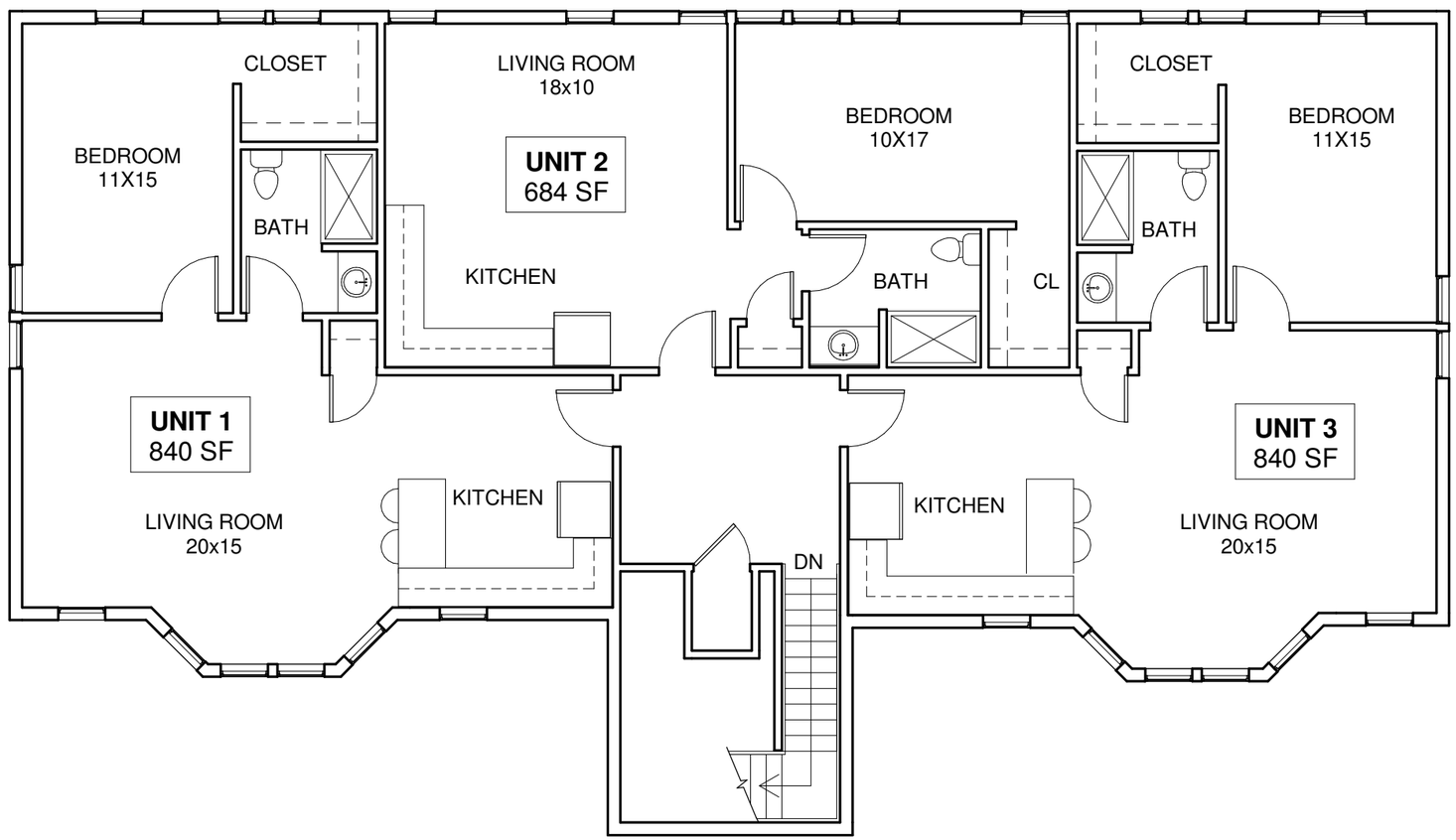
SEVEN PINES RESIDENTIAL CONVERSION
CAZENOVIA ROAD, MANLIUS, NY

PHOTO NUMBER: 7
PHOTO TITLE: VIEW OF BUILDING 3



0' 5' 10' 20'

ARCHITECTS

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Syracuse, New York 13202

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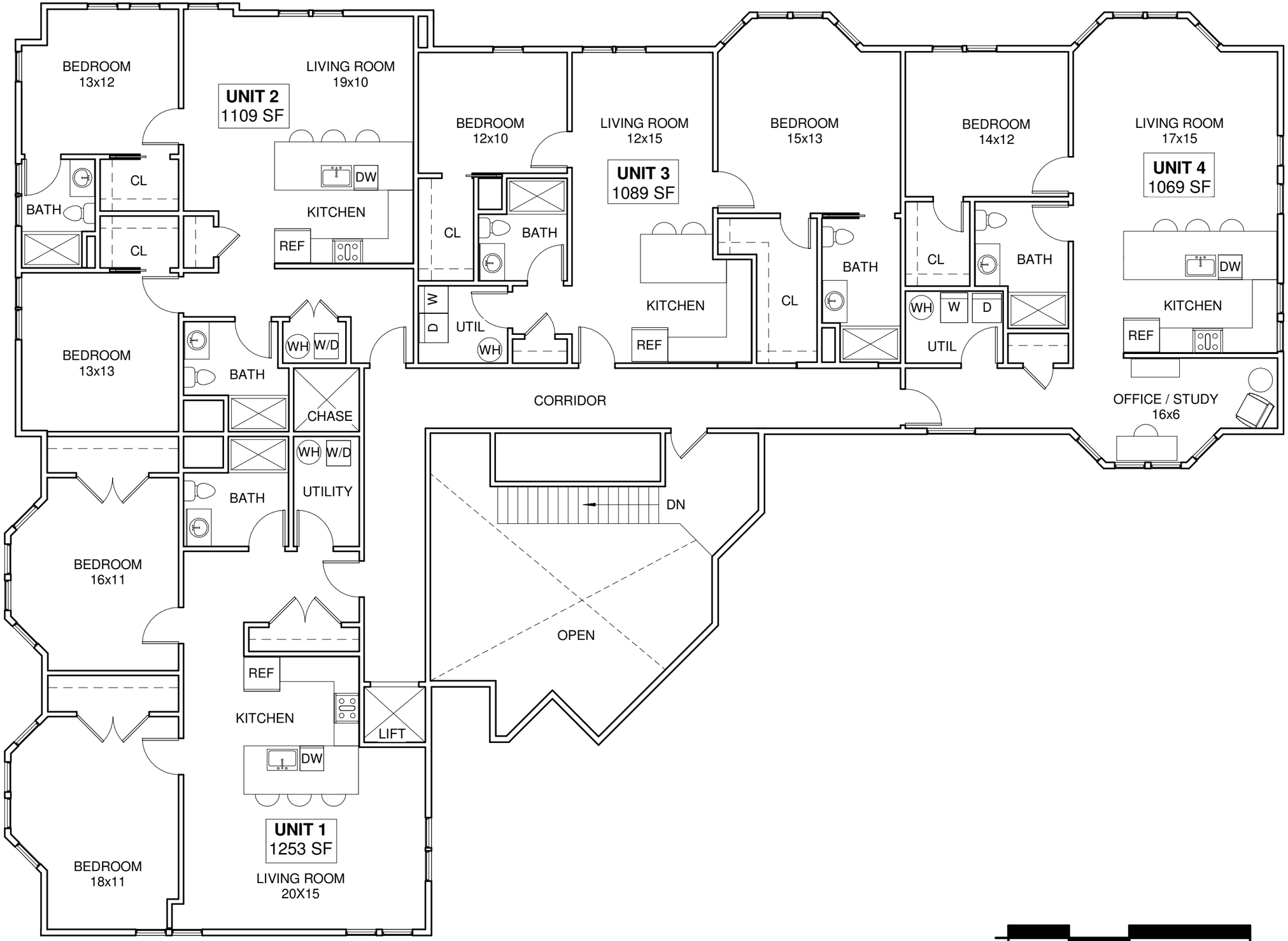
SEVEN PINES
RESIDENTIAL
CONVERSION
CAZENOVIA ROAD,
MANLIUS, NY

DATE: 06/03/2022

SCALE: 1/8" = 1'-0"

SHEET NAME: PROPOSED SECOND FLOOR LAYOUT OF BUILDING 1, 2 & 3

SHEET NUMBER: A-202



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SEVEN PINES
RESIDENTIAL
CONVERSION

CAZENOVIA ROAD,
MANLIUS, NY

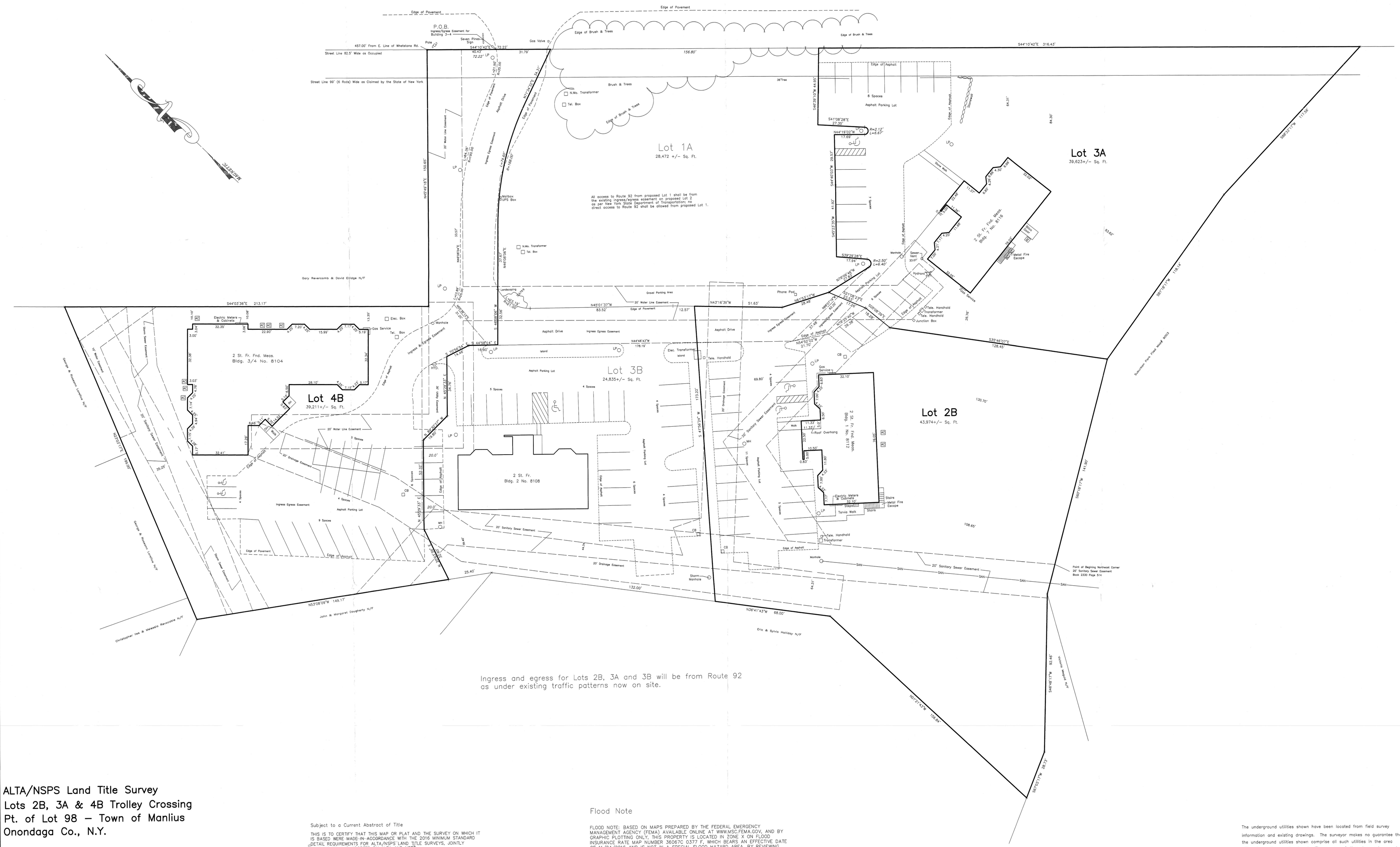
DATE: 06/03/2022

SCALE: 1/8" = 1'-0"

SHEET NAME: PROPOSED SECOND FLOOR LAYOUT OF BUILDING '3/4'

SHEET NUMBER: A-201

Manlius–Cazenovia Rd. – N.Y.S. Rte. 92



ALTA/NSPS Land Title Survey
Lots 2B, 3A & 4B Trolley Crossing
Pt. of Lot 98 – Town of Manlius
Onondaga Co., N.Y.

Scale 1" = 20'

October 09, 2019
Revd 1/06/2022

D. W. HANNIG L.S., P.C.
SURVEYORS - PLANNERS - CONSULTANTS
THE MARKET PLACE, BUILDING #1
MANLIUS, NEW YORK 13104
PHONE: (315) 682-5225 - FAX: (315) 682-7774

Subject to a Current Abstract of Title

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS.
THE FIELD WORK WAS COMPLETED ON 1/13/2022

DATE OF PLAT OR MAP: 1/13/2022

DAVID W. HANNIG, LS
LICENSE NO.: 047411

STATE OF NEW YORK · DAVID W. HANNIG · OFFICIAL SEAL · NO. 047411 · LICENSED LAND SURVEYOR

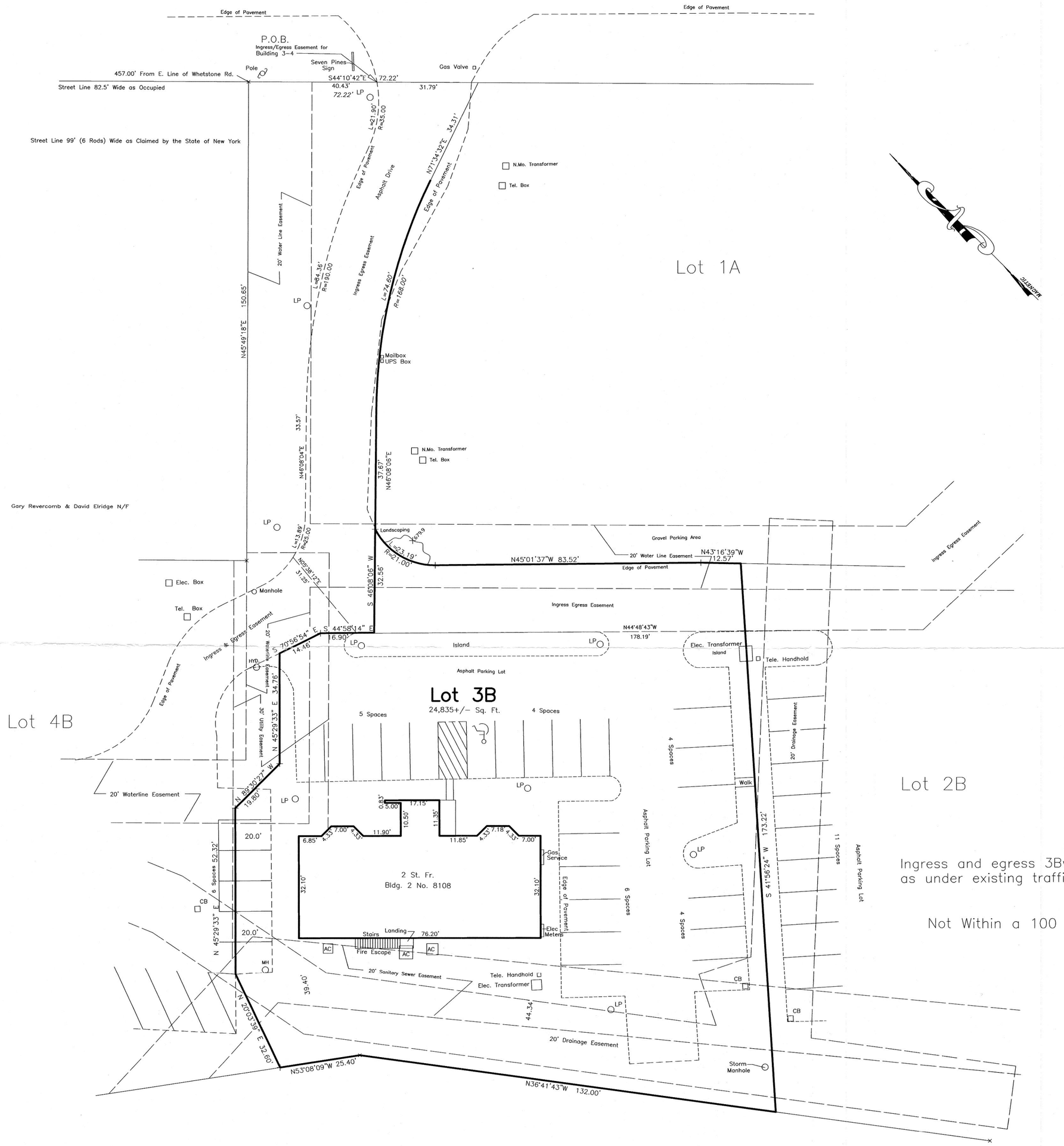
Flood Note

FLOOD NOTE: BASED ON MAPS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AVAILABLE ONLINE AT WWW.MSC.FEMA.GOV, AND BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS LOCATED IN ZONE X ON FLOOD INSURANCE RATE MAP NUMBER 36067C 0377 F, WHICH BEARS AN EFFECTIVE DATE OF 11/04/2016 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA. BY REVIEWING FLOOD MAPS PROVIDED BY THE NATIONAL FLOOD INSURANCE PROGRAM WE HAVE LEARNED THIS COMMUNITY DOES PARTICIPATE IN THE PROGRAM. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE AND AN ELEVATION CERTIFICATE MAY BE NEEDED TO VERIFY THE ACCURACY OF THE MAPS AND/OR TO APPLY FOR A VARIANCE FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities – Underground Facilities Protective Organization (315) 437-7333.

Projects/J841329/Base Plan/dwg/ Lots 2B,3B,4B

Manlius–Cazenovia Rd. – N.Y.S. Rte. 92



Ingress and egress 3Bwill be from Route 92 as under existing traffic patterns now on site.

Not Within a 100 Year Flood Zone.

Lot 3B, Trolley Crossing
Pt. of Lot 98 – Town of Manlius
Onondaga Co., N.Y.

Scale 1" = 20'

January 06, 2022

D. W. HANNIG L.S., P.C.
SURVEYORS - PLANNERS - CONSULTANTS
THE MARKET PLACE, BUILDING #1
MANLIUS, NEW YORK 13104
PHONE: (315) 682-5225 - FAX: (315) 682-7774

Subject to a Current Abstract of Tittle

In my professional opinion, and based on my observations and/or scope of service, I hereby certify this map was made from an actual survey on 1/06/2022, and this map is correct.

This certification is void unless signed in RED ink.

DAVID WILLIAM HANNIG, P.L.S., - N.Y.S. LIC. NO. 47411

STATE OF NEW YORK · DAVID WILLIAM HANNIG · OFFICIAL SEAL · NO. 047411 · LICENSED LAND SURVEYOR

The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities – Underground Facilities Protective Organization (315) 437–7333.

Projects/J841329/Base Plan/dwg/Lot 3B

TOWN OF MANLIUS
ZONE CHANGE APPLICATION

1. Name of Person applying for Zone Change SHASHANK BHATT
   Address of person applying 4579 Southwood Heights Jamesville NY 13078
   Cell Number 315-396-4394 Phone Number _____
2. Name: (owner of record) of land where Zone Change would occur HOGAN DRS LLC
   Address (owner of record) 4579 Southwood Height Drive Jamesville NY 13078
   Cell Number (owner of record) 315-396-4394 Phone Number _____
3. Tax Map Number of property where Zone Change would occur 8104 Manlius Center road – 112-02-2.7
   8112 " " – 112-02-7.0
   8116 " " – 112-02-2.9
   8108 " " – 112-02-06.0
4. Is this property located in a flood hazard area? NO
   If so, what flood area is the property in it in?
   _____
5. Present zoning classification of property CA & FA
6. Desired zoning classification RM
   Reason for Change of Zone (use additional sheets if necessary)
   DESIRED CONVERSION OF SECOND FLOOR OFFICE SPACE TO RESIDENTIAL APARTMENTS
7. What is lot size? _____
8. If the Zone Change is granted, will the use of the property conform to the District regulations as stated in Chapter 155 Article III of the Town of Manlius Municipal Code? YES
9. Is the property within the protectively zoned area of a housing project authorized under the public housing law? NO
10. Is the property within five hundred (500) feet of the boundaries of any city, village, town, county, state park or parkway? NO
    If yes, please specify _____
11. Is the property within five hundred (500) feet from the boundary of any existing or proposed County or State park or other recreation area, or from the right-of-way of any existing or proposed county or state parkway, thruway, expressway, road or highway, or from the existing or proposed right-of-way of any stream or drainage channel owned by the county or for which the county has established channel lines, or from the existing or proposed boundary of any county or state owned land on which a public building or institution is situated? YES

Revised 5/8/17

If yes, please specify PROPERTY ABUTTS LIMESTONE CREEK

12. List the uses of all abutting property COMMERCIAL OFFICE, RESIDENTIAL

13. The following must be included with your 12 application packets unless otherwise specified and/or specifically waived by the Town Board:

- An environmental assessment form which can be obtained from the Town Clerk, or an environmental impact statement.
- Copy of a survey of the premises certified by a New York State licensed surveyor.
- Legal description of the premises.
- This application must be signed by both the owner of record of the property and the applicant.

The failure to answer any question on this application, the failure to submit any item as specified or the failure to execute this application will result in a delay in the processing of the application.

Date 5/30/2022 Shashank Bhatt

Applicant 1

Date _____ _____

Applicant 2

Date _____ _____

Applicant

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

Seven Pines Office Park, Residential converion

Name of Action or Project:

Seven Pines Office PArk, Residential conversion

Project Location (describe, and attach a location map):

8104- 8110 Cazenovia Rd, Manlius NY 13104

Brief Description of Proposed Action:

The project is for the conversion of the second floors of 4 existing 2 story office buildings into residential apartments. Three of the buildings would have three units and one would have 4 units. No changes to the exteriors or to the current parking areas.

Name of Applicant or Sponsor:	Telephone: 315-396-4394
Shashank Bhatt	E-Mail: shashank_bhatt@hotmail.com

Address: 4579 Southwood Heights Jamesville NY

City/PO:	State:	Zip Code:
Jamesville	NY	13078

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Town of Manlius Zoning approval, Town of MAnlius Building Permit	☐	☑

3. a. Total acreage of the site of the proposed action? +/-4 acres
   b. Total acreage to be physically disturbed? 0 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? +/- 4 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☑ Commercial ☑ Residential (suburban)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):
☐ Parkland

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☑	☐	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑

	NO	YES
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	☑	☐

	NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
b. Are public transportation services available at or near the site of the proposed action?	☐	☑
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☑	☐

	NO	YES
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____	☐	☑

	NO	YES
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____	☐	☑

	NO	YES
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____	☐	☑

	NO	YES
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	☑	☐
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☑	☐

	NO	YES
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☑	☐
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☑	☐
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____		

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional

☐ Wetland ☐ Urban ☑ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☑	☐
16. Is the project site located in the 100-year flood plan?	☑	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes,	☐	☑
a. Will storm water discharges flow to adjacent properties?	☑	☐
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☐	☑
If Yes, briefly describe: _____		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment: _____	☑	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____	☑	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____	☑	☐

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: Shashank Bhatt Date: 5/30/2022

Signature: _____ Title: Managing member

PRINT FORM

Expected Fee: _____

TOWN OF MANLIUS
PLANNING DEPARTMENT
INITIAL APPEARANCE APPLICATION

DATE: 5/30/2022

Name of Project: _____

Applicant must submit 12 copies of all site plans, surveys, and supporting data with the final application before a planning board meeting can be scheduled.

Location of Project: Manlius - Cazenovia Road

Type of Project:

○ Division of Land ○ Subdivision ○ Accessory Use ○ Zone Change ○ Site Review ○ Other _____

Developer: Hogen DRS LLC Phone: _____

Address: 4579 Southwood Heights Jamesville NY Zip: 13078

Tax Map Number(#)/s: 8104 Manlius Cazenovia Road - 112-02-2.7
8112 Manlius - Cazenovia Road - 112-02-7.0 8108 Manlius - Caz Road - 112-02-06.
8116 " " - 112-02-2.9

Present Zoning: CA & RA Desired Zoning: RM

Total Acreage: ±4 Total Number of Lots: —

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

_____ Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

_____ Printed Name: _____

Use next page for additional known property owners' information

---

Planning Board Meeting Date Assignment: _____

Fee: _____ Paid: _____ Per: ○ Credit/Debit Card ○ Check ○ Cash

TOWN OF MANLIUS
PLANNING DEPARTMENT
INITIAL APPEARANCE APPLICATION
(continued)

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

_____ Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

_____ Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

_____ Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

_____ Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

_____ Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

_____ Printed Name: _____

III. That no Town of Manlius officer, employee or a relative of either, as defined in Section 809 General Municipal Law has any interest in this application.

-OR-

If a Town of Manlius officer, employee or relative of either as defined in Section 809 General Municipal law has any interest in this application, the full particulars are provided on an attached sheet.

Date: 5/25, 2022.

Shashank Bhatt
(Print Name)

(Signature)

(Entity Name)

By (Officer) (Title)

(Mailing Address of Applicant)

(Telephone Number)

Date: _____, 20_____.

(Print Name)

(Signature)

(Entity Name)

By (Officer) (Title)

(Mailing Address of Applicant)

(Telephone Number)

ACKNOWLEDGEMENTS

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

On this 25th day of May in the year 2022, before me, the undersigned, a notary public in and for said state, personally appeared Shashank Bhatt, N/A, and N/A personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within Petition and acknowledged to me the he/she/they executed the same in his/her/their capacity, and that by his/her/their signature(s) on the Petition, the individual or the persons upon behalf of which the individual acted executed the instrument.

Michelle Kolis
Notary Public

MICHELLE A KOLIS
Notary Public - State of New York
NO. 01KO6261392
Qualified in Onondaga County
My Commission Expires May 7, 2024

TOWN OF MANLIUS

DISCLOSURE AFFIDAVIT

This affidavit is a part of and must be completed and attached to every application, petition, request submitted for a *site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license* or *permit.*

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

I. _____, being duly sworn, deposes and says that (s) he is:

_____
(applicant, petitioner, corporation officer, property owner, *etc.)*

II. That deponent has read and is familiar with the provisions of the General Municipal Law, Section 809 which states:

A. Every application, petition or request submitted for a site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provisions or any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state officer or any officer or employee of such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.

B. For the purpose of this action an officer or employee shall be deemed to have an interest in the applicant when (s)he, his/her spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them:

1) is the applicant, or
2) is an officer, director, partner or employee of the applicant, or
3) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
4) is a party to an agreement with such an applicant, express or implied, whereby (s) he may receive any payment or other benefit, whether or not for services rendered, or contingent upon the favorable approval of such application, petition or request.

C. Ownership of less than five percent (5%) of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.

D. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

CORPORATE ACKNOWLEDGEMENT

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

Shashank Bhatt, being duly sworn, deposes and says the s(he) is the managing member of Hogan Drs LLC corporation named in the within Application/Petition, that s(he) has read the foregoing affidavit and knows the contents thereof; that the same is true of s(he) own knowledge, except as to those matters therein stated to be alleged upon information and belief, and as to those matters s(he) believes it to be true.

Applicant Signature

Subscribed to me before this day 25th
Of May, 2022

Notary Public

MICHELLE A KOLIS
Notary Public - State of New York
NO. 01KO6261392
Qualified in Onondaga County
My Commission Expires May 7, 2024

06/29/16 LB

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Date: 5/25, 2022.

Shashank Bhatt
(Print Name)

(Signature)

(Entity Name)

By (Officer) (Title)

(Mailing Address of Applicant)

(Telephone Number)

Date: _____, 20_____.

(Print Name)

(Signature)

(Entity Name)

By (Officer) (Title)

(Mailing Address of Applicant)

(Telephone Number)

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Michelle Kolis
Notary Public

MICHELLE A KOLIS
Notary Public - State of New York
NO. 01KO6261392
Qualified in Onondaga County
My Commission Expires May 7, 2024

TOWN OF MANLIUS

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COUNTY OF ONONDAGA)

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Applicant

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3) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
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Of May, 2022

Notary Public

MICHELLE A KOLIS
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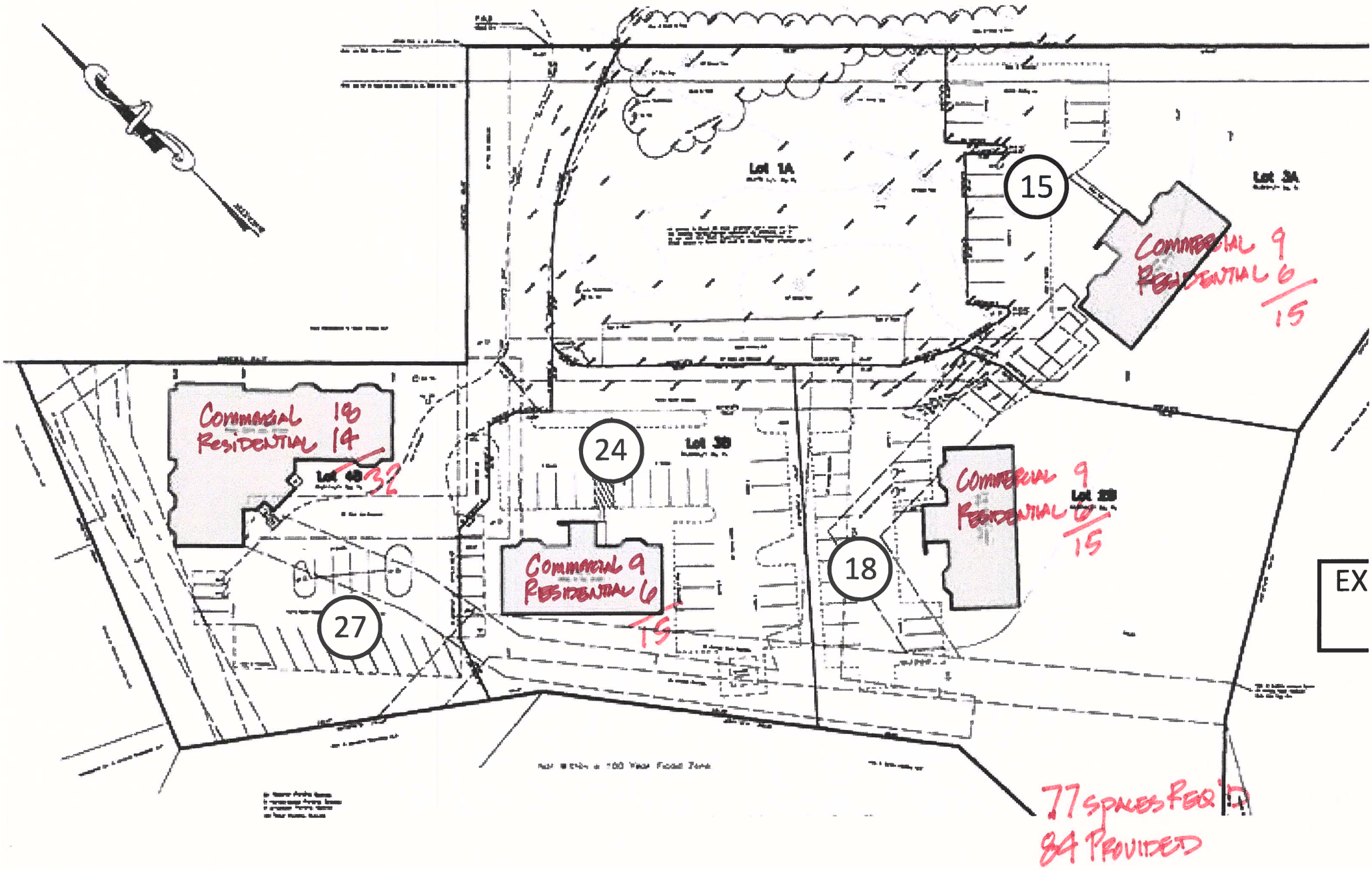
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RESIDENTIAL 6
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COMMERCIAL 18
RESIDENTIAL 14
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Lot 4B
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Lot 3B
COMMERCIAL 9
RESIDENTIAL 6
15
Lot 2B
18
COMMERCIAL 9
RESIDENTIAL 6
15
27
EX
77 SPACES REQ'D
84 PROVIDED

Selected RM Zone Criterion for consideration

- The front yard shall have a minimum depth of 40 feet, side yards of 20 feet and rear yard depth of 40 feet. No portion of any building shall be located on any front, side, or rear yard. Buildings are existing, however I believe that building meet all required setbacks
- The minimum road frontage requirement is 150 feet, and the minimum lot size is 40,000 square feet. Public sanitary sewer service is required. As stated below, some lots are less than 40,000 sf and frontages are less than required.
- Lot coverage maximum of 35% including driveways and parking areas same
- Parking 1 space for every 200 SF of floor space except for apartments which require two parking spaces for each bedroom. I believe office would be 1/300SF. See attached parking calculation sheet. My calculations indicate 77 required spaces and 84 provided.
- Parking Prohibited in front yard. Parking is existing
- One sign with maximum area of 8 SF
- No more than 2 uses without previous consent in accordance with 155-20A Residential and Business would be only uses
- Steep slope criteria ?
- Applicant should familiarize themselves with permitted RM uses.

Site Plan Items for consideration

- Stormwater upgrades (site bank erosion?) If determined to be necessary.
- Public Water & Sanitary Sewers appear to be used on site. Low number of residential units would have insignificant impact on water and sewer use.
- Pedestrian Walkways Existing walks.
- Cross easement parking I believe cross easements currently exist
- Hours of operation, employees & traffic. Existing office tenants are typical business hours. Residential would be typical for similar residential projects.
- Landscaping, buffering & setbacks Existing
- Lighting Existing lighting to remain. May be updated if necessary.
- Confirm Parking with code See above
- Provide signage detail ?
- Provide first and second floor floorplans (commercial & residential)
- Elevation renderings Existing photos provided.
- Address snow storage. Existing
- 5 lots depicted 4 less than 40,000 SF; 3 lots depicted less than 150 LF Frontage
    - 1A 28,472 SF VACANT 156.6 Frontage on State Route 92
    - 2B 43,974 SF 72.22 Frontage on State Route 92
    - 3A 39,623 SF 316.43 Frontage on State Route 92
    - 3B 24,835 SF No Frontage
    - 4B 39,211 SF No Frontage