Building Inspection Department

Jason Dool
Chief Building Inspector

Lockport Municipal Building
One Locks Plaza
Lockport, NY 14094
Phone (716) 439-6754
Fax (716) 439-6605

February 24, 2025

Megan Brewer

REGULAR MEETING

Please be advised that there will be one (1) item on the agenda for the March 3, 2025 Planning Board meeting at 5:00 p.m.

1. Kenan Center. 433 Locust Street. Request for site plan review to demolish the existing area and erect a 64,200 square foot arena situated in an RA Zone.

***IF YOU CANNOT ATTEND THIS MEETING, PLEASE CONTACT MEGAN AT 439-6754 or mbrewer@lockportny.gov ***

BOHLER

17 Computer Drive West
Albany, NY 12205
518.438.9900

70 Linden Oaks, Third Floor
Rochester, NY 14625
585.866.1100

February 20, 2025

City of Lockport
One Locks Plaza
Lockport, NY 14094

Attention: Jason Dool, Chief Building Inspector

Re: Site Plan Review
Proposed Kenan Civic Arena
433 Locust Street
Lockport, NY 14094

Dear Mr. Dool,

On behalf of our client, The Kenan Center, we are pleased to submit the enclosed documents for Site Plan review by the City of Lockport Planning Board for the proposed Kenan Civic Arena project located at 433 Locust Street.

We are providing the following documents in support of the application:

A. (10) Copies of the Letter of Intent, prepared by Bohler, dated 2/20/25.
B. (10) Copies of the Planning Board Application, prepared by Bohler, dated 2/20/25.
C. (10) Copies of the Long Form Environmental Assessment Form, prepared by Bohler, dated 2/20/25.
D. (2) Copies of the Prelim Drainage Report, prepared by Bohler, dated 2/20/25.
E. (10) Copies of the Topographical Map & Boundary Survey, prepared by McIntosh & McIntosh, dated 11/5/24.
F. (10) Copies of the Building Elevations, prepared by AXIS, dated 2/20/25.
G. (10) Copies of the Site Development Plans, prepared by Bohler, dated 02/20/25.

We respectfully request to be placed on March 3rd meeting agenda to present the project.

Existing Conditions
The existing ±27.098-acre site (TA No. 123.06-2-29.1) is located at 433 Locust Street between Locust Street and Beattie Ave. The site is currently developed with multiple buildings including the Kenan mansion, carriage houses and arena in addition to asphalt parking areas serving the different facilities. There are two access drives to the site, one on Locust Street and one on Beattie Avenue. Stormwater discharges to the east to the existing detention pond and to the southeast corner of the property. A majority of the grass areas on site are utilized for outdoor youth activities. The utilities for the current arena appear to be connected to mains along Beattie Avenue. There are

Proposed Project
The applicant is proposing to redevelop the site with the construction of a new ±64,200 sq. ft. Kenan Civic Arean facility. The project will also include new site improvements consisting of asphalt parking areas\internal access drives, concrete sidewalks, stormwater mitigation features, utility services, natural grass athletic fields, site lighting and landscaping. The proposed layout will provide improved parking facilities with the spaces being in closer proximity to the facility and outdoor fields.

The new facility will provide improved community services compared to what exists today. ties,
The front portion of the arena building will have a mezzanine area that will include a studio\yoga room, Computer room, fitness center, and a community conference room. The first floor will include a concessions

stand, bathroom facilities, community room, catering room and management offices, a turf field on the eastern half, basketball\volleyball courts on the western half and equipment storage areas at the rear of the building in addition to the Montessori school which will occupy the northwest portion of the first-floor area and will have their own dedicated entrance and outdoor play area

The project will be constructed in two Phases. Phase 1A will be the construction of the new arena building which will also include the utilities, stormwater mitigation, parking areas, sidewalks, Beattie Ave driveway modifications, lighting and landscaping. The intent is for the existing arena building to remain operational during the Phase 1A construction. Phase 1B would be the demolition of the existing arena and would include converting the former building area into natural grass recreational areas and would also include finishing a small portion of the new parking area and the construction of outdoor play area for the Montessori school. The three existing buildings and the majority of the existing asphalt parking areas on the western half of the site will remain unchanged.

Zoning

The parcel is in the City of Lockport and zoned Residential (RA). The project is in substantial compliance with the current zoning code. The project will require an area variance for the building height which is proposed to be 40'-8" where 35' is allowed by code. There are (434) parking spaces proposed where (321) are required by code and currently there (±241) parking spaces.

Building Architectural Design

The proposed building construction will be a prefabricated metal panel building and will have a masonry wainscot on all four sides. The front (north) façade of the building will have windows in addition to canopy areas protecting the building entries. The east and west elevations are proposed to have graphics representing the activities that the community center will provide. There will be an overhead door on the west façade to allow for larger equipment to be moved into the building. The rear (south) façade is where the equipment storage areas are and will be constructed of masonry and will also have overhead doors to accommodate moving equipment in and out.

Site Access

Currently there are two (one way) driveways connecting to Beattie Avenue. It is proposed to reconstruct the norther drive aisle into a 26' two-way access drive. The southern driveway will be removed. The existing driveway on Locust Street will remain unchanged. The reconfiguration of the Beattie Avenue access drive and new parking lots was done with the focus to address the on-going concern of vehicles cutting through the Kenan property from one street to the other. The new layout provides a three-way stop controlled intersection to slow vehicles down. Bohler will coordinate with City Highway Department and seek plan approval for the work within the City R.O.W.

Stormwater

The project will disturb more than 1-acre of land; therefore, a SWPPP will be prepared for the project that addresses all NYSDEC stormwater requirements. Stormwater runoff from new impervious and rooftop areas will be directed to new on-site catch basins and/or swales which will flow to the reconstructed stormwater management facility located at the northeast corner of the site. Stormwater will be treated for both quality and quantity before discharging to the existing public stormwater system and ultimately to the 42" RCP storm sewer along Beattie Avenue. Bohler will file a Notice of Intent with the NYSDEC to obtain SPDES coverage prior to the start of construction.

Water Service
There is an existing watermain 12" along Beattie Avenue located within the roadway. An 8" combined water service that will provide fire and domestic flows to the new facility is proposed to connect to the existing watermain. Meter and backflow devices will be provided inside the building. Bohler will coordinate with the City Engineering Department to obtain approval for the proposed water service.

Sanitary Sewer
There is an existing 10" sanitary sewer main along Beattie Avenue located within the roadway. A new 6" sanitary sewer lateral with a grease trap is proposed to connect to the existing main. Bohler will submit to the City Engineering Department to obtain approval for the proposed sanitary sewer facilities.

Lighting & Landscaping
New pole mounted dark sky compliant LED site lighting fixtures are proposed to illuminate the site to provide consistent lighting levels for the parking, drive lanes and sidewalk areas. The layout will minimize light spill at the property lines.

New plantings will be provide throughout the site which will consist of shade tress and shrubs. The intent is to maintain ±4 existing mature trees which will be located along the new entrance drive.

Schedule
The intent would be to start construction once all municipal and agency approvals and permits have been obtained. It is estimated that the duration of construction will be ±12 months.

Should you have any questions or require any additional information, please do not hesitate to contact us at (585) 866-1100.

Sincerely,

BOHLER ENGINEERING NY, PLLC

Randy Bebout
rbebout@bohlereng.com | (585) 490-1551

APPLICATION: APPROVED _____ DISAPPROVED _____

CITY OF LOCKPORT
PLANNING BOARD APPLICATION

DESCRIPTION OF PROPOSED REQUEST:

NAME OF PROPERTY: Kenan Civic Arena PHONE: _____

NAME OF APPLICANT: Kenen Center PHONE: _____

ADDRESS OR LOCATION OF PROPOSAL: 433 Locust Street, Lockport, NY 14094

SIZE OF PARCEL OR STRUCTURE: Ex. parcel is ±27.098 acres, prop. bldg. is ±64,200 sq. ft.

EXISTING ZONING: RA

PROPOSED REQUEST Proposed redevelopment of existing Kenan Civic Arena to include demolition of existing facility and construction of a new ±64,200 sq. ft. arena facility along with new asphalt parking, sidewalks, utilities, stormwater mitigation, lighting and landscaping

REQUIRED ENCLOSURES:

In order to provide the City Planning Board with adequate information on which to base its decision, this application will not be heard unless the following information is submitted ten (10) days prior to the meeting by no later than 1 p.m.

1. Adequate description of proposal.

2. Survey of property affected, together with a Plot Plan which shows the distance to nearest intersection, proposed physical layout of the property including any existing or proposed structures, traffic access patterns, parking arrangements, walls, fences or other buffers and signs.

SEQRA:

This proposal constitutes a: ( )Type I, ( )Type II, (X)Unlisted action as per the provisions of the State Environmental Quality Review Act. A determination of environmental significance has been made: ( )yes, ( )no; a copy of this determination is attached ( )yes, ( )no.

PROPERTY OWNER'S SIGNATURE _____

APPLICANT'S SIGNATURE _____

PLEASE NOTE YOU OR A REPRESENTATIVE ARE TO BE PRESENT AT THE MEETING TO PRESENT YOUR PROJECT TO THE BOARD.

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 sub ect to further verification.

Complete Part 1 based on information currer tly 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: Kenan Civic Arena Redevelopment		
Project Location (describe, and attach a general location map): 433 Locust Street, Lockport, NY, Niagara County		
Brief Description of Proposed Action (include purpose or need): The applicant is proposing to redevelop the site with the construction of a new ± 64,200 sq. ft. Kenan Civic Arean facility. The project will also include new site improvements consisting of asphalt parking areas\internal access drives, concrete sidewalks, stormwater mitigation features, utility services, natural grass athletic fields, site lighting and landscaping. The proposed layout will provide improved parking facilities with the spaces being in closer proximity to the facility and outdoor fields.		
Name of Applicant/Sponsor: The Kenan Center - Bill Patti	Telephone: 716.433.2617 E-Mail: bill@kenancenter.org	
Address: 433 Locust Street		
City/PO: Lockport	State: NY	Zip Code: 14094
Project Contact (if not same as sponsor; give name and title/role): Bohler Engineering NY, PLLC - Randy Bebout	Telephone: 585.490.1551 E-Mail: rbebout@bohlereng.com	
Address: 70 Linden Oaks, Third Floor		
City/PO: Rochester	State: NY	Zip Code: 14625
Property Owner (if not same as sponsor): First Presbyterian Church of Lockport	Telephone: 716.433.5905 E-Mail:	
Address: 21 Church Street		
City/PO: Lockport	State: NY	Zip Code: 14094

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	Planning Board - Site Plan Review	2/20/25
c. City, Town or Village Zoning Board of Appeals ☑Yes☐No	Zoning Board of Appeals - building height variance	TBD
d. Other local agencies ☐Yes☐No		
e. County agencies ☑Yes☐No	Niagara County Planning - 239M review	3/10/25
f. Regional agencies ☐Yes☑No		
g. State agencies ☑Yes☐No	NYSDEC - NOI\SPDES Permit	5/1/25
h. Federal agencies ☐Yes☑No		

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):

NYS Heritage Areas:West Erie Canal Corridor

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?

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? Lockport City School District

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

c. Which fire protection and emergency medical services serve the project site?
Lockport Fire Department

d. What parks serve the project site?
Joseph E. Kibler Park

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)? Communtiy \ Recreational

b. a. Total acreage of the site of the proposed action? ±27 acres
b. Total acreage to be physically disturbed? 9.8 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? ±27.1 acres

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

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)

ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 2
- Anticipated commencement date of phase 1 (including demolition) 9 month 2025 year
- Anticipated completion date of final phase 12 month 2026 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 1A will include construction of new arena facility and parking areas. Phase 1B will include demolition of ex. arena building and finishing parking and outdoor field areas.

f. Does the project include new residential uses? ☐ Yes ☑ No
If Yes, show numbers of units proposed.

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

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No
If Yes,
i. Total number of structures 1
ii. Dimensions (in feet) of largest proposed structure: ±40'-8" height; ±232 width; and ±284 length
iii. Approximate extent of building space to be heated or cooled: 64,200 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: storm water mitigation
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☑ Other specify: storm water runoff from impervious areas
iii. If other than water, identify the type of impounded/contained liquids and their source.
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: 0.8 acres
v. Dimensions of the proposed dam or impounding structure: _____ height; ±436 length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): earthen berms

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):

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

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

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

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

v. Describe any proposed reclamation/mitigation following disturbance:

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

i. Total anticipated water usage/demand per day: 750 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: City of Lockport Water District
- Does the existing public water supply have capacity to serve the proposal? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No
- Do existing lines serve the project site? ☑Yes ☐No

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

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

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

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

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

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

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

i. Total anticipated liquid waste generation per day: 750 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: Lockport Wastewater Treatment Plan
- Name of district: City of Lockport Sewer District
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

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

If Yes:

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

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

If Yes:

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

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

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

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

If Yes:

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

_____ Square feet or 1[illegible] acres (impervious surface)

_____ Square feet or ±27[illegible] acres (parcel size)

ii. Describe types of new point sources. runoff from building rooftop and new asphalt parking areas

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 storm water mitigation basin

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐ Yes ☑ No

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

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

If Yes, identify:

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

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

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

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

If Yes:

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

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

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

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

If Yes:

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

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

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

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

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

If Yes:

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

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

iii. Parking spaces: Existing 241 Proposed 434 Net increase/decrease 193

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

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

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

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

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

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

If Yes:

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

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

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: 7am-7pm
- Saturday: 8am-5pm
- Sunday: 9am-4pm
- Holidays: NA

ii. During Operations:

- Monday - Friday: 8am-11pm
- Saturday: 8am-11pm
- Sunday: 8am-11pm
- 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 expected to have typical construction activity sounds during the allowed work hours (earthmoving equipment, backhoes, cranes, etc.)

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

Describe:

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

If yes:

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

LED, parking lot light poles, 25' mounting height,

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

Describe:

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

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

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

If Yes:

i. Product(s) to be stored

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

iii. Generally, describe the proposed storage facilities:

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

If Yes:

i. Describe proposed treatment(s):

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

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

If Yes:

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

- Construction: 2 tons per month (unit of time)
- Operation : 1 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: Where possible, materials will be recycled by contractor
- Operation: Where applicable, materials will be recycled

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

- Construction: Licensed local waste management facility
- Operation: Licensed local waste management 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): public school

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	5.0	6.8	1.8
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	21.7	19.5	-2.2
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.4	0.8	+0.4
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: _____			

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

i. If Yes: explain: Community facilities

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:

Emmet Belknap Intermediate School

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): _____

☐ 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): _____

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

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

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

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? ±6 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: (within project area)

Niagara Silt Loam	50 %
Ontario Loam	25 %
Ovid Silt Loam	25 %

d. What is the average depth to the water table on the project site? Average: +11 feet

e. Drainage status of project site soils:
- ☐ Well Drained: 25 % of site
- ☐ Moderately Well Drained: _____ % of site
- ☑ Poorly Drained 75 % of site

f. Approximate proportion of proposed action site with slopes:
- ☑ 0-10%: 100 % of site
- ☐ 10-15%: _____ % of site
- ☐ 15% or greater: _____ % 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 _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC): _____

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

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

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

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

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

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

i. Name of aquifer: _____

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

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

If Yes:

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

ii. Source(s) of description or evaluation:

iii. Extent of community/habitat:

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

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

If Yes:

i. Species and listing (endangered or threatened):

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

If Yes:

i. Species and listing:

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

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

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

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

If Yes, provide county plus district name/number:

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

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

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

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

If Yes:

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

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

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

If Yes:

i. CEA name:

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:KENAN HOUSE

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):

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: West Erie Canal Corridor

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

iii. Distance between project and resource: _____ miles.

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

If Yes:

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

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

F. Additional Information

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

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

G. Verification

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

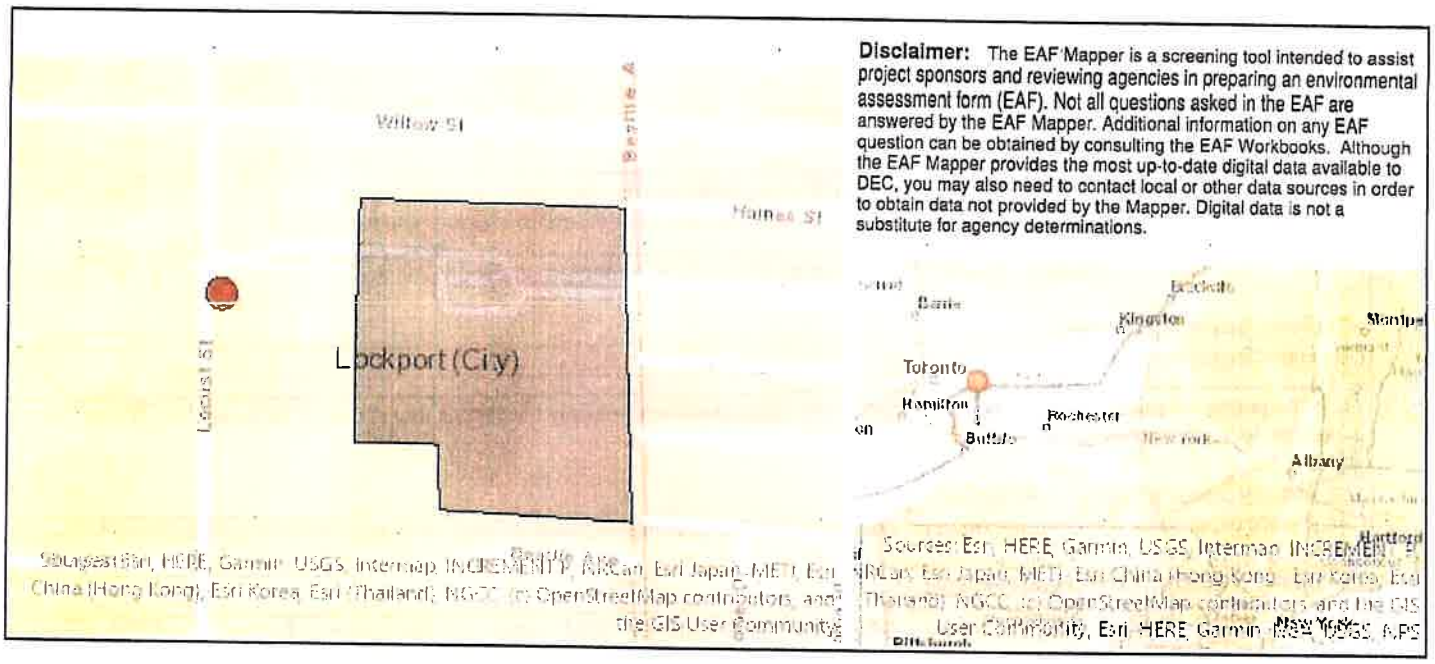
Applicant/Sponsor Name Bohler Engineering NY, PLLC Date 2/20/25

Signature Garrett Stein Title Design Engineer

PRINT FORM

EAF Mapper Summary Report

Wednesday, February 19, 2025 3:30 PM



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	No
E.2.h.iii [Surface Water Features]	No
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No

[illegible]	[illegible]
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:KENAN HOUSE
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

STORMWATER MANAGEMENT REPORT

FOR

CONSTUCTION ACTIVITIES

Located At:
433 Locust Street
City of Lockport
Erie County
New York State

Prepared For:
Kenan Center
433 Locust Street
Lockport, NY 14094

Prepared By:
Bohler Engineering NY, PLLC
70 Linden Oaks Third Floor
Rochester, NY 14625

Report Date:
February 20, 2025

BOHLER

BE Project #: NYB240124

1) Table of Contents

APPENDIX

(a) Introduction

The applicant, the Kenan Center, is proposing to redevelop the property located at 433 Locust Street, in the City of Lockport of Niagara County, New York. The project will include construction of ±64,200 SF building along with associated parking, access drives, stormwater management, landscaping, and utilities. The proposed features are shown on the latest Site Plan Documents prepared by Bohler Engineering NY, PLLC.

This report will briefly discuss the proposed development and provide a detailed analysis of the existing and proposed site conditions and the proposed stormwater management system. Hydraulic calculations included in this report were generated for the 1-, 10- and 100-year storm events utilizing the SCS TR-20 and HydroCad Stormwater modeling software.

(b) Project Information

Site Name	Proposed Kenan Civic Arena
Address	433 Locust Street
City, State, Zip Code	Lockport, NY 14094
County	Niagara County

Type of Construction: ☐Residential ☒Commercial ☐Industrial ☐Other _____

Size of Property	±27.1 acres
Total Area Expected to be Disturbed	±9.8 acres
Maximum Area to be Disturbed at Any One Time:	±5.00 acres

(c) Existing Conditions

The existing ±27.098-acre site (TA No. 123.06-2-29.1) is located at 433 Locust Street between Locust Street and Beattie Ave. The site is currently developed with multiple buildings including the Kenan mansion, carriage houses and arena in addition to asphalt parking areas serving the different facilities. Stormwater discharges to the east to the existing detention pond and to the southeast corner of the property. The majority ground cover consists of Impervious parking areas and green lawn areas with moderate topography.

The existing project site has been divided into four Watershed area(s) for analysis purposes. Watershed ground covers, flow paths, and design points are depicted in the Existing Conditions Watershed Areas Summary Table Below.

Watershed	Ground Cover	Flow Path	Discharge Point
EX-1	Impervious, Grass, Woods	Sheet flow to shallow concentrated, eventual discharge to catch basin in the right of way	DP-1 (Ex CB)

EX-2	Impervious, Grass, Woods	Sheet flow to shallow concentrated, eventual discharge by channel flow to existing storms ewer along Beattie Ave	DP-2 (Ex storm sewer)
EX-3	Impervious, Grass, Woods	Sheet flow to shallow concentrated, eventual discharge to low point at southeast corner of the property.	DP-3 (SE corner of property)
EX-4	Impervious, woods	Sheet flow to shallow concentrated, eventual discharge to existing catch basin.	DP-4 (Existing CB)

The existing watershed area, discharge points, and topography are illustrated on the Existing Watershed Map included in the appendix of this report.

The table below identifies all discharge points for stormwater leaving the project site.

Point of Discharge	Name of State receiving water	Is the receiving water on 303d list?	If yes, limiting pollutant
Design Point 1	Municipal storm sewer	No	
Design Point 2	Municipal storm sewer	No	

The USDA NRCS Soil Survey is included in the appendix of this report.

(d) Proposed Conditions

The proposed development is designed to mimic the existing drainage patterns and reduce the discharge flow rate from the pre-developed to post-developed conditions.

The proposed project site has been divided into three Watershed area(s) for analysis purposes. These watershed areas have been further divided into sub-catchments with unique flow paths. Ground covers, flow paths, and design points associated with proposed flows are depicted in the Proposed Conditions Watershed Areas Summary Table Below.

Watershed	Sub-Catchment	Ground Cover	Flow Path	Discharge Point
PD1	PD1.1	Impervious, grass,woods	Sheet flow to catch basin, discharge to detention basin before being discharged to Design Point	DP-2 (catch basin)
	PD1.2	Impervious, grass	Sheet flow to vegetated swale before entering detention basin and being discharged to the design point	DP-2 (catch basin)
PD2	N/A	Grass, Woods	Sheet flow to shallow concentrated, eventual discharge to onsite swale	DP-3 (SE corner of Property)
PD3	N/A	Woods, Grass	Sheet flow to shallow concentrated, eventual discharge to existing catch basin.	DP-4 (Ex catch basin)

The proposed watershed areas, topography and flow paths are illustrated on the Proposed Watershed Plan, included in the appendix of this report.

(e) Stormwater Calculations

During major storm events, post-development peak rates are expected to be reduced from pre-development peak rates, as shown on the discharge quantity table(s) below.

Rainfall Event	Design Point 1		
	Existing (cfs)	Proposed (cfs)	% Reduction
1-year	±4.07	±0	100
10-year	±11.58	±0	100
100-year	±21.56	±0	100

Rainfall Event	Design Point 2		
	Existing (cfs)	Proposed (cfs)	% Reduction
1-year	±6.15	±0.76	87.6
10-year	±15.62	±4.29	72.5
100-year	±27.71	±13.47	51.4

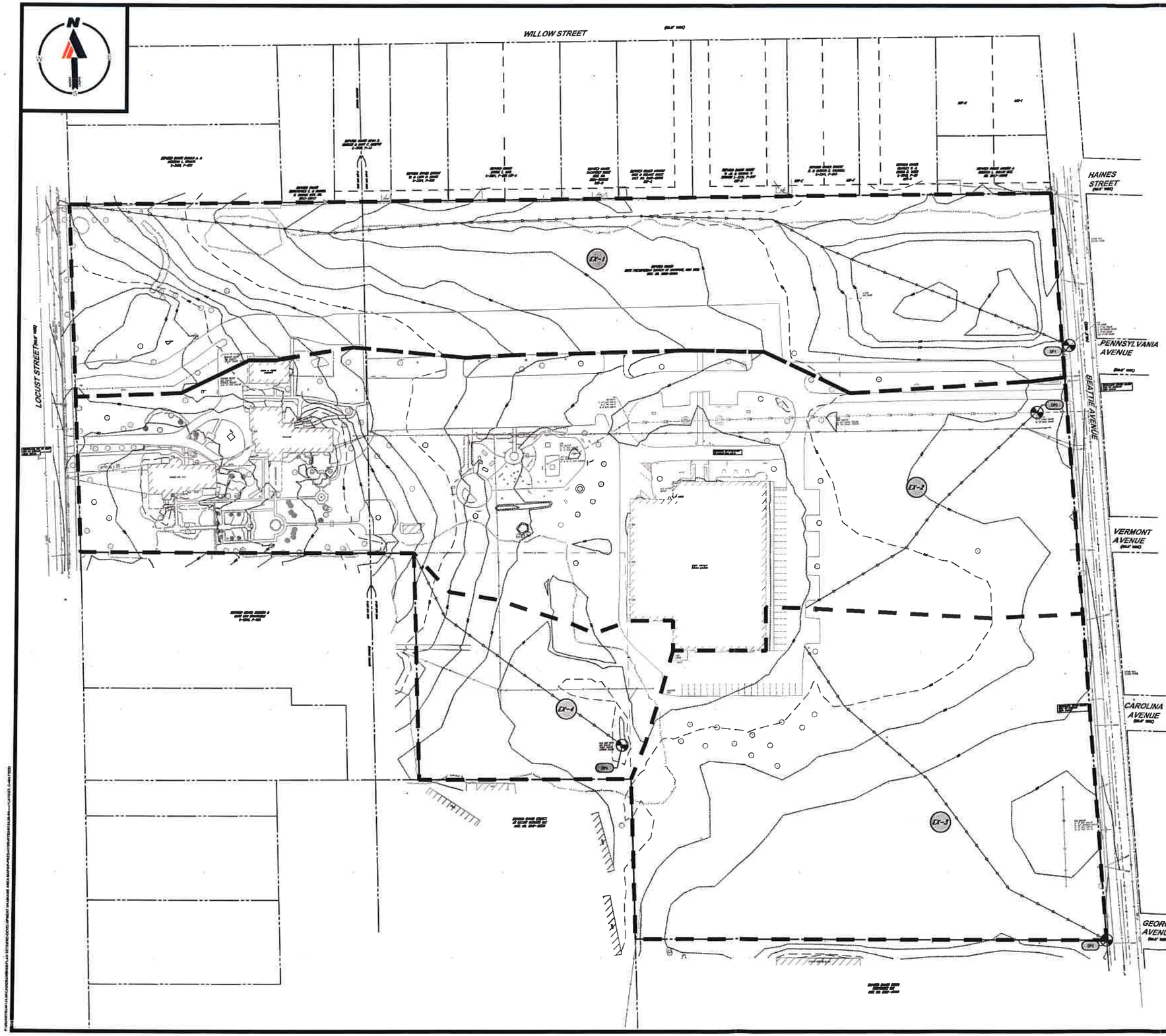
Rainfall Event	Design Point 3		
	Existing (cfs)	Proposed (cfs)	% Reduction
1-year	±2.35	±2.19	6.8
10-year	±7.34	±6.84	6.8
100-year	±14.19	±13.25	6.6

Rainfall Event	Design Point 4		
	Existing (cfs)	Proposed (cfs)	% Reduction
1-year	±0.70	±0.62	11
10-year	±2.54	±2.40	5.5
100-year	±5.16	±4.98	3.5

The existing and proposed stormwater models, depicting peak flow rates for pre- and post-development conditions are included within the appendix portion of this report.

APPENDIX "A"

Pre-Development Drainage Area Map



LEGEND

EXISTING WATERSHED

DESIGN POINT

SUBCATCHMENT ID

SUBCATCHMENT BOUNDARY

TIME OF CONCENTRATION PATH

STORMWATER CONTROL MEASURE OR MODELED DRAINAGE STRUCTURE

SURFACE OR CULVERT CONVEYANCE

SOIL BOUNDARY WITH NRCS MAP UNIT AND HYDROLOGIC SOIL GROUP RATING

MapUnit

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SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PLANNING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PRELIMINARY

PROJECT No.:	NYS24C124.00-GA
DRAWN BY:	GRS
CHECKED BY:	RLB
DATE:	02-20-2025
CAD I.D.:	PAPHED-HYDM

PROJECT:

SITE DEVELOPMENT PLANS

FOR

KENAN CENTER

PROPOSED
KENAN CIVIC ARENA

433 LOCUST STREET
CITY OF LOCKPORT
NIAGARA COUNTY
NEW YORK
TAX MAP ID: 123.06-2-29.1

BOHLER

70 LINDEN OAKS
THIRD FLOOR
ROCHESTER, NY 14625
Phone: (585) 869-1100
www.BohlerEngineering.com

SHEET TITLE:

PRE DEVELOPMENT DRAINAGE AREA MAP

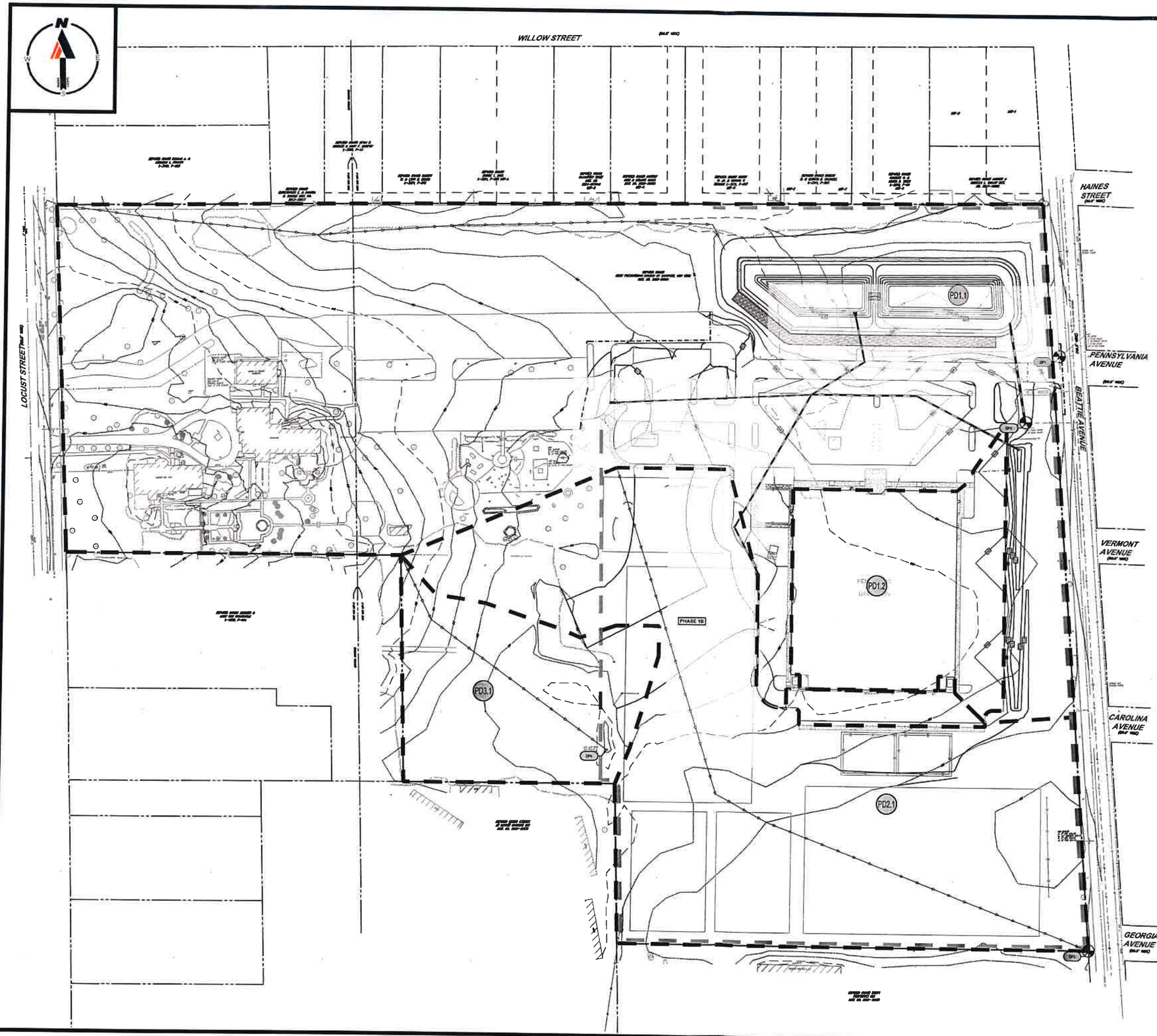
SHEET NUMBER:

C-404

ORG. DATE - 02-20-2025

APPENDIX "B"

Post-Development Drainage Area Map



LEGEND

PROPOSED WATERSHED

DESIGN POINT

SUBCATCHMENT ID

SUBCATCHMENT BOUNDARY

TIME OF CONCENTRATION PATH

STORMWATER CONTROL MEASURE OR MODELED DRAINAGE STRUCTURE

SURFACE OR CULVERT CONVEYANCE

SOIL BOUNDARY WITH NRCS MAP UNIT AND HYDROLOGIC SOIL GROUP RATING

MapUnit

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SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROJECT MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
ENVIRONMENTAL SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	Initials of PERSON IN CHARGE

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PRELIMINARY

PROJECT No.:	NYB240124.00-0A
DRAWN BY:	GRG
CHECKED BY:	RLS
DATE:	02-20-2025
CAD I.D.:	P-PSTDHYDH

PROJECT:

SITE DEVELOPMENT PLANS

FOR

KENAN CENTER
ARTS | EDUCATION | RECREATION

PROPOSED
KENAN CIVIC ARENA

433 LOCUST STREET
CITY OF LOCKPORT
NIAGARA COUNTY
NEW YORK
TAX MAP ID: 123.06-2-29.1

BOHLER
70 LINDEN OAKS
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ROCHESTER, NY 14625
Phone: (585) 906-1100
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SHEET TITLE:

POST DEVELOPMENT DRAINAGE AREA MAP

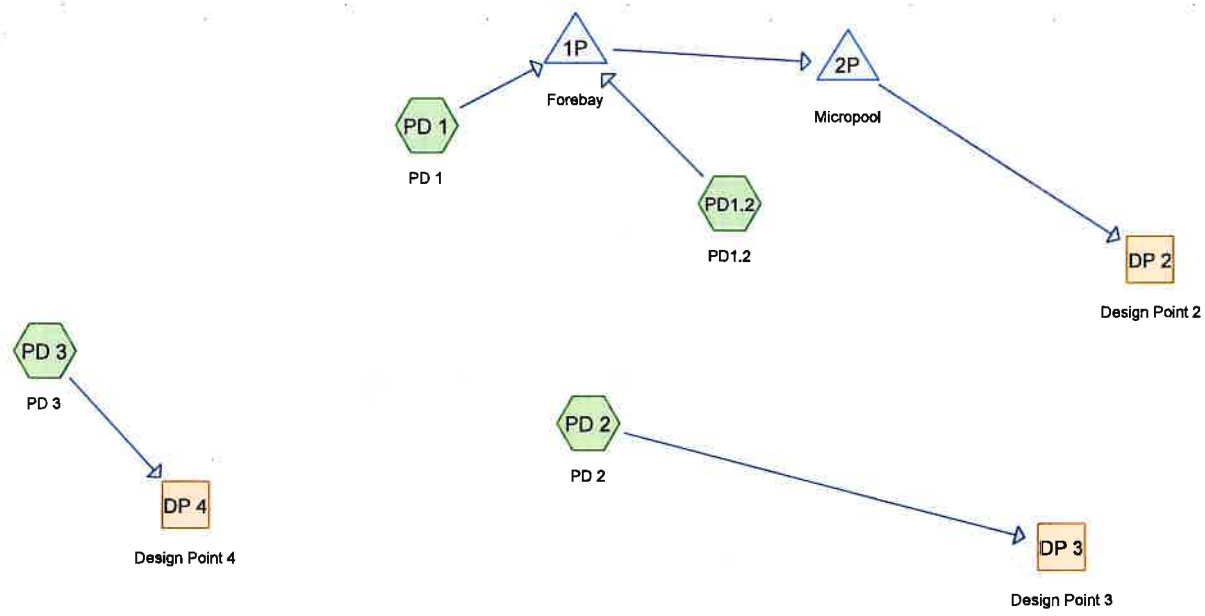
SHEET NUMBER:

C-403

ORG. DATE - 02-20-2025

APPENDIX "C"

HYDRAULIC CALCULATIONS



Subcat Reach Pond Link

Routing Diagram for NYB240124 Proposed HydroCAD
Prepared by Bohler, Printed 2/20/2025

Project Notes

Rainfall events imported from "NRCS2-Rain.txt" for 1394 NY Niagara

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	NOAA10 24-hr	A	Default	24.00	1	1.84	2
2	10-Year	NOAA10 24-hr	A	Default	24.00	1	3.17	2
3	100-Year	NOAA10 24-hr	A	Default	24.00	1	4.75	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
15.987	80	>75% Grass cover, Good, HSG D (PD 1, PD 2, PD 3)
6.804	98	Paved parking, HSG D (PD 1, PD 2, PD1.2)
3.057	77	Woods, Good, HSG D (PD 1, PD 3)
25.848	**84**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
25.848	HSG D	PD 1, PD 2, PD 3, PD1.2
0.000	Other	
25.848		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	15.987	0.000	15.987	>75% Grass cover, Good	PD 1, PD 2, PD 3
0.000	0.000	0.000	6.804	0.000	6.804	Paved parking	PD 1, PD 2, PD1.2
0.000	0.000	0.000	3.057	0.000	3.057	Woods, Good	PD 1, PD 3
0.000	**0.000**	**0.000**	**25.848**	**0.000**	**25.848**	**TOTAL AREA**	

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	2P	633.87	631.82	140.0	0.0146	0.012	0.0	24.0	0.0	
2	2P	633.87	631.82	142.0	0.0144	0.012	0.0	24.0	0.0	

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PD 1: PD 1 Runoff Area=14.908 ac 30.19% Impervious Runoff Depth>0.68"
Flow Length=960' Tc=21.5 min CN=85 Runoff=10.43 cfs 0.843 af

Subcatchment PD 2: PD 2 Runoff Area=307,623 sf 4.02% Impervious Runoff Depth>0.50"
Flow Length=1,047' Slope=0.0050 '/' Tc=45.1 min CN=81 Runoff=2.19 cfs 0.296 af

Subcatchment PD 3: PD 3 Runoff Area=80,913 sf 0.00% Impervious Runoff Depth>0.36"
Flow Length=407' Slope=0.0200 '/' Tc=19.7 min CN=77 Runoff=0.62 cfs 0.056 af

Subcatchment PD1.2: PD1.2 Runoff Area=2.020 ac 100.00% Impervious Runoff Depth>1.61"
Flow Length=365' Slope=0.0060 '/' Tc=16.8 min CN=98 Runoff=3.64 cfs 0.272 af

Reach DP 2: Design Point 2 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach DP 3: Design Point 3 Inflow=2.19 cfs 0.296 af
Outflow=2.19 cfs 0.296 af

Reach DP 4: Design Point 4 Inflow=0.62 cfs 0.056 af
Outflow=0.62 cfs 0.056 af

Pond 1P: Forebay Peak Elev=635.59' Storage=34,988 cf Inflow=13.70 cfs 1.114 af
Outflow=0.76 cfs 0.346 af

Pond 2P: Micropool Peak Elev=632.57' Storage=15,057 cf Inflow=0.76 cfs 0.346 af
Outflow=0.00 cfs 0.000 af

Total Runoff Area = 25.848 ac Runoff Volume = 1.466 af Average Runoff Depth = 0.68"
73.68% Pervious = 19.044 ac 26.32% Impervious = 6.804 ac

Summary for Subcatchment PD 1: PD 1

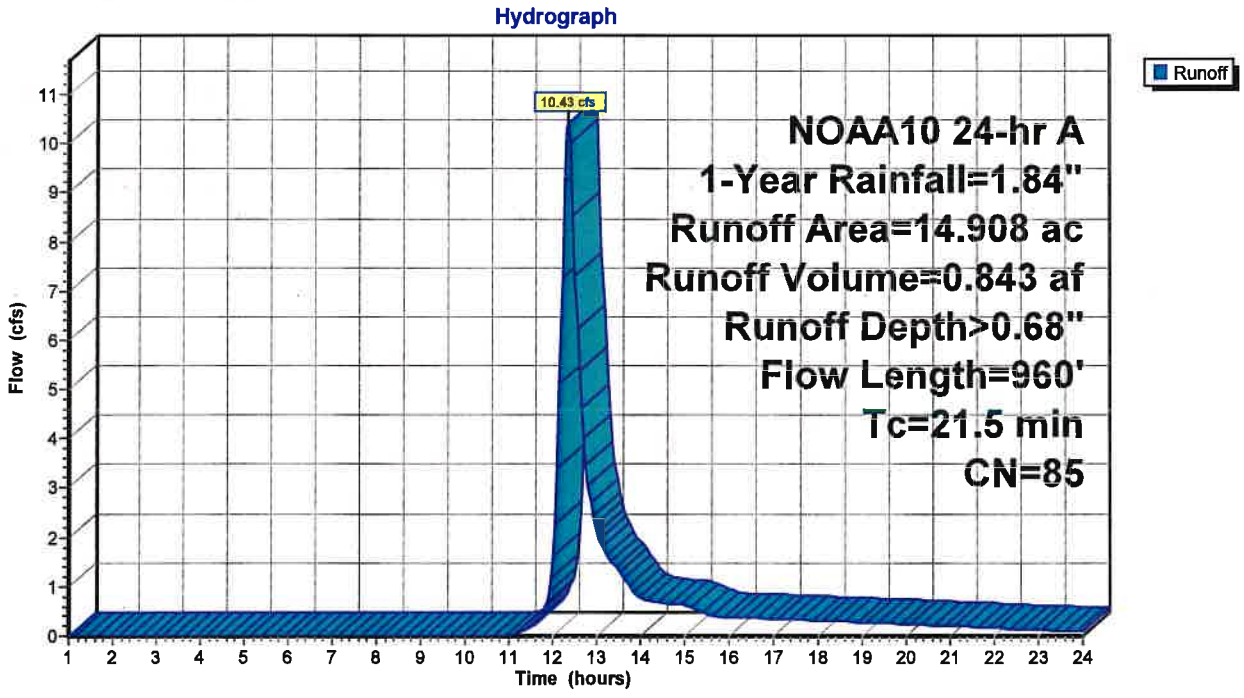
Runoff = 10.43 cfs @ 12.33 hrs, Volume= 0.843 af, Depth> 0.68"
Routed to Pond 1P : Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 1-Year Rainfall=1.84"

Area (ac)	CN	Description
4.500	98	Paved parking, HSG D
8.955	80	>75% Grass cover, Good, HSG D
1.453	77	Woods, Good, HSG D
14.908	85	Weighted Average
10.408		69.81% Pervious Area
4.500		30.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0300	0.11		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
6.8	860	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
21.5	960	Total			

Subcatchment PD 1: PD 1



Summary for Subcatchment PD 2: PD 2

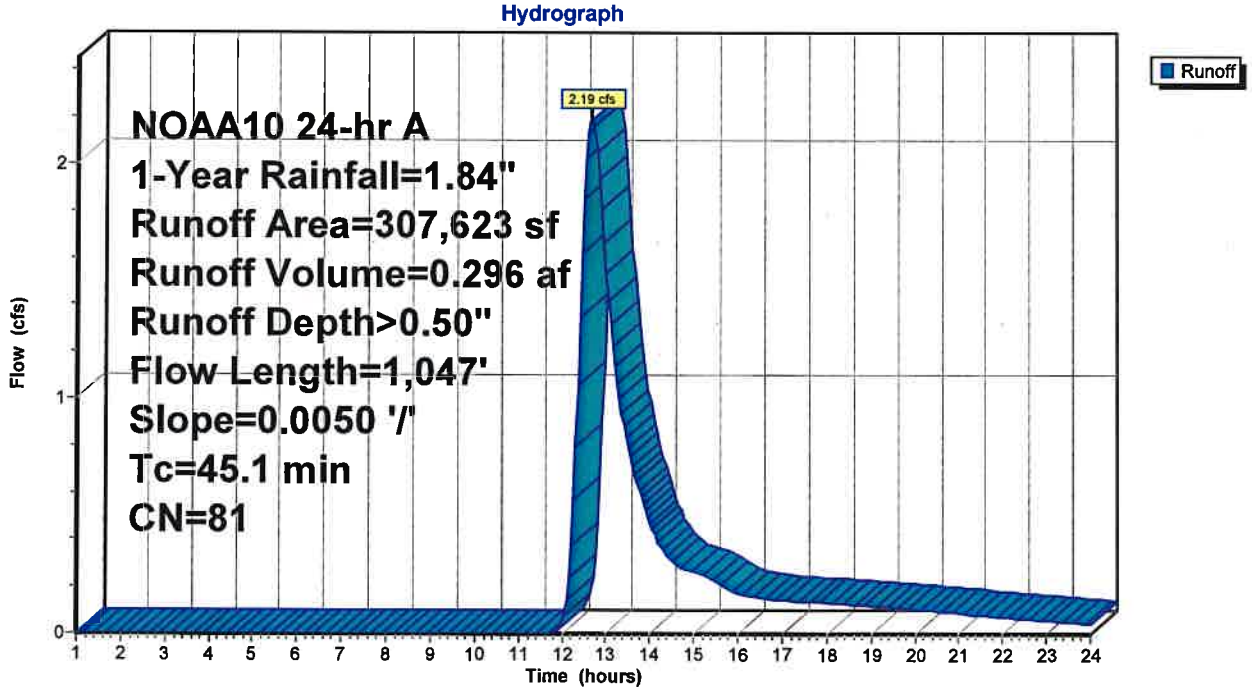
Runoff = 2.19 cfs @ 12.68 hrs, Volume= 0.296 af, Depth> 0.50"
Routed to Reach DP 3 : Design Point 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 1-Year Rainfall=1.84"

Area (sf)	CN	Description
12,354	98	Paved parking, HSG D
295,269	80	>75% Grass cover, Good, HSG D
307,623	81	Weighted Average
295,269		95.98% Pervious Area
12,354		4.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.2	100	0.0050	0.06		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
14.9	947	0.0050	1.06		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
45.1	1,047	Total			

Subcatchment PD 2: PD 2



Summary for Subcatchment PD 3: PD 3

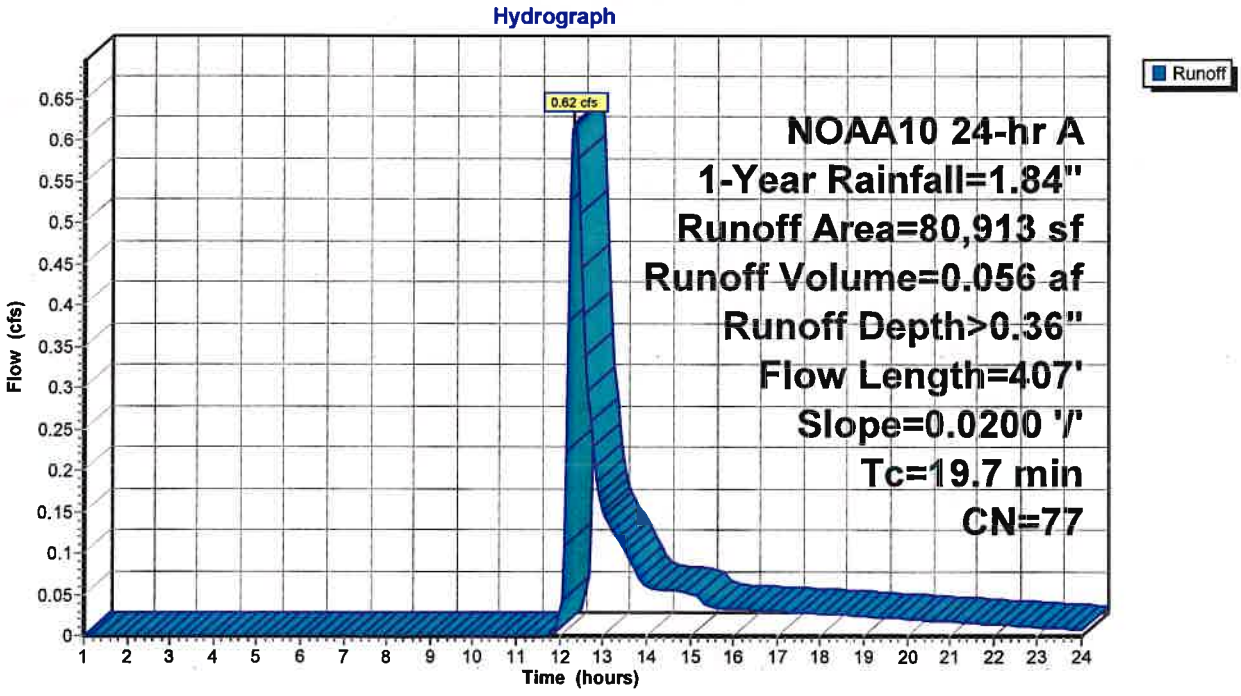
Runoff = 0.62 cfs @ 12.34 hrs, Volume= 0.056 af, Depth> 0.36"
Routed to Reach DP 4 : Design Point 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 1-Year Rainfall=1.84"

Area (sf)	CN	Description
11,054	80	>75% Grass cover, Good, HSG D
69,859	77	Woods, Good, HSG D
80,913	77	Weighted Average
80,913		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	100	0.0200	0.10		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
2.4	307	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
19.7	407	Total			

Subcatchment PD 3: PD 3



Summary for Subcatchment PD1.2: PD1.2

[47] Hint: Peak is 772% of capacity of segment #1

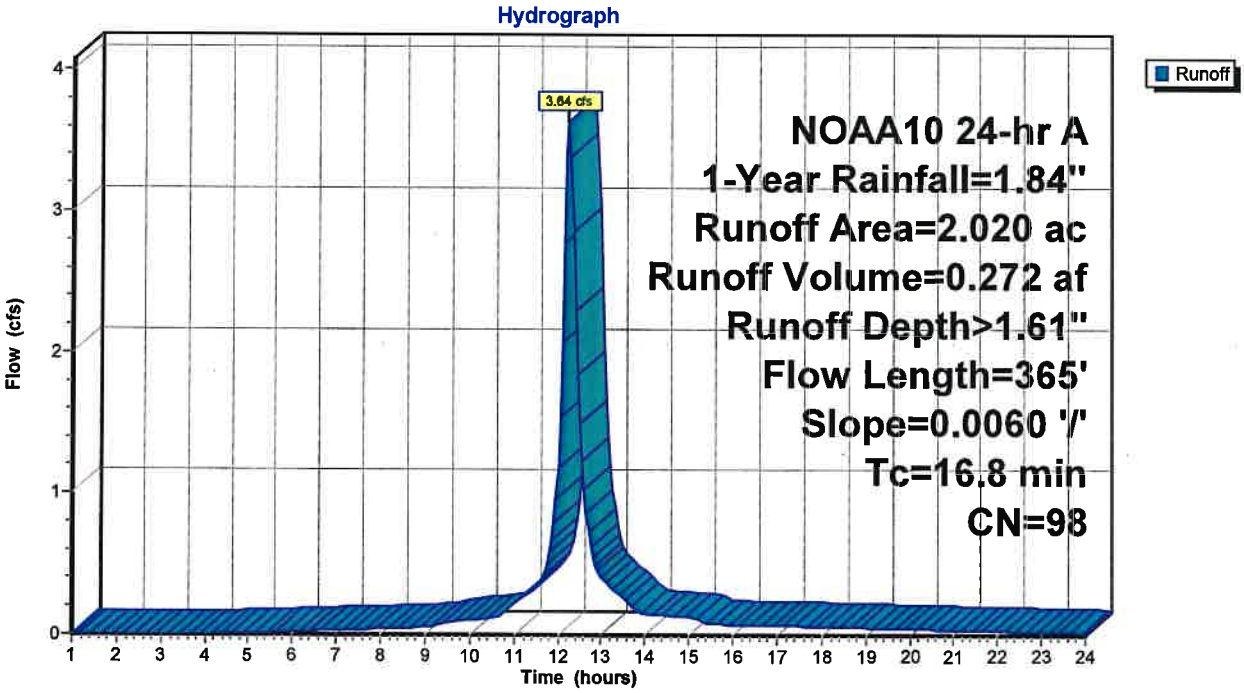
Runoff = 3.64 cfs @ 12.25 hrs, Volume= 0.272 af, Depth> 1.61"
Routed to Pond 1P : Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 1-Year Rainfall=1.84"

Area (ac)	CN	Description
2.020	98	Paved parking, HSG D
2.020		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	365	0.0060	0.36	0.47	**Channel Flow, Vegetated Swale** Area= 1.3 sf Perim= 4.0' r= 0.33' n= 0.150

Subcatchment PD1.2: PD1.2



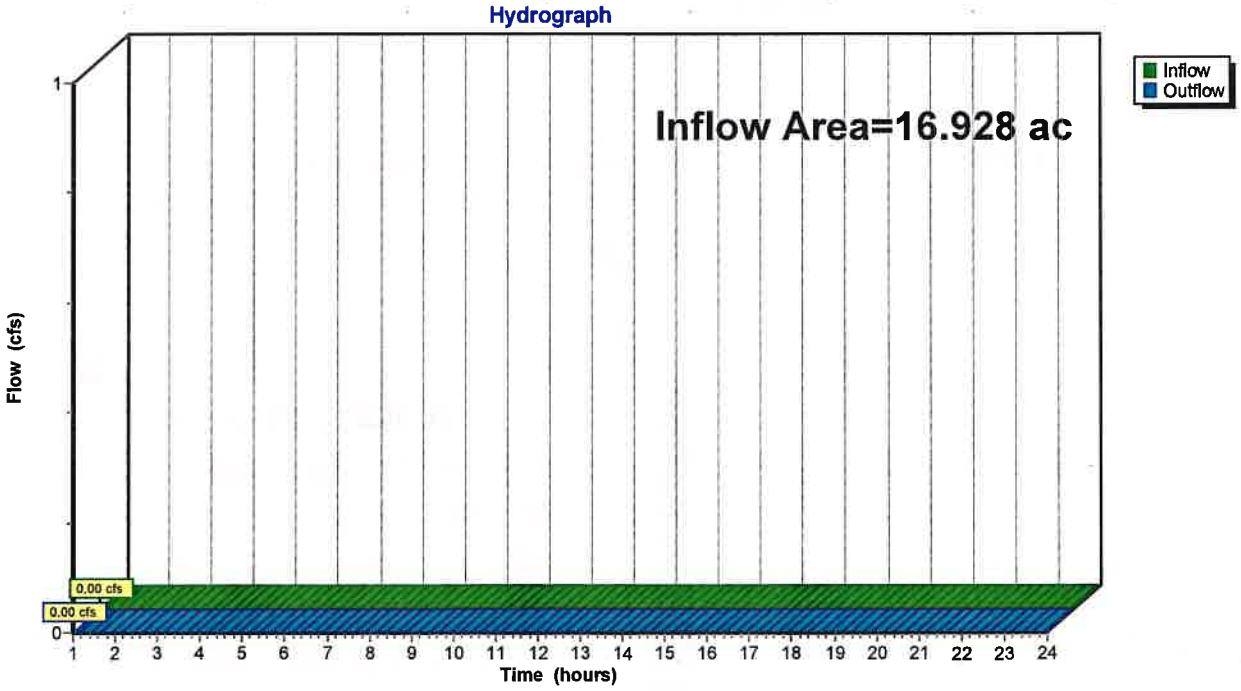
Summary for Reach DP 2: Design Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.928 ac, 38.52% Impervious, Inflow Depth = 0.00" for 1-Year event
Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP 2: Design Point 2



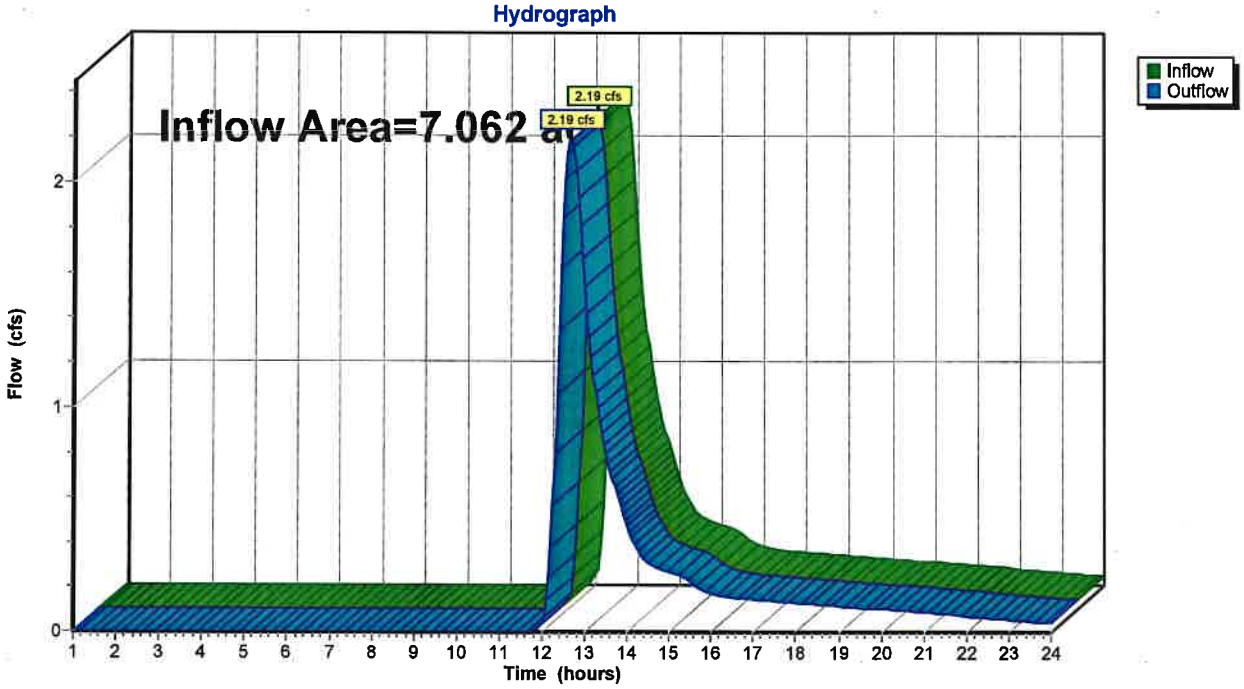
Summary for Reach DP 3: Design Point 3

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 7.062 ac, 4.02% Impervious, Inflow Depth > 0.50" for 1-Year event
Inflow = 2.19 cfs @ 12.68 hrs, Volume= 0.296 af
Outflow = 2.19 cfs @ 12.68 hrs, Volume= 0.296 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP 3: Design Point 3



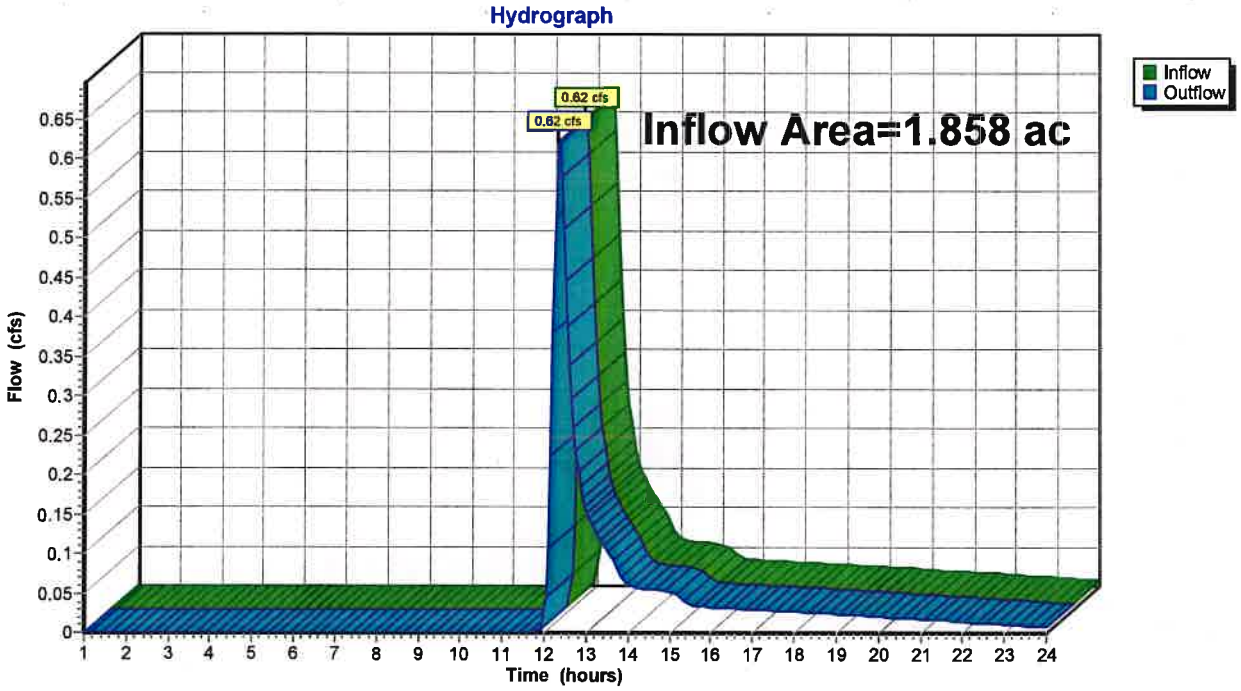
Summary for Reach DP 4: Design Point 4

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.858 ac, 0.00% Impervious, Inflow Depth > 0.36" for 1-Year event
Inflow = 0.62 cfs @ 12.34 hrs, Volume= 0.056 af
Outflow = 0.62 cfs @ 12.34 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP 4: Design Point 4



Summary for Pond 1P: Forebay

Inflow Area = 16.928 ac, 38.52% Impervious, Inflow Depth > 0.79" for 1-Year event
Inflow = 13.70 cfs @ 12.31 hrs, Volume= 1.114 af
Outflow = 0.76 cfs @ 15.03 hrs, Volume= 0.346 af, Atten= 94%, Lag= 163.3 min
Primary = 0.76 cfs @ 15.03 hrs, Volume= 0.346 af
Routed to Pond 2P : Micropool

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 635.59' @ 15.03 hrs Surf.Area= 23,370 sf Storage= 34,988 cf

Plug-Flow detention time= 344.7 min calculated for 0.345 af (31% of inflow)
Center-of-Mass det. time= 227.8 min (1,056.2 - 828.3)

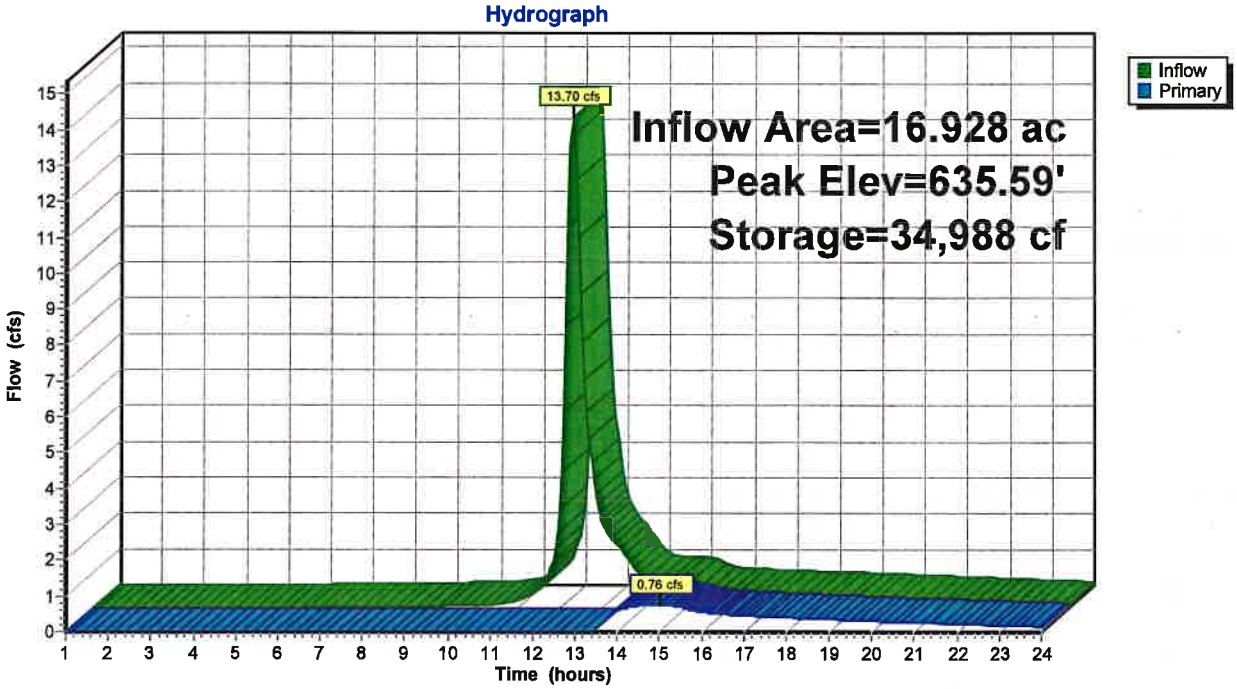
Volume	Invert	Avail.Storage	Storage Description
#1	631.00'	118,418 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
631.00	3,695	0	0
632.00	4,652	4,174	4,174
633.00	5,707	5,180	9,353
634.00	6,840	6,274	15,627
635.00	11,282	9,061	24,688
636.00	31,616	21,449	46,137
637.00	36,099	33,858	79,994
638.00	40,749	38,424	118,418

Device	Routing	Invert	Outlet Devices
#1	Primary	635.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.72 cfs @ 15.03 hrs HW=635.59' TW=634.50' (Fixed TW Elev= 634.50')
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 0.72 cfs @ 0.77 fps)

Pond 1P: Forebay



Summary for Pond 2P: Micropool

Inflow Area = 16.928 ac, 38.52% Impervious, Inflow Depth > 0.25" for 1-Year event
Inflow = 0.76 cfs @ 15.03 hrs, Volume= 0.346 af
Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Reach DP 2 : Design Point 2

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 632.57' @ 24.00 hrs Surf.Area= 7,368 sf Storage= 15,057 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	630.00'	133,705 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

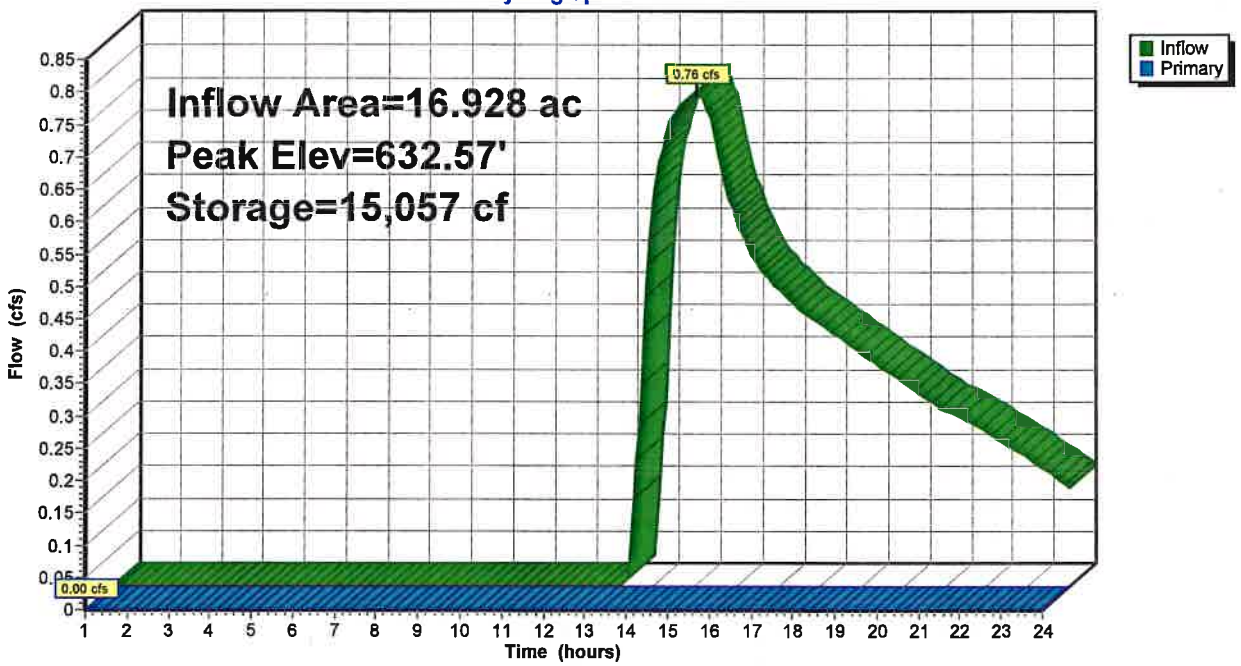
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
630.00	4,405	0	0
631.00	5,496	4,951	4,951
632.00	6,660	6,078	11,029
633.00	7,893	7,277	18,305
634.00	9,187	8,540	26,845
635.00	14,177	11,682	38,527
636.00	31,616	22,897	61,424
637.00	36,099	33,858	95,281
638.00	40,749	38,424	133,705

Device	Routing	Invert	Outlet Devices
#1	Primary	633.87'	**24.0" Round Culvert** L= 140.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 633.87' / 631.82' S= 0.0146 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 3.14 sf
#2	Device 1	635.50'	**24.0" Horiz. Orifice/Grate** C= 0.600 in 30.0" x 30.0" Grate (50% open area) Limited to weir flow at low heads
#3	Device 1	633.60'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	633.87'	**24.0" Round Culvert** L= 142.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 633.87' / 631.82' S= 0.0144 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=0.00 cfs @ 1.00 hrs HW=630.00' (Free Discharge)
↑**1=Culvert** (Controls 0.00 cfs)
↑**2=Orifice/Grate** (Controls 0.00 cfs)
3=Orifice/Grate (Controls 0.00 cfs)
↑**4=Culvert** (Controls 0.00 cfs)

Pond 2P: Micropool

Hydrograph



Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PD 1: PD 1 Runoff Area=14.908 ac 30.19% Impervious Runoff Depth>1.73"
Flow Length=960' Tc=21.5 min CN=85 Runoff=27.44 cfs 2.147 af

Subcatchment PD 2: PD 2 Runoff Area=307,623 sf 4.02% Impervious Runoff Depth>1.44"
Flow Length=1,047' Slope=0.0050 '/' Tc=45.1 min CN=81 Runoff=6.84 cfs 0.846 af

Subcatchment PD 3: PD 3 Runoff Area=80,913 sf 0.00% Impervious Runoff Depth>1.19"
Flow Length=407' Slope=0.0200 '/' Tc=19.7 min CN=77 Runoff=2.40 cfs 0.184 af

Subcatchment PD1.2: PD1.2 Runoff Area=2.020 ac 100.00% Impervious Runoff Depth>2.93"
Flow Length=365' Slope=0.0060 '/' Tc=16.8 min CN=98 Runoff=6.42 cfs 0.494 af

Reach DP 2: Design Point 2 Inflow=4.29 cfs 1.215 af
Outflow=4.29 cfs 1.215 af

Reach DP 3: Design Point 3 Inflow=6.84 cfs 0.846 af
Outflow=6.84 cfs 0.846 af

Reach DP 4: Design Point 4 Inflow=2.40 cfs 0.184 af
Outflow=2.40 cfs 0.184 af

Pond 1P: Forebay Peak Elev=636.17' Storage=51,587 cf Inflow=33.25 cfs 2.641 af
Outflow=14.81 cfs 1.862 af

Pond 2P: Micropool Peak Elev=634.88' Storage=36,856 cf Inflow=14.81 cfs 1.862 af
Outflow=4.29 cfs 1.215 af

Total Runoff Area = 25.848 ac Runoff Volume = 3.671 af Average Runoff Depth = 1.70"
73.68% Pervious = 19.044 ac 26.32% Impervious = 6.804 ac

Summary for Subcatchment PD 1: PD 1

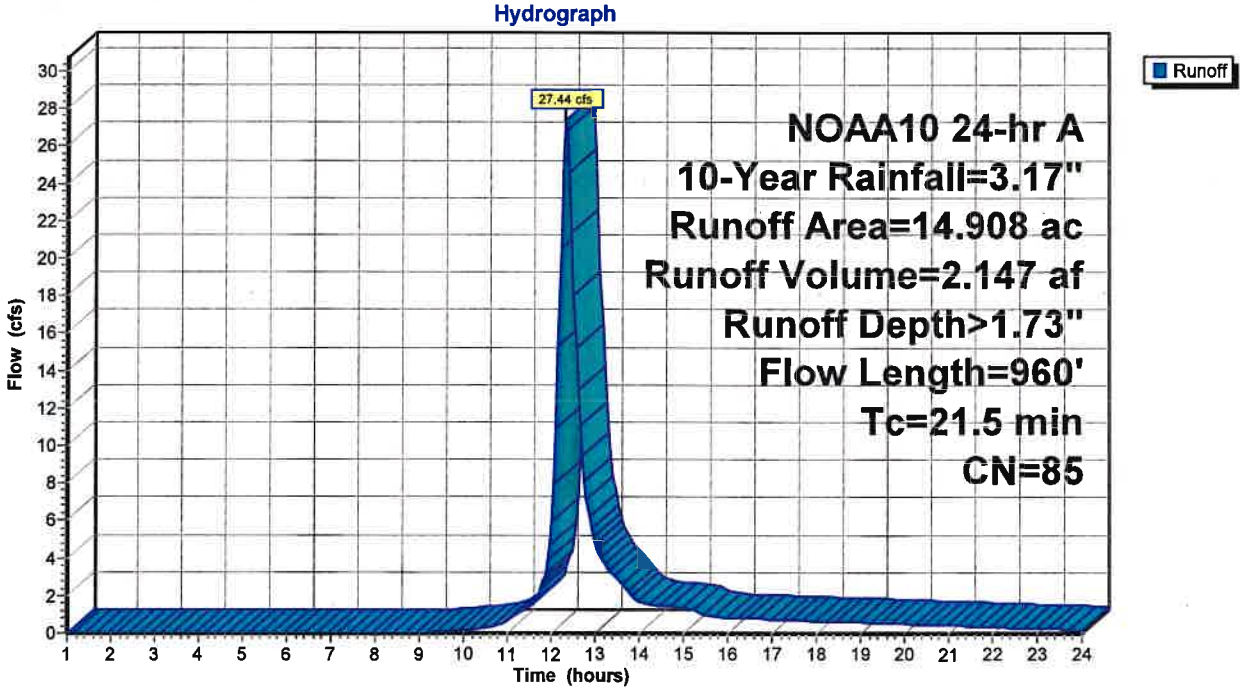
Runoff = 27.44 cfs @ 12.32 hrs, Volume= 2.147 af, Depth> 1.73"
Routed to Pond 1P : Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 10-Year Rainfall=3.17"

Area (ac)	CN	Description
4.500	98	Paved parking, HSG D
8.955	80	>75% Grass cover, Good, HSG D
1.453	77	Woods, Good, HSG D
14.908	85	Weighted Average
10.408		69.81% Pervious Area
4.500		30.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0300	0.11		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
6.8	860	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
21.5	960	Total			

Subcatchment PD 1: PD 1



Summary for Subcatchment PD 2: PD 2

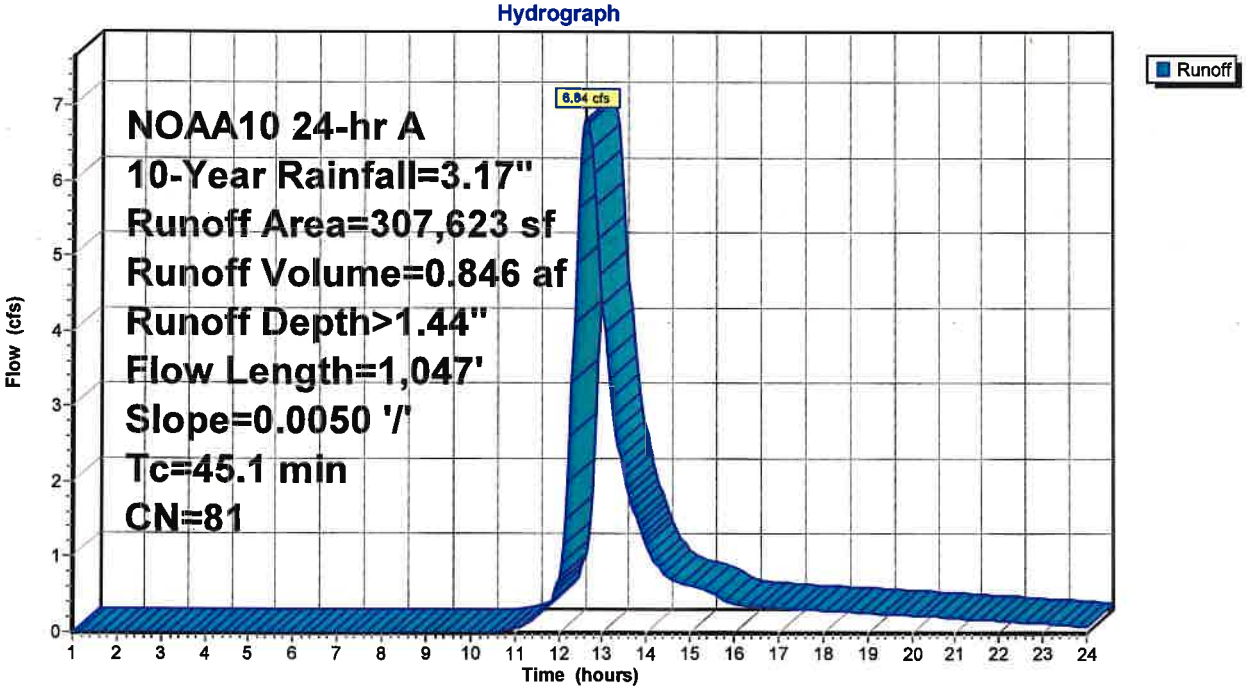
Runoff = 6.84 cfs @ 12.63 hrs, Volume= 0.846 af, Depth> 1.44"
Routed to Reach DP 3 : Design Point 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 10-Year Rainfall=3.17"

Area (sf)	CN	Description
12,354	98	Paved parking, HSG D
295,269	80	>75% Grass cover, Good, HSG D
307,623	81	Weighted Average
295,269		95.98% Pervious Area
12,354		4.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.2	100	0.0050	0.06		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
14.9	947	0.0050	1.06		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
45.1	1,047	Total			

Subcatchment PD 2: PD 2



Summary for Subcatchment PD 3: PD 3

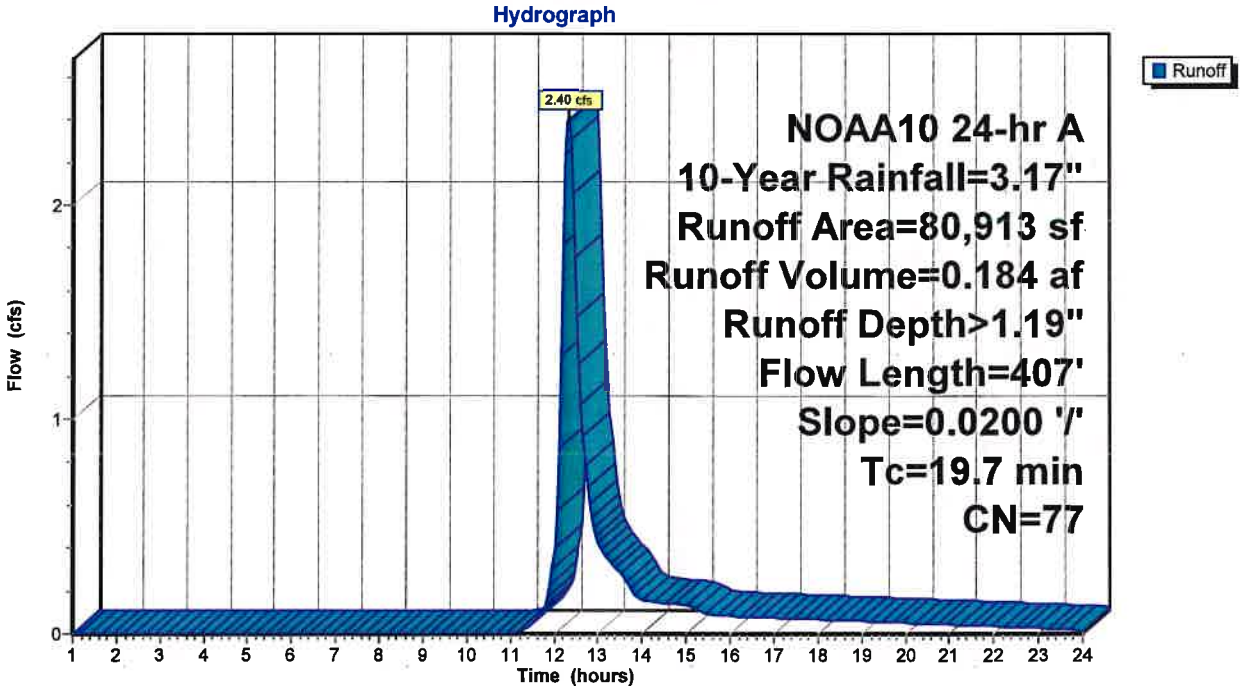
Runoff = 2.40 cfs @ 12.31 hrs, Volume= 0.184 af, Depth> 1.19"
Routed to Reach DP 4 : Design Point 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 10-Year Rainfall=3.17"

Area (sf)	CN	Description
11,054	80	>75% Grass cover, Good, HSG D
69,859	77	Woods, Good, HSG D
80,913	77	Weighted Average
80,913		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	100	0.0200	0.10		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
2.4	307	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
19.7	407	Total			

Subcatchment PD 3: PD 3



Summary for Subcatchment PD1.2: PD1.2

[47] Hint: Peak is 1361% of capacity of segment #1

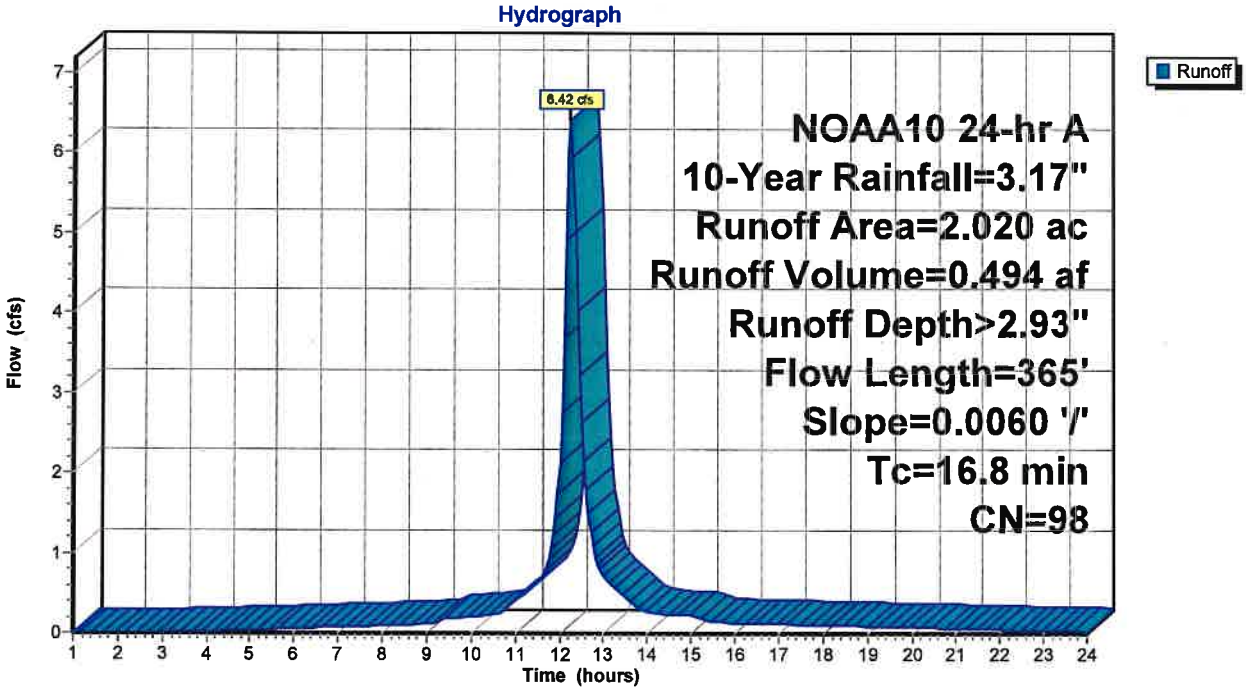
Runoff = 6.42 cfs @ 12.25 hrs, Volume= 0.494 af, Depth> 2.93"
Routed to Pond 1P : Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 10-Year Rainfall=3.17"

Area (ac)	CN	Description
2.020	98	Paved parking, HSG D
2.020		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	365	0.0060	0.36	0.47	**Channel Flow, Vegetated Swale** Area= 1.3 sf Perim= 4.0' r= 0.33' n= 0.150

Subcatchment PD1.2: PD1.2



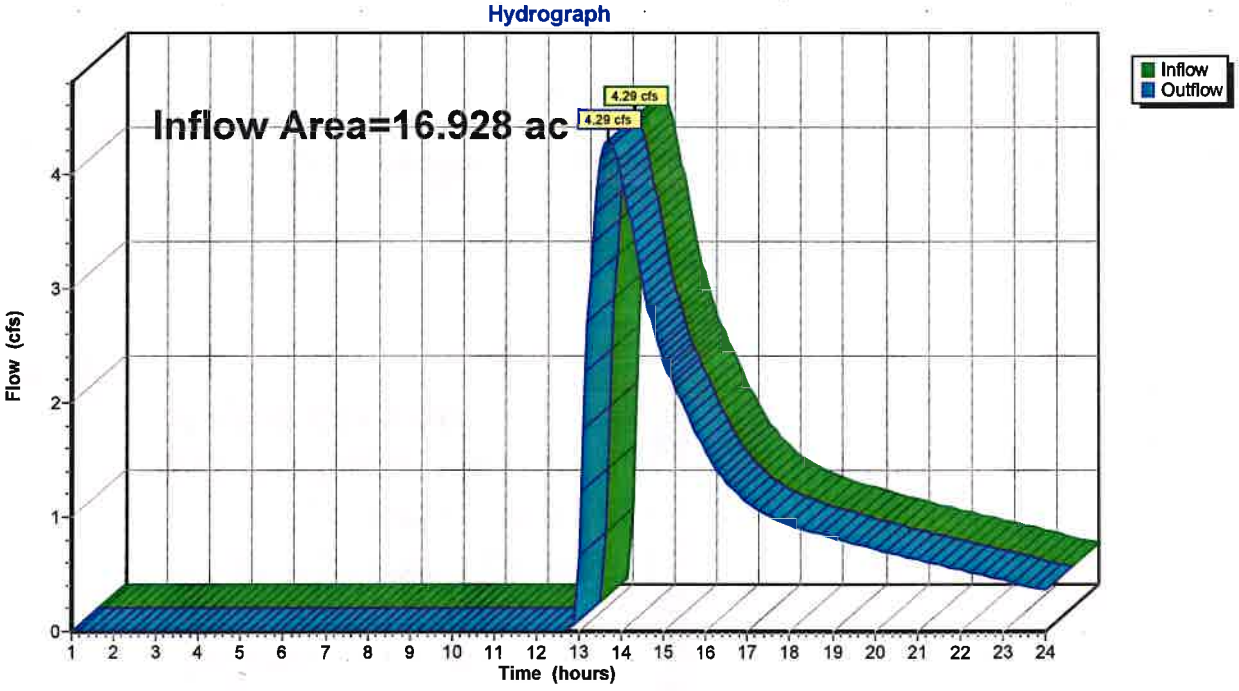
Summary for Reach DP 2: Design Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.928 ac, 38.52% Impervious, Inflow Depth > 0.86" for 10-Year event
Inflow = 4.29 cfs @ 13.68 hrs, Volume= 1.215 af
Outflow = 4.29 cfs @ 13.68 hrs, Volume= 1.215 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP 2: Design Point 2



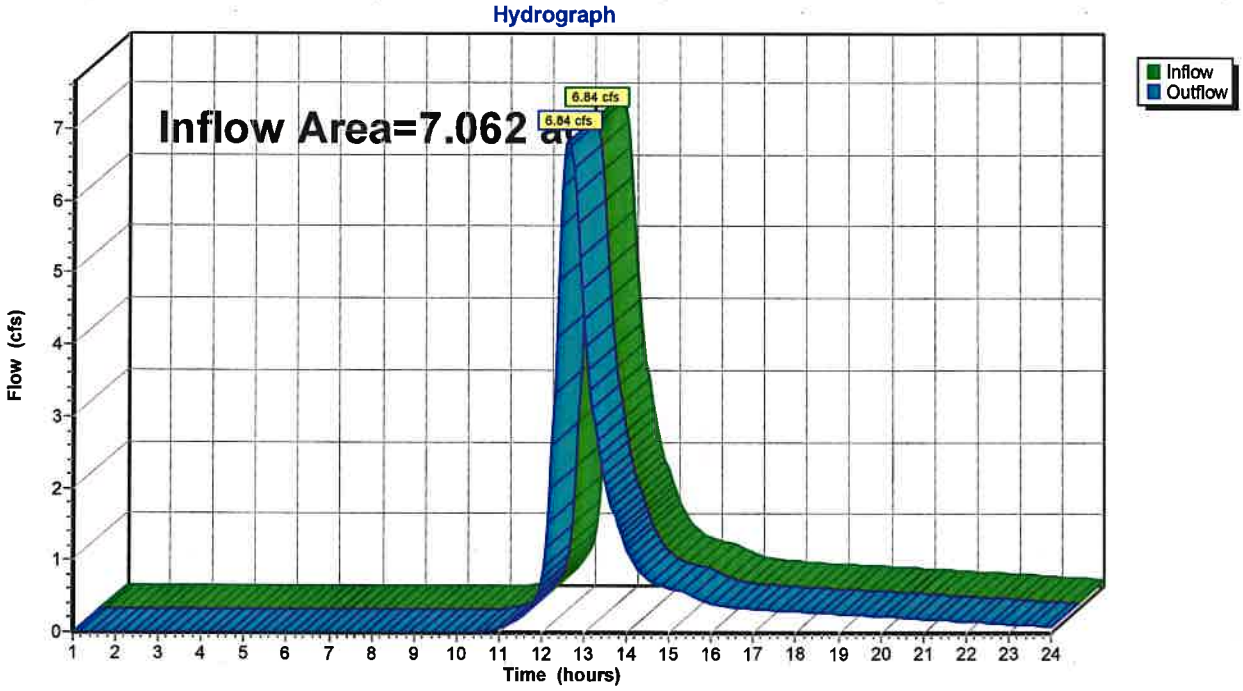
Summary for Reach DP 3: Design Point 3

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 7.062 ac, 4.02% Impervious, Inflow Depth > 1.44" for 10-Year event
Inflow = 6.84 cfs @ 12.63 hrs, Volume= 0.846 af
Outflow = 6.84 cfs @ 12.63 hrs, Volume= 0.846 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP 3: Design Point 3



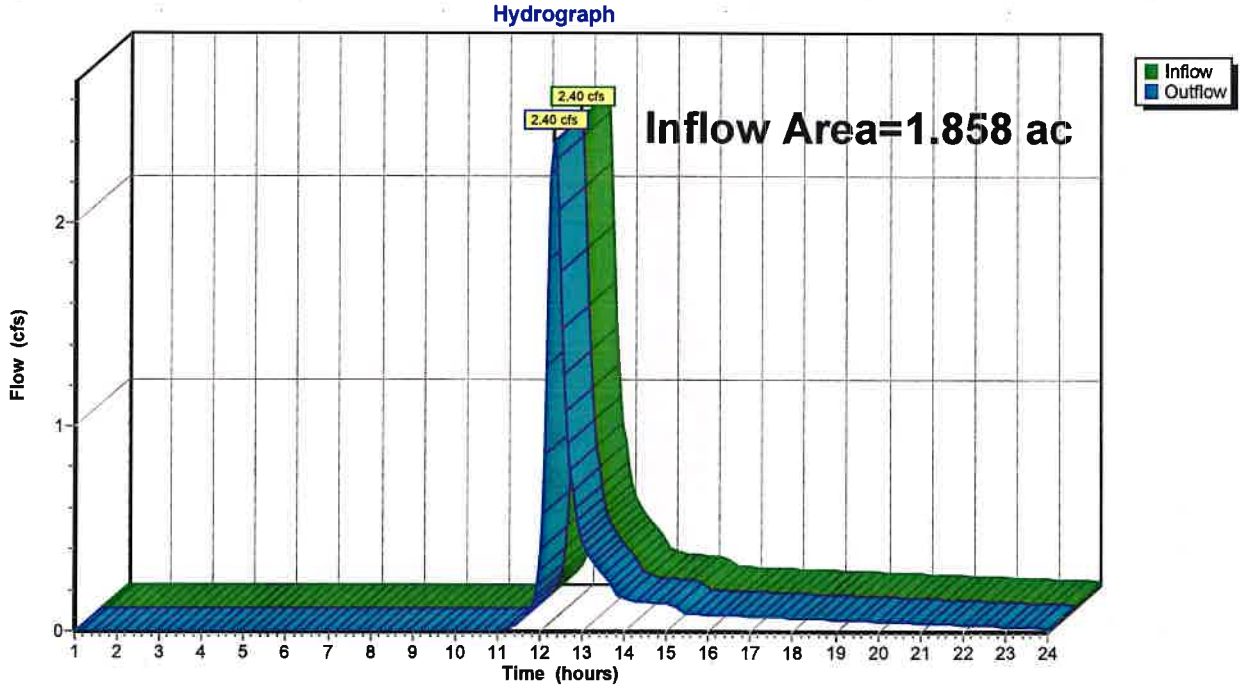
Summary for Reach DP 4: Design Point 4

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.858 ac, 0.00% Impervious, Inflow Depth > 1.19" for 10-Year event
Inflow = 2.40 cfs @ 12.31 hrs, Volume= 0.184 af
Outflow = 2.40 cfs @ 12.31 hrs, Volume= 0.184 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP 4: Design Point 4



Summary for Pond 1P: Forebay

Inflow Area = 16.928 ac, 38.52% Impervious, Inflow Depth > 1.87" for 10-Year event
Inflow = 33.25 cfs @ 12.30 hrs, Volume= 2.641 af
Outflow = 14.81 cfs @ 12.60 hrs, Volume= 1.862 af, Atten= 55%, Lag= 18.0 min
Primary = 14.81 cfs @ 12.60 hrs, Volume= 1.862 af
Routed to Pond 2P : Micropool

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 636.17' @ 12.60 hrs Surf.Area= 32,380 sf Storage= 51,587 cf

Plug-Flow detention time= 149.8 min calculated for 1.858 af (70% of inflow)
Center-of-Mass det. time= 70.5 min (883.2 - 812.8)

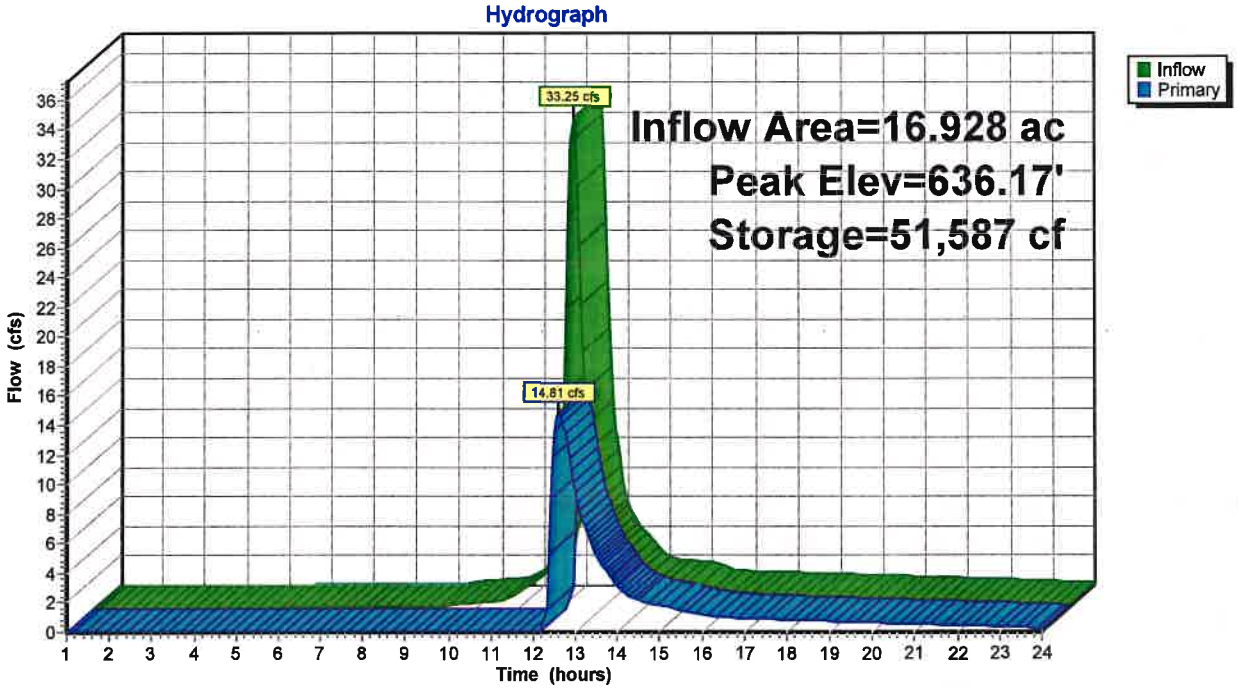
Volume	Invert	Avail.Storage	Storage Description
#1	631.00'	118,418 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
631.00	3,695	0	0
632.00	4,652	4,174	4,174
633.00	5,707	5,180	9,353
634.00	6,840	6,274	15,627
635.00	11,282	9,061	24,688
636.00	31,616	21,449	46,137
637.00	36,099	33,858	79,994
638.00	40,749	38,424	118,418

Device	Routing	Invert	Outlet Devices
#1	Primary	635.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=14.78 cfs @ 12.60 hrs HW=636.17' TW=634.50' (Fixed TW Elev= 634.50')
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 14.78 cfs @ 2.21 fps)

Pond 1P: Forebay



Summary for Pond 2P: Micropool

Inflow Area = 16.928 ac, 38.52% Impervious, Inflow Depth > 1.32" for 10-Year event
Inflow = 14.81 cfs @ 12.60 hrs, Volume= 1.862 af
Outflow = 4.29 cfs @ 13.68 hrs, Volume= 1.215 af, Atten= 71%, Lag= 64.7 min
Primary = 4.29 cfs @ 13.68 hrs, Volume= 1.215 af
Routed to Reach DP 2 : Design Point 2

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 634.88' @ 13.68 hrs Surf.Area= 13,576 sf Storage= 36,856 cf

Plug-Flow detention time= 197.5 min calculated for 1.215 af (65% of inflow)
Center-of-Mass det. time= 97.7 min (980.9 - 883.2)

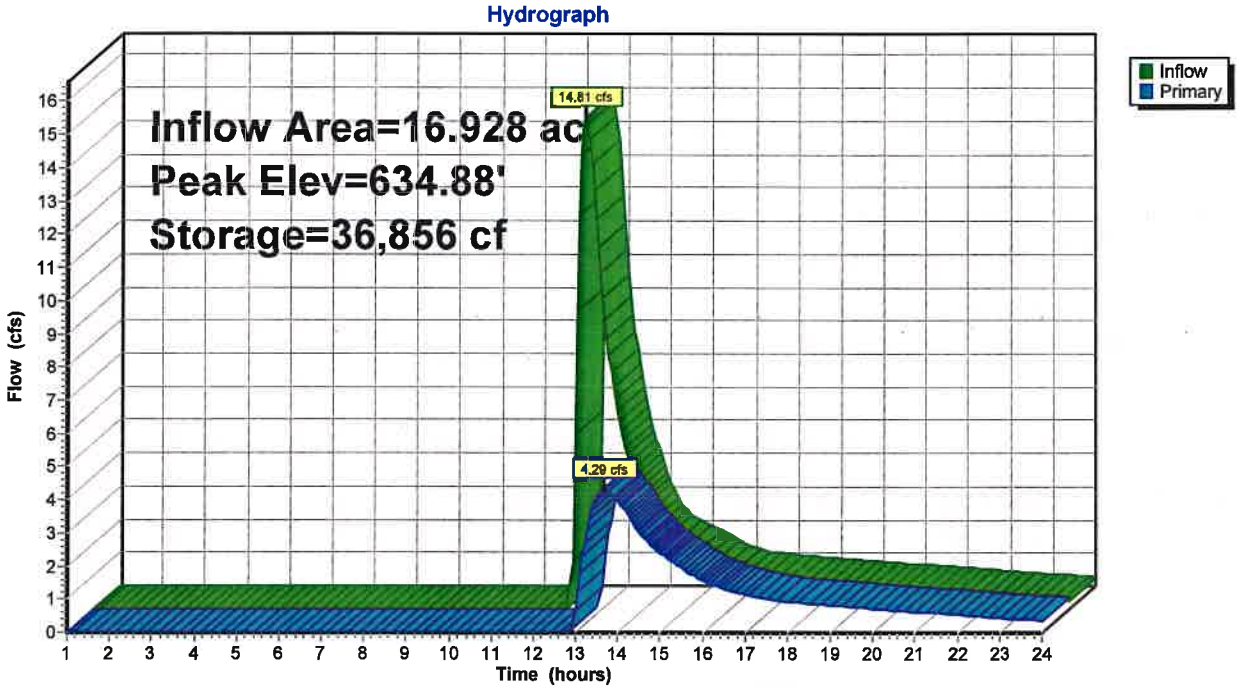
Volume	Invert	Avail.Storage	Storage Description
#1	630.00'	133,705 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
630.00	4,405	0	0
631.00	5,496	4,951	4,951
632.00	6,660	6,078	11,029
633.00	7,893	7,277	18,305
634.00	9,187	8,540	26,845
635.00	14,177	11,682	38,527
636.00	31,616	22,897	61,424
637.00	36,099	33,858	95,281
638.00	40,749	38,424	133,705

Device	Routing	Invert	Outlet Devices
#1	Primary	633.87'	**24.0" Round Culvert** L= 140.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 633.87' / 631.82' S= 0.0146 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 3.14 sf
#2	Device 1	635.50'	**24.0" Horiz. Orifice/Grate** C= 0.600 in 30.0" x 30.0" Grate (50% open area) Limited to weir flow at low heads
#3	Device 1	633.60'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	633.87'	**24.0" Round Culvert** L= 142.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 633.87' / 631.82' S= 0.0144 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=4.29 cfs @ 13.68 hrs HW=634.88' (Free Discharge)
↑**1=Culvert** (Inlet Controls 4.29 cfs @ 2.70 fps)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)
—**3=Orifice/Grate** (Passes < 0.95 cfs potential flow)
—**4=Culvert** (Passes < 4.29 cfs potential flow)

Pond 2P: Micropool



Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PD 1: PD 1 Runoff Area=14.908 ac 30.19% Impervious Runoff Depth>3.13"
Flow Length=960' Tc=21.5 min CN=85 Runoff=49.33 cfs 3.891 af

Subcatchment PD 2: PD 2 Runoff Area=307,623 sf 4.02% Impervious Runoff Depth>2.75"
Flow Length=1,047' Slope=0.0050 '/' Tc=45.1 min CN=81 Runoff=13.25 cfs 1.620 af

Subcatchment PD 3: PD 3 Runoff Area=80,913 sf 0.00% Impervious Runoff Depth>2.41"
Flow Length=407' Slope=0.0200 '/' Tc=19.7 min CN=77 Runoff=4.98 cfs 0.373 af

Subcatchment PD1.2: PD1.2 Runoff Area=2.020 ac 100.00% Impervious Runoff Depth>4.51"
Flow Length=365' Slope=0.0060 '/' Tc=16.8 min CN=98 Runoff=9.69 cfs 0.759 af

Reach DP 2: Design Point 2 Inflow=13.47 cfs 3.200 af
Outflow=13.47 cfs 3.200 af

Reach DP 3: Design Point 3 Inflow=13.25 cfs 1.620 af
Outflow=13.25 cfs 1.620 af

Reach DP 4: Design Point 4 Inflow=4.98 cfs 0.373 af
Outflow=4.98 cfs 0.373 af

Pond 1P: Forebay Peak Elev=636.77' Storage=71,853 cf Inflow=58.18 cfs 4.650 af
Outflow=38.46 cfs 3.863 af

Pond 2P: Micropool Peak Elev=636.14' Storage=65,967 cf Inflow=38.46 cfs 3.863 af
Outflow=13.47 cfs 3.200 af

Total Runoff Area = 25.848 ac Runoff Volume = 6.643 af Average Runoff Depth = 3.08"
73.68% Pervious = 19.044 ac 26.32% Impervious = 6.804 ac

Summary for Subcatchment PD 1: PD 1

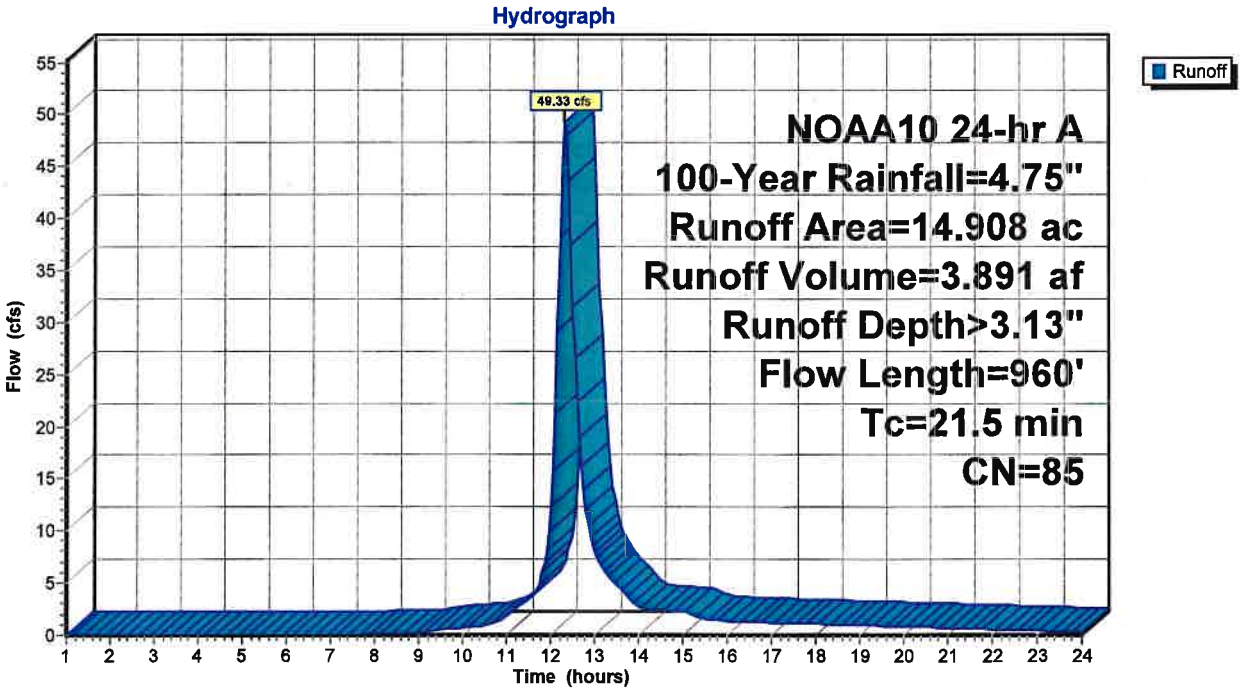
Runoff = 49.33 cfs @ 12.31 hrs, Volume= 3.891 af, Depth> 3.13"
Routed to Pond 1P : Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 100-Year Rainfall=4.75"

Area (ac)	CN	Description
4.500	98	Paved parking, HSG D
8.955	80	>75% Grass cover, Good, HSG D
1.453	77	Woods, Good, HSG D
14.908	85	Weighted Average
10.408		69.81% Pervious Area
4.500		30.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0300	0.11		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
6.8	860	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
21.5	960	Total			

Subcatchment PD 1: PD 1



Summary for Subcatchment PD 2: PD 2

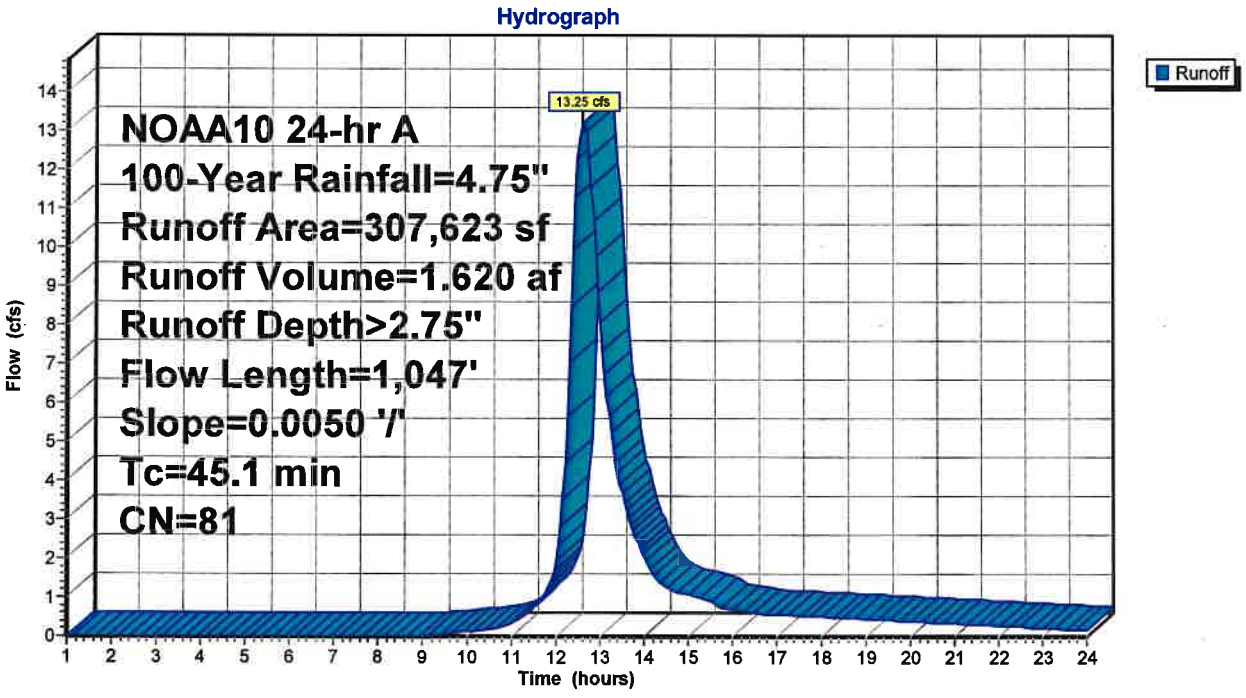
Runoff = 13.25 cfs @ 12.62 hrs, Volume= 1.620 af, Depth> 2.75"
Routed to Reach DP 3 : Design Point 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 100-Year Rainfall=4.75"

Area (sf)	CN	Description
12,354	98	Paved parking, HSG D
295,269	80	>75% Grass cover, Good, HSG D
307,623	81	Weighted Average
295,269		95.98% Pervious Area
12,354		4.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.2	100	0.0050	0.06		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
14.9	947	0.0050	1.06		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
45.1	1,047	Total			

Subcatchment PD 2: PD 2



Summary for Subcatchment PD 3: PD 3

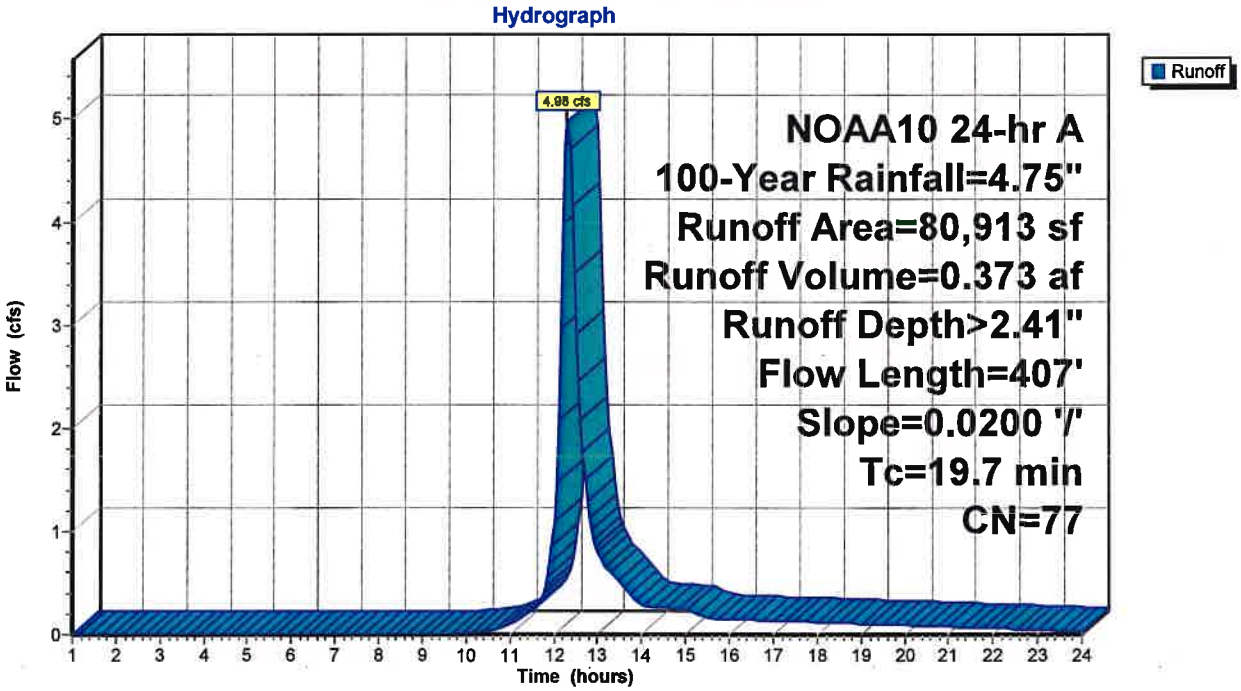
Runoff = 4.98 cfs @ 12.30 hrs, Volume= 0.373 af, Depth> 2.41"
Routed to Reach DP 4 : Design Point 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 100-Year Rainfall=4.75"

Area (sf)	CN	Description
11,054	80	>75% Grass cover, Good, HSG D
69,859	77	Woods, Good, HSG D
80,913	77	Weighted Average
80,913		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	100	0.0200	0.10		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
2.4	307	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
19.7	407	Total			

Subcatchment PD 3: PD 3



Summary for Subcatchment PD1.2: PD1.2

[47] Hint: Peak is 2055% of capacity of segment #1

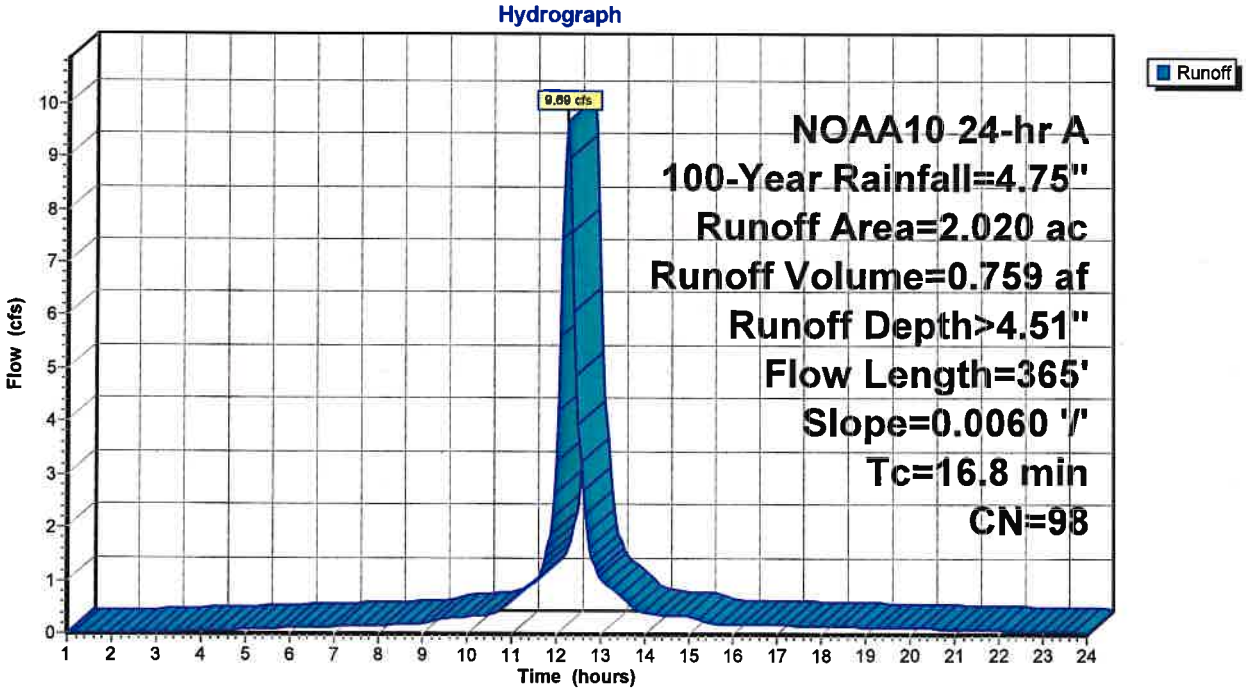
Runoff = 9.69 cfs @ 12.25 hrs, Volume= 0.759 af, Depth> 4.51"
Routed to Pond 1P : Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 100-Year Rainfall=4.75"

Area (ac)	CN	Description
2.020	98	Paved parking, HSG D
2.020		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	365	0.0060	0.36	0.47	**Channel Flow, Vegetated Swale** Area= 1.3 sf Perim= 4.0' r= 0.33' n= 0.150

Subcatchment PD1.2: PD1.2



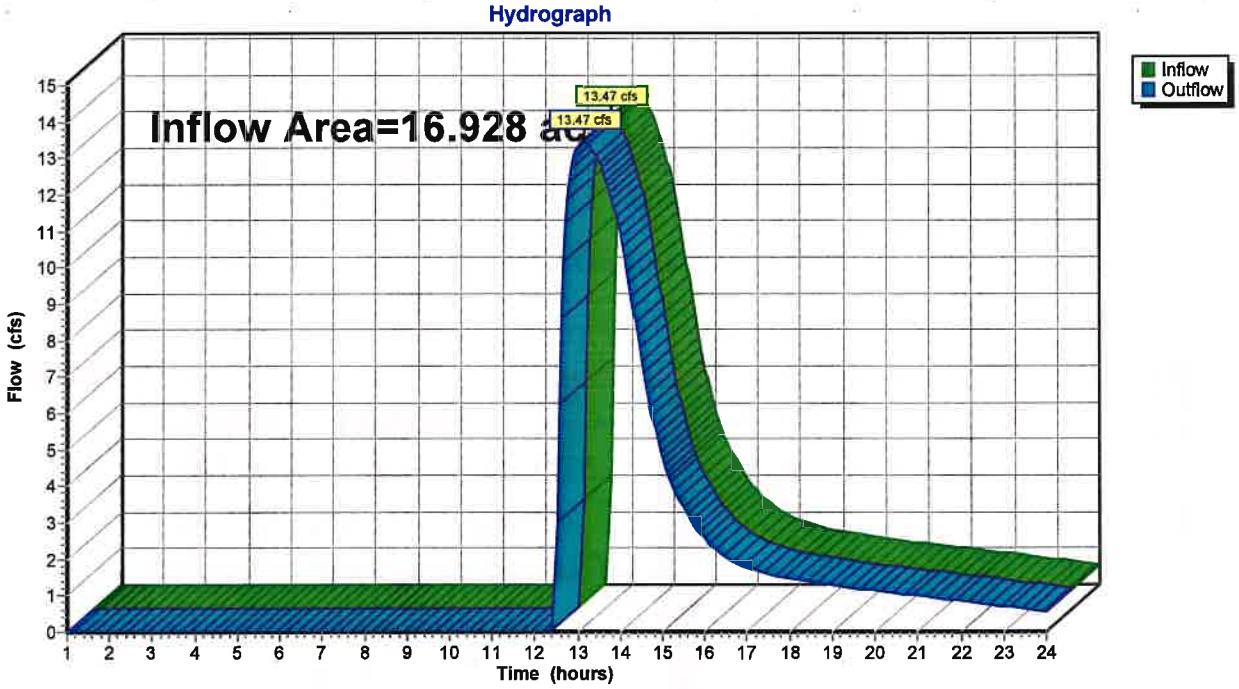
Summary for Reach DP 2: Design Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.928 ac, 38.52% Impervious, Inflow Depth > 2.27" for 100-Year event
Inflow = 13.47 cfs @ 13.14 hrs, Volume= 3.200 af
Outflow = 13.47 cfs @ 13.14 hrs, Volume= 3.200 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP 2: Design Point 2



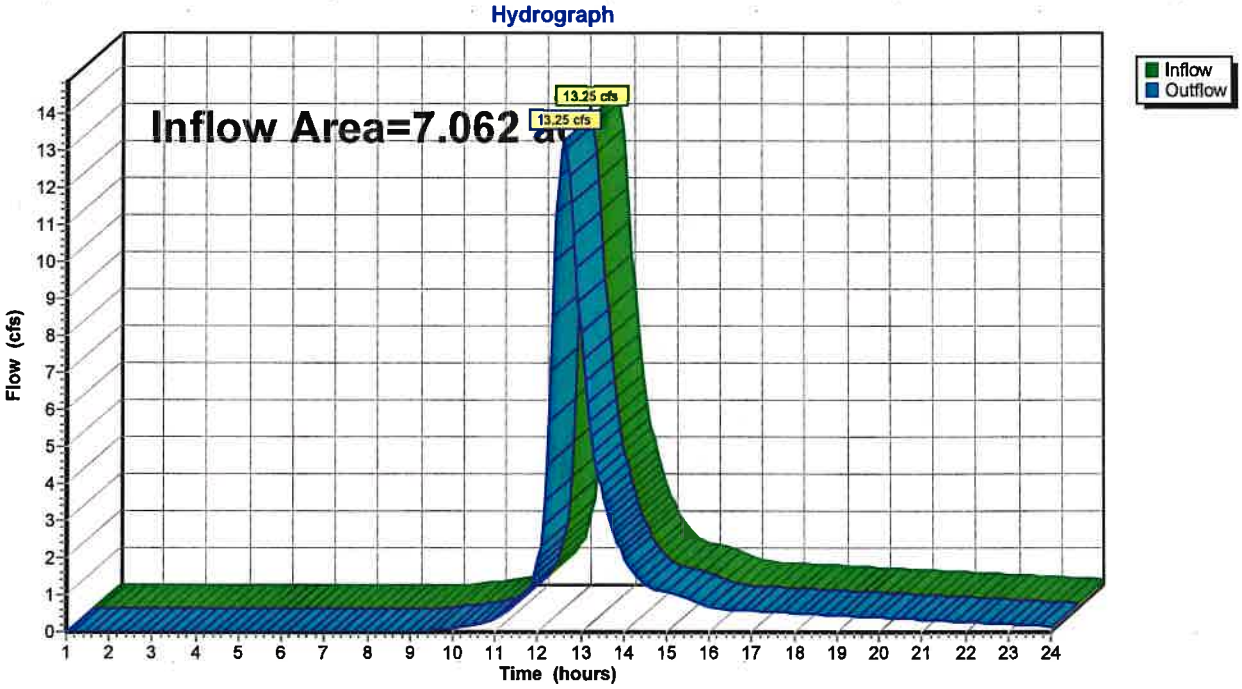
Summary for Reach DP 3: Design Point 3

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 7.062 ac, 4.02% Impervious, Inflow Depth > 2.75" for 100-Year event
Inflow = 13.25 cfs @ 12.62 hrs, Volume= 1.620 af
Outflow = 13.25 cfs @ 12.62 hrs, Volume= 1.620 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP 3: Design Point 3



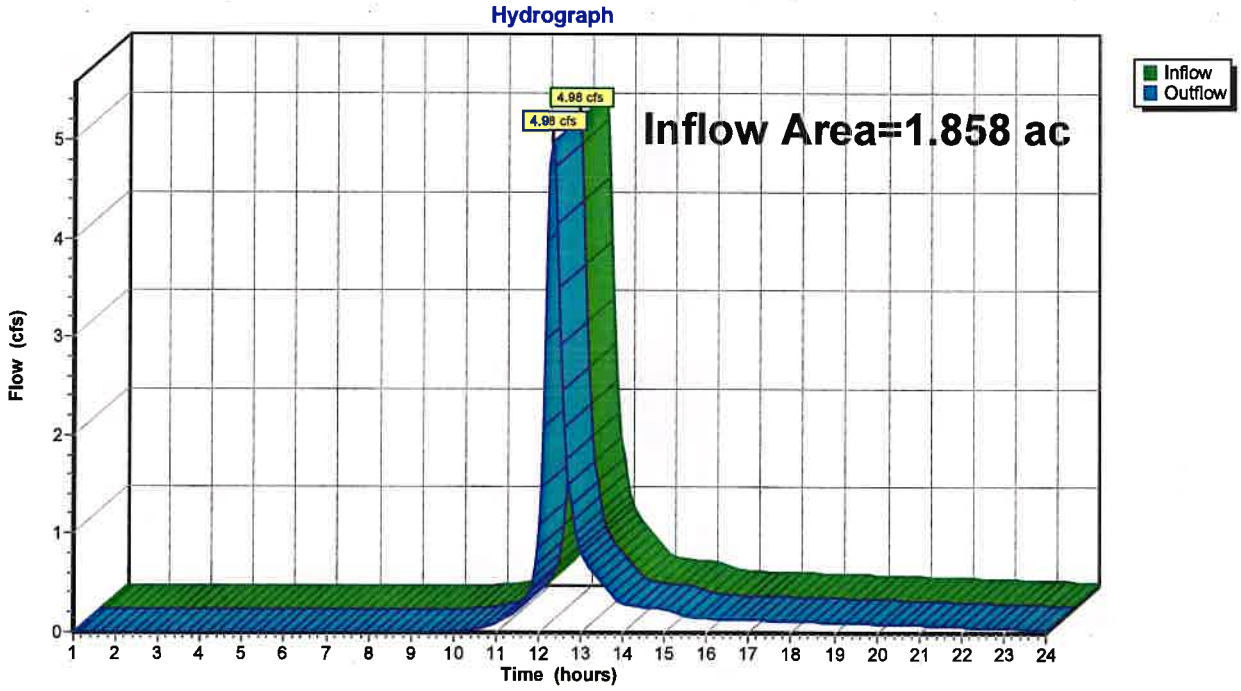
Summary for Reach DP 4: Design Point 4

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.858 ac, 0.00% Impervious, Inflow Depth > 2.41" for 100-Year event
Inflow = 4.98 cfs @ 12.30 hrs, Volume= 0.373 af
Outflow = 4.98 cfs @ 12.30 hrs, Volume= 0.373 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach DP 4: Design Point 4



Summary for Pond 1P: Forebay

Inflow Area = 16.928 ac, 38.52% Impervious, Inflow Depth > 3.30" for 100-Year event
Inflow = 58.18 cfs @ 12.30 hrs, Volume= 4.650 af
Outflow = 38.46 cfs @ 12.48 hrs, Volume= 3.863 af, Atten= 34%, Lag= 10.8 min
Primary = 38.46 cfs @ 12.48 hrs, Volume= 3.863 af
Routed to Pond 2P : Micropool

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 636.77' @ 12.48 hrs Surf.Area= 35,073 sf Storage= 71,853 cf

Plug-Flow detention time= 110.5 min calculated for 3.863 af (83% of inflow)
Center-of-Mass det. time= 49.6 min (851.6 - 801.9)

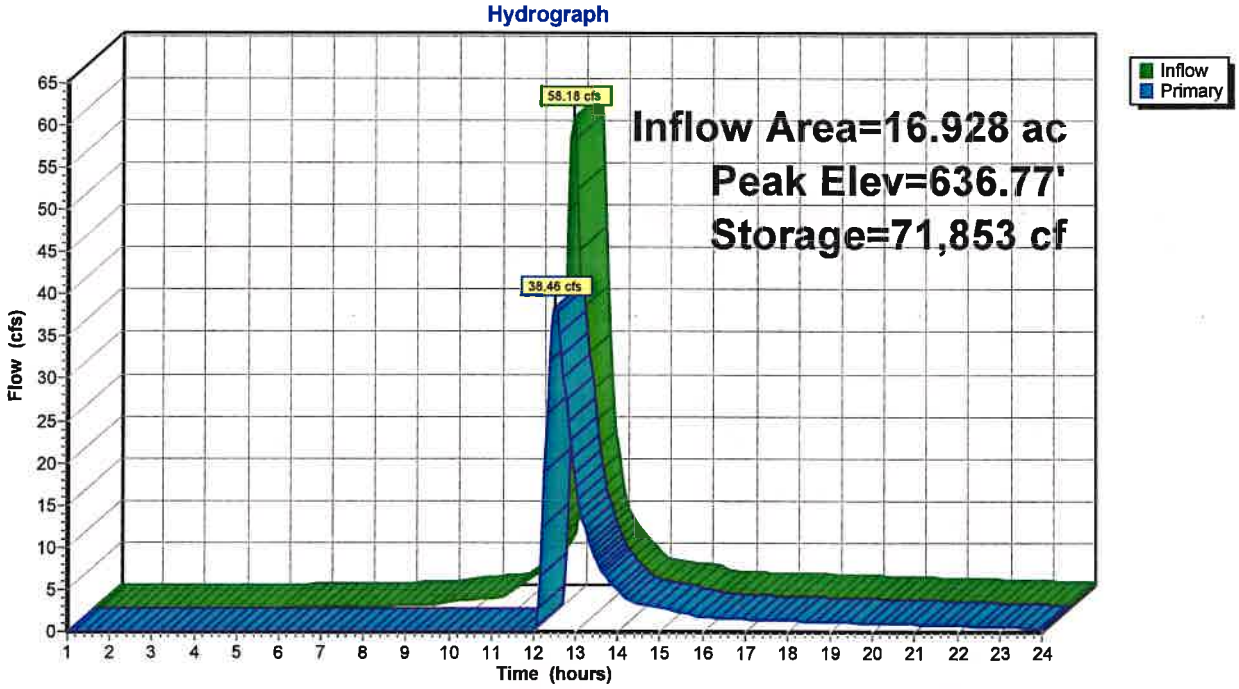
Volume	Invert	Avail.Storage	Storage Description
#1	631.00'	118,418 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
631.00	3,695	0	0
632.00	4,652	4,174	4,174
633.00	5,707	5,180	9,353
634.00	6,840	6,274	15,627
635.00	11,282	9,061	24,688
636.00	31,616	21,449	46,137
637.00	36,099	33,858	79,994
638.00	40,749	38,424	118,418

Device	Routing	Invert	Outlet Devices
#1	Primary	635.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=38.30 cfs @ 12.48 hrs HW=636.77' TW=634.50' (Fixed TW Elev= 634.50')
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 38.30 cfs @ 3.02 fps)

Pond 1P: Forebay



Summary for Pond 2P: Micropool

[81] Warning: Exceeded Pond 1P by 0.08' @ 13.35 hrs

Inflow Area = 16.928 ac, 38.52% Impervious, Inflow Depth > 2.74" for 100-Year event
Inflow = 38.46 cfs @ 12.48 hrs, Volume= 3.863 af
Outflow = 13.47 cfs @ 13.14 hrs, Volume= 3.200 af, Atten= 65%, Lag= 39.9 min
Primary = 13.47 cfs @ 13.14 hrs, Volume= 3.200 af
Routed to Reach DP 2 : Design Point 2

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 636.14' @ 13.14 hrs Surf.Area= 32,254 sf Storage= 65,967 cf

Plug-Flow detention time= 121.4 min calculated for 3.200 af (83% of inflow)
Center-of-Mass det. time= 57.7 min (909.3 - 851.6)

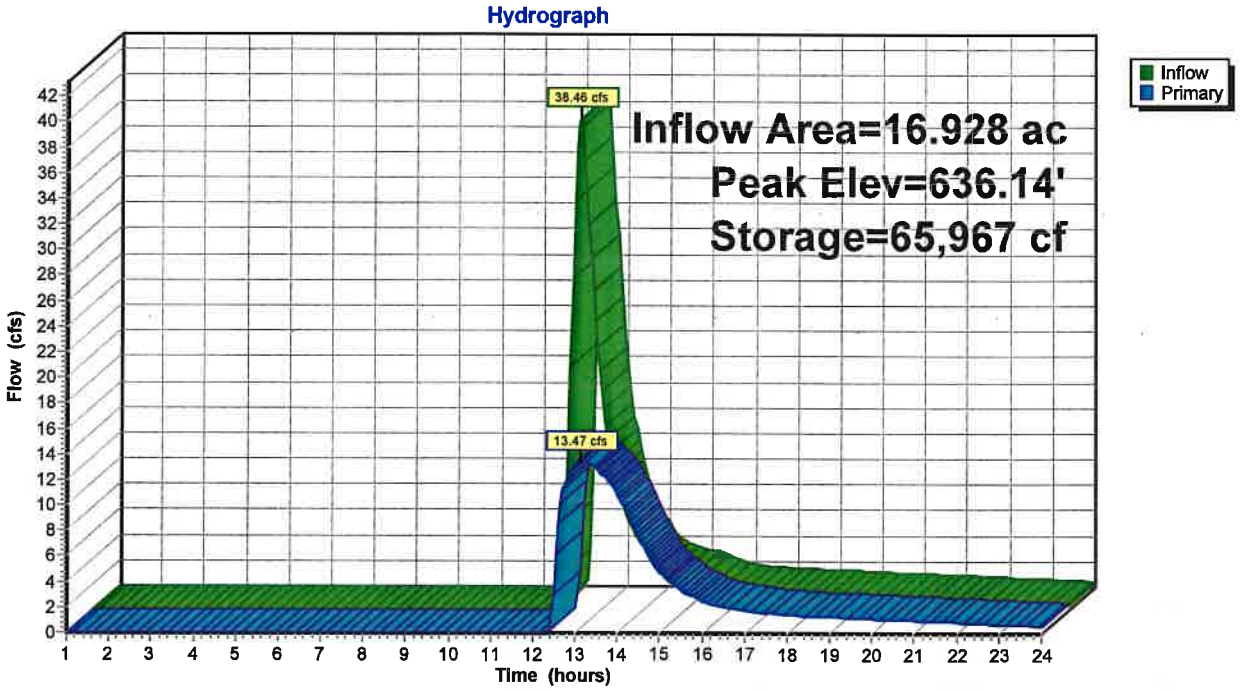
Volume	Invert	Avail.Storage	Storage Description
#1	630.00'	133,705 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

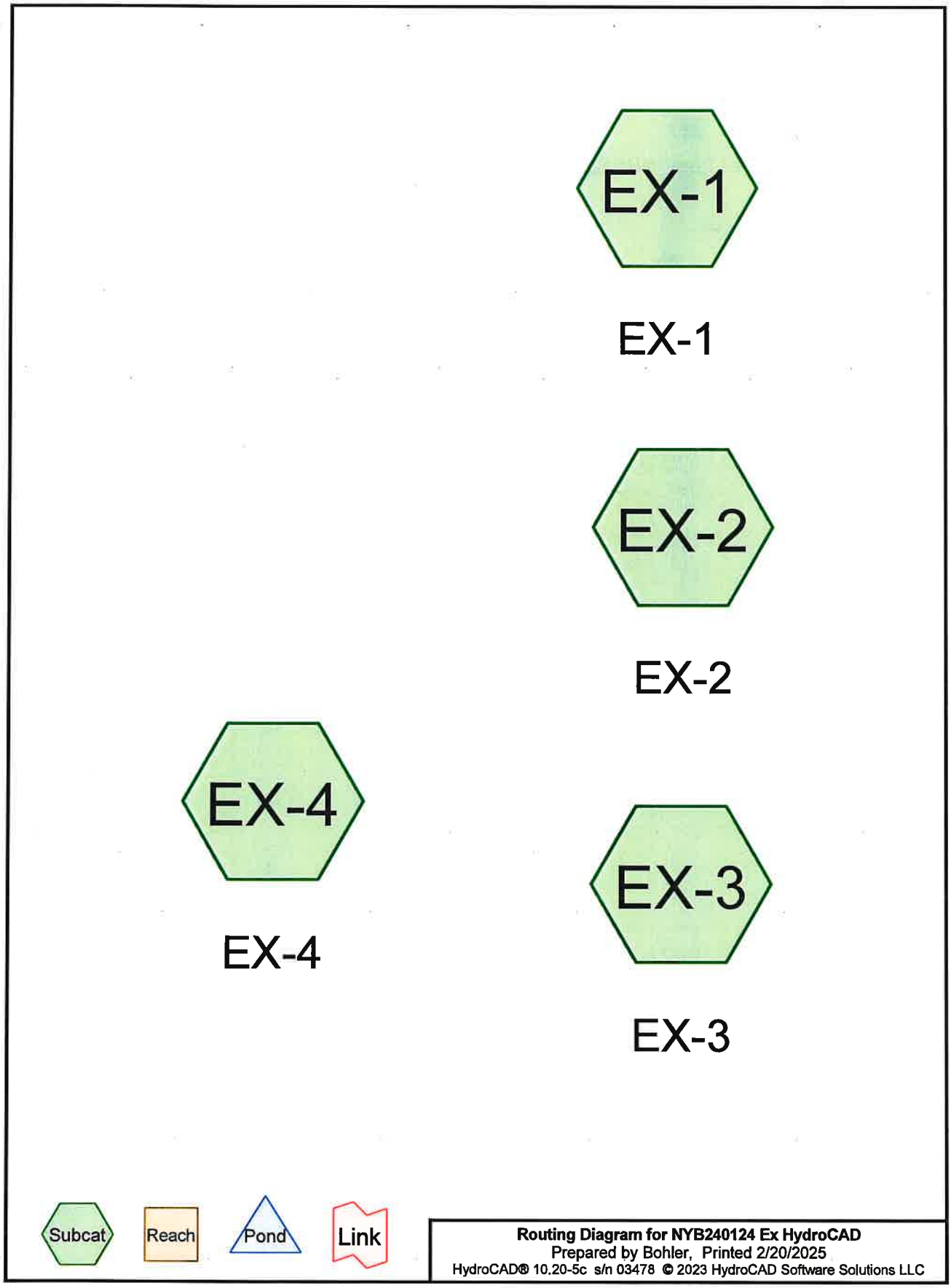
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
630.00	4,405	0	0
631.00	5,496	4,951	4,951
632.00	6,660	6,078	11,029
633.00	7,893	7,277	18,305
634.00	9,187	8,540	26,845
635.00	14,177	11,682	38,527
636.00	31,616	22,897	61,424
637.00	36,099	33,858	95,281
638.00	40,749	38,424	133,705

Device	Routing	Invert	Outlet Devices
#1	Primary	633.87'	**24.0" Round Culvert** L= 140.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 633.87' / 631.82' S= 0.0146 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 3.14 sf
#2	Device 1	635.50'	**24.0" Horiz. Orifice/Grate** C= 0.600 in 30.0" x 30.0" Grate (50% open area) Limited to weir flow at low heads
#3	Device 1	633.60'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	633.87'	**24.0" Round Culvert** L= 142.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 633.87' / 631.82' S= 0.0144 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=13.47 cfs @ 13.14 hrs HW=636.14' (Free Discharge)
↑**1=Culvert** (Inlet Controls 13.47 cfs @ 4.29 fps)
↑**2=Orifice/Grate** (Passes < 10.57 cfs potential flow)
3=Orifice/Grate (Passes < 1.43 cfs potential flow)
4=Culvert (Passes < 13.47 cfs potential flow)

Pond 2P: Micropool





Routing Diagram for NYB240124 Ex HydroCAD
Prepared by Bohler, Printed 2/20/2025

Project Notes

Rainfall events imported from "NRCS2-Rain.txt" for 1394 NY Niagara

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	NOAA10 24-hr	A	Default	24.00	1	1.84	2
2	10-Year	NOAA10 24-hr	A	Default	24.00	1	3.17	2
3	100-Year	NOAA10 24-hr	A	Default	24.00	1	4.75	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
17.840	80	>75% Grass cover, Good, HSG D (EX-1, EX-2, EX-3)
4.954	98	Paved parking, HSG D (EX-1, EX-2, EX-3, EX-4)
2.801	77	Woods, Good, HSG D (EX-1, EX-4)
0.531	79	Woods/grass comb., Good, HSG D (EX-2, EX-3)
26.126	**83**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
26.126	HSG D	EX-1, EX-2, EX-3, EX-4
0.000	Other	
26.126		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	17.840	0.000	17.840	>75% Grass cover, Good	EX-1, EX-2, EX-3
0.000	0.000	0.000	4.954	0.000	4.954	Paved parking	EX-1, EX-2, EX-3, EX-4
0.000	0.000	0.000	2.801	0.000	2.801	Woods, Good	EX-1, EX-4
0.000	0.000	0.000	0.531	0.000	0.531	Woods/grass comb., Good	EX-2, EX-3
0.000	**0.000**	**0.000**	**26.126**	**0.000**	**26.126**	**TOTAL AREA**	

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX-1: EX-1 Runoff Area=7.567 ac 17.55% Impervious Runoff Depth>0.55"
Flow Length=1,450' Tc=25.3 min CN=83 Runoff=4.07 cfs 0.344 af

Subcatchment EX-2: EX-2 Runoff Area=446,543 sf 31.16% Impervious Runoff Depth>0.68"
Flow Length=429' Slope=0.0063 '/' Tc=32.1 min CN=86 Runoff=6.15 cfs 0.581 af

Subcatchment EX-3: EX-3 Runoff Area=280,973 sf 5.50% Impervious Runoff Depth>0.46"
Flow Length=602' Slope=0.0060 '/' Tc=35.2 min CN=81 Runoff=2.35 cfs 0.249 af

Subcatchment EX-4: EX-4 Runoff Area=80,913 sf 4.12% Impervious Runoff Depth>0.36"
Flow Length=407' Slope=0.0200 '/' Tc=19.7 min CN=78 Runoff=0.70 cfs 0.056 af

Total Runoff Area = 26.126 ac Runoff Volume = 1.230 af Average Runoff Depth = 0.56"
81.04% Pervious = 21.172 ac 18.96% Impervious = 4.954 ac

Summary for Subcatchment EX-1: EX-1

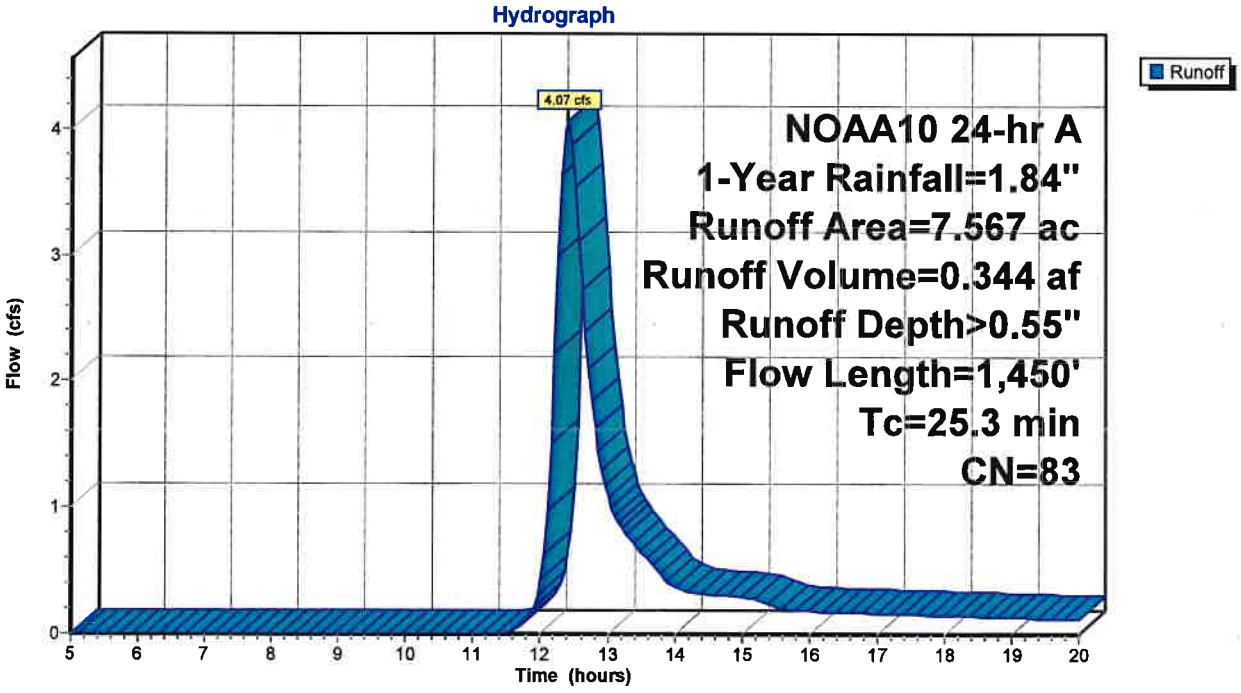
Runoff = 4.07 cfs @ 12.39 hrs, Volume= 0.344 af, Depth> 0.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 1-Year Rainfall=1.84"

Area (ac)	CN	Description
1.328	98	Paved parking, HSG D
5.219	80	>75% Grass cover, Good, HSG D
1.020	77	Woods, Good, HSG D
7.567	83	Weighted Average
6.239		82.45% Pervious Area
1.328		17.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0300	0.11		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
10.6	1,350	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated Flow** Grassed Waterway Kv= 15.0 fps
25.3	1,450	Total			

Subcatchment EX-1: EX-1



Summary for Subcatchment EX-2: EX-2

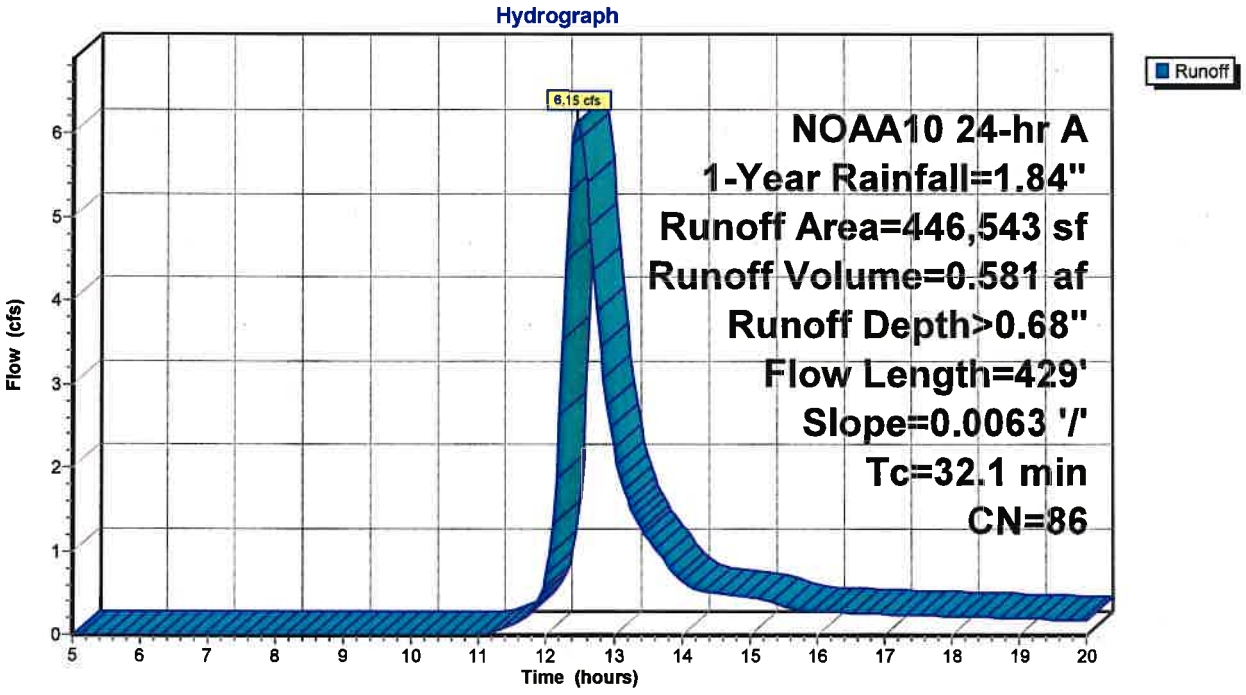
Runoff = 6.15 cfs @ 12.47 hrs, Volume= 0.581 af, Depth> 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 1-Year Rainfall=1.84"

Area (sf)	CN	Description
139,164	98	Paved parking, HSG D
288,497	80	>75% Grass cover, Good, HSG D
18,882	79	Woods/grass comb., Good, HSG D
446,543	86	Weighted Average
307,379		68.84% Pervious Area
139,164		31.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5	100	0.0063	0.06		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
4.6	329	0.0063	1.19		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
32.1	429	Total			

Subcatchment EX-2: EX-2



Summary for Subcatchment EX-3: EX-3

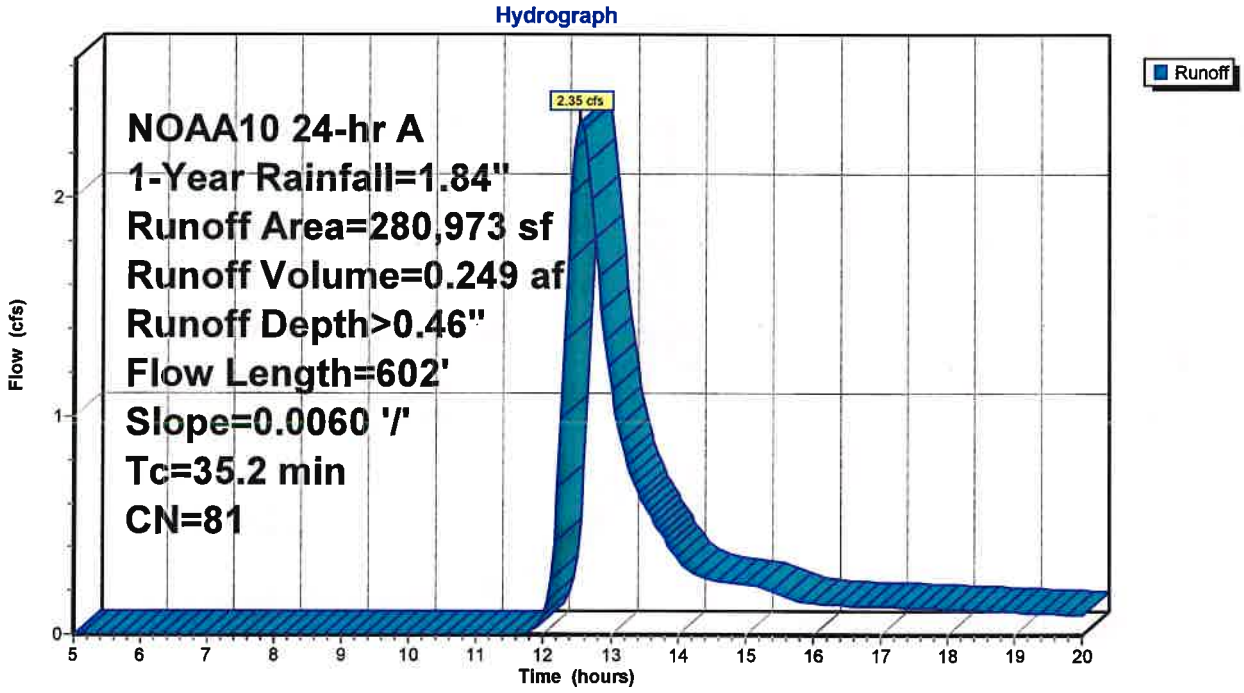
Runoff = 2.35 cfs @ 12.54 hrs, Volume= 0.249 af, Depth> 0.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 1-Year Rainfall=1.84"

Area (sf)	CN	Description
15,441	98	Paved parking, HSG D
261,275	80	>75% Grass cover, Good, HSG D
4,257	79	Woods/grass comb., Good, HSG D
280,973	81	Weighted Average
265,532		94.50% Pervious Area
15,441		5.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	100	0.0060	0.06		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
7.2	502	0.0060	1.16		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
35.2	602	Total			

Subcatchment EX-3: EX-3



Summary for Subcatchment EX-4: EX-4

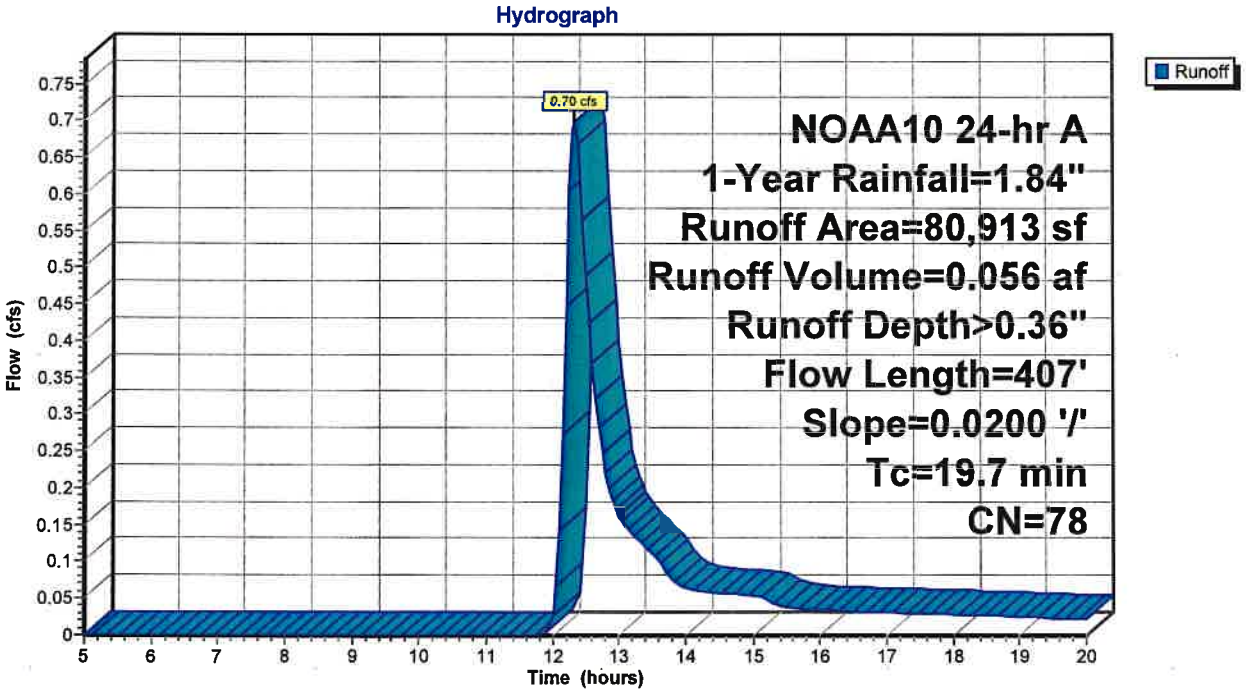
Runoff = 0.70 cfs @ 12.33 hrs, Volume= 0.056 af, Depth> 0.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 1-Year Rainfall=1.84"

Area (sf)	CN	Description
3,336	98	Paved parking, HSG D
77,577	77	Woods, Good, HSG D
80,913	78	Weighted Average
77,577		95.88% Pervious Area
3,336		4.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	100	0.0200	0.10		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
2.4	307	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated Flow** Grassed Waterway Kv= 15.0 fps
19.7	407	Total			

Subcatchment EX-4: EX-4



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX-1: EX-1 Runoff Area=7.567 ac 17.55% Impervious Runoff Depth>1.49"
Flow Length=1,450' Tc=25.3 min CN=83 Runoff=11.58 cfs 0.940 af

Subcatchment EX-2: EX-2 Runoff Area=446,543 sf 31.16% Impervious Runoff Depth>1.71"
Flow Length=429' Slope=0.0063 '/' Tc=32.1 min CN=86 Runoff=15.62 cfs 1.457 af

Subcatchment EX-3: EX-3 Runoff Area=280,973 sf 5.50% Impervious Runoff Depth>1.35"
Flow Length=602' Slope=0.0060 '/' Tc=35.2 min CN=81 Runoff=7.34 cfs 0.726 af

Subcatchment EX-4: EX-4 Runoff Area=80,913 sf 4.12% Impervious Runoff Depth>1.17"
Flow Length=407' Slope=0.0200 '/' Tc=19.7 min CN=78 Runoff=2.54 cfs 0.181 af

Total Runoff Area = 26.126 ac Runoff Volume = 3.305 af Average Runoff Depth = 1.52"
81.04% Pervious = 21.172 ac 18.96% Impervious = 4.954 ac

Summary for Subcatchment EX-1: EX-1

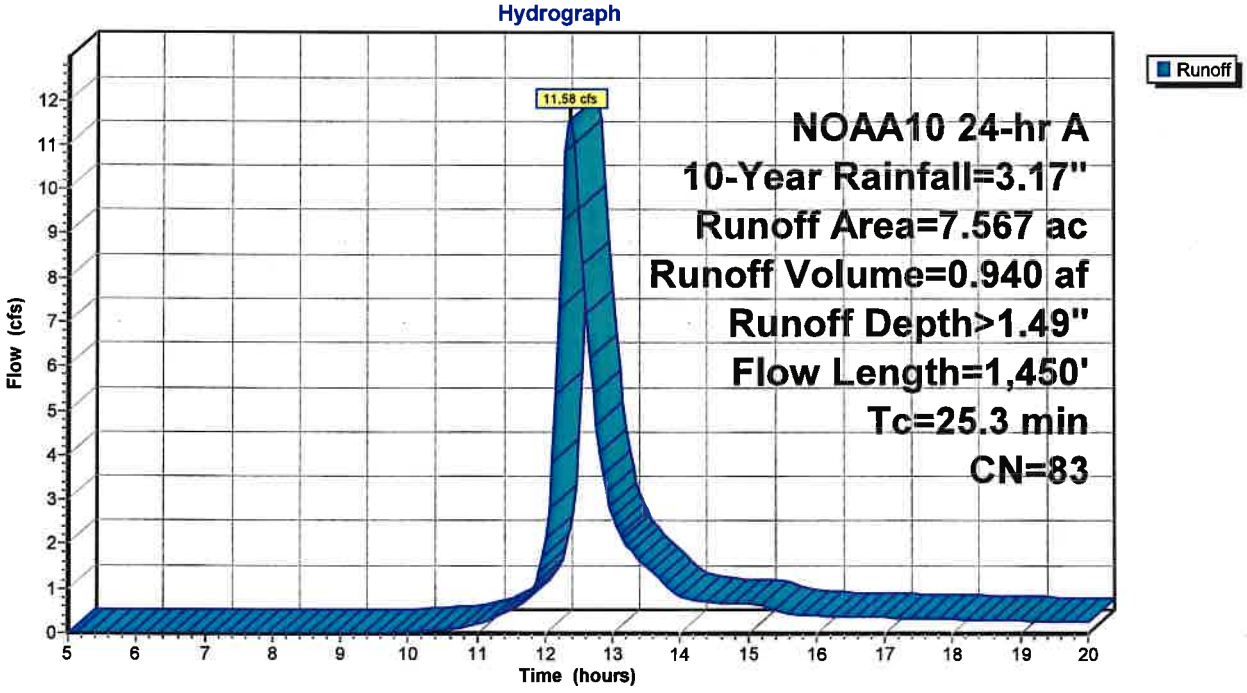
Runoff = 11.58 cfs @ 12.37 hrs, Volume= 0.940 af, Depth> 1.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 10-Year Rainfall=3.17"

Area (ac)	CN	Description
1.328	98	Paved parking, HSG D
5.219	80	>75% Grass cover, Good, HSG D
1.020	77	Woods, Good, HSG D
7.567	83	Weighted Average
6.239		82.45% Pervious Area
1.328		17.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0300	0.11		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
10.6	1,350	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated Flow** Grassed Waterway Kv= 15.0 fps
25.3	1,450	Total			

Subcatchment EX-1: EX-1



Summary for Subcatchment EX-2: EX-2

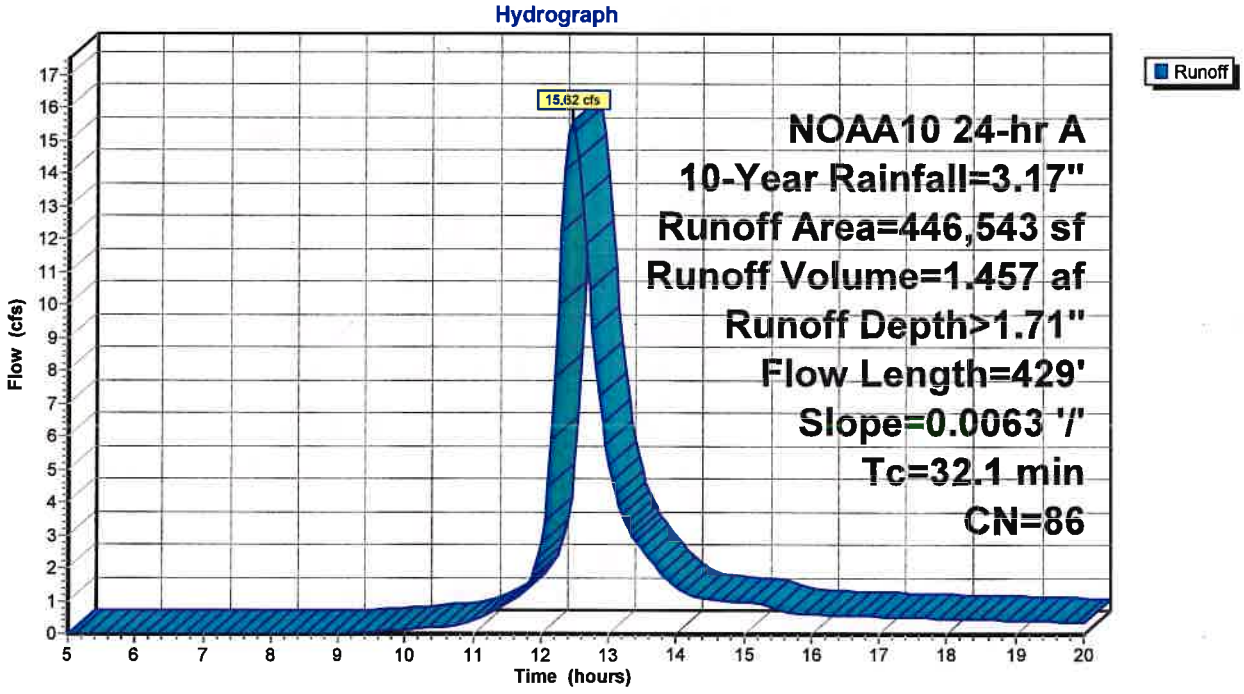
Runoff = 15.62 cfs @ 12.45 hrs, Volume= 1.457 af, Depth> 1.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 10-Year Rainfall=3.17"

Area (sf)	CN	Description
139,164	98	Paved parking, HSG D
288,497	80	>75% Grass cover, Good, HSG D
18,882	79	Woods/grass comb., Good, HSG D
446,543	86	Weighted Average
307,379		68.84% Pervious Area
139,164		31.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5	100	0.0063	0.06		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
4.6	329	0.0063	1.19		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
32.1	429	Total			

Subcatchment EX-2: EX-2



Summary for Subcatchment EX-3: EX-3

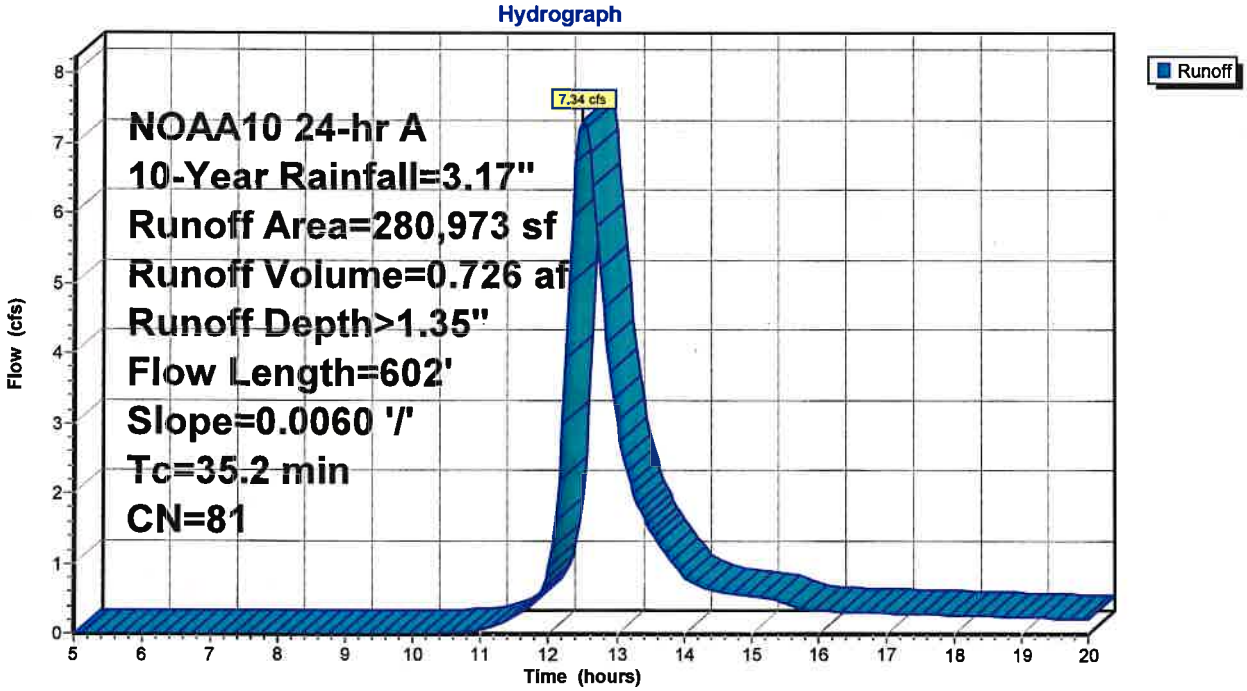
Runoff = 7.34 cfs @ 12.50 hrs, Volume= 0.726 af, Depth> 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 10-Year Rainfall=3.17"

Area (sf)	CN	Description
15,441	98	Paved parking, HSG D
261,275	80	>75% Grass cover, Good, HSG D
4,257	79	Woods/grass comb., Good, HSG D
280,973	81	Weighted Average
265,532		94.50% Pervious Area
15,441		5.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	100	0.0060	0.06		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
7.2	502	0.0060	1.16		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
35.2	602	Total			

Subcatchment EX-3: EX-3



Summary for Subcatchment EX-4: EX-4

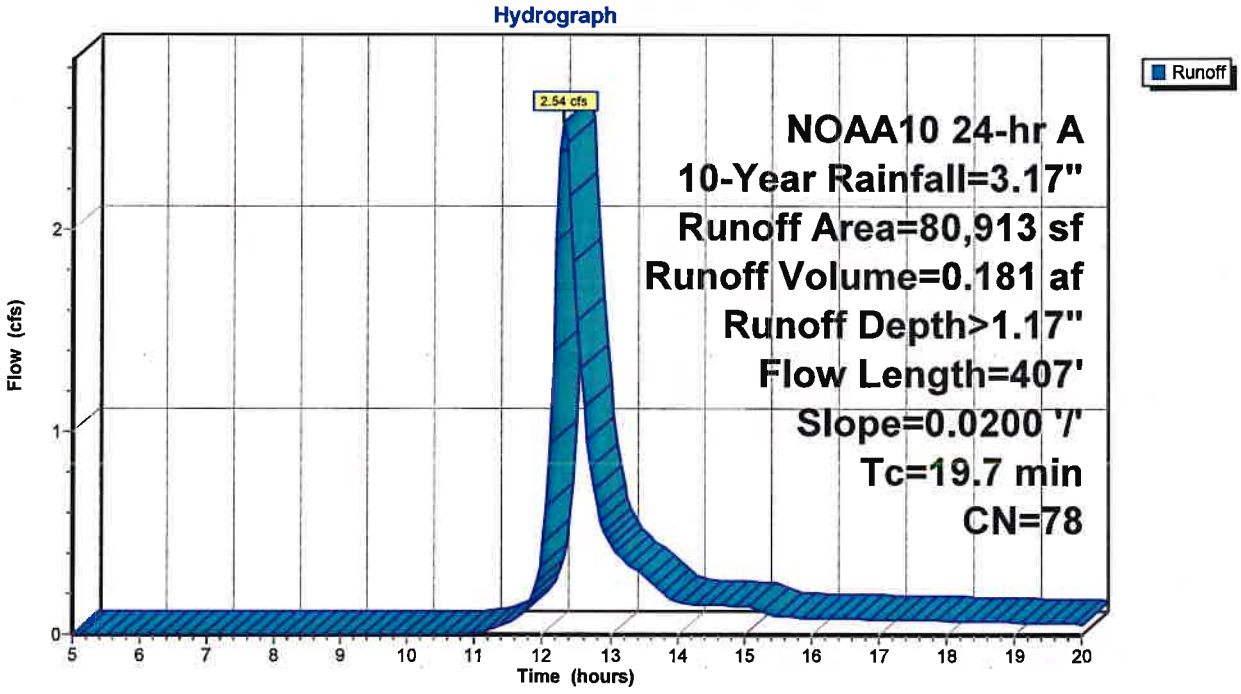
Runoff = 2.54 cfs @ 12.31 hrs, Volume= 0.181 af, Depth> 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 10-Year Rainfall=3.17"

Area (sf)	CN	Description
3,336	98	Paved parking, HSG D
77,577	77	Woods, Good, HSG D
80,913	78	Weighted Average
77,577		95.88% Pervious Area
3,336		4.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	100	0.0200	0.10		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
2.4	307	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated Flow** Grassed Waterway Kv= 15.0 fps
19.7	407	Total			

Subcatchment EX-4: EX-4



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX-1: EX-1 Runoff Area=7.567 ac 17.55% Impervious Runoff Depth>2.79"
Flow Length=1,450' Tc=25.3 min CN=83 Runoff=21.56 cfs 1.762 af

Subcatchment EX-2: EX-2 Runoff Area=446,543 sf 31.16% Impervious Runoff Depth>3.07"
Flow Length=429' Slope=0.0063 '/' Tc=32.1 min CN=86 Runoff=27.71 cfs 2.622 af

Subcatchment EX-3: EX-3 Runoff Area=280,973 sf 5.50% Impervious Runoff Depth>2.61"
Flow Length=602' Slope=0.0060 '/' Tc=35.2 min CN=81 Runoff=14.19 cfs 1.401 af

Subcatchment EX-4: EX-4 Runoff Area=80,913 sf 4.12% Impervious Runoff Depth>2.36"
Flow Length=407' Slope=0.0200 '/' Tc=19.7 min CN=78 Runoff=5.16 cfs 0.366 af

Total Runoff Area = 26.126 ac Runoff Volume = 6.151 af Average Runoff Depth = 2.83"
81.04% Pervious = 21.172 ac 18.96% Impervious = 4.954 ac

Summary for Subcatchment EX-1: EX-1

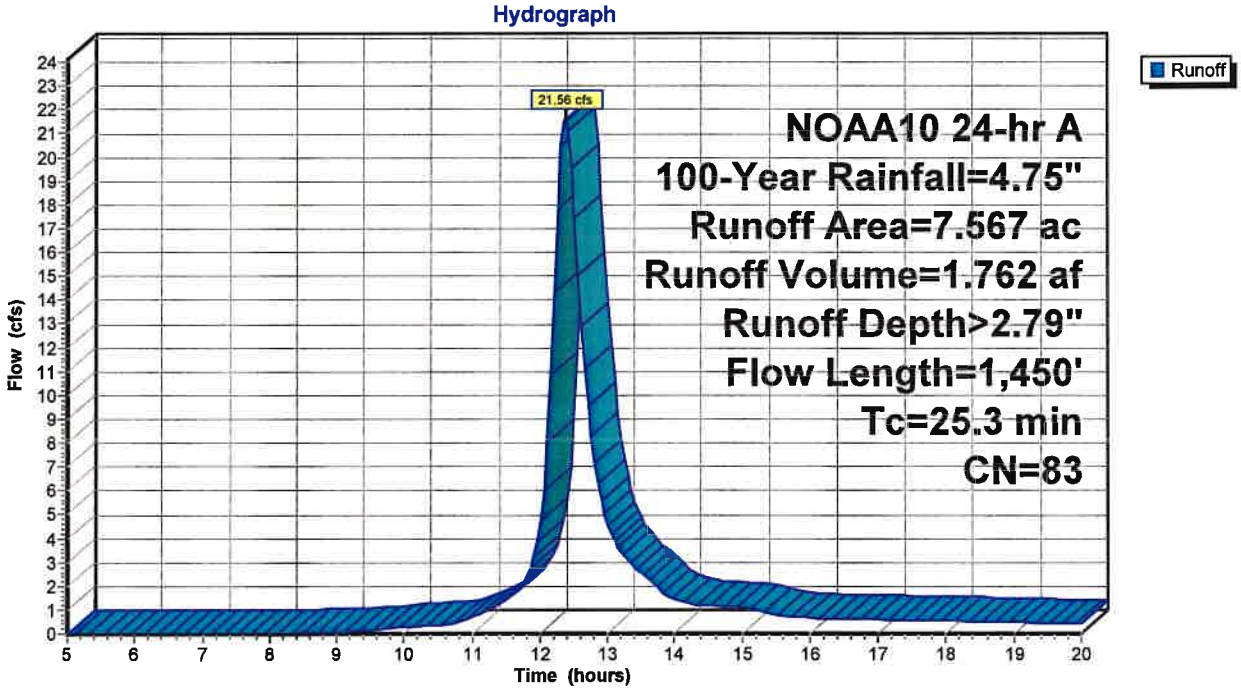
Runoff = 21.56 cfs @ 12.36 hrs, Volume= 1.762 af, Depth> 2.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 100-Year Rainfall=4.75"

Area (ac)	CN	Description
1.328	98	Paved parking, HSG D
5.219	80	>75% Grass cover, Good, HSG D
1.020	77	Woods, Good, HSG D
7.567	83	Weighted Average
6.239		82.45% Pervious Area
1.328		17.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0300	0.11		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
10.6	1,350	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated Flow** Grassed Waterway Kv= 15.0 fps
25.3	1,450	Total			

Subcatchment EX-1: EX-1



Summary for Subcatchment EX-2: EX-2

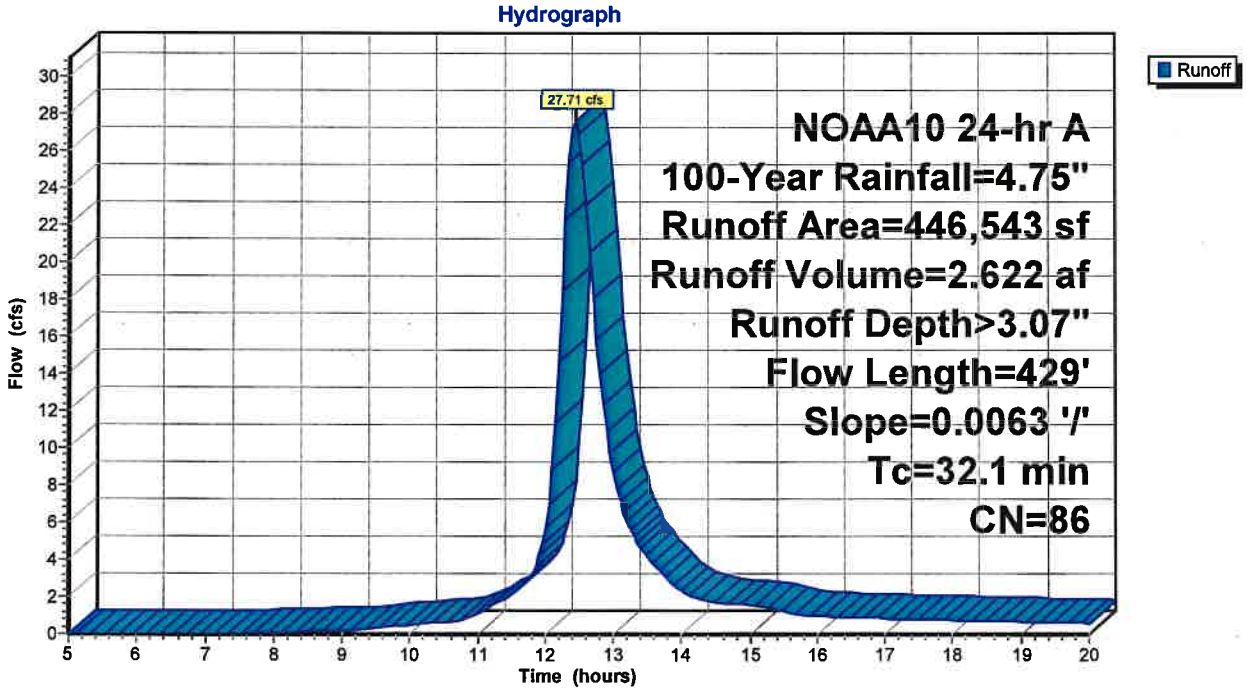
Runoff = 27.71 cfs @ 12.44 hrs, Volume= 2.622 af, Depth> 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 100-Year Rainfall=4.75"

Area (sf)	CN	Description
139,164	98	Paved parking, HSG D
288,497	80	>75% Grass cover, Good, HSG D
18,882	79	Woods/grass comb., Good, HSG D
446,543	86	Weighted Average
307,379		68.84% Pervious Area
139,164		31.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5	100	0.0063	0.06		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
4.6	329	0.0063	1.19		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
32.1	429	Total			

Subcatchment EX-2: EX-2



Summary for Subcatchment EX-3: EX-3

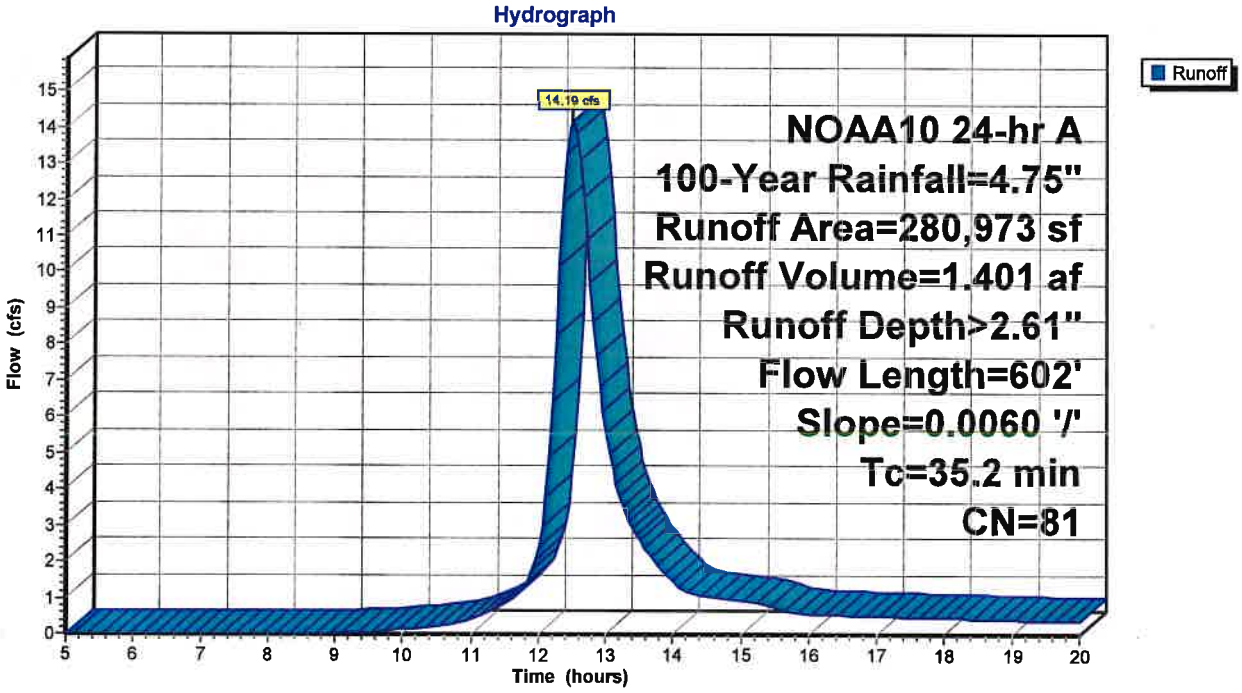
Runoff = 14.19 cfs @ 12.49 hrs, Volume= 1.401 af, Depth> 2.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 100-Year Rainfall=4.75"

Area (sf)	CN	Description
15,441	98	Paved parking, HSG D
261,275	80	>75% Grass cover, Good, HSG D
4,257	79	Woods/grass comb., Good, HSG D
280,973	81	Weighted Average
265,532		94.50% Pervious Area
15,441		5.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	100	0.0060	0.06		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
7.2	502	0.0060	1.16		**Shallow Concentrated Flow, Shallow Concentrated** Grassed Waterway Kv= 15.0 fps
35.2	602	Total			

Subcatchment EX-3: EX-3



Summary for Subcatchment EX-4: EX-4

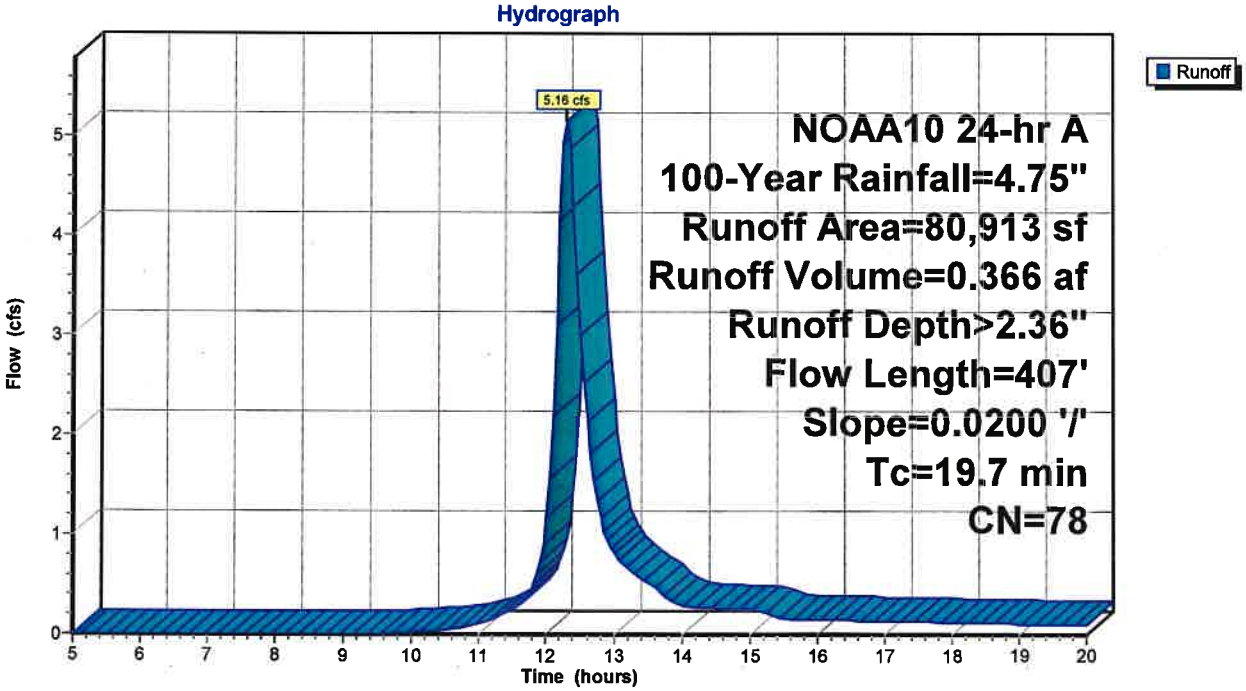
Runoff = 5.16 cfs @ 12.30 hrs, Volume= 0.366 af, Depth> 2.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA10 24-hr A 100-Year Rainfall=4.75"

Area (sf)	CN	Description
3,336	98	Paved parking, HSG D
77,577	77	Woods, Good, HSG D
80,913	78	Weighted Average
77,577		95.88% Pervious Area
3,336		4.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	100	0.0200	0.10		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.17"
2.4	307	0.0200	2.12		**Shallow Concentrated Flow, Shallow Concentrated Flow** Grassed Waterway Kv= 15.0 fps
19.7	407	Total			

Subcatchment EX-4: EX-4



APPENDIX "D"

NRCS SOIL SURVEY

United States Department of Agriculture

NRCS

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 Niagara County Area, New York

November 20, 2024

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.

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Contents

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.

Custom Soil Resource Report
Soil Map

Map Scale: 1:3,060 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 45 90 180 270

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N 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 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Niagara County Area, New York
Survey Area Data: Version 23, Aug 26, 2024

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

Date(s) aerial images were photographed: May 13, 2023—May 27, 2023

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
CIA	Churchville silt loam, 0 to 2 percent slopes	4.0	11.9%
Fr	Fredon gravelly loam	2.0	6.1%
HIA	Hilton silt loam, 0 to 3 percent slopes	8.7	26.0%
NaA	Niagara silt loam, 0 to 2 percent slopes	8.1	24.0%
OoA	Ontario loam, 0 to 3 percent slopes, bedrock substratum	4.3	12.9%
OvA	Ovid silt loam, 0 to 2 percent slopes	6.4	19.1%
Totals for Area of Interest		**33.6**	**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.

Niagara County Area, New York

CIA—Churchville silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 9tvz
Elevation: 250 to 660 feet
Mean annual precipitation: 31 to 37 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 145 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Churchville and similar soils: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Churchville

Setting

Landform: Lake plains, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey glaciolacustrine deposits over loamy till

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 31 inches: silty clay loam
H3 - 31 to 60 inches: loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly 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 6 to 18 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): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Madalin

Percent of map unit: 4 percent
Landform: Depressions

Hydric soil rating: Yes

Lakemont
Percent of map unit: 4 percent
Landform: Depressions
Hydric soil rating: Yes

Odessa
Percent of map unit: 4 percent
Hydric soil rating: No

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

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

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

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

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

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

Fr—Fredon gravelly loam

Map Unit Setting
National map unit symbol: 9twh
Elevation: 250 to 1,200 feet
Mean annual precipitation: 31 to 37 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 145 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition
Fredon, poorly drained, and similar soils: 50 percent
Fredon, somewhat poorly drained, and similar soils: 25 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fredon, Poorly Drained

Setting

Landform: Valley trains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy over sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 8 inches: gravelly loam
H2 - 8 to 22 inches: gravelly loam
H3 - 22 to 60 inches: stratified very gravelly sand

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 high to high (0.20 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F101XY007NY - Wet Outwash
Hydric soil rating: Yes

Description of Fredon, Somewhat Poorly Drained

Setting

Landform: Valley trains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy over sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 8 inches: gravelly loam
H2 - 8 to 22 inches: gravelly loam
H3 - 22 to 60 inches: stratified very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components

Stafford

Percent of map unit: 4 percent
Hydric soil rating: No

Hilton

Percent of map unit: 4 percent
Hydric soil rating: No

Altmar

Percent of map unit: 4 percent
Hydric soil rating: No

Phelps

Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed soils

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

Appleton

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

Lamson

Percent of map unit: 3 percent
Landform: Depressions
Hydric soil rating: Yes

HIA—Hilton silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2w3kz
Elevation: 260 to 660 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Hilton

Setting

Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Concave, convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 9 inches: silt loam
E - 9 to 17 inches: loam
Bt/E - 17 to 24 inches: gravelly loam
Bt - 24 to 36 inches: gravelly loam
C1 - 36 to 54 inches: gravelly loam
C2 - 54 to 79 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

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

Minor Components

Appleton

Percent of map unit: 5 percent
Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ontario

Percent of map unit: 5 percent
Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Bombay

Percent of map unit: 3 percent
Landform: Drumlinoid ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Cayuga

Percent of map unit: 2 percent
Landform: Drumlinoid ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

NaA—Niagara silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 9txf
Elevation: 250 to 660 feet
Mean annual precipitation: 31 to 37 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 145 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Niagara and similar soils: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Niagara

Setting

Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear

Parent material: Silty and clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 13 inches: silt loam
H2 - 13 to 30 inches: silt loam
H3 - 30 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Galen

Percent of map unit: 4 percent
Hydric soil rating: No

Rhinebeck

Percent of map unit: 4 percent
Hydric soil rating: No

Minoa

Percent of map unit: 4 percent
Hydric soil rating: No

Canandaigua

Percent of map unit: 4 percent
Landform: Depressions
Hydric soil rating: Yes

Collamer

Percent of map unit: 4 percent
Hydric soil rating: No

Odessa

Percent of map unit: 4 percent
Hydric soil rating: No

Appleton

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

Hilton

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

OoA—Ontario loam, 0 to 3 percent slopes, bedrock substratum

Map Unit Setting

National map unit symbol: 2w3pp
Elevation: 360 to 670 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Ontario

Setting

Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: loam
E - 8 to 14 inches: loam
Bt/E - 14 to 21 inches: loam
Bt - 21 to 39 inches: gravelly loam
C1 - 39 to 48 inches: gravelly loam
R - 48 to 79 inches: bedrock

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1

Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Hilton

Percent of map unit: 5 percent
Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Concave, convex
Hydric soil rating: No

Honeoye

Percent of map unit: 4 percent
Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Appleton

Percent of map unit: 2 percent
Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Cazenovia

Percent of map unit: 2 percent
Landform: Reworked lake plains, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Wassaic

Percent of map unit: 2 percent
Landform: Benches, ridges, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

OvA—Ovid silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 9txt
Elevation: 250 to 1,000 feet
Mean annual precipitation: 31 to 37 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 145 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Ovid and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ovid

Setting

Landform: Reworked lake plains, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till with a significant component of reddish shale or reddish glaciolacustrine clays, mixed with limestone and some sandstone

Typical profile

H1 - 0 to 11 inches: silt loam
H2 - 11 to 24 inches: silty clay loam
H3 - 24 to 60 inches: loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly 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 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

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

Cayuga
Percent of map unit: 4 percent
Hydric soil rating: No

Cazenovia
Percent of map unit: 4 percent
Hydric soil rating: No

Churchville
Percent of map unit: 4 percent
Hydric soil rating: No

Sun
Percent of map unit: 4 percent
Landform: Depressions
Hydric soil rating: Yes

Unnamed soils
Percent of map unit: 4 percent
Hydric soil rating: No

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SITE DEVELOPMENT PLANS

FOR

KENAN CENTER
ARTS, EDUCATION & RECREATION

KENAN CIVIC CENTER

433 LOCUS STREET
TOWN OF LOCKPORT
NIAGARA COUNTY
NEW YORK
MAP: 126.06, BLOCK: 2, LOT: 29.1

REFERENCES AND CONTACTS

REFERENCES

♦ BOUNDARY & TOPOGRAPHIC SURVEY:
MCINTOSH & MCINTOSH P.C.
429 PINE STREET
LOCKPORT, NY 14094
DATED: 11/05/2024
JOB # /SURVEY JOB #: 2183-A
ELEVATIONS: NAVD 88

♦ GEOTECHNICAL INVESTIGATION REPORT:
BARRON & ASSOCIATES, P.C.
10440 MAIN STREET
CLARENCE, NY 14031
DATED: MM/DD/YY

♦ ARCHITECTURAL PLAN:
AXIS COMPANIES
70 MANSELL CT STE 200
ROSWELL, GA 30076
DATED: 02/21/25

GOVERNING AGENCIES

♦ CITY OF LOCKPORT PLANNING BOARD
ONE LOCKS PLAZA
LOCKPORT, NY 14094
PHONE: (716) 439-6754

♦ CITY OF LOCKPORT ZONING BOARD OF APPEALS
ONE LOCKS PLAZA
LOCKPORT, NY 14094
PHONE: (716) 439-6754

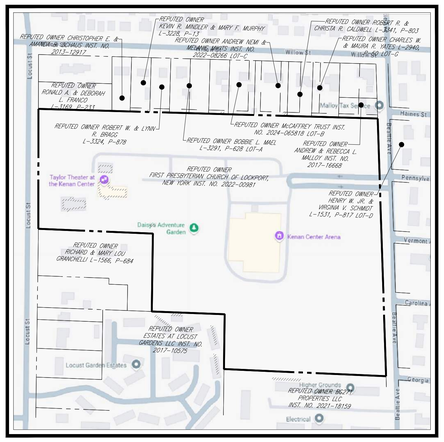
♦ CITY OF LOCKPORT BUILDING DEPARTMENT
ONE LOCKS PLAZA
LOCKPORT, NY 14094
PHONE: (716) 439-6754
FAX: (716) 439-6605

♦ CITY OF LOCKPORT FIRE DEPARTMENT
ONE LOCKS PLAZA
LOCKPORT, NY 14094
PHONE: (716) 439-6611

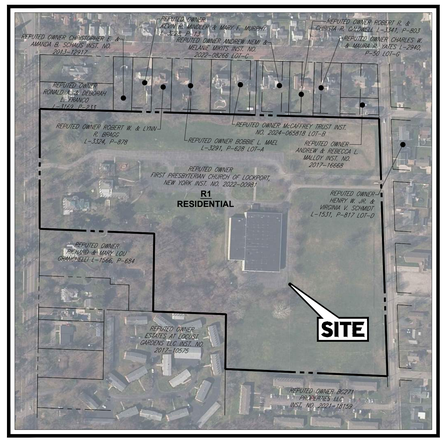
ROW JURISDICTION

♦ CITY OF LOCKPORT HIGHWAYS & PARKS
ONE LOCKS PLAZA
LOCKPORT, NY 14094
PHONE: (716) 954-1990

THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS. HOWEVER, BOHLER ENGINEERING DOES NOT CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS, BY OTHERS.



LOCATION MAP
SCALE: 1" = 250'
SOURCE: GOOGLE ONLINE MAPPING



AERIAL MAP
SCALE: 1" = 250'
SOURCE: NYS GIS CLEARINGHOUSE

SHEET INDEX

OWNER
FIRST PRESBYTERIAN CHURCH OF LOCKPORT
433 LOCUST STREET
LOCKPORT, NY 14094
OWNER PHONE

DEVELOPER
KENAN CENTER
433 LOCUST STREET
LOCKPORT, NY 14094
DEVELOPER PHONE

PREPARED BY

BOHLER

CONTACT: (585) 866-1100

GENERAL NOTE
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT. WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

P:\2024\NYB240124.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-CNDS-NYB240124.00-GA.dwg, 2/20/2025 4:03:51 PM, GREG LISS, ---LAYOUT: C-101 COVR

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL ENGINEERING
PERMITTING SERVICES
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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PRELIMINARY

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT NO.: NYB240124.00-0A
DRAWN BY: GRS
CHECKED BY: RLB
DATE: 02-20-2025
CAD I.D.: P-CIVL-CNDS

PROJECT:
SITE DEVELOPMENT PLANS
FOR
KENAN CENTER
ARTS, EDUCATION & RECREATION
PROPOSED
KENAN CIVIC ARENA
433 LOCUST STREET
CITY OF LOCKPORT
NIAGARA COUNTY
NEW YORK
TAX MAP ID: 123.06-2-29.1

BOHLER
70 LINDEN OAKS
THIRD FLOOR
ROCHESTER, NY 14625
Phone: (585) 866-1100
www.BohlerEngineering.com

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
C-101

ORG. DATE - 02-20-2025

GENERAL NOTES

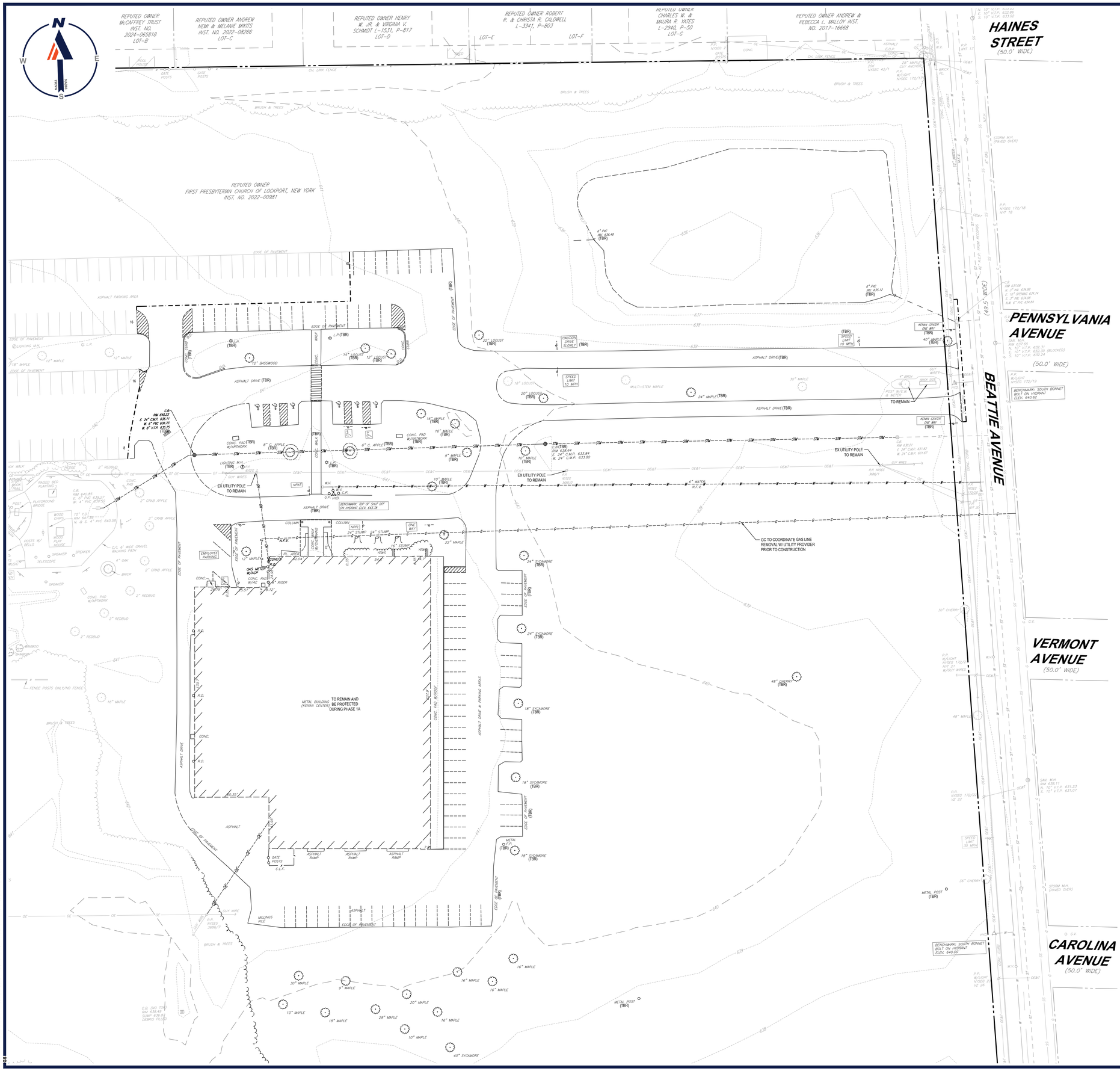
(Rev. 1/2023)

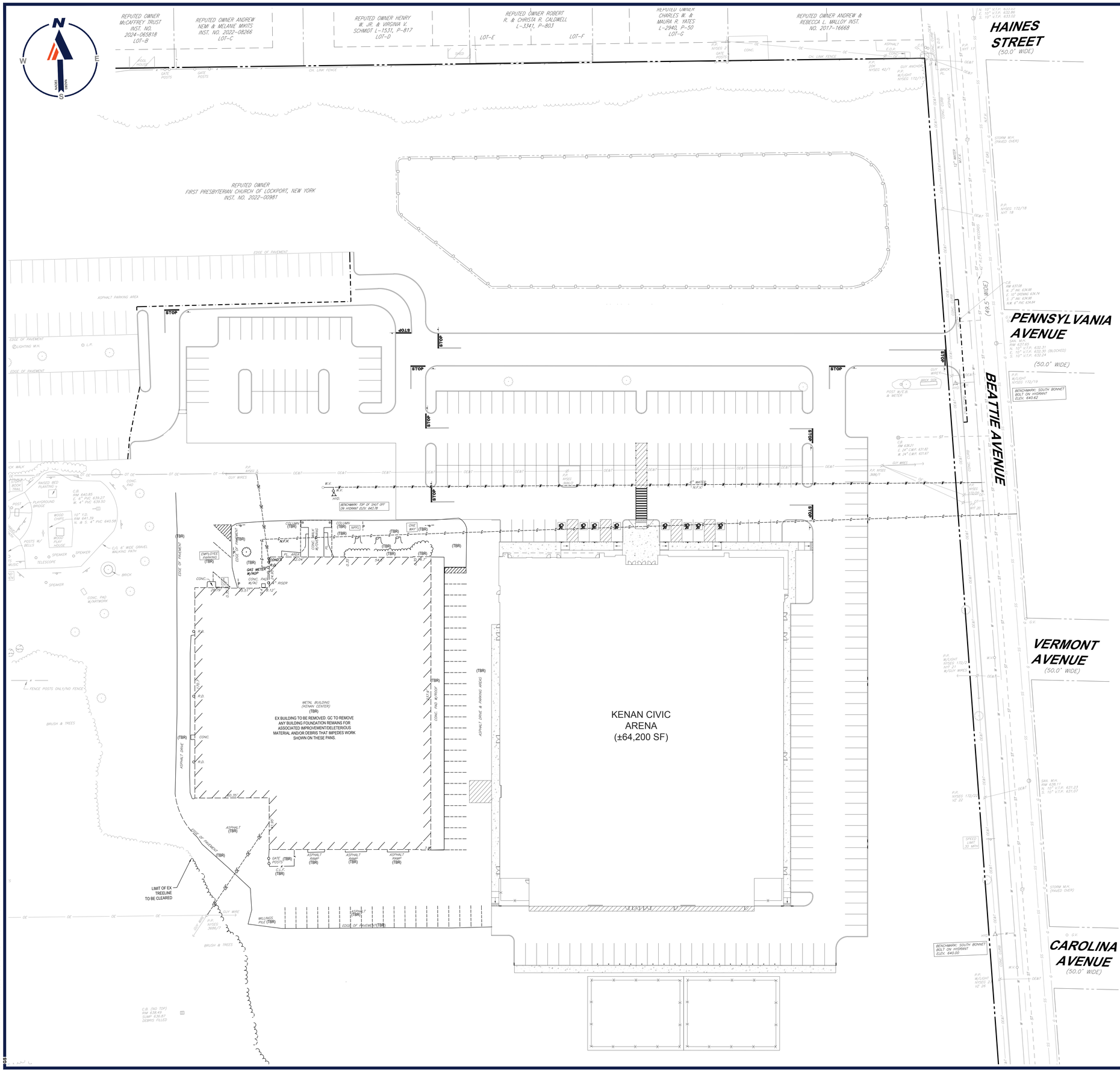
1. THESE PLANS ARE SOLELY BASED ON INFORMATION THE OWNER AND OTHERS PROVIDED TO BOHLER ENGINEERING NY, PLLC (HEREIN "BOHLER") PRIOR TO THE DATE ON WHICH THE PROFESSIONAL OF RECORD AND BOHLER PREPARED THESE PLANS. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS AND IMMEDIATELY NOTIFY BOHLER , IN WRITING, IF ANY ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THESE PLANS, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.
2. THE CONTRACTOR MUST STRICTLY COMPLY WITH THESE NOTES AND ALL SPECIFICATIONS/REPORTS CONTAINED HEREIN. THE CONTRACTOR MUST ENSURE THAT ALL SUBCONTRACTORS FULLY AND COMPLETELY CONFORM TO AND COMPLY WITH THESE REQUIREMENTS. THESE NOTES, AND THE REQUIREMENTS ARTICULATED IN THE NOTES CONTAINED IN ALL THE OTHER DRAWINGS THAT COMPRISE THE PLAN SET OF DRAWINGS. ADDITIONAL NOTES AND SPECIFIC PLAN NOTES MAY BE FOUND ON THE INDIVIDUAL PLANS. THESE GENERAL NOTES APPLY TO THIS ENTIRE DOCUMENT PACKAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE, PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION.
3. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST CONFIRM WITH THE PROFESSIONAL OF RECORD AND BOHLER THAT THE LATEST EDITION OF THE DOCUMENTS AND/OR REPORTS REFERENCED WITHIN THE PLAN REFERENCED ARE BEING USED FOR CONSTRUCTION. THIS IS THE CONTRACTOR'S SOLE AND COMPLETE RESPONSIBILITY.
4. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION IS TO BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE CONDITIONS OF APPROVAL TO ALL PLANS AND OTHER DOCUMENTS REVISED AND APPROVED BY THE PERMITTING AUTHORITIES AND HAS ALSO CONFIRMED THAT ALL NECESSARY AND REQUIRED PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.
5. THE CONTRACTOR MUST ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS/REPORTS AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTES, CODES, LAWS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES WITH JURISDICTION OVER THIS PROJECT, AND ALL PROVISIONS IN AND CONDITIONS OF THE CONSTRUCTION CONTRACT WITH THE OWNER/DEVELOPER INCLUDING ALL EXHIBITS, ATTACHMENTS AND ADDENDA TO SAME.
6. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST COORDINATE THE BUILDING LAYOUT BY CAREFULLY REVIEWING THE MOST CURRENT ARCHITECTURAL, CIVIL AND STRUCTURAL CONSTRUCTION DOCUMENTS (INCLUDING, BUT NOT LIMITED TO, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLANS, WHERE APPLICABLE). THE CONTRACTOR MUST IMMEDIATELY NOTIFY OWNER, ARCHITECT AND PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY CONFLICTS, DISCREPANCIES OR AMBIGUITIES THAT EXIST BETWEEN THESE PLANS AND ANY OTHER PLANS THAT COMPRISE THE CONSTRUCTION DOCUMENTS.
7. CONTRACTOR MUST REFER TO AND ENSURE COMPLIANCE WITH THE APPROVED ARCHITECTURAL/BUILDING PLANS OF RECORD FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
8. THE CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THESE PLANS, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR MUST IMMEDIATELY NOTIFY PROFESSIONAL, OF RECORD AND BOHLER, IN WRITING, IF ANY CONFLICTS, DISCREPANCIES, OR AMBIGUITIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR WORK WHICH HAS TO BE RE-DONE OR REPAIRED DUE TO DIMENSIONS, MEASUREMENTS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO BOTH (A) THE CONTRACTOR NOTIFYING THE PROFESSIONAL OF RECORD AND BOHLER WITH WRITTEN NOTIFICATION OF SAME AND (B) PROFESSIONAL OF RECORD AND BOHLER, THEREAFTER, PROVIDING THE CONTRACTOR WITH WRITTEN AUTHORIZATION TO PROCEED WITH SUCH ADDITIONAL WORK.
9. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND MEASUREMENTS INCLUDED ON DESIGN DOCUMENTS HEREIN AND MUST NOT SCALE OFF THE DRAWINGS DUE TO POTENTIAL PRINTING INACCURACIES. ALL DIMENSIONS AND MEASUREMENTS ARE TO BE RECKONED AND CONFIRMED BY THE GENERAL CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS, FABRICATION/ORDERING OF PARTS AND MATERIALS AND COMMENCEMENT OF SITE WORK, SITE PLAN DRAWINGS ARE NOT INTENDED AS SURVEY DOCUMENTS. DIMENSIONS SUPERSEDE GRAPHICAL REPRESENTATIONS. THE CONTRACTOR MUST MAKE CONTRACTOR'S OWN MEASUREMENTS FOR LAYOUT OF IMPROVEMENTS.
10. THE OWNER AND CONTRACTOR MUST BE FAMILIAR WITH AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
11. WHEN INCLUDED AS ONE OF THE REFERENCED DOCUMENTS, THE GEOTECHNICAL REPORT, SPECIFICATIONS AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, DISCREPANCY OR AMBIGUITY, THE MORE STRINGENT REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN: (A) THE PLANS; AND (B) THE GEOTECHNICAL REPORT AND RECOMMENDATIONS, MUST TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR MUST NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORT AND PLANS AND SPECIFICATIONS, PRIOR TO PERFORMING ANY WORK. IF A GEOTECHNICAL REPORT WAS NOT CREATED FOR THIS PROJECT, THEN THE CONTRACTOR MUST FOLLOW AND COMPLY WITH ALL OF THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE SPECIFICATIONS WHICH HAVE JURISDICTION OVER THE PROJECT.
12. PROFESSIONAL OF RECORD AND BOHLER ARE NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, HAS NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES OR CONTAMINATED SOIL ENCOUNTERED AT THE SITE.
13. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WHEN AND WHERE SHORING IS REQUIRED AND FOR INSTALLING ALL SHORING REQUIRED DURING EXCAVATION AND CONSTRUCTION IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. THE CONTRACTOR IS RESPONSIBLE TO TAKE STEPS TO ASSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES. ALL OF THIS WORK IS TO BE PERFORMED AT CONTRACTOR'S SOLE COST AND EXPENSE.
14. THE CONTRACTOR MUST EXERCISE EXTREME CAUTION WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN EITHER FOR AN INTERIM PHASE OF THE PROJECT OR AS PART OF THE FINAL CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ALL APPROPRIATE MEASURES REQUIRED TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, UTILITIES, BUILDINGS, AND INFRASTRUCTURE WHICH ARE TO REMAIN, AND TO PROTECT THE WORK AREA FOR THIRD PARTIES, PEDESTRIANS AND ANYONE INVOLVED WITH THE PROJECT.
15. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION AND CONSTRUCTION WASTES, UNSUITABLE EXCAVATED MATERIAL, EXCESS SOIL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES WHICH HAVE JURISDICTION OVER THIS PROJECT OR OVER THE CONTRACTOR.
16. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN RECORDS TO DEMONSTRATE PROPER AND FULLY COMPLIANT DISPOSAL ACTIVITIES, TO BE PROMPTLY PROVIDED TO THE OWNER UPON REQUEST.
17. THE CONTRACTOR MUST REPAIR, AT CONTRACTOR'S SOLE COST, ALL DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC, AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME. TO INCLUDE, BUT NOT BE LIMITED TO, REASONABLE ATTORNEYS' FEES AND EXPENSE COSTS. BRINGING OF CLAIMS BY ANY CONNECTED WITH OR TO THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTOR(S), ALL CLAIMS BY THIRD PARTIES AND ALL CLAIMS RELATED TO THE PROJECT. THE CONTRACTOR MUST HAVE PROFESSIONAL OF RECORD, IN WRITING, AT LEAST THIRTY (30) DAYS PRIOR TO ANY TERMINATION, SUSPENSION OR CHANGE OF ITS INSURANCE HEREUNDER.
18. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR CONSTRUCTION METHODS, MEANS, TECHNIQUES OR PROCEDURES, GENERALLY OR FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR COMPLETION OF THE WORK DEPICTED BOTH ON THESE PLANS, AND FOR ANY CONFLICTS IN SCOPE AND REVISIONS THAT RESULT FROM SAME. THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR DETERMINING THE MEANS AND METHODS FOR COMPLETION OF THE WORK, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
19. NEITHER THE PROFESSIONAL ACTIVITIES OF BOHLER, NOR THE PRESENCE OF BOHLER AND/OR ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE (HEREIN 'BOHLER PARTIES'), RELIEVES OR WILL RELIEVE THE CONTRACTOR OF AND FROM CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, OVERSEEING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND COMPLIANCE WITH ALL HEALTH AND SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT AND/OR PROPERTY. BOHLER PARTIES HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER OR ANY RESPONSIBILITY FOR ANY CONSTRUCTION, THE CONTRACTOR OR ITS EMPLOYEES RELATING TO THEIR WORK AND ANY AND ALL HEALTH AND SAFETY PROGRAMS OR PRECAUTIONS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THE CONTRACTOR MUST INDEMNIFY, DEFEND, PROTECT AND HOLD HARMLESS BOHLER PARTIES FOR AND FROM ANY LIABILITY TO BOHLER PARTIES RESULTING FROM THE CONTRACTOR'S WORK, SERVICES AND/OR LOCATIONS OF THE SAME. THE NOTES OF ANY NOTE IN THE PLAN SET AND, FURTHER, THE CONTRACTOR MUST NAME BOHLER AS AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTORS POLICIES OF GENERAL LIABILITY INSURANCE AS DESCRIBED ABOVE.
20. WHEN IT IS CLEARLY AND SPECIFICALLY WITHIN BOHLER'S SCOPE OF SERVICES CONTRACT WITH THE OWNER/DEVELOPER, BOHLER WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF EVALUATING CONFORMANCE WITH THE DESIGN CONCEPT AND THE INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND METHODS AND/OR TECHNIQUES OR PROCEDURES, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND BOHLER HAS NO RESPONSIBILITY OR LIABILITY FOR SAME. BOHLER WILL PERFORM ITS SHOP DRAWING REVIEW WITH REASONABLE promptness, AS CONTENT PERMITS, AND DOCUMENT, DOCUMENTING ITS REVIEW OF A SPECIFIC ITEM OR ITEMS WITH A LIMITED SCOPE, MUST NOT INDICATE THAT BOHLER HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. BOHLER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR MUST, IN WRITING, PROMPTLY AND IMMEDIATELY BRING ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS TO BOHLER'S ATTENTION. BOHLER IS NOT REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
21. IF THE CONTRACTOR DEVIATES FROM THESE PLANS AND/OR SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE PROFESSIONAL OF RECORD AND BOHLER FOR ALL DEVIATIONS WITHIN PROFESSIONAL OF RECORD'S SCOPE, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK PERFORMED WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND, FURTHER, MUST DEFEND, INDEMNIFY, PROTECT, AND HOLD HARMLESS THE PROFESSIONAL OF RECORD AND BOHLER PARTIES TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, FOR AND FROM ALL FEES, ATTORNEYS' FEES, DAMAGES, COSTS, JUDGMENTS, CLAIMS, INJURIES, PENALTIES AND THE LIKE RELATED TO SAME.
22. THE CONTRACTOR IS RESPONSIBLE FOR A MAINTAINING AND PROTECTING THE TRAFFIC CONTROL PLAN AND ELEMENTS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS, FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE RIGHT OF WAY OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE AND IS THE CONTRACTOR'S SOLE RESPONSIBILITY.
23. OWNER MUST MAINTAIN AND PRESERVE ALL PHYSICAL SITE FEATURES AND DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS IN STRICT ACCORDANCE WITH APPROVED PLAN(S) AND DESIGN, AND, FURTHER, THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR ANY FAILURE TO SO MAINTAIN OR PRESERVE SITE AND/OR DESIGN FEATURES. IF OWNER FAILS TO MAINTAIN AND/OR PRESERVE ALL PHYSICAL SITE FEATURES AND/OR DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, OWNER AGREES TO INDEMNIFY AND HOLD THE PROFESSIONAL OF RECORD AND BOHLER PARTIES, HARMLESS FOR ALL INJURIES, DAMAGES AND COSTS THAT PROFESSIONAL OF RECORD AND BOHLER INCUR AS A RESULT OF SAID FAILURE OR FAILURE TO PRESERVE.
24. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES AND MATERIALS COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL RULES AND REGULATIONS, LAWS, ORDINANCES, CODES, AND APPLICABLE STANDARDS, INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 ET SEQ.) AS AMENDED, AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
25. THE CONTRACTOR MUST STRICTLY COMPLY WITH THE LATEST AND CURRENT OSHA STANDARDS AND REGULATIONS, AND/OR ANY OTHER AGENCY WITH JURISDICTION OVER EXCAVATION AND TRENCHING PROCEDURES. PROFESSIONAL OF RECORD AND BOHLER HAS NO RESPONSIBILITY FOR OR AS RELATED TO EXCAVATION AND TRENCHING PROCEDURES AND WORK.
26. THE CONTRACTOR AND THE OWNER MUST INSTALL ALL ELEMENTS AND COMPONENTS IN STRICT COMPLIANCE WITH AND IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDED INSTALLATION CRITERIA AND SPECIFICATIONS. IF THE CONTRACTOR AND/OR OWNER FAIL TO DO SO, THEY AGREE TO JOINTLY, INDEPENDENTLY, SEPARATELY, COLLECTIVELY, AND SEVERALLY INDEMNIFY, DEFEND, PROTECT AND HOLD PROFESSIONAL OF RECORD AND BOHLER PARTIES HARMLESS FOR ALL INJURIES AND DAMAGES THAT PROFESSIONAL OF RECORD SUFFERS AND COSTS THAT PROFESSIONAL OF RECORD INCURS AS A RESULT OF SAID FAILURE.
27. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN AN ON-SITE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIREMENTS OR LOCAL GOVERNING AGENCY FOR SITES WHERE ONE (1) ACRE OR MORE IS DISTURBED BY CONSTRUCTION ACTIVITIES (UNLESS THE LOCAL JURISDICTION REQUIRES A DIFFERENT THRESHOLD). THE CONTRACTOR MUST ENSURE THAT ALL ACTIVITIES, INCLUDING THOSE OF ALL SUBCONTRACTORS, ARE IN COMPLIANCE WITH THE SWPPP, INCLUDING BUT NOT LIMITED TO LOGGING ACTIVITIES (MINIMUM ONCE PER WEEK AND AFTER RAINFALL EVENTS) AND CORRECTIVE MEASURES, AS APPROPRIATE AND FURTHER, THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR FAILING TO DO SO.
28. AS CONTAINED IN THESE DRAWINGS AND ASSOCIATED DOCUMENTS PREPARED BY THE PROFESSIONAL OF RECORD AND BOHLER, THE USE OF THE WORDS 'CERTIFY' OR 'CERTIFICATION CONSTITUTE(S) AN EXPRESSION ONLY OF PROFESSIONAL OPINION REGARDING THE INFORMATION WHICH IS THE SUBJECT OF THE PROFESSIONAL OF RECORD'S AND BOHLER KNOWLEDGE OR BELIEF AND IN ACCORDANCE WITH COMMON AND ACCEPTED PROCEDURE CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE OF ANY NATURE OR TYPE, EITHER EXPRESSED OR IMPLIED, UNDER ANY CIRCUMSTANCES.

DEMOLITION NOTES

(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES. IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. THE CONTRACTOR MUST CONDUCT DEMOLITION/REMOVALS ACTIVITIES IN SUCH A MANNER AS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND ALL OTHER ADJACENT FACILITIES. THE CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY(IES) PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE RIGHT-OF-WAY.
3. WHEN DEMOLITION-RELATED ACTIVITIES IMPACT ROADWAYS AND/OR ROADWAY RIGHT-OF-WAY, THE CONTRACTOR MUST PROVIDE TRAFFIC CONTROL IN GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE CURRENT FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AND THE FEDERAL, STATE, AND LOCAL REGULATIONS.
4. THE DEMOLITION (AND/OR REMOVALS) PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION AND TO IDENTIFY ONLY CONDITIONS REGARDING ITEMS TO BE DEMOLISHED, REMOVED, AND/OR TO REMAIN.
   A. THE CONTRACTOR MUST ALSO REVIEW ALL CONSTRUCTION DOCUMENTS AND INCLUDE WITHIN THE DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
   B. THIS PLAN IS NOT INTENDED TO AND DOES NOT PROVIDE INFORMATION REGARDING THE MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE EMPLOYED TO ACCOMPLISH THE WORK. ALL MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE USED MUST BE IN STRICT ACCORDANCE AND CONFORMANCE WITH ALL STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR MUST COMPLY WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROCEED WITH THE WORK SAFELY FOR THE CONSTRUCTION AND THE PUBLIC.
   C. THE CONTRACTOR MUST PROVIDE ALL "METHODS AND MEANS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE CONTRACTOR, AT THE CONTRACTOR'S SOLE COST, MUST REPAIR ALL DAMAGE TO ALL ITEMS AND FEATURES THAT ARE TO REMAIN. CONTRACTOR MUST USE NEW MATERIAL FOR ALL REPAIRS. CONTRACTOR'S REPAIRS MUST INCLUDE THE RESTORATION OF ALL ITEMS AND FEATURES REPAIRED TO THEIR PRE-DEMOLITION CONDITION, OR BETTER. CONTRACTOR MUST PERFORM ALL REPAIRS AT THE CONTRACTOR'S SOLE EXPENSE.
   D. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. THE CONTRACTOR MUST PERFORM THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, COMPLYING WITH ALL OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY AND SAFETY TO ALL PROPERTY ON THE SITE OR ADJACENT OR NEAR TO THE SAME.
   E. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY, WHICH MUST INCLUDE, BUT IS NOT LIMITED TO, THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING, OTHER APPROPRIATE AND/OR NECESSARY SAFETY FEATURES AND ITEMS NECESSARY TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST SAFEGUARD THE SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF SAME AND OF ALL UNAUTHORIZED PERSONS AT ANY TIME, TO OR NEAR THE DEMOLITION AREA.
   F. PRIOR TO THE COMMENCEMENT OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY, THE CONTRACTOR MUST, IN WRITING, RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS AND/OR SPECIFICATIONS. ALL CONCERNS OR QUESTIONS REGARDING THE APPLICABLE SAFETY STANDARDS AND/OR THE SAFETY OF THE CONTRACTOR AND/OR THIRD PARTIES IN PERFORMING THE WORK ON THIS PROJECT. ANY SUCH CONCERNS MUST BE CONVEYED TO THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING AND MUST ADDRESS ALL ISSUES AND ITEMS RESPONDED TO, BY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REQUIREMENTS, STATUTES, ORDINANCES AND CODES.
   G. THE CONTRACTOR MUST BECOME FAMILIAR WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL UTILITY COORDINATION REQUIRED FOR DEMOLITION AND/OR DISCONNECTION OF UTILITIES AS REQUIRED FOR THE PROJECT. THE CONTRACTOR MUST PROVIDE THE OWNER WITH WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND DISCONNECTED AND ABANDONED IN ACCORDANCE WITH THE JURISDICTION AND UTILITY COMPANY REQUIREMENTS AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
5. PRIOR TO COMMENCEMENT OF DEMOLITION, THE CONTRACTOR MUST:
   A. OBTAIN ALL REQUIRED PERMITS AND MAINTAIN THE SAME ON SITE FOR REVIEW BY THE PROFESSIONAL OF RECORD AND ALL PUBLIC AGENCIES WITH JURISDICTION THROUGHOUT THE DURATION OF THE DEMOLITION WORK, AND ALL DAILY ACTIVITY, AT A MINIMUM, THE MUNICIPAL ENGINEER, DESIGN ENGINEER, AND LOCAL SOIL CONSERVATION JURISDICTION, AT LEAST 72 BUSINESS HOURS PRIOR TO THE COMMENCEMENT OF WORK.
   B. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE, AND MAINTAIN SAID CONTROLS UNTIL SITE IS STABILIZED
   C. CONTACT THE STATE LAW, THE CONTRACTOR MUST CALL THE STATE ONE-CALL DAMAGE PROTECTION SYSTEM FOR UTILITY MARK OUT, IN ADVANCE OF ANY EXCAVATION.
   D. LOCATE AND PROTECT ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN AND ADJACENT TO THE LIMITS OF PROJECT ACTIVITIES. THE CONTRACTOR MUST USE DUE CARE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL UNDERGROUND UTILITIES.
   E. PROTECT AND MAINTAIN IN OPERATION, ALL ACTIVE UTILITIES AND SYSTEMS THAT ARE NOT BEING REMOVED DURING ANY DEMOLITION ACTIVITIES.
   G. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) FOR THE TEMPORARY OR PERMANENT TERMINATION OF SERVICE REQUIRED BY THE PROJECT PLANS AND SPECIFICATIONS REGARDING THE METHODS AND MEANS TO CONSTRUCT SAME. THESE ARE NOT THE PROFESSIONAL OF RECORD'S OR BOHLER RESPONSIBILITY. IN THE EVENT OF ABANDONMENT, THE CONTRACTOR MUST PROVIDE THE OWNER WITH WRITTEN NOTIFICATION WITH IMMEDIATE WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTIONAL AND UTILITY COMPANY REQUIREMENTS.
   H. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS NECESSARY OR AS REQUIRED TO MINIMIZE THE IMPACT ON, OF, AND TO THE AFFECTED PARTIES. WORK REQUIRED TO BE PERFORMED "OFF-PEAK" IS TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
   I. IN THE EVENTS THE CONTRACTOR ENCOUNTERS ANY HAZARDOUS MATERIAL, THE REMOVAL OF WHICH IS NOT ADDRESSED IN THE PROJECT PLANS AND SPECIFICATIONS OR THE CONTRACT WITH THE OWNER/DEVELOPER, THE CONTRACTOR MUST IMMEDIATELY CEASE ALL WORK IN THE AREA OF THE DISCOVERY AND IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY DISCREPANCIES AND/OR FIELD CONDITIONS THAT DIFFER IN ANY WAY OR IN ANY RESPECT FROM WHAT IS SHOWN ON THE PLANS. THE DISCOVERY OF SUCH MATERIALS TO PURSUE PROPER AND LEGAL DISPOSITION OF SAME.
6. THE CONTRACTOR MUST NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR SLABS WITHIN THE ZONE OF INFLUENCE OF ADJACENT STRUCTURES, UNLESS SPECIFICALLY DIRECTED TO DO SO IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, OR PURSUANT TO THE WRITTEN DIRECTION OF THE OWNER'S GEOTECHNICAL ENGINEER.
7. DEMOLITION ACTIVITIES AND EQUIPMENT MUST NOT USE OR INCLUDE AREAS OUTSIDE THE DEFINED PROJECT LIMIT LINE, WITHOUT SATISFACTION OF ALL REQUIREMENTS FOR THE EXPANSION OF THE LIMIT OF DISTURBANCE, INCLUDING OBTAINING ALL APPROVALS FROM ALL JURISDICTION.
8. THE CONTRACTOR MUST BACKFILL ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES. BACKFILL MUST BE ACCOMPLISHED WITH APPROVED BACKFILL MATERIALS AND MUST BE SUFFICIENTLY COMPACTED TO SUPPORT ALL NEW IMPROVEMENTS AND MUST BE PLACED AND COMPACTED IN COMPLIANCE WIT


REPUTED OWNER McCARTREY TRUST INST. NO. 2024-065818 LOT-B
REPUTED OWNER ANDREW NEMI & MELANIE MIKITS INST. NO. 2022-08266 LOT-C
REPUTED OWNER HENRY W. JR. & VIRGINIA V. SCHMIDT L-1531, P-817 LOT-D
REPUTED OWNER ROBERT R. & CHRISTA R. CALDWELL L-3341, P-803 LOT-E
REPUTED OWNER CHARLES W. & MAURA R. YATES L-2940, P-50 LOT-G
REPUTED OWNER ANDREW & REBECCA L. MALLOY INST. NO. 2017-16668 LOT-F
REPUTED OWNER FIRST PRESBYTERIAN CHURCH OF LOCKPORT, NEW YORK INST. NO. 2022-00981
HAINES STREET (50.0' WIDE)
PENNSYLVANIA AVENUE (50.0' WIDE)
BEATTIE AVENUE (50.0' WIDE)
VERMONT AVENUE (50.0' WIDE)
CAROLINA AVENUE (50.0' WIDE)
BENCHMARK: SOUTH BONNET BOLT ON HYDRANT ELEV. 640.62
BENCHMARK: TOP OF SHUT OFF ON HYDRANT ELEV. 641.78
BENCHMARK: SOUTH BONNET BOLT ON HYDRANT ELEV. 640.09
METAL BUILDING (KENAN CENTER) TO REMAIN AND BE PROTECTED DURING PHASE 1A
GC TO COORDINATE GAS LINE REMOVAL W/ UTILITY PROVIDER PRIOR TO CONSTRUCTION
EX UTILITY POLE TO REMAIN
EMPLOYEE PARKING
ASPHALT DRIVE & PARKING AREA
ASPHALT PARKING AREA
MILLINGS PILE
GAS METER W/ AOP
CONC. PAD W/ AC
CONC. PAD W/ GENERATOR
CONC. PAD W/ ARTWORK
CONC. PAD W/ BOOSTER
ASPHALT RAMP
GATE POSTS
C.L.F.
CH. LINK FENCE
BRUSH & TREES
EDGE OF PAVEMENT
ASPHALT DRIVE (TBR)
KENAN CENTER ONE WAY (TBR)
SPEED LIMIT 10 MPH (TBR)
CAUTION DRIVE SLOWLY (TBR)
STOP SIGN (TBR)
SPEED LIMIT 35 MPH
6" PVC INV. 634.48 (TBR)
6" PVC INV. 635.12 (TBR)
C.B. RIM 640.23 E. 24" C.M.P. 635.11 W. 6" PVC 636.73 N. 8" PVC 635.75 (TBR)
C.B. RIM 639.64 E. 24" C.M.P. 633.84 W. 24" C.M.P. 633.80 (TBR)
C.B. RIM 638.21 E. 24" C.M.P. 631.62 W. 24" C.M.P. 631.67
C.B. RIM 638.09 N. 8" PVC 634.36 E. 10" DRAINAGE 634.74 S. 8" PVC 634.84 N.W. 6" PVC 634.84
C.B. RIM 640.85 E. 6" PVC 639.27 W. 4" PVC 639.50
C.B. RIM 641.78 N. & S. 4" PVC 640.58
C.B. END TOP RIM 638.49 SUMP 636.49 DEBRIS FILLED
STORM M.H. (PAVED OVER)
SAN. M.H. RIM 638.11 N. 10" V.T.P. 631.23 S. 10" V.T.P. 631.07
P.P. W/LIGHT NYSEG 172/19
P.P. W/LIGHT NYSEG 172/18 NYT 18
P.P. W/LIGHT NYSEG 172/17 NYT 20 W/GUY WIRE
P.P. NYSEG 172/16 VZ 22
P.P. W/LIGHT NYSEG 172/15 NYT 22
P.P. W/LIGHT NYSEG 172/14 NYT 24
P.P. NYSEG 172/13 NYT 26
P.P. NYSEG 172/12 NYT 28
P.P. NYSEG 172/11 NYT 30
P.P. NYSEG 172/10 NYT 32
P.P. NYSEG 172/9 NYT 34
P.P. NYSEG 172/8 NYT 36
P.P. NYSEG 172/7 NYT 38
P.P. NYSEG 172/6 NYT 40
P.P. NYSEG 172/5 NYT 42
P.P. NYSEG 172/4 NYT 44
P.P. NYSEG 172/3 NYT 46
P.P. NYSEG 172/2 NYT 48
P.P. NYSEG 172/1 NYT 50
P.P. NYSEG 42/1
P.P. NYSEG 3686/7
P.P. NYSEG 3686/8
P.P. NYSEG 3686/9
P.P. NYSEG 3686/10
P.P. NYSEG 3686/11
P.P. NYSEG 3686/12
P.P. NYSEG 3686/13
P.P. NYSEG 3686/14
P.P. NYSEG 3686/15
P.P. NYSEG 3686/16
P.P. NYSEG 3686/17
P.P. NYSEG 3686/18
P.P. NYSEG 3686/19
P.P. NYSEG



LEGEND

DEMO	
PROPERTY LINE	
EASEMENT LINE	
SETBACK LINE	
CURB	
UTILITY POLE	○
TYPICAL SIGN	
PARKING COUNT	
CONTOUR	170
SPOT ELEVATIONS	TC 516.4 OR 516.4
SANITARY LATERAL	S
SANITARY MAIN	S
WATER LINE	W
ELECTRIC LINE	E
GAS LINE	G
OVERHEAD WIRE	OH
STORM SEWER	
HYDRANT	
SANITARY MANHOLE	S
STORM MANHOLE	D
WATER VALVE	WV
WATER METER	WM
GAS VALVE	
TYPICAL END SECTION	
ENDWALL	
GRATE INLET	
CURB INLET	
CLEANOUT	○

DEMOLITION ABBREVIATIONS

ABBREVIATION	DESCRIPTION
(TBA)	TO BE ABANDONED
(TBR)	TO BE REMOVED
(TBV)	TO BE VACATED
(RELO)	TO BE RELOCATED

THIS PLAN TO BE UTILIZED FOR DEMOLITION PURPOSES ONLY

30 15 7.5 0 30
1"= 30'

BOHLER
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PROJECT No.:	NYB240124.00-0A
DRAWN BY:	GRS
CHECKED BY:	RLB
DATE:	02-20-2025
CAD I.D.:	P-CIVIL-SITE

PROJECT:

SITE DEVELOPMENT PLANS

FOR

KENAN CENTER
ARTS, EDUCATION & RECREATION

PROPOSED KENAN CIVIC ARENA

433 LOCUST STREET
CITY OF LOCKPORT
NIAGARA COUNTY
NEW YORK
TAX MAP ID: 123.06-2-29.1

BOHLER
70 LINDEN OAKS
THIRD FLOOR
ROCHESTER, NY 14625
Phone (585) 866-1100
www.BohlerEngineering.com

SHEET TITLE:

EXISTING CONDITIONS/ DEMOLITION PLAN PHASE 1B

SHEET NUMBER:

C-202

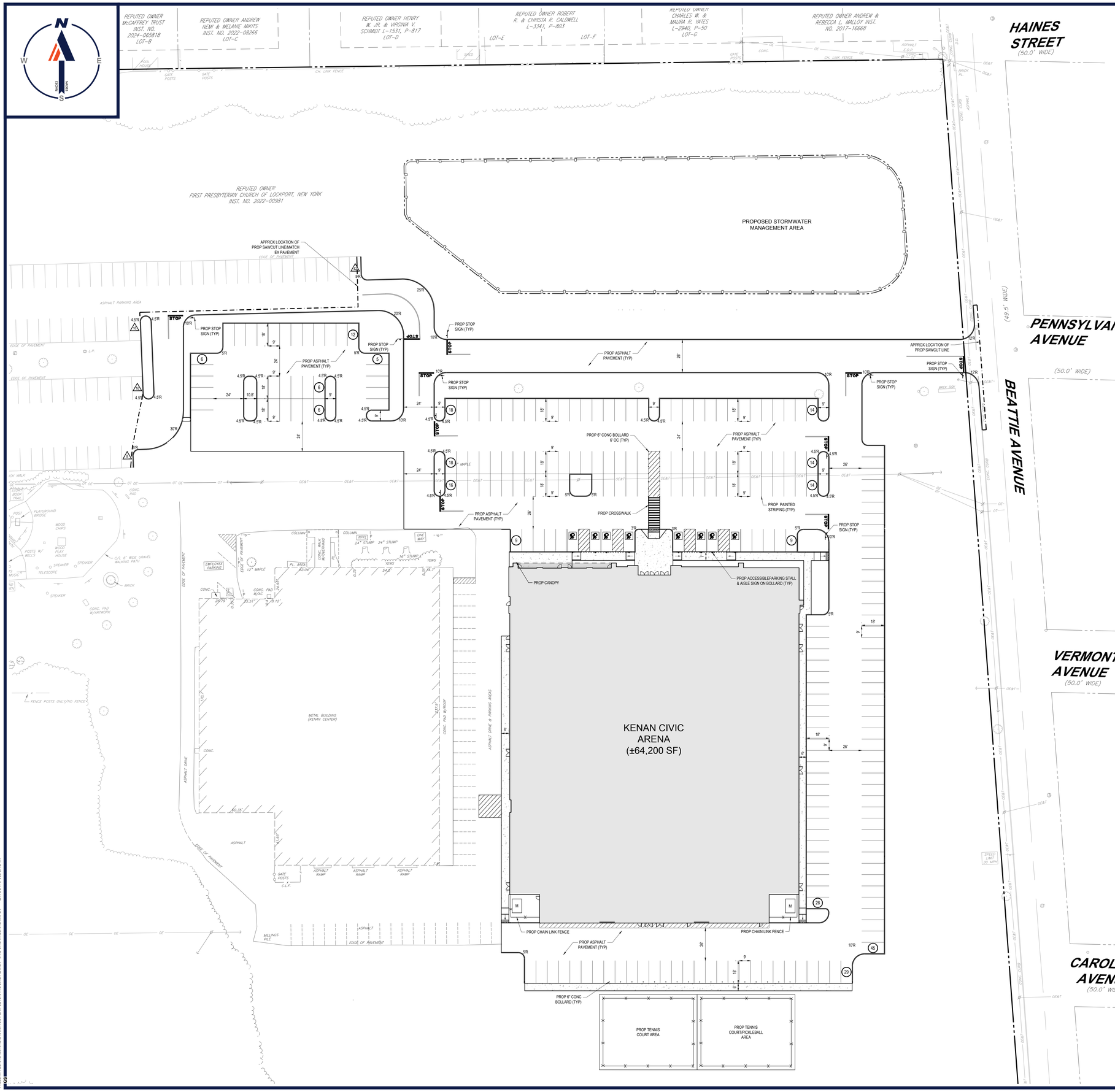
ORG. DATE - 02-20-2025

P:\2024\NYB240124.00\CAD\DRAWINGS\PLAN SET\CIVIL SITE PLANS\P-CIVIL-SITE.NYB240124.00.dwg ——LAYOUT: C-202 EXDM 1B

WILLOW STREET
(66.0' WIDE)
LOCUST STREET (66.0' WIDE)
HAINES STREET (50.0' WIDE)
PENNSYLVANIA AVENUE (50.0' WIDE)
BEATTIE AVENUE (50.0' WIDE)
VERMONT AVENUE (50.0' WIDE)
CAROLINA AVENUE (50.0' WIDE)
GEORGIA AVENUE (50.0' WIDE)

REPUTED OWNER RONALD A. & DEBORAH L. FRANCO L--3168, P--233
REPUTED OWNER KEVIN R. MINDLER & MARY F. MURPHY L--3339, P--13
REPUTED OWNER ROBERT W. & LYNN R. BRAGG L--3324, P--878
REPUTED OWNER BOBBIE L. MAC L--3291, P--628 LOT--A
REPUTED OWNER McCARTHY TRUST INST. NO. 2024-08581 LOT--B
REPUTED OWNER ANDREW NOM & MELANIE MAYES INST. NO. 2021-09266 LOT--C
REPUTED OWNER HENRY W. JR. & VIRGINIA V. SCHMIDT L--1571, P--817 LOT--D
REPUTED OWNER ROBERT R. & CHRISTA K. CALDWELL L--1341, P--853 LOT--E
REPUTED OWNER CHARLES W. & MAURA E. YATES L--2943, P--50 LOT--F
REPUTED OWNER ANDREW & REBECCA L. MALLOY INST. NO. 2017--16658 LOT--G
LOT--H
LOT--I
REPUTED OWNER CHRISTOPHER E. & AMANDA R. SCHEIC INST. NO. 2013--12917
REPUTED OWNER FIRST PRESBYTERIAN CHURCH OF LOCKPORT, NEW YORK INST. NO. 2022--02861
REPUTED OWNER RICHARD & MARY LOU GRANCHELLI L--1566, P--884
REPUTED OWNER ESKAS AT LOCUST GARDENS LLC INST. NO. 2017--10575
REPUTED OWNER 85277 PROPERTIES LLC INST. NO. 2021--18159

PROPOSED STORMWATER MANAGEMENT AREA
APPROX LOCATION OF PROP SAWCUT/DEMATCH EX PAVEMENT
APPROX LOCATION OF PROP SAWCUT LINE
PROP 5'-0" WIDE CONC WALK
PROP 6'-0" WIDE CONC WALK
PROP 8'-0" WIDE CONC WALK
PROP 10'-0" WIDE CONC WALK
PROP 5'-0" WIDE BRICK WALK
PROP 10'-0" WIDE BRICK WALK
PROP 6'-0" WIDE ASPHALT DRIVE
PROP 24'-0" WIDE ASPHALT DRIVE
PROP 26'-0" WIDE ASPHALT DRIVE
PROP 28'-0" WIDE ASPHALT DRIVE
PROP 30'-0" WIDE ASPHALT DRIVE
PROP 32'-0" WIDE ASPHALT DRIVE
PROP 34'-0" WIDE ASPHALT DRIVE
PROP 36'-0" WIDE ASPHALT DRIVE
PROP 38'-0" WIDE ASPHALT DRIVE
PROP



ZONING TABLE

ZONE: RESIDENTIAL (R1)
USE: CIVIC CENTER BUILDING
MAP: 126.06 BLOCK: 2 LOT: 29.1

APPLICANT/ OWNER INFORMATION

APPLICANT:	KENAN CENTER 433 LOCUST STREET LOCKPORT, NY 14094
PROPERTY OWNER:	FIRST PRESBYTERIAN CHURCH OF LOCKPORT 433 LOCUST STREET LOCKPORT, NY 14094

BULK REQUIREMENTS

ITEM	CODE	REQUIRED	EXISTING	PROPOSED
MIN LOT AREA	§ 190.19	10,000 SF (0.23 AC)	1,180,389 SF (27.098 AC)	1,180,389 SF (27.098 AC)
MIN LOT WIDTH	§ 190.19	70'	297.2'	NO CHANGE
MIN LOT DEPTH	§ 190.19	130'	488.7'	NO CHANGE
MIN FRONT YARD SETBACK	§ 190.19	40'	98.3'	NO CHANGE
MIN SIDE YARD SETBACK	§ 190.19	10'	81.6'	NO CHANGE
MIN REAR YARD SETBACK	§ 190.19	25'	189.2'	NO CHANGE
MAX PERMITTED HEIGHT	§ 190.19	35.0'	35.0'	40.7'
MAX BUILDING COVERAGE	§ 190.19	20%	±4.5%	±6.4%
			KEY =	VARIANCE REQUIRED

PARKING REQUIREMENTS

ITEM	CODE	REQUIRED	EXISTING	PROPOSED
MIN. STALL SIZE	§ 190.111	9' X 18'	9' X 18'	9' X 18'
MIN. NUMBER OF STALLS	§ 190.111	321	±241	NEW:285 EX:149 (434 TOTAL)

PARKING STALL COUNT: COMMUNITY BUILDING
REQUIRED STALLS = ONE FOR EACH 200 SF OF FLOOR AREA
CALCULATION: ±64,200 SF / 200 SF = 321 STALLS

		VARIANCE REQUIRED

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

30 15 7.5 0 30
1"= 30'

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LAND SURVEYING
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DATE:	02-20-2025
CAD I.D.:	P-CIVIL-SITE

PROJECT:

SITE DEVELOPMENT PLANS

FOR

KENAN CENTER
ARTS, EDUCATION & RECREATION

PROPOSED KENAN CIVIC ARENA

433 LOCUST STREET
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70 LINDEN OAKS
THIRD FLOOR
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www.BohlerEngineering.com

SHEET TITLE:

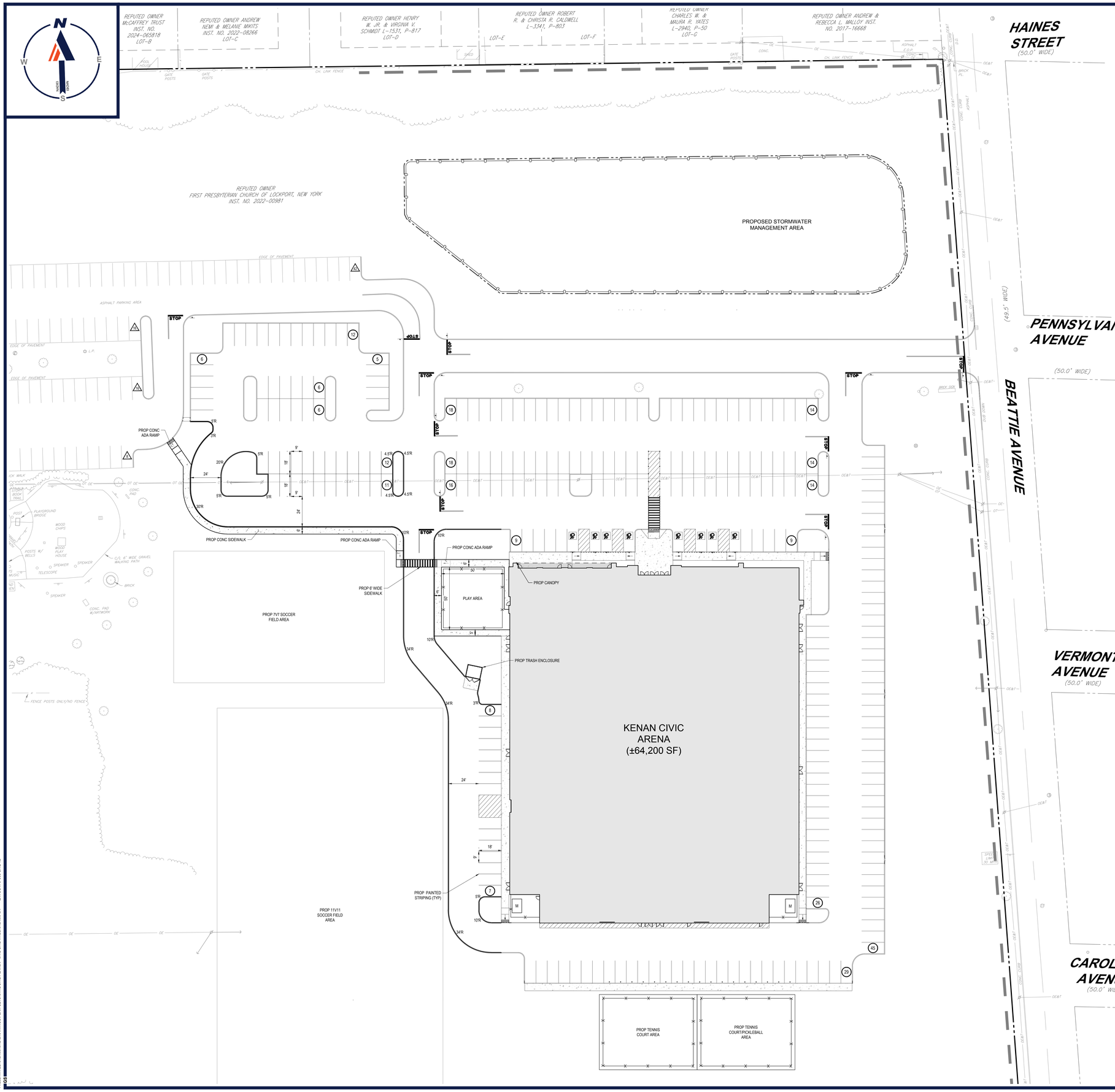
SITE PLAN PHASE 1A

SHEET NUMBER:

C-302

ORG. DATE - 02-20-2025

P:\2024\NYB240124.00\CAD\DRAWINGS\PLAN SET\$\CIVIL SITE PLAN\EP-CIVIL SITE NYB240124.00-0A——LAYOUT(C-302 SITE 1A GS



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MAP: 126.06 BLOCK: 2 LOT: 29.1

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PROPERTY OWNER:	FIRST PRESBYTERIAN CHURCH OF LOCKPORT 433 LOCUST STREET LOCKPORT, NY 14094

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				VARIANCE REQUIRED

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

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1"= 30'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SURVEY FIELD SERVICES
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DATE:	02-20-2025
CAD I.D.:	P-CIVIL-SITE

PROJECT:

SITE DEVELOPMENT PLANS

FOR

KENAN CENTER
ARTS, EDUCATION & RECREATION

PROPOSED KENAN CIVIC ARENA

433 LOCUST STREET
CITY OF LOCKPORT
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ROCHESTER, NY 14625
Phone: (585) 866-1100
www.BohlerEngineering.com

SHEET TITLE:

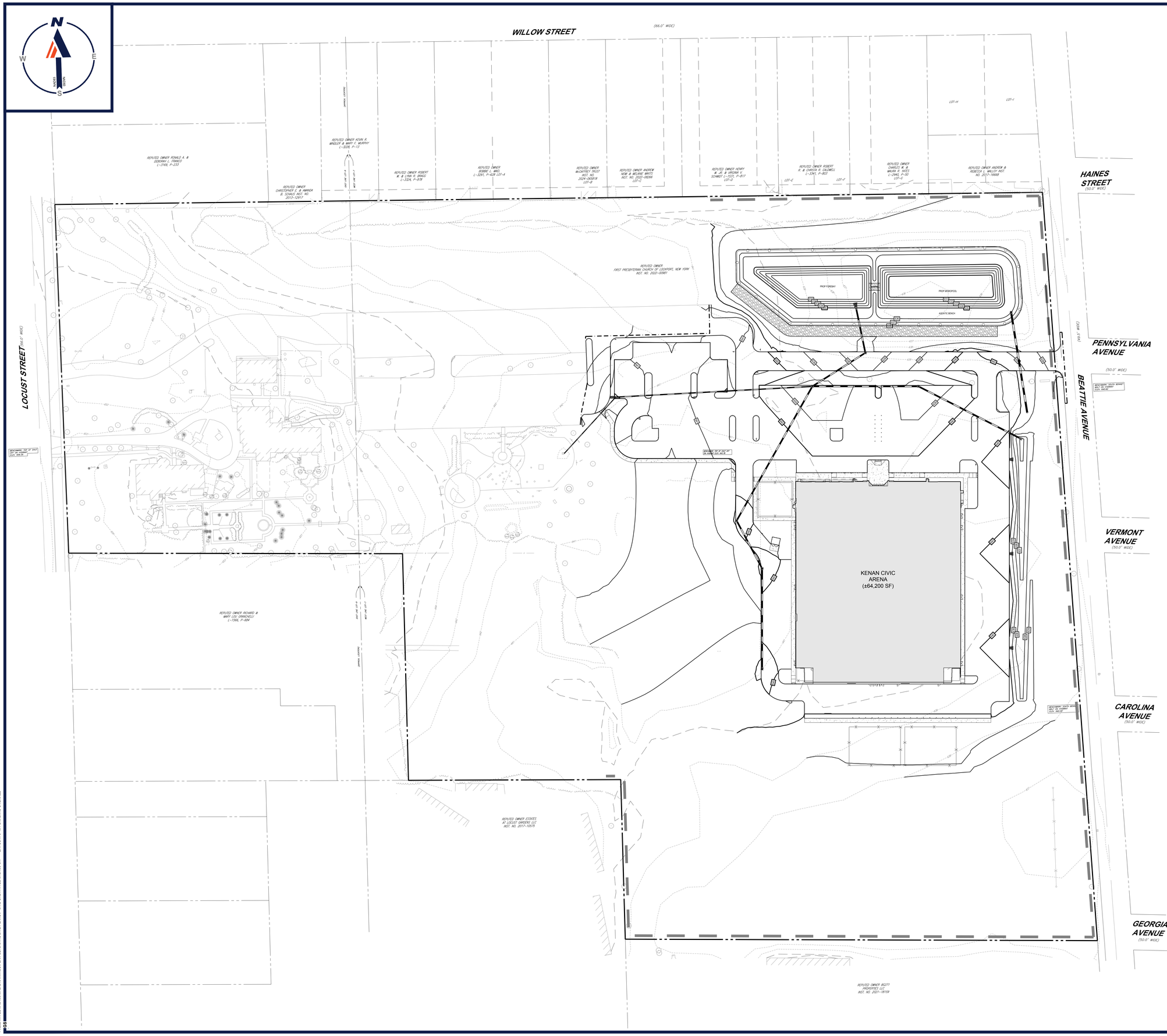
SITE PLAN PHASE 1B

SHEET NUMBER:

C-303

ORG. DATE - 02-20-2025

P:\2024\NYB240124.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL_SITE.NYB240124.00-0A——LAYOUT: C-303 SITE 1B


WILLOW STREET
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HAINES STREET
(50.0' WIDE)
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(50.0' WIDE)
BEATTIE AVENUE
VERMONT AVENUE
(50.0' WIDE)
CAROLINA AVENUE
(50.0' WIDE)
GEORGIA AVENUE
(50.0' WIDE)
KENAN CIVIC ARENA
(±64,200 SF)
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PROP WEIRPOOL
AQUATIC BENCH
REPUTED OWNER FIRST PRESBYTERIAN CHURCH OF LOCKPORT, NEW YORK INST. NO. 2022-02861
REPUTED OWNER RONALD A. & DEBORAH L. FRANCO L-3168, P-233
REPUTED OWNER KEVIN R. MINDLER & MARY F. MURPHY L-3339, P-13
REPUTED OWNER CHRISTOPHER R. & AMANDA R. SCHMID INST. NO. 2013-12917
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REPUTED OWNER DEBBIE L. MAC L-3291, P-628 LOT-A
REPUTED OWNER McCARTNEY TRUST INST. NO. 2024-08581 LOT-B
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REPUTED OWNER ANDREW & REBECCA L. MALLOY INST. NO. 2017-16658 LOT-G
LOT-H
LOT-I
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REPUTED OWNER BIZZITI PROPERTIES LLC INST. NO. 2021-18159
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BENCHMARK: SOUTH BOLT FIRE HYDRANT ELEV. 646.62
BENCHMARK: TOP OF BOLT IN HYDRANT ELEV. 647.16
BENCHMARK: SOUTH BOLT FIRE HYDRANT ELEV. 646.62
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EXISTING 12" WATER MAIN
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EXISTING STORM SEWER
EXISTING OVERHEAD UTILITIES
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EXISTING WATER LINE
EXISTING CURB
EXISTING GUIDE RAIL
EXISTING FENCE
EXISTING TREE LINE
EXISTING CONTOUR
EXISTING SPOT GRADE
EXISTING CATCH BASIN
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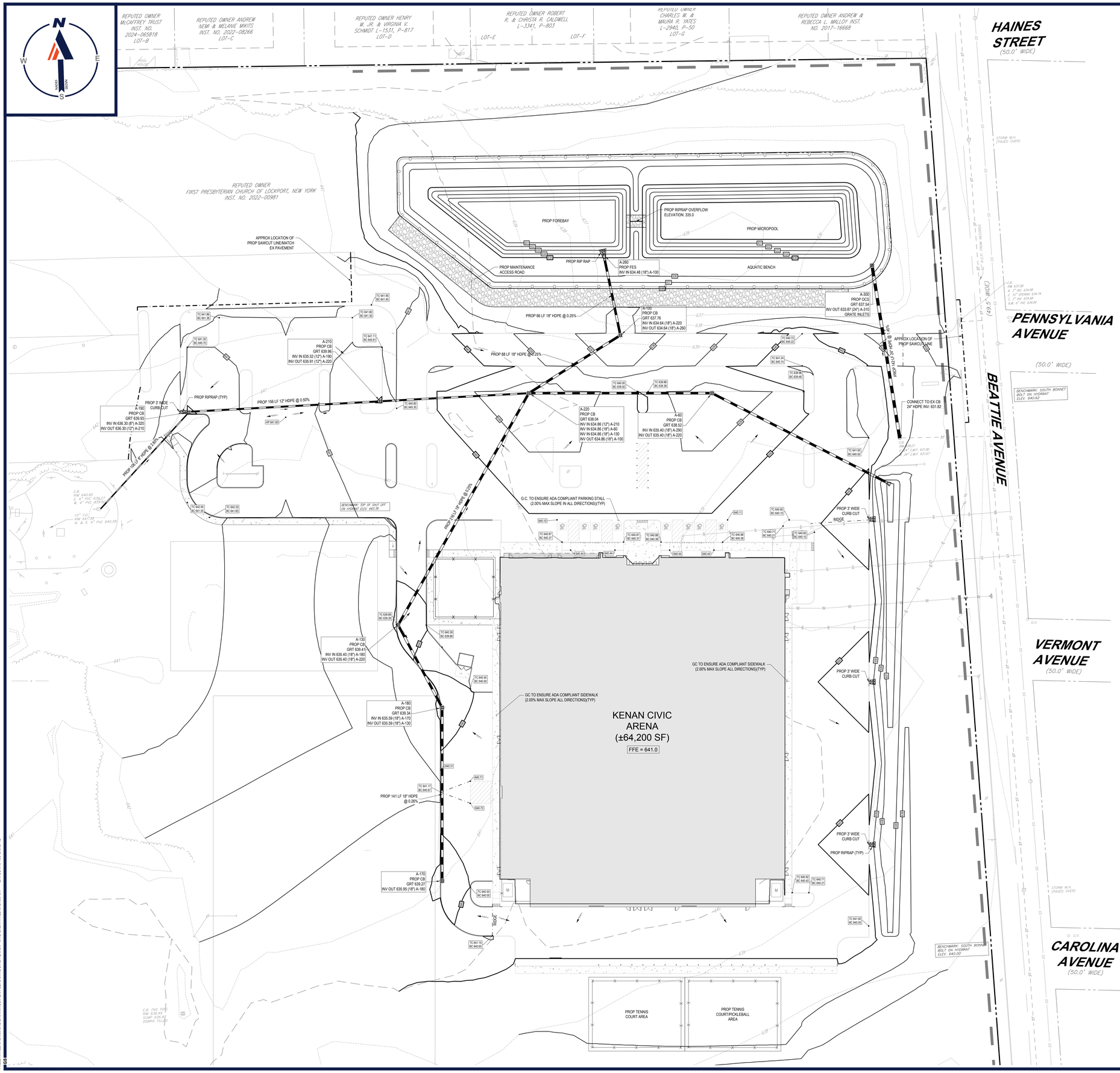

P:\2024\NYB240124.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-GRDR\NYB240124.00-0A-----3-LAYOUT1 - C-403 GRAD 1B

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
LANDSCAPE ARCHITECTURE
PROGRAM MANAGEMENT
SURVEY & MAPPING
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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www.newyork-811.com

PRELIMINARY

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	NYB240124.00-0A
DRAWN BY:	GRS
CHECKED BY:	RLB
DATE:	02-20-2025
CAD I.D.:	P-CIVIL-GRDR

PROJECT:

SITE DEVELOPMENT PLANS

FOR

KENAN CENTER
ARTS, EDUCATION & RECREATION

PROPOSED KENAN CIVIC ARENA

433 LOCUST STREET
CITY OF LOCKPORT
NIAGARA COUNTY
NEW YORK
TAX MAP ID: 123.06-2-29.1

BOHLER
70 LINDEN OAKS
THIRD FLOOR
ROCHESTER, NY 14625
Phone: (585) 866-1100
www.BohlerEngineering.com

SHEET TITLE:

PRELIM GRADING AND DRAINAGE PLAN

SHEET NUMBER:

C-403

ORG. DATE - 02-20-2025

REPUTED OWNER
McCARTHEY TRUST
INST. NO.
2024-065818
LOT-B

REPUTED OWNER ANDREW
NEMI & MELANIE MIKITS
INST. NO. 2022-08266
LOT-C

REPUTED OWNER HENRY
W. JR. & VIRGINIA V.
SCHMIDT L-1531, P-817
LOT-D

REPUTED OWNER ROBERT
R. & CHRISTA R. CALDWELL
L-3341, P-803
LOT-E

LOT-F

REPUTED OWNER
CHARLES W. &
MAURA R. YATES
L-2940, P-50
LOT-G

REPUTED OWNER ANDREW &
REBECCA L. MALLOY INST.
NO. 2017-16668

REPUTED OWNER
FIRST PRESBYTERIAN CHURCH OF LOCKPORT, NEW YORK
INST. NO. 2022-00981

HAINES
STREET
(50.0' WIDE)

PENNSYLVANIA
AVENUE
(50.0' WIDE)

BEATTIE AVENUE

VERMONT
AVENUE
(50.0' WIDE)

CAROLINA
AVENUE
(50.0' WIDE)

BENCHMARK: TOP OF SHUT OFF
ON HYDRANT ELEV. 643.78

BENCHMARK: SOUTH BONNET
BOLT ON HYDRANT
ELEV. 640.62

BENCHMARK: SOUTH BONNET
BOLT ON HYDRANT
ELEV. 640.00

KENAN CIVIC
ARENA
(±64,200 SF)
FFE = 641.0

PROP 1,000 GAL
GREASE INTERCEPTOR
RIMS = 640.8
INV IN = 635.28
INV OUT = 635.03

PROP 41LF - 6" PVC
SDR-21 SAN @ 1.6%

PROP 75LF - 6" PVC
SDR-21 SAN @ 1.6%

PROP 29 LF - 6" PVC
SDR-21 SAN @ 1.6%

6" SAN WYE
INV = 634.36

PROP 20 LF - 6" PVC
SDR-21 SAN @ 3.4%

PROP 32LF - 6" PVC
SDR-21 SAN @ 3.8%

PROP 18LF - 6" PVC SDR-21 SAN @ 1.6%

PROP CONNECTION TO BUILDING
6" PVC SDR-21 INV = 636.50

PROP GAS METER PER GAS
COMPANY SPECIFICATIONS.

PROP WATER SERVICE CONNECTION
TO BUILDING. RPZ AND METER
LOCATED INSIDE BUILDING. REFER
ARCH PLANS FOR DETAILS.

PROP 75 LF - 6" PVC SDR-21 SAN @ 1.6%

PROP UNDERGROUND GAS
SERVICE. ALL CONNECTIONS
AND METERS SHALL BE PER
GAS COMPANY
SPECIFICATIONS.

PROP ± 170 LF - 8" PVC
WATER SERVICE

PROP 8" GATE VALVE

PROP UNDERGROUND ELECTRICAL
SERVICE TO BUILDING PER UTILITY
COMPANY SPECIFICATIONS. REFER
TO ELECTRICAL DRAWINGS.

PROP ELECTRICAL SERVICE TO
CONNECT TO EX UTILITY POLE.
ALL CONNECTIONS SHALL BE PER
UTILITY PROVIDER
SPECIFICATIONS. GC TO
COORDINATE PRIOR TO
CONSTRUCTION.

PROP CONNECTION TO EX 10" SAN MAIN
VIA WYE INV: 631.77
GC TO CONFIRM DEPTH AND CONDITION OF
EX SAN MAIN PRIOR TO CONSTRUCTION.

PROP 46 LF - 6" PVC
SDR-21 SAN @ 1.6%

PROP CONNECTION TO EX GAS
MAIN. GC TO COORDINATE WITH
GAS COMPANY PRIOR TO
CONSTRUCTION.

PROP CONNECTION TO
EX 12" WATER MAIN VIA
8"X12"X12" TAPPING
SLEEVE AND VALVE

PROP TENNIS
COURT AREA

PROP TENNIS
COURT/PICKLEBALL
AREA

THIS PLAN TO BE UTILIZED
FOR UTILITIES PURPOSES
ONLY

30 15 7.5 0 30
1"= 30'

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SURFACE WATER ENGINEERING
PERMITTING SERVICES
TRANSPORTATION SERVICES

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REVISIONS

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PROJECT No.:	NYB240124.00-0A
DRAWN BY:	GRS
CHECKED BY:	RLB
DATE:	02-20-2025
CAD I.D.:	P-CIVIL-UTIL

PROJECT:

SITE DEVELOPMENT PLANS

FOR

KENAN CENTER
ARTS, EDUCATION & RECREATION

PROPOSED
KENAN CIVIC ARENA

433 LOCUST STREET
CITY OF LOCKPORT
NIAGARA COUNTY
NEW YORK
TAX MAP ID: 123.06-2-29.1

BOHLER

70 LINDEN OAKS
THIRD FLOOR
ROCHESTER, NY 14625
Phone: (585) 866-1100
www.BohlerEngineering.com

SHEET TITLE:

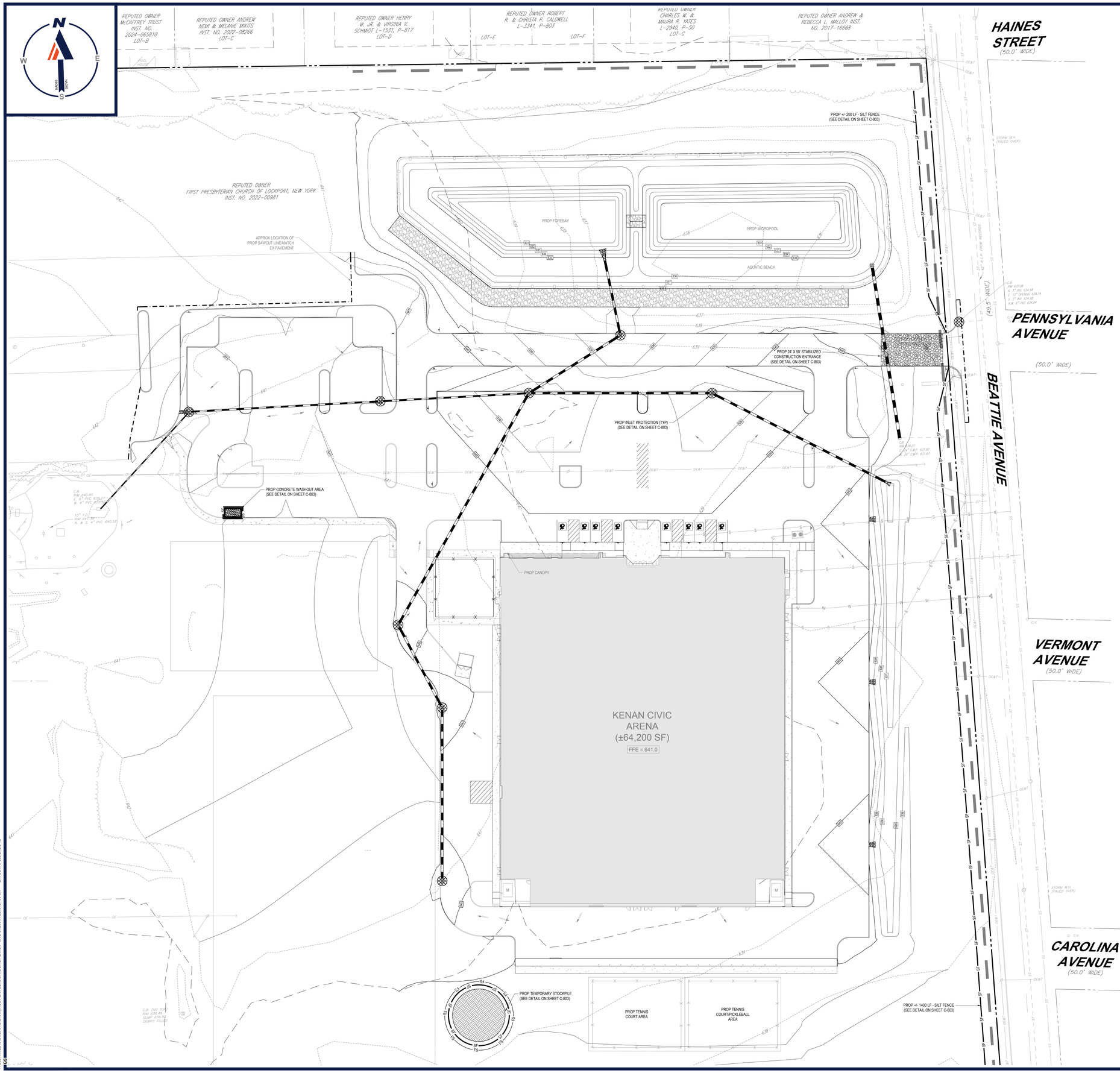
UTILITY PLAN

SHEET NUMBER:

C-501

ORG. DATE - 02-20-2025

P:\2024\NYB240124.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-UTIL-NYB240124.00-0A.DWG —>LAYOUT: C-501 UTIL 1B



THIS PLAN TO BE UTILIZED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY

30 15 7.5 0 30

1"= 30'

P:\2024\NYB240124.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-GRDR-NYB240124.00-GA——LAYOUT: C-802 EROS 1B

EROS

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SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
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PROJECT No.:	NYB240124.00-GA
DRAWN BY:	GRS
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CAD I.D.:	P-CIVL-GRDR

PROJECT:

SITE DEVELOPMENT PLANS

FOR

KENAN CENTER
ARTS, EDUCATION & RECREATION

PROPOSED KENAN CIVIC ARENA

433 LOCUST STREET
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70 LINDEN OAKS
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SHEET TITLE:

EROSION AND SEDIMENT CONTROL PLAN PHASE 1B

SHEET NUMBER:

C-802

ORG. DATE - 02-20-2025

UPSTATE NEW YORK EROSION AND SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.

2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. AT A MINIMUM, AREAS SHALL BE PERMANENTLY STABILIZED ACCORDING TO THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (REFERRED TO AS THE "BLUE BOOK"), OR IN THE ABSENCE OF THE BLUE BOOK, THEY SHALL BE PERMANENTLY STABILIZED WITHIN 14 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).

3. SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 8%.

4. INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILTATION BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE #5. THE FOLLOWING EROSION CONTROL MEASURES ARE PROPOSED FOR THIS SITE SUCH AS:
   4.1. SILT FENCE
   4.2. INLET PROTECTION
   4.3. COMPOST FILTER SOCK
   4.4. STABILIZED CONSTRUCTION ENTRANCE

5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED. FOR SEDIMENT CONTROL DEVICES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE DEVICES SHALL REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.

6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2:1) UNLESS OTHERWISE INDICATED ON THE PLANS. SLOPE PROTECTION FOR SLOPES GREATER THAN 2:1 SHALL BE DESIGNED BY A GEOTECHINCAL ENGINEER.

7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

8. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.

9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL STANDARDS.

10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
   a) SIX INCHES, OR DEPTH SPECIFIED ON THE LANDSCAPE PLAN, OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
   b) APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF USING 10-20-20 OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER1,000 SF).
   c) FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUE-GRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS: SEEDING RATE IS 1.03 LBS PER 1,000 SF LAWN. QUALITY SOD MAY BE SUBSTITUTED FOR SEED WHERE SLOPES DO NOT EXCEED 2:1. SOD ON SLOPES STEEPER THAN 3:1 SHOULD BE PEGGED.
   d) STRAW MULCH AT THE RATE OF 70-90 LBS PER 1,000 SF. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER WILL BE USED ON STRAW MULCH FOR WIND CONTROL.

11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS 70% STABILIZED. FOR EROSION CONTROL MEASURES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE MEASURES SHALL REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.

12. WETLANDS WILL BE PROTECTED WITH BARRIERS CONSISTING OF STRAW BALES, COMPOST TUBES, SILT FENCE OR A COMBINATION THEREOF.

13. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL HAVE AN EXPOSURE WINDOW OF NOT MORE THAN 7 DAYS.

14. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IF NOT BEING ACTIVELY WORKED:

LOCATION	MULCH	MULCH RATE (1000 SF)
PROTECTED AREA	STRAW	100 POUNDS
WINDY AREA	SHREDDED OR CHOPPED CORNSTALKS STRAW (ANCHORED)*	185-275 POUNDS 100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1	JUTE MESH OR EXCELSIOR MAT	AS REQUIRED
GREATER THAN 3:1	(REFER TO GEOTECHINCAL REPORT FOR FINAL DESIGN REQUIREMENT)	

* A HYDRO-APPLICATION OF WOOD OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER SHALL BE USED TO ADDITIONAL WIND CONTROL.

MULCH ANCHORING: ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (AS PER MANUFACTURER); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SERRATED STRAIGHT DISK. WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

15. STOCKPILING OF MATERIALS (DIRT, WOOD, CONSTRUCTION MATERIALS, ETC.) MUST REMAIN COVERED AT ALL TIMES TO MINIMIZE ANY DUST PROBLEMS THAT MAY OCCUR WITH ADJACENT PROPERTIES AND TO PROVIDE MAXIMUM PROTECTION AGAINST EROSION RUNOFF.

16. EXISTING CATCH BASIN STRUCTURES SHALL BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.

17. THE CONTRACTOR MUST PERFORM DEWATERING (IF REQUIRED), IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY FOR THE COSTS ASSOCIATED WITH ANY AND ALL NECESSARY DISCHARGE PERMITS ASSOCIATED WITH SAME.

18. THE CONTRACTOR MUST LOCATE CONSTRUCTION WASTE MATERIAL STORAGE AREAS TO MINIMIZE EXPOSURE TO STORMWATER. THE CONTRACTOR MUST IMMEDIATE PLACE CONSTRUCTION WASTE IN ON-SITE STORAGE CONTAINERS UNTIL THAT CONSTRUCTION WASTE IS READY FOR OFF-SITE DISPOSAL. THE CONTRACTOR MUST MAINTAIN SPILL PREVENTION AND RESPONSE EQUIPMENT AND MAKE SAME CONTINUOUSLY AVAILABLE ON-SITE FOR USE BY THE CONTRACTOR'S EMPLOYEES WHO MUST BE PROPERLY TRAINED IN THE APPLICATION OF SPILL PREVENTION AND RESPONSE PROCEDURES.

19. EROSION CONTROL NOTES DURING WINTER CONSTRUCTION

20. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.

21. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT THE AMOUNT OF AREA OPEN AT ONE TIME IS MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE AND IN CONFORMANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN SUCH THAT ADEQUATE PROVISIONS ARE EMPLOYED TO CONTROL STORMWATER RUNOFF.

22. CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.

23. AN AREA SHALL BE CONSIDERED TO HAVE BEEN TEMPORARILY STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.

24. FOR AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR A PERIOD EXCEEDING 14 DAYS BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED. IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 200-300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED AS APPLICABLE. SLOPES SHALL NOT BE LEFT UNSTABILIZED OVER THE WINTER OR IN AREAS WHERE WORK HAS CEASED FOR MORE THAN 14 DAYS UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF SEDIMENT BARRIERS OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.

25. MULCHING REQUIREMENTS:
   a) BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.
   b) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPE EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
   c) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.

26. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE STORMWATER PREVENTION PLAN.

27. DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.

2. EROSION CONTROL MEASURES MUST CONFORM TO THE STATE, LOCAL, AND FEDERAL GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL UNLESS OTHERWISE NOTED, OR UNLESS THE PROFESSIONAL OF RECORD CLEARLY AND SPECIFICALLY, IN WRITING, DIRECTS OTHERWISE. INSTALLATION OF EROSION CONTROL, CLEARING, AND SITE WORK MUST BE PERFORMED EXACTLY AS INDICATED IN THE EROSION CONTROL CONSTRUCTION NOTES.

3. THE DISTURBED LAND AREA OF THIS SITE IS APPROXIMATELY ±9.8 ACRES.

4. THE FOLLOWING EROSION CONTROL MEASURES ARE PROPOSED FOR THIS SITE:
   a) STABILIZED CONSTRUCTION ENTRANCE/ EXIT - A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT IS TO BE INSTALLED AT THE DESIGNATED LOCATION SHOWN ON THE PLAN. THIS AREA MUST BE GRADED SO THAT RUNOFF WATER WILL BE RETAINED ON-SITE.
   b) SEDIMENT FENCE - INSTALL SILT FENCE(S) AND/OR SILT SOCK AROUND ALL OF THE DOWNSLOPE PERIMETERS OF THE SITE, TEMPORARY FILL AND SOIL STOCKPILES.
   c) INSTALL FILTER FABRIC DROP INLET PROTECTION AROUND EACH DRAINAGE INLET AS DRAINAGE STRUCTURES ARE INSTALLED TO REDUCE THE QUANTITY OF SEDIMENT. INSTALL TEMPORARY INLET PROTECTION ON INLETS DOWNSLOPE FROM DISTURBANCE, WHICH MAY BE BEYOND THE LIMITS OF DISTURBED AREA.

5. INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS.

6. THE CONTRACTOR MUST INSPECT EROSION CONTROL MEASURES WEEKLY. THE CONTRACTOR MUST REMOVE ANY SILT DEPOSITS GREATER THAN 6 INCHES OR HALF THE EROSION CONTROL BARRIER'S HEIGHT COLLECTED ON THE FILTER FABRIC AND/OR SILT SOCK BARRIERS AND EXCAVATE AND REMOVE ANY SILT FROM DROP INLET PROTECTION.

7. THE CONTRACTOR MUST APPLY TEMPORARY SEED AND MULCH TO ALL DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINISHED GRADE AND VEGETATED WITHIN 7 DAYS. WHEN AREAS ARE DISTURBED AFTER THE GROWING SEASON, THE CONTRACTOR MUST STABILIZE SAME WITH GEOTEXTILE FABRIC AND MAINTAIN SAME IN STRICT ACCORDANCE WITH BEST MANAGEMENT PRACTICES.

8. THE CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF THE PROFESSIONAL OF RECORD SO REQUIRES, TO PREVENT ANY, INCLUDING THE INCIDENTAL, DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.

9. THE CONTRACTOR MUST BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT PAVING AND TURF/LANDSCAPING IS ESTABLISHED. THE COSTS OF INSTALLING AND MAINTAINING THE EROSION CONTROL MEASURES MUST BE INCLUDED IN THE BID PRICE FOR THE SITE WORK AND THE CONTRACTOR IS RESPONSIBLE FOR ALL SUCH COSTS.

10. THE CONTRACTOR MUST CONTINUE TO MAINTAIN ALL EROSION CONTROL MEASURES UNTIL THE COMPLETION OF CONSTRUCTION AND THE ESTABLISHMENT OF VEGETATION.

11. THE CONTRACTOR MUST REMOVE EROSION CONTROL MEASURES, SILT AND DEBRIS AFTER ESTABLISHING PERMANENT VEGETATION COVER OR OTHER INSTALLING A DIFFERENT, SPECIFIED METHOD OF STABILIZATION.

12. THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL FACILITIES, MEASURES AND STRUCTURES. ADDITIONAL FACILITIES, MEASURES AND STRUCTURES MUST BE INSTALLED WHERE NECESSARY TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS AND/OR TO PREVENT ANY, INCLUDING THE INCIDENTAL DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.

13. THE CONTRACTOR MUST PROTECT ALL EXISTING TREES AND SHRUBS. THE CONTRACTOR MUST REFER TO THE LANDSCAPE AND/OR DEMOLITION PLAN(S) FOR TREE PROTECTION, FENCE LOCATIONS AND DETAILS.

14. THE CONTRACTOR MUST REFER TO GRADING PLANS FOR ADDITIONAL INFORMATION.

15. THE CONTRACTOR MUST CLEAN EXISTING AND PROPOSED DRAINAGE STRUCTURES AND INTERCONNECTING PIPES ON OR OFF-SITE AS THE JURISDICTIONAL AGENCY REQUIRES, BOTH AT THE TIME OF SITE STABILIZATION AND AT END OF PROJECT.

16. SOIL EROSION CONTROL MEASURES MUST BE ADJUSTED OR RELOCATED BY THE CONTRACTOR AS IDENTIFIED DURING SITE OBSERVATION IN ORDER TO MAINTAIN THE COMPLETE EFFECTIVENESS OF ALL CONTROL MEASURES.

17. THE CONTRACTOR MUST IDENTIFY, ON THE PLAN, THE LOCATION OF WASTE CONTAINERS, FUEL STORAGE TANKS, CONCRETE WASHOUT AREAS AND ANY OTHER LOCATIONS WHERE HAZARDOUS MATERIALS ARE STORED.

SOIL RESTORATION PROCEDURE, PER NYSDEC "BLUE BOOK":

DURING PERIODS OF RELATIVELY LOW TO MODERATE SUBSOIL MOISTURE, THE DISTURBED SUBSOILS ARE RETURNED TO ROUGH GRADE AND THE FOLLOWING SOIL RESTORATION STEPS APPLIED:

1. APPLY 3 INCHES OF COMPOST OVER SUBSOIL.
2. TILL COMPOST INTO SUBSOIL TO A DEPTH OF AT LEAST 12 INCHES USING A CAT-MOUNTED RIPPER, TRACTOR-MOUNTED DISC, OR TILLER, MIXING, AND CIRCULATING AIR AND COMPOST INTO SUBSOILS.
3. ROCK-PICK UNTIL UPLIFTED STONE/ROCK MATERIALS OF FOUR INCHES AND LARGER SIZE ARE CLEANED OFF THE SITE.
4. APPLY TOPSOIL TO A DEPTH OF 6 INCHES.
5. VEGETATE AS REQUIRED BY APPROVED PLAN.

AT THE END OF THE PROJECT AN INSPECTOR SHOULD BE ABLE TO PUSH A 3/8" METAL BAR 12 INCHES INTO THE SOIL JUST WITH BODY WEIGHT. TILLING (STEP 2 ABOVE) SHOULD NOT BE PERFORMED WITHIN THE DRIP LINE OF ANY EXISTING TREES OR OVER UTILITY INSTALLATIONS THAT ARE WITHIN 24 INCHES OF THE SURFACE.

COMPOST SPECIFICATIONS:

COMPOST SHALL BE AGED, FROM PLANT DERIVED MATERIALS, FREE OF VIABLE WEED SEEDS, HAVE NO VISIBLE FREE WATER OR DUST PRODUCED WHEN HANDLING, PASS THROUGH A HALF INCH SCREEN AND HAVE A PH SUITABLE TO GROW DESIRED PLANTS WITH NO OBJECTIONABLE ODORS.

MAINTENANCE:

A SIMPLE MAINTENANCE AGREEMENT SHOULD IDENTIFY WHERE SOIL RESTORATION IS APPLIED, WHERE NEWLY RESTORED AREAS ARE/CANNOT BE CLEARED, WHO THE RESPONSIBLE PARTIES ARE TO ENSURE THAT ROUTINE VEGETATION IMPROVEMENTS ARE MADE (I.E., THINNING, INVASIVE PLANT REMOVAL, ETC.). SOIL COMPOST AMENDMENTS WITHIN A FILTER STRIP OR GRASS CHANNEL SHOULD BE LOCATED IN PUBLIC RIGHT OF WAY, OR WITHIN A DEDICATED STORMWATER OR DRAINAGE EASEMENT.

FIRST YEAR MAINTENANCE OPERATIONS INCLUDES:

- INITIAL INSPECTIONS FOR THE FIRST SIX MONTHS (ONCE AFTER EACH STORM GREATER THAN HALF-INCH).
- RESEEDING TO REPAIR BARE OR ERODING AREAS TO ASSURE GRASS STABILIZATION
- WATER ONCE EVERY THREE DAYS FOR FIRST MONTH, AND THEN PROVIDE A HALF INCH OF WATER PER WEEK DURING FIRST YEAR. IRRIGATION PLAN MAY BE ADJUSTED ACCORDING TO THE RAIN EVENT.
- FERTILIZATION MAY BE NEEDED IN THE FALL AFTER THE FIRST GROWING SEASON TO INCREASE PLANT VIGOR.

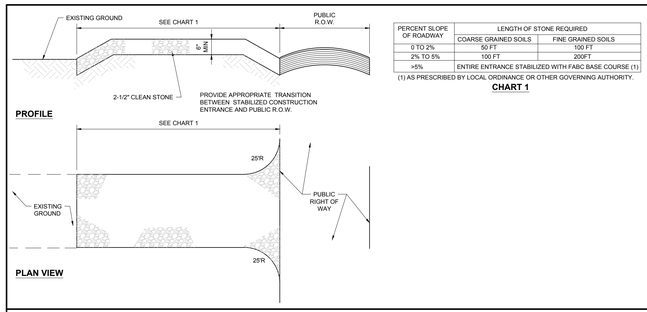
ONGOING MAINTENANCE:

TWO POINTS HELP ENSURE LASTING RESULTS OF DECOMPACTION:

1. PLANTING THE APPROPRIATE GROUND COVER WITH DEEP ROOTS TO MAINTAIN SOIL STRUCTURE.
2. KEEPING THE SITE FREE OF VEHICULAR AND FOOT TRAFFIC OR OTHER WEIGHT LOADS. CONSIDER PEDESTRIAN FOOTPATHS. (SOMETIMES IT MAY BE NECESSARY TO DE-THATCH THE TURF EVERY FEW YEARS).

SOIL RESTORATION REQUIREMENTS

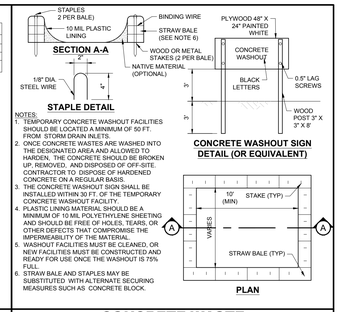
TYPE OF DISTURBANCE	SOIL RESTORATION REQUIREMENT
NO SOIL DISTURBANCE	RESTORATION NOT PERMITTED
MINIMAL SOIL DISTURBANCE	RESTORATION NOT REQUIRED
AREAS WHERE TOPSOIL IS STOCKPILED ONLY - NO CHANGE IN GRADE	HSG A&B: APPLY 6" OF TOPSOIL HSG C&D: AERATE AND APPLY 6" OF TOPSOIL
AREAS OF CUT OR FILL	HSG A&B: AERATE AND APPLY 6" OF TOPSOIL HSG C&D: APPLY FULL SOIL RESTORATION (SEE NOTES ON SHEET C-602)
HEAVY TRAFFIC AREAS ON SITE (ESPECIALLY IN A ZONE 5-25 FEET AROUND BUILDINGS BUT NOT WITHIN 5 FOOT PERIMETER AROUND FOUNDATION WALLS)	APPLY FULL SOIL RESTORATION (DE-COMPACTION AND COMPOST ENHANCEMENT, PER CURRENT VERSION OF NYS DEC DEEP RIPPING AND DECOMPACTION)
AREAS WHERE RUNOFF REDUCTION AND OR INFILTRATION PRACTICES ARE APPLIED	RESTORATION NOT REQUIRED, BUT MAY BE APPLIED TO ENHANCE THE REDUCTION SPECIFIED FOR APPROPRIATE PRACTICES.
REDEVELOPMENT PROJECTS	SOIL RESTORATION IS REQUIRED ON REDEVELOPMENT PROJECTS IN AREAS WHERE EXISTING IMPERVIOUS AREA WILL BE CONVERTED TO PERVIOUS AREA.



PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2% TO 5%	100 FT	200 FT
>5%	ENTIRE ENTRANCE STABILIZED WITH FABC BASE COURSE (1)	

(1) AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

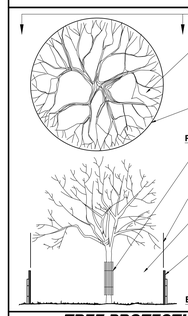
CHART 1

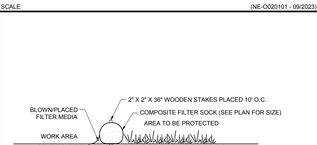


NOTES:
1. TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE LOCATED A MINIMUM OF 50 FT. FROM STORM DRAIN INLETS.
2. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN. THE CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF OFF-SITE CONTRACTOR TO DISPOSE OF HARDENED CONCRETE ON A REGULAR BASIS.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
4. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
5. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.
6. STRAW BALE AND STAPLES MAY BE SUBSTITUTED WITH ALTERNATE SECURING MEASURES SUCH AS CONCRETE BLOCK.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE (NE-0020101 - 09/2023)

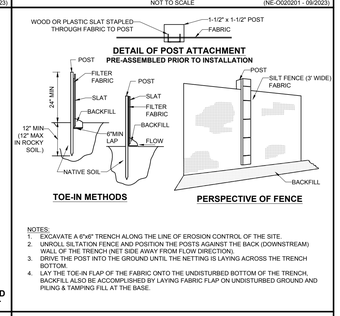




OR APPROVED EQUIVALENT

CONCRETE WASTE MANAGEMENT AREA

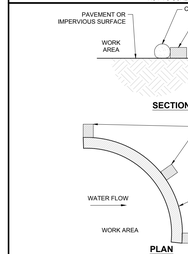
NOT TO SCALE (NE-0020201 - 09/2023)



NOTES:
1. EXCAVATE A 6"x6" TRENCH ALONG THE LINE OF EROSION CONTROL OF THE SITE.
2. UNROLL SILTATION FENCE AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH (NET SIDE AWAY FROM FLOW DIRECTION).
3. DRIVE THE POST INTO THE GROUND UNTIL THE NETTING IS LAYING ACROSS THE TRENCH BOTTOM.
4. LAY THE TOE-IN FLAP OF THE FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH. BACKFILL ALSO BE ACCOMPLISHED BY LAYING FABRIC FLAP ON UNDISTURBED GROUND AND FILING & TAMPING FILL AT THE BASE.

TREE PROTECTION DURING SITE CONSTRUCTION

NOT TO SCALE (NE-0030201 - 09/2023)



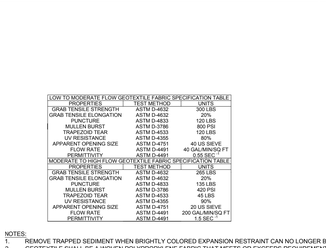
NOTES:
1. ALL MATERIAL TO MEET MANUFACTURER SPECIFICATIONS.
2. FILTER MEDIA TO MEET APPLICATION REQUIREMENTS.
3. FILTER MEDIA TO BE DISPERSED ON SITE AT COMPLETION OF CONSTRUCTION AFTER STABILIZATION IS ACHIEVED. AS DETERMINED BY ENGINEER IN OWNER.

OR APPROVED EQUIVALENT

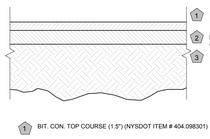
COMPOST FILTER SOCK

NOT TO SCALE (NE-0040201 - 09/2023)

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC-1
MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	250 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	30%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC-1



NOTES:
1. REMOVE TRAPPED SEDIMENT WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
3. PLACE AN OIL ADSORBENT PAD OR PILLOW OVER INLET GRATE WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT PER REGULATORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK SHALL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK SHALL BE BETWEEN 18 INCHES AND 36 INCHES.
7



1 BIT. CON. TOP COURSE (1.5") (NYSDOT ITEM # 404.098301)

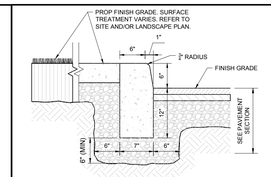
2 BIT. CONC. BINDER COURSE (2.5") (NYSDOT ITEM # 404.198901)

3 GRAVEL BORROW SUB-BASE COURSE (8") (NYSDOT ITEM # 304.12)

NOTES:
1. PAVEMENT BASE AND SUBBASE COURSES TO CONFORM TO NYS DEPARTMENT OF TRANSPORTATION

ASPHALT PAVEMENT SECTION

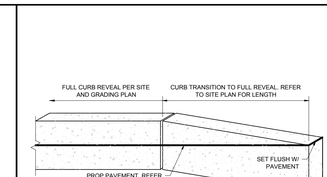
NOT TO SCALE



NOTES:
1. CURB SHALL CONSIST OF 4,000 PSI AIR ENTRAINED CONCRETE, EXPOSED EDGES TO HAVE RUBBED FINISH, AND SURFACE SHALL BE TREATED WITH A CONCRETE PENETRANT/SEALER.
2. THE ENDS OF CURB SECTIONS SHALL BE CHAMFERED 1/4 INCH.
3. THE CORNERS OF CURB SECTIONS SHALL MATCH THE ADJACENT CURB IN SIZE, COLOR AND FINISH.
4. CURBS, CURB CORNERS OR EDGING SHALL BE FITTED TOGETHER AS CLOSELY AS POSSIBLE.
5. EXPANSION JOINTS SHALL BE INSTALLED AT A MAXIMUM OF TWENTY FEET (20') ON CENTER USING PREFORMED EXPANSION JOINT FILLER HAVING A THICKNESS OF 1 INCH.
6. PAVEMENT SECTION DEPTHS, MATERIAL, AND SPECIFICATIONS PER PAVEMENT SECTION DETAIL.
7. STRAIGHT CURB SECTIONS CAN BE USED FOR RADII 25' OR GREATER, OTHERWISE, CURVED CURB LENGTHS SHALL BE INSTALLED AT THE SPECIFIED RADIUS PER THE SITE PLAN.

CAST IN PLACE CONCRETE CURB

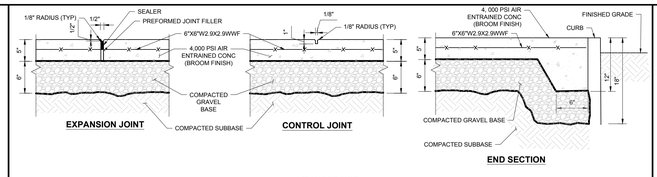
NOT TO SCALE (NE-S020201 - 10/2024)



NOTES:
1. SEE TYPICAL CURB DETAIL AND SITE PLAN FOR CURB TYPE AND TRANSITION CURB LOCATIONS

CAST IN PLACE TRANSITION CURB

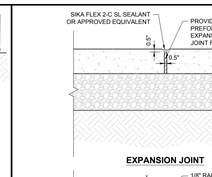
NOT TO SCALE (NE-S020206 - 09/2023)



NOTES:
1. TO BE USED FOR BUILDING SURROUNDING AND OTHER CONCRETE WALKS. USE CHAIRS TO SUPPORT REINFORCING STEEL DURING POUR. VARIES SEE PLAN
2. SEE SITE PLAN FOR WIDTH AND GRADES
3. PROVIDE MINIMUM 1/8"/FT. CROSS-SLOPE
4. PROVIDE CONTROL JOINTS 5'-0" O.C. MIN 5. PROVIDE EXPANSION JOINTS 20'-0" O.C. MIN AT EXPANSION JOINTS, PROVIDE DOWELS @ 24" O.C.

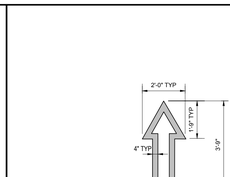
CONCRETE SIDEWALK

NOT TO SCALE (NE-S030201 - 10/2024)



SIDEWALK CONSTRUCTION JOINTS

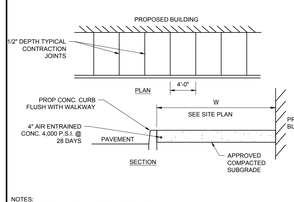
NOT TO SCALE (BE-S030401 - 08/2023)



NOTES:
1. ALL TRAFFIC FLOW ARROWS TO BE REFLECTIVE WHITE PAINT PER SPECS.

TRAFFIC FLOW ARROW

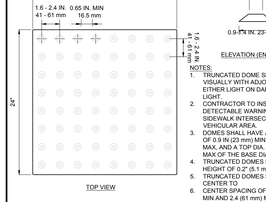
NOT TO SCALE (NE-S050302 - 10/2024)



NOTES:
1. MIN CROSS SLOPE 1/4" PER FOOT PITCHED AWAY FROM BUILDING.
2. PROVIDE 1/2" PREMOLDED BITUMINOUS EXPANSION JOINT AT 12' INTERVALS.

ASPHALT PAVEMENT SECTION

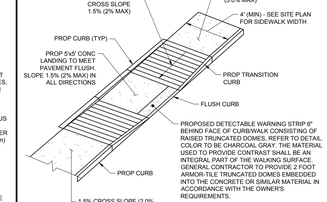
NOT TO SCALE



NOTES:
1. TRUNCATED DOME SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT ON DARK OR DARK ON LIGHT.
2. CONTRACTOR TO INSTALL DETECTABLE WARNINGS WHEN SIDEWALK INTERSECTS A HAZARDOUS VEHICULAR AREA.
3. DOMES SHALL HAVE A BASE DIAMETER OF 0.9 IN (23 mm) MIN TO 1.4 IN (36 mm) MAX, AND A TOP DIA. OF 50% TO 65% MAX OF THE BASE DIA.
4. TRUNCATED DOMES SHALL HAVE A HEIGHT OF 0.2" (5.1 mm).
5. TRUNCATED DOMES SHALL HAVE A CENTER TO
6. CENTER SPACING OF 1.6 IN (41 MM) MIN AND 2.4 (61 mm) MAX AND A BASE TO BASE SPACING OF 0.65 IN. (16.5 mm) MIN, MEASURED BETWEEN THE MOST ADJACENT DOMES ON THE GRID.

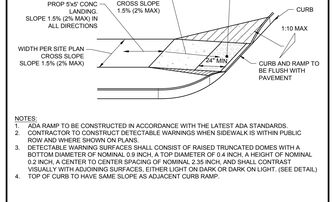
CAST IN PLACE CONCRETE CURB

NOT TO SCALE (NE-S020201 - 10/2024)

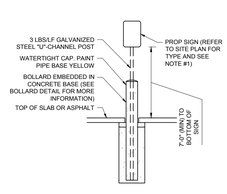


CONCRETE SIDEWALK

NOT TO SCALE (NE-S030201 - 10/2024)



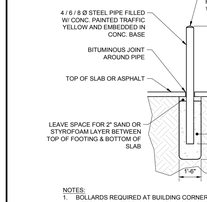
NOTES:
1. ADA RAMP TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ADA STANDARDS.
2. CONTRACTOR TO CONSTRUCT DETECTABLE WARNINGS WHEN SIDEWALK IS WITHIN PUBLIC ROW AND WHERE SHOWN ON PLANS.
3. DETECTABLE WARNING SURFACES SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A BOTTOM DIAMETER OF NOMINAL 0.9 INCH. A TOP DIAMETER OF 0.4 INCH, A HEIGHT OF NOMINAL 0.2 INCH, A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCH, AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT ON DARK OR DARK ON LIGHT. (SEE DETAIL)
4. TOP OF CURB TO HAVE SAME SLOPE AS ADJACENT CURB RAMP.



NOTES:
1. ACCESSIBLE AND VAN PARKING SIGNS SHALL CONFORM WITH CURRENT FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS. REFER TO ACCESSIBLE SIGN DETAILS FOR ADDITIONAL INFORMATION

SIGN IN BOLLARD

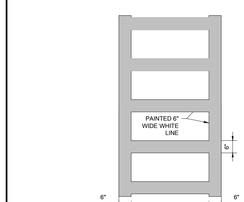
NOT TO SCALE (NE-S060201 - 12/2024)



NOTES:
1. BOLLARDS REQUIRED AT BUILDING CORNERS, FIRE HYDRANTS, WATER METER, GAS METER, SPRINKLER RISER, SHOWN TRANSFORMER & ALL UTILITIES AT LOCATIONS SHOWN ON THESE DRAWINGS INTERIOR & EXTERIOR.

BOLLARD

NOT TO SCALE (NE-S070101 - 09/2023)



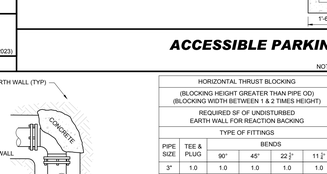
CROSSWALK LADDER

NOT TO SCALE (NE-S050401 - 07/2024)

NOTE:
ACCESSIBLE PARKING SPACES AND AISLES TO PROVIDE 98" MIN VERTICAL CLEARANCE

PAINTED ACCESSIBLE STRIPING AREA END - NYS

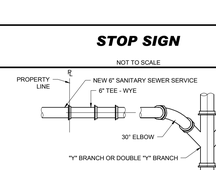
NOT TO SCALE (NYS050103 - 08/2023)



NOTES:
1. ACCESSIBLE PARKING SIGN SHALL CONFORM WITH CURRENT FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS.
2. VAN ACCESSIBLE SIGN SHALL CONFORM WITH CURRENT FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS.

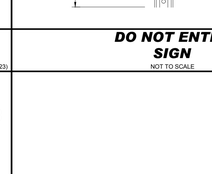
ACCESSIBLE PARKING SIGN BOLLARD - NYS

NOT TO SCALE (NY-S060103 - 09/2023)



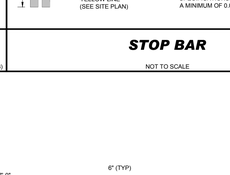
STOP SIGN

NOT TO SCALE (NE-S060202 - 09/2023)



DO NOT ENTER SIGN

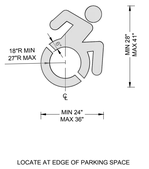
NOT TO SCALE (NE-S060203 - 09/2023)



NOTES:
1. ALL PAVEMENT STRIPING AND MARKINGS SHALL CONSIST OF CHLORINATED RUBBER PAINT APPLIED, OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. PAINT SHALL BE APPLIED AT A MINIMUM OF 0.015" (15 MIL) FILM THICKNESS.

STOP BAR

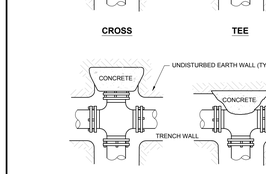
NOT TO SCALE (NE-S050301 - 10/2024)



LOCATE AT EDGE OF PARKING SPACE

ACCESSIBLE SYMBOL - NYS

NOT TO SCALE (NY-S50109 - 08/2023)

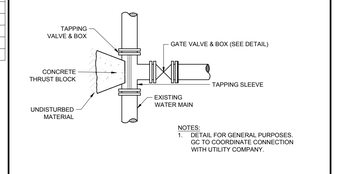


HORIZONTAL THRUST BLOCKING					
(BLOCKING HEIGHT GREATER THAN PIPE OD) (BLOCKING WIDTH BETWEEN 1 & 2 TIMES HEIGHT)					
REQUIRED SF OF UNDISTURBED EARTH WALL FOR REACTION BACKING					
TYPE OF FITTINGS					
PIPE SIZE	TEE & PLUG	BENDS			
		90°	45°	22 ½°	11 ¼°
3"	1.0	1.0	1.0	1.0	1.0
4"	1.0	1.0	1.0	1.0	1.0
6"	1.5	2.0	1.0	1.0	1.0
8"	2.5	3.5	1.8	1.0	1.0
10"	4.0	5.5	2.8	1.5	1.0
12"	6.0	8.0	4.0	2.0	1.5

NOTES:
1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE
2. WRAP ALL FITTINGS WITH VISQUEEN.
3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL SHALL BE BACKED.
6. REACTION BACKING TABLE IS BASED ON 100 PSI AND SOIL BEARING PRESSURE OF 2,000 LBS/SF ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS DIRECTED BY ENGINEERS.
7. ALL CONCRETE SHALL BE 2500 PSI
8. 18" AND LARGER REQUIRES SPECIFIC ANTI-THRUST DESIGN.

HORIZONTAL THRUST BLOCKING

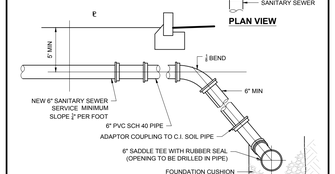
NOT TO SCALE (NE-U030501 - 11/2024)



NOTES:
1. DETAIL FOR GENERAL PURPOSES. GC TO COORDINATE CONNECTION WITH UTILITY COMPANY.

TAPPING SLEEVE AND GATE VALVE

NOT TO SCALE (NE-U030401 - 11/2024)



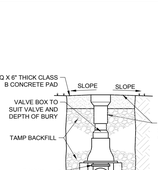
SANITARY MAIN CONNECTION

NOT TO SCALE (NE-U020401 - 09/2023)

NOTES:
1. THE CONCRETE SHALL HAVE A MIN. DESIGN STRENGTH OF 5,000 PSI IN 28 DAYS.
2. THE REINFORCING STEEL SHALL HAVE A YIELD STRENGTH OF 60,000 PSI.
3. THE STRUCTURE SHALL WITHSTAND AASHTO (H-20/HS-25)[DESIGNER TO CHOOSE BASED ON EXPECTED TRAFFIC CONDITIONS] LIVE LOAD CONDITIONS WHEN LOCATED IN PAVED AREAS (DESIGN OF HATCH AND/OR FRAME & COVER TO MATCH. SEE DETAIL)
4. PIPE CONNECTION GASKETS SHALL MEET THE REQUIREMENTS OF ASTM C-923.
5. DROP BETWEEN INLET AND OUTLET INVERTS SHOULD BE 2".
6. RIM ELEVATION TO BE 6" ABOVE GRADE WHEN LOCATED IN NON-PAVED AREAS.

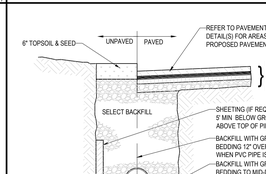
1,000 GALLON GREASE TRAP

NOT TO SCALE (BE-U020301 - 08/2023)



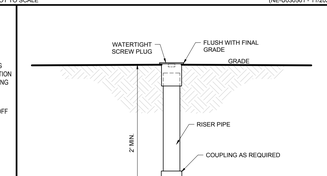
GATE VALVE

NOT TO SCALE (NE-U030201 - 09/2023)



TYPICAL UTILITY TRENCH

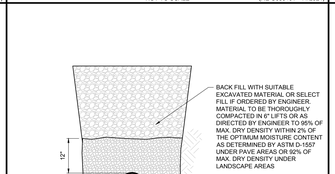
NOT TO SCALE (NE-U050201 - 09/2024)



NOTES:
1. RISER PIPE TO MATCH SANITARY SEWER LATERAL SIZE AND MATERIAL.
2. WHEN THE CLEANOUT OCCURS AT A BEND, THE BEND SHOULD BE A HORIZONTAL WYE WITH CLEANOUT IN LINE WITH DOWNSTREAM PIPE. RISER IS CONNECTED TO THE WYE VIA 90-DEGREE ELBOW.

SANITARY CLEANOUT (LANDSCAPE AREAS)

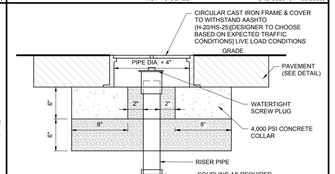
NOT TO SCALE (BE-U020202 - 08/2023)



NOTE:
1. THIS DETAIL IS INTENDED SOLELY FOR THE PURPOSE OF SHOWING BACK FILL, MATERIALS, AND MINIMUM THICKNESS OF LAYERS. DETAIL IS NOT INTENDED TO INDICATE MEANS AND METHODS OF CONSTRUCTION.

SANITARY PIPE BEDDING

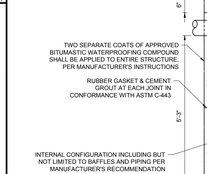
NOT TO SCALE (BE-U050202 - 08/2023)



NOTES:
1. RISER PIPE TO MATCH SANITARY SEWER LATERAL SIZE AND MATERIAL.
2. WHEN THE CLEANOUT OCCURS AT A BEND, THE BEND SHOULD BE A HORIZONTAL WYE WITH CLEANOUT IN LINE WITH DOWNSTREAM PIPE. RISER IS CONNECTED TO THE WYE VIA 90-DEGREE ELBOW.

SANITARY CLEANOUT (PAVED AREAS)

NOT TO SCALE (BE-U020201 - 08/2023)



NOTES:
1. THE CONCRETE SHALL HAVE A MIN. DESIGN STRENGTH OF 5,000 PSI IN 28 DAYS.
2. THE REINFORCING STEEL SHALL HAVE A YIELD STRENGTH OF 60,000 PSI.
3. THE STRUCTURE SHALL WITHSTAND AASHTO (H-20/HS-25)[DESIGNER TO CHOOSE BASED ON EXPECTED TRAFFIC CONDITIONS] LIVE LOAD CONDITIONS WHEN LOCATED IN PAVED AREAS (DESIGN OF HATCH AND/OR FRAME & COVER TO MATCH. SEE DETAIL)
4. PIPE CONNECTION GASKETS SHALL MEET THE REQUIREMENTS OF ASTM C-923.
5. DROP BETWEEN INLET AND OUTLET INVERTS SHOULD BE 2".
6. RIM ELEVATION TO BE 6" ABOVE GRADE WHEN LOCATED IN NON-PAVED AREAS.

1,000 GALLON GREASE TRAP

NOT TO SCALE (BE-U020301 - 08/2023)

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DRAWN BY:	GRS
CHECKED BY:	RLB
DATE:	02-20-2025
CAD I.D.:	P-CIVL-CNDS

PROJECT:

SITE DEVELOPMENT PLANS

FOR

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PROPOSED KENAN CIVIC ARENA

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SHEET TITLE:

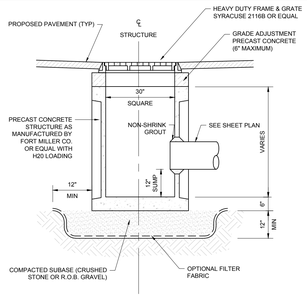
CONSTRUCTION DETAILS - 1

SHEET NUMBER:

C-901

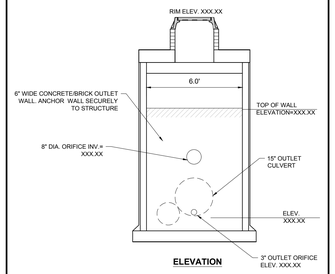
ORG. DATE - 02-20-2025

P:\2024\NYB240124.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL_CNDS.dwg NYB240124.00 GRS —LAYOUT: C-901 DETL



CATCH BASIN DETAIL

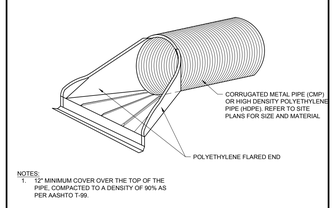
NOT TO SCALE (NY-U010227 - 09/2024)



ELEVATION

OUTLET CONTROL STRUCTURE

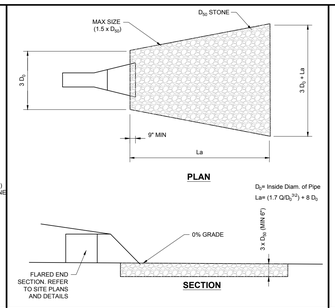
NOT TO SCALE (NE-U010103 - 09/2023)



NOTES:
1. 12" MINIMUM COVER OVER THE TOP OF THE PIPE, COMPACTED TO A DENSITY OF 90% AS PER AASHTO T-99.

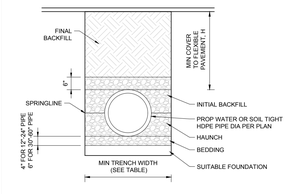
POLYETHYLENE FLARED END SECTION

NOT TO SCALE (NE-U010401 - 09/2023)



FLARED END SECTION WITH RIP-RAP

NOT TO SCALE (NE-U010403 - 09/2023)



RECOMMENDED MINIMUM TRENCH WIDTH	
PIPE DIA	MIN TRENCH WIDTH
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
48"	80"
60"	96"

NOTES:
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

HDPE STORM PIPE TRENCH

NOT TO SCALE (NE-U019812 - 11/2024)

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CHECKED BY:	RLB
DATE:	02-20-2025
CAD I.D.:	P-CIVL-CNDS

PROJECT:

SITE DEVELOPMENT PLANS

FOR

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PROPOSED
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CITY OF LOCKPORT
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SHEET TITLE:

CONSTRUCTION DETAILS - 2

SHEET NUMBER:

C-902

ORG. DATE - 02-20-2025

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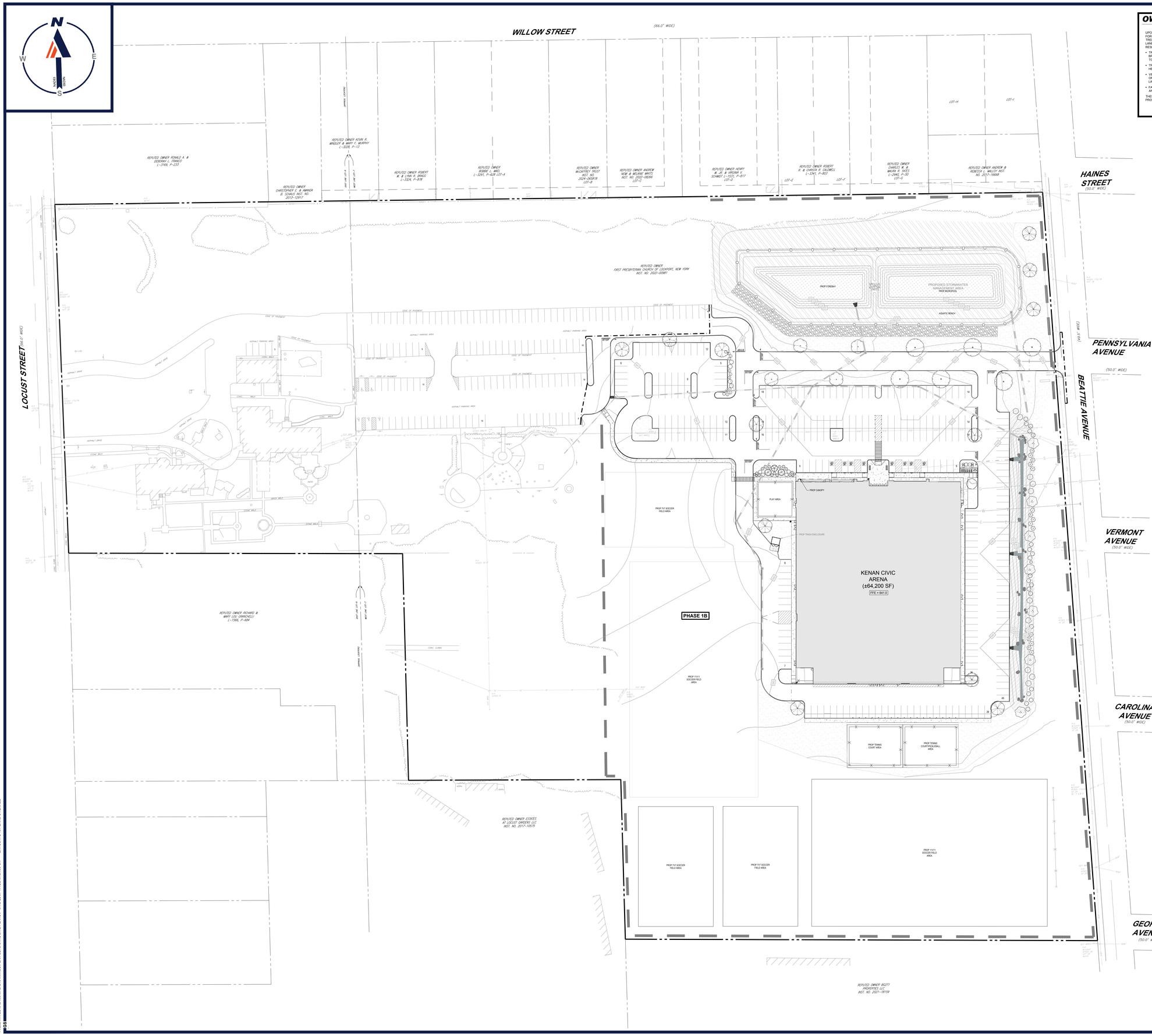
LOG



OWNER MAINTENANCE RESPONSIBILITIES

UPON OWNER'S (OR OWNER CONTRACTOR'S) COMPLETION OF LANDSCAPING WORK, THE OWNER IS FULLY RESPONSIBLE FOR ALL FUTURE MAINTENANCE, CARE, UPKEEP, WATERING, AND TRIMMING OF ALL INSTALLED VEGETATION, PLANTS, TREE, BUSHES, SHRUBS, GRASSES, GRASS, ORNAMENTAL PLANTS AND FLOWERS, FLOWERS, GROUND COVER, AND ANYTHING ELSE THAT IS PLANTED ON THE LANDSCAPE PLAN, ADJACENT OR PART OF THE LANDSCAPED AREAS. THIS RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

- TREES ADJACENT TO WALKWAYS AND AREAS OF PEDESTRIAN TRAFFIC MUST BE MAINTAINED TO ASSURE THAT ANY BRANCHES MUST BE LIMBED UP TO A CLEARANCE HEIGHT OF 7 FT. (FROM ALL PEDESTRIAN SURFACES) OR PRUNED BACK TO AVOID ANY INTERFERENCE WITH THE TYPICAL PATH OF TRAVEL.
- TREES WITHIN VEHICULAR SIGHT LINES, AS ILLUSTRATED ON THE LANDSCAPE PLAN, ARE TO BE TRIMMED TO A CLEARANCE HEIGHT OF 7 FT. (FROM ALL PAVED, TRAVELED SURFACES), OR AS OTHERWISE INDICATED ON THE PLANS.
- VEGETATIVE GROUND COVER, SHRUBS AND ORNAMENTAL PLANTS AND GRASSES MUST BE TRIMMED SO THAT NO PORTION OF THE PLANT EXCEEDS 30 INCHES ABOVE GRADE (OF ALL PAVED, TRAVEL SURFACES) ALONG AND WITHIN THE SIGHT LINES OF PARKING LOTS AND INGRESS-EGRESS WAYS.
- FALLEN PLANT FLOWERS, FRUIT, SEEDS AND DEBRIS DROPPINGS ARE TO BE REMOVED IMMEDIATELY FROM VEHICULAR AND PEDESTRIAN TRAFFIC AREAS TO PREVENT TRIPPING, SLIPPING OR ANY OTHER HAZARDS.

THESE REQUIREMENTS DO NOT AFFECT THE PLANT LIFE GUARANTEES THE LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE.

REFER TO SHEET L-102 FOR LANDSCAPE SCHEDULE AND SEED KEY

THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

REFER TO SHEET L-103 FOR LANDSCAPE NOTES AND DETAILS

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PROJECT:

SITE DEVELOPMENT PLANS

FOR

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PROPOSED KENAN CIVIC ARENA

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SHEET TITLE:

OVERALL LANDSCAPE PLAN

SHEET NUMBER:

L-101

ORG. DATE - 02-20-2025

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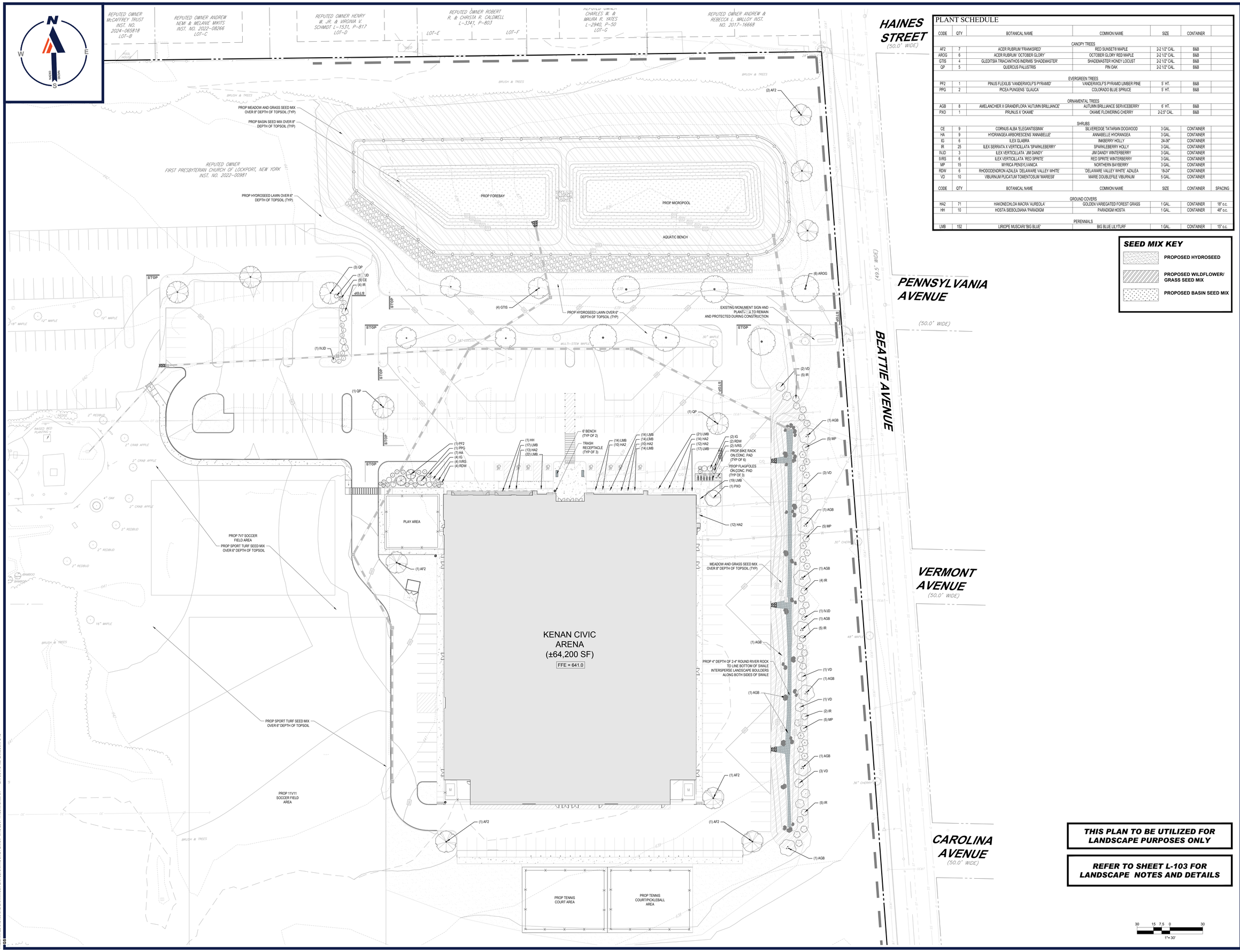

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	
		CANOPY TREES				
AF2	7	ACER RUBRUM 'FRANKSRED'	RED SUNSET® MAPLE	2-2 1/2" CAL.	B&B	
AROG	6	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2-2 1/2" CAL.	B&B	
GTIS	4	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER'	SHADEMASTER HONEY LOCUST	2-2 1/2" CAL.	B&B	
QP	5	QUERCUS PALUSTRIS	PIN OAK	2-2 1/2" CAL.	B&B	
		EVERGREEN TREES				
PF2	1	PINUS FLEXILIS 'VANDERWOLF'S PYRAMID'	VANDERWOLF'S PYRAMID LIMBER PINE	5' HT.	B&B	
PPG	2	PICEA PUNGENS 'GLAUCA'	COLORADO BLUE SPRUCE	5' HT.	B&B	
		ORNAMENTAL TREES				
AGB	8	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	6' HT.	B&B	
PXO	1	PRUNUS X 'OKAME'	OKAME FLOWERING CHERRY	2-2.5" CAL.	B&B	
		SHRUBS				
CE	9	CORNUS ALBA 'ELEGANTISSIMA'	SILVEREDGE TATARIAN DOGWOOD	3 GAL.	CONTAINER	
HA	9	HYDRANGEA ARBORESCENS 'ANNABELLE'	ANNABELLE HYDRANGEA	3 GAL.	CONTAINER	
IG	6	ILEX GLABRA	INKBERRY HOLLY	24-36"	CONTAINER	
IR	25	ILEX SERRATA X VERTICILLATA 'SPARKLEBERRY'	SPARKLEBERRY HOLLY	3 GAL.	CONTAINER	
IVJD	3	ILEX VERTICILLATA 'JIM DANDY'	JIM DANDY WINTERBERRY	3 GAL.	CONTAINER	
IVRS	6	ILEX VERTICILLATA 'RED SPRITE'	RED SPRITE WINTERBERRY	3 GAL.	CONTAINER	
MP	15	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	3 GAL.	CONTAINER	
RDW	6	RHODODENDRON AZALEA 'DELAWARE VALLEY WHITE'	'DELAWARE VALLEY WHITE' AZALEA	18-24"	CONTAINER	
VD	10	VIBURNUM PLICATUM TOMENTOSUM 'MARIESII'	MARIE DOUBLEFILE VIBURNUM	5 GAL.	CONTAINER	
CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
		GROUND COVERS				
HA2	71	HAKONECHLOA MACRA 'AUREOLA'	GOLDEN VARIEGATED FOREST GRASS	1 GAL.	CONTAINER	18" o.c.
HH	10	HOSTA SIEBOLDIANA 'PARADIGM'	PARADIGM HOSTA	1 GAL.	CONTAINER	48" o.c.
		PERENNIALS				
LMB	152	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILYTURF	1 GAL.	CONTAINER	15" o.c.

SEED MIX KEY

- PROPOSED HYDROSEED
- PROPOSED WILDFLOWER/ GRASS SEED MIX
- PROPOSED BASIN SEED MIX

THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

REFER TO SHEET L-103 FOR LANDSCAPE NOTES AND DETAILS

30 15 7.5 0 30
1"= 30'

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PROJECT:

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SHEET TITLE:

LANDSCAPE PLAN

SHEET NUMBER:

L-102

ORG. DATE - 02-20-2025

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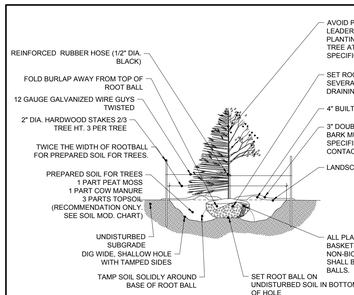
LANDSCAPE SPECIFICATION

1. SCOPE OF WORK:
   a) THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.
2. MATERIALS
   a) GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.
   b) TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.
   c) LAWN:
      c)a) ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM 6" THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED ON THE LANDSCAPE PLAN.
      c)b) LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
      c)c) SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.
      c)d) MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 3" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN AND/OR LANDSCAPE PLAN NOTES / DETAILS.
   d) FERTILIZER:
      d)a) FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
      d)b) FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY. CONTRACTOR TO ADHERE TO STATE REGULATIONS REGARDING APPLICATION OF FERTILIZERS.
   e) PLANT MATERIAL:
      e)a) ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN).
      e)b) IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
      e)c) PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
      e)d) TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1½", WHICH HAVE NOT BEEN COMPLETELY CALLUSED, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
      e)e) ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH: WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
      e)f) CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
      e)g) SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
      e)h) TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.
3. GENERAL WORK PROCEDURES
   a) CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.
   b) WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.
4. SITE PREPARATIONS
   a) BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.
   b) ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.
   c) CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.
5. TREE PROTECTION
   a) CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.
   b) A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY "VISI-FENCE", OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.
   c) WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.
   d) AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.
6. SOIL MODIFICATIONS
   a) CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.
   b) LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS.
   c) THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY
   d) TO INCREASE A SANDY SOILS ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5.
      d)a) TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE.
      d)b) MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
7. FINISHED GRADING
   a) UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.
   b) LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1"±).
   c) ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT
   d) ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.
8. TOPSOILING
   a) CONTRACTOR SHALL PROVIDE A 6" THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.
   b) ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.
   c) CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.
   d) ALL LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA - FOR BID PURPOSES ONLY [SEE SPECIFICATION 8.A.]):
      d)a) 20 POUNDS 'GRO-POWER' OR APPROVED SOIL CONDITIONER/FERTILIZER
      d)b) 20 POUNDS NITRO-FORM (COURSE) 38-0-0 BLUE CHIP OR APPROVED NITROGEN FERTILIZER
   e) THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.
9. PLANTING
   a) INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.
   b) PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.
   c) ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.
   d) ALL PLANTING CONTAINERS, BASKETS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING.
   e) POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.
   f) PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN, MUST BE INSTALLED, INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:
      f)a) PLANTS: MARCH 15 TO DECEMBER 15
      f)b) LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1
      f)c) PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.
   g) FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:

ACER RUBRUM	PLATANUS X ACERIFOLIA
BETULA VARIETIES	POPULUS VARIETIES
CARPINUS VARIETIES	PRUNUS VARIETIES
CRATAEGUS VARIETIES	PYRUS VARIETIES
KOELREUTERIA	QUERCUS VARIETIES
LIQUIDAMBAR STYRACIFLUA	TILIA TOMENTOSA
LIRODDENDRON TULIPIFERA	ZELKOVA VARIETIES

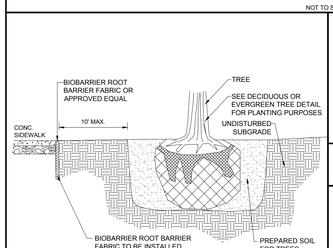
   h) PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
      h)a) 1 PART PEAT MOSS
      h)b) 1 PART COMPOSTED COW MANURE BY VOLUME
      h)c) 3 PARTS TOPSOIL BY VOLUME
      h)d) 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
         h)d)a) 2 TABLETS PER 1 GALLON PLANT
         h)d)b) 3 TABLETS PER 5 GALLON PLANT
         h)d)c) 4 TABLETS PER 15 GALLON PLANT
         h)d)d) LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK
   i) FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.
   j) ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.
   k) ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE.
   l) GROUND COVER AREAS SHALL RECEIVE A ½" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.
   m) NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.
   n) ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.
   o) ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.
10. TRANSPLANTING (WHEN REQUIRED):
   a) ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT.
   b) IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.
   c) PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30.
   d) UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.
   e) TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.
   f) F TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.
11. WATERING
   a) NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH A MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.
   b) SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.
   c) IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTORS RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.
12. GUARANTEE
   a) THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF 1 YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.
   b) ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION.
   c) TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.
   d) LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.
13. CLEANUP
   a) UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.
   b) THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.
14. MAINTENANCE (ALTERNATIVE BID):
   a) A 90 DAY MAINTENANCE PERIOD SHALL COMMENCE AT THE END OF ALL LANDSCAPE INSTALLATION OPERATIONS. THE 90 DAY MAINTENANCE PERIOD ENSURES TO THE OWNER/OPERATOR THAT THE NEWLY INSTALLED LANDSCAPING HAS BEEN MAINTAINED AS SPECIFIED ON THE APPROVED LANDSCAPE PLAN. ONCE THE INITIAL 90 DAY MAINTENANCE PERIOD HAS EXPIRED, THE OWNER/OPERATOR MAY REQUEST THAT BIDDERS SUBMIT AN ALTERNATE MAINTENANCE BID FOR A MONTHLY MAINTENANCE CONTRACT. THE ALTERNATE MAINTENANCE CONTRACT WILL ENCOMPASS ANY WORK THAT IS CONSIDERED APPROPRIATE TO ENSURE THAT PLANT AND LAWN AREAS ARE HEALTHY AND MANICURED TO THE APPROVAL OF THE OWNER/OPERATOR.



NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. REMOVE ALL NON-BIODEGRADABLE MATERIAL AND ROPE FROM TRUNK & TOP OF ROOT BALL.FOLD BURLAP BACK 1/3 FROM ROOT BALL
3. PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
4. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH. AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5. THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD BE ROUGH TO AVOID MATTING OF SOIL LAYERS AS NEW SOIL IS ADDED. IT IS PREFERABLE TO TILL THE FIRST LIFT (2 TO 3 IN.) OF PLANTING SOIL INTO THE SUBSOIL.

TREE PLANTING

NOT TO SCALE



NOTES:
1. ANY TREE INSTALLED WITHIN 10 FT. OF NEW CONCRETE SIDEWALKS SHOULD BE INSTALLED WITH BIOBARRIER ROOT BARRIER FABRIC AS SHOWN.
2. TREES SHALL BE INSTALLED ACCORDING TO THE APPROPRIATE PLANTING DETAIL.

SHRUB PLANTING

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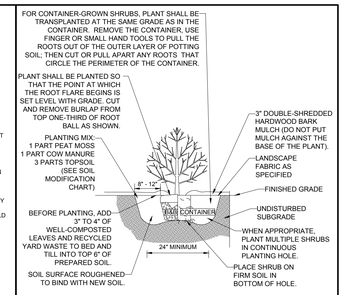

GROUND COVER PLANTING

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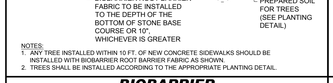


BIOBARRIER ROOT BARRIER

NOT TO SCALE

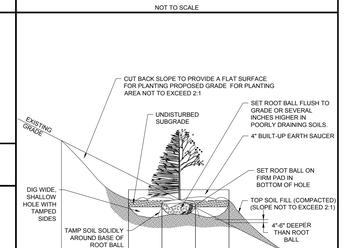
NOTES:
1. SPECIFIED ARBORTIE GREEN (OR WHITE) STAKING AND GUYING MATERIAL IS TO BE FLAT WOVEN POLYPROPYLENE MATERIAL, 3/4" WIDE, 800 LB. BREAK STRENGTH. ARBORTIE SHALL BE FASTENED TO STAKES IN A MANNER WHICH PERMITS TREE MOVEMENT AND SUPPORTS THE TREE.

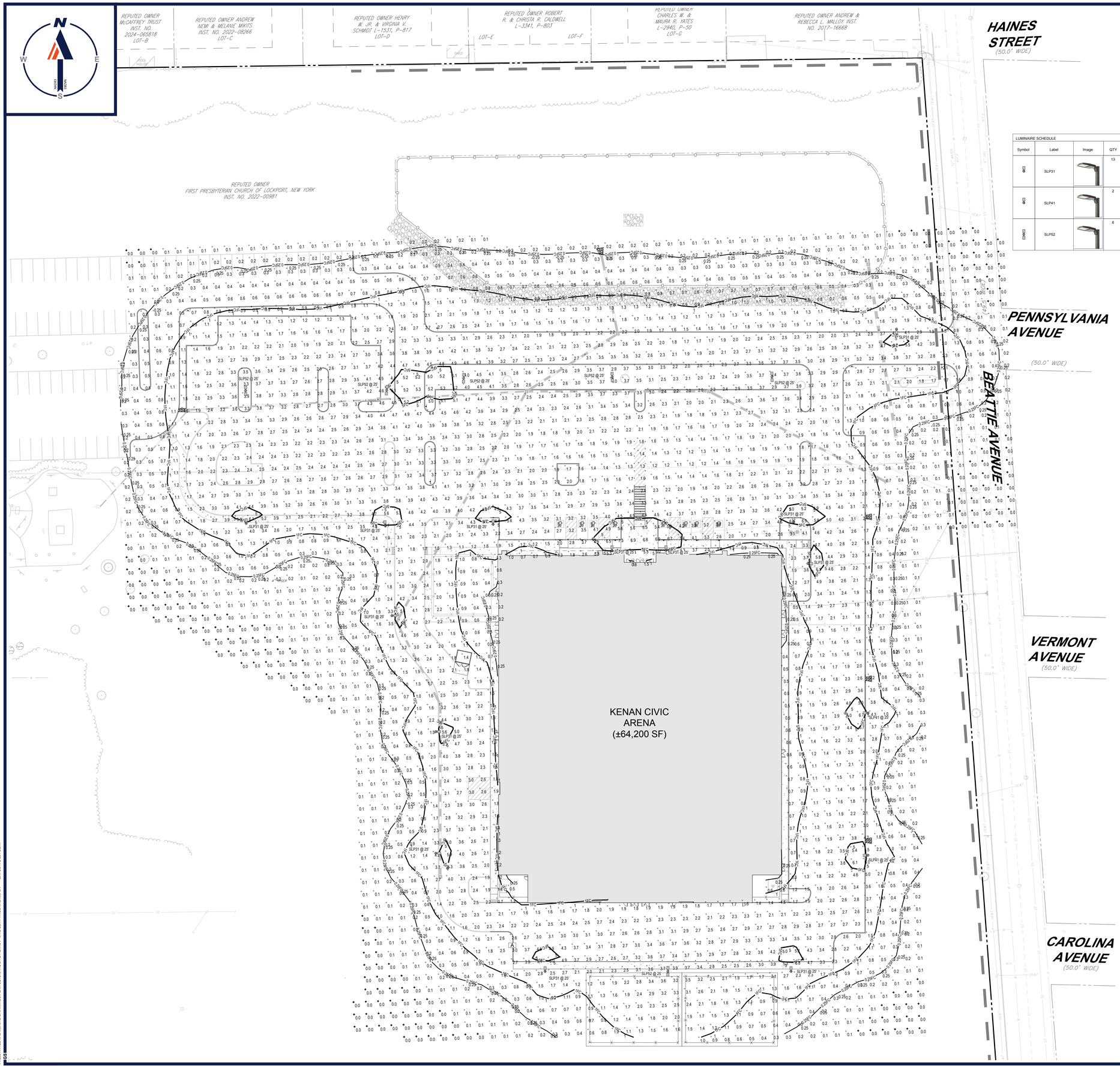
BLACK ALUMINUM EDGING

NOT TO SCALE

TREE PLANTING ON SLOPE

NOT TO SCALE



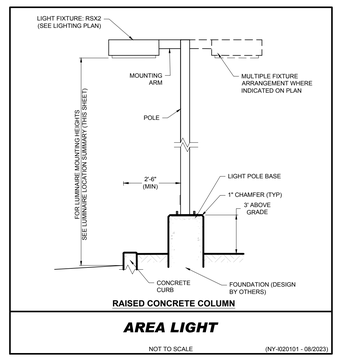


LUMINAIRE SCHEDULE									
Symbol	Label	Image	QTY	Catalog Number	Description	Lumens per Lamp	LLF	Wattage	Distribution
	SLP31		13	RSX2 LED P3 40K R3	RSX Area Fixture Size 2 P3 Lumen Package 4000K CCT Type R3 Distribution	21736	0.92	149.98	TYPE III, SHORT, BUG RATING: B3 - U0 - G4
	SLP41		2	RSX2 LED P3 40K R4	RSX Area Fixture Size 2 P3 Lumen Package 4000K CCT Type R4 Distribution	22020	0.92	149.98	TYPE IV, SHORT, BUG RATING: B3 - U0 - G4
	SLP52		6	RSX2 LED P3 40K R5	RSX Area Fixture Size 2 P3 Lumen Package 4000K CCT Type R5 Distribution	22316	0.92	299.96	TYPE VS, BUG RATING: B5 - U0 - G3

LIGHTING NOTES

(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. THE LIGHTING CONTRACTOR MUST COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE PLANS, INCLUDING BUT NOT LIMITED TO GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL AGENCY AND GOVERNMENTAL REGULATIONS.
3. THE LIGHTING PLAN DEPICTS PROPOSED, SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER. ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
4. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT GROUND LEVEL UNLESS OTHERWISE NOTED. ILLUMINATION LEVELS ARE SHOWN IN FOOT-CANDLES (FC).
5. THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT IS NOT LIMITED TO, VISUAL OBSERVATION, CLEANING OF LENSES, AND RE-LAMPING ACCORDING TO MANUFACTURER RECOMMENDATIONS. FAILURE TO FOLLOW THE ABOVE STEPS COULD RESULT IN IMPROPER LIGHT DISTRIBUTION AND FAILURE TO COMPLY WITH THE APPROVED DESIGN. UPON COMPLETION AND OWNER'S ACCEPTANCE OF THE WORK, THE ABOVE RESPONSIBILITIES BECOMES SOLELY THE OWNER'S.
6. THE LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES. POWER SYSTEM, CONDUITS, WIRING AND OTHER ELECTRICAL COMPONENTS ARE SOLELY THE ARCHITECTS, MECHANICAL ENGINEER'S AND/OR LIGHTING CONTRACTOR'S RESPONSIBILITY, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THE LIGHTING CONTRACTOR MUST COORDINATE WITH THE PROJECT ARCHITECT AND/OR ELECTRICAL ENGINEER REGARDING ANY AND ALL POWER SOURCES AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES.
7. THE CONTRACTOR MUST BRING IMMEDIATELY, IN WRITING, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURE(S) TO THE PROFESSIONAL OF RECORD'S ATTENTION, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
8. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SHIELDING AND OR ROTATED OPTICS ARE INSTALLED AS INDICATED ON THE PLAN IN ORDER TO ACHIEVE THE LIGHTING LEVELS THE REVIEWING AGENCY APPROVED.
9. THE ACTUAL LIGHTING LEVELS MUST BE VERIFIED IN THE FIELD AND FIXTURES ADJUSTED ACCORDINGLY, BY THE CONTRACTOR, TO ACHIEVE THE APPROVED LIGHT LEVELS.
10. ILLUMINATION LEVELS SHOWN ON THE PLAN HAVE BEEN CALCULATED FOR PROPOSED LIGHTS ONLY. ACTUAL ILLUMINATION LEVELS IN THE FIELD MAY DIFFER FROM THOSE DEPICTED ON THE PLAN DUE TO INTERFERENCE FROM EXISTING/AMBIENT LIGHTS WHOSE ILLUMINATION LEVELS ARE NOT REFLECTED ON THIS PLAN.
11. LIGHTING FIXTURES MUST BE DIRECTED SO AS NOT TO SHINE DIRECTLY ONTO NEIGHBORING PROPERTIES, OR PUBLIC RIGHTS-OF-WAY.
12. ILLUMINATION LEVELS SHOWN ON THE PLAN WERE CALCULATED WITH LIGHTING DESIGN SOFTWARE AGI32 BY LIGHTING ANALYST.



RAISED CONCRETE COLUMN

AREA LIGHT

NOT TO SCALE (NY-020101 - 08/2023)

EXISTING LIGHT POLE FOUNDATION NOTE

GENERAL CONTRACTOR TO PROVIDE, IN WRITING, DOCUMENTATION TO OWNER VERIFYING THE SUITABILITY OF ANY EXISTING LOT LIGHT BASE FOUNDATION AND POLE FOR REUSE. FINAL REVIEW OF ALL LIGHT BASE FOUNDATIONS AND POLES SHALL BE WITH PROJECT CPM.

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

30 15 7.5 0 30

1"= 30'

P:\2024\NYB240124.00\CAD\DRAWING\PLAN SET\CIVIL SITE PLANS\P-CIVL-LGHT.NYB240124.00-0A.dwg, —LAYOUT: L-201 LIGHT

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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	NYB240124.00-0A
DRAWN BY:	GRS
CHECKED BY:	RLB
DATE:	02-20-2025
CAD I.D.:	P-CIVL-LGHT

PROJECT:

SITE DEVELOPMENT PLANS

FOR

KENAN CENTER
ARTS EDUCATION & RECREATION

PROPOSED KENAN CIVIC ARENA

433 LOCUST STREET
CITY OF LOCKPORT
NIAGARA COUNTY
NEW YORK
TAX MAP ID: 123.06-2-29.1

BOHLER

70 LINDEN OAKS
THIRD FLOOR
ROCHESTER, NY 14625
Phone: (585) 866-1100
www.BohlerEngineering.com

SHEET TITLE:

LIGHTING PLAN

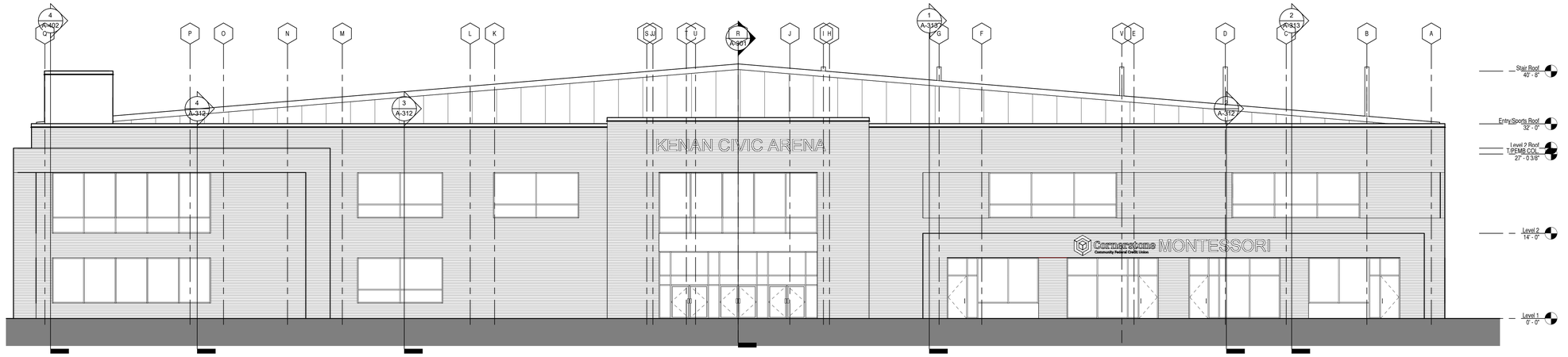
SHEET NUMBER:

L-201

ORG. DATE - 02-20-2025

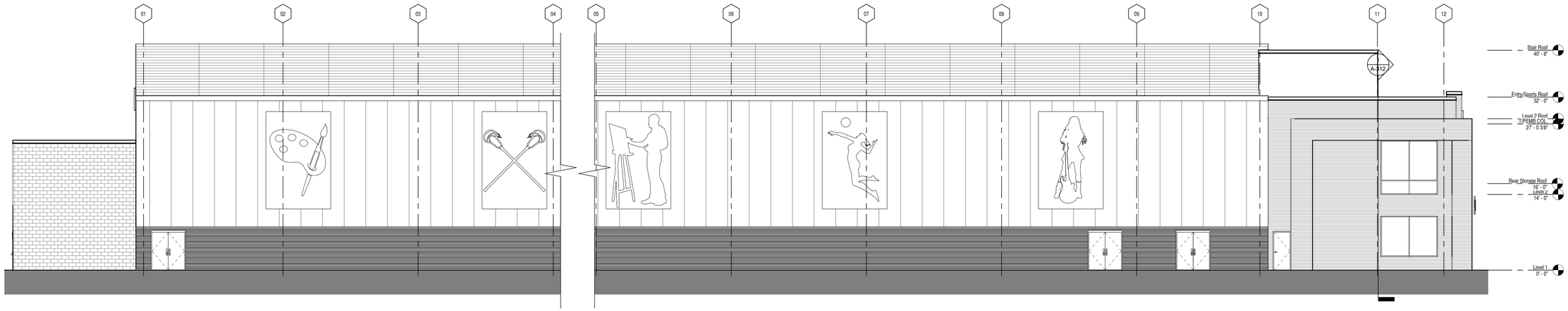
KEYNOTES - ELEVATIONS

1	SAMPLE TEXT.



1 NORTH ELEVATION

1/8" = 1'-0"



2 EAST ELEVATION

1/8" = 1'-0"

DATED 2/20/25

NOT ISSUED FOR CONSTRUCTION

AXIS INFRASTRUCTURE
AXIS INFRASTRUCTURE LLC
ARCHITECTURE
70 Mansell Ct., Suite 200 Roswell, Georgia 30076
678-395-4920 (phone)
www.axiscompanies.com

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Rev #	Date	Issue/Revision

ELEVATION

KENAN CIVIC ARENA

195 BEATTIE AVENUE
LOCKPORT, NEW YORK 14094

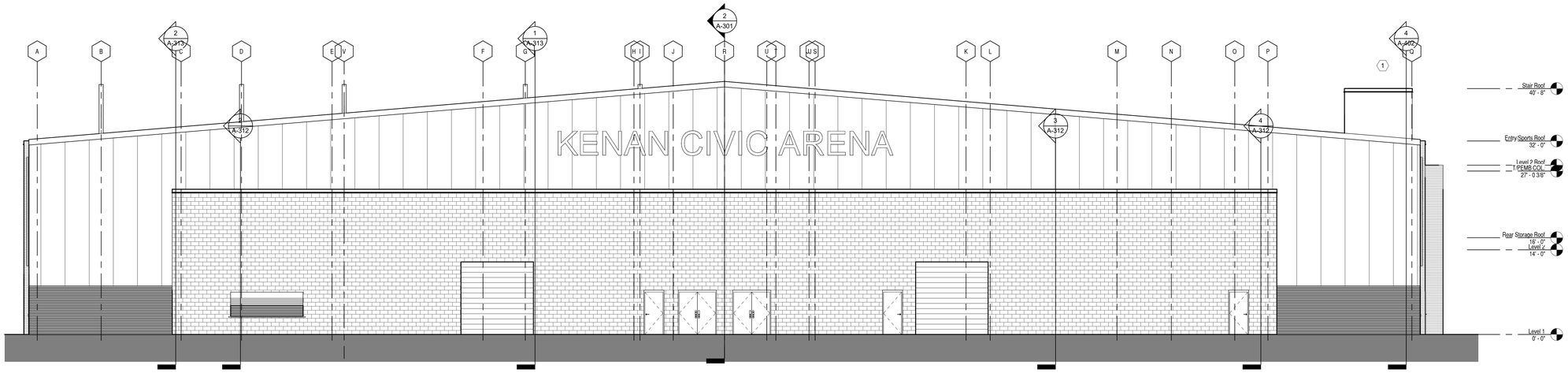
COMMISSION NO: **-***

DRAWING NO:

A-201

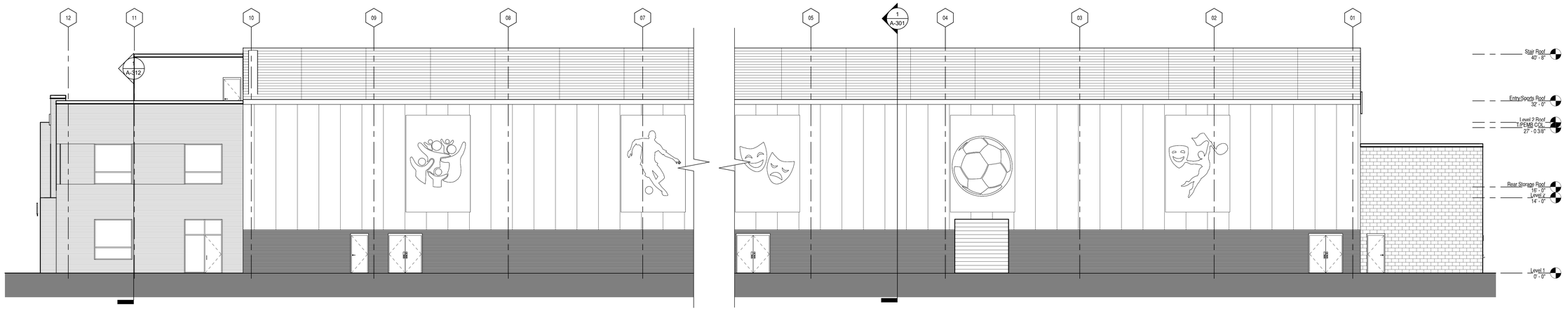
KEYNOTES - ELEVATIONS

1	SAMPLE TEXT.



1 SOUTH ELEVATION

1/8" = 1'-0"



2 WEST ELEVATION

1/8" = 1'-0"

DATED 2/20/25

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Rev #	Date	Issue/Revision

ELEVATIONS

KENAN CIVIC ARENA

195 BEATTIE AVENUE
LOCKPORT, NEW YORK 14094

COMMISSION NO: **.***

DRAWING NO:

A-202

1 **EXTERIOR VIEW 1**
12" = 1'-0"

2 **EXTERIOR VIEW 2**
12" = 1'-0"

3 **EXTERIOR VIEW 3**
12" = 1'-0"

4 **EXTERIOR VIEW 4**
12" = 1'-0"

5 **EXTERIOR VIEW 5**
12" = 1'-0"

AXIS INFRASTRUCTURE

KENAN CIVIC ARENA

195 BEATTIE AVENUE

KENAN CENTER
ARTS, EDUCATION & RECREATION