

CITY OF WATERTOWN, NEW YORK
REVISED AGENDA
Monday, March 16, 2020

This shall serve as notice that the next regularly scheduled meeting of the City Council will be held on Monday, March 16, 2020, at 7:00 p.m. in the City Council Chambers, 245 Washington Street, Watertown, New York.

MOMENT OF SILENCE

PLEDGE OF ALLEGIANCE

ROLL CALL

ADOPTION OF MINUTES

COMMUNICATIONS

PRIVILEGE OF THE FLOOR

RESOLUTIONS

- Resolution No. 1 - Reappointment to the Transportation Commission - Sam Purington
- Resolution No. 2 - Reappointment to the Transportation Commission - Owen Virkler
- Resolution No. 3 - Changing the Fees Charged for the 2020 Home Show
- Resolution No. 4 - Accepting Donation For Bench From Hyde-Stone Mechanical Contractors, Inc.
- Resolution No. 5 - Accepting Proposal for DPW Facility Spatial Needs Assessment & Site Recommendations
- Resolution No. 6 - Accepting Bid for CDBG Sidewalk and Northside ADA Ramps Repair Project
- Resolution No. 7 - Readopting Fiscal Year 2019-20 General Fund Budget
- Resolution No. 8 - Site Plan Approval for the Construction of a 1,880 and a 5,460 Square Foot Building Addition, a New 10,400 Square Foot Storage Building and Associated Site Improvements at Roth Industries, Inc. Located at 268 Bellew Avenue South, Parcel Number 9-43-105.000

Resolution No. 9 - Approving the Site Plan for the Construction of a 9,500 Square-Foot Building and Associated Site Improvements at 491 Eastern Boulevard, Parcel Number 5-26-103.007

Resolution No. 10 - Accepting Administration Rights of Formula Grants for Rural Area Transit From Jefferson County

Resolution No. 11 - Employing Kenneth A. Mix as City Manager of the City of
Addition Watertown

ORDINANCES

LOCAL LAW

PUBLIC HEARING

7:30 p.m. CDBG Citizen Participation Plan

OLD BUSINESS

STAFF REPORTS

1. COPS Office Award Grant Application
2. Community Development Block Grant (CDBG) Program Year 2020 Annual Action Plan - Update

NEW BUSINESS

EXECUTIVE SESSION

1. The proposed acquisition, sale or lease of real property when publicity would affect the value thereof
2. To Discuss Collective Bargaining

WORK SESSION

Next Work Session is scheduled for Monday, March 23, 2020, at 7:00 p.m.

ADJOURNMENT

NEXT REGULARLY SCHEDULED CITY COUNCIL MEETING IS MONDAY, APRIL 6, 2020.

Res Nos. 1 and 2

March 10, 2020

To: The Honorable Mayor and City Council
From: Kenneth A. Mix, City Manager
Subject: Reappointments to the Transportation Commission

At Council's request, Staff has contacted the two members of the Transportation Committee, and both have agreed to serve another three-year term (Sam Purington and Owen Virkler). In compliance with the City's Title VI policy, these vacancies were advertised in the *Watertown Daily Times*, on the City's website and posted on all CitiBus vehicles.

Resolutions are attached for Council consideration.

RESOLUTION

Page 1 of 1

Reappointment to the Transportation
Commission – Sam Purington

Council Member COMPO, Sarah V.

Council Member HENRY-WILKINSON, Ryan J.

Council Member ROSHIA, Jesse C.P.

Council Member RUGGIERO, Lisa A.

Mayor SMITH, Jeffrey M.

Total

YEA	NAY

Introduced by

RESOLVED that the following individual is reappointed to the Transportation Commission for a three-year term, such term expiring on April 1, 2023:

Sam Purington
42 North Main Street
Carthage, NY 13619

Seconded by

RESOLUTION

Page 1 of 1

Reappointment to the Transportation
Commission – Owen Virkler

Council Member COMPO, Sarah V.
 Council Member HENRY-WILKINSON, Ryan J.
 Council Member ROSHIA, Jesse C.P.
 Council Member RUGGIERO, Lisa A.
 Mayor SMITH, Jeffrey .
 Total

YEA	NAY

Introduced by

RESOLVED that the following individual is reappointed to the Transportation Commission for a three-year term, such term expiring on April 1, 2023:

Owen Virkler
 420 Newman Drive
 Watertown, NY 13601

Seconded by

Res No. 3

March 3, 2020

To: The Honorable Mayor and City Council
From: Erin E. Gardner, Superintendent of Parks and Recreation
Subject: Northern New York Builder's Exchange

Mr. Phil Reed from the Northern New York Builders Exchange has requested that the Builders Exchange be charged the City Resident fee for the 2020 Home Show, scheduled in the Watertown Municipal Arena for May 1-3, 2020.

The Builder's Exchange partners with the City of Watertown through their Online Plan Service software. By allowing the City to use this software, any City Department who is bidding out a project can get up to the minute details and see which contractors have turned in their required documents. Also, a great deal of businesses participating in the Home Show are located in the City of Watertown. For the past several years, City Council has approved this request.

As Superintendent of Parks and Recreation, I recommend we grant Mr. Reed's request to be charged as a City Resident. Attached is a Resolution for Council consideration.

RESOLUTION

Page 1 of 1

Changing the Fees Charged for the
2020 Home Show

Council Member COMPO, Sarah V.
 Council Member HENRY-WILKINSON, Ryan J.
 Council Member ROSHIA, Jesse C.P.
 Council Member RUGGIERO, Lisa A.
 Mayor SMITH, Jeffrey M..
 Total

YEA	NAY

Introduced by

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Watertown, New York, that it will charge the City Resident fee for exhibitors at the 2020 Home Show event being held at the Municipal Arena by the New York Builders Exchange.

Seconded by



NORTHERN NEW YORK BUILDERS EXCHANGE, INC.

Tel: 315-788-1330
Fax: 315-788-9357

22074 FABCO ROAD
WATERTOWN, NY 13601-1755

Web: www.nnybe.com
Email: info@nnybe.com

Headquarters of the Building Industry in Northern New York

February 20, 2020

Acting City Manager
Kenneth Mix

Watertown City Council

Superintendent of Parks and Recreation
Erin Gardner

Watertown Municipal Arena
600 William T. Field Drive
Watertown, NY 13601

Dear City Officials:

The Northern New York Builders Exchange would like to thank the City of Watertown for extending to us the City rates for rental of the Ice Arena in years past. The Home Show is a good draw for the area and the venue is expected to have over 60 exhibitors with many of them coming from the 13601 zip code area.

It is our intention to keep the Home Show in Watertown for this year's event. Technically our office is located just past the City limits, but we have much of our business in and around the City. We would like to request the same rates that we were granted last year. This will allow for the opportunity to provide the same rates to our exhibitors as last year, and keep the participation high, which in turn draws people to the Arena. As a thank you we have allowed access to our premium Electronic Plan Room service at no charge to your engineering department and any other City employee with a need to follow City construction related projects.

This year's Home Show promises to be a great event, and we look forward to having it at your facility. Thank you for your time and consideration.

Best regards,

A handwritten signature in black ink that reads "Phil Reed".

Phil Reed
Executive Director

Res No. 4

March 3, 2020

To: The Honorable Mayor and City Council

From: Erin E. Gardner, Superintendent of Parks and Recreation

Subject: Accepting Monetary Donation for Bench in Thompson Park in Memory of Jay F. Stone

We have received the attached letter from Crystal Northrop of Hyde-Stone Mechanical Contractors, Inc. As Superintendent of Parks and Recreation, I encourage City Council to accept this monetary donation from the Hyde-Stone employees to place a bench in Thompson Park in memory of Jay F. Stone.

It is an honor that they have chosen the City of Watertown's Thompson Park to honor Mr. Stone. It is my intention to place the bench in an area near Kite Hill and the tennis courts. This has been agreed to by Hyde-Stone employee representative, Crystal Northrop. Upon Council approval, the Parks and Recreation Department will order, assemble and install the bench and Ms. Northrop will be advised as to the estimated completion date for the installation.

Attached is a Resolution for Council consideration.

RESOLUTION

Page 1 of 1

Accepting Donation For Bench From
Hyde-Stone Mechanical Contractors, Inc.

Council Member COMPO, Sarah V.

Council Member HENRY-WILKINSON, Ryan J.

Council Member ROSHIA, Jesse C.P.

Council Member RUGGIERO, Lisa A.

Mayor SMITH, Jeffrey M.

Total

YEA	NAY

Introduced by

WHEREAS the employees of Hyde-Stone Mechanical Contractors, Inc. would like to donate money to place a bench in Thompson Park in memory of Jay F. Stone, and

WHEREAS the City of Watertown accepts this donation with the intent of using these funds for the specific purpose of ordering, assembling and installing this bench in the area near Kite Hill and the tennis courts,

NOW THEREFORE BE IT RESOLVED that the City Council of the City of Watertown hereby accepts the financial donation from the employees of Hyde-Stone Mechanical Contractors, Inc. in the amount of \$450 for a bench to be placed in Thompson Park in memory of Jay F. Stone, and

BE IT FURTHER RESOLVED that the Parks and Recreation Department has specifically earmarked the funds to be used for this item as mentioned above.

Seconded by



Mechanical Services
Building Controls
Since 1893

29 Hatch Road Potsdam, New York 13676
Telephone: (315) 265-6999 FAX: (315) 265-7685

City Council Members

245 Washington Street, Room 302A

Watertown, NY 13061

March 3, 2020

Regarding Bench Donation

To Whom it May Concern:

I have enclosed check #3273 in the amount of \$450 I am writing today to ask if our donation could be used for a plaque and a bench in memory of our Jay Stone who passed away last April. Jay was a great leader and very generous man and the employees of Hyde-Stone would like to make this donation in his memory.

I have enclosed a few pictures of the area where I was hoping the bench could be placed. It is near picnic area \$9 and there are two other benches there overlooking the city.

Please let me know if this is something that would be able to do. (315) 323-0243 cell phone or (315) 265-6999 x500 work. Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink that reads 'Crystal NP'.

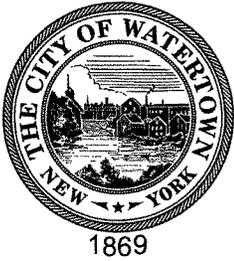
Crystal Northrop

Hyde-Stone Mechanical Contractors, Inc.

RESERVED
PICNIC
AREA
NUMBER 9

R-9





CITY OF WATERTOWN, NEW YORK

ROOM 302, CITY HALL
245 WASHINGTON STREET
WATERTOWN, NEW YORK 13601
E-MAIL DMorrow@watertown-ny.gov
Phone (315) 785-7749 Fax (315) 782-9014

Dale Morrow
Purchasing Manager

Res No. 5

MEMORANDUM

TO: Honorable Mayor and City Council
FROM: Dale Morrow, Purchasing Manager
SUBJECT: RFP 2020-01 – DPW Facility Spatial Needs Assessment & Site Recommendations
DATE: March 5, 2020

The City's Purchasing Department advertised in the Watertown Daily Times on November 29, 2019, calling for proposals from qualified Architects or Engineers for a spatial needs assessment and site location recommendation for a new Public Works Department facility, as per City specifications.

The DPW Facility Spatial Needs Assessment & Site Recommendations Project is part of the 2019-2020 Approved Capital Budget, pg. 289 in the amount of \$50,000.

Invitations to provide proposals were issued to Bid Net and (10) area providers. Six (6) responses were submitted to the Purchasing Department. The Purchasing Department opened the proposals on January 21, 2020, at 2:00 pm local time.

The written proposals were reviewed by Pat Keenan, Superintendent of Public Works; Pete Monaco, Assistant Superintendent of Public Works; Mike Delaney, City Engineer; and Dale Morrow, Purchasing Manager. Staff recommends that City Council award the proposal to **C&S Companies, Syracuse, NY** for **\$18,450** as they are responsive and responsible.

C&S has demonstrated their understanding of the scope of services requested and is available to begin work to complete the assessment in a timely fashion.

If there are any questions concerning this recommendation, please contact me at your convenience.

RESOLUTION

Page 1 of 1

Accepting Proposal for DPW
Facility Spatial Needs
Assessment & Site Recommendations

- Council Member COMPO, Sarah V.
- Council Member HENRY-WILKINSON, Ryan J.
- Council Member ROSHIA, Jesse C.P.
- Council Member RUGGIERO, Lisa L.
- Mayor SMITH, Jeffrey M.

Total

YEA	NAY

Introduced by

WHEREAS the City Purchasing Department has advertised and received sealed proposals for DPW Facility Spatial Needs Assessment & Site Recommendations, and

WHEREAS proposals were sent to (10) area providers, with (6) proposals submitted to the Purchasing Department, and

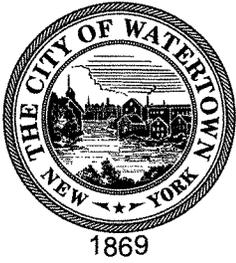
WHEREAS on Tuesday, January 21, 2020, at 2:00 p.m., the proposals received were opened, and

WHEREAS City Purchasing Manager Dale Morrow reviewed the proposals received with the Public Works Department and the City Engineering Department, and it is their recommendation that the City Council accept the proposal submitted by C&S Companies in the amount of \$18,450,

NOW THEREFORE BE IT RESOLVED that the City Council of the City of Watertown hereby accepts the proposal of C&S Companies in the amount of \$18,450, and

BE IT FURTHER RESOLVED that City Manager Kenneth A. Mix is hereby authorized and directed to execute this contract on behalf of the City of Watertown and any other documents required to implement the proposal and administer the program.

Seconded by



CITY OF WATERTOWN, NEW YORK

ROOM 302, CITY HALL
245 WASHINGTON STREET
WATERTOWN, NEW YORK 13601-3380
E-MAIL DMorrow@watertown-ny.gov
Phone (315) 785-7749 Fax (315) 782-9014

Dale Morrow
Purchasing Manager

Res No. 6

MEMORANDUM

TO: Honorable Mayor and City Council
FROM: Dale Morrow, Purchasing Manager
SUBJECT: Bid 2020-03 – CDBG Sidewalk and Northside ADA Ramps Repair Project
DATE: 03/10/20

The City’s Purchasing Department advertised in the Watertown Daily Times on February 13, 2020, calling for sealed bids for the CDBG Sidewalk and Northside ADA Ramps Repair Project. The Project sites are located on 100 to 300 blocks of Rutland Street North, 1000 and 1100 blocks on north side of Huntington Street, and various ADA ramps on the North West side of the City. The successful contractor will be required to provide all labor, materials, machinery, tools, equipment and other means of construction necessary and incidental to the completion of the work shown, as per City specifications.

The project is being funded with Community Development Block Grant funds from Program Years 2018-2019 and 2019-2020. The budget for the sidewalk replacement in the 100-300 blocks of Rutland Street North (Component #1) was \$240,000 and the bid price was \$135,512.50. The budget for the sidewalk replacement on the north side of the 1000-1100 blocks of Huntington Street (Component #2) was \$50,000 and the bid price was \$39,301. The budget for the north side ADA Ramp Replacement Project (Component #3) of the project was \$90,000 and the bid price was \$74,168.

The Purchasing Department issued Invitations to Bid to Bid Net. The City received five (5) sealed bid submittals. The Purchasing Department publically opened and read the sealed bids on March 10, 2020, at 11:00 am local time. The bid tabulation for the bid is shown below.

Concrete Slipform	Ballard Construction	Sierra Delta	Powis Contracting	DEW Builders
Canastota, NY	Syracuse, NY	Sackets Harbor, NY	Copenhagen, NY	Adams Center, NY
\$248,981.50	\$454,922.75	\$552,600.00	\$454,589.00	\$330,672.25

City Engineering and the Purchasing Department reviewed the responses to ensure that they complied with the specifications.

Staff recommends that City Council award the bid for the CDBG Sidewalk and Northside ADA Ramps Repair Project to **Concrete Slipform** in the amount of **\$248,981.50** as the lowest responsive responsible bidder. If there are any questions concerning this recommendation, please contact me at your convenience.

RESOLUTION

Page 1 of 1

Accepting Bid for CDBG Sidewalk and Northside ADA Ramps Repair Project

- Council Member COMPO, Sarah V.
- Council Member HENRY-WILKINSON, Ryan J.
- Council Member ROSHIA, Jesse C. P.
- Council Member RUGGIERO, Lisa L.
- Mayor SMITH, Jeffrey M.

Total

YEA	NAY

Introduced by

WHEREAS the City Purchasing Department has advertised and received sealed bids for CDBG Sidewalk and Northside ADA Ramps Repair Project, as per City specifications, and

WHEREAS bid invitations were also issued to Bid Net with five (5) sealed bids submitted to the Purchasing Department, and

WHEREAS on Tuesday, March 10, 2020, at 11:00 a.m., the bids received were publicly opened and read, and

WHEREAS the City Purchasing Department reviewed the bids received with City Engineering, and it is their recommendation that the City Council accept the bid submitted by Concrete Slipform, Inc. in the amount of \$248,981.50,

NOW THEREFORE BE IT RESOLVED that the City Council of the City of Watertown accepts the bid of Concrete Slipform Inc. in the amount of \$248,981.50 for CDBG Sidewalk and Northside ADA Ramps Repair Project as the lowest qualified bidder meeting our specifications, and

BE IT FURTHER RESOLVED that the City Manager is hereby authorized and directed to sign all contracts associated with implementing the award to Concrete Slipform Inc.

Seconded by

Res No. 7

March 9, 2020

To: The Honorable Mayor and City Council
From: James E. Mills, City Comptroller
Subject: Fiscal Year 2019-20 General Fund Budget Re-adoption

Department of Public Works Superintendent Patrick Keenan is requesting that a vacant Motor Equipment Operator (Heavy) be eliminated and that an additional Motor Equipment Operator (Light) position be created.

If City Council concurs with this request, the Fiscal Year 2019-20 General Fund Budget should be re-adopted to reflect the change in authorized positions and a slight reduction in expenditures.

RESOLUTION

Page 1 of 1

Readopting Fiscal Year 2019-20
General Fund Budget

Council Member COMPO, Sarah V.
 Council Member HENRY-WILKINSON, Ryan J.
 Council Member ROSHIA, Jesse C. P.
 Council Member RUGGIERO, Lisa L.
 Mayor SMITH, Jeffrey M.
 Total

YEA	NAY

Introduced by

WHEREAS on May 29, 2019 the City Council passed a resolution adopting the Budget for Fiscal Year 2019-20, of which \$44,148,031 was appropriated for the General Fund, and

WHEREAS included in the Fiscal Year 2019-20 General Fund budget there were two Motor Equipment Operators (Heavy) budgeted in A.5110.0130 Maintenance of Roads (at 67%) and A.5142.1130 Snow Removal (at 33%), and

WHEREAS included in the Fiscal Year 2019-20 General Fund budget there were six Motor Equipment Operators (Light) budgeted in A.5110.0130 Maintenance of Roads (at 67%) and A.5142.1130 Snow Removal (at 33%), and

WHEREAS the Superintendent of the Department of Public Works is recommending the elimination of one Motor Equipment Operator (Heavy) and the creation of one additional Motor Equipment Operator (Light),

NOW THEREFORE BE IT RESOLVED that the City Council of the City of Watertown hereby re-adopts the General Fund Budget for Fiscal Year 2019-20 to eliminate one Department of Public Works Motor Equipment Operator (Heavy) and create one additional Department of Public Works Motor Equipment Operator (Light), and

BE IT FURTHER RESOLVED that the City Council of the City of Watertown hereby that the following adjustments be included in the re-adopted General Fund Budget:

<u>Expenditures</u>	
A.1990. 0430 Contingency	\$ 3,570
A.5110.0130 Maintenance of Roads – Wages	(\$ 2,886)
A.5110.0810 Maintenance of Roads – Retirement	(\$ 463)
A.5110.0830 Maintenance of Roads – Social Security	(\$ 221)
Total Expenditures	<u>\$ -</u>

Seconded by

Res No. 8

March 6, 2020

To: The Honorable Mayor and City Council

From: Michael A. Lumbis, Planning and Community Development Director

Subject: Site Plan Approval for the Construction of a 1,880 and a 5,460 Square Foot Building Addition, a New 10,400 Square Foot Storage Building and Associated Site Improvements at Roth Industries, Inc. Located at 268 Bellew Avenue South, Parcel Number 9-43-105.000

Matthew R. Morgia, P.E., of Aubertine and Currier, PLLC on behalf of Roth Industries, Inc, has submitted a request for the above subject Site Plan Approval.

The City Planning Board reviewed the request at its meeting held on March 3, 2020, and voted to recommend that the City Council approve the site plan with the conditions listed in the resolution. Attached is an excerpt from their meeting minutes.

The Staff Report prepared for the Planning Board, the Site Plan application, original drawings and other related materials were all previously sent to Council as part of the Planning Board agenda package. The applicant subsequently submitted revised drawings on March 3, 2020. Staff has included the revised site plan in this package. The complete application package is also available in the online version of the City Council agenda.

The applicant has completed Part 1 of the SEQR Short Environmental Assessment Form (EAF), which is attached for Council review. The City Council must complete Part 2, and Part 3 if necessary, of the Short EAF before it may vote on the resolution.

The resolution prepared for City Council consideration states that the project will not have a significant negative impact on the environment and approves the site plan submitted to the City Engineering Department on March 3, 2020 with the conditions listed in the resolution.

RESOLUTION

Page 1 of 2

Site Plan Approval for the Construction of a 1,880 and a 5,460 Square Foot Building Addition, a New 10,400 Square Foot Storage Building and Associated Site Improvements at Roth Industries, Inc. Located at 268 Bellew Avenue South, Parcel Number 9-43-105.000

Council Member COMPO, Sarah V.
 Council Member HENRY-WILKINSON, Ryan J.
 Council Member ROSHIA, Jesse C. P.
 Council Member RUGGIERO, Lisa L.
 Mayor SMITH, Jeffrey M.
 Total

YEA	NAY

Introduced by

WHEREAS Matthew R. Morgia, P.E., of Aubertine and Currier, PLLC on behalf of Roth Industries, Inc, has submitted an application for Site Plan Approval for the construction of a 1,880 and a 5,460 square foot building addition, a new 10,400 square foot storage building and associated site improvements at Roth Industries, Inc. located at 268 Bellew Avenue South, Parcel Number 9-43-105.000, and

WHEREAS the Planning Board of the City of Watertown reviewed the site plan at its meeting held on March 3, 2020 and voted to recommend that the City Council of the City of Watertown approve the site plan with the following conditions:

1. The applicant shall ensure the area designated on the site plan as proposed un-striped parking area stays clear of stored materials.
2. The applicant must add inlet protection around the existing trench drain on the Southwest corner of the existing Roth Industries Building.
3. The applicant must obtain the following permits, minimally, prior to construction: Building Permit, General City Permit and Certificate of Zoning Compliance.

And

WHEREAS the City Council has reviewed the Short Environmental Assessment Form, responding to each of the questions contained in Part 2, and has determined that the project, as submitted, is an Unlisted Action and will not have a significant impact on the environment,

RESOLUTION

Page 2 of 2

Site Plan Approval for the Construction of a 1,880 and a 5,460 Square Foot Building Addition, a New 10,400 Square Foot Storage Building and Associated Site Improvements at Roth Industries, Inc. Located at 268 Bellew Avenue South, Parcel Number 9-43-105.000

Council Member COMPO, Sarah V.
 Council Member HENRY-WILKINSON, Ryan J.
 Council Member ROSHIA, Jesse C. P.
 Council Member RUGGIERO, Lisa L.
 Mayor SMITH, Jeffrey M.
 Total

YEA	NAY

NOW THEREFORE BE IT RESOLVED that the City Council of the City of Watertown declares that the proposed construction and site plan constitute an Unlisted Action for the purposes of SEQRA and hereby determines that the project, as proposed, will not have a significant impact on the environment, and

BE IT FURTHER RESOLVED that it is an express condition of this Site Plan Approval that the applicant provide the City Engineer with a copy of any change in stamped plans forming the basis for this approval at the same time such plans are provided to the contractor. If plans are not provided as required by this condition of site plan approval, the City Code Enforcement Officer shall direct that work on the project site shall immediately cease until such time as the City Engineer is provided with the revised stamped plans. Additionally, any change in the approved plan, which, in the opinion of the City Engineer, would require Amended Site Plan Approval, will result in immediate cessation of the affected portion of the project work until such time as the amended site plan is approved. The City Code Enforcement Officer is directed to periodically review on-site plans to determine whether the City Engineer has been provided with plans as required by this approval, and

BE IT FURTHER RESOLVED by the City Council of the City of Watertown that Site Plan Approval is hereby granted to Matthew R. Morgia, P.E., of Aubertine and Currier, PLLC on behalf of Roth Industries, Inc, for Site Plan Approval for the construction of a 1,880 and a 5,460 square foot building addition, a new 10,400 square foot storage building and associated site improvements at Roth Industries, Inc. located at 268 Bellew Avenue South, Parcel Number 9-43-105.000, as depicted on the site plan submitted to the City Engineer on March 3, 2020, contingent upon the applicant meeting the conditions listed above.

Seconded by:

Project:

Date:

**Short Environmental Assessment Form
Part 2 - Impact Assessment**

Part 2 is to be completed by the Lead Agency.

Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:	<input type="checkbox"/>	<input type="checkbox"/>
a. public / private water supplies?	<input type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input type="checkbox"/>	<input type="checkbox"/>
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input type="checkbox"/>	<input type="checkbox"/>

Project:	
Date:	

**Short Environmental Assessment Form
Part 3 Determination of Significance**

For every question in Part 2 that was answered “moderate to large impact may occur”, or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.
_____	_____
Name of Lead Agency	Date
_____	_____
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
_____	_____
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

PRINT FORM



CITY OF WATERTOWN, NEW YORK

CITY PLANNING BOARD
ROOM 304, WATERTOWN CITY HALL
245 WASHINGTON STREET
WATERTOWN, NEW YORK 13601-3380
(315) 785-7740

MEETING: March 3, 2020

PRESENT:

Linda Fields, Acting Chair
T.J. Babcock
Katie Dermody
Kerry Johnson
Neil Katzman

ABSENT:

Larry Coburn
Michelle Capone

ALSO:

Michael A. Lumbis, Planning and Community
Development Director
Jennifer Voss, Senior Planner
Geoffrey Urda, Planner
Michael DeMarco, Planner
Michael Delaney, City Engineer
Benjamin Arquitt, Civil Engineer I

The March 3, 2020 Planning Board meeting was called to order at 3:00 p.m. by acting Planning Board Chair, Linda Fields.

Ms. Fields then called for a reading of the Minutes from the February 21, 2020 Planning Board Meeting. Mr. Katzman made a motion to accept the minutes as written. Mr. Babcock seconded the motion and all voted in favor.

SITE PLAN APPROVAL

268 BELLEW AVENUE SOUTH, PARCEL NUMBER 9-43-105.000

The Planning Board then considered a request submitted by Matthew R. Morgia, P.E. of Aubertine and Currier, PLLC, on behalf of Roth Industries for the construction of 1,880 and 5,460 square-foot building additions, a new 10,400 square-foot storage building and associated site improvements at 268 Bellew Avenue South, Parcel Number 9-43-105.000.

Mr. Morgia attended to represent the request.

Mr Morgia began by saying that he had some updated plan sets to hand out that included revisions made based on the Planning Department's comments. He also said the copy displayed on the easel was the updated version.

Mr. Morgia then said that Roth Industries was planning another addition. He said the proposed 5,460 SF addition was for production, the 1,800 SF addition was for storage and the new 10,000 SF building was for incoming product. He said that new paving would be minor since Roth could use the existing driveway that they constructed in 2016.

Mr. Morgia then said there would be additional storage off to the west end of the yard where finished product is typically stored. He said that incoming product would come to the proposed building and materials could move back and forth across the site as needed. He said there would be a small expansion to the entrance drive from Rail Drive.

Mr. Morgia then said that Staff's memorandum included some comments on parking, just as the 2016 memorandum did. Mr. Morgia said that there was an enormous amount of asphalt at the north end of the site that Roth designated as overflow parking if it were ever needed.

Ms. Fields then asked Mr. Morgia if he would like to go through the summary items on Staff's memorandum one-by-one, beginning with the first summary item, which required the applicant to ensure the area designated on the site plan as proposed un-striped parking area stays clear of stored materials. Mr. Morgia said that he could verify that a sufficient amount of asphalt would stay clear for overflow parking, but he could not guarantee what part of the asphalt that would be at any given time.

Ms. Fields then asked about the second summary item, which required the applicant to show the location of the existing sanitary sewer connection on the drawing. Mr. Morgia replied that Aubertine and Currier was unable to determine its exact location, and added that it was not depicted on the as-built plan. He then said that they thought it came out near the office. Ms. Fields then asked Mr. Arquitt if that answer was sufficient. Mr. Arquitt replied that if the project required digging in that area, he would require the applicant to locate it first, but since they did not need to dig there, it was all right.

Ms. Fields then asked about the third summary item, which required the applicant to show the curb cut length in the city right-of-way as well as a curb detail on sheet CS-100. Mr. Morgia replied that they were not changing that curb cut, and that the only proposed changes were to the radii.

Mr. Morgia then addressed the fourth summary item, which required the applicant to add inlet protection around the existing catch basin on the Southwest corner of the existing Roth Industries Building. Mr. Morgia said that it was actually a trench drain in that location, but he pledged to provide inlet protection as necessary.

Ms. Fields then asked about the fifth summary item, which listed all the permits the applicant would need to obtain prior to construction. Mr. Morgia said that he acknowledged all required permits. Mr. Lumbis then said that the Planning Board could eliminate summary items 2 and 4 as the applicant had addressed them.

Mr. Babcock then moved to recommend that City Council approve the request for Site Plan Approval submitted by Matthew R. Morgia, P.E. of Aubertine and Currier, PLLC, on behalf of Roth Industries for the construction of 1,880 and 5,460 square-foot building additions, a new 10,400 square-foot storage building and associated site improvements at 268 Bellew Avenue South, Parcel Number 9-43-105.000, as shown on the site plans submitted to the City on March 3, 2020, contingent upon the following:

1. The applicant shall ensure the area designated on the site plan as proposed un-striped parking area stays clear of stored materials.

2. The applicant must add inlet protection around the existing trench drain on the Southwest corner of the existing Roth Industries Building.
3. The applicant must obtain the following permits, minimally, prior to construction: Building Permit, General City Permit and Certificate of Zoning Compliance.

Mr. Katzman seconded the motion and all voted in favor.

**SITE PLAN APPROVAL
491 EASTERN BOULEVARD, PARCEL NUMBER 5-26-103.007**

The Planning Board then considered a request submitted by Matthew R. Morgia, P.E. of Aubertine and Currier, PLLC, on behalf of Parkside Bible Church for the construction of a 9,500 square-foot building and associated site improvements at 491 Eastern Boulevard, Parcel Number 5-26-103.007.

Mr. Morgia remained in attendance to represent this proposal as well, and said that he also had updated plan sets of this project to pass around.

Mr. Morgia then began by saying that Parkside Bible Church proposed a new multi-purpose building that would be two stories, with a first floor and a basement. He said the new building would go behind the church sanctuary and would have shared access with the main church entry via an enclosed corridor that would connect directly across from the main entry doors.

Also proposed, Mr. Morgia said, were a new access drive to the west, and utilities connecting from Huntington Street, which Mr. Morgia said would include combined domestic and fire service, which would provide the proposed building with a full sprinkler system. He then said that there would be a sanitary sewer connection to Huntington Street, as there was no sanitary on the property now.

Mr. Morgia then said that the plans depicted two sheds, both of which already existed and the church proposed to relocate. Mr. Morgia then explained that there were some proposed parking alterations on the site, including reconfiguring the existing ADA accessible parking spaces and adding two more, based on federal requirements. He then said there was no proposed change to the number of overall parking spaces, as there would be no activities in the multi-use building during mass times.

Mr. Morgia then elaborated that the existing parking requirement under the Zoning Ordinance based on the sanctuary was 88 spaces and there were 112 existing spaces on the property. He said that the proposed multi-use building would increase that requirement to 111 spaces, so remaining at 112 still met the requirement.

Mr. Morgia then addressed landscaping concerns on the property. He acknowledged that the proposed construction would necessitate removing 24 trees and then noted that the revised plan depicted 21 proposed new trees along the western property line to replace the lost trees. Ms.

February 18, 2020

City of Watertown
Attn: Michael Delaney, City Engineer
Room 305, City Hall
245 Washington Street
Watertown, NY 13601

Re: **Site Plan Review Application
Expansion Project
Roth Industries and Roth Global Plastics (A&C Proj. #2016-033.004)
268 Bellew Avenue, Watertown, NY**

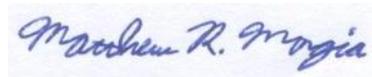
Dear Mr. Delaney:

Aubertine and Currier Architects, Engineers & Land Surveyors, PLLC on behalf of Roth Industries, Inc is requesting to be included on the agenda for the March 3, 2020 City of Watertown Planning Board meeting for Site Plan review of the proposed Roth Industries Expansion Project, on Tax Parcel 9-43-105.000. Included with this submission is fifteen (15) copies of the Cover Letter, Site Plan Application, Short SEQR Environmental Assessment Form, and three (3) copies of the Engineering Report. Also attached are three (3) full size, twelve (12) 11"x17" copies of the Site Plans and Preliminary Architectural Plans, and check for the \$150.00 review fee.

The project consists of two building additions totaling 7,340 SF on the northwestern corner of the existing manufacturing facility and construction of a 10,400 SF storage building with covered loading dock at the southwest corner of the property. Site improvements include reconfiguration of the asphalt storage area and expansion of the southwestern entrance drive to accommodate access to the building additions and proposed loading dock, chain link fence reconfiguration, site lighting, grading and drainage. Site utility installation will include gas and electric services from existing utilities that run along the eastern side of Roundhouse Drive for the proposed storage building. Site runoff will be contained within the project site and will be diverted to the two existing stormwater detention basins that were previously expanded in the 2016 Roth Industries expansion project.

Roth Industries intends to begin construction this spring/summer as soon as approvals are granted. If there are any questions, please feel free to contact our office at your earliest convenience.

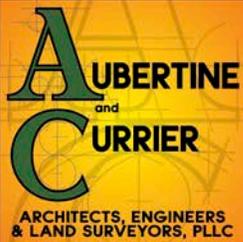
Sincerely,
Aubertine and Currier Architects, Engineers & Land Surveyors, PLLC



Matthew R. Morgia, P.E.
Civil Engineer, Partner

Attachments

Cc: John Pezzi – Roth Industries



NYS WBE/DBE Certified
SBA Woman Owned
Small Business (WOSB)

aubertinecurrier.com

522 Bradley Street
Watertown, New York 13601

Phone: 315.782.2005
Fax: 315.782.1472

Managing Partner
Annette M. Mason, P.E.
Structural Engineer

Partners
Brian A. Jones, AIA.,
LEED AP BD+C
Architect

Matthew R. Morgia, P.E.
Civil Engineer

Jayson J. Jones, P.L.S.
Land Surveyor

City of Watertown
245 Washington Street
Watertown, NY 13601

Tel: 315-785-7735
Fax: 315-785-7854

SIGNATURE AUTHORIZATION

I hereby authorize Auberine and Currier, PLLC to apply for
Site Plan Approval in connection with the property owned by me located at:
Roth Industries and Roth Global Plastics – 268 Bellew Ave. South, Watertown, NY 13601
(address)

Also, I further agree to comply with all conditions called for in said application and to abide by all other applicable codes, ordinances, and regulations.



Signature of Property Owner

John C. Pezzi – Vice President Operations 02/12/2020
Print Property Owner's Name Date

Address: One General Motors Drive
Syracuse, NY 13206

Phone: (888) 266-7684

Fax: (315) 475-0200



1869

CITY OF WATERTOWN SITE PLAN APPLICATION

** Provide responses for all sections. INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED. Failure to submit required information by the submittal deadline will result in **not** making the agenda for the upcoming Planning Board meeting.

PROPERTY LOCATION

Proposed Project Name: Roth Industries and Roth Global Plastics - Expansion Project
Tax Parcel Number: 9-43-105.000
Property Address: 268 Bellew Avenue South, Watertown, NY 13601
Existing Zoning Classification: LI - Light Industry

OWNER OF PROPERTY

Name: Roth Industries, Inc
Address: 268 Bellew Ave South
Watertown, NY 13601
Telephone Number: (315) 266-7684
Fax Number: (315) 475-0200

APPLICANT

Name: Roth Industries, Inc
Address: 268 Bellew Ave South
Watertown, NY 13601
Telephone Number: (888) 266-7684
Fax Number: (315) 475-0200
Email Address: johnp@roth-usa.com

ENGINEER/ARCHITECT/SURVEYOR

Name: Aubertine and Currier, PLLC
Address: 522 Bradley Street
Watertown, NY 13601
Telephone Number: (315) 782-2005
Fax Number: (315) 782-1472
Email Address: mrm@aubertinecurrier.com

OPTIONAL MATERIALS:

- PROVIDE AN ELECTRONIC (.DWG) COPY OF THE SITE PLAN WITH AS-BUILT REVISIONS. This will assist the City in keeping our GIS mapping up-to-date.**

REQUIRED MATERIALS:

** The following drawings with the listed information **ARE REQUIRED, NOT OPTIONAL**. If the required information is not included and/or addressed, the Site Plan Application will **not** be processed.

- COMPLETED ENVIRONMENTAL ASSESSMENT FORM** (Contact us if you need help choosing between the Short EAF and the Full EAF). The Complete EAF is available online at: <http://www.dec.ny.gov/permits/6191.html>
- ELECTRONIC COPY OF ENTIRE SUBMISSION (PDF)** A single, combined PDF of the entire application, including cover letter, plans, reports, and all submitted material.
- BOUNDARY and TOPOGRAPHIC SURVEY**
(Depict existing features as of the date of the Site Plan Application. This Survey and Map must be performed and created by a Professional Land Surveyor licensed and currently registered to practice in the State of New York. This Survey and Map must be stamped and signed with an original seal and signature on at least one copy, the rest may be copies thereof.)
 - All elevations are North American Vertical Datum of 1988 (NAVD88).
 - 1' contours are shown and labeled with appropriate spot elevations.
 - All existing features on and within 50 feet of the subject property are shown and labeled.
 - All existing utilities on and within 50 feet of the subject property are shown and labeled.
 - All existing easements and/or right-of-ways are shown and labeled.
 - Existing property lines (bearings and distances), margins, acreage, zoning, existing land use, reputed owner, adjacent reputed owners and tax parcel numbers are shown and labeled.
 - The north arrow and graphic scale are shown.

DEMOLITION PLAN (If Applicable)

All existing features on and within 50 feet of the subject property are shown and labeled.

All items to be removed are labeled in darker text.

SITE PLAN

Include a reference to the coordinate system used(NYS NAD83-CF preferred).

All proposed above ground features are depicted and clearly labeled.

All proposed features are clearly labeled “proposed”.

N/A All proposed easements and right-of-ways are shown and labeled.

Land use, zoning, and tax parcel number are shown.

The Plan is adequately dimensioned including radii.

The line work and text for all proposed features is shown darker than existing features.

All vehicular and pedestrian traffic circulation is shown including a delivery or refuse vehicle entering and exiting the property.

Proposed parking and loading spaces including ADA accessible spaces are shown and labeled.

Sidewalks within the City Right-of-Way meet Public-Right-of-Way (PROWAG) standards.

N/A Refuse Enclosure Area (Dumpster), if applicable, is shown. Section 161-19.1 of the Zoning Ordinance states, “No refuse vehicle or refuse container shall be parked or placed within 15 feet of a party line without the written consent of the adjoining owner, if the owner occupies any part of the adjoining property”.

N/A Proposed snow storage areas are shown on the plans.

The north arrow and graphic scale are shown.

GRADING PLAN

All proposed below ground features including elevations and inverts are shown and labeled.

All proposed above ground features are shown and labeled.

The line work and text for all proposed features is shown darker than existing features.

N/A All proposed easements and right-of-ways are shown and labeled.

1' existing contours are shown dashed and labeled with appropriate spot elevations.

1' proposed contours are shown and labeled with appropriate spot elevations.

All elevations are North American Vertical Datum of 1988 (NAVD88).

N/A Sediment and Erosion control are shown and labeled on the grading plan unless separate drawings have been provided as part of a Stormwater Pollution Prevention Plan (SWPPP).

UTILITY PLAN

All proposed above and below ground features are shown and labeled.

All existing above and below ground utilities including sanitary, storm water, water, electric, gas, telephone, cable, fiber optic, etc. are shown and labeled.

N/A All proposed easements and right-of-ways are shown and labeled.

The Plan is adequately dimensioned including radii.

The line work and text for all proposed features is shown darker than existing features.

The following note has been added to the drawings stating, "All water main and service work must be coordinated with the City of Watertown Water Department. The Water Department requirements supersede all other plans and specifications provided."

N/A LANDSCAPING PLAN

All proposed above ground features are shown and labeled.

All proposed trees, shrubs, and other plantings are shown and labeled.

All proposed landscaping and text are shown darker than existing features.

All proposed landscaping is clearly depicted, labeled and keyed to a plant schedule that includes the scientific name, common name, size, quantity, etc.

N/A For additional landscaping requirements where nonresidential districts and land uses abut land in any residential district, please refer to Section 310-59, Landscaping of the City's Zoning Ordinance.

N/A **Site Plan complies with and meets acceptable guidelines set forth in Appendix A - Landscaping and Buffer Zone Guidelines (August 7, 2007).**

PHOTOMETRIC PLAN (If Applicable)

All proposed above ground features are shown.

Photometric spot elevations or labeled photometric contours of the property are clearly depicted. Light spillage across all property lines shall not exceed 0.5 foot-candles.

CONSTRUCTION DETAILS and NOTES

All details and notes necessary to adequately complete the project including, but not limited to, landscaping, curbing, catch basins, manholes, water line, pavement, sidewalks, trench, lighting, trash enclosure, etc. are provided.

N/A Maintenance and protection and traffic plans and notes for all required work within City streets including driveways, water laterals, sanitary laterals, storm connections, etc. are provided.

The following note must be added to the drawings stating:
"All work to be performed within the City of Watertown margin will require sign-off from a Professional Engineer, licensed and currently registered to practice in the State of New York, that the work was built according to the approved site plan and applicable City of Watertown standards. Compaction testing will be required for all work to be performed within the City of Watertown margin and must be submitted to the City of Watertown Codes Department."

PRELIMINARY ARCHITECTURAL PLANS (If Applicable)

Floor plan drawings, including finished floor elevations, for all buildings to be constructed are provided.

Exterior elevations including exterior materials and colors for all buildings to be constructed are provided.

Roof outline depicting shape, slope and direction is provided.

■ ENGINEERING REPORT

**** The engineering report at a minimum includes the following:**

- Project location
- Project description
- Existing and proposed sanitary sewer flows and summary
- Water flows and pressure
- Storm Water Pre and Post Construction calculations and summary
- Traffic impacts
- Lighting summary
- Landscaping summary

■ GENERAL INFORMATION

To be provided with final plans ALL ITEMS ARE STAMPED AND SIGNED WITH AN ORIGINAL SIGNATURE BY A PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR SURVEYOR LICENSED AND CURRENTLY REGISTERED TO PRACTICE IN THE STATE OF NEW YORK.

N/A If required, submit a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the City of Watertown Engineering Department for review to obtain an MS4 SWPPP Acceptance Form.

Post Construction SWPPP Requirements to Complete:

In accordance with City Code Section 260, provide the following:

- *Submit a detailed as-built topographic and boundary survey of the site with all stormwater practices.*
- *Perform and submit results of insitu infiltration testing, updated drainage area maps and hydraulic calculations in a comprehensive Engineering Report based on As-Built Conditions.*
- *Submit a detailed post construction Maintenance Plan for all Stormwater Management Practices (SMP's) and provide a Maintenance Agreement with irrevocable letter of credit for approval. Maintenance Agreement shall be filed at the County Clerk's Office as a deed restriction on the property.*

N/A ** If required, a copy of all submittals sent to the New York State Department of Environmental Conservation (NYSDEC) for the sanitary sewer extension permit will also be sent to the City of Watertown Engineering Department.

N/A ** If required, a copy of all submittals sent to the New York State Department of Health (NYSDOH) will also be sent to the City of Watertown Engineering Department.

** When NYSDEC or NYSDOH permitting is required, the property owner/applicant shall retain a licensed Professional Engineer to perform inspections of the proposed utility work and to certify the completed works were constructed in substantial conformance with the approved plans and specifications.

N/A Signage will not be approved as part of this submission. It requires a sign permit from the City Code Enforcement Bureau. See Section 310-52.2 of the Zoning Ordinance.

Plans have been collated and properly folded.

N/A If an applicant proposes a site plan with multiple buildings and any of those buildings front on a private drive, the City Council will name the private drive by resolution and the building(s) will be given an address number on that private drive by City staff. The applicant may propose a name for the private drive for the City Council's consideration.

Proposed Street Name: _____

N/A For non-residential uses, the proposed Hours of Operation shall be indicated.

Signature Authorization form or letter signed by the owner is submitted allowing the applicant to apply on behalf of the owner if the applicant is not the property owner.

Explanation for any item not checked in the Site Plan Checklist.

The project disturbs <1 acre of soil therefore a SWPPP is not
required for this project. This project does not include any
proposed easements or landscaping, therefore
none are depicted on the plans.

Short Environmental Assessment Form

Part 1 - Project Information

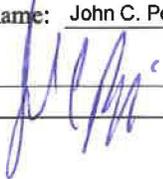
Instructions for Completing

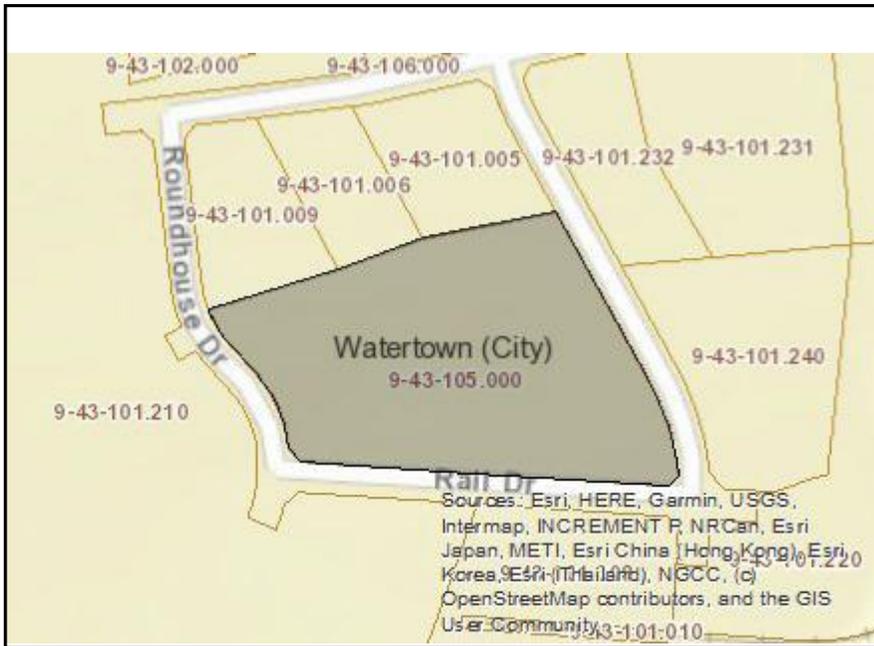
Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information			
Project: Expansion Project		Sponsor: Roth Industries, Inc	
Name of Action or Project: Expansion Project			
Project Location (describe, and attach a location map): 268 Bellew Ave South, Watertown, NY			
Brief Description of Proposed Action: The project consists of two building additions totaling 7,340 SF on the northwest corner of the existing manufacturing facility and construction of a 10,400 SF storage building with covered loading dock at the southwest corner of the property. Site improvements include reconfiguration of the asphalt storage area and southwestern entrance drive to accommodate the building additions and loading dock access, gas and electric services to the proposed storage building, chain link fence reconfiguration, site lighting, grading and drainage. The new gas and electric services will extend from existing utilities located along the east side of Roundhouse Drive.			
Name of Applicant or Sponsor: Roth Industries, Inc		Telephone: 888-266-7684 E-Mail: johnp@roth-usa.com	
Address: 268 Bellew Ave South			
City/PO: Watertown		State: NY	Zip Code: 13601
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval:		NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
3. a. Total acreage of the site of the proposed action?		_____ 8.86 acres	
b. Total acreage to be physically disturbed?		_____ 0.81 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		_____ 8.86 acres	
4. Check all land uses that occur on, are adjoining or near the proposed action:			
5. <input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential (suburban) <input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other(Specify): <input type="checkbox"/> Parkland			

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
8. a. Will the proposed action result in a substantial increase in traffic above present levels? b. Are public transportation services available at or near the site of the proposed action? c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	NO <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	YES <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____ _____	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ Building additions will connect to existing interior water supply. The proposed storage building will not be connected to any water utilities	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ Building additions will connect to existing interior plumbing. The proposed storage building will not be connected to any wastewater utilities	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	NO <input checked="" type="checkbox"/> <input type="checkbox"/>	YES <input type="checkbox"/> <input checked="" type="checkbox"/>	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency? b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ There are wetlands located within the City Center Industrial Park and adjacent lands, but not within the Roth owned Property _____ _____	NO <input type="checkbox"/> <input checked="" type="checkbox"/>	YES <input checked="" type="checkbox"/> <input type="checkbox"/>	

<p>14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:</p> <p><input type="checkbox"/> Shoreline <input type="checkbox"/> Forest <input type="checkbox"/> Agricultural/grasslands <input type="checkbox"/> Early mid-successional</p> <p><input type="checkbox"/> Wetland <input checked="" type="checkbox"/> Urban <input type="checkbox"/> Suburban</p>		
<p>15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?</p> <p>Indiana Bat, Northern Long-...</p>	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>16. Is the project site located in the 100-year flood plan?</p>	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>17. Will the proposed action create storm water discharge, either from point or non-point sources?</p> <p>If Yes,</p> <p>a. Will storm water discharges flow to adjacent properties?</p> <p>b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?</p> <p>If Yes, briefly describe:</p> <p>Stormwater runoff will be directed to one of two on-site stormwater basins prior to discharging into the City municipal storm system</p>	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)?</p> <p>If Yes, explain the purpose and size of the impoundment:</p>	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?</p> <p>If Yes, describe:</p>	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?</p> <p>If Yes, describe:</p>	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</p> <p>Applicant/sponsor/name: <u>John C. Pezzi</u> Date: <u>02/12/2020</u></p> <p>Signature:  Title: <u>Vice President Operations</u></p>		



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

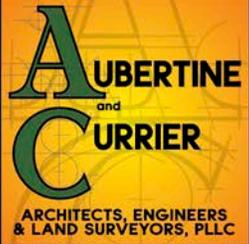


Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	Yes
Part 1 / Question 15 [Threatened or Endangered Animal - Name]	Indiana Bat, Northern Long-eared Bat
Part 1 / Question 16 [100 Year Flood Plain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
Part 1 / Question 20 [Remediation Site]	No

SHORT EAF SUMMARY REPORT:

Questions 12b, 13a, and 15 are answered automatically by the EAF mapper based upon limited digital mapping information that is available.

- Questions 12b, Archeological Sites, is answered yes due to the location of the historic railroad car maintenance turn-table located on the adjacent tax parcel number 9-43-101.231, northeast of the site. See Subdivision Final Plat, City Center Industrial Park, 11/21/2008, Jeff. Co. File #4655.
- Question 13a, Wetlands, is answered yes due to the location of wetlands located on the adjacent lots directly west of the City Center Industrial Park site. See Subdivision Final Plat, City Center Industrial Park, 11/21/2008, Jeff. Co. File #4655.
- Question 15, Threatened or Endangered Species, is answered yes due to the lot being part of the City Center Industrial Park, which was previously developed adjacent to undeveloped wetlands and forest area to the west. The industrial park was developed in 2001 and currently the site contains only buildings, parking lot, grass lawn and landscaping.



NYS WBE/DBE Certified
SBA Woman Owned
Small Business (WOSB)

aubertinecurrier.com

522 Bradley Street
Watertown, New York 13601

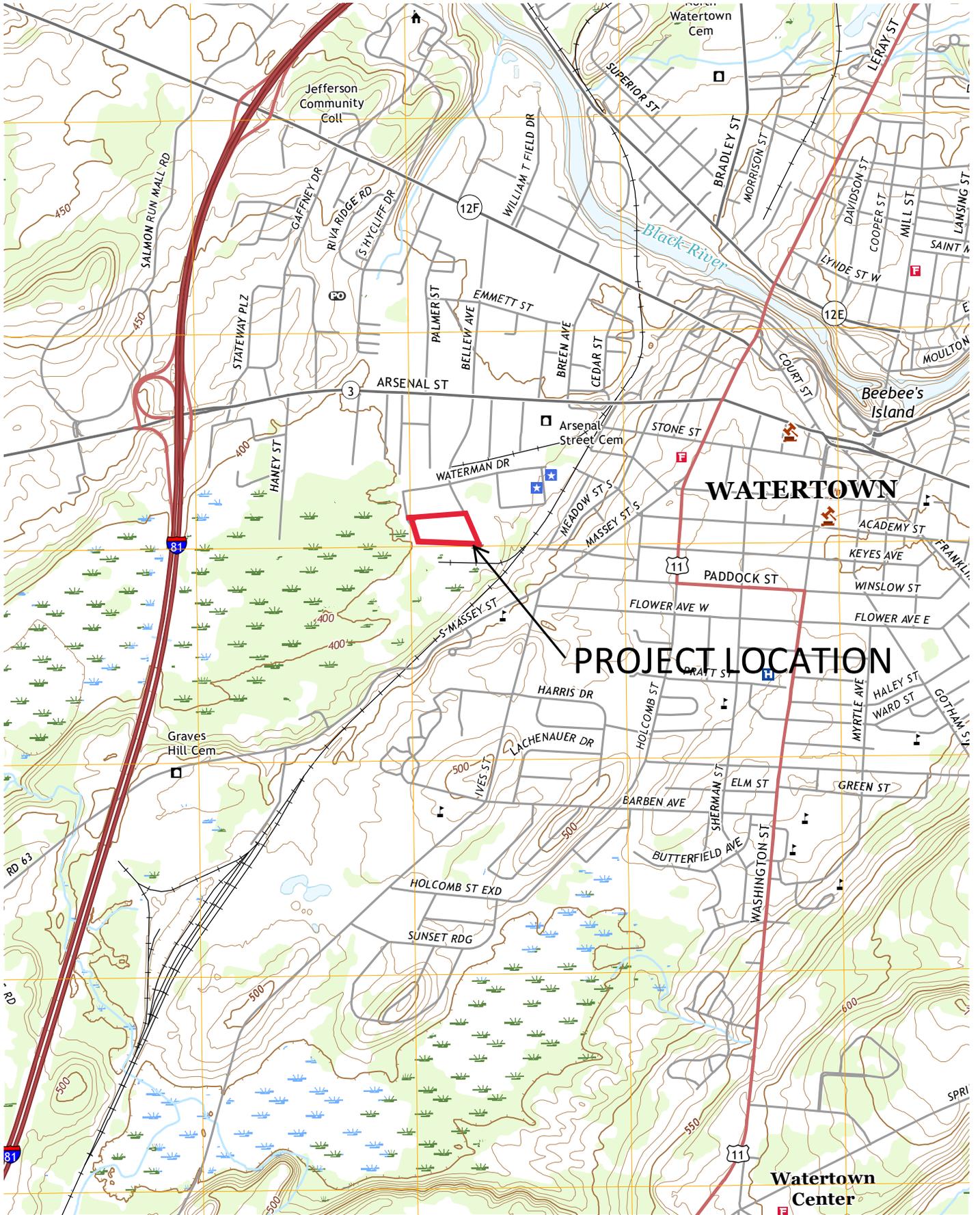
Phone: 315.782.2005
Fax: 315.782.1472

Managing Partner
Annette M. Mason, P.E.
Structural Engineer

Partners
Brian A. Jones, AIA.,
LEED AP BD+C
Architect

Matthew R. Morgia, P.E.
Civil Engineer

Jayson J. Jones, P.L.S.
Land Surveyor



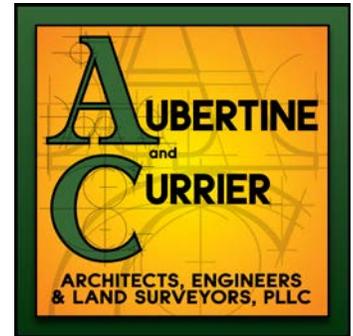
WATERTOWN

PROJECT LOCATION

Watertown Center

PRELIMINARY ENGINEERING REPORT

**ROTH INDUSTRIES, INC
PROPOSED BUILDING EXPANSION
CITY CENTER INDUSTRIAL PARK TAX MAP# 9-43-105
268 BELLEW AVE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, NEW YORK**



**Owner: Roth Industries, Inc.
268 Bellew Ave South
Watertown, NY 13601**

February 18, 2020

**Matthew R. Morgia, P.E.
Civil Engineer**

The above Engineer states that to the best of his knowledge, information and belief, the plans and specifications are in accordance with applicable requirements of New York State. It is a violation of New York State Law for any person, unless acting under the direction of a licensed professional engineer to alter this document in any way. If altered, such licensee shall affix his or her seal and the notation "altered by" followed by his or her signature, date, and a specific description of alteration.

Aubertine and Currier Architects, Engineers & Land Surveyors, PLLC
522 Bradley Street Watertown, New York 13601 TELE: (315) 782-2005 FAX: (315) 782-1472

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 - 2.1 Existing Water Facilities
 - 2.2 Proposed Water Facilities

- 3.0 Sanitary Sewer Facilities
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- 4.0 Stormwater Facilities
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 - 8.2 Proposed Landscaping

Appendices

Appendix 1: Location Map
City of Watertown Zoning Map
City of Watertown GIS Floodplain & Wetlands Map
Soils Map
Soils Description

Appendix 2: Hydrologic and Hydraulic Analysis

Appendix 3: Parking and Traffic Calculations

1.0 SITE AND PROJECT DESCRIPTIONS

1.1 Location

The project is located at 268 Bellew Ave South on an industrial property within the City of Watertown's City Center Industrial Park. Roth Industries currently owns and operates the facility on the 8.86 acre parcel. The Industrial Park Lots and associated infrastructure was developed by the City in 2001. The existing property contains a 68,900 SF building, 94,700 SF asphalt parking and storage area, one 22,200 SF asphalt entrance drive and loading dock and one 10,000 SF entrance drive and loading dock. The 68,900 SF building contains space for manufacturing, storage, and office area. The property is located on Tax Map Parcel No. 9-43-105.000. This parcel is zoned LI –Light Industry.

1.2 Project Description

The project consists of two building additions totaling 7,340 SF on the northwestern corner of the existing manufacturing facility and construction of a 10,400 SF storage building with covered loading dock at the southwest corner of the property. Site improvements include reconfiguration of the asphalt storage area and southwestern entrance drive to accommodate access to the building additions and proposed loading dock, utility installation for the proposed storage building, chain link fence reconfiguration, site lighting, grading and drainage.

1.3 Site Topography

The existing 8.86 acre site is comprised of a 68,900 SF manufacturing facility, asphalt parking and storage area, and access drives on the eastern and southern portion of the property. A strip of undeveloped vegetated land lies on the western portion of the property. A chain link fence runs along the perimeter of the asphalt storage yard, separating the developed portion of the property from the undeveloped vegetated lawn area to the west.

The existing manufacturing facility, asphalt parking and storage area, and undeveloped vegetated lawn area all slope north at a slope varying between 1% and 2% via sheet flow towards an existing stormwater detention basin located along the northern edge of the storage yard. Runoff that enters the northern stormwater detention basin either infiltrates into the existing sandy soils or overflows and discharges east into a 24" SICPP storm pipe that connects to the Bellew Avenue South municipal storm sewer. The southern truck access drives that permit access to the receiving and shipping area loading docks on the south and southwestern sides of the building drain south to a separate storm water detention basin where runoff either infiltrates into the existing sandy soils or overflows and discharges south into the city municipal storm sewer that crosses under Rail Drive. The detention basins were constructed as part of the 2006 Roth Industries Building Addition project and were expanded as part of the 2016 Roth Industries expansion project.

The developed area of the project is not located within a 100 year flood plain.

1.4 Soil Classification

The project site is located in the City of Watertown, which is an urban environment and consists primarily of previously developed area. According to the USDA Web Soil Survey for Jefferson County, New York, the project area Primarily includes soils classified as sand of Hydrologic Group A with areas of silt loam classified as Hydrologic Soil Group C/D to the south and Loamy sand classified as Hydrologic soil group A/D to the west.

<u>Soil Symbol</u>	<u>Soil Name</u>	<u>Hydrologic Group</u>
CnB	Collamer Silt Loam	C/D
PoB	Plainfield Sand	A
Sc	Scarboro Mucky Loam Fine Sand	A/D
Ur	Urban Land	A

2.0 WATER FACILITIES

2.1 Existing Water Facilities

There are existing 8" municipal water mains located at the west, south, and east road frontage of the lot, along Roundhouse Drive, Rail Drive and Bellew Avenue South. An 8" water service extends from the Bellew Avenue south water main to the southeastern corner of the building. There are five (5) hydrants located within the Bellew Avenue South, Rail Drive and Roundhouse Drive City rights of ways that provide fire protection for the property. The existing facility is sprinkler system equipped.

2.2 Proposed Water Facilities

No additional water utilities are proposed for this project.

3.0 SANITARY SEWER FACILITIES

3.1 Existing Sanitary Sewer Facilities

There are municipal sanitary sewer mains located within the Roundhouse Drive, Rail Drive, and Bellew Avenue South road right of ways that service the Industrial park. The Roth Industries facility is served by an existing 6" sanitary sewer lateral that exits the east side of the building and connects to the Bellew Avenue South sanitary sewer main.

3.2 Proposed Sanitary Sewer Facilities

No additional sanitary sewer utilities are proposed for this project.

4.0 STORMWATER FACILITIES

4.1 Existing Drainage

The existing manufacturing facility, asphalt parking and storage yard, and undeveloped vegetated lawn area at the east of the property all slope north to an existing stormwater detention basin located at the northwest portion of the storage yard. Runoff that enters the northern stormwater detention basin either infiltrates into the existing sandy soils or flows into a control structure and discharges east into a 24" SICPP storm pipe that connects to the Bellew Ave South municipal storm sewer. The southeastern truck access and loading dock area and the southwestern access drive and loading dock drain to the southern stormwater detention basin. Runoff into this basin either infiltrates into the existing sandy soils or overflows and discharges south into the city municipal storm sewer that crosses under Rail Drive. The detention basins were constructed as part of the 2006 Roth Industries Building Addition project and expanded as part of the 2016 Roth Industries expansion project.

The existing site drainage and runoff conditions were analyzed utilizing the SCS method. HydroCAD calculations can be found in Appendix #2. Runoff calculations were completed for the 1, 10, and 100 year, 24 hour storm events. Peak discharge from the 25 year, 24 hour, storm event has been utilized for design and discussion purposes. The existing condition 25 year peak site discharge is 0.01 CFS.

4.2 Proposed Drainage

Site improvements include the construction of two (2) building additions and single storage building with loading dock and access drive. Drainage improvements associated with the two (2) proposed additions include regrading a section of the existing asphalt storage area to maintain positive drainage away from the building as well as the addition of roof downspouts on the building additions. The proposed roof downspouts will be connected to the existing roof drain system within the asphalt storage area. Runoff collected in the roof drains is piped east through the existing 6" PVC roof drain system and then north into the northern stormwater detention basin. The proposed improvements do not change the overall site drainage patterns from the existing to proposed conditions. The existing manufacturing facility, asphalt parking and storage yard as well as the proposed storage building and vegetated lawn area at the west portion of the property will continue to drain north into the existing northern stormwater detention basin. Drainage improvements associated with the proposed storage building include a proposed asphalt loading dock access and asphalt area expansion that will drain to the existing southern stormwater detention basin. The existing southeastern truck access and loading dock area and expanded southwestern access drive and

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loading dock will continue to drain into the existing southern stormwater detention basin.

The proposed conditions 25 year, 24 hour storm, peak site discharge is 0.17 CFS. This increase in peak runoff from the project site is due primarily to the 0.36 acre increase in impervious area resulting from the proposed storage building and southwestern asphalt access drive expansion.

5.0 ROADS, DRIVES, TRAFFIC, AND PARKING

5.1 Existing Roads / Drives

The project site is accessed from three (3) access drives, the Bellew Avenue South drive to the east and two drives from Rail Drive to the south. The Bellew Avenue South access drive is used by workers and visitors to the office. The asphalt storage yard can also be accessed through the Bellew Avenue South drive. The southwestern connection to Rail Drive is utilized by delivery trucks to access the shipping area loading dock at the southwest portion of the building as well as the asphalt storage yard. The southeastern connection to Rail Drive is utilized by delivery trucks to access the receiving area loading docks at the southeast portion of the building.

5.2 Proposed Roads / Driveways

A proposed access drive will be located on the south side of the proposed storage building to provide access to the loading dock. The proposed access drive and loading dock will allow off-loading of incoming materials directly into the proposed storage building. The proposed access drive will be accessed through the southwestern Rail Drive entrance. The Rail Drive entrance will be expanded with larger radii to accommodate the new travel pattern of incoming tractor trailers.

5.3 Traffic and Parking

Per the City of Watertown Zoning Laws (Section 310-47 and 310-48), 200 SF of parking area is required for every 1,000 SF of floor area for Light Industry uses excluding utility and storage areas and five (5) parking spaces are required for every 1,000 SF of floor area for Office Space.

The existing Roth Industries facility has approximately 24,500 SF of floor space dedicated to manufacturing, 41,500 SF of floor area dedicated to dry storage and utilities, and 2,500 SF of floor area dedicated to office space. The proposed addition includes 5,460 SF of floor space dedicated to manufacturing that will result in a total of 29,960 SF dedicated to Light Industrial Uses. The 29,960 SF of floor area dedicated to manufacturing, equating to approximately 6,000 SF of parking area for Light Industrial Use. The 2,500 SF of floor area dedicated to office space, equating to 13 required parking spaces for office space. The site has an existing parking lot with nineteen (19) parking spaces and an approximately 8,190 SF of unstriped parking area within the fenced storage yard.

The existing 41,500 SF of floor area dedicated to dry storage and utilities and 12,280 SF of proposed floor space dedicated to dry storage area. The resulting total 53,780 SF of floor area dedicated to storage and utilities does not include any parking space requirements per the current City Zoning Laws.

Trip generation calculations were performed utilizing data from the ITE Trip Generation Manual, 7th Edition. Trip generation was calculated for both the existing facility as well as the post-expansion facility. The Weekday AM Peak Hour for the existing building generates approximately 13 trips/hour entering and 3 trips/hour exiting while the post-construction building generates approximately 22 trips/hour entering and 5 trips/hour exiting. The Weekday PM Peak Hour for the existing building generates approximately 8 trips/hour entering and 9 trips/hour exiting while the post-construction building generates approximately 13 trips/hour entering and 15 trips/hour exiting. The Saturday Peak Hour for the existing building generates approximately 4 trips/hour entering and 3 trips/hour exiting while the post-construction building generates approximately 6 trips/hour entering and 5 trips/hour exiting. See Appendix 4 for calculations.

6.0 PRIVATE UTILITIES

6.1 Gas, Electric, Telephone and Cable

Existing gas, electric and communication services are connected to the facility from Bellew Avenue South and will be extended through the existing facility as required into the two (2) building additions.

6.2 Proposed Gas, Electric, Telephone and Cable

The proposed 10,400 SF storage building will require new gas and electric services from the existing gas and electric services along Roundhouse Drive. Gas service will be via a 1" PE gas service tapped into the existing gas main along the east side of Rail Drive. Buried electric service will be routed from an existing transformer to the northwest of the proposed building. No telephone or cable services are proposed for the project.

7.0 LIGHTING

7.1 Existing Site Lighting

The existing site lighting is provided by two (2) pole mounted lights located along the northern and eastern edge of the asphalt parking lot, and one (1) pole mounted light located north of the existing storage yard. Fifteen (15) building mounted lights are located around the existing building. Multiple streetlights on existing utility poles are located along Roundhouse Drive and Bellew Avenue South.

7.2 Proposed Site Lighting

Three (3) proposed building mounted LED wall pack cutoff light fixtures will be installed on the proposed building additions to replace those removed for the

building additions. Two (2) building mounted LED wall pack cutoff light fixtures will be installed on the east and south side of the proposed storage building.

8.0 LANDSCAPING

8.1 Existing Landscaping

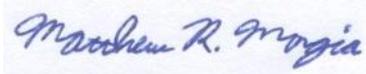
Existing landscape trees and shrubs are located along the eastern entrance and parking lot along Bellew Avenue South. Additional landscape trees are also located east of the building along Bellew Avenue South, and three (3) maple trees near the Bellew Avenue south and Rail Drive intersection. Two (2) oak and three maple are located south of the building along Rail Drive.

The entire perimeter of the asphalt storage area is enclosed by a chain link fence, with screens slats along the eastern side.

8.2 Proposed Landscaping

No additional landscaping is proposed for this project. Each surrounding property is zoned Light Industry.

Sincerely,
Aubertine and Currier Architects, Engineers & Land Surveyors, P.L.L.C.

A handwritten signature in blue ink that reads "Matthew R. Morgia". The signature is written in a cursive style and is positioned above the printed name and title.

Matthew R. Morgia, P.E.
Civil Engineer

APPENDIX #1

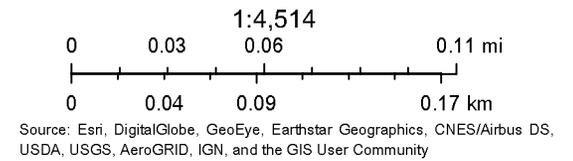
**LOCATION MAP
CITY OF WATERTOWN ZONING MAP
CITY OF WATERTOWN GIS FLOODPLAIN & WETLANDS MAP
SOILS MAP
SOILS DESCRIPTION**

ArcGIS Web Map

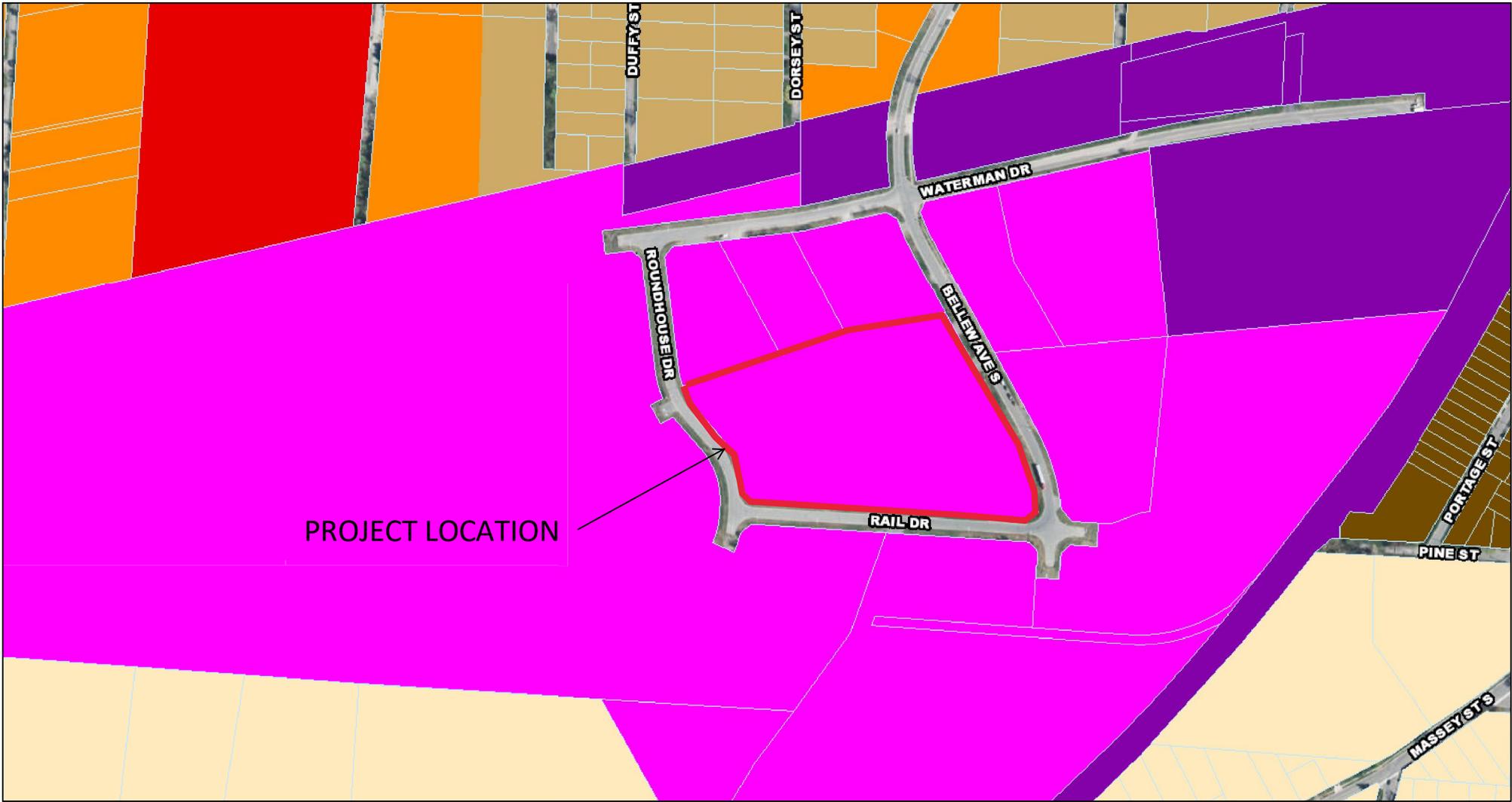


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-  Black River
-  Parcels
-  City Boundary
-  ROADS



ArcGIS Web Map



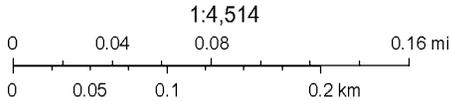
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- Zoning
- RIVER DEVELOPMENT DISTRICT
 - DOWNTOWN CORE OVERLAY
 - Open Space and Recreation
 - DOWNTOWN

- RESIDENCE A
- RESIDENCE B
- RESIDENCE C
- WATERFRONT
- LIMITED BUSINESS

- NEIGHBORHOOD BUSINESS
- COMMERCIAL
- HEALTH SERVICES
- LIGHT INDUSTRY
- HEAVY INDUSTRY

- PLANNED DEVELOPMENT
- Black River
- City Boundary
- Parcels
- ROADS



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ArcGIS Web Map



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- | | | | | | | |
|----------|--|------|--|-------------|--|---------------|
| FLOODPLN | | X500 | | Black River | | Parcels |
| | | A | | Wetlands | | City Boundary |
| | | AE | | | | ROADS |

1:4,514
0 0.03 0.06 0.11 mi
0 0.04 0.09 0.17 km
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus
Web AppBuilder for ArcGIS
New York State, USDA FSA, DigitalGlobe, GeoEye |

Custom Soil Resource Report
Map—Hydrologic Soil Group



Map Scale: 1:1,790 if printed on A landscape (11" x 8.5") sheet.



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



MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Lines

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Points

-  A
-  A/D
-  B
-  B/D

Water Features

-  Streams and Canals

Transportation

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

Background

-  Aerial Photography

Soils

-  C
-  C/D
-  D
-  Not rated or not available

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: Jefferson County, New York
 Survey Area Data: Version 19, Sep 16, 2019

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

Date(s) aerial images were photographed: Nov 3, 2013—Sep 27, 2016

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.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CnB	Collamer silt loam, 3 to 8 percent slopes	C/D	0.3	3.1%
PoB	Plainfield sand, 0 to 8 percent slopes	A	3.8	37.0%
Sc	Scarboro mucky loamy fine sand	A/D	1.2	11.6%
Ub	Udorthents, smoothed	A	5.0	48.3%
Totals for Area of Interest			10.3	100.0%

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

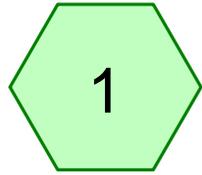
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

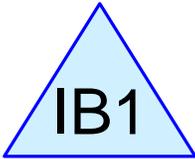
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APPENDIX #2

HYDROLOGIC AND HYDRAULIC ANALYSIS



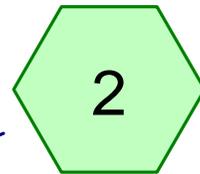
EX DA #1



EX Inf Basin #1



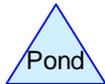
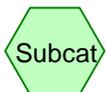
Design Point



EX DA #2



EX Inf Basin #2



2016-033.004 Existing

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.950	30	Meadow, non-grazed, HSG A (1, 2)
0.430	71	Meadow, non-grazed, HSG C (2)
2.880	98	Paved parking, HSG A (1, 2)
0.020	98	Paved parking, HSG C (2)
1.580	98	Roofs, HSG A (1)
8.860	66	TOTAL AREA

2016-033.004 Existing

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Page 3

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
8.410	HSG A	1, 2
0.000	HSG B	
0.450	HSG C	2
0.000	HSG D	
0.000	Other	
8.860		TOTAL AREA

2016-033.004 Existing

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Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
3.950	0.000	0.430	0.000	0.000	4.380	Meadow, non-grazed	1, 2
2.880	0.000	0.020	0.000	0.000	2.900	Paved parking	1, 2
1.580	0.000	0.000	0.000	0.000	1.580	Roofs	1
8.410	0.000	0.450	0.000	0.000	8.860	TOTAL AREA	

2016-033.004 Existing

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Page 5

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	2	0.00	0.00	45.0	0.0720	0.010	6.0	0.0	0.0
2	IB1	397.79	397.43	18.5	0.0195	0.013	18.0	0.0	0.0
3	IB1	398.11	398.05	6.0	0.0100	0.013	8.0	0.0	0.0
4	IB2	401.23	400.87	25.0	0.0144	0.013	15.0	0.0	0.0
5	IB2	401.06	400.85	25.0	0.0084	0.013	15.0	0.0	0.0
6	IB2	401.17	400.96	25.0	0.0084	0.013	15.0	0.0	0.0

2016-033.004 Existing

NRCC 24-hr A 10-yr Rainfall=3.33"

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Page 6

Time span=0.10-20.00 hrs, dt=0.05 hrs, 399 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 1: EX DA #1 Runoff Area=6.460 ac 58.67% Impervious Runoff Depth>0.82"
Flow Length=445' Tc=34.9 min CN=70 Runoff=3.86 cfs 0.440 af

Subcatchment 2: EX DA #2 Runoff Area=2.400 ac 28.75% Impervious Runoff Depth>0.30"
Flow Length=257' Tc=50.2 min CN=57 Runoff=0.32 cfs 0.060 af

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

Pond IB1: EX Inf Basin #1 Peak Elev=397.60' Storage=4,746 cf Inflow=3.86 cfs 0.440 af
Discarded=1.99 cfs 0.436 af Primary=0.00 cfs 0.000 af Outflow=1.99 cfs 0.436 af

Pond IB2: EX Inf Basin #2 Peak Elev=397.03' Storage=29 cf Inflow=0.32 cfs 0.060 af
Discarded=0.31 cfs 0.060 af Primary=0.00 cfs 0.000 af Outflow=0.31 cfs 0.060 af

Total Runoff Area = 8.860 ac Runoff Volume = 0.500 af Average Runoff Depth = 0.68"
49.44% Pervious = 4.380 ac 50.56% Impervious = 4.480 ac

2016-033.004 Existing

NRCC 24-hr A 10-yr Rainfall=3.33"

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Summary for Subcatchment 1: EX DA #1

Runoff = 3.86 cfs @ 12.54 hrs, Volume= 0.440 af, Depth> 0.82"

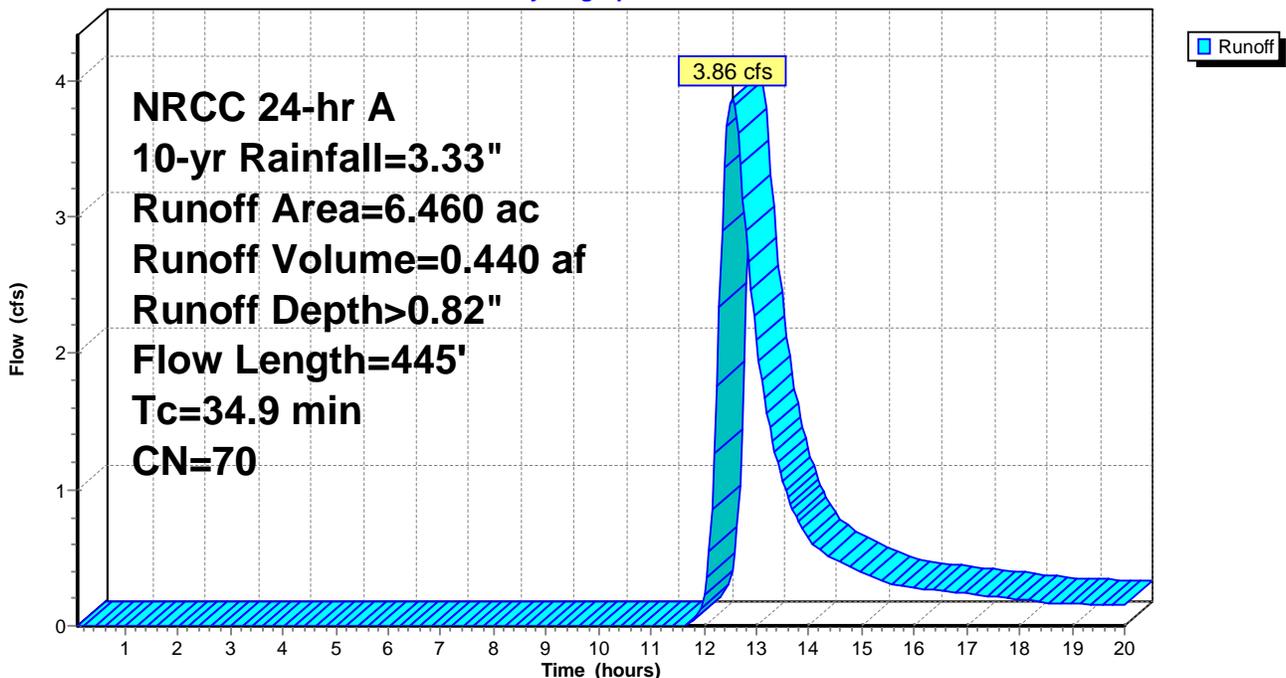
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-yr Rainfall=3.33"

Area (ac)	CN	Description
2.670	30	Meadow, non-grazed, HSG A
2.210	98	Paved parking, HSG A
1.580	98	Roofs, HSG A
6.460	70	Weighted Average
2.670		41.33% Pervious Area
3.790		58.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	100	0.0140	0.06		Sheet Flow, Lawn
					Grass: Bermuda n= 0.410 P2= 2.33"
5.3	345	0.0236	1.08		Shallow Concentrated Flow, Lawn
					Short Grass Pasture Kv= 7.0 fps
34.9	445	Total			

Subcatchment 1: EX DA #1

Hydrograph



2016-033.004 Existing

NRCC 24-hr A 10-yr Rainfall=3.33"

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Summary for Subcatchment 2: EX DA #2

Runoff = 0.32 cfs @ 12.94 hrs, Volume= 0.060 af, Depth> 0.30"

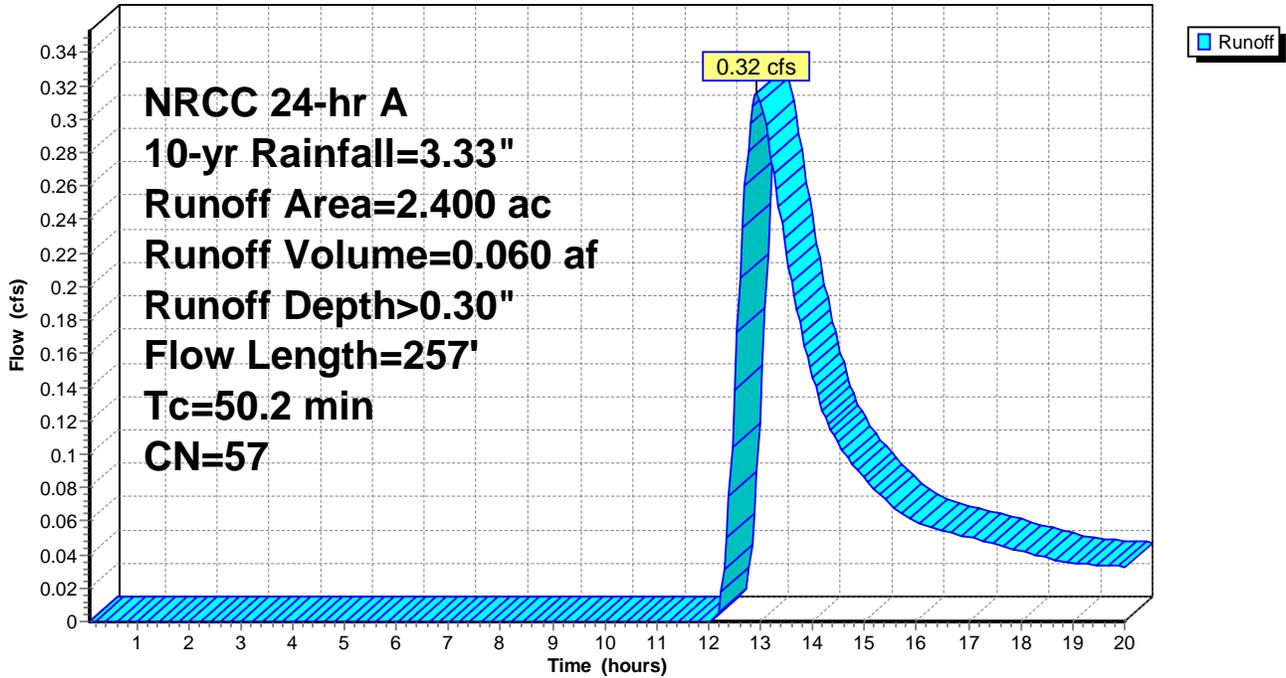
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-yr Rainfall=3.33"

Area (ac)	CN	Description
1.280	30	Meadow, non-grazed, HSG A
0.670	98	Paved parking, HSG A
0.430	71	Meadow, non-grazed, HSG C
0.020	98	Paved parking, HSG C
2.400	57	Weighted Average
1.710		71.25% Pervious Area
0.690		28.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
48.4	100	0.0041	0.03		Sheet Flow, Lawn Grass: Bermuda n= 0.410 P2= 2.33"
1.2	77	0.0230	1.06		Shallow Concentrated Flow, Lawn Short Grass Pasture Kv= 7.0 fps
0.5	35	0.0040	1.28		Shallow Concentrated Flow, Asphalt Paved Kv= 20.3 fps
0.1	45	0.0720	9.97	1.96	Pipe Channel, Storm Sewer 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
50.2	257	Total			

Subcatchment 2: EX DA #2

Hydrograph



Summary for Reach DP: Design Point

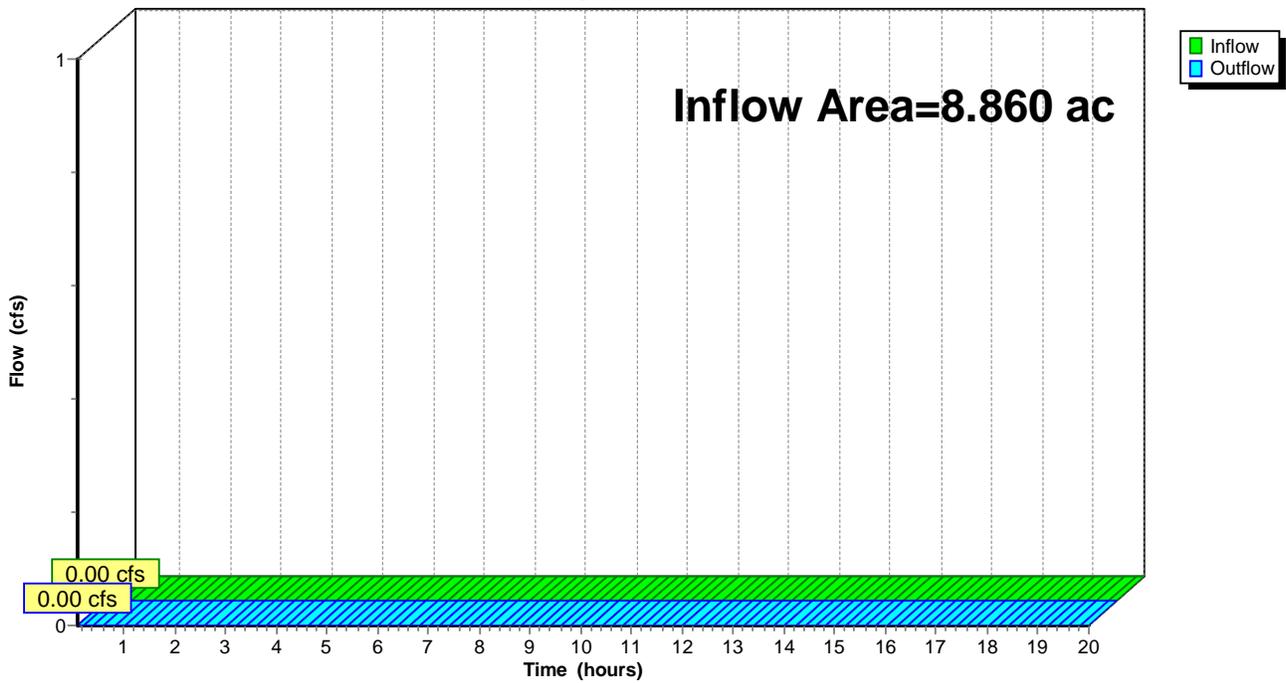
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.860 ac, 50.56% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs

Reach DP: Design Point

Hydrograph



2016-033.004 Existing

NRCC 24-hr A 10-yr Rainfall=3.33"

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Summary for Pond IB1: EX Inf Basin #1

Inflow Area = 6.460 ac, 58.67% Impervious, Inflow Depth > 0.82" for 10-yr event
 Inflow = 3.86 cfs @ 12.54 hrs, Volume= 0.440 af
 Outflow = 1.99 cfs @ 13.03 hrs, Volume= 0.436 af, Atten= 48%, Lag= 29.7 min
 Discarded = 1.99 cfs @ 13.03 hrs, Volume= 0.436 af
 Primary = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 397.60' @ 13.03 hrs Surf.Area= 6,236 sf Storage= 4,746 cf

Plug-Flow detention time= 28.3 min calculated for 0.435 af (99% of inflow)
 Center-of-Mass det. time= 25.3 min (859.3 - 834.0)

Volume	Invert	Avail.Storage	Storage Description
#1	396.66'	45,348 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
396.66	3,100	0	0
397.00	4,971	1,372	1,372
398.00	7,072	6,022	7,394
399.00	9,611	8,342	15,735
400.00	12,307	10,959	26,694
401.00	25,000	18,654	45,348

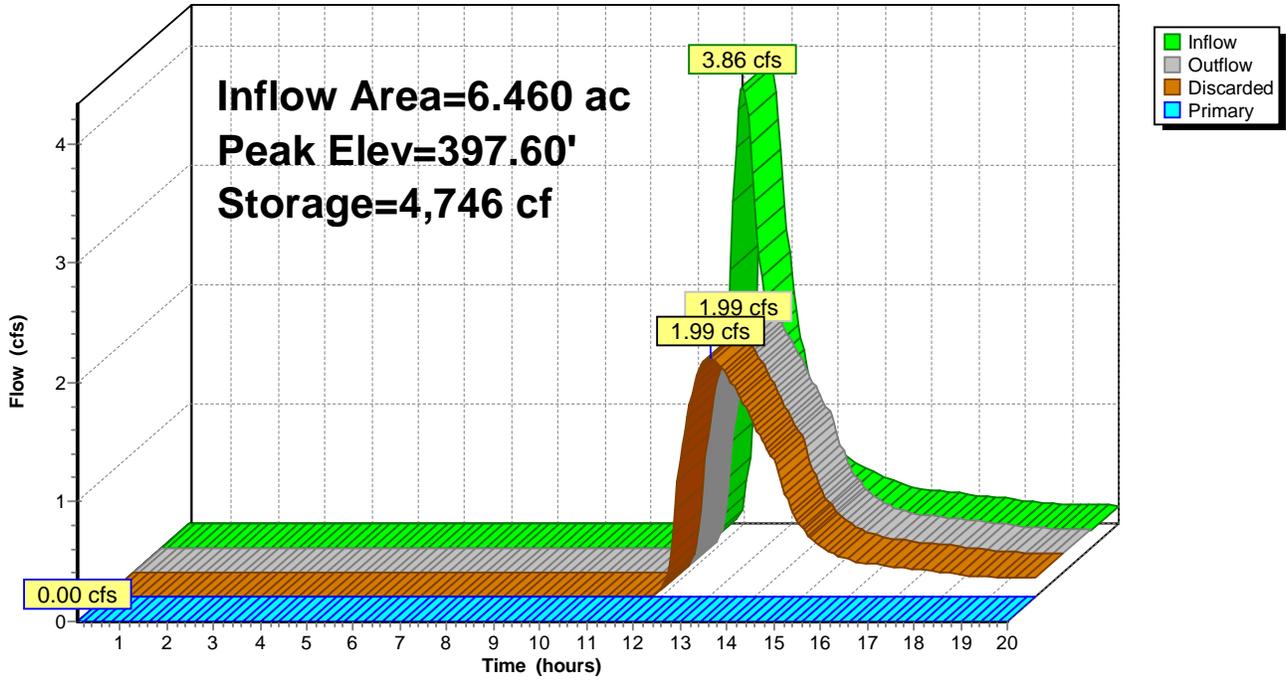
Device	Routing	Invert	Outlet Devices
#1	Discarded	396.66'	25.000 in/hr Exfiltration over Surface area above 396.66' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 3,100 sf
#2	Primary	397.79'	18.0" Round Culvert L= 18.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 397.79' / 397.43' S= 0.0195 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	398.11'	8.0" Round Culvert L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 398.11' / 398.05' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 2	399.41'	18.0" W x 12.0" H Vert. Orifice/Grate C= 0.600
#5	Device 2	400.64'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=1.99 cfs @ 13.03 hrs HW=397.60' (Free Discharge)
 ↑1=Exfiltration (Controls 1.99 cfs)

Primary OutFlow Max=0.00 cfs @ 0.10 hrs HW=396.66' (Free Discharge)
 ↑2=Culvert (Controls 0.00 cfs)
 ↑3=Culvert (Controls 0.00 cfs)
 ↑4=Orifice/Grate (Controls 0.00 cfs)
 ↑5=Orifice/Grate (Controls 0.00 cfs)

Pond IB1: EX Inf Basin #1

Hydrograph



2016-033.004 Existing

NRCC 24-hr A 10-yr Rainfall=3.33"

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Summary for Pond IB2: EX Inf Basin #2

Inflow Area = 2.400 ac, 28.75% Impervious, Inflow Depth > 0.30" for 10-yr event
 Inflow = 0.32 cfs @ 12.94 hrs, Volume= 0.060 af
 Outflow = 0.31 cfs @ 12.96 hrs, Volume= 0.060 af, Atten= 0%, Lag= 1.7 min
 Discarded = 0.31 cfs @ 12.96 hrs, Volume= 0.060 af
 Primary = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 397.03' @ 12.96 hrs Surf.Area= 1,114 sf Storage= 29 cf

Plug-Flow detention time= 1.5 min calculated for 0.060 af (100% of inflow)
 Center-of-Mass det. time= 1.2 min (882.3 - 881.1)

Volume	Invert	Avail.Storage	Storage Description
#1	397.00'	22,978 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
397.00	1,095	0	0
398.00	1,825	1,460	1,460
399.00	2,615	2,220	3,680
400.00	3,640	3,128	6,808
401.00	4,350	3,995	10,803
402.00	20,000	12,175	22,978

Device	Routing	Invert	Outlet Devices
#1	Discarded	397.00'	25.000 in/hr Exfiltration over Surface area above 396.00' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 0 sf
#2	Primary	401.23'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.23' / 400.87' S= 0.0144 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Primary	401.06'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.06' / 400.85' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#4	Primary	401.17'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.17' / 400.96' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Discarded OutFlow Max=0.65 cfs @ 12.96 hrs HW=397.03' (Free Discharge)

↑1=Exfiltration (Controls 0.65 cfs)

Primary OutFlow Max=0.00 cfs @ 0.10 hrs HW=397.00' (Free Discharge)

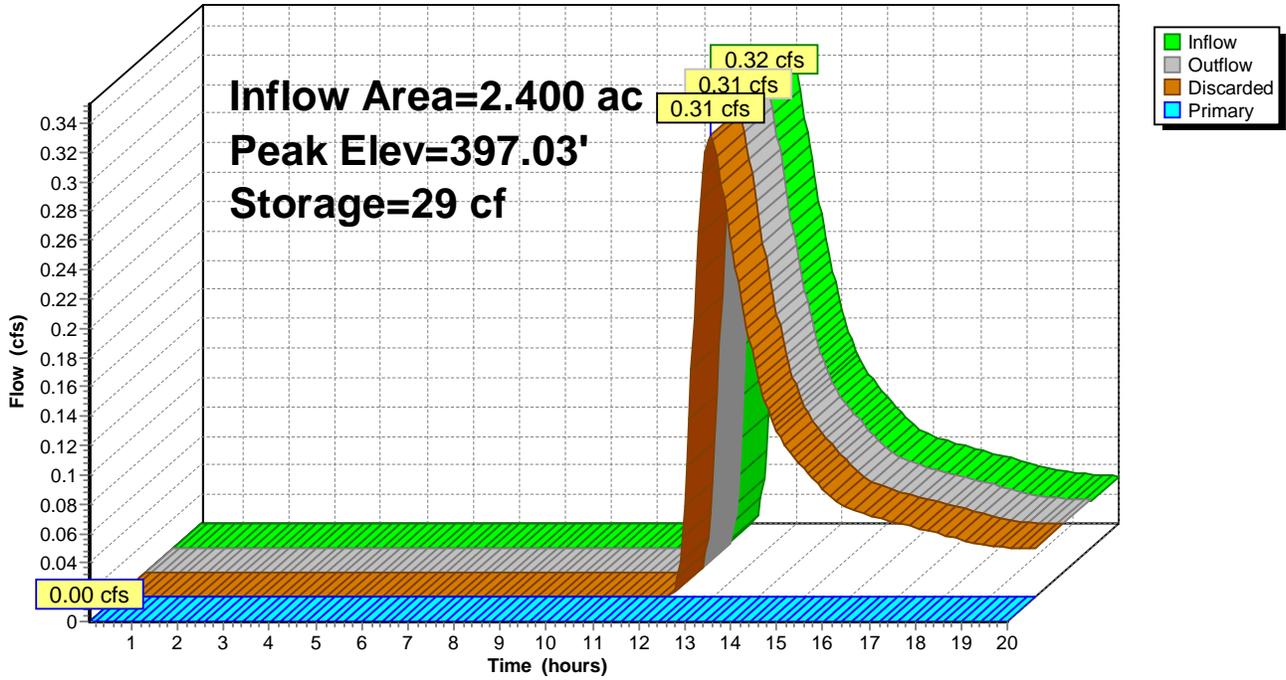
↑2=Culvert (Controls 0.00 cfs)

↑3=Culvert (Controls 0.00 cfs)

↑4=Culvert (Controls 0.00 cfs)

Pond IB2: EX Inf Basin #2

Hydrograph



2016-033.004 Existing

NRCC 24-hr A 25-yr Rainfall=4.07"

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Time span=0.10-20.00 hrs, dt=0.05 hrs, 399 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 1: EX DA #1 Runoff Area=6.460 ac 58.67% Impervious Runoff Depth>1.25"
Flow Length=445' Tc=34.9 min CN=70 Runoff=6.18 cfs 0.675 af

Subcatchment 2: EX DA #2 Runoff Area=2.400 ac 28.75% Impervious Runoff Depth>0.56"
Flow Length=257' Tc=50.2 min CN=57 Runoff=0.70 cfs 0.113 af

Reach DP: Design Point Inflow=0.01 cfs 0.000 af
Outflow=0.01 cfs 0.000 af

Pond IB1: EX Inf Basin #1 Peak Elev=398.16' Storage=8,521 cf Inflow=6.18 cfs 0.675 af
Discarded=2.90 cfs 0.670 af Primary=0.01 cfs 0.000 af Outflow=2.91 cfs 0.670 af

Pond IB2: EX Inf Basin #2 Peak Elev=397.07' Storage=77 cf Inflow=0.70 cfs 0.113 af
Discarded=0.67 cfs 0.113 af Primary=0.00 cfs 0.000 af Outflow=0.67 cfs 0.113 af

Total Runoff Area = 8.860 ac Runoff Volume = 0.788 af Average Runoff Depth = 1.07"
49.44% Pervious = 4.380 ac 50.56% Impervious = 4.480 ac

2016-033.004 Existing

NRCC 24-hr A 25-yr Rainfall=4.07"

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Summary for Subcatchment 1: EX DA #1

Runoff = 6.18 cfs @ 12.52 hrs, Volume= 0.675 af, Depth> 1.25"

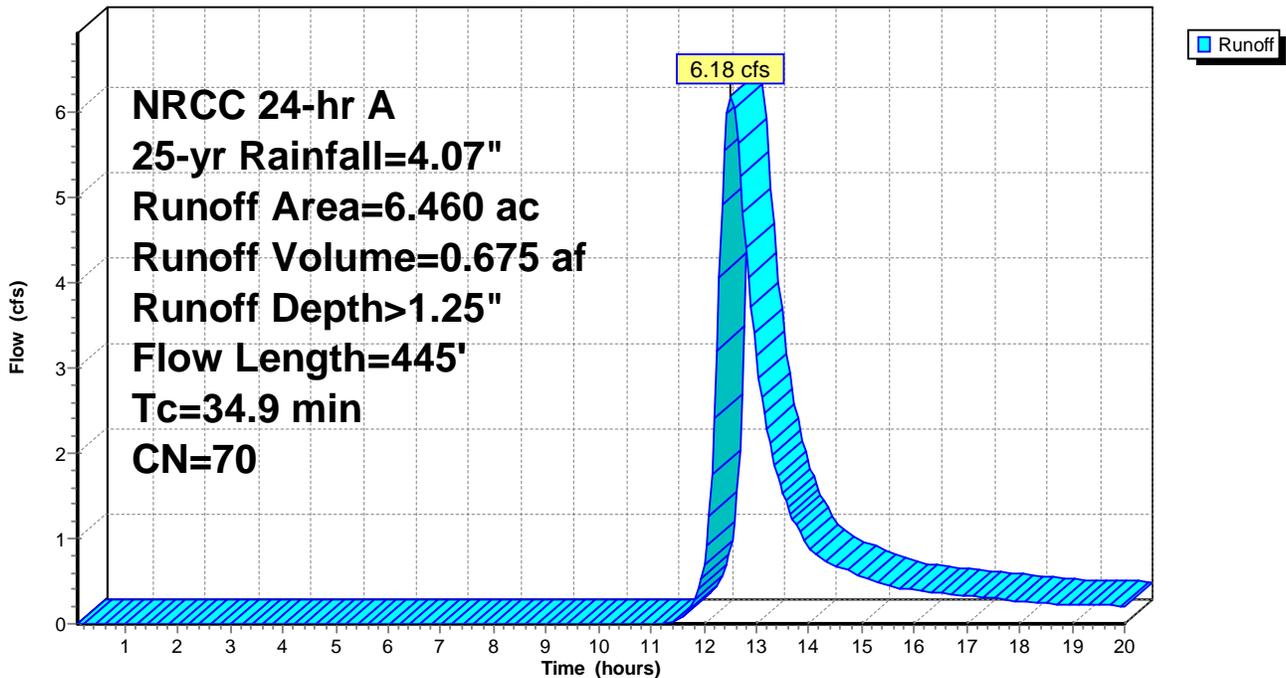
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-yr Rainfall=4.07"

Area (ac)	CN	Description
2.670	30	Meadow, non-grazed, HSG A
2.210	98	Paved parking, HSG A
1.580	98	Roofs, HSG A
6.460	70	Weighted Average
2.670		41.33% Pervious Area
3.790		58.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	100	0.0140	0.06		Sheet Flow, Lawn
					Grass: Bermuda n= 0.410 P2= 2.33"
5.3	345	0.0236	1.08		Shallow Concentrated Flow, Lawn
					Short Grass Pasture Kv= 7.0 fps
34.9	445	Total			

Subcatchment 1: EX DA #1

Hydrograph



2016-033.004 Existing

NRCC 24-hr A 25-yr Rainfall=4.07"

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Summary for Subcatchment 2: EX DA #2

Runoff = 0.70 cfs @ 12.85 hrs, Volume= 0.113 af, Depth> 0.56"

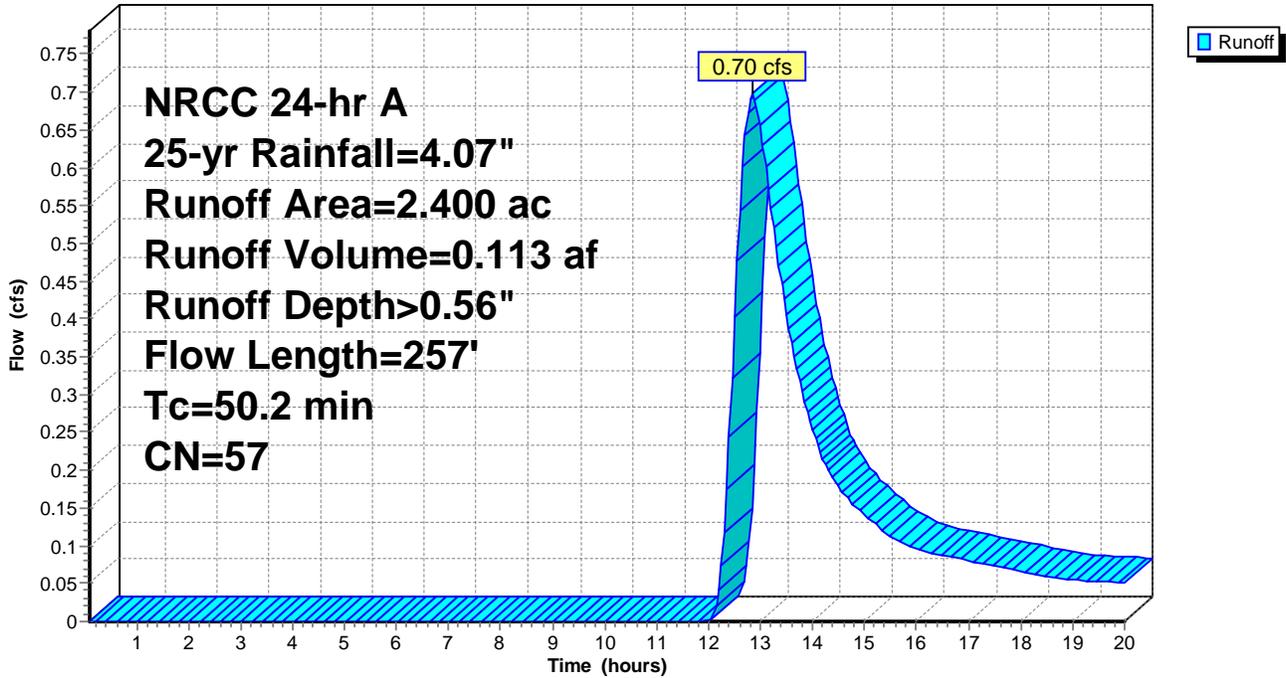
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-yr Rainfall=4.07"

Area (ac)	CN	Description
1.280	30	Meadow, non-grazed, HSG A
0.670	98	Paved parking, HSG A
0.430	71	Meadow, non-grazed, HSG C
0.020	98	Paved parking, HSG C
2.400	57	Weighted Average
1.710		71.25% Pervious Area
0.690		28.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
48.4	100	0.0041	0.03		Sheet Flow, Lawn Grass: Bermuda n= 0.410 P2= 2.33"
1.2	77	0.0230	1.06		Shallow Concentrated Flow, Lawn Short Grass Pasture Kv= 7.0 fps
0.5	35	0.0040	1.28		Shallow Concentrated Flow, Asphalt Paved Kv= 20.3 fps
0.1	45	0.0720	9.97	1.96	Pipe Channel, Storm Sewer 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
50.2	257	Total			

Subcatchment 2: EX DA #2

Hydrograph



Summary for Reach DP: Design Point

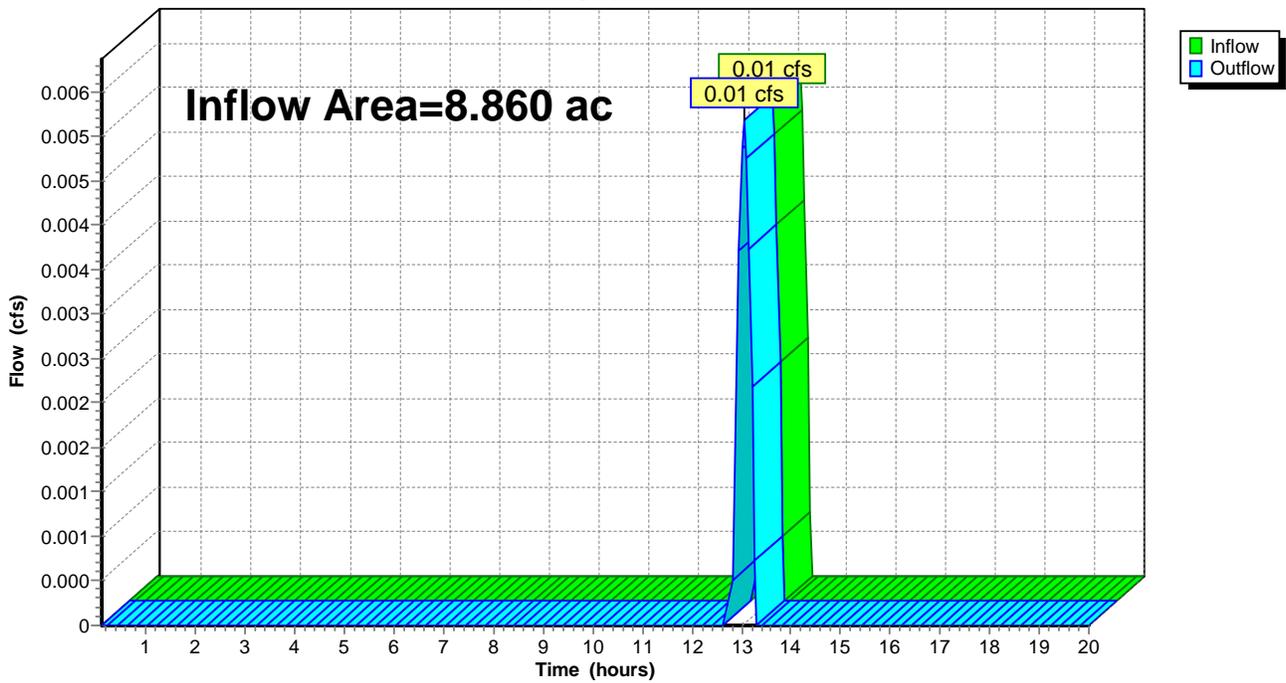
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.860 ac, 50.56% Impervious, Inflow Depth = 0.00" for 25-yr event
Inflow = 0.01 cfs @ 13.05 hrs, Volume= 0.000 af
Outflow = 0.01 cfs @ 13.05 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs

Reach DP: Design Point

Hydrograph



2016-033.004 Existing

NRCC 24-hr A 25-yr Rainfall=4.07"

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Summary for Pond IB1: EX Inf Basin #1

Inflow Area = 6.460 ac, 58.67% Impervious, Inflow Depth > 1.25" for 25-yr event
 Inflow = 6.18 cfs @ 12.52 hrs, Volume= 0.675 af
 Outflow = 2.91 cfs @ 13.05 hrs, Volume= 0.670 af, Atten= 53%, Lag= 31.6 min
 Discarded = 2.90 cfs @ 13.05 hrs, Volume= 0.670 af
 Primary = 0.01 cfs @ 13.05 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 398.16' @ 13.05 hrs Surf.Area= 7,466 sf Storage= 8,521 cf

Plug-Flow detention time= 35.6 min calculated for 0.669 af (99% of inflow)
 Center-of-Mass det. time= 32.8 min (858.9 - 826.1)

Volume	Invert	Avail.Storage	Storage Description
#1	396.66'	45,348 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
396.66	3,100	0	0
397.00	4,971	1,372	1,372
398.00	7,072	6,022	7,394
399.00	9,611	8,342	15,735
400.00	12,307	10,959	26,694
401.00	25,000	18,654	45,348

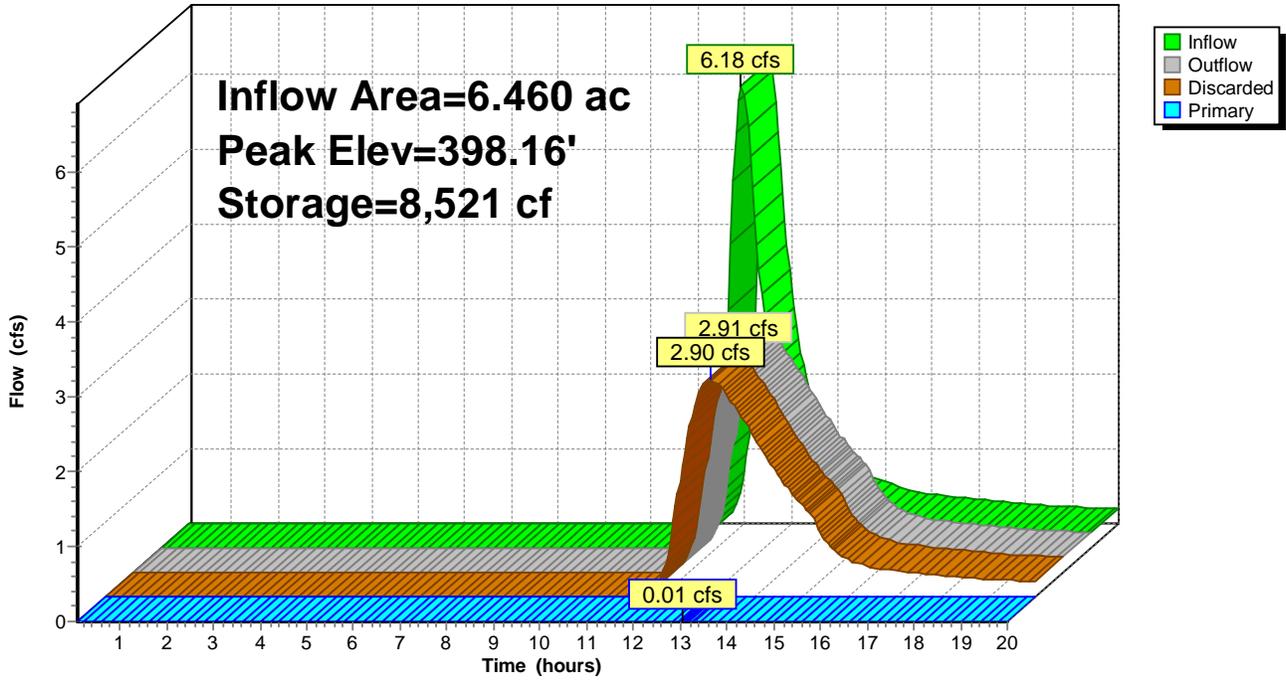
Device	Routing	Invert	Outlet Devices
#1	Discarded	396.66'	25.000 in/hr Exfiltration over Surface area above 396.66' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 3,100 sf
#2	Primary	397.79'	18.0" Round Culvert L= 18.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 397.79' / 397.43' S= 0.0195 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	398.11'	8.0" Round Culvert L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 398.11' / 398.05' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 2	399.41'	18.0" W x 12.0" H Vert. Orifice/Grate C= 0.600
#5	Device 2	400.64'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=2.90 cfs @ 13.05 hrs HW=398.15' (Free Discharge)
 ↑ **1=Exfiltration** (Controls 2.90 cfs)

Primary OutFlow Max=0.01 cfs @ 13.05 hrs HW=398.15' (Free Discharge)
 ↑ **2=Culvert** (Passes 0.01 cfs of 0.68 cfs potential flow)
 ↑ **3=Culvert** (Barrel Controls 0.01 cfs @ 0.85 fps)
 ↑ **4=Orifice/Grate** (Controls 0.00 cfs)
 ↑ **5=Orifice/Grate** (Controls 0.00 cfs)

Pond IB1: EX Inf Basin #1

Hydrograph



2016-033.004 Existing

NRCC 24-hr A 25-yr Rainfall=4.07"

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Summary for Pond IB2: EX Inf Basin #2

Inflow Area = 2.400 ac, 28.75% Impervious, Inflow Depth > 0.56" for 25-yr event
 Inflow = 0.70 cfs @ 12.85 hrs, Volume= 0.113 af
 Outflow = 0.67 cfs @ 12.97 hrs, Volume= 0.113 af, Atten= 4%, Lag= 6.7 min
 Discarded = 0.67 cfs @ 12.97 hrs, Volume= 0.113 af
 Primary = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 397.07' @ 12.97 hrs Surf.Area= 1,145 sf Storage= 77 cf

Plug-Flow detention time= 1.6 min calculated for 0.113 af (100% of inflow)
 Center-of-Mass det. time= 1.3 min (866.1 - 864.8)

Volume	Invert	Avail.Storage	Storage Description
#1	397.00'	22,978 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
397.00	1,095	0	0
398.00	1,825	1,460	1,460
399.00	2,615	2,220	3,680
400.00	3,640	3,128	6,808
401.00	4,350	3,995	10,803
402.00	20,000	12,175	22,978

Device	Routing	Invert	Outlet Devices
#1	Discarded	397.00'	25.000 in/hr Exfiltration over Surface area above 396.00' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 0 sf
#2	Primary	401.23'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.23' / 400.87' S= 0.0144 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Primary	401.06'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.06' / 400.85' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#4	Primary	401.17'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.17' / 400.96' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Discarded OutFlow Max=0.67 cfs @ 12.97 hrs HW=397.07' (Free Discharge)

↑1=Exfiltration (Controls 0.67 cfs)

Primary OutFlow Max=0.00 cfs @ 0.10 hrs HW=397.00' (Free Discharge)

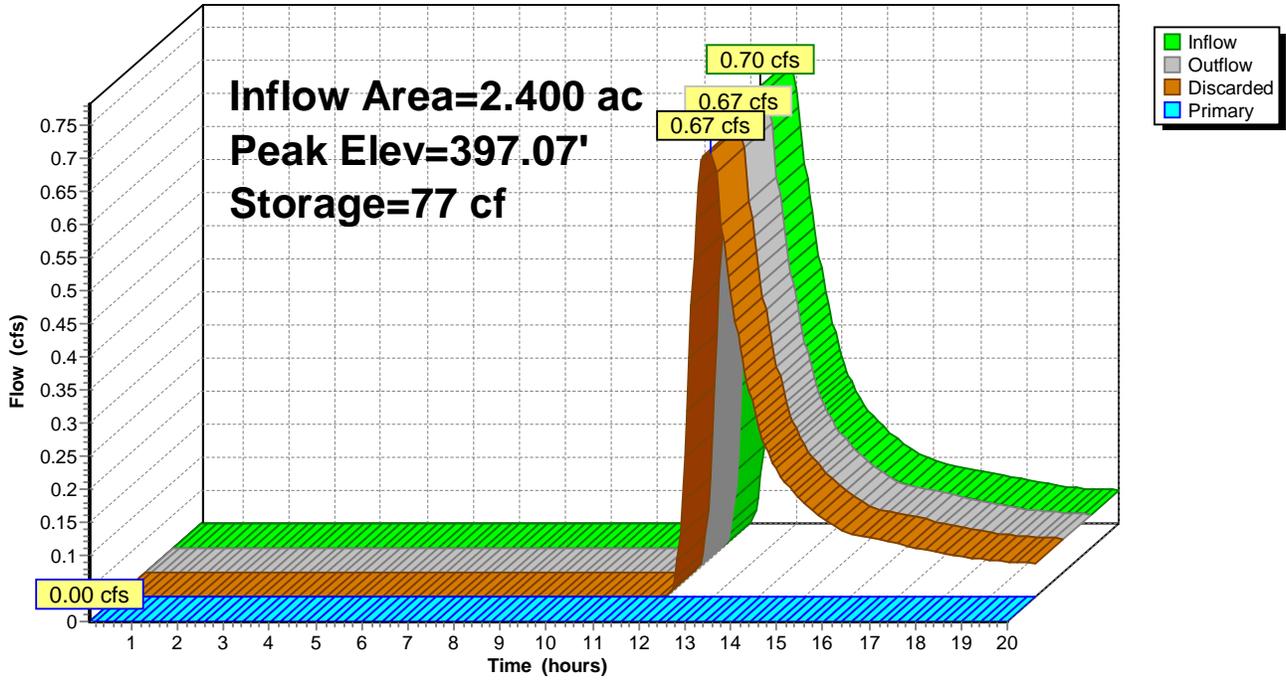
↑2=Culvert (Controls 0.00 cfs)

↑3=Culvert (Controls 0.00 cfs)

↑4=Culvert (Controls 0.00 cfs)

Pond IB2: EX Inf Basin #2

Hydrograph



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NRCC 24-hr A 50-yr Rainfall=4.75"

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Time span=0.10-20.00 hrs, dt=0.05 hrs, 399 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 1: EX DA #1 Runoff Area=6.460 ac 58.67% Impervious Runoff Depth>1.70"
Flow Length=445' Tc=34.9 min CN=70 Runoff=8.51 cfs 0.915 af

Subcatchment 2: EX DA #2 Runoff Area=2.400 ac 28.75% Impervious Runoff Depth>0.86"
Flow Length=257' Tc=50.2 min CN=57 Runoff=1.15 cfs 0.172 af

Reach DP: Design Point Inflow=0.48 cfs 0.027 af
Outflow=0.48 cfs 0.027 af

Pond IB1: EX Inf Basin #1 Peak Elev=398.59' Storage=11,974 cf Inflow=8.51 cfs 0.915 af
Discarded=3.73 cfs 0.882 af Primary=0.48 cfs 0.027 af Outflow=4.22 cfs 0.908 af

Pond IB2: EX Inf Basin #2 Peak Elev=397.48' Storage=605 cf Inflow=1.15 cfs 0.172 af
Discarded=0.89 cfs 0.172 af Primary=0.00 cfs 0.000 af Outflow=0.89 cfs 0.172 af

Total Runoff Area = 8.860 ac Runoff Volume = 1.087 af Average Runoff Depth = 1.47"
49.44% Pervious = 4.380 ac 50.56% Impervious = 4.480 ac

2016-033.004 Existing

NRCC 24-hr A 50-yr Rainfall=4.75"

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Summary for Subcatchment 1: EX DA #1

Runoff = 8.51 cfs @ 12.51 hrs, Volume= 0.915 af, Depth> 1.70"

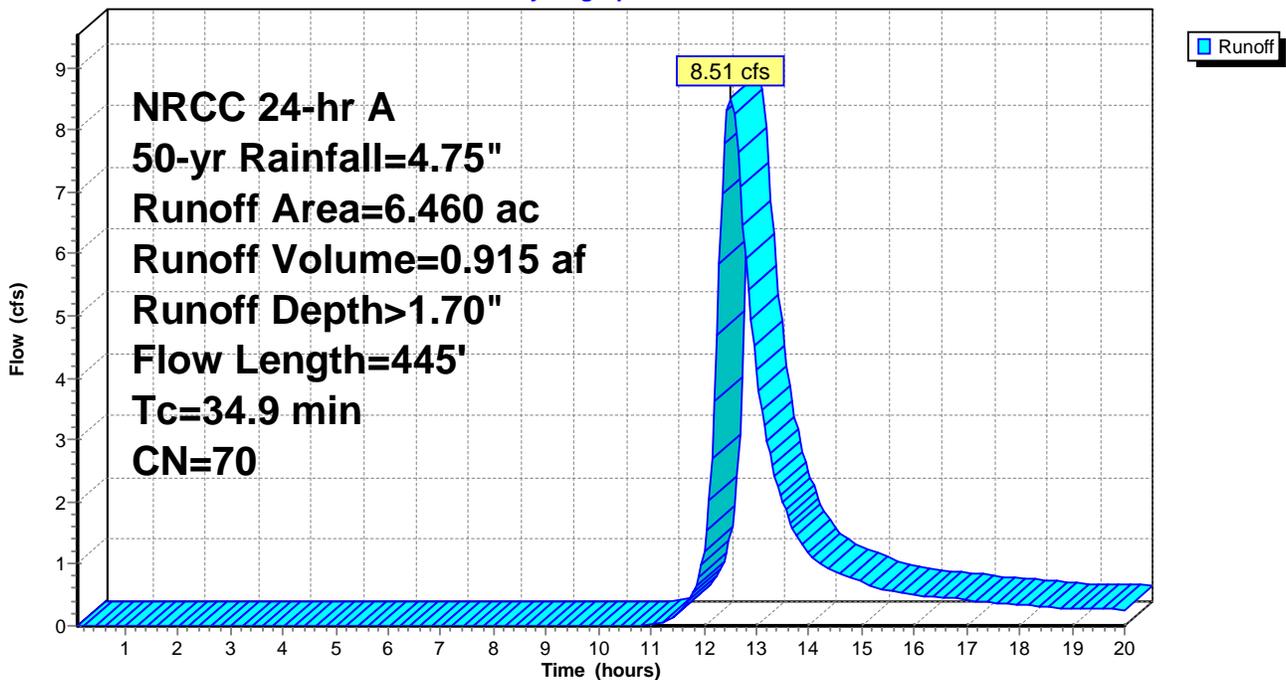
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-yr Rainfall=4.75"

Area (ac)	CN	Description
2.670	30	Meadow, non-grazed, HSG A
2.210	98	Paved parking, HSG A
1.580	98	Roofs, HSG A
6.460	70	Weighted Average
2.670		41.33% Pervious Area
3.790		58.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	100	0.0140	0.06		Sheet Flow, Lawn
					Grass: Bermuda n= 0.410 P2= 2.33"
5.3	345	0.0236	1.08		Shallow Concentrated Flow, Lawn
					Short Grass Pasture Kv= 7.0 fps
34.9	445	Total			

Subcatchment 1: EX DA #1

Hydrograph



2016-033.004 Existing

NRCC 24-hr A 50-yr Rainfall=4.75"

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Summary for Subcatchment 2: EX DA #2

Runoff = 1.15 cfs @ 12.81 hrs, Volume= 0.172 af, Depth> 0.86"

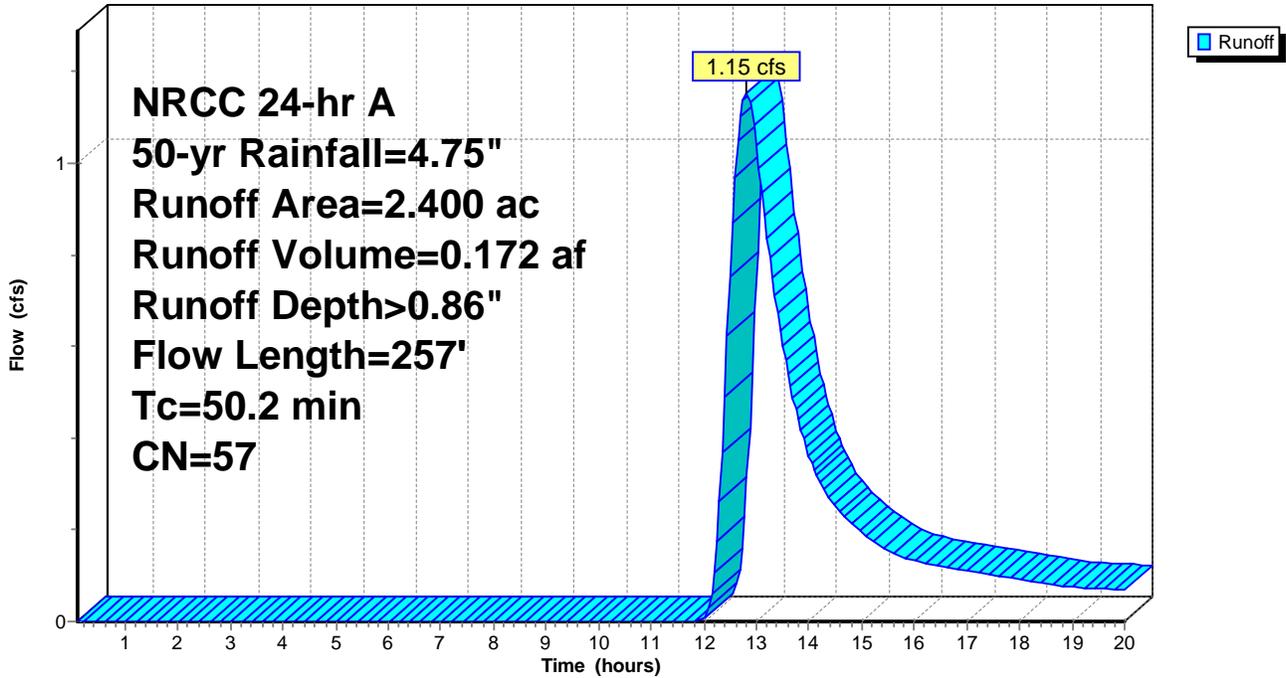
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-yr Rainfall=4.75"

Area (ac)	CN	Description
1.280	30	Meadow, non-grazed, HSG A
0.670	98	Paved parking, HSG A
0.430	71	Meadow, non-grazed, HSG C
0.020	98	Paved parking, HSG C
2.400	57	Weighted Average
1.710		71.25% Pervious Area
0.690		28.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
48.4	100	0.0041	0.03		Sheet Flow, Lawn Grass: Bermuda n= 0.410 P2= 2.33"
1.2	77	0.0230	1.06		Shallow Concentrated Flow, Lawn Short Grass Pasture Kv= 7.0 fps
0.5	35	0.0040	1.28		Shallow Concentrated Flow, Asphalt Paved Kv= 20.3 fps
0.1	45	0.0720	9.97	1.96	Pipe Channel, Storm Sewer 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
50.2	257	Total			

Subcatchment 2: EX DA #2

Hydrograph



Summary for Reach DP: Design Point

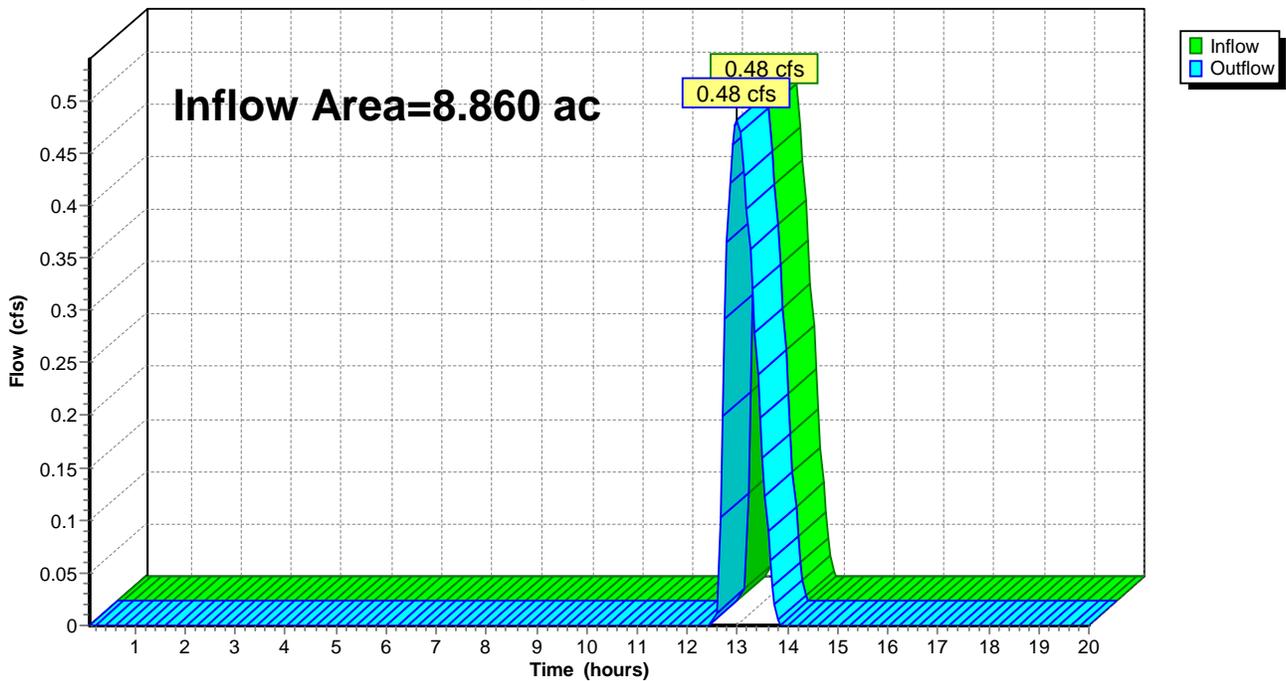
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.860 ac, 50.56% Impervious, Inflow Depth = 0.04" for 50-yr event
Inflow = 0.48 cfs @ 12.99 hrs, Volume= 0.027 af
Outflow = 0.48 cfs @ 12.99 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs

Reach DP: Design Point

Hydrograph



2016-033.004 Existing

NRCC 24-hr A 50-yr Rainfall=4.75"

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Summary for Pond IB1: EX Inf Basin #1

Inflow Area = 6.460 ac, 58.67% Impervious, Inflow Depth > 1.70" for 50-yr event
 Inflow = 8.51 cfs @ 12.51 hrs, Volume= 0.915 af
 Outflow = 4.22 cfs @ 12.99 hrs, Volume= 0.908 af, Atten= 50%, Lag= 28.9 min
 Discarded = 3.73 cfs @ 12.99 hrs, Volume= 0.882 af
 Primary = 0.48 cfs @ 12.99 hrs, Volume= 0.027 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 398.59' @ 12.99 hrs Surf.Area= 8,560 sf Storage= 11,974 cf

Plug-Flow detention time= 38.5 min calculated for 0.906 af (99% of inflow)
 Center-of-Mass det. time= 35.8 min (856.5 - 820.7)

Volume	Invert	Avail.Storage	Storage Description
#1	396.66'	45,348 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
396.66	3,100	0	0
397.00	4,971	1,372	1,372
398.00	7,072	6,022	7,394
399.00	9,611	8,342	15,735
400.00	12,307	10,959	26,694
401.00	25,000	18,654	45,348

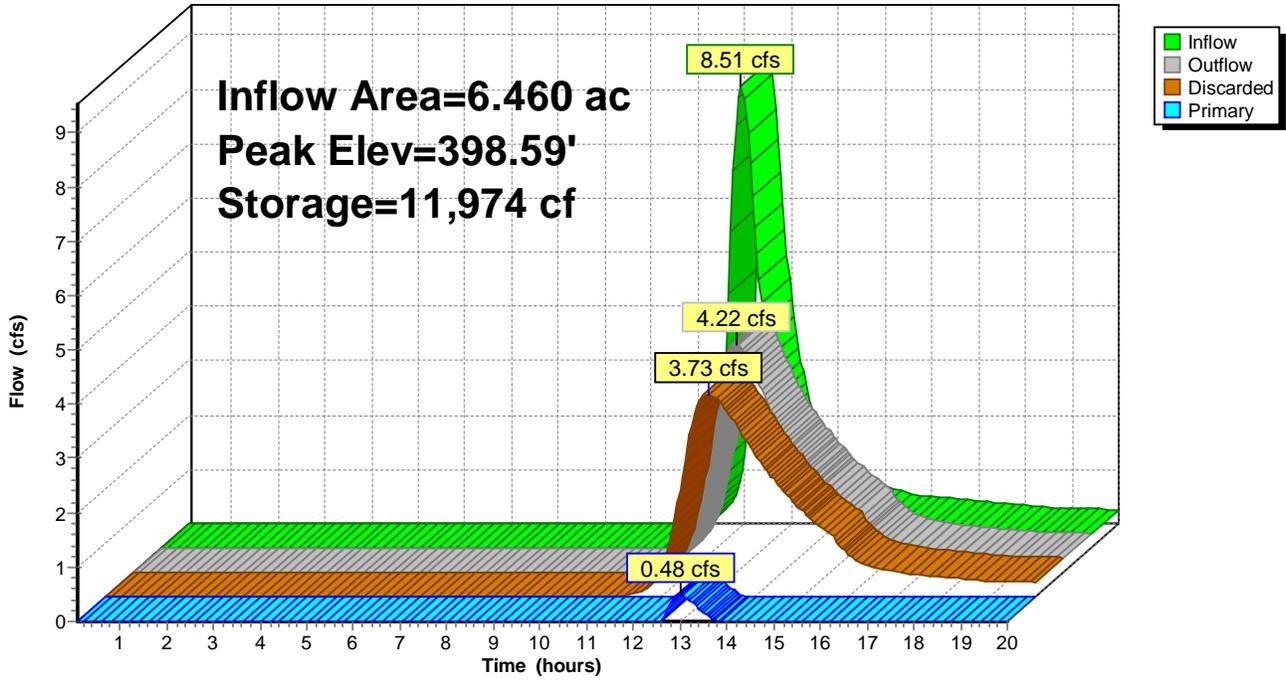
Device	Routing	Invert	Outlet Devices
#1	Discarded	396.66'	25.000 in/hr Exfiltration over Surface area above 396.66' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 3,100 sf
#2	Primary	397.79'	18.0" Round Culvert L= 18.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 397.79' / 397.43' S= 0.0195 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	398.11'	8.0" Round Culvert L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 398.11' / 398.05' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 2	399.41'	18.0" W x 12.0" H Vert. Orifice/Grate C= 0.600
#5	Device 2	400.64'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=3.73 cfs @ 12.99 hrs HW=398.59' (Free Discharge)
 ↑1=Exfiltration (Controls 3.73 cfs)

Primary OutFlow Max=0.48 cfs @ 12.99 hrs HW=398.59' (Free Discharge)
 ↑2=Culvert (Passes 0.48 cfs of 2.84 cfs potential flow)
 ↑3=Culvert (Barrel Controls 0.48 cfs @ 2.53 fps)
 ↑4=Orifice/Grate (Controls 0.00 cfs)
 ↑5=Orifice/Grate (Controls 0.00 cfs)

Pond IB1: EX Inf Basin #1

Hydrograph



Summary for Pond IB2: EX Inf Basin #2

Inflow Area = 2.400 ac, 28.75% Impervious, Inflow Depth > 0.86" for 50-yr event
 Inflow = 1.15 cfs @ 12.81 hrs, Volume= 0.172 af
 Outflow = 0.89 cfs @ 13.14 hrs, Volume= 0.172 af, Atten= 22%, Lag= 19.9 min
 Discarded = 0.89 cfs @ 13.14 hrs, Volume= 0.172 af
 Primary = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 397.48' @ 13.14 hrs Surf.Area= 1,443 sf Storage= 605 cf

Plug-Flow detention time= 5.0 min calculated for 0.171 af (100% of inflow)
 Center-of-Mass det. time= 4.7 min (860.3 - 855.6)

Volume	Invert	Avail.Storage	Storage Description
#1	397.00'	22,978 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
397.00	1,095	0	0
398.00	1,825	1,460	1,460
399.00	2,615	2,220	3,680
400.00	3,640	3,128	6,808
401.00	4,350	3,995	10,803
402.00	20,000	12,175	22,978

Device	Routing	Invert	Outlet Devices
#1	Discarded	397.00'	25.000 in/hr Exfiltration over Surface area above 396.00' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 0 sf
#2	Primary	401.23'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.23' / 400.87' S= 0.0144 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Primary	401.06'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.06' / 400.85' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#4	Primary	401.17'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.17' / 400.96' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Discarded OutFlow Max=0.89 cfs @ 13.14 hrs HW=397.48' (Free Discharge)

↑1=Exfiltration (Controls 0.89 cfs)

Primary OutFlow Max=0.00 cfs @ 0.10 hrs HW=397.00' (Free Discharge)

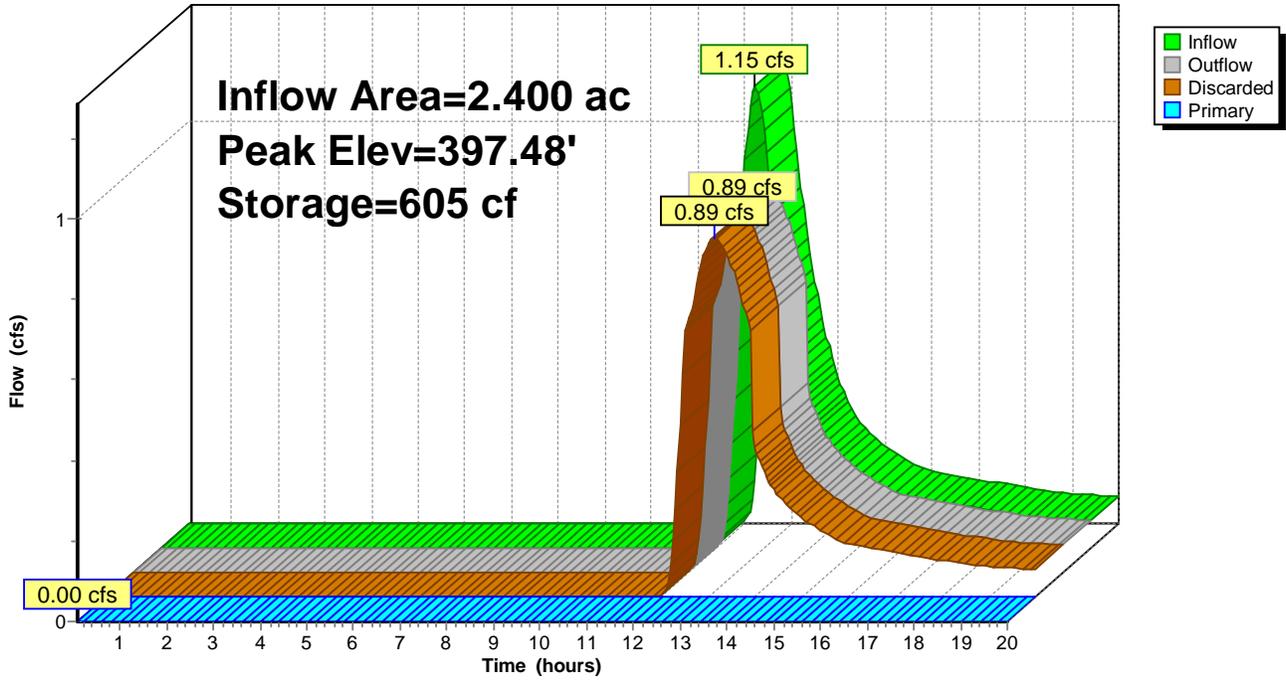
↑2=Culvert (Controls 0.00 cfs)

↑3=Culvert (Controls 0.00 cfs)

↑4=Culvert (Controls 0.00 cfs)

Pond IB2: EX Inf Basin #2

Hydrograph



2016-033.004 Existing

NRCC 24-hr A 100-yr Rainfall=5.54"

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Time span=0.10-20.00 hrs, dt=0.05 hrs, 399 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 1: EX DA #1 Runoff Area=6.460 ac 58.67% Impervious Runoff Depth>2.25"
Flow Length=445' Tc=34.9 min CN=70 Runoff=11.38 cfs 1.214 af

Subcatchment 2: EX DA #2 Runoff Area=2.400 ac 28.75% Impervious Runoff Depth>1.25"
Flow Length=257' Tc=50.2 min CN=57 Runoff=1.77 cfs 0.251 af

Reach DP: Design Point Inflow=1.16 cfs 0.092 af
Outflow=1.16 cfs 0.092 af

Pond IB1: EX Inf Basin #1 Peak Elev=399.03' Storage=16,031 cf Inflow=11.38 cfs 1.214 af
Discarded=4.63 cfs 1.113 af Primary=1.16 cfs 0.092 af Outflow=5.79 cfs 1.205 af

Pond IB2: EX Inf Basin #2 Peak Elev=398.03' Storage=1,522 cf Inflow=1.77 cfs 0.251 af
Discarded=1.22 cfs 0.251 af Primary=0.00 cfs 0.000 af Outflow=1.22 cfs 0.251 af

Total Runoff Area = 8.860 ac Runoff Volume = 1.464 af Average Runoff Depth = 1.98"
49.44% Pervious = 4.380 ac 50.56% Impervious = 4.480 ac

2016-033.004 Existing

NRCC 24-hr A 100-yr Rainfall=5.54"

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Summary for Subcatchment 1: EX DA #1

Runoff = 11.38 cfs @ 12.50 hrs, Volume= 1.214 af, Depth> 2.25"

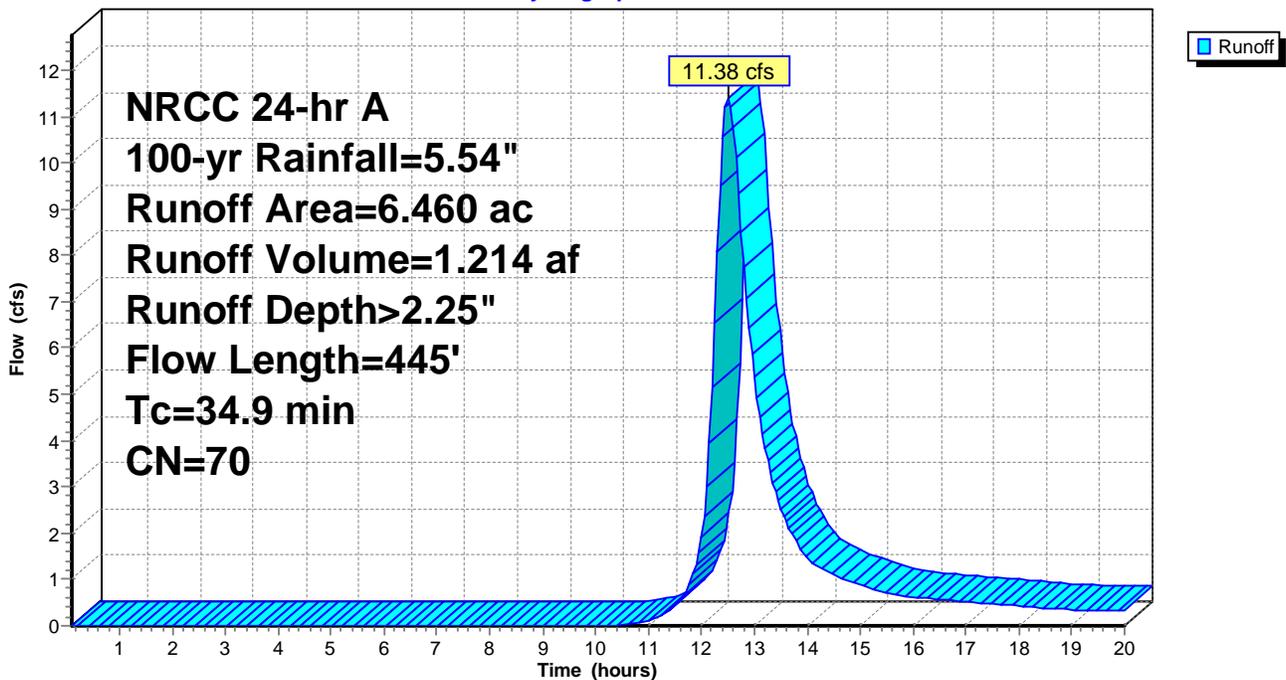
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-yr Rainfall=5.54"

Area (ac)	CN	Description
2.670	30	Meadow, non-grazed, HSG A
2.210	98	Paved parking, HSG A
1.580	98	Roofs, HSG A
6.460	70	Weighted Average
2.670		41.33% Pervious Area
3.790		58.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	100	0.0140	0.06		Sheet Flow, Lawn
					Grass: Bermuda n= 0.410 P2= 2.33"
5.3	345	0.0236	1.08		Shallow Concentrated Flow, Lawn
					Short Grass Pasture Kv= 7.0 fps
34.9	445	Total			

Subcatchment 1: EX DA #1

Hydrograph



2016-033.004 Existing

NRCC 24-hr A 100-yr Rainfall=5.54"

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Summary for Subcatchment 2: EX DA #2

Runoff = 1.77 cfs @ 12.78 hrs, Volume= 0.251 af, Depth> 1.25"

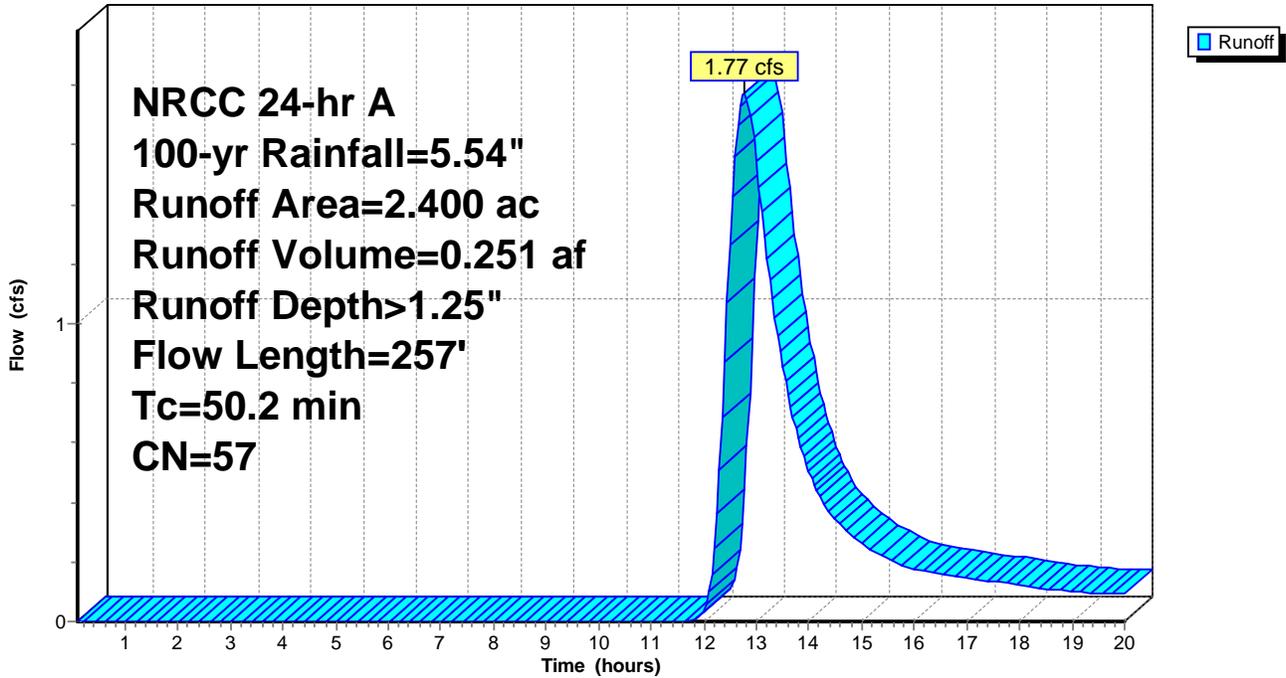
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-yr Rainfall=5.54"

Area (ac)	CN	Description
1.280	30	Meadow, non-grazed, HSG A
0.670	98	Paved parking, HSG A
0.430	71	Meadow, non-grazed, HSG C
0.020	98	Paved parking, HSG C
2.400	57	Weighted Average
1.710		71.25% Pervious Area
0.690		28.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
48.4	100	0.0041	0.03		Sheet Flow, Lawn Grass: Bermuda n= 0.410 P2= 2.33"
1.2	77	0.0230	1.06		Shallow Concentrated Flow, Lawn Short Grass Pasture Kv= 7.0 fps
0.5	35	0.0040	1.28		Shallow Concentrated Flow, Asphalt Paved Kv= 20.3 fps
0.1	45	0.0720	9.97	1.96	Pipe Channel, Storm Sewer 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
50.2	257	Total			

Subcatchment 2: EX DA #2

Hydrograph



Summary for Reach DP: Design Point

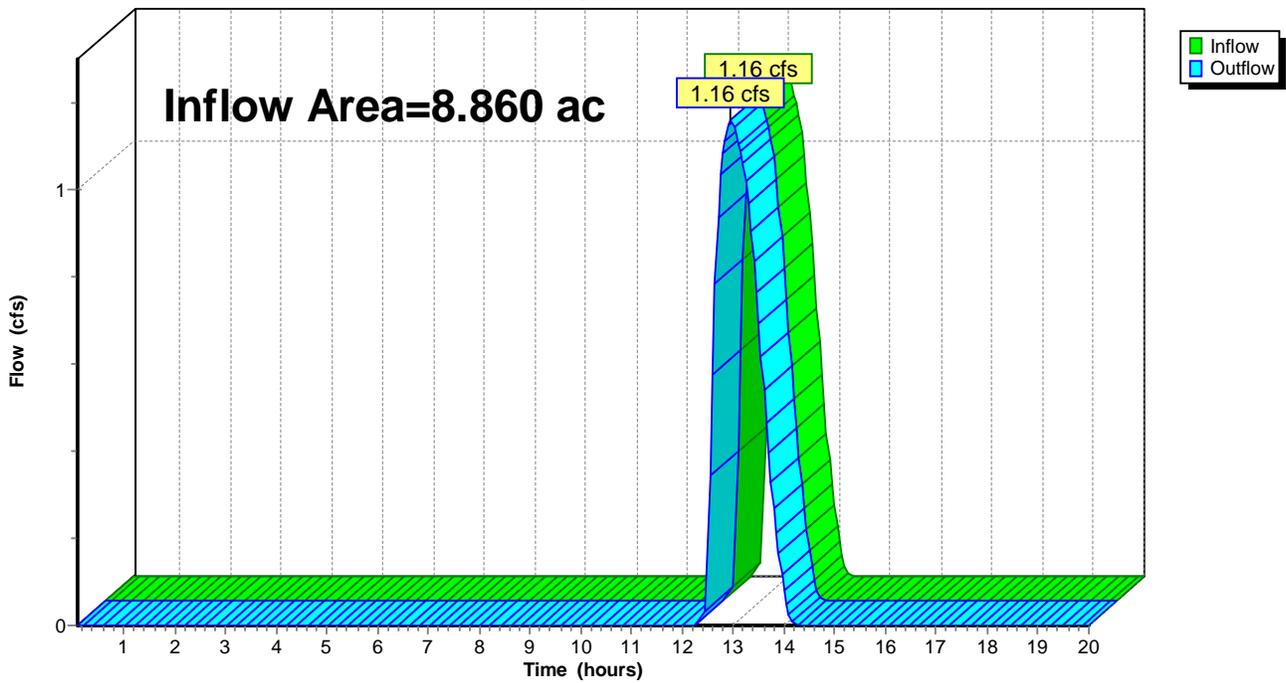
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.860 ac, 50.56% Impervious, Inflow Depth = 0.12" for 100-yr event
Inflow = 1.16 cfs @ 12.96 hrs, Volume= 0.092 af
Outflow = 1.16 cfs @ 12.96 hrs, Volume= 0.092 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs

Reach DP: Design Point

Hydrograph



Summary for Pond IB1: EX Inf Basin #1

Inflow Area = 6.460 ac, 58.67% Impervious, Inflow Depth > 2.25" for 100-yr event
 Inflow = 11.38 cfs @ 12.50 hrs, Volume= 1.214 af
 Outflow = 5.79 cfs @ 12.96 hrs, Volume= 1.205 af, Atten= 49%, Lag= 27.4 min
 Discarded = 4.63 cfs @ 12.96 hrs, Volume= 1.113 af
 Primary = 1.16 cfs @ 12.96 hrs, Volume= 0.092 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 399.03' @ 12.96 hrs Surf.Area= 9,694 sf Storage= 16,031 cf

Plug-Flow detention time= 39.6 min calculated for 1.205 af (99% of inflow)
 Center-of-Mass det. time= 37.0 min (852.8 - 815.8)

Volume	Invert	Avail.Storage	Storage Description
#1	396.66'	45,348 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
396.66	3,100	0	0
397.00	4,971	1,372	1,372
398.00	7,072	6,022	7,394
399.00	9,611	8,342	15,735
400.00	12,307	10,959	26,694
401.00	25,000	18,654	45,348

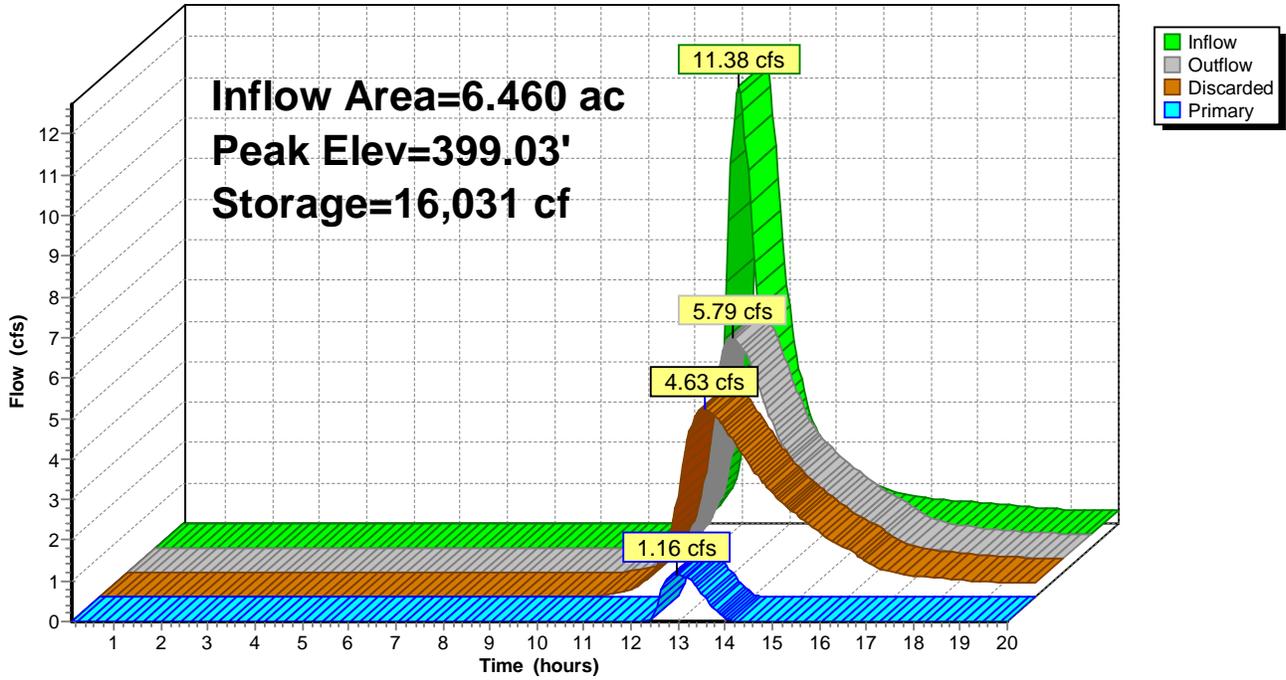
Device	Routing	Invert	Outlet Devices
#1	Discarded	396.66'	25.000 in/hr Exfiltration over Surface area above 396.66' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 3,100 sf
#2	Primary	397.79'	18.0" Round Culvert L= 18.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 397.79' / 397.43' S= 0.0195 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	398.11'	8.0" Round Culvert L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 398.11' / 398.05' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 2	399.41'	18.0" W x 12.0" H Vert. Orifice/Grate C= 0.600
#5	Device 2	400.64'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=4.63 cfs @ 12.96 hrs HW=399.03' (Free Discharge)
 ↑ **1=Exfiltration** (Controls 4.63 cfs)

Primary OutFlow Max=1.16 cfs @ 12.96 hrs HW=399.03' (Free Discharge)
 ↑ **2=Culvert** (Passes 1.16 cfs of 5.65 cfs potential flow)
 ↑ **3=Culvert** (Barrel Controls 1.16 cfs @ 3.33 fps)
 ↑ **4=Orifice/Grate** (Controls 0.00 cfs)
 ↑ **5=Orifice/Grate** (Controls 0.00 cfs)

Pond IB1: EX Inf Basin #1

Hydrograph



Summary for Pond IB2: EX Inf Basin #2

Inflow Area = 2.400 ac, 28.75% Impervious, Inflow Depth > 1.25" for 100-yr event
 Inflow = 1.77 cfs @ 12.78 hrs, Volume= 0.251 af
 Outflow = 1.22 cfs @ 13.20 hrs, Volume= 0.251 af, Atten= 31%, Lag= 25.2 min
 Discarded = 1.22 cfs @ 13.20 hrs, Volume= 0.251 af
 Primary = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 398.03' @ 13.20 hrs Surf.Area= 1,852 sf Storage= 1,522 cf

Plug-Flow detention time= 10.5 min calculated for 0.251 af (100% of inflow)
 Center-of-Mass det. time= 10.2 min (858.3 - 848.1)

Volume	Invert	Avail.Storage	Storage Description
#1	397.00'	22,978 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
397.00	1,095	0	0
398.00	1,825	1,460	1,460
399.00	2,615	2,220	3,680
400.00	3,640	3,128	6,808
401.00	4,350	3,995	10,803
402.00	20,000	12,175	22,978

Device	Routing	Invert	Outlet Devices
#1	Discarded	397.00'	25.000 in/hr Exfiltration over Surface area above 396.00' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 0 sf
#2	Primary	401.23'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.23' / 400.87' S= 0.0144 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Primary	401.06'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.06' / 400.85' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#4	Primary	401.17'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.17' / 400.96' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Discarded OutFlow Max=1.22 cfs @ 13.20 hrs HW=398.03' (Free Discharge)

↑ **1=Exfiltration** (Controls 1.22 cfs)

Primary OutFlow Max=0.00 cfs @ 0.10 hrs HW=397.00' (Free Discharge)

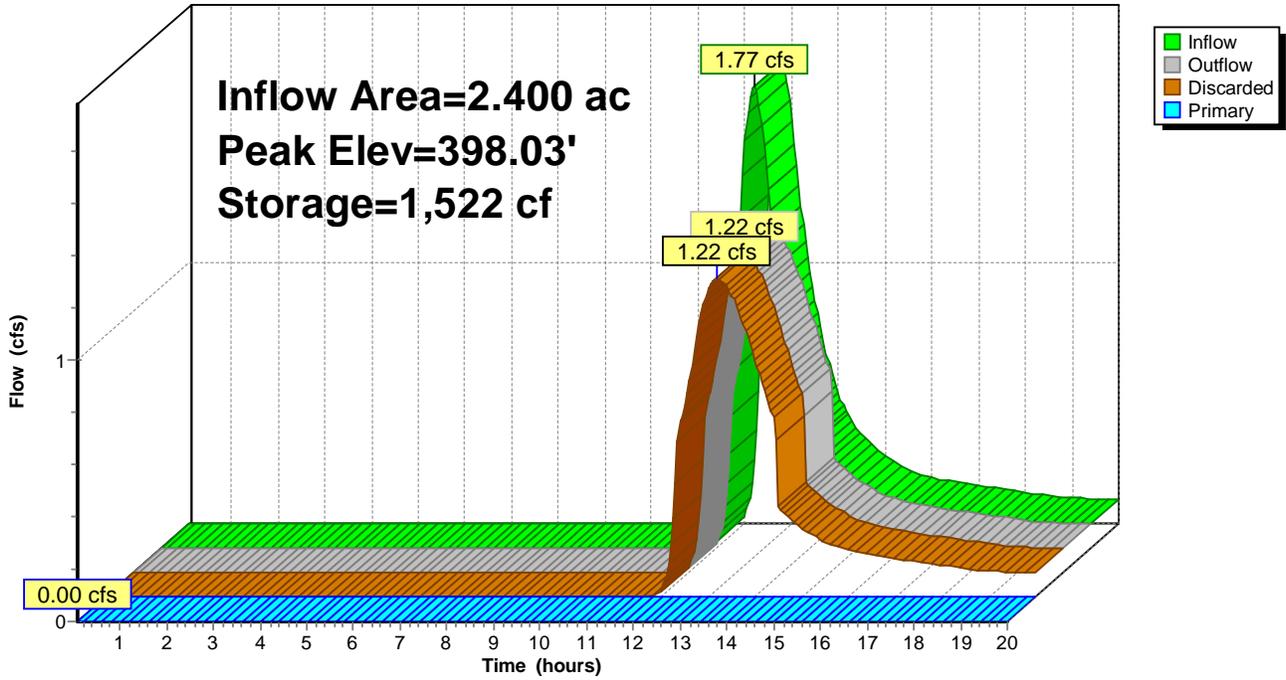
↑ **2=Culvert** (Controls 0.00 cfs)

↑ **3=Culvert** (Controls 0.00 cfs)

↑ **4=Culvert** (Controls 0.00 cfs)

Pond IB2: EX Inf Basin #2

Hydrograph



LEGEND	EXISTING	PROPOSED
8' CONTOUR	---	---
1' CONTOUR	---	---
PROPERTY LINE	---	---
RIGHT OF WAY	---	---
SETBACK	---	---
BUILDING	---	---
ASPHALT PAVEMENT	---	---
CURB	---	---
SIDEWALK	---	---
EDGE OF GRAVEL	---	---
FENCE	---	---
WATERLINE	---	---
SANITARY SEWER	---	---
STORM SEWER	---	---
OVERHEAD UTILITIES	---	---
UNDERGROUND ELECTRIC	---	---
GAS	---	---
ROOF DRAIN PIPE	---	---
FIRE HYDRANT	---	---
WATER VALVE	---	---
SANITARY MANHOLE	---	---
STORM MANHOLE	---	---
CATCH BASIN	---	---
UTILITY POLE AND GUY	---	---
LIGHT POLE	---	---



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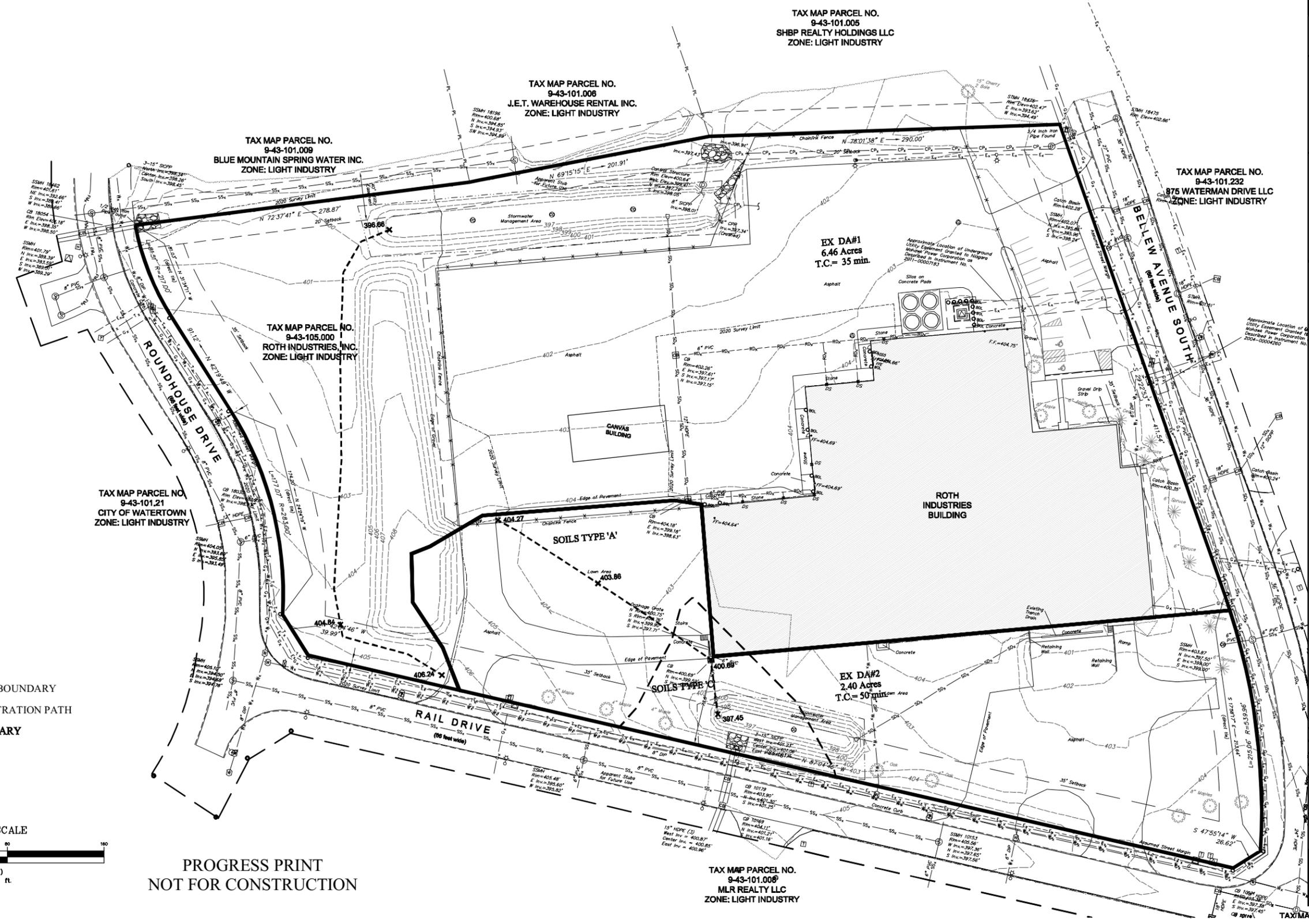
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**ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT**
268 BELLEW AVENUE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

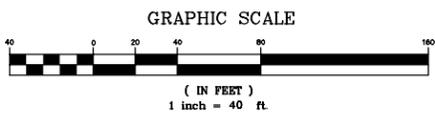
PROJECT NO: 2016-033.004
SCALE: 1"=40'
DRAWN BY: JLV/TFT
CHECKED BY: MRM
ISSUE DATES:
02/18/2020

EXISTING DRAINAGE AREA MAP
EX-1



DRAINAGE MAP LEGEND (EXISTING)

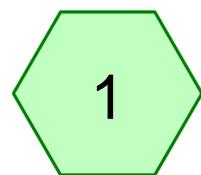
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---	TIME OF CONCENTRATION PATH
---	SOIL TYPE BOUNDARY



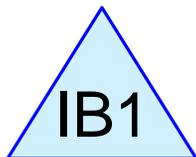
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9-43-101.006
MLR REALTY LLC
ZONE: LIGHT INDUSTRY

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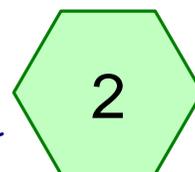
PR DA #1



PR Inf Basin #1



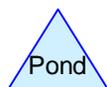
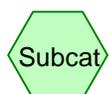
Design Point



EX DA #2



PR Inf Basin #2



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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.600	30	Meadow, non-grazed, HSG A (1, 2)
0.430	71	Meadow, non-grazed, HSG C (2)
2.990	98	Paved parking, HSG A (1, 2)
0.020	98	Paved parking, HSG C (2)
1.820	98	Roofs, HSG A (1)
8.860	69	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
8.410	HSG A	1, 2
0.000	HSG B	
0.450	HSG C	2
0.000	HSG D	
0.000	Other	
8.860		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
3.600	0.000	0.430	0.000	0.000	4.030	Meadow, non-grazed	1, 2
2.990	0.000	0.020	0.000	0.000	3.010	Paved parking	1, 2
1.820	0.000	0.000	0.000	0.000	1.820	Roofs	1
8.410	0.000	0.450	0.000	0.000	8.860	TOTAL AREA	

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	2	0.00	0.00	45.0	0.0720	0.010	6.0	0.0	0.0
2	IB1	397.79	397.43	18.5	0.0195	0.013	18.0	0.0	0.0
3	IB1	398.11	398.05	6.0	0.0100	0.013	8.0	0.0	0.0
4	IB2	401.23	400.87	25.0	0.0144	0.013	15.0	0.0	0.0
5	IB2	401.06	400.85	25.0	0.0084	0.013	15.0	0.0	0.0
6	IB2	401.17	400.96	25.0	0.0084	0.013	15.0	0.0	0.0

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NRCC 24-hr A 10-yr Rainfall=3.33"

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Time span=0.10-20.00 hrs, dt=0.05 hrs, 399 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 1: PR DA #1

Runoff Area=6.440 ac 62.58% Impervious Runoff Depth>0.97"
Flow Length=459' Tc=34.0 min CN=73 Runoff=4.80 cfs 0.521 af

Subcatchment 2: EX DA #2

Runoff Area=2.420 ac 33.06% Impervious Runoff Depth>0.40"
Flow Length=257' Tc=50.2 min CN=60 Runoff=0.47 cfs 0.080 af

Reach DP: Design Point

Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Pond IB1: PR Inf Basin #1

Peak Elev=397.82' Storage=6,165 cf Inflow=4.80 cfs 0.521 af
Discarded=2.33 cfs 0.517 af Primary=0.00 cfs 0.000 af Outflow=2.33 cfs 0.517 af

Pond IB2: PR Inf Basin #2

Peak Elev=397.04' Storage=43 cf Inflow=0.47 cfs 0.080 af
Discarded=0.47 cfs 0.080 af Primary=0.00 cfs 0.000 af Outflow=0.47 cfs 0.080 af

Total Runoff Area = 8.860 ac Runoff Volume = 0.601 af Average Runoff Depth = 0.81"
45.49% Pervious = 4.030 ac 54.51% Impervious = 4.830 ac

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NRCC 24-hr A 10-yr Rainfall=3.33"

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Summary for Subcatchment 1: PR DA #1

Runoff = 4.80 cfs @ 12.51 hrs, Volume= 0.521 af, Depth> 0.97"

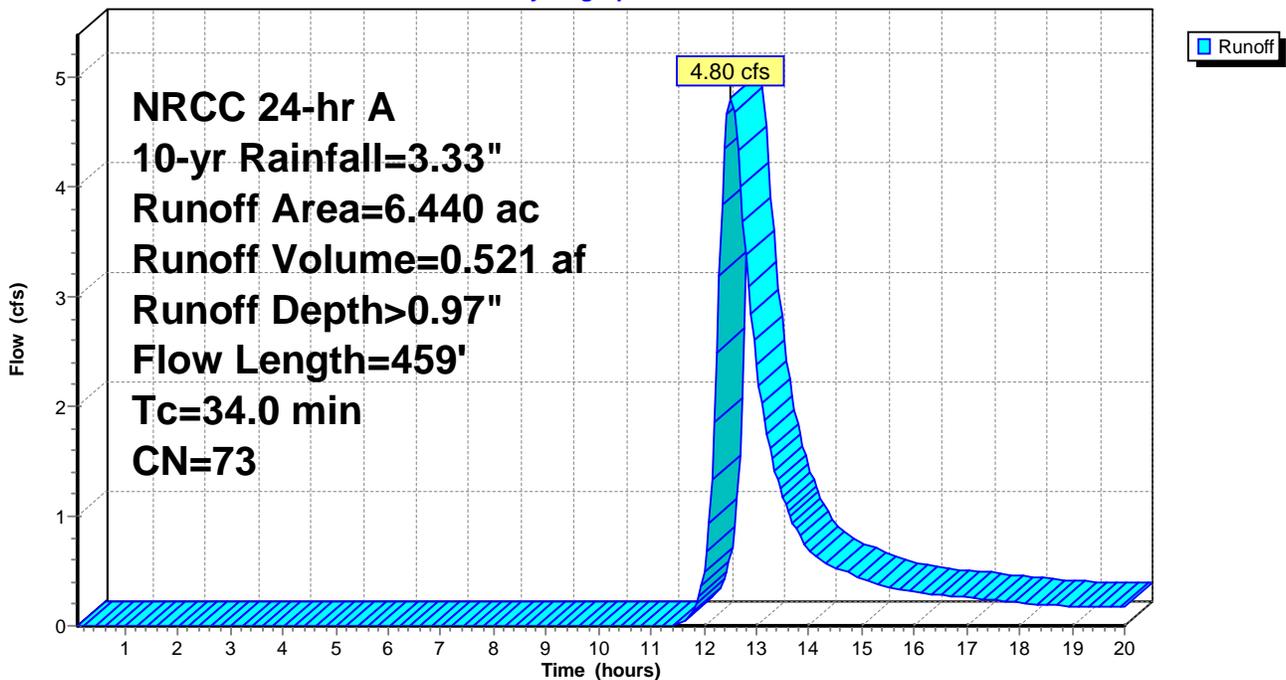
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-yr Rainfall=3.33"

Area (ac)	CN	Description
2.410	30	Meadow, non-grazed, HSG A
2.210	98	Paved parking, HSG A
1.820	98	Roofs, HSG A
6.440	73	Weighted Average
2.410		37.42% Pervious Area
4.030		62.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3	100	0.0157	0.06		Sheet Flow, Lawn
					Grass: Bermuda n= 0.410 P2= 2.33"
5.7	359	0.0223	1.05		Shallow Concentrated Flow, Lawn
					Short Grass Pasture Kv= 7.0 fps
34.0	459	Total			

Subcatchment 1: PR DA #1

Hydrograph



2016-033.004 Proposed

NRCC 24-hr A 10-yr Rainfall=3.33"

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Summary for Subcatchment 2: EX DA #2

Runoff = 0.47 cfs @ 12.88 hrs, Volume= 0.080 af, Depth> 0.40"

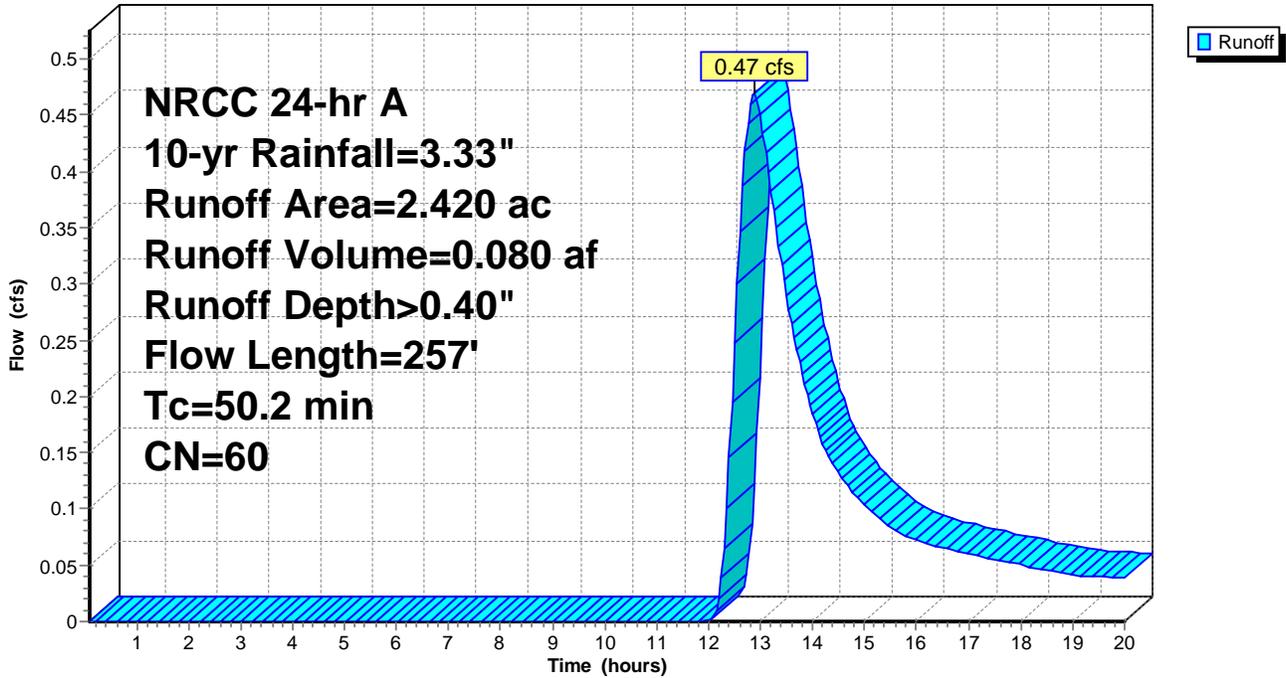
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-yr Rainfall=3.33"

Area (ac)	CN	Description
1.190	30	Meadow, non-grazed, HSG A
0.780	98	Paved parking, HSG A
0.430	71	Meadow, non-grazed, HSG C
0.020	98	Paved parking, HSG C
2.420	60	Weighted Average
1.620		66.94% Pervious Area
0.800		33.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
48.4	100	0.0041	0.03		Sheet Flow, Lawn Grass: Bermuda n= 0.410 P2= 2.33"
1.2	77	0.0230	1.06		Shallow Concentrated Flow, Lawn Short Grass Pasture Kv= 7.0 fps
0.5	35	0.0040	1.28		Shallow Concentrated Flow, Asphalt Paved Kv= 20.3 fps
0.1	45	0.0720	9.97	1.96	Pipe Channel, Storm Sewer 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
50.2	257	Total			

Subcatchment 2: EX DA #2

Hydrograph



Summary for Reach DP: Design Point

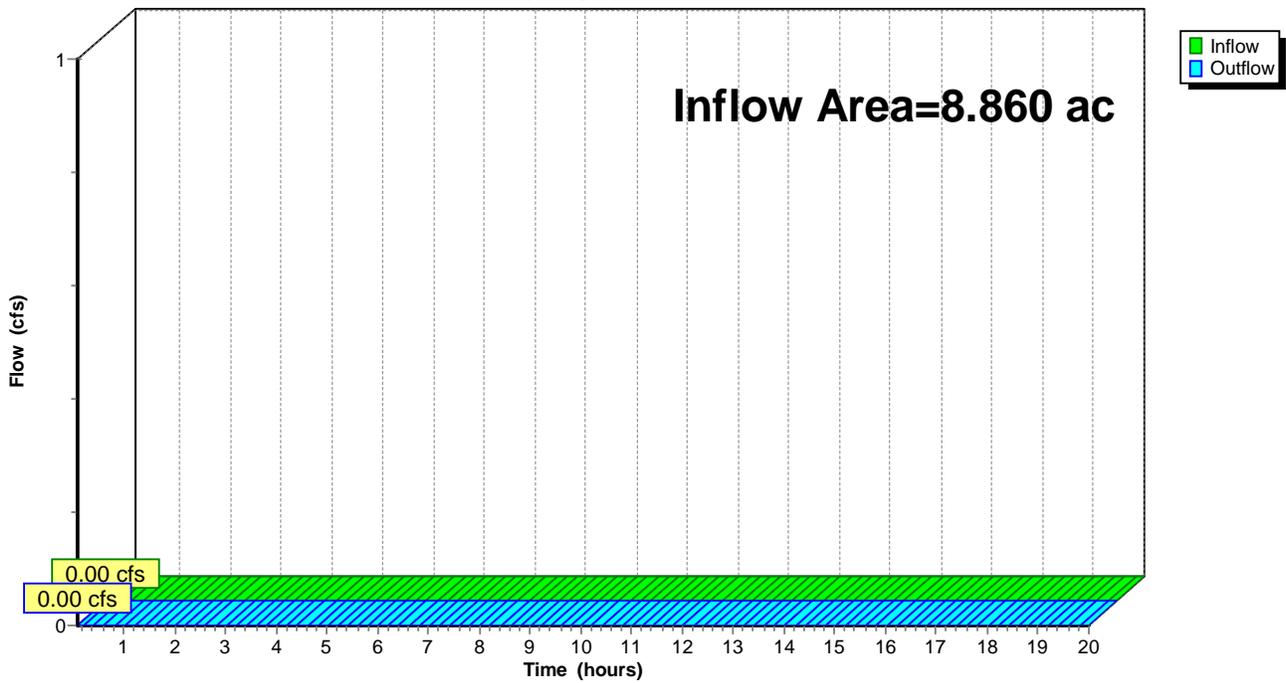
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.860 ac, 54.51% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs

Reach DP: Design Point

Hydrograph



Summary for Pond IB1: PR Inf Basin #1

Inflow Area = 6.440 ac, 62.58% Impervious, Inflow Depth > 0.97" for 10-yr event
 Inflow = 4.80 cfs @ 12.51 hrs, Volume= 0.521 af
 Outflow = 2.33 cfs @ 13.01 hrs, Volume= 0.517 af, Atten= 51%, Lag= 30.1 min
 Discarded = 2.33 cfs @ 13.01 hrs, Volume= 0.517 af
 Primary = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 397.82' @ 13.01 hrs Surf.Area= 6,697 sf Storage= 6,165 cf

Plug-Flow detention time= 31.4 min calculated for 0.515 af (99% of inflow)
 Center-of-Mass det. time= 28.6 min (856.0 - 827.4)

Volume	Invert	Avail.Storage	Storage Description
#1	396.66'	45,348 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
396.66	3,100	0	0
397.00	4,971	1,372	1,372
398.00	7,072	6,022	7,394
399.00	9,611	8,342	15,735
400.00	12,307	10,959	26,694
401.00	25,000	18,654	45,348

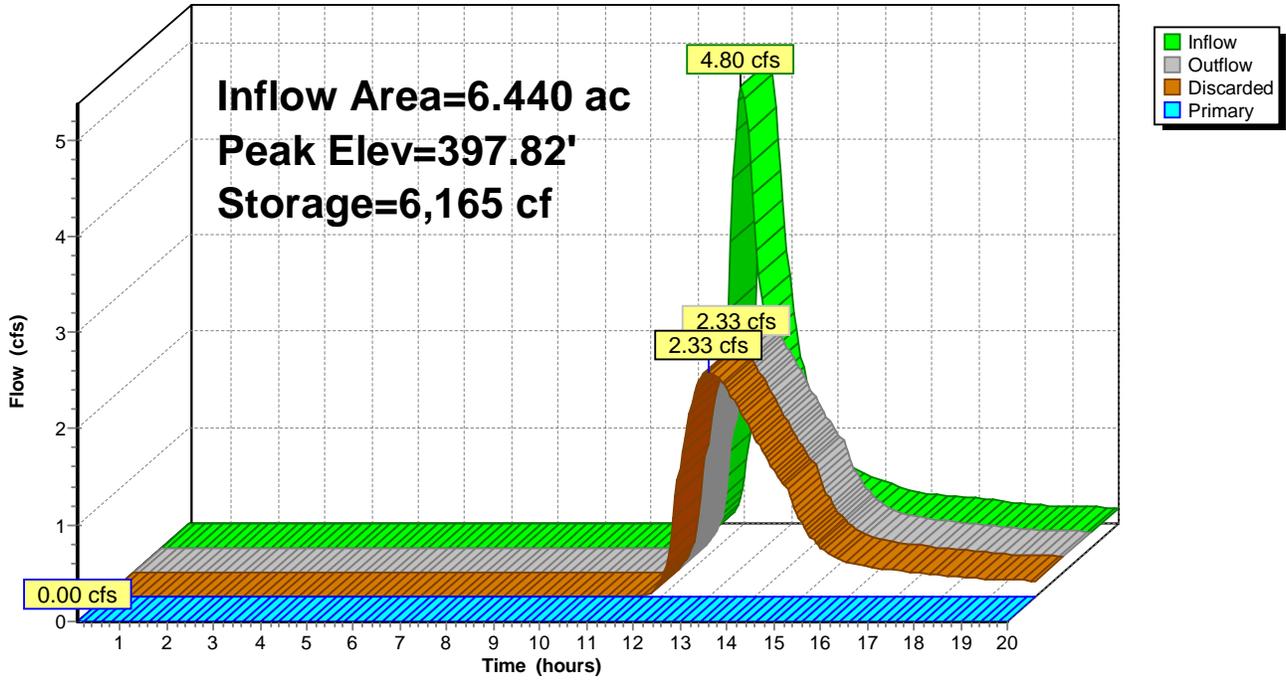
Device	Routing	Invert	Outlet Devices
#1	Discarded	396.66'	25.000 in/hr Exfiltration over Surface area above 396.66' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 3,100 sf
#2	Primary	397.79'	18.0" Round Culvert L= 18.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 397.79' / 397.43' S= 0.0195 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	398.11'	8.0" Round Culvert L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 398.11' / 398.05' S= 0.0100 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 2	399.41'	18.0" W x 12.0" H Vert. Orifice/Grate C= 0.600
#5	Device 2	400.64'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=2.33 cfs @ 13.01 hrs HW=397.82' (Free Discharge)
 ↑1=Exfiltration (Controls 2.33 cfs)

Primary OutFlow Max=0.00 cfs @ 0.10 hrs HW=396.66' (Free Discharge)
 ↑2=Culvert (Controls 0.00 cfs)
 ↑3=Culvert (Controls 0.00 cfs)
 ↑4=Orifice/Grate (Controls 0.00 cfs)
 ↑5=Orifice/Grate (Controls 0.00 cfs)

Pond IB1: PR Inf Basin #1

Hydrograph



Summary for Pond IB2: PR Inf Basin #2

Inflow Area = 2.420 ac, 33.06% Impervious, Inflow Depth > 0.40" for 10-yr event
 Inflow = 0.47 cfs @ 12.88 hrs, Volume= 0.080 af
 Outflow = 0.47 cfs @ 12.91 hrs, Volume= 0.080 af, Atten= 0%, Lag= 1.5 min
 Discarded = 0.47 cfs @ 12.91 hrs, Volume= 0.080 af
 Primary = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 397.04' @ 12.91 hrs Surf.Area= 1,123 sf Storage= 43 cf

Plug-Flow detention time= 1.5 min calculated for 0.080 af (100% of inflow)
 Center-of-Mass det. time= 1.2 min (871.6 - 870.4)

Volume	Invert	Avail.Storage	Storage Description
#1	397.00'	22,978 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
397.00	1,095	0	0
398.00	1,825	1,460	1,460
399.00	2,615	2,220	3,680
400.00	3,640	3,128	6,808
401.00	4,350	3,995	10,803
402.00	20,000	12,175	22,978

Device	Routing	Invert	Outlet Devices
#1	Discarded	397.00'	25.000 in/hr Exfiltration over Surface area above 396.00' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 0 sf
#2	Primary	401.23'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.23' / 400.87' S= 0.0144 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Primary	401.06'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.06' / 400.85' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#4	Primary	401.17'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.17' / 400.96' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Discarded OutFlow Max=0.65 cfs @ 12.91 hrs HW=397.04' (Free Discharge)

↑1=Exfiltration (Controls 0.65 cfs)

Primary OutFlow Max=0.00 cfs @ 0.10 hrs HW=397.00' (Free Discharge)

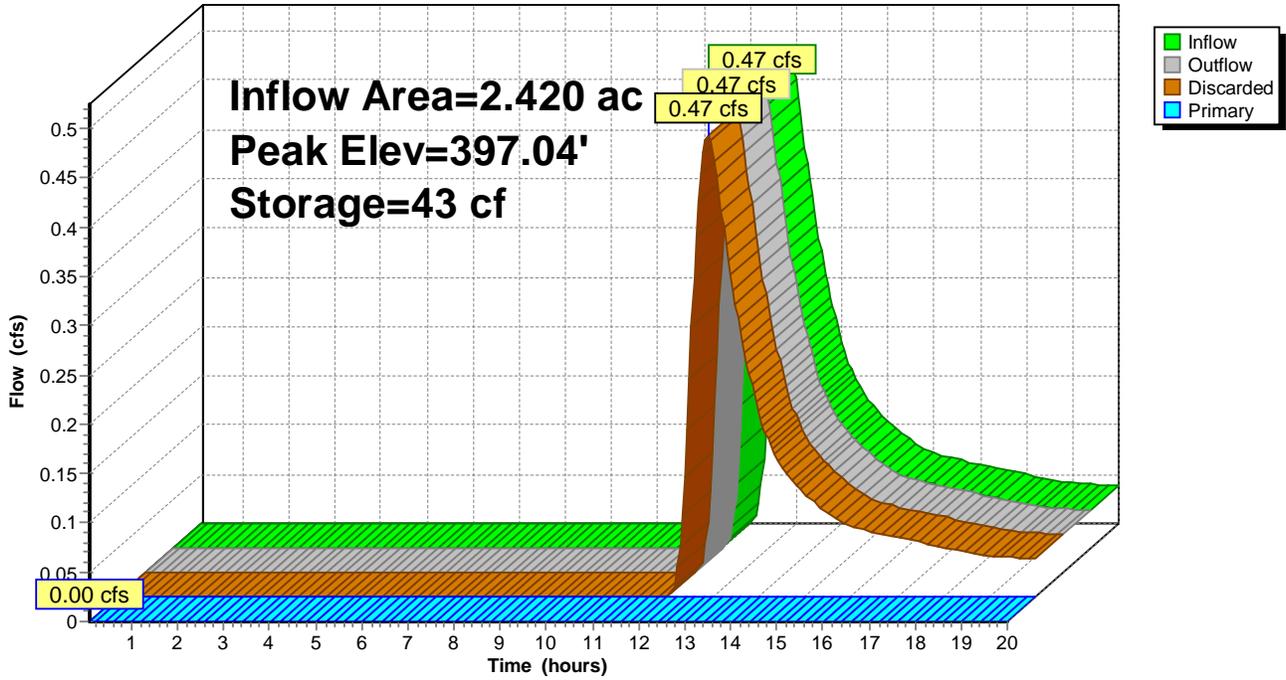
↑2=Culvert (Controls 0.00 cfs)

↑3=Culvert (Controls 0.00 cfs)

↑4=Culvert (Controls 0.00 cfs)

Pond IB2: PR Inf Basin #2

Hydrograph



2016-033.004 Proposed

NRCC 24-hr A 25-yr Rainfall=4.07"

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Time span=0.10-20.00 hrs, dt=0.05 hrs, 399 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 1: PR DA #1

Runoff Area=6.440 ac 62.58% Impervious Runoff Depth>1.45"
Flow Length=459' Tc=34.0 min CN=73 Runoff=7.33 cfs 0.777 af

Subcatchment 2: EX DA #2

Runoff Area=2.420 ac 33.06% Impervious Runoff Depth>0.70"
Flow Length=257' Tc=50.2 min CN=60 Runoff=0.93 cfs 0.141 af

Reach DP: Design Point

Inflow=0.17 cfs 0.007 af
Outflow=0.17 cfs 0.007 af

Pond IB1: PR Inf Basin #1

Peak Elev=398.37' Storage=10,177 cf Inflow=7.33 cfs 0.777 af
Discarded=3.31 cfs 0.764 af Primary=0.17 cfs 0.007 af Outflow=3.48 cfs 0.771 af

Pond IB2: PR Inf Basin #2

Peak Elev=397.27' Storage=322 cf Inflow=0.93 cfs 0.141 af
Discarded=0.78 cfs 0.141 af Primary=0.00 cfs 0.000 af Outflow=0.78 cfs 0.141 af

Total Runoff Area = 8.860 ac Runoff Volume = 0.918 af Average Runoff Depth = 1.24"
45.49% Pervious = 4.030 ac 54.51% Impervious = 4.830 ac

2016-033.004 Proposed

NRCC 24-hr A 25-yr Rainfall=4.07"

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Summary for Subcatchment 1: PR DA #1

Runoff = 7.33 cfs @ 12.50 hrs, Volume= 0.777 af, Depth> 1.45"

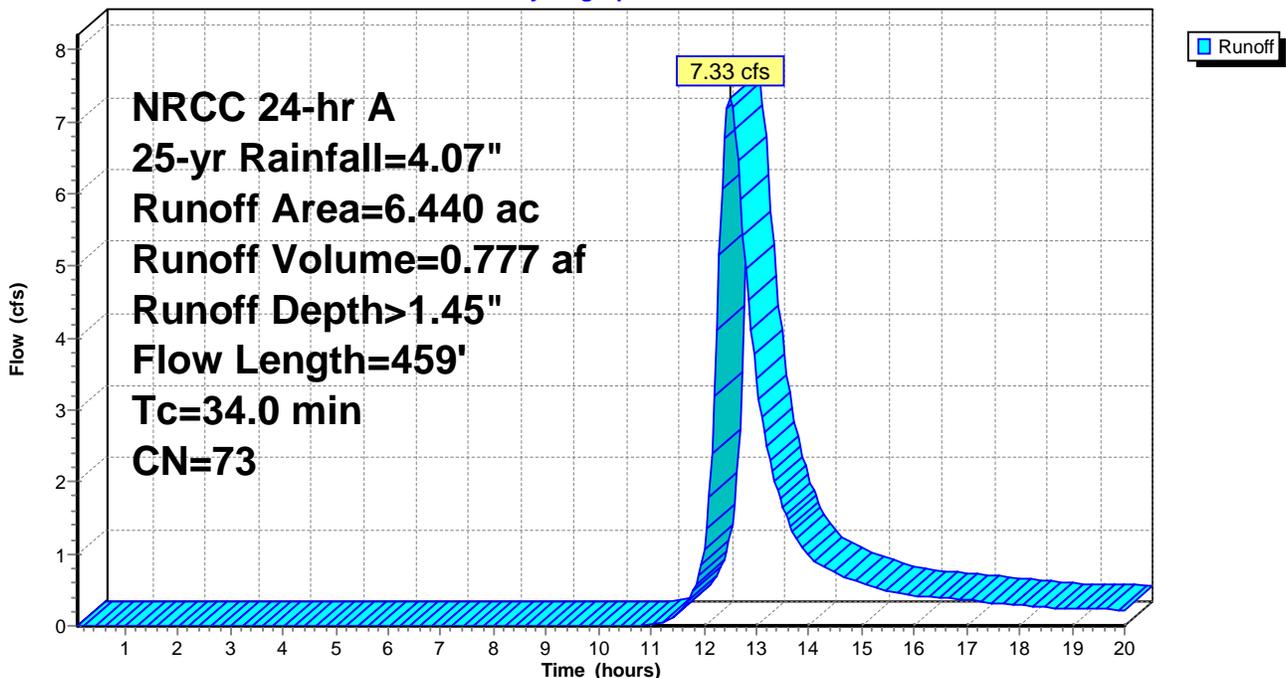
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-yr Rainfall=4.07"

Area (ac)	CN	Description
2.410	30	Meadow, non-grazed, HSG A
2.210	98	Paved parking, HSG A
1.820	98	Roofs, HSG A
6.440	73	Weighted Average
2.410		37.42% Pervious Area
4.030		62.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3	100	0.0157	0.06		Sheet Flow, Lawn
					Grass: Bermuda n= 0.410 P2= 2.33"
5.7	359	0.0223	1.05		Shallow Concentrated Flow, Lawn
					Short Grass Pasture Kv= 7.0 fps
34.0	459	Total			

Subcatchment 1: PR DA #1

Hydrograph



2016-033.004 Proposed

NRCC 24-hr A 25-yr Rainfall=4.07"

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Summary for Subcatchment 2: EX DA #2

Runoff = 0.93 cfs @ 12.82 hrs, Volume= 0.141 af, Depth> 0.70"

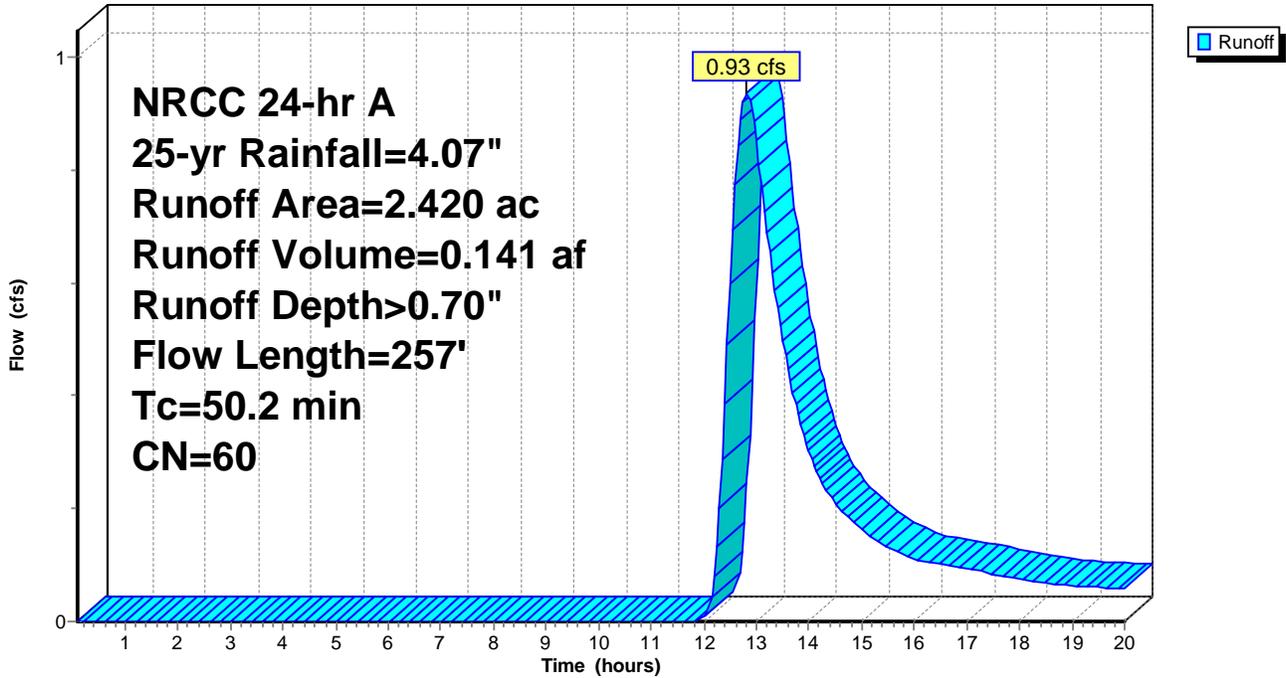
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-yr Rainfall=4.07"

Area (ac)	CN	Description
1.190	30	Meadow, non-grazed, HSG A
0.780	98	Paved parking, HSG A
0.430	71	Meadow, non-grazed, HSG C
0.020	98	Paved parking, HSG C
2.420	60	Weighted Average
1.620		66.94% Pervious Area
0.800		33.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
48.4	100	0.0041	0.03		Sheet Flow, Lawn Grass: Bermuda n= 0.410 P2= 2.33"
1.2	77	0.0230	1.06		Shallow Concentrated Flow, Lawn Short Grass Pasture Kv= 7.0 fps
0.5	35	0.0040	1.28		Shallow Concentrated Flow, Asphalt Paved Kv= 20.3 fps
0.1	45	0.0720	9.97	1.96	Pipe Channel, Storm Sewer 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
50.2	257	Total			

Subcatchment 2: EX DA #2

Hydrograph



Summary for Reach DP: Design Point

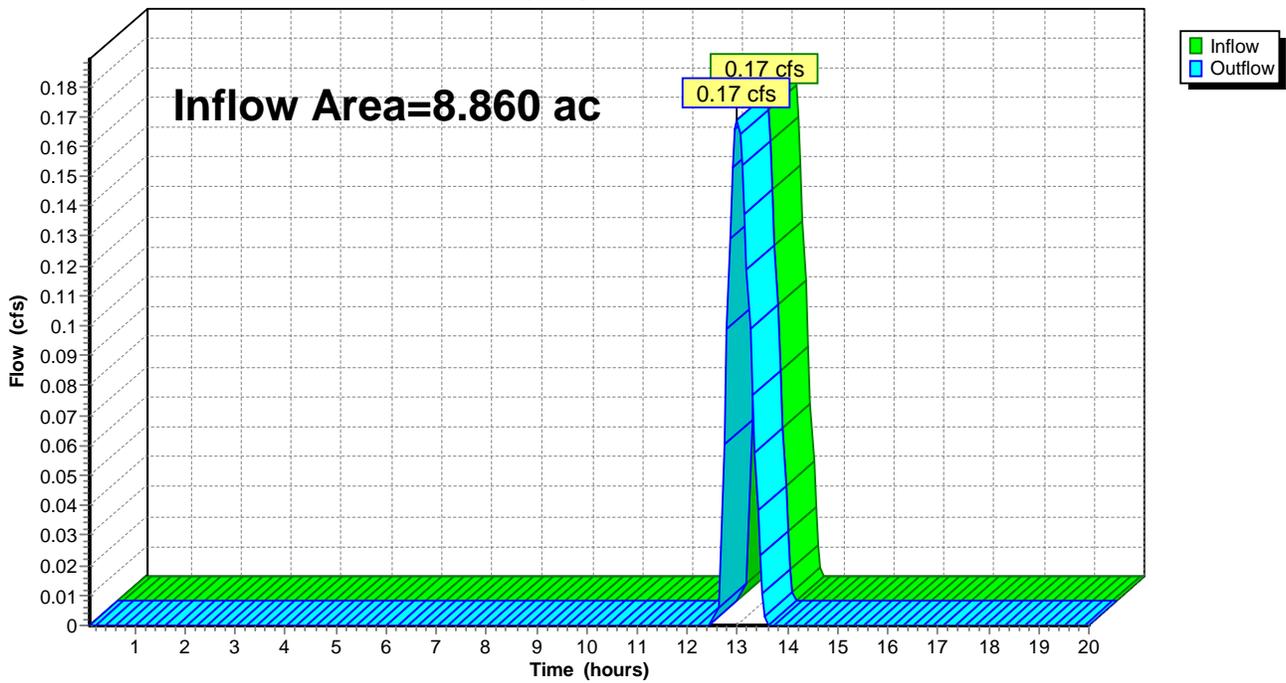
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.860 ac, 54.51% Impervious, Inflow Depth = 0.01" for 25-yr event
Inflow = 0.17 cfs @ 13.00 hrs, Volume= 0.007 af
Outflow = 0.17 cfs @ 13.00 hrs, Volume= 0.007 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs

Reach DP: Design Point

Hydrograph



Summary for Pond IB1: PR Inf Basin #1

Inflow Area = 6.440 ac, 62.58% Impervious, Inflow Depth > 1.45" for 25-yr event
 Inflow = 7.33 cfs @ 12.50 hrs, Volume= 0.777 af
 Outflow = 3.48 cfs @ 13.00 hrs, Volume= 0.771 af, Atten= 52%, Lag= 29.7 min
 Discarded = 3.31 cfs @ 13.00 hrs, Volume= 0.764 af
 Primary = 0.17 cfs @ 13.00 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 398.37' @ 13.00 hrs Surf.Area= 8,009 sf Storage= 10,177 cf

Plug-Flow detention time= 37.4 min calculated for 0.769 af (99% of inflow)
 Center-of-Mass det. time= 34.7 min (855.0 - 820.3)

Volume	Invert	Avail.Storage	Storage Description
#1	396.66'	45,348 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
396.66	3,100	0	0
397.00	4,971	1,372	1,372
398.00	7,072	6,022	7,394
399.00	9,611	8,342	15,735
400.00	12,307	10,959	26,694
401.00	25,000	18,654	45,348

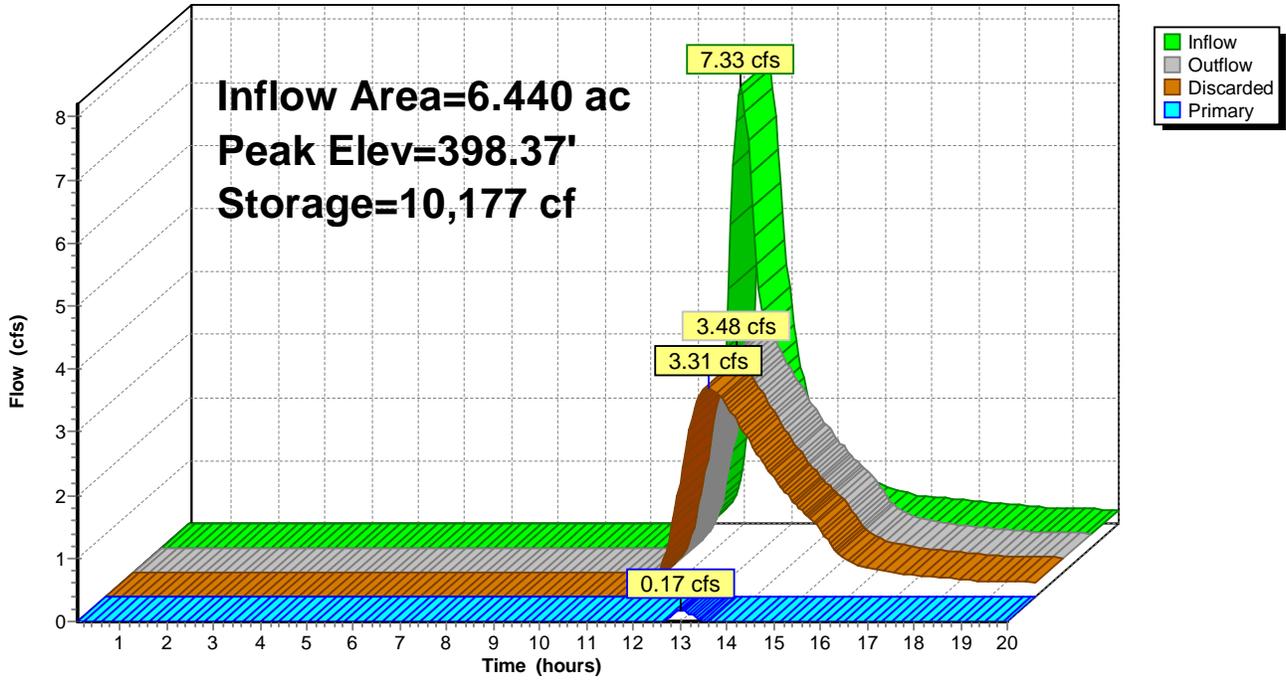
Device	Routing	Invert	Outlet Devices
#1	Discarded	396.66'	25.000 in/hr Exfiltration over Surface area above 396.66' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 3,100 sf
#2	Primary	397.79'	18.0" Round Culvert L= 18.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 397.79' / 397.43' S= 0.0195 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	398.11'	8.0" Round Culvert L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 398.11' / 398.05' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 2	399.41'	18.0" W x 12.0" H Vert. Orifice/Grate C= 0.600
#5	Device 2	400.64'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=3.31 cfs @ 13.00 hrs HW=398.37' (Free Discharge)
 ↑1=Exfiltration (Controls 3.31 cfs)

Primary OutFlow Max=0.17 cfs @ 13.00 hrs HW=398.37' (Free Discharge)
 ↑2=Culvert (Passes 0.17 cfs of 1.63 cfs potential flow)
 ↑3=Culvert (Barrel Controls 0.17 cfs @ 1.98 fps)
 ↑4=Orifice/Grate (Controls 0.00 cfs)
 ↑5=Orifice/Grate (Controls 0.00 cfs)

Pond IB1: PR Inf Basin #1

Hydrograph



Summary for Pond IB2: PR Inf Basin #2

Inflow Area = 2.420 ac, 33.06% Impervious, Inflow Depth > 0.70" for 25-yr event
 Inflow = 0.93 cfs @ 12.82 hrs, Volume= 0.141 af
 Outflow = 0.78 cfs @ 13.08 hrs, Volume= 0.141 af, Atten= 16%, Lag= 16.1 min
 Discarded = 0.78 cfs @ 13.08 hrs, Volume= 0.141 af
 Primary = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 397.27' @ 13.08 hrs Surf.Area= 1,292 sf Storage= 322 cf

Plug-Flow detention time= 3.0 min calculated for 0.141 af (100% of inflow)
 Center-of-Mass det. time= 2.7 min (860.0 - 857.3)

Volume	Invert	Avail.Storage	Storage Description
#1	397.00'	22,978 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
397.00	1,095	0	0
398.00	1,825	1,460	1,460
399.00	2,615	2,220	3,680
400.00	3,640	3,128	6,808
401.00	4,350	3,995	10,803
402.00	20,000	12,175	22,978

Device	Routing	Invert	Outlet Devices
#1	Discarded	397.00'	25.000 in/hr Exfiltration over Surface area above 396.00' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 0 sf
#2	Primary	401.23'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.23' / 400.87' S= 0.0144 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Primary	401.06'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.06' / 400.85' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#4	Primary	401.17'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.17' / 400.96' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Discarded OutFlow Max=0.78 cfs @ 13.08 hrs HW=397.27' (Free Discharge)

↑1=Exfiltration (Controls 0.78 cfs)

Primary OutFlow Max=0.00 cfs @ 0.10 hrs HW=397.00' (Free Discharge)

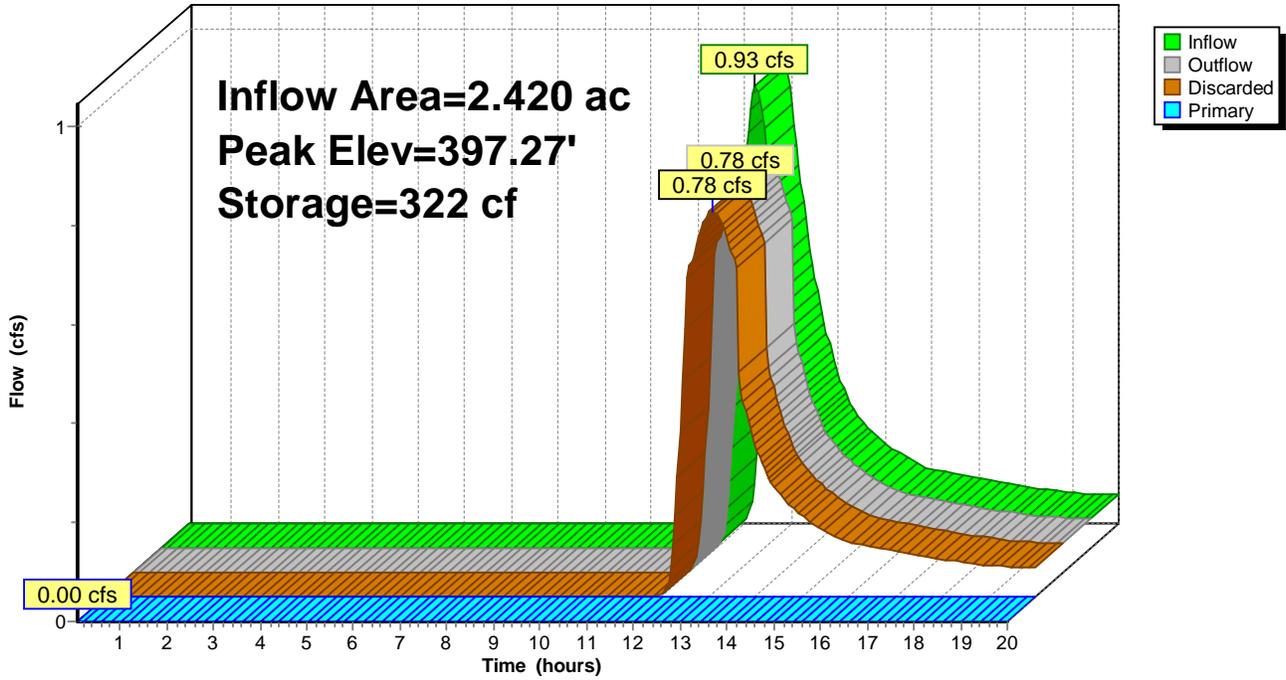
↑2=Culvert (Controls 0.00 cfs)

↑3=Culvert (Controls 0.00 cfs)

↑4=Culvert (Controls 0.00 cfs)

Pond IB2: PR Inf Basin #2

Hydrograph



2016-033.004 Proposed

NRCC 24-hr A 50-yr Rainfall=4.75"

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Time span=0.10-20.00 hrs, dt=0.05 hrs, 399 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 1: PR DA #1 Runoff Area=6.440 ac 62.58% Impervious Runoff Depth>1.92"
Flow Length=459' Tc=34.0 min CN=73 Runoff=9.82 cfs 1.032 af

Subcatchment 2: EX DA #2 Runoff Area=2.420 ac 33.06% Impervious Runoff Depth>1.03"
Flow Length=257' Tc=50.2 min CN=60 Runoff=1.46 cfs 0.208 af

Reach DP: Design Point Inflow=0.82 cfs 0.052 af
Outflow=0.82 cfs 0.052 af

Pond IB1: PR Inf Basin #1 Peak Elev=398.78' Storage=13,685 cf Inflow=9.82 cfs 1.032 af
Discarded=4.12 cfs 0.973 af Primary=0.82 cfs 0.052 af Outflow=4.94 cfs 1.025 af

Pond IB2: PR Inf Basin #2 Peak Elev=397.76' Storage=1,039 cf Inflow=1.46 cfs 0.208 af
Discarded=1.06 cfs 0.208 af Primary=0.00 cfs 0.000 af Outflow=1.06 cfs 0.208 af

Total Runoff Area = 8.860 ac Runoff Volume = 1.240 af Average Runoff Depth = 1.68"
45.49% Pervious = 4.030 ac 54.51% Impervious = 4.830 ac

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NRCC 24-hr A 50-yr Rainfall=4.75"

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Summary for Subcatchment 1: PR DA #1

Runoff = 9.82 cfs @ 12.49 hrs, Volume= 1.032 af, Depth> 1.92"

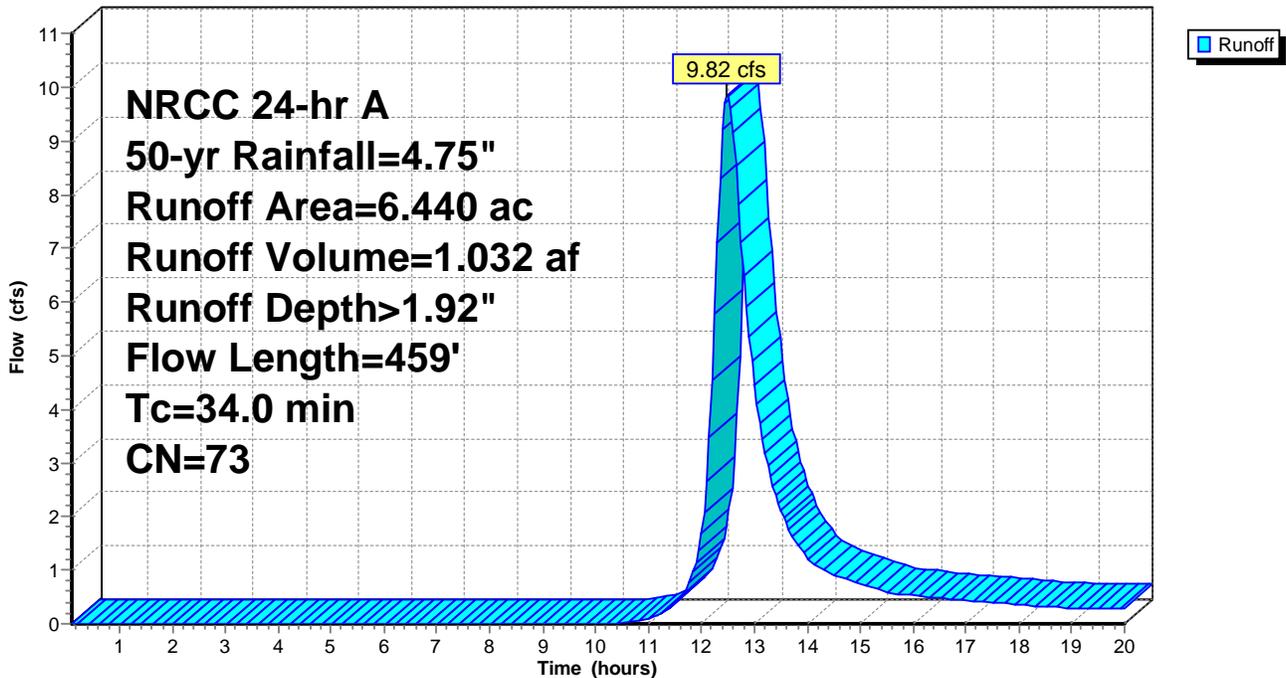
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-yr Rainfall=4.75"

Area (ac)	CN	Description
2.410	30	Meadow, non-grazed, HSG A
2.210	98	Paved parking, HSG A
1.820	98	Roofs, HSG A
6.440	73	Weighted Average
2.410		37.42% Pervious Area
4.030		62.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3	100	0.0157	0.06		Sheet Flow, Lawn
					Grass: Bermuda n= 0.410 P2= 2.33"
5.7	359	0.0223	1.05		Shallow Concentrated Flow, Lawn
					Short Grass Pasture Kv= 7.0 fps
34.0	459	Total			

Subcatchment 1: PR DA #1

Hydrograph



2016-033.004 Proposed

NRCC 24-hr A 50-yr Rainfall=4.75"

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Summary for Subcatchment 2: EX DA #2

Runoff = 1.46 cfs @ 12.79 hrs, Volume= 0.208 af, Depth> 1.03"

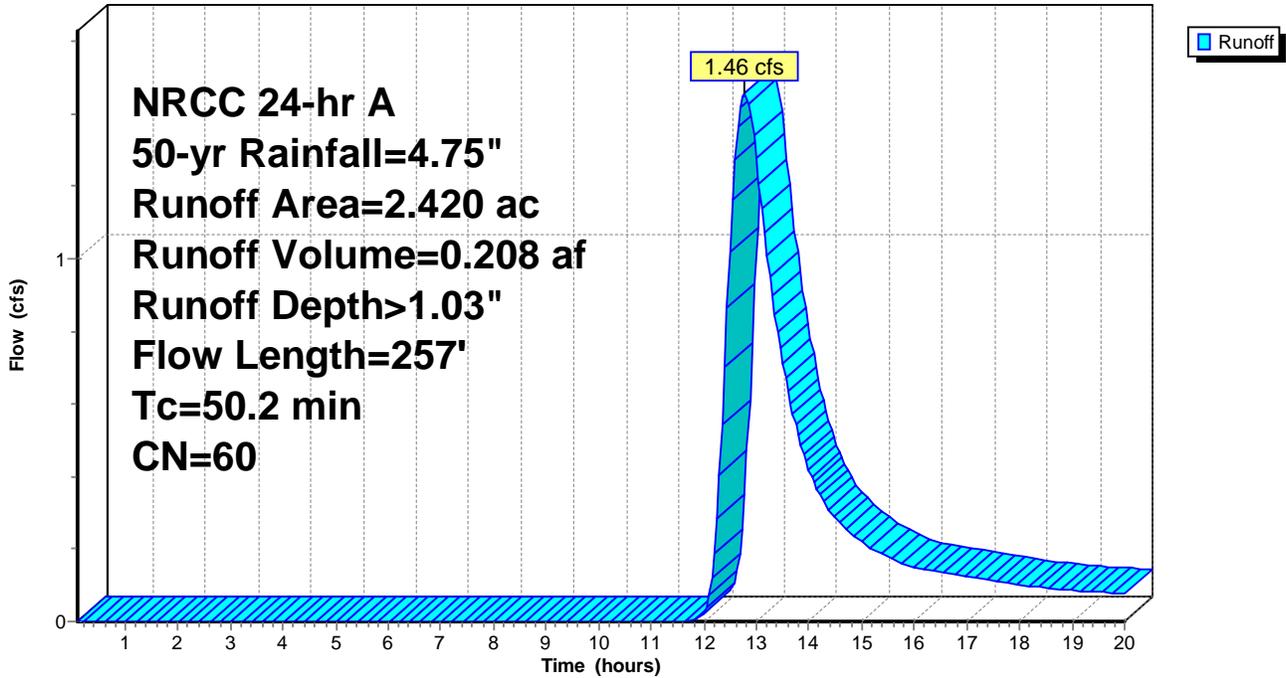
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-yr Rainfall=4.75"

Area (ac)	CN	Description
1.190	30	Meadow, non-grazed, HSG A
0.780	98	Paved parking, HSG A
0.430	71	Meadow, non-grazed, HSG C
0.020	98	Paved parking, HSG C
2.420	60	Weighted Average
1.620		66.94% Pervious Area
0.800		33.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
48.4	100	0.0041	0.03		Sheet Flow, Lawn Grass: Bermuda n= 0.410 P2= 2.33"
1.2	77	0.0230	1.06		Shallow Concentrated Flow, Lawn Short Grass Pasture Kv= 7.0 fps
0.5	35	0.0040	1.28		Shallow Concentrated Flow, Asphalt Paved Kv= 20.3 fps
0.1	45	0.0720	9.97	1.96	Pipe Channel, Storm Sewer 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
50.2	257	Total			

Subcatchment 2: EX DA #2

Hydrograph



Summary for Reach DP: Design Point

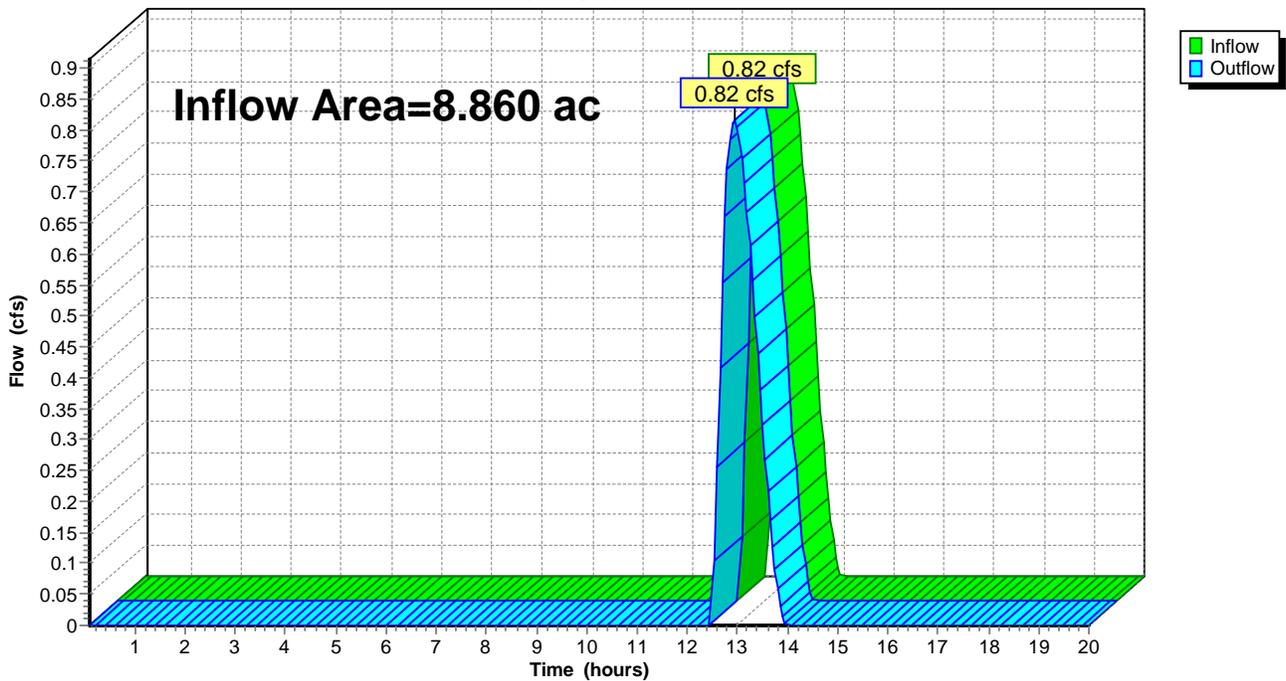
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.860 ac, 54.51% Impervious, Inflow Depth = 0.07" for 50-yr event
Inflow = 0.82 cfs @ 12.95 hrs, Volume= 0.052 af
Outflow = 0.82 cfs @ 12.95 hrs, Volume= 0.052 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs

Reach DP: Design Point

Hydrograph



Summary for Pond IB1: PR Inf Basin #1

Inflow Area = 6.440 ac, 62.58% Impervious, Inflow Depth > 1.92" for 50-yr event
 Inflow = 9.82 cfs @ 12.49 hrs, Volume= 1.032 af
 Outflow = 4.94 cfs @ 12.95 hrs, Volume= 1.025 af, Atten= 50%, Lag= 27.2 min
 Discarded = 4.12 cfs @ 12.95 hrs, Volume= 0.973 af
 Primary = 0.82 cfs @ 12.95 hrs, Volume= 0.052 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 398.78' @ 12.95 hrs Surf.Area= 9,053 sf Storage= 13,685 cf

Plug-Flow detention time= 38.9 min calculated for 1.025 af (99% of inflow)
 Center-of-Mass det. time= 36.3 min (851.7 - 815.3)

Volume	Invert	Avail.Storage	Storage Description
#1	396.66'	45,348 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
396.66	3,100	0	0
397.00	4,971	1,372	1,372
398.00	7,072	6,022	7,394
399.00	9,611	8,342	15,735
400.00	12,307	10,959	26,694
401.00	25,000	18,654	45,348

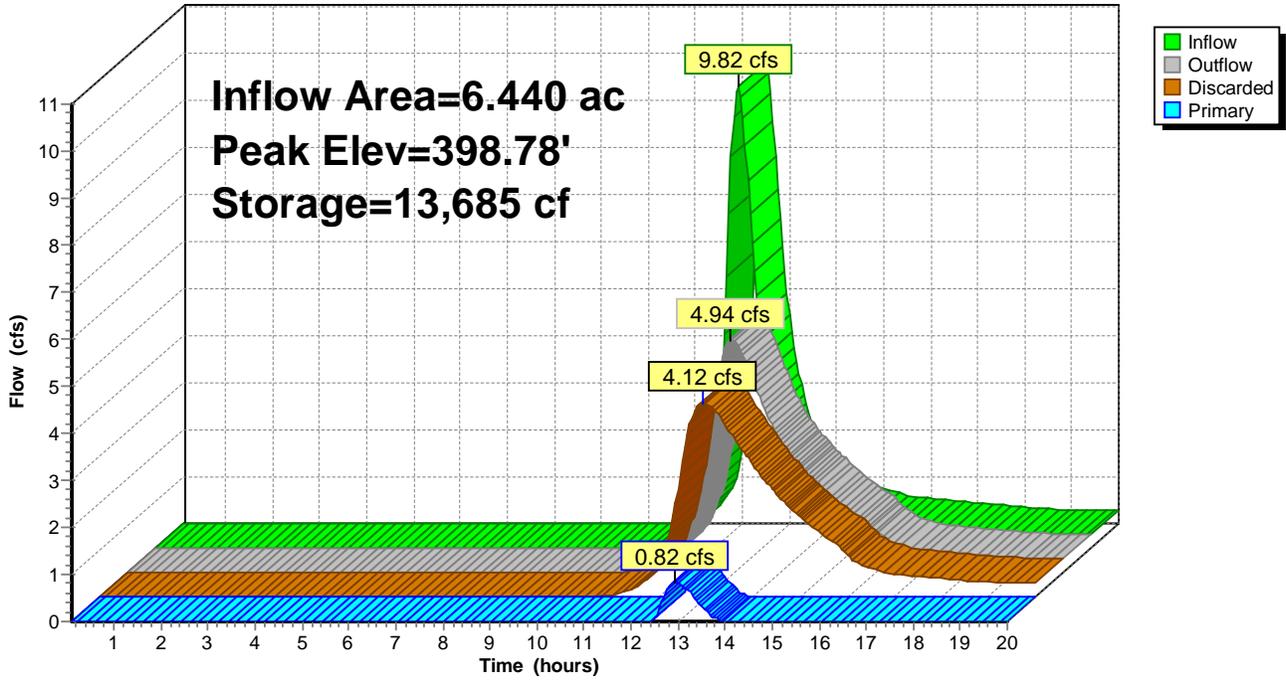
Device	Routing	Invert	Outlet Devices
#1	Discarded	396.66'	25.000 in/hr Exfiltration over Surface area above 396.66' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 3,100 sf
#2	Primary	397.79'	18.0" Round Culvert L= 18.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 397.79' / 397.43' S= 0.0195 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	398.11'	8.0" Round Culvert L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 398.11' / 398.05' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 2	399.41'	18.0" W x 12.0" H Vert. Orifice/Grate C= 0.600
#5	Device 2	400.64'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=4.12 cfs @ 12.95 hrs HW=398.78' (Free Discharge)
 ↑1=Exfiltration (Controls 4.12 cfs)

Primary OutFlow Max=0.82 cfs @ 12.95 hrs HW=398.78' (Free Discharge)
 ↑2=Culvert (Passes 0.82 cfs of 4.02 cfs potential flow)
 ↑3=Culvert (Barrel Controls 0.82 cfs @ 2.89 fps)
 ↓4=Orifice/Grate (Controls 0.00 cfs)
 ↓5=Orifice/Grate (Controls 0.00 cfs)

Pond IB1: PR Inf Basin #1

Hydrograph



Summary for Pond IB2: PR Inf Basin #2

Inflow Area = 2.420 ac, 33.06% Impervious, Inflow Depth > 1.03" for 50-yr event
 Inflow = 1.46 cfs @ 12.79 hrs, Volume= 0.208 af
 Outflow = 1.06 cfs @ 13.16 hrs, Volume= 0.208 af, Atten= 27%, Lag= 22.8 min
 Discarded = 1.06 cfs @ 13.16 hrs, Volume= 0.208 af
 Primary = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 397.76' @ 13.16 hrs Surf.Area= 1,648 sf Storage= 1,039 cf

Plug-Flow detention time= 7.8 min calculated for 0.208 af (100% of inflow)
 Center-of-Mass det. time= 7.5 min (857.0 - 849.5)

Volume	Invert	Avail.Storage	Storage Description
#1	397.00'	22,978 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
397.00	1,095	0	0
398.00	1,825	1,460	1,460
399.00	2,615	2,220	3,680
400.00	3,640	3,128	6,808
401.00	4,350	3,995	10,803
402.00	20,000	12,175	22,978

Device	Routing	Invert	Outlet Devices
#1	Discarded	397.00'	25.000 in/hr Exfiltration over Surface area above 396.00' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 0 sf
#2	Primary	401.23'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.23' / 400.87' S= 0.0144 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Primary	401.06'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.06' / 400.85' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#4	Primary	401.17'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.17' / 400.96' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Discarded OutFlow Max=1.05 cfs @ 13.16 hrs HW=397.76' (Free Discharge)

↑ **1=Exfiltration** (Controls 1.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.10 hrs HW=397.00' (Free Discharge)

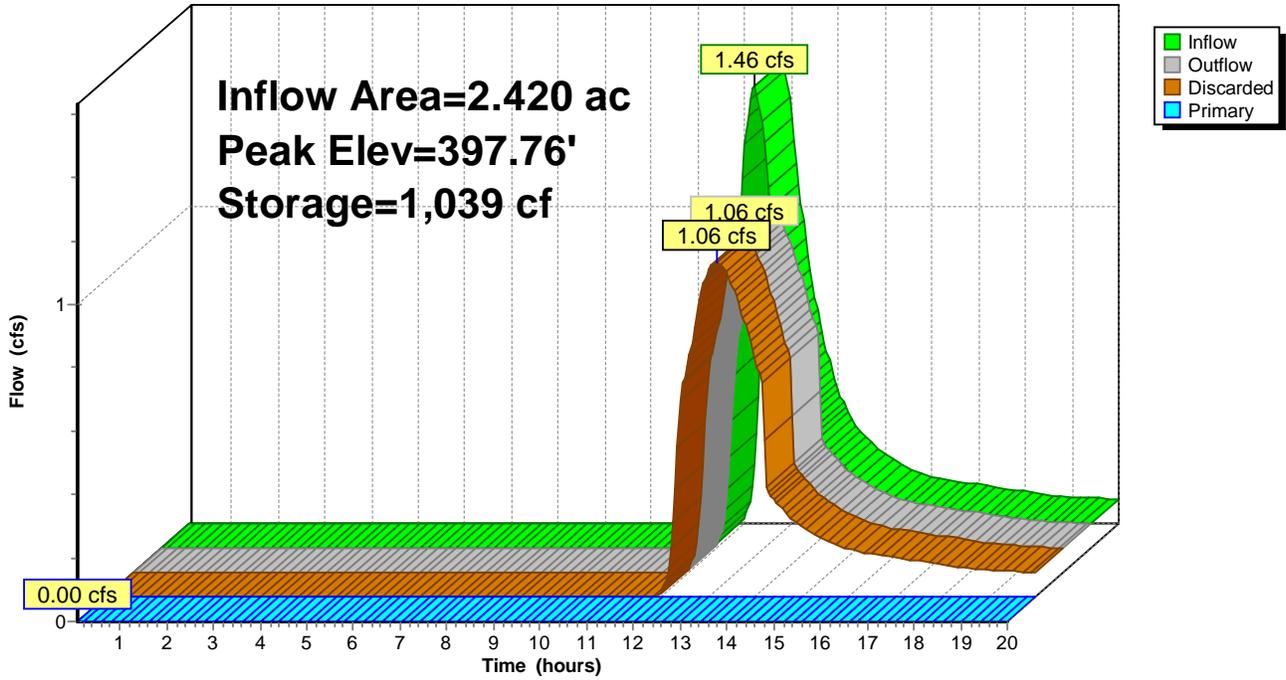
↑ **2=Culvert** (Controls 0.00 cfs)

↑ **3=Culvert** (Controls 0.00 cfs)

↑ **4=Culvert** (Controls 0.00 cfs)

Pond IB2: PR Inf Basin #2

Hydrograph



2016-033.004 Proposed

NRCC 24-hr A 100-yr Rainfall=5.54"

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Time span=0.10-20.00 hrs, dt=0.05 hrs, 399 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 1: PR DA #1

Runoff Area=6.440 ac 62.58% Impervious Runoff Depth>2.51"
Flow Length=459' Tc=34.0 min CN=73 Runoff=12.87 cfs 1.348 af

Subcatchment 2: EX DA #2

Runoff Area=2.420 ac 33.06% Impervious Runoff Depth>1.46"
Flow Length=257' Tc=50.2 min CN=60 Runoff=2.15 cfs 0.295 af

Reach DP: Design Point

Inflow=1.49 cfs 0.126 af
Outflow=1.49 cfs 0.126 af

Pond IB1: PR Inf Basin #1

Peak Elev=399.23' Storage=18,018 cf Inflow=12.87 cfs 1.348 af
Discarded=5.07 cfs 1.213 af Primary=1.49 cfs 0.126 af Outflow=6.55 cfs 1.339 af

Pond IB2: PR Inf Basin #2

Peak Elev=398.34' Storage=2,119 cf Inflow=2.15 cfs 0.295 af
Discarded=1.41 cfs 0.295 af Primary=0.00 cfs 0.000 af Outflow=1.41 cfs 0.295 af

Total Runoff Area = 8.860 ac Runoff Volume = 1.643 af Average Runoff Depth = 2.23"
45.49% Pervious = 4.030 ac 54.51% Impervious = 4.830 ac

2016-033.004 Proposed

NRCC 24-hr A 100-yr Rainfall=5.54"

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Summary for Subcatchment 1: PR DA #1

Runoff = 12.87 cfs @ 12.49 hrs, Volume= 1.348 af, Depth> 2.51"

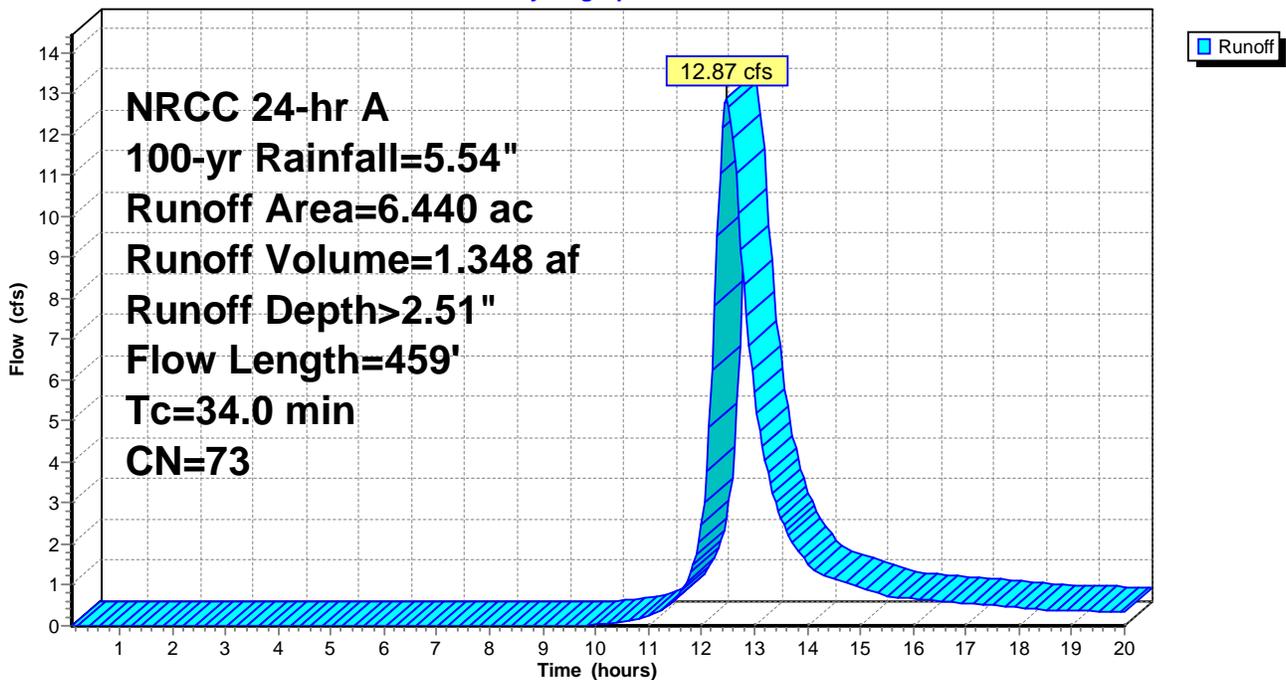
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-yr Rainfall=5.54"

Area (ac)	CN	Description
2.410	30	Meadow, non-grazed, HSG A
2.210	98	Paved parking, HSG A
1.820	98	Roofs, HSG A
6.440	73	Weighted Average
2.410		37.42% Pervious Area
4.030		62.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3	100	0.0157	0.06		Sheet Flow, Lawn
					Grass: Bermuda n= 0.410 P2= 2.33"
5.7	359	0.0223	1.05		Shallow Concentrated Flow, Lawn
					Short Grass Pasture Kv= 7.0 fps
34.0	459	Total			

Subcatchment 1: PR DA #1

Hydrograph



2016-033.004 Proposed

NRCC 24-hr A 100-yr Rainfall=5.54"

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Summary for Subcatchment 2: EX DA #2

Runoff = 2.15 cfs @ 12.76 hrs, Volume= 0.295 af, Depth> 1.46"

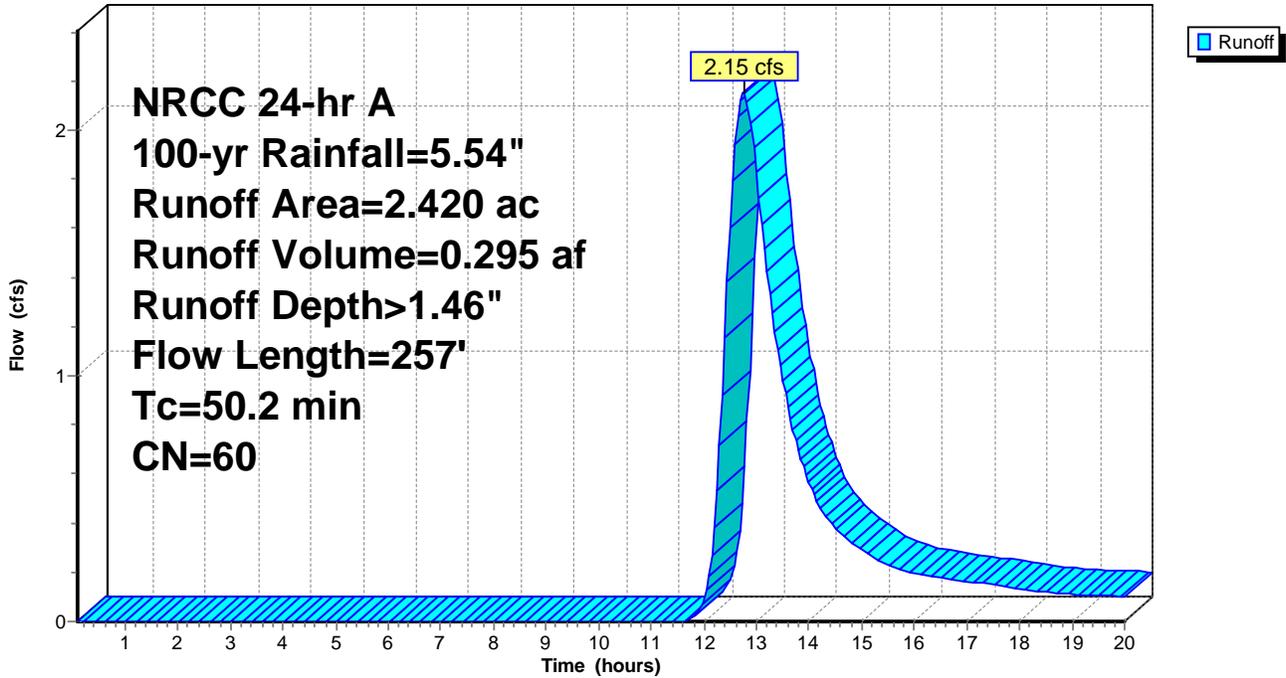
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 100-yr Rainfall=5.54"

Area (ac)	CN	Description
1.190	30	Meadow, non-grazed, HSG A
0.780	98	Paved parking, HSG A
0.430	71	Meadow, non-grazed, HSG C
0.020	98	Paved parking, HSG C
2.420	60	Weighted Average
1.620		66.94% Pervious Area
0.800		33.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
48.4	100	0.0041	0.03		Sheet Flow, Lawn Grass: Bermuda n= 0.410 P2= 2.33"
1.2	77	0.0230	1.06		Shallow Concentrated Flow, Lawn Short Grass Pasture Kv= 7.0 fps
0.5	35	0.0040	1.28		Shallow Concentrated Flow, Asphalt Paved Kv= 20.3 fps
0.1	45	0.0720	9.97	1.96	Pipe Channel, Storm Sewer 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
50.2	257	Total			

Subcatchment 2: EX DA #2

Hydrograph



Summary for Reach DP: Design Point

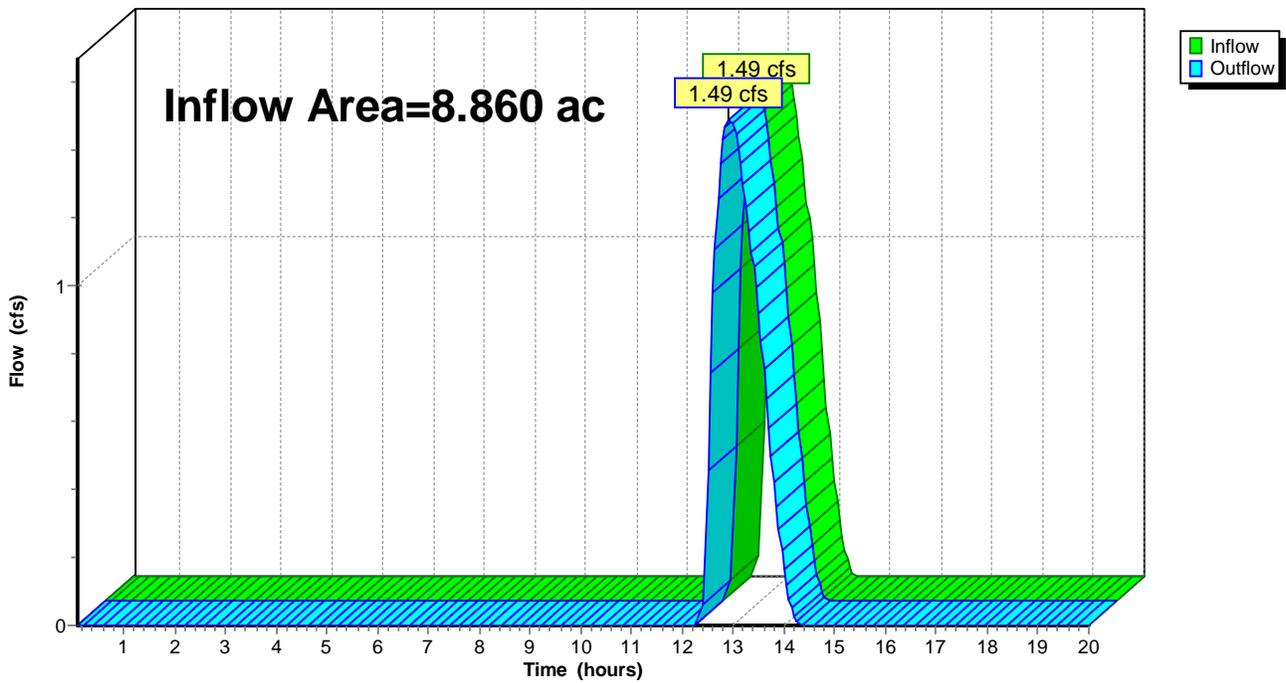
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 8.860 ac, 54.51% Impervious, Inflow Depth = 0.17" for 100-yr event
Inflow = 1.49 cfs @ 12.93 hrs, Volume= 0.126 af
Outflow = 1.49 cfs @ 12.93 hrs, Volume= 0.126 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs

Reach DP: Design Point

Hydrograph



Summary for Pond IB1: PR Inf Basin #1

Inflow Area = 6.440 ac, 62.58% Impervious, Inflow Depth > 2.51" for 100-yr event
 Inflow = 12.87 cfs @ 12.49 hrs, Volume= 1.348 af
 Outflow = 6.55 cfs @ 12.93 hrs, Volume= 1.339 af, Atten= 49%, Lag= 26.3 min
 Discarded = 5.07 cfs @ 12.93 hrs, Volume= 1.213 af
 Primary = 1.49 cfs @ 12.93 hrs, Volume= 0.126 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 399.23' @ 12.93 hrs Surf.Area= 10,231 sf Storage= 18,018 cf

Plug-Flow detention time= 39.9 min calculated for 1.336 af (99% of inflow)
 Center-of-Mass det. time= 37.4 min (848.1 - 810.7)

Volume	Invert	Avail.Storage	Storage Description
#1	396.66'	45,348 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
396.66	3,100	0	0
397.00	4,971	1,372	1,372
398.00	7,072	6,022	7,394
399.00	9,611	8,342	15,735
400.00	12,307	10,959	26,694
401.00	25,000	18,654	45,348

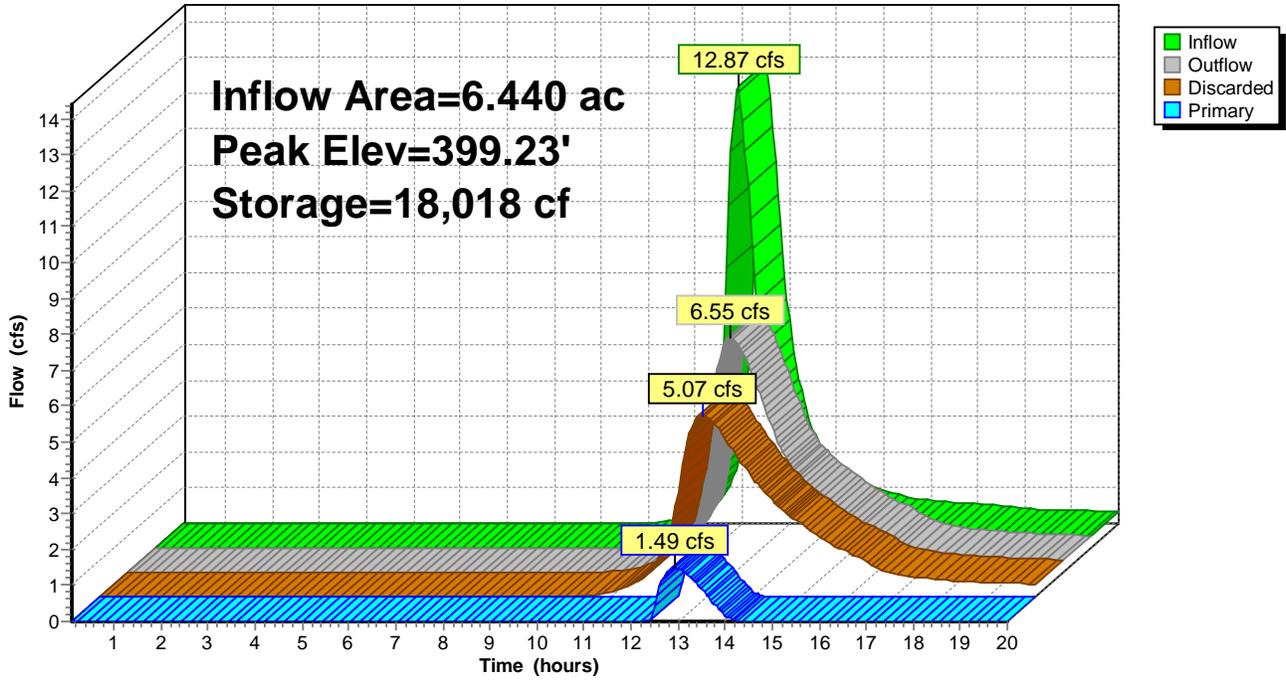
Device	Routing	Invert	Outlet Devices
#1	Discarded	396.66'	25.000 in/hr Exfiltration over Surface area above 396.66' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 3,100 sf
#2	Primary	397.79'	18.0" Round Culvert L= 18.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 397.79' / 397.43' S= 0.0195 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	398.11'	8.0" Round Culvert L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 398.11' / 398.05' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#4	Device 2	399.41'	18.0" W x 12.0" H Vert. Orifice/Grate C= 0.600
#5	Device 2	400.64'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=5.06 cfs @ 12.93 hrs HW=399.23' (Free Discharge)
 ↑1=Exfiltration (Controls 5.06 cfs)

Primary OutFlow Max=1.48 cfs @ 12.93 hrs HW=399.23' (Free Discharge)
 ↑2=Culvert (Passes 1.48 cfs of 6.97 cfs potential flow)
 ↑3=Culvert (Barrel Controls 1.48 cfs @ 4.25 fps)
 ↑4=Orifice/Grate (Controls 0.00 cfs)
 ↑5=Orifice/Grate (Controls 0.00 cfs)

Pond IB1: PR Inf Basin #1

Hydrograph



Summary for Pond IB2: PR Inf Basin #2

Inflow Area = 2.420 ac, 33.06% Impervious, Inflow Depth > 1.46" for 100-yr event
 Inflow = 2.15 cfs @ 12.76 hrs, Volume= 0.295 af
 Outflow = 1.41 cfs @ 13.21 hrs, Volume= 0.295 af, Atten= 34%, Lag= 26.6 min
 Discarded = 1.41 cfs @ 13.21 hrs, Volume= 0.295 af
 Primary = 0.00 cfs @ 0.10 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.10-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 398.34' @ 13.21 hrs Surf.Area= 2,091 sf Storage= 2,119 cf

Plug-Flow detention time= 13.4 min calculated for 0.295 af (100% of inflow)
 Center-of-Mass det. time= 13.1 min (856.1 - 842.9)

Volume	Invert	Avail.Storage	Storage Description
#1	397.00'	22,978 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
397.00	1,095	0	0
398.00	1,825	1,460	1,460
399.00	2,615	2,220	3,680
400.00	3,640	3,128	6,808
401.00	4,350	3,995	10,803
402.00	20,000	12,175	22,978

Device	Routing	Invert	Outlet Devices
#1	Discarded	397.00'	25.000 in/hr Exfiltration over Surface area above 396.00' Conductivity to Groundwater Elevation = 391.21' Excluded Surface area = 0 sf
#2	Primary	401.23'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.23' / 400.87' S= 0.0144 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Primary	401.06'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.06' / 400.85' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#4	Primary	401.17'	15.0" Round Culvert L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 401.17' / 400.96' S= 0.0084 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Discarded OutFlow Max=1.41 cfs @ 13.21 hrs HW=398.34' (Free Discharge)

↑ **1=Exfiltration** (Controls 1.41 cfs)

Primary OutFlow Max=0.00 cfs @ 0.10 hrs HW=397.00' (Free Discharge)

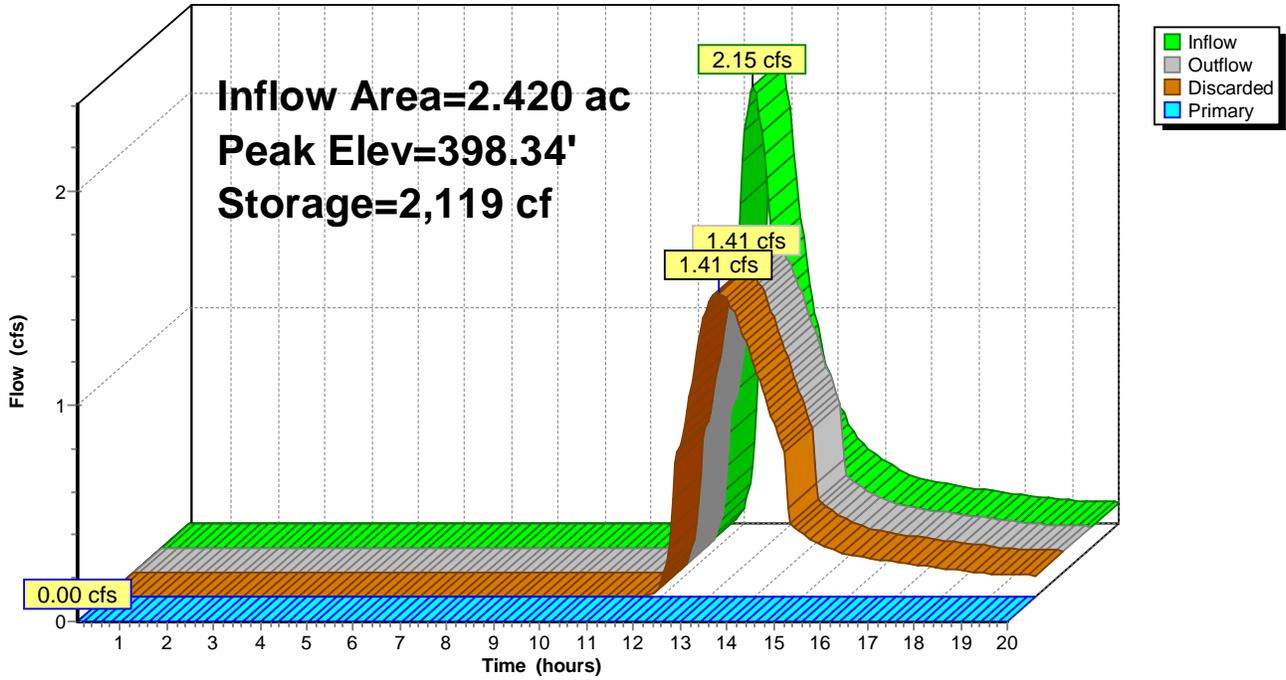
↑ **2=Culvert** (Controls 0.00 cfs)

↑ **3=Culvert** (Controls 0.00 cfs)

↑ **4=Culvert** (Controls 0.00 cfs)

Pond IB2: PR Inf Basin #2

Hydrograph



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LEGEND	EXISTING	PROPOSED
5' CONTOUR		
1' CONTOUR		
PROPERTY LINE		
RIGHT OF WAY		
RETBACK		
BUILDING		
ASPHALT PAVEMENT		
CURB		
SIDEWALK		
EDGE OF GRAVEL		
FENCE		
WATERLINE		
SANITARY SEWER		
STORM SEWER		
OVERHEAD UTILITIES		
UNDERGROUND ELECTRIC		
GAS		
ROOF DRAIN PIPE		
FIRE HYDRANT		
WATER VALVE		
SANITARY MANHOLE		
STORM MANHOLE		
CATCH BASIN		
UTILITY POLE AND GLY		
LIGHT POLE		



522 Bradley Street
Watertown, New York 13601

aubertinecurrier.com

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The above Architect, Engineer or Land Surveyor certifies that he is the holder of his or her knowledge, information and belief, the above and specifications are in accordance with applicable regulations of New York State. This is a violation of New York State Law for any person, unless acting under the direct supervision of a Registered Architect, Licensed Professional Engineer or Licensed Land Surveyor to submit documents to any town, village, or city for approval or for the use and the modification thereof by followed by his or her signature, this certifies a specific knowledge of the above.

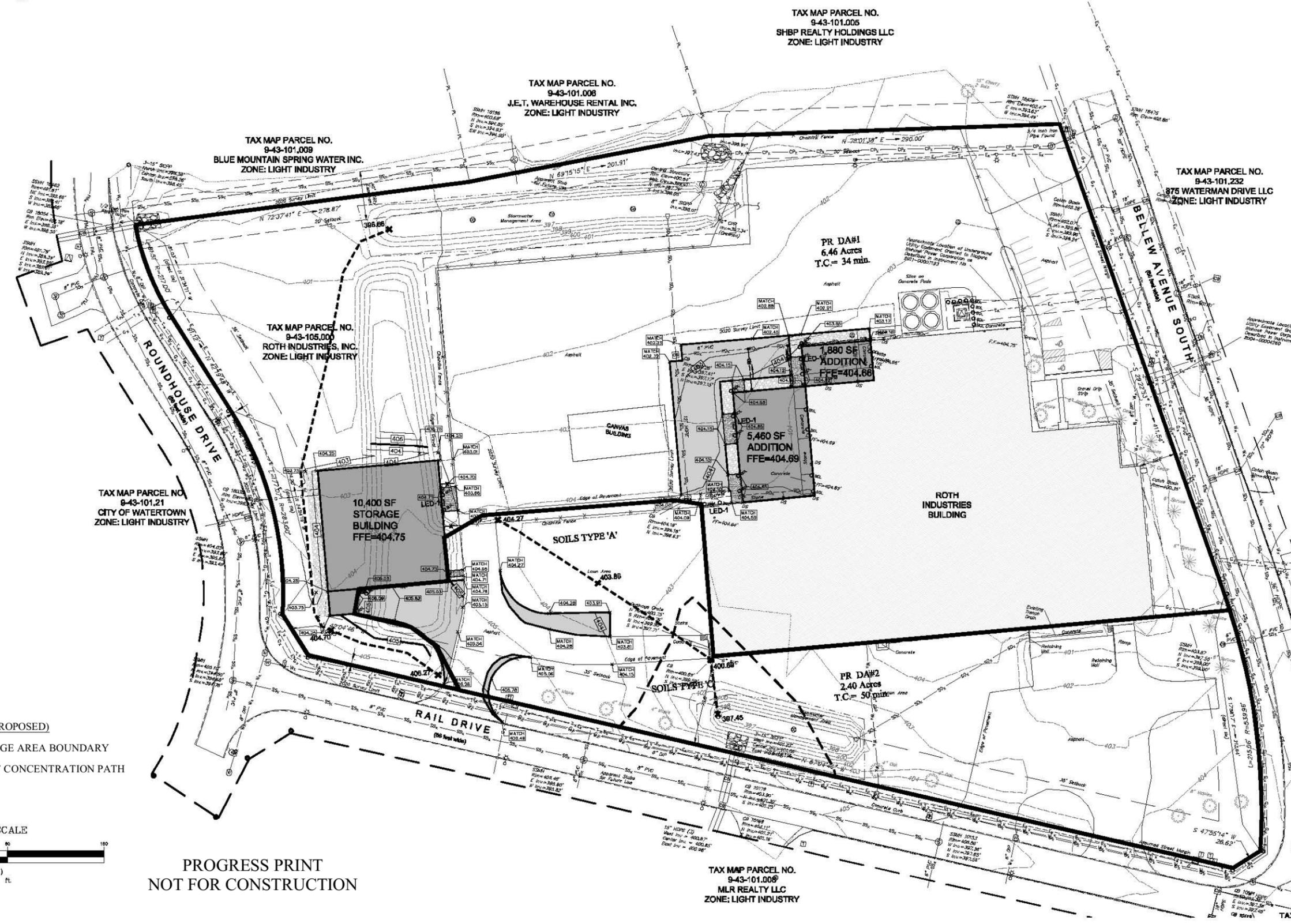
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**ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT**
268 BELLEW AVENUE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO: 2016-03004
SCALE: 1"=40'
DRAWN BY: J. YFTT
CHECKED BY: NRM
ISSUE DATE:
04/18/2022

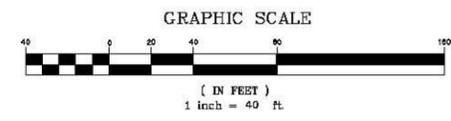
PROPOSED DRAINAGE AREA MAP

PR-1



DRAINAGE MAP LEGEND (PROPOSED)

	DRAINAGE AREA BOUNDARY
	TIME OF CONCENTRATION PATH



PROGRESS PRINT
NOT FOR CONSTRUCTION

TAX MAP PARCEL NO.
9-43-101.008
MLR REALTY LLC
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.005
SHBP REALTY HOLDINGS LLC
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.008
J.E.T. WAREHOUSE RENTAL INC.
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.009
BLUE MOUNTAIN SPRING WATER INC.
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.232
875 WATERMAN DRIVE LLC
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-105.000
ROTH INDUSTRIES, INC.
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.21
CITY OF WATERTOWN
ZONE: LIGHT INDUSTRY

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EXISTING VS. PROPOSED RUNOFF COMPARISON
Roth Industries Expansion Project

24 HOUR STORM EVENT PEAK DISCHARGE - (CFS)

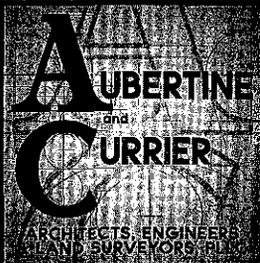
DRAINAGE AREAS	EXIST. 1 0 YR	PROP. 10 YR	EXIST. 25 YR	PROP. 25 YR	EXIST. 50 YR	PROP. 50 YR	EXIST. 100 YR	PROP. 100 YR
DA #1	3.86	4.80	6.18	7.33	8.51	9.82	11.38	12.87
Ex. Infiltration Basin #1	0.00	0.00	0.01	0.17	0.48	0.82	1.16	1.49
DA #2	0.32	0.47	0.70	0.93	1.15	1.46	1.77	2.15
Ex. Infiltration Basin #2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL SITE DISCHARGE	0.00	0.00	0.01	0.17	0.48	0.82	1.16	1.49

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APPENDIX #4

PARKING AND TRAFFIC CALCULATIONS

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522 BRADLEY STREET
 WATERTOWN, NY 13601
 TEL: (315) 782-2005
 FAX: (315) 782-1472
 www.AubertineCurrier.com

CALCULATION SHEET

Project Number: 2016-033.004 Date: _____
 Project Name: Roth Industries Page: 1 Of: 2
 Location: 268 Helen Ave South Calc'd By: JLY

Trip Generation Calculations

Trip Generation ITE 7th Edition

Land Use 140: Manufacturing

Existing Building = 66,000 SF
 Proposed Building = 16,300 SF
 total = 82,300 SF

- Average Vehicle Trip Ends vs. 1,000 SF of Gross Floor Area

- Weekday A.M. peak hour
 68% Entering, 32% exiting

$T = 0.83(x) - 17.71$, $x = 66$ (existing), 82.3 (Proposed)

Existing: $T = 0.83(66) - 17.71 = 37$ trips \rightarrow 25 entering, 12 exiting

Proposed: $T = 0.83(82.3) - 17.71 = 51$ trips \rightarrow 35 entering, 16 exiting

- Weekday PM peak hour
 52% entering, 48% exiting

$T = 0.76(x) - 5.15$, $x = 66$ (existing), 82.3 (Proposed)

Existing: $T = 0.76(66) - 5.15 = 45$ trips \rightarrow 23 entering, 22 exiting

Proposed: $T = 0.76(82.3) - 5.15 = 63$ trips \rightarrow 33 entering, 30 exiting

- Saturday peak hour

- Avg rate = 0.28 trips / 1,000 SF Gross Floor Area

Existing: $T = 0.28(66) = 20$ trips (Distribution not available)

Proposed: $T = 0.28(82.3) = 23$ trips (Distribution not available)



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CALCULATION SHEET

Project Number: 2016-033-004 Date: _____
 Project Name: Roth Industries Page: 2 Of: 2
 Location: 268 Bellow Ave South Calc'd By: JLY

Parking Calculations

- Per City of Watertown Zoning Sections 310-47, 310-48
 200 SF per 1,000 SF of floor space for light industry
 15 parking Spaces per 1,000 SF of office space
- Per Section 310-50, Areas used for boiler room, heating facilities, Utility facilities & storage are not included in floor space area.

- Existing Building → office floor area = 2,500 SF ∴ 13 Spaces required
 Manufacturing Area = 24,500 SF ∴ 4,900 SF required
 Utility / Storage Area = 41,500 SF - No parking req'd

Proposed Building → Manufacturing Area = 30,000 SF = 6,000 SF required
 Utility / Storage = 52,300 SF - No parking req'd

- Office use requires 13 spaces
- Industrial use requires 6,000 SF of parking area

Existing parking lot contains 19 spaces and storage area within chain link fence contains 8,190 SF of unstriped parking spaces

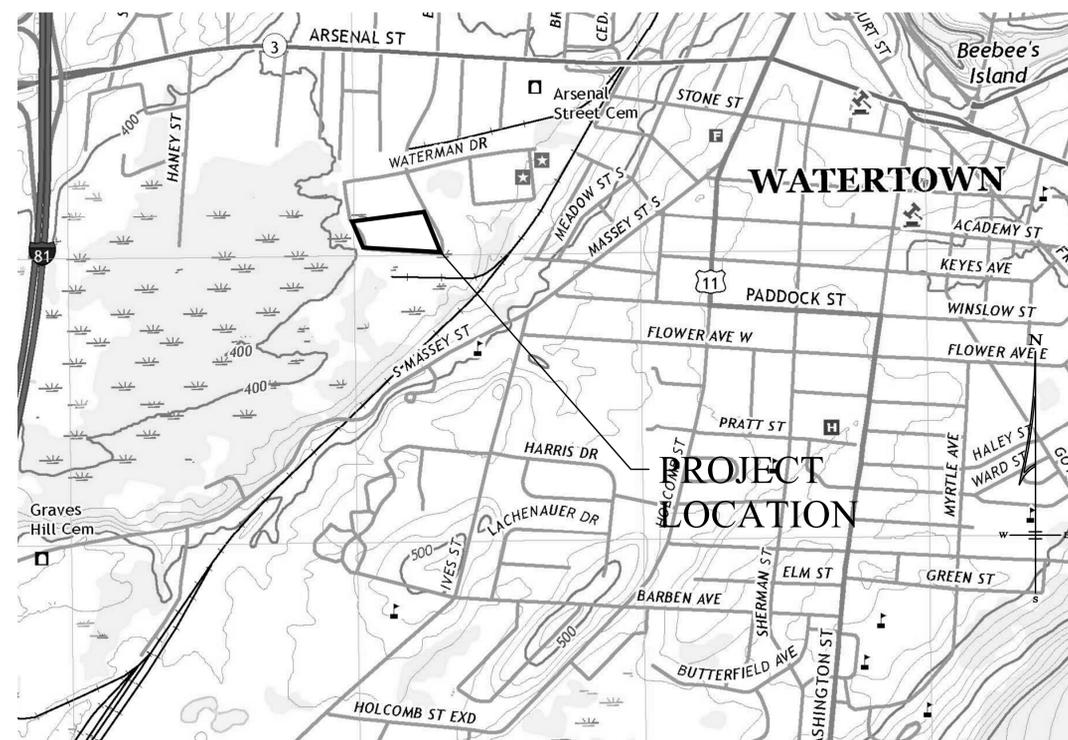
ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS EXPANSION PROJECT

268 BELLEW AVENUE SOUTH

CITY OF WATERTOWN

JEFFERSON COUNTY, STATE OF NEW YORK

PRELIMINARY SITE PLANS: 03/03/2020



INDEX OF DRAWINGS

CD-101	EXISTING CONDITIONS AND DEMOLITION PLAN
CS-101	SITE PLAN
CG-101	GRADING, EROSION AND SEDIMENT CONTROL, AND UTILITY PLAN
CS-500	SITE DETAILS
CS-501	CHAIN LINK FENCE DETAILS
CG-500	ESC AND DRAINAGE DETAILS
CT-101	TRAFFIC CIRCULATION PLAN
A100	ADDITION PLAN - MAIN BUILDING
A101	FLOOR PLAN - STORAGE BUILDING
A102	ROOF PLANS
A200	EXTERIOR ELEVATIONS - MAIN FACILITY
A201	EXTERIOR ELEVATIONS - STORAGE BUILDING

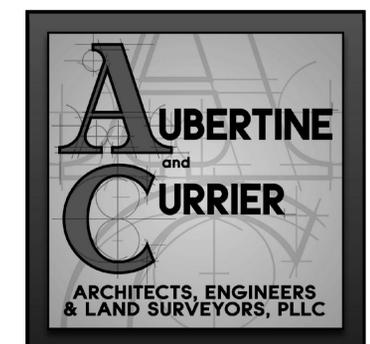
OWNER

ROTH INDUSTRIES, INC
ATTN: JOHN C. PEZZI, VICE PRESIDENT OF SALES
268 BELLEW AVENUE SOUTH
WATERTOWN, NEW YORK 13601
TELE: (888) 266-7684

CIVIL/SITE ENGINEER

AUBERTINE and CURRIER, PLLC
522 BRADLEY STREET
WATERTOWN, NEW YORK 13601
TELE: (315) 782-2005
FAX: (315) 782-1472
www.aubertinecurrier.com

FOR APPROVALS ONLY
NOT FOR CONSTRUCTION



LEGEND	EXISTING	PROPOSED
5' CONTOUR	---	---
1' CONTOUR	---	---
PROPERTY LINE	---	---
RIGHT OF WAY	---	---
SETBACK	---	---
BUILDING	---	---
ASPHALT PAVEMENT	---	---
CURB	---	---
SIDEWALK	---	---
EDGE OF GRAVEL	---	---
FENCE	---	---
WATERLINE	---	---
SANITARY SEWER	---	---
STORM SEWER	---	---
OVERHEAD UTILITIES	---	---
UNDERGROUND ELECTRIC	---	---
GAS	---	---
ROOF DRAIN PIPE	---	---
FIRE HYDRANT	---	---
WATER VALVE	---	---
SANITARY MANHOLE	---	---
STORM MANHOLE	---	---
CATCH BASIN	---	---
UTILITY POLE AND GUY	---	---
LIGHT POLE	---	---



522 Bradley Street
Watertown, New York 13601

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**ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT**
268 BELLEVUE AVENUE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

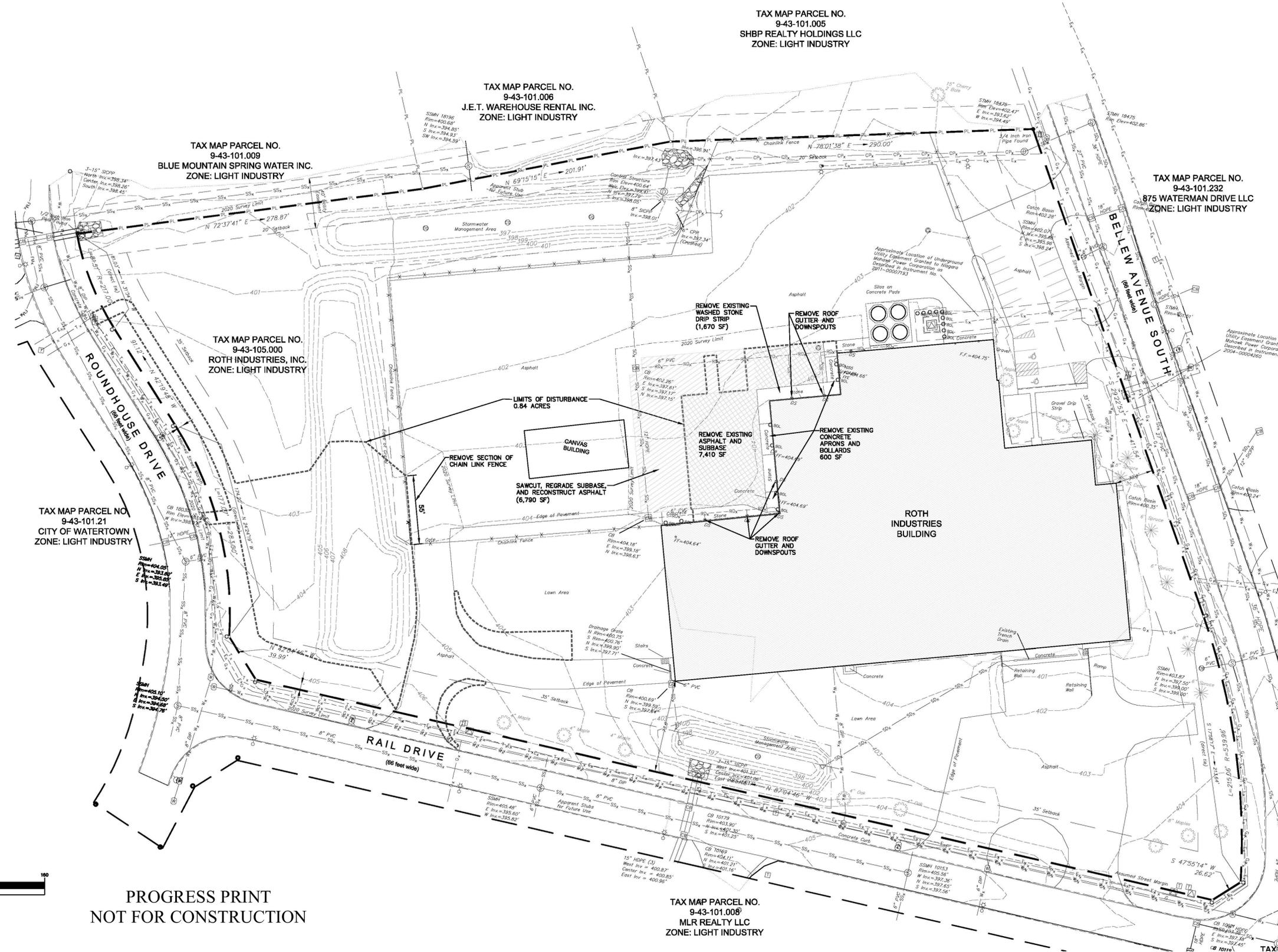
PROJECT NO.: 2016-033-004
SCALE: 1"=40'
DRAWN BY: JUVITF
CHECKED BY: MRM
ISSUE DATES:
02/18/2020
03/03/2020

EXISTING CONDITIONS
AND DEMOLITION PLAN

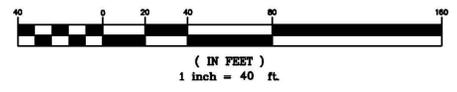
CD-100

GENERAL NOTES:

- UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN. PRIOR TO CONSTRUCTION CONTACT UNDERGROUND UTILITIES CALL CENTER OF NEW YORK FOR EXACT LOCATION OF ALL UNDERGROUND UTILITIES. (1-800-982-7862). CONTRACTOR IS RESPONSIBLE FOR LOCATING AND WORKING WITH THE APPROPRIATE UTILITY COMPANIES PRIOR TO CONSTRUCTION.
- THE ON-SITE TOPOGRAPHIC, UTILITY, AND PLANIMETRIC SURVEY FOR THE PROJECT AREA WAS CONDUCTED BY AUBERTINE AND CURRIER, PLLC ON 03/12/2016, 03/14/2016, 04/13/2016, AND 08/31/2017. ON-SITE FIELD VERIFICATION SURVEY FOR THE PROJECT AREA WAS CONDUCTED BY AUBERTINE AND CURRIER, PLLC ON 01/03/2020, AND 01/13/2020. UTILITY LOCATIONS WERE PLOTTED FROM VISIBLE EVIDENCE, OWNERS RECORD DRAWINGS, AND RECORD DRAWINGS PROVIDED BY THE CITY OF WATERTOWN ENGINEERING DEPARTMENT. VERTICAL DATUM IS BASED ON NAVD83 DATUM AND THE HORIZONTAL DATUM IS BASED ON NAD83(09).
- ALL OUT-OF-SCOPE AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS WILL BE RESTORED TO CONDITIONS EQUAL TO OR BETTER THAN THAT PRIOR TO CONSTRUCTION. OUTSIDE OF PROPERTY BOUNDARIES AND EASEMENT AREAS THE CONTRACTOR IS REMINDED THAT HE MUST OBTAIN WRITTEN AUTHORIZATION TO USE PRIVATE PROPERTY AND ASSUME ALL LIABILITY HIMSELF.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CHARACTERISTICS AND EXTENT OF SUBSURFACE SOILS, ROCK, WATER TABLE LEVELS, ETC., PRIOR TO BIDDING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND BONDS NECESSARY TO OBTAIN SAID PERMITS WHERE APPLICABLE.
- SITE CONTRACTOR TO PROVIDE EROSION AND DUST CONTROL AS REQUIRED.
- A LICENSED LAND SURVEYOR SHALL BE RETAINED FOR ALL UTILITY AND FIELD STAKEOUT AT THE CONTRACTOR'S EXPENSE.
- PAVED AREAS WILL BE SAWCUT PRIOR TO EXCAVATION AND PAVING OPERATIONS. SAW CUT AREAS WILL BE TACK COATED PRIOR TO PAVING. TACK COAT SHALL MEET THE REQUIREMENTS OF ASPHALT OF ASPHALT EMULSION FOR TACK COAT, NYSDOT TABLE 702.8.
- CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION UNTIL ESTABLISHMENT OF VEGETATIVE COVER. RUN-OFF CONTAINING SEDIMENTS FROM DISTURBED AREAS OF THE SITE SHALL NOT BE ALLOWED DIRECTLY INTO NATURAL STREAM CHANNELS.
- ALL TREES AND WETLANDS TO REMAIN SHALL BE PROTECTED BY THE CONTRACTOR. CONSTRUCTION ACTIVITIES ADJACENT TO TREES SHALL BE CONDUCTED TO REDUCE THE IMPACT TO TREES TO THE MAXIMUM EXTENT PRACTICAL. ANY DAMAGE TO EXISTING TREES SHALL BE REPAIRED OR THE TREE REPLACED, AS DIRECTED BY THE OWNER AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL PERFORM ALL ROADWAY CONNECTION WORK IN ACCORDANCE WITH NYSDOT SPECIFICATIONS. ALL ROADWAY WORK SHALL BE IN ACCORDANCE WITH NYSDOT MAINTENANCE AND PROTECTION OF TRAFFIC REGULATIONS, INCLUDING FLAGMEN, BARRICADES, WARNING SIGNS/LIGHTS, ETC., WHERE WARRANTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND PROPER DISPOSAL, AT A NYSDOT ACCEPTABLE LOCATION, OF ALL MATERIALS NOT REUSED AS TRENCH BACKFILL.
- EXCAVATIONS SHALL BE TO DEPTHS SHOWN ON DRAWINGS. ALL UNSTABLE OR UNSUITABLE MATERIAL SHALL BE EXCAVATED AND REMOVED TO SUCH DEPTH AS REQUIRED TO PROVIDE SUFFICIENT BEARING CAPACITY. OVEREXCAVATED AREAS SHALL BE BACKFILLED WITH SUITABLE MATERIAL.
- COMPACTION OF PIPE BEDDING AND BACKFILL MATERIAL SHALL BE BY MEANS OF HAND-GUIDED POWER DRIVEN OR DRUM-TYPE OR PLATE TAMPERS. BACKFILLING SHOULD PROCEED IN ACCORDANCE WITH LIFT THICKNESSES AND COMPACTION REQUIREMENTS AS SHOWN ON THE DRAWINGS, UNLESS OTHERWISE NOTED ON THE DRAWINGS. COMPACTION REQUIREMENTS REFER TO PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM STANDARD D1557 METHOD "C". CARE SHOULD BE TAKEN TO SHAPE PIPE BEDDING TO FIT THE LOWER PART OF THE PIPE. BACKFILLING AND COMPACTION SHOULD PROGRESS EVENLY ALONG THE PIPE SIDEWALLS AND TO THE TOP OF PIPE BEDDING.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OF DIMENSIONS, ELEVATIONS AND LOCATIONS DURING PRECONSTRUCTION FIELD VERIFICATION. SUCH INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR VERIFICATION OR MODIFICATION OF THE PLANS.
- THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORD DRAWINGS INCLUDING, AS A MINIMUM, THE FOLLOWING INFORMATION AS WELL AS ALL REQUIREMENTS OF THE SPECIFICATION:
 - RECORD OF ALL UTILITIES ENCOUNTERED IN TRENCH EXCAVATION. INFORMATION SHALL INCLUDE DIAMETER OF UTILITY, DEPTH OF BURIAL AND LOCATION WITH REFERENCE TO NEAREST STRUCTURE SHOWN ON DRAWINGS. THIS INFORMATION SHALL BE KEPT CURRENT ON A WEEKLY BASIS. FAILURE TO DO SO MAY RESULT IN WITHHOLDING OF PAYMENTS.
 - DISTANCE TIES TO ALL MANHOLES, CLEANOUTS, BENDS AND CORPORATION STOPS.
 - UTILITY REPAIRS, SIDEWALK, AND DRIVEWAY REPLACEMENTS CENTERLINE.
 - STATIONS OF BENDS, CLEANOUTS, VALVES AND CORPORATION STOPS.
 - DENOTE BENCH MARK REFERENCE USED.
 - PERIODIC OFFSETS.
 - RECORD DETAILS NOT SHOWN ON THE ORIGINAL CONTRACT DOCUMENTS. ANY FIELD CHANGES OF DIMENSIONS AND DETAILS AND ANY CHANGES MADE BY CHANGE ORDER OR FIELD ORDER.
 - CERTIFICATE OF SUBSTANTIAL COMPLETION SHALL NOT BE ISSUED UNTIL AS-BUILT INFORMATION IS ACCEPTABLE.
 - PROVIDE TWO (2) SETS OF FINAL COMPLETE RECORD DRAWINGS. CONTRACTOR SHALL FURNISH AS-BUILT DATA ON PLAN SHEETS.
- ALL WORK TO BE PERFORMED WITHIN THE CITY OF WATERTOWN MARGIN WILL REQUIRE SIGN-OFF FROM AN ENGINEER LICENSED IN THE STATE OF NEW YORK THAT THE WORK WAS BUILT ACCORDING TO THE APPROVED SITE PLAN AND APPLICABLE CITY OF WATERTOWN STANDARDS. COMPACTION TESTING WILL BE REQUIRED FOR ALL WORK TO BE PERFORMED WITHIN THE CITY OF WATERTOWN MARGIN AND MUST BE SUBMITTED TO THE CITY OF WATERTOWN CODES DEPARTMENT.
- ALL WATER MAIN AND SERVICE WORK MUST BE COORDINATED WITH THE CITY OF WATERTOWN WATER DEPARTMENT. THE WATER DEPARTMENT REQUIREMENTS SUPERCEDE ALL OTHER PLANS AND SPECIFICATIONS PROVIDED.
- UPON COMPLETION OF STORM SEWER FACILITIES AND ESTABLISHMENT OF VEGETATION, THE NEW AND EXISTING STORM SYSTEMS RECEIVING RUNOFF FROM THIS SITE SHALL BE CLEANED OF DEBRIS, ONLY AT THIS TIME SHALL THE EROSION AND SEDIMENTATION CONTROL MEASURES BE REMOVED.



GRAPHIC SCALE



PROGRESS PRINT
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LEGEND	EXISTING	PROPOSED
5' CONTOUR	-155	-155
1' CONTOUR	-154	-154
PROPERTY LINE	— RL — RL	— RL — RL
RIGHT OF WAY	— RL — RL	— RL — RL
SETBACK	— RL — RL	— RL — RL
BUILDING	— RL — RL	— RL — RL
ASPHALT PAVEMENT	— RL — RL	— RL — RL
CURB	— RL — RL	— RL — RL
SIDEWALK	— RL — RL	— RL — RL
EDGE OF GRAVEL	— RL — RL	— RL — RL
FENCE	— RL — RL	— RL — RL
WATERLINE	— RL — RL	— RL — RL
SANITARY SEWER	— RL — RL	— RL — RL
STORM SEWER	— RL — RL	— RL — RL
OVERHEAD UTILITIES	— RL — RL	— RL — RL
UNDERGROUND ELECTRIC	— RL — RL	— RL — RL
GAS	— RL — RL	— RL — RL
ROOF DRAIN PIPE	— RL — RL	— RL — RL
FIRE HYDRANT	— RL — RL	— RL — RL
WATER VALVE	— RL — RL	— RL — RL
SANITARY MANHOLE	— RL — RL	— RL — RL
STORM MANHOLE	— RL — RL	— RL — RL
CATCH BASIN	— RL — RL	— RL — RL
UTILITY POLE AND GUY	— RL — RL	— RL — RL
LIGHT POLE	— RL — RL	— RL — RL

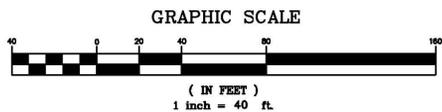
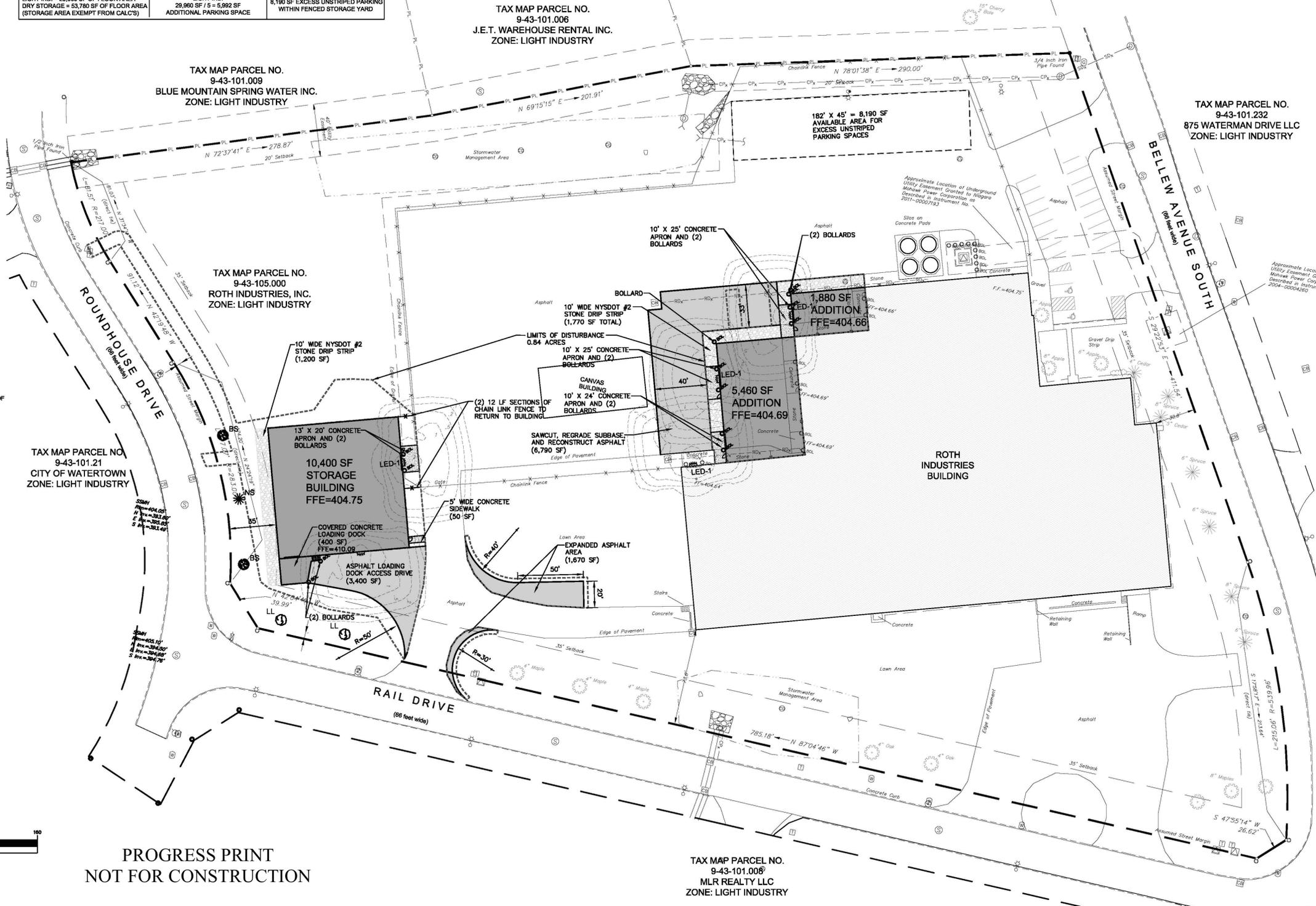
PLANNING DATA			
ZONING: LIGHT INDUSTRY USE: INDUSTRIAL BUILDING (5,460 SF BUILDING ADDITION), STORAGE (1,880 SF ADDITION, AND 10,400 SF BUILDING) TOTAL = 17,740 SF			
ITEM	REQUIRED	CCIP COVENANTS & RESTRICTIONS	AS PROVIDED
MIN. LOT AREA	--	44,000 SQ. FT. (1.01 ACRES)	388,092 SQ. FT. (8.86 ACRES)
MIN. FRONTAGE	--	150'	648'
MIN. FRONT SETBACK	0'	35'	EXISTING BUILDING = 31' PROPOSED BUILDING = 35'
MIN. REAR YARD SETBACK	0'	20'	173'
MIN. SIDE YARD SETBACK	0'	20'	N/A
LIMITS OF DISTURBANCE	40.84 ACRES		
HOURS OF OPERATION	EXISTING	PROPOSED	
	7 DAYS PER WEEK, 24 HOURS PER DAY	7 DAYS PER WEEK, 24 HOURS PER DAY	
FIRE FLOW RESULTS (2016)	STATIC: 98 PSI TEST: 2,950 GPM AT 36 PSI PROJECTED: 2,940 GPM AT 20 PSI		
PARKING		REQUIRED	AS PROVIDED
EXISTING PARKING REQUIREMENTS - OFFICE SPACE = 2,500 SF OF FLOOR AREA LIGHT IND. = 24,500 SF OF FLOOR AREA DRY STORAGE = 41,500 SF OF FLOOR AREA (STORAGE AREA EXEMPT FROM CALC'S)		OFFICE SPACE: 2,500 SF / 200 SF = 13 SPACES LIGHT IND.: 24,500 SF / 5 = 4,900 SF ADDITIONAL PARKING SPACE	19 STRIPED SPACES PLUS 8,190 SF EXCESS UNSTRIPED PARKING WITHIN FENCED STORAGE YARD
PROPOSED PARKING REQUIREMENTS - OFFICE SPACE = 2,500 SF OF FLOOR AREA LIGHT IND. = 29,960 SF OF FLOOR AREA DRY STORAGE = 53,780 SF OF FLOOR AREA (STORAGE AREA EXEMPT FROM CALC'S)		OFFICE SPACE: 2,500 SF / 200 SF = 13 SPACES LIGHT IND.: 29,960 SF / 5 = 5,992 SF ADDITIONAL PARKING SPACE	19 STRIPED SPACES PLUS 8,190 SF EXCESS UNSTRIPED PARKING WITHIN FENCED STORAGE YARD

TRAFFIC INFORMATION (ITE TRAFFIC GENERATION, 7TH EDITION)		
WEEKDAY, AM	ENTERING	22
	EXITING	5
WEEKDAY, PM	ENTERING	13
	EXITING	15
SATURDAY	ENTERING	6
	EXITING	5

SITE LIGHTING SCHEDULE			
SYMBOL	FIXTURE	MOUNTING HEIGHT	QUANTITY
LED-1	1ST-E01-LED-E1-BL4-BZ BY EATON LIGHTING	16' MOUNTING HEIGHT (MOUNTED ON BUILDING)	5

PLANTING SCHEDULE					
SYM	COMMON NAME	ABBREV.	BOTANICAL NAME	SIZE	QUANTITY
BS	COLORADO BLUE SPRUCE	BS	PICEA PUNGENS	2" CALIPER	2
NS	NORWAY SPRUCE	NS	PICEA ABIES	2" CALIPER	1
LL	LITTLELEAF LINDEN	LL	TILIA CORDATA	2" CALIPER	2

- LANDSCAPING NOTE:**
- PLANT SPECIES WERE SELECTED BASED ON ABILITY TO GROW IN EXISTING SOIL CONDITIONS. PLANT SPECIFIED WERE ALSO CHOSEN BASED ON SIZE, SHAPE, COLOR AND GROWTH HABIT. ANY SUBSTITUTIONS SHALL BE APPROVED BY THE ARCHITECT.
 - ALL PLANTINGS SHALL ARRIVE ON-SITE BEARING THE ORIGINAL IDENTIFICATION TAGS SHOWING THEIR BOTANICAL NAME, COMMON NAME AND SIZE.
 - ALL TREES SHALL HAVE A 4" DIA. SHREDDED HARDWOOD MULCH RING AROUND THE BASE OF THE TREE.
 - ALL LANDSCAPED AREAS SHALL HAVE A WEED BARRIER FABRIC AND A MIN. OF 3" DEEP SHREDDED HARDWOOD MULCH.
 - ALL PLANTINGS SHALL BE THOROUGHLY WATERED AT THE TIME OF PLANTING.



PROGRESS PRINT
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TAX MAP PARCEL NO.
9-43-101.008
MLR REALTY LLC
ZONE: LIGHT INDUSTRY



522 Bradley Street
Watertown, New York 13601

aubertinecurrier.com

Phone: (315)782-2005
Fax: (315)782-1472

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**ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
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268 BELLEVUE AVENUE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO.: 2016-033-004
SCALE: 1"=40'
DRAWN BY: J.VITTT
CHECKED BY: MRM
ISSUE DATES:
02/16/2020
03/04/2020
03/03/2020

SITE PLAN

CS-100

LEGEND	EXISTING	PROPOSED
5' CONTOUR	---	---
1' CONTOUR	---	---
PROPERTY LINE	---	---
RIGHT OF WAY	---	---
SETBACK	---	---
BUILDING	---	---
ASPHALT PAVEMENT	---	---
CURB	---	---
SIDEWALK	---	---
EDGE OF GRAVEL	---	---
FENCE	---	---
WATERLINE	---	---
SANITARY SEWER	---	---
STORM SEWER	---	---
OVERHEAD UTILITIES	---	---
UNDERGROUND ELECTRIC	---	---
GAS	---	---
ROOF DRAIN PIPE	---	---
FIRE HYDRANT	---	---
WATER VALVE	---	---
SANITARY MANHOLE	---	---
STORM MANHOLE	---	---
CATCH BASIN	---	---
UTILITY POLE AND GUY	---	---
LIGHT POLE	---	---

SPOT ELEVATION LEGEND	
PROPOSED ELEV.	263.00
PROPOSED ELEV. TOP OF CURB	263.50
PROPOSED ELEV. BOTTOM FACE OF CURB	263.00
PROPOSED ELEV. TOP OF CURB	263.50
MATCH EXISTING FACE OF CURB ELEV.	263.00
MATCH EXISTING TOP OF CURB ELEV.	263.50
PROPOSED ELEV. BOTTOM FACE OF CURB	263.00
MATCH EXISTING TOP OF CURB ELEV.	263.50
MATCH EXISTING ELEV. FACE OF CURB	263.00

- TEMPORARY MEASURES:**
- INSTALL SILT FENCE IN LOCATIONS INDICATED AND WHERE THERE IS THE POTENTIAL FOR OFF-SITE RUNOFF TO OCCUR PRIOR TO ANY CONSTRUCTION WITHIN THOSE AREAS. FENCE MUST BE MAINTAINED AND MUST REMAIN IN PLACE UNTIL PROJECT HAS BEEN FINAL GRADED AND VEGETATION HAS BEEN ESTABLISHED.
 - CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY OR STREETS. ALL SEDIMENT SPILLED, DROPPED OR WASHED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.
 - INLET PROTECTION SHALL BE INSTALLED AROUND CULVERTS AND CATCH BASINS FOLLOWING THEIR INSTALLATION.



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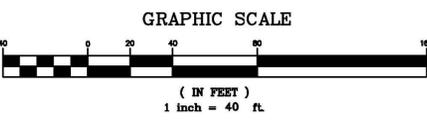
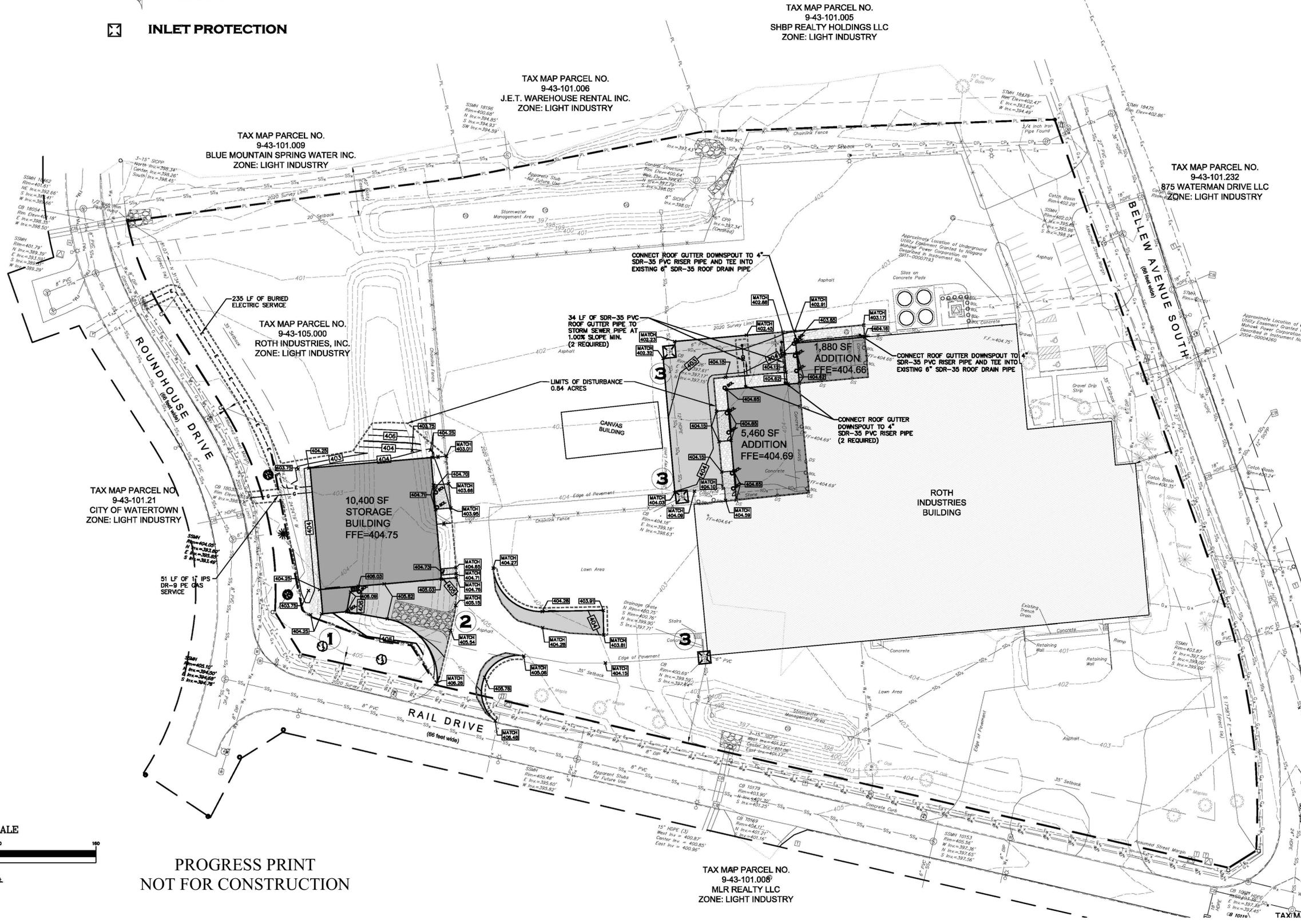


**ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT**
268 BELLEVUE AVENUE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO.: 2016-033-004
SCALE: 1"=40'
DRAWN BY: J.VITTT
CHECKED BY: MRM
ISSUE DATES:
02/18/2020
03/02/2020

GRADING,
EROSION AND SEDIMENT CONTROL,
AND UTILITY PLAN

CG-100



PROGRESS PRINT
NOT FOR CONSTRUCTION

TAX MAP PARCEL NO.
9-43-101.008
MLR REALTY LLC
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.005
SHBP REALTY HOLDINGS LLC
ZONE: LIGHT INDUSTRY

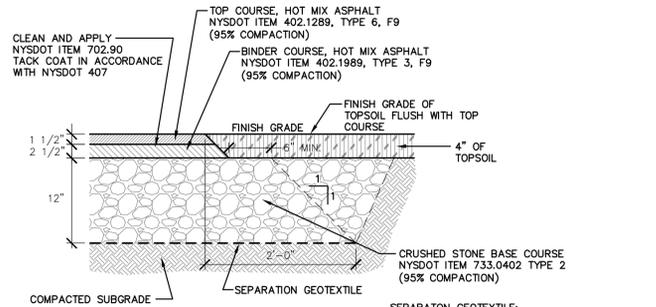
TAX MAP PARCEL NO.
9-43-101.006
J.E.T. WAREHOUSE RENTAL INC.
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.009
BLUE MOUNTAIN SPRING WATER INC.
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-105.000
ROTH INDUSTRIES, INC.
ZONE: LIGHT INDUSTRY

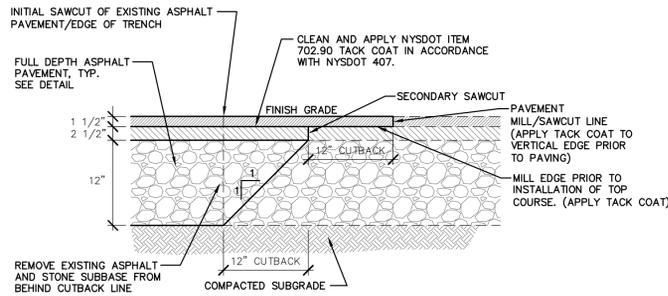
TAX MAP PARCEL NO.
9-43-101.21
CITY OF WATERTOWN
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.232
875 WATERMAN DRIVE LLC
ZONE: LIGHT INDUSTRY

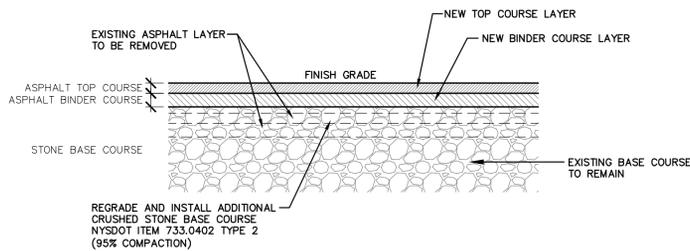


- NOTES:**
- ALL HMA COMPACTION WILL BE TO 95% MADMTD (MIXTURE'S AVERAGE DAILY MAXIMUM THEORETICAL DENSITY) PER NYS DOT SPECIFICATIONS FOR HMA COMPACTION 402-3.07. BASE COURSE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DENSITY.
 - FIELD VERIFICATION OF COMPACTION SHALL BE BY NUCLEAR DENSITY TESTING METHODS.
- SEPARATION GEOTEXTILE:**
 WOVEN, MINIMUM CRITERIA AS FOLLOWS:
 1. NYS DOT 737.01, STRENGTH CLASS 2
 2. MIN. 247 LB GRAB STRENGTH AT <50% ELONGATION, ASTM D-4632
 3. MIN. 495 LB PUNCTURE, ASTM D-6241
 4. MAX. NO. 30 SIEVE, APPARENT OPENING (AOS), ASTM D-4751
 5. MIN. 0.02 sec⁻¹ PERMITIVITY, ASTM D-4491

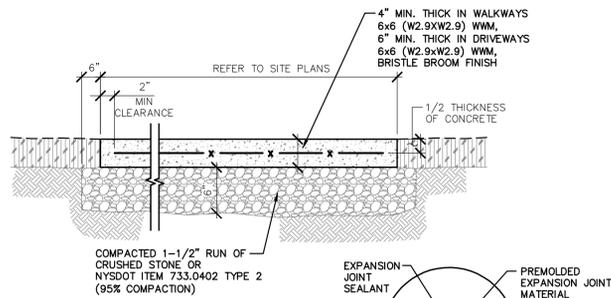
1 TYPICAL ASPHALT PAVEMENT DETAIL
NOT TO SCALE



2 TYPICAL ASPHALT PAVEMENT JOINT DETAIL
NOT TO SCALE

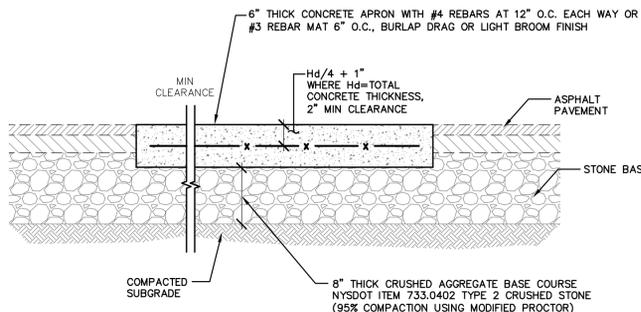


3 TYPICAL EXISTING ASPHALT PAVEMENT REMOVAL AND REGRADE AND ASPHALT PAVEMENT RECONSTRUCTION DETAIL
NOT TO SCALE



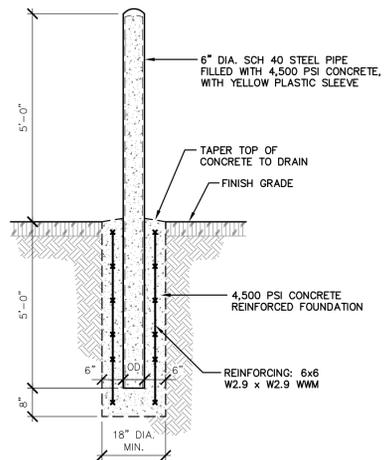
- NOTES:**
- CONCRETE WALK EXPANSION JOINTS SHALL BE AT 20' O.C. MAX.
 - CONTRACTION JOINTS TO BE SPACED EVENLY AT 4' TO 6' O.C. MAX. BOTH DIRECTIONS. CONTRACTION JOINT SPACING SHALL BE SPACED SYMMETRICALLY BASED UP THE SIDEWALK WIDTH BEING CONSTRUCTED. (I.E. 6' WIDE WALK - 6' CONTROL JOINTS, 5' WIDE WALK - 5' CONTROL JOINTS, 8' WIDE WALK - 4' CONTROL JOINTS)
 - EXPANSION JOINTS TO BE 1/2" WIDE PREMOULDED CLOSED-CELL POLYPROPYLENE FOAM EXPANSION JOINT MATERIAL CONFORMING TO ASTM D8139 OR D7174.
 - EXPANSION JOINT SEALANT SHALL BE ELASTIC POLYURETHANE SEALANT CONFORMING TO ASTM D920.
 - CONTROL/CONTRACTION JOINTS SHALL BE TOOLED OR SAW CUT JOINT WITH A DEPTH OF 1/4 THE CONCRETE THICKNESS.
 - CONCRETE SHALL BE MIN. 4,500 PSI, MAX W/C RATIO 0.45, 3"-5" SLUMP, AIR CONTENT 4-7%.

4 TYPICAL CONCRETE WALK DETAIL
NOT TO SCALE

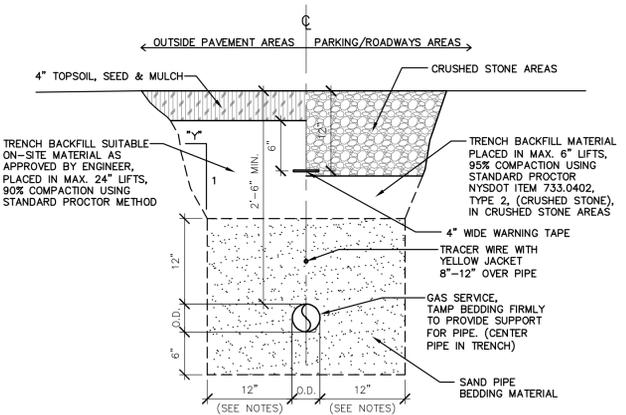


- NOTES:**
- ALL CONCRETE SHALL BE MINIMUM 4,500 PSI CONCRETE WITH A 550-FLEXURAL STRENGTH.
 - EXPANSION JOINTS TO BE 3/4" WIDE FILLED WITH PREMOULDED JOINT FILLER AND SEALANT CONFORMING TO ASTM D5893.
 - CONTROL/CONTRACTION JOINTS SHALL BE SAW CUT WITH A DEPTH OF 1/4 THE CONCRETE THICKNESS.

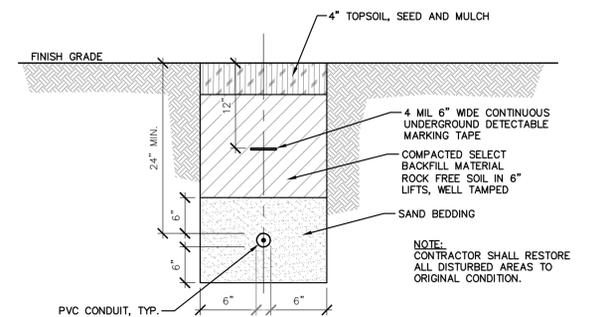
5 TYPICAL CONCRETE APRON DETAIL
NOT TO SCALE



6 TYPICAL PIPE GUARD BOLLARD DETAIL
NOT TO SCALE



7 TYPICAL GAS SERVICE TRENCH DETAIL
NOT TO SCALE



- NOTES:**
- CONTRACTOR SHALL FIELD VERIFY AND MATCH EXISTING SIZE AND TYPE OF CONDUCTORS.
 - PVC CONDUIT SHALL BE SCHEDULE 40 WITHIN LAWN AREAS AND SCHEDULE 80 WITHIN ASPHALT/GRAVEL AREAS.
 - SECONDARY ELECTRIC SHALL BE MIN. 1" PVC CONDUIT. WIRE SIZES SHALL BE IN ACCORDANCE WITH NEC REQUIREMENTS.
 - ALL BURIAL TYPE CONDUITS, SIZES, NUMBER, AND WIRES SHALL BE COORDINATED WITH THE RESPECTIVE UTILITIES.
 - WIDTH OF TRENCH IS DEPENDENT UPON THE NUMBER OF CONDUITS AND ARRANGEMENT REQUIRED.

8 TYPICAL SECONDARY ELECTRIC TRENCH IN LAWN AREA DETAIL
NOT TO SCALE

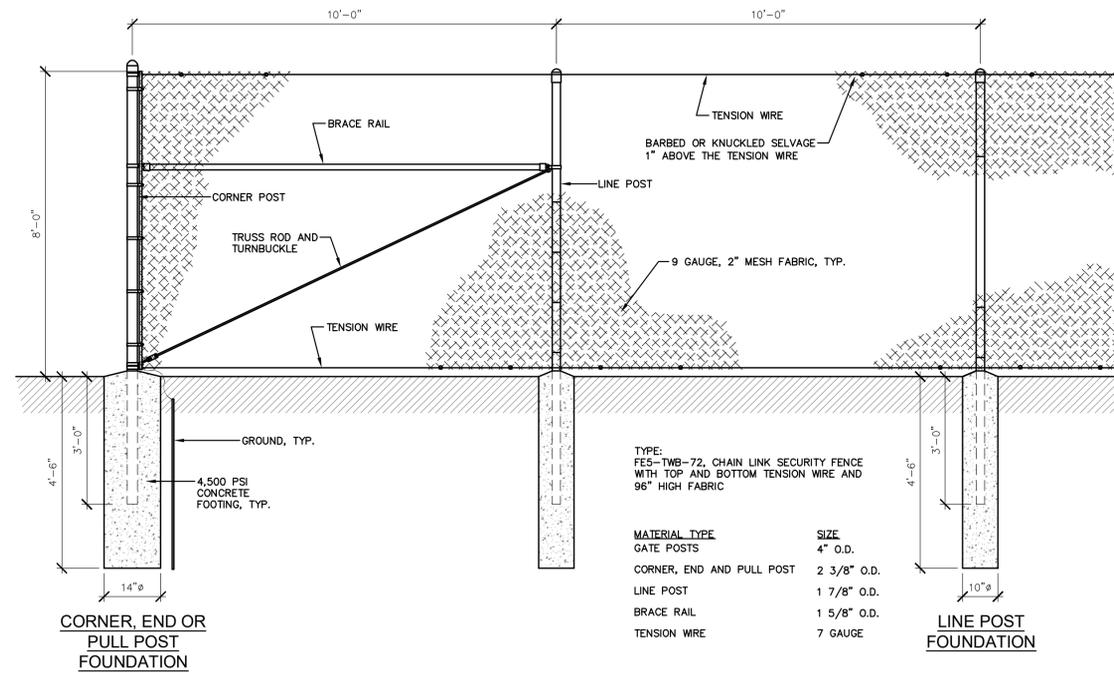
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ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT
268 BELLEVUE AVENUE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO.:	2016-033-004
SCALE:	AS NOTED
DRAWN BY:	JY
CHECKED BY:	MRM
ISSUE DATES:	02/16/2020

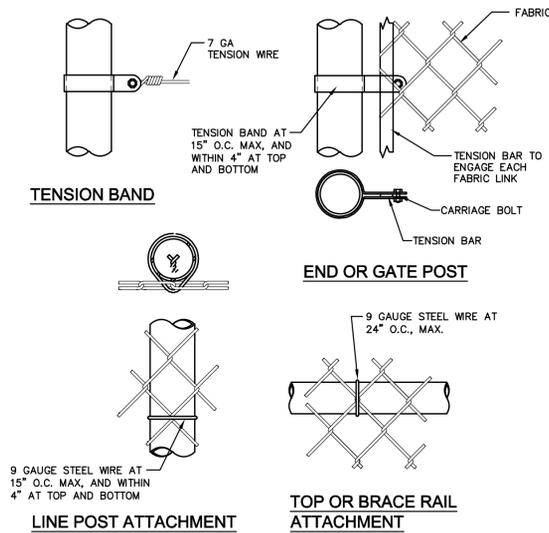
SITE DETAILS



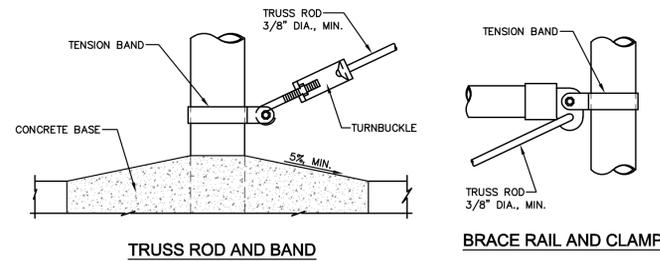
1 TYPICAL CHAIN LINK SECURITY FENCE DETAIL
NOT TO SCALE

TYPICAL CHAIN LINK FENCING NOTES

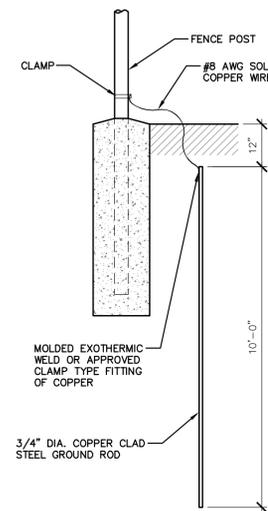
1. DETAILS SHOWN ILLUSTRATE THE GENERAL FENCE REQUIREMENTS AND ARE NOT INTENDED TO LIMIT VARIATIONS IN ASSEMBLY TYPES UTILIZED BY DIFFERENT MANUFACTURERS OF FENCE COMPONENTS. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS DETAILING THE NECESSARY COMPONENTS AND ASSEMBLIES.
2. ALL GATE POSTS AND FRAMES, TOP AND BRACE RAILS, LINE, CORNER, TERMINAL OR PULL POST SHALL CONFORM TO ASTM-F1083, SS40 PIPE.
3. FABRIC: 9 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
4. TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL FOR ATTACHMENT OF FABRIC TO LINE POSTS, RAIL AND BRACES. HOG RINGS OF 11 GA. FOR ATTACHMENT OF FABRIC TO TENSION WIRE SPACED MAX 24" INTERVALS.
5. TENSION WIRE: 7 GA. GALVANIZED STEEL.
6. GROUNDING: GROUND WIRE, CONNECTING TO EACH FENCE TERMINAL, CORNER, AND GATE POSTS. INSTALL GROUND RODS ON EACH SIDE OF GATES AND EVERY 160 FT. ALL UNDERGROUND CONNECTIONS BY EXOTHERMIC WELD PROCESS (CAD WELD).



2 TYPICAL FABRIC TIE DETAILS
NOT TO SCALE



3 TYPICAL TRUSS ROD AND TURNBUCKLE DETAIL
NOT TO SCALE



4 TYPICAL CHAIN LINK FENCE GROUNDING DETAIL
NOT TO SCALE

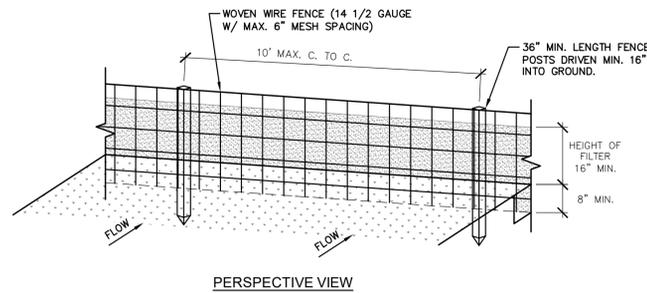
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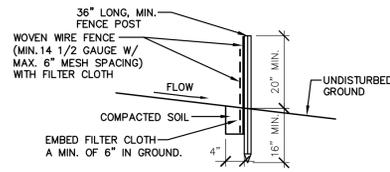
ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT
268 BELLEVUE AVENUE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO: 2016-033.004
SCALE: AS NOTED
DRAWN BY: JLY
CHECKED BY: MRM
ISSUE DATES: 02/16/2020

CHAIN LINK FENCE DETAILS



PERSPECTIVE VIEW

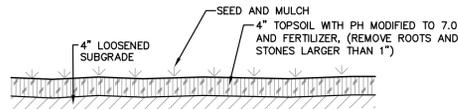


SECTION VIEW

CONSTRUCTION SPECIFICATIONS

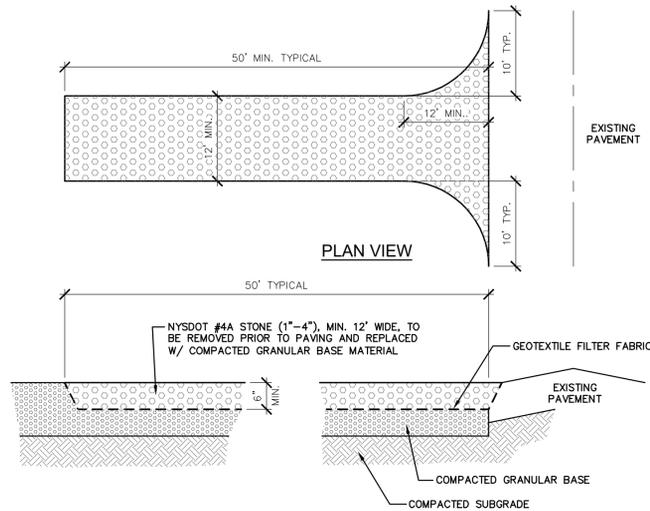
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "I" OR "U" TYPE OR HARDWOOD.
- FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
- PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

1 TYPICAL SILT FENCE DETAIL
NOT TO SCALE



NOTE:
PROVIDE SOIL TESTS WITH SEED, FERTILIZER AND MULCH RECOMMENDATIONS
(ONE PER EACH 5 ACRES OF SEEDING AND MIN. ONE PER TOPSOIL STOCKPILE)

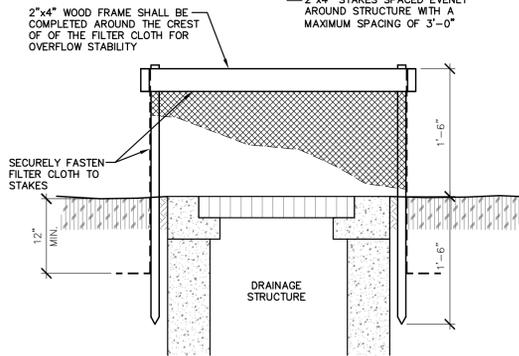
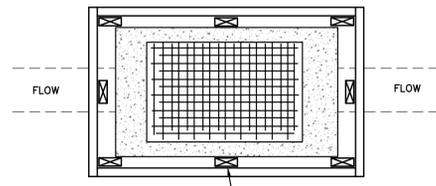
2 TYPICAL TOPSOIL REPLACEMENT DETAIL
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

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

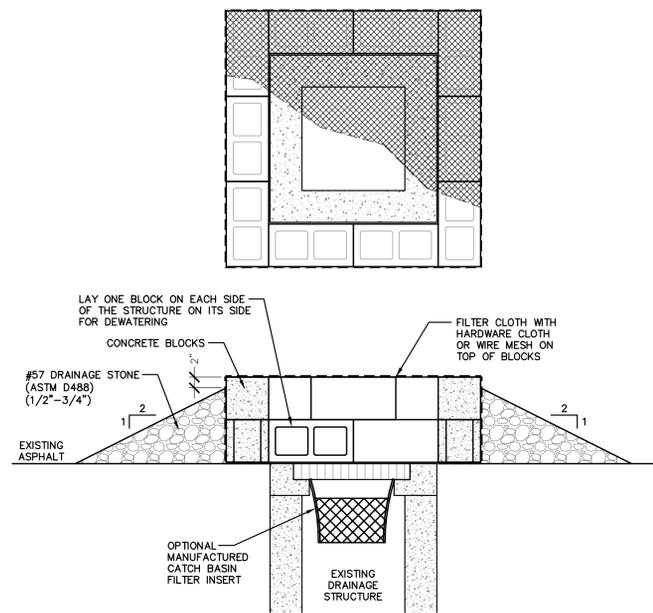
3 TYPICAL OFFSITE SEDIMENT TRACKING DETAIL
NOT TO SCALE



INSTALLATION NOTES:

- FILTER CLOTH TO BE CUT FROM A ROLL TO ELIMINATED JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
- STAKE SHALL BE 2"x4" AND A MINIMUM OF 36" LONG.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AT REGULAR INTERVALS.
- FILTER CLOTH SHALL BE FILTER X, MIRAFI 100X, STABILINKA-T140N OR APPROVED EQUAL.

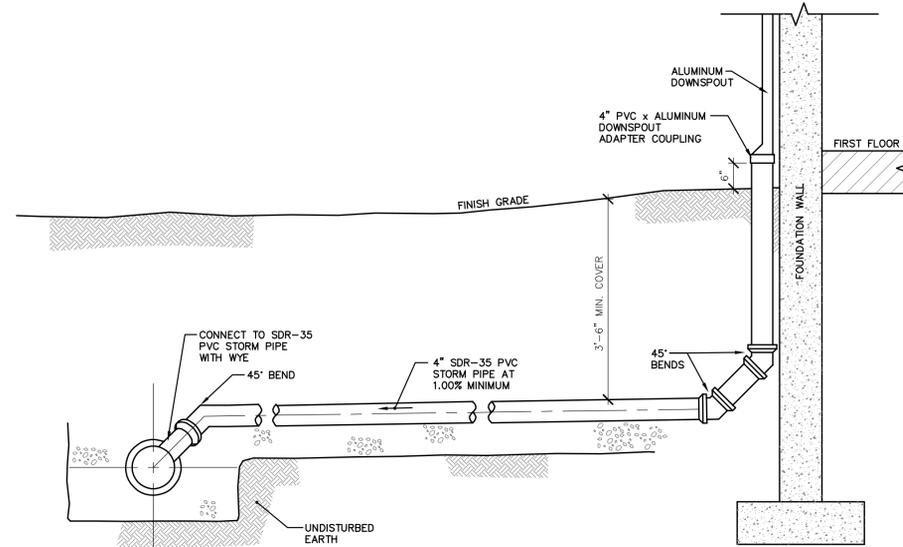
4 TYPICAL INLET PROTECTION DETAIL
NOT TO SCALE



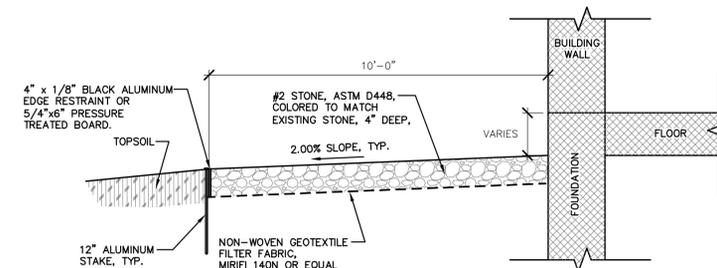
INSTALLATION NOTES:

- FILTER CLOTH TO BE CUT FROM A ROLL TO ELIMINATED JOINTS.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AT REGULAR INTERVALS.
- FILTER CLOTH SHALL BE FILTER X, MIRAFI 100X, STABILINKA-T140N OR APPROVED EQUAL.
- MANUFACTURED CATCH BASIN INSERT FILTER CAN BE USED INSIDE THE STRUCTURE INSTEAD OF USING AN ABOVE GRADE INLET PROTECTION

5 TYPICAL INLET PROTECTION DETAIL
NOT TO SCALE



6 TYPICAL ROOF DRAIN CONNECTION DETAIL
NOT TO SCALE



7 TYPICAL FOUNDATION PERIMETER "DRIP STRIP" DETAIL
NOT TO SCALE

EXECUTION

LAWN PREPARATION

- NEWLY GRADED SUBGRADES: LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 4 INCHES (100 MM). REMOVE STONES LARGER THAN 1 INCH (25 MM) IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
- APPLY SUPERPHOSPHATE FERTILIZER DIRECTLY TO SUBGRADE BEFORE LOOSENING.
- THOROUGHLY BLEND PLANTING SOIL MIX OFF-SITE BEFORE SPREADING OR SPREAD TOPSOIL. APPLY SOIL AMENDMENTS AND FERTILIZER ON SURFACE, AND THOROUGHLY BLEND PLANTING SOIL MIX.
- SPREAD PLANTING SOIL MIX TO A DEPTH OF 4 INCHES (100 MM) BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER LIGHT ROLLING AND NATURAL SETTLEMENT. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
- FINISH GRADING: GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS 1/2 INCH (13 MM) OF FINISH ELEVATION. ROLL AND RAKE. REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINE GRADING TO AREAS THAT CAN BE PLANTED IN THE IMMEDIATE FUTURE.
- MOISTEN PREPARED LAWN AREAS BEFORE PLANTING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE TO DRY BEFORE PLANTING. DO NOT CREATE MUDDY SOIL.
- RESTORE AREAS IF ERODED OR OTHERWISE DISTURBED AFTER FINISH GRADING AND BEFORE PLANTING.

TEMPORARY EROSION AND SEDIMENTATION CONTROL

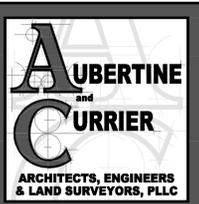
- PROVIDE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT SOIL EROSION AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS, IN ACCORDANCE WITH NYS DEC STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
- THE OPERATOR SHALL INITIATE STABILIZATION MEASURES AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAVE TEMPORARILY OR PERMANENTLY CEASED. THIS REQUIREMENT DOES NOT APPLY IN THE FOLLOWING INSTANCES:
 - WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE;
 - SEED WITH 24 HOURS OF DISTURBANCE OR LOOSEN SCARIFY THE SOIL SURFACE PRIOR TO SEEDING.
 - SPRING, SUMMER OR EARLY FALL TEMPORARY SEEDING: ANNUAL OR PERENNIAL RYE GRASS AT A RATE OF 30 LBS/AC. (PERENNIAL RYE GRASS MUST BE UTILIZED WHERE FINAL GRADING ACTIVITIES WILL NOT BE COMPLETED UNTIL THE FOLLOWING SPRING.)
 - LATE FALL OR EARLY WINTER TEMPORARY SEEDING: CERTIFIED 'ARROSTOOK' WINTER RYE AT A RATE OF 100 LBS/AC.
 - SOILING HAY OR STRAW AT A RATE OF 2 TONS/ACRE (APPROXIMATELY 90 BALES PER ACRE). MULCH ANCHORING WILL BE REQUESTED WHERE WIND OR AREAS OF WATER ARE OF CONCERN. WOOD FIBER HYDROMULCH OR OTHER SPRAYABLE PRODUCTS APPROVED FOR EROSION CONTROL MAY BE USED IF APPLIED ACCORDING TO MANUFACTURERS SPECIFICATIONS.

PERMANENT SEEDING

- SOILING RATES VARY WITH GRASS SPECIES AND MIXTURES.
- SOW SEED AT THE RATE OF 6 LB/1000 SQ. FT. (250 LB/AC).
- RAKE SEED LIGHTLY INTO TOP 1/8 INCH (3 MM) OF TOPSOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.
- MULCH WITH STRAW AT A RATE OF 2 TONS/ACRE (APPROXIMATELY 90 BALES PER ACRE). MULCH ANCHORING WILL BE REQUESTED WHERE WIND OR AREAS OF WATER ARE OF CONCERN. WOOD FIBER HYDROMULCH OR OTHER SPRAYABLE PRODUCTS APPROVED FOR EROSION CONTROL MAY BE USED IF APPLIED ACCORDING TO MANUFACTURERS SPECIFICATIONS.

SATISFACTORY LAWNS

- SATISFACTORY SEEDING LAWN: AT END OF MAINTENANCE PERIOD, A HEALTHY, UNIFORM, CLOSE STAND OF GRASS HAS BEEN ESTABLISHED, FREE OF WEEDS AND SURFACE IRREGULARITIES, WITH COVERAGE EXCEEDING 90 PERCENT OVER ANY 10 SQ. FT. (0.92 SQ. M) AND BARE SPOTS NOT EXCEEDING 5 BY 5 INCHES (125 BY 125 MM.)
- VEGETATION SHALL BE ESTABLISHED AS SOON AFTER CONSTRUCTION AS POSSIBLE TO ENSURE PROTECTION FROM EROSION. IF RILLING OCCURS, REGRADE AND USE FABRIC OR JUTE MESH TO PROTECT AREA.
- REESTABLISH LAWNS THAT DO NOT COMPLY WITH REQUIREMENTS AND CONTINUE MAINTENANCE UNTIL LAWNS ARE SATISFACTORY.



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ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT
268 BELLEVUE AVENUE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO.: 2016-033.004
SCALE: AS NOTED
DRAWN BY: JLY
CHECKED BY: MRM
ISSUE DATES:
02/16/2020

ESC AND DRAINAGE DETAILS

CG-500

LEGEND	EXISTING	PROPOSED
5' CONTOUR	-155	155
1' CONTOUR	-154	154
PROPERTY LINE	— RL — RL	— RL — RL
RIGHT OF WAY	— RL — RL	— RL — RL
SETBACK	— RL — RL	— RL — RL
BUILDING	— RL — RL	— RL — RL
ASPHALT PAVEMENT	— RL — RL	— RL — RL
CURB	— RL — RL	— RL — RL
SIDEWALK	— RL — RL	— RL — RL
EDGE OF GRAVEL	— RL — RL	— RL — RL
FENCE	— RL — RL	— RL — RL
WATERLINE	W _x W _x	W _x W _x
SANITARY SEWER	SS _x SS _x	SS _x SS _x
STORM SEWER	SD _x SD _x	SD _x SD _x
OVERHEAD UTILITIES	OU _x OU _x	OU _x OU _x
UNDERGROUND ELECTRIC	E _x E _x	E _x E _x
GAS	G _x G _x	G _x G _x
ROOF DRAIN PIPE	RD _x RD _x	RD _x RD _x
FIRE HYDRANT	⊙	⊙
WATER VALVE	⊙	⊙
SANITARY MANHOLE	⊙	⊙
STORM MANHOLE	⊙	⊙
CATCH BASIN	⊙	⊙
UTILITY POLE AND GUY	⊙	⊙
LIGHT POLE	⊙	⊙



522 Bradley Street
Watertown, New York 13601

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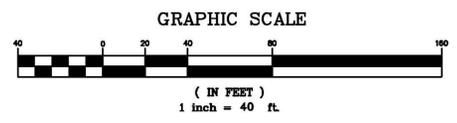
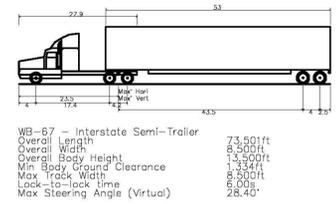
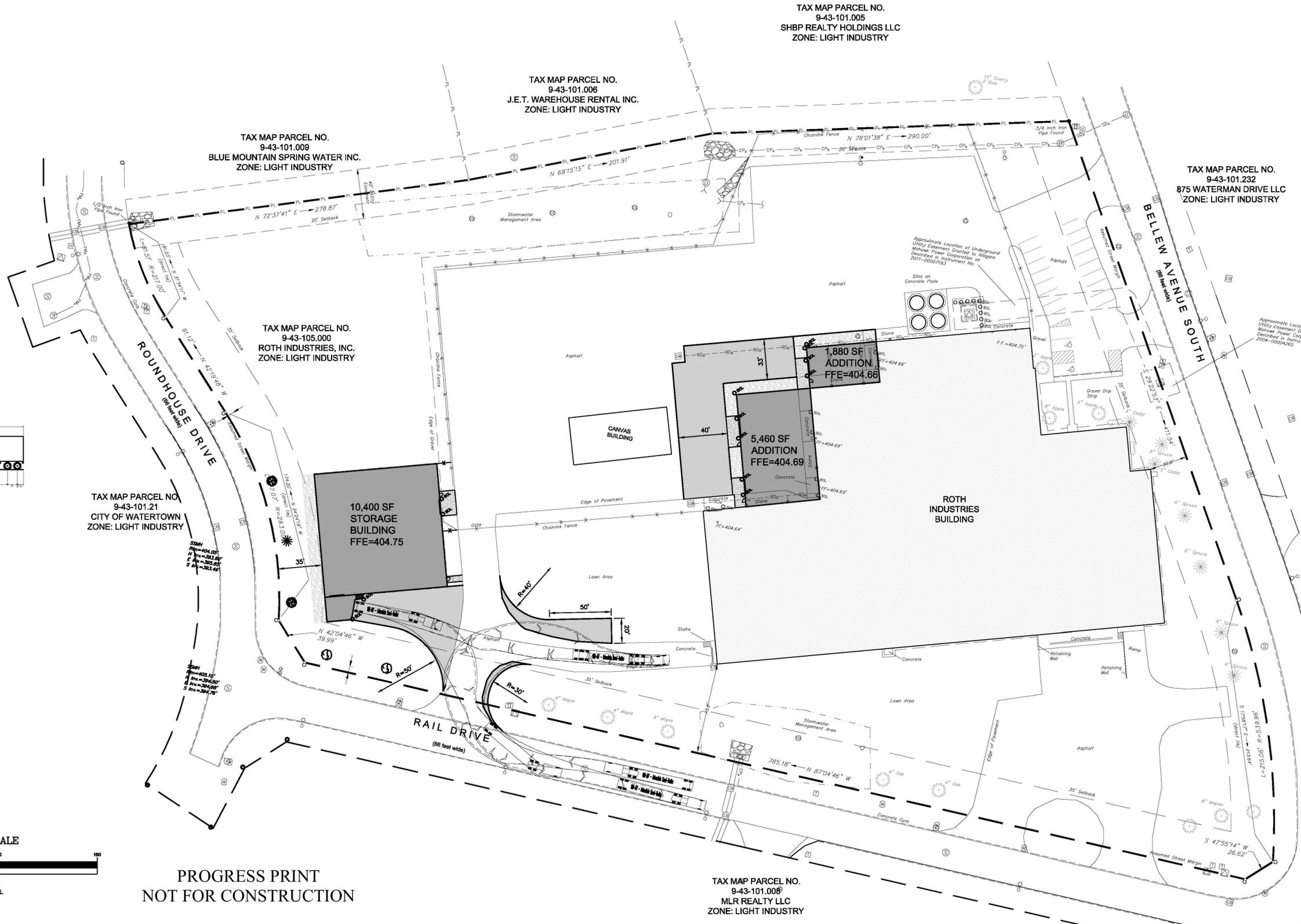


**ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT**
268 BELLEVUE AVENUE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO: 2016-033.004
SCALE: 1"=40'
DRAWN BY: J.VITTT
CHECKED BY: MRW
ISSUE DATES:
02/16/2020
03/03/2020

TRAFFIC CIRCULATION PLAN

CT-100



PROGRESS PRINT
NOT FOR CONSTRUCTION

TAX MAP PARCEL NO.
9-43-101.008
MLR REALTY LLC
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.005
SHBP REALTY HOLDINGS LLC
ZONE: LIGHT INDUSTRY

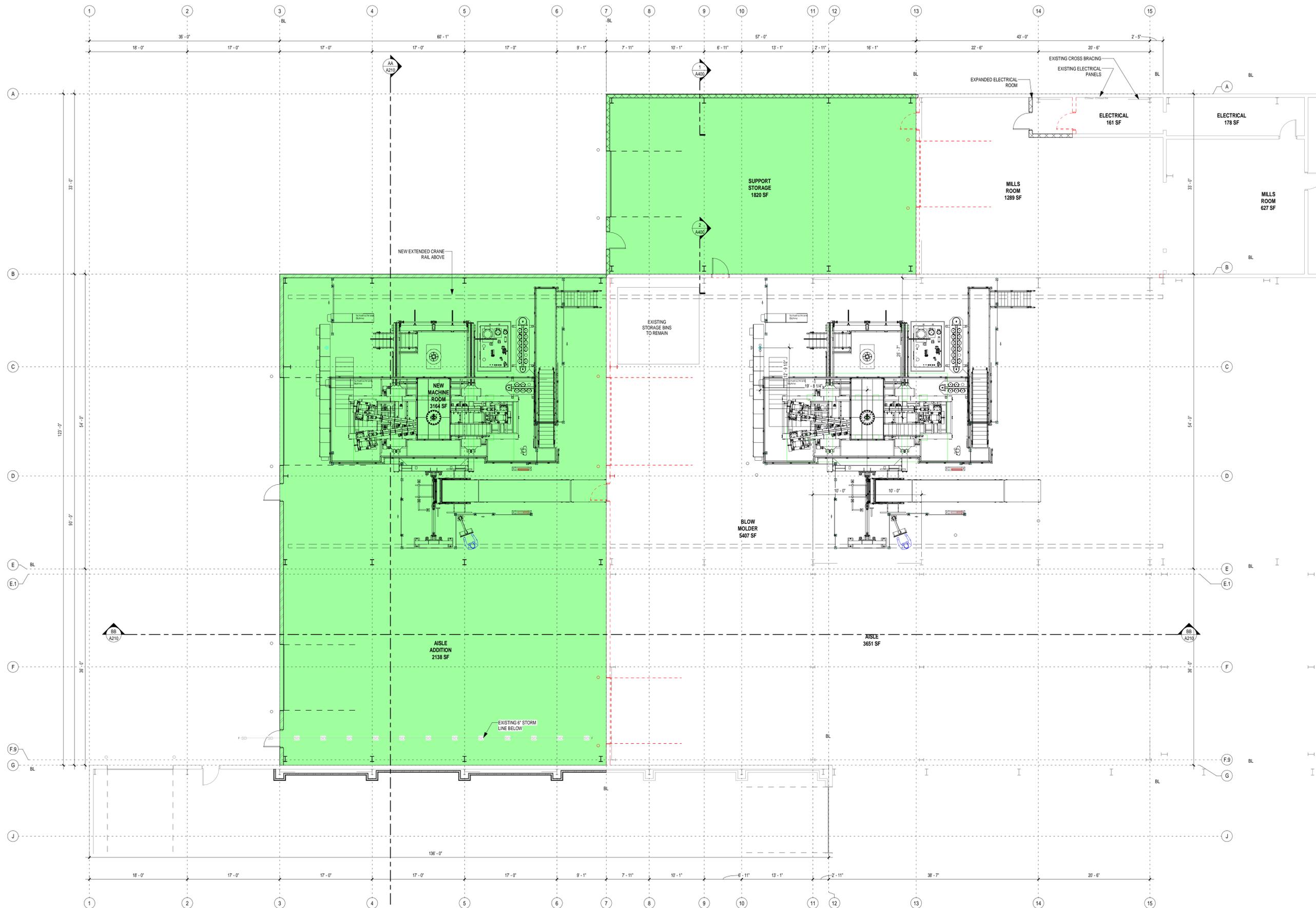
TAX MAP PARCEL NO.
9-43-101.006
J.E.T. WAREHOUSE RENTAL INC.
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.009
BLUE MOUNTAIN SPRING WATER INC.
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-105.000
ROTH INDUSTRIES, INC.
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.21
CITY OF WATERTOWN
ZONE: LIGHT INDUSTRY

TAX MAP PARCEL NO.
9-43-101.232
875 WATERMAN DRIVE LLC
ZONE: LIGHT INDUSTRY



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EXPANSION PROJECT
268 BELLEVUE AVE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

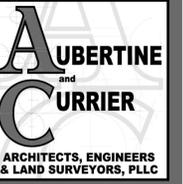
PROJECT NO: 2016-033.004
SCALE: 1/8" = 1'-0"
DRAWN BY: BMK
CHECKED BY:
ISSUE DATES:
02/18/2020

ADDITION PLAN - MAIN BUILDING

A FIRST FLOOR PLAN - MAIN BUILDING
1/8" = 1'-0"

A100

PROGRESS PRINT - NOT FOR CONSTRUCTION



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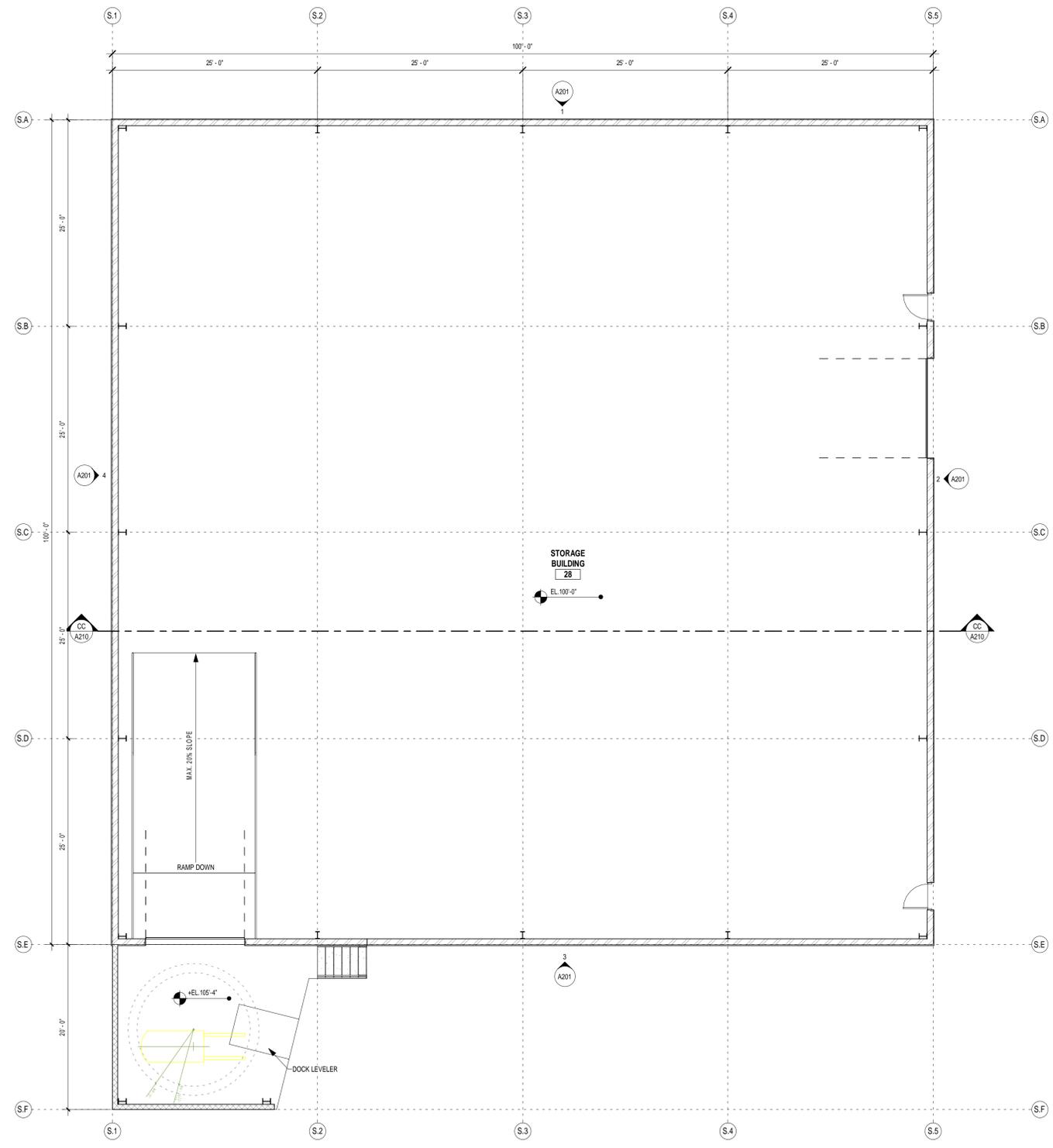


**ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT**
268 BELLEW AVE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

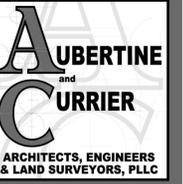
PROJECT NO: 2016-033.004
SCALE: 1/8" = 1'-0"
DRAWN BY: BMK
CHECKED BY:
ISSUE DATES:
02/18/2020

FLOOR PLAN - STORAGE BUILDING

A101



A FIRST FLOOR PLAN - STORAGE BUILDING
1/8" = 1'-0"



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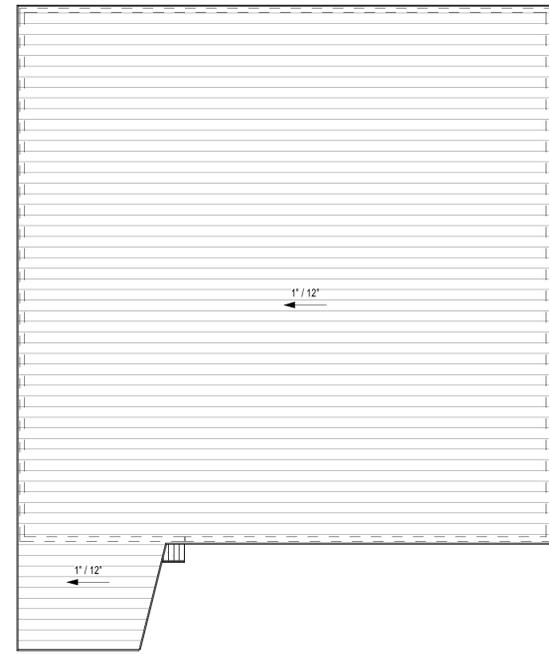
**ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT**
268 BELLEW AVE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO: 2016-033.004
SCALE: 1/16" = 1'-0"
DRAWN BY: BMK
CHECKED BY:
ISSUE DATES:
02/18/2020

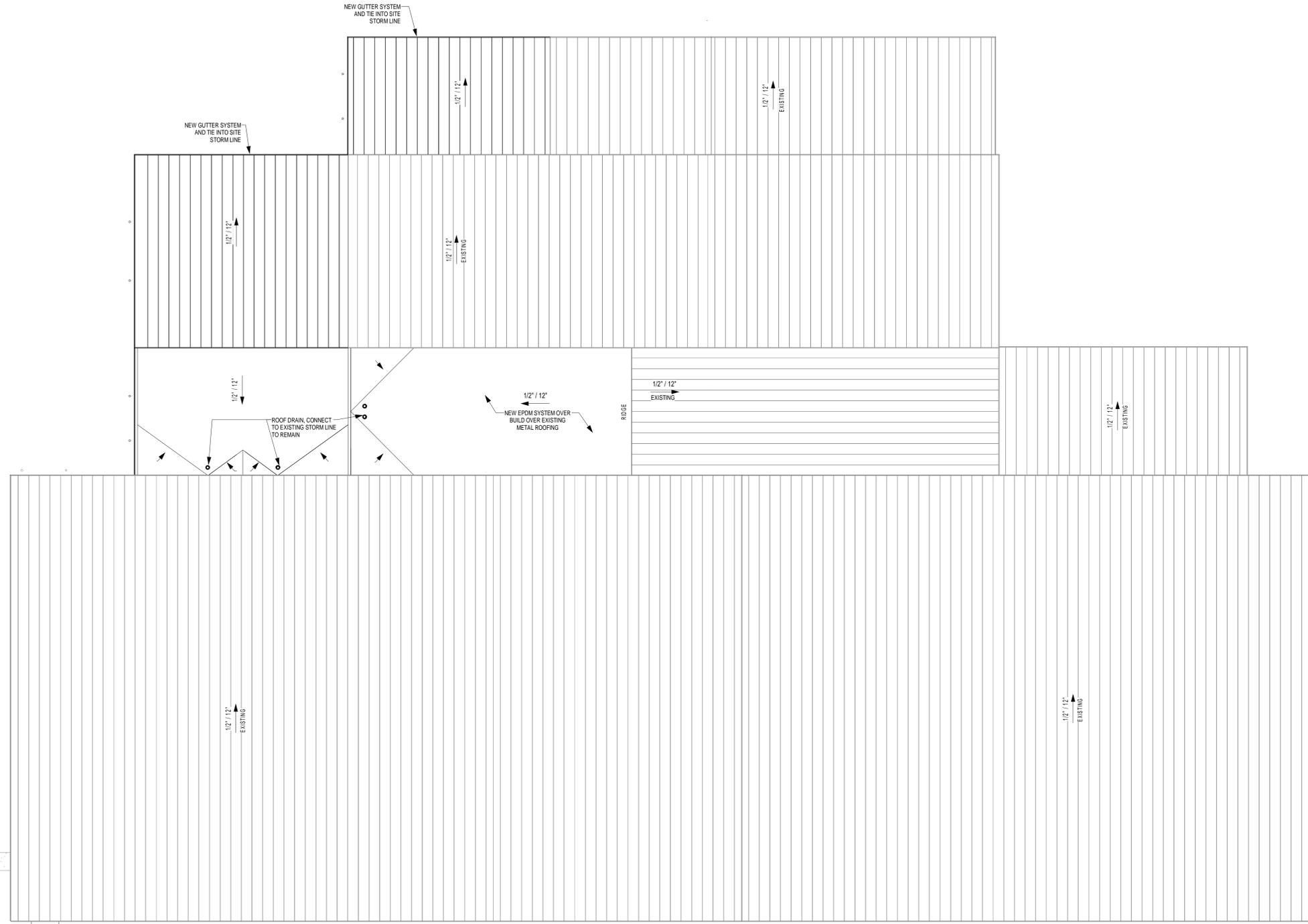
ROOF PLANS

A102

PROGRESS PRINT - NOT FOR CONSTRUCTION



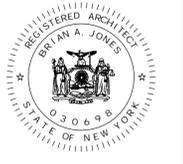
B ROOF PLAN - STORAGE BUILDING
1/16" = 1'-0"
ALTERNATE #1 SIMILAR ROOF PLAN



A ROOF PLAN - MAIN ADDITION
1/16" = 1'-0"

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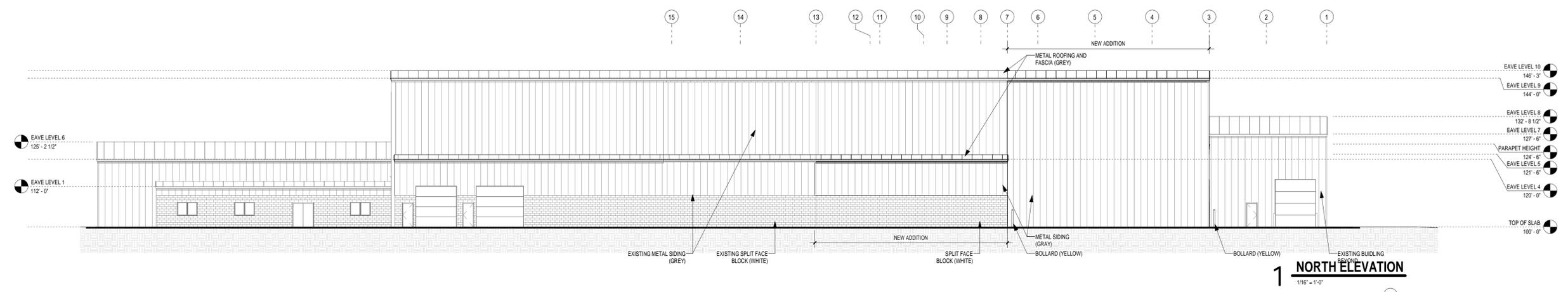
ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT
268 BELLEVUE AVE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO: 2016-033.004
SCALE: 1/16" = 1'-0"
DRAWN BY: BMK
CHECKED BY:
ISSUE DATES:
02/18/2020

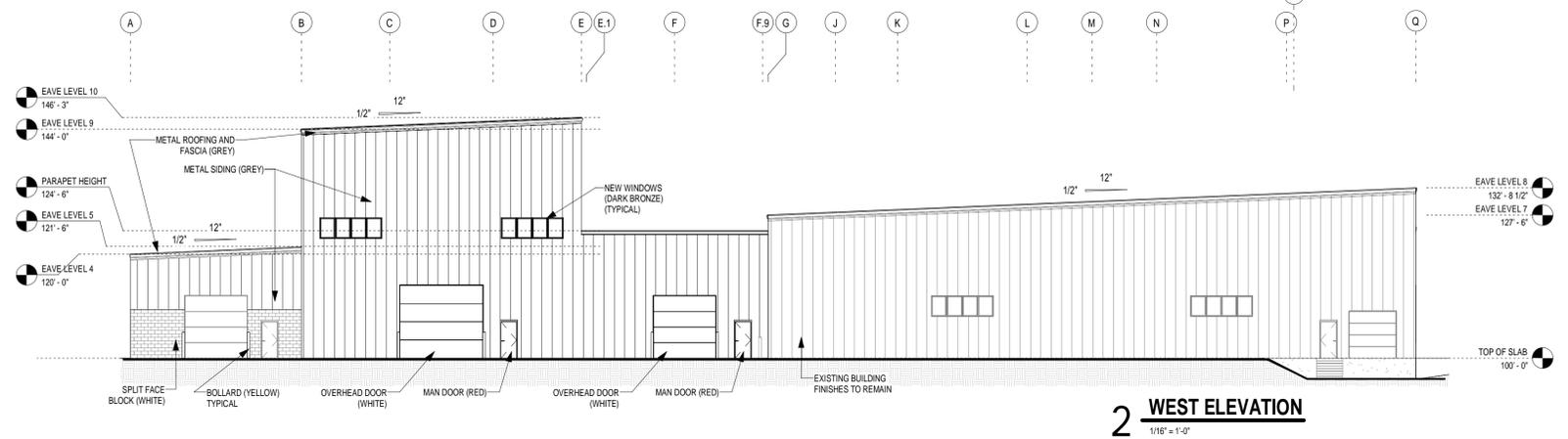
EXTERIOR ELEVATIONS - MAIN FACILITY

A200

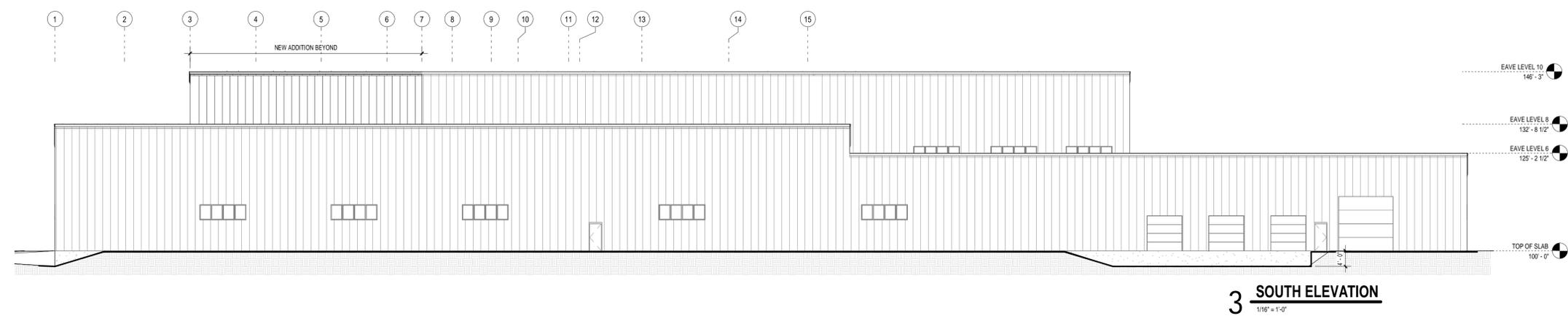
PROGRESS PRINT - NOT FOR CONSTRUCTION



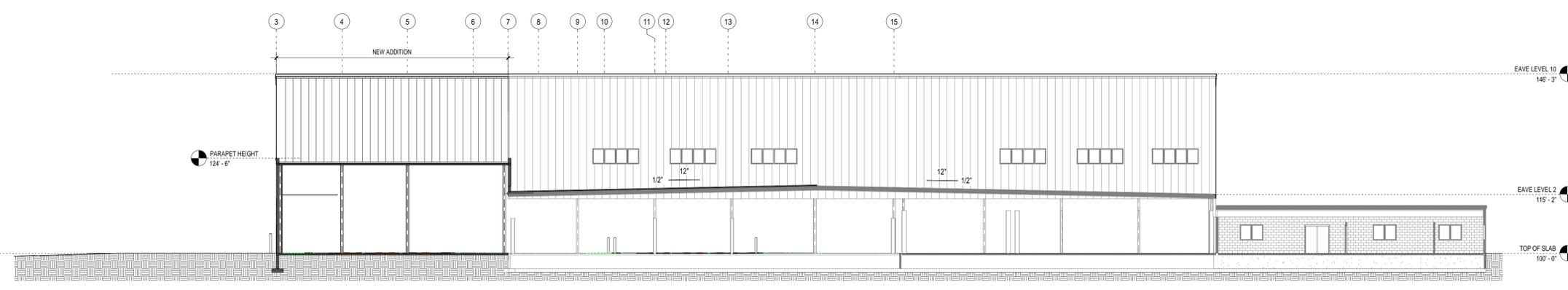
1 NORTH ELEVATION
1/16" = 1'-0"



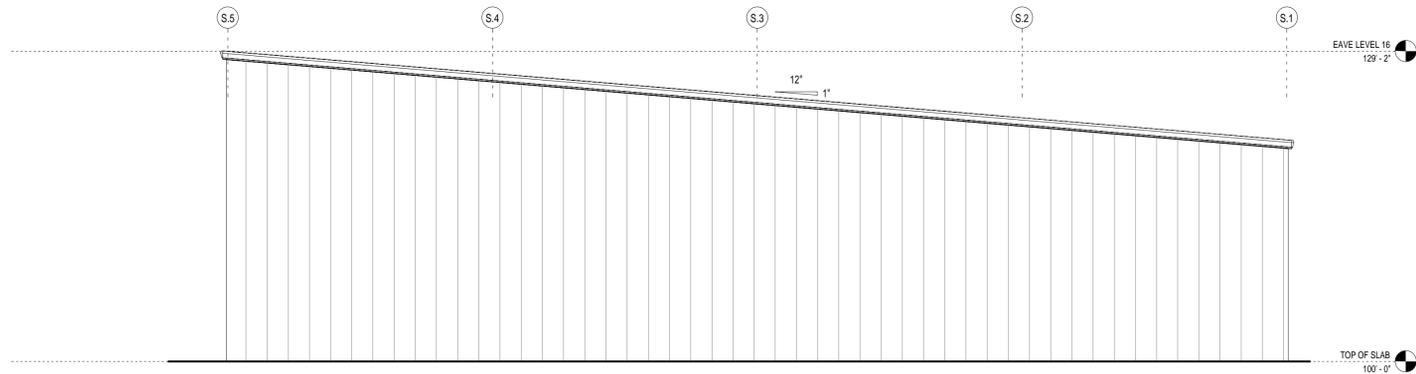
2 WEST ELEVATION
1/16" = 1'-0"



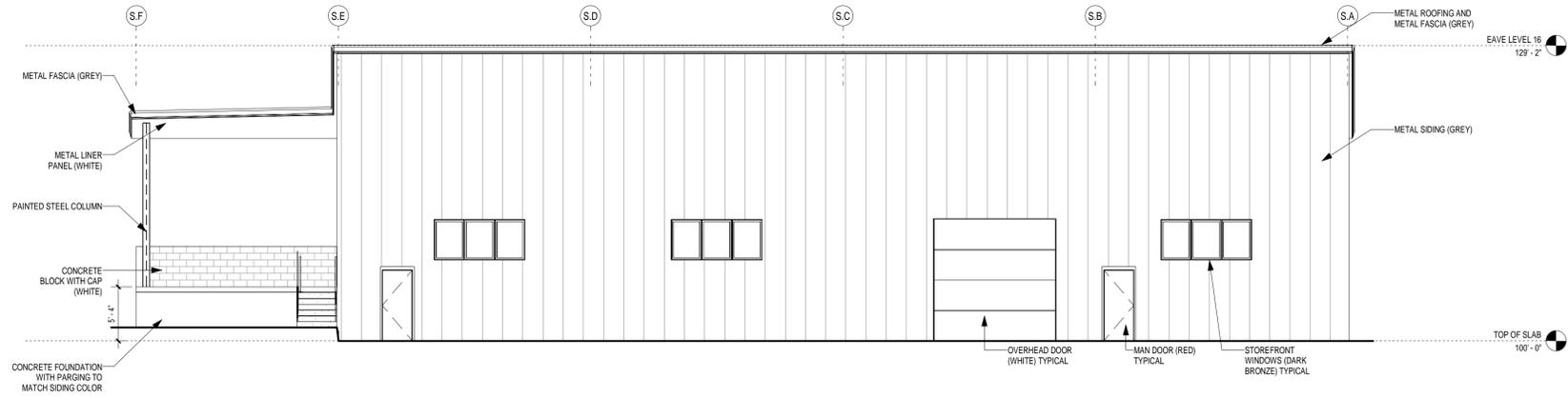
3 SOUTH ELEVATION
1/16" = 1'-0"



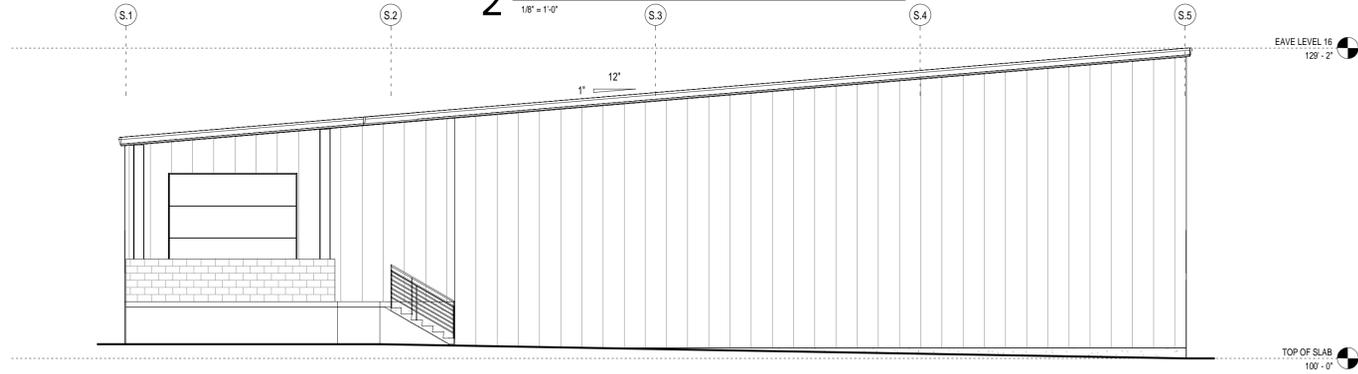
4 SOUTH ELEVATION
1/16" = 1'-0"



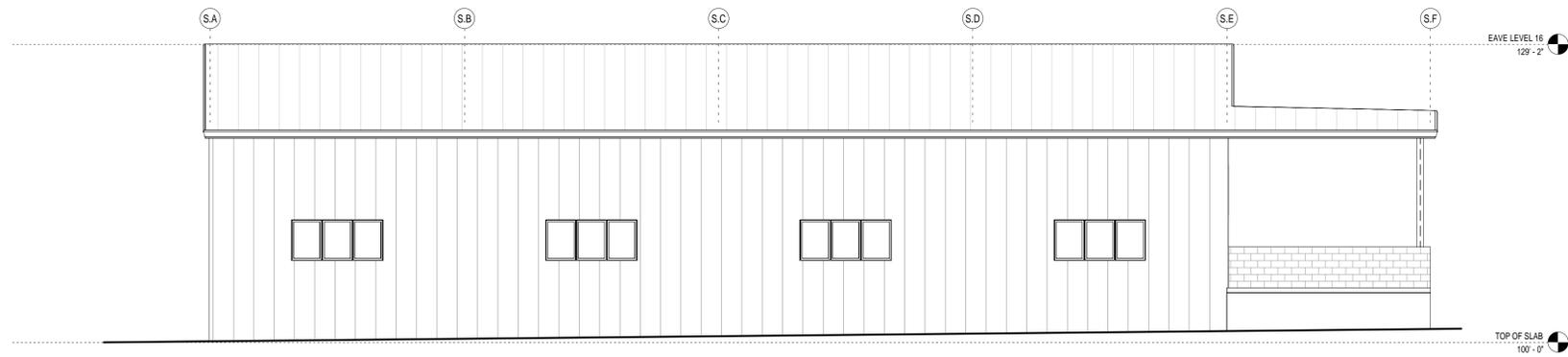
1 NORTH ELEVATION - STORAGE BUILDING
1/8" = 1'-0"



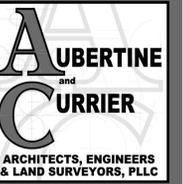
2 EAST ELEVATION - STORAGE BUILDING
1/8" = 1'-0"



3 SOUTH ELEVATION - STORAGE BUILDING
1/8" = 1'-0"



4 WEST ELEVATION - STORAGE BUILDING
1/8" = 1'-0"



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**ROTH INDUSTRIES AND ROTH GLOBAL PLASTICS
EXPANSION PROJECT**
268 BELLEW AVE SOUTH
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO: 2016-033.004
SCALE: 1/8" = 1'-0"
DRAWN BY: BMK
CHECKED BY:
ISSUE DATES:
02/18/2020

BUILDING ELEVATIONS -
STORAGE BUILDING

A201

PROGRESS PRINT - NOT FOR CONSTRUCTION

Res No. 9

March 10, 2020

To: The Honorable Mayor and City Council

From: Michael A. Lumbis, Planning and Community Development Director

Subject: Approving the Site Plan for the Construction of a 9,500 Square-Foot Building and Associated Site Improvements at 491 Eastern Boulevard, Parcel Number 5-26-103.007

Matthew R. Morgia, P.E. of Aubertine and Currier, PLLC, on behalf of Parkside Bible Church, has submitted a request for the above subject Site Plan Approval.

The City Planning Board reviewed the request at its meeting held on March 3, 2020, and voted to recommend that the City Council approve the site plan with the conditions listed in the resolution. Attached is an excerpt from their meeting minutes.

The Staff Report prepared for the Planning Board, the Site Plan application, original drawings and other related materials were all previously sent to Council as part of the Planning Board agenda package. The applicant subsequently submitted revised drawings on March 3, 2020, which Staff has included the revised site plan in this package. The complete application package is also available in the online version of the City Council agenda.

The applicant has completed Part 1 of the SEQR Short Environmental Assessment Form (EAF) which is attached for Council review. The City Council must complete Part 2, and Part 3 if necessary, of the Short EAF before it may vote on the resolution.

The resolution prepared for City Council consideration states that the project will not have a significant negative impact on the environment and approves the site plan submitted to the City Engineering Department on March 3, 2020 with the conditions listed in the resolution.

RESOLUTION

Page 1 of 2

Approving the Site Plan for the Construction of a 9,500 Square-Foot Building and Associated Site Improvements at 491 Eastern Boulevard, Parcel Number 5-26-103.007

Council Member COMPO, Sarah V.
Council Member HENRY-WILKINSON, Ryan J.
Council Member ROSHIA, Jesse C. P.
Council Member RUGGIERO, Lisa A.
Mayor SMITH, Jeffrey M.

Total

YEA	NAY

Introduced by

WHEREAS Matthew R. Morgia, P.E. of Aubertine and Currier, PLLC, on behalf of Parkside Bible Church, has submitted an application for Site Plan Approval for the construction of a two-story 9,500 square-foot building and associated site improvements at 491 Eastern Boulevard, Parcel Number 5-26-103.007, and

WHEREAS the Jefferson County Planning Board reviewed the application at its February 25, 2020 meeting, pursuant to Section 239-m of New York State General Municipal Law, and determined the proposal was of local concern only, and

WHEREAS the Planning Board of the City of Watertown reviewed the site plan at its meeting held on March 3, 2020 and voted to recommend that the City Council of the City of Watertown approve the site plan with the following conditions:

1. The applicant shall widen the proposed asphalt drive aisle that accesses the rear of the site to 24 feet in width or work with the City Engineering Department to come up with an acceptable alternative for emergency access.
2. The applicant must obtain the following permits, minimally, prior to construction: Building Permit, General City Permit, Sanitary Sewer Connection Permit, Water Supply Permit and a Certificate of Zoning Compliance.

And,

WHEREAS the City Council has reviewed the Short Environmental Assessment Form, responding to each of the questions contained in Part 2, and has determined that the project, as submitted, is an Unlisted Action and will not have a significant impact on the environment,

NOW THEREFORE BE IT RESOLVED that the City Council of the City of Watertown declares that the proposed construction and site plan constitute an Unlisted Action for the purposes of SEQRA and hereby determines that the project, as proposed, will not have a significant impact on the environment, and

RESOLUTION

Page 2 of 2

Approving the Site Plan for the Construction of a 9,500 Square-Foot Building and Associated Site Improvements at 491 Eastern Boulevard, Parcel Number 5-26-103.007

- Council Member COMPO, Sarah V.
- Council Member HENRY-WILKINSON, Ryan J.
- Council Member ROSHIA, Jesse C. P.
- Council Member RUGGIERO, Lisa A.
- Mayor SMITH, Jeffrey M.

Total

YEA	NAY

BE IT FURTHER RESOLVED that it is an express condition of this Site Plan Approval that the applicant provide the City Engineer with a copy of any change in stamped plans forming the basis for this approval at the same time such plans are provided to the contractor. If plans are not provided as required by this condition of site plan approval, the City Code Enforcement Officer shall direct that work on the project site shall immediately cease until such time as the City Engineer is provided with the revised stamped plans. Additionally, any change in the approved plan, which, in the opinion of the City Engineer, would require Amended Site Plan Approval, will result in immediate cessation of the affected portion of the project work until such time as the amended site plan is approved. The City Code Enforcement Officer is directed to periodically review on-site plans to determine whether the City Engineer has been provided with plans as required by this approval, and

BE IT FURTHER RESOLVED by the City Council of the City of Watertown that Site Plan Approval is hereby granted to Matthew R. Morgia, P.E. of Aubertine and Currier, PLLC, on behalf of Parkside Bible Church for the construction of a 9,500 square-foot building and associated site improvements at 491 Eastern Boulevard, Parcel Number 5-26-103.007, as depicted on the site plan submitted to the City Engineer on March 3, 2020, contingent upon the applicant meeting the conditions listed above.

Seconded by

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

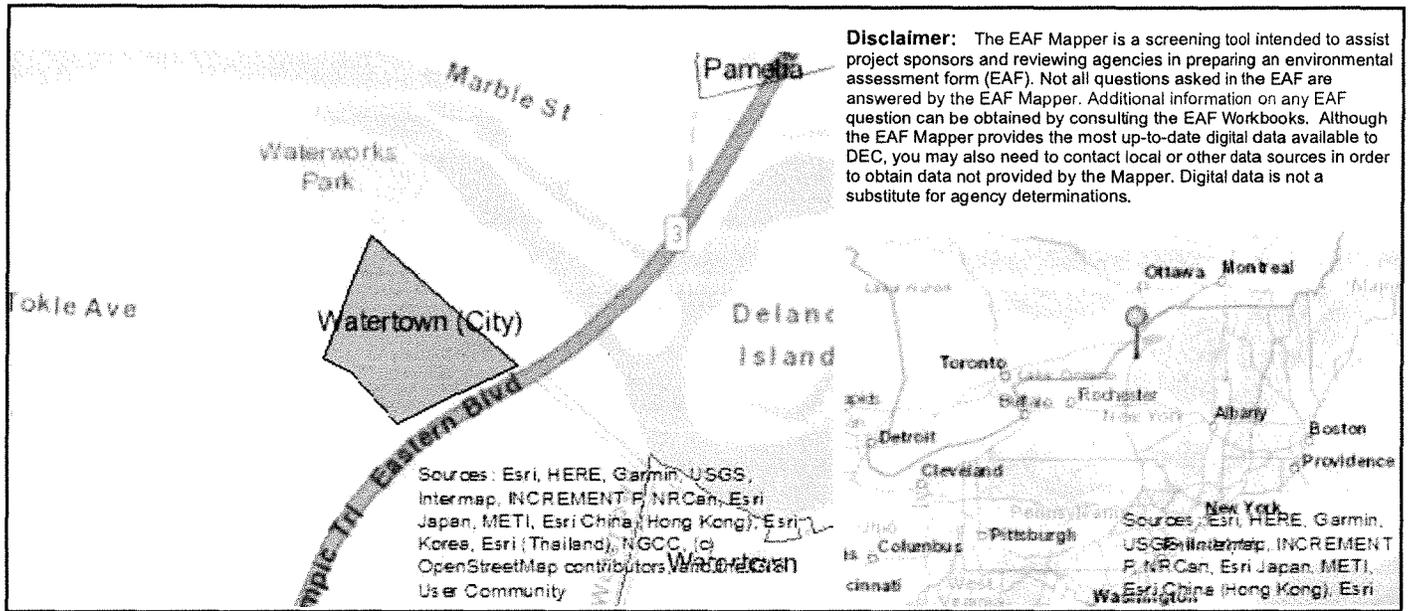
Part 1 – Project and Sponsor Information			
Project: Multi-Purpose Community Building Sponsor: Parkside Bible Church			
Name of Action or Project: Parkside Bible Church Multi-Purpose Community Building			
Project Location (describe, and attach a location map): 491 Eastern Blvd., Watertown, NY 13601			
Brief Description of Proposed Action: The project consists of the construction of a free standing 9,500 SF pre-engineered building with an enclosed walkway corridor connecting to the existing church building lobby. The corridor will include ADA ramps allowing handicap access from the existing church to the multi-purpose building and will be fire rated to provide separate fire zones between the existing building, corridor, and new building. Site improvements will include a 7,550 SF asphalt access drive/fire lane, 6' wide asphalt walk/fire access path around the perimeter of the multi-purpose building, water, sewer, gas, electric utilities, and site grading and drainage. The new asphalt drive/fire lane will connect the existing parking area to the proposed building and will include adequate turn around area for fire access apparatus as well as provide two (2) additional ADA accessible parking spaces. All multi-purpose building utilities will be extended from existing utilities located along Huntington Street to the east of the project area.			
Name of Applicant or Sponsor: Parkside Bible Church, Attn: Mike Gerhardt, Senior Pastor		Telephone: (315) 782-6534 E-Mail: mikegerhardt @parksidebible.org	
Address: 491 Eastern Blvd.			
City/PO: Watertown		State: NY	Zip Code: 13601
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			NO <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval:			YES <input type="checkbox"/>
3. a. Total acreage of the site of the proposed action? _____ 8.62 acres			
b. Total acreage to be physically disturbed? _____ 0.93 acres			
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ 8.62 acres			
4. Check all land uses that occur on, are adjoining or near the proposed action:			
5. <input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential (suburban)			
<input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input checked="" type="checkbox"/> Aquatic <input type="checkbox"/> Other(Specify):			
<input checked="" type="checkbox"/> Parkland			

5. Is the proposed action, a. A permitted use under the zoning regulations? b. Consistent with the adopted comprehensive plan?	NO	YES	N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. a. Will the proposed action result in a substantial increase in traffic above present levels? b. Are public transportation services available at or near the site of the proposed action? c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____ _____	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ _____	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ _____	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency? b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____ _____	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: <input type="checkbox"/> Shoreline <input type="checkbox"/> Forest <input type="checkbox"/> Agricultural/grasslands <input type="checkbox"/> Early mid-successional <input type="checkbox"/> Wetland <input checked="" type="checkbox"/> Urban <input type="checkbox"/> Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered? Northern Long-eared Bat	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16. Is the project site located in the 100-year flood plan?	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe:	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Stormwater runoff is collected within the existing City of Watertown municipal storm sewers and roadside drainage channels		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: Parkside Bible Church Date: 02/03/2020
 Signature: *Michael C Gerhardt* Title: Senior Pastor



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	No
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	Yes
Part 1 / Question 15 [Threatened or Endangered Animal - Name]	Northern Long-eared Bat
Part 1 / Question 16 [100 Year Flood Plain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
Part 1 / Question 20 [Remediation Site]	No

Project:

Date:

**Short Environmental Assessment Form
Part 2 - Impact Assessment**

Part 2 is to be completed by the Lead Agency.

Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:	<input type="checkbox"/>	<input type="checkbox"/>
a. public / private water supplies?	<input type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input type="checkbox"/>	<input type="checkbox"/>
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input type="checkbox"/>	<input type="checkbox"/>

Project:

Date:

Short Environmental Assessment Form Part 3 Determination of Significance

For every question in Part 2 that was answered “moderate to large impact may occur”, or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

Name of Lead Agency

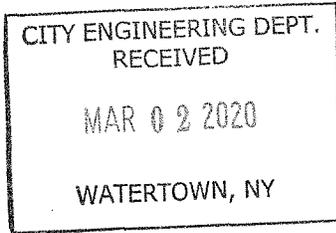
Date

Print or Type Name of Responsible Officer in Lead Agency

Title of Responsible Officer

Signature of Responsible Officer in Lead Agency

Signature of Preparer (if different from Responsible Officer)



Department of Planning
175 Arsenal Street
Watertown, NY 13601

Michael J. Bourcy
Director of Planning

(315) 785-3144
(315) 785-5092 (Fax)

February 27, 2020

Geoffrey Urda, Planner
City of Watertown
245 Washington Street, Rm 304
Watertown, NY 13601

Re: Parkside Bible Church, Site Plan Review for a multi-purpose building, JCDP File # C 2 - 20

Dear Geoff,

On February 25, 2020, the Jefferson County Planning Board reviewed the above referenced project, referred pursuant to General Municipal Law, Section 239m.

The Board adopted a motion that the project does not have any significant County-wide or intermunicipal issues and is of local concern only.

Furthermore, the Board has the following local advisory comments:

As per the City of Watertown Zoning Law, Appendix A, the parking lot should incorporate landscaping (along its exterior and interior as specified). Therefore, any new development at existing sites should take this guidance under consideration.

The Site Plan indicates that the existing sheds will be relocated, but does not indicate to where.

Please note that the advisory comments are not a condition of the County Planning Board's action. They are listed to assist the local board in its review of the project. The local board is free to make its final decision.

General Municipal Law, Section 239m requires the local board to notify the County of its action on this matter within thirty (30) days after taking a final action.

Thank you.

Sincerely,

Erin Ermine

Erin Ermine
Assistant Planner

SITE PLAN APPROVAL
491 EASTERN BOULEVARD, PARCEL NUMBER 5-26-103.007

The Planning Board then considered a request submitted by Matthew R. Morgia, P.E. of Aubertine and Currier, PLLC, on behalf of Parkside Bible Church for the construction of a 9,500 square-foot building and associated site improvements at 491 Eastern Boulevard, Parcel Number 5-26-103.007.

Mr. Morgia remained in attendance to represent this proposal as well, and said that he also had updated plan sets of this project to pass around.

Mr. Morgia then began by saying that Parkside Bible Church proposed a new multi-purpose building that would be two stories, with a first floor and a basement. He said the new building would go behind the church sanctuary and would have shared access with the main church entry via an enclosed corridor that would connect directly across from the main entry doors.

Also proposed, Mr. Morgia said, were a new access drive to the west, and utilities connecting from Huntington Street, which Mr. Morgia said would include combined domestic and fire service, which would provide the proposed building with a full sprinkler system. He then said that there would be a sanitary sewer connection to Huntington Street, as there was no sanitary on the property now.

Mr. Morgia then said that the plans depicted two sheds, both of which already existed and the church proposed to relocate. Mr. Morgia then explained that there were some proposed parking alterations on the site, including reconfiguring the existing ADA accessible parking spaces and adding two more, based on federal requirements. He then said there was no proposed change to the number of overall parking spaces, as there would be no activities in the multi-use building during mass times.

Mr. Morgia then elaborated that the existing parking requirement under the Zoning Ordinance based on the sanctuary was 88 spaces and there were 112 existing spaces on the property. He said that the proposed multi-use building would increase that requirement to 11 spaces, so remaining at 112 still met the requirement.

Mr. Morgia then addressed landscaping concerns on the property. He acknowledged that the proposed construction would necessitate removing 24 trees and then noted that the revised plan depicted 21 proposed new trees along the western property line to replace the lost trees. Ms. Fields asked what the new species would be. Mr. Morgia replied by reading the proposed species from the planting schedule.

Mr. Katzman then asked if the Fire Department had seen these drawings. Mr. Urda replied that Code Enforcement reviews all site plans and verifies emergency access as a part of their review. Mr. Urda said that if there Codes finds an issue, they will bring it to the attention of the Planning Department, and they had not raised any concerns with this proposal.

Ms. Fields then suggested moving on to the summary items listed in the staff report. Mr. Morgia then addressed the first summary item, which required the applicant to either move all ADA parking signs to the front of all proposed ADA accessible spaces or use wheel stops to prevent vehicles from entering the pedestrian zones. Mr. Morgia explained that they did not want to put the signs or wheel stops at the heads of the parking spaces and would instead widen the walkways to six feet and would use concrete to delineate them from the asphalt parking spaces. Ms. Fields then asked where the ADA signs would be. Mr. Morgia replied that they would be behind the walks in the grass area.

Mr. Urda then explained that Staff's comment stemmed from concerns that vehicles would pull too far forward and encroach into the pedestrian zones since they were at grade and only separated by a painted stripe. Mr. Urda then said that the applicant's proposal to widen the walkways and use concrete to provide a visual distinction was acceptable to Staff.

Mr. Morgia then addressed the second summary item, which required the applicant to widen the proposed asphalt drive aisle that accesses the rear of the site to 24 feet. Mr. Morgia said that the preference was not to widen that drive aisle because it would then get closer to the root systems of two more trees, and added that it was strictly for emergency vehicle access.

Mr. Arquitt then said that Fire Chief Dale Herman¹ told him that the outrigger extended to 24 feet and the fire truck would become unstable if parked on grass. Ms. Fields said that it sounded like it needs to be 24 feet. Mr. Arquitt then said that Chief Herman told him the alternative was to extend the drive all the way to Huntington Street. Mr. Morgia then said that would be too expensive for the church. Mr. Urda then asked if the Planning Board was comfortable leaving this condition in, with the understanding that the applicant would work with Engineering Staff to come up with an acceptable solution. The Planning Board members all agreed.

Mr. Morgia then addressed the third summary item, which stated that applicant should include tree protection on the site plan around trees located immediately adjacent to the proposed project area, including paths and provide a tree protection detail on the site detail sheet. Mr. Morgia said that the revised plan depicted tree protection. Mr. DeMarco then said that it was important to understand why Staff was requiring this. He explained that its intent was to protect the property owner from future liability, and elaborated that any damage caused to trees now might not produce a visible decline in health for several years.

Mr. Morgia then addressed the fourth summary item, which stated that the Planning Board should decide whether outdoor lighting is necessary at the basement-level entrances, and whether it requires any additional information, particularly about hours of

¹ Editor's Note: Mr. Arquitt met with Chief Herman on February 27, 2020 to discuss this site plan. Chief Herman subsequently retired on February 28, 2020. This Planning Board meeting occurred on March 3, 2020, so while Chief Herman was no longer the active Fire Chief on the date of this meeting, he was still in the position at the time he reviewed this site plan with Mr. Arquitt.

operation, to make such a determination. Mr. Morgia said that all mass services took place during the day, and added that there were canopies over all stairwells with under lighting.

Mr. Urda then explained that the reason for this summary item was not so much mass times as it was potential weekday hours of use for the multi-purpose building, particularly in December, when sunset was especially early. Mr. Morgia then referred to the covered walkway entrance, noting that it connected to the multi-purpose building. He then acknowledged that some of the other areas were darker and that the church would love to add lights as finances permit, but now was not the time.

Ms. Fields then expressed concerns for adequate lighting around other exterior doors to the proposed multi-use building. Mr. Morgia said that all such entrances will be lit underneath the canopies. Mr. Morgia said that those could be motion-sensor activated. Ms. Fields replied that motion sensors were acceptable to her.

Mr. Morgia then addressed the fifth summary item, which required the applicant to address all concerns listed in the “Utilities and Hydrology” section of the February 27, 2020 Planning Department memorandum to the Planning Board to the satisfaction of the Engineering Department prior to the issuance of any permits.

Mr. Morgia said that he believed those were related the sanitary sewer lateral. He noted the requirement to separate valves and shut-offs for the fire and domestic lines, but said they were co-mingled, so separate valves were not possible. He added that this was nothing new in the City. Mr. Arquitt said that the City allowed it, but did not encourage it, and said this was in the City Code.

Mr. Urda had looked up the relevant code (Section 301-18 of the City Code) on his phone and read it aloud, “When a water service line is used for combined fire and domestic use, separate valves or shut-offs shall be required to enable the isolation of the service branches, and approved backflow prevention devices must be installed in conformance with all governing regulations and approved by the City’s Code Enforcement Officials and by the Superintendent or City Engineer.” Mr. Arquitt said that was the basis of his comment.

Mr. Morgia stated that it would not be possible to install the shut-off valves and backflow prevention devices outside the building. Mr. Arquitt reiterated that Section 301-18 of the City Code requires the separate shut-off valves and backflow prevention devices, and then added that these can be installed inside the new multipurpose building and are needed to isolate the water supply line and domestic water supply line in the event maintenance is required.

Mr. Morgia then addressed the sixth summary item, which required the applicant to correct the graphic scale on sheet CG-101 (Grading and Utility Plan) to identify the accurate scale of the drawing. Mr. Morgia confirmed that this correction was completed.

Mr. Morgia then addressed the seventh summary item, which listed all the permits the applicant would need to obtain prior to construction. Mr. Morgia said that he acknowledged all required permits.

Mr. Morgia then said that he wanted to communicate an additional change from the original plan set, which was that the church wished to relocate the majority of the proposed trees to the west property line due to concern over damage from plows pushing snow into the lawn.

Ms. Fields then asked if there were any questions. Hearing none, she then asked for a motion.

Mr. Babcock then moved to recommend that City Council approve the request for Site Plan Approval submitted by Matthew R. Morgia, P.E. of Aubertine and Currier, PLLC, on behalf of Parkside Bible Church for the construction of a 9,500 square-foot building and associated site improvements at 491 Eastern Boulevard, Parcel Number 5-26-103.007, as shown on the site plans submitted to the City on March 3, 2020, contingent upon the following:

1. The applicant shall widen the proposed asphalt drive aisle that accesses the rear of the site to 24 feet in width or work with the City Engineering Department to come up with an acceptable alternative for emergency access.
2. The applicant must obtain the following permits, minimally, prior to construction: Building Permit, General City Permit, Sanitary Sewer Connection Permit, Water Supply Permit and a Certificate of Zoning Compliance.

Ms. Dermody seconded the motion and all voted in favor.

February 11, 2020

City of Watertown
Attn: Michael Delaney, City Engineer
Room 305, City Hall
245 Washington Street
Watertown, NY 13601

Re: **Site Plan Review Application**
Multi-Purpose Community Building
Parkside Bible Church (A&C Proj. #2013-166.002)
491 Eastern Boulevard, Watertown, NY

Dear Mr. Delaney:

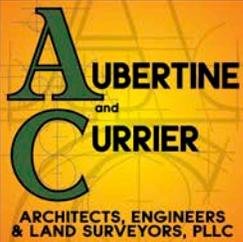
Aubertine and Currier Architects, Engineers & Land Surveyors, PLLC on behalf of Parkside Bible Church is requesting to be included on the agenda for the March 3, 2020 City of Watertown Planning Board meeting for Site Plan review of the proposed Community Building project, on Tax Parcel 5-26-103.007. Included with this submission is sixteen (16) copies of the Cover Letter, Site Plan Application, Short SEQR Environmental Assessment Form, and four (4) copies of the Engineering Report. Also attached are four (4) full size, twelve (12) 11"x17" copies of the Site Plans and Preliminary Architectural Plans, and check for the \$150.00 review fee.

The project consists of the construction of a free standing 9,500 SF pre-engineered building with an enclosed walkway corridor connecting to the existing church building lobby. The corridor will include ADA ramps allowing handicap access from the existing church to the multi-purpose building and will be fire rated to provide separate fire zones between the existing building, corridor, and new building. Site improvements will include a 7,550 SF asphalt access drive/fire lane, 6' wide asphalt walk/fire access path around the perimeter of the multi-purpose building, water, sewer, gas, electric utilities, and site grading and drainage. The new asphalt drive/fire lane will connect the existing parking area to the proposed building and will include adequate turn around area for fire access apparatus as well as provide two (2) additional ADA accessible parking spaces. All multi-purpose building utilities will be extended from existing utilities located along Huntington Street to the east of the project area. Water service to the proposed building will be a 6" combined domestic/fire water service, and will include a fire hydrant, post indicator valve, and fire department connection to the building sprinkler system.

The multi-purpose community building will be utilized by the church to continue weekly programs that are currently being held at the church building. The existing sanctuary is currently being utilized for multiple weekly programs, which requires church staff to frequently set up and take down chairs, tables, and recreation equipment within the sanctuary. The proposed building will allow adequate space for these activities and programs to continue with more appropriate accommodations.

We anticipate that this application will require Jefferson County 239M Review as well as City Planning Board review due to its proximity to a State Highway.

Parkside Bible Church intends to begin construction this spring/summer as soon as approvals are granted. If there are any questions, please feel free to contact our office at your earliest convenience.



NYS WBE/DBE Certified
SBA Woman Owned
Small Business (WOSB)

aubertinecurrier.com

522 Bradley Street
Watertown, New York 13601

Phone: 315.782.2005
Fax: 315.782.1472

Managing Partner
Annette M. Mason, P.E.
Structural Engineer

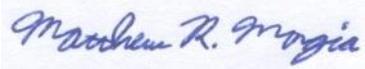
Partners
Brian A. Jones, AIA.,
LEED AP BD+C
Architect

Matthew R. Morgia, P.E.
Civil Engineer

Jayson J. Jones, P.L.S.
Land Surveyor

Site Plan Review Application Cover Letter
Parkside Bible Church Multi-Purpose Community Building
February 11, 2020
Page 2 of 2

Sincerely,
Aubertine and Currier Architects, Engineers & Land Surveyors, PLLC



Matthew R. Morgia, P.E.
Civil Engineer, Partner

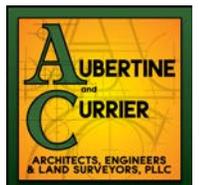
Attachments

Cc: Mike Gerhardt - Parkside Bible Senior Pastor

NYS WBE/DBE Certified

SBA Woman Owned Small Business (WOSB)

522 Bradley Street, Watertown, NY 13601 315.782.2005 www.aubertinecurrier.com





1869

CITY OF WATERTOWN SITE PLAN APPLICATION

** Provide responses for all sections. INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED. Failure to submit required information by the submittal deadline will result in **not** making the agenda for the upcoming Planning Board meeting.

PROPERTY LOCATION

Proposed Project Name: Parkside Bible Church - Multi-Purpose Community Building
Tax Parcel Number: 5-26-103.007
Property Address: 491 Eastern Boulevard, Watertown, NY 13601
Existing Zoning Classification: LI - Light Industry

OWNER OF PROPERTY

Name: Parkside Bible Church
Address: 491 Eastern Boulevard
Watertown, NY 13601
Telephone Number: (315) 782-6534
Fax Number: (315) 782-6170

APPLICANT

Name: Parkside Bible Church
Address: 491 Eastern Boulevard
Watertown, NY 13601
Telephone Number: (315) 782-6534
Fax Number: (315) 782-6170
Email Address: mikegerhardt@parksidebible.org

ENGINEER/ARCHITECT/SURVEYOR

Name: Aubertine and Currier, PLLC
Address: 522 Bradley Street
Watertown, NY 13601
Telephone Number: (315) 782-2005
Fax Number: (315) 782-1472
Email Address: mrm@aubertinecurrier.com

OPTIONAL MATERIALS:

- PROVIDE AN ELECTRONIC (.DWG) COPY OF THE SITE PLAN WITH AS-BUILT REVISIONS. This will assist the City in keeping our GIS mapping up-to-date.**

REQUIRED MATERIALS:

** The following drawings with the listed information **ARE REQUIRED, NOT OPTIONAL**. If the required information is not included and/or addressed, the Site Plan Application will **not** be processed.

- COMPLETED ENVIRONMENTAL ASSESSMENT FORM** (Contact us if you need help choosing between the Short EAF and the Full EAF). The Complete EAF is available online at: <http://www.dec.ny.gov/permits/6191.html>
- ELECTRONIC COPY OF ENTIRE SUBMISSION (PDF)** A single, combined PDF of the entire application, including cover letter, plans, reports, and all submitted material.
- BOUNDARY and TOPOGRAPHIC SURVEY**
(Depict existing features as of the date of the Site Plan Application. This Survey and Map must be performed and created by a Professional Land Surveyor licensed and currently registered to practice in the State of New York. This Survey and Map must be stamped and signed with an original seal and signature on at least one copy, the rest may be copies thereof.)
 - All elevations are North American Vertical Datum of 1988 (NAVD88).
 - 1' contours are shown and labeled with appropriate spot elevations.
 - All existing features on and within 50 feet of the subject property are shown and labeled.
 - All existing utilities on and within 50 feet of the subject property are shown and labeled.
 - All existing easements and/or right-of-ways are shown and labeled.
 - Existing property lines (bearings and distances), margins, acreage, zoning, existing land use, reputed owner, adjacent reputed owners and tax parcel numbers are shown and labeled.
 - The north arrow and graphic scale are shown.

DEMOLITION PLAN (If Applicable)

- All existing features on and within 50 feet of the subject property are shown and labeled.
- All items to be removed are labeled in darker text.

SITE PLAN

- Include a reference to the coordinate system used(NYS NAD83-CF preferred).
- All proposed above ground features are depicted and clearly labeled.
- All proposed features are clearly labeled “proposed”.
- N/A All proposed easements and right-of-ways are shown and labeled.
- Land use, zoning, and tax parcel number are shown.
- The Plan is adequately dimensioned including radii.
- The line work and text for all proposed features is shown darker than existing features.
- All vehicular and pedestrian traffic circulation is shown including a delivery or refuse vehicle entering and exiting the property.
- Proposed parking and loading spaces including ADA accessible spaces are shown and labeled.
- Sidewalks within the City Right-of-Way meet Public-Right-of-Way (PROWAG) standards.

- N/A Refuse Enclosure Area (Dumpster), if applicable, is shown. Section 161-19.1 of the Zoning Ordinance states, “No refuse vehicle or refuse container shall be parked or placed within 15 feet of a party line without the written consent of the adjoining owner, if the owner occupies any part of the adjoining property”.

- N/A Proposed snow storage areas are shown on the plans.

- The north arrow and graphic scale are shown.

GRADING PLAN

- All proposed below ground features including elevations and inverts are shown and labeled.
- All proposed above ground features are shown and labeled.

The line work and text for all proposed features is shown darker than existing features.

N/A All proposed easements and right-of-ways are shown and labeled.

1' existing contours are shown dashed and labeled with appropriate spot elevations.

1' proposed contours are shown and labeled with appropriate spot elevations.

All elevations are North American Vertical Datum of 1988 (NAVD88).

N/A Sediment and Erosion control are shown and labeled on the grading plan unless separate drawings have been provided as part of a Stormwater Pollution Prevention Plan (SWPPP).

UTILITY PLAN

All proposed above and below ground features are shown and labeled.

All existing above and below ground utilities including sanitary, storm water, water, electric, gas, telephone, cable, fiber optic, etc. are shown and labeled.

N/A All proposed easements and right-of-ways are shown and labeled.

The Plan is adequately dimensioned including radii.

The line work and text for all proposed features is shown darker than existing features.

The following note has been added to the drawings stating, "All water main and service work must be coordinated with the City of Watertown Water Department. The Water Department requirements supersede all other plans and specifications provided."

N/A LANDSCAPING PLAN

All proposed above ground features are shown and labeled.

All proposed trees, shrubs, and other plantings are shown and labeled.

All proposed landscaping and text are shown darker than existing features.

All proposed landscaping is clearly depicted, labeled and keyed to a plant schedule that includes the scientific name, common name, size, quantity, etc.

N/A For additional landscaping requirements where nonresidential districts and land uses abut land in any residential district, please refer to Section 310-59, Landscaping of the City's Zoning Ordinance.

N/A **Site Plan complies with and meets acceptable guidelines set forth in Appendix A - Landscaping and Buffer Zone Guidelines (August 7, 2007).**

N/A **PHOTOMETRIC PLAN** (If Applicable)

All proposed above ground features are shown.

Photometric spot elevations or labeled photometric contours of the property are clearly depicted. Light spillage across all property lines shall not exceed 0.5 foot-candles.

CONSTRUCTION DETAILS and NOTES

All details and notes necessary to adequately complete the project including, but not limited to, landscaping, curbing, catch basins, manholes, water line, pavement, sidewalks, trench, lighting, trash enclosure, etc. are provided.

N/A Maintenance and protection and traffic plans and notes for all required work within City streets including driveways, water laterals, sanitary laterals, storm connections, etc. are provided.

The following note must be added to the drawings stating:
"All work to be performed within the City of Watertown margin will require sign-off from a Professional Engineer, licensed and currently registered to practice in the State of New York, that the work was built according to the approved site plan and applicable City of Watertown standards. Compaction testing will be required for all work to be performed within the City of Watertown margin and must be submitted to the City of Watertown Codes Department."

PRELIMINARY ARCHITECTURAL PLANS (If Applicable)

Floor plan drawings, including finished floor elevations, for all buildings to be constructed are provided.

Exterior elevations including exterior materials and colors for all buildings to be constructed are provided.

Roof outline depicting shape, slope and direction is provided.

■ ENGINEERING REPORT

**** The engineering report at a minimum includes the following:**

- Project location
- Project description
- Existing and proposed sanitary sewer flows and summary
- Water flows and pressure
- Storm Water Pre and Post Construction calculations and summary
- Traffic impacts
- Lighting summary
- Landscaping summary

■ GENERAL INFORMATION

To be provided with final plans ALL ITEMS ARE STAMPED AND SIGNED WITH AN ORIGINAL SIGNATURE BY A PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR SURVEYOR LICENSED AND CURRENTLY REGISTERED TO PRACTICE IN THE STATE OF NEW YORK.

N/A If required, submit a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the City of Watertown Engineering Department for review to obtain an MS4 SWPPP Acceptance Form.

Post Construction SWPPP Requirements to Complete:

In accordance with City Code Section 260, provide the following:

- *Submit a detailed as-built topographic and boundary survey of the site with all stormwater practices.*
- *Perform and submit results of insitu infiltration testing, updated drainage area maps and hydraulic calculations in a comprehensive Engineering Report based on As-Built Conditions.*
- *Submit a detailed post construction Maintenance Plan for all Stormwater Management Practices (SMP's) and provide a Maintenance Agreement with irrevocable letter of credit for approval. Maintenance Agreement shall be filed at the County Clerk's Office as a deed restriction on the property.*

N/A ** If required, a copy of all submittals sent to the New York State Department of Environmental Conservation (NYSDEC) for the sanitary sewer extension permit will also be sent to the City of Watertown Engineering Department.

N/A ** If required, a copy of all submittals sent to the New York State Department of Health (NYSDOH) will also be sent to the City of Watertown Engineering Department.

** When NYSDEC or NYSDOH permitting is required, the property owner/applicant shall retain a licensed Professional Engineer to perform inspections of the proposed utility work and to certify the completed works were constructed in substantial conformance with the approved plans and specifications.

N/A Signage will not be approved as part of this submission. It requires a sign permit from the City Code Enforcement Bureau. See Section 310-52.2 of the Zoning Ordinance.

Plans have been collated and properly folded.

N/A If an applicant proposes a site plan with multiple buildings and any of those buildings front on a private drive, the City Council will name the private drive by resolution and the building(s) will be given an address number on that private drive by City staff. The applicant may propose a name for the private drive for the City Council's consideration.

Proposed Street Name: _____

N/A For non-residential uses, the proposed Hours of Operation shall be indicated.

Signature Authorization form or letter signed by the owner is submitted allowing the applicant to apply on behalf of the owner if the applicant is not the property owner.

Explanation for any item not checked in the Site Plan Checklist.

The project disturbs <1 acre of soil therefore a SWPPP is not
required for this project. This project does not include any
proposed easements, landscaping or site lighting, therefore
none are depicted on the plans.

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

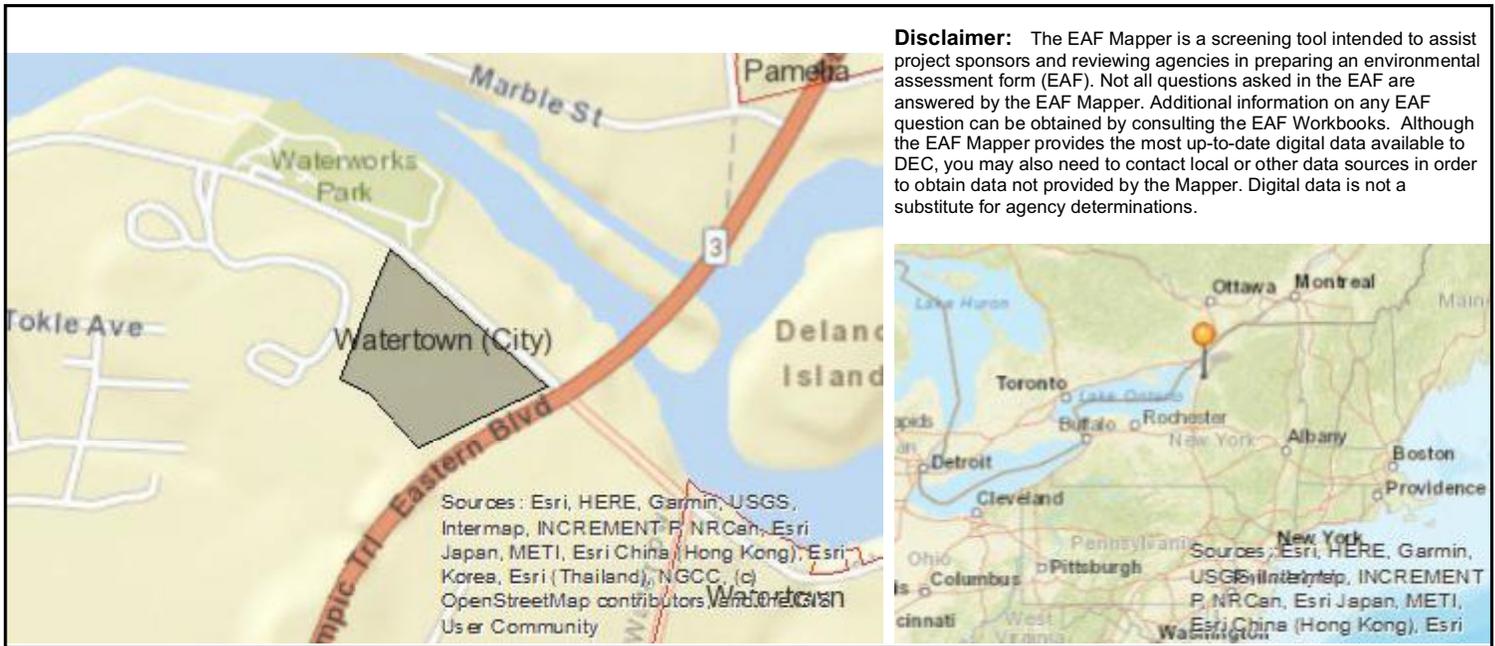
Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information			
Project: Multi-Purpose Community Building Sponsor: Parkside Bible Church			
Name of Action or Project: Parkside Bible Church Multi-Purpose Community Building			
Project Location (describe, and attach a location map): 491 Eastern Blvd., Watertown, NY 13601			
Brief Description of Proposed Action: The project consists of the construction of a free standing 9,500 SF pre-engineered building with an enclosed walkway corridor connecting to the existing church building lobby. The corridor will include ADA ramps allowing handicap access from the existing church to the multi-purpose building and will be fire rated to provide separate fire zones between the existing building, corridor, and new building. Site improvements will include a 7,550 SF asphalt access drive/fire lane, 6' wide asphalt walk/fire access path around the perimeter of the multi-purpose building, water, sewer, gas, electric utilities, and site grading and drainage. The new asphalt drive/fire lane will connect the existing parking area to the proposed building and will include adequate turn around area for fire access apparatus as well as provide two (2) additional ADA accessible parking spaces. All multi-purpose building utilities will be extended from existing utilities located along Huntington Street to the east of the project area.			
Name of Applicant or Sponsor: Parkside Bible Church, Attn: Mike Gerhardt, Senior Pastor		Telephone: (315) 782-6534 E-Mail: mikegerhardt@parksidebible.org	
Address: 491 Eastern Blvd.			
City/PO: Watertown		State: NY	Zip Code: 13601
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval:		NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
3. a. Total acreage of the site of the proposed action? _____ 8.62 acres			
b. Total acreage to be physically disturbed? _____ 0.93 acres			
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ 8.62 acres			
4. Check all land uses that occur on, are adjoining or near the proposed action:			
5. <input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential (suburban)			
<input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input checked="" type="checkbox"/> Aquatic <input type="checkbox"/> Other(Specify):			
<input checked="" type="checkbox"/> Parkland			

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
8. a. Will the proposed action result in a substantial increase in traffic above present levels? b. Are public transportation services available at or near the site of the proposed action? c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	NO <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	YES <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____ _____	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ _____	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ _____	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	NO <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	YES <input type="checkbox"/> <input type="checkbox"/>	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency? b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____ _____	NO <input type="checkbox"/> <input checked="" type="checkbox"/>	YES <input checked="" type="checkbox"/> <input type="checkbox"/>	

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:		
<input type="checkbox"/> Shoreline <input type="checkbox"/> Forest <input type="checkbox"/> Agricultural/grasslands <input type="checkbox"/> Early mid-successional <input type="checkbox"/> Wetland <input checked="" type="checkbox"/> Urban <input type="checkbox"/> Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered? Northern Long-eared Bat	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16. Is the project site located in the 100-year flood plan?	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: Stormwater runoff is collected within the existing City of Watertown municipal storm sewers and roadside drainage channels	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor/name: <u>Parkside Bible Church</u> Date: <u>02/03/2020</u> Signature: <u><i>Michael C Gerhardt</i></u> Title: <u>Senior Pastor</u>		



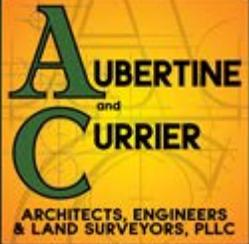
Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the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

Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	No
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	Yes
Part 1 / Question 15 [Threatened or Endangered Animal - Name]	Northern Long-eared Bat
Part 1 / Question 16 [100 Year Flood Plain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
Part 1 / Question 20 [Remediation Site]	No

SHORT EAF SUMMARY REPORT:

Questions 12b, 13a, and 15 are answered automatically by the EAF mapper based upon limited digital mapping information that is available.

- Question 13a, Wetland or Other waterbodies, is answered yes due to the presence of the Black River within 1000' of the project site. The project does not impact any wetland or shoreline area.
- Question 15, Threatened or Endangered Species, is answered yes due to the reported presence of the Northern Long-eared Bat within the City of Watertown. A submission to the DEC has been made requesting more information regarding this project.



NYS WBE/DBE Certified
SBA Woman Owned
Small Business (WOSB)

aubertinecurrier.com

522 Bradley Street
Watertown, New York 13601

Phone: 315.782.2005
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Managing Partner
Annette M. Mason, P.E.
Structural Engineer

Partners
Brian A. Jones, AIA.,
LEED AP BD+C
Architect

Matthew R. Morgia, P.E.
Civil Engineer

Jayson J. Jones, P.L.S.
Land Surveyor

Project:

Date:

Short Environmental Assessment Form
Part 2 - Impact Assessment

Part 2 is to be completed by the Lead Agency.

Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept “Have my responses been reasonable considering the scale and context of the proposed action?”

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?		
2. Will the proposed action result in a change in the use or intensity of use of land?		
3. Will the proposed action impair the character or quality of the existing community?		
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?		
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?		
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?		
7. Will the proposed action impact existing:		
a. public / private water supplies?		
b. public / private wastewater treatment utilities?		
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?		
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?		
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?		
11. Will the proposed action create a hazard to environmental resources or human health?		

Project:

Date:

Short Environmental Assessment Form Part 3 Determination of Significance

For every question in Part 2 that was answered “moderate to large impact may occur”, or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.

Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

Name of Lead Agency

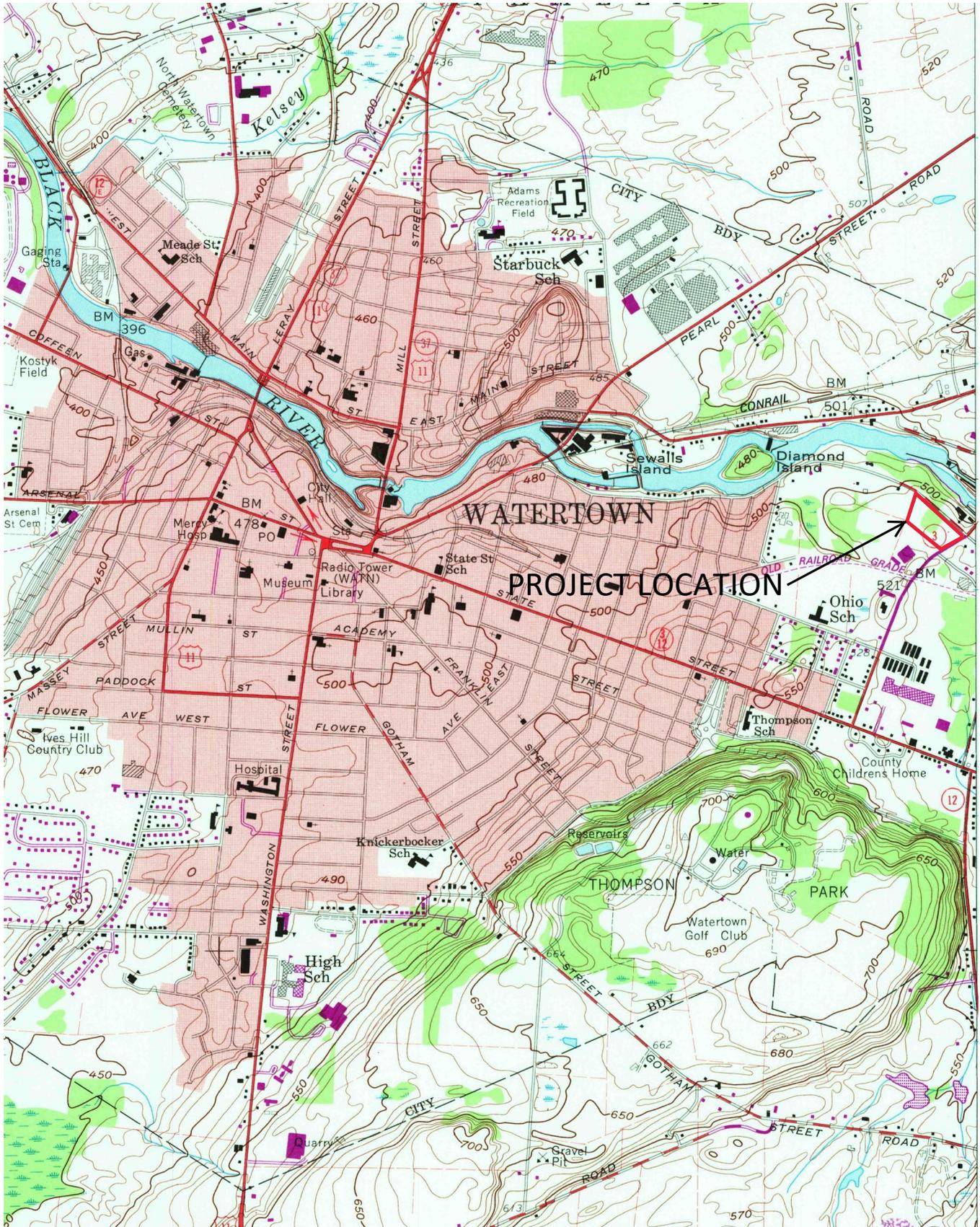
Date

Print or Type Name of Responsible Officer in Lead Agency

Title of Responsible Officer

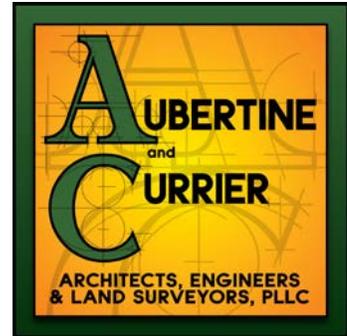
Signature of Responsible Officer in Lead Agency

Signature of Preparer (if different from Responsible Officer)



PRELIMINARY ENGINEERING REPORT

**MULTI-PURPOSE COMMUNITY BUILDING
PARKSIDE BIBLE CHURCH
491 EASTERN BOULEVARD
CITY OF WATERTOWN
JEFFERSON COUNTY, NEW YORK**



**Owner: Parkside Bible Church
491 Eastern Boulevard
Watertown, NY 13601**

February 11, 2020

**Matthew R. Morgia, P.E.
Civil Engineer**

The above Engineer states that to the best of his knowledge, information and belief, the plans and specifications are in accordance with applicable requirements of New York State. It is a violation of New York State Law for any person, unless acting under the direction of a licensed professional engineer to alter this document in any way. If altered, such licensee shall affix his or her seal and the notation "altered by" followed by his or her signature, date, and a specific description of alteration.

Aubertine and Currier Architects, Engineers & Land Surveyors, PLLC
522 Bradley Street Watertown, New York 13601 TELE: (315) 782-2005 FAX: (315) 782-1472

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Appendices

Appendix 1: Location Map
City of Watertown Zoning Map
Soils Map
Soils Description

Appendix 2: Hydrologic and Hydraulic Analysis

Appendix 3: Parking and Traffic Calculations

1.0 SITE AND PROJECT DESCRIPTIONS

1.1 Location

Parkside Bible Church is located on the City of Watertown Tax Map Parcel No.5-26-103.007 on the corner of Huntington Street and Eastern Boulevard. Access to the site is by an entrance drive off the north side of Eastern Boulevard, 300' west of the Huntington St. intersection. A secondary shared access drive is located approximately 900' west of the intersection. This parcel is zoned LI – Light Industrial.

1.2 Project Description

The Parkside Bible Church proposed multi-purpose Community Building Project will consist of the construction of a free standing 9,500 SF pre-engineered building with an enclosed walkway corridor connecting to the existing church building. The corridor will include an ADA ramp allowing handicap access from the existing church to the multi-purpose building and the corridor will be fire rated to create separate fire zones within the existing building, corridor, and multi-purpose building. Site improvements will include a 7,600 SF asphalt access drive/fire lane, 6' wide asphalt walk/fire access path around the perimeter of the new building, water, sewer, gas, and electric utilities, and site grading and drainage. All building utilities will be extended from existing utilities located along Huntington Street to the east of the project area. Water service to the proposed building will be via 6" combined domestic/fire water service, and will include a fire hydrant, post indicator valve, and fire department connection to the building sprinkler system.

1.3 Site Topography

The existing site is comprised of the existing church office building and sanctuary at the southeast corner of the property as well as an asphalt parking area that extends along the highway margin of Eastern Blvd. at the south frontage of the site. The majority of the property to the north consists of lawn area, mature trees, and some brush along the north and east property lines. A cell tower stands approx. 350' to the north of the church buildings with a crushed stone access drive connecting to Huntington St.

The site consists of both very flat areas at the center and east of the site as well as steep slopes at the east of the site along Huntington street. The center of the site contains a large, relatively flat area that is also the high point of the site. This high point slopes downward in all directions toward the property lines. The northern portion primarily slopes north from the center of the site with slopes ranging from 0.5% to 5%. Slopes within the eastern portion of the site are towards the east and southeast with slopes varying from 0.2% to 3%. The southern portion of the site slopes primarily south with slightly steeper slopes of 2% to 8% across the asphalt parking area to a drainage channel sloping east along Eastern Blvd. The eastern portion of the site slopes east and south with slopes as steep as 20% adjacent to Huntington St.

The developed area of the project is not located within a 100-year flood plain.

1.4 Soil Classification

The project site is located in the City of Watertown, which is an urban environment and consists primarily of previously developed area. The project site contains loam and silt loam soils of Hydrologic Group D. According to the USDA Web Soil Survey for Jefferson County, New York, The following soil type is present within the project area.

<u>Soil Symbol</u>	<u>Soil Name</u>	<u>Hydrologic Group</u>
CnB	Collamer silt loam	C/D
FaB	Farmington loam	D

A copy of the NRCS Web Soil Survey data is attached.

2.0 WATER FACILITIES

2.1 Existing Water Facilities

There is an existing 16" municipal water main located along the west side of Huntington Street that provides domestic water to the existing facility. A 2" copper water service connects the facility to the main at the east side of the building. The existing building and site do not currently any fire service piping. A single existing fire hydrant is located on the east side of Huntington St. in front of the City Water Department building, approx. 330' north of the existing church building.

2.2 Proposed Water Facilities

A 326 LF 6" combined domestic/fire water service will be installed to extend around the north and west sides of the building to a utility room at the southwest corner of the multi-purpose building. One hydrant will be installed between the building and emergency/service access drive at the western side of the building. The fire hydrant location has been established to provide a 600' maximum fire hose length from the hydrants around the perimeter of the building, per the 2020 International Fire Code, for buildings equipped with an automatic sprinkler system. The proposed building will include a sprinkler system and a fire department connection located at the southwestern corner of the building. A post indicator valve will be installed on the main line between the hydrant and building. Fire flow tests for the proposed facility have not yet been conducted due to the winter weather season. Adequate fire flow and pressure are not anticipated to be a concern, as the 16" City water main is a primary line supplying the City with a connection 100' from the water treatment plant.

3.0 SANITARY SEWER FACILITIES

3.1 Existing Sanitary Sewer Facilities

The existing church facility is served by a septic system and leach field located at southeast corner of the property and is not currently connected to any municipal sanitary

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sewer system. An existing dead-end City sanitary sewer manhole is located on the east side of Huntington St. approx. 150' north of the existing church facility. This manhole flows north into the existing City sanitary sewer system.

3.2 Proposed Sanitary Sewer Facilities

A 120' long, 4" gravity sewer lateral and will be installed from the west side of the multi-purpose building and connect to the existing manhole located on the east side of Huntington St. The new lateral will serve only the multi-purpose building and the existing church building will remain connected the septic system.

4.0 STORMWATER FACILITIES

4.1 Existing Drainage

The Parkside Bible Church site has three points of discharge either offsite or directly into existing stormwater infrastructure.

Site runoff is primarily via overland flow from a relatively flat high area near the center of the property, to the north, south, east and west sides of the property. The northern portion of the property drains to the north via sheet flow towards the northern property corner and offsite into a roadside drainage channel on the west side of Huntington Street. The western portion of the property drains to the west and southwest via sheet flow and across the eastern property line. The southeastern corner of the property drains south via sheet flow across the asphalt parking lot and into a shallow roadside drainage channel along the northern edge of Eastern Blvd. Flow within this channel is diverted east and then south into a 24" CMP culvert pipe under Eastern Blvd. to a drainage channel on the south side of the road, and eventually discharges into the Black River. The western portion of the property drains via sheet flow to the west and south along the edges of the road. This flow is picked up by a catch basin and culvert pipe at the southeastern corner of the property and is routed to the drainage channel located on the south side of Eastern Blvd., eventually discharging into the Black River.

The existing site drainage and runoff conditions were analyzed utilizing the Rational Method. HydroCAD calculations can be found in Appendix #2. Runoff calculations were completed for the 10, 25, 50, and 100 year, 24 hour storm events. Peak discharge from the 25 year, 24 hour storm event has been utilized for design and discussion purposes. The existing condition 25 year site discharge is 0.12 CFS to the northern discharge point, 0.30 CFS to the existing stormwater infrastructure at the eastern discharge Point and 0.23 CFS to the western discharge point.

4.2 Proposed Drainage

Site improvements include the construction of a multi-purpose community building, access drive, and walkway on the relatively flat area at the center of the site. Drainage improvements associated with the project include the installation of 4" perforated underdrain installed along the building foundation, roof downspouts on the south side of

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the proposed building , and a single 6" diameter yard drain to collect surface runoff trapped between the proposed Community Building and existing sanctuary. Runoff collected in these systems will be piped east and discharged along the embankment located along the west side of Huntington St. The proposed improvements do not change the overall site drainage patterns from the existing to proposed conditions. The northern portion of the site will continue to drain towards the northern property corner, eastern and southern portions will continue to drain to the east and south, and areas to the east will continue to drain into the existing stormwater infrastructure at the southeastern corner of the property, where they are conveyed to the Black River.

The proposed conditions 25 year, 24 hour storm, peak discharge is 0.12 CFS to the Northern Discharge Point, 0.34 CFS to the existing stormwater infrastructure at the eastern discharge Point, and 0.28 CFS to the western discharge point. This small increase in peak runoff from the project site is due primarily to the 0.47 acre increase in impervious area resulting from the proposed building, asphalt access drive, and walks.

5.0 ROADS / DRIVEWAYS

5.1 Existing Roads / Driveways

The project site is accessed via one of two existing asphalt entrance drives. The main 30' wide access drive connects the asphalt parking lot to Eastern Boulevard at the south of the site, approximately 300' west of the Huntington Street intersection. A secondary 20' wide access drive connects the parking lot to a 30' wide crushed stone driveway within a right of way adjacent the eastern property line. This crushed stone shared drive in turn connects to Eastern Boulevard approximately 600' west of Huntington Street. There are multiple rows of parking within the parking lot which contains 112 total parking spaces including 4 handicap spaces.

5.2 Proposed Roads / Driveways

The Parkside Bible Church multi-purpose Community Building project includes the construction of a 20' wide 7,550 SF asphalt service drive/fire lane connecting the existing asphalt parking area to the proposed community building. This service drive/fire lane extends 160' north of the existing parking lot and includes a turn around with turning radii to accommodate fire apparatus access in accordance with the 2020 International Fire Code for buildings equipped with an automatic sprinkler system. Two additional handicap spaces will also be added adjacent to the service drive, with walkways extending into the existing sanctuary building emergency exits. A portion of the existing parking paint striping will be modified to accommodate the proposed service drive, and a total of 114 parking spaces including 5 handicap spaces will be created.

5.3 Traffic and Parking

Per the City of Watertown Zoning Laws (Section 310-46) one (1) parking space is required for each four seats in places of public assembly. The existing sanctuary facility has a maximum capacity of 350 persons, equating to a total of 88 parking spaces. The 112

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spaces that currently exist are greater than the required. The proposed multi-purpose community room has a larger maximum occupancy than the sanctuary. The multi-purpose room has a maximum occupancy of 444 persons, requiring 111 parking spaces. Total proposed parking spaces for the facility after parking reconfiguration equates to 114 spaces including 5 handicap spaces. The church will not utilize both the sanctuary and the multi-purpose facility at the same time. No other activities are scheduled when the sanctuary is being utilized. This allows for the sanctuary, multi-purpose building and all church operations to share the existing parking lot much like it currently functions.

Trip generation calculations were performed utilizing data from the ITE Trip Generation Manual, 7th Edition. Trip generation was calculated for both the existing and post-expansion facility. The Weekday AM Peak Hour for the existing building generates approximately 9 trips/hour entering and 9 trips/hour exiting while post-construction facility generates approximately 15 trips/hour entering and 15 trips/hour exiting. The Weekday PM Peak Hour for the existing building generates approximately 14 trips/hour entering and 10 trips/hour exiting while the post-construction facility generates approximately 18 trips/hour entering and 12 trips/hour exiting. The Saturday Peak Hour for the existing building generates approximately 90 trips/hour entering and 120 trips/hour exiting while the post-construction facility generates approximately 114 trips/hour entering and 152 trips/hour exiting. The Sunday Peak Hour for the existing building generates approximately 117 trips/hour entering and 108 trips/hour exiting while the post-construction facility generates approximately 147 trips/hour entering and 135 trips/hour exiting. See Appendix 3 for calculations.

6.0 PRIVATE UTILITIES

6.1 Existing Gas, Electric, Telephone and Cable

There are existing electric, gas, cable, and telephone services to the existing building. All utility services are extended from existing utilities along Eastern Blvd. and Huntington St.

6.2 Proposed Gas, Electric, Telephone, and Cable

The proposed building will be connected to new gas, electric, and communication services. 114 LF of 1" DR-9 PE gas service and 103 LF of buried electric/communication service will be connected to a mechanical room at the eastern side of the building. Gas, electric, and communication service are anticipated to extend from existing utilities along the west side of Huntington St. The respective utility service provider will ultimately decide the connection location.

7.0 LIGHTING

7.1 Existing Site Lighting

The existing site lighting for the parking area is provided via two (2) National Grid owned pole mounted fixtures located along the southern edge of the eastern half of the parking area. The western half of the parking area is not illuminated.

7.2 Proposed Site Lighting

No additional site lighting is proposed for this project.

8.0 LANDSCAPING

8.1 Existing Landscaping

Existing vegetated areas are located along the northern, southern, and eastern sides of the project site. These vegetated areas are comprised of overgrowth, trees and brush to the north and landscaped areas and trees to the south of the existing facility. Seven (7) trees exist between the parking area and Eastern Blvd.

8.2 Proposed Landscaping

There are 24 mature trees within the proposed building footprint that will require removal. Based upon recent tree removal activities, several are anticipated to be hollow and nearing the end of their life. No additional landscaping is proposed for this project. Surrounding residential, planned development and waterfront zoned areas are already separated by trees and brush from the proposed building footprint.

Sincerely,
Aubertine and Currier Architects, Engineers & Land Surveyors, P.L.L.C.



Matthew R. Morgia, P.E.
Civil Engineer

APPENDIX #1

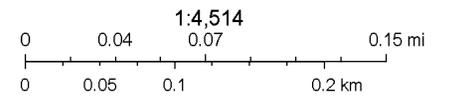
**LOCATION MAP
CITY OF WATERTOWN ZONING MAP
SOILS MAP
SOILS DESCRIPTION**

ArcGIS Web Map



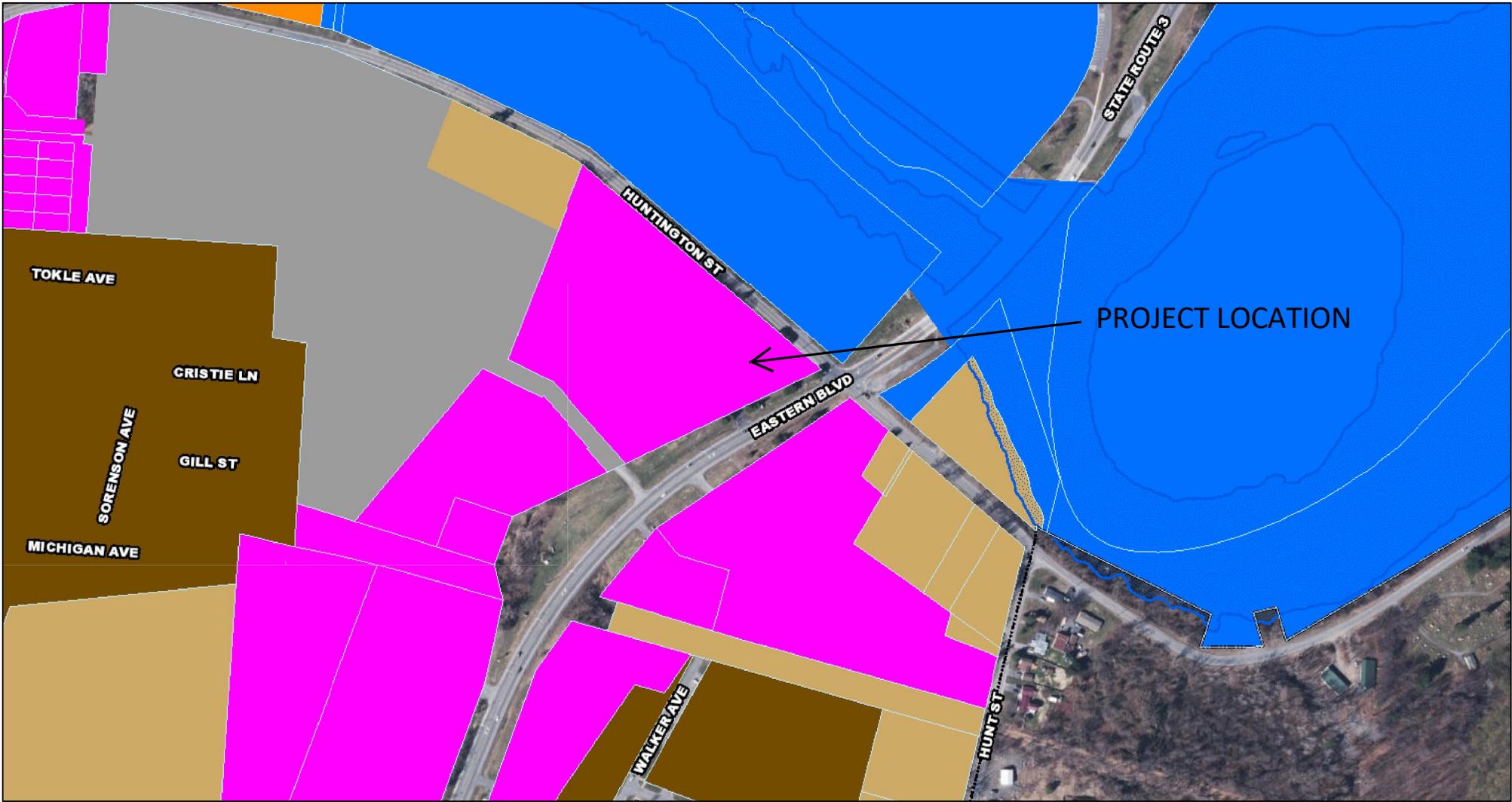
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-  Black River
-  City Boundary
-  Parcels
- ROADS



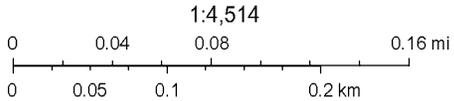
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ArcGIS Web Map



2/6/2020, 7:19:22 PM

- | | | | |
|----------------------------|------------------|-----------------------|---------------------|
| Zoning | RESIDENCE A | NEIGHBORHOOD BUSINESS | PLANNED DEVELOPMENT |
| RIVER DEVELOPMENT DISTRICT | RESIDENCE B | COMMERCIAL | Black River |
| DOWNTOWN CORE OVERLAY | RESIDENCE C | HEALTH SERVICES | City Boundary |
| Open Space and Recreation | WATERFRONT | LIGHT INDUSTRY | Parcels |
| DOWNTOWN | LIMITED BUSINESS | HEAVY INDUSTRY | ROADS |

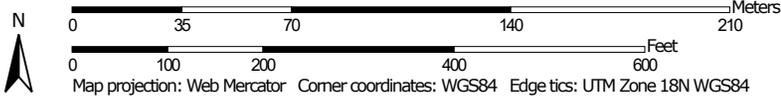


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Custom Soil Resource Report
Map—Hydrologic Soil Group



Map Scale: 1:2,400 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Lines

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Points

-  A
-  A/D
-  B
-  B/D

-  C
-  C/D
-  D
-  Not rated or not available

Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Jefferson County, New York
 Survey Area Data: Version 19, Sep 16, 2019

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

Date(s) aerial images were photographed: Nov 3, 2013—Sep 27, 2016

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.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CnB	Collamer silt loam, 3 to 8 percent slopes	C/D	8.0	80.3%
FaB	Farmington loam, 0 to 8 percent slopes	D	2.0	19.7%
Totals for Area of Interest			10.0	100.0%

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

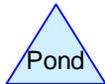
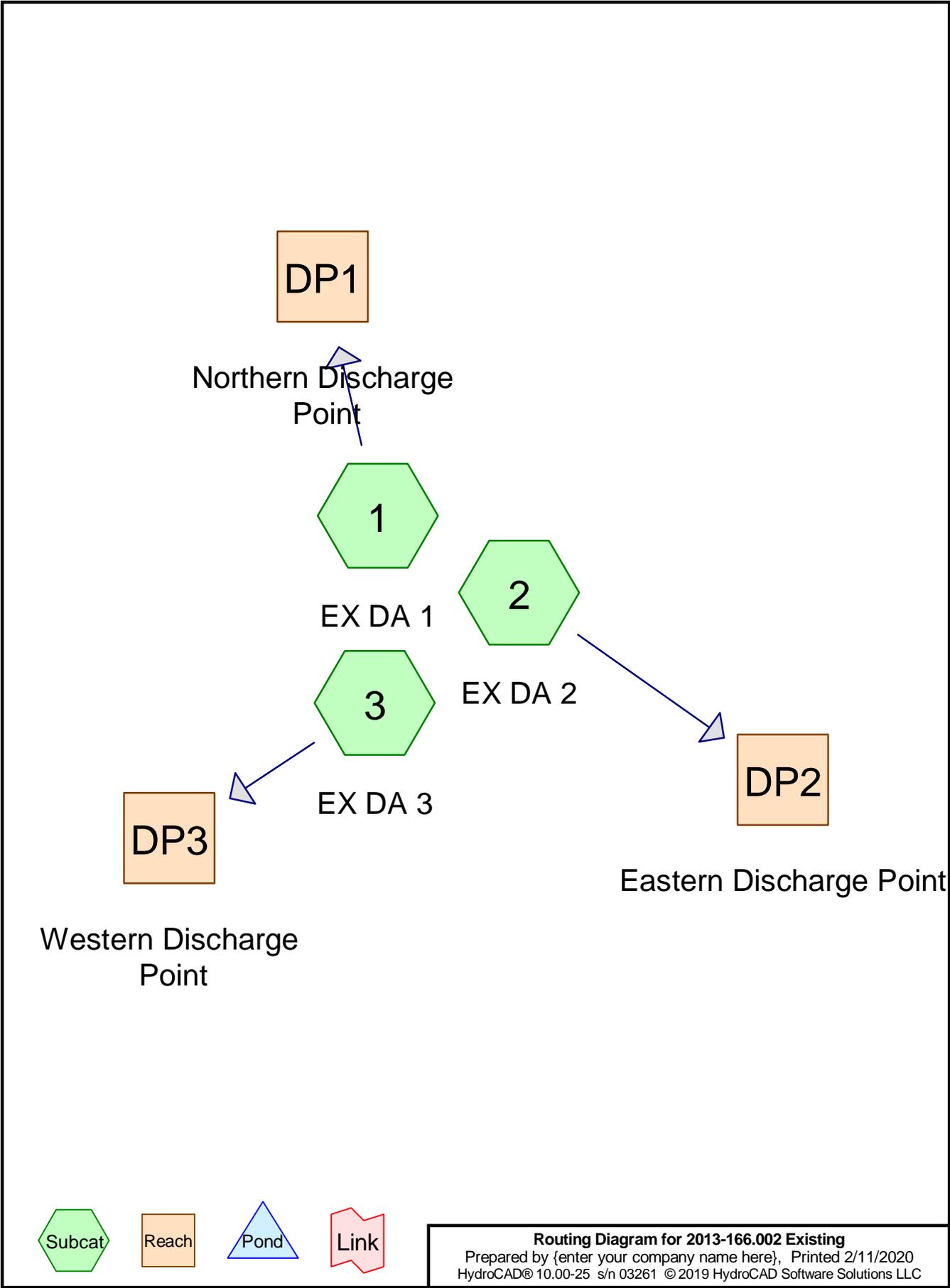
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX #2

HYDROLOGIC AND HYDRAILIC ANALYSIS

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2013-166.002 Existing

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Page 2

Area Listing (all nodes)

Area (acres)	C	Description (subcatchment-numbers)
0.171	0.75	Gravel Surface "D" (1)
6.067	0.20	Lawn Area "D" (1, 2, 3)
2.261	0.96	Pavement and Roof "D" (2, 3)
1.083	0.25	Woods Fair "D" (1)
0.179	0.25	Woods, Fair, "D" (2)
9.760	0.39	TOTAL AREA

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Page 3

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
9.760	Other	1, 2, 3
9.760		TOTAL AREA

2013-166.002 Existing

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Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	0.171	0.171	Gravel Surface "D"	1
0.000	0.000	0.000	0.000	6.067	6.067	Lawn Area "D"	1, 2, 3
0.000	0.000	0.000	0.000	2.261	2.261	Pavement and Roof "D"	2, 3
0.000	0.000	0.000	0.000	1.083	1.083	Woods Fair "D"	1
0.000	0.000	0.000	0.000	0.179	0.179	Woods, Fair, "D"	2
0.000	0.000	0.000	0.000	9.760	9.760	TOTAL AREA	

2013-166.002 Existing

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	2	0.00	0.00	40.0	0.0180	0.025	12.0	0.0	0.0

2013-166.002 Existing

Jefferson County SE 10-yr Duration=1,440 min, Inten=0.14 in/hr

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: EX DA 1

Runoff Area=123,710 sf 0.00% Impervious Runoff Depth=0.83"
Flow Length=435' Tc=21.8 min C=0.25 Runoff=0.10 cfs 0.197 af

Subcatchment 2: EX DA 2

Runoff Area=139,828 sf 45.32% Impervious Runoff Depth=1.83"
Flow Length=653' Tc=24.0 min C=0.55 Runoff=0.25 cfs 0.490 af

Subcatchment 3: EX DA 3

Runoff Area=161,608 sf 21.73% Impervious Runoff Depth=1.23"
Flow Length=391' Tc=22.6 min C=0.37 Runoff=0.19 cfs 0.381 af

Reach DP1: Northern Discharge Point

Inflow=0.10 cfs 0.197 af
Outflow=0.10 cfs 0.197 af

Reach DP2: Eastern Discharge Point

Inflow=0.25 cfs 0.490 af
Outflow=0.25 cfs 0.490 af

Reach DP3: Western Discharge Point

Inflow=0.19 cfs 0.381 af
Outflow=0.19 cfs 0.381 af

Total Runoff Area = 9.760 ac Runoff Volume = 1.068 af Average Runoff Depth = 1.31"
76.83% Pervious = 7.499 ac 23.17% Impervious = 2.261 ac

Summary for Subcatchment 1: EX DA 1

Runoff = 0.10 cfs @ 0.37 hrs, Volume= 0.197 af, Depth= 0.83"

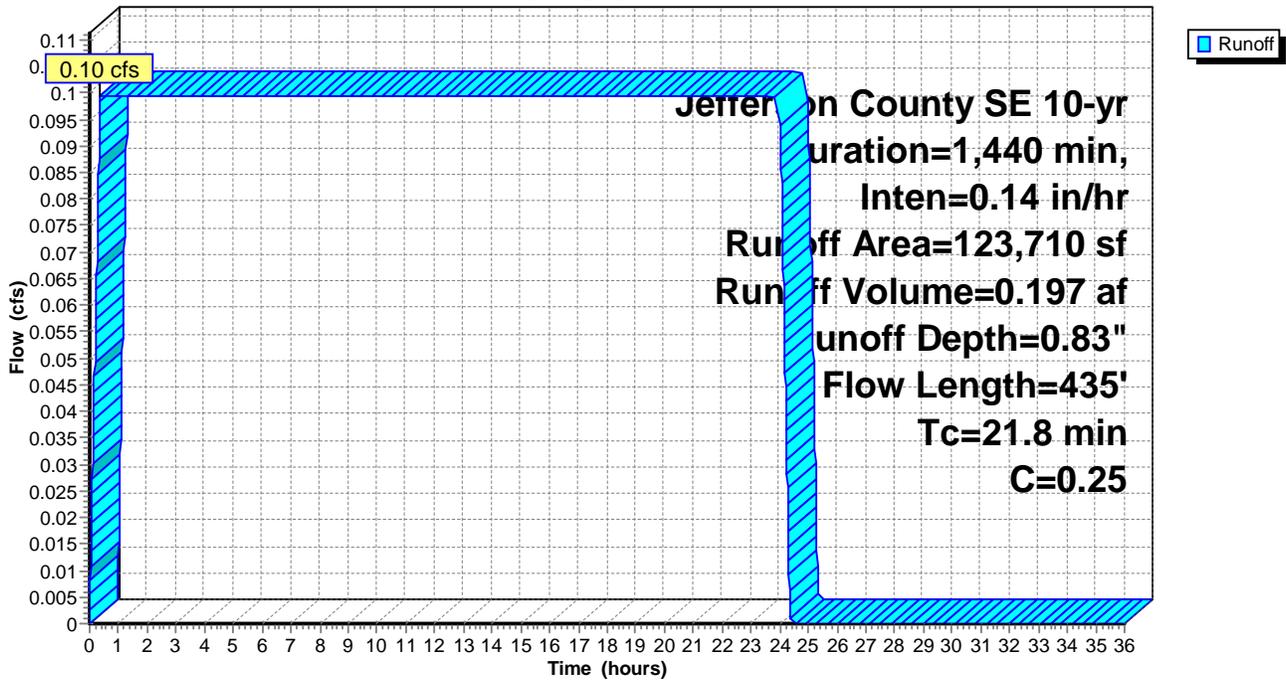
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 10-yr Duration=1,440 min, Inten=0.14 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area
					Grass: Dense n= 0.240 P2= 2.50"
6.8	335	0.0272	0.82		Shallow Concentrated Flow, Shallow - Wooded Area
					Woodland Kv= 5.0 fps
21.8	435	Total			

Subcatchment 1: EX DA 1

Hydrograph



Summary for Subcatchment 2: EX DA 2

Runoff = 0.25 cfs @ 0.40 hrs, Volume= 0.490 af, Depth= 1.83"

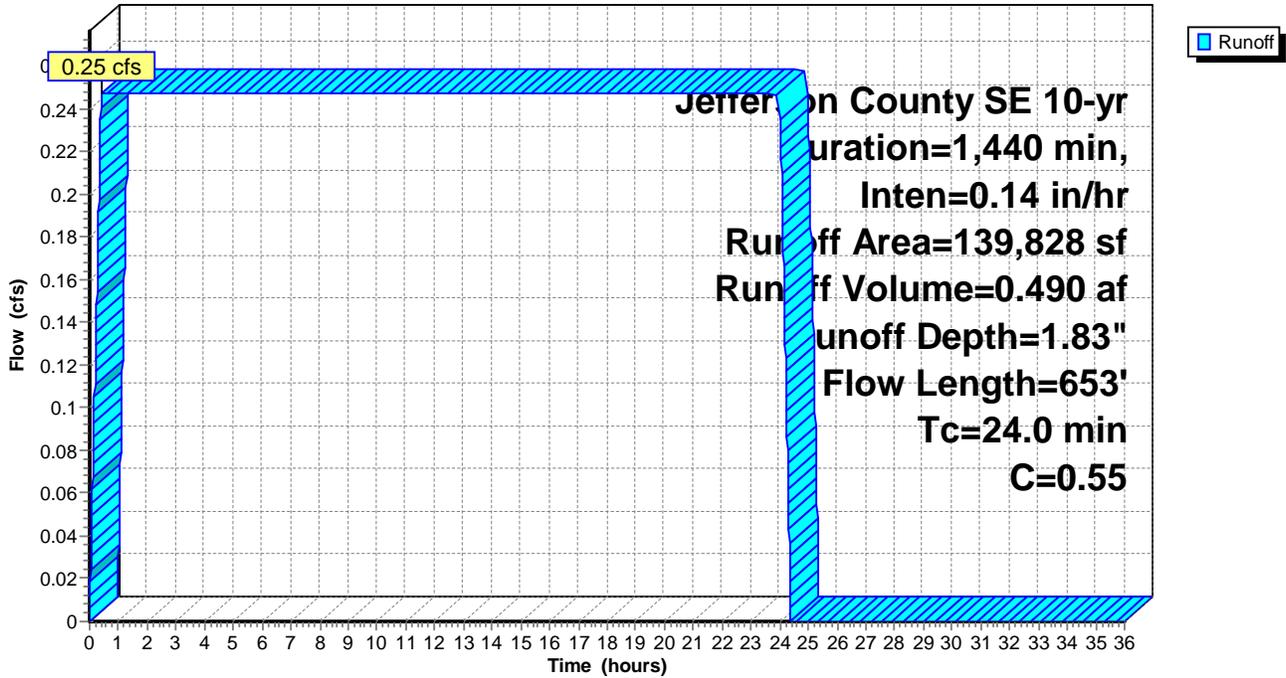
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 10-yr Duration=1,440 min, Inten=0.14 in/hr

Area (sf)	C	Description
63,366	0.96	Pavement and Roof "D"
7,803	0.25	Woods, Fair, "D"
68,659	0.20	Lawn Area "D"
139,828	0.55	Weighted Average
76,462		54.68% Pervious Area
63,366		45.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0155	0.09		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.4	23	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	33	0.2030	2.25		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
24.0	653	Total			

Subcatchment 2: EX DA 2

Hydrograph



Summary for Subcatchment 3: EX DA 3

Runoff = 0.19 cfs @ 0.38 hrs, Volume= 0.381 af, Depth= 1.23"

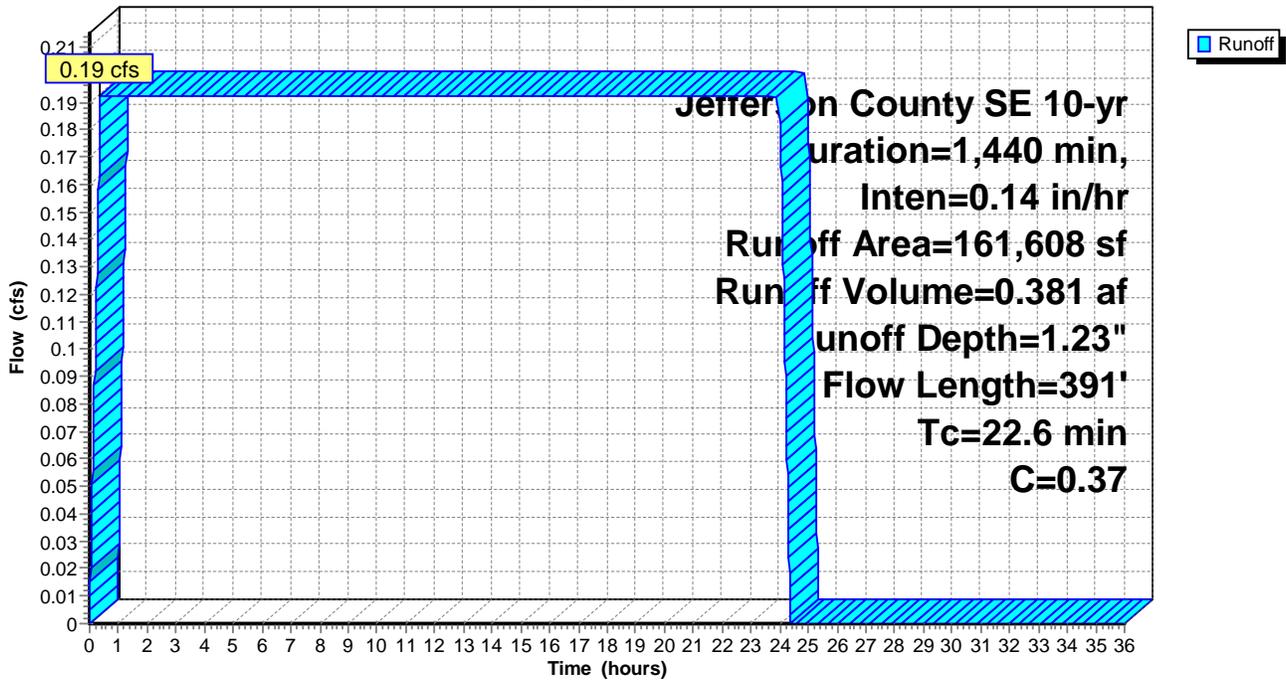
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 10-yr Duration=1,440 min, Inten=0.14 in/hr

Area (sf)	C	Description
35,121	0.96	Pavement and Roof "D"
126,487	0.20	Lawn Area "D"
161,608	0.37	Weighted Average
126,487		78.27% Pervious Area
35,121		21.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	100	0.0172	0.10		Sheet Flow, Sheet Flow - Lawn Area
					Grass: Dense n= 0.240 P2= 2.50"
5.5	291	0.0160	0.89		Shallow Concentrated Flow, Shallow Concentrated
					Short Grass Pasture Kv= 7.0 fps
22.6	391	Total			

Subcatchment 3: EX DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

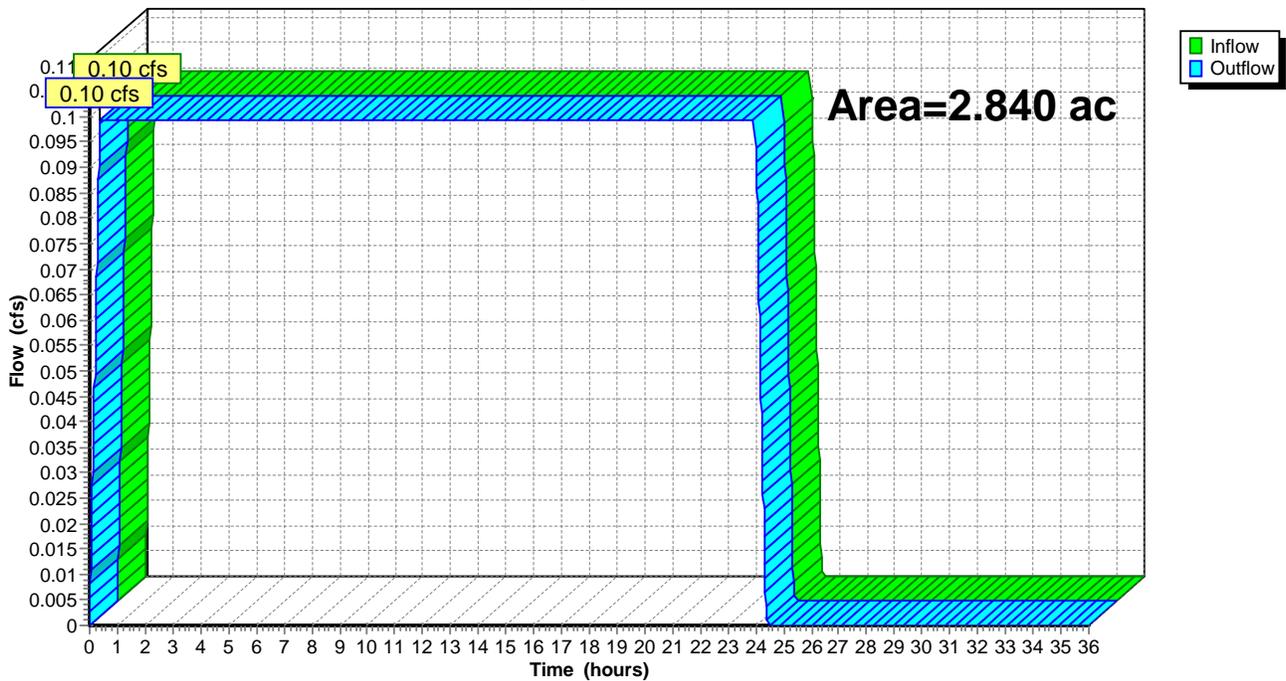
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 0.83" for 10-yr event
Inflow = 0.10 cfs @ 0.37 hrs, Volume= 0.197 af
Outflow = 0.10 cfs @ 0.37 hrs, Volume= 0.197 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

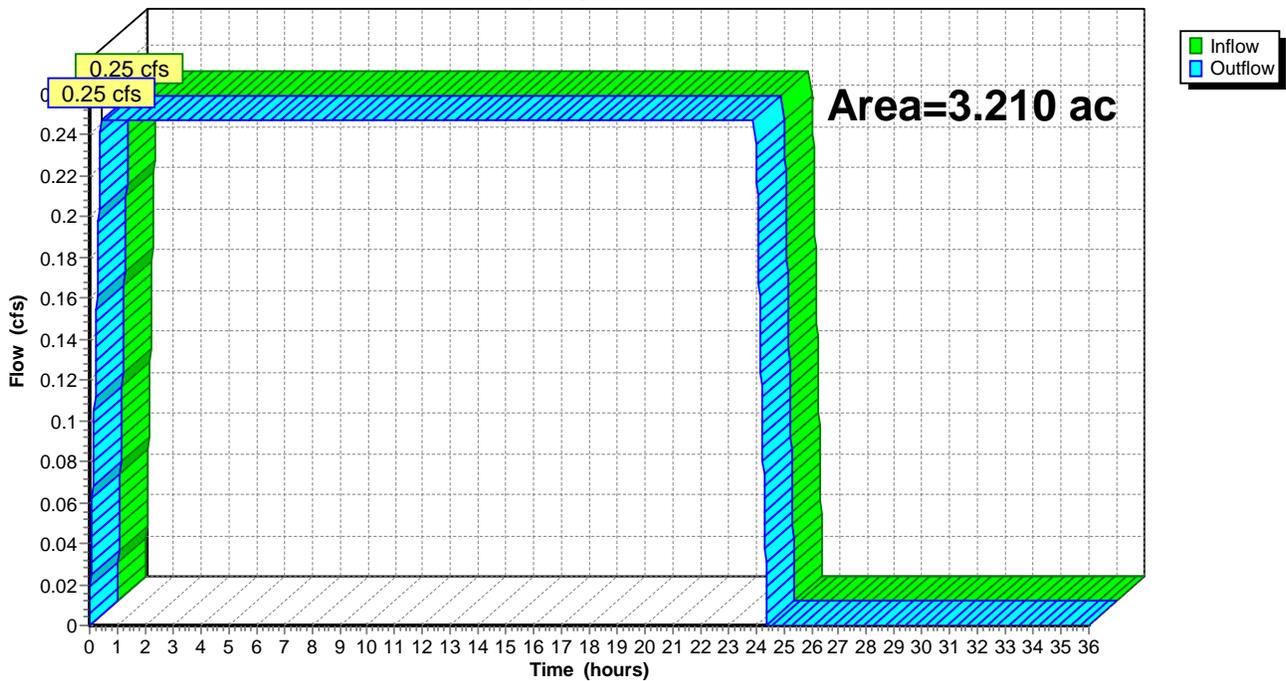
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.210 ac, 45.32% Impervious, Inflow Depth = 1.83" for 10-yr event
Inflow = 0.25 cfs @ 0.40 hrs, Volume= 0.490 af
Outflow = 0.25 cfs @ 0.40 hrs, Volume= 0.490 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

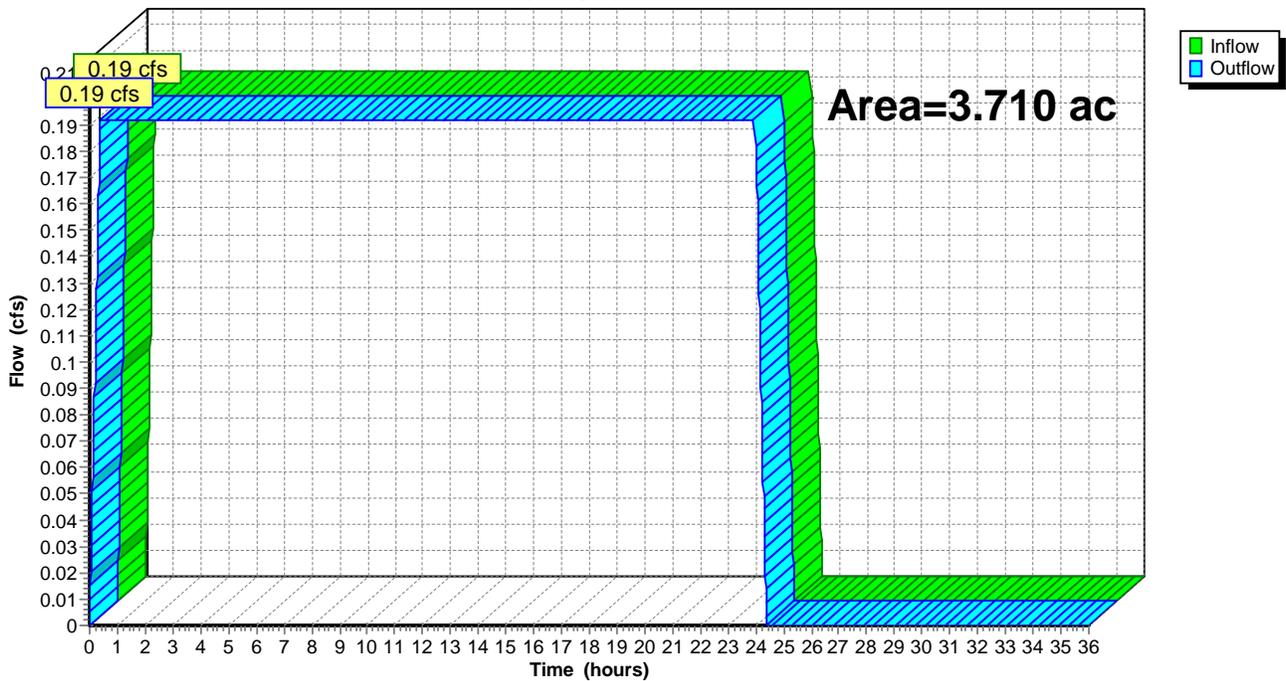
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.710 ac, 21.73% Impervious, Inflow Depth = 1.23" for 10-yr event
Inflow = 0.19 cfs @ 0.38 hrs, Volume= 0.381 af
Outflow = 0.19 cfs @ 0.38 hrs, Volume= 0.381 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



2013-166.002 Existing

Jefferson County SE 25-yr Duration=1,440 min, Inten=0.17 in/hr

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: EX DA 1

Runoff Area=123,710 sf 0.00% Impervious Runoff Depth=1.02"
Flow Length=435' Tc=21.8 min C=0.25 Runoff=0.12 cfs 0.241 af

Subcatchment 2: EX DA 2

Runoff Area=139,828 sf 45.32% Impervious Runoff Depth=2.24"
Flow Length=653' Tc=24.0 min C=0.55 Runoff=0.30 cfs 0.599 af

Subcatchment 3: EX DA 3

Runoff Area=161,608 sf 21.73% Impervious Runoff Depth=1.51"
Flow Length=391' Tc=22.6 min C=0.37 Runoff=0.23 cfs 0.466 af

Reach DP1: Northern Discharge Point

Inflow=0.12 cfs 0.241 af
Outflow=0.12 cfs 0.241 af

Reach DP2: Eastern Discharge Point

Inflow=0.30 cfs 0.599 af
Outflow=0.30 cfs 0.599 af

Reach DP3: Western Discharge Point

Inflow=0.23 cfs 0.466 af
Outflow=0.23 cfs 0.466 af

Total Runoff Area = 9.760 ac Runoff Volume = 1.305 af Average Runoff Depth = 1.60"
76.83% Pervious = 7.499 ac 23.17% Impervious = 2.261 ac

Summary for Subcatchment 1: EX DA 1

Runoff = 0.12 cfs @ 0.37 hrs, Volume= 0.241 af, Depth= 1.02"

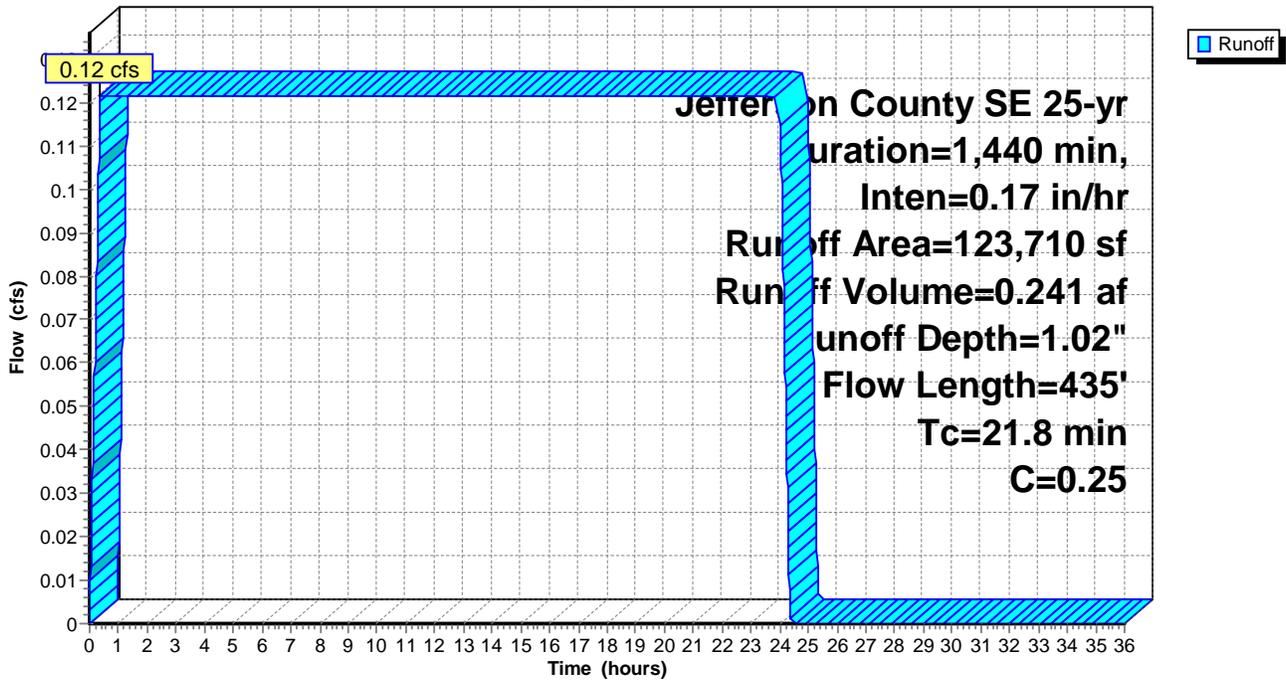
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 25-yr Duration=1,440 min, Inten=0.17 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area
6.8	335	0.0272	0.82		Grass: Dense n= 0.240 P2= 2.50" Shallow Concentrated Flow, Shallow - Wooded Area
21.8	435	Total			Woodland Kv= 5.0 fps

Subcatchment 1: EX DA 1

Hydrograph



Summary for Subcatchment 2: EX DA 2

Runoff = 0.30 cfs @ 0.40 hrs, Volume= 0.599 af, Depth= 2.24"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 25-yr Duration=1,440 min, Inten=0.17 in/hr

Area (sf)	C	Description
63,366	0.96	Pavement and Roof "D"
7,803	0.25	Woods, Fair, "D"
68,659	0.20	Lawn Area "D"
139,828	0.55	Weighted Average
76,462		54.68% Pervious Area
63,366		45.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0155	0.09		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.4	23	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	33	0.2030	2.25		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
24.0	653	Total			

Subcatchment 2: EX DA 2

Hydrograph



Summary for Subcatchment 3: EX DA 3

Runoff = 0.23 cfs @ 0.38 hrs, Volume= 0.466 af, Depth= 1.51"

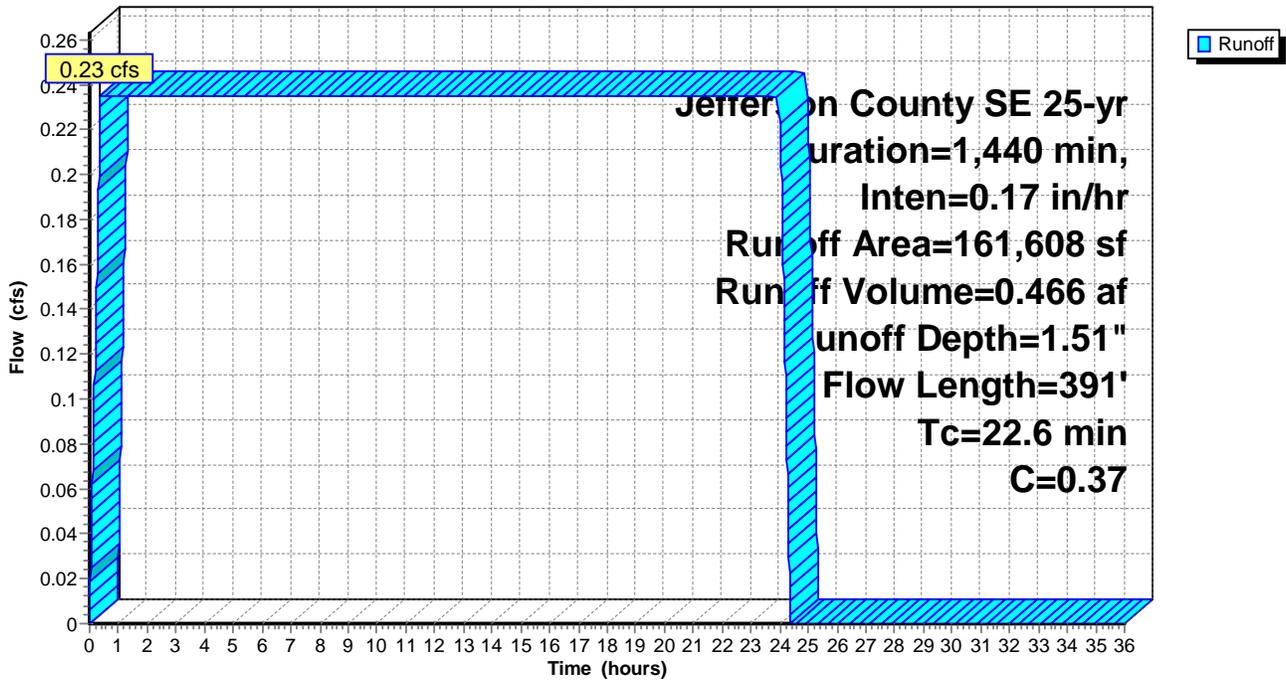
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 25-yr Duration=1,440 min, Inten=0.17 in/hr

Area (sf)	C	Description
35,121	0.96	Pavement and Roof "D"
126,487	0.20	Lawn Area "D"
161,608	0.37	Weighted Average
126,487		78.27% Pervious Area
35,121		21.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	100	0.0172	0.10		Sheet Flow, Sheet Flow - Lawn Area
5.5	291	0.0160	0.89		Grass: Dense n= 0.240 P2= 2.50"
					Shallow Concentrated Flow, Shallow Concentrated
					Short Grass Pasture Kv= 7.0 fps
22.6	391	Total			

Subcatchment 3: EX DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

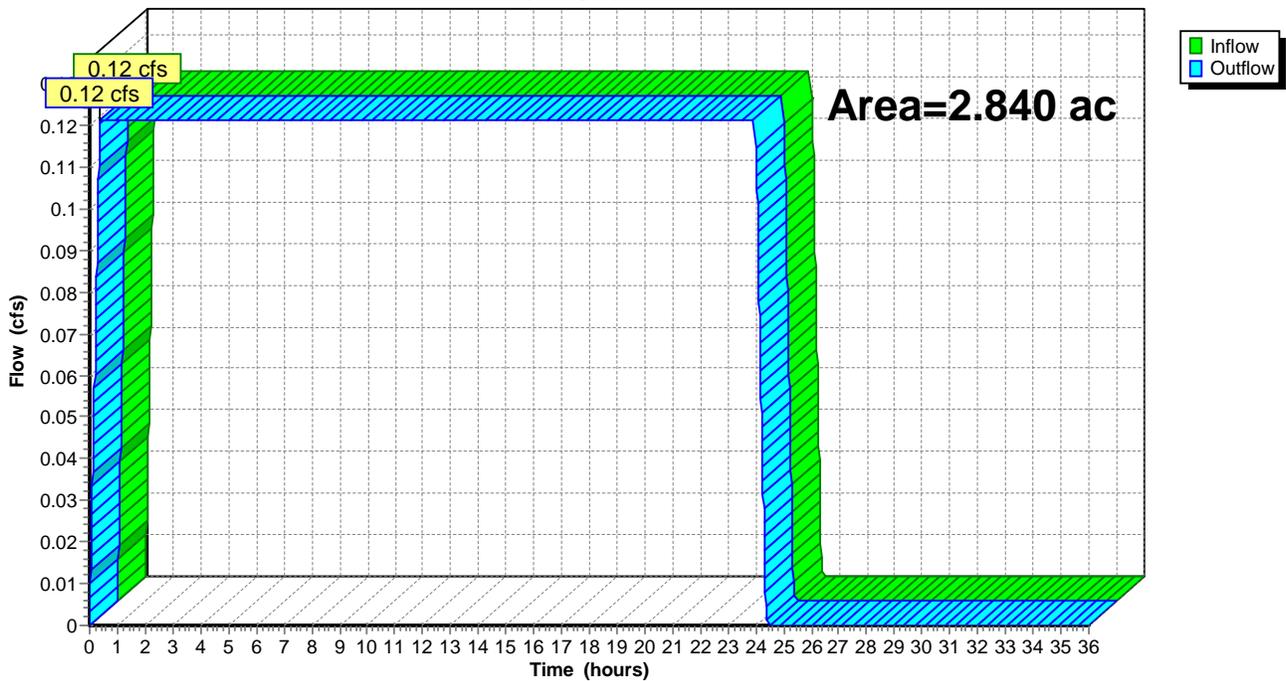
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 1.02" for 25-yr event
Inflow = 0.12 cfs @ 0.37 hrs, Volume= 0.241 af
Outflow = 0.12 cfs @ 0.37 hrs, Volume= 0.241 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

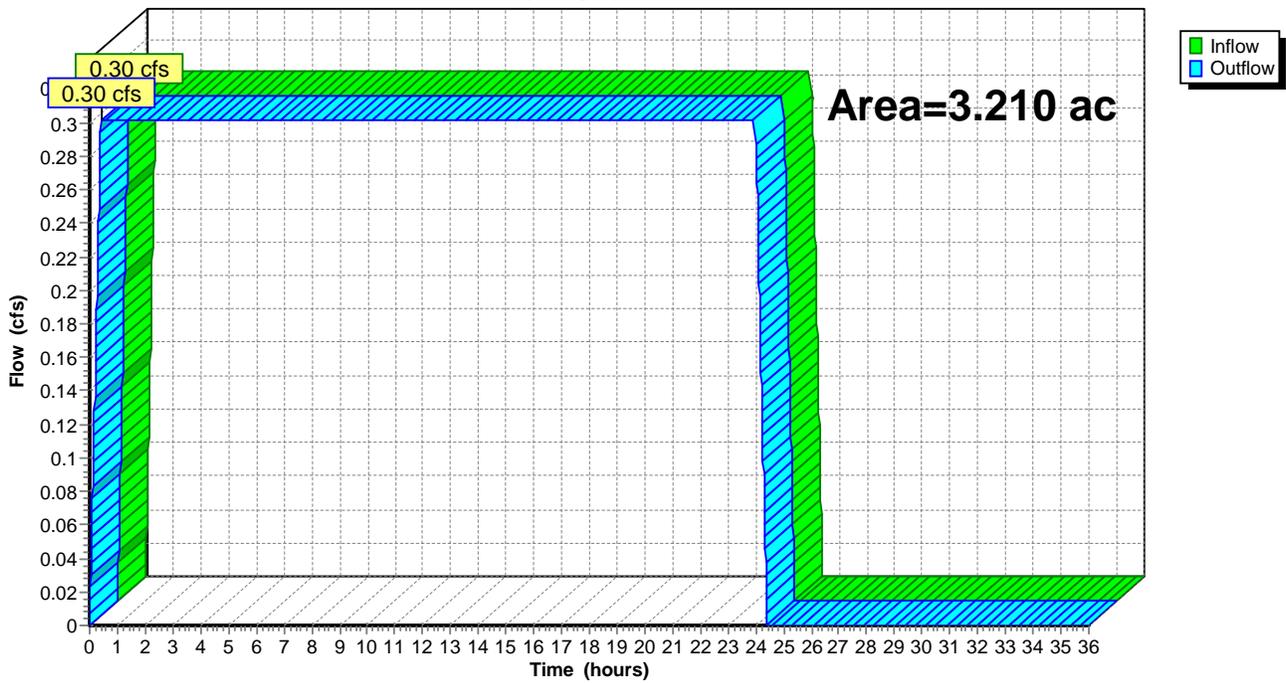
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.210 ac, 45.32% Impervious, Inflow Depth = 2.24" for 25-yr event
Inflow = 0.30 cfs @ 0.40 hrs, Volume= 0.599 af
Outflow = 0.30 cfs @ 0.40 hrs, Volume= 0.599 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

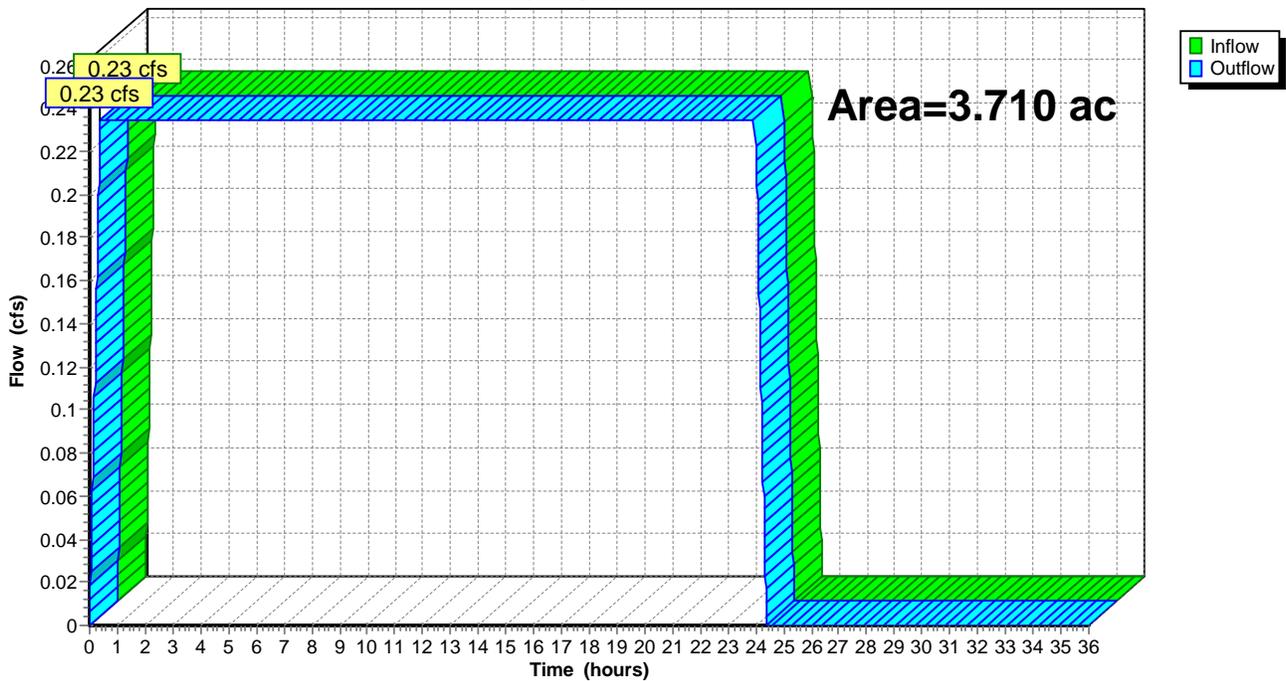
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.710 ac, 21.73% Impervious, Inflow Depth = 1.51" for 25-yr event
Inflow = 0.23 cfs @ 0.38 hrs, Volume= 0.466 af
Outflow = 0.23 cfs @ 0.38 hrs, Volume= 0.466 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



2013-166.002 Existing

Jefferson County SE 50-yr Duration=1,440 min, Inten=0.20 in/hr

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: EX DA 1

Runoff Area=123,710 sf 0.00% Impervious Runoff Depth=1.19"
Flow Length=435' Tc=21.8 min C=0.25 Runoff=0.14 cfs 0.281 af

Subcatchment 2: EX DA 2

Runoff Area=139,828 sf 45.32% Impervious Runoff Depth=2.61"
Flow Length=653' Tc=24.0 min C=0.55 Runoff=0.35 cfs 0.699 af

Subcatchment 3: EX DA 3

Runoff Area=161,608 sf 21.73% Impervious Runoff Depth=1.76"
Flow Length=391' Tc=22.6 min C=0.37 Runoff=0.27 cfs 0.543 af

Reach DP1: Northern Discharge Point

Inflow=0.14 cfs 0.281 af
Outflow=0.14 cfs 0.281 af

Reach DP2: Eastern Discharge Point

Inflow=0.35 cfs 0.699 af
Outflow=0.35 cfs 0.699 af

Reach DP3: Western Discharge Point

Inflow=0.27 cfs 0.543 af
Outflow=0.27 cfs 0.543 af

Total Runoff Area = 9.760 ac Runoff Volume = 1.523 af Average Runoff Depth = 1.87"
76.83% Pervious = 7.499 ac 23.17% Impervious = 2.261 ac

Summary for Subcatchment 1: EX DA 1

Runoff = 0.14 cfs @ 0.37 hrs, Volume= 0.281 af, Depth= 1.19"

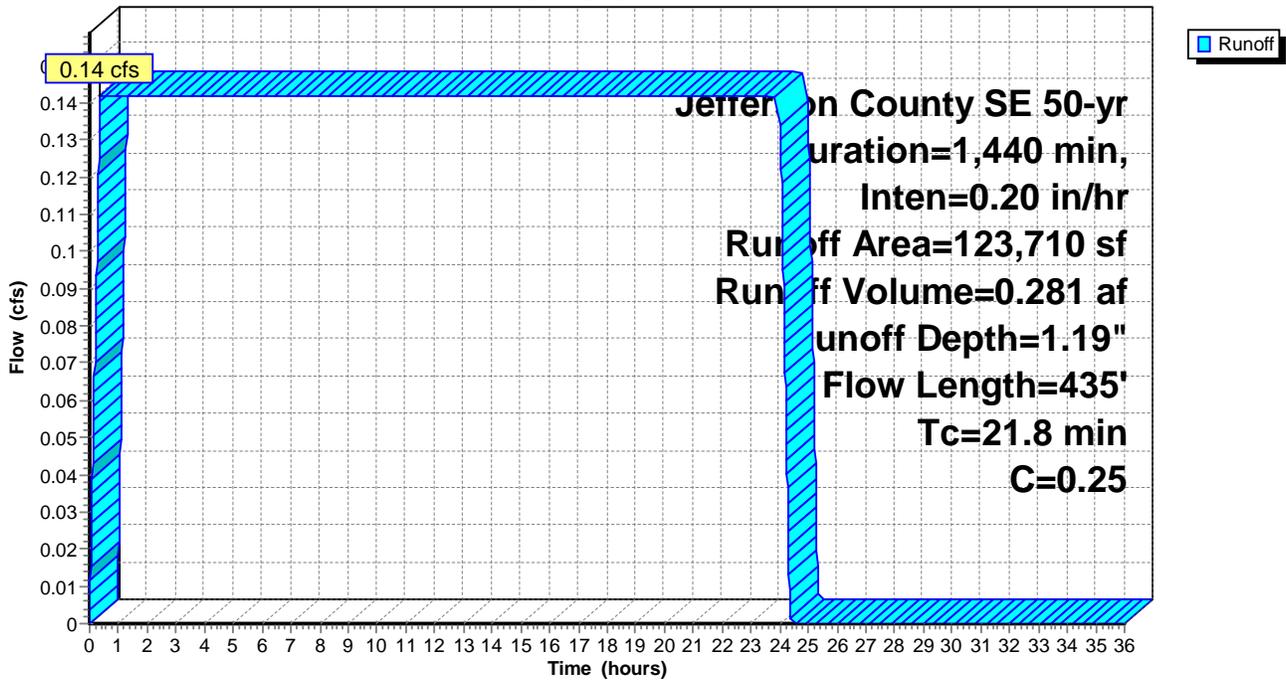
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 50-yr Duration=1,440 min, Inten=0.20 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
6.8	335	0.0272	0.82		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
21.8	435	Total			

Subcatchment 1: EX DA 1

Hydrograph



Summary for Subcatchment 2: EX DA 2

Runoff = 0.35 cfs @ 0.40 hrs, Volume= 0.699 af, Depth= 2.61"

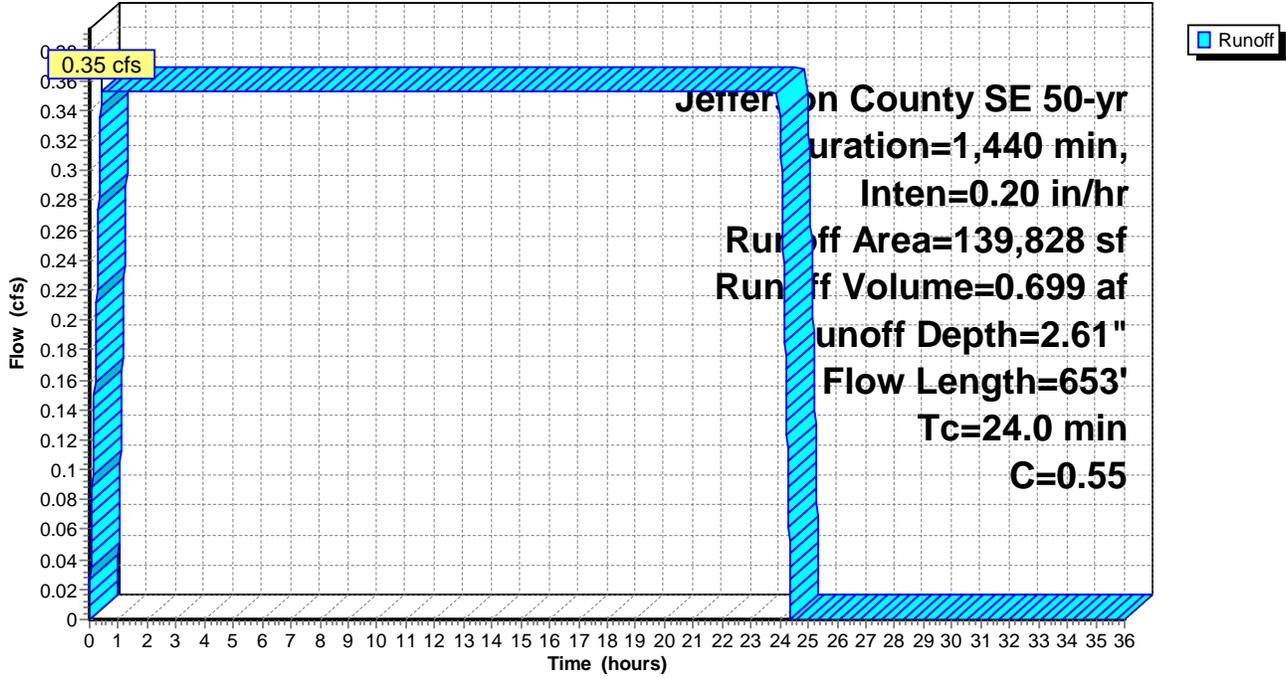
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 50-yr Duration=1,440 min, Inten=0.20 in/hr

Area (sf)	C	Description
63,366	0.96	Pavement and Roof "D"
7,803	0.25	Woods, Fair, "D"
68,659	0.20	Lawn Area "D"
139,828	0.55	Weighted Average
76,462		54.68% Pervious Area
63,366		45.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0155	0.09		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.4	23	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	33	0.2030	2.25		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
24.0	653	Total			

Subcatchment 2: EX DA 2

Hydrograph



Summary for Subcatchment 3: EX DA 3

Runoff = 0.27 cfs @ 0.38 hrs, Volume= 0.543 af, Depth= 1.76"

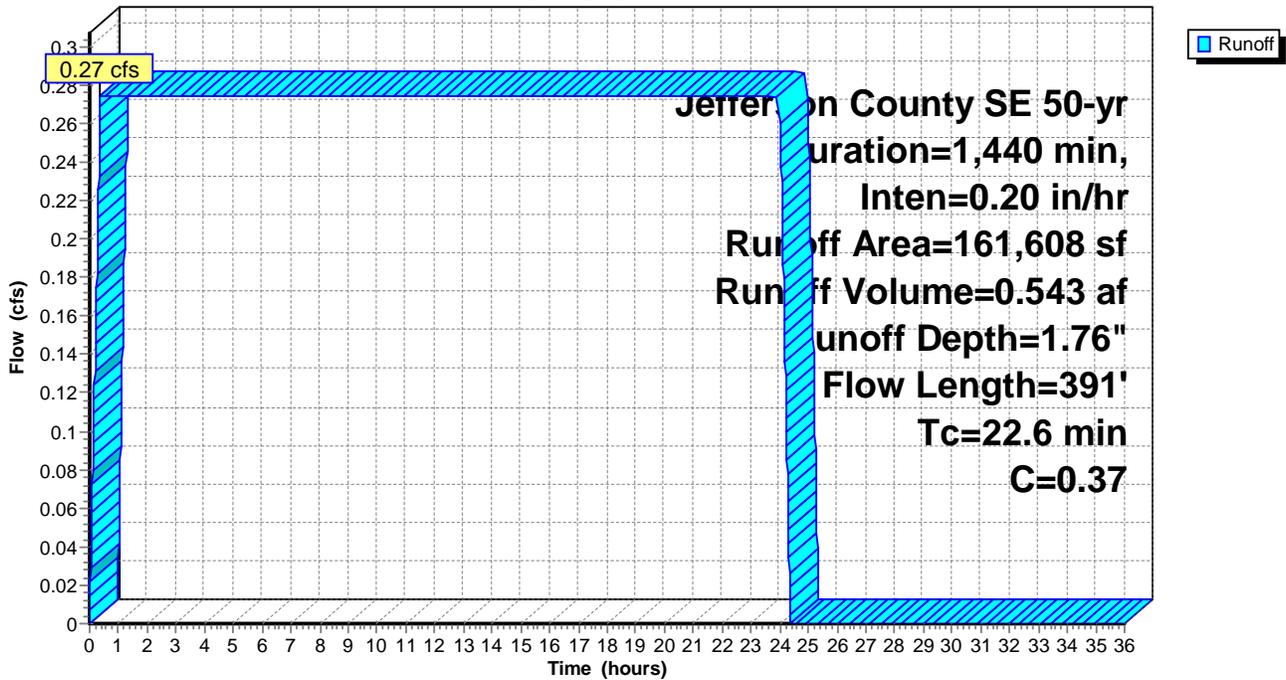
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 50-yr Duration=1,440 min, Inten=0.20 in/hr

Area (sf)	C	Description
35,121	0.96	Pavement and Roof "D"
126,487	0.20	Lawn Area "D"
161,608	0.37	Weighted Average
126,487		78.27% Pervious Area
35,121		21.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	100	0.0172	0.10		Sheet Flow, Sheet Flow - Lawn Area
5.5	291	0.0160	0.89		Grass: Dense n= 0.240 P2= 2.50"
					Shallow Concentrated Flow, Shallow Concentrated
					Short Grass Pasture Kv= 7.0 fps
22.6	391	Total			

Subcatchment 3: EX DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

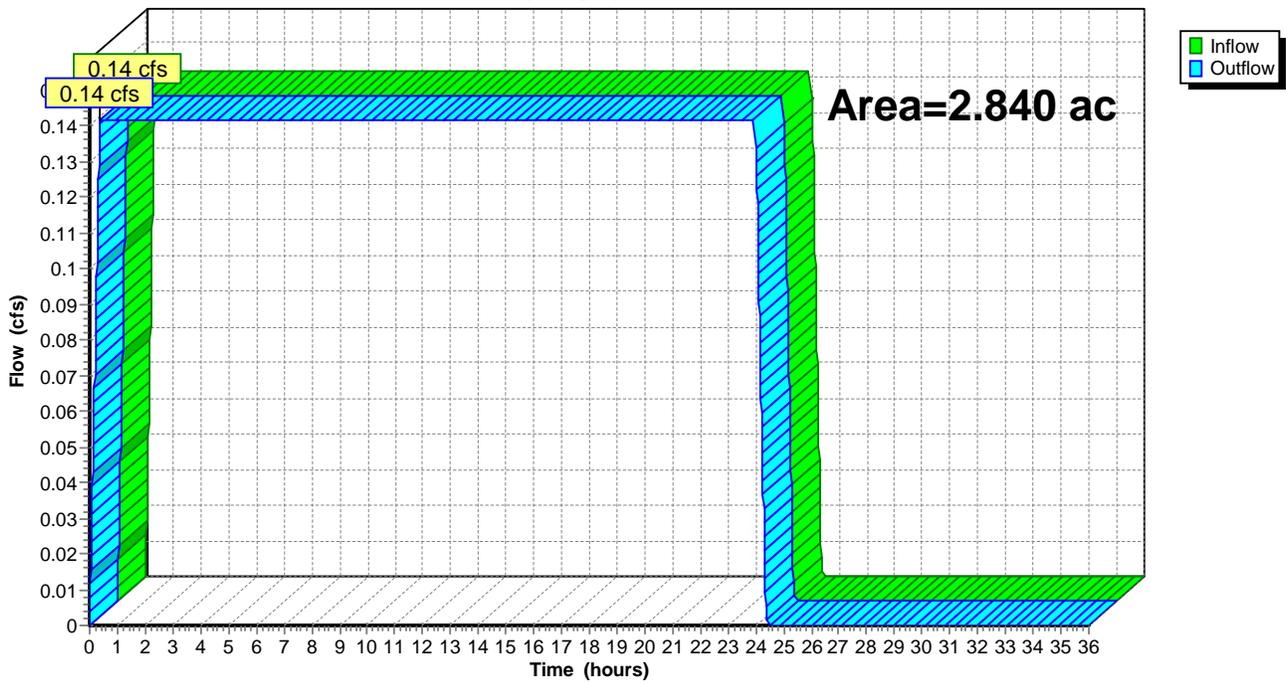
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 1.19" for 50-yr event
Inflow = 0.14 cfs @ 0.37 hrs, Volume= 0.281 af
Outflow = 0.14 cfs @ 0.37 hrs, Volume= 0.281 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

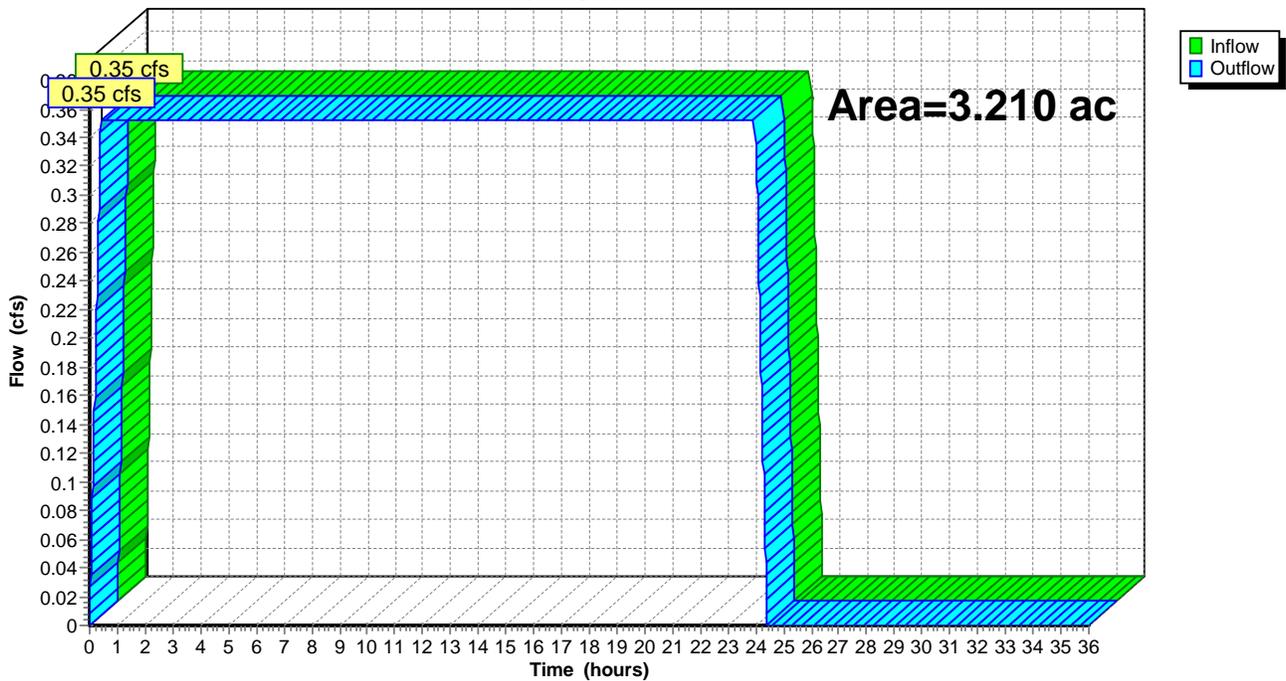
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.210 ac, 45.32% Impervious, Inflow Depth = 2.61" for 50-yr event
Inflow = 0.35 cfs @ 0.40 hrs, Volume= 0.699 af
Outflow = 0.35 cfs @ 0.40 hrs, Volume= 0.699 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

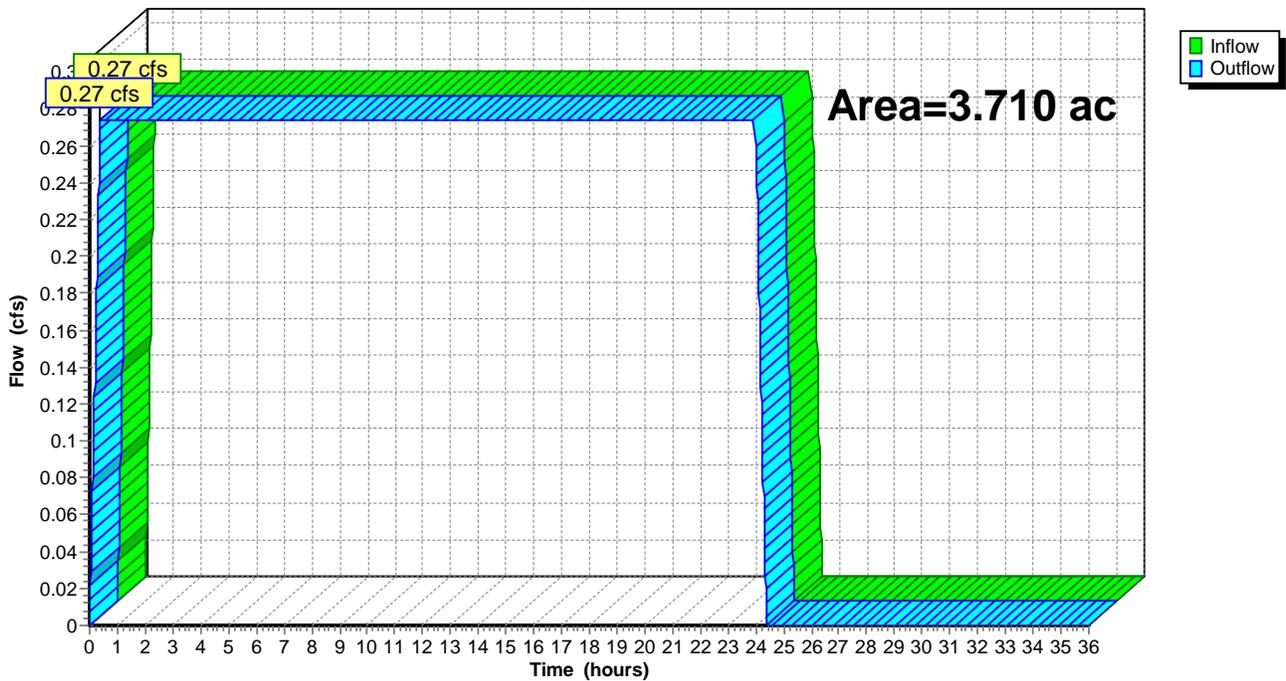
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.710 ac, 21.73% Impervious, Inflow Depth = 1.76" for 50-yr event
Inflow = 0.27 cfs @ 0.38 hrs, Volume= 0.543 af
Outflow = 0.27 cfs @ 0.38 hrs, Volume= 0.543 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



2013-166.002 Existing

Jefferson County SE 100-yr Duration=1,440 min, Inten=0.23 in/hr

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: EX DA 1

Runoff Area=123,710 sf 0.00% Impervious Runoff Depth=1.39"
Flow Length=435' Tc=21.8 min C=0.25 Runoff=0.17 cfs 0.328 af

Subcatchment 2: EX DA 2

Runoff Area=139,828 sf 45.32% Impervious Runoff Depth=3.05"
Flow Length=653' Tc=24.0 min C=0.55 Runoff=0.41 cfs 0.815 af

Subcatchment 3: EX DA 3

Runoff Area=161,608 sf 21.73% Impervious Runoff Depth=2.05"
Flow Length=391' Tc=22.6 min C=0.37 Runoff=0.32 cfs 0.634 af

Reach DP1: Northern Discharge Point

Inflow=0.17 cfs 0.328 af
Outflow=0.17 cfs 0.328 af

Reach DP2: Eastern Discharge Point

Inflow=0.41 cfs 0.815 af
Outflow=0.41 cfs 0.815 af

Reach DP3: Western Discharge Point

Inflow=0.32 cfs 0.634 af
Outflow=0.32 cfs 0.634 af

Total Runoff Area = 9.760 ac Runoff Volume = 1.777 af Average Runoff Depth = 2.18"
76.83% Pervious = 7.499 ac 23.17% Impervious = 2.261 ac

Summary for Subcatchment 1: EX DA 1

Runoff = 0.17 cfs @ 0.37 hrs, Volume= 0.328 af, Depth= 1.39"

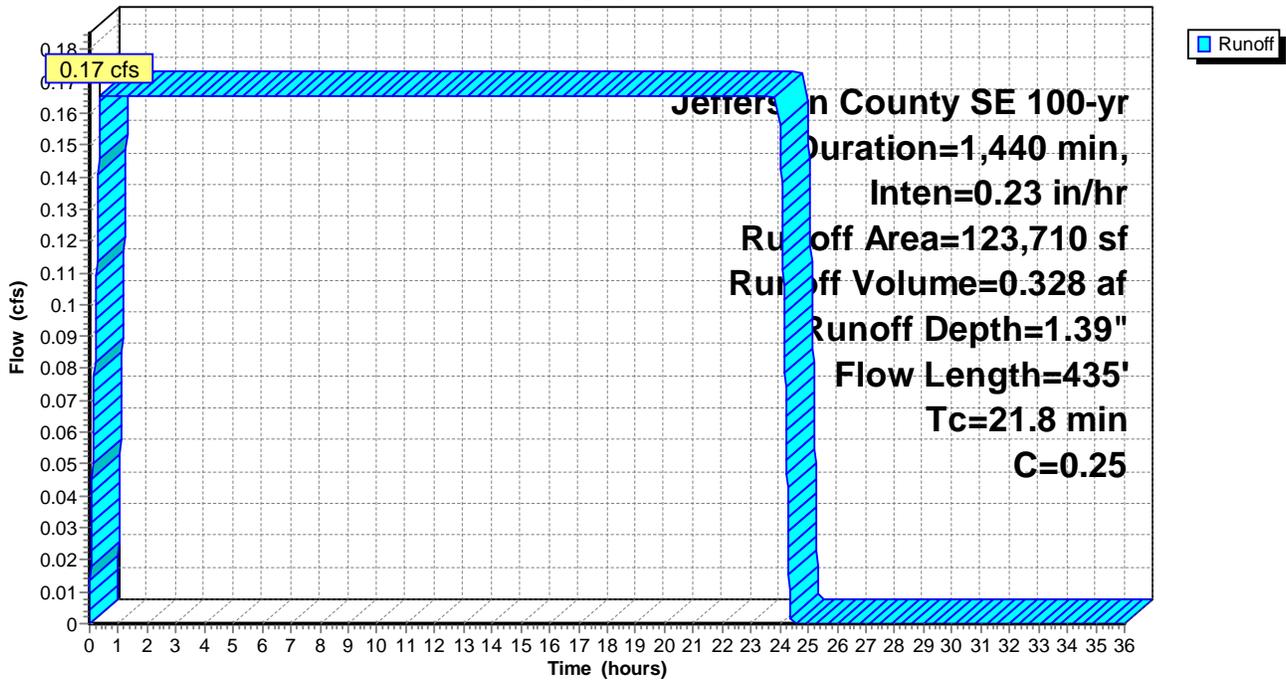
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 100-yr Duration=1,440 min, Inten=0.23 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area
					Grass: Dense n= 0.240 P2= 2.50"
6.8	335	0.0272	0.82		Shallow Concentrated Flow, Shallow - Wooded Area
					Woodland Kv= 5.0 fps
21.8	435	Total			

Subcatchment 1: EX DA 1

Hydrograph



Summary for Subcatchment 2: EX DA 2

Runoff = 0.41 cfs @ 0.40 hrs, Volume= 0.815 af, Depth= 3.05"

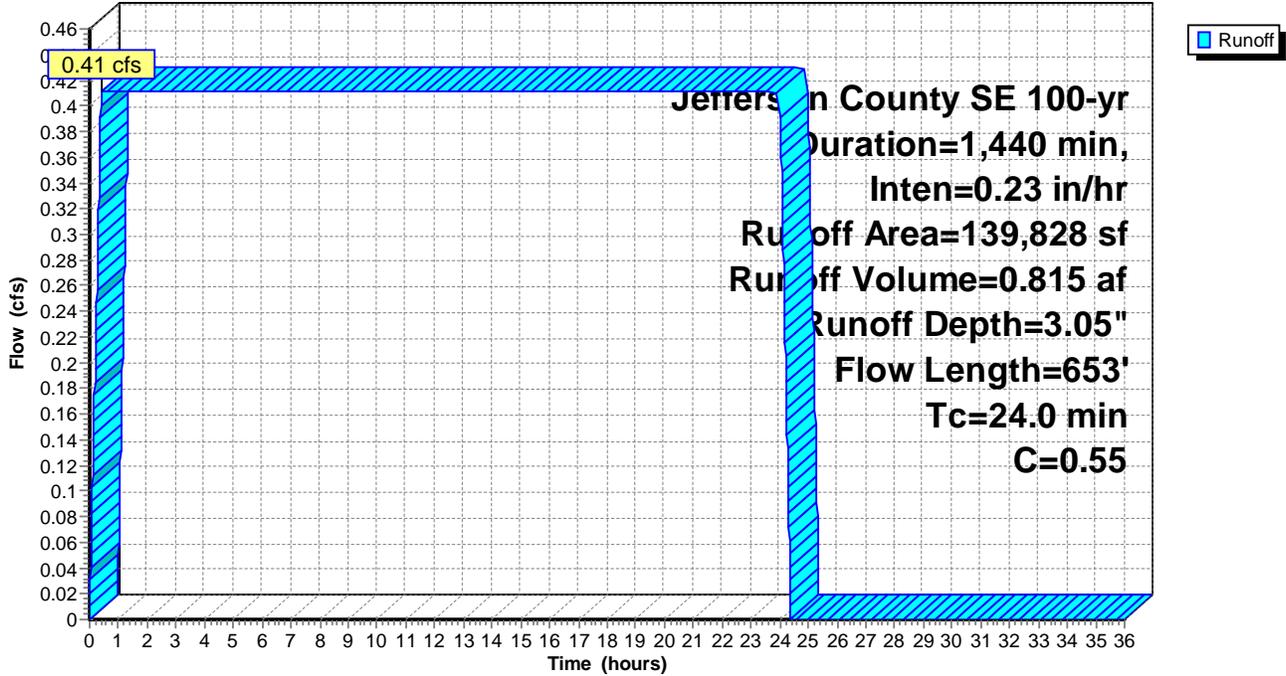
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 100-yr Duration=1,440 min, Inten=0.23 in/hr

Area (sf)	C	Description
63,366	0.96	Pavement and Roof "D"
7,803	0.25	Woods, Fair, "D"
68,659	0.20	Lawn Area "D"
139,828	0.55	Weighted Average
76,462		54.68% Pervious Area
63,366		45.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0155	0.09		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.4	23	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	33	0.2030	2.25		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
24.0	653	Total			

Subcatchment 2: EX DA 2

Hydrograph



Summary for Subcatchment 3: EX DA 3

Runoff = 0.32 cfs @ 0.38 hrs, Volume= 0.634 af, Depth= 2.05"

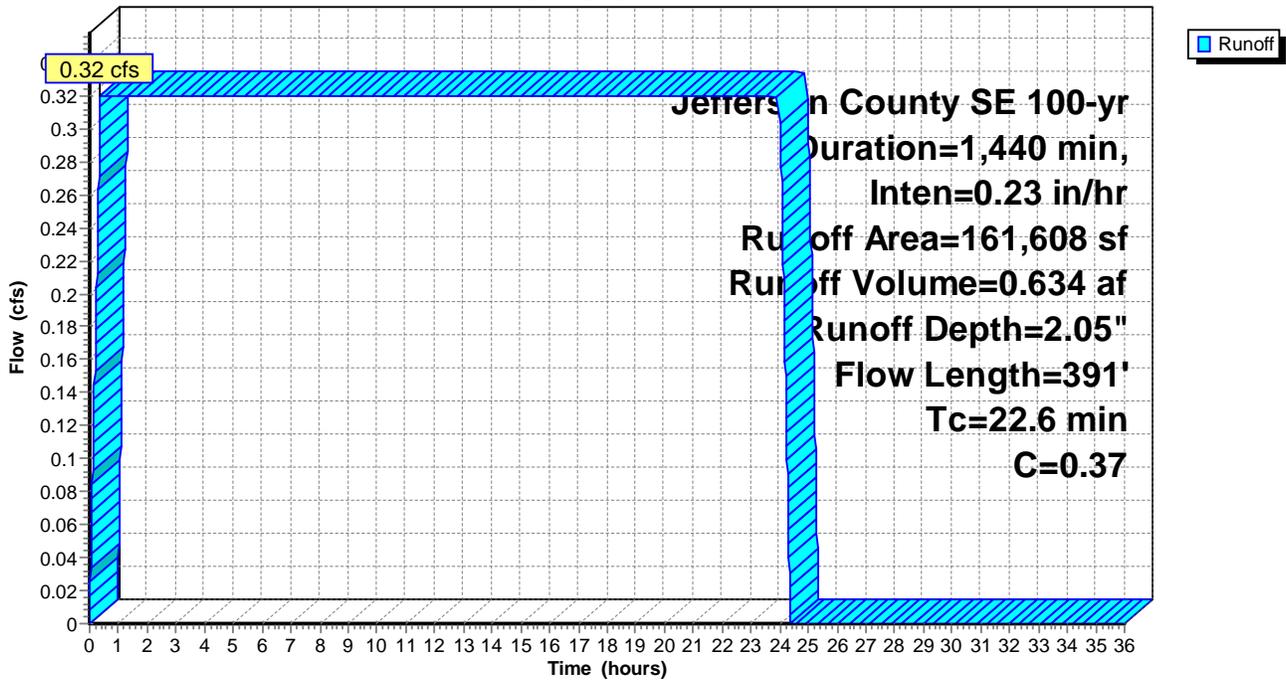
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 100-yr Duration=1,440 min, Inten=0.23 in/hr

Area (sf)	C	Description
35,121	0.96	Pavement and Roof "D"
126,487	0.20	Lawn Area "D"
161,608	0.37	Weighted Average
126,487		78.27% Pervious Area
35,121		21.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	100	0.0172	0.10		Sheet Flow, Sheet Flow - Lawn Area
5.5	291	0.0160	0.89		Shallow Concentrated Flow, Shallow Concentrated
					Short Grass Pasture Kv= 7.0 fps
22.6	391	Total			

Subcatchment 3: EX DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

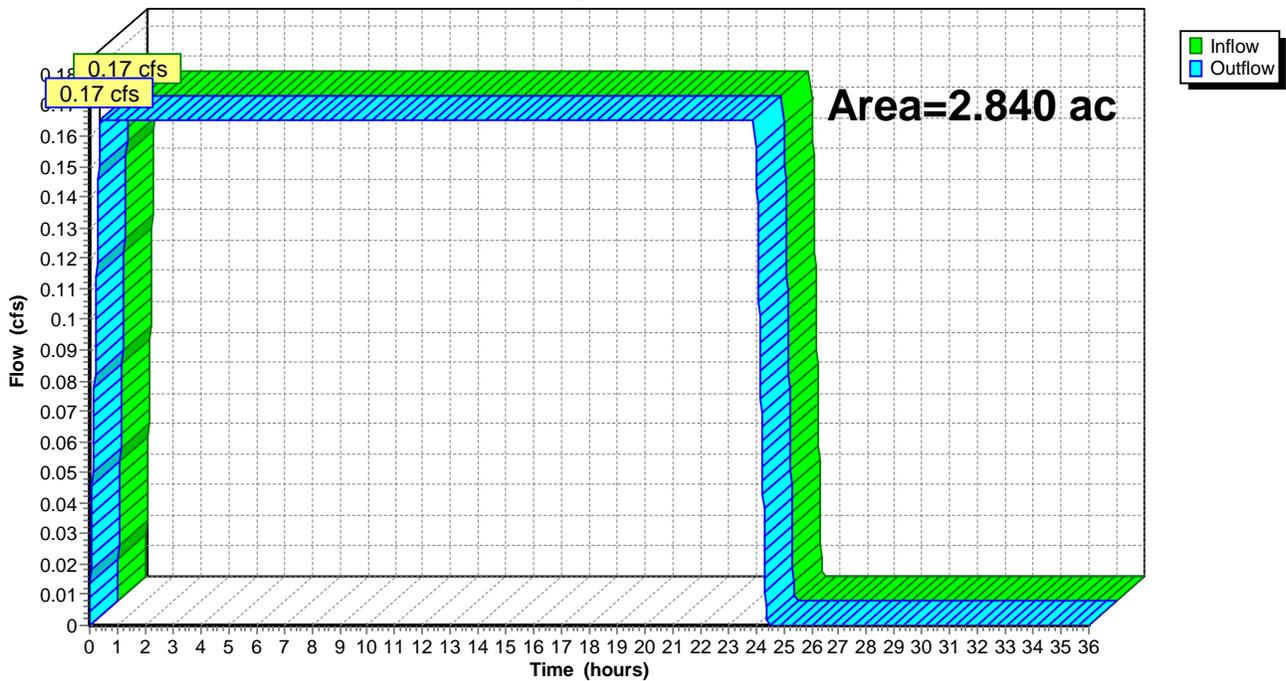
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 1.39" for 100-yr event
Inflow = 0.17 cfs @ 0.37 hrs, Volume= 0.328 af
Outflow = 0.17 cfs @ 0.37 hrs, Volume= 0.328 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

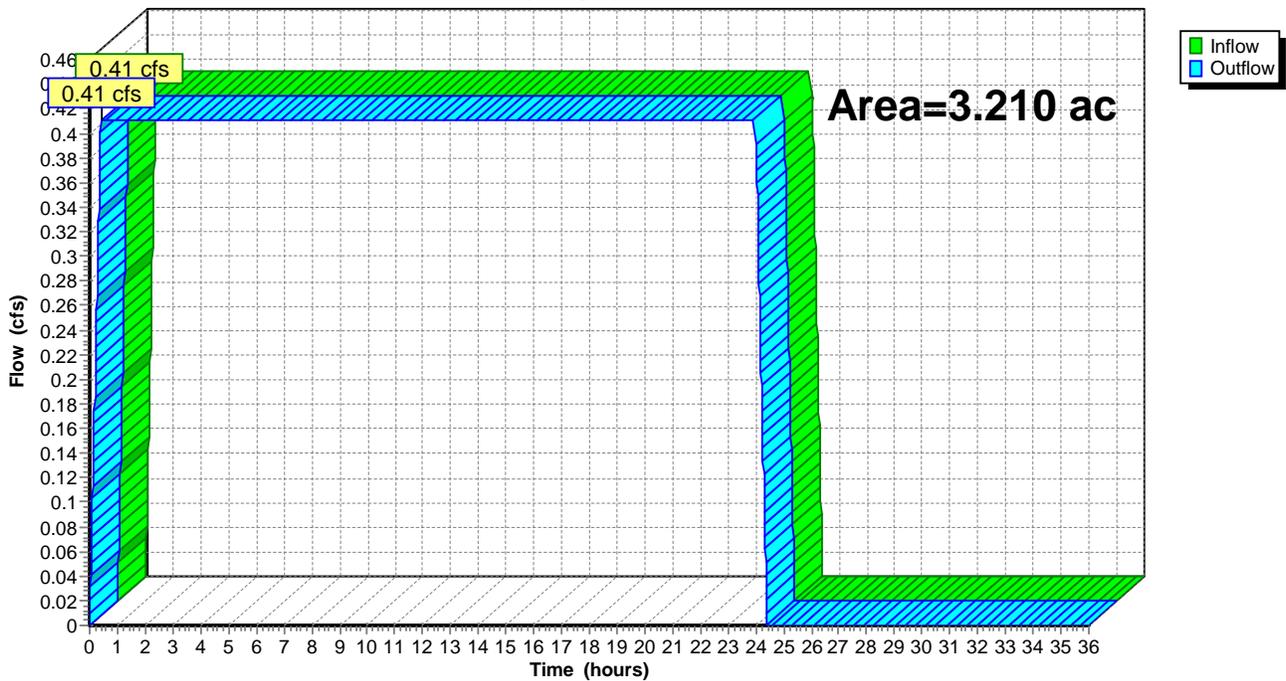
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.210 ac, 45.32% Impervious, Inflow Depth = 3.05" for 100-yr event
Inflow = 0.41 cfs @ 0.40 hrs, Volume= 0.815 af
Outflow = 0.41 cfs @ 0.40 hrs, Volume= 0.815 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

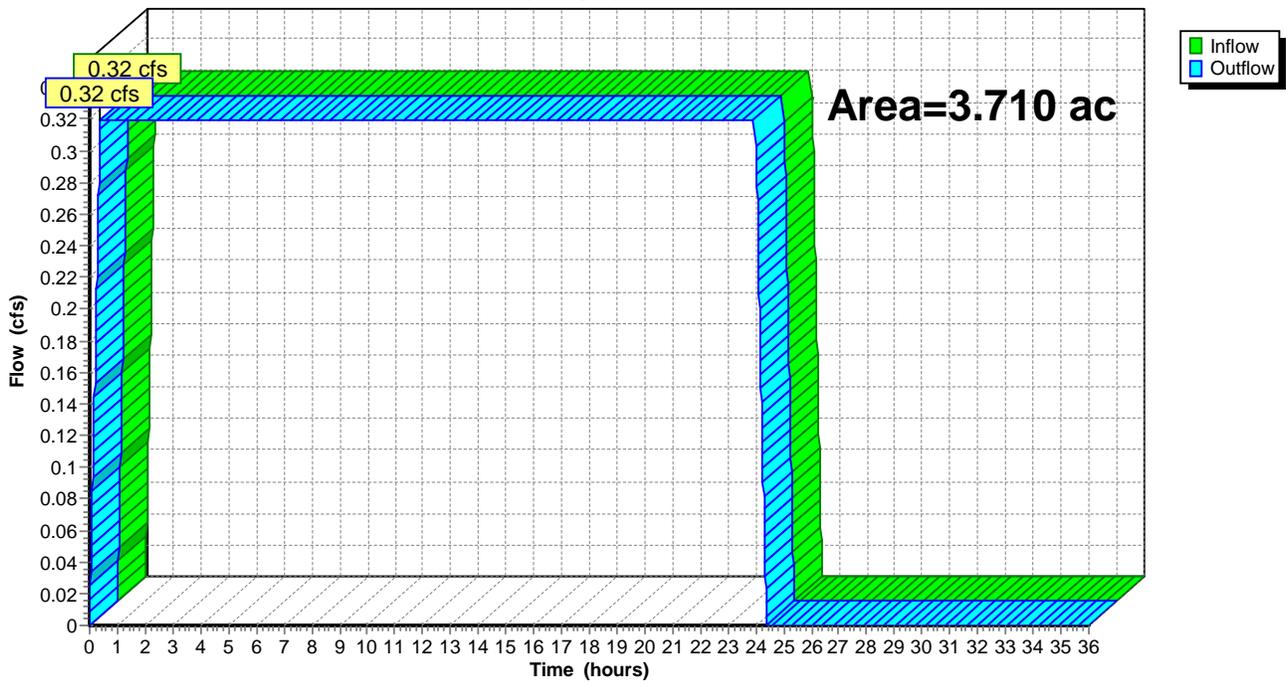
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.710 ac, 21.73% Impervious, Inflow Depth = 2.05" for 100-yr event
Inflow = 0.32 cfs @ 0.38 hrs, Volume= 0.634 af
Outflow = 0.32 cfs @ 0.38 hrs, Volume= 0.634 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



2013-166.002 Existing

Jefferson County SE 200-yr Duration=1,440 min, Inten=0.27 in/hr

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: EX DA 1

Runoff Area=123,710 sf 0.00% Impervious Runoff Depth=1.63"
Flow Length=435' Tc=21.8 min C=0.25 Runoff=0.19 cfs 0.385 af

Subcatchment 2: EX DA 2

Runoff Area=139,828 sf 45.32% Impervious Runoff Depth=3.58"
Flow Length=653' Tc=24.0 min C=0.55 Runoff=0.48 cfs 0.956 af

Subcatchment 3: EX DA 3

Runoff Area=161,608 sf 21.73% Impervious Runoff Depth=2.40"
Flow Length=391' Tc=22.6 min C=0.37 Runoff=0.37 cfs 0.744 af

Reach DP1: Northern Discharge Point

Inflow=0.19 cfs 0.385 af
Outflow=0.19 cfs 0.385 af

Reach DP2: Eastern Discharge Point

Inflow=0.48 cfs 0.956 af
Outflow=0.48 cfs 0.956 af

Reach DP3: Western Discharge Point

Inflow=0.37 cfs 0.744 af
Outflow=0.37 cfs 0.744 af

Total Runoff Area = 9.760 ac Runoff Volume = 2.084 af Average Runoff Depth = 2.56"
76.83% Pervious = 7.499 ac 23.17% Impervious = 2.261 ac

Summary for Subcatchment 1: EX DA 1

Runoff = 0.19 cfs @ 0.37 hrs, Volume= 0.385 af, Depth= 1.63"

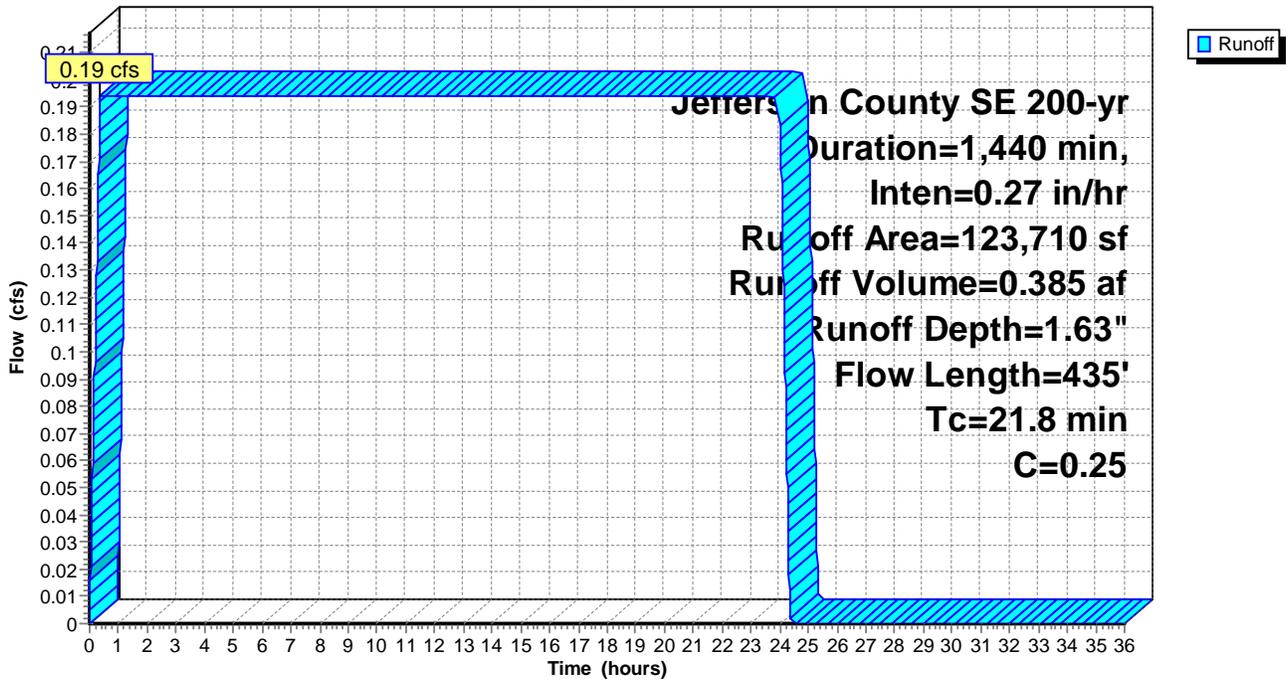
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 200-yr Duration=1,440 min, Inten=0.27 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area
					Grass: Dense n= 0.240 P2= 2.50"
6.8	335	0.0272	0.82		Shallow Concentrated Flow, Shallow - Wooded Area
					Woodland Kv= 5.0 fps
21.8	435	Total			

Subcatchment 1: EX DA 1

Hydrograph



Summary for Subcatchment 2: EX DA 2

Runoff = 0.48 cfs @ 0.40 hrs, Volume= 0.956 af, Depth= 3.58"

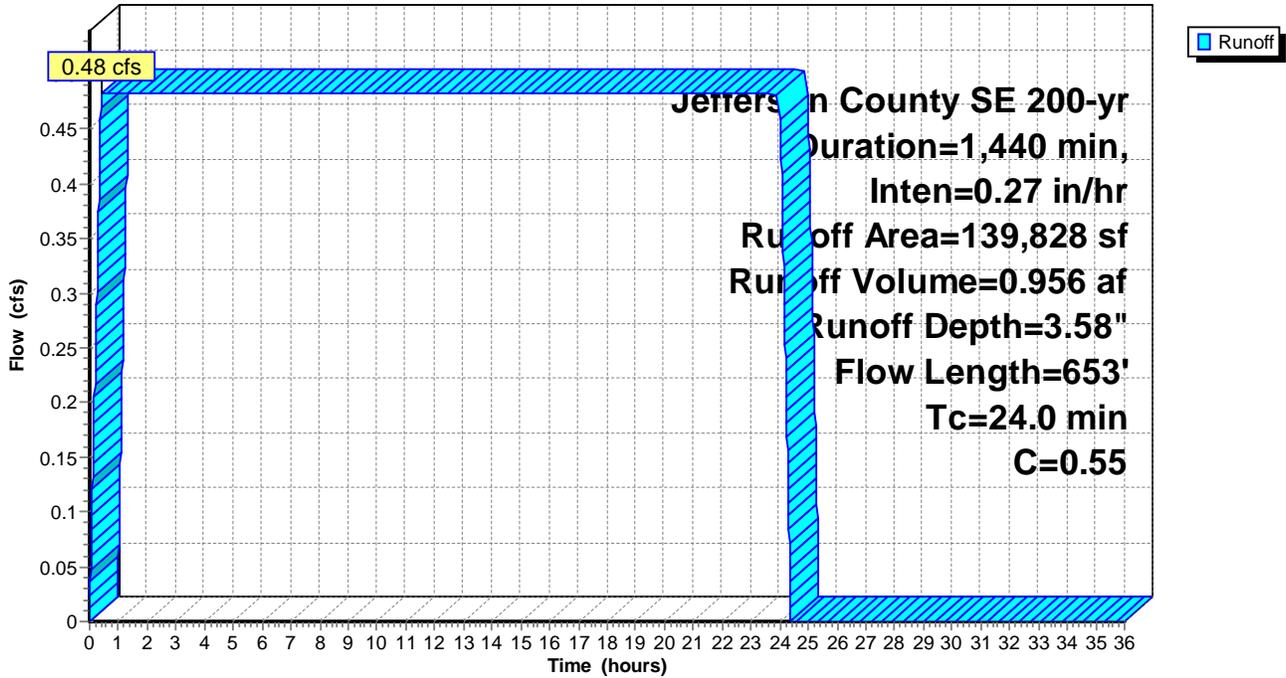
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 200-yr Duration=1,440 min, Inten=0.27 in/hr

Area (sf)	C	Description
63,366	0.96	Pavement and Roof "D"
7,803	0.25	Woods, Fair, "D"
68,659	0.20	Lawn Area "D"
139,828	0.55	Weighted Average
76,462		54.68% Pervious Area
63,366		45.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0155	0.09		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.4	23	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	33	0.2030	2.25		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
24.0	653	Total			

Subcatchment 2: EX DA 2

Hydrograph



Summary for Subcatchment 3: EX DA 3

Runoff = 0.37 cfs @ 0.38 hrs, Volume= 0.744 af, Depth= 2.40"

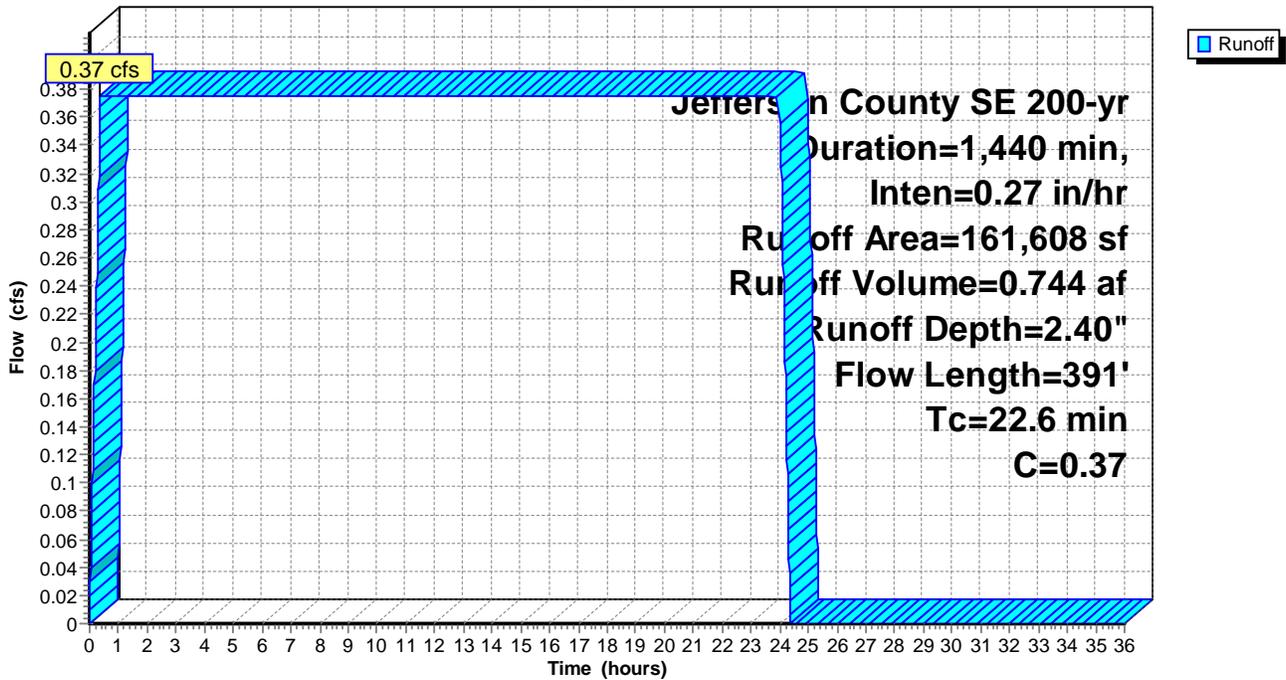
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 200-yr Duration=1,440 min, Inten=0.27 in/hr

Area (sf)	C	Description
35,121	0.96	Pavement and Roof "D"
126,487	0.20	Lawn Area "D"
161,608	0.37	Weighted Average
126,487		78.27% Pervious Area
35,121		21.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	100	0.0172	0.10		Sheet Flow, Sheet Flow - Lawn Area
5.5	291	0.0160	0.89		Grass: Dense n= 0.240 P2= 2.50"
					Shallow Concentrated Flow, Shallow Concentrated
					Short Grass Pasture Kv= 7.0 fps
22.6	391	Total			

Subcatchment 3: EX DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

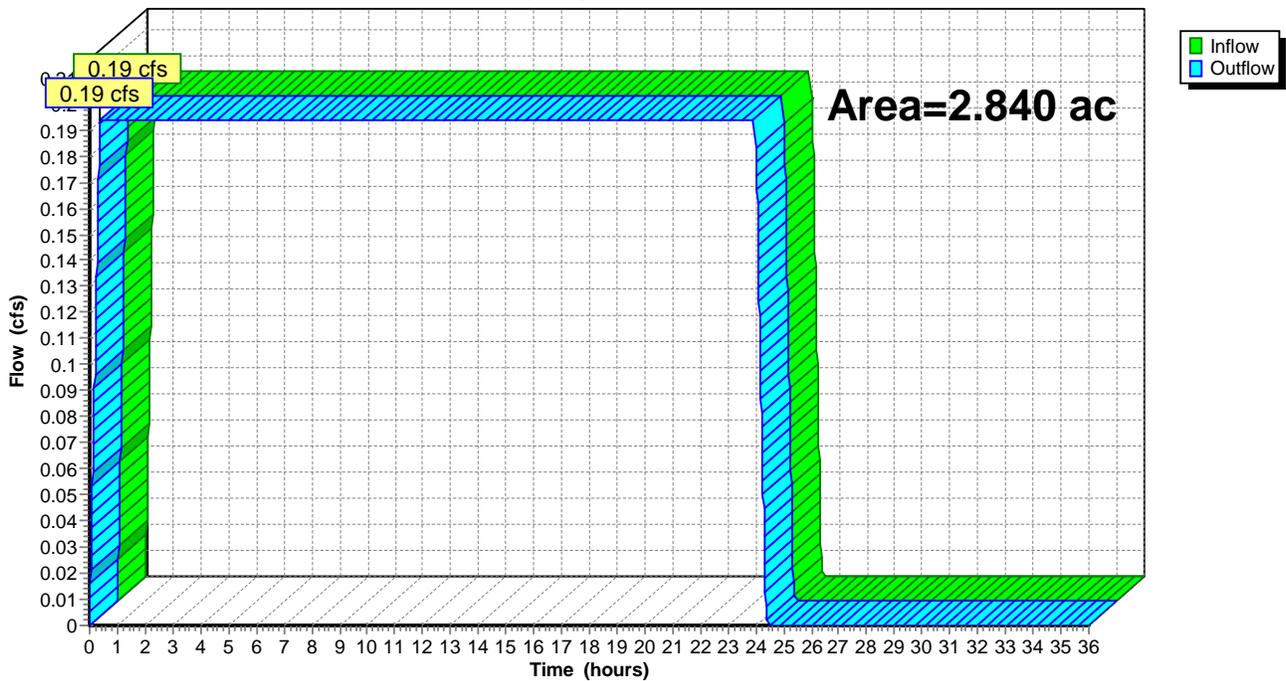
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 1.63" for 200-yr event
Inflow = 0.19 cfs @ 0.37 hrs, Volume= 0.385 af
Outflow = 0.19 cfs @ 0.37 hrs, Volume= 0.385 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

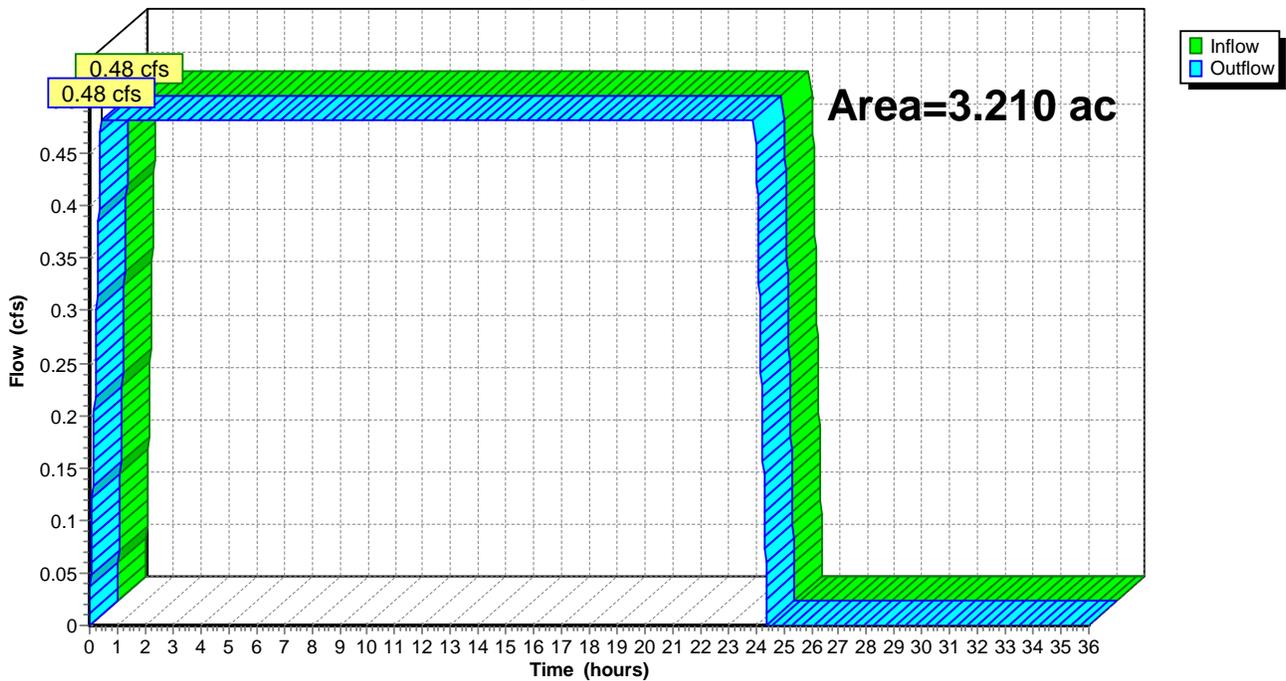
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.210 ac, 45.32% Impervious, Inflow Depth = 3.58" for 200-yr event
Inflow = 0.48 cfs @ 0.40 hrs, Volume= 0.956 af
Outflow = 0.48 cfs @ 0.40 hrs, Volume= 0.956 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

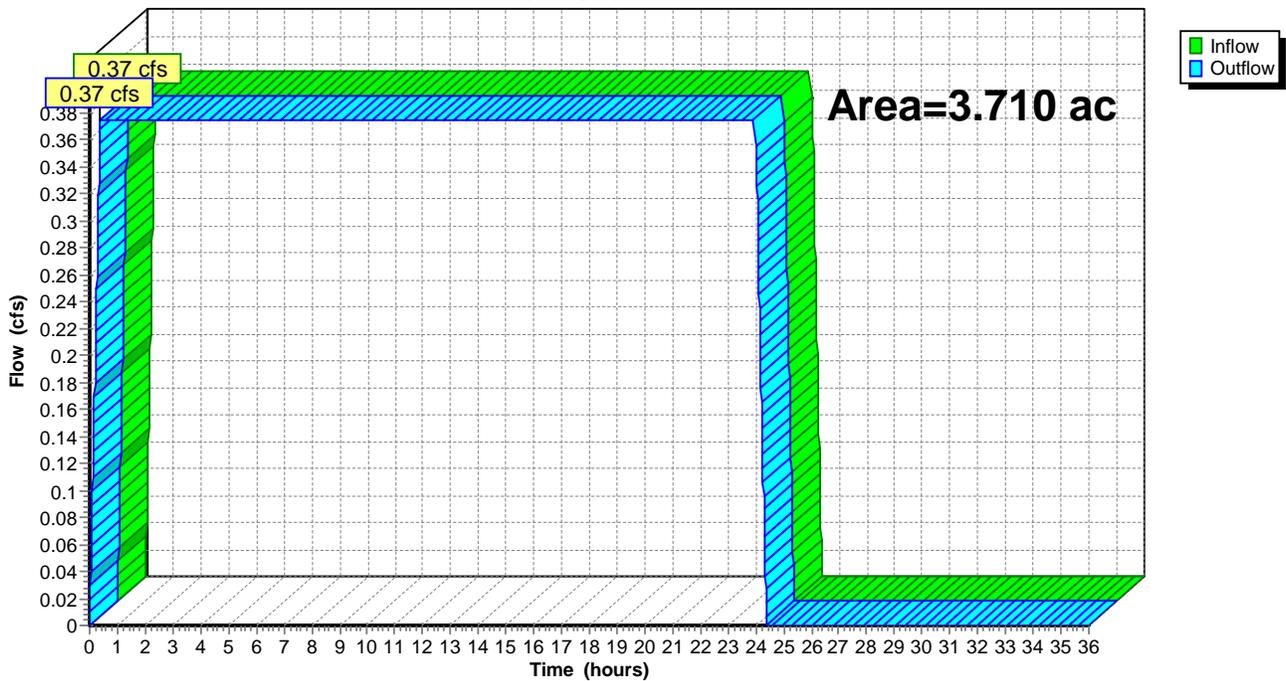
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.710 ac, 21.73% Impervious, Inflow Depth = 2.40" for 200-yr event
Inflow = 0.37 cfs @ 0.38 hrs, Volume= 0.744 af
Outflow = 0.37 cfs @ 0.38 hrs, Volume= 0.744 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



2013-166.002 Existing

Jefferson County SE 500-yr Duration=1,440 min, Inten=0.33 in/hr

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: EX DA 1

Runoff Area=123,710 sf 0.00% Impervious Runoff Depth=2.00"
Flow Length=435' Tc=21.8 min C=0.25 Runoff=0.24 cfs 0.473 af

Subcatchment 2: EX DA 2

Runoff Area=139,828 sf 45.32% Impervious Runoff Depth=4.39"
Flow Length=653' Tc=24.0 min C=0.55 Runoff=0.59 cfs 1.176 af

Subcatchment 3: EX DA 3

Runoff Area=161,608 sf 21.73% Impervious Runoff Depth=2.96"
Flow Length=391' Tc=22.6 min C=0.37 Runoff=0.46 cfs 0.914 af

Reach DP1: Northern Discharge Point

Inflow=0.24 cfs 0.473 af
Outflow=0.24 cfs 0.473 af

Reach DP2: Eastern Discharge Point

Inflow=0.59 cfs 1.176 af
Outflow=0.59 cfs 1.176 af

Reach DP3: Western Discharge Point

Inflow=0.46 cfs 0.914 af
Outflow=0.46 cfs 0.914 af

Total Runoff Area = 9.760 ac Runoff Volume = 2.562 af Average Runoff Depth = 3.15"
76.83% Pervious = 7.499 ac 23.17% Impervious = 2.261 ac

Summary for Subcatchment 1: EX DA 1

Runoff = 0.24 cfs @ 0.37 hrs, Volume= 0.473 af, Depth= 2.00"

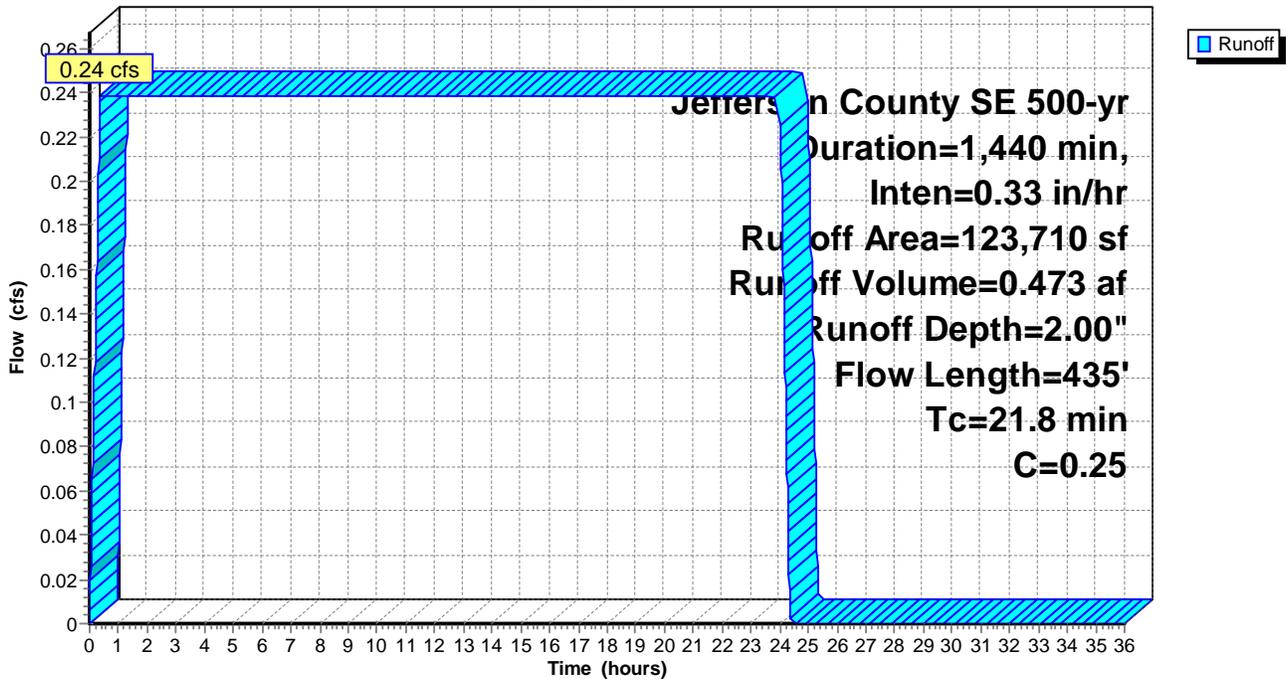
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 500-yr Duration=1,440 min, Inten=0.33 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area
					Grass: Dense n= 0.240 P2= 2.50"
6.8	335	0.0272	0.82		Shallow Concentrated Flow, Shallow - Wooded Area
					Woodland Kv= 5.0 fps
21.8	435	Total			

Subcatchment 1: EX DA 1

Hydrograph



Summary for Subcatchment 2: EX DA 2

Runoff = 0.59 cfs @ 0.40 hrs, Volume= 1.176 af, Depth= 4.39"

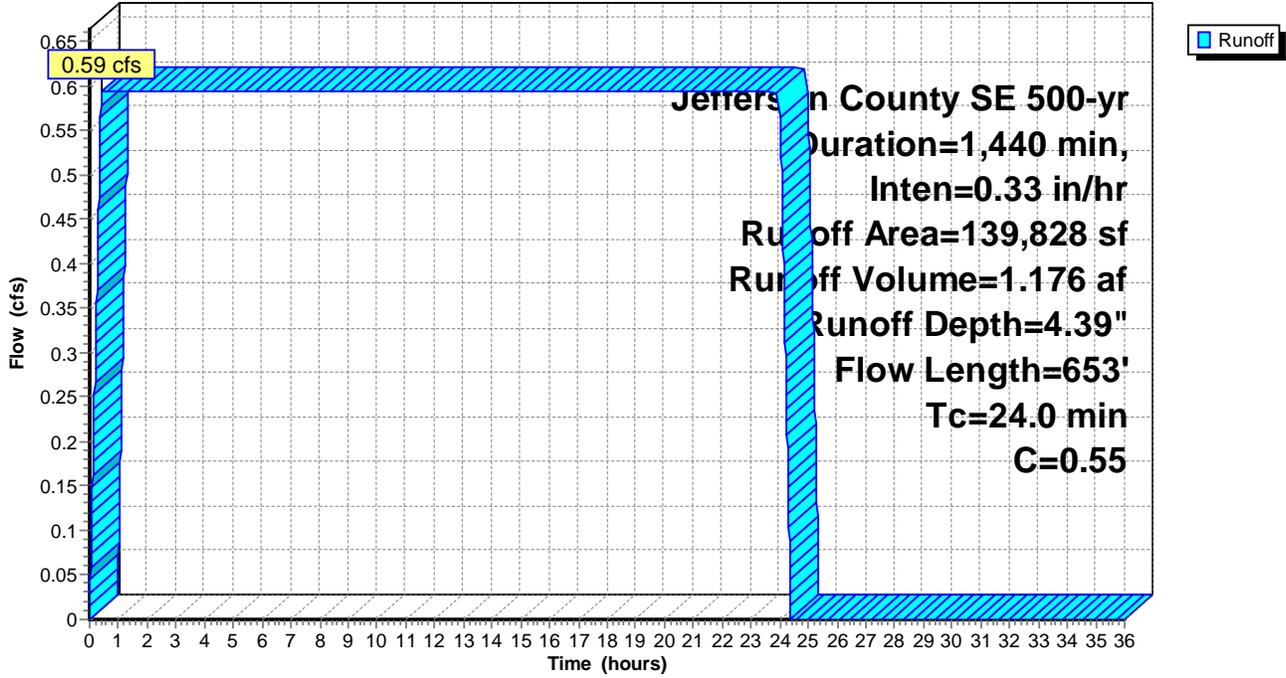
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 500-yr Duration=1,440 min, Inten=0.33 in/hr

Area (sf)	C	Description
63,366	0.96	Pavement and Roof "D"
7,803	0.25	Woods, Fair, "D"
68,659	0.20	Lawn Area "D"
139,828	0.55	Weighted Average
76,462		54.68% Pervious Area
63,366		45.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0155	0.09		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.4	23	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	33	0.2030	2.25		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
24.0	653	Total			

Subcatchment 2: EX DA 2

Hydrograph



Summary for Subcatchment 3: EX DA 3

Runoff = 0.46 cfs @ 0.38 hrs, Volume= 0.914 af, Depth= 2.96"

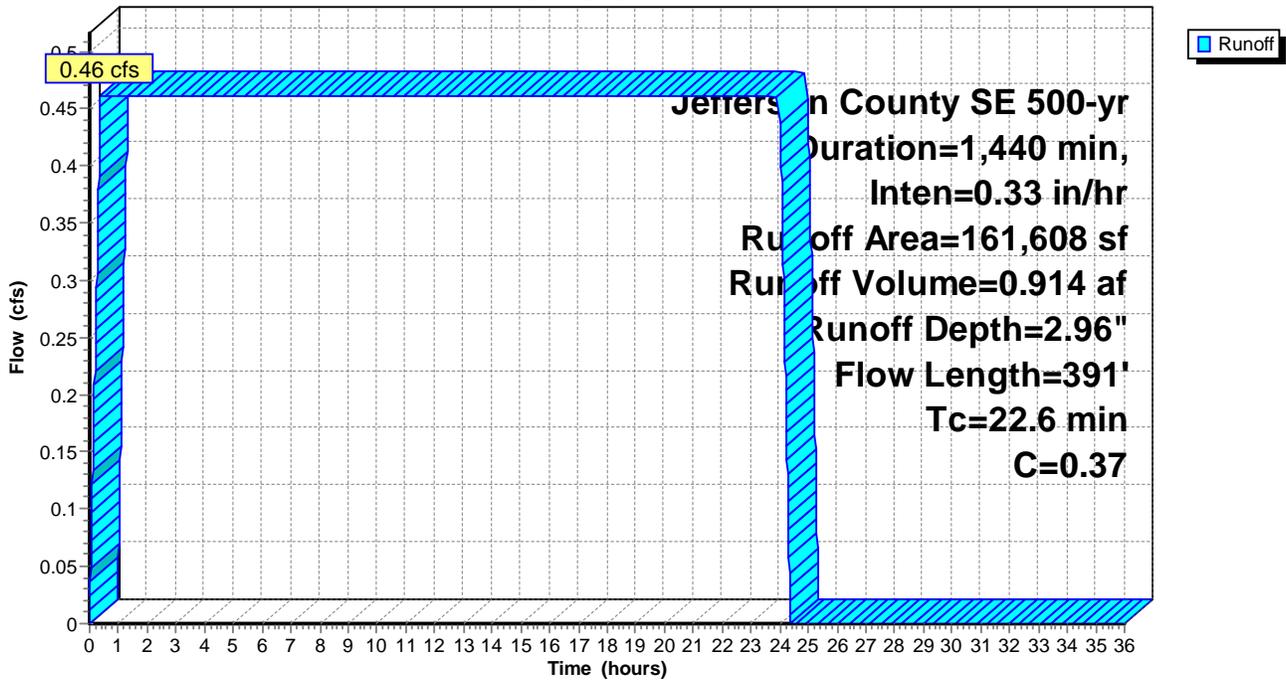
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 500-yr Duration=1,440 min, Inten=0.33 in/hr

Area (sf)	C	Description
35,121	0.96	Pavement and Roof "D"
126,487	0.20	Lawn Area "D"
161,608	0.37	Weighted Average
126,487		78.27% Pervious Area
35,121		21.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	100	0.0172	0.10		Sheet Flow, Sheet Flow - Lawn Area
					Grass: Dense n= 0.240 P2= 2.50"
5.5	291	0.0160	0.89		Shallow Concentrated Flow, Shallow Concentrated
					Short Grass Pasture Kv= 7.0 fps
22.6	391	Total			

Subcatchment 3: EX DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

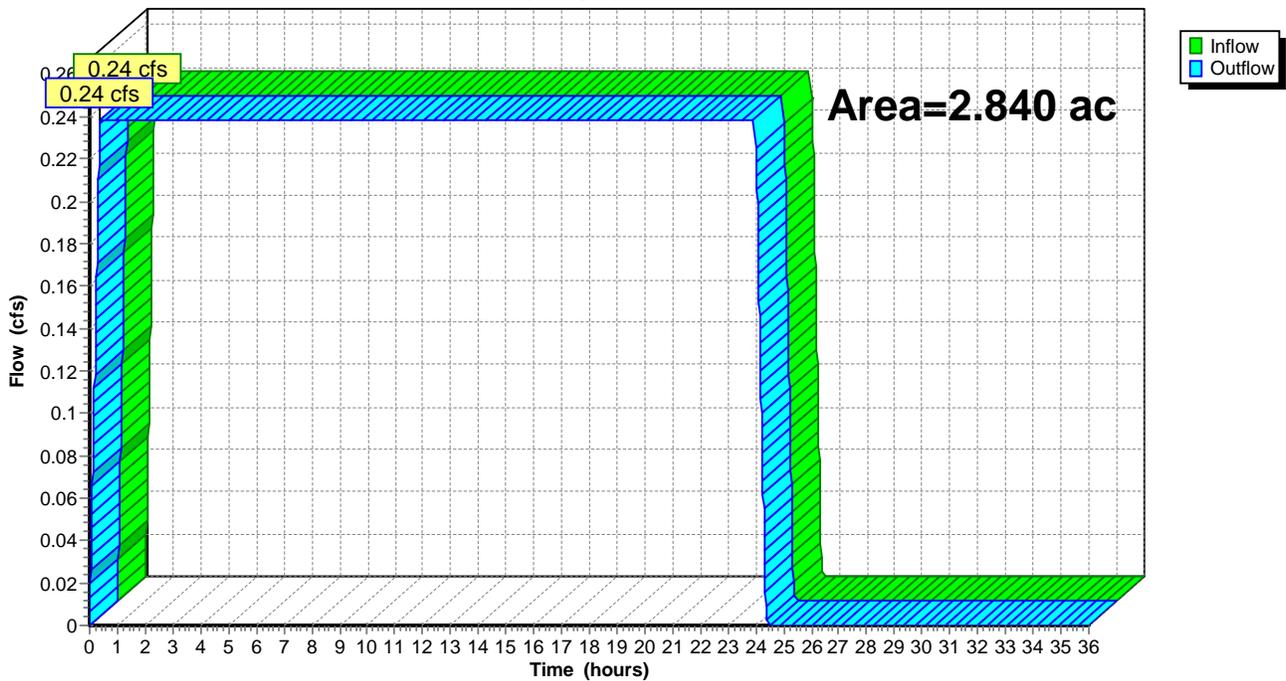
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 2.00" for 500-yr event
Inflow = 0.24 cfs @ 0.37 hrs, Volume= 0.473 af
Outflow = 0.24 cfs @ 0.37 hrs, Volume= 0.473 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

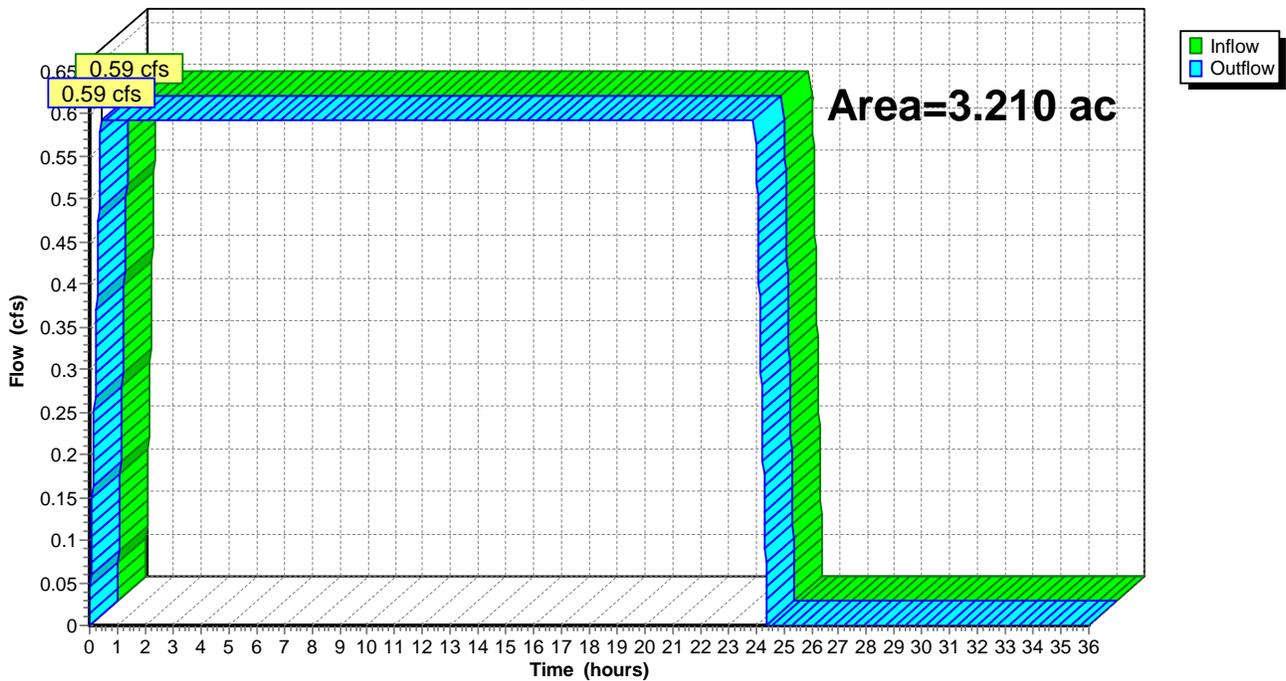
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.210 ac, 45.32% Impervious, Inflow Depth = 4.39" for 500-yr event
Inflow = 0.59 cfs @ 0.40 hrs, Volume= 1.176 af
Outflow = 0.59 cfs @ 0.40 hrs, Volume= 1.176 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

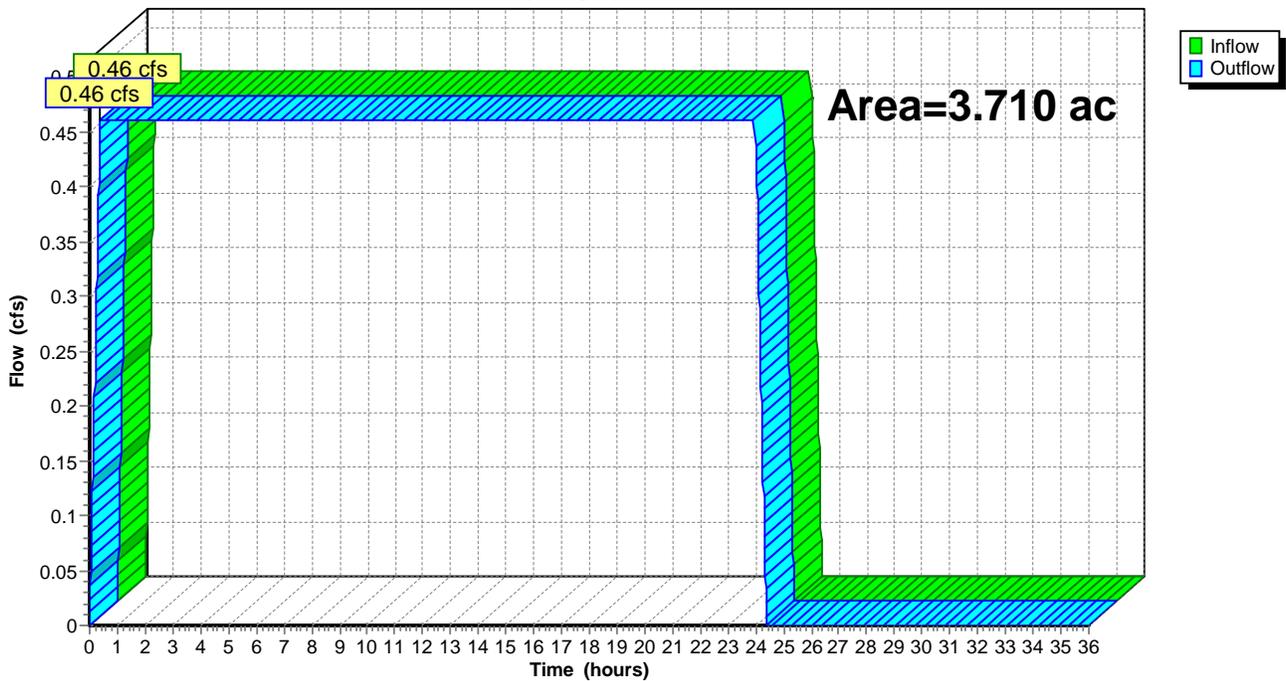
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.710 ac, 21.73% Impervious, Inflow Depth = 2.96" for 500-yr event
Inflow = 0.46 cfs @ 0.38 hrs, Volume= 0.914 af
Outflow = 0.46 cfs @ 0.38 hrs, Volume= 0.914 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



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LEGEND	EXISTING	PROPOSED
5' CONTOUR	---	---
1' CONTOUR	---	---
PROPERTY LINE	PL	PL
RIGHT OF WAY	---	---
SETBACK	---	---
ZONING LINE	---	---
BUILDING	---	---
ASPHALT PAVEMENT	---	---
EDGE OF GRAVEL	---	---
CURB	---	---
SIDEWALK	---	---
TREE LINE	---	---
FENCE	---	---
WATERLINE	W _x	W _x
SANITARY SEWER	SS _x	SS _x
STORM SEWER	SS _x	SS _x
FOUNDATION DRAIN	FD	FD
OVERHEAD UTILITY	E _x	U _x
UNDERGROUND UTILITY	E _x	U _x
ELECTRIC	E _x	E _x
TELEPHONE	T _x	T _x
GAS	G _x	G _x
SANITARY MANHOLE	(S)	(S)
STORM MANHOLE	(SM)	(SM)
CATCH BASIN	(CB)	(CB)
FIRE HYDRANT	(FH)	(FH)
WATER VALVE	(WV)	(WV)
CURB STOP	(CS)	(CS)
UTILITY POLE	(UP)	(UP)
ELECTRIC MANHOLE	(EM)	(EM)
TELEPHONE MANHOLE	(TM)	(TM)
GAS VALVE	(GV)	(GV)
LIGHT POLE	(LP)	(LP)

TAX MAP PARCEL 5-26-110.100
BSF HOUSING DEVELOPMENT FUND C
ZONING: PLANNED DEVELOPMENT

EX DA#1
2.84 Acres
T.C.=22 min.

TAX MAP PARCEL 5-26-103.007
PARKSIDE BIBLE CHURCH
ZONING: LIGHT INDUSTRY

EX DA#2
3.21 Acres
T.C.=24 min.

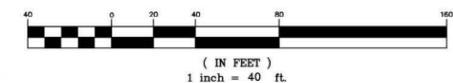
EX DA#3
3.71 Acres
T.C.=23 min.

TAX MAP PARCEL 5-26-103.004
STEBBINS ENGMANF CO
ZONING: LIGHT INDUSTRY

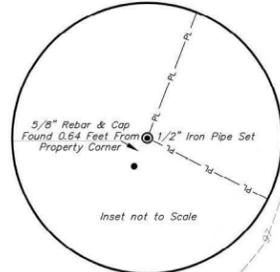
TAX MAP PARCEL 5-26-103.002
SUPPLY CO INC AMERICAN BUILDERS & CONTRACTORS
ZONING: LIGHT INDUSTRY

PROGRESS PRINT
NOT FOR CONSTRUCTION

GRAPHIC SCALE



B.M.
600 Nail Set in P.P.
N.M. 11 Elev. = 95.96



522 Bradley Street
Watertown, New York 13601

aubertinecurrier.com

Phone: (315)782-2005
Fax: (315)782-1472

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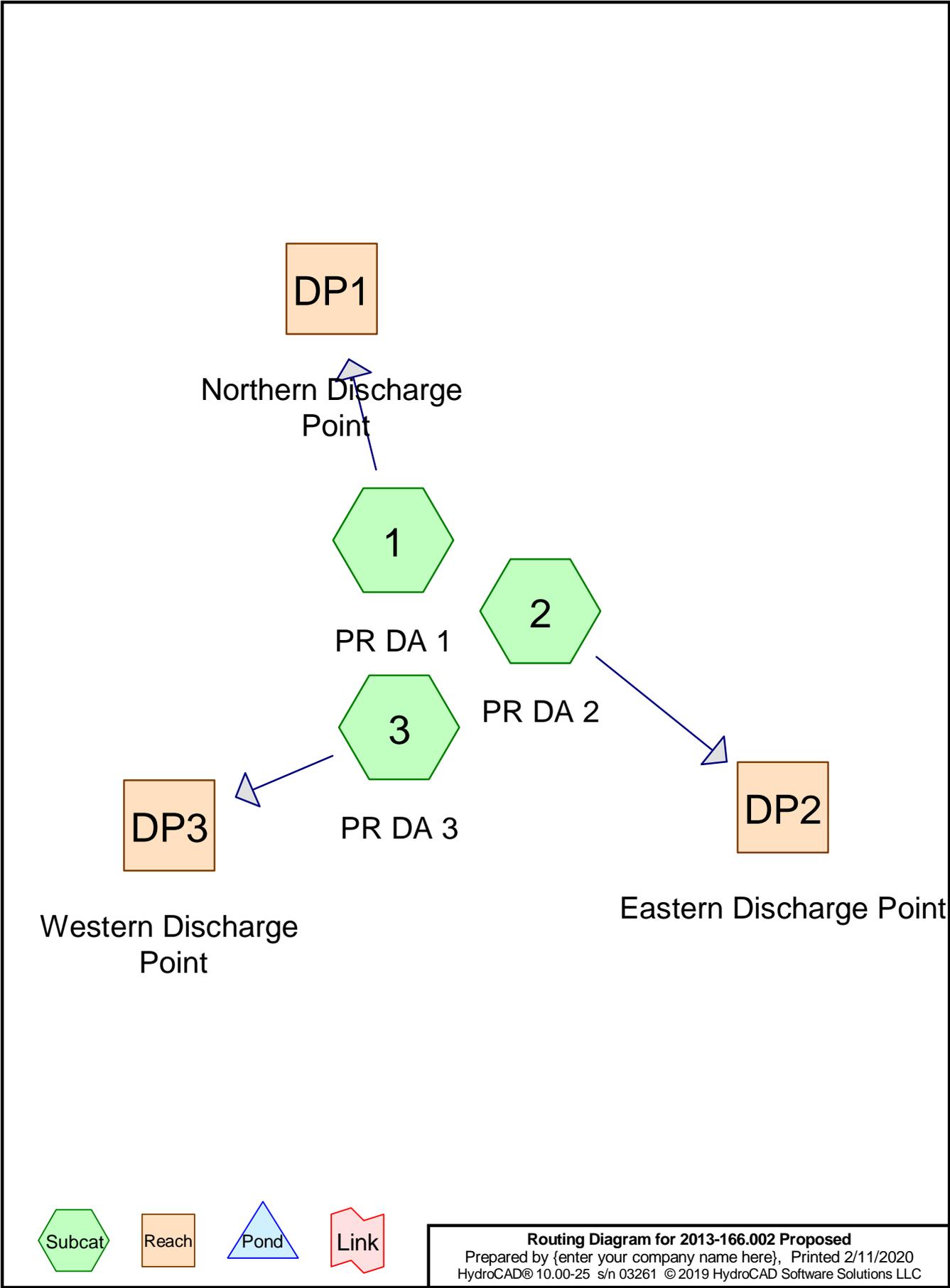
PARKSIDE BIBLE CHURCH
NEW COMMUNITY BUILDING
491 EASTERN BLVD
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO.	2013-166.002
SCALE	1"=40'
DRAWN BY	JLY
CHECKED BY	MRM
ISSUE DATES	02/11/2020

EXISTING DRAINAGE AREA MAP

EX-1

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2013-166.002 Proposed

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Page 2

Area Listing (all nodes)

Area (acres)	C	Description (subcatchment-numbers)
0.171	0.75	Gravel Surface "D" (1)
6.120	0.20	Lawn Area "D" (1, 2, 3)
2.831	0.96	Pavement and Roof "D" (2, 3)
1.083	0.25	Woods Fair "D" (1)
0.152	0.25	Woods, Fair, "D" (2)
10.357	0.42	TOTAL AREA

2013-166.002 Proposed

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Page 3

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
10.357	Other	1, 2, 3
10.357		TOTAL AREA

2013-166.002 Proposed

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Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	0.171	0.171	Gravel Surface "D"	1
0.000	0.000	0.000	0.000	6.120	6.120	Lawn Area "D"	1, 2, 3
0.000	0.000	0.000	0.000	2.831	2.831	Pavement and Roof "D"	2, 3
0.000	0.000	0.000	0.000	1.083	1.083	Woods Fair "D"	1
0.000	0.000	0.000	0.000	0.152	0.152	Woods, Fair, "D"	2
0.000	0.000	0.000	0.000	10.357	10.357	TOTAL AREA	

2013-166.002 Proposed

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Page 5

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	2	0.00	0.00	40.0	0.0180	0.025	12.0	0.0	0.0

2013-166.002 Proposed

Jefferson County SE 10-yr Duration=1,440 min, Inten=0.14 in/hr

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Page 6

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: PR DA 1

Runoff Area=123,710 sf 0.00% Impervious Runoff Depth=0.83"
Flow Length=435' Tc=21.8 min C=0.25 Runoff=0.10 cfs 0.197 af

Subcatchment 2: PR DA 2

Runoff Area=143,274 sf 53.71% Impervious Runoff Depth=2.03"
Flow Length=689' Tc=22.1 min C=0.61 Runoff=0.28 cfs 0.557 af

Subcatchment 3: PR DA 3

Runoff Area=184,162 sf 25.19% Impervious Runoff Depth=1.30"
Flow Length=403' Tc=20.3 min C=0.39 Runoff=0.23 cfs 0.458 af

Reach DP1: Northern Discharge Point

Inflow=0.10 cfs 0.197 af
Outflow=0.10 cfs 0.197 af

Reach DP2: Eastern Discharge Point

Inflow=0.28 cfs 0.557 af
Outflow=0.28 cfs 0.557 af

Reach DP3: Western Discharge Point

Inflow=0.23 cfs 0.458 af
Outflow=0.23 cfs 0.458 af

Total Runoff Area = 10.357 ac Runoff Volume = 1.211 af Average Runoff Depth = 1.40"
72.66% Pervious = 7.525 ac 27.34% Impervious = 2.831 ac

Summary for Subcatchment 1: PR DA 1

Runoff = 0.10 cfs @ 0.37 hrs, Volume= 0.197 af, Depth= 0.83"

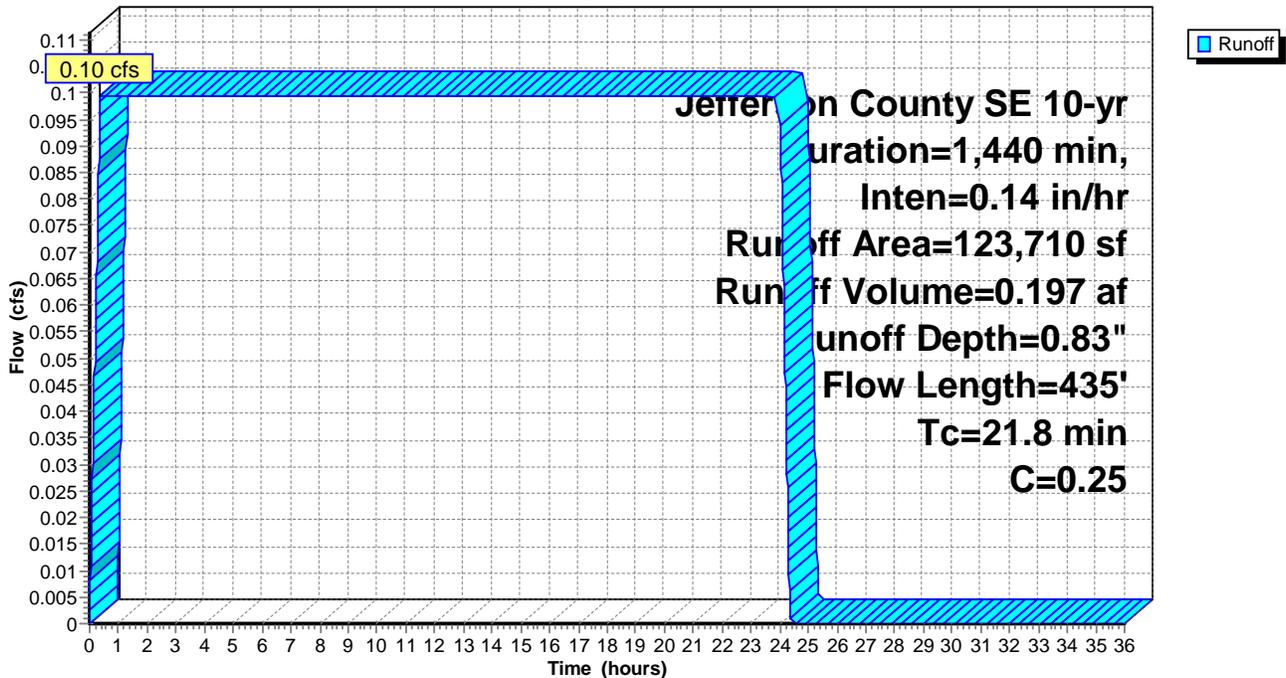
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 10-yr Duration=1,440 min, Inten=0.14 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
6.8	335	0.0272	0.82		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
21.8	435	Total			

Subcatchment 1: PR DA 1

Hydrograph



Summary for Subcatchment 2: PR DA 2

Runoff = 0.28 cfs @ 0.37 hrs, Volume= 0.557 af, Depth= 2.03"

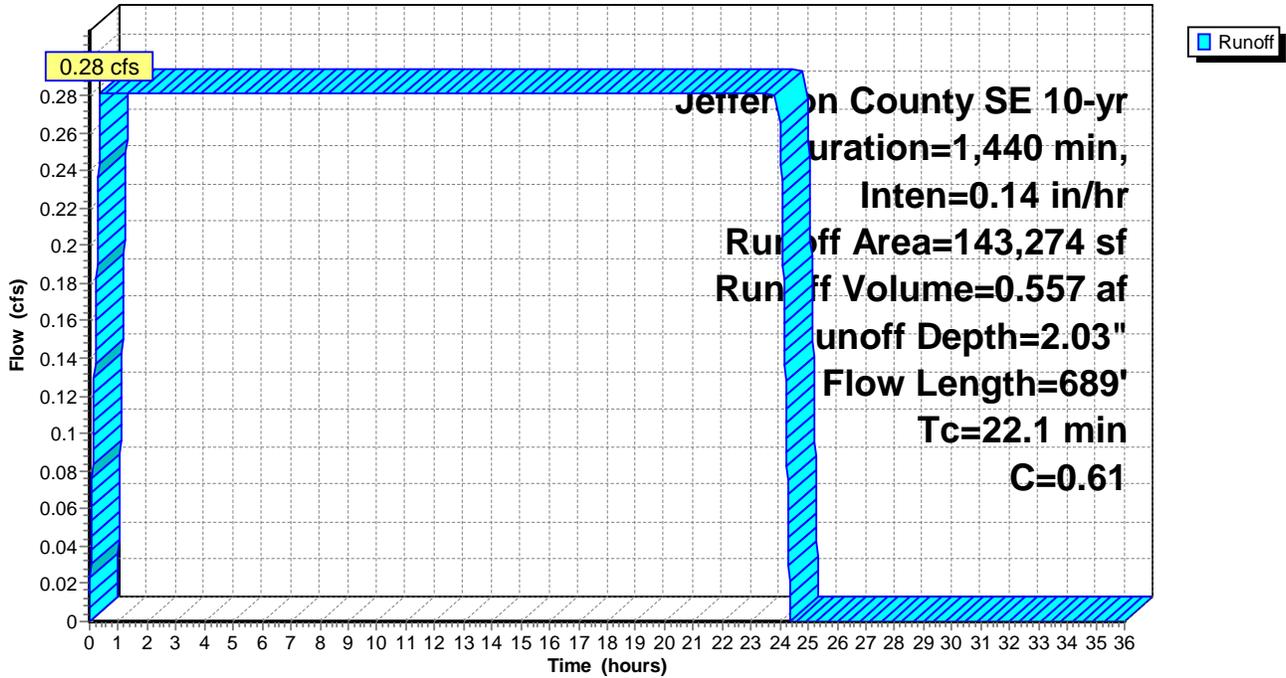
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 10-yr Duration=1,440 min, Inten=0.14 in/hr

Area (sf)	C	Description
76,946	0.96	Pavement and Roof "D"
6,618	0.25	Woods, Fair, "D"
59,710	0.20	Lawn Area "D"
143,274	0.61	Weighted Average
66,328		46.29% Pervious Area
76,946		53.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	94	0.0204	0.10		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
1.0	58	0.0186	0.95		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.3	34	0.1970	2.22		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
22.1	689	Total			

Subcatchment 2: PR DA 2

Hydrograph



Summary for Subcatchment 3: PR DA 3

Runoff = 0.23 cfs @ 0.34 hrs, Volume= 0.458 af, Depth= 1.30"

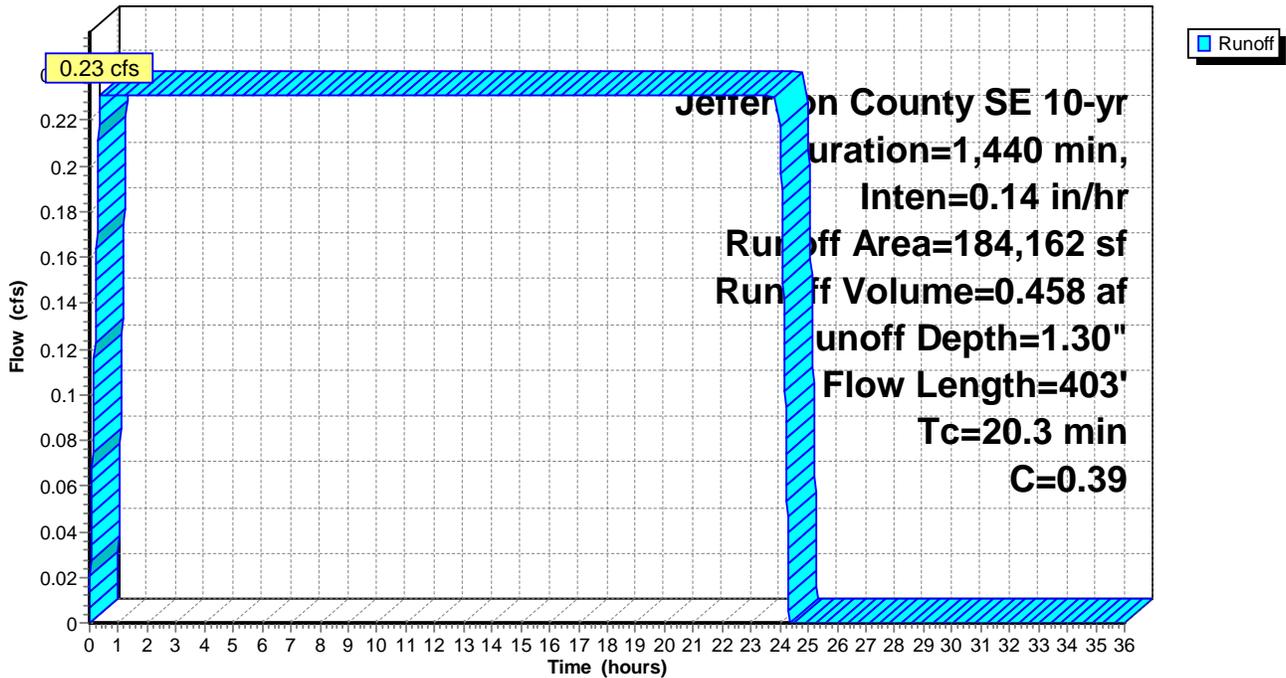
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 10-yr Duration=1,440 min, Inten=0.14 in/hr

Area (sf)	C	Description
46,393	0.96	Pavement and Roof "D"
137,769	0.20	Lawn Area "D"
184,162	0.39	Weighted Average
137,769		74.81% Pervious Area
46,393		25.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	94	0.0240	0.11		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
5.9	303	0.0149	0.85		Shallow Concentrated Flow, Shallow Concentrated Short Grass Pasture Kv= 7.0 fps
20.3	403	Total			

Subcatchment 3: PR DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

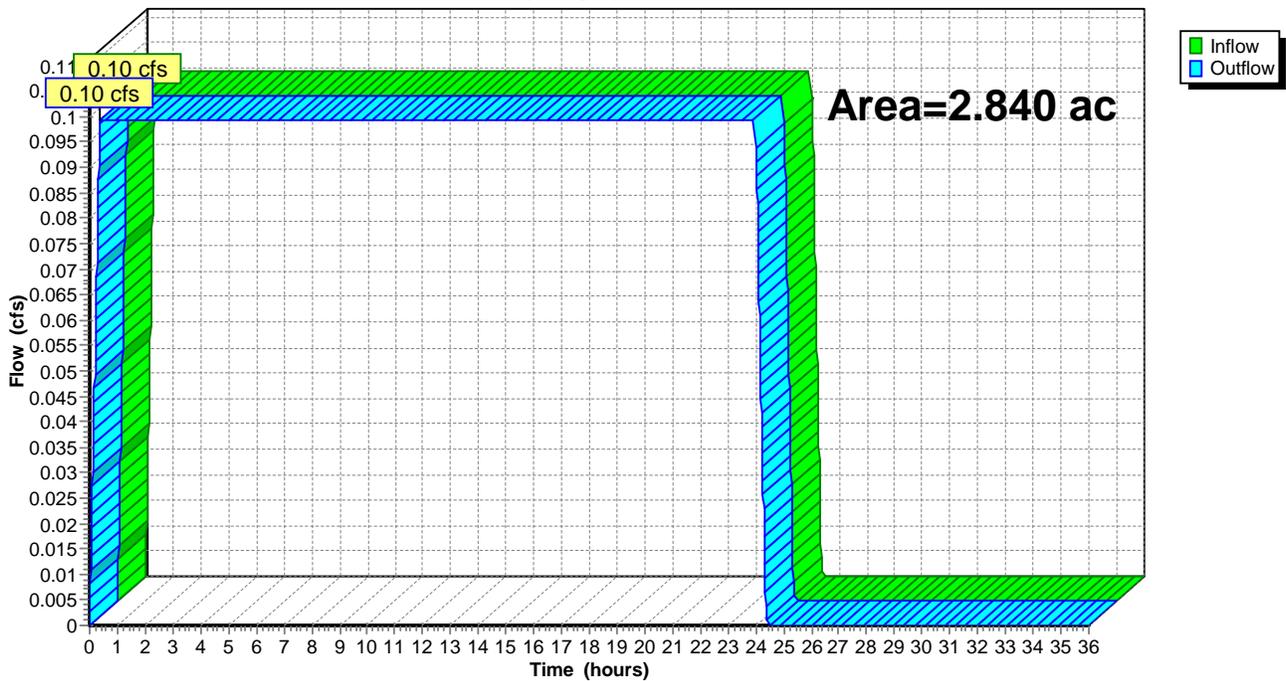
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 0.83" for 10-yr event
Inflow = 0.10 cfs @ 0.37 hrs, Volume= 0.197 af
Outflow = 0.10 cfs @ 0.37 hrs, Volume= 0.197 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

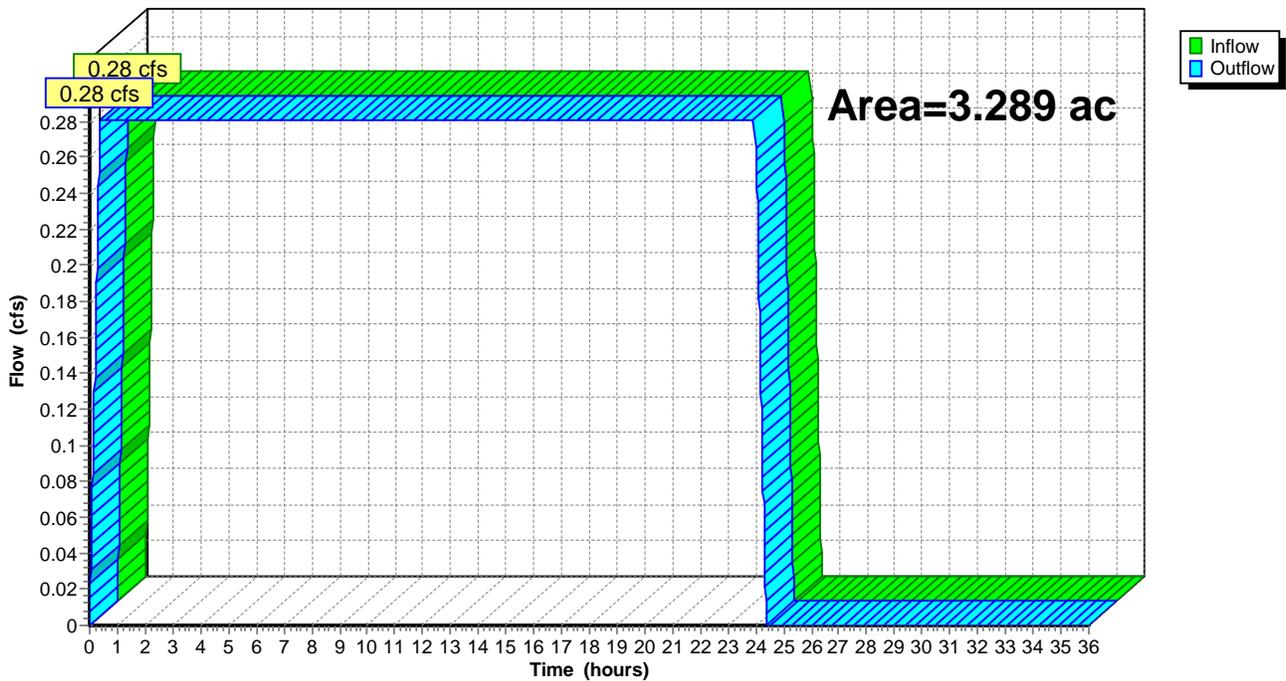
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.289 ac, 53.71% Impervious, Inflow Depth = 2.03" for 10-yr event
Inflow = 0.28 cfs @ 0.37 hrs, Volume= 0.557 af
Outflow = 0.28 cfs @ 0.37 hrs, Volume= 0.557 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

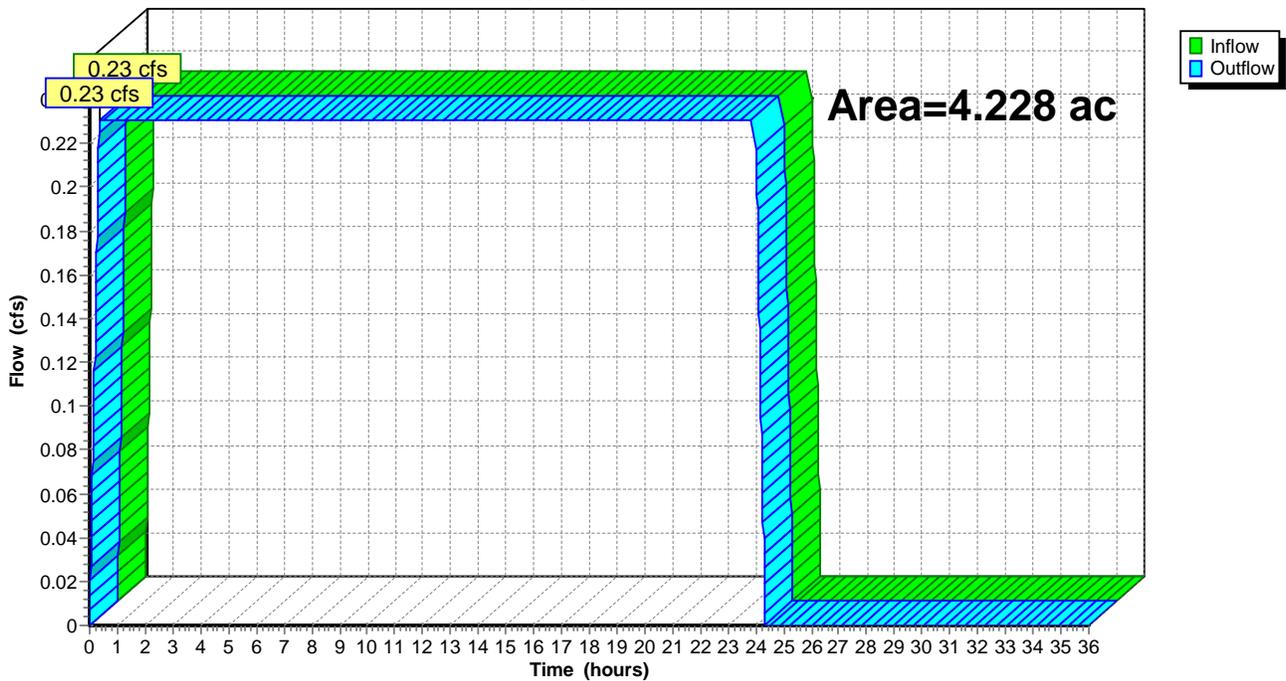
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.228 ac, 25.19% Impervious, Inflow Depth = 1.30" for 10-yr event
Inflow = 0.23 cfs @ 0.34 hrs, Volume= 0.458 af
Outflow = 0.23 cfs @ 0.34 hrs, Volume= 0.458 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



2013-166.002 Proposed

Jefferson County SE 25-yr Duration=1,440 min, Inten=0.17 in/hr

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: PR DA 1

Runoff Area=123,710 sf 0.00% Impervious Runoff Depth=1.02"
Flow Length=435' Tc=21.8 min C=0.25 Runoff=0.12 cfs 0.241 af

Subcatchment 2: PR DA 2

Runoff Area=143,274 sf 53.71% Impervious Runoff Depth=2.48"
Flow Length=689' Tc=22.1 min C=0.61 Runoff=0.34 cfs 0.680 af

Subcatchment 3: PR DA 3

Runoff Area=184,162 sf 25.19% Impervious Runoff Depth=1.59"
Flow Length=403' Tc=20.3 min C=0.39 Runoff=0.28 cfs 0.559 af

Reach DP1: Northern Discharge Point

Inflow=0.12 cfs 0.241 af
Outflow=0.12 cfs 0.241 af

Reach DP2: Eastern Discharge Point

Inflow=0.34 cfs 0.680 af
Outflow=0.34 cfs 0.680 af

Reach DP3: Western Discharge Point

Inflow=0.28 cfs 0.559 af
Outflow=0.28 cfs 0.559 af

Total Runoff Area = 10.357 ac Runoff Volume = 1.481 af Average Runoff Depth = 1.72"
72.66% Pervious = 7.525 ac 27.34% Impervious = 2.831 ac

Summary for Subcatchment 1: PR DA 1

Runoff = 0.12 cfs @ 0.37 hrs, Volume= 0.241 af, Depth= 1.02"

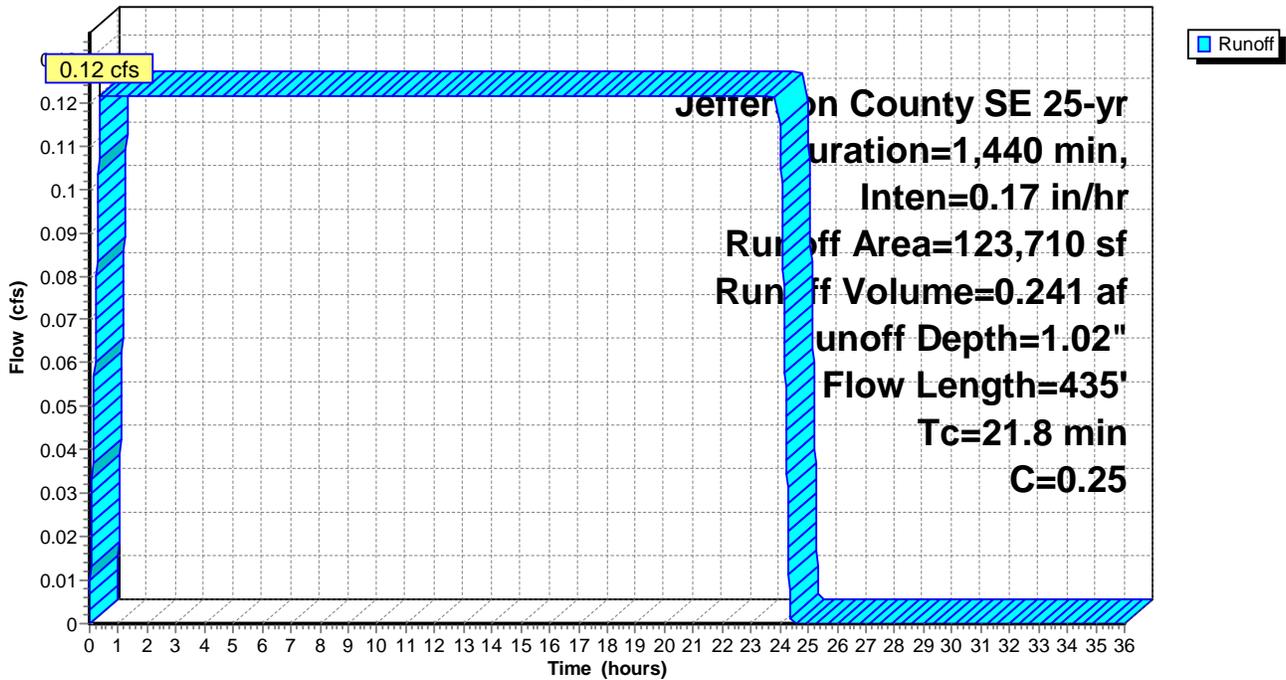
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 25-yr Duration=1,440 min, Inten=0.17 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area
					Grass: Dense n= 0.240 P2= 2.50"
6.8	335	0.0272	0.82		Shallow Concentrated Flow, Shallow - Wooded Area
					Woodland Kv= 5.0 fps
21.8	435	Total			

Subcatchment 1: PR DA 1

Hydrograph



Summary for Subcatchment 2: PR DA 2

Runoff = 0.34 cfs @ 0.37 hrs, Volume= 0.680 af, Depth= 2.48"

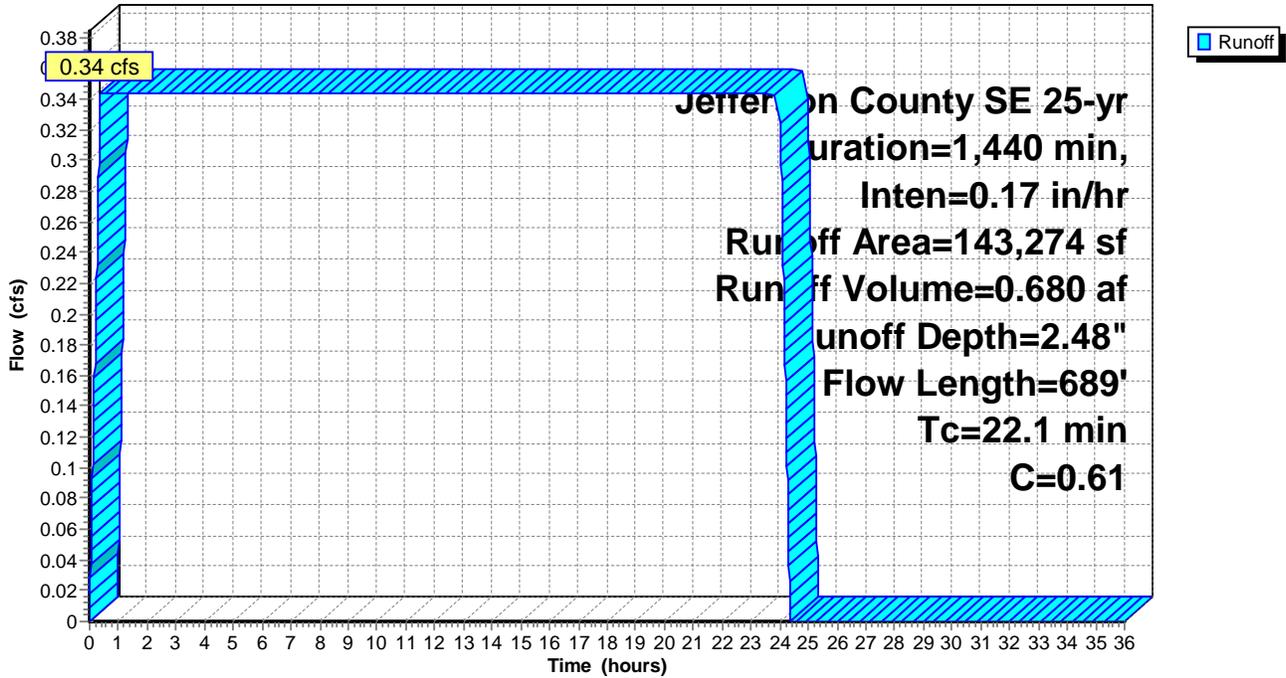
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 25-yr Duration=1,440 min, Inten=0.17 in/hr

Area (sf)	C	Description
76,946	0.96	Pavement and Roof "D"
6,618	0.25	Woods, Fair, "D"
59,710	0.20	Lawn Area "D"
143,274	0.61	Weighted Average
66,328		46.29% Pervious Area
76,946		53.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	94	0.0204	0.10		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
1.0	58	0.0186	0.95		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.3	34	0.1970	2.22		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
22.1	689	Total			

Subcatchment 2: PR DA 2

Hydrograph



Summary for Subcatchment 3: PR DA 3

Runoff = 0.28 cfs @ 0.34 hrs, Volume= 0.559 af, Depth= 1.59"

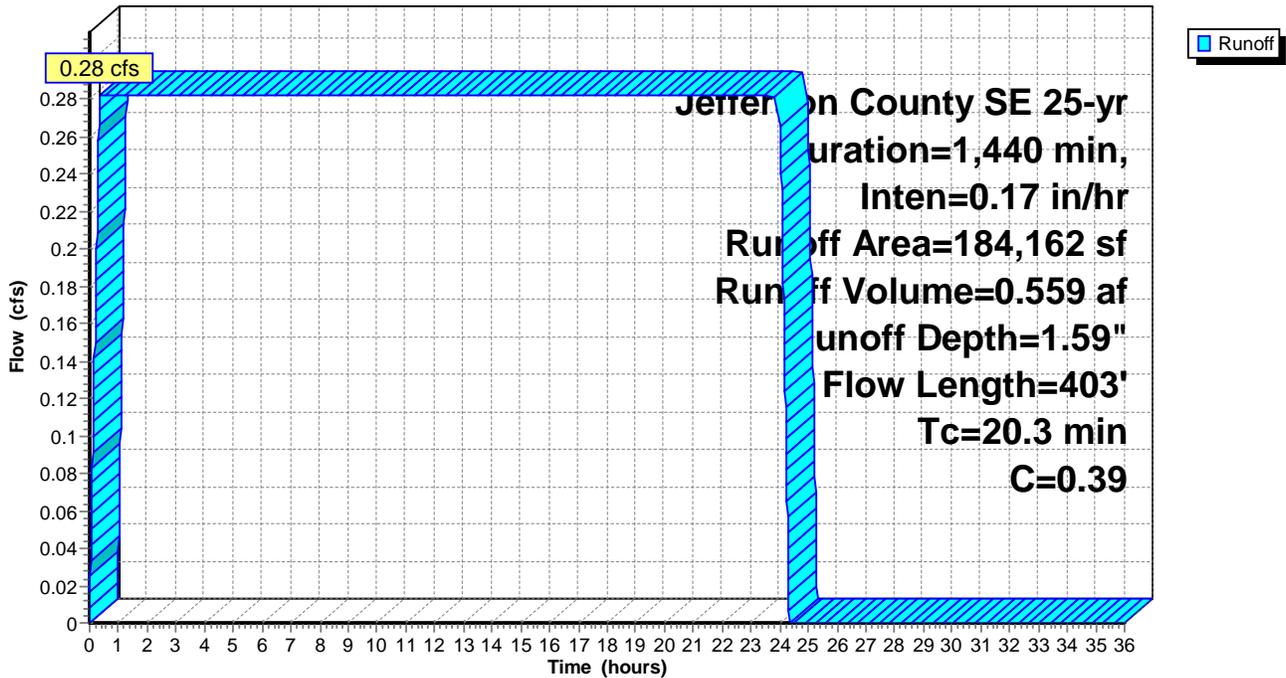
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 25-yr Duration=1,440 min, Inten=0.17 in/hr

Area (sf)	C	Description
46,393	0.96	Pavement and Roof "D"
137,769	0.20	Lawn Area "D"
184,162	0.39	Weighted Average
137,769		74.81% Pervious Area
46,393		25.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	94	0.0240	0.11		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
5.9	303	0.0149	0.85		Shallow Concentrated Flow, Shallow Concentrated Short Grass Pasture Kv= 7.0 fps
20.3	403	Total			

Subcatchment 3: PR DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

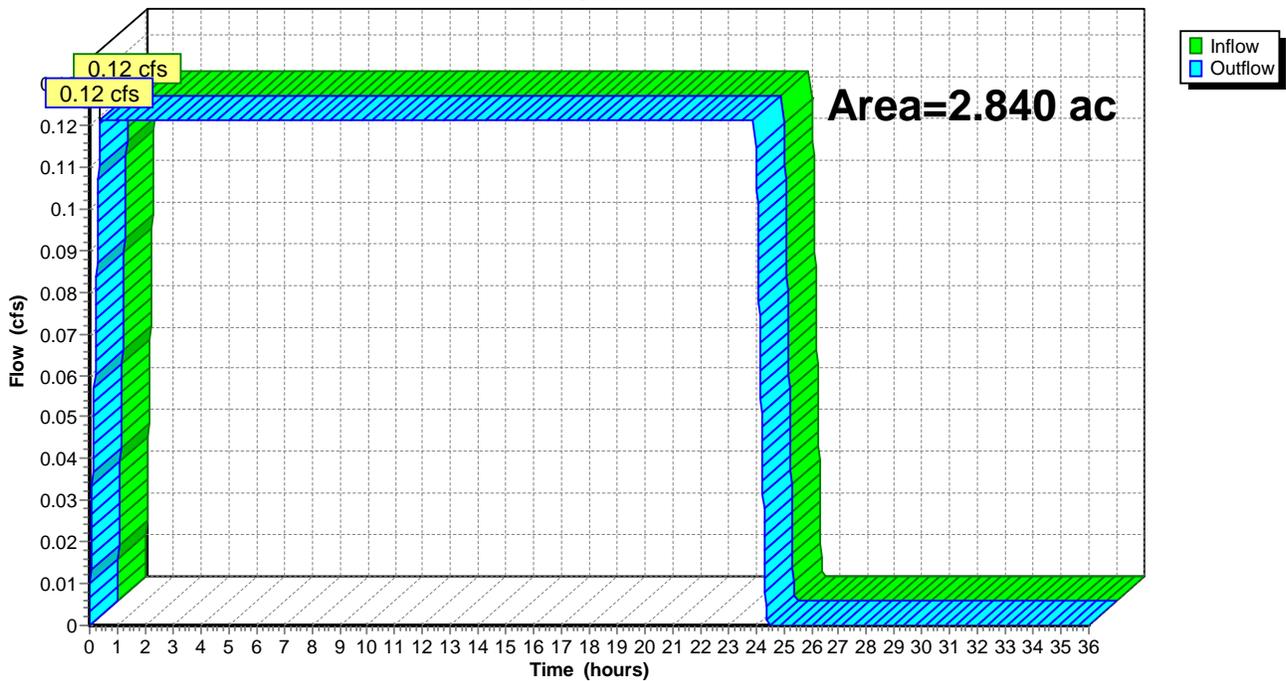
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 1.02" for 25-yr event
Inflow = 0.12 cfs @ 0.37 hrs, Volume= 0.241 af
Outflow = 0.12 cfs @ 0.37 hrs, Volume= 0.241 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

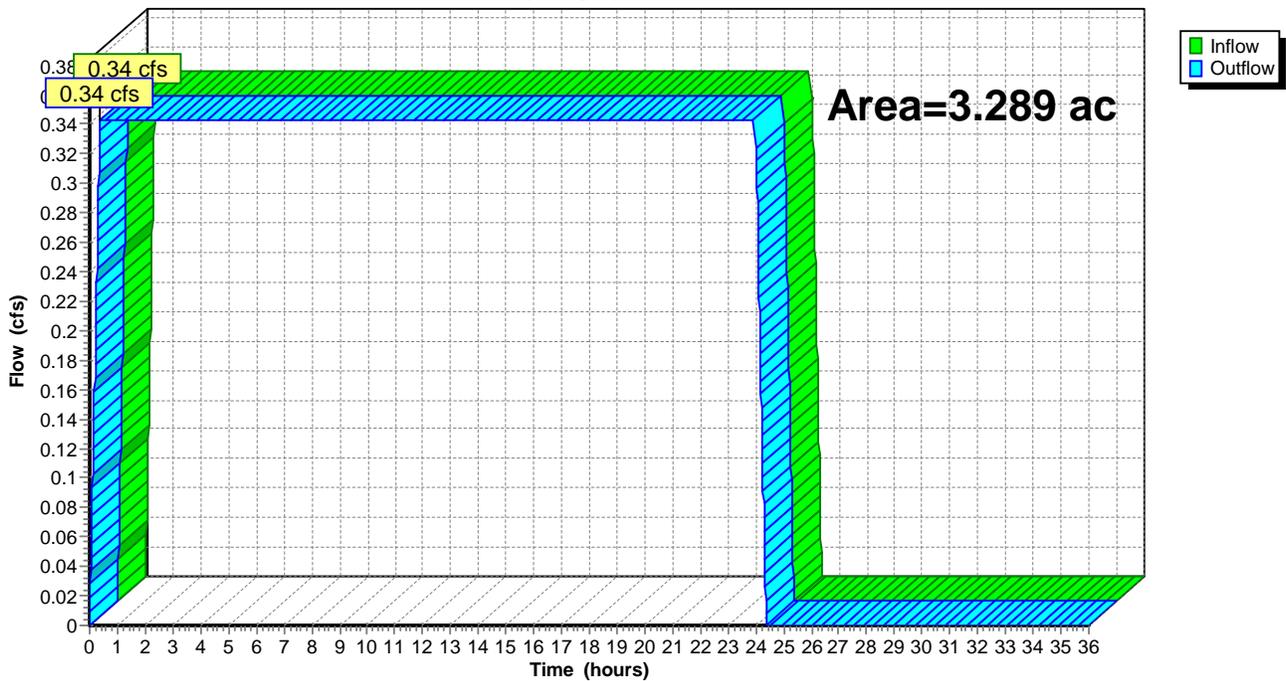
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.289 ac, 53.71% Impervious, Inflow Depth = 2.48" for 25-yr event
Inflow = 0.34 cfs @ 0.37 hrs, Volume= 0.680 af
Outflow = 0.34 cfs @ 0.37 hrs, Volume= 0.680 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

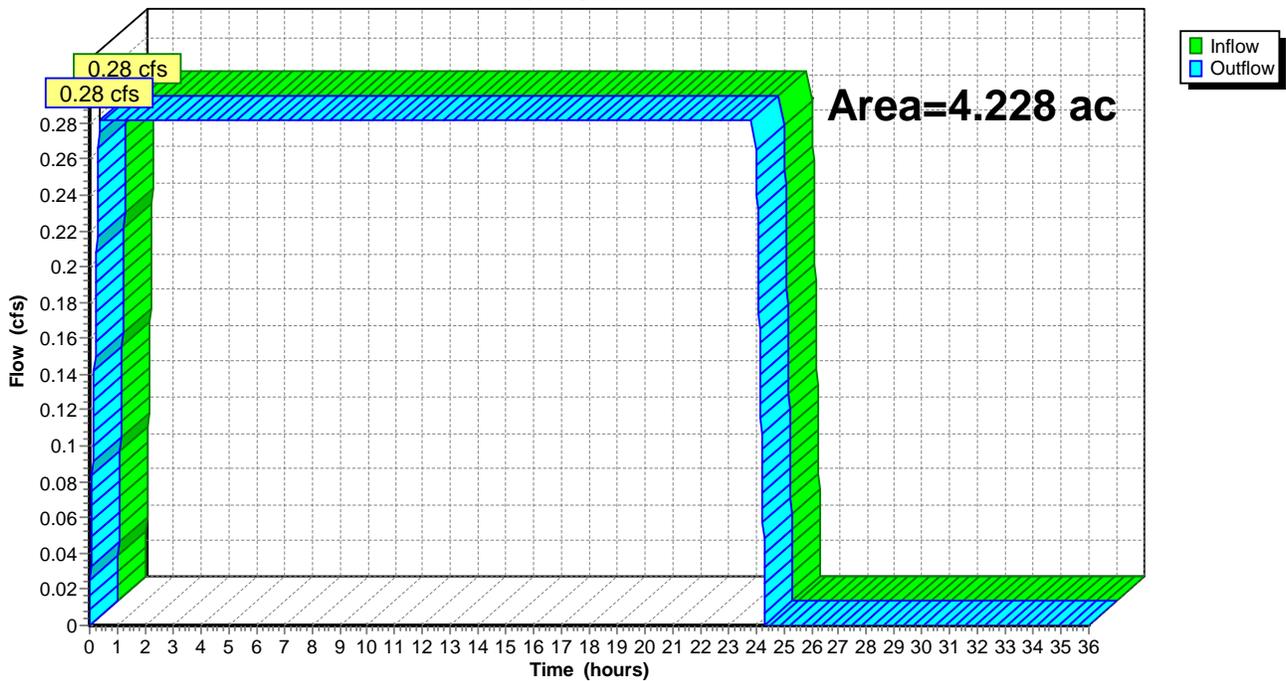
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.228 ac, 25.19% Impervious, Inflow Depth = 1.59" for 25-yr event
Inflow = 0.28 cfs @ 0.34 hrs, Volume= 0.559 af
Outflow = 0.28 cfs @ 0.34 hrs, Volume= 0.559 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



2013-166.002 Proposed

Jefferson County SE 50-yr Duration=1,440 min, Inten=0.20 in/hr

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: PR DA 1 Runoff Area=123,710 sf 0.00% Impervious Runoff Depth=1.19"
Flow Length=435' Tc=21.8 min C=0.25 Runoff=0.14 cfs 0.281 af

Subcatchment 2: PR DA 2 Runoff Area=143,274 sf 53.71% Impervious Runoff Depth=2.90"
Flow Length=689' Tc=22.1 min C=0.61 Runoff=0.40 cfs 0.794 af

Subcatchment 3: PR DA 3 Runoff Area=184,162 sf 25.19% Impervious Runoff Depth=1.85"
Flow Length=403' Tc=20.3 min C=0.39 Runoff=0.33 cfs 0.653 af

Reach DP1: Northern Discharge Point Inflow=0.14 cfs 0.281 af
Outflow=0.14 cfs 0.281 af

Reach DP2: Eastern Discharge Point Inflow=0.40 cfs 0.794 af
Outflow=0.40 cfs 0.794 af

Reach DP3: Western Discharge Point Inflow=0.33 cfs 0.653 af
Outflow=0.33 cfs 0.653 af

Total Runoff Area = 10.357 ac Runoff Volume = 1.728 af Average Runoff Depth = 2.00"
72.66% Pervious = 7.525 ac 27.34% Impervious = 2.831 ac

Summary for Subcatchment 1: PR DA 1

Runoff = 0.14 cfs @ 0.37 hrs, Volume= 0.281 af, Depth= 1.19"

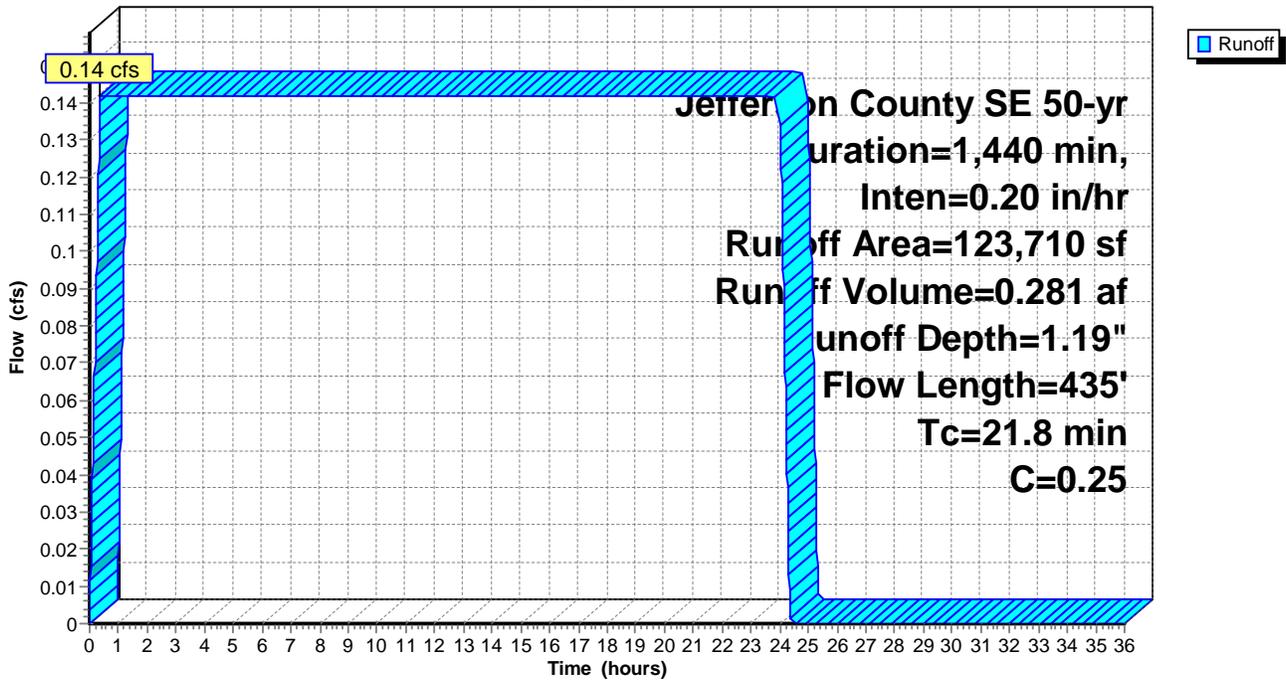
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 50-yr Duration=1,440 min, Inten=0.20 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
6.8	335	0.0272	0.82		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
21.8	435	Total			

Subcatchment 1: PR DA 1

Hydrograph



Summary for Subcatchment 2: PR DA 2

Runoff = 0.40 cfs @ 0.37 hrs, Volume= 0.794 af, Depth= 2.90"

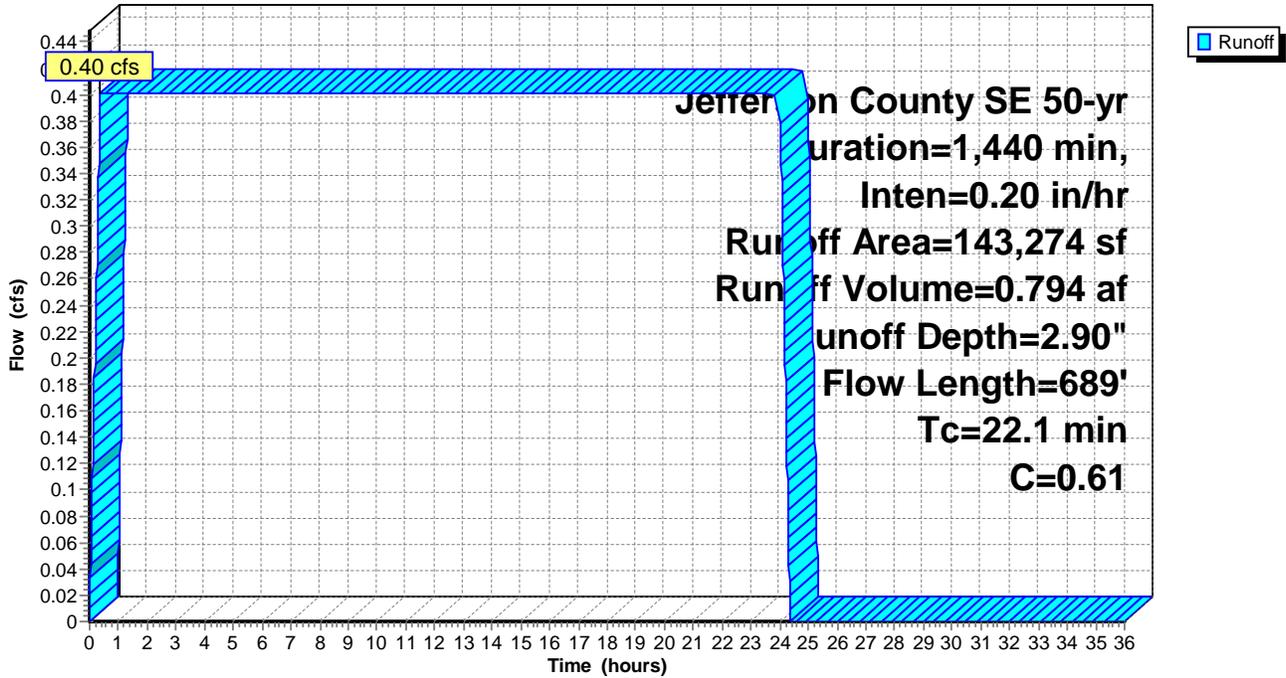
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 50-yr Duration=1,440 min, Inten=0.20 in/hr

Area (sf)	C	Description
76,946	0.96	Pavement and Roof "D"
6,618	0.25	Woods, Fair, "D"
59,710	0.20	Lawn Area "D"
143,274	0.61	Weighted Average
66,328		46.29% Pervious Area
76,946		53.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	94	0.0204	0.10		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
1.0	58	0.0186	0.95		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.3	34	0.1970	2.22		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
22.1	689	Total			

Subcatchment 2: PR DA 2

Hydrograph



Summary for Subcatchment 3: PR DA 3

Runoff = 0.33 cfs @ 0.34 hrs, Volume= 0.653 af, Depth= 1.85"

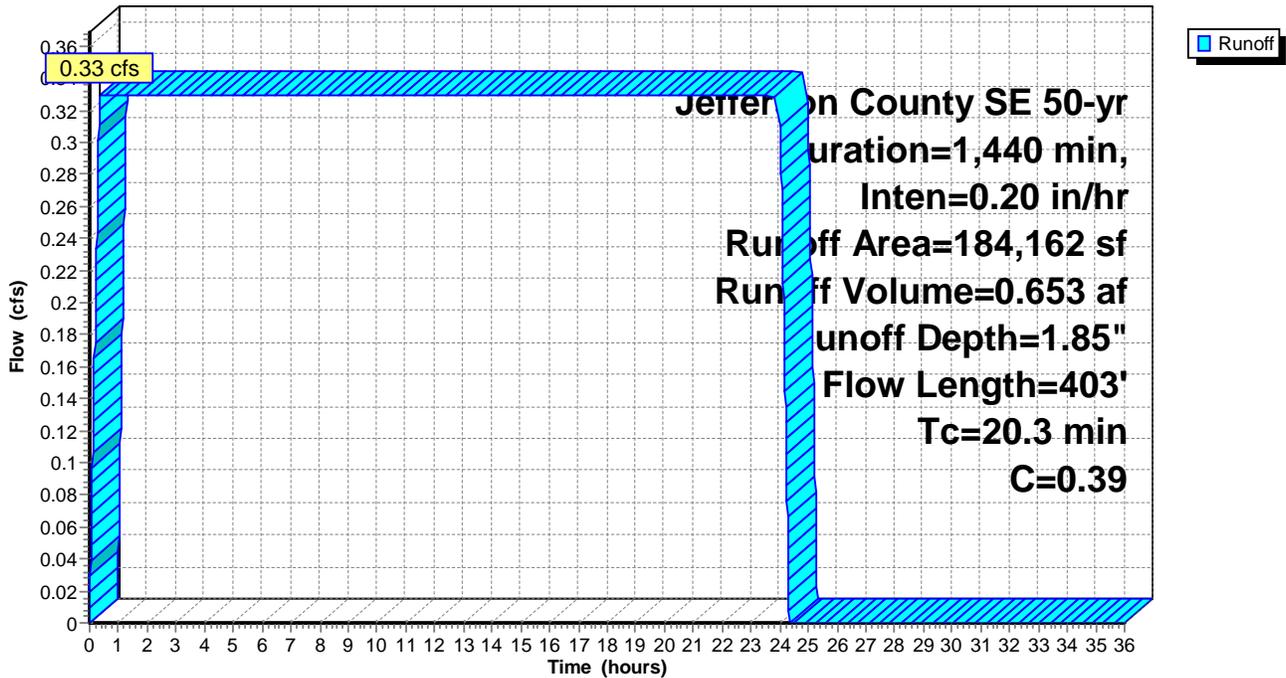
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 50-yr Duration=1,440 min, Inten=0.20 in/hr

Area (sf)	C	Description
46,393	0.96	Pavement and Roof "D"
137,769	0.20	Lawn Area "D"
184,162	0.39	Weighted Average
137,769		74.81% Pervious Area
46,393		25.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	94	0.0240	0.11		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
5.9	303	0.0149	0.85		Shallow Concentrated Flow, Shallow Concentrated Short Grass Pasture Kv= 7.0 fps
20.3	403	Total			

Subcatchment 3: PR DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

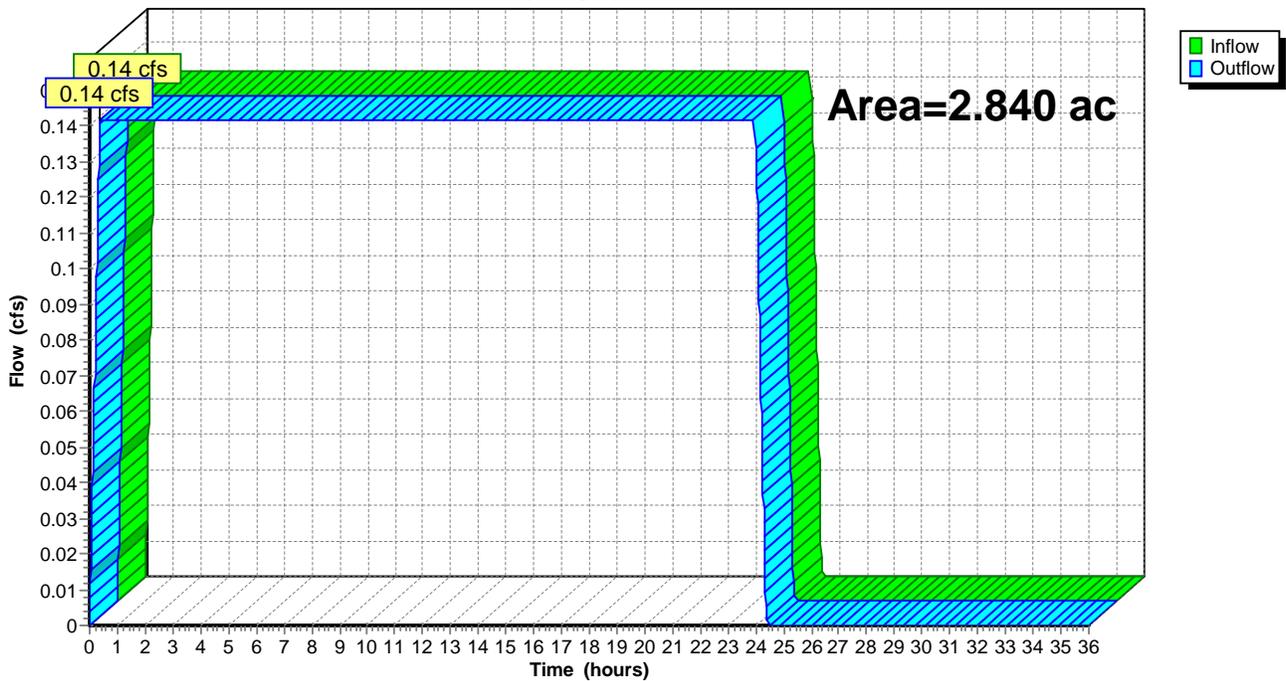
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 1.19" for 50-yr event
Inflow = 0.14 cfs @ 0.37 hrs, Volume= 0.281 af
Outflow = 0.14 cfs @ 0.37 hrs, Volume= 0.281 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

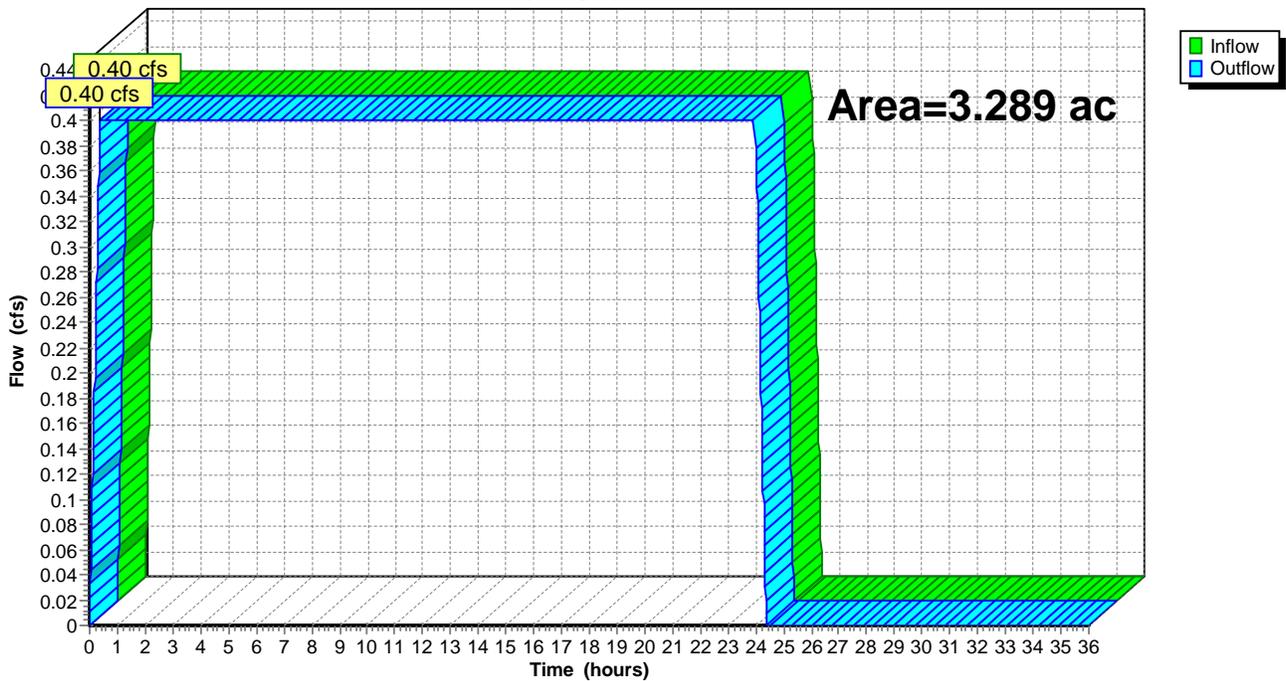
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.289 ac, 53.71% Impervious, Inflow Depth = 2.90" for 50-yr event
Inflow = 0.40 cfs @ 0.37 hrs, Volume= 0.794 af
Outflow = 0.40 cfs @ 0.37 hrs, Volume= 0.794 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

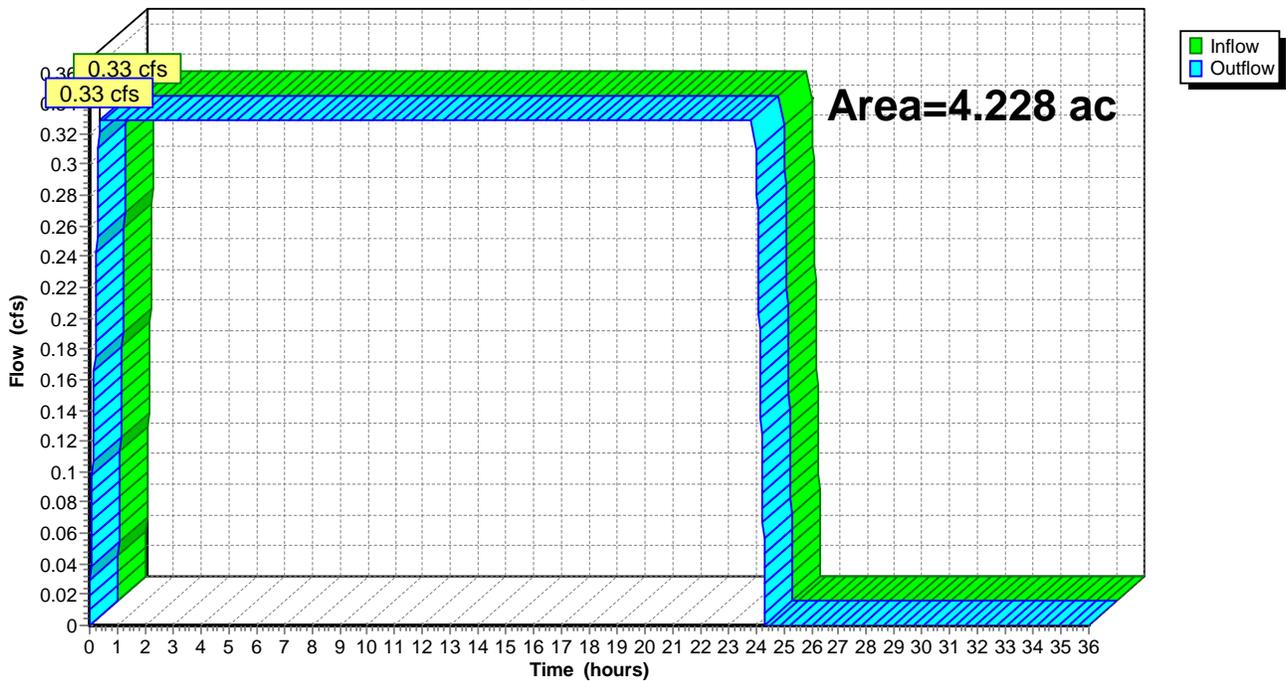
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.228 ac, 25.19% Impervious, Inflow Depth = 1.85" for 50-yr event
Inflow = 0.33 cfs @ 0.34 hrs, Volume= 0.653 af
Outflow = 0.33 cfs @ 0.34 hrs, Volume= 0.653 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



2013-166.002 Proposed

Jefferson County SE 100-yr Duration=1,440 min, Inten=0.23 in/hr

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: PR DA 1

Runoff Area=123,710 sf 0.00% Impervious Runoff Depth=1.39"
Flow Length=435' Tc=21.8 min C=0.25 Runoff=0.17 cfs 0.328 af

Subcatchment 2: PR DA 2

Runoff Area=143,274 sf 53.71% Impervious Runoff Depth=3.38"
Flow Length=689' Tc=22.1 min C=0.61 Runoff=0.47 cfs 0.926 af

Subcatchment 3: PR DA 3

Runoff Area=184,162 sf 25.19% Impervious Runoff Depth=2.16"
Flow Length=403' Tc=20.3 min C=0.39 Runoff=0.38 cfs 0.761 af

Reach DP1: Northern Discharge Point

Inflow=0.17 cfs 0.328 af
Outflow=0.17 cfs 0.328 af

Reach DP2: Eastern Discharge Point

Inflow=0.47 cfs 0.926 af
Outflow=0.47 cfs 0.926 af

Reach DP3: Western Discharge Point

Inflow=0.38 cfs 0.761 af
Outflow=0.38 cfs 0.761 af

Total Runoff Area = 10.357 ac Runoff Volume = 2.015 af Average Runoff Depth = 2.33"
72.66% Pervious = 7.525 ac 27.34% Impervious = 2.831 ac

Summary for Subcatchment 1: PR DA 1

Runoff = 0.17 cfs @ 0.37 hrs, Volume= 0.328 af, Depth= 1.39"

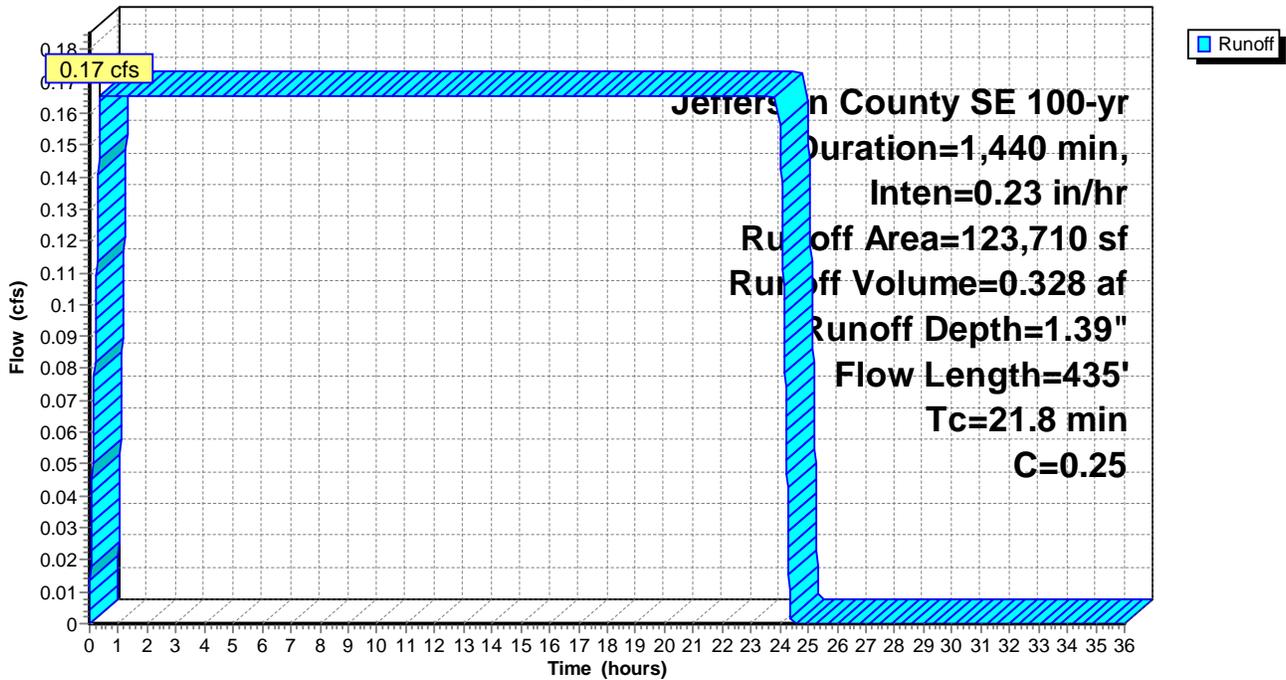
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 100-yr Duration=1,440 min, Inten=0.23 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area
					Grass: Dense n= 0.240 P2= 2.50"
6.8	335	0.0272	0.82		Shallow Concentrated Flow, Shallow - Wooded Area
					Woodland Kv= 5.0 fps
21.8	435	Total			

Subcatchment 1: PR DA 1

Hydrograph



Summary for Subcatchment 2: PR DA 2

Runoff = 0.47 cfs @ 0.37 hrs, Volume= 0.926 af, Depth= 3.38"

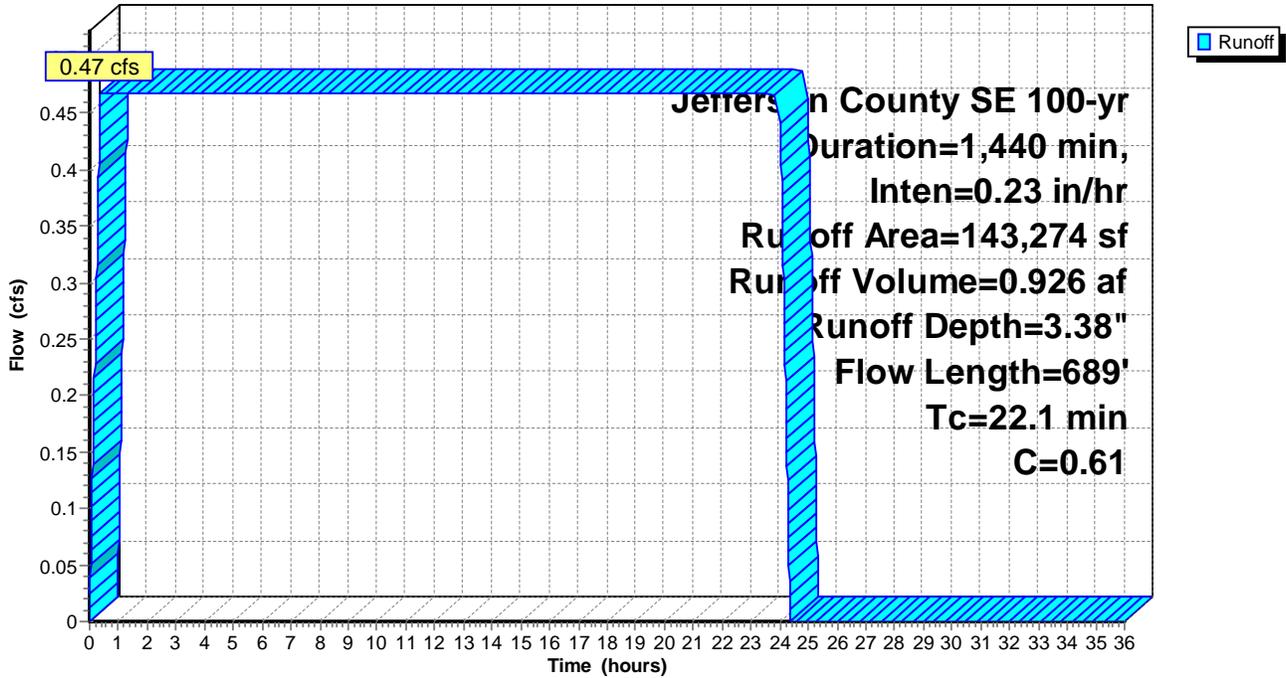
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 100-yr Duration=1,440 min, Inten=0.23 in/hr

Area (sf)	C	Description
76,946	0.96	Pavement and Roof "D"
6,618	0.25	Woods, Fair, "D"
59,710	0.20	Lawn Area "D"
143,274	0.61	Weighted Average
66,328		46.29% Pervious Area
76,946		53.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	94	0.0204	0.10		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
1.0	58	0.0186	0.95		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.3	34	0.1970	2.22		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
22.1	689	Total			

Subcatchment 2: PR DA 2

Hydrograph



Summary for Subcatchment 3: PR DA 3

Runoff = 0.38 cfs @ 0.34 hrs, Volume= 0.761 af, Depth= 2.16"

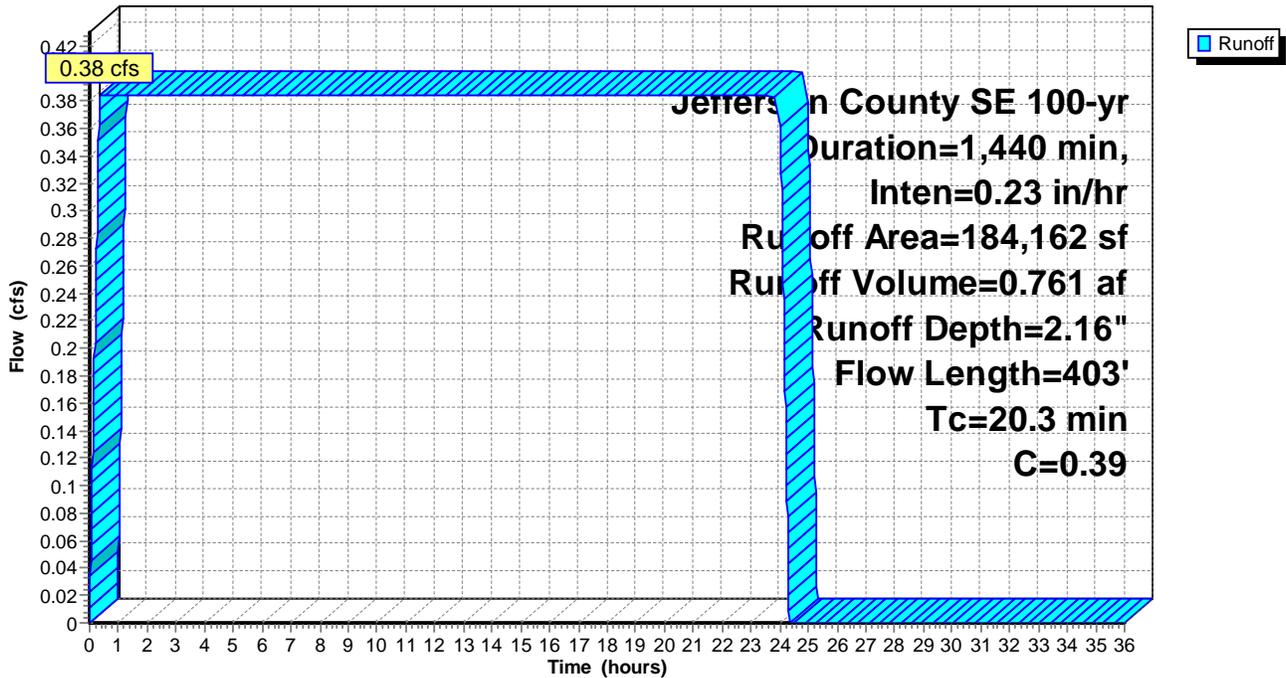
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 100-yr Duration=1,440 min, Inten=0.23 in/hr

Area (sf)	C	Description
46,393	0.96	Pavement and Roof "D"
137,769	0.20	Lawn Area "D"
184,162	0.39	Weighted Average
137,769		74.81% Pervious Area
46,393		25.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	94	0.0240	0.11		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
5.9	303	0.0149	0.85		Shallow Concentrated Flow, Shallow Concentrated Short Grass Pasture Kv= 7.0 fps
20.3	403	Total			

Subcatchment 3: PR DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

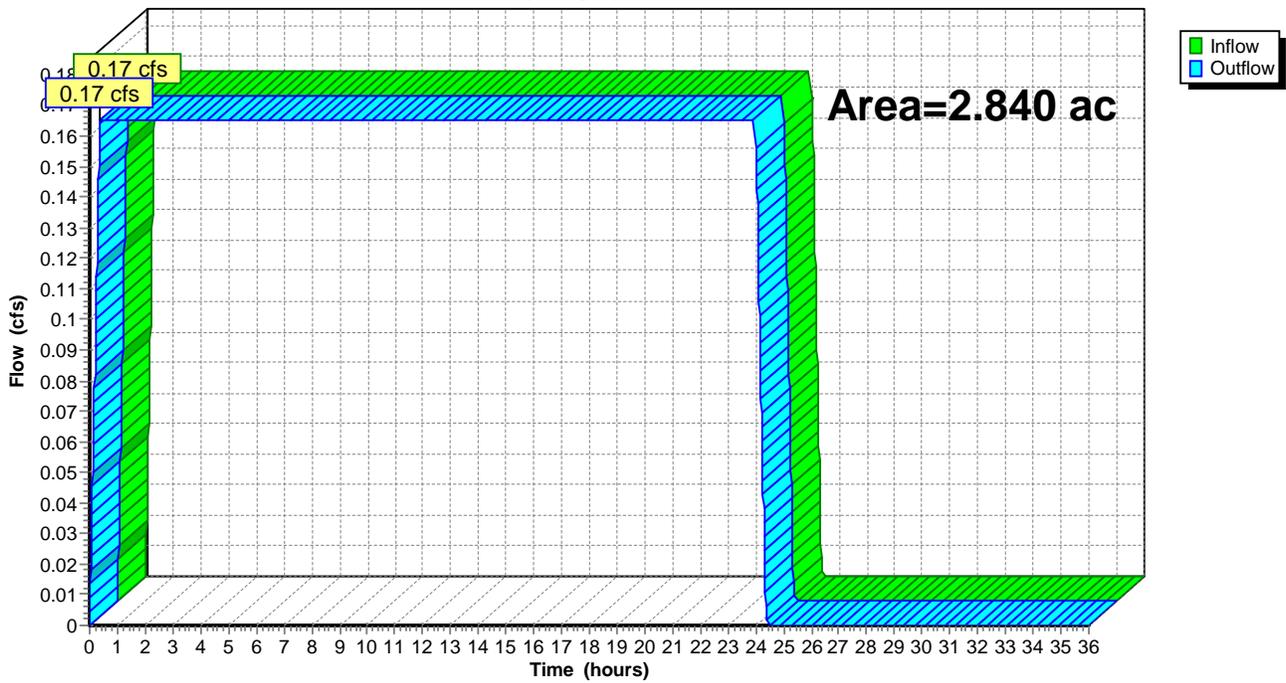
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 1.39" for 100-yr event
Inflow = 0.17 cfs @ 0.37 hrs, Volume= 0.328 af
Outflow = 0.17 cfs @ 0.37 hrs, Volume= 0.328 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

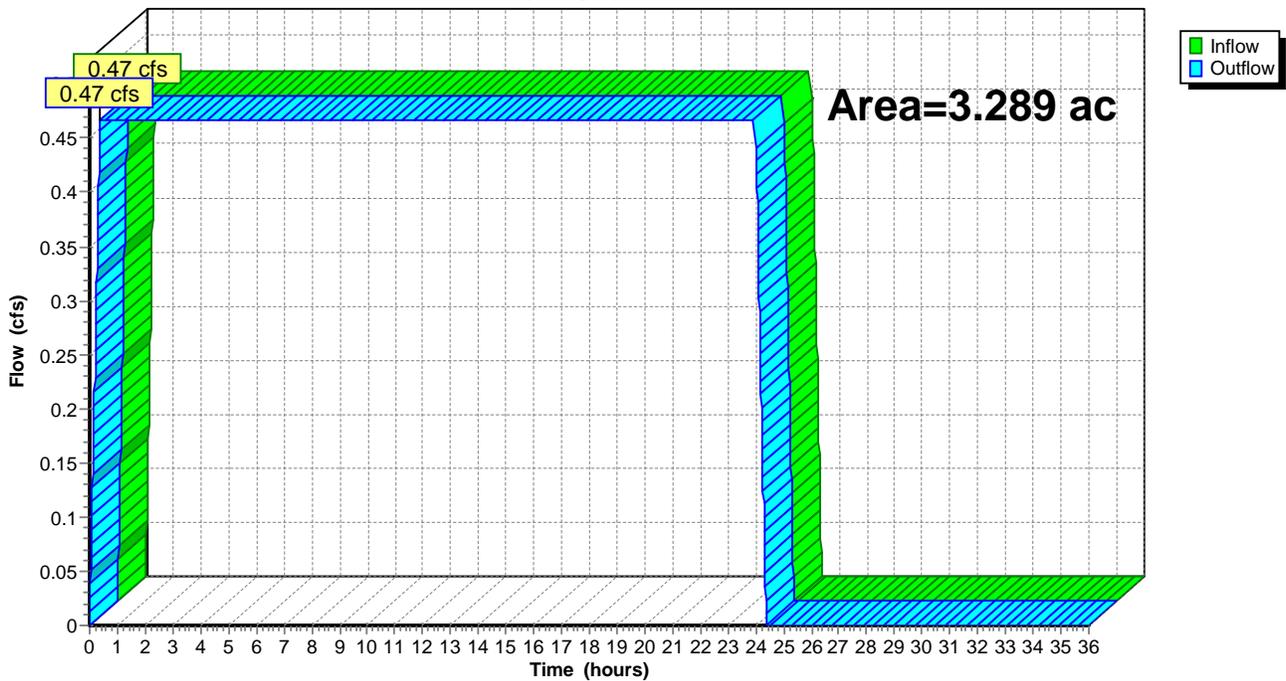
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.289 ac, 53.71% Impervious, Inflow Depth = 3.38" for 100-yr event
Inflow = 0.47 cfs @ 0.37 hrs, Volume= 0.926 af
Outflow = 0.47 cfs @ 0.37 hrs, Volume= 0.926 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

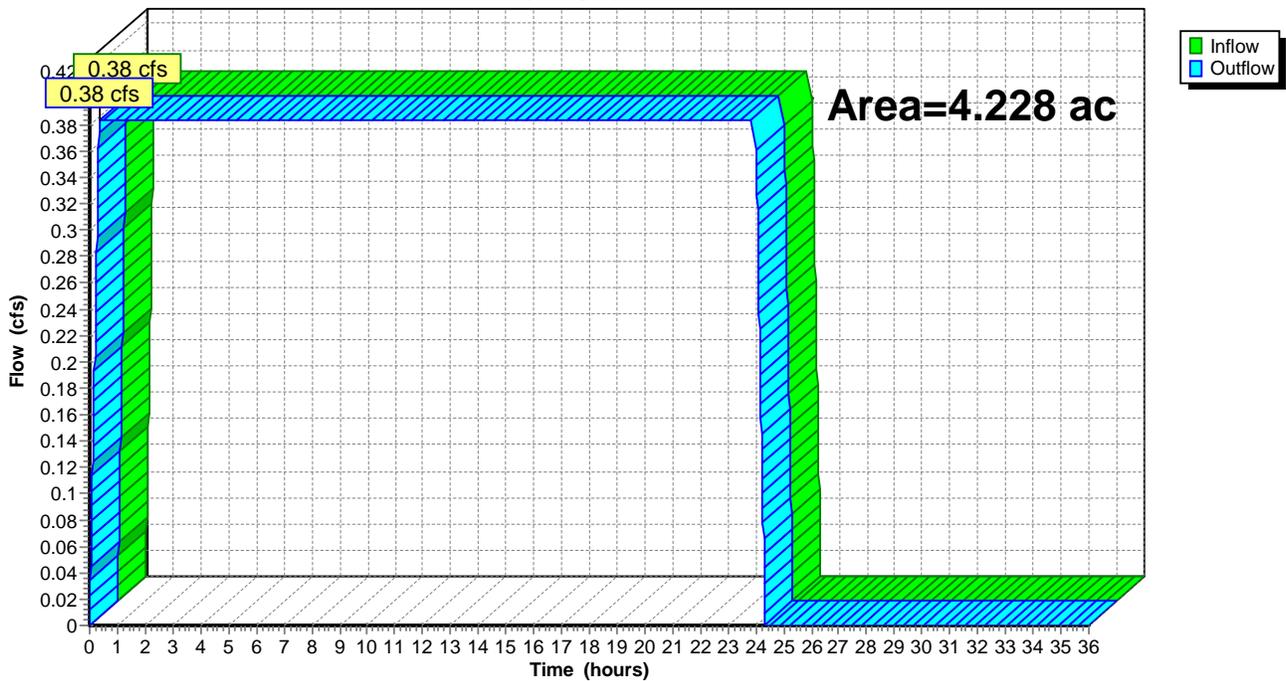
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.228 ac, 25.19% Impervious, Inflow Depth = 2.16" for 100-yr event
Inflow = 0.38 cfs @ 0.34 hrs, Volume= 0.761 af
Outflow = 0.38 cfs @ 0.34 hrs, Volume= 0.761 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



Summary for Subcatchment 1: PR DA 1

Runoff = 0.19 cfs @ 0.37 hrs, Volume= 0.385 af, Depth= 1.63"

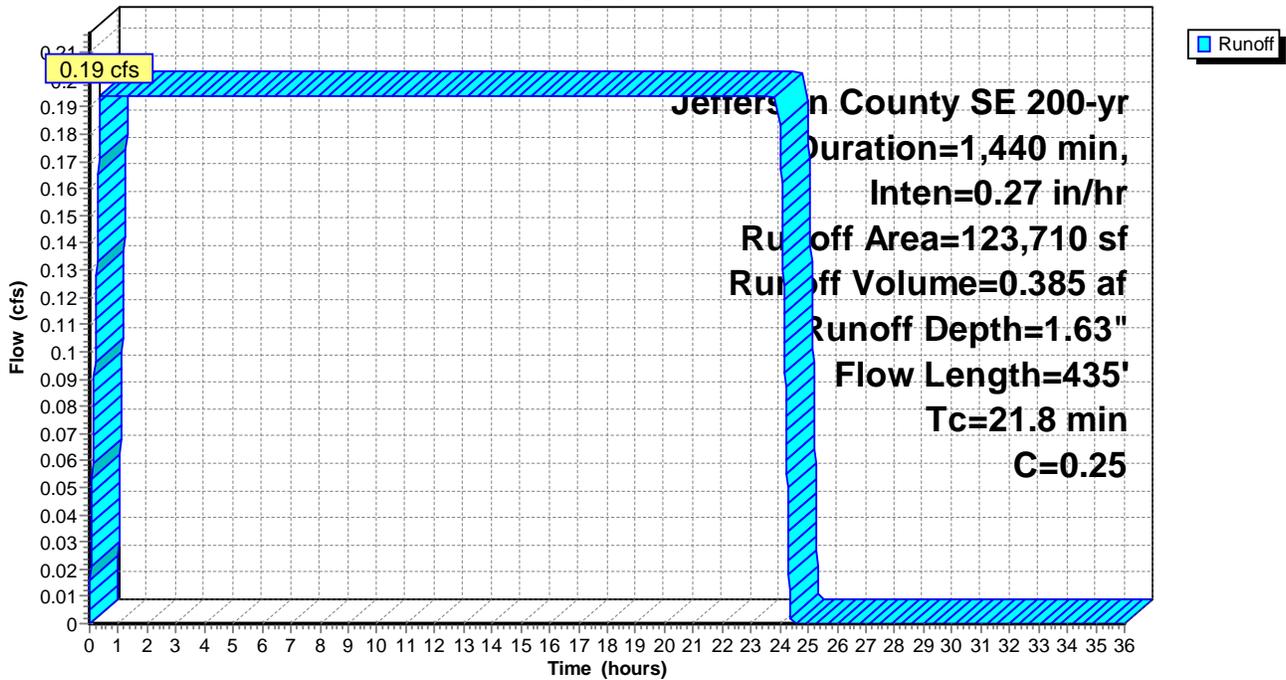
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 200-yr Duration=1,440 min, Inten=0.27 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area
6.8	335	0.0272	0.82		Grass: Dense n= 0.240 P2= 2.50" Shallow Concentrated Flow, Shalow - Wooded Area
21.8	435	Total			Woodland Kv= 5.0 fps

Subcatchment 1: PR DA 1

Hydrograph



Summary for Subcatchment 2: PR DA 2

Runoff = 0.55 cfs @ 0.37 hrs, Volume= 1.087 af, Depth= 3.96"

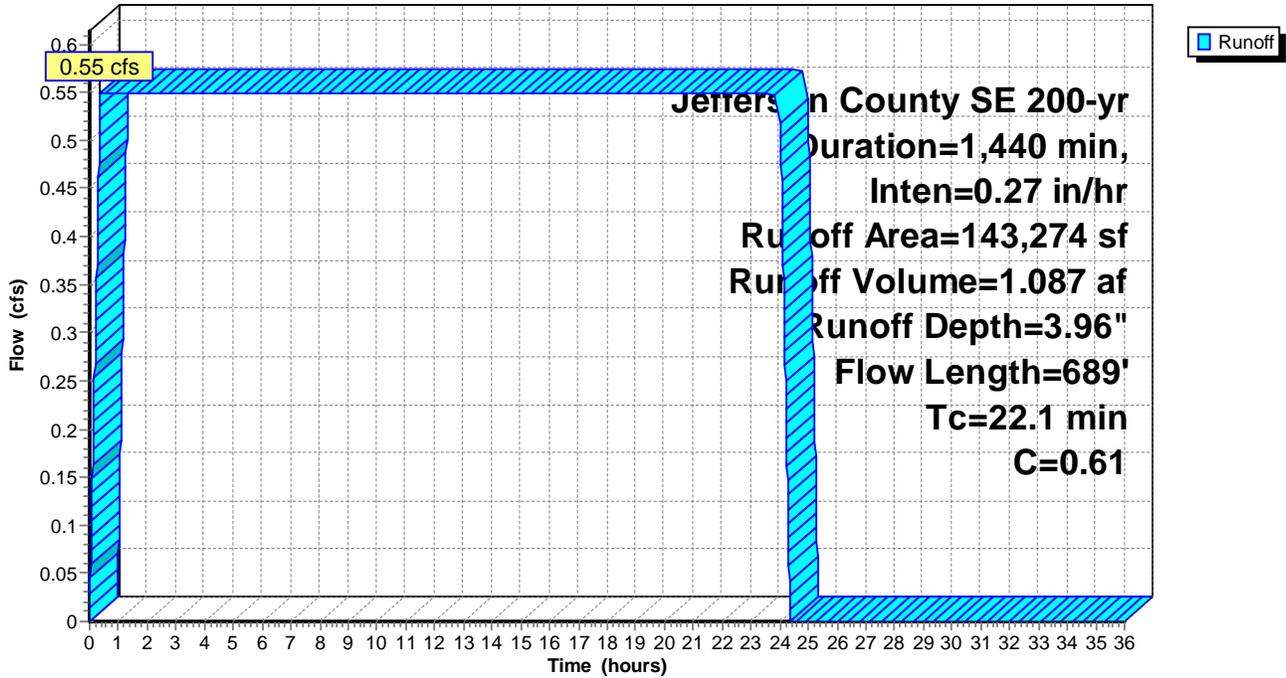
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 200-yr Duration=1,440 min, Inten=0.27 in/hr

Area (sf)	C	Description
76,946	0.96	Pavement and Roof "D"
6,618	0.25	Woods, Fair, "D"
59,710	0.20	Lawn Area "D"
143,274	0.61	Weighted Average
66,328		46.29% Pervious Area
76,946		53.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	94	0.0204	0.10		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
1.0	58	0.0186	0.95		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.3	34	0.1970	2.22		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
22.1	689	Total			

Subcatchment 2: PR DA 2

Hydrograph



Summary for Subcatchment 3: PR DA 3

Runoff = 0.45 cfs @ 0.34 hrs, Volume= 0.893 af, Depth= 2.53"

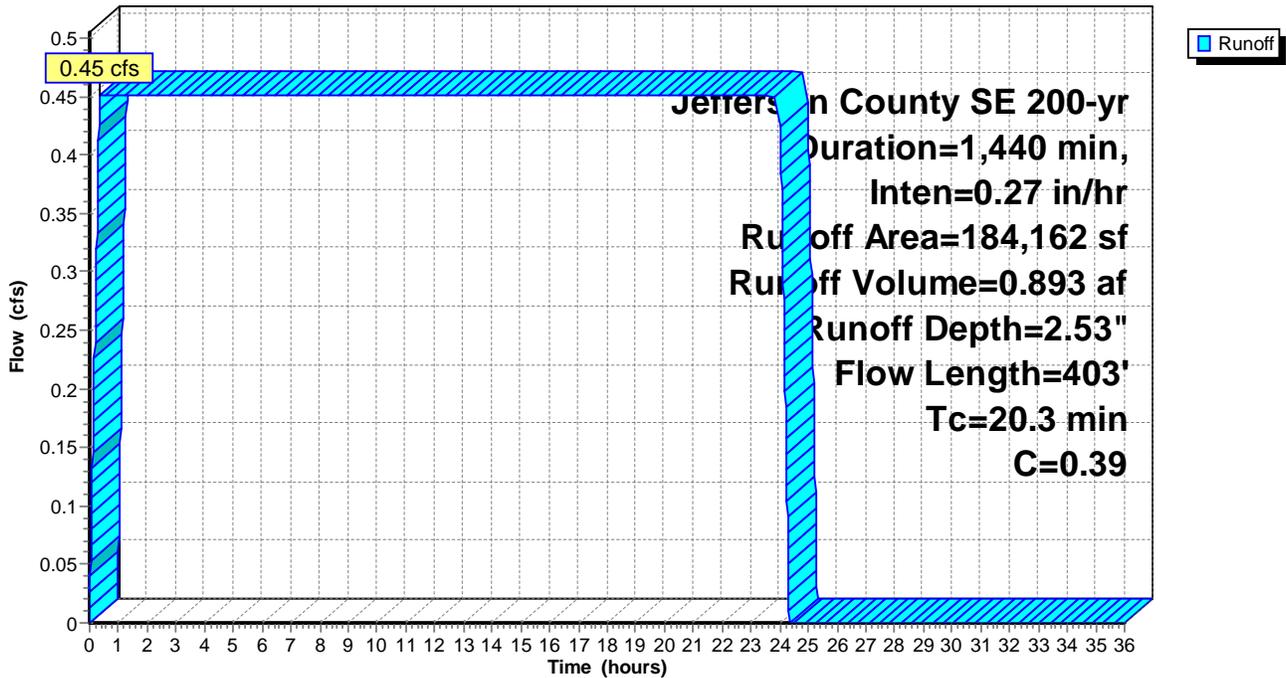
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 200-yr Duration=1,440 min, Inten=0.27 in/hr

Area (sf)	C	Description
46,393	0.96	Pavement and Roof "D"
137,769	0.20	Lawn Area "D"
184,162	0.39	Weighted Average
137,769		74.81% Pervious Area
46,393		25.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	94	0.0240	0.11		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
5.9	303	0.0149	0.85		Shallow Concentrated Flow, Shallow Concentrated Short Grass Pasture Kv= 7.0 fps
20.3	403	Total			

Subcatchment 3: PR DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

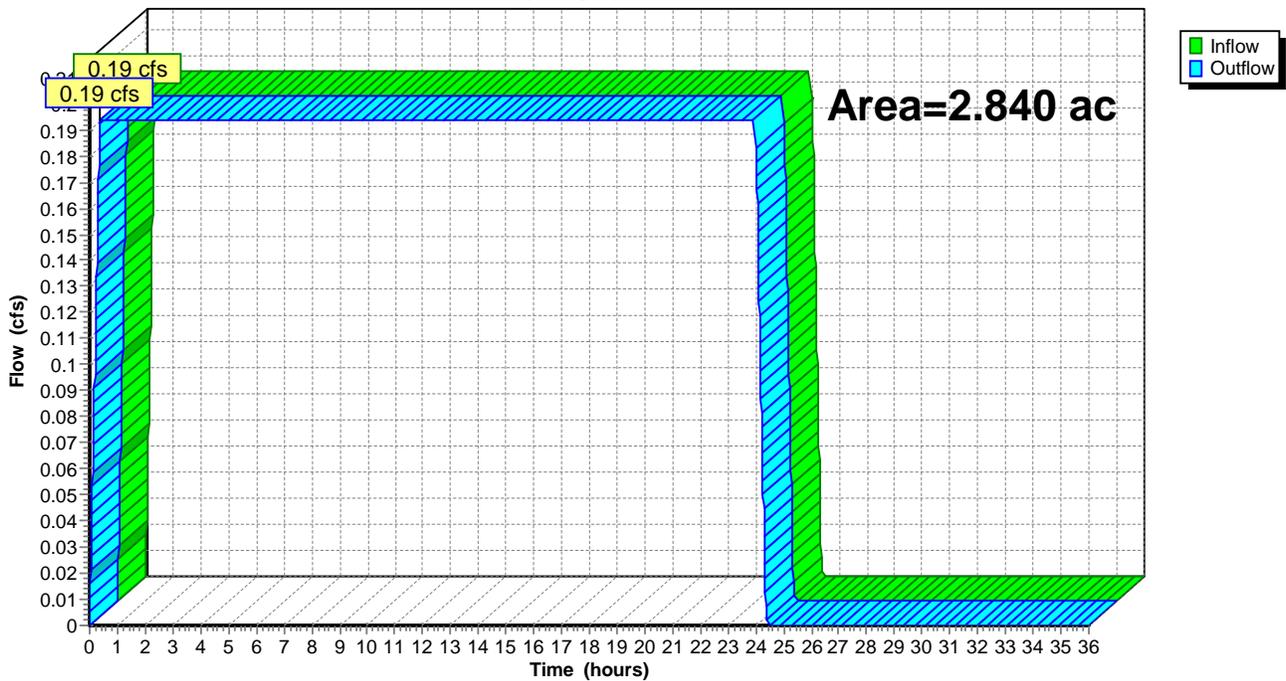
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 1.63" for 200-yr event
Inflow = 0.19 cfs @ 0.37 hrs, Volume= 0.385 af
Outflow = 0.19 cfs @ 0.37 hrs, Volume= 0.385 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

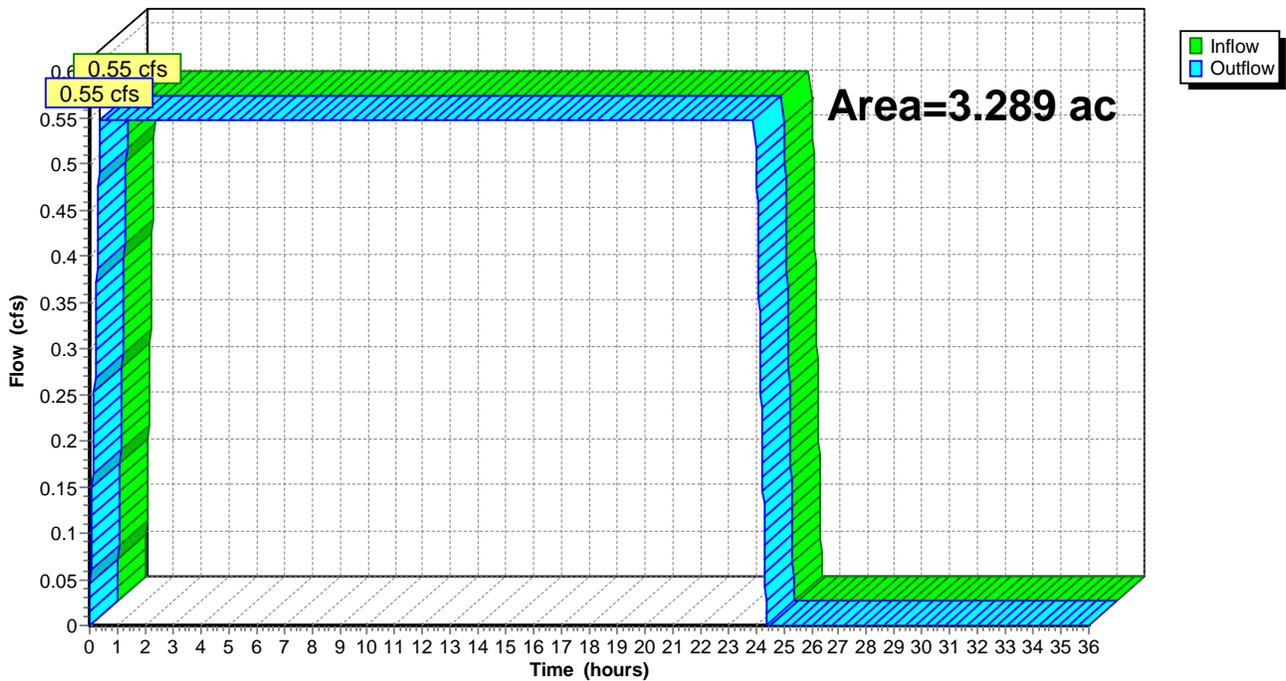
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.289 ac, 53.71% Impervious, Inflow Depth = 3.96" for 200-yr event
Inflow = 0.55 cfs @ 0.37 hrs, Volume= 1.087 af
Outflow = 0.55 cfs @ 0.37 hrs, Volume= 1.087 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

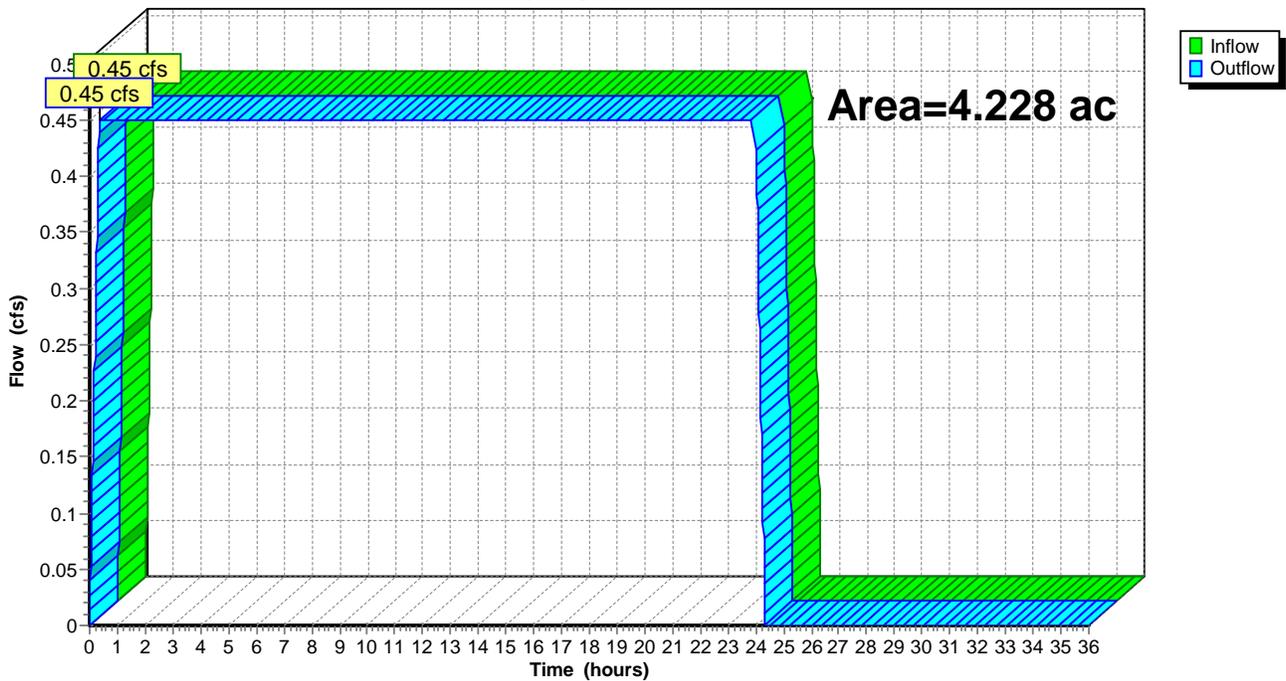
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.228 ac, 25.19% Impervious, Inflow Depth = 2.53" for 200-yr event
Inflow = 0.45 cfs @ 0.34 hrs, Volume= 0.893 af
Outflow = 0.45 cfs @ 0.34 hrs, Volume= 0.893 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



2013-166.002 Proposed

Jefferson County SE 500-yr Duration=1,440 min, Inten=0.33 in/hr

Prepared by {enter your company name here}

Printed 2/11/2020

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Page 46

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: PR DA 1

Runoff Area=123,710 sf 0.00% Impervious Runoff Depth=2.00"
Flow Length=435' Tc=21.8 min C=0.25 Runoff=0.24 cfs 0.473 af

Subcatchment 2: PR DA 2

Runoff Area=143,274 sf 53.71% Impervious Runoff Depth=4.87"
Flow Length=689' Tc=22.1 min C=0.61 Runoff=0.67 cfs 1.336 af

Subcatchment 3: PR DA 3

Runoff Area=184,162 sf 25.19% Impervious Runoff Depth=3.12"
Flow Length=403' Tc=20.3 min C=0.39 Runoff=0.55 cfs 1.098 af

Reach DP1: Northern Discharge Point

Inflow=0.24 cfs 0.473 af
Outflow=0.24 cfs 0.473 af

Reach DP2: Eastern Discharge Point

Inflow=0.67 cfs 1.336 af
Outflow=0.67 cfs 1.336 af

Reach DP3: Western Discharge Point

Inflow=0.55 cfs 1.098 af
Outflow=0.55 cfs 1.098 af

Total Runoff Area = 10.357 ac Runoff Volume = 2.906 af Average Runoff Depth = 3.37"
72.66% Pervious = 7.525 ac 27.34% Impervious = 2.831 ac

Summary for Subcatchment 1: PR DA 1

Runoff = 0.24 cfs @ 0.37 hrs, Volume= 0.473 af, Depth= 2.00"

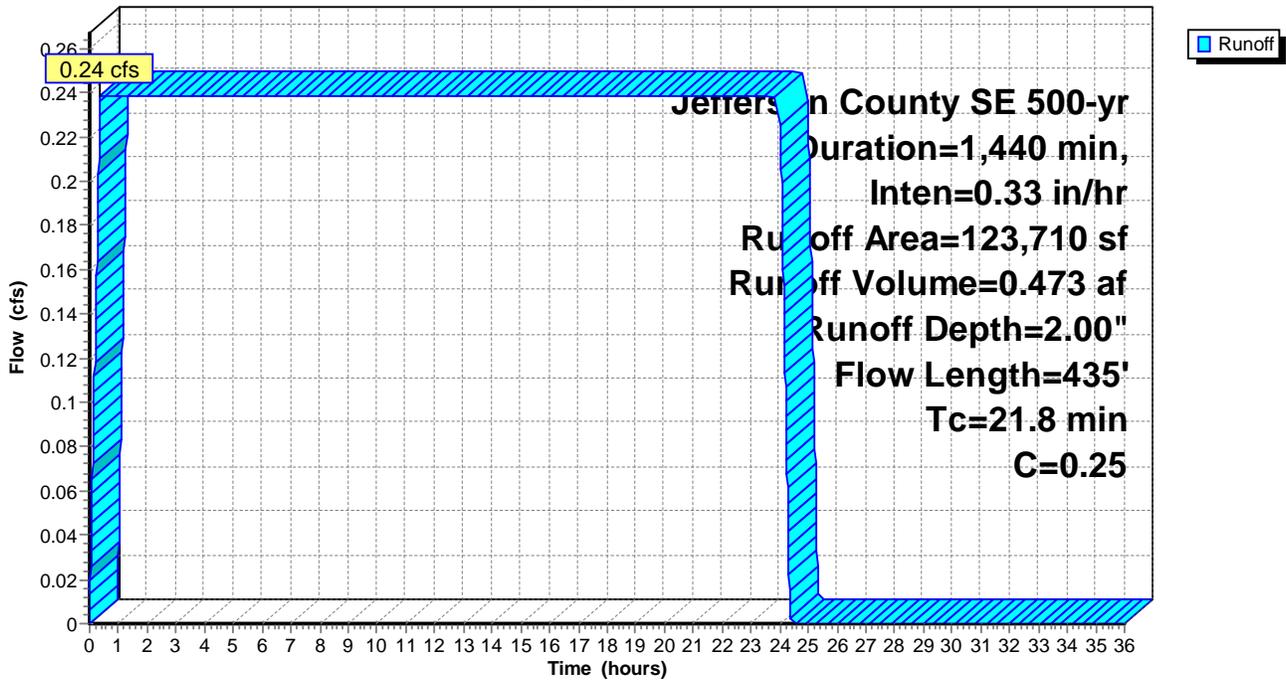
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 500-yr Duration=1,440 min, Inten=0.33 in/hr

Area (sf)	C	Description
7,428	0.75	Gravel Surface "D"
47,165	0.25	Woods Fair "D"
69,117	0.20	Lawn Area "D"
123,710	0.25	Weighted Average
123,710		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0242	0.11		Sheet Flow, Sheet Flow - Lawn Area
					Grass: Dense n= 0.240 P2= 2.50"
6.8	335	0.0272	0.82		Shallow Concentrated Flow, Shallow - Wooded Area
					Woodland Kv= 5.0 fps
21.8	435	Total			

Subcatchment 1: PR DA 1

Hydrograph



Summary for Subcatchment 2: PR DA 2

Runoff = 0.67 cfs @ 0.37 hrs, Volume= 1.336 af, Depth= 4.87"

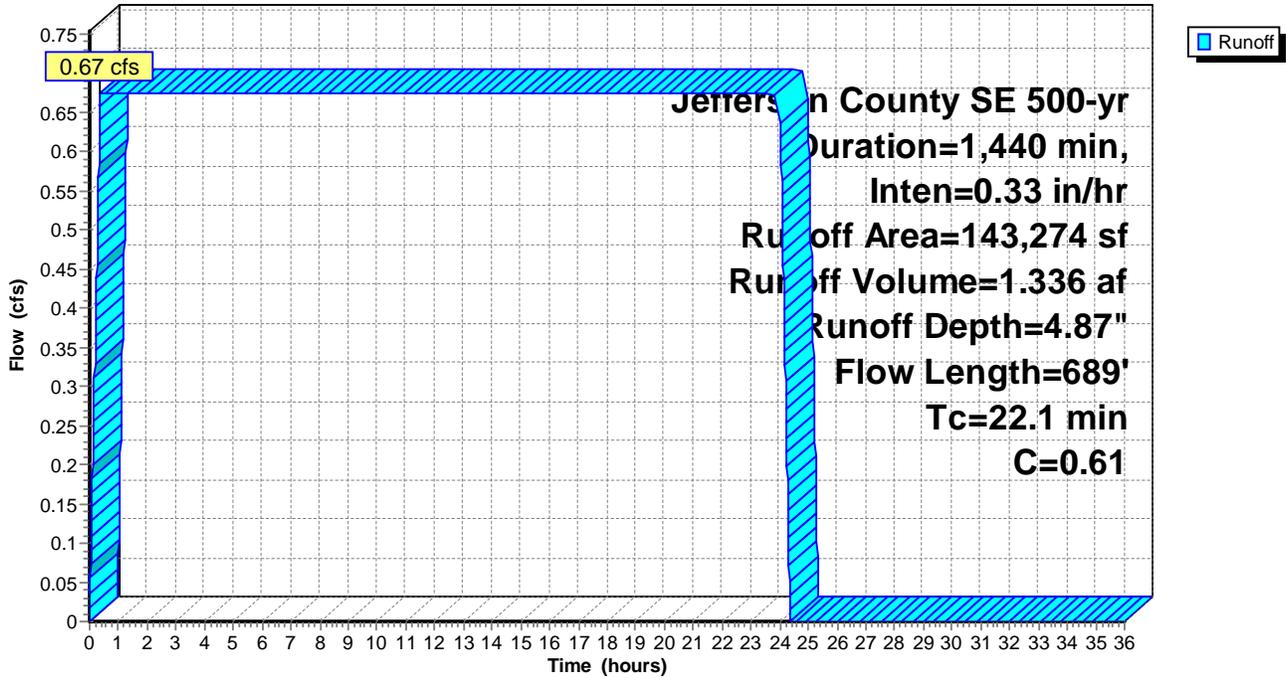
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 500-yr Duration=1,440 min, Inten=0.33 in/hr

Area (sf)	C	Description
76,946	0.96	Pavement and Roof "D"
6,618	0.25	Woods, Fair, "D"
59,710	0.20	Lawn Area "D"
143,274	0.61	Weighted Average
66,328		46.29% Pervious Area
76,946		53.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	94	0.0204	0.10		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
1.0	58	0.0186	0.95		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.3	34	0.1970	2.22		Shallow Concentrated Flow, Shallow - Wooded Area Woodland Kv= 5.0 fps
1.1	225	0.0260	3.27		Shallow Concentrated Flow, Shallow - Huntington Street Paved Kv= 20.3 fps
4.2	232	0.0170	0.91		Shallow Concentrated Flow, Shallow - Lawn Area Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0180	3.16	2.49	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.025 Corrugated metal
22.1	689	Total			

Subcatchment 2: PR DA 2

Hydrograph



Summary for Subcatchment 3: PR DA 3

Runoff = 0.55 cfs @ 0.34 hrs, Volume= 1.098 af, Depth= 3.12"

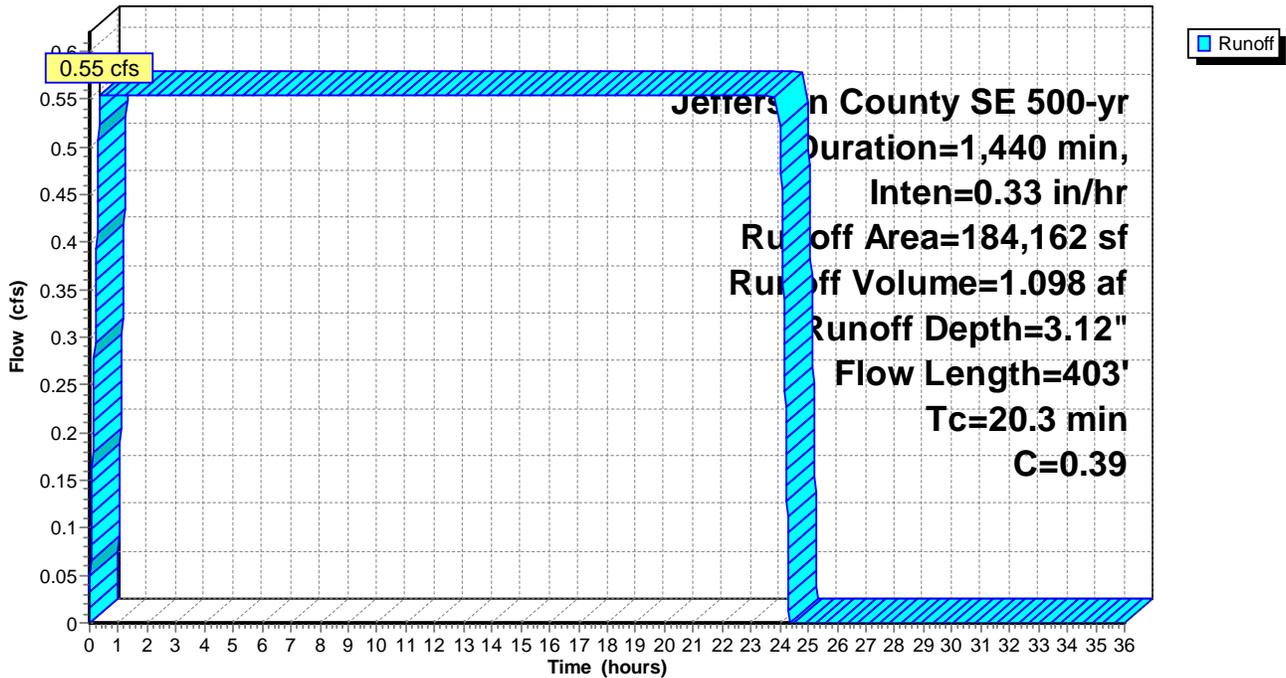
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Jefferson County SE 500-yr Duration=1,440 min, Inten=0.33 in/hr

Area (sf)	C	Description
46,393	0.96	Pavement and Roof "D"
137,769	0.20	Lawn Area "D"
184,162	0.39	Weighted Average
137,769		74.81% Pervious Area
46,393		25.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	94	0.0240	0.11		Sheet Flow, Sheet Flow - Lawn Area Grass: Dense n= 0.240 P2= 2.50"
0.1	6	0.0200	0.69		Sheet Flow, Sheet Flow - Asphalt Smooth surfaces n= 0.011 P2= 2.50"
5.9	303	0.0149	0.85		Shallow Concentrated Flow, Shallow Concentrated Short Grass Pasture Kv= 7.0 fps
20.3	403	Total			

Subcatchment 3: PR DA 3

Hydrograph



Summary for Reach DP1: Northern Discharge Point

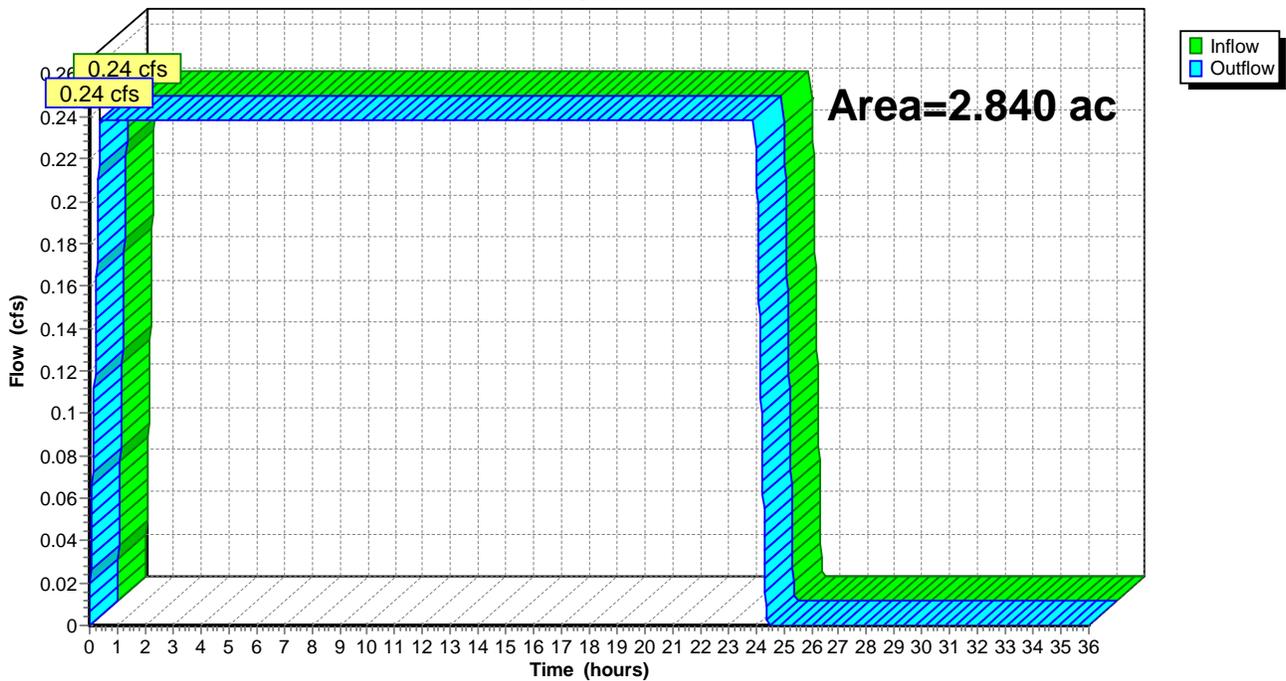
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth = 2.00" for 500-yr event
Inflow = 0.24 cfs @ 0.37 hrs, Volume= 0.473 af
Outflow = 0.24 cfs @ 0.37 hrs, Volume= 0.473 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP1: Northern Discharge Point

Hydrograph



Summary for Reach DP2: Eastern Discharge Point

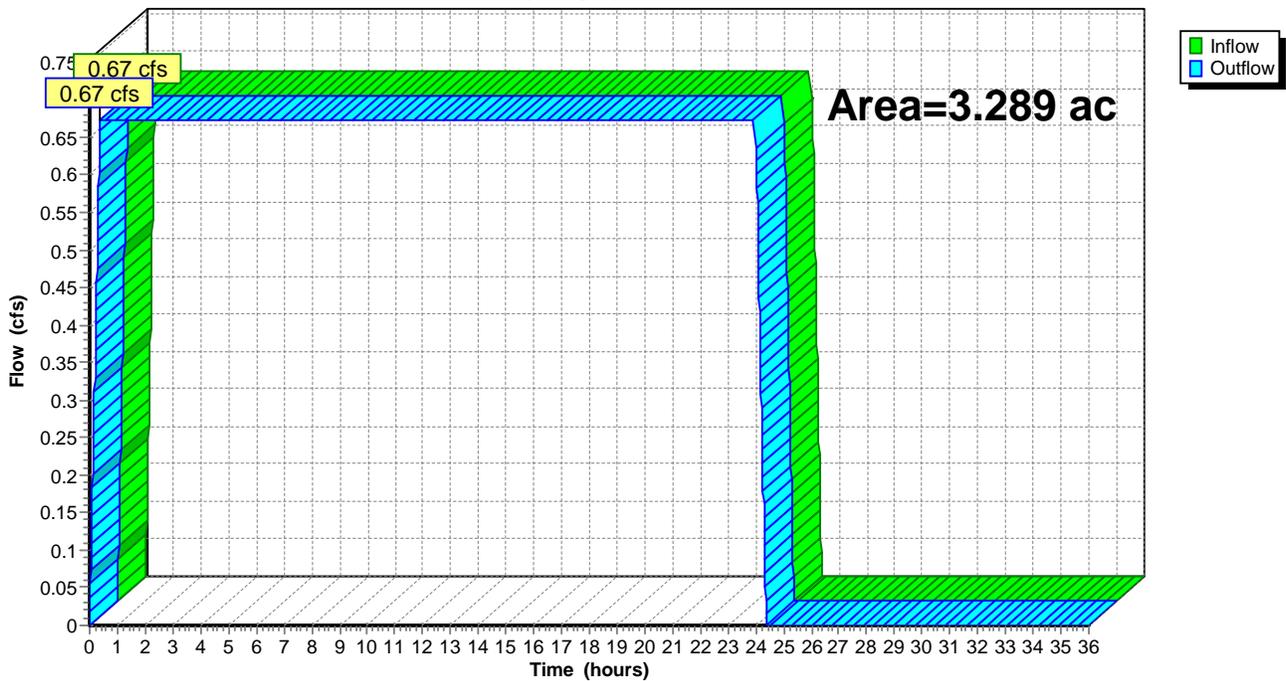
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.289 ac, 53.71% Impervious, Inflow Depth = 4.87" for 500-yr event
Inflow = 0.67 cfs @ 0.37 hrs, Volume= 1.336 af
Outflow = 0.67 cfs @ 0.37 hrs, Volume= 1.336 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP2: Eastern Discharge Point

Hydrograph



Summary for Reach DP3: Western Discharge Point

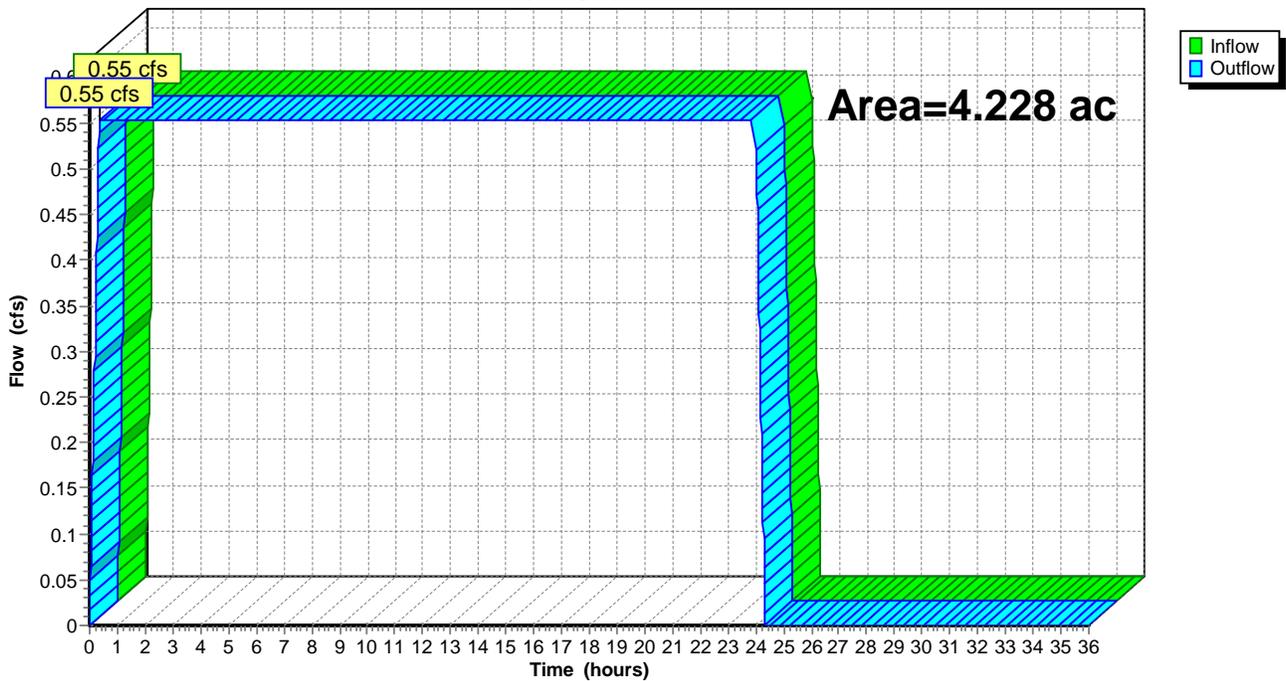
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.228 ac, 25.19% Impervious, Inflow Depth = 3.12" for 500-yr event
Inflow = 0.55 cfs @ 0.34 hrs, Volume= 1.098 af
Outflow = 0.55 cfs @ 0.34 hrs, Volume= 1.098 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach DP3: Western Discharge Point

Hydrograph



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LEGEND	EXISTING	PROPOSED
5' CONTOUR	---	---
1' CONTOUR	---	---
PROPERTY LINE	PL	PL
RIGHT OF WAY	---	---
SETBACK	---	---
ZONING LINE	---	---
BUILDING	---	---
ASPHALT PAVEMENT	---	---
EDGE OF GRAVEL	---	---
CURB	---	---
SIDEWALK	---	---
TREE LINE	---	---
FENCE	---	---
WATERLINE	W _x	W _x
SANITARY SEWER	SS _x	SS _x
STORM SEWER	SS _x	SS _x
FOUNDATION DRAIN	FD	FD
OVERHEAD UTILITY	E _x	U _x
UNDERGROUND UTILITY	E _x	U _x
ELECTRIC	E _x	E _x
TELEPHONE	T _x	T _x
GAS	G	G
SANITARY MANHOLE	(S)	(S)
STORM MANHOLE	(D)	(D)
CATCH BASIN	(C)	(C)
FIRE HYDRANT	(F)	(F)
WATER VALVE	(V)	(V)
CURB STOP	(CS)	(CS)
UTILITY POLE	(P)	(P)
ELECTRIC MANHOLE	(EM)	(EM)
TELEPHONE MANHOLE	(TM)	(TM)
GAS VALVE	(GV)	(GV)
LIGHT POLE	(LP)	(LP)

TAX MAP PARCEL 5-26-110.100
BSF HOUSING DEVELOPMENT FUND C
ZONING: PLANNED DEVELOPMENT

PR DA#1
2.84 Acres
T.C.=22 min.

TAX MAP PARCEL 5-26-103.007
PARKSIDE BIBLE CHURCH
ZONING: LIGHT INDUSTRY

PR DA#3
3.71 Acres
T.C.=20 min.

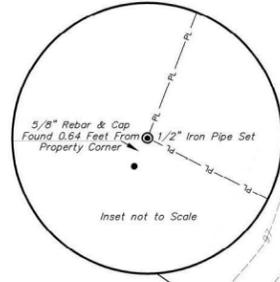
PR DA#2
3.21 Acres
T.C.=22 min.

TAX MAP PARCEL 5-26-203.000
CITY OF WATERTOWN
ZONING: WATERFRONT

TAX MAP PARCEL 5-26-103.004
STEBBINS ENGMANF CO
ZONING: LIGHT INDUSTRY

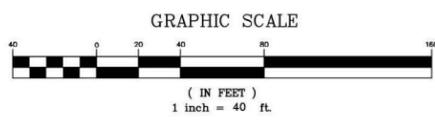
DRAINAGE MAP LEGEND (PROPOSED)

---	DRAINAGE AREA BOUNDARY
---	TIME OF CONCENTRATION PATH



TAX MAP PARCEL 5-26-103.002
SUPPLY CO INC AMERICAN BUILDERS & CONTRACTORS
ZONING: LIGHT INDUSTRY

**PROGRESS PRINT
NOT FOR CONSTRUCTION**



B.M.
600 Nail Set in P.P.
N.M. 11 Elev. = 95.96



522 Bradley Street
Watertown, New York 13601

aubertinecurrier.com

Phone: (315)782-2005
Fax: (315)782-1472

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AUBERTINE and CURRIER ARCHITECTS, ENGINEERS & LAND SURVEYORS, PLLC

**PARKSIDE BIBLE CHURCH
NEW COMMUNITY BUILDING**
491 EASTERN BLVD
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO.	2013-166.002
SCALE	1"=40'
DRAWN BY	JLY
CHECKED BY	MRM
ISSUE DATES	02/11/2020

PROPOSED DRAINAGE AREA MAP

PR-1

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APPENDIX #3

PARKING AND TRAFFIC CALCULATIONS

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522 BRADLEY STREET
 WATERTOWN, NY 13601
 TEL: (315) 782-2005
 FAX: (315) 782-1472
 www.AubertineCurrier.com

CALCULATION SHEET

Project Number: 2013-166.002 Date: _____
 Project Name: Parkside Bible Church Page: _____ Of: _____
 Location: 491 Eastern Blvd. Calc'd By: _____

Trip Generation Calculations

Trip Generation ITE 7th Edition

Land use 560: church

Existing Building = 14,100 SF
 Proposed Building = 9,500 SF
 total = 23,600 SF

Average Vehicle trip ends vs. 1,000 SF of Floor Area

- Weekday AM Peak hour, 50% entering, 50% exiting

Average rate = 1.28 trips/1000 SF, Gross Floor Area

existing = $1.28 \times 14.1 = 18$ trips \rightarrow 9 entering, 9 exiting

Proposed = $1.28 \times 23.6 = 30$ trips \rightarrow 15 entering, 15 exiting

- Weekday PM Peak hour, 59% entering, 41% exiting

$L_n(T) = 0.49 \ln(x) + 1.85 \rightarrow T = e^{0.49 \ln(x) + 1.85}$

existing = $T = e^{0.49 \ln(14.1) + 1.85} = 24$ trips \rightarrow 14 entering, 10 exiting

Proposed = $T = e^{0.49 \ln(23.6) + 1.85} = 30$ trips \rightarrow 18 entering, 12 exiting

Average Vehicle trip ends vs. Seats

- Saturday Peak hour, 43% entering, 57% exiting

Average rate = 0.60 trips/seat

existing = $0.60 \times 350 = 210$ trips \rightarrow 90 entering, 120 exiting

Proposed = $0.60 \times 444 = 266$ trips \rightarrow 114 entering, 152 exiting

- Sunday Peak hour, 52% entering, 48% exiting

$T = 0.61(x) + 11.56$

existing = $T = 0.61(350) + 11.56 = 225$ trips \rightarrow 117 entering, 108 exiting

Proposed = $T = 0.61(444) + 11.56 = 282$ trips \rightarrow 147 entering, 135 exiting

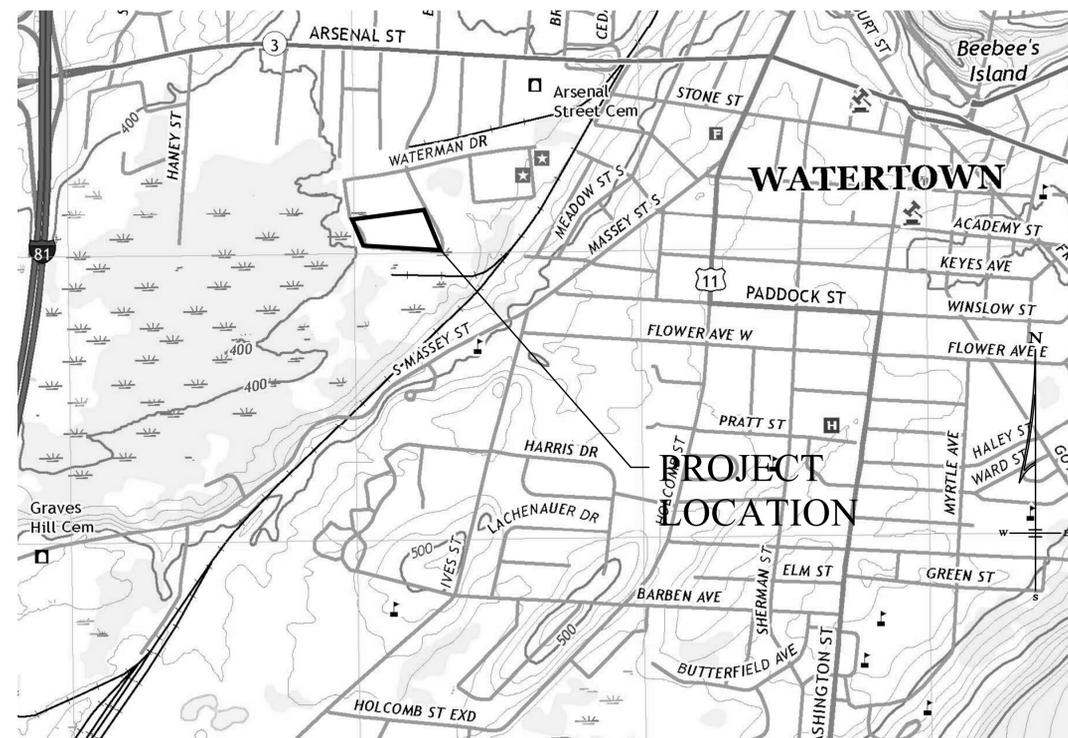
PARKSIDE BIBLE CHURCH MULTI-PURPOSE COMMUNITY BUILDING

491 EASTERN BOULEVARD

CITY OF WATERTOWN

JEFFERSON COUNTY, STATE OF NEW YORK

PRELIMINARY SITE PLANS: 03/03/2020



OWNER

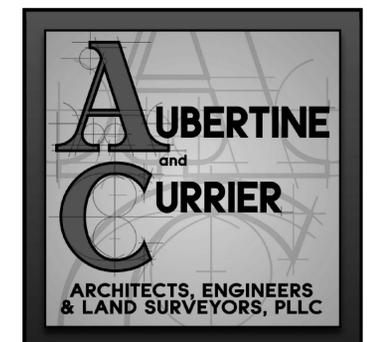
PARKSIDE BIBLE CHURCH
ATTN: MIKE GERHARDT, SENIOR PASTOR
491 EASTERN BOULEVARD
WATERTOWN, NEW YORK 13601
TELE: (315) 782-6534

CIVIL/SITE ENGINEER

AUBERTINE and CURRIER, PLLC
522 BRADLEY STREET
WATERTOWN, NEW YORK 13601
TELE: (315) 782-2005
FAX: (315) 782-1472
www.aubertinecurrier.com

INDEX OF DRAWINGS

CD-101	EXISTING CONDITIONS AND DEMOLITION PLAN
CS-101	SITE PLAN
CG-101	GRADING AND UTILITY PLAN
CS-500	SITE DETAILS
CT-101	UTILITY DETAILS
A100	WATER DETAILS
A200	ESC AND DRAINAGE DETAILS
CT-101	TRAFFIC CIRCULATION PLAN
A100	FLOOR PLANS
A200	EXTERIOR ELEVATIONS



LEGEND	EXISTING	PROPOSED
5' CONTOUR	---	---
1' CONTOUR	---	---
PROPERTY LINE	PL	PL
RIGHT OF WAY	---	---
SETBACK	---	---
ZONING LINE	---	---
BUILDING	---	---
ASPHALT PAVEMENT	---	---
EDGE OF GRAVEL	---	---
CURB	---	---
SIDEWALK	---	---
TREE LINE	---	---
FENCE	---	---
WATERLINE	W _x	W
SANITARY SEWER	SS _x	SS
STORM SEWER	SO _x	SO
FOUNDATION DRAIN	FD _x	FD
OVERHEAD UTILITY	OU _x	OU
UNDERGROUND UTILITY	U _x	U
ELECTRIC	E _x	E
TELEPHONE	T _x	T
GAS	G	G
SANITARY MANHOLE	⊙	⊙
STORM MANHOLE	⊙	⊙
CATCH BASIN	⊙	⊙
FIRE HYDRANT	⊙	⊙
WATER VALVE	⊙	⊙
CURB STOP	⊙	⊙
UTILITY POLE	⊙	⊙
ELECTRIC MANHOLE	⊙	⊙
TELEPHONE MANHOLE	⊙	⊙
GAS VALVE	⊙	⊙
LIGHT POLE	⊙	⊙

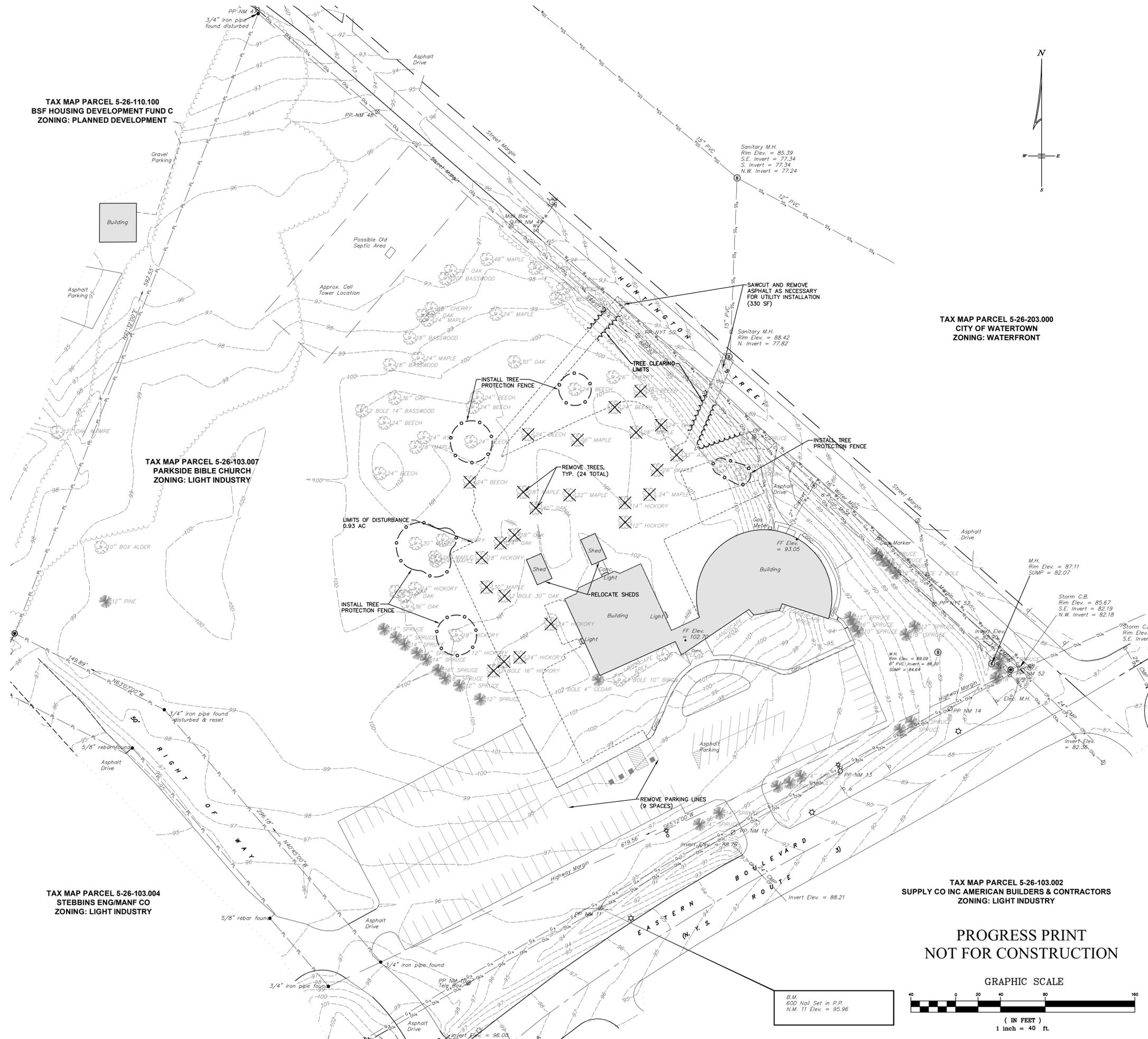
GENERAL NOTES:

- UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN. PRIOR TO CONSTRUCTION CONTACT UNDERGROUND UTILITIES CALL CENTER OF NEW YORK FOR EXACT LOCATION OF ALL UNDERGROUND UTILITIES. (1-800-962-7862). CONTRACTOR IS RESPONSIBLE FOR LOCATING AND WORKING WITH THE APPROPRIATE UTILITY COMPANIES PRIOR TO CONSTRUCTION.
- THE ONSITE TOPOGRAPHIC, UTILITY, AND PLANIMETRIC SURVEY, FOR THE PROJECT AREA WAS PREPARED BY GYMO P.C. ON 05/06/2008, AND 05/06/2008. VERTICAL AND HORIZONTAL DATUM ARE ASSUMED BOUNDARY REFERENCE IS VECTED BASED ON A MAP TITLED "SURVEY & TOPOGRAPHIC MAP OF THE LAND OF PARKSIDE BIBLE CHURCH" DATED 05/19/2008.
- ALL OUT-OF-SCOPE AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS WILL BE RESTORED TO CONDITIONS EQUAL TO OR BETTER THAN THAT PRIOR TO CONSTRUCTION. OUTSIDE OF PROPERTY BOUNDARIES AND EASEMENT AREAS THE CONTRACTOR IS REMINDED THAT HE MUST OBTAIN WRITTEN AUTHORIZATION TO USE PRIVATE PROPERTY AND ASSUMES ALL LIABILITY HIMSELF.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CHARACTERISTICS AND EXTENT OF SUBSURFACE SOILS, ROCK, WATER TABLE LEVELS, ETC., PRIOR TO BIDDING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND BONDS NECESSARY TO OBTAIN SAID PERMITS WHERE APPLICABLE.
- SITE CONTRACTOR TO PROVIDE EROSION AND DUST CONTROL AS REQUIRED.
- A LICENSED LAND SURVEYOR SHALL BE RETAINED FOR ALL UTILITY AND FIELD STAKEOUT AT THE CONTRACTOR'S EXPENSE.
- PAVED AREAS WILL BE SAWCUT PRIOR TO EXCAVATION AND PAVING OPERATIONS. SAW CUT AREAS WILL BE TACK COATED PRIOR TO PAVING. TACK COAT SHALL MEET THE REQUIREMENTS OF ASPHALT OF ASPHALT EMULSION FOR TACK COAT, NYS DOT TABLE 702.9.
- CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION UNTIL ESTABLISHMENT OF VEGETATIVE COVER. RUN-OFF CONTAINING SEDIMENTS FROM DISTURBED AREAS OF THE SITE SHALL NOT BE ALLOWED DIRECTLY INTO NATURAL STREAM CHANNELS.
- ALL TREES AND WETLANDS TO REMAIN SHALL BE PROTECTED BY THE CONTRACTOR. CONSTRUCTION ACTIVITIES ADJACENT TO TREES SHALL BE CONDUCTED TO REDUCE THE IMPACT TO TREES TO THE MAXIMUM EXTENT PRACTICAL. ANY DAMAGE TO EXISTING TREES SHALL BE REPAIRED OR THE TREE REPLACED, AS DIRECTED BY THE OWNER AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL PERFORM ALL ROADWAY CONNECTION WORK IN ACCORDANCE WITH NYS DOT SPECIFICATIONS. ALL ROADWAY WORK SHALL BE IN ACCORDANCE WITH NYS DOT MAINTENANCE AND PROTECTION OF TRAFFIC REGULATIONS, INCLUDING FLAGMEN, BARRICADES, WARNING SIGNS, ETC., WHERE WANTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND PROPER DISPOSAL, AT A NYS DEC ACCEPTABLE LOCATION, OF ALL MATERIALS NOT REUSED AS TRENCH BACKFILL. EXCAVATIONS SHOWN ON DRAWINGS, ALL UNSTABLE OR UNSUITABLE MATERIAL SHALL BE EXCAVATED AND REMOVED TO SUCH DEPTH AS REQUIRED TO PROVIDE SUFFICIENT BEARING CAPACITY. OVEREXCAVATED AREAS SHALL BE BACKFILLED WITH SUITABLE MATERIAL.
- COMPACTION OF PIPE BEDDING AND BACKFILL MATERIAL SHALL BE BY MEANS OF HAND-GUIDED POWER DRIVEN OR DRUM-TYPE OR PLATE TAMPERS. BACKFILLING SHOULD PROCEED IN ACCORDANCE WITH LIFT THICKNESSES AND COMPACTION REQUIREMENTS AS SHOWN ON THE DRAWINGS. UNLESS OTHERWISE NOTED ON THE DRAWINGS, COMPACTION REQUIREMENTS REFER TO PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM STANDARD D1557 METHOD "C". CARE SHOULD BE TAKEN TO SHAPE PIPE BEDDING TO FIT THE LOWER PART OF THE PIPE. BACKFILLING AND COMPACTION SHOULD PROGRESS EVENLY ALONG THE PIPE SIDEWALLS AND TO THE TOP OF PIPE BEDDING.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OF DIMENSIONS, ELEVATIONS AND LOCATIONS DURING PRECONSTRUCTION FIELD VERIFICATION. SUCH INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR VERIFICATION OR MODIFICATION OF THE PLANS.
- THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORD DRAWINGS INCLUDING, AS A MINIMUM, THE FOLLOWING INFORMATION AS WELL AS ALL REQUIREMENTS OF THE SPECIFICATION:
 - RECORD OF ALL UTILITIES ENCOUNTERED IN TRENCH EXCAVATION. INFORMATION SHALL INCLUDE DIAMETER OF UTILITY, DEPTH OF BURIAL AND LOCATION WITH REFERENCE TO NEAREST STRUCTURE SHOWN ON DRAWINGS. THIS INFORMATION SHALL BE KEPT CURRENT ON A WEEKLY BASIS. FAILURE TO DO SO MAY RESULT IN WITHHOLDING OF PAYMENTS.
 - DISTANCE TIES TO ALL MANHOLES, CLEANOUTS, BENDS AND CORPORATION STOPS.
 - UTILITY REPAIRS, SIDEWALK, AND DRIVEWAY REPLACEMENTS CENTERLINE.
 - STATIONS OF BENDS, CLEANOUTS, VALVES AND CORPORATION STOPS.
 - DENOTE BENCH MARK REFERENCE USED.
 - PERIODIC OFFSETS.
 - RECORD DETAILS NOT SHOWN ON THE ORIGINAL CONTRACT DOCUMENTS. ANY FIELD CHANGES OF DIMENSIONS AND DETAILS AND ANY CHANGES MADE BY CHANGE ORDER OR FIELD ORDER.
 - CERTIFICATE OF SUBSTANTIAL COMPLETION SHALL NOT BE ISSUED UNTIL AS-BUILT INFORMATION IS ACCEPTABLE.
 - PROVIDE TWO (2) SETS OF FINAL COMPLETE RECORD DRAWINGS. CONTRACTOR SHALL FURNISH AS-BUILT DATA ON PLAN SHEETS.
- ALL WATER MAIN AND SERVICE WORK MUST BE COORDINATED WITH THE CITY OF WATERTOWN WATER DEPARTMENT. WATER DEPARTMENT REQUIREMENTS SUPERCEDE ALL OTHER PLANS AND SPECIFICATIONS PROVIDED.
- ALL WORK TO BE PERFORMED WITHIN THE CITY OF WATERTOWN MARGIN WILL REQUIRE SIGN-OFF FROM AN ENGINEER LICENSED IN THE STATE OF NEW YORK THAT THE WORK WAS BUILT ACCORDING TO THE APPROVED SITE PLAN AND APPLICABLE CITY OF WATERTOWN STANDARDS. COMPACTION TESTING WILL BE REQUIRED FOR ALL WORK TO BE PERFORMED WITHIN THE CITY OF WATERTOWN MARGIN AND MUST BE SUBMITTED TO THE CITY OF WATERTOWN CODES DEPARTMENT.
- UPON COMPLETION OF STORM SEWER FACILITIES AND ESTABLISHMENT OF VEGETATION, THE NEW AND EXISTING STORM SYSTEMS RECEIVING RUNOFF FROM THIS SITE SHALL BE CLEANED OF DEBRIS. ONLY AT THIS TIME SHALL THE EROSION AND SEDIMENTATION CONTROL MEASURES BE REMOVED.

TAX MAP PARCEL 5-26-110.100
BSF HOUSING DEVELOPMENT FUND C
ZONING: PLANNED DEVELOPMENT

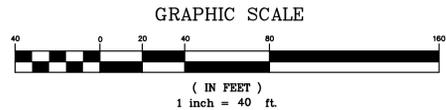
TAX MAP PARCEL 5-26-103.007
PARKSIDE BIBLE CHURCH
ZONING: LIGHT INDUSTRY

TAX MAP PARCEL 5-26-103.004
STEBBINS ENGMAN CO
ZONING: LIGHT INDUSTRY



TAX MAP PARCEL 5-26-103.002
SUPPLY CO INC AMERICAN BUILDERS & CONTRACTORS
ZONING: LIGHT INDUSTRY

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NOT FOR CONSTRUCTION



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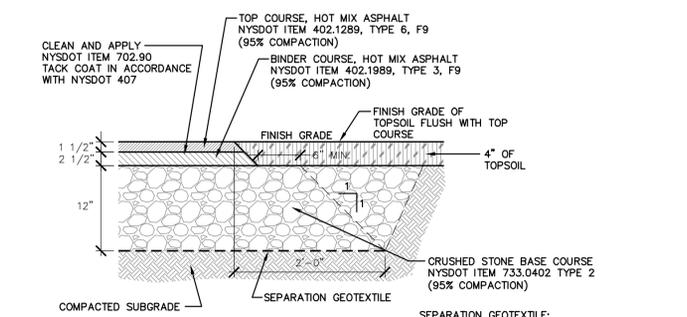


PARKSIDE BIBLE CHURCH
MULTI-PURPOSE COMMUNITY BUILDING
491 EASTERN BLVD
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO:	2015-166.002
SCALE:	1"=40'
DRAWN BY:	JLY
CHECKED BY:	MRM
ISSUE DATES:	02/11/2020 03/03/2020

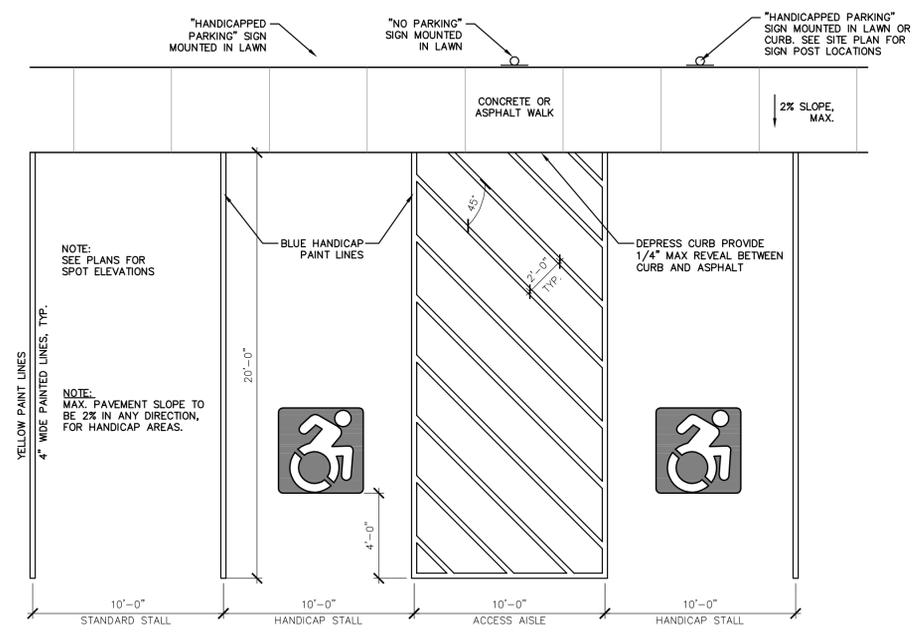
EXISTING CONDITIONS AND DEMOLITION PLAN

CD-101

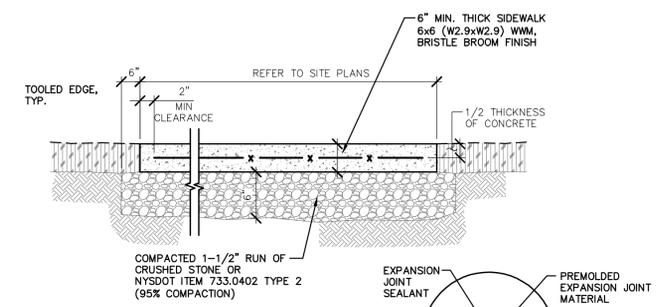


- NOTES:**
- ALL HMA COMPACTION WILL BE TO 95% MADMTD (MIXTURE'S AVERAGE DAILY MAXIMUM THEORETICAL DENSITY) PER NYS DOT SPECIFICATIONS FOR HMA COMPACTION 402-3.07. BASE COURSE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DENSITY.
 - FIELD VERIFICATION OF COMPACTION SHALL BE BY NUCLEAR DENSITY TESTING METHODS.
- SEPARATION GEOTEXTILE:**
- WOVEN, MINIMUM CRITERIA AS FOLLOWS:
1. NYSDOT 737.01, STRENGTH CLASS 2
2. MIN. 247 LB GRAB STRENGTH AT $\leq 50\%$ ELONGATION, ASTM D-4632
3. MIN. 495 LB PUNCTURE, ASTM D-6241
4. MAX. NO.30 SIEVE, APPARENT OPENING (AOS), ASTM D-4751
5. MIN. 0.02 sec⁻¹ PERMITIVITY, ASTM D-4491

1 TYPICAL ASPHALT PAVEMENT DETAIL
NOT TO SCALE

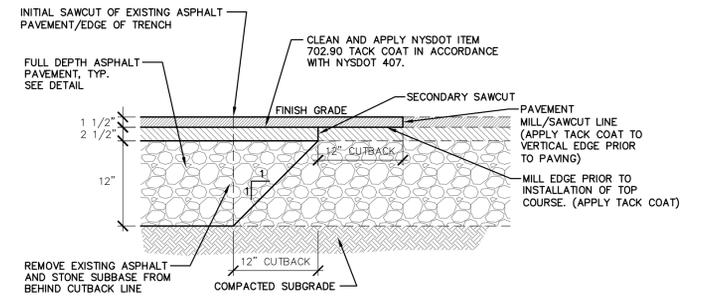


4 TYPICAL PARKING STALL MARKINGS DETAIL
NOT TO SCALE

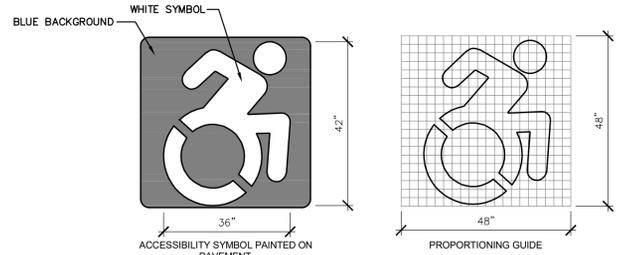


- NOTES:**
- CONCRETE WALK EXPANSION JOINTS SHALL BE AT 20' O.C. MAX.
 - CONTRACTION JOINTS TO BE SPACED EVENLY AT 4' TO 6' O.C. MAX. BOTH DIRECTIONS. CONTRACTION JOINT SPACING SHALL BE SPACED SYMMETRICALLY BASED UP THE SIDEWALK WIDTH BEING CONSTRUCTED. (I.E. 6' WIDE WALK - 6' CONTROL JOINTS, 5' WIDE WALK - 5' CONTROL JOINTS, 8' WIDE WALK - 4' CONTROL JOINTS)
 - EXPANSION JOINTS TO BE 1/2" WIDE PREMOLDED CLOSED-CELL POLYPROPYLENE FOAM EXPANSION JOINT MATERIAL CONFORMING TO ASTM D8139 OR D7174.
 - EXPANSION JOINT SEALANT SHALL BE ELASTIC POLYURETHANE SEALANT CONFORMING TO ASTM C920.
 - CONTROL/CONTRACTION JOINTS SHALL BE SAW CUT JOINT WITH A DEPTH OF 1/4 THE CONCRETE THICKNESS.
 - PROVIDE TOOLED EDGE ON ALL OUTER EDGES OF CONCRETE WALKS.
 - CONCRETE SHALL BE MIN. 4,500 PSI, MAX W/C RATIO 0.45, 3"-5" SLUMP, AIR CONTENT 4-7%.

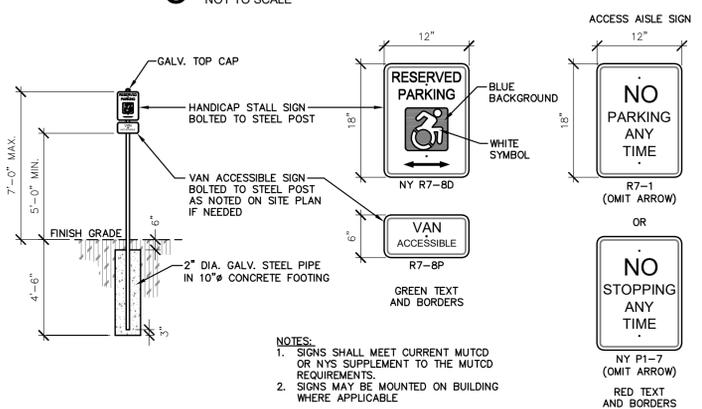
6 TYPICAL CONCRETE WALK DETAIL
NOT TO SCALE



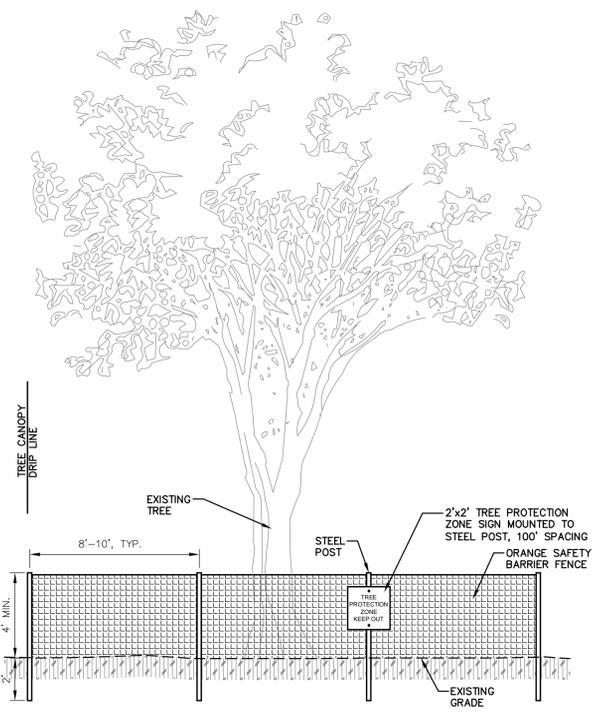
2 TYPICAL ASPHALT PAVEMENT JOINT DETAIL
NOT TO SCALE



5 TYPICAL HANDICAP SYMBOL DETAIL
NOT TO SCALE

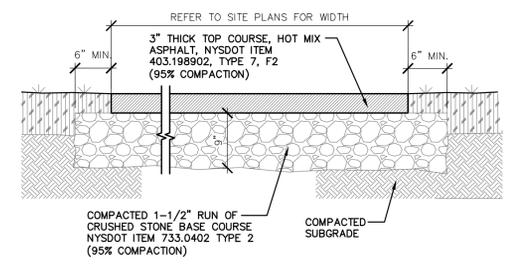


5 TYPICAL HANDICAP SIGNAGE DETAIL
NOT TO SCALE



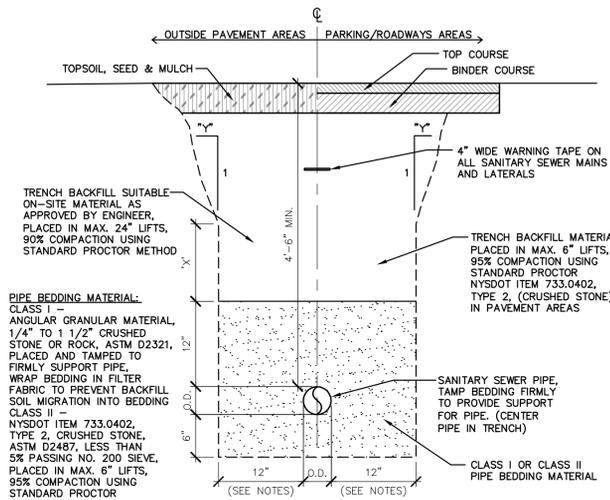
- NOTES:**
- INSTALL TREE PROTECTION FENCE AT EDGE OF DISTURBED AREA AND/OR DRIP LINE AS SHOWN ON SITE PLAN SHEETS.
 - INSTALL A "TREE PROTECTION ZONE KEEP OUT" SIGN FOR EACH DESIGNATED AREA. TREE PROTECTION SIGN SHALL BE MINIMUM 2'x2' AND BE VISIBLE FROM BOTH SIDES OF FENCE.
 - THERE SHALL BE NO STORAGE OF CONSTRUCTION MATERIAL WITHIN BOUNDARIES OF TREE PROTECTION FENCING.
 - TREE PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION.

7 TYPICAL TREE PROTECTION DETAIL
NOT TO SCALE



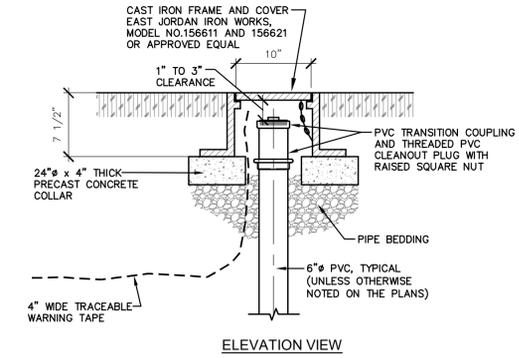
- NOTES:**
- ALL HMA COMPACTION WILL BE TO 95% MADMTD (MIXTURE'S AVERAGE DAILY MAXIMUM THEORETICAL DENSITY) PER NYS DOT SPECIFICATIONS FOR HMA COMPACTION 402-3.07. BASE COURSE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DENSITY.
 - FIELD VERIFICATION OF COMPACTION SHALL BE BY NUCLEAR DENSITY TESTING METHODS.

3 TYPICAL ASPHALT WALK DETAIL
NOT TO SCALE

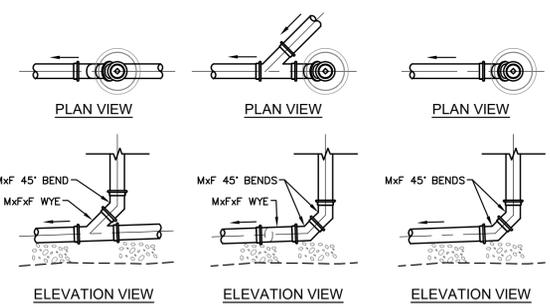


- NOTES**
- DIMENSIONS 'X' AND 'Y' SHOWN ABOVE SHALL BE DETERMINED BY CONTRACTOR TO COMPLY WITH O.S.H.A., NEW YORK STATE DEPARTMENT OF LABOR, NEW YORK STATE INDUSTRIAL CODE AND ALL OTHER APPLICABLE SAFETY STANDARDS.
 - SAFETY SHEETING OR TRENCH BOX MAY BE USED IN PLACE OF SLOPED TRENCH WALLS.
 - SHEETING, WHEN REQUIRED, TO BE CUT OFF AT LEAST 5 FEET BELOW STREET AND A MINIMUM OF 1 FOOT ABOVE TOP OF PIPE. WOOD SHEETING DRIVEN BELOW MID-DIAMETER OF THE PIPE SHALL BE LEFT IN PLACE. STEEL SHEETING DRIVEN BELOW MID-DIAMETER MAY BE WITHDRAWN IF APPROVED IN WRITING BY THE ENGINEER. FOR PVC PIPE ALL SHEETING DRIVEN BELOW MID-DIAMETER SHALL BE LEFT IN PLACE.
 - TRENCHES LOCATED WITHIN 5' OF ROAD SHOULDERS SHALL BE TREATED THE SAME AS UNDER PAVEMENT.
 - PIPE TO TRENCH WALL DISTANCE MAY BE REDUCED WHEN INSTALLED IN SAWCUT ROCK TRENCH.
 - PROVIDE WARNING TAPE AT ALL UNDERGROUND UTILITIES.

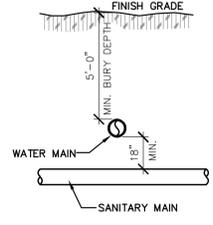
1 TYPICAL SANITARY SEWER TRENCH DETAIL
NOT TO SCALE



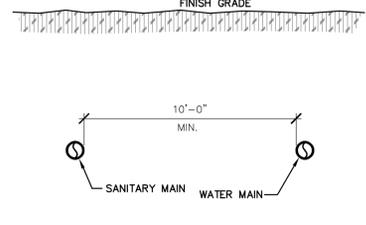
2 TYPICAL CLEANOUT DETAIL
NOT TO SCALE



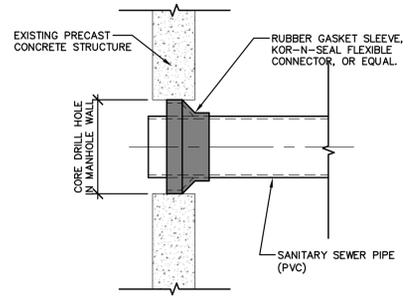
3 TYPICAL CLEANOUT CONFIGURATION DETAIL
NOT TO SCALE



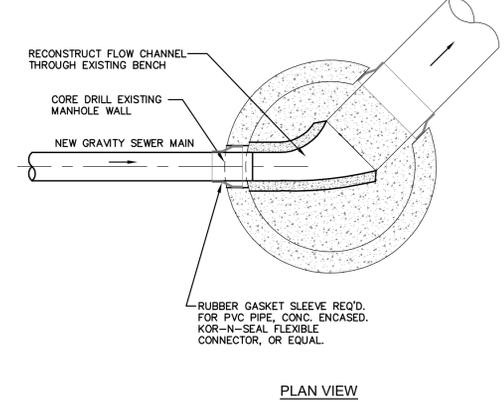
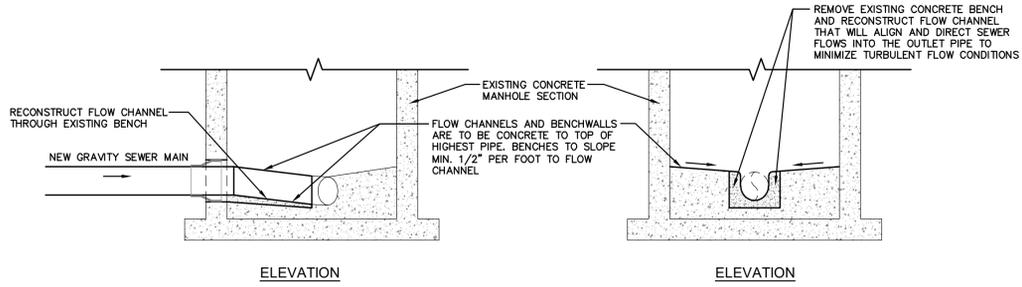
4 MINIMUM VERTICAL SEPARATION DETAIL
NOT TO SCALE



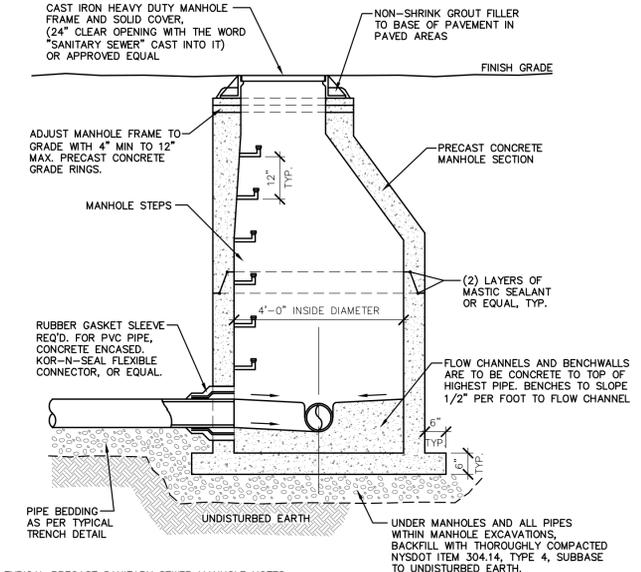
5 MINIMUM HORIZONTAL SEPARATION DETAIL
NOT TO SCALE



6 TYPICAL SANITARY SEWER CONNECTION DETAIL
NOT TO SCALE

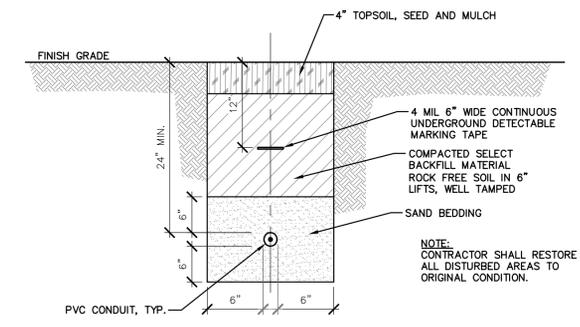


7 TYPICAL GRAVITY SEWER PIPE CONNECTION AT EXISTING SANITARY MANHOLE DETAIL
NOT TO SCALE



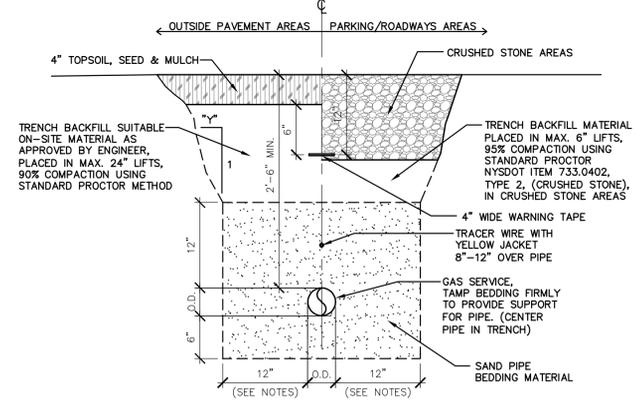
- TYPICAL PRECAST SANITARY SEWER MANHOLE NOTES:**
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS.
 - CONCRETE SHALL BE AIR ENTRAINED 5%-8%.
 - WALLS, FLOOR, TOP SLAB AND ACCESS COVERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM C890 (HS-20 LOAD).
 - REINFORCEMENT - ASTM A497/A615 GRADE 60.
 - ALL JOINTS SHALL BE SEALED SUCH THAT THE TANK IS WATERTIGHT WITH BUTYL SEALANT CS-102 ASTM C-990.
 - 2 COATS OF BITUMASTIC WATERPROOF COATING TO BE APPLIED TO OUTER SURFACE OF PRECAST CONCRETE STRUCTURES.
 - ALL MANHOLE COVERS SHALL HAVE THE WORDS "SANITARY SEWER" IN 3" LETTERS, CAST IN COVERS.
 - ALL MANHOLES SHALL BE 4'-0" I.D. UNLESS OTHERWISE NOTED.

8 TYPICAL SANITARY SEWER MANHOLE DETAIL
NOT TO SCALE



- NOTES:**
- CONTRACTOR SHALL FIELD VERIFY AND MATCH EXISTING SIZE AND TYPE OF CONDUCTORS.
 - PVC CONDUIT SHALL BE SCHEDULE 40 WITHIN LAWN AREAS AND SCHEDULE 80 WITHIN ASPHALT/GRAVEL AREAS.
 - SECONDARY ELECTRIC SHALL BE MIN. 1" PVC CONDUIT. WIRE SIZES SHALL BE IN ACCORDANCE WITH NEC REQUIREMENTS.
 - ALL BURIAL TYPE CONDUITS, SIZES, NUMBER, AND WIRES SHALL BE COORDINATED WITH THE RESPECTIVE UTILITIES.
 - WIDTH OF TRENCH IS DEPENDENT UPON THE NUMBER OF CONDUITS AND ARRANGEMENT REQUIRED.

9 TYPICAL SECONDARY ELECTRIC TRENCH IN LAWN AREA DETAIL
NOT TO SCALE

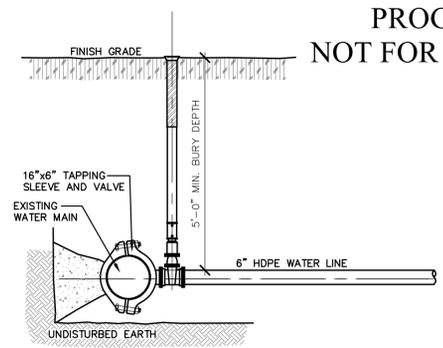


10 TYPICAL GAS SERVICE TRENCH DETAIL
NOT TO SCALE

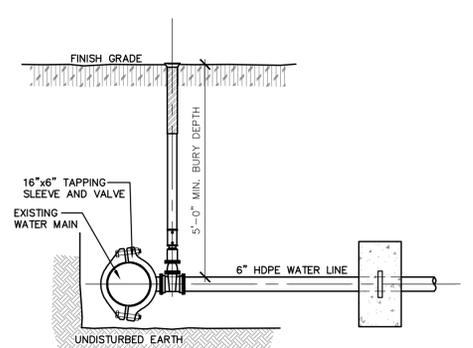
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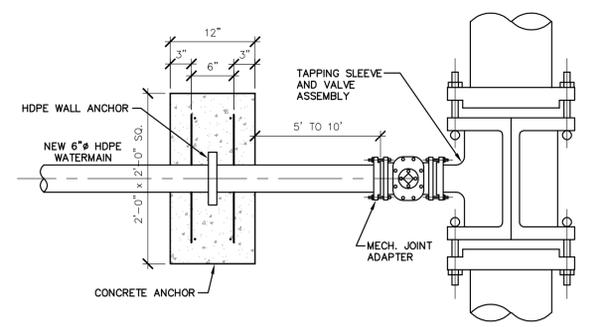
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DRAWN BY:	JLY
CHECKED BY:	MRM
ISSUE DATES:	02/11/2020 03/03/2020



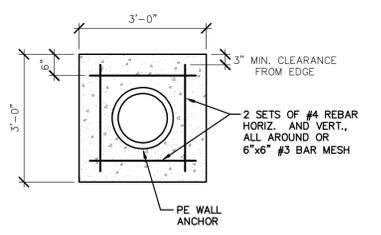
7 TYPICAL TAPPING SLEEVE AND VALVE DETAIL
NOT TO SCALE (DI PIPE)



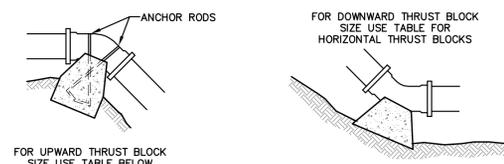
5 TYPICAL TAPPING SLEEVE AND VALVE DETAIL
NOT TO SCALE (HDPE PIPE)



8 TYPICAL HDPE PIPE PULL OUT RESTRAINT DETAIL
NOT TO SCALE (HDPE PIPE)

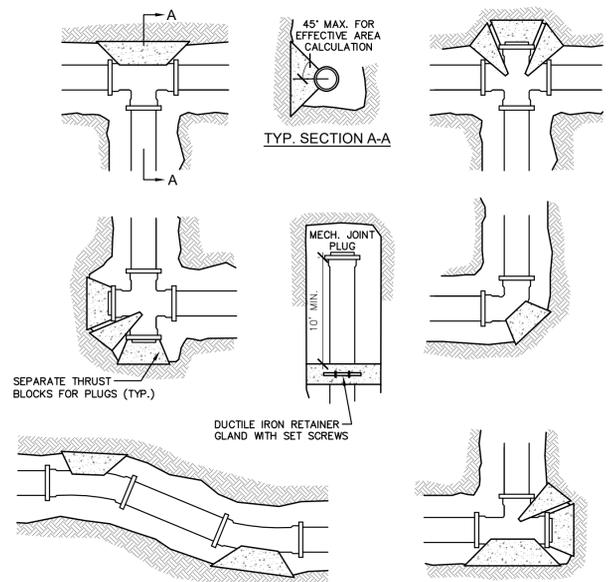


9 TYPICAL PE WALL ANCHOR DETAIL
NOT TO SCALE (HDPE PIPE)



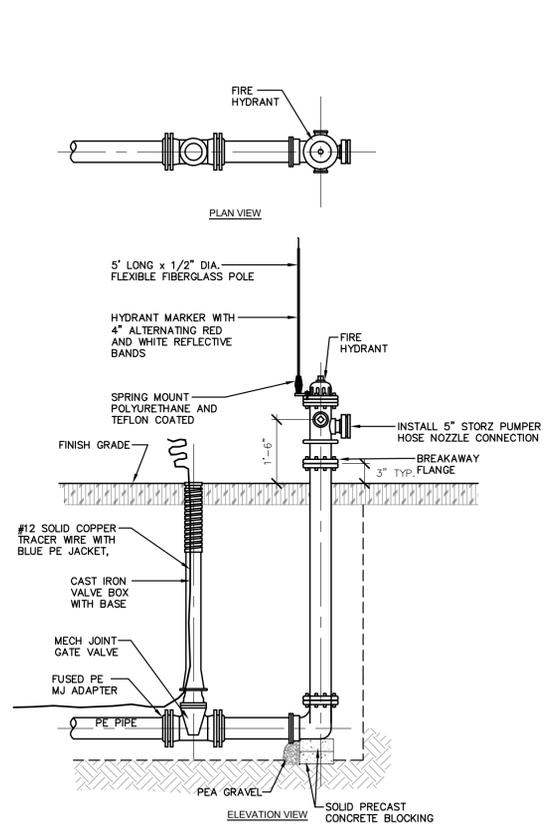
ANCHOR SCHEDULE

NOMINAL PIPE SIZE	150 P.S.I. HYDROSTATIC PRESSURE											
	11-1/4" BEND				22-1/2" BEND				45° BEND			
	CONCRETE VOLUME (CU. YDS.)	ANCHOR ROD (DIA.)	EMBED LENGTH	CONCRETE VOLUME (CU. YDS.)	ANCHOR ROD (DIA.)	EMBED LENGTH	CONCRETE VOLUME (CU. YDS.)	ANCHOR ROD (DIA.)	EMBED LENGTH	CONCRETE VOLUME (CU. YDS.)	ANCHOR ROD (DIA.)	EMBED LENGTH
4"	0.2	3/8"	0.4	3/8"	3/8"	1'-2"	0.4	3/8"	1'-2"	0.7	3/8"	1'-2"
6"	0.4	3/8"	0.7	3/8"	3/8"	1'-2"	0.7	3/8"	1'-2"	1.2	3/8"	1'-2"
8"	0.8	3/8"	1.2	3/8"	3/8"	1'-2"	1.2	3/8"	1'-2"	1.7	3/8"	1'-2"
10"	0.9	3/8"	1.7	3/8"	3/8"	1'-2"	1.7	3/8"	1'-2"	2.5	3/8"	1'-2"
12"	1.3	3/8"	2.5	1/2"	3/8"	1'-6"	2.5	1/2"	1'-6"	3.3	3/8"	1'-6"
14"	1.7	3/8"	3.3	1/2"	3/8"	1'-6"	3.3	1/2"	1'-6"	4.3	3/8"	1'-6"
16"	2.2	3/8"	4.3	1/2"	3/8"	1'-6"	4.3	1/2"	1'-6"	5.4	5/8"	2'-0"
18"	2.7	1/2"	5.4	5/8"	1/2"	2'-0"	5.4	5/8"	2'-0"	6.6	5/8"	2'-0"
20"	3.3	1/2"	6.6	5/8"	1/2"	2'-0"	6.6	5/8"	2'-0"	8.1	5/8"	2'-0"
24"	4.7	5/8"	9.4	3/4"	5/8"	2'-3"	9.4	3/4"	2'-3"	11.1	3/4"	2'-3"

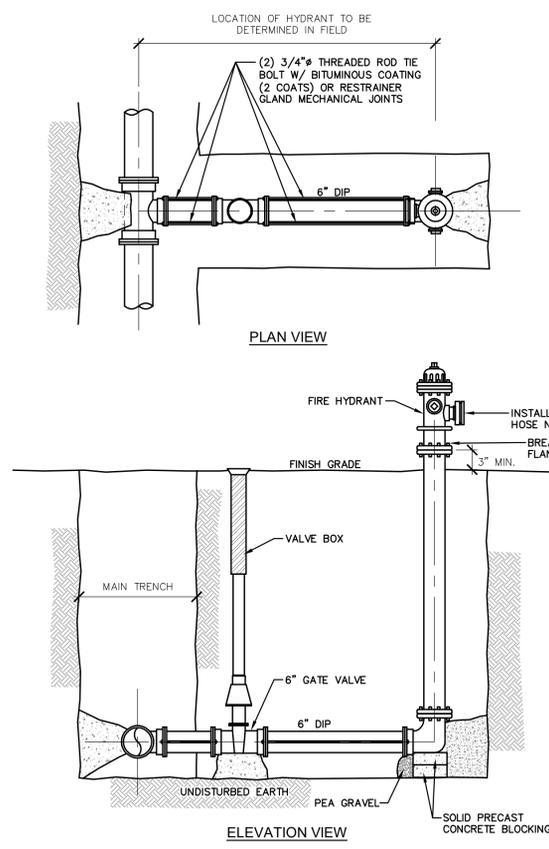


ANCHOR SCHEDULE

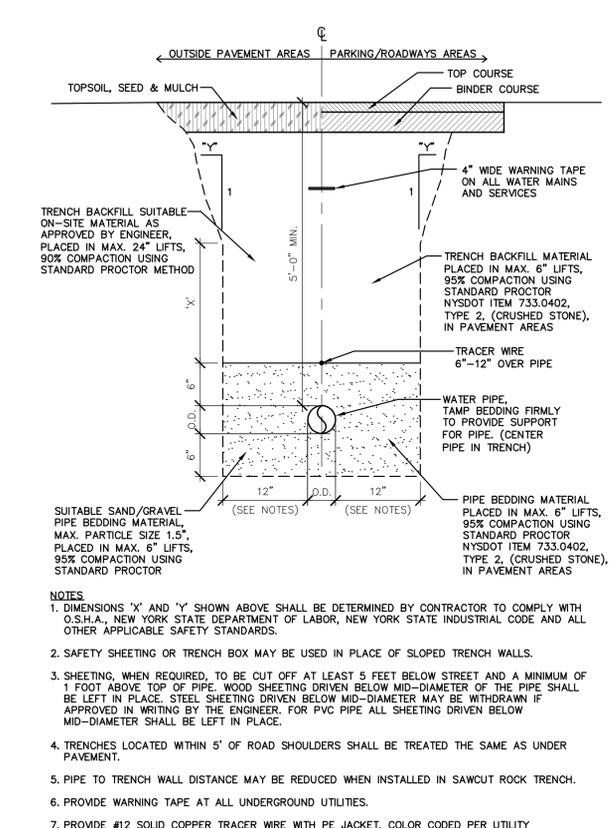
NOMINAL PIPE SIZE	150 P.S.I. HYDROSTATIC PRESSURE AGAINST UNDISTURBED SOIL, AT 2000 P.S.F. BRNG. CAPACITY						150 P.S.I. HYDROSTATIC PRESSURE AGAINST ROCK TRENCH, AT 10,000 P.S.F. BRNG. CAPACITY					
	11-1/4" BEND		22-1/2" BEND		45° BEND		11-1/4" BEND		22-1/2" BEND		45° BEND	
	MINIMUM REQUIRED BEARING AREA IN SQ. FT.	PLUG OR TEE	MINIMUM REQUIRED BEARING AREA IN SQ. FT.	PLUG OR TEE	MINIMUM REQUIRED BEARING AREA IN SQ. FT.	PLUG OR TEE	MINIMUM REQUIRED BEARING AREA IN SQ. FT.	PLUG OR TEE	MINIMUM REQUIRED BEARING AREA IN SQ. FT.	PLUG OR TEE	MINIMUM REQUIRED BEARING AREA IN SQ. FT.	PLUG OR TEE
4"	1.0	1.0	1.0	1.9	1.4	1.0	1.0	1.0	1.0	1.0	1.0	
6"	1.0	1.1	2.1	4.0	2.8	1.0	1.0	1.0	1.0	1.0	1.0	
8"	1.0	1.9	3.7	6.8	4.8	1.0	1.0	1.0	1.4	1.0	1.0	
10"	1.4	2.8	5.6	10.3	7.3	1.0	1.0	1.1	2.1	1.5	1.5	
12"	2.0	4.0	7.9	14.5	10.3	1.0	1.0	1.6	2.9	2.1	2.1	
14"	2.7	5.4	10.6	19.5	13.8	1.0	1.1	2.1	3.9	2.8	2.8	
16"	3.5	7.0	13.6	25.2	17.8	1.0	1.4	2.7	5.0	3.6	3.6	
18"	4.4	8.7	17.1	31.7	22.4	1.0	1.7	3.4	6.3	4.5	4.5	
20"	5.4	10.7	21.0	38.9	27.5	1.2	2.1	4.2	7.8	5.5	5.5	
24"	7.7	15.3	30.0	55.5	39.2	1.5	3.1	6.0	11.1	7.8	7.8	



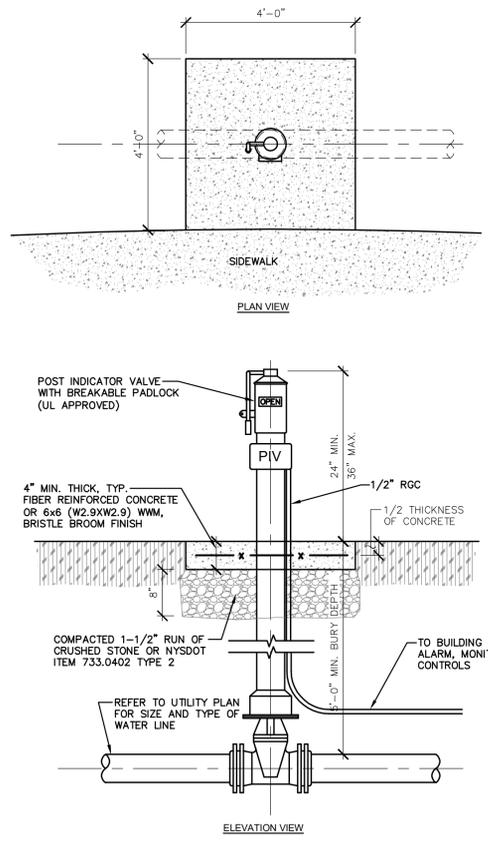
3 FIRE HYDRANT DETAIL
NOT TO SCALE (HDPE PIPE)



4 TYPICAL FIRE HYDRANT ASSEMBLY DETAIL
NOT TO SCALE (DI PIPE)



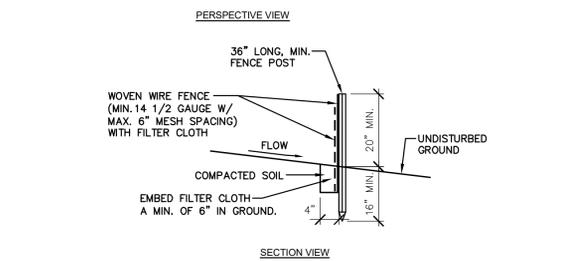
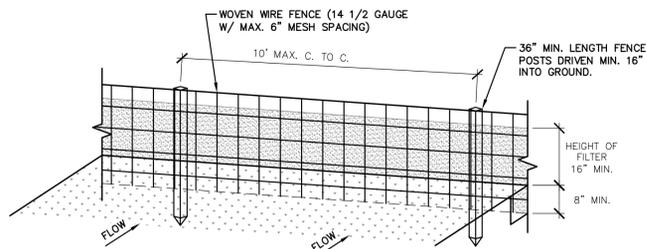
1 TYPICAL WATER TRENCH DETAIL
NOT TO SCALE



2 TYPICAL POST INDICATOR VALVE DETAIL
NOT TO SCALE

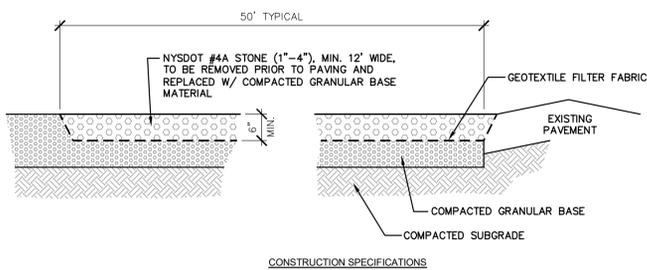
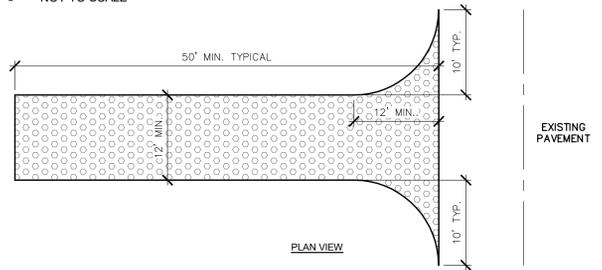
NOTES

- DIMENSIONS "X" AND "Y" SHOWN ABOVE SHALL BE DETERMINED BY CONTRACTOR TO COMPLY WITH O.S.H.A., NEW YORK STATE DEPARTMENT OF LABOR, NEW YORK STATE INDUSTRIAL CODE AND ALL OTHER APPLICABLE SAFETY STANDARDS.
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- TRENCHES LOCATED WITHIN 5' OF ROAD SHOULDERS SHALL BE TREATED THE SAME AS UNDER PAVEMENT.
- PIPE TO TRENCH WALL DISTANCE MAY BE REDUCED WHEN INSTALLED IN SAWCUT ROCK TRENCH.
- PROVIDE WARNING TAPE AT ALL UNDERGROUND UTILITIES.
- PROVIDE #12 SOLID COPPER TRACER WIRE WITH PE JACKET, COLOR CODED PER UTILITY (BLUE=WATER).



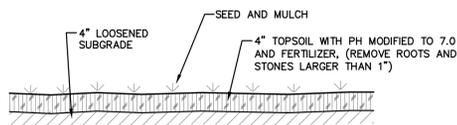
- CONSTRUCTION SPECIFICATIONS**
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "I" OR "U" TYPE OR HARDWOOD.
 - FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
 - PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

1 TYPICAL SILT FENCE DETAIL
NOT TO SCALE



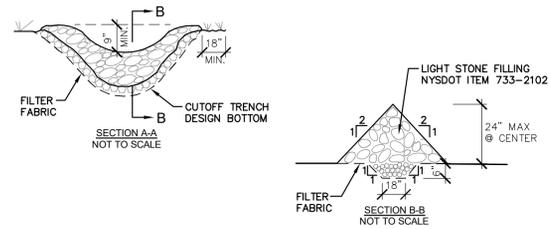
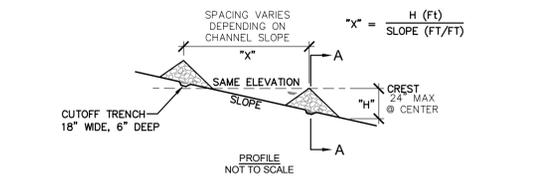
- CONSTRUCTION SPECIFICATIONS**
- LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
 - THICKNESS - NOT LESS THAN SIX (6) INCHES.
 - WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.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

2 TYPICAL OFFSITE SEDIMENT TRACKING DETAIL
NOT TO SCALE



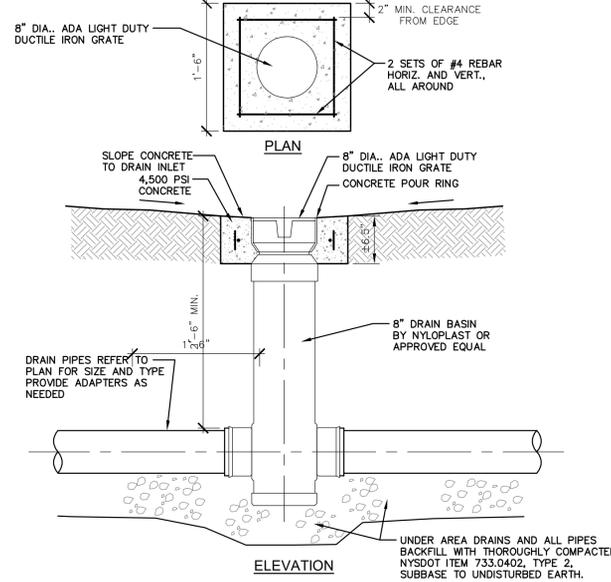
NOTE:
PROVIDE SOIL TESTS WITH SEED, FERTILIZER AND MULCH RECOMMENDATIONS
(ONE PER EACH 5 ACRES OF SEEDING AND MIN. ONE PER TOPSOIL STOCKPILE)

3 TYPICAL TOPSOIL REPLACEMENT DETAIL
NOT TO SCALE



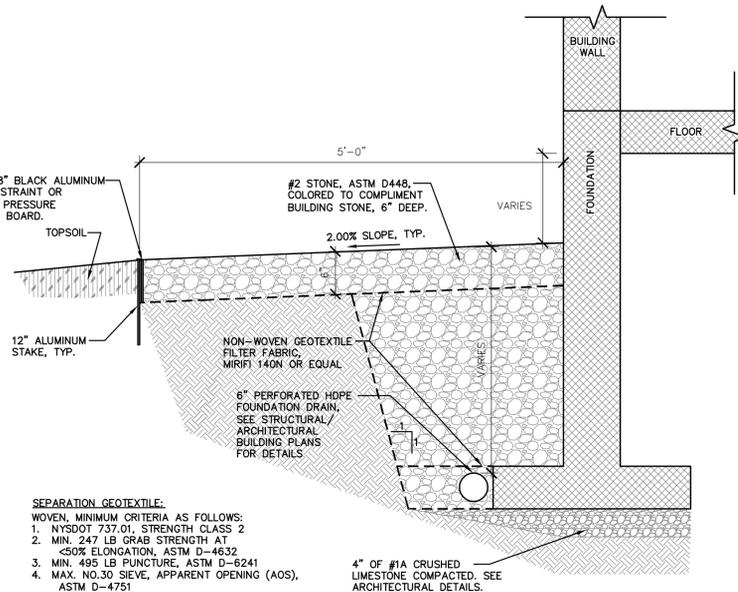
- CONSTRUCTION SPECIFICATIONS**
- STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
 - SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
 - EXTEND THE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

4 TYPICAL STONE CHECK DAM DETAIL
NOT TO SCALE



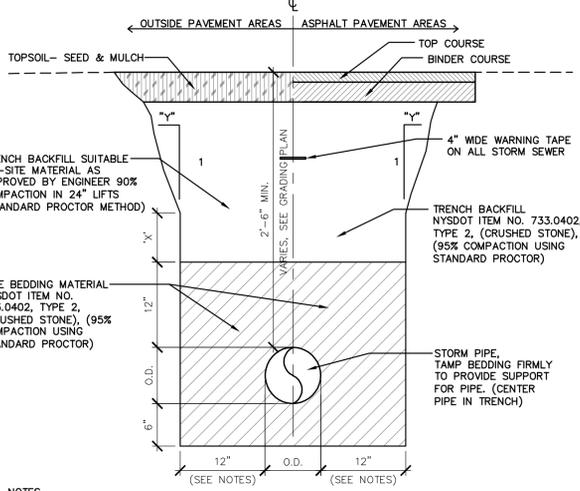
- CONCRETE NOTES:**
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS.
 - CONCRETE SHALL BE AIR ENTRAINED 5%-8%.
 - REINFORCEMENT - ASTM A497/A615 GRADE 60.

5 TYPICAL LAWN DRAIN CONCRETE APRON DETAIL
NOT TO SCALE



- SEPARATION GEOTEXTILE:**
WOVEN. MINIMUM CRITERIA AS FOLLOWS:
- NYSDOT 737.01, STRENGTH CLASS 2
 - MIN. 247 LB GRAB STRENGTH AT <50% ELONGATION, ASTM D-4632
 - MIN. 495 LB PUNCTURE, ASTM D-6241
 - MAX. NO.30 SIEVE, APPARENT OPENING (AOS), ASTM D-4751
 - MIN. 0.02 sec⁻¹ PERMITIVITY, ASTM D-4491

6 TYPICAL FOUNDATION PERIMETER "DRIP STRIP" DETAIL
NOT TO SCALE



- NOTES:**
- DIMENSIONS "X" AND "Y" SHOWN ABOVE SHALL BE DETERMINED BY CONTRACTOR TO COMPLY WITH O.S.H.A., NEW YORK STATE DEPARTMENT OF LABOR, NEW YORK STATE INDUSTRIAL CODE AND ALL OTHER APPLICABLE SAFETY STANDARDS.
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 - PIPE TO TRENCH WALL DISTANCE MAY BE REDUCED WHEN INSTALLED IN SAWCUT ROCK TRENCH.

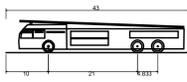
7 PRECAST CONCRETE PIPE OUTLET DETAIL
NOT TO SCALE

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LEGEND	EXISTING	PROPOSED
5' CONTOUR	-153	-155
1' CONTOUR	-154	-154
PROPERTY LINE	PL	PL
RIGHT OF WAY		
SETBACK		
ZONING LINE	AGRICULTURAL MARINE	COMMERCIAL RESIDENTIAL
BUILDING		
ASPHALT PAVEMENT		
EDGE OF GRAVEL		
CURB		
SIDEWALK		
TREE LINE		
FENCE		
WATERLINE	W _x	W
SANITARY SEWER	SS _x	SS
STORM SEWER	SO _x	SO
FOUNDATION DRAIN	FD	FD
OVERHEAD UTILITY	OU	OU
UNDERGROUND UTILITY	UU	UU
ELECTRIC	E _x	E
TELEPHONE	T _x	T
GAS	G	G
SANITARY MANHOLE		
STORM MANHOLE		
CATCH BASIN		
FIRE HYDRANT		
WATER VALVE		
CURB STOP		
UTILITY POLE		
ELECTRIC MANHOLE		
TELEPHONE MANHOLE		
GAS VALVE		
LIGHT POLE		

PLANNING DATA		
ZONING: LIGHT INDUSTRY (LI)		
USE: RELIGIOUS		
ITEM	REQUIRED	AS PROVIDED
MIN. LOT AREA	-	375,487 SQ. FT. (8.62 ACRES)
MIN. FRONTAGE	-	562'
MIN. FRONT SETBACK	0'	46'
MIN. REAR YARD SETBACK	0'	446'
MIN. SIDE YARD SETBACK	0'	23'
LIMITS OF DISTURBANCE		0.93 AC
PARKING DATA		
ITEM	REQUIRED	AS PROVIDED
EXISTING PARKING REQUIREMENTS: PLACE OF PUBLIC ASSEMBLY = 200 SF (1 SPACE) FOR EVERY 4 SEATS. MAX OCCUPANCY OF SANCTUARY = 350 PERSONS	350 / 4 = 88 SPACES	112 SPACES (4 HANDICAP SPACES)
PROPOSED PARKING REQUIREMENTS: PLACE OF PUBLIC ASSEMBLY = 200 SF (1 SPACE) FOR EVERY 4 SEATS. MAX OCCUPANCY OF MULTIPURPOSE ROOM = 444 PERSONS	444 / 4 = 111 SPACES	114 SPACES (6 HANDICAP SPACES)
TRAFFIC INFORMATION (ITE TRIP GENERATION 7TH EDITION)		
WEEKDAY, AM	ENTERING	EXITING
	15	15
WEEKDAY, PM	ENTERING	EXITING
	18	12
SATURDAY	ENTERING	EXITING
	114	152
SUNDAY	ENTERING	EXITING
	147	135

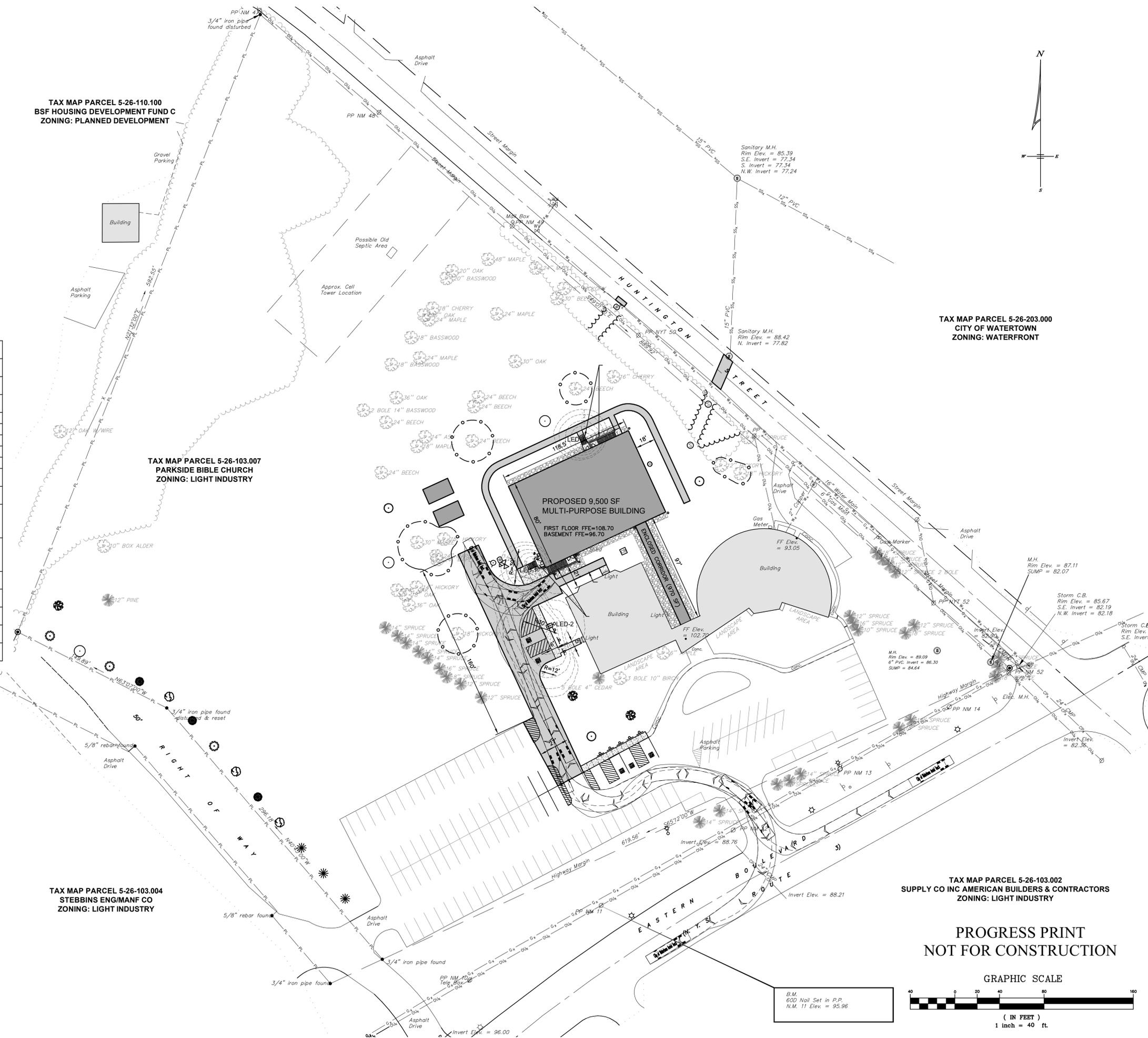


City of Watertown Aerial Truck
 Overall Length 43.00ft
 Overall Width 9.25ft
 Overall Body Height 7.54ft
 Min Body Ground Clearance 0.794ft
 Max Track Width 8.50ft
 Lock-to-lock time 5.00s
 Max Wheel Angle 45.00°

TAX MAP PARCEL 5-26-110.100
 BSF HOUSING DEVELOPMENT FUND C
 ZONING: PLANNED DEVELOPMENT

TAX MAP PARCEL 5-26-103.007
 PARKSIDE BIBLE CHURCH
 ZONING: LIGHT INDUSTRY

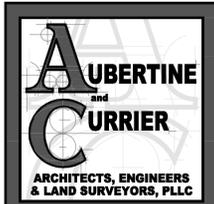
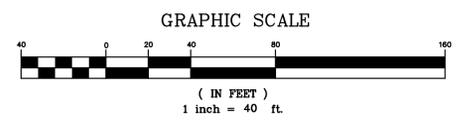
TAX MAP PARCEL 5-26-103.004
 STEBBINS ENGMAN CO
 ZONING: LIGHT INDUSTRY



TAX MAP PARCEL 5-26-203.000
 CITY OF WATERTOWN
 ZONING: WATERFRONT

TAX MAP PARCEL 5-26-103.002
 SUPPLY CO INC AMERICAN BUILDERS & CONTRACTORS
 ZONING: LIGHT INDUSTRY

PROGRESS PRINT
 NOT FOR CONSTRUCTION



522 Bradley Street
 Watertown, New York 13601

aubertinecurrier.com

Phone: (315)782-2005
 Fax: (315)782-1472

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PARKSIDE BIBLE CHURCH
 MULTI-PURPOSE COMMUNITY BUILDING
 491 EASTERN BLVD
 CITY OF WATERTOWN
 JEFFERSON COUNTY, STATE OF NEW YORK

PROJECT NO:	2015-166.002
SCALE:	1"=40'
DRAWN BY:	JLY
CHECKED BY:	MRM
ISSUE DATES:	02/11/2020 03/03/2020

TRAFFIC CIRCULATION PLAN

CT-101

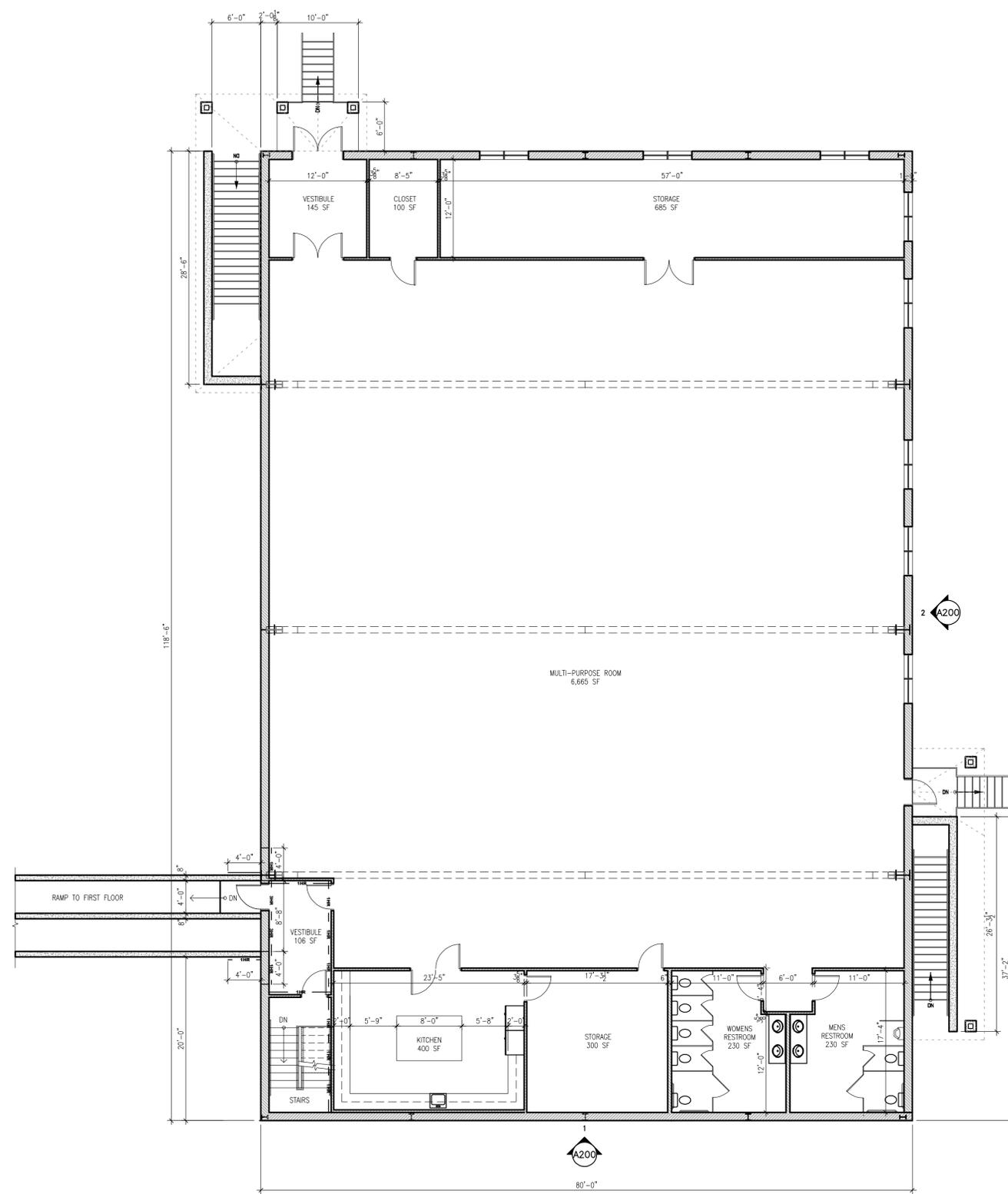


**PARKSIDE BIBLE CHURCH
MULTI-PURPOSE COMMUNITY BUILDING**
491 EASTERN BLVD
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

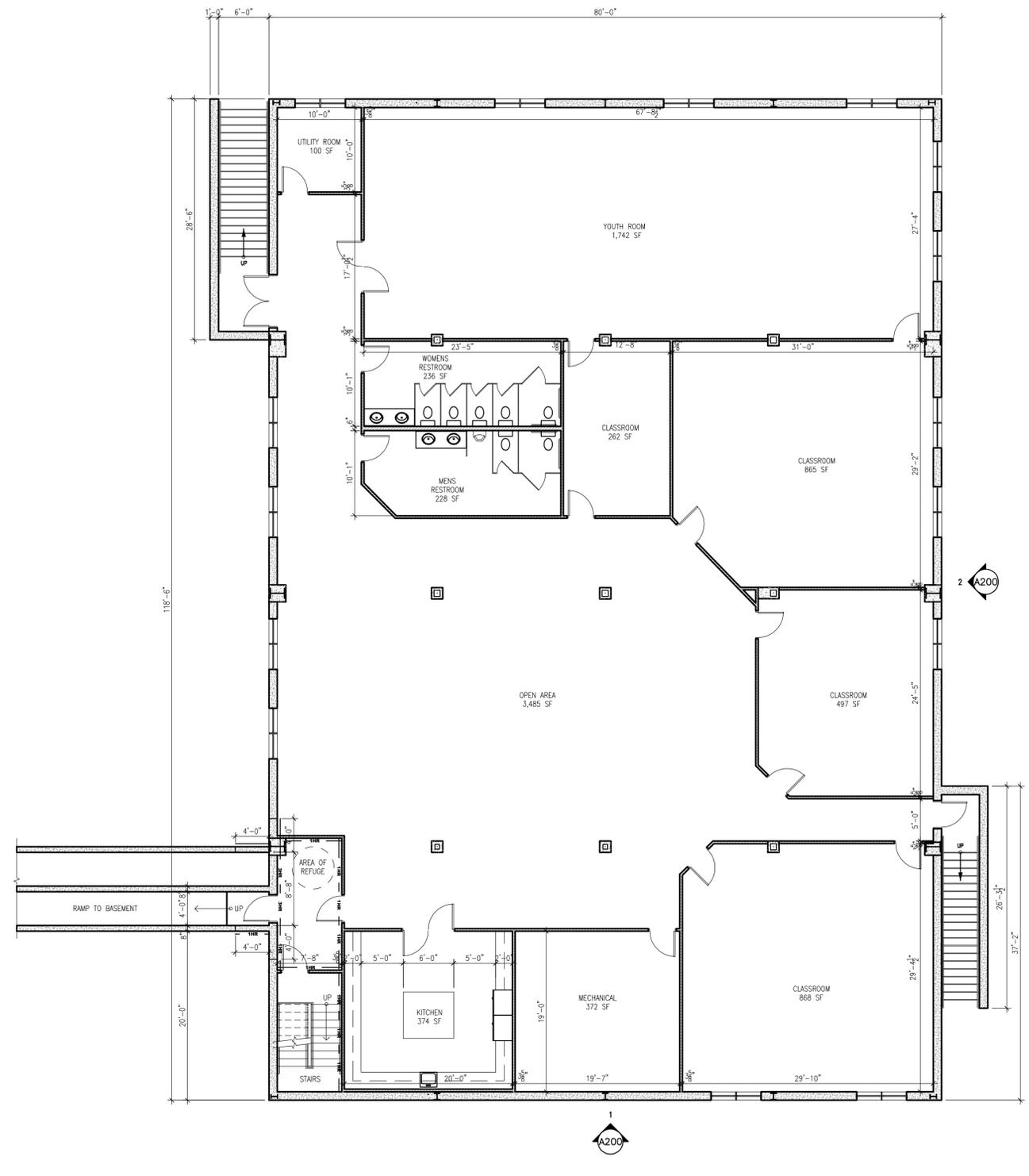
PROJECT NO:	2015-196.002
SCALE:	AS NOTED
DRAWN BY:	MEF
CHECKED BY:	BAJ
ISSUE DATES:	2/11/2020

FLOOR PLANS

A100



B FIRST FLOOR PLAN
1/8" = 1'-0"



A BASEMENT FLOOR PLAN
1/8" = 1'-0"

SQUARE FOOTAGE

BASEMENT FLOOR PLAN:	9,490 SF
FIRST FLOOR PLAN:	9,480 SF
TOTAL:	18,970 SF



NYS WBE/DBE Certified
SBA Woman Owned
Small Business (WOSB)

aubertinecurrier.com

522 Bradley Street
Watertown, New York 13601
Phone: (315)782-2005

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**PARKSIDE BIBLE CHURCH
MULTI-PURPOSE COMMUNITY BUILDING**
491 EASTERN BLVD
CITY OF WATERTOWN
JEFFERSON COUNTY, STATE OF NEW YORK

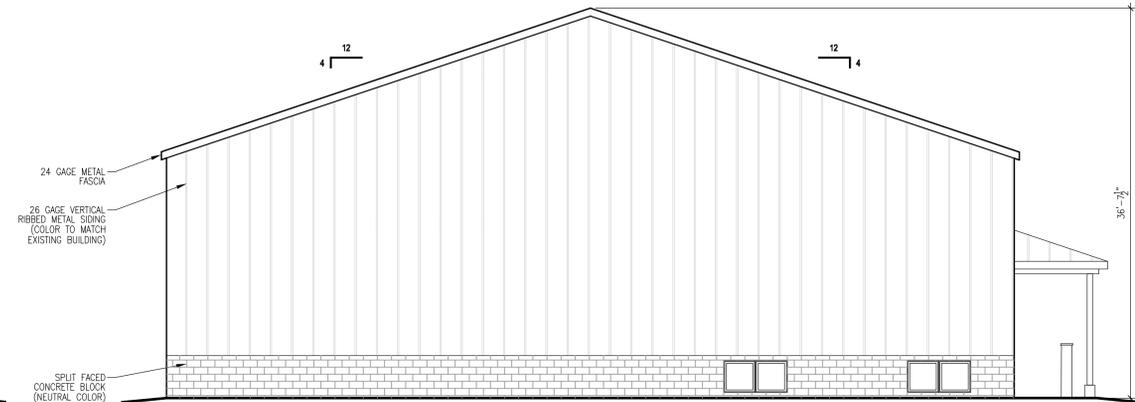
PROJECT NO: 2015-196.002
SCALE: AS NOTED
DRAWN BY: MEF
CHECKED BY: BAJ
ISSUE DATES:
2/11/2020

EXTERIOR ELEVATIONS

A200



2 WEST ELEVATION
1/8" = 1'-0"



1 SOUTH ELEVATION
1/8" = 1'-0"

Res No. 10

March 11, 2020

To: The Honorable Mayor and City Council

From: Kenneth A. Mix, City Manager

Subject: Authorizing the Acceptance of Administration of Federal Transit Administration (FTA) 5311 Formula Grant Applications for Rural Areas

Through the efforts of the Metropolitan Planning Organization, a regional transit study was prepared which identifies the formation of a regional transit network as a vital need to provide residents with access to employment, education and healthcare services. Through a series of presentations to this Council as well as the Jefferson County Board of Supervisors, the concept of Mobility Management has been presented and embraced as the next step in developing plans to create a viable transit service.

The City of Watertown has established a Mobility Management function to support the development of plans for enhancing transit services within the urbanized portions of the City, as well as in adjacent areas along the Route 3 corridor. Funding for this function is provided through Federal Transit Administration (FTA) administered section 5307 Formula Grants of which the City of Watertown is a direct recipient.

The Federal Transit Administration also provides funding through section 5311 Formula Grants to support rural transit services. This funding is administered by the New York State Department of Transportation and is awarded to eligible recipients in rural areas which include Jefferson County. As the Council is aware, an application has been submitted to this program.

Jefferson County has opted to relinquish administration of the 5311 Formula Grants to the City of Watertown with the intent of supporting a complimentary Mobility Management function addressing rural portions of County. The attached letter from Jefferson County Administrator Robert F. Hagemann, III supports the City's application.

Attached for Council consideration is a Resolution that approves acceptance of the administration rights to the section 5311 Formal Grants.

RESOLUTION

Page 1 of 1

Accepting Administration Rights of
Formula Grants for Rural Area Transit
From Jefferson County

Council Member COMPO, Sarah V.
 Council Member HENRY-WILKINSON, Ryan J.
 Council Member ROSHIA, Jesse C.P.
 Council Member RUGGIERO, Lisa L.
 Mayor SMITH, Jeffrey M.
 Total

YEA	NAY

Introduced by

WHEREAS, 2019-2020 Federal Transit Administration Formula Grants for Rural Areas are available through the New York State Department of Transportation to fund rural transportation services, and

WHEREAS Jefferson County is an eligible recipient of Formula Grants for Rural Areas administered through the New York State Department of Transportation, and

WHEREAS Jefferson County has relinquished the rights to apply for Formula Grants for Rural Areas to the City of Watertown as indicated by written communication approved by the Jefferson County Board of Legislature on March 11, 2020, and

WHEREAS, the City of Watertown will submit applications to the New York State Department of Transportation for Formula Grants for Rural Areas with the intent to establish a Mobility Management Function within rural portions of the County as a compliment to similar service provided within the City and the Urbanized portions of Jefferson County,

NOW THEREFORE BE IT RESOLVED that the City Council of the City of Watertown hereby accepts administration rights for Formula Grants for Rural Areas from Jefferson County to support development of Mobility Management services within rural portions of the County, and

BE IT FURTHER RESOLVED that in the event of an elimination of funding to support Formula Grants for Rural Areas, the City of Watertown will not be bound to continue administration of said grants, and

BE IT FURTHER RESOLVED upon the award Formula Grants for Rural Areas, the City Council authorizes the City Manager to sign contracts with third party vendors to provide rural Mobility Management services.

Seconded by

County of Jefferson
Office of the County Administrator



Historic Courthouse
195 Arsenal Street, 2nd Floor
Watertown, NY 13601-2567
Phone: (315) 785-3075 Fax: (315) 785-5070

March 11, 2020

Kent Sopris
Public Transportation Bureau
NYS Department of Transportation
50 Wolf Road, POD 54
Albany, NY 12232

Dear Mr. Sopris:

On behalf of the Board of Legislators in Jefferson County I am writing to express our support regarding the City of Watertown's application for the 2019-2020 Federal Transit Administration (FTA) Formula Grants for Rural Area Program (Section 5311). With a growing need in our rural county area to provide access to transit services to help open the doors to employment and education opportunities for our constituents, we feel this is the most expeditious way to address that task.

It is our understanding that this application will allow the City of Watertown to access the funding necessary to establish a mobility management program serving rural Jefferson County. Any local match for projects secured through this funding source will be the responsibility of the third party vendor providing the mobility management services. Likewise, we understand that neither the County or the City is responsible for funding this program should NYS financial assistance fall through at some future date.

Should you have any questions, please do not hesitate to reach out to me and I will be happy to respond. Thank you for your anticipated support of this grant application.

Sincerely,

Robert F. Hagemann, III
County Administrator

RESOLUTION

Page 1 of 1

Employing Kenneth A. Mix as City Manager of the City of Watertown

- Council Member COMPO, Sarah V.
- Council Member HENRY-WILKINSON, Ryan J.
- Council Member ROSHIA, Jesse C. P.
- Council Member RUGGIERO, Lisa L.
- Mayor SMITH, Jeffrey M.

Total

YEA	NAY

Introduced by

WHEREAS, upon the resignation of Richard M. Finn as Watertown City Manager, Kenneth A. Mix was appointed by the City Council as City Manager, on an interim basis, until a long-term candidate for the position could be found; and

WHEREAS the advent of the COVID-19 virus pandemic has created a State of Emergency on a national, state, and local level, calling for informed, consistent action by the Office of the City Manager over the next several months; and

WHEREAS Kenneth A. Mix, a long-term former employee of the City has experience in this City’s government which provides him with a unique ability to provide steady and reliable leadership in this fast-evolving situation; and

WHEREAS the City is in need of experience and leadership to continue during the COVID-19 crisis, the City Council is of the view that Kenneth A. Mix should continue as City Manager through the end of this calendar year,

NOW THEREFORE BE IT RESOLVED that Kenneth A. Mix is hereby appointed as City Manager for the City of Watertown, pursuant to Plan C of the optional City Government Law, being Chapter 444 of the Laws of 1914, and that the City Council desires to enter into a contract with Kenneth A. Mix for a period from this date to December 31, 2020, all in accordance with Sections 5 and 20(5) of the Watertown City Charter, a copy of which contract is attached to, made a part of, this resolution; and

BE IT FURTHER RESOLVED that City Mayor, Jeffrey M. Smith is hereby authorized and directed by Council to sign said Employment Agreement on behalf of the City Council.

Seconded by

EMPLOYMENT AGREEMENT

THIS AGREEMENT is made and entered into effective the sixteenth day of March 2020, by and between the City of Watertown, a New York municipal corporation hereinafter called “Employer or City Council,” and Kenneth A. Mix, hereinafter called “Employee” or “City Manager.”

WITNESSETH

WHEREAS, Employer desires to employ the services of Kenneth A. Mix as City Manager of the City of Watertown, as provided at Section 20(5) of the Charter of the City of Watertown and to perform the duties of City Manager contained in the Charter and the Optional City Government Law found at Chapter 444 of the Laws of 1914; and

WHEREAS, it is the desire of the City Council to establish certain conditions of employment and to set working conditions of said Employee; and

WHEREAS, Employee desires to be employed as City Manager of the City of Watertown;

NOW, THEREFORE, in consideration of the mutual covenants herein contained, the parties agree as follows:

Section 1. Powers and Duties of the City Manager.

The City Council hereby agrees to employ Kenneth A. Mix as City Manager of the City of Watertown to perform the functions and duties specified in the Watertown City Charter and at Chapter 444 of the Laws of New York of 1914, and to perform other legally permissible and proper duties and functions as the City Council shall from time to time assign, subject to this Agreement.

Section 2. Term.

- A. The City Manager serves at the pleasure of the City Council and nothing herein shall be taken to prevent, limit or otherwise interfere with the right of the City Council to terminate the services of the City Manager, subject to the provisions of Section 3 of this Agreement.
- B. The term of this Agreement shall be March 16, 2020 through December 31, 2020.
- C. In the event Employee voluntarily resigns as City Manager before expiration of the term of this Agreement, then Employee shall give the City Council thirty (30) calendar days advance notice unless the parties agree otherwise.

Section 3. Early Termination.

- A. In the event the City Manager is terminated for any reason prior to the expiration of the term of this Agreement, then the Employer's obligation to the City Manager shall be to pay all compensation and benefits accrued but unpaid at the date of termination.
- B. The terms of this Agreement shall remain in full force and effect unless and until it expires of its own terms, or is sooner terminated.

Section 4. Salary.

Employer agrees to pay Kenneth A. Mix for his services as City Manager an annual gross salary of \$122,400 for the full term of the Agreement, payable in installments at the same time as other employees of the City of Watertown are paid.

Section 5. Other Benefits.

- A. Employee acknowledges that, as a City retiree, he is previously covered by his retiree health plan, and that his health benefits are governed by the terms of that plan.
- B. No paid vacation time is to be provided during the term of this Agreement.
- C. No contributions to the New York State Retirement System are contemplated during the term of this Agreement.

Section 6. Hours of Work

It is recognized that Employee must devote a great deal of time outside the normal office hours on business for the Employer, and to that end, Employee shall be allowed to establish an appropriate work schedule.

Section 7. Indemnification.

Employer shall defend and indemnify Employee, in accordance with Section 18 of the N. Y. Public Officers Law, in any action or special proceeding arising from Employee's performance of duties as City Manager, unless those actions were illegal or otherwise outside the scope of his duties or authority.

Section 8. Notices.

Notices pursuant to this Agreement shall be given by deposit in the custody of the United States Postal Service, postage prepaid, addressed as follows:

(1) EMPLOYER: Mayor of the City of Watertown
Suite 302, Municipal Building
245 Washington Street
Watertown, New York 13601

(2) EMPLOYEE: Kenneth A. Mix
32401 State Route 126
Carthage, New York 13619

Alternatively, notices required pursuant to this Agreement may be personally served in the same manner as is applicable to civil judicial practice. Notice shall be deemed given as of the date of personal service or as of the date of deposit of such written notice in the course of transmission in the United States Postal Service.

Section 9. General Provisions.

- A. The text herein shall constitute the entire Agreement between the parties.
- B. If any provision, or any portion thereof, contained in this Agreement is held unconstitutional, invalid or unenforceable, the remainder of this Agreement, of portion thereof, shall be deemed severable, shall not be affected, and shall remain in full force and effect.
- C. There shall be no changes in this Agreement unless agreed to in writing and approved by majority vote on the Council and by Employee.
- D. This Agreement is subject to all provisions of the City Charter of Watertown, New York.

IN WITNESS WHEREOF, the City of Watertown has caused this Agreement to be signed and executed in its behalf by its Mayor and duly attested by its City Clerk, and the Employee has signed and executed this Agreement, both in duplicate, the day and year first above written.

Mayor of the City of Watertown

ATTEST:

City Clerk
(Seal)

APPROVED AS TO FORM:

City Attorney

Kenneth A. Mix, City Manager

Public Hearing – 7:30 p.m.

March 10, 2020

To: The Honorable Mayor and City Council
From: Michael A. Lumbis, Planning and Community Development Director
Subject: CDBG Citizen Participation Plan Public Hearing

One of the required tasks identified during the a recent monitoring of the Community Development Block Grant Program was to amend the City's adopted Citizen Participation Plan for the program to include language defining a Low-to-Moderate Income (LMI) Neighborhood. Planning Staff subsequently took the opportunity to review the plan in its entirety and make other updates and edits where appropriate.

Readopting the plan requires a public hearing and a public comment period. The City Council has scheduled a public hearing for 7:30 p.m. on Monday, March 16, 2020. Staff previously advertised the public comment period in the *Watertown Daily Times*, and it lasted from February 15, 2020 to March 15, 2020.

Any public comments received will be addressed in the final document, which Staff will present to the City Council for adoption on April 6, 2020.

March 10, 2020

To: The Honorable Mayor and City Council
From: Kenneth A. Mix, City Manager
Subject: COPS Office Award Grant Application

As you are aware from your conversations with Chief Charles Donoghue, an application was submitted for a COPS (Community Oriented Policing Services) Office Award Grant through the Department of Justice to finance an additional School Resource Officer (SRO) for the Watertown City School District.

The Grant funding is for a maximum of 75% of the cost, up to a total of \$125,000, for a three-year period. The City must maintain the position for one year after the three-year grant period.

Under the current agreement with the School District, they pay the cost of the SRO during the school year (9 months) and the City pays them during the summer (3 months).

The total cost of the SRO will be about \$400,000 for the four years. That means the local share will be \$275,000. The City's share will be \$100,000 for the summer months. School Superintendent Patricia LaBarr has indicated her support for the School District paying the rest of the local share.

If the grant is awarded, it will be put before the City Council for acceptance.

March 10, 2020

To: The Honorable Mayor and City Council

From: Michael A. Lumbis, Planning and Community Development Director

Subject: Community Development Block Grant (CDBG) Program Year 2020 Annual Action Plan - Update

As you are aware, Staff has been soliciting public input and comments over the course of the last several weeks regarding the development of the City's CDBG Program Year 2020 Annual Action Plan. Public participation is a key component in the development of the plan. Staff presented an overview of the program and discussed project ideas at the February 11, 2020 City Council Work Session and also discussed the program with Council members at the February 18, 2020 City Council meeting. A public hearing was also held on March 2, 2020. In addition to the public hearing, Staff sent email correspondence to the partner agencies identified in our CDBG Citizen Participation Plan and discussed the proposed plan with our Citizens Advisory Board, Advantage Watertown, on February 13, 2020.

The result of this outreach and our discussion with the City Council yielded various ideas for projects and funding requests. During the last few weeks, we have been evaluating these ideas and working with our U.S. Department of Housing and Urban Development (HUD) representative to determine whether or not they would be eligible for CDBG funding and if so, how they might fit into the 2020-2021 Program Year budget. The following is a description of the various project ideas we have received and a determination of their eligibility.

Police Foot Patrols in Low and Moderate Income Areas. At the City Council Work Session, Council members suggested allocating CDBG funding for increasing the police presence in LMI areas to aid in crime prevention. CDBG funds may be able to be used to provide this type of public service; however, there are several conditions that apply.

First, the public service must be either a new service or a quantifiable increase in the level of service above that which has been provided previously. The City could not, for example, pay for an existing officer's salary to patrol one of the LMI areas. We would either have to hire a new officer or pay overtime to increase patrols over and above what the existing levels are now.

Second, the officer(s) would only be able to patrol in designated LMI areas. These are areas of the City where at least 51% of the residents are LMI persons as

determined by the census. See the attached map. While downtown is a target area and has an LMI population of greater than 51%, this type of public service can only be conducted in areas that are primarily residential. While downtown does have residents, HUD has previously determined that it cannot be considered primarily residential as the main land use is commercial.

Finally, any new project that we propose must be consistent with our adopted 5-Year CDBG Consolidated Plan (2016-2021). This would include being consistent with proposed spending amounts outlined in the plan and with the types of projects that were originally identified.

Our current 5-Year plan identified a goal entitled Public Services Support. The intent of the goal is to support agencies that are working to address social issues and concerns within the community. The goal is considered a lower priority as compared to some others since it was identified that there were many agencies in the community that already address social issues and concerns throughout the community. Although a lower priority, the strategic plan included resources to supplement and expand some of the services provided. This has been accomplished during the first four years of the plan through the funding and implementation of the Bed Bug Education Project and the Food for Families Program.

A total of \$37,000 was programmed to support this goal over the five years. To date, \$35,657 has been spent on projects that fall under this goal. While the amount spent on this goal can be varied slightly, the City must still remain somewhat close to the original projections. We could not, for example, eliminate all of our proposed funding for public infrastructure in a given year in favor of a lower priority goal that had a much smaller proposed funding level. We would have to adopt a budget that provided for both, in amounts similar to what was originally proposed in our Consolidated Plan.

Although hiring a police officer to provide foot patrols in LMI areas to aid in crime prevention is an eligible use of CDBG funds, it would not be considered consistent with the intent of public services goal and associated funding level as outlined in the City's current Consolidated Plan (2016-2021). It is nonetheless a good idea that is worth considering in the future. As we begin to develop our next 5-Year Consolidated Plan and 2021-2022 Annual Action Plan later this year, the public services goal could be expanded to address issues such as crime prevention.

Waiting to include a project such as this in next year's Annual Action Plan would also give the Police Department an opportunity to evaluate the success of the foot patrols planned for this summer using grant funding that has been awarded to the Alcohol and Substance Abuse Council of Jefferson County, Inc. d/b/a Pivot. CDBG funding allocated for this project in Program Year 2021-2022 would allow the program to continue once Pivot's funding is exhausted if it is determined that the program was a success and the Council wishes to continue it.

School Resource Officer for the Watertown City School District. At the City Council Work Session, Council members also suggested allocating CDBG funding for a School Resource Officer in the Watertown City School District. After consulting with our HUD representative, it has been determined that the use of CDBG funds for this

activity would not be eligible. The schools are not located in one of our target areas, and it would be difficult to prove that at least 51% of the beneficiaries, including the school staff as well as the students, are LMI persons. In addition, as is discussed above, the proposed project would not be consistent with our adopted 5-Year CDBG Consolidated Plan in terms of proposed spending levels outlined in the plan and with the types of projects that were originally identified.

CDBG Target Area Smoke Detector Program. The Fire Department has suggested a smoke detector program that would allow for the purchase of smoke detectors to be installed in homes in Low to Moderate Income (LMI) areas. They have requested \$5,000 in CDBG funding for the proposed program. The project would be considered a Public Service activity, as defined by HUD. In order to meet the CDBG income requirements, the smoke detectors will only be allowed to be installed in homes within one the City's CDBG Target Neighborhoods. These are areas of the City where at least 51% of the residents are LMI persons as determined by the census.

Since the amount of funding is minimal at \$5,000, the project will still fit within the City's 5 year Consolidated Plan budget for the Public Service goal as discussed above. It is anticipated that the smoke detectors will be installed by the firemen to ensure proper installation, and that the residents will be given educational materials on the importance of having working smoke detectors in their home. Staff is recommending including this project in our 2020 Annual Action Plan.

First Responder Home Buyer Program. At the City Council Work Session, Council members also suggested creating a First Responder Homebuyer Program to encourage members of the police and fire departments to purchase homes within the City's CDBG Target Areas. This would be possible provided that the first responder income qualifies for the program. The income limits for the program depend on the family size of the applicant, but as an example, a family of four could earn up to \$54,250 and still be eligible for the program. Since many of our first responders are likely to earn more than the income limit, it is Staff's recommendation that we do not create a program that is exclusively for first responders as finding qualified applicants may be difficult. However, Staff is recommending that we modify our existing Homebuyer Program to give priority to first responders who qualify and are interested in purchasing a home in a target area.

HUD recently informed the City that our 2020-2021 Program Year CDBG allocation will be \$920,779. At the City Council Work Session in February, Staff provided an overview of the CDBG program and discussed potential projects for inclusion in the Annual Action Plan. Based on the Council feedback, Staff discussion and the community input that we have received; Staff is proposing the following projects and associated budgets for the 2020-2021 Annual Action Plan:

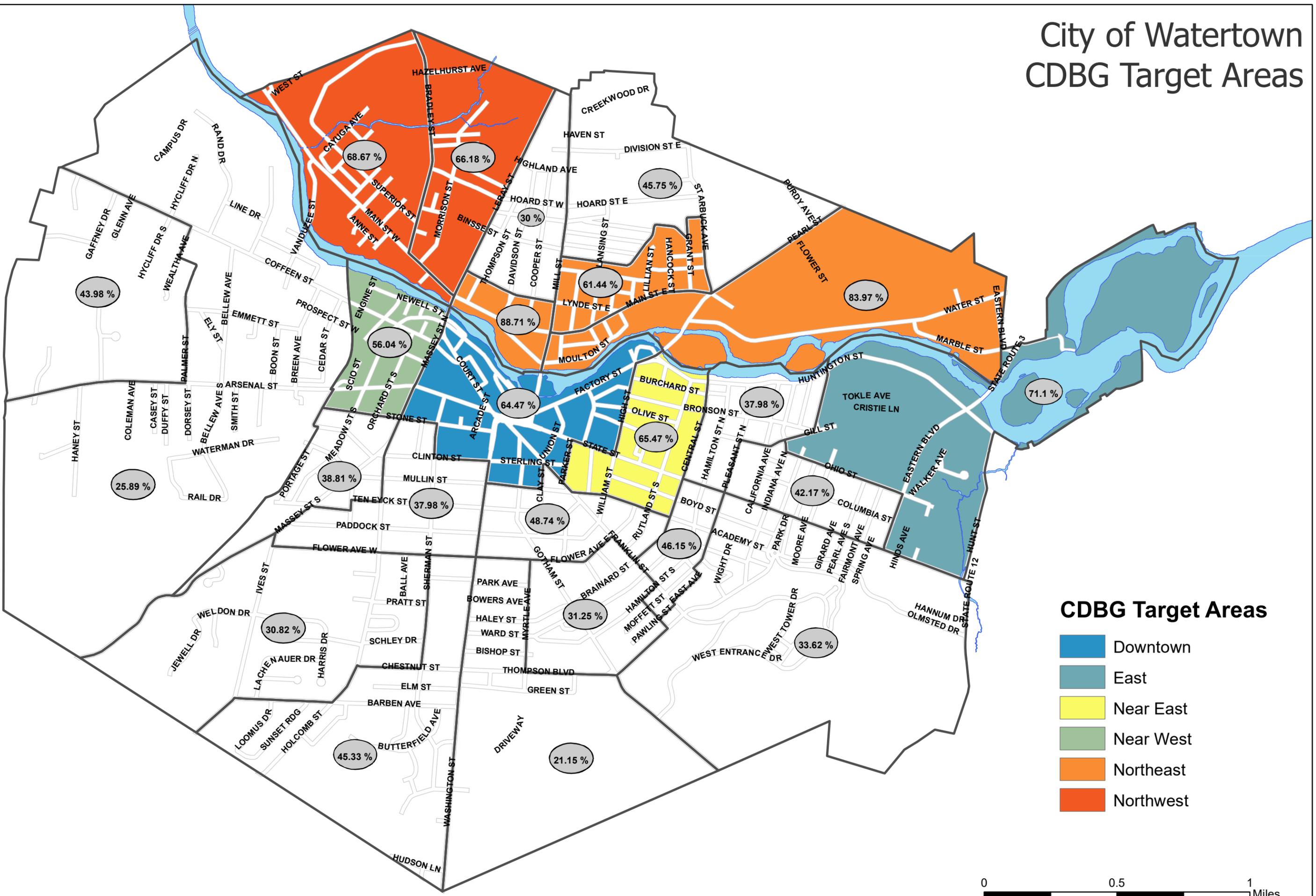
CDBG Program Year 2020-2021 Proposed Budget

Proposed Uses

Tilden Street/Starbuck Avenue Sidewalk Project	\$250,000.00
North Side ADA Ramp Replacement Project Phase 2	\$100,000.00
Owner-Occupied Housing Rehab Program	\$215,000.00
Homebuyer Program	\$150,000.00
NDC Housing Stabilization Program	\$45,000.00
Homeless Assistance Point-In-Time Outreach & Education	\$8,500.00
Fair Housing Education	\$5,000.00
WCSD Food 4 Families Program	\$6,500.00
CDBG Target Area Smoke Detector Program	5,000.00
Planning – Zoning Ordinance Rewrite Phase 2	\$75,000.00
Program Administration	\$60,779.00
Total Funds Proposed for Allocation	\$920,779.00

In order to stay on schedule to submit our Annual Action Plan by the May 15, 2020 deadline, our draft plan must be completed and be made available for public review and comment by March 23, 2020. If the Council concurs with the proposed projects identified above, Staff will finalize the draft of the Program Year 2020 Annual Action Plan accordingly and will make it available to the public for the required 30-day review within the next week.

City of Watertown CDBG Target Areas



CDBG Target Areas

- Downtown
- East
- Near East
- Near West
- Northeast
- Northwest

