TOWN OF ESSEX SELECTBOARD
REGULAR MEETING AGENDA

Online & 81 Main St.
Essex Junction, VT 05452
Monday, September 13, 2021
6:30 PM

E-mail: manager@essex.org *www.essexvt.org* *Phone: (802) 878-1341*

This meeting will be held both remotely and in person. Available options to watch or join the meeting:

- **WATCH:** the meeting will be live streamed on Town Meeting TV.
- **JOIN ONLINE**: Join Microsoft Teams Meeting. Depending on your browser, you may need to call in for audio (below).
- **JOIN CALLING:** Join via conference call (*audio only*): (802) 377-3784 | Conference ID: 635 204 079#
- **PROVIDE FULL NAME:** For minutes, please provide your full name whenever prompted.
- **CHAT DURING MEETING: Please use "Chat" to request to speak, only. Please do not use for comments.**
- **RAISE YOUR HAND:** Click on the hand in Teams to speak or use the "Chat" feature to request to speak.
- **MUTE YOUR MIC:** When not speaking, please mute your microphone on your computer/phone.

1. **CALL TO ORDER** [6:30 PM]
2. **AGENDA ADDITIONS/CHANGES**
3. **APPROVE AGENDA**
4. **PUBLIC TO BE HEARD**
   a. Comments from Public on Items Not on Agenda
5. **PUBLIC HEARING** [6:35 PM]
   a. Public hearing about application to the State of Vermont for a Recovery Housing Program Grant (2021) under the Vermont Community Development Program
6. **BUSINESS ITEMS**
   a. Consider approval of application to the State of Vermont for a Recovery Housing Program Grant (2021) under the Vermont Community Development Program
   b. *Interview and potential appointment: Stephen Dowd, Conservation and Trails Committee
   c. *Interview and potential appointment: Ken Signorello, Conservation and Trails Committee
   d. Presentation and discussion of potential changes to Public Nuisance Ordinance
   e. Consider approval of preferred alternative for scoping study for improved pedestrian facilities and stormwater infrastructure on Tanglewood Drive
   f. Presentation of and potential action on speed limit study on Osgood Hill Road
   g. Consider approval of Retainer Contract method of procurement for all projects $39,999 and under
   h. Discussion about appointment of new Selectboard member
   i. **Legal discussion on Village of Essex Junction's proposed separation from Town of Essex
   j. ***Discussion of personnel
7. **CONSENT ITEMS**
   a. Consider approval of public hearing warning for survey of Fleury Road
   b. Approve minutes: August 17, 2021, August 23, 2021 - Joint
   c. Check Warrants: #17899 – 8/23/21; #17901 – 8/27/21; #17903 – 9/3/21; #17905 – 9/10/21
8. **READING FILE**
   a. Board member comments
   b. Memo from Public Works re: Stormwater Management related to Separation Discussion
   c. Memo from Jennifer Knauer re: Summary Notes from "Town of Essex Public Forums" held on August 4th, 6th, and 21st
   d. Thank you note from Essex Jericho Underhill Food Shelf
   e. List of Boards/Committees/Commissions vacancies
   f. Upcoming meeting schedule
9. **EXECUTIVE SESSION**
   a. *An executive session may be requested to discuss the appointments of public officials
   b. **An executive session may be requested to discuss legal matters and contracts
   c. *** An executive session is anticipated to discuss the employment of public officials

Members of the public are encouraged to speak during the Public to Be Heard agenda item, during a Public Hearing, or, when recognized by the Chair, during consideration of a specific agenda item. The public will not be permitted to participate when a motion is being discussed except when specifically requested by the Chair. This agenda is available in alternative formats upon request. Meetings of the Selectboard, like all programs and activities of the Town of Essex, are accessible to people with disabilities. For information on accessibility or this agenda, call the Town Manager's office at 878-1341.

Certification: _____ 9/10/2021

PUBLIC HEARING NOTICE

The Town of Essex is considering making application to the State of Vermont for a Recovery Housing Program Grant (2021) under the Vermont Community Development Program. A hybrid public hearing will be held on Monday, September 13, 2021 at 6:35 PM at the Town Offices, 81 Main St., Essex, Vermont and via the link on the September 13, 2021 Selectboard agenda, accessed here: https://www.essexvt.org/AgendaCenter/Essex-Selectboard-9 , to obtain the views of citizens on community development, to furnish information concerning the amount of funds available and the range of community development activities that may be undertaken under this program, the impact to any historic and archaeological resources that may be affected by the proposed project, and to give affected citizens the opportunity to examine the proposed statement of projected use of these funds. The proposal is to apply for $500,000 in Recovery Housing Program Funds which will be used to accomplish the following activities**:**

The Champlain Housing Trust in partnership with Vermont Foundation of Recovery plan to convert 12 existing apartments in three buildings at 1005, 1006 and 1007 Ethan Allen Avenue into supportive housing for people in recovery from substance abuse disorder. Of the total grant request, $50,000 would be used for stormwater improvements at the site.

A draft copy of the proposed application will be available for public review by September __, 2021 at the Essex Town Offices, 81 Main St., Essex, Vermont, and may be viewed during the weekday hours of 7:30 AM to 4:30 PM. Should you require any special accommodations, please call Owiso Makuku at Essex Town Offices, 802-878-1343. For the hearing impaired please call 711.

Town of Essex Selectboard

Copy submitted by: Amy Demetrowitz, Phone: 802-861-7307
Please send Tear Sheet & Invoice to:
Champlain Housing Trust
Attention: Kirsten Merriman Shapiro
88 King St.
Burlington, VT 05401

Read Me Page

Application Target Dates	Board Meeting Dates
September 10, 2019	November 7, 2019
February 11, 2020	April 2, 2020
April 14, 2020	June 11, 2020

What Board Meeting is your project targeting? 4/2/2020

1. PUBLIC HEARING: Every applicant must hold a public hearing before the application can be submitted. Please see the Boards and Meetings VCDP website and be certain to get the public hearing notice published as required. Also if the application is a consortium one, keep in mind that more than one public hearing may be required. The public hearing notice form is part of the on-line application, so be sure to complete the form as one of the first steps in completing this application. For further information, contact your CD Specialist.

2. MUNICIPAL PLAN: All applicant communities, including consortium member communities, must have an adopted and still current (municipal plans expire 5 years after adoption) Municipal Plan under 24 V.S.A. Chapter 117, Subchapter 5. For further information, contact your CD Specialist.

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3. ENVIRONMENTAL REVIEW: Every project is required to complete an Environmental Review. For further guidance on Environmental Review please refer to our Environmental Review Webpage or contact the Department's Environmental Officer.

4. HISTORIC PRESERVATION: Every project is subject to review under Section 106 of the National Historic Preservation Act, please complete the Section 106 Preliminary Review Form and submit it to the email listed on the form. The Department's Environmental Officer. can assist you with completing the form, and staff from the Division for Historic Preservation will assist you with the Section 106 Process.

NOTE: Any application that is not submitted to Agency in time to be reviewed by the June Community Development Board meeting will need to start a new application for the next fiscal year which starts July 1.

✔ I certify that I have read and understand this page, and if I am not an employee of the applicant municipality, I have made the applicant municipality aware of the requirements on this page.

Program Area Selection

- ✔ Housing
- Economic Development
- Public Facilities
- Public Services

Executive Summary: Recovery Housing

Working Title for Project: Recovery Housing

Applicant Municipality (or lead applicant if applying as a consortium): Town of Essex

Is this a consortium project?
Yes
✔ No
If Yes, please select the participating municipalities. *
Participating Municipalities:

Chief Executive Officer (of lead applicant if consortium application): EVAN TEICH

Contact Person (of lead applicant if consortium Application): Amy Demetrowitz
Person who prepared this application: Amy Demetrowitz

Municipal DUNS#: 104047027
✔ **I certify** the Municipalities DUNS# above is current and valid, it blank please enter the Municipalities DUNS# on the "Municipal Policies, Plans, and Insurance" page under the Organization Detail page.

Estimated Project Funding:

VCDP Request	$700,000
Municipal Funds	$3,000
All Other Funds	$1,150,000
Total (Municipal & Other)	$1,153,000
Total Project Funding	$1,853,000

Please select all that apply: *
Applicant intends to: keep ✔ subgrant : loan the VCDP Funds.

Enter legal name and complete address (city, state, zip) of Subgrantee.*
Champlain Housing Trust
88 King St.
Burlington VT 05401 N/A
DUNS# 00-000-0000 Federal ID# 22-2536446
86-815-1226
Enter legal name and complete address (city, state,zip) of Borrower*
✔ N/A
DUNS# 00-000-0000 Federal ID#

National and State Objectives

State Objective*

- ✔ Housing
- Economic Development
  - The loan will be For: Profit Borrower Non-Profit Borrower
- Public Facility
- Public Service

National Objective *

- ✔ LMI
- Slums & Blight
- Urgent Need

For Slums & Blight and Urgent Need Only - provide the following:
Slum and Blight Applications – Upload the pre-qualification request submitted to the Agency Urgent Need Applications – Upload the signed "Urgent Need Certification Form", found on the Agency's website Forms and Sample Document Page.

For LMI Only
For specific information about National Objectives refer to the VCDP Implementation Grant Application Instructions and Program Guide or contact your CD Specialist. For Information on median income consult the HUD Income Limits

NOTE:
For housing projects count the number of households and persons as beneficiaries. For economic development, public facilities, and public services projects count the number of persons as beneficiaries. For any Counseling Advocacy Services (Including Housing Counseling) enter the number of persons served under Public Service. If unclear how to fill out beneficiary data, please contact your CD Specialist.

	Housing (households)	Housing (persons)	Econ. Devel. (persons)	Public Facility (persons)	Public Service (persons)	Total
Number of beneficiaries less than 30% of median income						0
Number of beneficiaries between 30% and 50% of median income		10				10
Number of beneficiaries between 50% and 80% of median income		12				12
Sub-total of LMI beneficiaries	0	22	0	0	0	22
Number of beneficiaries over 80% of median income		10				10
Total beneficiaries	0	32	0	0	0	32
Percentage of LMI beneficiaries	0%	69	0%	0%	0%	69%

Basis of LMI determination *

- L/M Area Benefit

Income Certification Survey
Area-Wide Communities and Census Tract greater than 51% LMI, Contact CD Specialist

L/M Limited Clientele

Income Certification Survey
Presumed LMI

Pre-Qualified LMI Through Other Program

✔ L/M Housing

✔ Income Certification Survey

L/M Jobs

Income Certification Survey

Grantee Roles and Capacity

ROLE/TASK TO BE PERFORMED	NAME OF RESPONSIBLE PERSON	TITLE OF RESPONSIBLE PERSON	Do you anticipate this service being paid for with VCDP funds?
1. Project Application Management/Preparer	Amy Demetrowitz	Champlain Housing Trust, Director of Real Estate Development	Yes ✔ No Unsure N/A
2. Environmental Review Preparer	Amy Demetrowitz	Champlain Housing Trust, Director of Real Estate Development	Yes ✔ No Unsure N/A
3. Architect	N/A	N/A	Yes ✔ No Unsure N/A
4. Engineer	N/A	N/A	Yes ✔ No Unsure N/A

Grantee Roles and Capacity

5. Project Manager (Contact for project progress during implementation, start to finish)	Amy Demetrowitz	Champlain Housing Trust, Director of Real Estate Development	Yes ✔ No Unsure N/A
a. Preparation of Progress Reports	Amy Demetrowitz	Champlain Housing Trust, Director of Real Estate Development	Yes ✔ No Unsure N/A
b. Review/submission of Progress Reports	Gregory Duggan	Deputy Manager, Town of Essex	Yes ✔ No Unsure N/A
6. Historic Preservation Consultant(s)	NA	NA	Yes No Unsure ✔ N/A
7. Financial Management at the Municipal Level			
a. Reviews/approves invoices	Sarah Macy	Finance Director	Yes ✔ No Unsure N/A
b. Submits requisitions for disbursement of grant funds	Department heads responsible for budget; Sarah Macy > $1k; Evan Teich > $20k	Various department heads	Yes ✔ No Unsure N/A
c. Approves payments	Department heads responsible for budget; Sarah Macy > $1k; Evan Teich > $20k	Various department heads	Yes ✔ No Unsure N/A
d. Prepares checks for payment of	Shirley Fitzgerald	Accounts Payable and	Yes ✔

invoices		Water Sewer Clerk, Finance Department	No Unsure N/A
e. Signs checks	Susan McNamara-Hill	Town/Village Clerk/Treasurer	Yes ✔ No Unsure N/A
f. Maintains and controls accounting records, including ledgers	Sarah Macy	Finance Director	Yes ✔ No Unsure N/A
g. Reconciliation of bank statements	Courtney Bushey	Assistant Finance Director	Yes ✔ No Unsure N/A
h. Preparation/submission of Subrecipient Annual Report/Single Audit	Sarah Macy and Courtney Bushey	Finance Director and Assistant Finance Director	Yes ✔ No Unsure N/A
i. Reports financial status of grant to Municipal Governing Body	Department heads responsible for grant and/or Finance Director	Various department heads	Yes ✔ No Unsure N/A
8. Financial Person at the Subrecipient/Borrower Level	Sarah Macy	Finance Director	Yes ✔ No Unsure N/A
9. Compliance Management			
a. Preparation of Request for Proposals/Qualifications for construction	Amy Demetrowitz	Champlain Housing Trust, Director of Real Estate Development	Yes ✔ No Unsure N/A

Grantee Roles and Capacity

b. Responsible for oversight of bid solicitation/procurement of contractors	Amy Demetrowitz	Champlain Housing Trust, Director of Real Estate Development	Yes ✔ No Unsure N/A
c. Review/execution of contracts for construction	Amy Demetrowitz	Champlain Housing Trust, Director of Real Estate Development	Yes ✔ No Unsure N/A
d. Review/submission of certified payrolls (only applies to projects that are subject to Davis Bacon)	Amy Demetrowitz	Champlain Housing Trust, Director of Real Estate Development	Yes ✔ No Unsure N/A
e. Clerk of the Works	N/A	N/A	Yes ✔ No Unsure N/A
f. Inspection of work prior to release of payment	Amy Demetrowitz	Champlain Housing Trust, Director of Real Estate Development	Yes ✔ No Unsure N/A
Other			Yes ✔ No Unsure N/A
			Yes ✔ NoUnsure N/A

For Economic Development Projects, if project is not an Economic Development project, select N/A: ✔ N/A

Grantee Roles and Capacity

ROLE/TASK TO BE PERFORMED	NAME OF RESPONSIBLE PERSON	TITLE OF RESPONSIBLE PERSON
1. Responsible for Job Creation/Retention Requirements		
For Scattered Sites Projects, if project is not a Scattered Sites project, select N/A:	✔ N/A	

ROLE/TASK TO BE PERFORMED	NAME OF RESPONSIBLE PERSON	TITLE OF RESPONSIBLE PERSON
1. Outreach/Marketing		
2. Intake/Application review		
3. Verification of application information/Underwriter		
4. Housing rehab inspections		
5. Tier II Environmental Reviews		
6. Manager of Escrow Accounts		
7. Loan Servicer		
8. Delinquent Accounts Collector		

Project Description

Provide a description of the project. Be sure to include the following:

a) Provide a detailed project description.

The Champlain Housing Trust (CHT) is proposing to partner with Vermont Foundation of Recovery (VFOR), to renovate and utilize three CHT-owned buildings on the Essex side of the Fort Ethan Allen neighborhood to be used as recovery homes. The goal of this project is to reduce costs and increase efficiencies in Chittenden County to allow VFOR to grow their network of recovery residences throughout Vermont. The three apartment buildings are two-story brick, each with four apartments and full basements and do not currently have any affordability restrictions.

VFOR is a federally recognized 501c3 organization, established in December of 2013. Their mission is to create a network of recovery homes to help people suffering from addiction re-assimilate into society by supporting the transitions from addiction, to recovery, to independent living. VFOR is currently operating five recovery homes in different Vermont towns. Each recovery home is a residential property where the members of the home agree to maintain a drug and alcohol free environment. There exists a family-like atmosphere in the homes, where members are nurtured and energized by others who share common experiences, struggles, values, and goals. The homes provide varying degrees of supervision and autonomy, offering a variety of housing options (shared bedrooms, single bedrooms, shared apartments) to meet the needs of individuals at varying stages of recovery. In line with the Vermont Department of Health's strategic plan, 2017-2020, this project will reduce the risks that contribute to drug and alcohol use, while promoting healthy lifestyles and communities by offering supportive housing, peer-based recovery supports, and collaboration with communities and treatment providers.

This project includes three existing buildings each with four, 2-bedroom apartments. One building will retain that configuration and provide four two-bedroom apartments for families or individuals (8 beds total). The other two buildings will each be converted to two, 4-bedroom apartments each housing 6 people for a total of 24 beds with one building serving men and the other women. Co-locating recovery homes will provide efficiencies and flexibility for VFOR. None of the currently existing recovery homes allow for families to be housed together. In each case the person in recovery must leave the family home in order to participate in the program. The project will be the first with the ability to house families, or single parents with children.

CHT will manage the buildings at a low, sustainable cost, with cost savings to VFOR of close to $150,000 annually over the 32 Fort Ethan Allen beds. These cost savings will help to bridge the gap between the true operational cost of a well-functioning recovery residence and the extremely limited capacity of most residents to cover that cost. In addition, consolidating Chittenden County residences in one location makes VFOR management and operational tasks more effective and efficient; creates a greater sense of community, with a playground, open space and common areas for group activities; and increases the opportunities for connections among residents. The master leasing arrangement will also relieve VFOR of its current maintenance responsibilities and allow it to focus on its core mission. These monetary savings and operational efficiencies will allow VFOR to create a new model for families with children, and to open new homes in St. Albans, Morrisville and Barre.

Of the $700,000 request, $50,000 will go towards improving the storm water drainage in the community green adjacent to the buildings. The community green is owned in common between these three buildings and a shared-equity condominium association of 19 condos developed by CHT. The storm

water lines are old and deteriorated causing flooding of the adjacent buildings. The Essex Public Works Department is assisting CHT in the design of the proposed storm water system which will include a future easement to the Town to allow for additional improvements to storm water infrastructure in the neighborhood.

b) Provide the address or location of the project. Be sure to include street address, city and zip+4.

1005, 1006, 1007 Ethan Allen Ave
Essex, VT 05452

c) The service area for this project if it serves beyond the municipality applying. (If not applicable enter N/A)

These homes will be available for people struggling with addiction from across the region. The majority of residents will come from the Chittenden County area, though some may come from other counties.

d) Attach a location map and site plans.

https://egrants.vermont.gov/_Upload/237236_8063247-A3-RecoveryHousingSiteLocationandPlanMap.pdf
N/A

e) For construction/rehabilitation projects, attach floor plans of the proposed building(s).

https://egrants.vermont.gov/_Upload/237236_8063249-A6-RecoveryHousing-floorplans.pdf
N/A

f) You may also submit photographs.

https://egrants.vermont.gov/_Upload/237236_8063251-A8-RecoveryHousing-photos.pdf
N/A

g) Is any part of the project located in a flood plain?

Yes
✔ No

If only part of the project is located in a flood plain, please clarify what part is in the flood plain.

h) Is the project located in a designated downtown or designated village center as determined by the Downtown Development Board?

Yes
✔ No

If no, is it located in a downtown?

Yes
✔ No

If only part of the project is located in a designated downtown, designated village center or simply in the downtown, please clarify what part.

i) If your project is a housing project and you have completed a Common Housing Application for VHCB or VHFA please attach your Common Housing Application.
Note: If you feel you have fully addressed any of the VCDP application questions in your Common Housing Application, please cite where (page & question number) in the Common Application the answer can be found for each question.
https://egrants.vermont.gov/_Upload/237236_8063242-HousingCommonApp--RecoveryHousing.pdf
N/A

j) Please provide the Environmental Review Identifier Number and status of the Environmental Review for this project. Please Note: Completion of the Environmental Review is not required before submitting an application, but it is critical that you have a handle on what environmental review components may impact your project's timeline/budget in order to properly represent the budget and timeline in the project's application .
ENV 2019 Essex-023 Review is underway. On January 30, 2020, the preliminary Section 106 Review by the SHPO has found that the activities undertaken in this project are exempt.

Project Budget: Housing: IG-Acquisition - Real Property

Activity	IG-Acquisition - Real Property
VCDP Amount Requested	$650,000
Activity Total	$1,326,150

If you are uploading your Activity Details and Basis for Estimates, put See Attached in the textbox and upload your document.

Activity Details and Basis for Estimates*

acquisition cost is based on current debt

Instructions: For the Other Resources entries below, please select the appropriate resource, the resource type and enter the amount. If you select “Other” as the Resource, enter a brief description in the “Other Description” column. If you have supporting documentation for the Resource and can upload an electronic version, use the Browse button and upload the document. The Other Resources Total and the Activity Total will be calculated when you Save this page.

Other Resources	Type	Amount	Other Description	Funding Source	Status	Upload	Alread Upload
(VHCB) - Vermont Housing & Conservation Board	Grant	$476,150		State/Local	Pending		
Other	Loan	$200,000		Private	In-Hand	https://egrants.vermont.gov/_Upload/237857_8061615-UVMEthanALlenAddendumtoPromisoryNoteSIGNED.pdf	
Total		**$676,150**					

Project Budget: Housing: IG-Flood/Drainage

Activity	IG-Flood/Drainage
VCDP Amount Requested	$50,000
Activity Total	$50,000

If you are uploading your Activity Details and Basis for Estimates, put See Attached in the textbox and upload your document.

Activity Details and Basis for Estimates*

based on civil engineers estimate

https://egrants.vermont.gov/_Upload/237858_8061488-stormwater.pdf

Instructions: For the Other Resources entries below, please select the appropriate resource, the resource type and enter the amount. If you select “Other” as the Resource, enter a brief description in the “Other Description” column. If you have supporting documentation for the Resource and can upload an electronic version, use the Browse button and upload the document. The Other Resources Total and the Activity Total will be calculated when you Save this page.

Other Resources	Type	Amount	Other Description	Funding Source	Status	Upload	Alread Upload
Total		**$0**					

Project Budget: Housing: IG-General Administration

Activity	IG-General Administration
VCDP Amount Requested	$0
Activity Total	$5,000

If you are uploading your Activity Details and Basis for Estimates, put See Attached in the textbox and upload your document.

Activity Details and Basis for Estimates*

Includes Town Legal expense and audit expense. Town in -kind contribution will be staff time.

Instructions: For the Other Resources entries below, please select the appropriate resource, the resource type and enter the amount. If you select “Other” as the Resource, enter a brief description in the “Other Description” column. If you have supporting documentation for the Resource and can upload an electronic version, use the Browse button and upload the document. The Other Resources Total and the Activity Total will be calculated when you Save this page.

Other Resources	Type	Amount	Other Description	Funding Source	Status	Upload	Alread Upload
Other	Grant	$2,000		Private	Pending		
(MUNI) - Municipal Contribution	Cash-In-Kind	$3,000		State/Local	Pending		
Total		**$5,000**					

Project Budget: Housing: IG-Program Management

Activity	IG-Program Management
VCDP Amount Requested	$0
Activity Total	$153,800

If you are uploading your Activity Details and Basis for Estimates, put See Attached in the textbox and upload your document.

Activity Details and Basis for Estimates*

based on developers experience

Instructions: For the Other Resources entries below, please select the appropriate resource, the resource type and enter the amount. If you select “Other” as the Resource, enter a brief description in the “Other Description” column. If you have supporting documentation for the Resource and can upload an electronic version, use the Browse button and upload the document. The Other Resources Total and the Activity Total will be calculated when you Save this page.

Other Resources	Type	Amount	Other Description	Funding Source	Status	Upload	Alread Upload
Other	Grant	$153,800		Private	Pending		
Total		**$153,800**					

Project Budget: Housing: IG-Residential Rehabilitation Multiple (Rental)

Activity	IG-Residential Rehabilitation Multiple (Rental)
VCDP Amount Requested	$0
Activity Total	$318,050

If you are uploading your Activity Details and Basis for Estimates, put See Attached in the textbox and upload your document.

Activity Details and Basis for Estimates*

Based on third party estimate

https://egrants.vermont.gov/_Upload/237863_8061488-B1-RecoveryHousing-CostEstimate.pdf

Instructions: For the Other Resources entries below, please select the appropriate resource, the resource type and enter the amount. If you select “Other” as the Resource, enter a brief description in the “Other Description” column. If you have supporting documentation for the Resource and can upload an electronic version, use the Browse button and upload the document. The Other Resources Total and the Activity Total will be calculated when you Save this page.

Other Resources	Type	Amount	Other Description	Funding Source	Status	Upload	Alread Upload
(VHCB) - Vermont Housing & Conservation Board	Grant	$123,850		State/Local	Pending		
Other	Grant	$125,000		Private	Pending		
Other	Grant	$69,200		Private	Pending		
Total		**$318,050**					

Project Need

Project need is well-documented (e.g. studies, updated data, etc).

1. Describe the need for this project.*

Like many states, Vermont has been struggling with the impacts of the opioid crisis and high rates of substance abuse. HOUSING: A CRITICAL LINK TO RECOVERY, An Assessment of the Need for RECOVERY RESIDENCES In Vermont, February 2019 (prepared with the assistance of Vermont's Alcohol & Drug Abuse Prevention programs (ADAP) and the Governor's Opioid Coordination Council) found that:

• More than 52,000 Vermont residents, or one in 10 individuals over age 12, are affected by a Substance Use Disorder (SUD).

• Roughly 1,200 individuals, or about 14% of the Vermonters entering treatment for an SUD in 2017, would benefit from access to a Recovery Residence as a means of managing their SUD, to maintain their status as stable.

• Currently, there are only about 212 Recovery Residence beds in Vermont, with a total potential to serve roughly 425 residents a year staying an average of six months. And, only one residence accommodates women with dependent children despite the fact that this sub-group represents a significant share of those in treatment.

• To serve this population sustainably would require as many as 300 additional beds distributed statewide.

• More than 3/4 of Vermonters in treatment today are Medicaid-eligible. And, the number of homeless individuals in treatment has risen four-fold since 2000. For these populations, housing instability represents one of the greatest external hurdles to a recovery that is already inherently difficult.

Individuals in recovery are better able to participate in the active management of their health. According to Substance Abuse and Mental Health Services Administration's Recovery Support Strategic Initiative, "Overall well being begins with addressing symptoms of addiction that complicate physical and emotional health. Abstinence from alcohol, non-prescribed medications and illicit drug use is recommended so that any psychiatric disorders can be addressed and treated. This leads to more informed and healthier choices that will sustain ongoing recovery."

Reducing costs: A comparison of hospital use, emergency room use, outpatient visits and smoking among the general work force, workers with any SUD, workers with an Alcohol Use Disorder, workers with an Illicit Drug Use Disorder, workers with a Pain Medication Use Disorder, workers with a Marijuana Use Disorder and workers in recovery shows that:

• Workers in recovery have the lowest hospital use of any group.

• Workers in recovery use hospital emergency services at the same level as the general work force, as compared to workers with an illicit drug use disorder or who misuse pain medications, who had twice the rate of Emergency Department use as their peers.

• Workers in recovery are much less likely to smoke or to be nicotine-dependent than workers with a SUD and have rates even lower than workers who have never had a SUD.

2. Describe the manner in which the need was determined (cite relevant data and attach any studies or information to support this need).*

The Town's Plan, identifies the need to serve residents of all income levels, ages and special needs which includes persons in treatment for substance abuse. Essex identified this critical need for

wrap-around support of substance abuse treatment, the proposal would further elements of the 2016 Essex Town Plan. Furthermore, the project aligns with the 2019 Essex and Essex Junction Housing Needs Assessment and Action Plan by advancing supportive housing as described in Section 6.7 through partnerships with non-profits as recommended in Section 8.6.

Additionally, the conclusion of the Community Health Needs Assessment for Chittenden and Grand Isle County that housing is foundational to many other community health issues including substance abuse. The proposed actions related to housing include partnering with non-profit developers.

There is not a more appropriate solution than the one presented.

3. a. Describe why this is the best approach to meet the need described in #1 above, and how your proposal will meet this need. *
This project is part of a larger plan to expand the availability of recovery residences in northern Vermont. The specific goal for this project is to reduce the actual cost per bed across VFOR's network by about $90/week, or around $150,000 annually. The cost savings will be achieved by consolidating 32 Chittenden County Recovery Residences here at this location at Fort Ethan Allen. The larger plan is to use those cost savings to add recovery residences (1) for women with children in Chittenden County, (2) for women and for men in Barre / Berlin (Montpelier) and in Morrisville, and (3) for men and for women and/or women with children in St. Albans. The project leverages CHT's real estate expertise to lower costs and provides sustainable property management for Recovery Residences, allowing VFOR to concentrate on its core mission of recovery. The second innovation is VFOR's expansion into Recovery Residence models for families with children. While there is an identified need for Recovery Residences for families, parents living with dependent children do have different and additional issues in recovery. Parents struggling with an SUD are often also struggling with inadequate parenting skills and/or housing instability and therefore may be involved with the child welfare system, up to and including losing custody of their children. They must balance focusing on their recovery with the demands of their children's safety and well-being. And, the transitional nature of a recovery residence must be balanced with the needs of children for housing and school stability. VFOR will explore what a successful recovery residence model for families looks like in order to move into this arena.

b. Identify other approaches that were considered and explain why they were not pursued.*
Fort Ethan Allen is an ideal location for recovery housing. It is an established neighborhood on the bus line and within walking distant of stores and jobs. It has many amenities including walking trails, community gardens, playing fields and walking trails. These three buildings are currently owned by CHT and have no existing income restrictions making them ideal for this type of project.

4. If your project involves workforce education and training, describe the extent to which other state and/or federal training funds are being utilized. If project is ineligible for such funds, please explain and provide documentation. If not applicable select N/A.*

- ✔ N/A

All appropriate funding sources have been sought.

5. Describe the effort to obtain other funding and, why particular funding sources were considered but not pursued.*
We have applied for VHCB funding and a TDBank Housing For All grant and have extended an interest only loan with the University of Vermont. We will be applying for funding through OneCare in the Spring. We have identified sources that will allow flexibility for this type of transitional housing.

6. Explain the level of municipal government support.*

The Town of Essex Selectboard, administration and Chief of Police have been supportive of this project as a way to help people and families struggling with addiction. The Town of Essex held a Public Hearing on September 23, 2019 to consider support of an application for VCDP funding. While there was neighborhood opposition to housing people with substance abuse disorder in the neighborhood, the Selectboard voted unanimously (5-0) in support of this application and again when considering the application resolution on January 13, 2020.

https://egrants.vermont.gov/_Upload/237238_8060469-EssexSBminutes_RecoveryHousingapplication_092319_FINAL.pdf

How well the project meets a Consolidated Plan goal.

For specific information about the Consolidated Plan refer to the VCDP Application Instructions and Program Guide or contact your CD Specialist.

7. Describe how the project meets the goals of the Consolidated Plan and identify the strategies that will be employed to meet those goals. *
This project will meet the goal to "Increase supply and quality of affordable housing". The use of these units for recovery housing is referenced in the consolidated plan as an activity the jurisdiction plans to undertake during the next year to address the housing and supportive services needs identified in accordance with 24 CFR Section 91.215(e) with respect to persons with alcohol or other drug addiction.

Is the project consistent with the local Municipal Plan?

8. Please provide a letter from the Municipality that tells us how this project is consistent with the Municipal Plan.*
https://egrants.vermont.gov/_Upload/237238_8060472-LetterofSupport_Essex-CHTRecoveryHousing20200110signed.pdf

Is the project consistent with the Regional Plan?

9. Upload a certification from the Regional Planning Commission that the project is consistent with the Regional Plan. Provide clarification if needed. *
https://egrants.vermont.gov/_Upload/237238_8060786-CCRPC_CHTandVTFoundationofRecovery_FortEthanAllen_20190813.pdf

10. If this project is being carried out on behalf of the municipalities within your county or region, the

application must include documentation of regional support. Please describe the regional support. If not applicable select N/A.*

- ✔ N/A

Degree of health/safety risks to beneficiaries

11. If applicable, describe how this project directly addresses a health or safety issue for the intended beneficiaries. If not applicable select N/A.*
This project will provide temporary, supportive housing for people struggling with addiction including apartments for family reunification. It will help people suffering from addiction re-assimilate into society by supporting the transitions from addiction, to recovery, to independent living.

A substance-free home is vital to the success of individuals in early recovery. A two year study conducted by researchers at DePaul University found that individuals who entered sober housing after substance abuse treatment discharge “had significantly lower substance use, significantly higher monthly income, and significantly lower incarceration rates” compared with individuals who left treatment to a “usual-care condition (i.e., outpatient treatment or self-help groups).” American Journal of Public Health, Oct 2006; Vol. 96, pp1727–1729. Recovering alcoholics and addicts who have access to sober housing not only become healthy, they become productive and valued citizens.

The efficiencies provided by this location will allow VFOR to expand offerings in St, Ablans, Barre and Morissville Vermont.
N/A

Timing Pressures

12. Please describe, if applicable, any particular issues that make funding of this project time sensitive. If not applicable select N/A.*
This project will help strengthen VFOR so that they can expand their network of recovery homes across other regions of the State. It is critical that this project be ready for occupancy in July 2020 in order for VFOR to begin to see cost saving and be able to prepare for expansion.
N/A

Project Outcomes

13. These numbers will automatically populate from the data entered in the National and State Objectives section.

Number of beneficiaries less than 30% of median income	0
Number of beneficiaries between 30% and 50% of median income	10
Number of beneficiaries between 50% and 80% of median income	12
Sub-total of LMI beneficiaries	**22**
Number of beneficiaries over 80% of median income	10
Total beneficiaries	**32**

NOTE: If your project is funded there will be additional outcome information required.

14. Explain how benefit numbers were determined/projected? (Must be filled out if LMI was selected as a National Objective)*The project will provide 32 beds including two buildings with 12 beds each and one building with 4 2-bedroom apartments that will be used for reuniting families. While most people served will be below 80% of AMI, it is important to have the ability to also serve some people over 80%, we therefore have assumed 10 above 80%; 12 below 80% and 10 below 50%. The actual mix will vary from time to time as this will be transitional housing. The total count includes all members of a family in the family reunification units.

The longevity of the benefit.

15. Describe how long the project and benefit can be sustained and provide the basis for this determination. *

These homes will operate as Recovery Housing for as long as such housing is needed and there is an organization able to support the use. In the event that there is no longer a need, CHT would convert the buildings back to apartments and rent them to households earning less than 80% AMI.

16. Please provide the plan to establish capital and operating reserves, and also address the ability to meet all loan payments. If there is no need to have a capital or operating reserve, please explain. If there will be no loans, please note this.*

The financing requested in this and other funding applications will allow for the buildings to be operated without debt except for the interest only loan from the University of Vermont making it unnecessary to maintain significant operating reserves.

N/A

Level of beneficiary involvement in the development of the project, as appropriate

17. Describe how persons of low- and moderate- income were involved in the development of this project. How have they shown support?*We have been working in close partnership with VFOR who represents their members who are in recovery, many of whom are low-income. Also people in recovery have participated in community meetings regarding the development of the project.

Project Impact

How well the project indirectly impacts the community and/or additional LMI people.

18. Describe the indirect impact to the community and other LMI beneficiaries that may be indirectly served by the project.*

VFOR envisions a future in which it will be able to connect addicts and alcoholics with services which shepherd them from detoxification, to inpatient treatment, to outpatient counseling, to sober living and employment, and ultimately, to stable sobriety and independent living as valued and productive members of their communities. Because this is transitional housing, it will serve many individuals and families over the course of a year. It will also have positive impacts on the families of those in recovery.

19. Describe the organization's plans and tools to achieve the State's goal of making available at least 15% of the units in your portfolio to those who are homeless.* The Champlain Housing Trust has exceeded the 15% goal and currently 17% of our portfolio is occupied by formerly homeless households. We anticipate that some of the VFOR participants will be formerly homeless.

N/A

Readiness to start within six months of the award.

20. Are there any deed restrictions on the use of the property or impediments to clear title?*
No. The buildings are currently owned by CHT and have no affordable housing convenants or other restrictions.

https://egrants.vermont.gov/_Upload/237303_8060820-RecoveryHousingevidenceofsitecontrol_CHT-UVM-WarrantyDeed(Recorded).pdf

21. If the project depends upon easements or rights-of-ways, please submit documentation that these have been secured or will be secured within six months. If not applicable select N/A.*

✔ N/A

22. If control of the site involves voter approval, please explain how and when you expect to obtain that approval? If not applicable select N/A.*

✔ N/A

23. Please identify the federal, state and local permits which will be required for your project and when you expect such permits to be issued.Attach a completed Project Review Sheet from Department of Environmental Conservation (DEC). Contact the DEC Permit Specialist serving your community at http://dec.vermont.gov/environmental-assistance/permits/specialists to complete the required project review sheet. If not applicable select N/A.*
We will need a State Stormwaer Permit in order to undertake the stormwater improvement project that is also proposed with this project.
N/A

24. Please identify the status of commitments from each of the other funding sources; please explain when commitments are expected from each funding source. If not applicable select N/A.*
We will be before the VHCB board with our request on March 19, 2020; expect to hear from the TD Bank grant request in February and will reapply for OneCare funding in the Spring.
N/A

Benefit/Timeframe Feasibility

For specific information about Benefit or Timeframe refer to the VCDP Application Instructions and Program Guide.

25. If there is need for a marketing plan to advise potential users of the services that would be provided through the grant, provide a summary and attach a copy of this plan. If not applicable select N/A.*

✔ N/A

26.

(a) Provide a project time line. Include dates for the Environmental Release, permits in hand, 100% funding commitments, design completion, construction completion, etc. as well as for procurement steps including hiring, execution of contracts, achieving Benefit, and any other key dates for actions to carry out

this project. *Complete Environmental Review - March 2020
All funding approved May 1, 2020
Stormwater Permits in hand - June 1, 2020
Funding closing - May 30, 2020
Construction start (building 1) - June 1, 2020
Occupancy of building 1 - July 2020
Occupancy of transitional apartment buildiing - July 1, 2020 through July 1, 2021
Construction start (building 3) - June 1, 2021
Occupancy of Building 3 - July 1, 2021

(b) How was this time table determined?*
The beginning of construction is predicated on receiving full funding commitments. We have an agreement with the Town of Essex about phasing occupancy in order to assess the impact on local emergency services. The timeline above reflects that agreement.

https://egrants.vermont.gov/_Upload/237303_8060851-CHTandEssexAgreementonRecoveryHousingTimeline102819.pdf

27. What experience has the project developers had that is similar to this project?*
The Champlain Housing Trust has been developing and managing affordable housing since 1984 and currently has a portfolio of 1,800 apartments across Chittenden, Franklin and Grand Isle Counties. This includes numerous special purpose projects including Beacon Apartments for chronically homeless medically fragile individuals, Bel Aire Apartments - respite housing in partnership with UVM Medical Center, and Harbor Place - a hotel for homeless individuals and families.

Cost estimates are reasonably supported

28. Attach the following financial documents:

(a) Financial Statements (Balance Sheet and Operating Income/Expenses) for most recent 3 years. If audits exist, submit them. If no audits, submit federal tax returns. *

✔ N/A

(b) Operating pro forma projected at least five years (three years for economic development projects) beyond the grant completion date. For housing projects with debt as part of financing package be sure the pro forma is projected for at least the term of the loan(s). *
https://egrants.vermont.gov/_Upload/237303_8060840-operatingcashflow.pdf
N/A

(c) Submit supporting documentation and/or assumptions to support the costs shown on the Application Budget Forms. If supporting documentation was uploaded to the budget forms, select N/A.*
https://egrants.vermont.gov/_Upload/237303_8060842-B1-RecoveryHousing-CostEstimate.pdf
N/A

(d) Submit supporting documentation and assumptions to support the operating pro-forma.*
https://egrants.vermont.gov/_Upload/237303_8060852-recoveryhousingoperatingcostsassumptions.doc.pdf
N/A

29. Despite best efforts and built in contingencies, cost overruns sometimes occur. Please explain how cost overruns will be covered. *CHT will apply for additional funding if there are significant cost overruns.

Sustainability/Energy Efficiency

30. What sustainable practices and energy efficiency measures are being incorporated in your project? Will these measures result in the project achieving any green building designations or energy efficiency certifications (such as LEED or Green Communities Standards).*

The scope of work includes installation of new bath fans and insulation of water piping. We will reach out to the Weatherization program for additional air-sealing and basement insulation.

31. If your project involves site acquisition include all appraisals completed within the last six months that pertain to the property.*
https://egrants.vermont.gov/_Upload/237303_8060846-A9-RecoveryHousing-2015MartinAppraisalPart1.pdf
N/A

Economic Development Business Information

✔ N/A

If your project involves assistance to a for-profit or non-profit entity creating or retaining jobs, this form must be completed. If not applicable, select N/A above. If you are not certain this applies to your project please contact your Community Development Specialist.
For detailed information consult the Business Analysis Instructions

Exhibit 1 - Summary Page * Provide the name of the business, address, phone contact information, Federal ID number (Tax Identification Number - TIN) and Data Universal Number System (DUNS) number. Summarize the overall project, total project costs, and sources of project funding. Give an overview of the available collateral in addition to project assets. To acquire a Data Universal Number System (DUNS) number call the toll free DUNS number request line at (866) 705-5711 or go online at Dun and Brad Street.

N/A

Exhibit 2 & 3 - Names of Principals and Resumes * Provide the names of the principals, contact information, and percent of ownership. Provide the name of the primary contact for DHCD.
N/A

Exhibit 4 - Business History * Provide a narrative of business or corporate history.
N/A

Exhibit 5 - Project Description. * Provide a full narrative description of what is to be purchased or built with funds awarded through VCDP. Include: a legal description of the land and building(s), type of machinery, equipment, and working capital to be used. Upload various appraisals, purchase and sales agreements (must be an option agreement if the project does not have Environmental Release), leases, quotes, invoices, or other project supporting documentation.
N/A

Exhibit 6 - Business Plan. * Provide a standard business plan which includes, but is not limited to: the business market area, competition analysis, customers, competitive edge, marketing plan, production plan, key personnel, management structure, expertise, labor pool, and suppliers.
N/A

Exhibit 7 - Financial Plan. * Provide three years of historical financial statements and current year-to-date financial statements including profit and loss statements, balance sheets, and sources and uses of funds. Provide three years of historical financial statements current year-to-date financial statements of parent company, subsidiary, or affiliate business financial statements if applicable. Provide a month-to-month projected financial statements for three years going forward with year-end totals and all related assumptions. Provide a schedule of current and future debt with interest rates and maturities. Supply a list of collateral items. Provide current personal financial statements for all owners with 20% of more ownership.
N/A

Exhibit 8 - Project Timetable. * Provide the timetable for the project through the completion of the project and benefit.
N/A

Exhibit 9 - Compensation Scale. * Provide gross payroll for each of the last three years, current number of hourly and salaried employees, and hourly and salary range/rate. Please note any change in the number of employees along with an explanation.
N/A

E**xhibit 10 - Benefits to Local Area.** * Provide the amount of local property tax and Vermont income tax paid prior to the project and expected upon project completion. Provide the number and type of local suppliers, contractors and others who the project and business will work with. List any other expected local benefits as a result of the project.
N/A

Exhibit 11 - Current Loan Information. * Provide contact information for all existing and future creditors and lenders. Include the contact person and description of the financing for reference.
N/A

Exhibit 12 - Letter of Good Standing. * Provide a Certificate of Good Standing from the Vermont Secretary of State.
N/A

Exhibit 13 - Letter of Certification.* Provide a certification of good standing with all local, state, and federal taxes due. Get a letter from the Vermont Department of Taxes for state taxes. The CEO or CFO of the business can certify all local and federal taxes are current.

N/A
Exhibit 14 - Disclosure of Bankruptcy. * Provide the details of any bankruptcy and/or criminal charges, any pending litigation or criminal convictions to date against the company, officers, or principal owners.
N/A

Exhibit 15 - Lender Commitments. * Provide all letters of commitments. Include copies of any corporate resolutions to borrow.
N/A

Exhibit 16 - Certificate of Authority to do Business in VT. * If the business to be assisted is an out of state business provide a Certificate of Authority to do business in the State of Vermont from the Vermont Secretary of State.
N/A

Exhibit 17 - Proposed Loan Terms. * Provide all the terms of the proposed debt, including conditions to be met, interest rates, collateral, and maturities.
N/A

Exhibit 18 - Third Party Business Analysis. * If available, provide any third party lender analysis of the proposed project.N/A

Economic Development Business Information

Employment Plan

✔ N/A

Employer

Grantee

Employment Category	Description/Qualifications	Job Title	Wage/Salary Range From - To	# FTE Jobs to be Created Retained	Present # FTE Employees
Managerial					
Professional					
Technical					
Sales					
Clerical					
Craftsman (Skilled)					
Operatives (semi-skilled)					
Laborers (unskilled)					
Service Workers/Others					
TOTALS				**0**	**0**

If any part time jobs will be created or retained please provide the following information for each part time person. If there is more than one part time job with the same title, provide the average number of hours worked in a week for each.

Information to provide: The Employment Category or Job Title with the average number of hours worked in a week.

N/A

Municipal Resolution(s) and Regulations: Town of Essex

Community Town of Essex

1. **Does your community have a valid Municipal Development Plan in Accordance with 24 V.S.A. Chapter 117?***
   - ✔ Yes
   - No

   Date adopted 3/1/2016
   Date expired 3/1/2024

2. **The appropriate Resolution for VCDP Grant Application Authority has been executed and uploaded or mailed to DHCD.**
   Resolution Uploaded:*
   https://egrants.vermont.gov/_Upload/238304_8060328-ResolutionforVCDPGrantApplicationAuthority20200113_RecoveryHousing_Essex.pdf

3. **Does your community currently regulate development within the floodplain? ***
   - ✔ Yes
   - No

   Uploaded copy of your Flood Hazard Area Regulations.
   https://egrants.vermont.gov/_Upload/238304_8060324-EssexFloodHazardAreaRegulations_RecoveryHousing_.pdf

4. **Has a current designee from the municipality attended a Fair Housing Training by DHCD or a training approved by DHCD withing the past three years?** * If Yes, please verify information has been entered on the "Municipal Policies, Plans and Insurance" page. If no, please see upcoming trainings on our Departments website at: http://accd.vermont.gov/housing/events
   - Yes
   - ✔ No

Please have your municipal zoning administrator complete and sign the Municipal Fair Housing Certification form below and upload.
https://egrants.vermont.gov/_Upload/238304_8060584-RecoveryHousingEssexVT_FairHousingCertbyTown02032020.pdf

For publication on or before 9/8/2019
Tear Sheet Requested.

Notice of Public Hearing

The Town of Essex is/are considering making application to the State of Vermont for a VCDP Implementation Grant 2019 under the Vermont Community Development Program. A public hearing will be held at 07:30 PM on 9/23/2019 at 81 Main Street Essex Vermont to obtain the views of citizens on community development, to furnish information concerning the amount of funds available and the range of community development activities that may be undertaken under this program, the impact to any historic and archaeological resources that may be affected by the proposed project, and to give affected citizens the opportunity to examine the proposed statement of projected use of these funds.

The proposal is to apply for $700,000 in VCDP funds which will be used to accomplish the following activities: The Champlain Housing Trust in partnership with Vermont Foundation of Recovery plan to convert 12 existing apartments in three buildings at 1005, 1006 and 1007 Ethan Allen Avenue into supportive housing for people in recovery from substance abuse disorder. Of the total grant request, $50,000 would be used for stormwater improvements at the site.

Copies of the proposed application are available at 81 Main Street Essex Vermont and may be viewed during the hours of 7:30 am - 4:30 pm. Should you require any special accommodations, please contact Dana Hanley at 802-878-1343 to ensure appropriate accommodations are made. For the hearing impaired please call (TTY) #1-800-253-0191.

Legislative Body for the Town of Essex
Copy submitted by: Kirsten Merriman Shapiro
Phone: 802-861-7308

Send tear sheet to: Kirsten Merriman Shapiro
Champlain Housing Trust
88 King Street, Burlington , Vermont 05401

Minutes of the Public Meeting: 09/23/2019

Date Held 9/23/2019
Number of Attendees 41
Location 81 Main Street, Essex, Vermont
Hearing Officer Greg Duggan, Deputy Manager
Date Published 10/7/2019
Where Published? Essex town web page for select board minutes
Copy of the minutes here:
https://egrants.vermont.gov/_Upload/237229_8060351-EssexSBminutes_RecoveryHousingapplication_092319_FINAL.pdf

Copy of the Notice: notice for public hearing on recovery housing application_essex

Description

notice for public hearing on recovery housing application_essex
https://egrants.vermont.gov/_Upload/237227_8060336-BFP_Affidavit_noticefor092319publichearingVCDPgrantapplication091819.pdf

Description

Certification of Program Income/Unrestricted Revenue Available

Does the municipality currently have a revolving loan fund funded by previous VCDP or HUD-directed grants?*
Yes
✔ No

Does the sub-grantee currently have a revolving loan fund funded by previous VCDP or HUD-directed grants? IF yes, click ADD button and complete a form for the sub-grantee's revolving loan fund.*
Yes
✔ No

Note: If no to both questions, then completing remainder of the form is not required.

***Please note that communities with inactive (as defined by Agency Procedures) VCDP/HUD funded RLF's, must commit at least 20% of the RLF balance on hand when applying for any VCDP Grants. Committed funds may be in the form of a loan or grant to the project. For Planning Grants only, communities with inactive revolving loan funds will be required to commit 20% of the loan funds on hand or $7,500 (25% of the maximum $30,000 PG,) whichever is less.**

Municipality
Reporting Date
Check appropriate box
Applicant
Lead Applicant (consortium)
Participating Applicant (consortium)
NCDO/RLF Name :

Income/Revenue Generated From VCDP or HUD Funded Grants

Schedule 1 Establishment of the Current Cash Balance

	Third Previous Fiscal Year	Second Previous Fiscal Year	First Previous Fiscal Year	Current Fiscal Year
Opening balance		$0	$0	$0
Plus total receipts during fiscal year				
Less total outlay during fiscal year				
Ending balance	$0	$0	$0	
Current balance as of				**$0**

Schedule 2 Establishment of the amount of Current Cash Balance that is Obligated (A legally committed liability to a third party through a purchase order, executed contract or a loan commitment letter; but not funds reserved or designated for a specific purpose)

Explanation of Obligation
Amount Obligated

Certification of Program Income/Unrestricted Revenue Available

Determination of what should be considered for use in this application

Current balance from Schedule 1	$0
Less total of all Obligation from Schedule 2	$0
Equals the amount potentially available	$0
Amount of this that is committed to the proposed project	

Describe how the funds were used during the past three years. Give the purpose including verification of eligible activity and amounts for each loan or grant.

Describe the process used to "Obligate" in Schedule 1 from the amounts listed in Schedule 2. Include a copy of loan policies that govern the expenditure of revolving loan funds.

Explain what loan payments are expected during the term of the proposed project(s), whether there will be balloon payments or other receipts of funds.

Indicate whether or not there has been any consideration given to selling the loan portfolio on the secondary market. If so, when would that happen?

Provide an explanation of any portion of the amount potentially available that is not being committed to the proposed project(s).

Application Attachments

Local Bond Support*	✔ N/A
Public Service documentation*	✔ N/A
One for One Replacement Plan*	✔ N/A
Market Study*	✔ N/A
Option Agreement/Other evidence of site control* https://egrants.vermont.gov/_Upload/237932_8061919-RecoveryHousingevidenceofsitecontrol_CHT-UVM-WarrantyDeed(Recorded).pdf	N/A
Proposed/Executed Lease*	✔ N/A

Document Name

Document Name

Document Name

Document Name

Document Name

Memorandum

To: Selectboard; Evan Teich, Unified Manager
Cc: Owiso Makuku, Community Development Director
From: Greg Duggan, Deputy Manager
Re: Application to the State of Vermont for a Recovery Housing Program Grant (2021) under the Vermont Community Development Program
Date: September 10, 2021

Issue

The issue is whether the Selectboard will authorize staff to work with Champlain Housing Trust to submit an application to the State of Vermont for a Recovery Housing Program Grant (2021) under the Vermont Community Development Program.

Discussion

Champlain Housing Trust has approached the Town of Essex about applying to the State of Vermont for a Recovery Housing Program Grant (2021) under the Vermont Community Development Program. The project is similar to one that was proposed in 2019, in which existing residences at Fort Ethan Allen would be converted to recovery housing for individuals recovering from substance abuse. Champlain Housing Trust has already begun the conversion, and the grant would support that process.

Following a public hearing on the topic, the Selectboard may be ready to authorize staff to submit the application.

Cost

Staff time.

Recommendation

Staff recommends the Selectboard authorize staff to work with Champlain Housing Trust to submit an Application to the State of Vermont for a Recovery Housing Program Grant (2021) under the Vermont Community Development Program.

Memorandum

To: Town Selectboard, Evan Teich, Unified Manager
From: Linda Mahns, Administrative Assistant
Re: Appointment of volunteer to the Conservation and Trails Committee
Date: September 10, 2021

Issue
The issue is whether the Selectboard will appoint a volunteer to the Conservation and Trails Committee.

Discussion
Steve Dowd has stepped forward for consideration to join the Conservation and Trails Committee and their letter of interest has been combined with this memo.

For reference, the following seats are vacant:

Committee/Board	*Open seats*	*Term(s) ending*	*Status*
Conservation and Trails Committee	1	June 30, 2024	Advertised since 8/28/20
	1	June 30, 2023	Advertising beginning 8/13/21
	1	June 30, 2022	Advertised since 8/28/20

The appointment of public officials can be a protected discussion during the interview, provided that the Selectboard make a final decision to appoint a public official in an open meeting and shall explain the reasons for its final decision during the open meeting.

Cost
None.

Recommendation
It is recommended that the Selectboard interview Steve Dowd for the Conservation and Trails Committee ending June 30, 2023 or 4. If the board members wish to enter executive session, the following motion is recommended:

> "I move that the Selectboard enter into executive session to discuss the proposed public official appointment(s) in accordance with 1 V.S.A. Section 313(a)(3) and to include the Unified Manager and the Deputy Manager."

As a 35-year resident of Indian Brook Road, I've had a particular interest in Indian Brook Park and all our parks and trails. I have hiked many of the trails in our town and understand the needs and benefits of our natural resources. I feel my involvement would be beneficial to the Conservation and Trails Committee.

Interestingly enough, decades ago my cross country team cleaned the then unimproved land at Indian Brook. My athletes climbed below the dam and hauled up truckloads of trash. The Essex School District trucks assisted our hauling efforts. I feel this marked improvement drew more attention to the potential of the park. Presently, I'm quite interested in working on the yearly algae issue that has in past years plagued Indian Brook.

I've taught at Essex High School and the Center for Technology for over 40 years. During that time I've had the pleasure of working closely with the Natural Resources program. Our students have, in turn, helped groom many of our parks. I feel I'm also uniquely prepared to enhance the educational opportunities of our parks.

I have the time and the expertise to serve this committee well.

Memorandum

To: Town Selectboard, Evan Teich, Unified Manager
From: Linda Mahns, Administrative Assistant
Re: Appointment of volunteer to the Conservation and Trails Committee
Date: August 13, 2021

Issue
The issue is whether the Selectboard will appoint a volunteer to the Conservation and Trails Committee.

Discussion
Ken Signorello has stepped forward for consideration to join the Conservation and Trails Committee and their letter of interest has been combined with this memo.

For reference, the following seats are vacant:

Committee/Board	*Open seats*	*Term(s) ending*	*Status*
Conservation and Trails Committee	1	June 30, 2024	Advertised since 8/28/20
	1	June 30, 2023	Advertising beginning 8/13/21
	1	June 30, 2022	Advertised since 8/28/20

The appointment of public officials can be a protected discussion during the interview, provided that the Selectboard make a final decision to appoint a public official in an open meeting and shall explain the reasons for its final decision during the open meeting.

Cost
None.

Recommendation
It is recommended that the Selectboard interview Ken Signorello for the Conservation and Trails Committee ending June 30, 2022. If the board members wish to enter executive session, the following motion is recommended:

> "I move that the Selectboard enter into executive session to discuss the proposed public official appointment(s) in accordance with 1 V.S.A. Section 313(a)(3) and to include the Unified Manager and the Deputy Manager."

From: Ken Signorello
Sent: Wednesday, August 11, 2021 7:52 PM
To: Linda Mahns <lmahns@essexjunction.org>
Subject: Application for Conservation and Trails Committee Membership

Linda,

Please forward this application to the appropriate staff/board members.

I am applying to the Selectboard for one of the open seats on the Conservation and Trails Committee.

I attended their last meeting and learned that my experience and background are what they seek. Even though I was just observing, I was able to make a number of favorably received contributions and believe I can offer much more as a committee member.

I have a BS in Forest Management from Rutgers University and did four years of graduate work in Forest Biometry here at UVM. In fact, that is what brought me to Vermont.

Although I'm not currently a practicing forester, I own 40 acres of forest in Essex that are enrolled in the State current use program.

The committee has a number of projects focused trails, urban and suburban forests. I'd hope to add one or two rural based projects.

I am particularly concerned about, and want the town to be prepared for, potential insect infestations that can significantly damage our forests
and wildlife.

A healthy and vigorous forest is one of the most cost effective ways to remove carbon dioxide from the atmosphere to mitigate climate change,
along with many other benefits.
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Regards,
Ken Signorello

MEMORANDUM

Date: September 8 , 2021

To: Evan Teich and members of the Selectboard

From: Lt. Robert Kissinger

Re: Public Nuisance / Dog licensing and Control Ordinances

Issue: Introduction of a Public Nuisance ordinance and revision of the Dog Licensing and Control ordinance.

Discussion:

The introduction of the Public Nuisance ordinance 6.11 will address incidents that have come up in the past that were not backed previously by ordinance. Some examples:

- Noise complaints.
- Disorderly Conduct.
- Alcohol – open containers.
- Public Urination.
- Solicitation.

The creation of the public nuisance ordinance will provide officers with another layer of options before pursuing criminal charges. The Public Nuisance ordinance will incorporate section 5.09 Open Fires and section 6.12 Public Indecency and remove them from their previous listed chapter.

The current Open Fires ordinance allows the fire department to issue fines for expenses incurred by the Fire Department. Those costs have been updates as recommended by the Town Fire Chief, Charles Cole.

The Dog Licensing and Control ordinance has not been updated since 1996. The following additions and / or revisions have been made to the ordinance:

- Previously failure to register a dog did not have a fine associated with the violation, dogs must wear a collar, revision.
- Falsifying documents with the purpose of misleading the breed of dog, new.
- Investigating a vicious dog complaint is outlined, revision.
- Define potentially vicious dog, new.
- Disturbance by sound defines a 15-minute period providing a measurable standard, revision.

- Running at large - dog must be on a leash on public property. When using sidewalks or in parking lots, must be on a leash no longer than 6 ft. Exemptions for not being leashed are listed, revision.
- Removal of dog waste, new.
- Confinement of animals, new.

Per the Town's ordinance adoption process, the Selectboard must pass a proposed ordinance and warn a public hearing before approved final passage of the ordinance.

Staff asks that the Selectboard review and discuss the proposed changes on September 13. Staff will make any desired revisions and present the ordinances again at a future meeting for the Selectboard to consider passing the ordinances.

Cost: None at this time.

Recommendation: This memo is for information and discussion. The Selectboard will be asked at a future date to pass the proposed revisions to the Public Nuisance and Dog Licensing and Control ordinances and authorize staff to warn a public hearing to consider final passage of the ordinance revisions.

Chapter 6.11

Public Nuisance

Sections:

6.11.000 Authority
6.11.010 Purpose
6.11.020 Definitions
6.11.030 Disorderly Conduct
6.11.040 Excessive Sound
6.11.050 Public Urination / Defecation
6.11.060 Public Nudity
6.11.070 Soliciting – General Provisions
6.11.080 Soliciting - Regulations
6.11.090 Soliciting – Violations
6.11.100 Aggressive panhandling prohibited
6.11.110 Defacing Buildings, Structures and signs
6.11.120 Alcohol
6.11.130 Open Fires
6.11.140 Fireworks
6.11.150 Enforcement
6.11.160 Violations – Penalties
6.11.170 Severability

DRAFT

6.11.000 Authority.

A. This ordinance is enacted pursuant to 24 V.S.A., Section 2291, et seq. It shall constitute a civil ordinance within the meaning of 24 V.S.A., Chapter 59.

6.11.010 Purpose.

A. The purpose of this ordinance is to preserve the public health, safety and welfare by prohibiting general nuisance behavior, which is unreasonable or unsuitable for a particular time and place. Such behavior is detrimental to the peace and good order of the community. Typically, nuisance behavior disrupts the public peace and affects the quality of life within the Town of Essex.

6.11.020 Definitions.

A. **Aggressive manner** shall mean any of the following:

a. Approaching or speaking to a person, or following a person before, during or after soliciting if that conduct is intended or is likely to cause a reasonable person to fear bodily harm to oneself or to another or damage to or loss of property or otherwise be intimidated into giving money or other thing of value.

b. Continuing to solicit from a person or continuing to engage that person after the person has given a negative response to such soliciting.

c. Intentionally or recklessly touching or causing physical contact with another person or that person's property without that person's consent in the course of soliciting.

d. Intentionally or recklessly blocking or interfering with the safe or free passage of a pedestrian or vehicle by any means, including unreasonably causing a pedestrian or vehicle operator to take evasive action to avoid physical contact.

e. Using violent, obscene or threatening gestures toward a person solicited.

f. Following the person being solicited, with the intent of asking that person for money or other things of value.

g. Speaking in a volume unreasonably loud under the circumstances.

h. Soliciting from anyone who is waiting in line.

B. **Average sound level:** A sound level during a given period of time found by the general rule of combination of sound levels. Also called equivalent sound level.

C. **Decibel (dB):** means a unit for measuring the volume of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

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D. **Fireworks:** shall means any combustible or explosive composition, or any substance or combination of substances, or article prepared for the purpose of producing a visible or an audible effect by combustion, explosion, deflagration or detonation, including blank cartridges, toy pistols, toy cannons, toy canes, or toy guns in which explosives are used, balloons that are propelled by explosives, firecrackers, torpedoes, sky rockets, Roman candles, cherry bombs, or other fireworks of like construction and any fireworks containing any explosive or flammable compound, or any tablets or other device containing any explosive substance, except sparklers. The term "fireworks" does not include toy pistols, toy canes, toy guns, or other devices in which paper or plastic caps containing 0.25 grains or less of explosive compound are used, providing they are so constructed that the hand cannot come in contact with the cap when in place for use, and toy pistol paper or plastic caps that contain less than 0.2 grains of explosive mixture. The term "fireworks" does not include fixed ammunition for firearms, or primers for firearms. The term "sparkler" means a sparkling item that is in compliance with the United States Consumer Product Safety Commission regulations and is one of the following:

   a. A hand-held wire or wood sparkler that is less than 14 inches and has no more than 20 grams of pyrotechnic mixture; or

   b. A snake, party popper, glow worm, smoke device, string popper, snapper, or drop pop with no more than 0.25 grains of explosive mixture.

Cross References:
See 20 V.S.A. § 3131.

E. **Food:** shall have its usual and ordinary meaning and shall include all items designed for human consumption, including, but not limited to, candy, coffee, gum, popcorn, hot dogs, sandwiches, peanuts, soft drinks and dairy products.

F. **Instantaneous maximum sound:** means either a single pressure peak or a single burst (multiple pressure peaks) that has duration of less than one second.

G. **Merchandise**: shall have its usual and ordinary meaning, including, but not limited to, such items as tools, clothing, furniture, toys, and appliances.

H. **Mobile ice cream vendor:** means a person, firm or corporation, either as a principal or agent, which engages in the mobile vending of ice cream and/or frozen novelty items for immediate human consumption.

I. **Mobile vending:** means offering food, merchandise or services for sale to the general public from a vehicle, conveyance, or a nonpermanent structure or place of business.

J. **Mobile vendor:** means the person, firm or corporation, either as a principal or agent, which engages in mobile vending as defined herein.

K. **Nudity:** shall mean the showing of the human male or female genitals, pubic area or buttocks with less than a full opaque covering, or the showing of the female breast with less than a fully opaque

DRAFT

covering of any portion of the nipple, or the depiction of covered male genitals in a discernibly turgid state.

L. **Open beverage container**: A container, bottle, can or vessel containing malt or vinous beverages or spirituous liquors, which is opened.

M. **Plainly audible**: shall mean any sound that can be detected by a person using his or her unaided hearing faculties. The detection of the rhythmic base component of the music is sufficient to constitute a plainly audible sound.

N. **Premises:** shall mean any building, structure, land, utility or portion thereof, including all appurtenances, and shall also include yards, lots, courts, inner yards and real properties without buildings or improvements, owned or controlled by a person.

O. **Property line** shall mean that real or imaginary line and its vertical extension which separates real property owned or controlled by any person from contiguous real property owned or controlled by another person. The vertical and horizontal boundaries of a dwelling unit in a multi-dwelling-unit building, condominium, or townhouse complex shall not be considered property lines separating one (1) premises from another.

P. **Public celebration:** means Independence Day activities or any other time of public celebration designated by the municipality, such as Memorial Day or such events as sidewalk sales, parades, and street fairs which are officially authorized by the legislative body.

Q. **Public Place**: shall mean any bridge, culvert, roadway, street, square, fairground, sidewalk, alley, playground, park, or school property or other place open temporarily or permanently to the public or general circulation of vehicles or pedestrians within the Town of Essex.

R. **Receiving Property:** The location that is receiving the sound in question.

S. **Sample period:** shall mean 15 minutes of continuous monitoring.

T. **Services:** shall have its usual and ordinary meaning and shall include the performance of any act done for compensation, including, but not limited to the acts of cleaning, repairing, entertaining, delivering, advising, adjusting, moving, insuring, protecting, and/or maintaining.

U. **Solicitation or Soliciting**: shall mean asking for money or objects of value, selling, offering or exposing for sale, or trading, dealing, or trafficking in any personal property, food, merchandise, or service, either at wholesale or retail, in the town by going from house to house, business to business, or from place to place or by indiscriminately approaching individuals, businesses, or organizations, including sales by sample or for future delivery.

V. **Solicitor:** means the person, firm or corporation, either as a principal or agent, which engages in solicitation as defined herein.

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W. **Sound measurement standards**: Sound shall be measured in accordance with standards specified by the American National Standards Institute (ANSI).

X. **Source premises:** shall mean the premises (residential, commercial, industrial, or public) as listed in Table A that is emitting ***Sound*** that is crossing one (1) or more property lines and impacting the receiving property.

Y. **Sponsor:** Any individual, business or organization with which a solicitor or peddler is economically affiliated, in relation to soliciting, in an employer-employee, master-servant, independent contractor, agency, joint venture of similar arrangement.

Z. **Standard working day:** means Monday through Friday, 8:00 a.m. to 5:00 p.m., except weekends and holidays.

AA. **Unreasonable Sound:** shall mean any excessive or unusually loud sound which either annoys, disturbs, injures or endangers the comfort, repose, health, peace or safety of a reasonable person of normal sensibilities.

6.11.030 Disorderly Conduct

A. No person in a public place shall behave in a rude or disorderly manner or use indecent, profane, or insulting language with the intent to annoy or disturb another person.

B. No person shall make graffiti, indecent figures, letters, words or write indecent or obscene words upon a fence, building, sidewalk, or public place.

C. No person, shall, by sound, gesture, or other means, wantonly and designedly frighten a horse in a street or other public place.

D. No person shall throw stones or other missiles in or upon a public street, common, or other ground belonging to the municipality.

Cross References. Breach of the Peace,
See, Disorderly Conduct 13 V.S.A. § 1026.

6.11.040 Excessive Sound

A. General Prohibition:

a. It shall be unlawful for any person to make or cause to be made, assist in making or continue any excessive or unreasonable loud sound. Sound shall be deemed unreasonable when it disturbs, injures, or endangers the comfort, peace or health of a person in the immediate vicinity of the sound disturbance.

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b. It shall be considered a sound disturbance and public nuisance provided the sound source is plainly audible from the receiving property line.

B. Express Prohibitions:

a. The following acts, which enumerations shall not be deemed to be exclusive, are declared to be sound disturbances:

i. Operating or permitting the use or operation of radios, television sets, musical instruments, phonographs and similar devices. The operation or permitting the use or operation of any musical instrument, radio, television, phonograph, or other device for the production or reproduction of sound in such a manner as to be plainly audible through walls between units within the same building, from another property or from the street between the hours of 10:00 p.m. and 7:00 a.m. or in such a manner as to unreasonably disturb the peace, quiet or comfort of the public.

ii. The operation or permitting the operation of any radio, stereo or other sound amplification equipment from a motor vehicle that is audible at twenty-five (25) feet from such vehicle. The term "motor vehicle" shall mean any car, truck, or motorcycle.

iii. Parties and other social events. Notwithstanding section (a)(i), it shall be unlawful for any person who is participating in a party or other social event to actively make unreasonably loud sound. A party or other social event is defined as a gathering upon the premises of one or more persons not residing at the premises. Unreasonably loud sound is sound that unreasonably interferes with the peace or health of members of the public or is plainly audible between the hours of 10:00 p.m. and 7:00 a.m. through the walls between units within the same building, from another property or from the street. It shall also be unlawful for any resident of a premise to allow a party or other social event occurring in or about the premises to produce unreasonably loud sound. There is a rebuttable presumption that all residents of the premises have allowed such party or other social event to occur in or about the premises. All residents of the premises are responsible for such unreasonable sound made, each having joint and several liability.

iv. Machinery. The operation or permitting or directing the operation of any power equipment or machinery outdoors between the hours of 9:00 p.m. and 7:00 a.m. except in emergency situations, ex: Construction sound. The excavation, demolition, erection, construction, alteration or repair of any premises or structure between the hours of 9:00 p.m. and 7:00 a.m. except in emergency situations.

v. Loudspeakers, amplifiers. The use of loudspeakers or other sound amplification equipment upon the public streets for the purpose of commercial advertising or attracting the attention of the public to any building or site.

DRAFT

vi. The removal of household and commercial trash by authorized commercial trash haulers utilizing mechanized conveyances between the hours of 9:00 p.m. and 7:00 a.m. is prohibited.

vii. Defect in vehicle or operation of a vehicle. The operation of an automobile or motorcycle which creates squealing, squealing of tires, loud and unnecessary grating, grinding, exploding type, rattling or other sounds.

viii. Dogs, cats and other animals. The keeping of any dog, cat or other animal which shall become a nuisance to another person in the vicinity where such dog, cat or other animal is kept, by frequent or continued barking, howling, yelping or screaming.

C. Prohibtions for Non-Residential Uses

a. It shall be a violation of this section for anyone to create or allow the creation of sound not otherwise specified under General Provisions, in excess of the following stated limits during the stated time periods for the sound generated on the properties being used for other than residential purposes.

b. Sound measurments shall be made at the property line.

c. This standard shall not apply to the unoccoupied receiving properties.

d. Sound level measurements shall be take with a sound level meter meeting the minimum American Standards Insitutite (ANSI) requirements for Type I or Type II accuracy, and shall have a fast response setting.

e. Nothing in this section shall prevent the Town of Essex from impossing additional sound control measures beyond that needed to reach the limits below.

Table A: Allowable Sound *Levels (in dB) with Time of Day Allowance*

	Receiving Premises			
	Residential	**Sample Period (15 mins)**		**Instantaneous Maximum (db)**	
Source Premises	7am-10pm	10pm-7am	7am-10pm	10pm-7am
Residential	60	55	80	60
Commercial	65	60	80	60
Industrial	80	75	90	70

D. Exemptions:

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a. Sound from the following sources shall be exempt from the prohibitions specified herein:

i. Any person or organization that has obtained a sound waiver from the Town of Essex. (Parade, block parties, fireworks, etc.)

ii. All safety signals and warning devices or any other device used to alert persons to any emergency or used during the conduct of emergency work, including, but not limited to, police, fire and rescue vehicle sirens.

iii. The repair and maintenance to the Town of Essex facilities, services, or public utilities when such work must be accomplished outside of daytime hours.

iv. Any construction activity that has obtained approval from the Town of Essex to occur between the hours of 9:00 p.m. and 7:00 a.m. and that is deemed to be in the best interest of public health, safety, and welfare.

v. Equipment for maintenance of lawn and grounds during the hours of 7:00 a.m. to 9:00 p.m. (including but not limited to lawn mowers, hedge trimmers, weed trimmers, chain saws, snow blowers and leaf blowers) assuming they are properly mufflered.

vi. Snow removal equipment operated within the manufacturer's specifications and in proper operating condition.

vii. Musical, recreational, and athletic events conducted by and on the site of a school or educational institution or is sponsored by the Town of Essex, state or federal government.

viii. Events and activities conducted by or permitted by the Town of Essex. Persons operating an event or activity under authority of an entertainment permit, parade/street event permit, solid waste license, or parks special use permit shall comply with all conditions of such permits or licenses with respect to sound control issues.

ix. Construction or repair work which must be done to address an emergency health or safety concern and that cannot be accomplished during daytime hours and is not work which includes normal maintenance and repair.

x. Sound associated with standard agricultural operations.

xi. Sounds created by bell, carillons, or chimes associated with specific religious observances.

xii. The use of firearms when used for hunting in accordance with state Fish and Wildlife laws.

E. It shall be a violation of this section for anyone to create or allow the creation of sound not otherwise specified under General Prohibitions or Expressed Prohibitions, in excess of the sample

DRAFT

period (15 continuous minutes) for sound generated on properties being used for other than residential purposes. Refer to Table A.

a. Sound measurements shall be made at the property line of the receiving premises.
b. Sampling will be conducted with a sound level instrument using sound measurement standards. (American National Standards Institute (ANSI))

F. Notification by property owners of rental housing. Owners of rental housing shall be required to provide a copy of this section to a tenant at the start of the tenancy. However, the failure of an owner to provide a copy of the ordinance shall not be a defense to a violation of this section.

Cross References. Breach of the Peace; Disturbances.
See Noise in the nighttime 13 V.S.A. § 1022;
See Disorderly conduct 13 V.S.A. § 1026.

6.11.050 Public Urination / Defecation

A. No person shall urinate or defecate on any street, sidewalk, parking lot, recreational path, in a park or other public place.

6.11.060 Public Nudity

A. No person shall knowingly or intentionally in a public place:

a. Engage in sexual intercourse.
b. Appear in a state of nudity.
c. Fondle his/her genitals.
d. Fondle the genitals of another person.
e. Fondle his/her breasts.
f. Fondle the breasts of another person.

B. No person who owns, leases or controls property shall knowingly allow any person to engage in the conduct described in subsection (A) of this section at any time such property is open to the public.

Cross References. Obscenity.
See Obscenity 13 V.S.A. § 2801 et seq.

6.11.070 Soliciting General Provisions

A. **Purposes:** To regulate the activities of solicitors and peddlers within the Town of Essex for the protection of the public health, safety, welfare, and convenience, and to protect the residents of the Town of Essex from unscrupulous, fraudulent, and immoral business practices.

B. **Exclusions :** This ordinance shall not be construed as impairing the rights conferred by 24 V.S.A. Section 2181. (Sale of Produce. Owners and renters of land shall have the right to vend or sell all products of such land without obtaining licenses from such towns).

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6.11.080 Soliciting - Regulations

A. No solicitor shall conduct business without first obtaining a permit from the Town of Essex Clerk office.

    a. The following information shall be gathered:

        i. The full name, address and telephone of the group, business or organization.
        ii. The full name, address and telephone of a contact person for the group, business or organization.
        iii. The purpose of the solicitations to be conducted in the Town of Essex.
        iv. The description of services, food or merchandise being offered for sale.
        v. A list of the full names, contact information and identification of the persons acting on behalf of the group, business or organization and the dates and times during which they will be soliciting in the municipality.
        vi. The license plate and description of the vehicle used in transporting persons who will be soliciting.

B. Persons acting on behalf of the group, business or organization qualifying under this subsection shall always during the solicitations wear identification clearly showing their affiliation with said group or organization.

C. Sound. No solicitor or peddler shall shout, cry out, or use any sound-making device (including horns, bells, loudspeakers, sound amplifying systems) from the town's streets, sidewalks, or other public property in a manner which unreasonably disturbs the peace or constitutes a public nuisance.

D. Offensive Practices. No solicitor or peddler shall physically accost, restrain or otherwise interfere with the free movement of any individual during the course of the solicitor's or peddler's activities.

E. Conduct on Private Property. No solicitor or peddler shall enter upon private property which contains a sign or other notice that soliciting is prohibited. Solicitors and peddlers shall promptly depart from private property upon the request of the owner or resident thereof.

F. Hours: No solicitor or peddler shall solicit between the hours of 9 p.m. and 7 a.m.

6.11.090 Soliciting – Violations

A. Failure to comply with any of the above requirements, or the following, shall be a violation of this chapter:

    a. Failure to obtain a permit.
    b. Parking regulations as contained Title 7.

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c. Shall not, by causing a congregation of people, obstruct the passage along any sidewalk, street, alley or parking lot, annoy, injure or endanger the public safety, health, or comfort; nor unreasonably disturb the peace.
d. Shall not sell on the street side of the vehicle or conveyance.
e. Shall comply will all clauses and regulations of State of Vermont Department of Health regarding food handling.
f. Shall not misrepresent facts to the town clerk / police department or to the public.
g. Shall not sell, operate or supply any good or service unless properly licensed by the state and/or county.
h. Shall not shout, cry out, or use sound making devices (including horns, whistles, bells, loudspeakers sound amplification systems).
i. Shall not physically accost, restrain or otherwise interfere with the free movement of any individual.
j. Shall not enter upon private property that contains a sign or notice that soliciting is prohibited. Solicitors shall also promptly leave when requested by the owner or resident.
k. Shall comply with all requirements enumerated in this chapter.

B. Violations will be issued in a manner described in 6.11.160 of this chapter.

C. Violations may be cause for the Town Clerk to revoke the permit and privileges to solicit.

6.11.100 Aggressive panhandling prohibited

A. The Town of Essex finds that aggressive begging, panhandling, or solicitation negatively affects the following significant governmental interests set forth herein. This law is intended to promote these governmental interests and combat the negative effects of aggressive begging, panhandling or solicitation. It is not intended to limit any persons from exercising their constitutional right to solicit funds, picket, protest or engage in other constitutionally protected activity.

a. Protection of citizens from physical threats or injury and from damage to property.
b. Prevention of harassment and intimidation of members of the public.
c. Prevention of violent crime.
d. Traffic control and public safety.
e. Orderly movement of traffic and pedestrians.
f. Provision and maintenance of a safe, aesthetically attractive environment in areas designed to attract tourist revenue.

6.11.110 Defacing Buildings, Structures and Signs

A. No person shall apply or cause to be applied any paint, varnish, lead, crayon, wax, ink, dye or other indelible substance, nor shall any person carve, chisel or write any figure or letter on the exterior or interior walls or on the windows of any building or structure or deface or any sign or signal without having authority from the owner or authorized agent.

Cross References. Trespass and Malicious Injuries to Property.
See, Unlawful Mischief 13 V.S.A. § 3701;

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See, Interference with devices or signals 23 V.S.A. § 1028.

6.11.120 Alcohol

A. No person shall have constructive or actual possession of an open beverage container in any public place or in any motor vehicle located in a public place.
B. No person shall consume the contents of an open beverage container in any public place or in any motor vehicle in a public place.

C. Notwithstanding subsections (1) to (2) hereof, it shall not be unlawful to possess an open beverage container or to consume the contents where permits have been issued by the Town of Essex.

D. Violations of this section are punishable by the penalties listed below. However, the penalty shall be waived upon the successful completion of a restorative or reparative justice program through the Community Justice Center.

Cross References. Operation of Vehicles,
See, Open Container 23 V.S.A. § 1134(a)

6.11.130 Open Fires

A. Burning materials other than-brush, grass, natural unpainted, unstained, untreated dimension lumber and wood products is not allowed in the Town of Essex.

B. Materials such as tires, solid waste, composite materials, treated, painted or stained, pressure treated materials, other like materials and/or trash are specifically prohibited.

C. Residents wishing to burn brush, grass, natural unpainted, unstained, untreated dimension lumber, wood products shall obtain a permit online at https://essexvt.burnpermits.com/ or from the Essex Police Department prior to burning. The times of burning will be allowed by the fire warden or fire chief.

D. Individuals with a valid permit are responsible for control of the fire at all times preventing its escape from their property. Fires must have extinguishment resource within twenty (20) feet of the fire. Fires must be ten (10) feet away from a structure and must be built where they will not escape.

E. Cooking or outdoor fireplaces are allowed with proper fuels to include charcoal, firewood, liquid propane (LP) or natural gas.

F. This prohibition shall not include training exercises by the Essex Junction Fire and Essex Town Fire Departments. The Legislative body, with the concurrence of the Essex Town Fire Chief, may

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approve a burn permit for a community event provided that the Essex Town Fire Department is present.

6.11.140 Fireworks

A. Except as hereinafter provided it shall be unlawful for any person, firm, co-partnership or corporation to offer for sale, expose for sale, sell at retail or wholesale, possess, use or explode any fireworks; and it shall also be unlawful for any person, firm, co-partnership or corporation to transport fireworks except in interstate commerce.

Cross References. Internal Security and Public Safety,
See, Fireworks, 20 V.S.A. § 3132 et seq.

6.11.150 Enforcement

A. This is a civil ordinance and shall be enforced in accordance with 24 V.S.A. § 1974a et seq. and 1977.

6.11.160 Violations – Penalties

A. Any person in violation of any provisions of this chapter shall be considered a civil violation. If any violation continues, each day shall constitute a new violation. Offenses shall be counted on a calendar year basis.

a. Waiver Fees

An issuing municipal official is authorized to recover a waiver fee, in lieu of a civil penalty, for any person who declines to contest a municipal complaint and pays the following waiver amount for each violation:

First Offense	$50.00
Second Offense	$100.00
Third Offense	$200.00
Fourth and subsequent Offense	$400.00

- *Fire calls only - fine plus fire department expense up to $800.00*

b. Civil Penalties

An issuing municipal official is authorized to recover civil penalties in the following amounts for each violation:

First Offense	$100.00
Second Offense	$200.00
Third Offense	$400.00
Fourth and subsequent Offense	$800.00

- *Fire calls only - fine plus fire department expense up to $800.00.*

DRAFT

c. Fire Department expenses
    i. Fire Engine $200.00 per hour including crew.
    ii. Tanker $125.00 per hour including crew.
    iii. Utility vehicles $75.00 per hour including crew.

B. In addition to the enforcement procedures available before the Judicial Bureau, the Manager or their designee is authorized to commence a civil action to obtain injunctive and other appropriate relief, or to pursue any other remedy authorized by law.

6.11.170 Severability

A. If any portion of this ordinance and any amendments made hereto are held unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance and amendments made hereto shall not be affected and shall remain in full force and effect. If any statute referred to in this ordinance shall be amended this ordinance shall be deemed to refer to such statute as amended.

DRAFT

Chapter 4.04

DOG LICENSING AND CONTROL

Sections:

4.04.000 Authority
4.04.010 Purpose
4.04.020 Definitions
4.04.030 License Requirements
4.04.040 Falsifying Documents
4.04.050 Investigation of Vicious Dogs
4.04.060 Potentially Vicious Dogs
4.04.070 Dog Bites
4.04.080 Disturbance by sound
4.04.090 Running at Large
4.04.100 Dog Waste
4.04.110 Impoundment—Contracting for services
4.04.120 Impoundment—Authorized when—Notice to owner
4.04.130 Impoundment—Release conditions
4.04.140 Unclaimed Dogs—Disposition
4.04.150 Unclaimed Dogs—Owner responsible for costs
4.04.160 Interference with Impoundment
4.04.170 Confinement of Animals
4.04.180 Enforcement
4.04.190 Violations - Penalties
4.04.200 Severability

4.04.000 Authority

A. This ordinance is enacted pursuant to 24 V.S.A. § 2291, et seq. and 20 V.S.A. § 3549. It shall constitute a civil ordinance within the meaning of 24 V.S.A., Chapter 59.

04.04.010 Purpose

A. The purpose of this ordinance is to regulate the keeping of dogs and wolf hybrids and to provide for their leashing, muzzling, restraint, impoundment and destruction, in order to protect the public health and safety of the Town and preserve the quiet enjoyment of its residents' homes and properties.

4.04.020 Definitions

Used in this chapter, unless the context indicates otherwise:

A. **Dog:** shall mean an animal of the canine species, and wolf-hybrid as defined in 20 V.S.A. § 3541.

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B. **At large:** means off the premises of the owner except for those areas as defined in subsection B of 4.04.080, and not under the control of the owner, a member of their immediate family, or an agent of the owner, by leash, cord or chain so that at all times the dog may be prevented from causing any damage, disturbance, nuisance or annoyance.

C. **Municipal official:** shall mean Animal Control Warden of the Town of Essex or any police officer; deputy sheriff; or any person designated by the Town of Essex for the control of dogs.

D. **Owner:** means any person who has actual or constructive possession of a dog. The term also includes those persons who provide food and shelter to a dog.

E. **Premises:** means the home and real property of the dog owner.

F. **Potentially Vicious Dog:** shall mean a dog running at large that inflicts minor injuries on a person not necessitating medical attention; chases in a menacing manner, threatens to attack or attacks another domestic pet or domestic animal; causes damage to personal property; chases a person; or causes any person to reasonably fear attack or bodily injury from such dog. This definition shall not apply if the dog was protecting or defending itself, its offspring, another domestic pet or animal or a person from attack or assault or the person attacked or threatened by the dog was engaged in teasing, tormenting, battering, assaulting, injuring or otherwise provoking the dog.

G. **Vicious Dog**: shall mean a dog, which causes bodily injury by attacking, biting or previously bitten or endangered the safety of a person or other domestic animal on any public or private property, unless the person is trespassing on the property of another animal, was protecting or defending itself, its offspring, another domestic pet or animal or a person from attack or assault or the person attacked or threatened by the dog was engaged in teasing, tormenting, battering, assaulting, injuring or otherwise provoking the dog.

4.04.030 License requirements

A. Dogs must be registered and licensed annually in accordance with the Town Clerk's Office, pursuant to 20 V.S.A. § 3581.

B. All dog owners shall obtain and be required to demonstrate proof of current rabies vaccinations, a certificate or a certified copy thereof signed by a duly licensed veterinarian as a requirement of the annual license application.

C. All dogs must wear a collar or harness with current license attached. Any dogs visiting from another town, city or state must wear a collar or harness with current license of said jurisdiction. A dog that is found to be without a collar or harness and license shall be in violation of this ordinance.

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4.04.040 Falsifying documents

A. No owner shall knowingly present false documentation to the Town Clerk's Office with the purpose of misleading the breed of the dog. This shall also apply to proof of rabies vaccination certificates.

4.04.050 Investigation of vicious dogs

A. When a dog has bitten a person while the dog is off the premises of the owner or keeper, and the person bitten requires medical attention for the attack, such person may file a written complaint with the Legislative Body for the Town of Essex. The complaint shall contain the time, date and place where the attack occurred, the name and address of the victim or victims, and any other facts that may assist the legislative body in conducting its investigation required by subsection (B) of this section.

B. The legislative body, within seven (7) days from receipt of the complaint, may request the police department to investigate the charges and hold a hearing on the matter. If the owner of the domestic pet or wolf-hybrid which is the subject of the complaint can be ascertained with due diligence, said owner shall be provided with a written notice of the time, date and place of hearing and the facts of the complaint.

C. If the dog is found to have bitten the victim without provocation, the legislative body for the Town of Essex shall make such order for the protection of persons as the facts and circumstances of the case may require, including, without limitation, that the domestic pet or wolf-hybrid is disposed of in a humane way, muzzled, chained, or confined. The order shall be sent by certified mail, return receipt requested. A person who, after receiving notice, fails to comply with the terms of the order shall be subject to the penalties provided in 20 V.S.A. § 3550.

D. The procedures provided in this section shall apply if the dog is not a rabies suspect. If a member of the legislative body or a municipal official designated by the legislative body determines that the animal is a rabies suspect, the provisions of 20 V.S.A. Chapter 193, Subchapter 5, and the rules of the department of health shall apply, the terms and conditions set forth in the legislative body's order shall be enforced.

Cross reference. General Provisions,
See 20 V.S.A. § 3546; Penalties,
See 20 V.S.A. § 2550; Control of Rabies,
See 20 V.S.A. § 3801-3813.

4.04.060 Potentially Vicious Dogs

A. A person claiming a dog is a "potentially vicious dog" may file a written complaint with the legislative body. The complaint shall contain the time, date and place where the alleged behavior occurred, an identification of the domestic pet or animal threatened or attacked; the name and address of any victim or victims, and any other facts that may assist the legislative body in conducting its hearing.

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B. A municipal official upon discovery of a potentially vicious dog may also file a written complaint with the legislative body of the legislative body. Upon receipt of a "potentially vicious dog" complaint the legislative body may proceed as in the case of a "vicious dog" complaint with the exception that if the legislative body determines that the behavior classifies the dog as "potentially vicious" the legislative body may order any protective measures be taken absent the dog being humanely destroyed.

4.04.070 Dog Bites

A. No person shall permit or cause any dog to cause bodily injury to a person or other domestic animal.

4.04.080 Disturbance by sound

A. No person shall keep or harbor a dog that disturbs the quiet, comfort and repose of others by frequent or long continued barking, whining, calling, or howling that disturbs the comfort or repose of persons in the vicinity for a continuous period of 15 minutes or more. *"This regulation shall not apply to dogs in a kennel or boarding facility which has received a zoning permit under the Town of Essex - Zoning Regulations. The zoning permit will govern the use of the kennel or boarding facility."*]

4.04.090 Running at large

A. No owner shall permit or cause any dog to go at large off the premises on any public or private property within the Town of Essex. Dogs shall be restrained by leash, cord or chain. All dogs using a town sidewalk, recreational or bicycle path, and parking areas must be leashed on a leash that is no longer than six (6) feet.

B. Exemptions - Dogs shall be under control of the owner, but may be unrestrained by leash, cord or chain:

1. In Saxon Hill Forest, except for the parking areas.
2. In undeveloped area of Indian Brook Park, which includes any areas except for the following: boat launch area, boat launch parking area, upper parking lot, lower parking lot, dam and beach area, and picnic area on east side of Indian Brook Dam and must be 300 yards away from the parking lots on a trail system before being unleased.
3. In the dog park located at 111 West Street, according to the regulations for use of the park.
4. While hunting with the owner.

4.040.100 Dog Waste

A. A dog that defecates in any public area or on the private premises of another person and whose owner does not immediately remove the fecal material and dispose of it in a sanitary manner is in violation of this ordinance.

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4.04.110 Impounding—Contracting for services

A. The legislative body may enter into a contract or contracts with persons or firms for impoundment services and enforcement of this chapter.

4.04.120 Impounding—Authorized when—Notice to owner

A. Any dog may be immediately impounded if the dog:
   1. Has been determined by a municipal official to be a "potentially vicious dog" which presents an imminent danger to people or other animals.
   2. Has reportedly bitten a person off or on the premises of the owner.
   3. Is in violation of state licensing law.
   4. Has an unknown rabies vaccination history or is suspected of having been exposed to rabies.
   5. Is running at large.
   6. Is found without a collar or a harness.

B. A municipal official who impounds a dog shall, within twenty-four hours, given notice to the owner thereof either personally, by telephone, email or by regular mail postage to the owner's last known address. Such notice shall inform the owner of the violations, the dog's location, and the necessary steps to have it returned to the owner.

4.04.130 Impoundment—Release conditions

A. Impounded dogs shall be released to the owner only after payment of all penalties and impoundment fees (including, but not limited to, boarding, food, and veterinary expenses), the final disposition of a potentially vicious dog or vicious dog hearing if applicable, and after all necessary remedial action, as determined by the enforcement officer and or legislative body in consideration of the violation committed, is taken by the owner. Remedial action shall include, but is not limited to, such actions as providing a collar and current license; verification of certification of current vaccination against rabies; payment of all applicable fines or waiver fees; and proof of satisfactory successful completion of a program designed to improve the owner's understanding and execution of dog ownership responsibilities.

B. If the owner of a dog impounded under the provisions of this ordinance refuses to take the remedial action necessary to secure the dog's release within ten (10) calendar days following notice of impoundment or gives notice either personally, by telephone call, or in writing to the municipality of forfeiture of ownership before that time, the dog may be placed in an adoptive home, transferred to a humane society or rescue organization; or, if the town is unable to transfer the dog, it may be humanely destroyed. The owner of a dog transferred or humanely destroyed shall remain liable for all expenses incurred by the Town for treatment, boarding and care of the dog for the duration of its impoundment, and any expenses associated with its transfer or humane disposal.

C. The procedures provided in this section shall only apply if the dog is not a rabies suspect. If an official designated by the legislative body to enforce the provisions of this ordinance determines

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that the dog is a rabies suspect, the municipal official shall immediately notify the Municipal Health Officer who shall proceed in accordance with the Vermont Department of Health's rules.

4.04.140 Unclaimed dogs—Disposition

A. Unless sooner redeemed by payment, it shall be the duty of the pound keeper or other official designated by the legislative body to keep all dogs so impounded for a period of seven days. If, at the expiration of seven (7) days from the initial date of impoundment, such dog shall not have been redeemed, it may be sold, given away or destroyed. Any proceeds from the sale of the impounded dog, over and above impoundment fees, license fees and other charges required under this chapter, shall be paid over to the owner, if any is found.

4.04.150 Unclaimed dogs—Owner responsible for costs

A. Any owner, if known, who elects not to redeem their dog and does not pay the boarding fees and impoundment fees within thirty (30) days of initial impoundment, may be assessed all of such fees and charges in a civil action brought under this chapter.

4.04.160 Interference with impoundment prohibited

A. Any person who interferes with the impounding of a dog under provision of this chapter, or releases or who attempts to release an impounded dog contrary to this chapter, shall be punished by fees not to exceed eight hundred dollars ($800.00) in an action brought under this chapter.

4.04.170 Confinement of Animals

A. An owner shall not leave an animal unattended in a standing or parked motor vehicle in a manner that would endanger the health or safety of the animal.

B. Any municipal official may use reasonable force to remove any such animal from a motor vehicle. The municipal official removing an animal shall deliver the animal to a humane society, veterinarian or municipal pound. If the owner of the animal cannot be found, the municipal official shall place a written notice in the vehicle, bearing the name of the officer and the department and address where the animal may be claimed. The owner shall be liable for reasonable expenses, and a lien may be placed on the animal for these expenses. The officer may not be held liable for criminal or civil liability for any damage resulting from actions taken under this section.

Cross reference. Humane and Proper Treatment of Animals, See 13 V.S.A. § 386.

4.04.180 Enforcement

A. This is a civil ordinance and shall be enforced in accordance with 24 V.S.A. § 1974a et seq.

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4.04.190 Violations – Penalties

A. Any person in violation of any provisions of this chapter shall be fined pursuant to Chapter 4.04 Section 4.04.180. If any violation continues, each day shall constitute a new violation.

1. Waiver Fees

a. An issuing municipal official is authorized to recover a waiver fee, in lieu of a civil penalty, for any person who declines to contest a municipal complaint and pays the following waiver amount for each violation:

First Offense	$50.00
Second Offense	$100.00
Third Offense	$200.00
Forth and subsequent Offense	$400.00

Offenses shall be counted on a calendar year basis.

2. Civil Penalties

a. An issuing municipal official is authorized to recover civil penalties in the following amounts for each violation:

First Offense	$100.00
Second Offense	$200.00
Third and subsequent Offense	$400.00
Forth and subsequent Offense	$800.00

Offenses shall be counted on a calendar year basis.

3. In addition to the enforcement procedures available before the Judicial Bureau, the Manager or their designee is authorized to commence a civil action to obtain injunctive and other appropriate relief, or to pursue any other remedy authorized by law.

4.04.200 Severability

A. If any portion of this ordinance and any amendments made hereto are held unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance and amendments made hereto shall not be affected and shall remain in full force and effect. If any statute referred to in this ordinance shall be amended this ordinance shall be deemed to refer to such statute as amended.

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Memorandum

TO: Selectboard and Evan Teich, Unified Manager
FROM: Annie Costandi, P.E., Director of Stormwater Operations/Staff Engineer AC
Dennis Lutz, P.E., Public Works Director
DATE: July 13, 2021
SUBJECT: Tanglewood Drive Scoping Study – Final Report and Presentation

ISSUE: Whether the Selectboard will endorse Alternative 5 as the preferred alternative for the Tanglewood Scoping Study allowing staff to proceed with implementation.

BACKGROUND: The Town received a grant through the Chittenden County Regional Planning Commission's Unified Planning Work Program to conduct scoping work and to develop conceptual plans for improved pedestrian facilities and stormwater infrastructure on Tanglewood Drive between Woodlawn Drive and Cindy Lane. There are no accommodations for bicycles and pedestrians except for at the end of the Tanglewood Drive. There is also significant erosion near the outlet of the drainage system at the end of Fern Hollow Road that Public Works has tried to address in recent years.

The scoping process involves quantifying existing bicycle and pedestrian, roadway, and drainage conditions and then defining a purpose and need for the project. Alternative improvement strategies are then identified and evaluated leading to the selection of a preferred alternative. Stantec was retained to complete the work for the study.

A Local Concerns Meeting was held on October 23, 2019, introducing residents to the project. Following this meeting, a public survey was sent out to residents asking for their input on what they would like to see implemented for both pedestrian facilities and stormwater improvements. After completing the scoping process, four alternatives were identified:

Alternative 1: No Action – Tanglewood Drive is scheduled for milling and overlay as part of regular pavement maintenance. As part of this work, there is an option to add a designated and painted bike/pedestrian lane to one or both sides.

- Estimated Project Cost: $60,000

Alternative 2: This alternative narrows the roadway to 30 ft. with 11 ft. lanes and 4 ft. shoulders. A 5 ft. green strip and 5 ft. wide paved path would be added to the north side of Tanglewood Drive. The green strip would be used for stormwater treatment to reduce the flows at the outlet. The existing stormwater pipes would be lined to increase their useful life.

- Estimated project cost: $410,000

Alternative 3: This alternative is to mill and overlay the existing pavement at the existing 40 ft. width and reline the stormwater pipes. Fill would be brought into Fern Hollow to stabilize eroded areas and the close drainage system would be extended to relocate the outlet further north to a location with less potential for erosion due to reduced slopes. No dedicated pedestrian facilities

would be constructed. An optional designated and painted bike/pedestrian lane could be added to one or both sides.

- Estimated project cost: $330,000

Alternative 4: This alternative is to mill and overlay the existing pavement at the existing 40 ft. width. The stormwater pipes would be relined to extend their useful life. A series of underground storage chambers would be added along Fern Hollow Road to detain stormwater to reduce peak flows. No dedicated pedestrian facilities would be constructed. An optional designated and painted bike/pedestrian lane could be added to one or both sides.

- Estimated project cost: $310,000

These alternatives were presented to residents at a public meeting held on March 16, 2021, to narrow down the options and to listen to feedback. Residents did not want the road width to be reduced, but they wanted the stormwater infrastructure to be repaired, improved water quality, and speed reduction measures implemented on Tanglewood Drive. Based on comments from residents, a fifth alternative was added.

Alternative 5: Like alternative 3, this alternative is to mill and overlay the existing pavement at the existing 40 ft. width and reline the stormwater pipes. Fill would be brought into Fern Hollow to stabilize eroded areas and the closed drainage system would be extended to relocate the outlet further north to a location with less potential for erosion due to reduced slopes. A sub-surface stormwater filter for water quality would be installed. No dedicated pedestrian facilities would be constructed. An optional designated and painted bike/pedestrian lane could be added to one or both sides. Edge of road markings would be painted with a single white strip on both sides of the road. A speed table would be installed east or west of the intersection of Tanglewood Drive and Fern Hollow Road.

- Estimated project cost: $440,000

Alternative 5 is the preferred alternative that staff would like to pursue. The plan is to implement the project in phases. Road resurfacing and catch basin repair has already been completed as part of the current summer paving program. Speed table installation would take place this fall. The relining of stormwater pipes and extending the outfall pipe will occur in 2022. The subsurface treatment filter will be constructed once additional funding can be secured. Installing the subsurface treatment filter will help the Town make progress towards the required phosphorus reduction targets by mitigating approximately 10% of the target and it has been incorporated into the Phosphorus Control Plan as a potential project.

RECOMMENDATION: It is recommended that the Selectboard endorse Alternative 5 as the preferred alternative for the Tanglewood Scoping Study and allow staff to move forward with implementation.

Tanglewood Drive Stormwater / Pedestrian Improvements Study

Tanglewood Drive, Cindy Lane to Woodlawn
Essex, Vermont

Scoping Report

May 20, 2021



Prepared for:

Town of Essex, Vermont

Chittenden County RPC

Prepared by:

Stantec

TANGLEWOOD DRIVE STORMWATER / PEDESTRIAN IMPROVEMENTS STUDY

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Under the direction of:

Chittenden County Regional Planning Commission

Table of Contents

1.0 EXECUTIVE SUMMARY 1
1.1 INTRODUCTION 1
1.2 PURPOSE AND NEED 1
1.3 ALTERNATIVES 2
1.4 PREFERRED ALTERNATIVE 3

2.0 INTRODUCTION 3

3.0 PROJECT BACKGROUND 4
3.1 EXISTING PLAN AND STUDY REVIEW 5
3.1.1 Essex Bicycle and Pedestrian Plan 5
3.1.2 UVM Capstone Design of Roadway Layout and Drainage Infrastructure 5

4.0 EXISTING CONDITIONS 6
4.1 ROADWAY CHARACTERISTICS 6
4.2 TRAFFIC VOLUMES 6
4.3 PEDESTRIAN AND BICYCLE FACILITIES 7
4.4 STORMWATER INFRASTRUCTURE 8
4.5 TRANSIT SERVICE 8
4.6 CRASH HISTORY 9
4.7 NATURAL RESOURCES 9
4.7.1 Review of Existing Resources 9
4.7.2 Site Investigation 12

5.0 PURPOSE AND NEED STATEMENT 13

6.0 ALTERNATIVES 13
6.1 ALTERNATIVE 1: NO ACTION 14
6.2 ALTERNATIVE 2: 30’ ROADWAY, GREENSTRIP AND 5’ PATH 14
6.3 ALTERNATIVE 3: 40’ ROADWAY WIDTH; RELOCATE OUTFALL 17
6.4 ALTERNATIVE 4: 40’ ROADWAY WIDTH, STORMWATER STORAGE STRUCTURES 19
6.5 ALTERNATIVE 5: 40’ ROADWAY WIDTH; RELOCATE OUTFALL; SUBSURFACE FILTER 21
6.6 COMPARISON OF ALTERNATIVES 23
6.6.1 Alternative Impacts 23
6.6.2 Project Costs 24
6.6.3 Evaluation Matrix 25

7.0 STAKEHOLDER INPUT AND RECOMMENDATIONS 26

8.0 MUNICIPAL PREFERRED ALTERNATIVE 28

LIST OF TABLES

Table 1 Summary of Project Costs 24
Table 2 Evaluation Matrix 25

LIST OF FIGURES

Figure 1 Project Study Area 4
Figure 2 Typical Section UVM Capstone Design Report 5
Figure 3 Existing Typical Section 6
Figure 4 Existing Pedestrian Facilities 7
Figure 5 Stone Outlet Pad 8
Figure 7 Upstream Channel 8
Figure 6 Downstream Channel 8
Figure 8 Streams, Wetlands, RTE 10
Figure 9 Habitats 11
Figure 10 Hazardous Waste Sites 12
Figure 11 Alternative 2 Plan and Typical Section 16
Figure 12 Alternative 3 - Plan 18
Figure 13 Alternative 4 – Plan 20
Figure 14 Alternative 5 – Plan 22

LIST OF APPENDICES

APPENDIX A: HYDROCAD ANALYSIS

APPENDIX B: ARCHEOLOGICAL RESOURCE ASSESSMENT

APPENDIX C: ESTIMATED CONSTRUCTION COSTS

APPENDIX D: LOCAL CONCERNS MEETING PRESENTATION

APPENDIX E: ONLINE SURVEY COMMENTS

APPENDIX F: ALTERNATIVE PRESENTATION MEETING NOTES

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

Tanglewood Drive, between Cindy Lane and Woodlawn Drive, is a relatively low-volume car-oriented street with no accommodations for bicycles and pedestrians. There is also recurring problems with the outlet to the closed drainage system that has resulted in significant erosion near the outlet adjacent to Fern Hollow Road. Given the high residential density and proximity to schools, parks, and other public amenities, this study area is an important transportation link that is lacking safe and convenient facilities for bicycles and pedestrians.

This study builds on previous studies within the area and the region. These include the UVM capstone project “Design of Roadway Layout and Stormwater Infrastructure for Tanglewood Drive, Essex VT” dated May 12, 2012 and the Essex Bicycle and Pedestrian Plan dated January 2015. In the former report, the need for pedestrian facilities along Tanglewood Drive was identified. While the 2015 study helped identify the need for on-road facilities, it focused on the entire communities of Essex and Essex Junction, and lacked sufficient detail for this specific section. The purpose of this study is to provide the additional detail needed to evaluate the viability of a potential improvement.

Tanglewood Drive was constructed in the 1970’s as part of a housing development project. It is a 40’ wide paved roadway with curb on both sides and closed drainage. All utilities in the area are underground with municipal water service but private soil-based sewage disposal systems. This section of roadway has had pavement overlays but no major redevelopment since the original construction. Tanglewood Drive west of the study area was lengthened after the original construction and has a width of 24’ with an 8’ green strip and shared use path on the south side.

The speed limit along Tanglewood Drive is 25 mph. Tanglewood Drive is a Class III town highway with a 60’ right-of-way width. The roadway ends west of the study area in a cul-de-sac. There are four intersections in the study area including: Cindy Lane, Rosewood Trail, Fern Hollow Road, and Woodlawn Drive. All are dead-end roads with T-type intersection geometry onto Tanglewood Drive.

The closed drainage system consists of grated inlets with corrugated metal pipe connections. The system outlets to Fern Hollow north of Tanglewood Drive. The outlet area has been adjusted since original construction to include additional drop structures to reduce the energy at the outlet to reduce erosive forces. Although measures have been taken to reduce erosion, significant erosion near the outlet is still occurring.

1.2 PURPOSE AND NEED

***Purpose**:* The purpose of this project is to improve the drainage system along Tanglewood Drive and to provide safe, comfortable pedestrian and bicycle facilities for users of all ages and abilities while maintaining safe and efficient vehicular conditions.

Need:

1. Address drainage problems resulting in erosion at the closed drainage system outlet.
2. Provide an inviting pedestrian travel route for residents that reinforces the Town's and Region's goals for pedestrian and bicycle mobility.
3. Facilitate use by all age groups, experience levels, and trip purposes.

1.3 ALTERNATIVES

Alternative 1: No Action. Tanglewood Drive is scheduled for milling and overlay as part of regular pavement maintenance. As part of this work, there is an option to add a designated and painted bike/pedestrian lane to one or both sides.

- Met Purpose and Need: No
- Cost Estimate: $60,000

Alternative 2: This alternative narrows the roadway to 30' with 11' Lanes and 4' shoulders. A 5'-6" green strip and 5' wide paved path would be added to the north side of Tanglewood Drive. The green strip would be used for stormwater treatment to reduce the flows at the outlet. The existing storm sewer pipes would be lined to increase lifespan. One goal of this alternative was to maintain the existing roadway footprint to salvage the existing drainage system and reduce impacts.

- Met Purpose and Need: Yes
- Cost Estimate: $410,000

Alternative 3: This alternative is to mill (if needed) and overlay the existing pavement at the existing 40' width and reline the storm sewer pipes. Additionally, fill would be brought into Fern Hollow to stabilize eroded areas and the closed drainage system would be extended to relocate the outlet further north to a location with less potential for erosion due to reduced slopes. No dedicated pedestrian facilities constructed. An optional designated and painted bike/pedestrian lane could be added to one or both sides.

- Met Purpose and Need: Part
- Cost Estimate: $330,000

Alternative 4: This alternative is to mill (if needed) and overlay the existing pavement at the existing 40' width. The storm sewer pipes would be relined to extend life. A series of underground storage chambers will be added along Fern Hollow Road to detain stormwater to reduce peak flows. No pedestrian facilities constructed. An optional designated and painted bike/pedestrian lane could be added to one or both sides.

- Met Purpose and Need: Part
- Cost Estimate: $310,000

Alternative 5: Like alternative 3, this alternative is to mill (if needed) and overlay the existing pavement at the existing 40' width and reline the storm sewer pipes. Additionally, fill would be brought into Fern

Hollow to stabilize eroded areas and the closed drainage system would be extended to relocate the outlet further north to a location with less potential for erosion due to reduced slopes. This alternative also includes a sub-surface stormwater filter for water quality treatment. No dedicated pedestrian facilities constructed. An optional designated and painted bike/pedestrian lane could be added to one or both sides. Edge of road markings will be painted with a single white strip on both sides of road. A speed table will be installed east or west of the intersection.

- Met Purpose and Need: Part
- Cost Estimate: $440,000

1.4 PREFERRED ALTERNATIVE

With input received at the public meetings and survey of residents considered, Town Engineering and Planning Staffs worked cooperatively to produce a series of recommendations relative to the project. The Staff recommendations that were ultimately endorsed by the Town of Essex Selectboard are:

[Placeholder for SB preferred alternative.]

2.0 INTRODUCTION

The Chittenden County Regional Planning Commission (CCRPC), working with the Town of Essex and Stantec Consulting Services Inc. (Stantec), completed a scoping study for drainage and pedestrian improvements to Tanglewood Drive. The scoping process involves quantifying existing bicycle and pedestrian, roadway, and drainage conditions and then defining a purpose and need for the project. Alternative improvement strategies are then identified and evaluated leading to the selection of a preferred alternative.

The scoping process includes working closely with a project advisory committee made up of leaders, Town staff, and CCRPC staff. Advisory committee members for this project are listed below.

Essex Town Staff	Dennis Lutz PE, Ann Costandi PE
CCRPC	Bryan Davis, Chris Dubin
Stantec	Israel Maynard PE

The advisory committee is charged with recommending a preferred improvement alternative to the Town Selectboard.

3.0 PROJECT BACKGROUND

The Tanglewood Drive neighborhood has been identified as a location that is experiencing problems with the existing drainage system and that lacks sufficient pedestrian and bicycle facilities. Progress has been made in recent years to address the drainage problem. At the outlet near Fern Hollow Road, drop structures have been added and the outlet location was changed to reduce outlet velocities to reduce erosion potential. The newly constructed section of Tanglewood Drive west of the study area was constructed with an 8' green strip and an 8' shared use path.

This study focuses on the Tanglewood Drive section from Cindy Lane to Woodlawn Drive. The goal is for the alternative selected in this study to be replicated along the remaining length of Tanglewood Drive in the future. This scoping study builds upon previous studies to further evaluate alternatives for addressing the drainage problems as well as bicycle and pedestrian needs in this area.

Figure 1 Project Study Area



3.1 EXISTING PLAN AND STUDY REVIEW

Two previous studies for this area considered drainage and/or pedestrian concerns. The most recent studies were reviewed in the preparation of this scoping study and are listed below.

- Essex Bicycle and Pedestrian Plan Dated January 2015
- UVM Capstone Design of Roadway Layout and Drainage Infrastructure for Tanglewood Drive Report Dated May 12, 2012

3.1.1 Essex Bicycle and Pedestrian Plan

This plan includes the following objectives that pertain to this project.

1. Tanglewood Drive is identified as a link in a future network of shared use paths that would include path along the existing VT Route 289 right-of-way.

2. Tanglewood Drive identified as a location that could be retrofitted to improve bicycle access via buffered bike lanes.

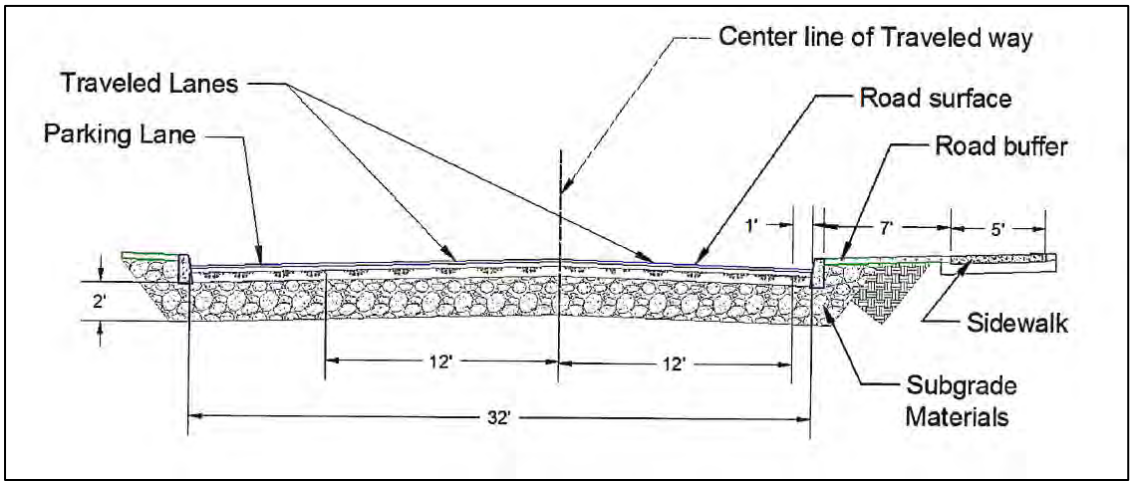
3.1.2 UVM Capstone Design of Roadway Layout and Drainage Infrastructure

The *UVM report* was completed in 2012 and included the entire project area. Below are the pertinent recommendations from the plan.

1. Reduce peak flow from Tanglewood Drive to prevent sediment laden runoff to Alder Brook.

2. Reduce existing roadway width to provide accommodation for bicycles and pedestrians.

Figure 2 Typical Section UVM Capstone Design Report

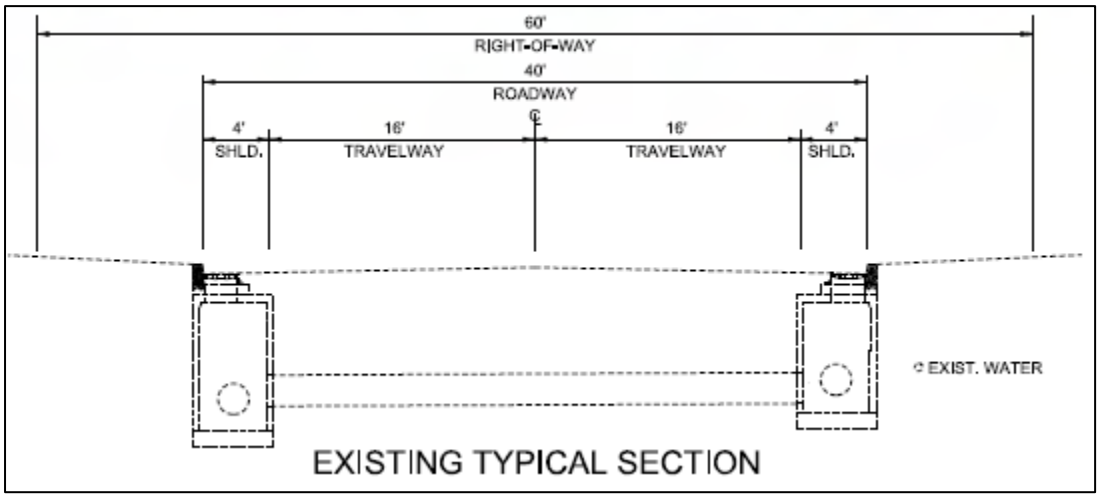


4.0 EXISTING CONDITIONS

4.1 ROADWAY CHARACTERISTICS

Tanglewood Drive was constructed in 1970's as part of the housing development project with a full depth of new subbase and pavement, new drainage system, and water utilities. It was constructed as a curbed two-lane roadway (one 16-foot lane and 4-foot shoulder in each direction). Underground electric is present on the north side of the roadway. A typical section of the existing condition is shown below. Given the excessively wide lanes, the roadway is used for informal parking and is used by bicyclists and pedestrians.

Figure 3 Existing Typical Section



The roadway is a dead-end street that connects a series of dead-end streets to Sand Hill Road. Four roads intersect Tanglewood Drive in the study area. They are Cindy Lane, Rosewood Trail, Fern Hollow Road, and Woodlawn Drive. All intersections are T-type stop-controlled intersections.

The current posted speed is 25 mph. Residents have indicated that the speeds on the roadway are typically significantly higher than the posted speed. No speed study has been conducted to support or deny the claim. The land use in this area is residential with primarily single-family homes.

4.2 TRAFFIC VOLUMES

Traffic volume data, including Annual Average Daily Traffic (AADT) values and Peak Hourly Volumes for the study area, were collected from the Vermont Agency of Transportation (VTrans) Transportation Data Management System. The 2019 AADT for the study area is 283 vehicles/day.

Intersection traffic data for the area are unavailable, but based on Tanglewood Drive's AADT, would not likely be approaching capacity.

4.3 PEDESTRIAN AND BICYCLE FACILITIES

A network of sidewalks and a shared use path are provided or planned adjacent to the project area. There is an existing 5-foot wide concrete sidewalk along Sand Hill Road at the intersection of Tanglewood Drive. This connects to sidewalks along VT Route 15 north of the project. The Sand Hill Road sidewalk connects to the Foster Road Sidewalk to the south of the project which leads to the school and athletic fields. Tanglewood Drive west of the project area was recently extended and includes an 8' paved path. (See Figure 4)

There are no dedicated bike or pedestrian facilities along Tanglewood Drive in the project area. Bicycles and pedestrians currently share a lane with traffic. The existing lanes are 16 feet wide with 4' shoulders.

The Essex/Essex Junction Bicycle Pedestrian Plan, dated January 15, 2015, identified Tanglewood Drive as a connection between Sand Hill Road and a future planned shared use path along the I-289 right-of-way.

Figure 4 Existing Pedestrian Facilities



4.4 STORMWATER INFRASTRUCTURE

The drainage infrastructure information for the study area was obtained from GIS data provided by the CCRPC and field verification. The project area contains the portion of one closed drainage system and the entirety of another. The first system on the west end of the project has three drop inlets in the study area at the intersection of Cindy Lane and Tanglewood Drive. This system flows to the west outside the study are. The second system contains 7 drop inlets on Tanglewood Drive that flow to Fern Hollow Drive. These inlets are connected by corrugated metal pipes. Pipes were video inspected in May 2021. Pipes in the study area are mainly CMP in poor condition. Video assessment indicates that the area would be a good candidate for slip lining. Along Fern Hollow Drive, there are three drop structures to dissipate energy down the steep grade. There is an additional inlet structure at the end of Fern Hollow Road that collects additional runoff and turns the piping towards the outlet in Fern Hollow. The outlet has a stone outlet pad and is in good condition (Figure 5).

Figure 5 Stone Outlet Pad



The channel upstream and downstream of the outlet is incised and unstable. The slope continues to slide as evidenced by the trees tilting into the gulley (Figures 6 and 7).

Figure 7 Downstream Channel



Figure 6 Upstream Channel



4.5 TRANSIT SERVICE

Green Mountain Transit (GMT) has a local bus route, the silver route, with a stop at the intersection of Tanglewood Drive and Sand Hill Road. This route loops through Essex and the Essex Junction Amtrak Station using VT Route 15, Sand Hill Road, and River Road.

4.6 CRASH HISTORY

The crash history for the study area was investigated using the VTrans crash database. VTrans keeps records of reported crashes by milepost along all public highways. General Yearly Summaries can be obtained through the Vermont Public Crash Data Query Tool for given roadway segments. Crash data for 2015 through 2019 were reviewed for Tanglewood Drive. No crashes were reported in the project area during this five-year period (2015-2019).

4.7 NATURAL RESOURCES

Stantec conducted a preliminary review of the natural resources present within the project area. Specifically, as part of this investigation, Stantec identified and characterized wetlands, streams, rare, threatened, or endangered (RTE) species, wildlife habitat, agricultural land, 4(f) and 6(f) public lands, and hazardous waste sites. Hartgen Archeological Associates worked as a subconsultant to determine potential archeological resources in the area. Following is a summary of the findings.

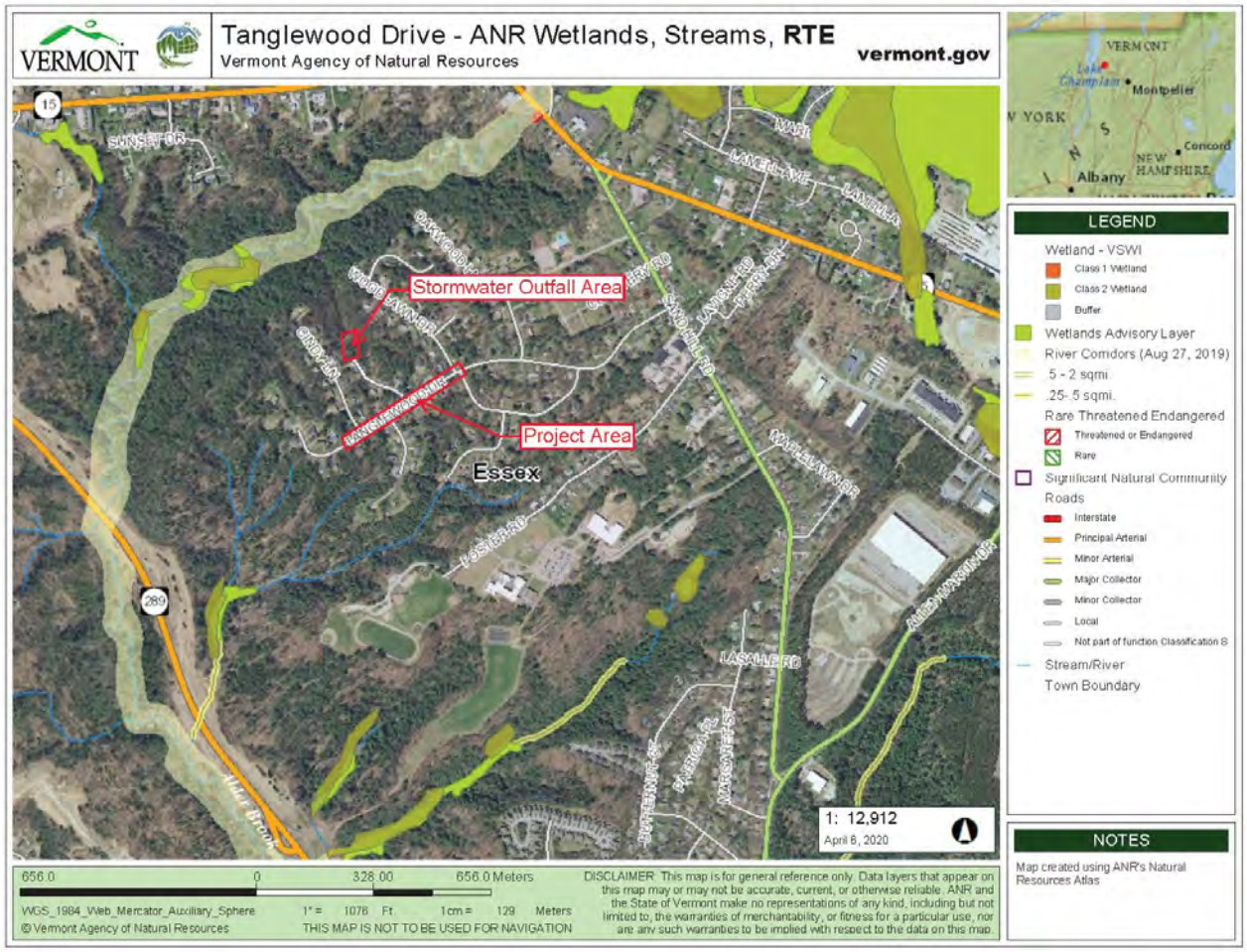
4.7.1 Review of Existing Resources

Stantec used the Vermont Agency of Natural Resources (ANR) Natural Resources Atlas mapping program to evaluate known natural resources within the Project Area.

Wetlands and Streams. According to the Atlas, there are no mapped Vermont Significant Wetland Inventory or Advisory Layer wetlands in the Project Area. There are no mapped streams within the Project Area.

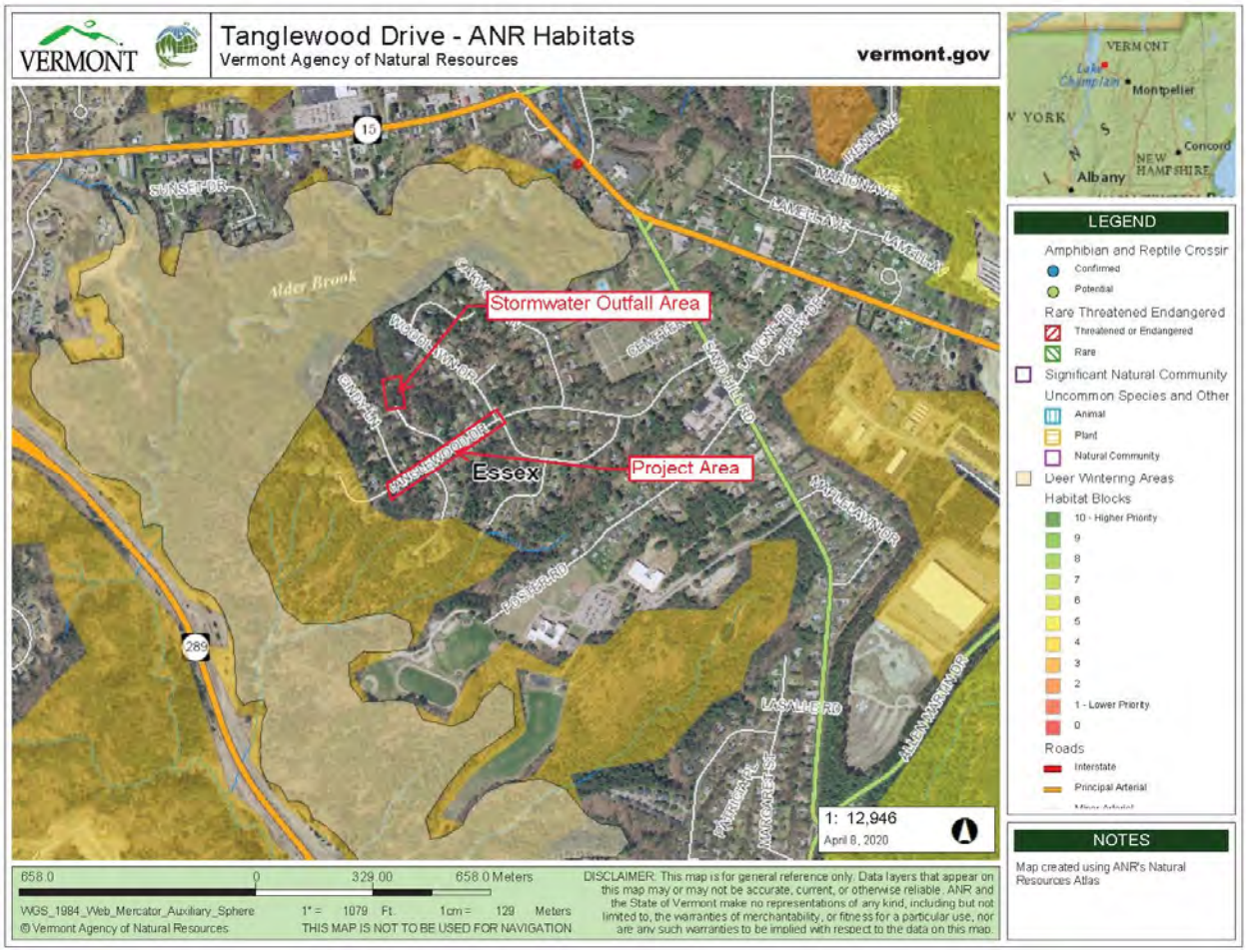
RTE Review. No RTE species are mapped within the Project Area, but all of Vermont is considered critical habitat for the state- and federal listed northern long-eared bat (Myotis septentrionalis). Trees and bridges provide potential habitat for this species. Work proposed for this project may include minimal tree cutting. The project will comply with the Federal Highway Administration (FHWA) Range-wide Programmatic Informal Consultation for Indiana Bat and Northern Long-eared Bats. Suitable Habitat includes trees (dead or alive) and/or bridges.

Figure 8 Streams, Wetlands, RTE



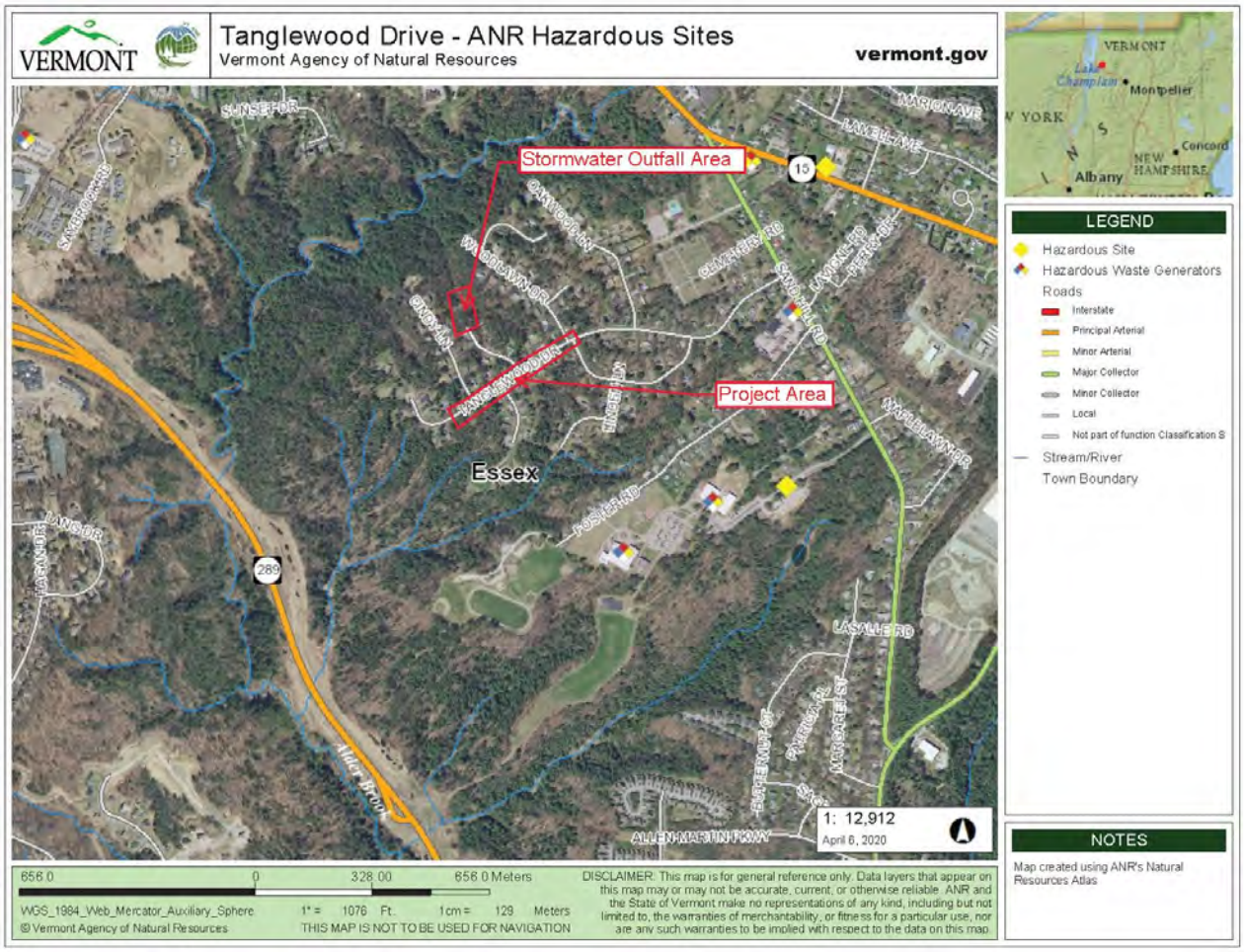
Flora/Fauna and Forest Land. No priority habitat areas are mapped within the Project Area, but low priority wildlife habitat blocks and deer wintering areas are mapped to the west and north of the Project Area. The undeveloped portions of the Project Area provide general habitat for various suburban species but are not considered critical habitat areas.

Figure 9 Habitats



Hazardous Waste Sites. There are no Hazardous Sites mapped within the Project Area.

Figure 10 Hazardous Waste Sites



4.7.2 Site Investigation

Stantec conducted a site visit on May 13, 2020, to evaluate natural resources present within the project area.

Wetlands/Streams. Palustrine emergent wetlands were identified within the Project Area. These wetlands are associated with the stormwater discharge system north of Fern Hollow Road. Stormwater is discharged into the ravine, and small areas of wetland are located adjacent to the discharge channel downstream of the outfall where the channel slope flattens. These wetland areas were determined using the technical criteria described in the U.S. Army Corps of Engineers (Corps) guidance document: *Corps of Engineers Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regional Supplement*. Wetland communities

were classified according to the *Classification of Wetlands and Deepwater Habitats of the United States*. Hydric soil determinations were made in accordance with the Corps manual and the *Field Indicators for Identifying Hydric Soils in New England, Version 4*. Dominant species present include jewelweed *(Impatiens capensis*) and sedges *(Carex spp.).* Soils had a thin (2-3") dark surface horizon of mucky loam over sand and were saturated to the surface during the field investigation on May 13, 2020.

No jurisdictional streams were identified in the project area.

RTE Species. No RTE species were observed within the Project Area during the field visit. Forested habitat is present within the stormwater discharge area north of Fern Hollow Road, and this may be considered habitat for the state- and federal listed northern long-eared bat.

Wildlife Habitat. The undeveloped portions of the Project Area provide general habitat for various suburban species but are not considered critical habitat areas. Eastern chipmunk (*Tamias striatus*) were observed and white-tailed deer (*Odocoileus virginianus*) prints and scat were present in the area north of Fern Hollow Road.

5.0 PURPOSE AND NEED STATEMENT

The following statement was developed based on the existing conditions assessment, public input, and project advisory committee discussions.

Purpose: The purpose of this project is to improve the drainage system along Tanglewood Drive and to provide safe, comfortable pedestrian and bicycle facilities for users of all ages and abilities while maintaining safe and efficient vehicular conditions.

Need:

- Address drainage problems resulting in erosion at the closed drainage system outlet.
- Provide an inviting pedestrian travel route for residents that reinforces the Town's and Region's goals for pedestrian and bicycle mobility.
- Facilitate use by all age groups, experience levels, and trip purposes.

6.0 ALTERNATIVES

The project advisory committee (PAC) considered a wide range of improvements to address the project's purpose and need. Constructing a 10-foot wide shared use path was considered. This improvement was discarded as it would require construction outside the existing roadway footprint, and there were viable alternatives to accommodate higher speed on-road cyclists. The PAC also discussed on-road facilities delineated by markers or other barriers. This was discarded due to the change in aesthetic and restriction to on street parking, as confirmed by comments from public meetings. Stormwater infiltration chambers were considered at the end of Fern Hollow Road. This option was discarded due to concern of a restrictive clay layer resulting in poor performance.



The resulting alternatives developed and evaluated include the following:

- Alternative 1: No Action (Scheduled mill and overlay only)
- Alternative 2: Narrowing Roadway to 30'; Constructing 5' path and green strip.
- Alternative 3: Mill and Overlay Existing Roadway; pedestrians continue to use roadway; Line existing pipes; Drainage outlet relocation; Gulley stabilized.
- Alternative 4: Mill and Overlay Existing Roadway: Pedestrians continue to use roadway; Line existing CMP's; Subsurface Storage adjacent to existing drop structures.
- Alternative 5: Is like Alternative 3 with a subsurface filtration system added for Water Quality.

6.1 ALTERNATIVE 1: NO ACTION

For the No Action alternative, the existing transportation and stormwater facilities in the project area remain as they exist today, although the roadway will be milled and repaved due to scheduled maintenance. This alternative retains the curb locations on both sides of Tanglewood Drive. The roadway is coarse milled and then overlaid with new pavement to improve the pavement condition. This alternative would include construction costs for milling and repaving only, and there would be no impacts to right-of-way, resources, or traffic. As part of repaving, there would be an option to add a designated and painted bike lane to one or both sides of the roadway. The No Action Alternative would not fully address the project's purpose and need. The estimated project cost of the mill and overlay for this area is $60,000.

6.2 ALTERNATIVE 2: 30' ROADWAY, GREENSTRIP AND 5' PATH

This alternative retains the curb on the south side of Tanglewood Drive and moves the edge of roadway in 10' on the north side of the roadway. A 5'-6" Green Strip and 5' Paved Path are added to the north side of Tanglewood Drive so that the back of the proposed path aligns with the existing back of curb location. The green strip is used for stormwater treatment and detention to reduce peak flows to the existing outfall in Fern Hollow. A typical section and plan of this alternative is shown in Figure 11. As shown on the plan, this alternative includes the following features:

- 5' Paved Path on the north side of Tanglewood Drive
- Connection to the existing shared use path to the west of the project area via crosswalk
- Crosswalks and signage for crossing Cindy Lane and Fern Hollow Road
- Stormwater Detention / Treatment Areas in the newly constructed green strip
- Rehabilitation of the existing closed drainage system via pipe lining
- Estimated project cost is $410,000

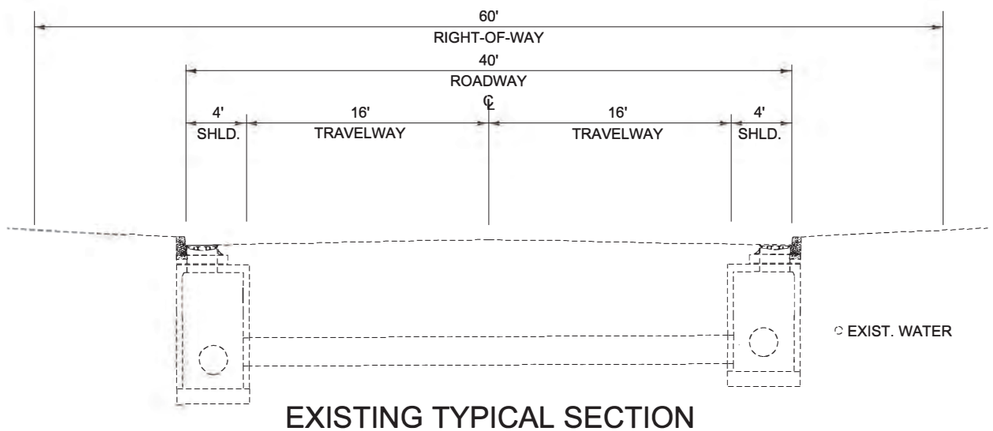
These improvements do not impact right-of-way or utilities, or require permits, allowing this alternative to be readily implemented, subject to available funding.

Based on the available 60’ right-of-way, the green strip could be widened in areas to increase potential for stormwater treatment. This will be restricted by underground electric vaults across from Rosewood Trail and near the drive between Fern Hollow Road and Woodlawn Drive.

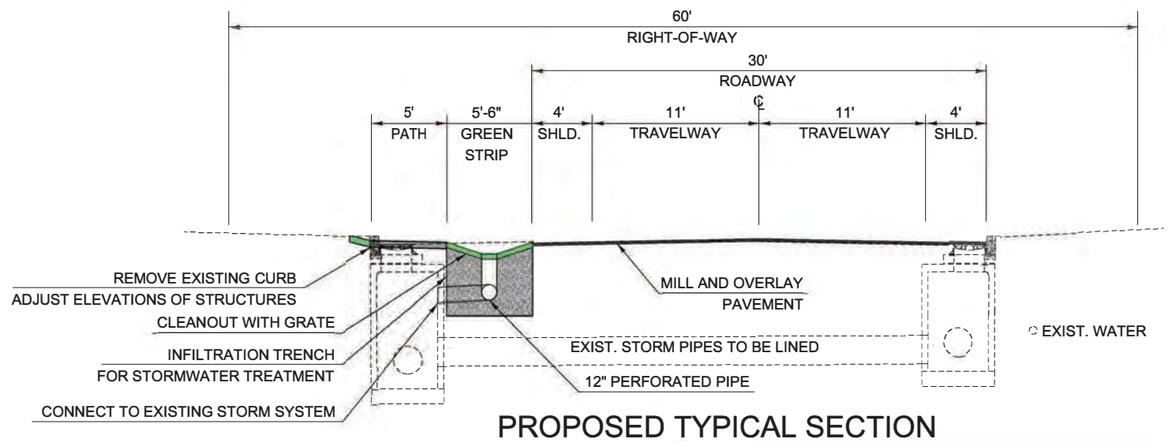
Operational Impacts

Given the low traffic volumes on the roadway, there will not be a significant impact to traffic operations in the project area. It is assumed that the reduction in roadway will not impact the ability to park on the roadside. The parking condition would result in a further narrowed roadway which will reduce operating speed in this section. Stormwater runoff was analyzed and the available storage in green strip would result in a peak flow reduction of 15% at the outlet. In the future if the typical is applied along Tanglewood Drive between Woodlawn drive and Glenwood Drive the total flow reduction will be 34%. Further reductions could be achieved through infiltration in the green strip areas. Prior to design, soil investigations would need to be completed to determine the feasibility and capacity of infiltration in this area. HydroCAD analysis of the existing and proposed and potential future condition can be found in Appendix A.





EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION

FIGURE 10

Stantec

PROJECT NAME:	TANGLEWOOD SCOPING
PROJECT NUMBER:	
FILE NAME: Concept 1- color.dgn	PLOT DATE: 4/14/2020
PROJECT LEADER: I. MAYNARD	DRAWN BY: J. LAPERLE
DESIGNED BY: I. MAYNARD	CHECKED BY: G. GOYETTE
ALTERNATIVE 2	SHEET | OF |

6.3 ALTERNATIVE 3: 40’ ROADWAY WIDTH; RELOCATE OUTFALL

This alternative retains the curb locations on both sides of Tanglewood Drive. The roadway is coarse milled and then overlaid with new pavement to improve the pavement condition. The existing CMP pipes along Tanglewood Drive receive liners to extend their useful life. The outfall location is relocated downstream, away from the unstable channel banks of Fern Hollow. The unstable banks are backfilled to reduce the potential for further collapse. A plan of this alternative is shown in Figure 12. As shown on the plan, this alternative includes the following features:

- Mill (if needed) and overlay of existing roadway
- Lining of existing CMP’s
- Extension of closed drainage system to relocate outfall
- Fill in existing outfall location to improve channel stability
- An optional designated and painted bike/pedestrian lane could be added to one or both sides.
- Estimated project cost is $330,000

These improvements do not impact right-of-way or utilities, a wetland permit may be required depending on area of wetland impacts at the relocated outfall.

Operational Impacts

Since this alternative does not change the conditions for vehicles or pedestrians, there will be no impacts to operations. The extension of the drainage system to a location with less slope will result in a more stable outfall condition that is less likely to erode in the future. Stabilization of the existing channel damage in the gulley will reduce further deterioration of the side slopes. A proper designed channel protection will ensure that the restored area remains stable through future storm events.



PROJECT NAME:	TANGLEWOOD SCOPING
PROJECT NUMBER:	
FILE NAME: Concept 2 - color.dgn	PLOT DATE: 10/19/2020
PROJECT LEADER: I. MAYNARD	DRAWN BY: J. LAPERLE
DESIGNED BY: I. MAYNARD	CHECKED BY: G. GOYETTE
ALTERNATIVE 2	SHEET 1 OF 1

Stantec

6.4 ALTERNATIVE 4: 40' ROADWAY WIDTH, STORMWATER STORAGE STRUCTURES

This alternative retains the curb locations on both sides of Tanglewood Drive. The roadway is coarse milled and then overlaid with new pavement to improve the pavement condition. The existing CMP pipes along Tanglewood Drive receive liners to extend their useful life. Stormwater storage chambers are added adjacent to the existing drop structures along Fern Hollow Road. A plan of this alternative is shown in Figure 13. As shown on the plan, this alternative includes the following features:

- Mill (if needed) and overlay of existing roadway
- Lining of existing CMP's
- Addition of Storage Structures along Fern Hollow Road
- Optional Treatment Filter at the end of Fern Hollow Road.
- An optional designated and painted bike/pedestrian lane could be added to one or both sides.
- Estimated project cost is $310,000

These improvements do not impact right-of-way or utilities, or require permits, allowing this alternative to be readily implemented, subject to available funding.

Operational Impacts

Since this alternative does not change the conditions for vehicles or pedestrians, there will be no impacts to traffic operations. Based on input from the Town, the desired storage configuration will be independent storage structures adjacent the existing basin drop structures along fern hollow road. To achieve maximum detention with structures in series down a slope the outlet to each structure will have to be variable to ensure that all structures fill simultaneously. A hydroCAD analysis was conducted to determine the peak flow reduction from a 1-year storm. Using the storage configuration described with outlets ranging from 7.25" at the lowest structure to 8.25" at the highest structure the peak flow would be reduced from 6.83 cfs to 4.83 cfs (approximately 30%). Optionally, a stormwater treatment practice could be added to the system to reduce nutrient load at the outfall. HydroCAD analysis of the existing and proposed condition can be found in Appendix A.



Stantec

PROJECT NAME: TANGLEWOOD SCOPING	
PROJECT NUMBER:	
FILE NAME: Concept 3 - color.dgn	PLOT DATE: 10/19/2020
PROJECT LEADER: I. MAYNARD	DRAWN BY: J. LAPERLE
DESIGNED BY: I. MAYNARD	CHECKED BY: G. GOYETTE
ALTERNATIVE 3	SHEET 1 OF 1

6.5 ALTERNATIVE 5: 40’ ROADWAY WIDTH; RELOCATE OUTFALL; SUBSURFACE FILTER

This alternative was added based on public comments from at the alternative presentation meeting. Like alternative 3, this alternative retains the curb locations on both sides of Tanglewood Drive. The roadway is coarse milled and then overlaid with new pavement to improve the pavement condition. The existing CMP pipes along Tanglewood Drive receive liners to extend their useful life. The outfall location is relocated downstream, away from the unstable channel banks of Fern Hollow. The unstable banks are backfilled to reduce the potential for further collapse. A plan of this alternative is shown in Figure 14. As shown on the plan, this alternative includes the following features:

- Mill (if needed) and overlay of existing roadway
- Lining of existing CMP’s
- Offline Subsurface filter for Water Quality Treatment
- Extension of closed drainage system to relocate outfall
- Fill in existing outfall location to improve channel stability
- speed table east or west of the intersection
- Paint the edge of road markings with a single white stripe on both sides of the road
- An optional designated and painted bike/pedestrian lane could be added to one or both sides.
- Estimated project cost is $440,000

These improvements do not impact right-of-way or utilities, a wetland permit may be required depending on area of wetland impacts at the relocated outfall.

Operational Impacts

Since this alternative does not change the conditions for vehicles or pedestrians, there will be no impacts to operations. The extension of the drainage system to a location with less slope will result in a more stable outfall condition that is less likely to erode in the future. Stabilization of the existing channel damage in the gulley will reduce further deterioration of the side slopes. A proper designed channel protection will ensure that the restored area remains stable through future storm events. The subsurface filter will treat water quality volume from the impervious surfaces upstream.



0 30 60

SCALE IN FEET

Stantec

PROJECT NAME:	TANGLEWOOD SCOPING
PROJECT NUMBER:	
FILE NAME: Concept 4 - color.dgn	PLOT DATE: 5/4/2021
PROJECT LEADER: I. MAYNARD	DRAWN BY: J. LAPERLE
DESIGNED BY: I. MAYNARD	CHECKED BY: G. GOYETTE
ALTERNATIVE 4	SHEET 1 OF 1

6.6 COMPARISON OF ALTERNATIVES

6.6.1 Alternative Impacts

Traffic Operations

Traffic operations do not significantly vary between alternatives. Alternative 2 introduces a crosswalk across Tanglewood Drive at the western limit of the study area. This crosswalk connects the proposed path to the existing path. Given the low volumes in the area, the crosswalk is not expected to impact traffic operations.

Safety Impacts

Safety for pedestrians and bicyclists is improved in Alternative 2. Intermediate and advanced cyclists can use the 4’ shoulder and beginner cyclists can use the 5-foot separated path. Alternatives 3 and 4 do not improve pedestrian and bicycle safety over the existing condition.

Right-of-Way (ROW) Impacts

Based on the available parcel data, the right-of-way width along Tanglewood Drive is 60’, centered on the existing roadway. Alternatives 2 and 4 do not have impacts outside existing right-of-way. Alternative 3 may require easements for stabilization of the existing channel near the outlet.

Environmental Resource Impacts

Based on the desktop research and site visit, there are no known impacts to natural resources, such as wetlands, streams, wildlife, or rare and endangered species, for any alternatives.

Cultural Resource Impacts

An archeological resource assessment (ARA) was conducted by Hartgen Archeological Associates. The assessment determined that there are no historic archeological sites, State Register or National Register sites located within or adjacent to the project areas and the project area is not considered to be archeologically sensitive for either historic or precontact resources. The full ARA report can be found in Appendix B.

Utility Impacts

Existing underground utilities in the project area include water, gas, electric and communications. The limited construction of the alternatives does not impact utilities and does not require their wholesale relocation. Alternative 2, which relocates the northside curb, does require new drainage inlets and may require utility relocations or adjustments.

Stormwater Impacts

Alternative 2 reduces the amount of impervious surface over the existing condition and will therefore reduce overall runoff volume. Storage will provide flow mitigation, resulting in an overall decrease in

volume and peak flow to the outfall. Alternative 3 does not reduce volume or peak flow. The outfall is relocated to a more stable location and existing channel banks are stabilized, which will reduce sediment load. Alternative 4 will reduce peak flows through detention provided in subsurface storage. Water quality can be improved in this alternative if the optional treatment practice is constructed. All three alternatives maintain or decrease impervious area over the existing condition so there will not be a need for an operational stormwater permit.

6.6.2 Project Costs

The following table is a summary of the estimated project costs for alternatives. It is assumed that there will be no right-of-way cost for any alternative. See Appendix C for a detailed breakdown of estimated construction costs.

Table 1 Summary of Project Costs

Item	Alternative 1 No Action*	Alternative 2 (30' Roadway, Green strip, Path)	Alternative 3 (40' Roadway, Relocated Outfall)	Alternative 4 (40' Roadway, Stormwater Storage)	Alternative 5 ** (40' Roadway, Stormwater Filtration)
Construction Costs	$60,000	$320,000	$250,000	$230,000	$360,000
Right-of-Way Costs	$0	$0	$0	$0	$0
Design Engineering	$0	$60,000	$50,000	$50,000	$50,000
Construction Engineering	$0	$30,000	$30,000	$30,000	$30,000
TOTAL PROJECT COSTS	$60,000	**$410,000**	**$330,000**	**$310,000**	**$440,000**

* No action alternative construction cost is for regularly scheduled mill and overlay work.
** Alternative added after alternatives presentation

6.6.3 Evaluation Matrix

The table below provides an evaluation matrix summarizing the above information for traffic operations, safety, right-of-way, environmental, cultural resources, utilities, and project costs.

Table 2 Evaluation Matrix

CRITERIA	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5*
	No Action (Overlay Only)	30' Roadway, Green strip, Path	40' Roadway, Relocated Outfall	40' Roadway, Stormwater Storage	40' Roadway, Stormwater Filtration
Project Costs	$60,000	$410,000	$330,000	$310,000	$440,000
PURPOSE AND NEED					
Address Drainage Problems resulting in unstable channel slopes in Fern Hollow	No	Yes	Yes	Yes	Yes
Support goals for active mobility	No	Yes	No	No	No
Facilitate use by all ages and experience	No	Yes	No	No	No
IMPACTS					
Traffic Operations	None	None	None	None	None
Safety	No Improvement	Improved	No Improvement	No Improvement	No Improvement
Right-of-way	None	None	None	None	None
Environmental	None	None	Wetland	None	Wetland
Cultural Resources	None	None	None	None	None
Utilities	None	None	None	None	None

CRITERIA	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5*
	No Action (Overlay Only)	**30' Roadway, Green strip, Path**	**40' Roadway, Relocated Outfall**	**40' Roadway, Stormwater Storage**	**40' Roadway, Stormwater Filtration**
Stormwater	No Change	Reduce Peak Flow and Volume	No change; Stabilized Outfall	Reduce Peak Flow	Water Quality Treatment and Stabilized Outfall
* Alternative added after alternatives presentation meeting					

7.0 STAKEHOLDER INPUT AND RECOMMENDATIONS

A local concerns meeting was held on October 23, 2019 at the Essex Fire station. At this meeting the existing information was presented along with the project's goals. The public provided input on their concerns which include speeding and stormwater runoff into residences. The presentation along with the meeting notes are attached in Appendix D.

After the local concerns meeting the project team sent an online survey to residents in the neighborhood to help guide the alternatives development process and gain more information about properties in the project area.

The survey questions and responses were as follows:

1. Does your property front on Tanglewood Drive between Woodlawn Drive and Cindy Lane?
    a. YES: 4
    b. NO: 15
2. If your property fronts on Tanglewood Drive between Woodlawn Drive and Cindy Lane, do you have a foundation drain that connects to the Town's storm water pipe in the roadway?
    a. YES: 2
    b. NO: 9
    c. DON'T KNOW: 5
3. If your property fronts on Tanglewood Drive between Woodlawn Drive and Cindy Lane, is your septic tank in the front or back lawn?
    a. FRONT: 0

   b. BACK: 4

   c. DON'T KNOW: 8

4. Do you prefer keeping the road width at 40 feet without any pedestrian or bicycle facilities?

   a. YES: 10

   b. NO: 6

   c. NO PREFERENCE: 3

5. Would you accept a narrower road width of 30 feet in this section of Tanglewood (per the Town's current road standards) with the 10 feet of removed roadway width used for a 5-foot wide pedestrian walkway separated from the travelled way by a 5 foot wide green strip?

   a. YES: 10

   b. NO: 8

   c. NO PREFERENCE: 1

6. If the roadway width was reduced to 30 feet, would you prefer parking on one side of the street or both?

   a. ONE SIDE: 8

   b. BOTH SIDES: 6

   c. NO PREFERENCE: 4

7. Would you prefer a 30-foot-wide road width with a separate 7-10-foot-wide multi-purpose path?

   a. YES: 6

   b. NO: 11

   c. NO PREFERENCE: 1

8. Would you prefer a vegetative green belt between any sidewalk/multi-purpose path or only protective delineators such as white flexible posts?

   a. VEGETATIVE GREEN BELT: 13

   b. FLEXIBLE WHITE POSTS: 1

   c. NO PREFERENCE: 4

Comments received as part of the online survey are attached in Appendix E.

An alternatives presentation meeting was noticed and then conducted on March 16, 2021 virtually via Microsoft Teams. Notes and chat log from this meeting can be found in Appendix F.

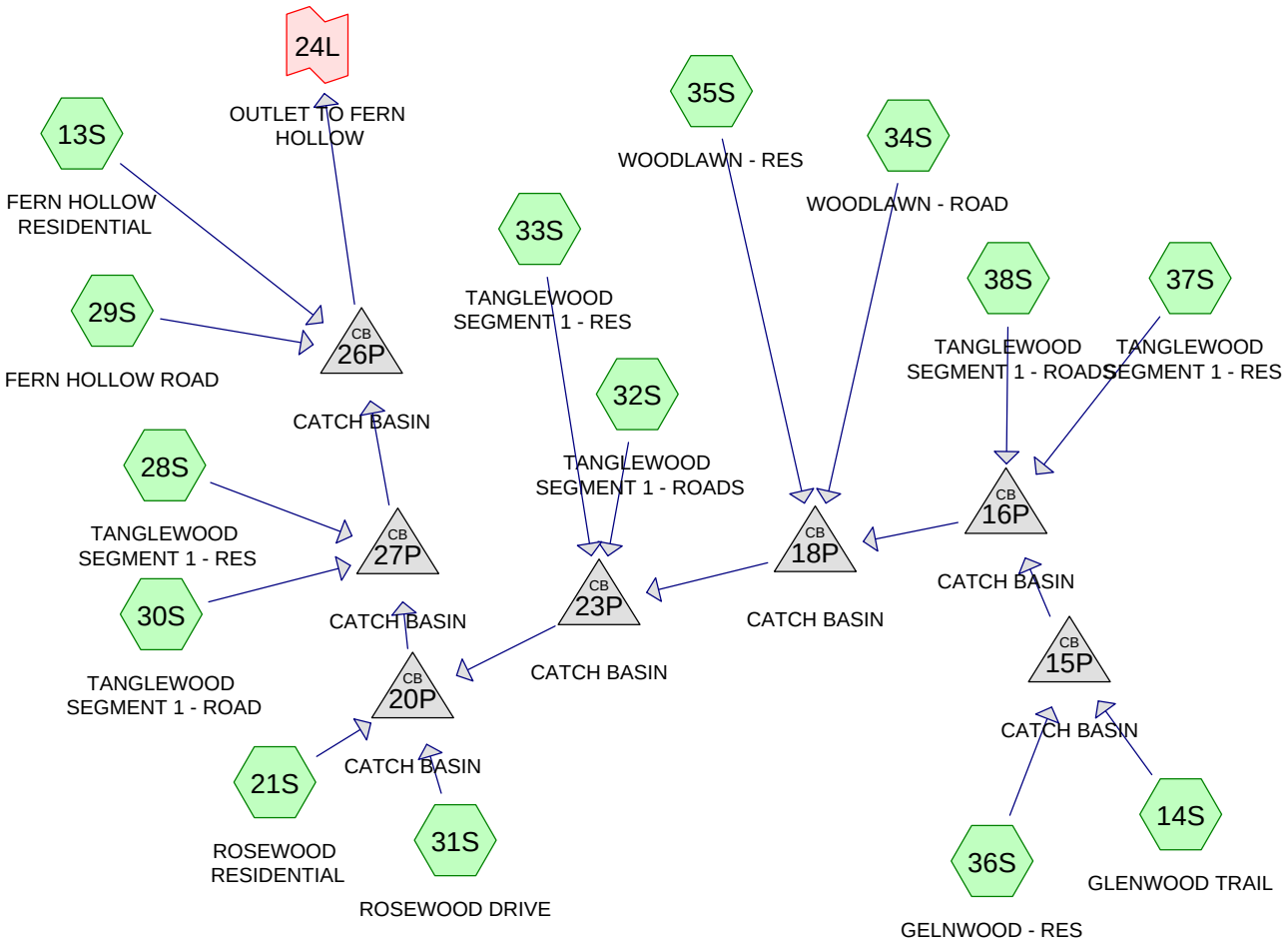
At this meeting alternatives 1 through 4 were presented and discussed. Attendees expressed a desire to keep the entirety of Tanglewood Drive uniform by maintaining the existing roadway width while also repairing damage to Fern Hollow and incorporating stormwater treatment. This resulted in an additional alternative that is very similar to alternative 3 but includes a sub-filter for stormwater treatment. Alternative 5 has been added to this report based on the results of this meeting.

8.0 MUNICIPAL PREFERRED ALTERNATIVE

With input received at the public meetings considered, Town Engineering and Planning Staffs worked cooperatively to produce recommendations relative to the project. The Staff recommendations is Alternative 5.

APPENDIX A

HydroCAD Analysis



Subcat Reach Pond Link

Routing Diagram for Tanglewood_Existing
Prepared by Stantec Consulting Ltd., Printed 10/19/2020
HydroCAD® 10.00-20 s/n 01592 © 2017 HydroCAD Software Solutions LLC

Summary for Subcatchment 13S: FERN HOLLOW RESIDENTIAL

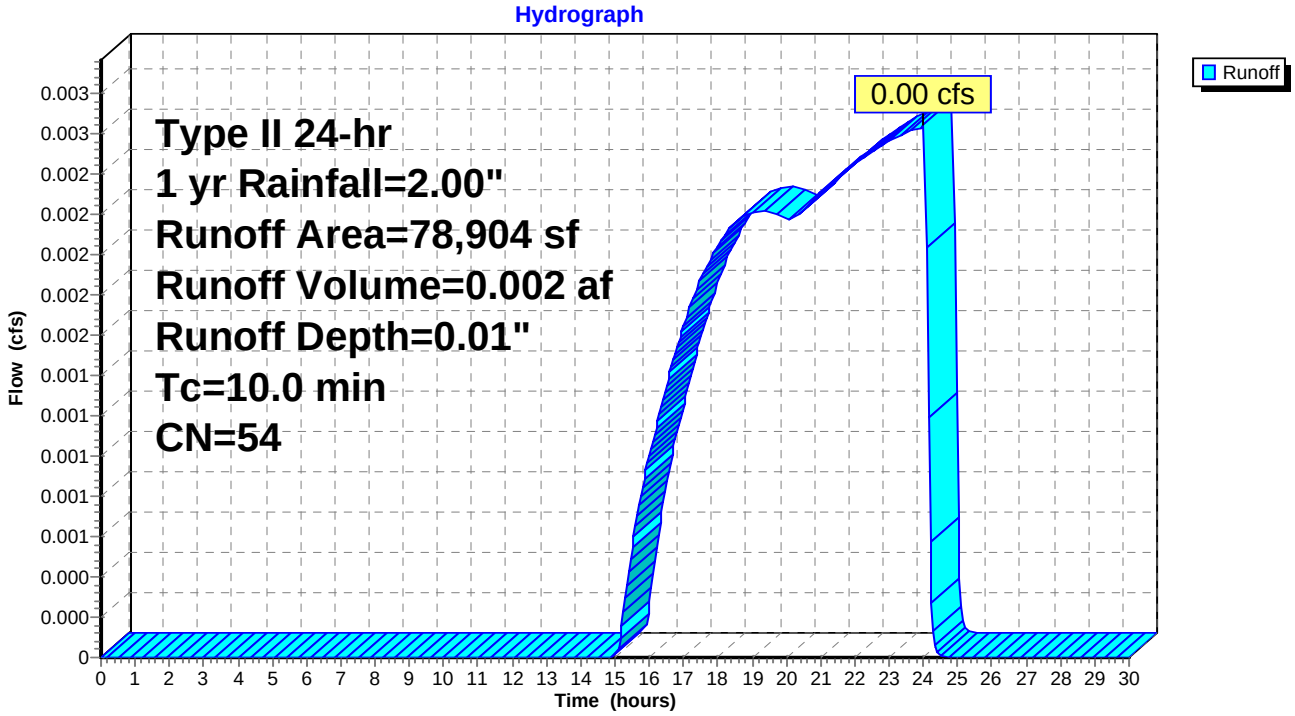
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.002 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
78,904	54	1/2 acre lots, 25% imp, HSG A
59,178		75.00% Pervious Area
19,726		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 13S: FERN HOLLOW RESIDENTIAL



Summary for Subcatchment 14S: GLENWOOD TRAIL

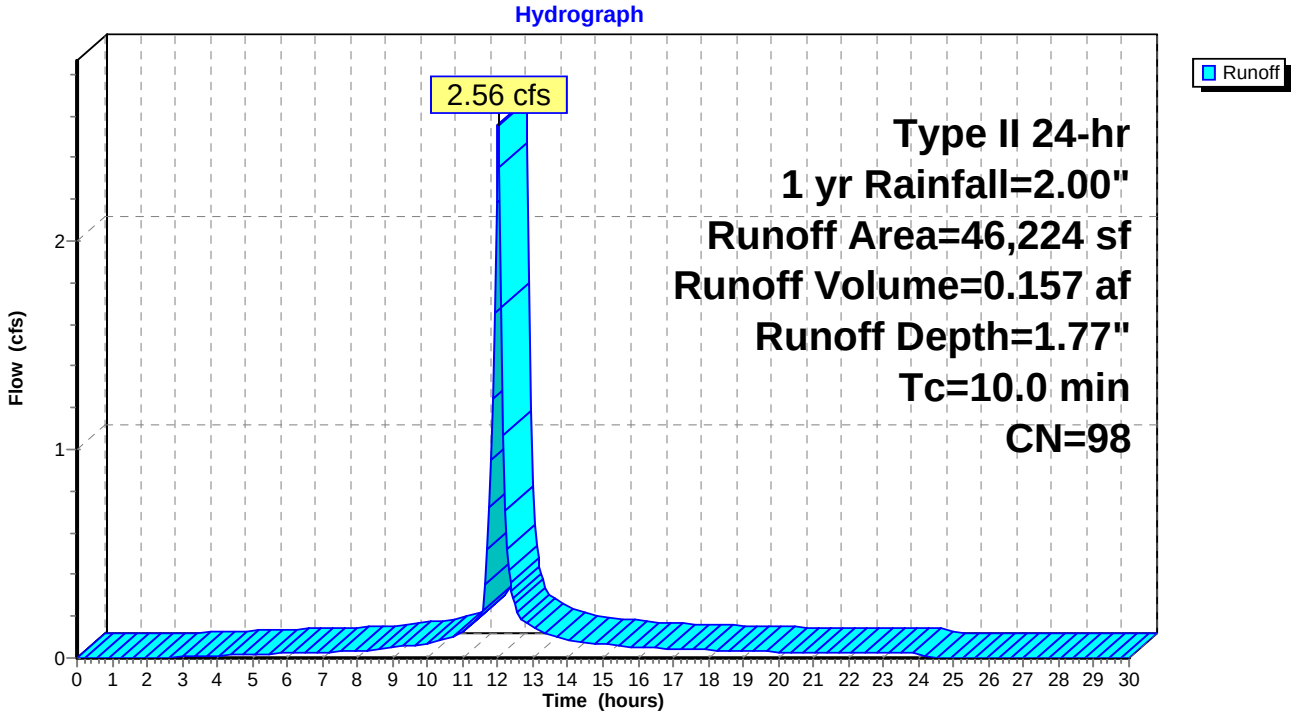
Runoff = 2.56 cfs @ 12.01 hrs, Volume= 0.157 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
46,224	98	Paved roads w/curbs & sewers, HSG A
46,224		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 14S: GLENWOOD TRAIL



Summary for Subcatchment 21S: ROSEWOOD RESIDENTIAL

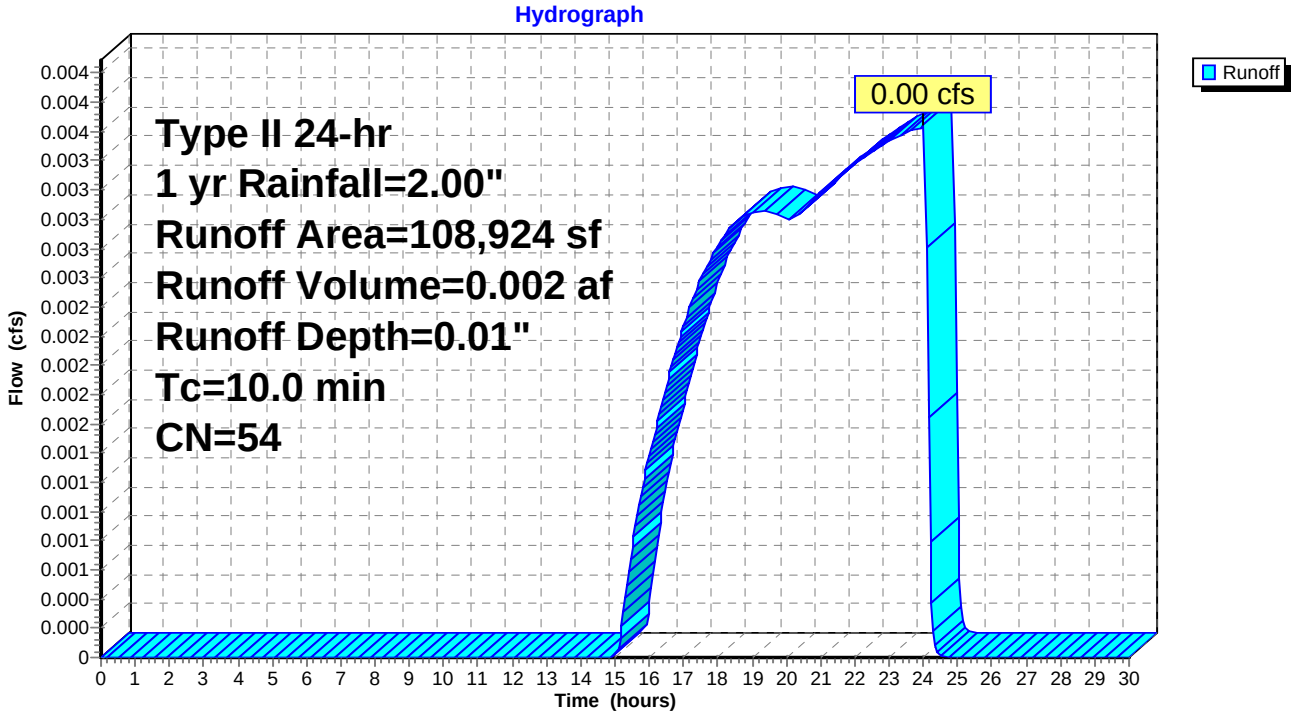
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.002 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
108,924	54	1/2 acre lots, 25% imp, HSG A
81,693		75.00% Pervious Area
27,231		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 21S: ROSEWOOD RESIDENTIAL



Summary for Subcatchment 28S: TANGLEWOOD SEGMENT 1 - RES

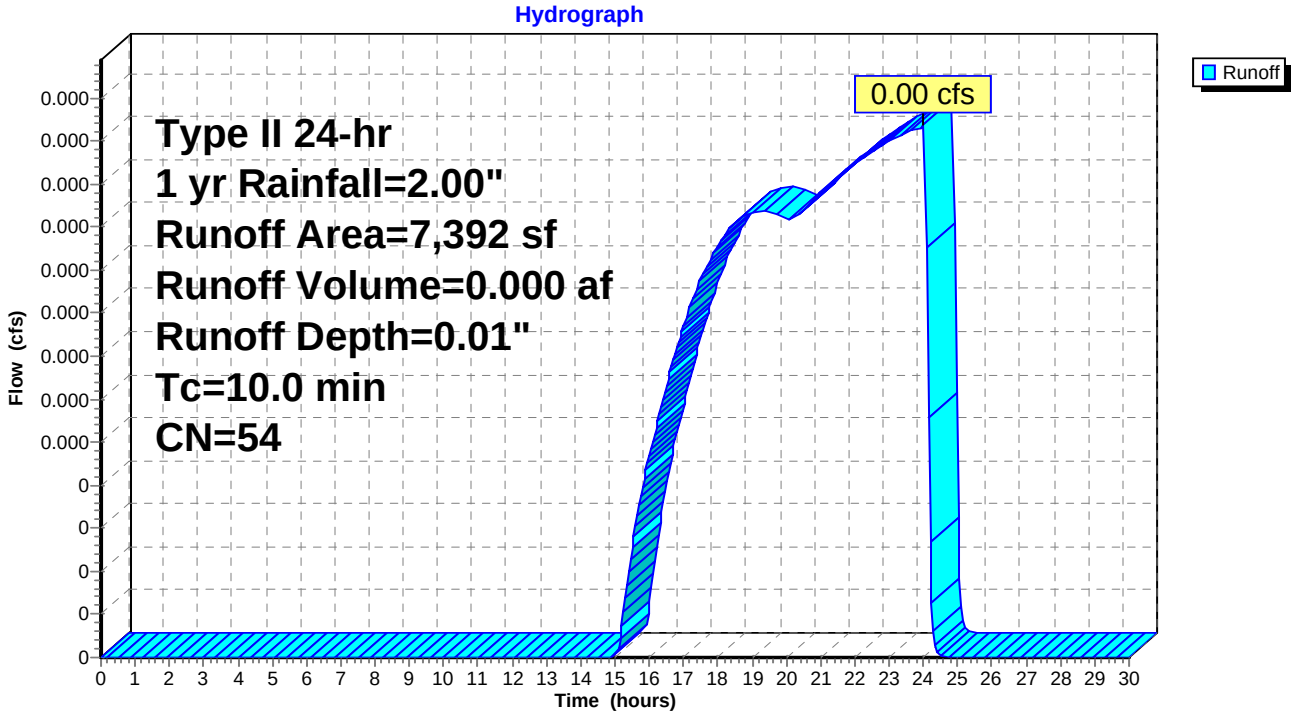
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
7,392	54	1/2 acre lots, 25% imp, HSG A
5,544		75.00% Pervious Area
1,848		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 28S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 29S: FERN HOLLOW ROAD

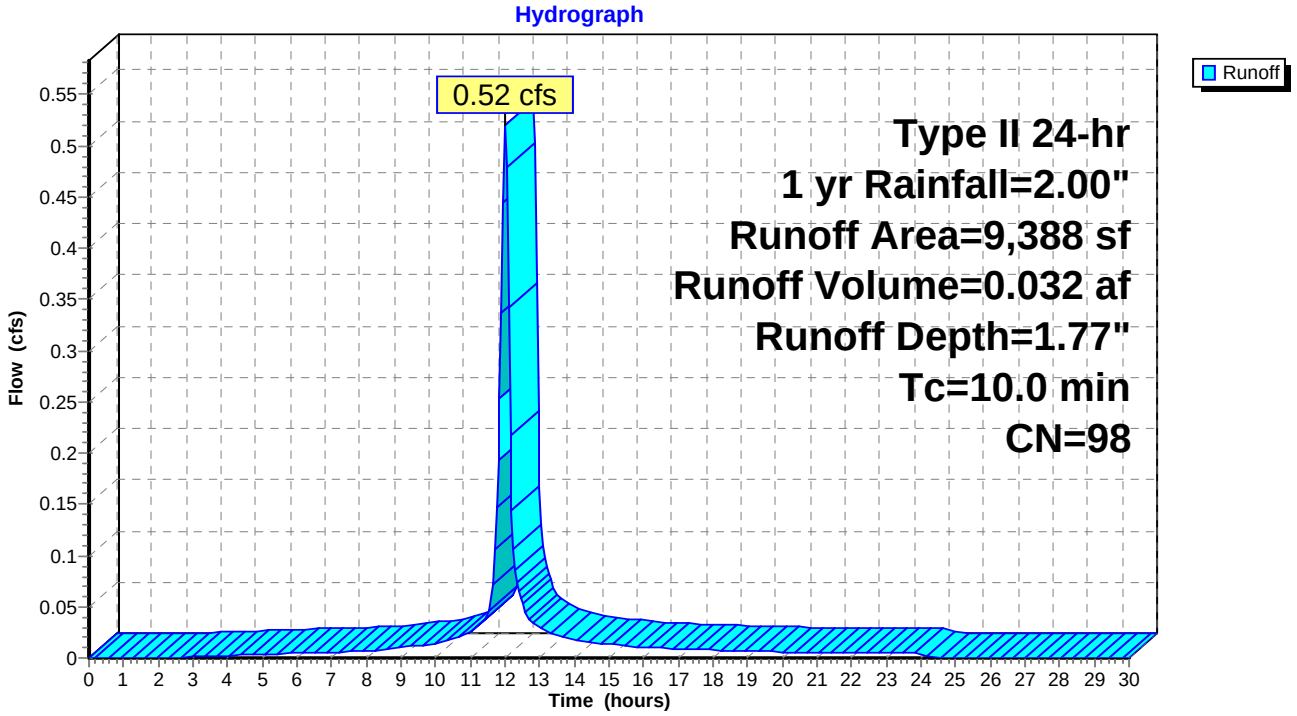
Runoff = 0.52 cfs @ 12.01 hrs, Volume= 0.032 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
9,388	98	Paved roads w/curbs & sewers, HSG A
9,388		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 29S: FERN HOLLOW ROAD



Summary for Subcatchment 30S: TANGLEWOOD SEGMENT 1 - ROAD

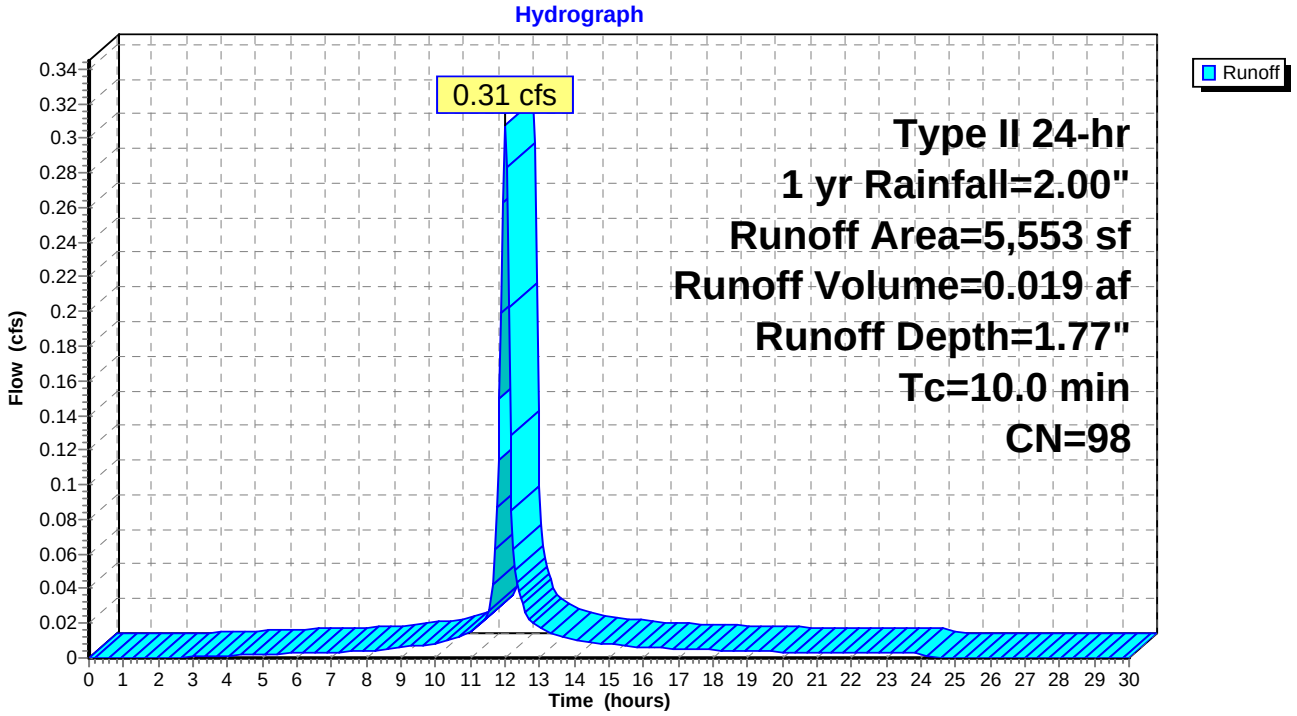
Runoff = 0.31 cfs @ 12.01 hrs, Volume= 0.019 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
5,553	98	Paved roads w/curbs & sewers, HSG A
5,553		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 30S: TANGLEWOOD SEGMENT 1 - ROAD



Summary for Subcatchment 31S: ROSEWOOD DRIVE

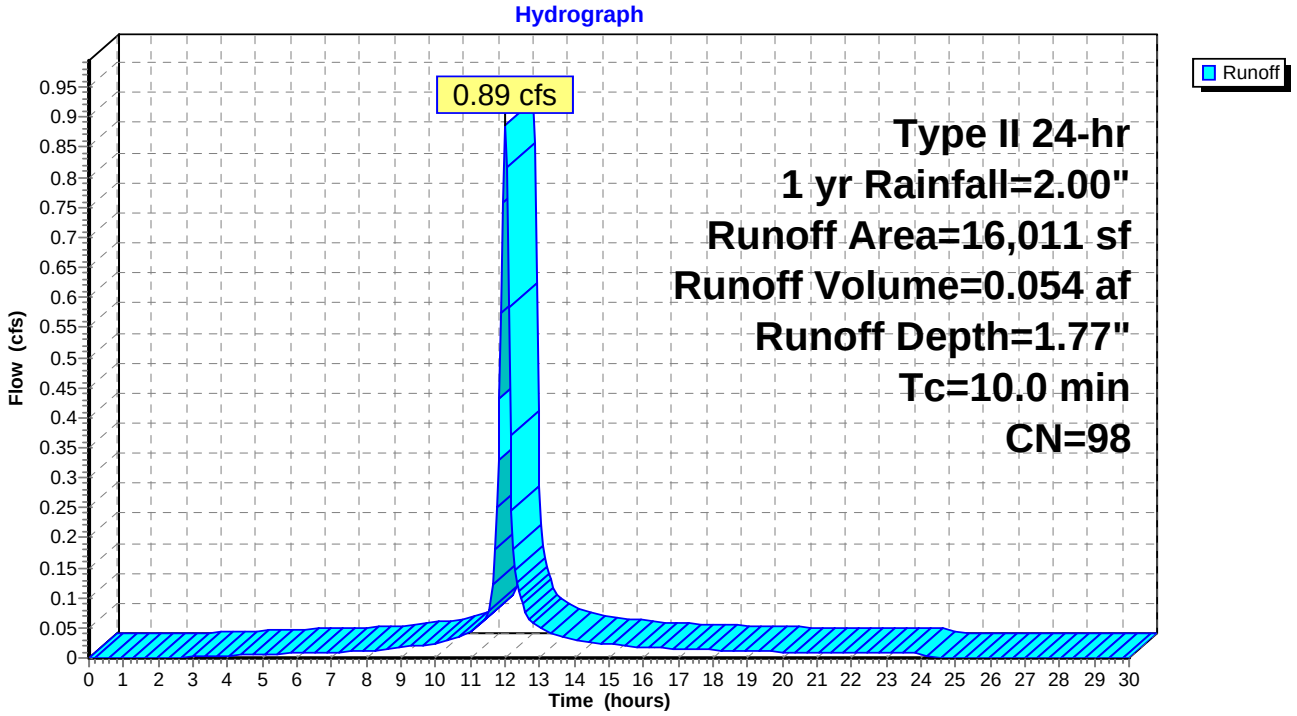
Runoff = 0.89 cfs @ 12.01 hrs, Volume= 0.054 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
16,011	98	Paved roads w/curbs & sewers, HSG A
16,011		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 31S: ROSEWOOD DRIVE



Summary for Subcatchment 32S: TANGLEWOOD SEGMENT 1 - ROADS

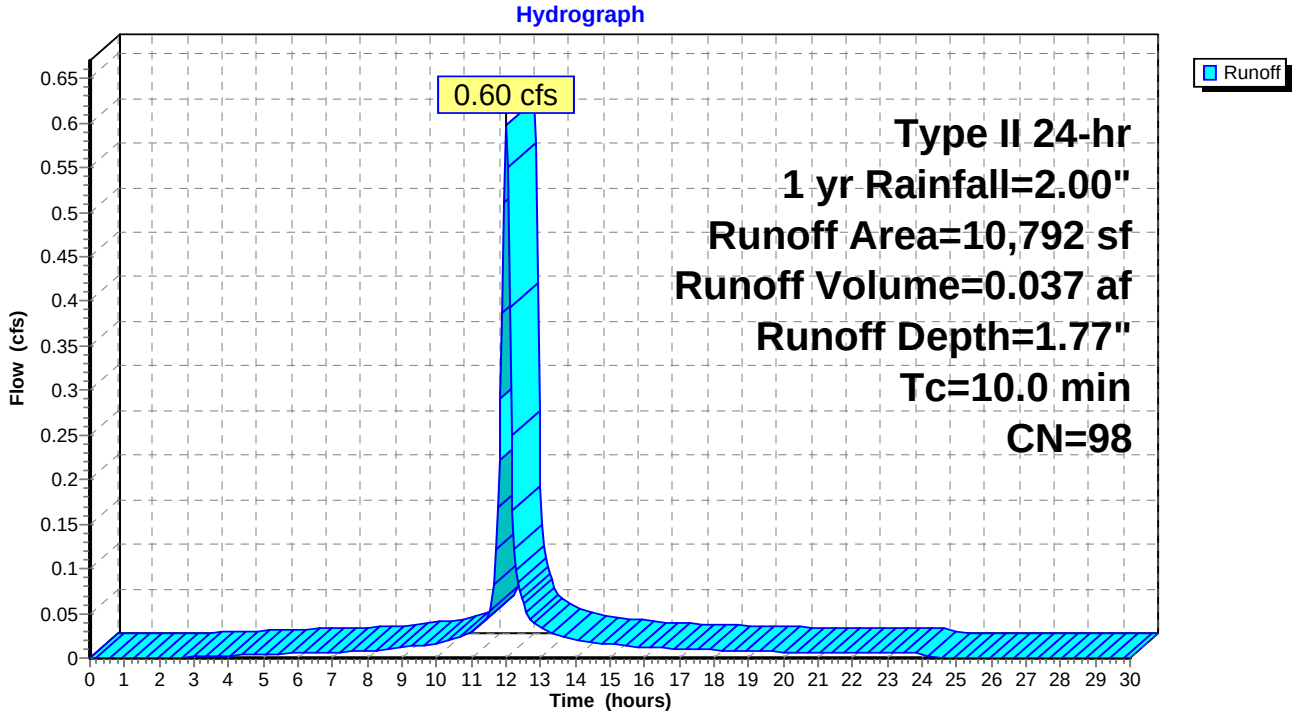
Runoff = 0.60 cfs @ 12.01 hrs, Volume= 0.037 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
10,792	98	Paved roads w/curbs & sewers, HSG A
10,792		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 32S: TANGLEWOOD SEGMENT 1 - ROADS



Summary for Subcatchment 33S: TANGLEWOOD SEGMENT 1 - RES

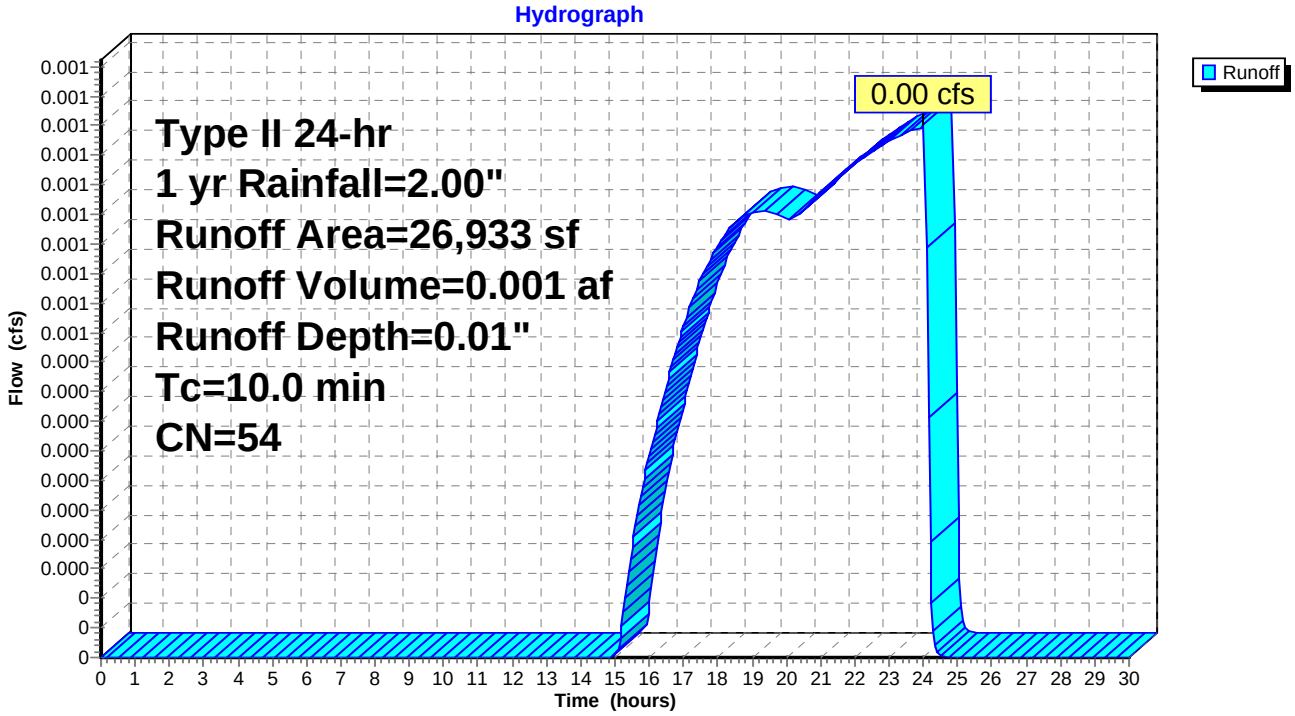
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
26,933	54	1/2 acre lots, 25% imp, HSG A
20,200		75.00% Pervious Area
6,733		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 33S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 34S: WOODLAWN - ROAD

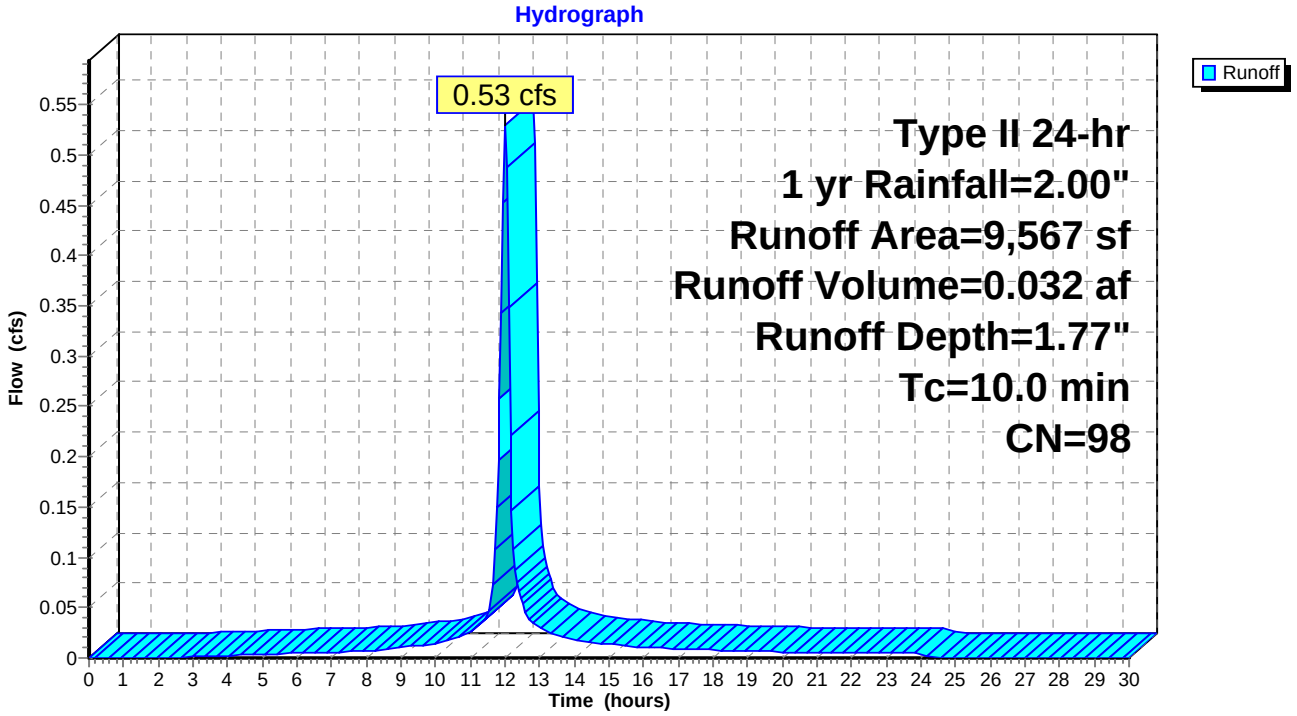
Runoff = 0.53 cfs @ 12.01 hrs, Volume= 0.032 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
9,567	98	Paved roads w/curbs & sewers, HSG A
9,567		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 34S: WOODLAWN - ROAD



Summary for Subcatchment 35S: WOODLAWN - RES

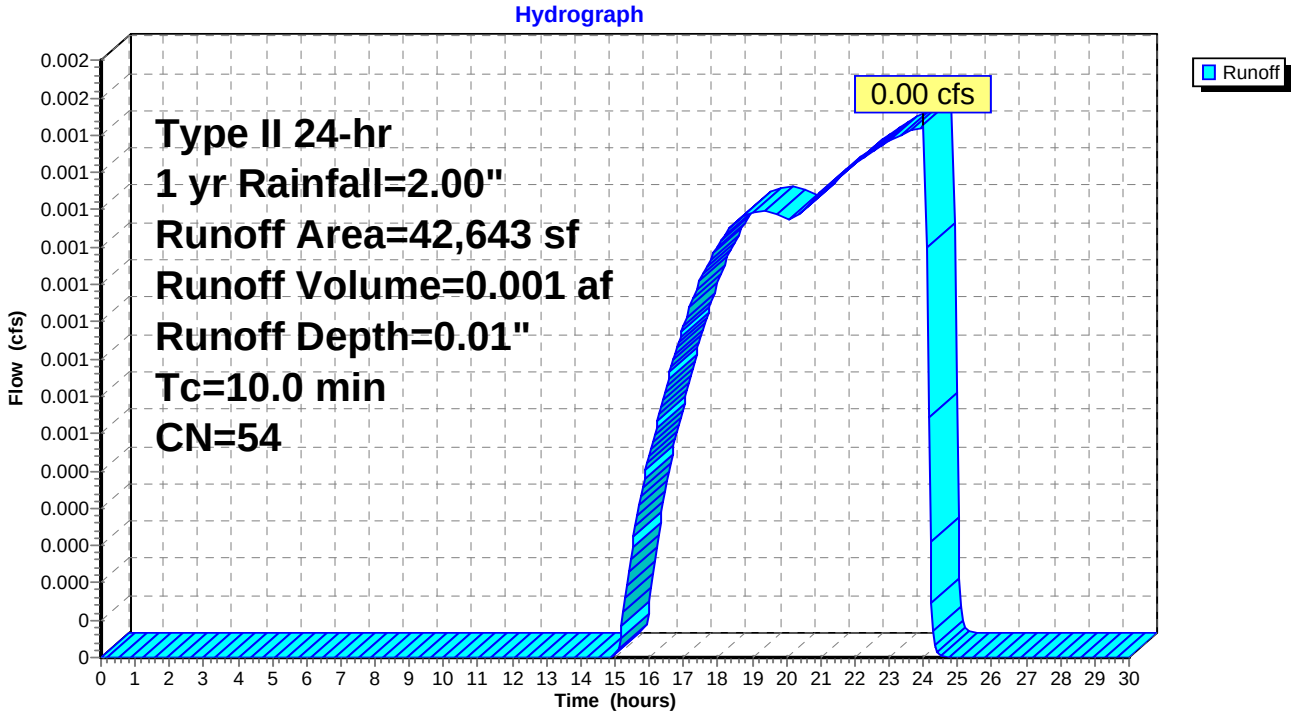
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
42,643	54	1/2 acre lots, 25% imp, HSG A
31,982		75.00% Pervious Area
10,661		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 35S: WOODLAWN - RES



Summary for Subcatchment 36S: GELNWOOD - RES

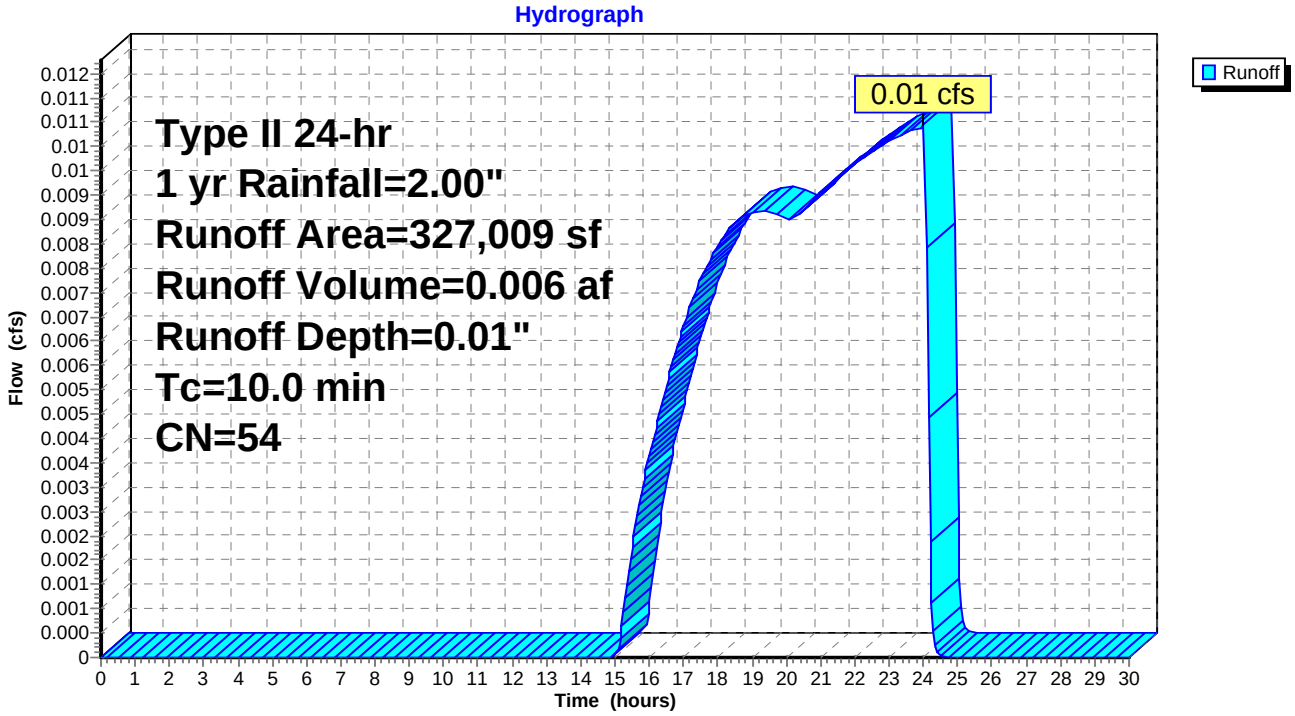
Runoff = 0.01 cfs @ 24.00 hrs, Volume= 0.006 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
327,009	54	1/2 acre lots, 25% imp, HSG A
245,257		75.00% Pervious Area
81,752		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 36S: GELNWOOD - RES



Summary for Subcatchment 37S: TANGLEWOOD SEGMENT 1 - RES

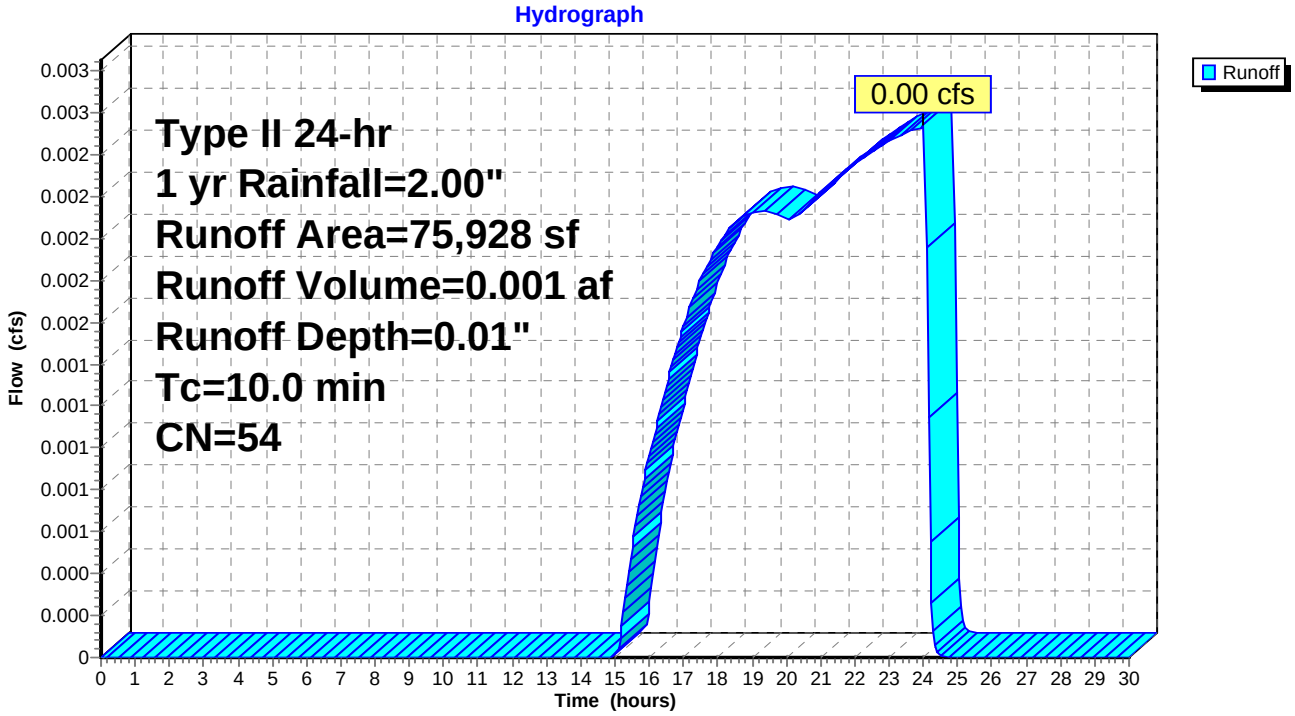
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
75,928	54	1/2 acre lots, 25% imp, HSG A
56,946		75.00% Pervious Area
18,982		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 37S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 38S: TANGLEWOOD SEGMENT 1 - ROADS

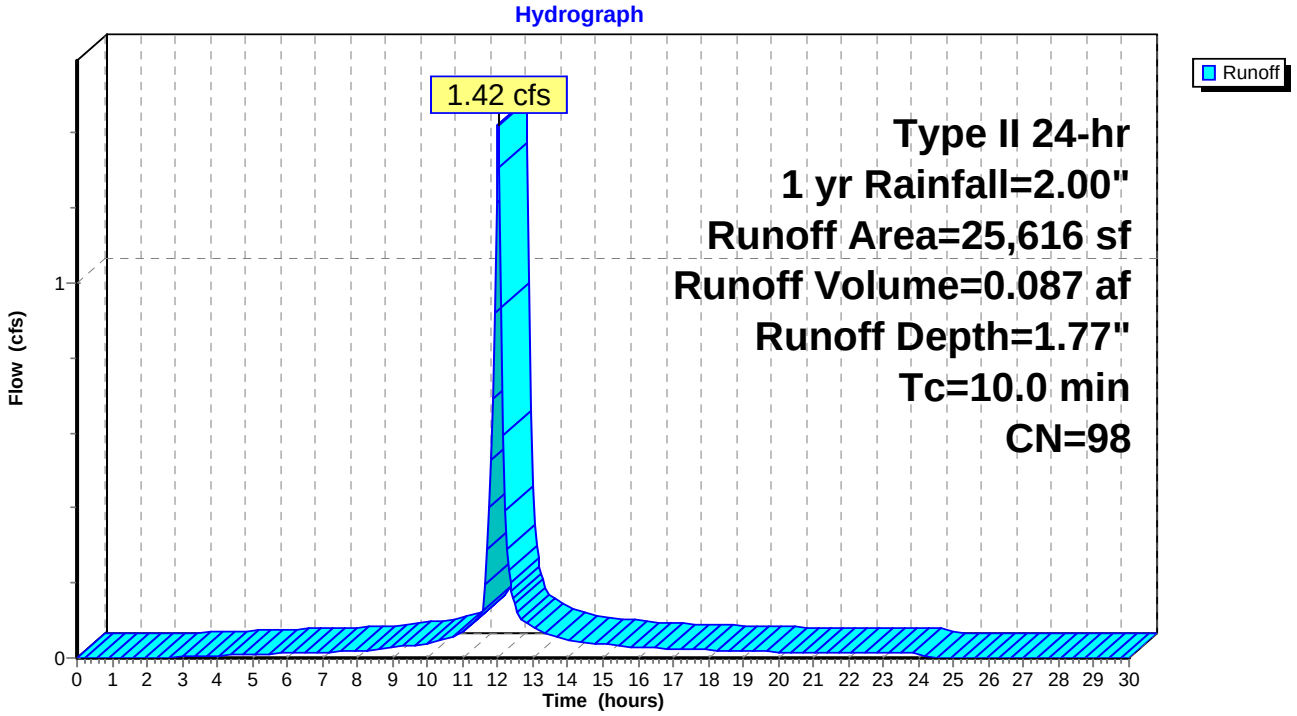
Runoff = 1.42 cfs @ 12.01 hrs, Volume= 0.087 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
25,616	98	Paved roads w/curbs & sewers, HSG A
25,616		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 38S: TANGLEWOOD SEGMENT 1 - ROADS



Summary for Pond 15P: CATCH BASIN

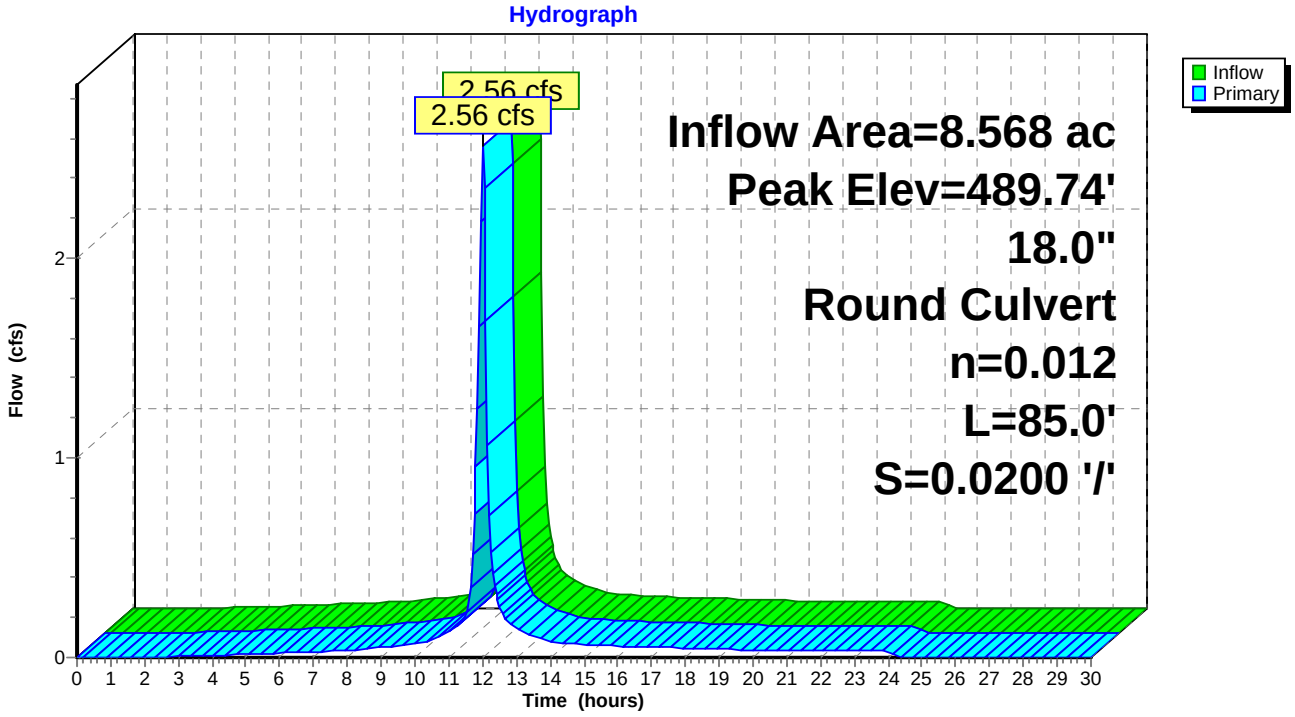
Inflow Area = 8.568 ac, 34.29% Impervious, Inflow Depth = 0.23" for 1 yr event
Inflow = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af
Outflow = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af, Atten= 0%, Lag= 0.0 min
Primary = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.74' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=2.53 cfs @ 12.01 hrs HW=489.74' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.53 cfs @ 2.92 fps)

Pond 15P: CATCH BASIN



Summary for Pond 16P: CATCH BASIN

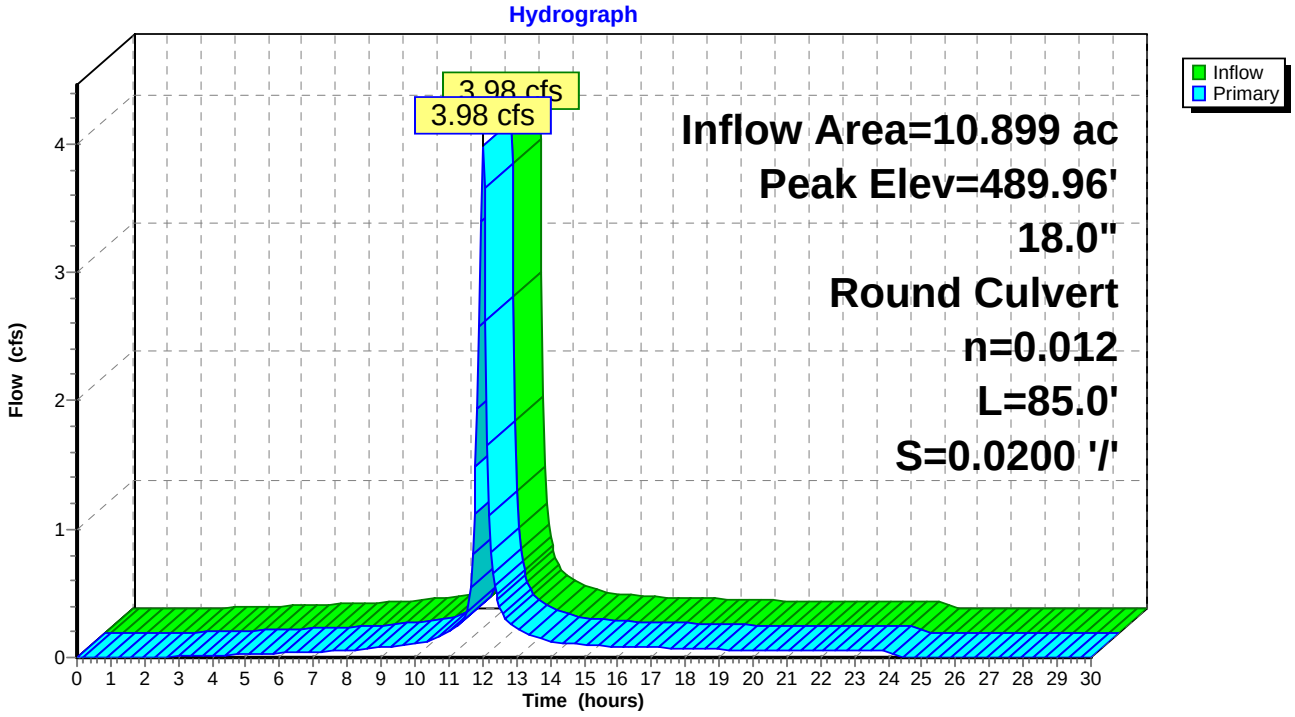
Inflow Area = 10.899 ac, 36.35% Impervious, Inflow Depth = 0.28" for 1 yr event
Inflow = 3.98 cfs @ 12.01 hrs, Volume= 0.252 af
Outflow = 3.98 cfs @ 12.01 hrs, Volume= 0.252 af, Atten= 0%, Lag= 0.0 min
Primary = 3.98 cfs @ 12.01 hrs, Volume= 0.252 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.96' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=3.93 cfs @ 12.01 hrs HW=489.95' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.93 cfs @ 3.32 fps)

Pond 16P: CATCH BASIN



Summary for Pond 18P: CATCH BASIN

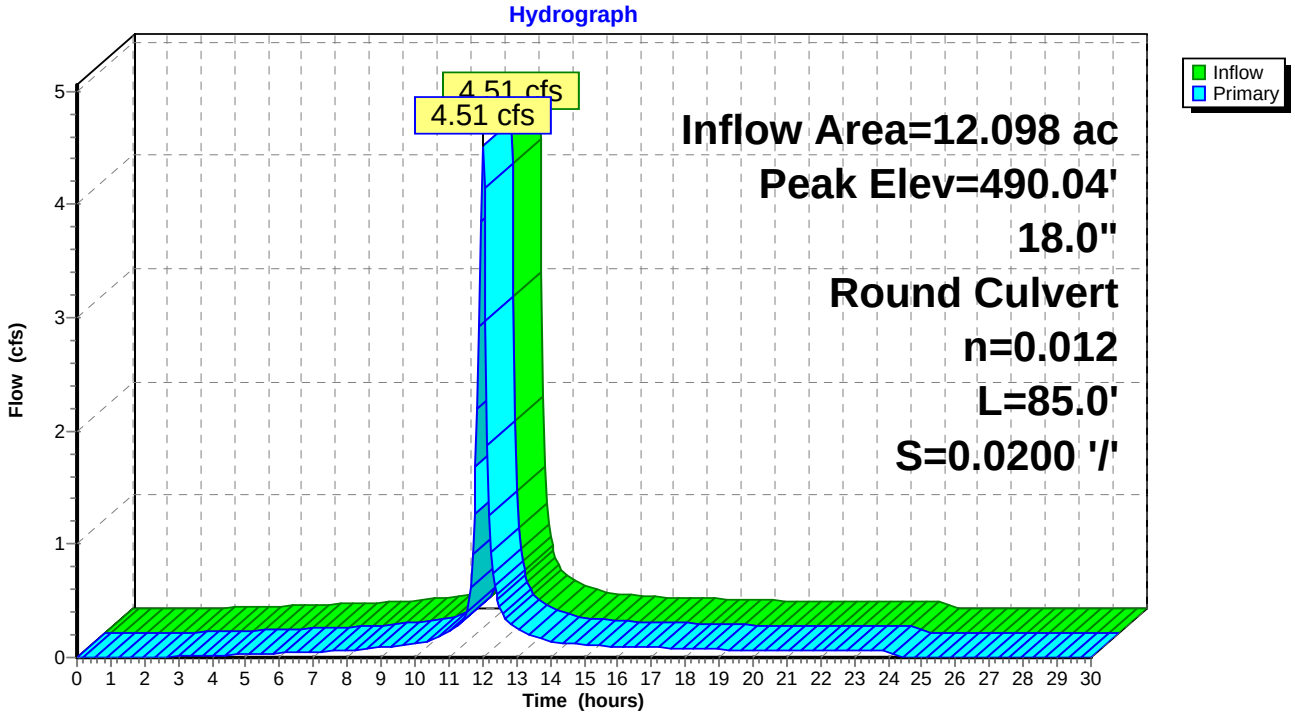
Inflow Area = 12.098 ac, 36.59% Impervious, Inflow Depth = 0.28" for 1 yr event
Inflow = 4.51 cfs @ 12.01 hrs, Volume= 0.285 af
Outflow = 4.51 cfs @ 12.01 hrs, Volume= 0.285 af, Atten= 0%, Lag= 0.0 min
Primary = 4.51 cfs @ 12.01 hrs, Volume= 0.285 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.04' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=4.45 cfs @ 12.01 hrs HW=490.03' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.45 cfs @ 3.45 fps)

Pond 18P: CATCH BASIN



Summary for Pond 20P: CATCH BASIN

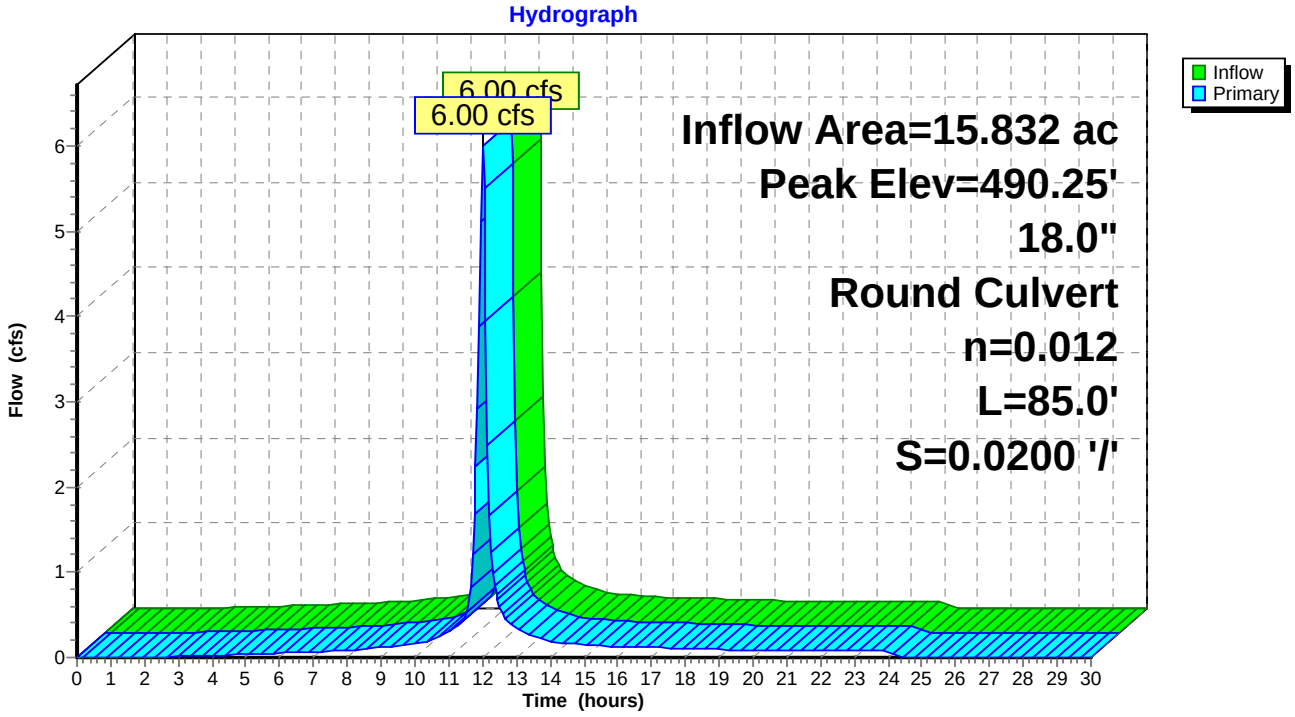
Inflow Area = 15.832 ac, 36.77% Impervious, Inflow Depth = 0.29" for 1 yr event
Inflow = 6.00 cfs @ 12.01 hrs, Volume= 0.378 af
Outflow = 6.00 cfs @ 12.01 hrs, Volume= 0.378 af, Atten= 0%, Lag= 0.0 min
Primary = 6.00 cfs @ 12.01 hrs, Volume= 0.378 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.25' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=5.92 cfs @ 12.01 hrs HW=490.24' (Free Discharge)
└**1=Culvert** (Inlet Controls 5.92 cfs @ 3.79 fps)

Pond 20P: CATCH BASIN



Summary for Pond 23P: CATCH BASIN

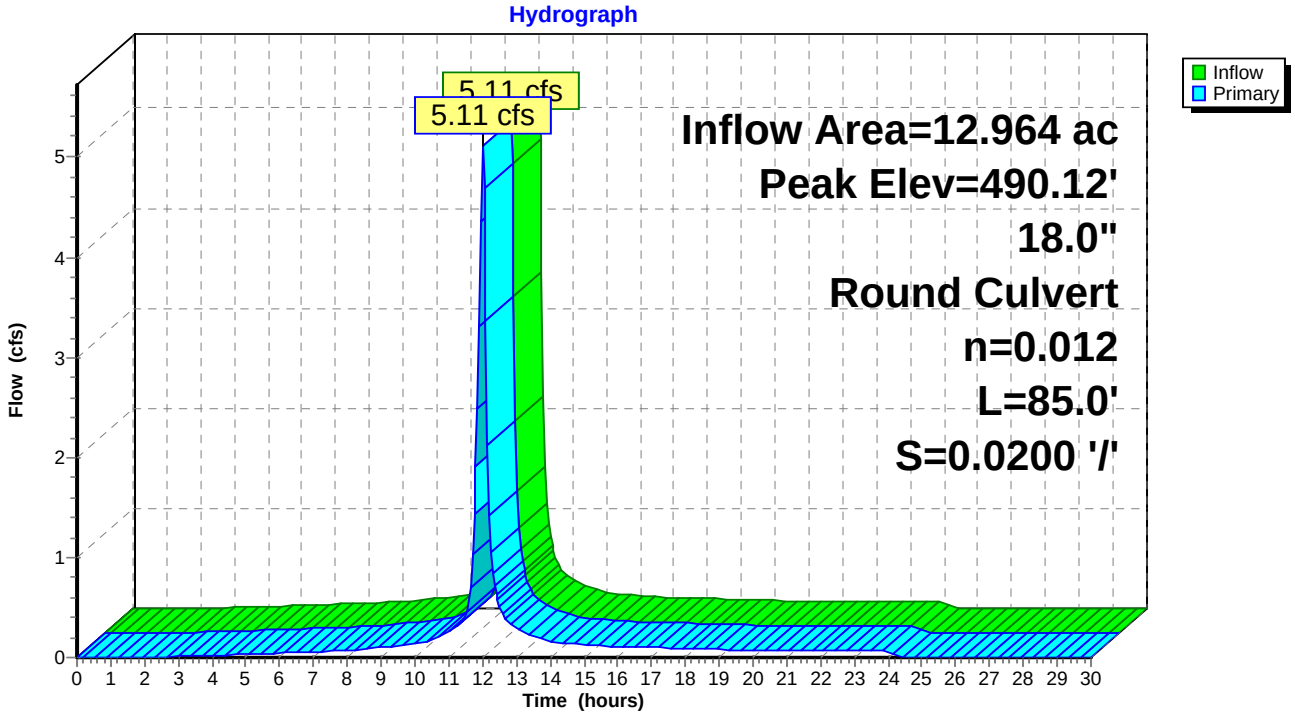
Inflow Area = 12.964 ac, 37.25% Impervious, Inflow Depth = 0.30" for 1 yr event
Inflow = 5.11 cfs @ 12.01 hrs, Volume= 0.322 af
Outflow = 5.11 cfs @ 12.01 hrs, Volume= 0.322 af, Atten= 0%, Lag= 0.0 min
Primary = 5.11 cfs @ 12.01 hrs, Volume= 0.322 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.12' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=5.04 cfs @ 12.01 hrs HW=490.11' (Free Discharge)
└**1=Culvert** (Inlet Controls 5.04 cfs @ 3.59 fps)

Pond 23P: CATCH BASIN



Summary for Pond 26P: CATCH BASIN

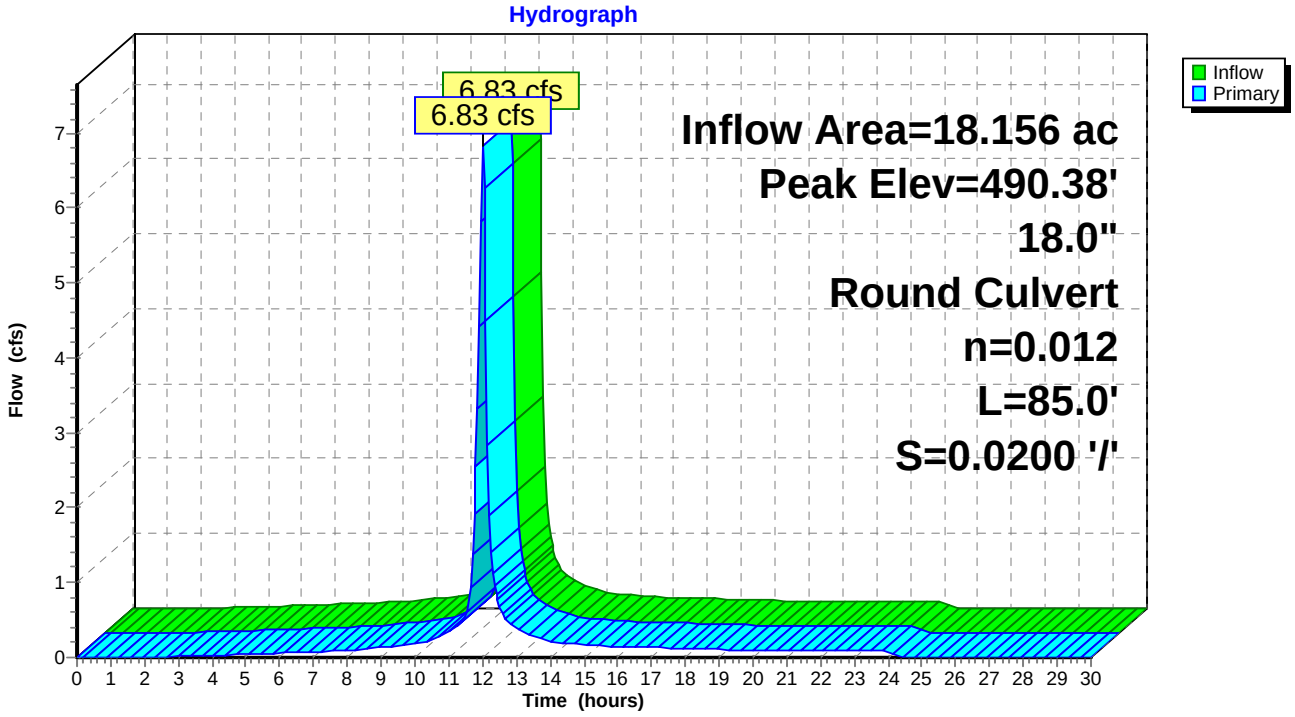
Inflow Area = 18.156 ac, 36.68% Impervious, Inflow Depth = 0.28" for 1 yr event
Inflow = 6.83 cfs @ 12.01 hrs, Volume= 0.431 af
Outflow = 6.83 cfs @ 12.01 hrs, Volume= 0.431 af, Atten= 0%, Lag= 0.0 min
Primary = 6.83 cfs @ 12.01 hrs, Volume= 0.431 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.38' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=6.74 cfs @ 12.01 hrs HW=490.37' (Free Discharge)
└**1=Culvert** (Inlet Controls 6.74 cfs @ 3.98 fps)

Pond 26P: CATCH BASIN



Summary for Pond 27P: CATCH BASIN

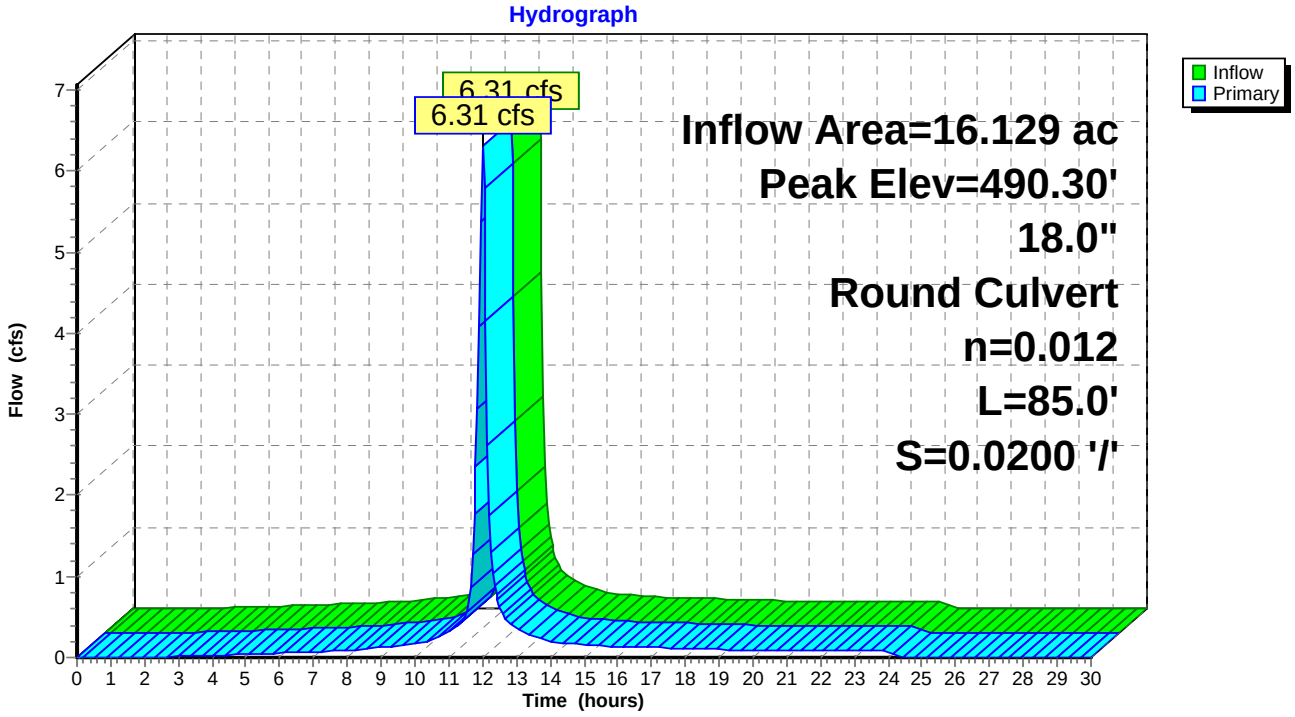
Inflow Area = 16.129 ac, 37.14% Impervious, Inflow Depth = 0.30" for 1 yr event
Inflow = 6.31 cfs @ 12.01 hrs, Volume= 0.397 af
Outflow = 6.31 cfs @ 12.01 hrs, Volume= 0.397 af, Atten= 0%, Lag= 0.0 min
Primary = 6.31 cfs @ 12.01 hrs, Volume= 0.397 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.30' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=6.22 cfs @ 12.01 hrs HW=490.29' (Free Discharge)
└**1=Culvert** (Inlet Controls 6.22 cfs @ 3.86 fps)

Pond 27P: CATCH BASIN

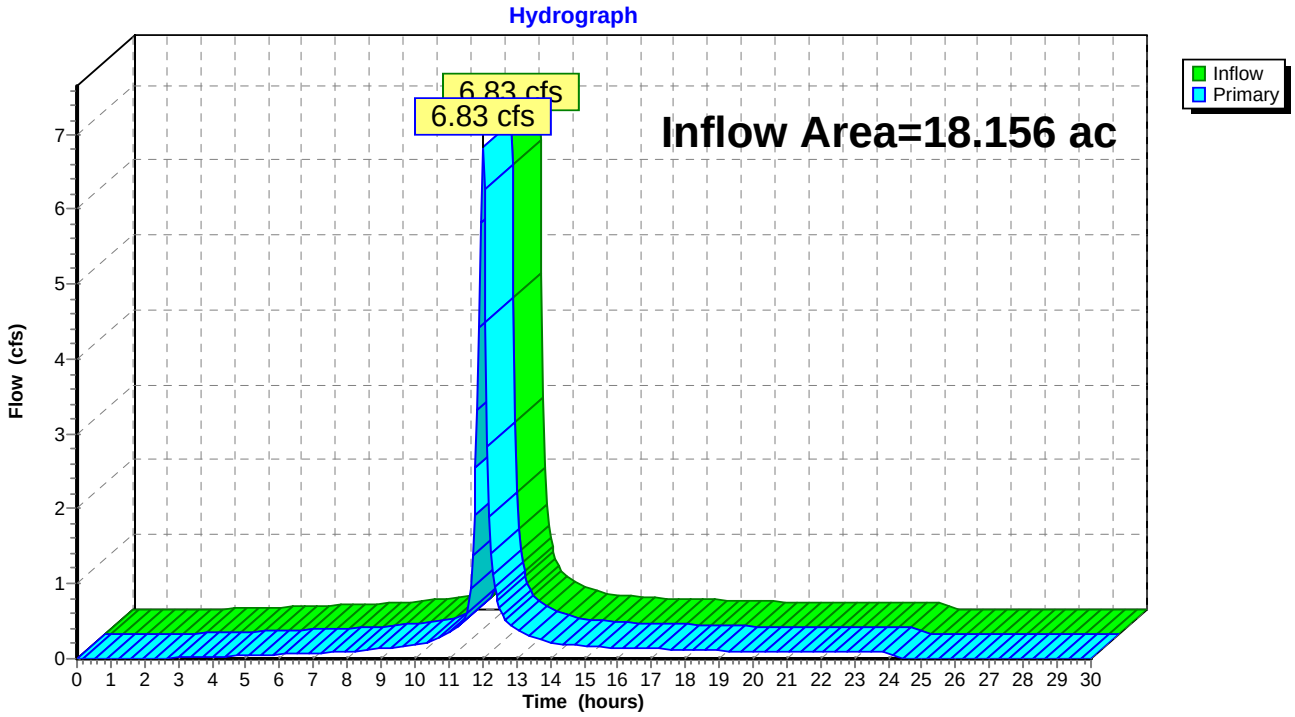


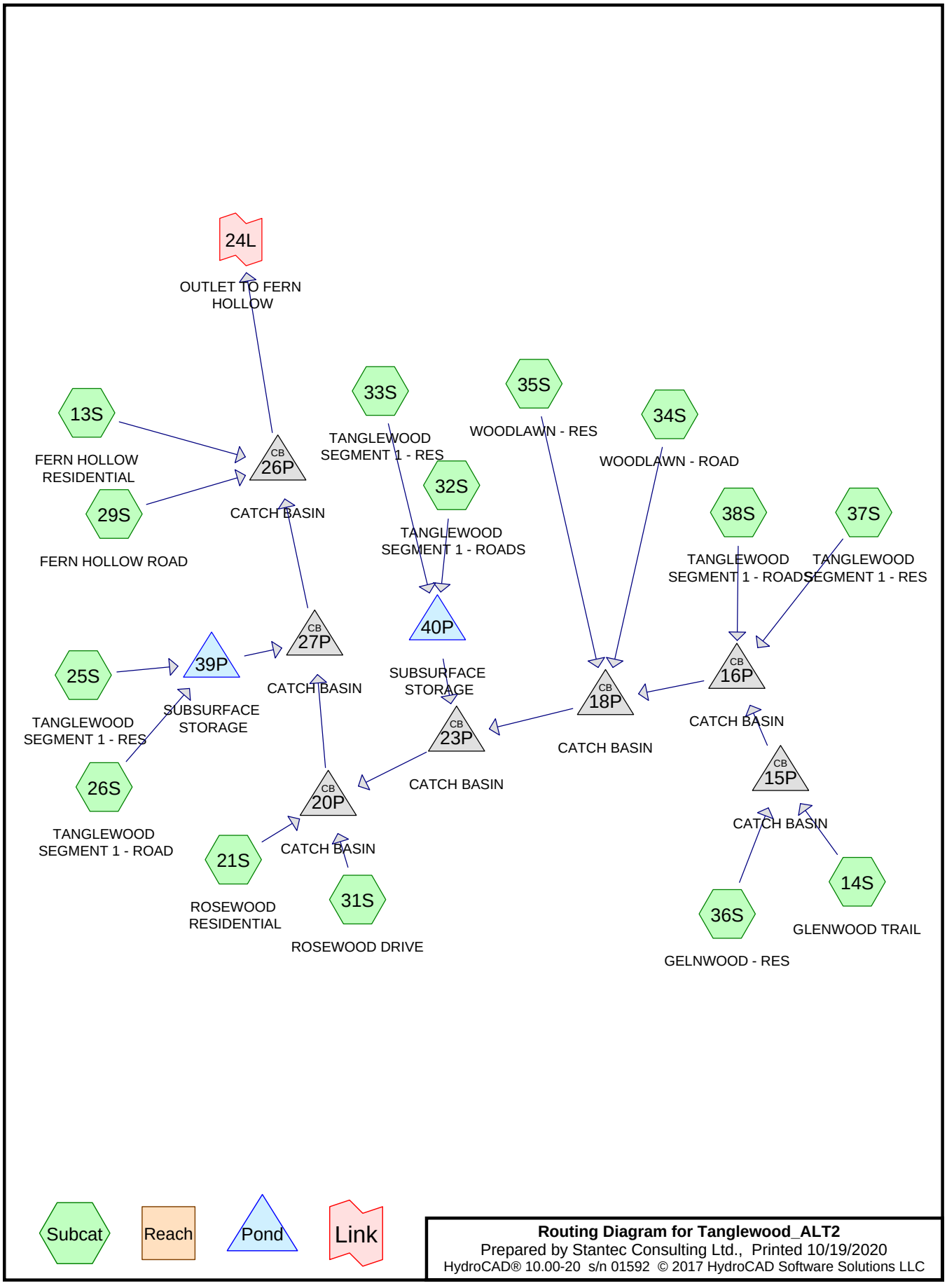
Summary for Link 24L: OUTLET TO FERN HOLLOW

Inflow Area = 18.156 ac, 36.68% Impervious, Inflow Depth = 0.28" for 1 yr event
Inflow = 6.83 cfs @ 12.01 hrs, Volume= 0.431 af
Primary = 6.83 cfs @ 12.01 hrs, Volume= 0.431 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link 24L: OUTLET TO FERN HOLLOW





Routing Diagram for Tanglewood_ALT2
Prepared by Stantec Consulting Ltd., Printed 10/19/2020
HydroCAD® 10.00-20 s/n 01592 © 2017 HydroCAD Software Solutions LLC

Summary for Subcatchment 13S: FERN HOLLOW RESIDENTIAL

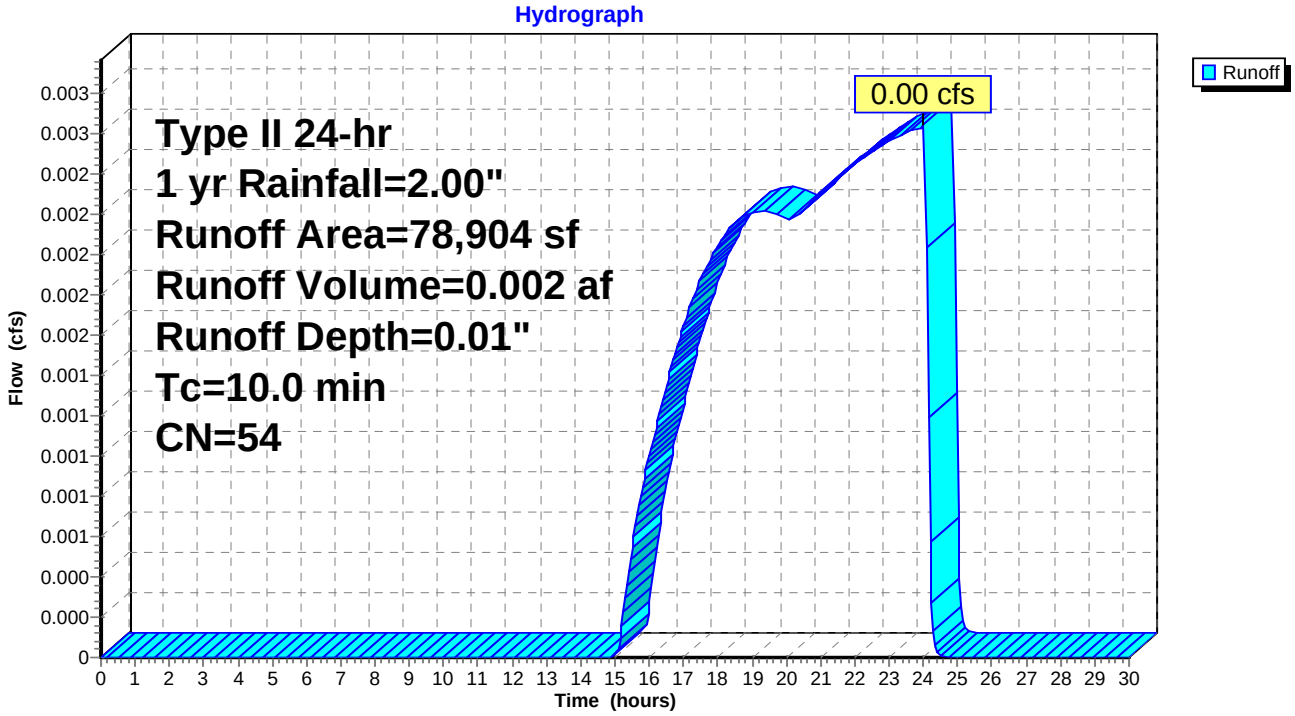
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.002 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
78,904	54	1/2 acre lots, 25% imp, HSG A
59,178		75.00% Pervious Area
19,726		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 13S: FERN HOLLOW RESIDENTIAL



Summary for Subcatchment 14S: GLENWOOD TRAIL

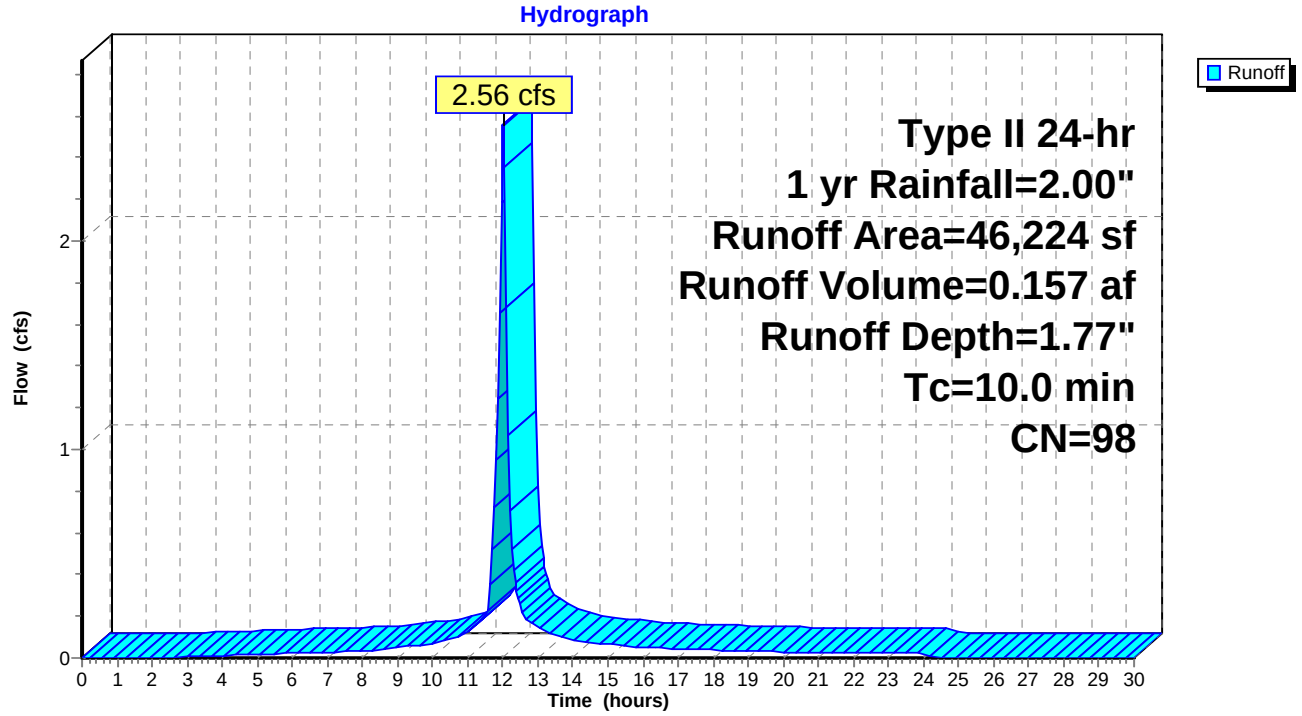
Runoff = 2.56 cfs @ 12.01 hrs, Volume= 0.157 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
46,224	98	Paved roads w/curbs & sewers, HSG A
46,224		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 14S: GLENWOOD TRAIL



Summary for Subcatchment 21S: ROSEWOOD RESIDENTIAL

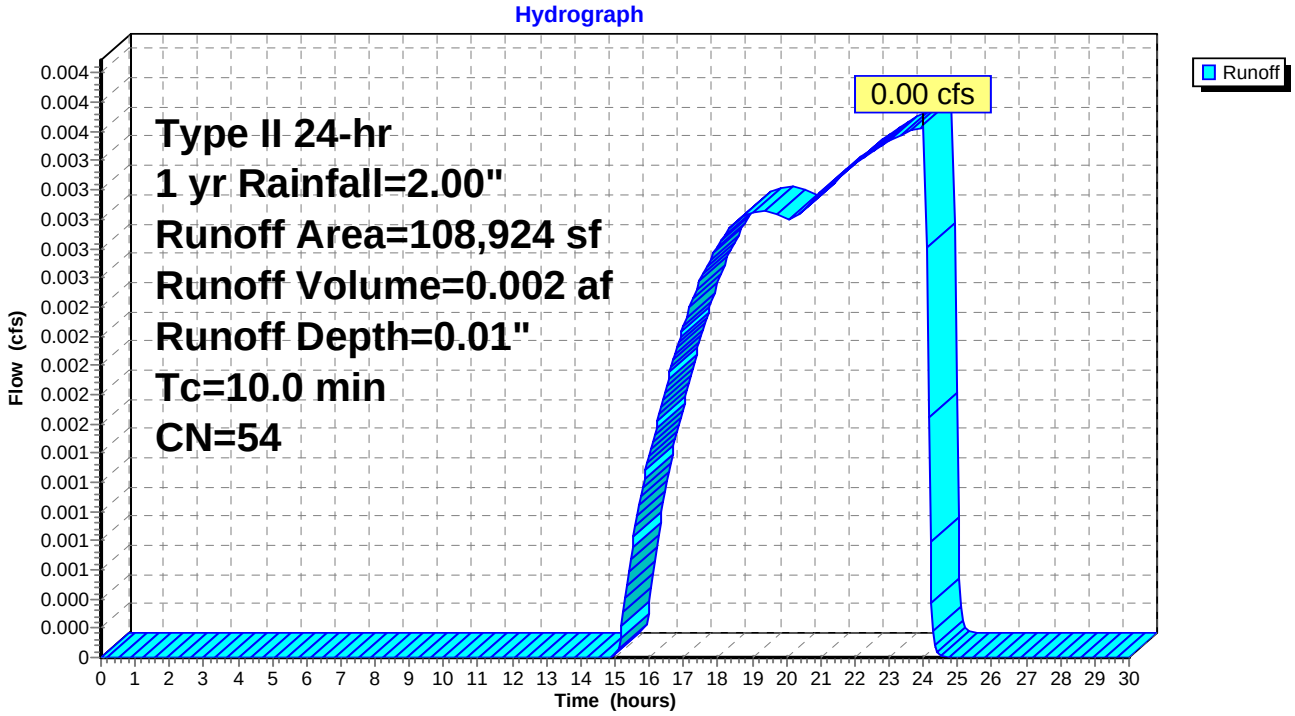
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.002 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
108,924	54	1/2 acre lots, 25% imp, HSG A
81,693		75.00% Pervious Area
27,231		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 21S: ROSEWOOD RESIDENTIAL



Summary for Subcatchment 25S: TANGLEWOOD SEGMENT 1 - RES

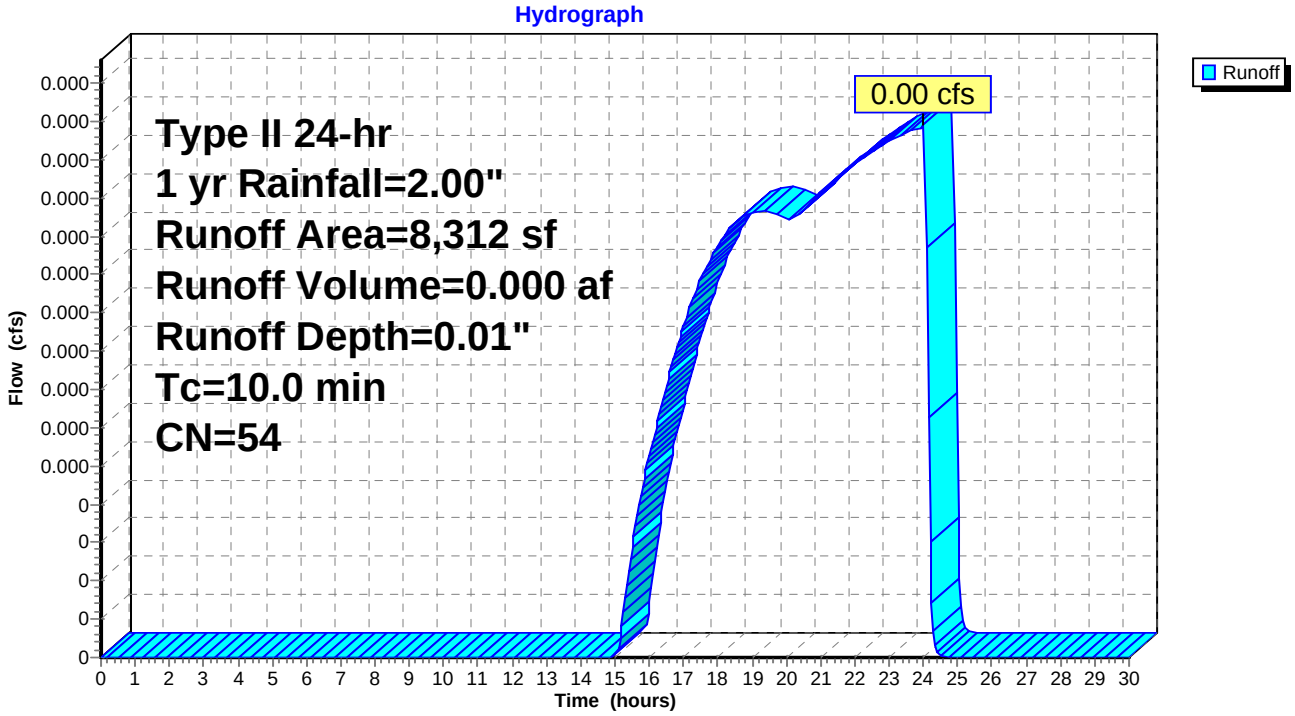
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
8,312	54	1/2 acre lots, 25% imp, HSG A
6,234		75.00% Pervious Area
2,078		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 25S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 26S: TANGLEWOOD SEGMENT 1 - ROAD

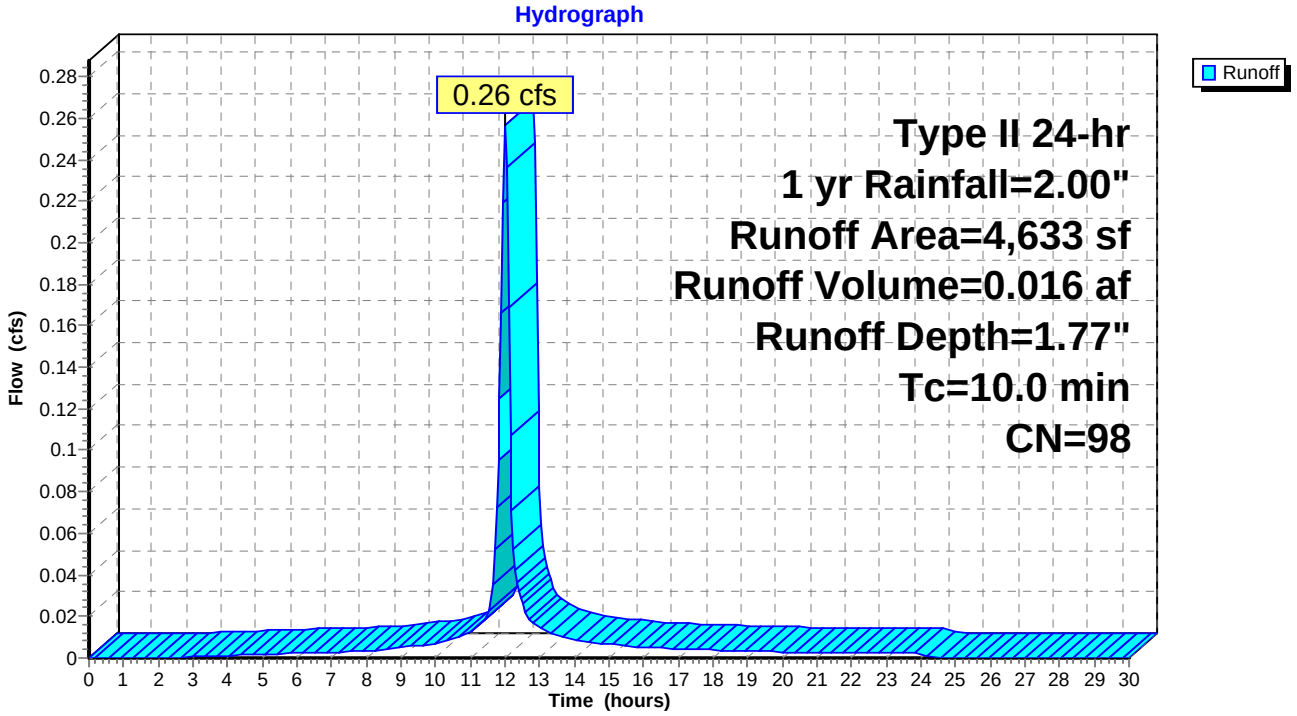
Runoff = 0.26 cfs @ 12.01 hrs, Volume= 0.016 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
4,633	98	Paved roads w/curbs & sewers, HSG A
4,633		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 26S: TANGLEWOOD SEGMENT 1 - ROAD



Summary for Subcatchment 29S: FERN HOLLOW ROAD

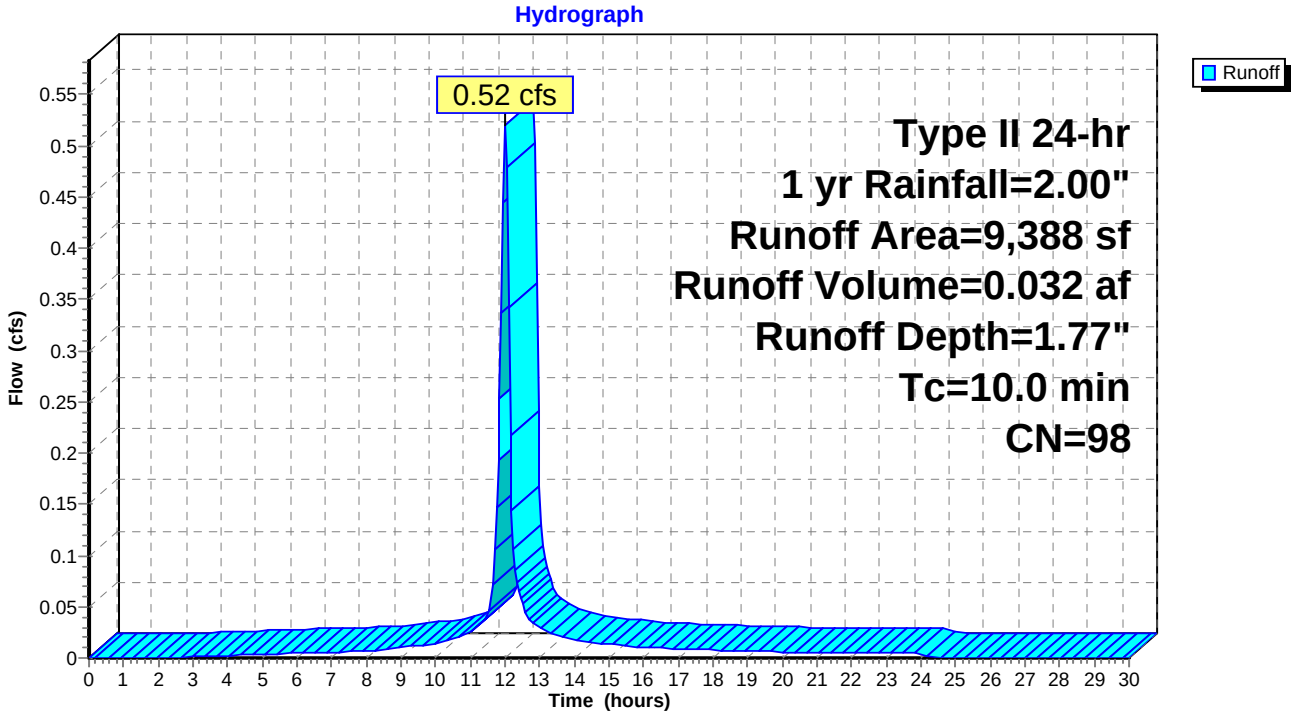
Runoff = 0.52 cfs @ 12.01 hrs, Volume= 0.032 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
9,388	98	Paved roads w/curbs & sewers, HSG A
9,388		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 29S: FERN HOLLOW ROAD



Summary for Subcatchment 31S: ROSEWOOD DRIVE

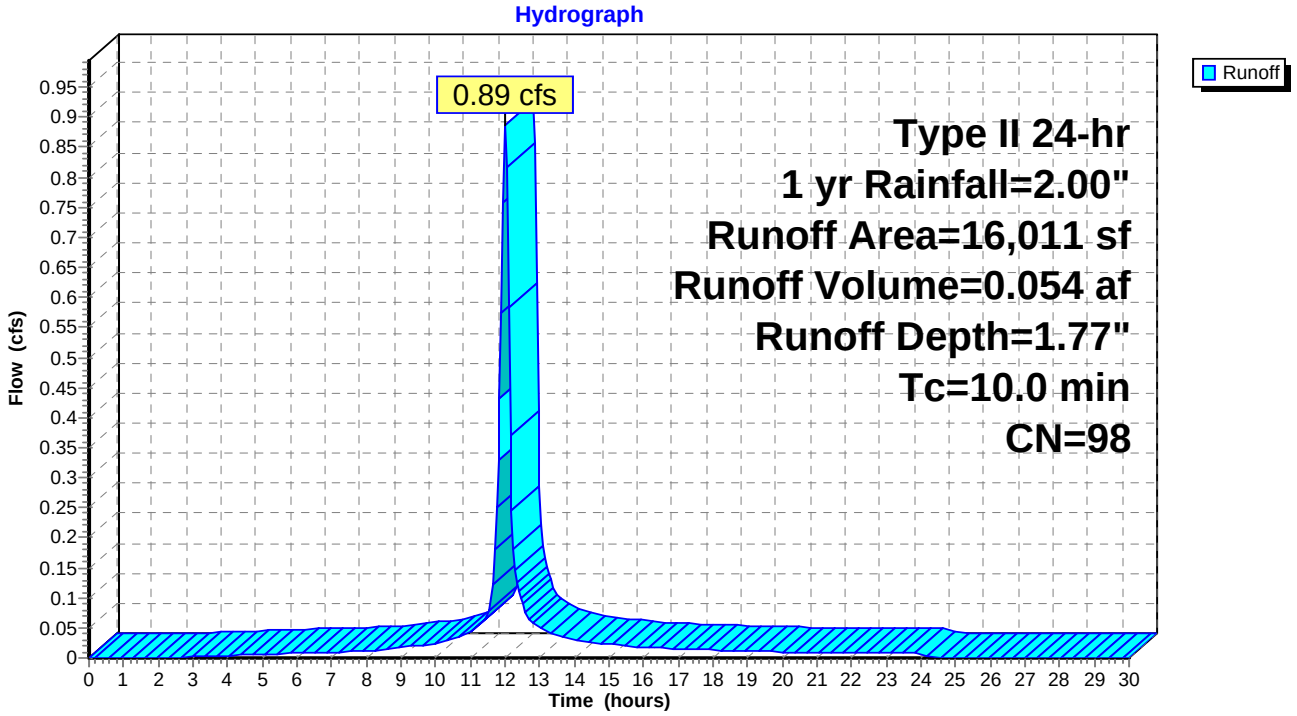
Runoff = 0.89 cfs @ 12.01 hrs, Volume= 0.054 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
16,011	98	Paved roads w/curbs & sewers, HSG A
16,011		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 31S: ROSEWOOD DRIVE



Summary for Subcatchment 32S: TANGLEWOOD SEGMENT 1 - ROADS

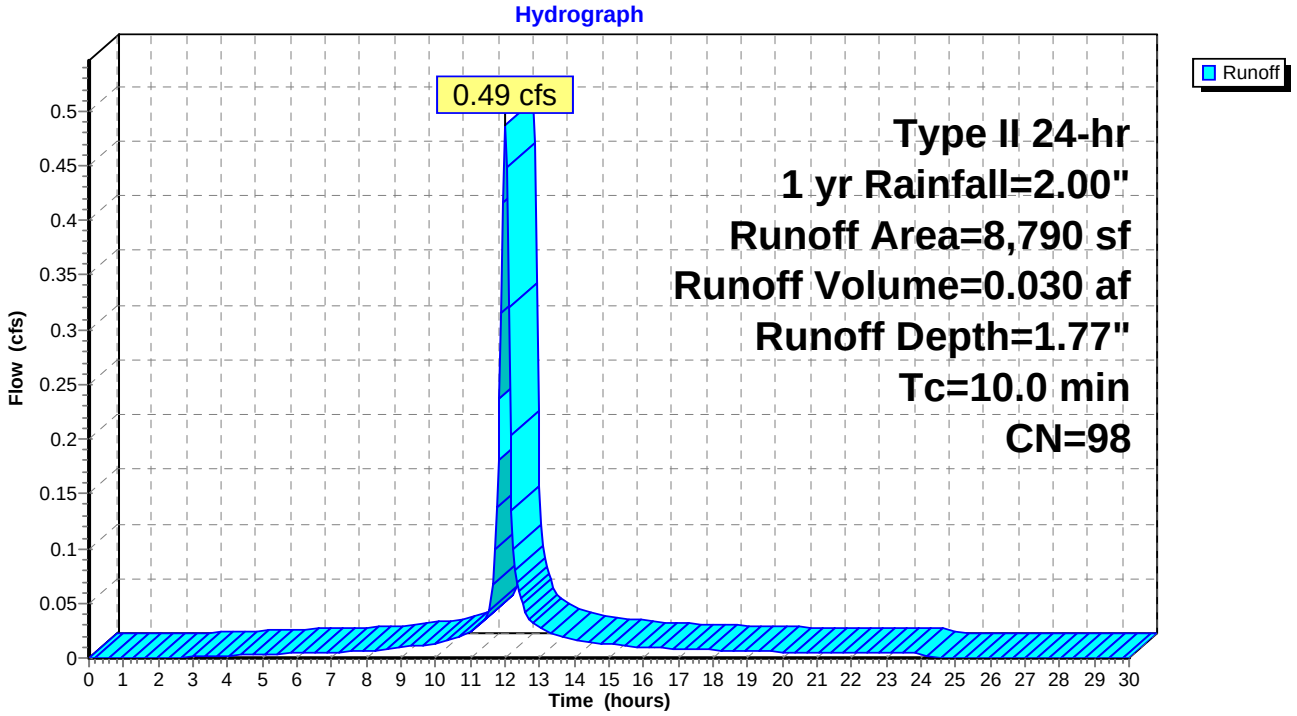
Runoff = 0.49 cfs @ 12.01 hrs, Volume= 0.030 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
8,790	98	Paved roads w/curbs & sewers, HSG A
8,790		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 32S: TANGLEWOOD SEGMENT 1 - ROADS



Summary for Subcatchment 33S: TANGLEWOOD SEGMENT 1 - RES

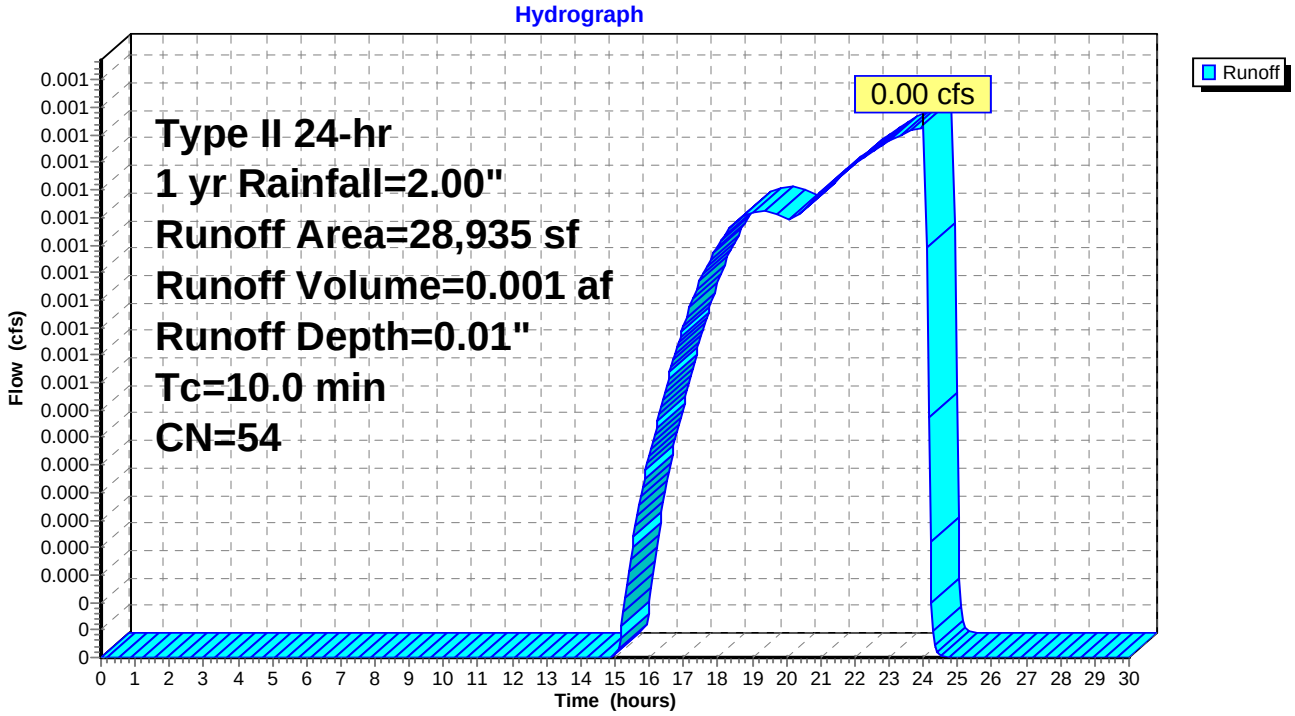
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
28,935	54	1/2 acre lots, 25% imp, HSG A
21,701		75.00% Pervious Area
7,234		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 33S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 34S: WOODLAWN - ROAD

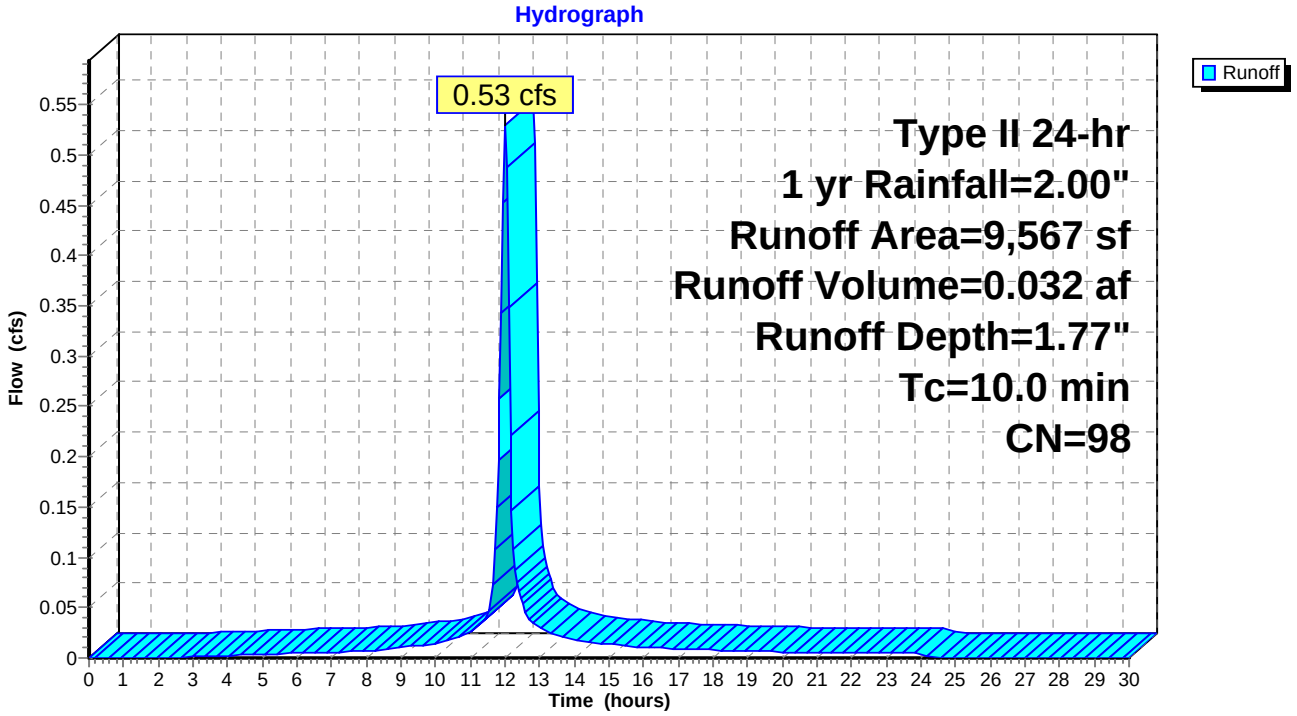
Runoff = 0.53 cfs @ 12.01 hrs, Volume= 0.032 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
9,567	98	Paved roads w/curbs & sewers, HSG A
9,567		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 34S: WOODLAWN - ROAD



Summary for Subcatchment 35S: WOODLAWN - RES

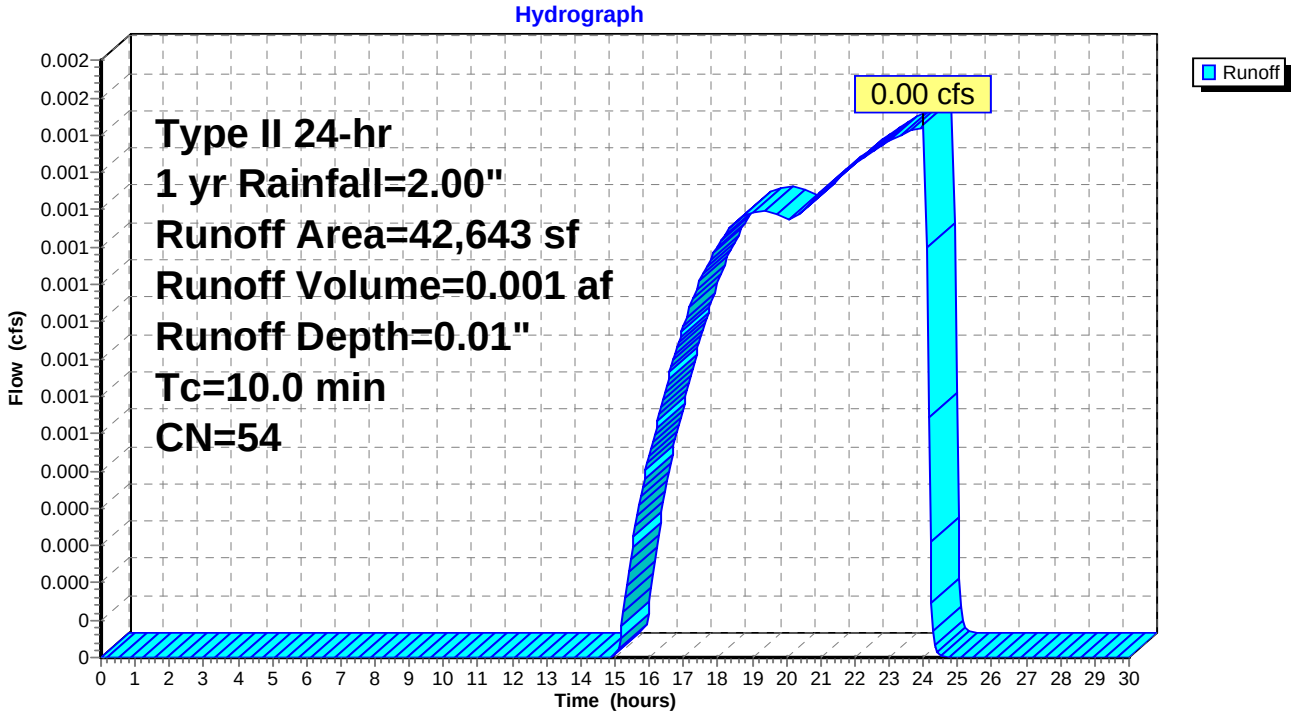
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
42,643	54	1/2 acre lots, 25% imp, HSG A
31,982		75.00% Pervious Area
10,661		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 35S: WOODLAWN - RES



Summary for Subcatchment 36S: GELNWOOD - RES

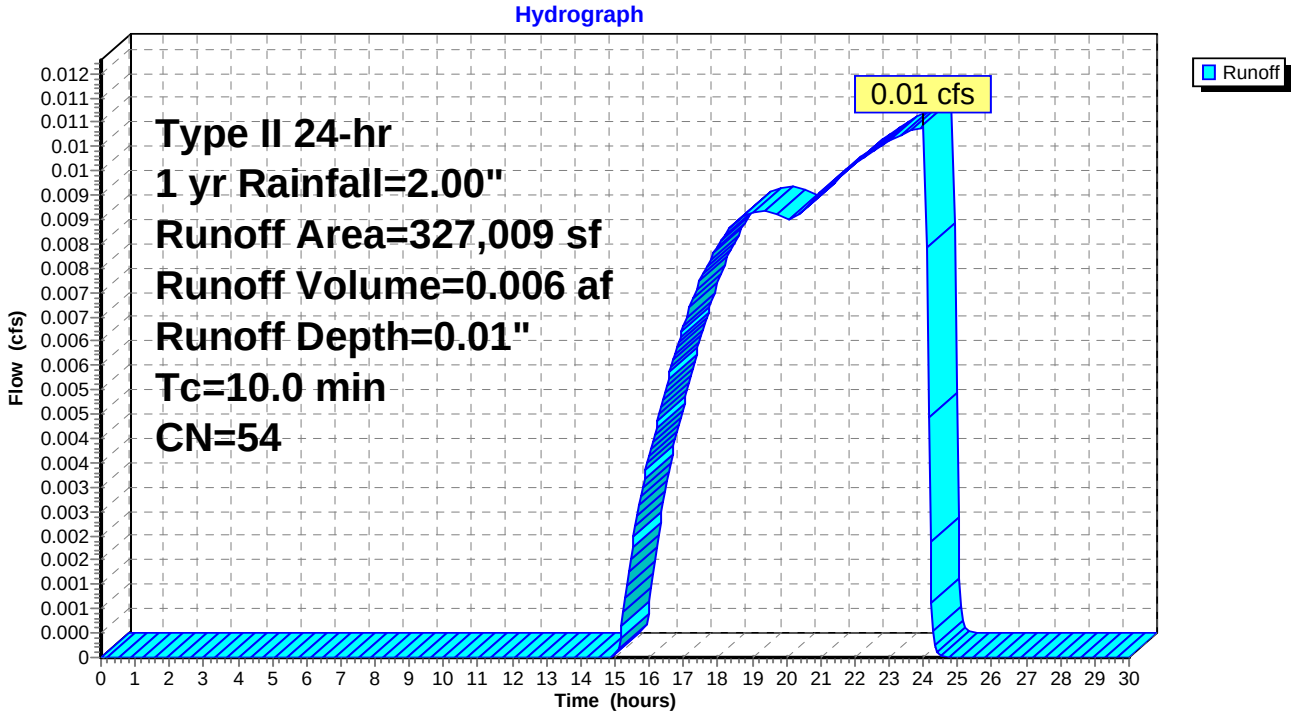
Runoff = 0.01 cfs @ 24.00 hrs, Volume= 0.006 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
327,009	54	1/2 acre lots, 25% imp, HSG A
245,257		75.00% Pervious Area
81,752		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 36S: GELNWOOD - RES



Summary for Subcatchment 37S: TANGLEWOOD SEGMENT 1 - RES

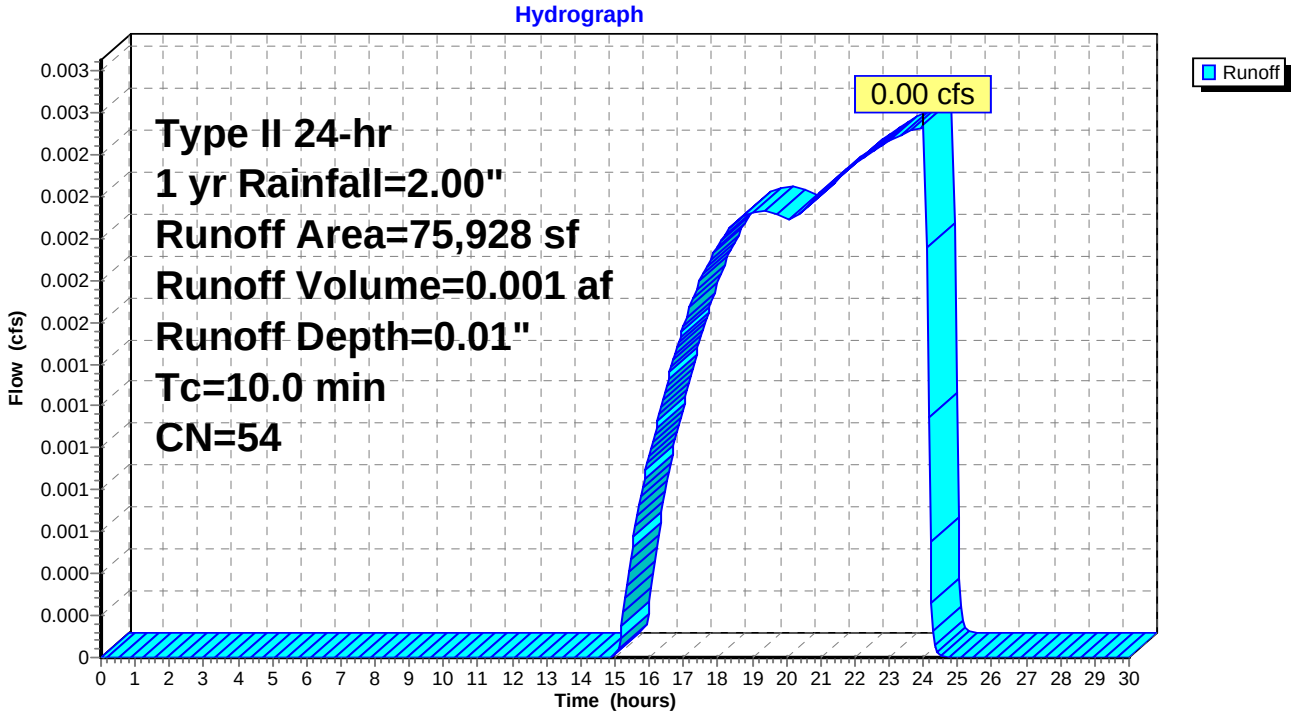
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
75,928	54	1/2 acre lots, 25% imp, HSG A
56,946		75.00% Pervious Area
18,982		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 37S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 38S: TANGLEWOOD SEGMENT 1 - ROADS

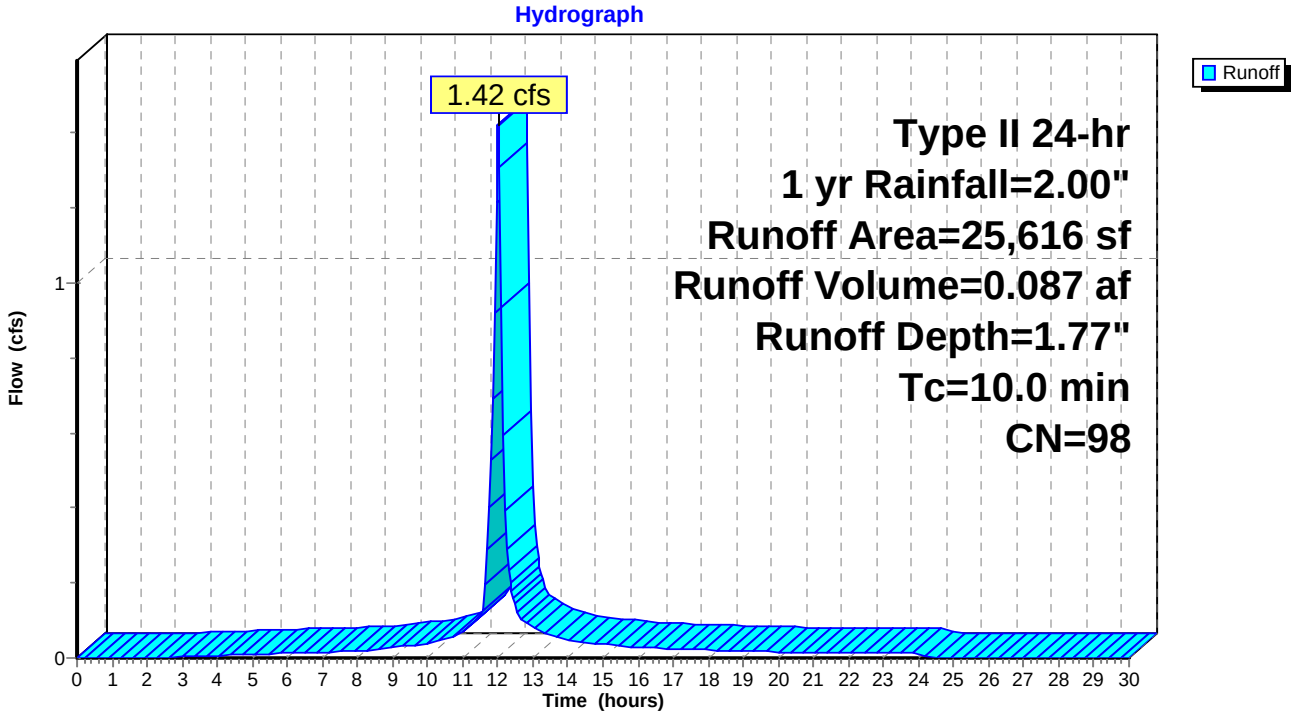
Runoff = 1.42 cfs @ 12.01 hrs, Volume= 0.087 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
25,616	98	Paved roads w/curbs & sewers, HSG A
25,616		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 38S: TANGLEWOOD SEGMENT 1 - ROADS



Summary for Pond 15P: CATCH BASIN

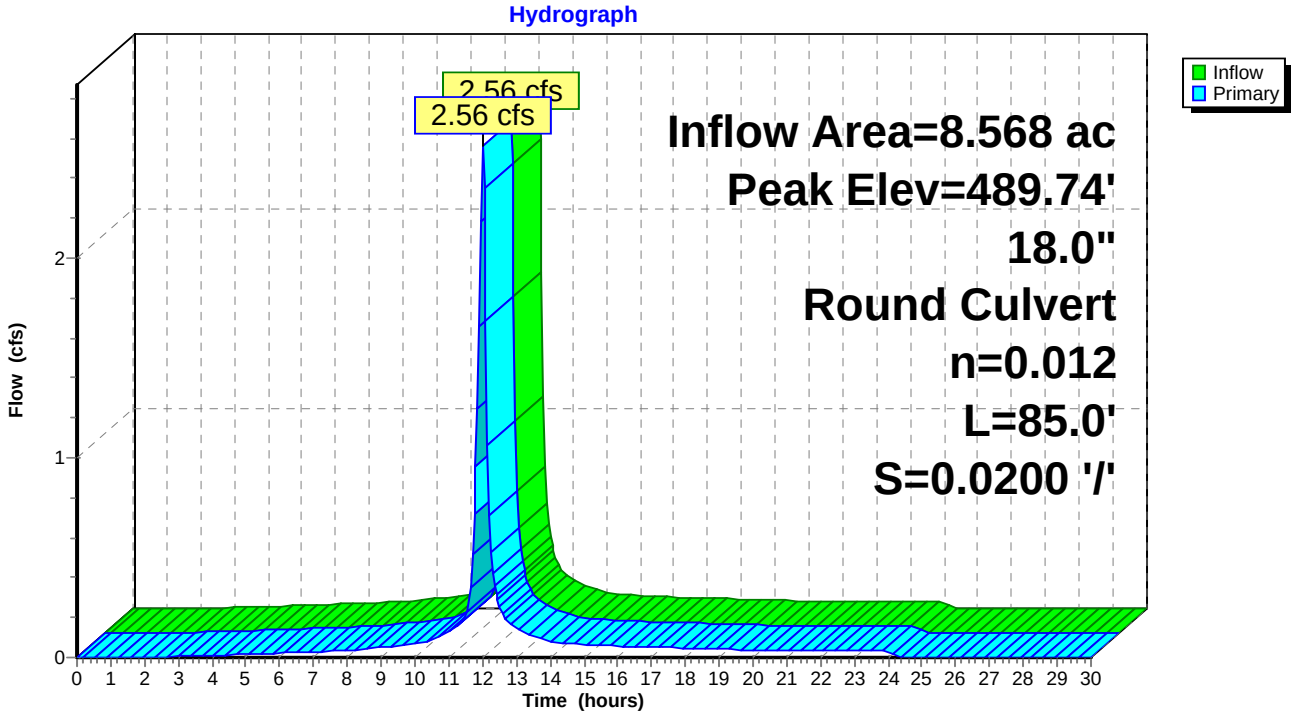
Inflow Area = 8.568 ac, 34.29% Impervious, Inflow Depth = 0.23" for 1 yr event
Inflow = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af
Outflow = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af, Atten= 0%, Lag= 0.0 min
Primary = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.74' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=2.53 cfs @ 12.01 hrs HW=489.74' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.53 cfs @ 2.92 fps)

Pond 15P: CATCH BASIN



Summary for Pond 16P: CATCH BASIN

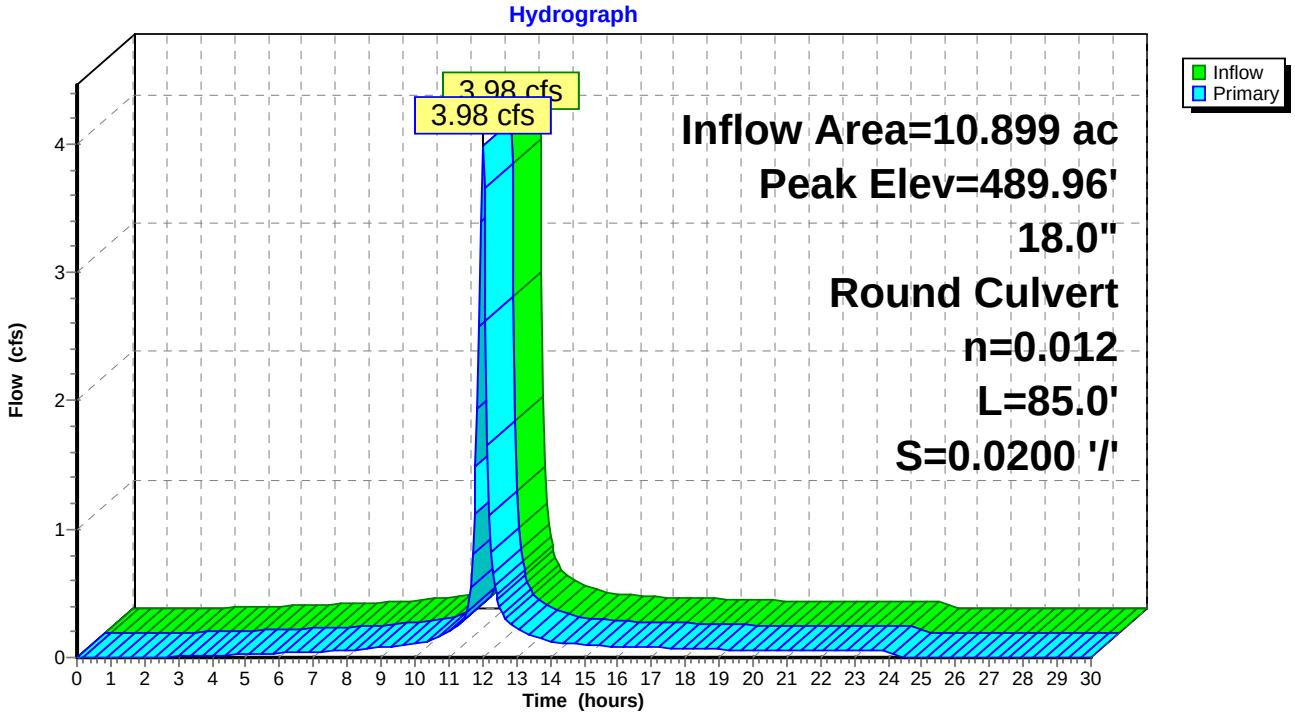
Inflow Area = 10.899 ac, 36.35% Impervious, Inflow Depth = 0.28" for 1 yr event
Inflow = 3.98 cfs @ 12.01 hrs, Volume= 0.252 af
Outflow = 3.98 cfs @ 12.01 hrs, Volume= 0.252 af, Atten= 0%, Lag= 0.0 min
Primary = 3.98 cfs @ 12.01 hrs, Volume= 0.252 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.96' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=3.93 cfs @ 12.01 hrs HW=489.95' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.93 cfs @ 3.32 fps)

Pond 16P: CATCH BASIN



Summary for Pond 18P: CATCH BASIN

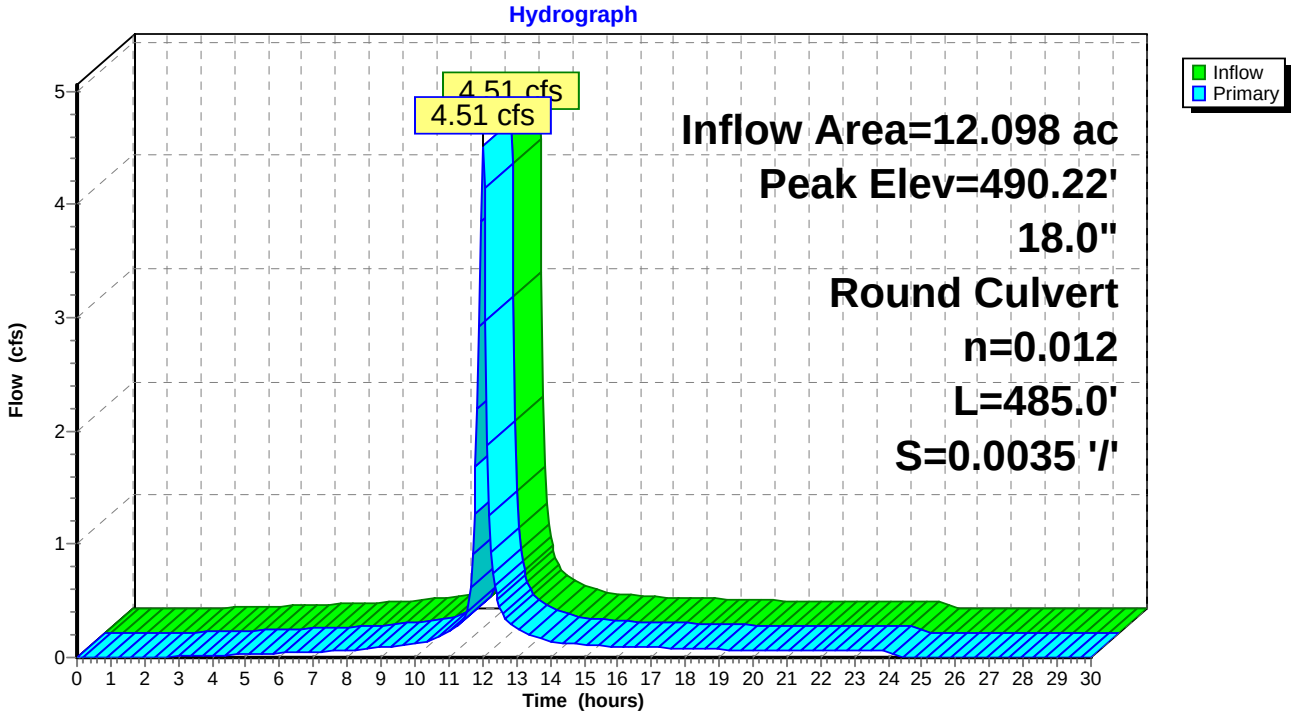
Inflow Area = 12.098 ac, 36.59% Impervious, Inflow Depth = 0.28" for 1 yr event
Inflow = 4.51 cfs @ 12.01 hrs, Volume= 0.285 af
Outflow = 4.51 cfs @ 12.01 hrs, Volume= 0.285 af, Atten= 0%, Lag= 0.0 min
Primary = 4.51 cfs @ 12.01 hrs, Volume= 0.285 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.22' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 485.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0035 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=4.45 cfs @ 12.01 hrs HW=490.21' (Free Discharge)
└**1=Culvert** (Barrel Controls 4.45 cfs @ 4.00 fps)

Pond 18P: CATCH BASIN



Summary for Pond 20P: CATCH BASIN

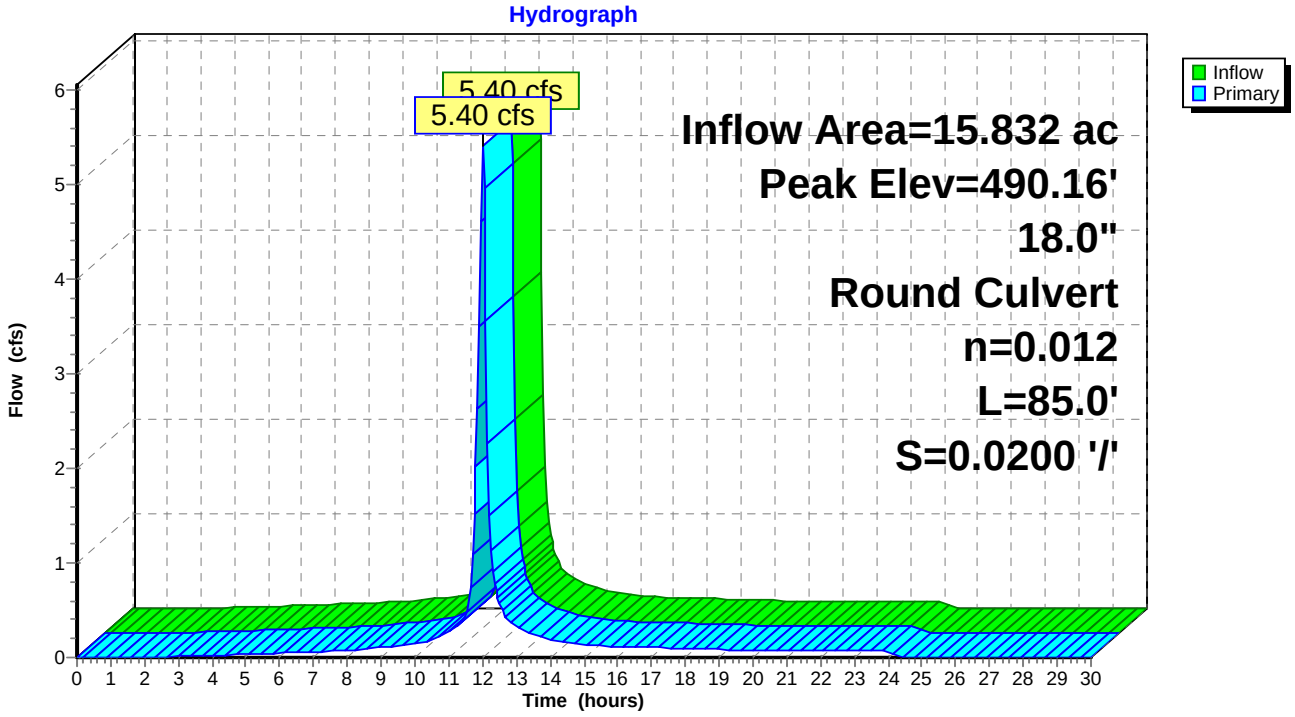
Inflow Area = 15.832 ac, 36.55% Impervious, Inflow Depth = 0.26" for 1 yr event
Inflow = 5.40 cfs @ 12.01 hrs, Volume= 0.344 af
Outflow = 5.40 cfs @ 12.01 hrs, Volume= 0.344 af, Atten= 0%, Lag= 0.0 min
Primary = 5.40 cfs @ 12.01 hrs, Volume= 0.344 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.16' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=5.33 cfs @ 12.01 hrs HW=490.15' (Free Discharge)
└**1=Culvert** (Inlet Controls 5.33 cfs @ 3.66 fps)

Pond 20P: CATCH BASIN



Summary for Pond 23P: CATCH BASIN

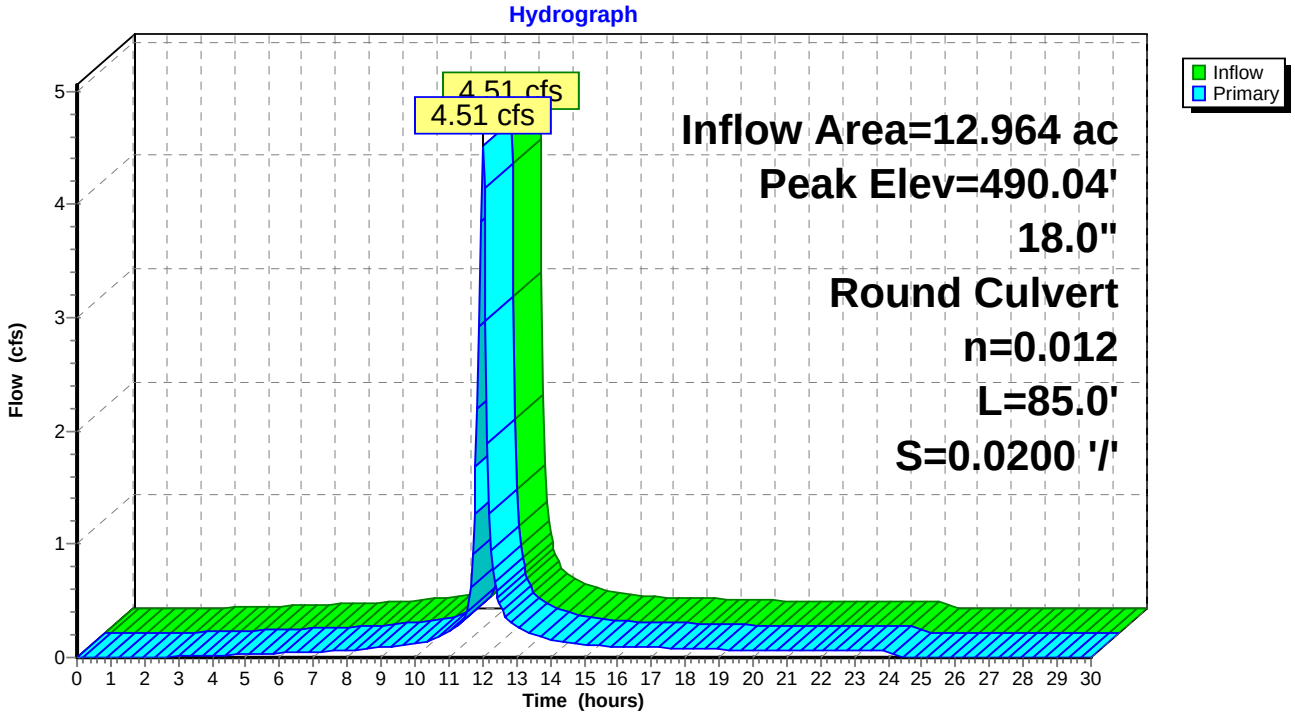
Inflow Area = 12.964 ac, 36.98% Impervious, Inflow Depth = 0.27" for 1 yr event
Inflow = 4.51 cfs @ 12.01 hrs, Volume= 0.287 af
Outflow = 4.51 cfs @ 12.01 hrs, Volume= 0.287 af, Atten= 0%, Lag= 0.0 min
Primary = 4.51 cfs @ 12.01 hrs, Volume= 0.287 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.04' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=4.45 cfs @ 12.01 hrs HW=490.03' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.45 cfs @ 3.45 fps)

Pond 23P: CATCH BASIN



Summary for Pond 26P: CATCH BASIN

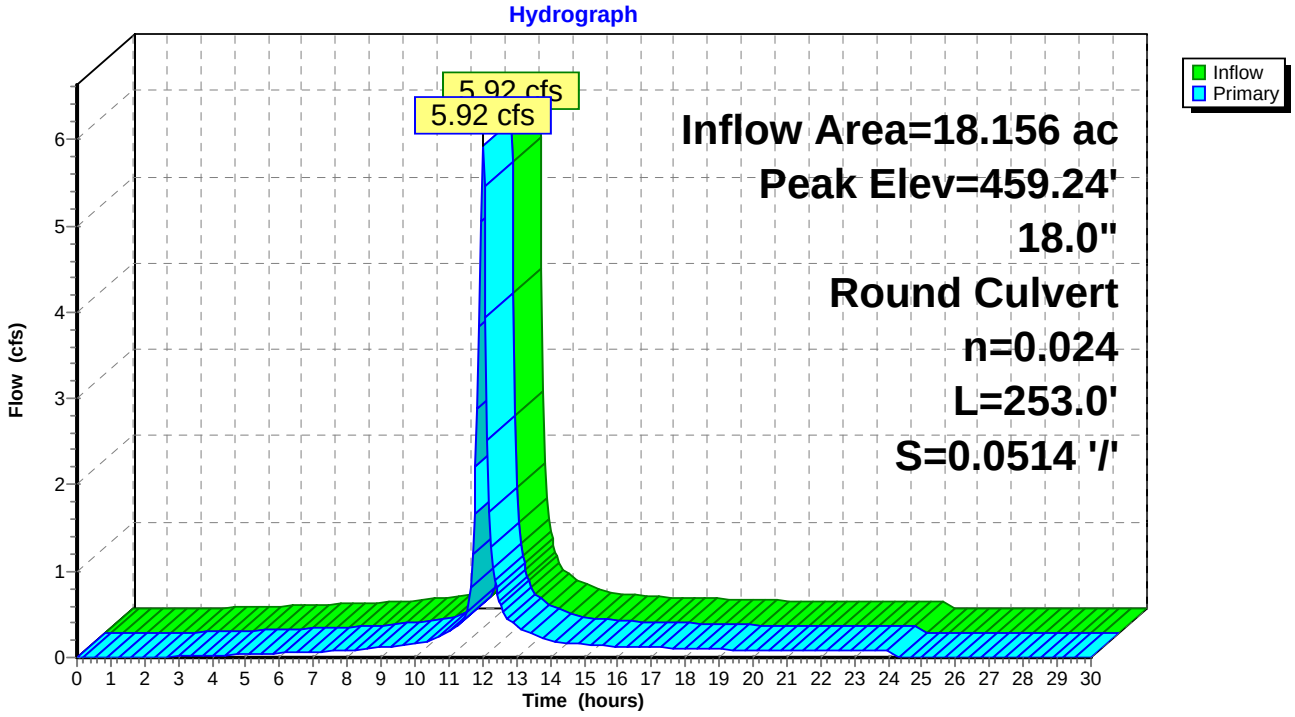
Inflow Area = 18.156 ac, 36.40% Impervious, Inflow Depth = 0.25" for 1 yr event
Inflow = 5.92 cfs @ 12.01 hrs, Volume= 0.381 af
Outflow = 5.92 cfs @ 12.01 hrs, Volume= 0.381 af, Atten= 0%, Lag= 0.0 min
Primary = 5.92 cfs @ 12.01 hrs, Volume= 0.381 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 459.24' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	458.00'	**18.0" Round Culvert** L= 253.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 458.00' / 445.00' S= 0.0514 '/' Cc= 0.900 n= 0.024, Flow Area= 1.77 sf

Primary OutFlow Max=5.84 cfs @ 12.01 hrs HW=459.23' (Free Discharge)
└**1=Culvert** (Inlet Controls 5.84 cfs @ 3.77 fps)

Pond 26P: CATCH BASIN



Summary for Pond 27P: CATCH BASIN

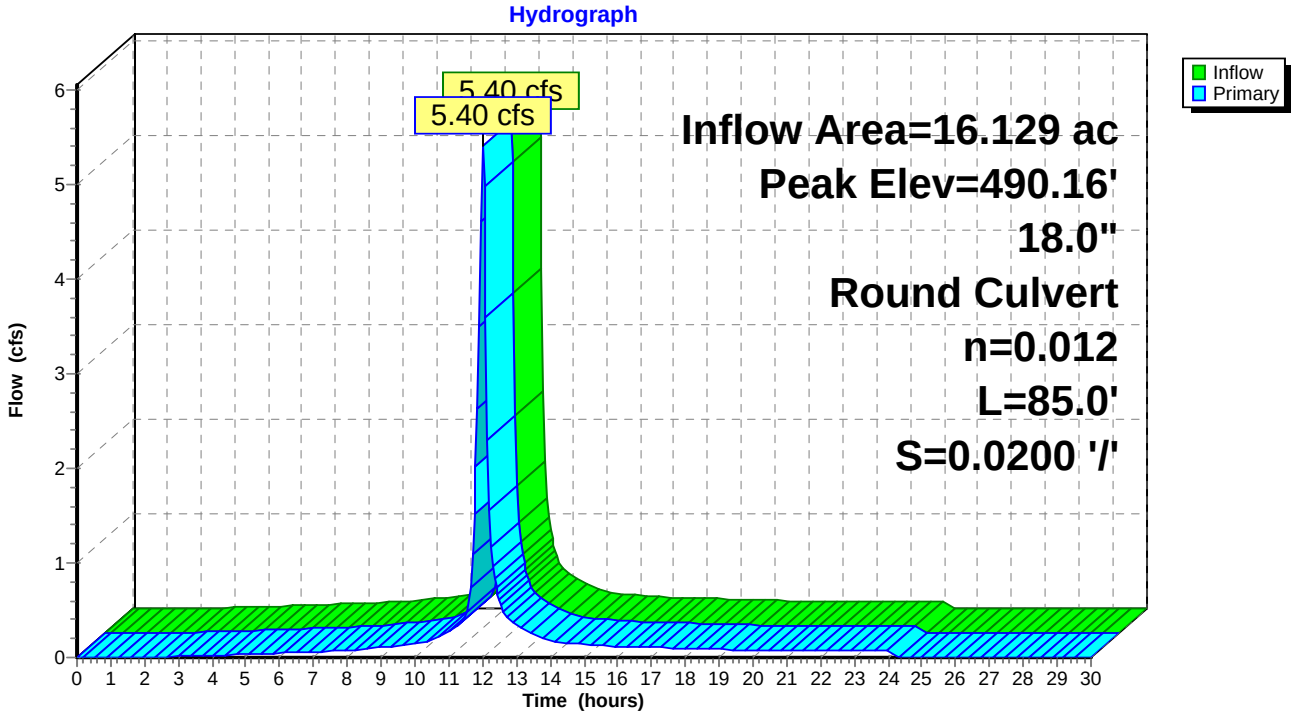
Inflow Area = 16.129 ac, 36.83% Impervious, Inflow Depth = 0.26" for 1 yr event
Inflow = 5.40 cfs @ 12.01 hrs, Volume= 0.347 af
Outflow = 5.40 cfs @ 12.01 hrs, Volume= 0.347 af, Atten= 0%, Lag= 0.0 min
Primary = 5.40 cfs @ 12.01 hrs, Volume= 0.347 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.16' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=5.33 cfs @ 12.01 hrs HW=490.15' (Free Discharge)
└**1=Culvert** (Inlet Controls 5.33 cfs @ 3.66 fps)

Pond 27P: CATCH BASIN



Summary for Pond 39P: SUBSURFACE STORAGE

Inflow Area = 0.297 ac, 51.84% Impervious, Inflow Depth = 0.64" for 1 yr event
Inflow = 0.26 cfs @ 12.01 hrs, Volume= 0.016 af
Outflow = 0.05 cfs @ 12.25 hrs, Volume= 0.016 af, Atten= 79%, Lag= 14.8 min
Discarded = 0.01 cfs @ 12.25 hrs, Volume= 0.012 af
Primary = 0.04 cfs @ 12.25 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 450.76' @ 12.25 hrs Surf.Area= 0.021 ac Storage= 0.006 af

Plug-Flow detention time= 127.5 min calculated for 0.016 af (100% of inflow)
Center-of-Mass det. time= 127.4 min (899.4 - 772.0)

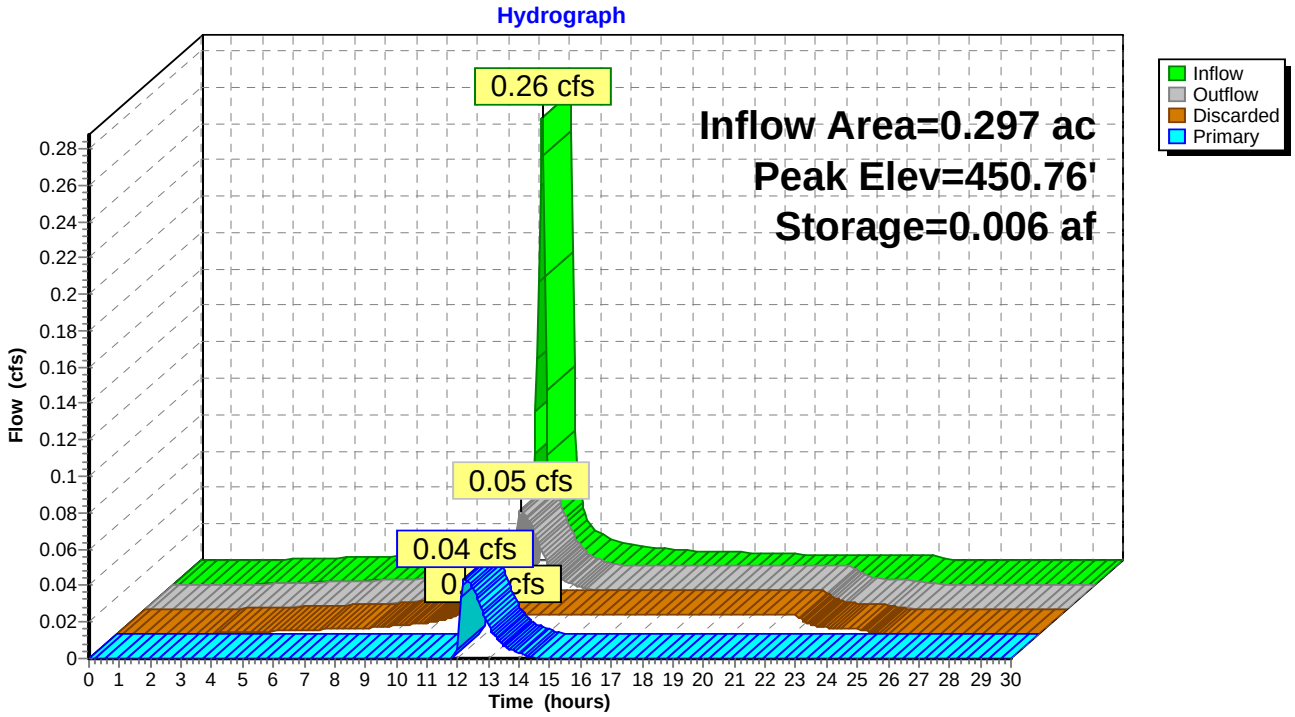
Volume	Invert	Avail.Storage	Storage Description
#1	450.00'	0.033 af	**5.00'W x 180.00'L x 4.00'H Prismatoid** 0.083 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	450.50'	**2.0" Vert. Orifice/Grate** C= 0.600
#2	Discarded	450.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 10.00'

Discarded OutFlow Max=0.01 cfs @ 12.25 hrs HW=450.76' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.04 cfs @ 12.25 hrs HW=450.76' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.04 cfs @ 2.00 fps)

Pond 39P: SUBSURFACE STORAGE



Summary for Pond 40P: SUBSURFACE STORAGE

Inflow Area = 0.866 ac, 42.48% Impervious, Inflow Depth = 0.42" for 1 yr event
Inflow = 0.49 cfs @ 12.01 hrs, Volume= 0.030 af
Outflow = 0.05 cfs @ 12.50 hrs, Volume= 0.030 af, Atten= 90%, Lag= 29.5 min
Discarded = 0.03 cfs @ 12.50 hrs, Volume= 0.028 af
Primary = 0.02 cfs @ 12.50 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 450.64' @ 12.50 hrs Surf.Area= 0.051 ac Storage= 0.013 af

Plug-Flow detention time= 148.4 min calculated for 0.030 af (100% of inflow)
Center-of-Mass det. time= 148.2 min (923.9 - 775.7)

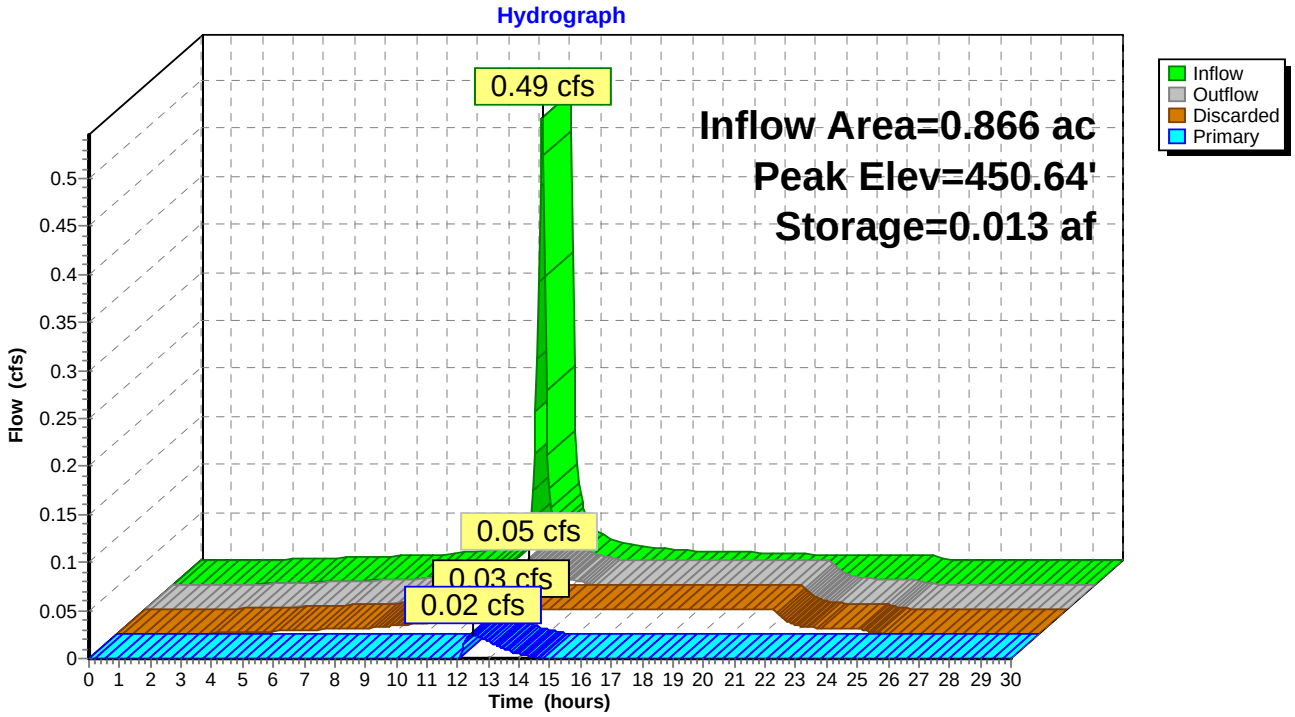
Volume	Invert	Avail.Storage	Storage Description
#1	450.00'	0.081 af	**5.00'W x 440.00'L x 4.00'H Prismatoid** 0.202 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	450.50'	**2.0" Vert. Orifice/Grate** C= 0.600
#2	Discarded	450.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 10.00'

Discarded OutFlow Max=0.03 cfs @ 12.50 hrs HW=450.64' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=0.02 cfs @ 12.50 hrs HW=450.64' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 1.26 fps)

Pond 40P: SUBSURFACE STORAGE

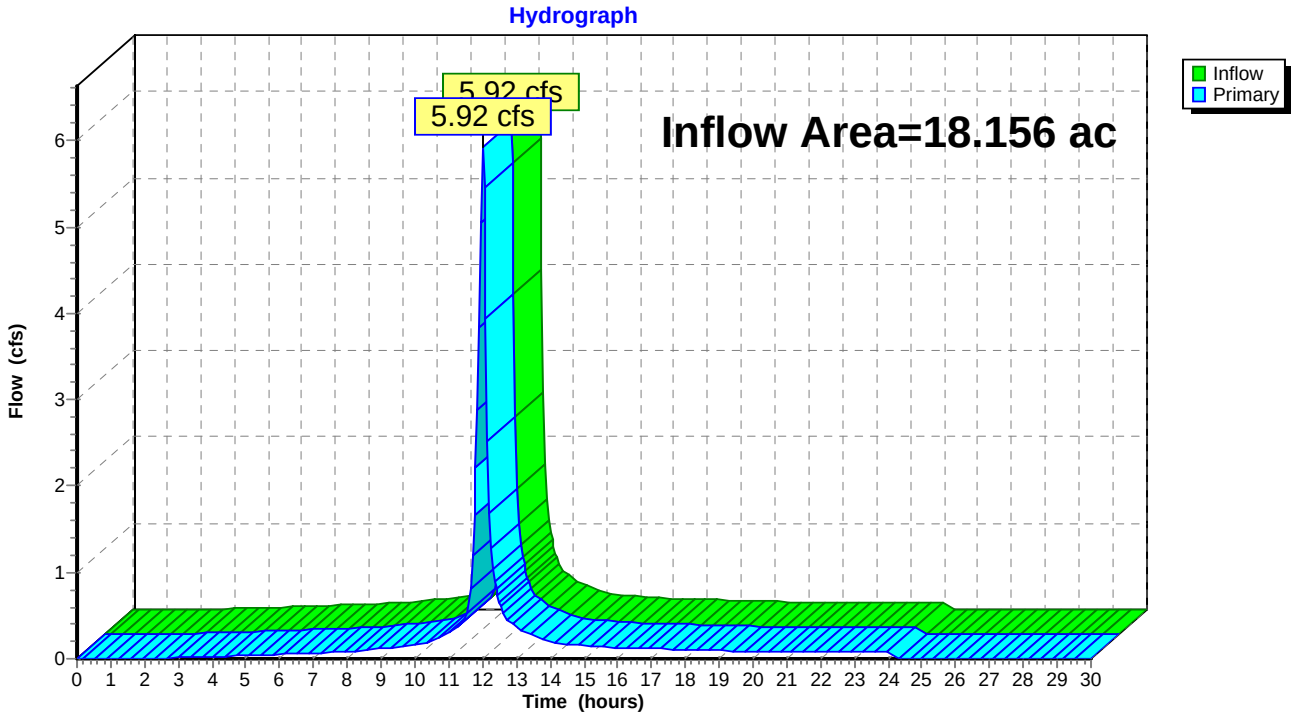


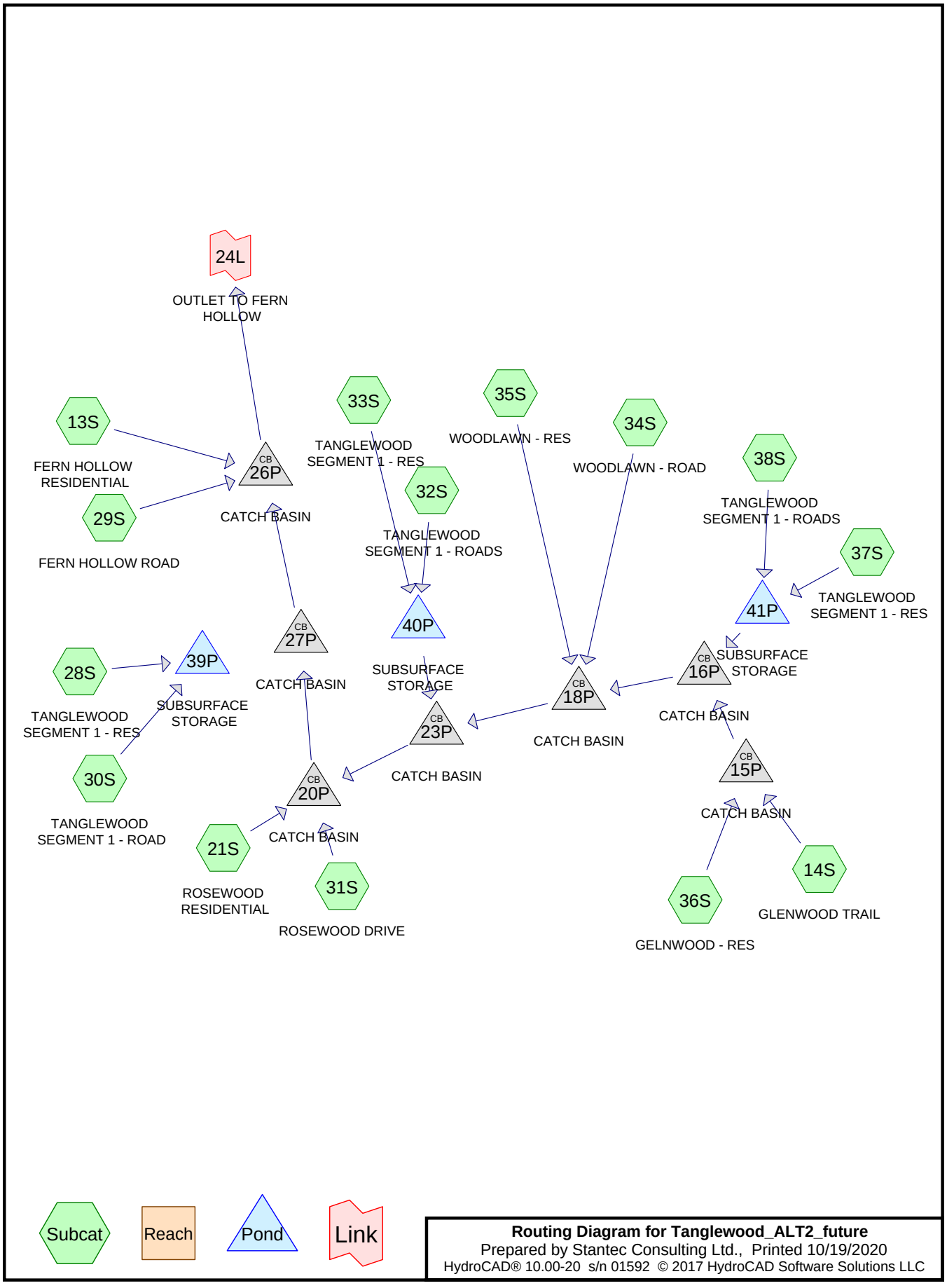
Summary for Link 24L: OUTLET TO FERN HOLLOW

Inflow Area = 18.156 ac, 36.40% Impervious, Inflow Depth = 0.25" for 1 yr event
Inflow = 5.92 cfs @ 12.01 hrs, Volume= 0.381 af
Primary = 5.92 cfs @ 12.01 hrs, Volume= 0.381 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link 24L: OUTLET TO FERN HOLLOW





Routing Diagram for Tanglewood_ALT2_future
Prepared by Stantec Consulting Ltd., Printed 10/19/2020
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Summary for Subcatchment 13S: FERN HOLLOW RESIDENTIAL

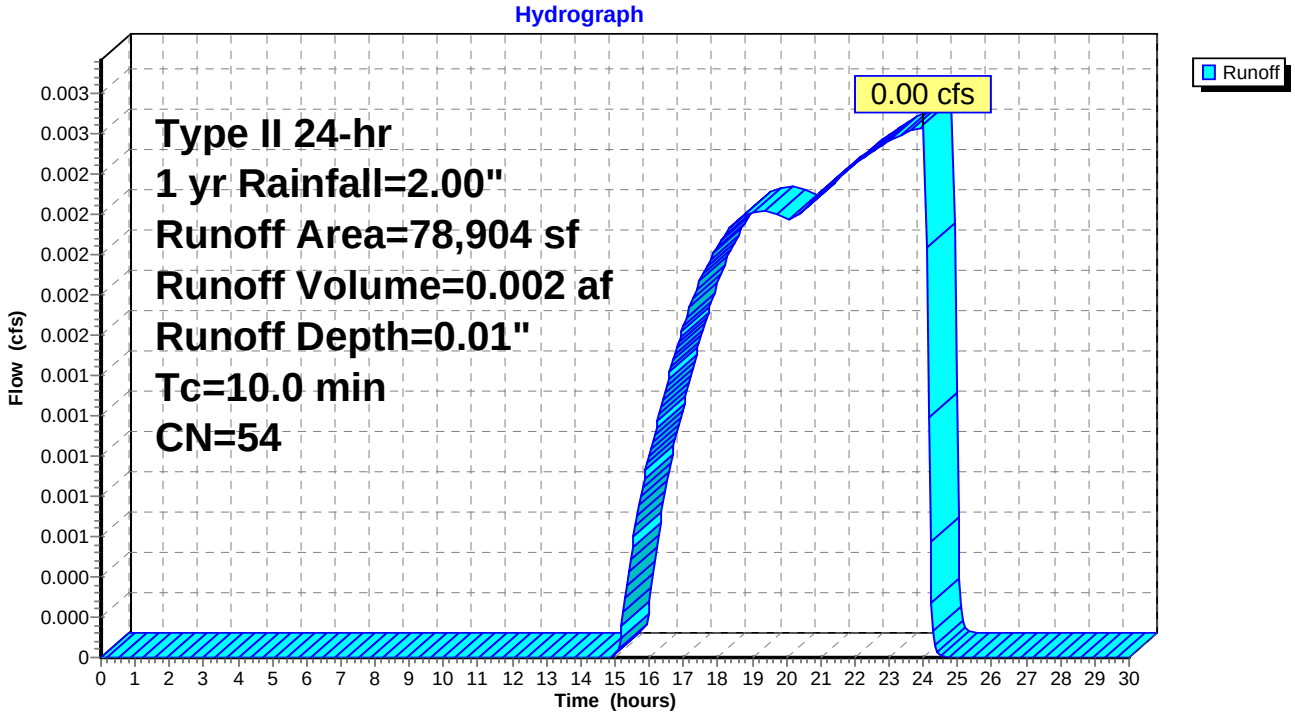
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.002 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
78,904	54	1/2 acre lots, 25% imp, HSG A
59,178		75.00% Pervious Area
19,726		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 13S: FERN HOLLOW RESIDENTIAL



Summary for Subcatchment 14S: GLENWOOD TRAIL

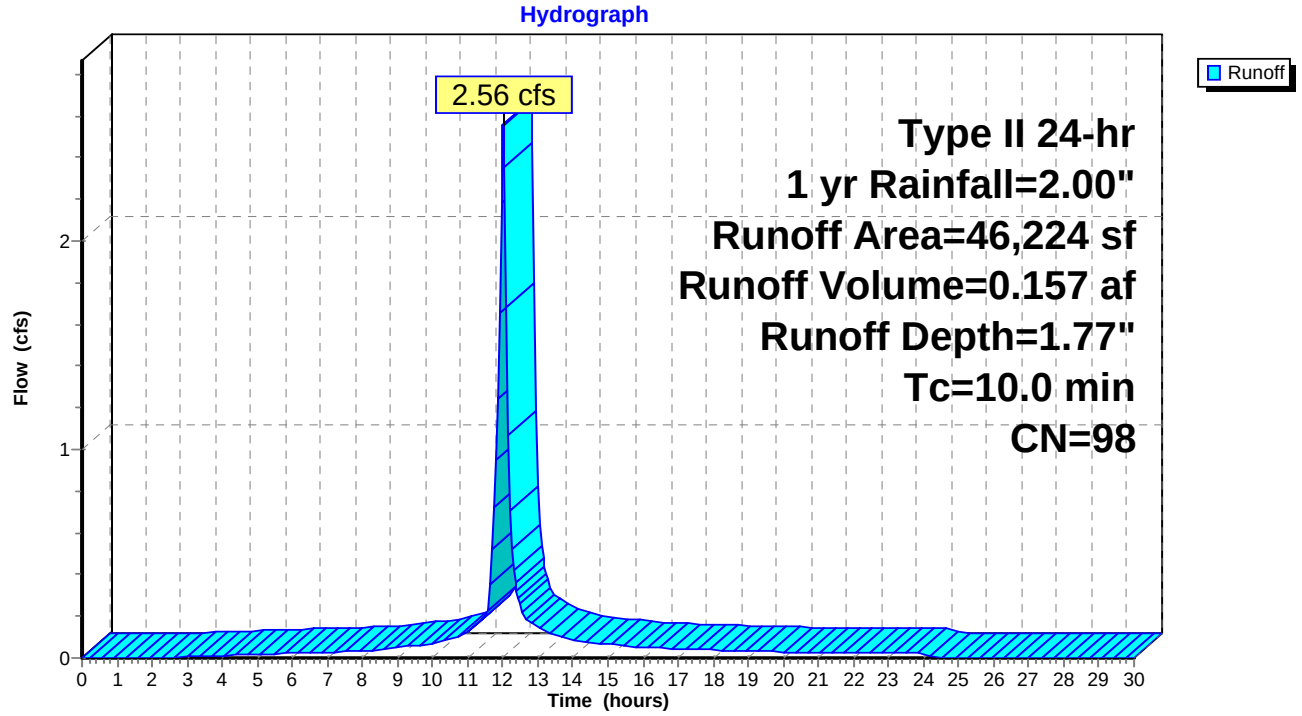
Runoff = 2.56 cfs @ 12.01 hrs, Volume= 0.157 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
46,224	98	Paved roads w/curbs & sewers, HSG A
46,224		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 14S: GLENWOOD TRAIL



Summary for Subcatchment 21S: ROSEWOOD RESIDENTIAL

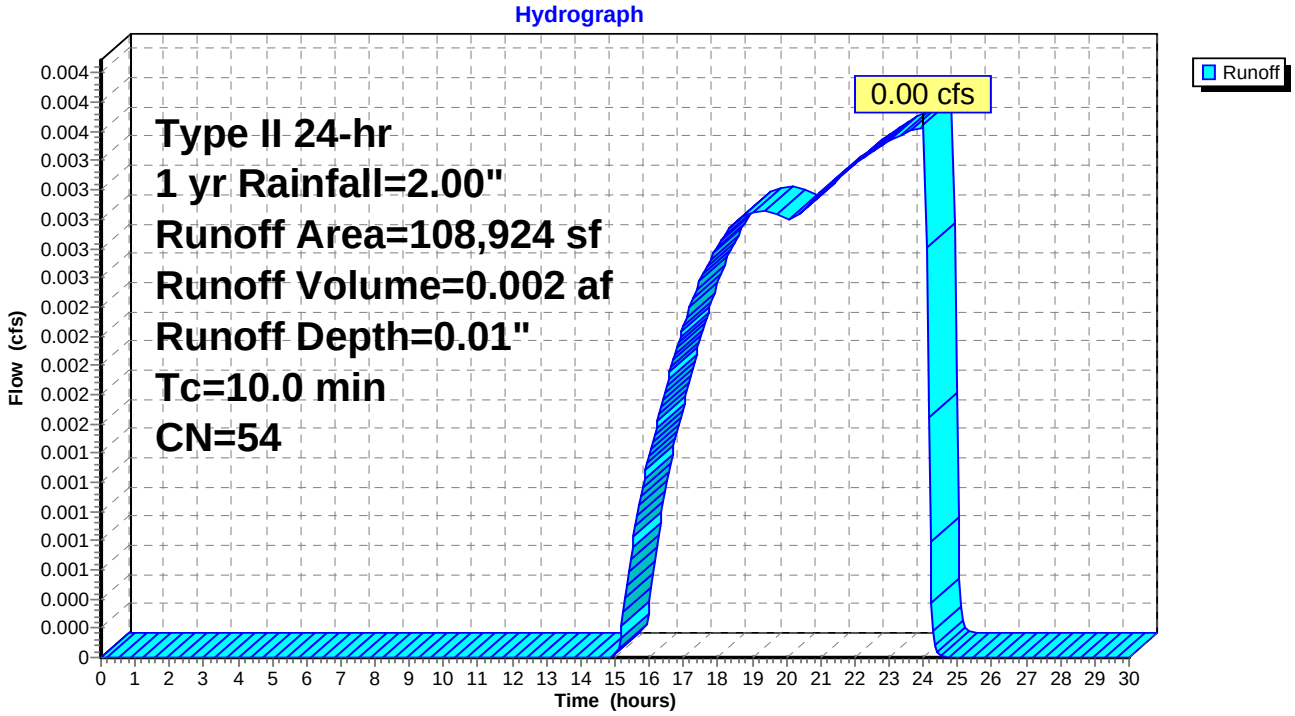
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.002 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
108,924	54	1/2 acre lots, 25% imp, HSG A
81,693		75.00% Pervious Area
27,231		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 21S: ROSEWOOD RESIDENTIAL



Summary for Subcatchment 28S: TANGLEWOOD SEGMENT 1 - RES

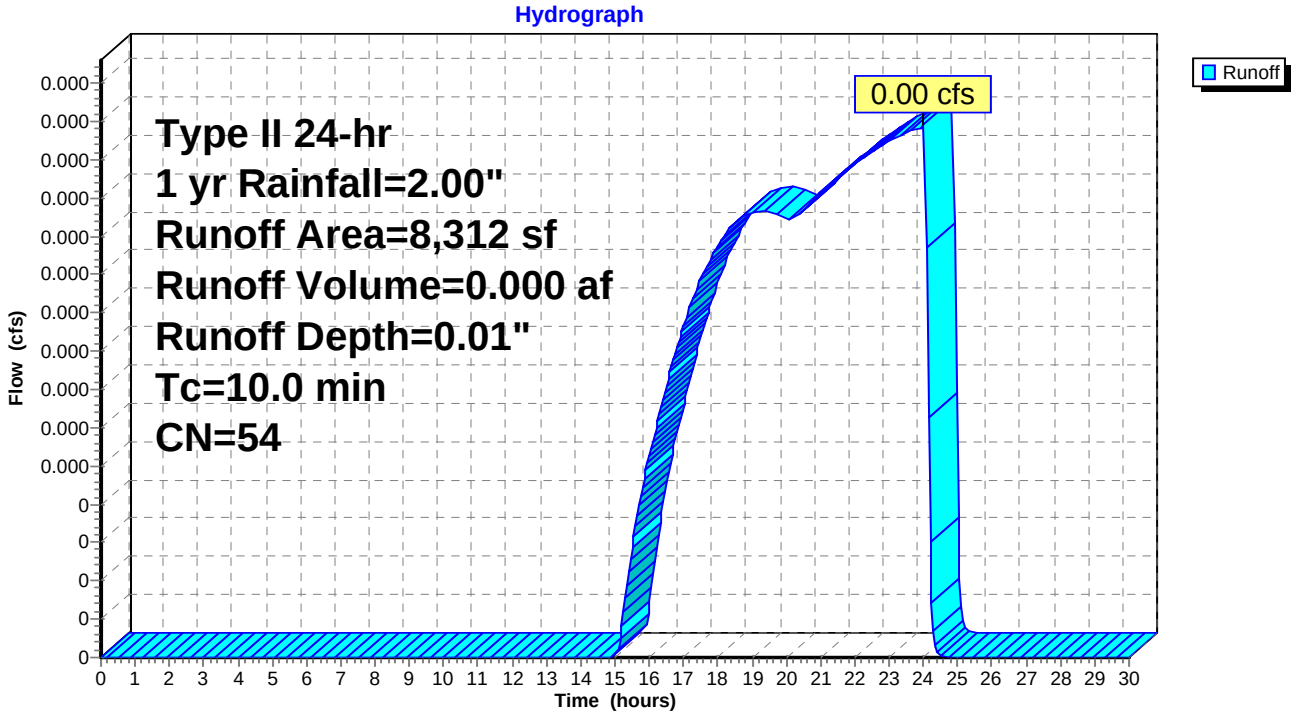
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
8,312	54	1/2 acre lots, 25% imp, HSG A
6,234		75.00% Pervious Area
2,078		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 28S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 29S: FERN HOLLOW ROAD

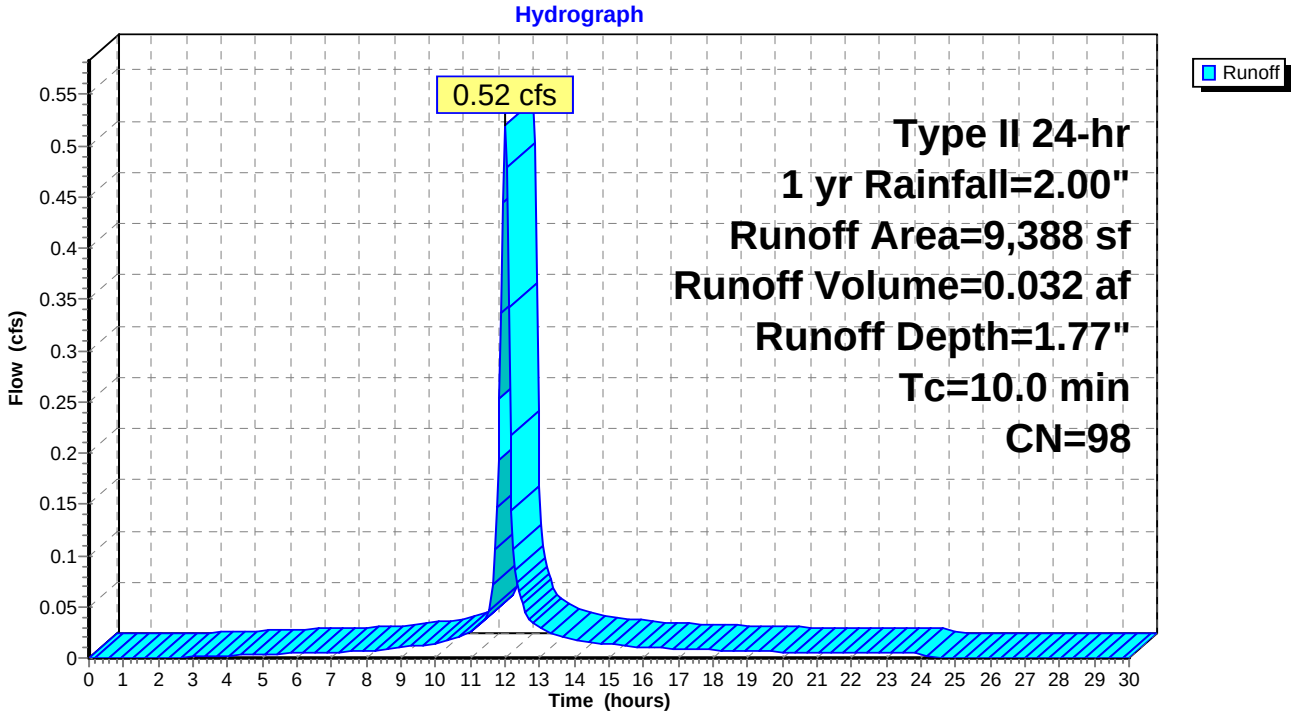
Runoff = 0.52 cfs @ 12.01 hrs, Volume= 0.032 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
9,388	98	Paved roads w/curbs & sewers, HSG A
9,388		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 29S: FERN HOLLOW ROAD



Summary for Subcatchment 30S: TANGLEWOOD SEGMENT 1 - ROAD

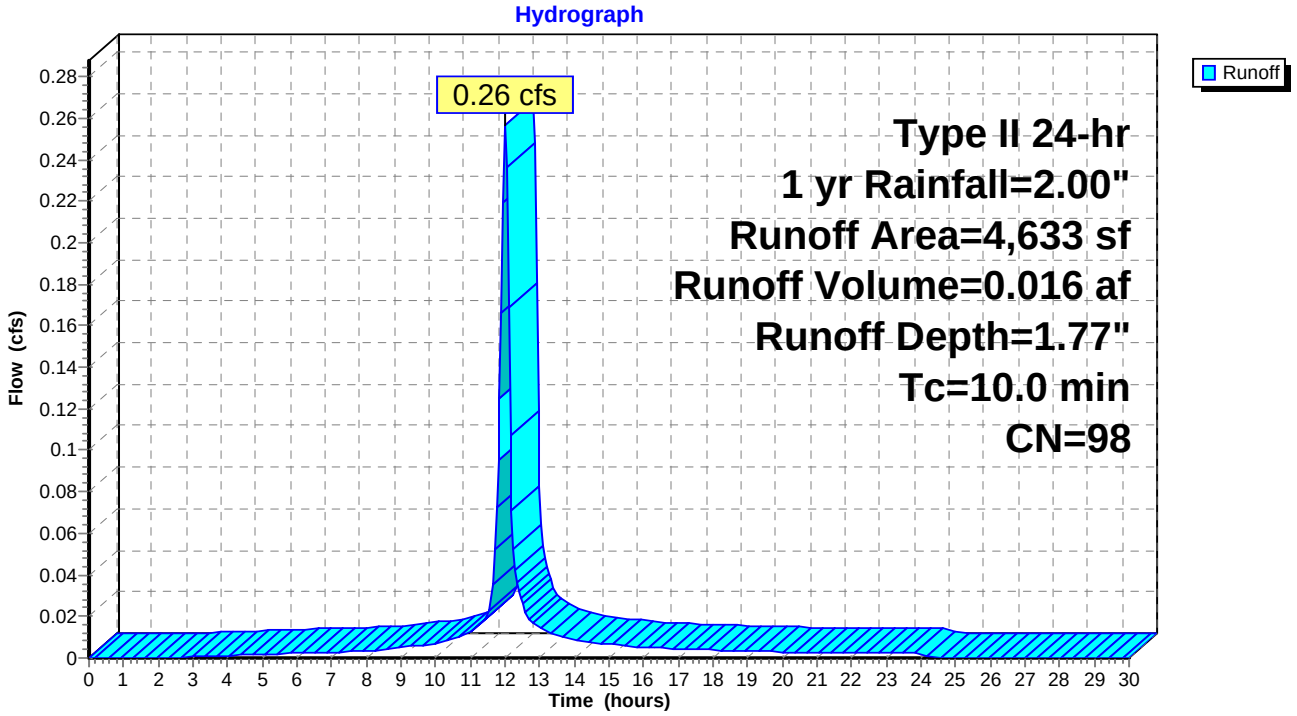
Runoff = 0.26 cfs @ 12.01 hrs, Volume= 0.016 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
4,633	98	Paved roads w/curbs & sewers, HSG A
4,633		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 30S: TANGLEWOOD SEGMENT 1 - ROAD



Summary for Subcatchment 31S: ROSEWOOD DRIVE

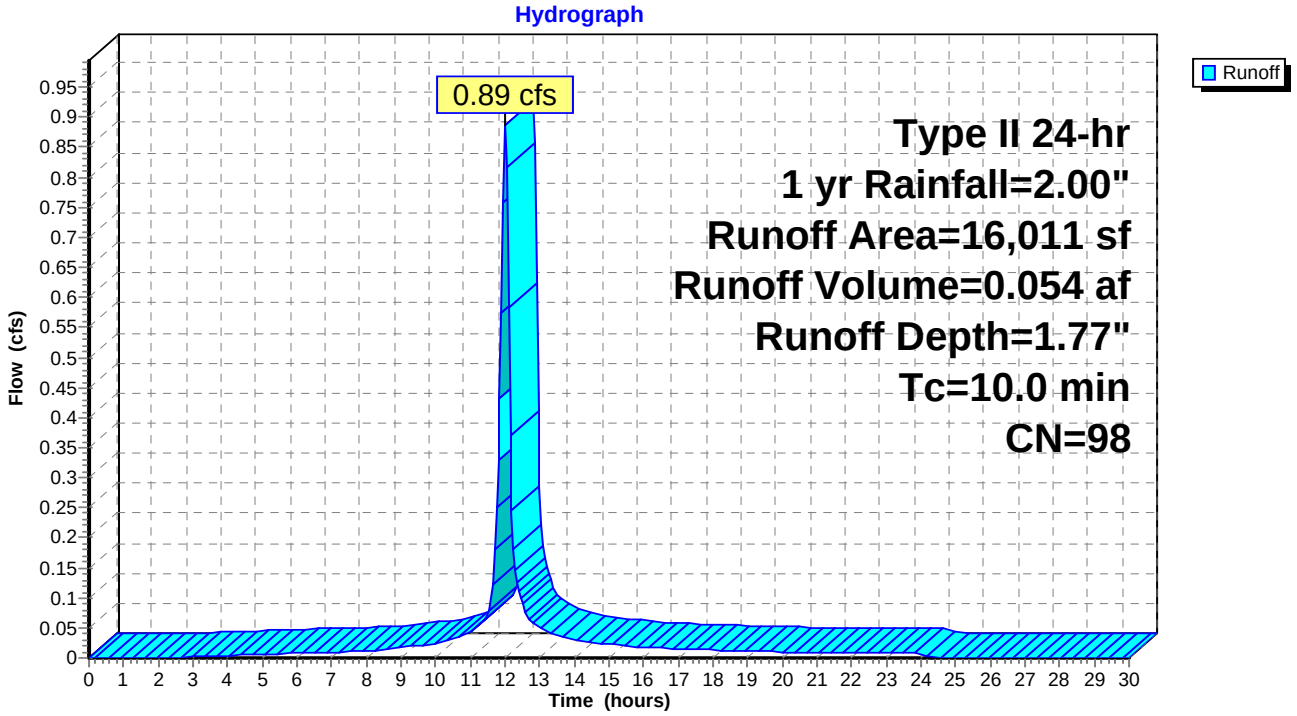
Runoff = 0.89 cfs @ 12.01 hrs, Volume= 0.054 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
16,011	98	Paved roads w/curbs & sewers, HSG A
16,011		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 31S: ROSEWOOD DRIVE



Summary for Subcatchment 32S: TANGLEWOOD SEGMENT 1 - ROADS

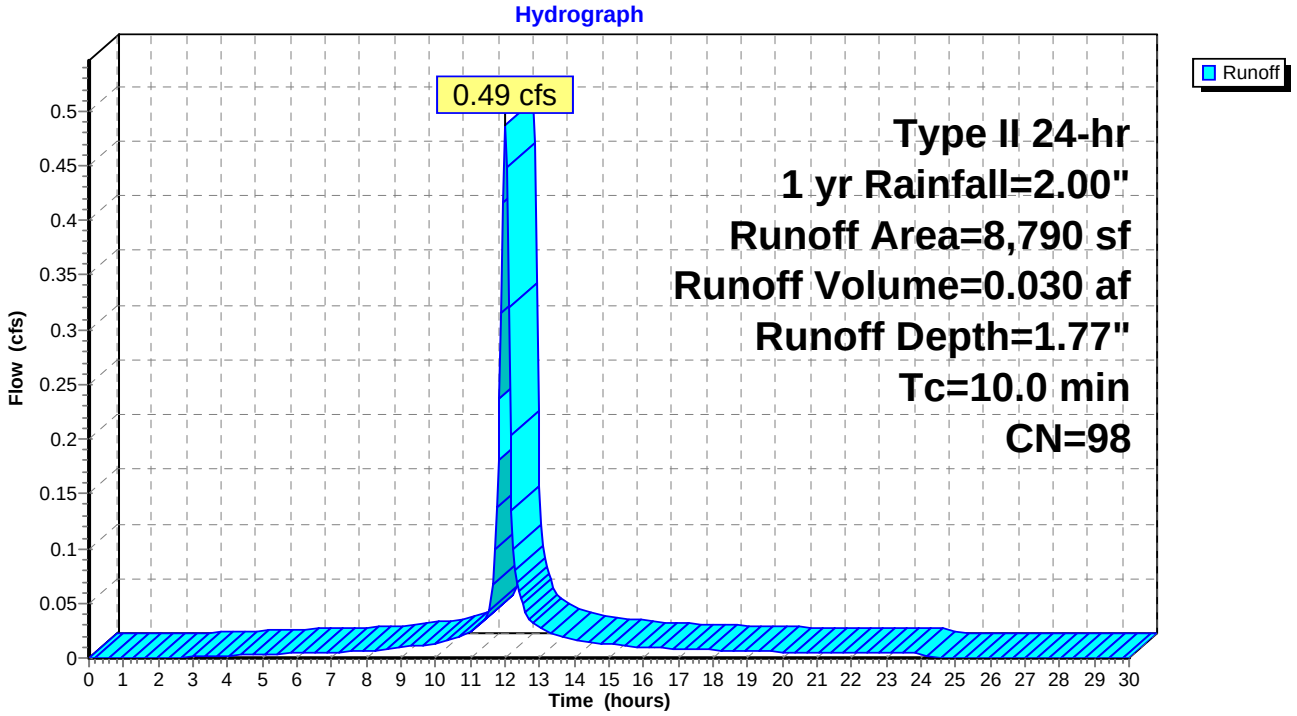
Runoff = 0.49 cfs @ 12.01 hrs, Volume= 0.030 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
8,790	98	Paved roads w/curbs & sewers, HSG A
8,790		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 32S: TANGLEWOOD SEGMENT 1 - ROADS



Summary for Subcatchment 33S: TANGLEWOOD SEGMENT 1 - RES

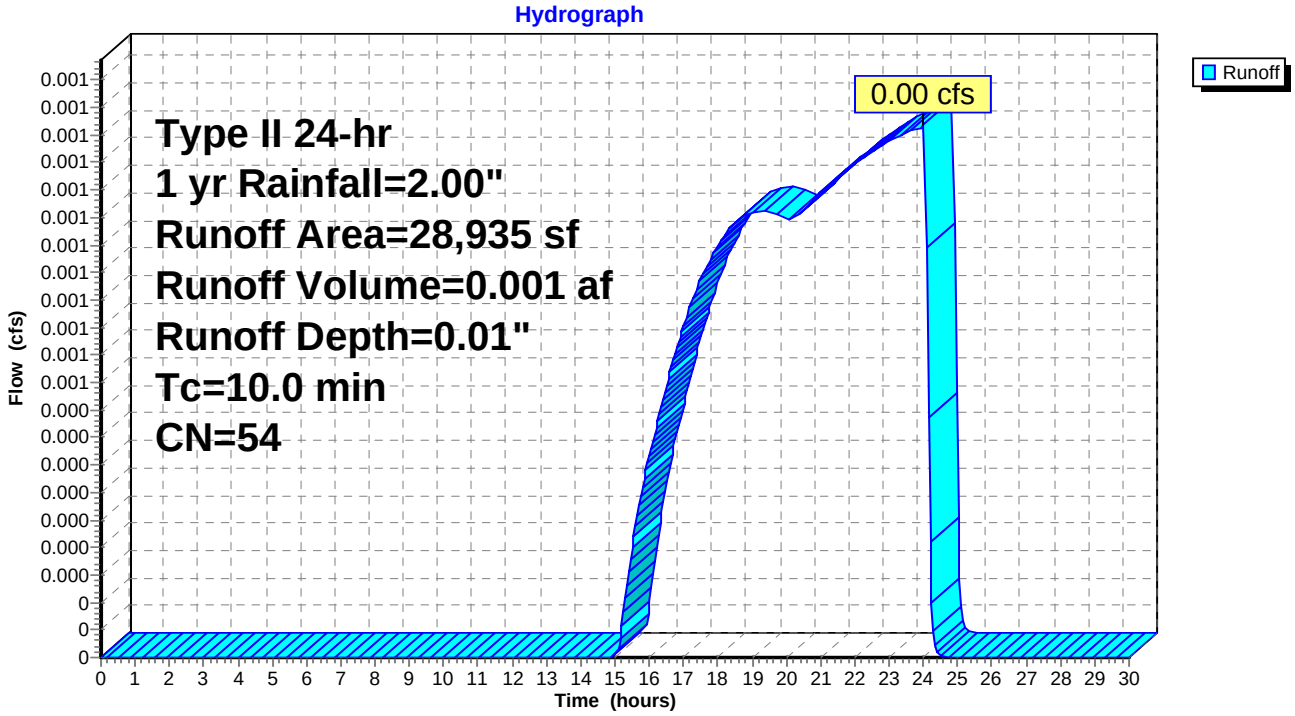
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
28,935	54	1/2 acre lots, 25% imp, HSG A
21,701		75.00% Pervious Area
7,234		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 33S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 34S: WOODLAWN - ROAD

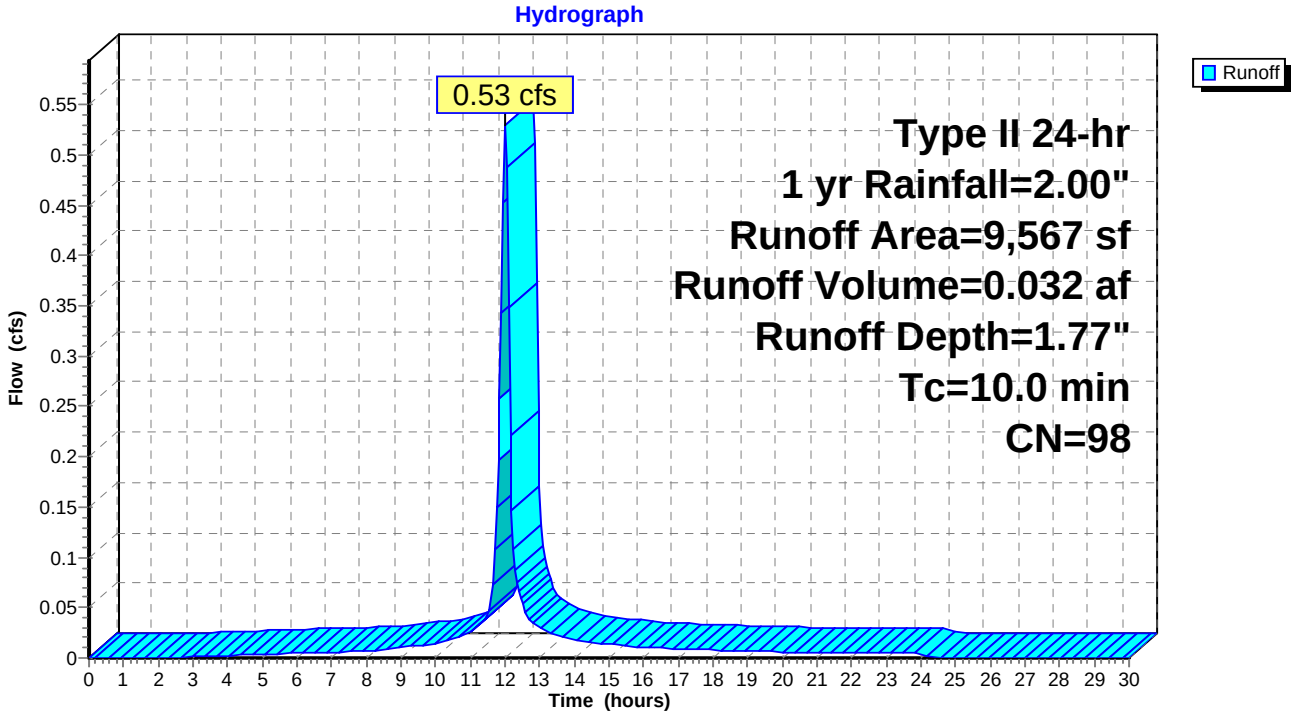
Runoff = 0.53 cfs @ 12.01 hrs, Volume= 0.032 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
9,567	98	Paved roads w/curbs & sewers, HSG A
9,567		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 34S: WOODLAWN - ROAD



Summary for Subcatchment 35S: WOODLAWN - RES

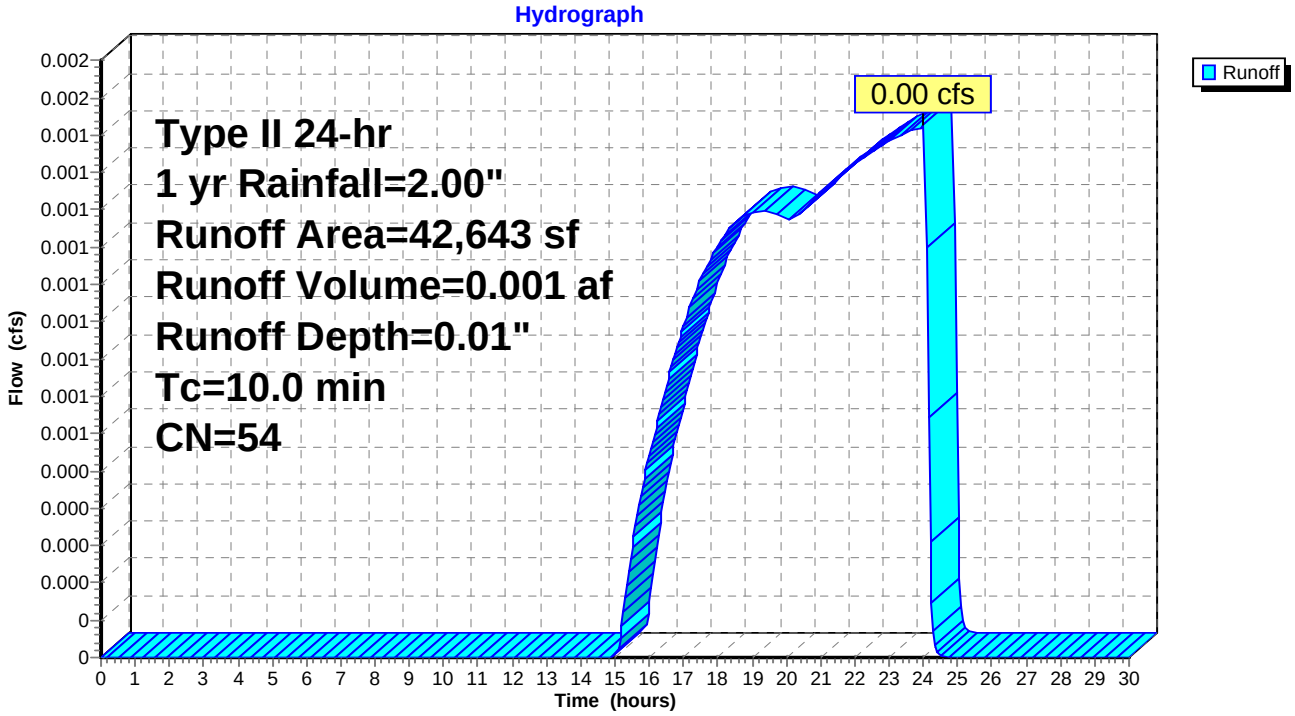
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
42,643	54	1/2 acre lots, 25% imp, HSG A
31,982		75.00% Pervious Area
10,661		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 35S: WOODLAWN - RES



Summary for Subcatchment 36S: GELNWOOD - RES

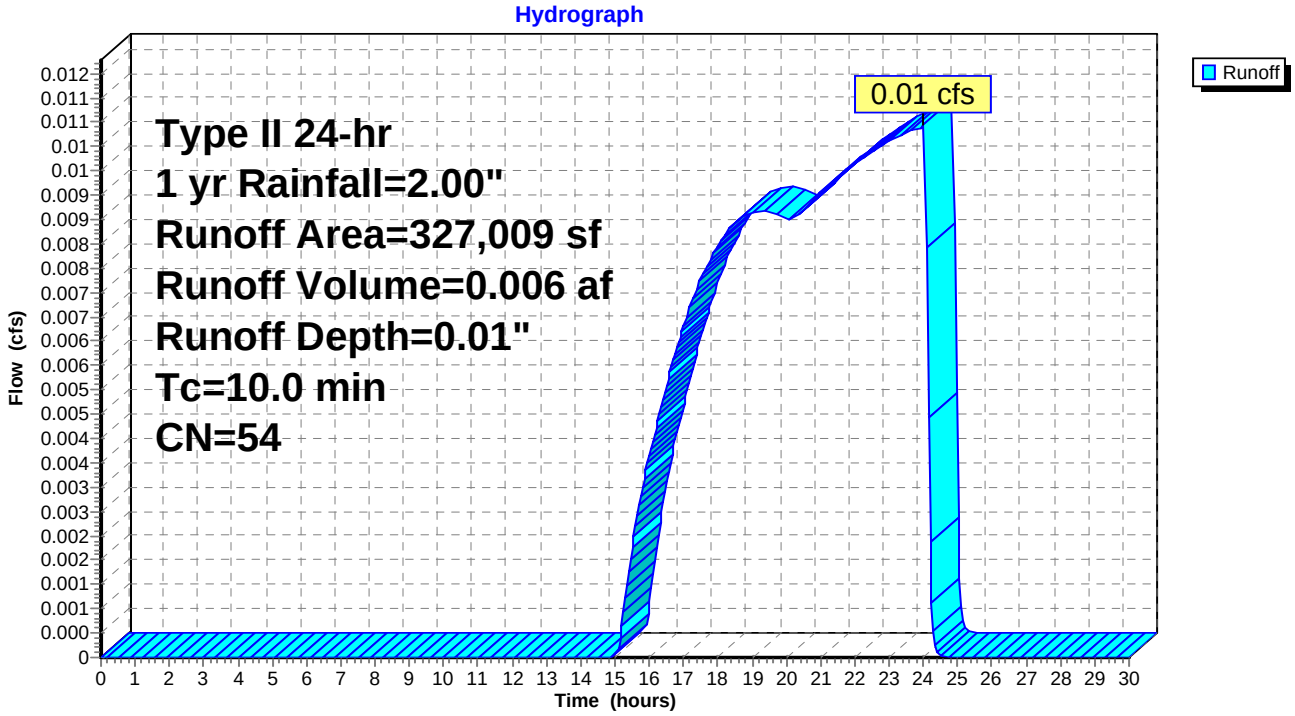
Runoff = 0.01 cfs @ 24.00 hrs, Volume= 0.006 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
327,009	54	1/2 acre lots, 25% imp, HSG A
245,257		75.00% Pervious Area
81,752		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 36S: GELNWOOD - RES



Summary for Subcatchment 37S: TANGLEWOOD SEGMENT 1 - RES

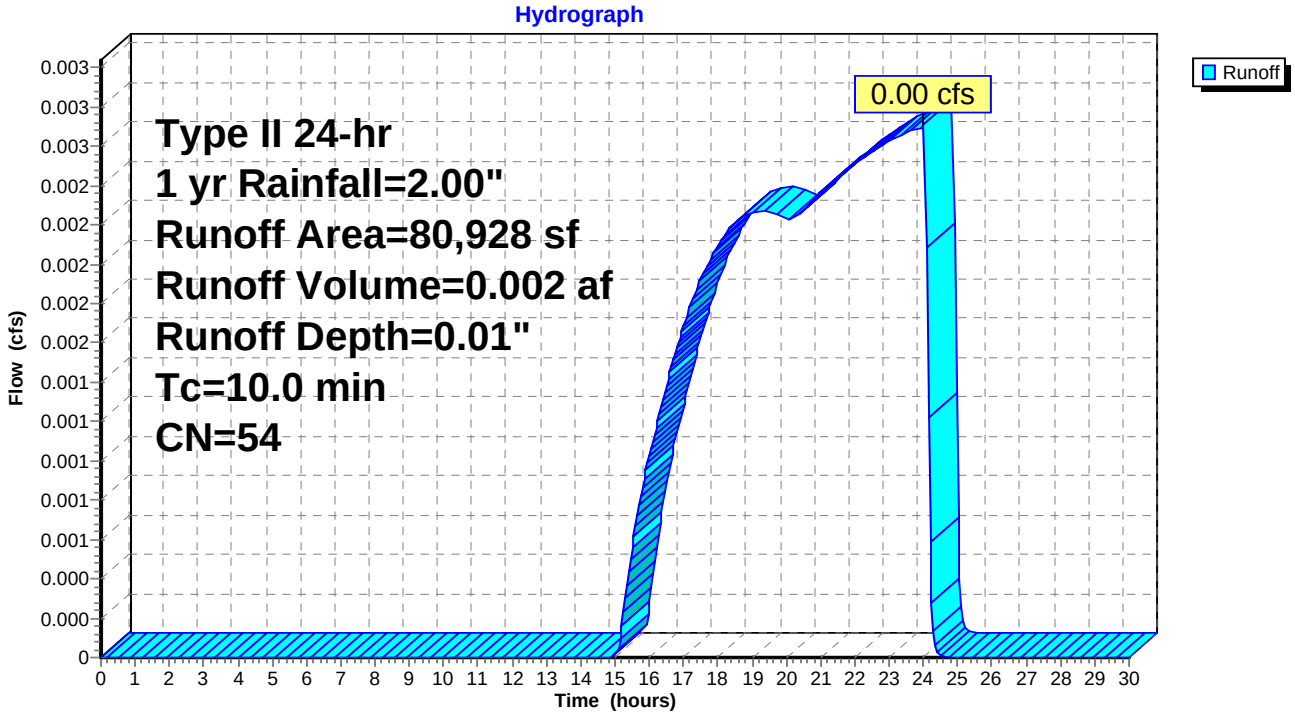
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.002 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
80,928	54	1/2 acre lots, 25% imp, HSG A
60,696		75.00% Pervious Area
20,232		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 37S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 38S: TANGLEWOOD SEGMENT 1 - ROADS

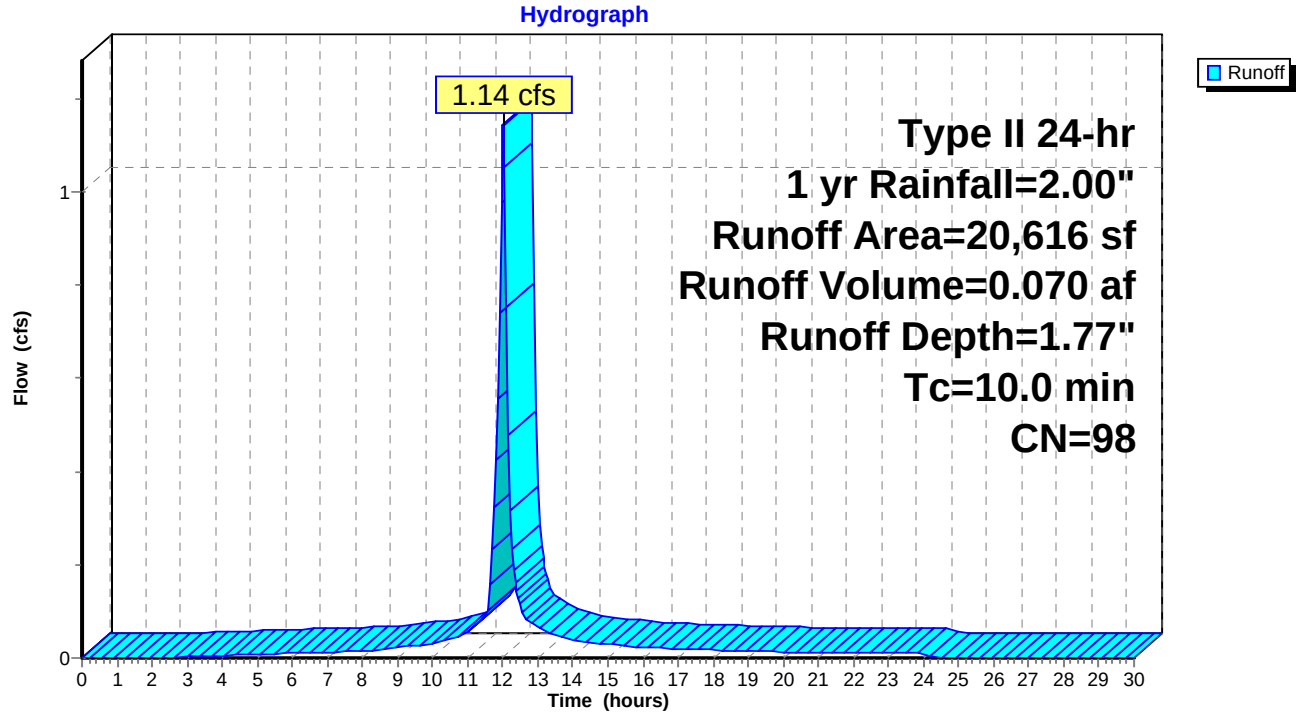
Runoff = 1.14 cfs @ 12.01 hrs, Volume= 0.070 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
20,616	98	Paved roads w/curbs & sewers, HSG A
20,616		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 38S: TANGLEWOOD SEGMENT 1 - ROADS



Summary for Pond 15P: CATCH BASIN

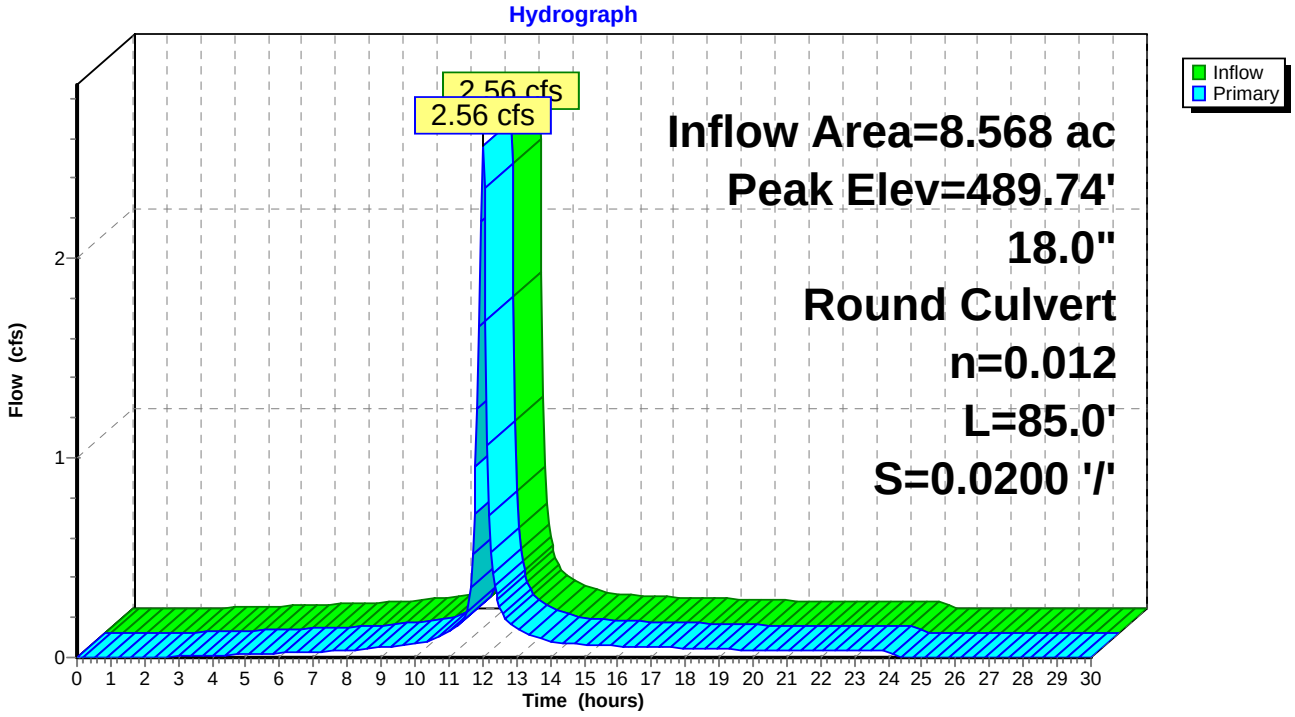
Inflow Area = 8.568 ac, 34.29% Impervious, Inflow Depth = 0.23" for 1 yr event
Inflow = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af
Outflow = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af, Atten= 0%, Lag= 0.0 min
Primary = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.74' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=2.53 cfs @ 12.01 hrs HW=489.74' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.53 cfs @ 2.92 fps)

Pond 15P: CATCH BASIN



Summary for Pond 16P: CATCH BASIN

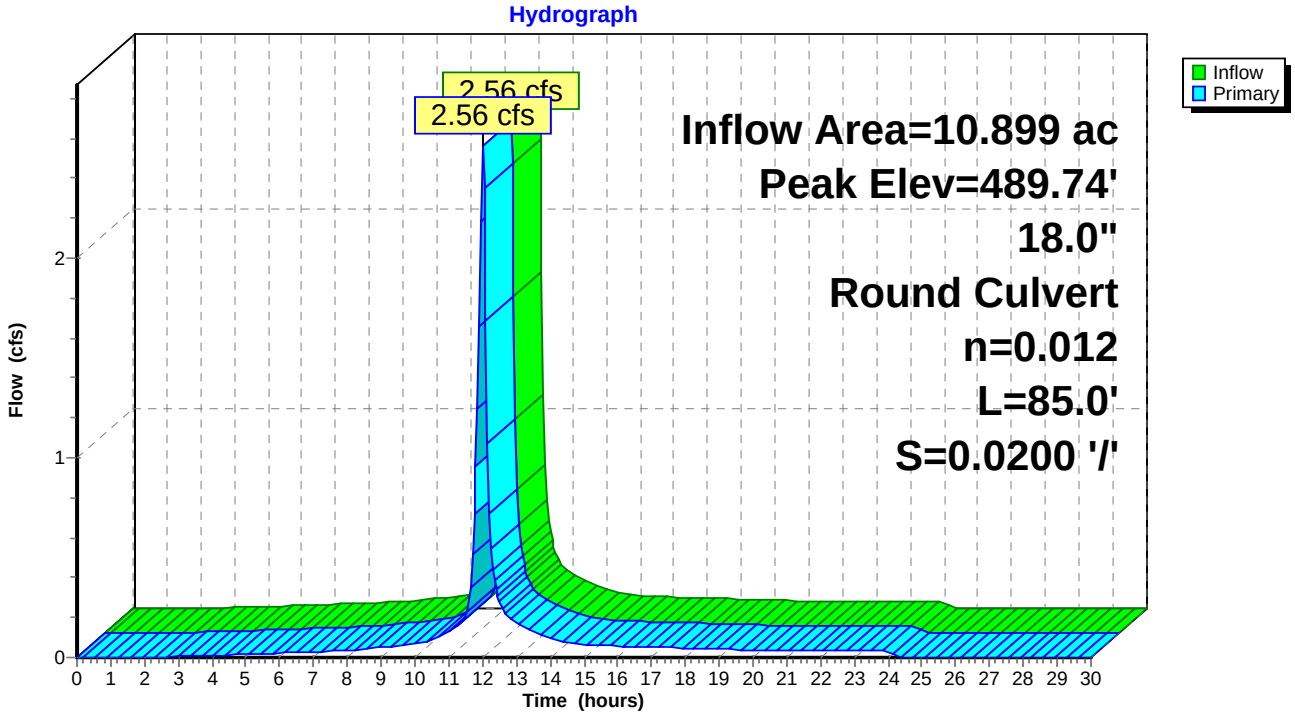
Inflow Area = 10.899 ac, 35.56% Impervious, Inflow Depth = 0.18" for 1 yr event
Inflow = 2.56 cfs @ 12.01 hrs, Volume= 0.167 af
Outflow = 2.56 cfs @ 12.01 hrs, Volume= 0.167 af, Atten= 0%, Lag= 0.0 min
Primary = 2.56 cfs @ 12.01 hrs, Volume= 0.167 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.74' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=2.53 cfs @ 12.01 hrs HW=489.74' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.53 cfs @ 2.92 fps)

Pond 16P: CATCH BASIN



Summary for Pond 18P: CATCH BASIN

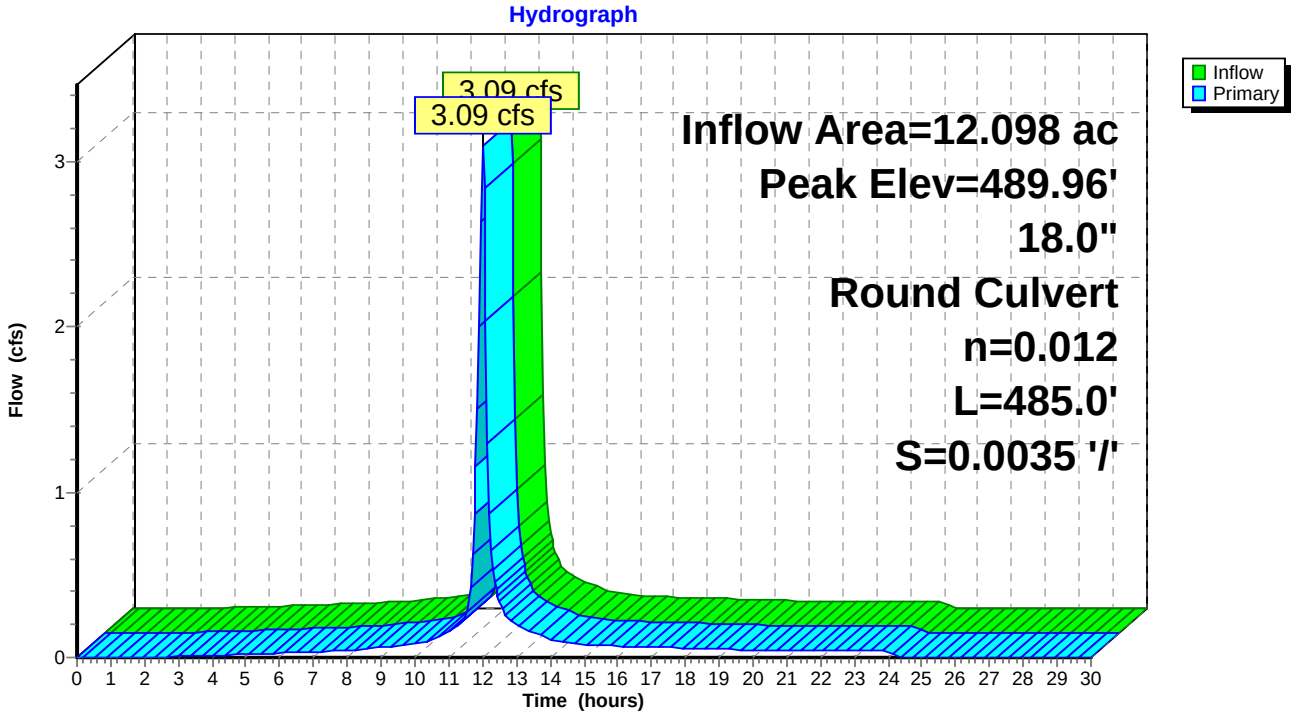
Inflow Area = 12.098 ac, 35.87% Impervious, Inflow Depth = 0.20" for 1 yr event
Inflow = 3.09 cfs @ 12.01 hrs, Volume= 0.200 af
Outflow = 3.09 cfs @ 12.01 hrs, Volume= 0.200 af, Atten= 0%, Lag= 0.0 min
Primary = 3.09 cfs @ 12.01 hrs, Volume= 0.200 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.96' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 485.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0035 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=3.05 cfs @ 12.01 hrs HW=489.96' (Free Discharge)
└**1=Culvert** (Barrel Controls 3.05 cfs @ 3.65 fps)

Pond 18P: CATCH BASIN



Summary for Pond 20P: CATCH BASIN

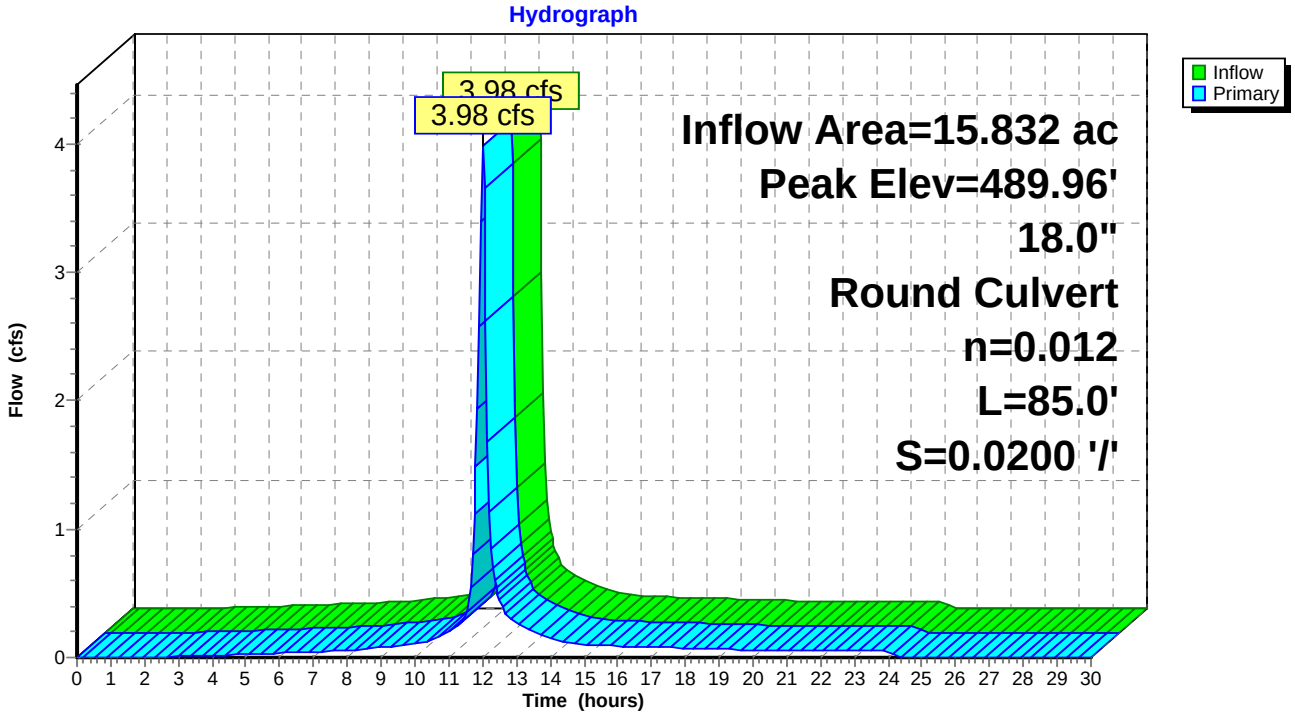
Inflow Area = 15.832 ac, 36.01% Impervious, Inflow Depth = 0.20" for 1 yr event
Inflow = 3.98 cfs @ 12.01 hrs, Volume= 0.259 af
Outflow = 3.98 cfs @ 12.01 hrs, Volume= 0.259 af, Atten= 0%, Lag= 0.0 min
Primary = 3.98 cfs @ 12.01 hrs, Volume= 0.259 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.96' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=3.93 cfs @ 12.01 hrs HW=489.95' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.93 cfs @ 3.32 fps)

Pond 20P: CATCH BASIN



Summary for Pond 23P: CATCH BASIN

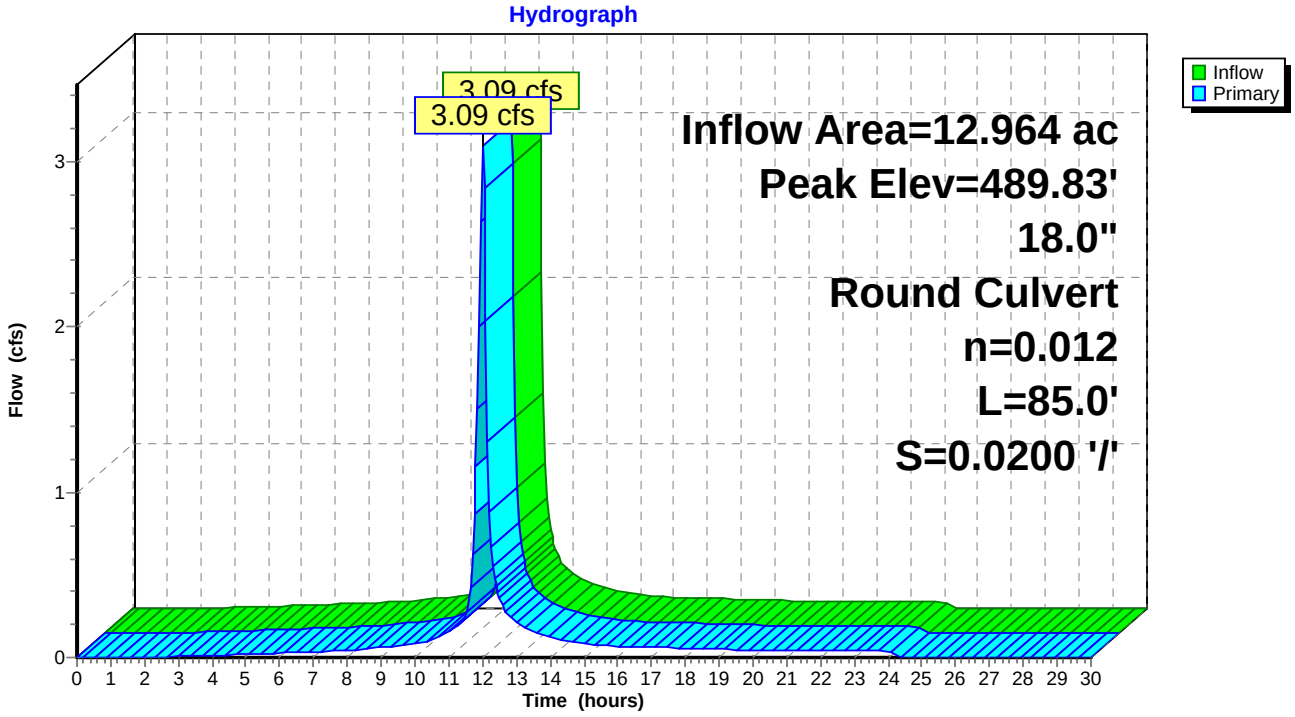
Inflow Area = 12.964 ac, 36.32% Impervious, Inflow Depth = 0.19" for 1 yr event
Inflow = 3.09 cfs @ 12.01 hrs, Volume= 0.203 af
Outflow = 3.09 cfs @ 12.01 hrs, Volume= 0.203 af, Atten= 0%, Lag= 0.0 min
Primary = 3.09 cfs @ 12.01 hrs, Volume= 0.203 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.83' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=3.05 cfs @ 12.01 hrs HW=489.82' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.05 cfs @ 3.08 fps)

Pond 23P: CATCH BASIN



Summary for Pond 26P: CATCH BASIN

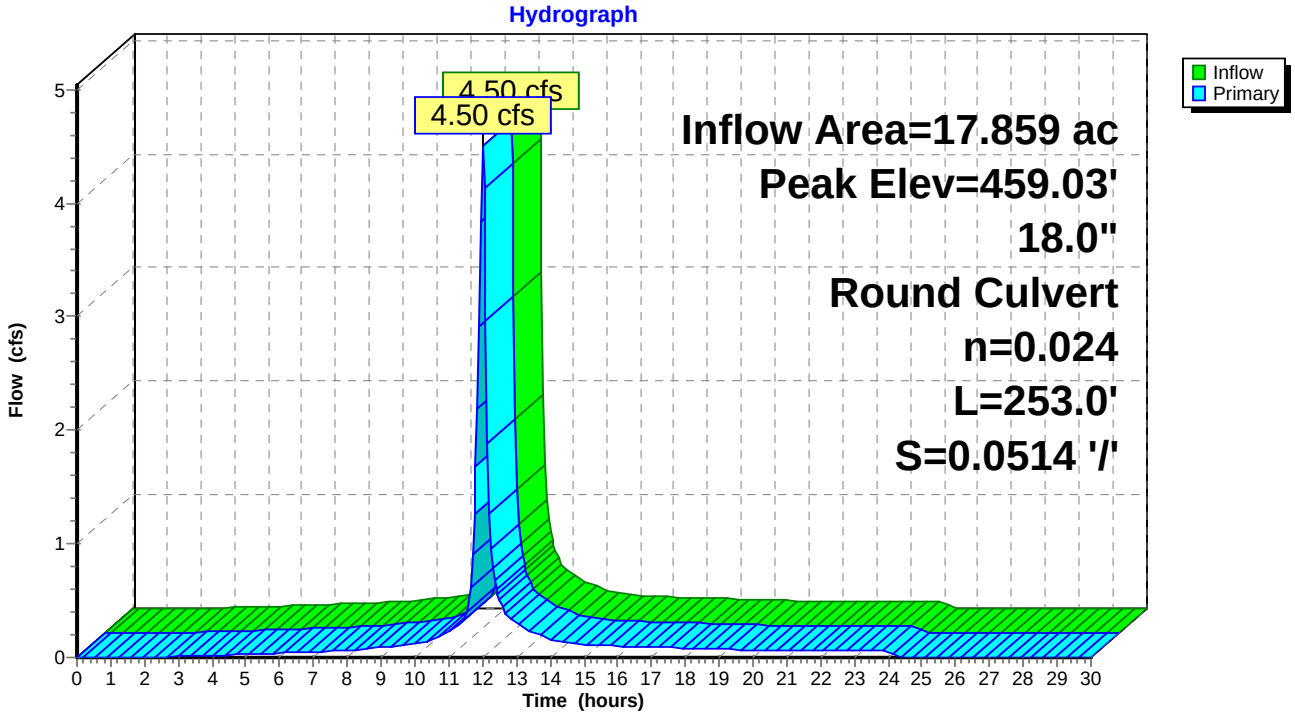
Inflow Area = 17.859 ac, 35.66% Impervious, Inflow Depth = 0.20" for 1 yr event
Inflow = 4.50 cfs @ 12.01 hrs, Volume= 0.292 af
Outflow = 4.50 cfs @ 12.01 hrs, Volume= 0.292 af, Atten= 0%, Lag= 0.0 min
Primary = 4.50 cfs @ 12.01 hrs, Volume= 0.292 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 459.03' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	458.00'	**18.0" Round Culvert** L= 253.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 458.00' / 445.00' S= 0.0514 '/' Cc= 0.900 n= 0.024, Flow Area= 1.77 sf

Primary OutFlow Max=4.44 cfs @ 12.01 hrs HW=459.03' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.44 cfs @ 3.45 fps)

Pond 26P: CATCH BASIN



Summary for Pond 27P: CATCH BASIN

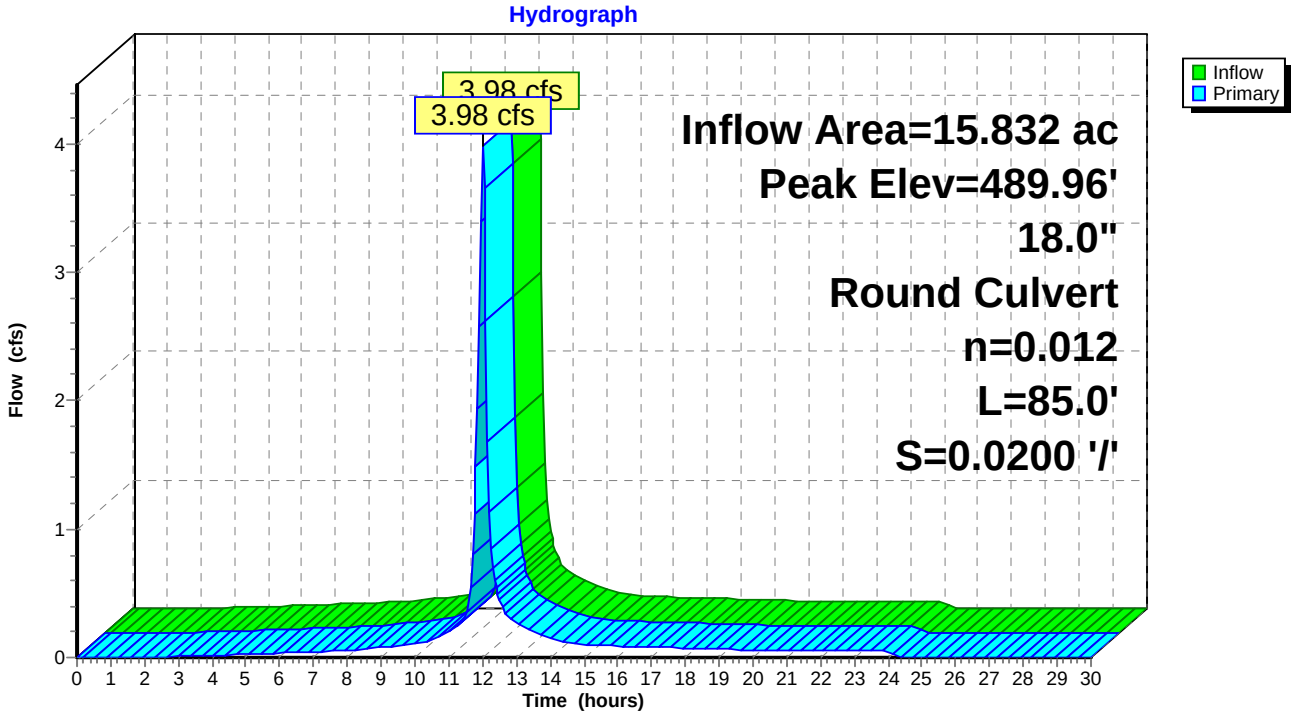
Inflow Area = 15.832 ac, 36.01% Impervious, Inflow Depth = 0.20" for 1 yr event
Inflow = 3.98 cfs @ 12.01 hrs, Volume= 0.259 af
Outflow = 3.98 cfs @ 12.01 hrs, Volume= 0.259 af, Atten= 0%, Lag= 0.0 min
Primary = 3.98 cfs @ 12.01 hrs, Volume= 0.259 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.96' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=3.93 cfs @ 12.01 hrs HW=489.95' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.93 cfs @ 3.32 fps)

Pond 27P: CATCH BASIN



Summary for Pond 39P: SUBSURFACE STORAGE

Inflow Area = 0.297 ac, 51.84% Impervious, Inflow Depth = 0.64" for 1 yr event
Inflow = 0.26 cfs @ 12.01 hrs, Volume= 0.016 af
Outflow = 0.05 cfs @ 12.25 hrs, Volume= 0.016 af, Atten= 79%, Lag= 14.8 min
Discarded = 0.01 cfs @ 12.25 hrs, Volume= 0.012 af
Primary = 0.04 cfs @ 12.25 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 450.76' @ 12.25 hrs Surf.Area= 0.021 ac Storage= 0.006 af

Plug-Flow detention time= 127.5 min calculated for 0.016 af (100% of inflow)
Center-of-Mass det. time= 127.4 min (899.4 - 772.0)

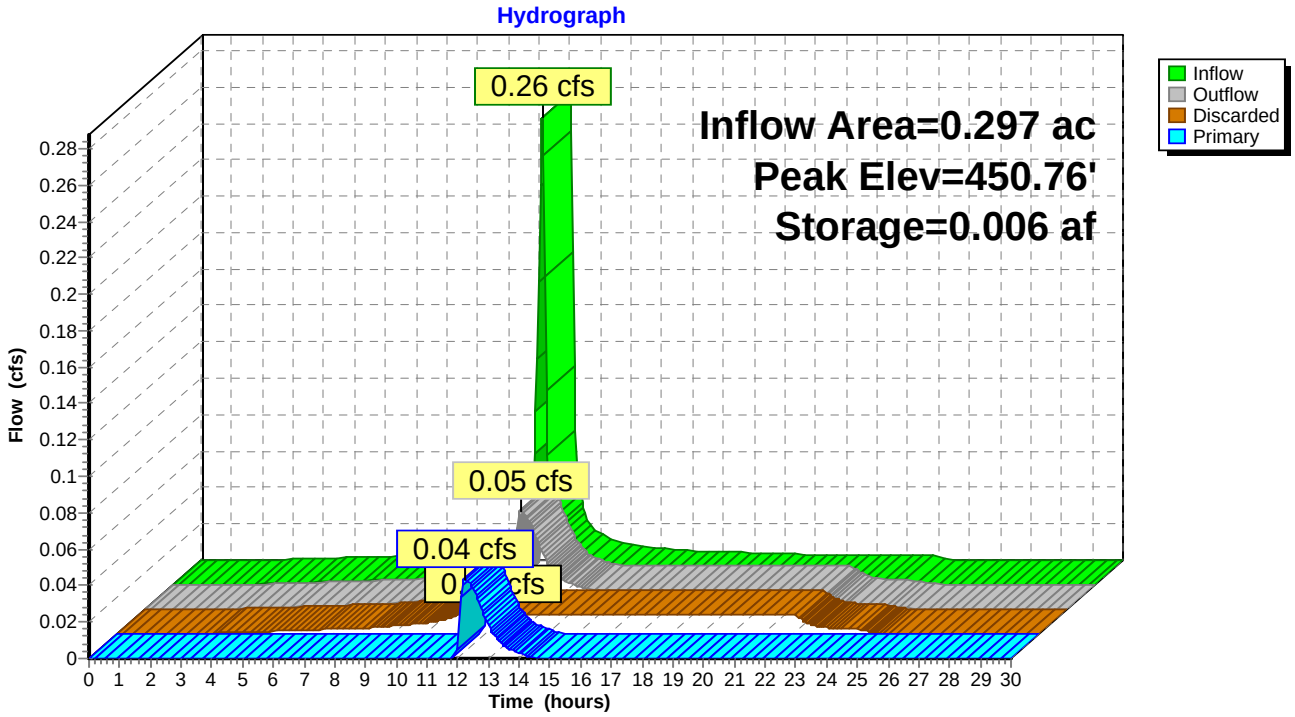
Volume	Invert	Avail.Storage	Storage Description
#1	450.00'	0.033 af	**5.00'W x 180.00'L x 4.00'H Prismatoid** 0.083 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	450.50'	**2.0" Vert. Orifice/Grate** C= 0.600
#2	Discarded	450.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 10.00'

Discarded OutFlow Max=0.01 cfs @ 12.25 hrs HW=450.76' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.04 cfs @ 12.25 hrs HW=450.76' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.04 cfs @ 2.00 fps)

Pond 39P: SUBSURFACE STORAGE



Summary for Pond 40P: SUBSURFACE STORAGE

Inflow Area = 0.866 ac, 42.48% Impervious, Inflow Depth = 0.42" for 1 yr event
Inflow = 0.49 cfs @ 12.01 hrs, Volume= 0.030 af
Outflow = 0.05 cfs @ 12.50 hrs, Volume= 0.030 af, Atten= 90%, Lag= 29.5 min
Discarded = 0.03 cfs @ 12.50 hrs, Volume= 0.028 af
Primary = 0.02 cfs @ 12.50 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 450.64' @ 12.50 hrs Surf.Area= 0.051 ac Storage= 0.013 af

Plug-Flow detention time= 148.4 min calculated for 0.030 af (100% of inflow)
Center-of-Mass det. time= 148.2 min (923.9 - 775.7)

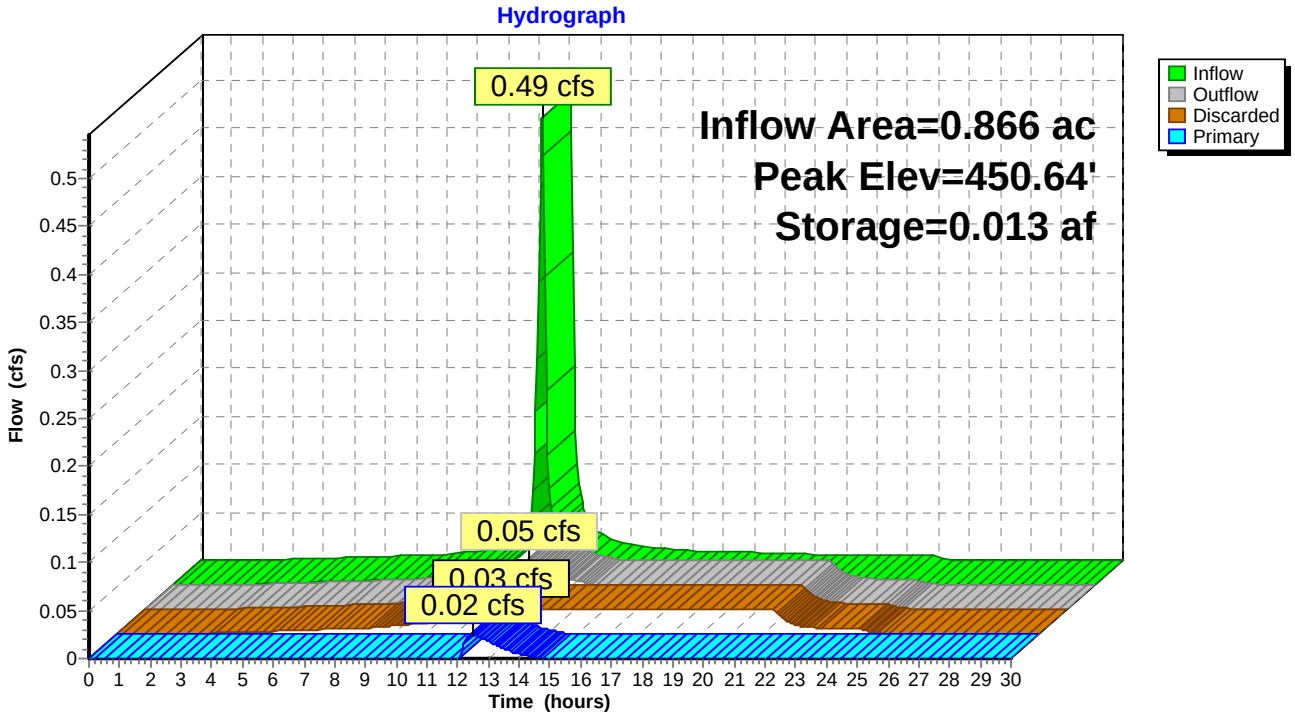
Volume	Invert	Avail.Storage	Storage Description
#1	450.00'	0.081 af	**5.00'W x 440.00'L x 4.00'H Prismatoid** 0.202 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	450.50'	**2.0" Vert. Orifice/Grate** C= 0.600
#2	Discarded	450.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 10.00'

Discarded OutFlow Max=0.03 cfs @ 12.50 hrs HW=450.64' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=0.02 cfs @ 12.50 hrs HW=450.64' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 1.26 fps)

Pond 40P: SUBSURFACE STORAGE



Summary for Pond 41P: SUBSURFACE STORAGE

Inflow Area = 2.331 ac, 40.23% Impervious, Inflow Depth = 0.37" for 1 yr event
Inflow = 1.14 cfs @ 12.01 hrs, Volume= 0.072 af
Outflow = 0.09 cfs @ 12.66 hrs, Volume= 0.072 af, Atten= 92%, Lag= 39.1 min
Discarded = 0.06 cfs @ 12.66 hrs, Volume= 0.068 af
Primary = 0.03 cfs @ 12.66 hrs, Volume= 0.004 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 450.64' @ 12.66 hrs Surf.Area= 0.121 ac Storage= 0.031 af

Plug-Flow detention time= 161.7 min calculated for 0.071 af (100% of inflow)
Center-of-Mass det. time= 161.5 min (938.7 - 777.2)

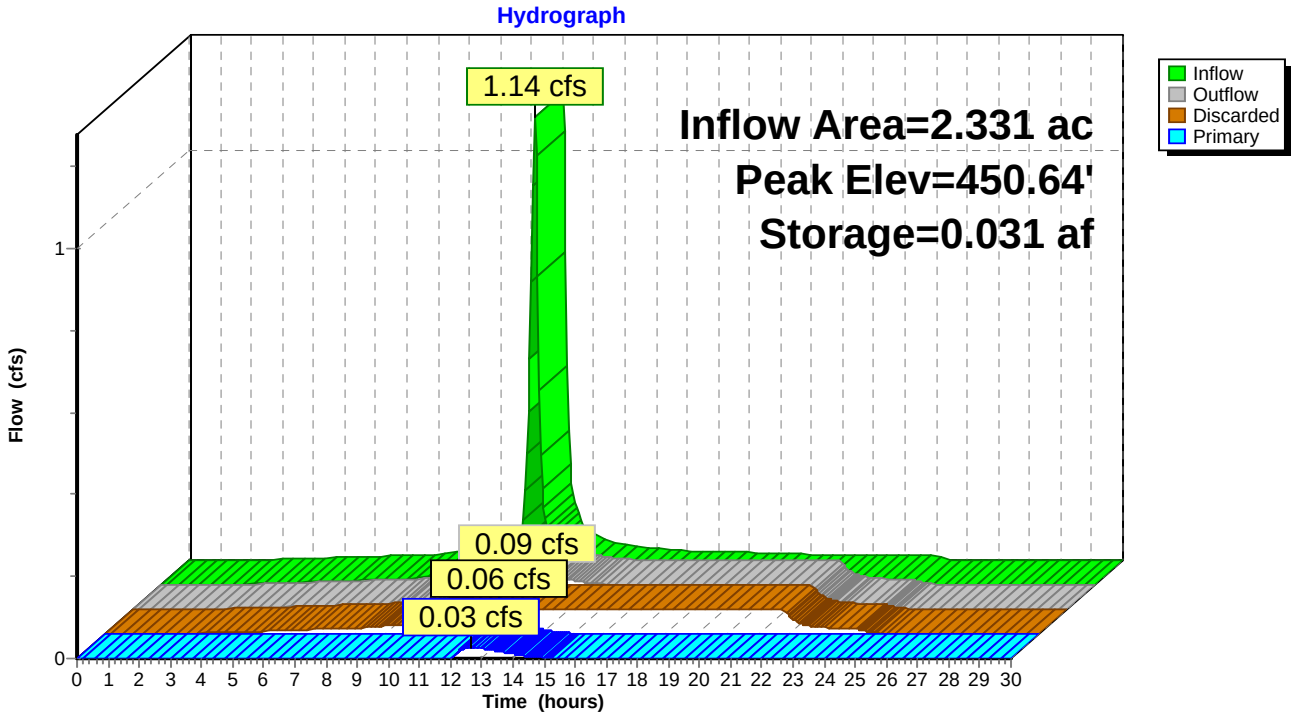
Volume	Invert	Avail.Storage	Storage Description
#1	450.00'	0.193 af	**5.00'W x 1,050.00'L x 4.00'H Prismatoid** 0.482 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	450.50'	**2.0" Vert. Orifice/Grate** C= 0.600
#2	Discarded	450.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 10.00'

Discarded OutFlow Max=0.06 cfs @ 12.66 hrs HW=450.64' (Free Discharge)
└**2=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=0.03 cfs @ 12.66 hrs HW=450.64' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 1.29 fps)

Pond 41P: SUBSURFACE STORAGE

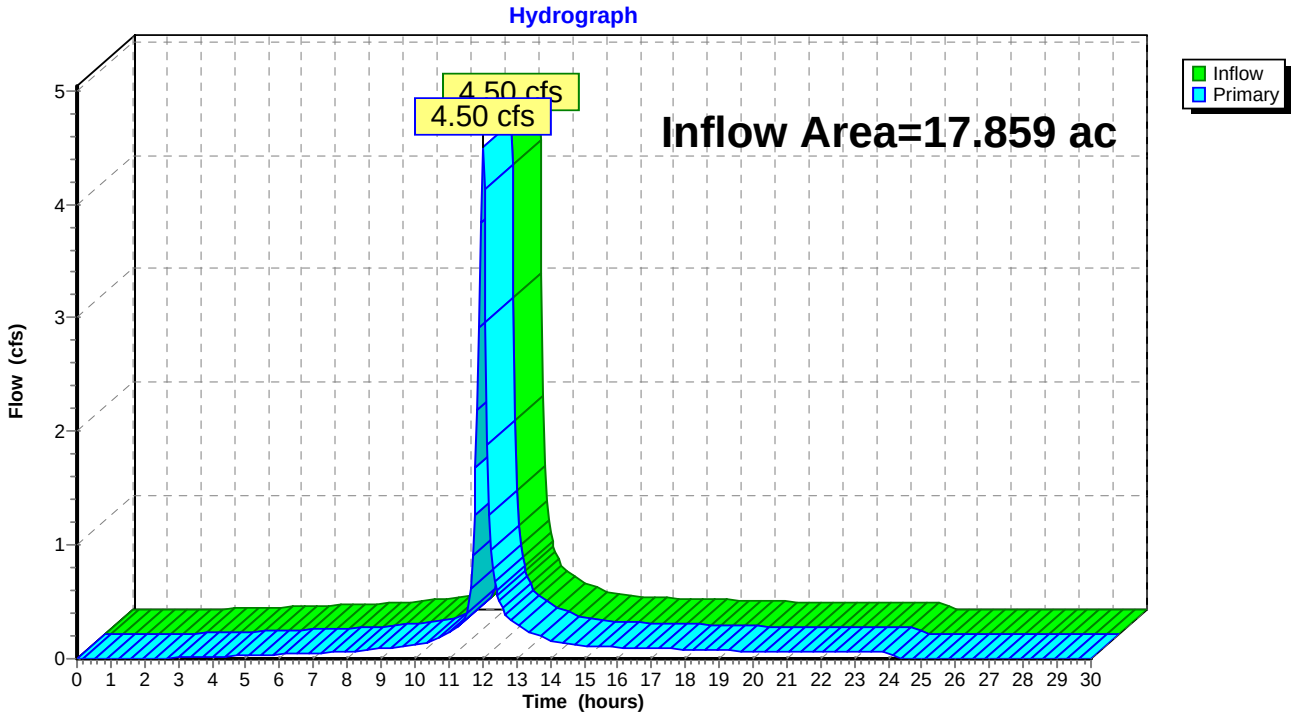


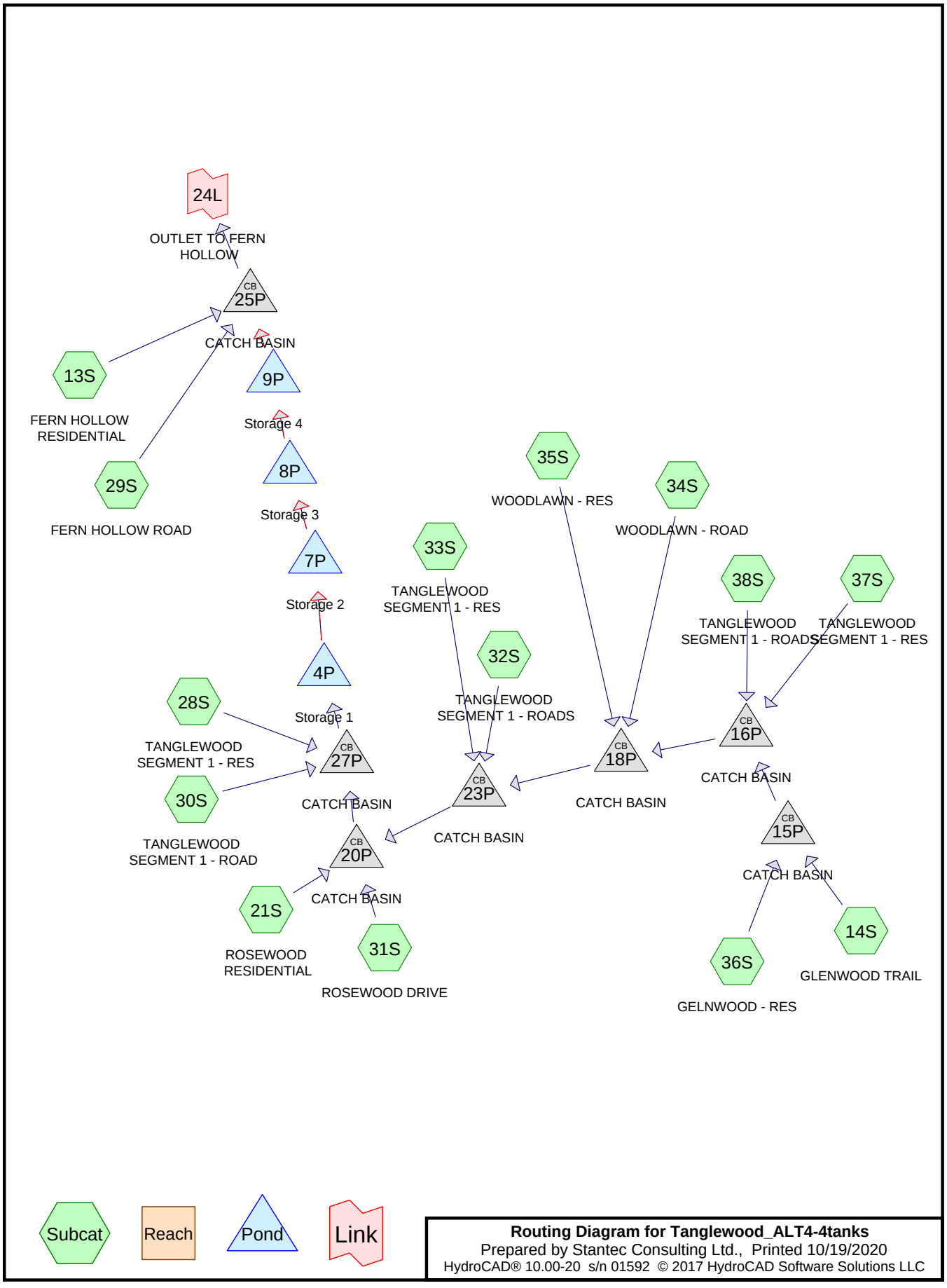
Summary for Link 24L: OUTLET TO FERN HOLLOW

Inflow Area = 17.859 ac, 35.66% Impervious, Inflow Depth = 0.20" for 1 yr event
Inflow = 4.50 cfs @ 12.01 hrs, Volume= 0.292 af
Primary = 4.50 cfs @ 12.01 hrs, Volume= 0.292 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link 24L: OUTLET TO FERN HOLLOW





Routing Diagram for Tanglewood_ALT4-4tanks
Prepared by Stantec Consulting Ltd., Printed 10/19/2020
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Summary for Subcatchment 13S: FERN HOLLOW RESIDENTIAL

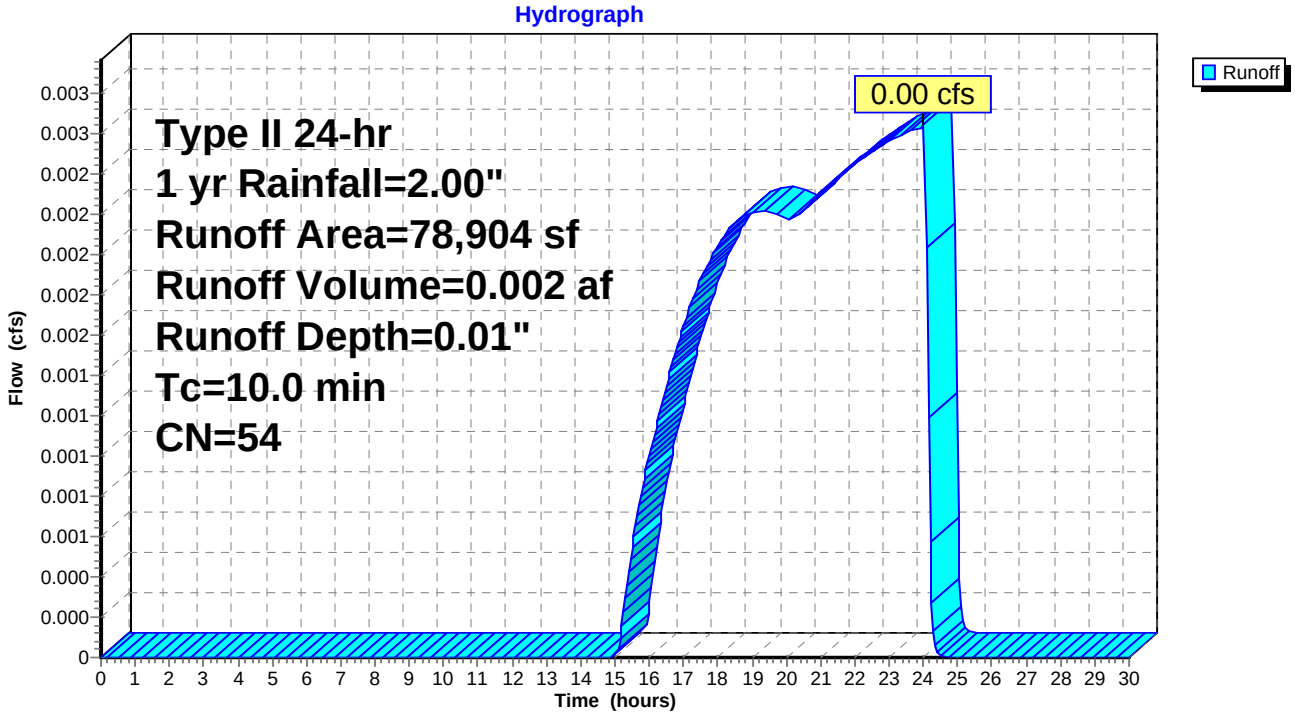
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.002 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
78,904	54	1/2 acre lots, 25% imp, HSG A
59,178		75.00% Pervious Area
19,726		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 13S: FERN HOLLOW RESIDENTIAL



Summary for Subcatchment 14S: GLENWOOD TRAIL

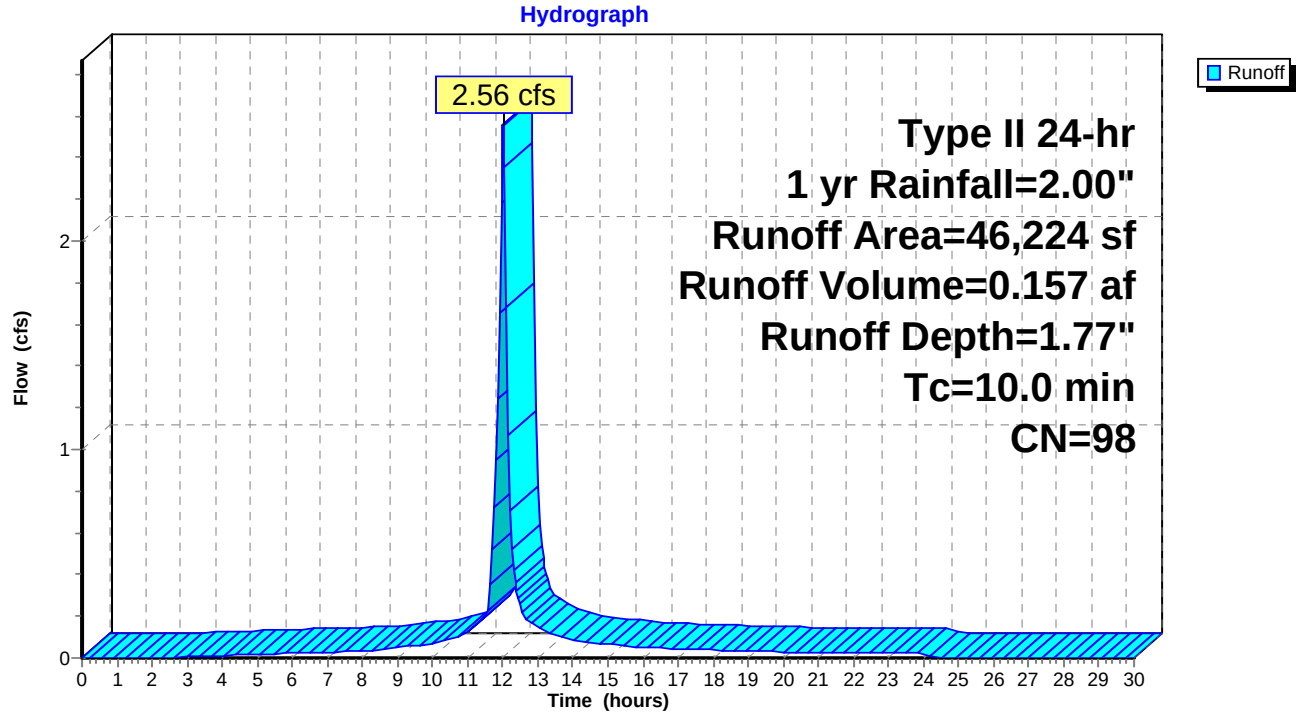
Runoff = 2.56 cfs @ 12.01 hrs, Volume= 0.157 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
46,224	98	Paved roads w/curbs & sewers, HSG A
46,224		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 14S: GLENWOOD TRAIL



Summary for Subcatchment 21S: ROSEWOOD RESIDENTIAL

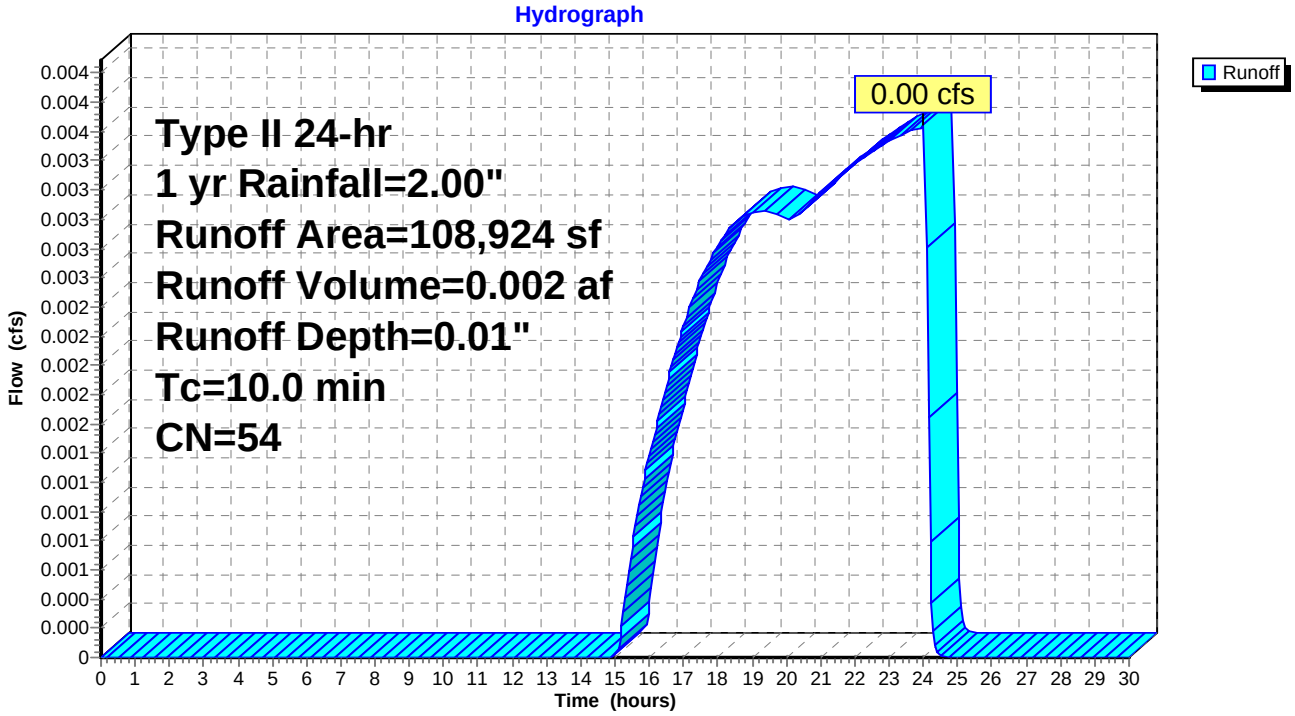
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.002 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
108,924	54	1/2 acre lots, 25% imp, HSG A
81,693		75.00% Pervious Area
27,231		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 21S: ROSEWOOD RESIDENTIAL



Summary for Subcatchment 28S: TANGLEWOOD SEGMENT 1 - RES

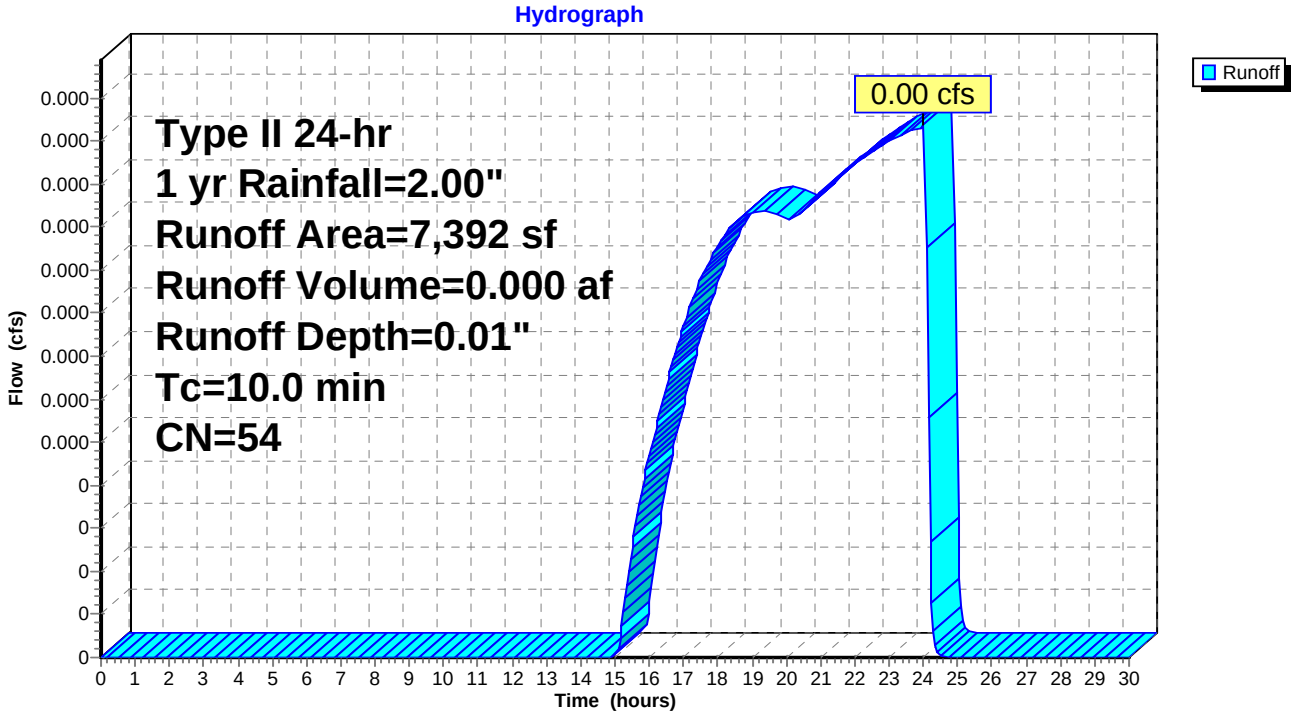
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
7,392	54	1/2 acre lots, 25% imp, HSG A
5,544		75.00% Pervious Area
1,848		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 28S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 29S: FERN HOLLOW ROAD

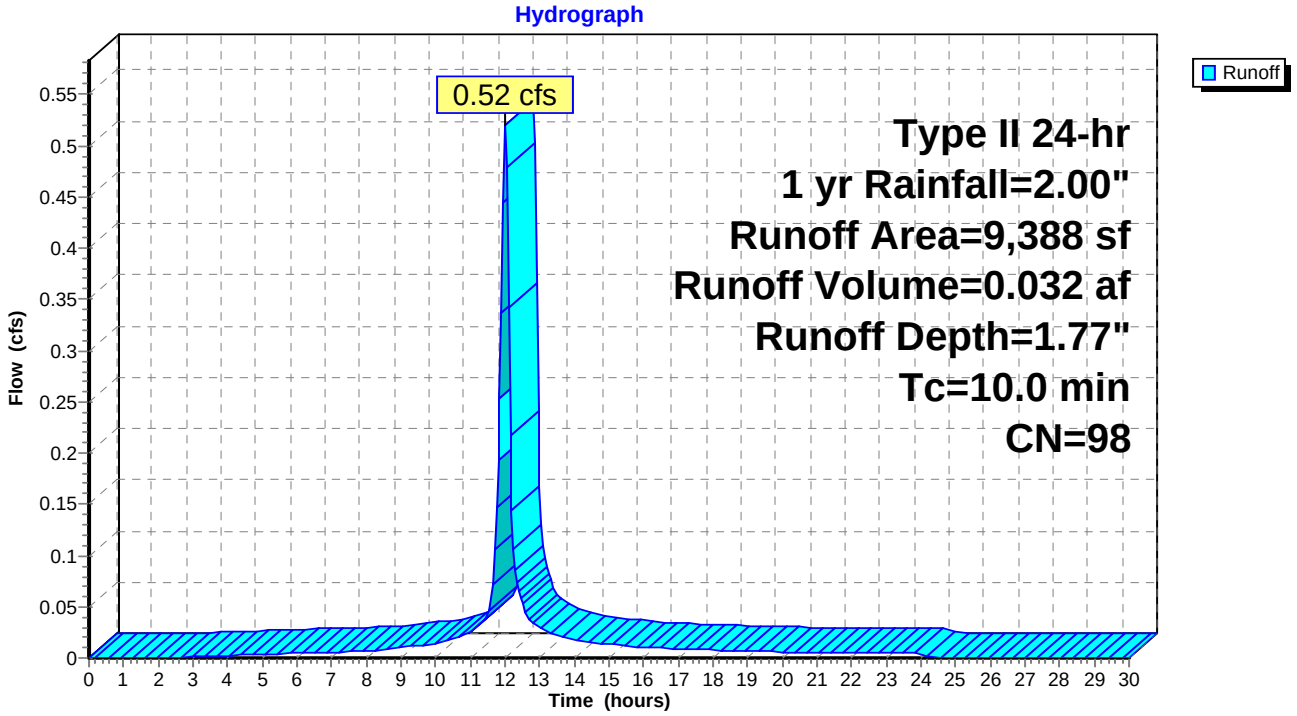
Runoff = 0.52 cfs @ 12.01 hrs, Volume= 0.032 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
9,388	98	Paved roads w/curbs & sewers, HSG A
9,388		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 29S: FERN HOLLOW ROAD



Summary for Subcatchment 30S: TANGLEWOOD SEGMENT 1 - ROAD

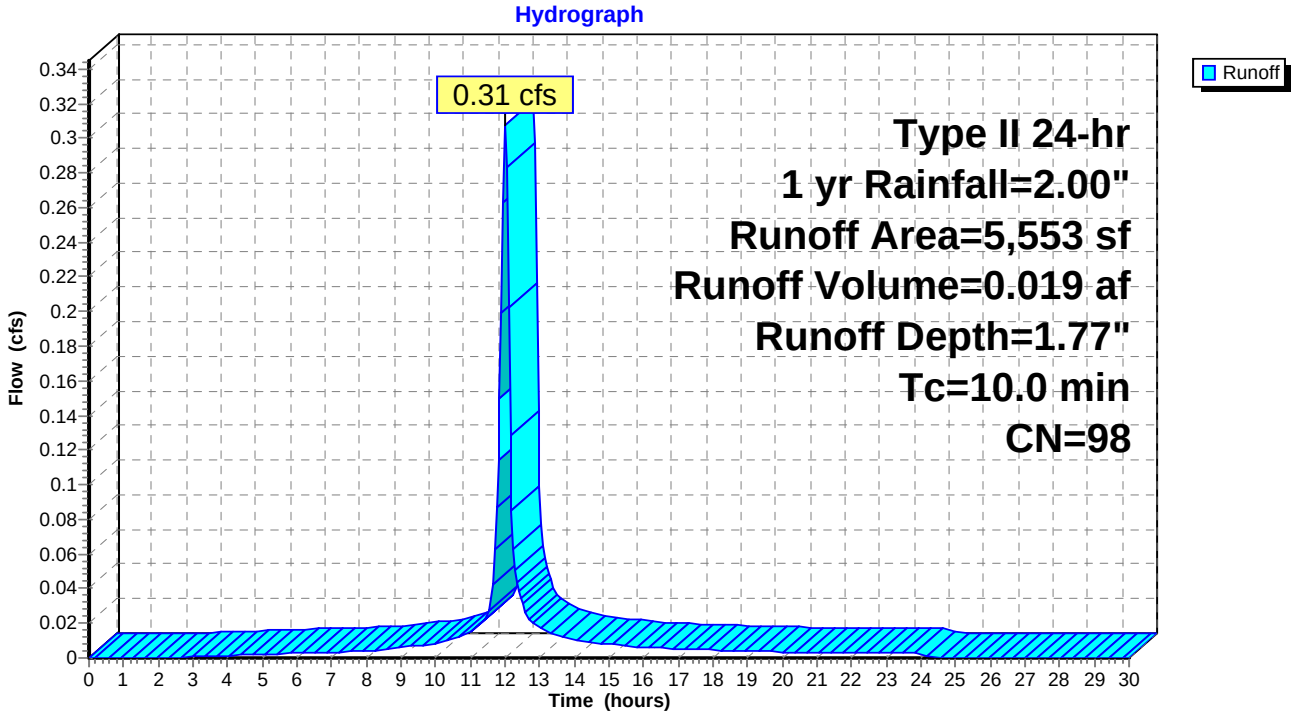
Runoff = 0.31 cfs @ 12.01 hrs, Volume= 0.019 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
5,553	98	Paved roads w/curbs & sewers, HSG A
5,553		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 30S: TANGLEWOOD SEGMENT 1 - ROAD



Summary for Subcatchment 31S: ROSEWOOD DRIVE

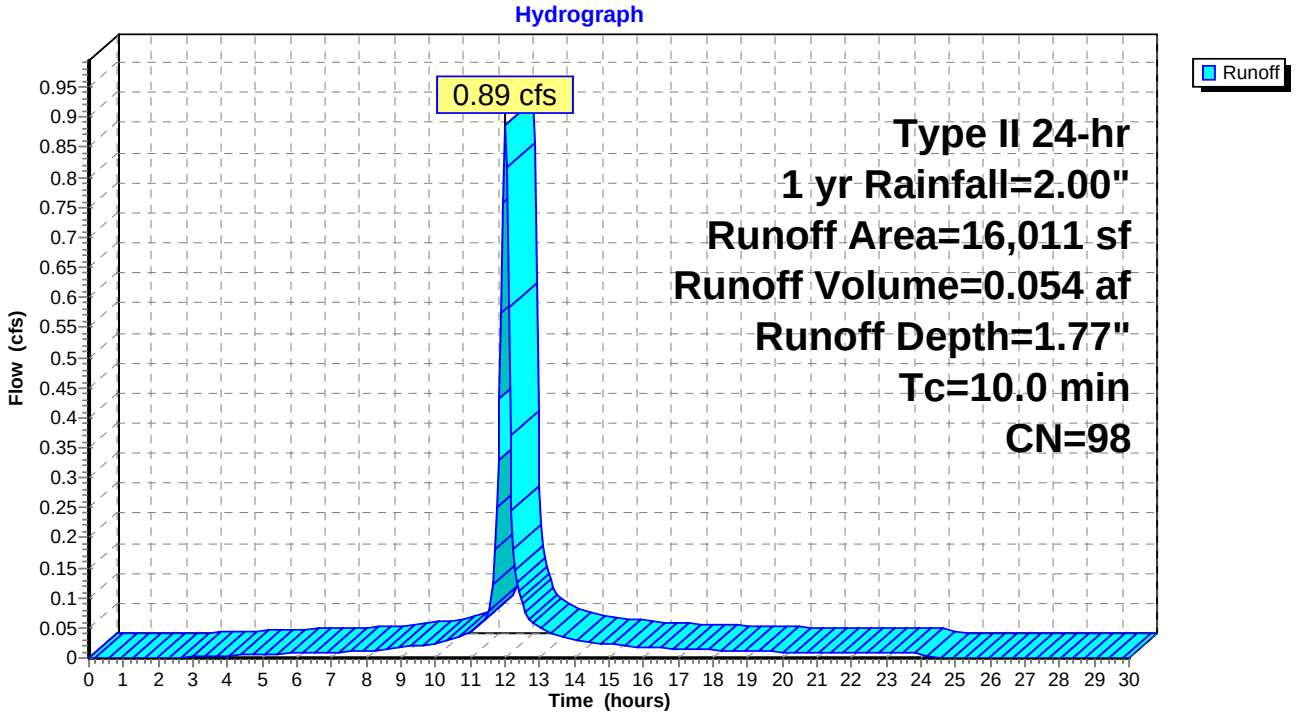
Runoff = 0.89 cfs @ 12.01 hrs, Volume= 0.054 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
16,011	98	Paved roads w/curbs & sewers, HSG A
16,011		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 31S: ROSEWOOD DRIVE



Summary for Subcatchment 32S: TANGLEWOOD SEGMENT 1 - ROADS

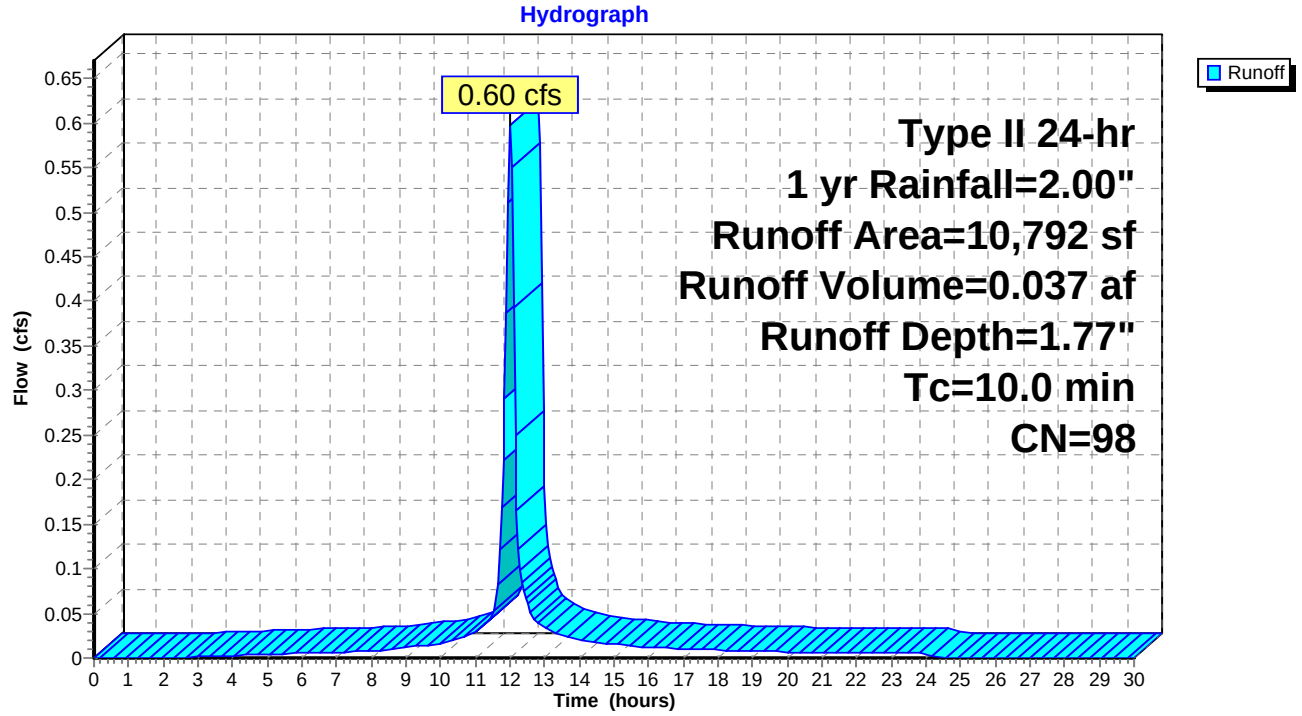
Runoff = 0.60 cfs @ 12.01 hrs, Volume= 0.037 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
10,792	98	Paved roads w/curbs & sewers, HSG A
10,792		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 32S: TANGLEWOOD SEGMENT 1 - ROADS



Summary for Subcatchment 33S: TANGLEWOOD SEGMENT 1 - RES

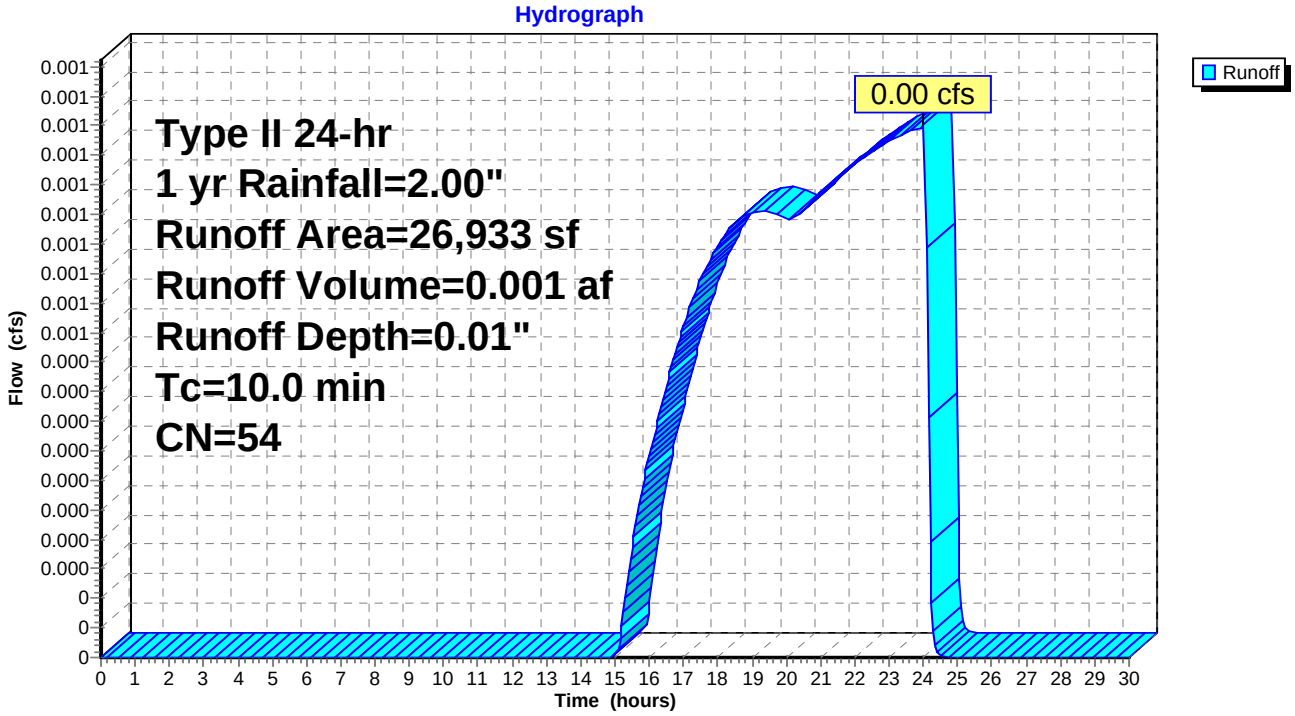
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
26,933	54	1/2 acre lots, 25% imp, HSG A
20,200		75.00% Pervious Area
6,733		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 33S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 34S: WOODLAWN - ROAD

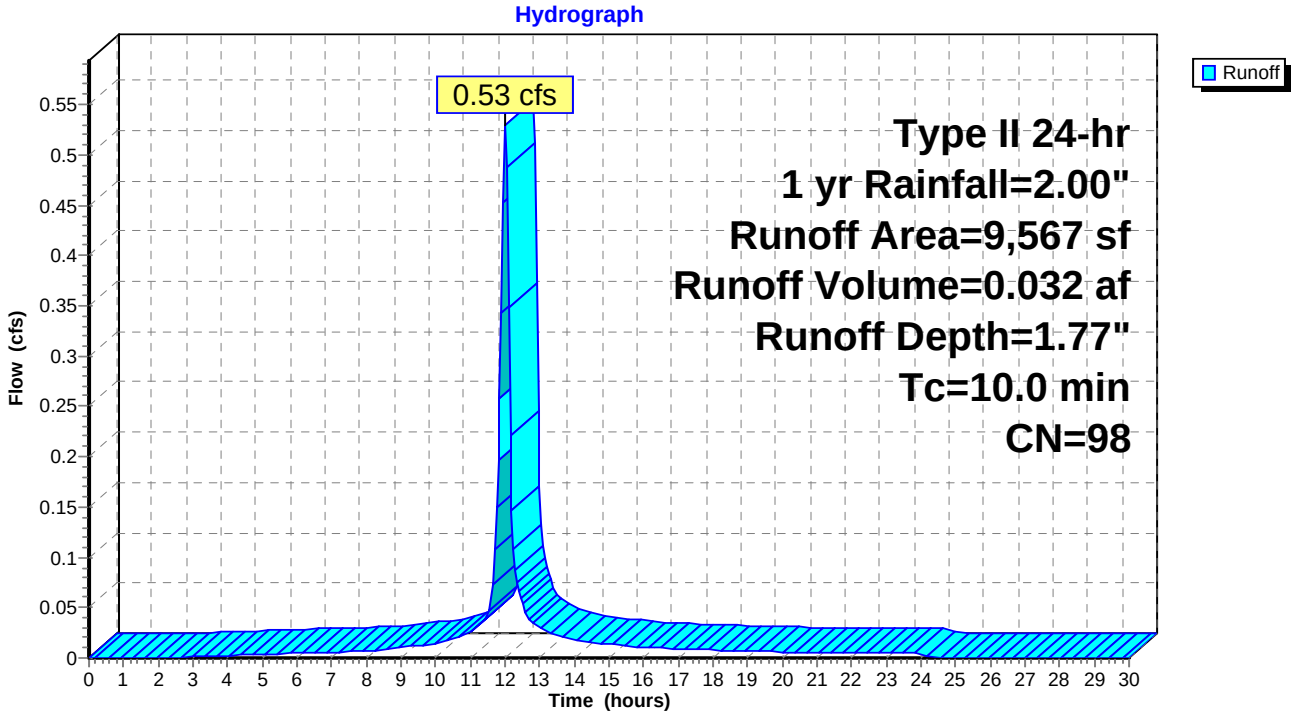
Runoff = 0.53 cfs @ 12.01 hrs, Volume= 0.032 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
9,567	98	Paved roads w/curbs & sewers, HSG A
9,567		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 34S: WOODLAWN - ROAD



Summary for Subcatchment 35S: WOODLAWN - RES

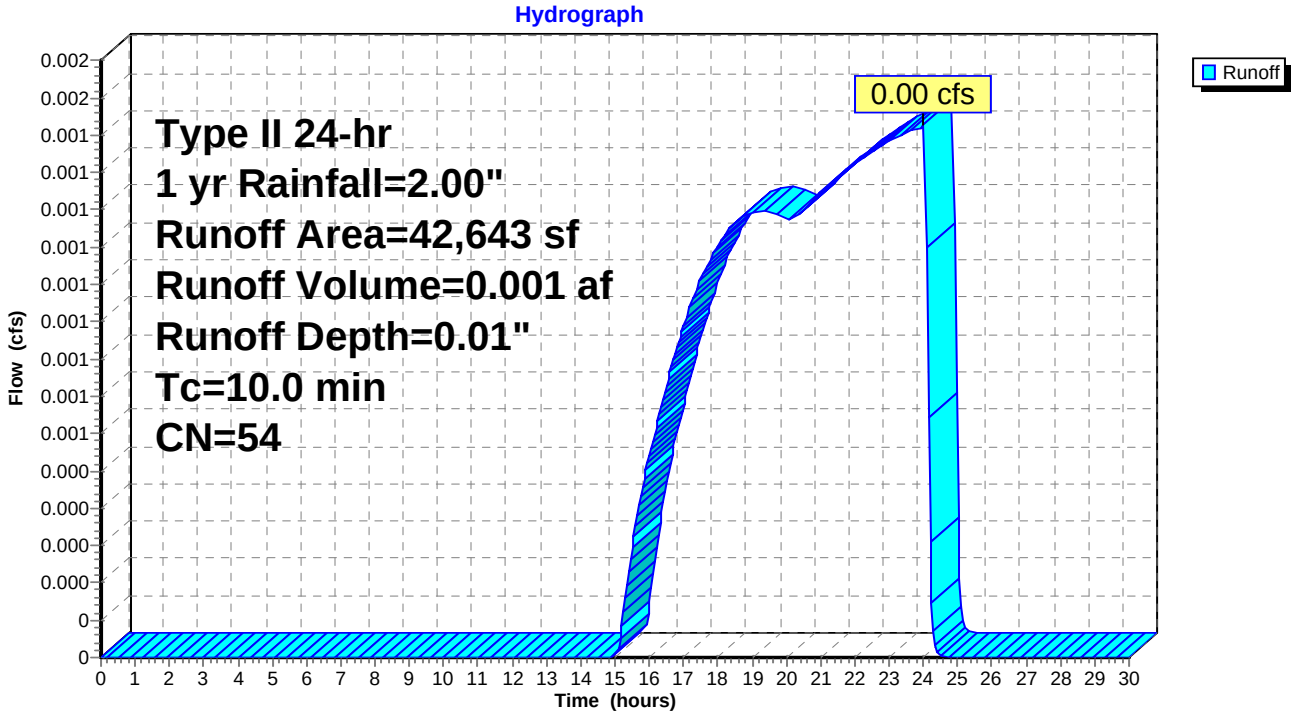
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
42,643	54	1/2 acre lots, 25% imp, HSG A
31,982		75.00% Pervious Area
10,661		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 35S: WOODLAWN - RES



Summary for Subcatchment 36S: GELNWOOD - RES

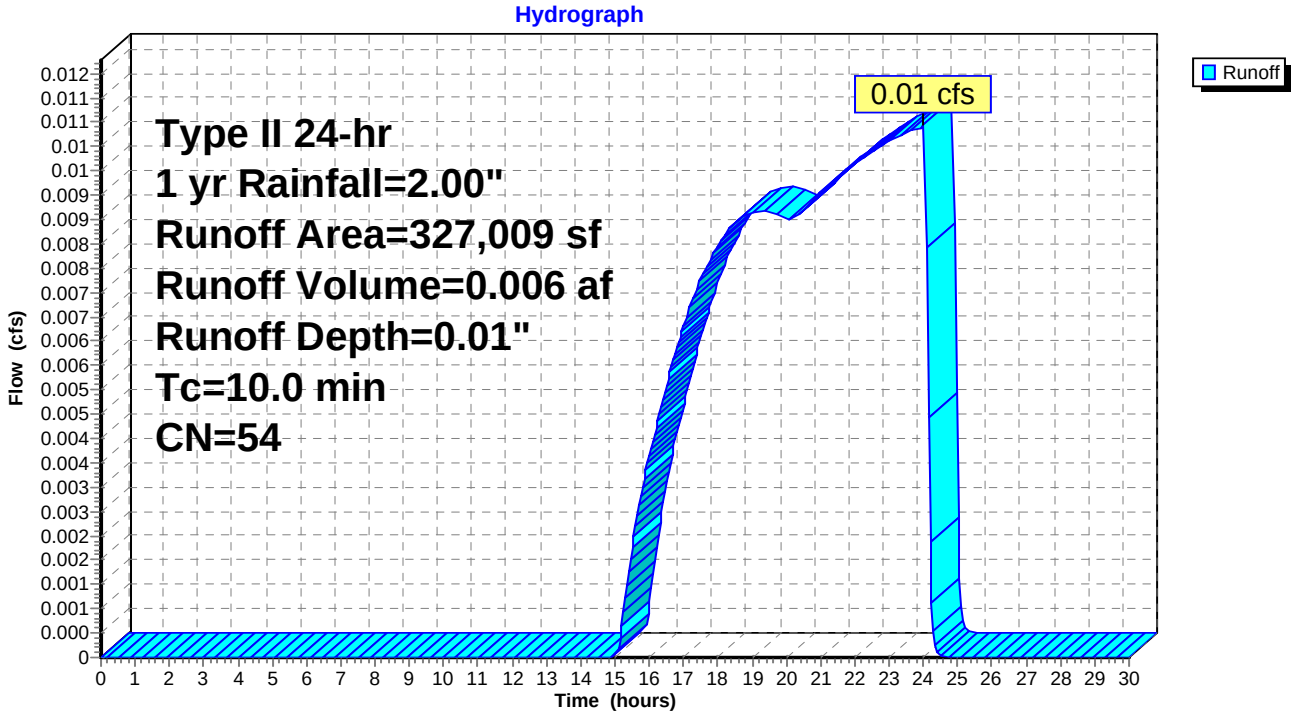
Runoff = 0.01 cfs @ 24.00 hrs, Volume= 0.006 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
327,009	54	1/2 acre lots, 25% imp, HSG A
245,257		75.00% Pervious Area
81,752		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 36S: GELNWOOD - RES



Summary for Subcatchment 37S: TANGLEWOOD SEGMENT 1 - RES

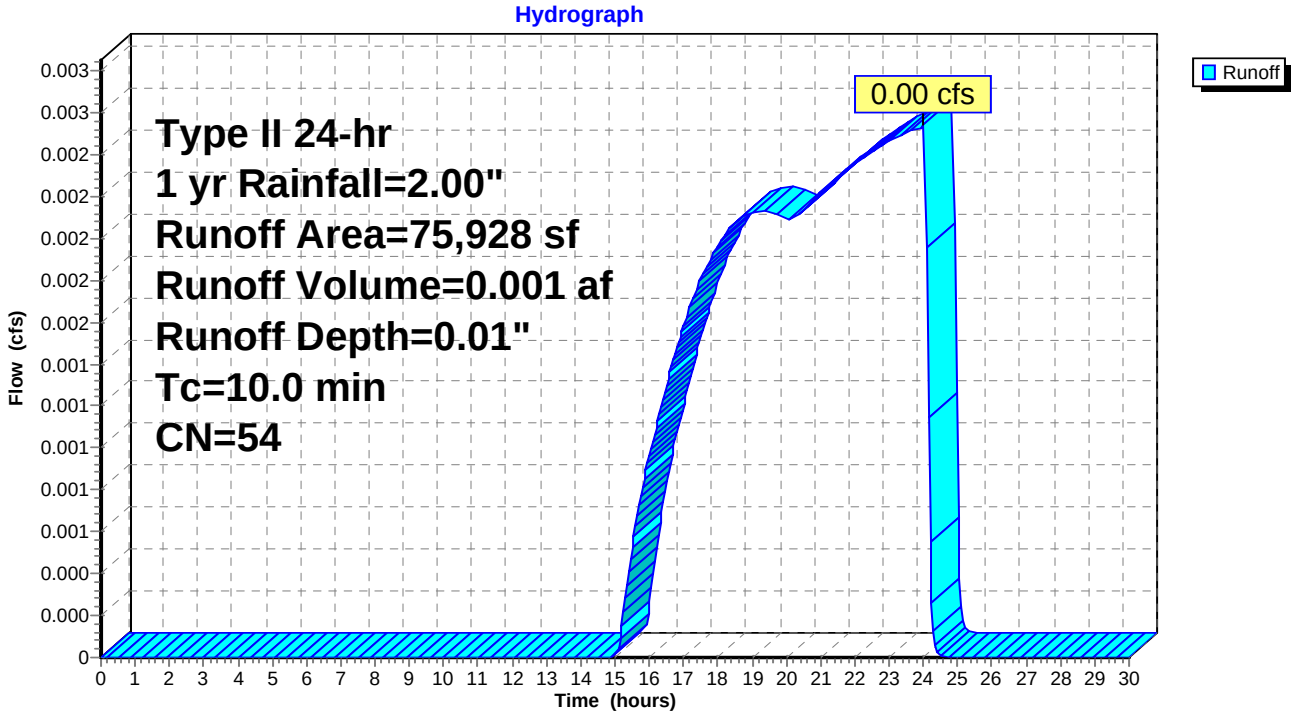
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
75,928	54	1/2 acre lots, 25% imp, HSG A
56,946		75.00% Pervious Area
18,982		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 37S: TANGLEWOOD SEGMENT 1 - RES



Summary for Subcatchment 38S: TANGLEWOOD SEGMENT 1 - ROADS

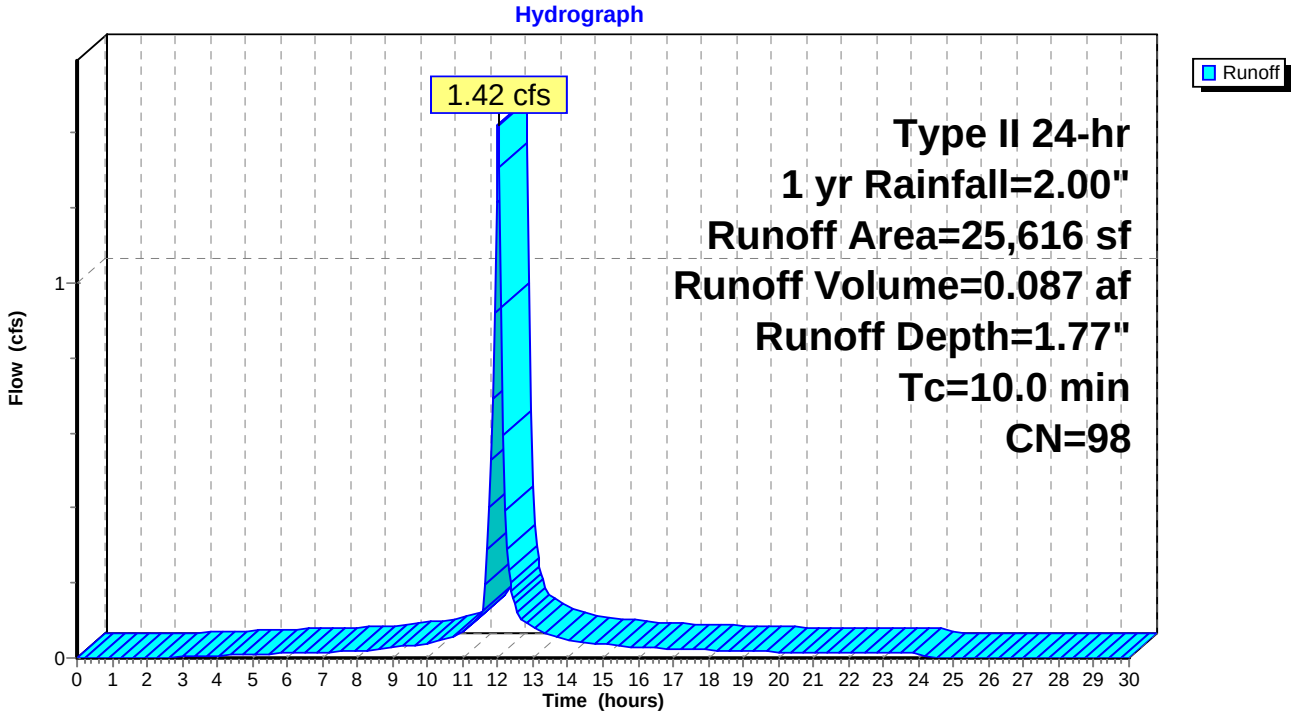
Runoff = 1.42 cfs @ 12.01 hrs, Volume= 0.087 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1 yr Rainfall=2.00"

Area (sf)	CN	Description
25,616	98	Paved roads w/curbs & sewers, HSG A
25,616		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 38S: TANGLEWOOD SEGMENT 1 - ROADS



Summary for Pond 4P: Storage 1

Inflow Area = 16.129 ac, 37.14% Impervious, Inflow Depth = 0.30" for 1 yr event
Inflow = 6.31 cfs @ 12.01 hrs, Volume= 0.397 af
Outflow = 6.00 cfs @ 12.04 hrs, Volume= 0.397 af, Atten= 5%, Lag= 2.2 min
Primary = 5.79 cfs @ 12.04 hrs, Volume= 0.397 af
Secondary = 0.21 cfs @ 12.05 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 486.09' @ 12.04 hrs Surf.Area= 0.001 ac Storage= 0.013 af

Plug-Flow detention time= 1.1 min calculated for 0.397 af (100% of inflow)
Center-of-Mass det. time= 1.1 min (781.4 - 780.3)

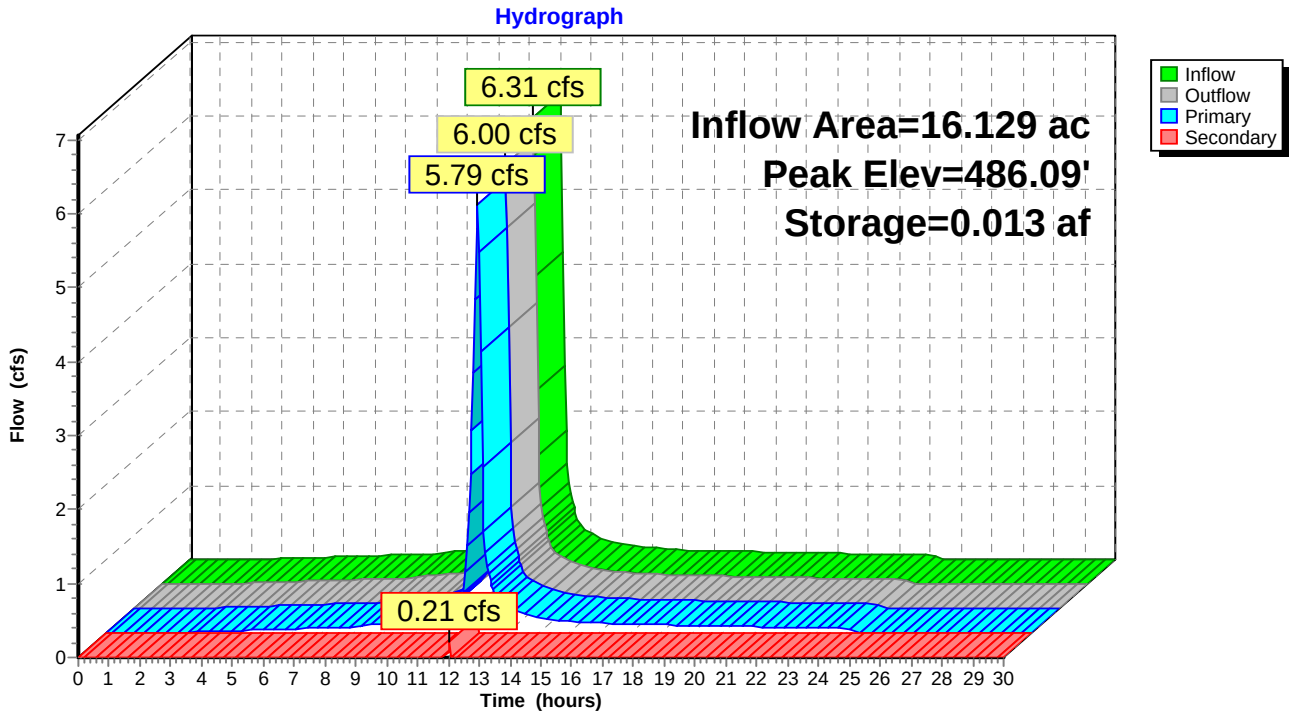
Volume	Invert	Avail.Storage	Storage Description
#1	475.00'	0.014 af	**8.00'D x 12.00'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	475.00'	**8.2" Vert. Orifice/Grate (8.25")** C= 0.600
#2	Secondary	486.00'	**18.0" Horiz. Orifice/Grate (18")** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=5.73 cfs @ 12.04 hrs HW=485.87' (Free Discharge)
└**1=Orifice/Grate (8.25")** (Orifice Controls 5.73 cfs @ 15.62 fps)

Secondary OutFlow Max=0.18 cfs @ 12.05 hrs HW=486.05' (Free Discharge)
└**2=Orifice/Grate (18")** (Weir Controls 0.18 cfs @ 0.75 fps)

Pond 4P: Storage 1



Summary for Pond 7P: Storage 2

Inflow Area = 16.129 ac, 37.14% Impervious, Inflow Depth = 0.30" for 1 yr event
Inflow = 6.00 cfs @ 12.04 hrs, Volume= 0.397 af
Outflow = 5.51 cfs @ 12.09 hrs, Volume= 0.397 af, Atten= 8%, Lag= 2.5 min
Primary = 5.51 cfs @ 12.09 hrs, Volume= 0.397 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 481.05' @ 12.09 hrs Surf.Area= 0.001 ac Storage= 0.016 af

Plug-Flow detention time= 1.3 min calculated for 0.397 af (100% of inflow)
Center-of-Mass det. time= 1.3 min (782.7 - 781.4)

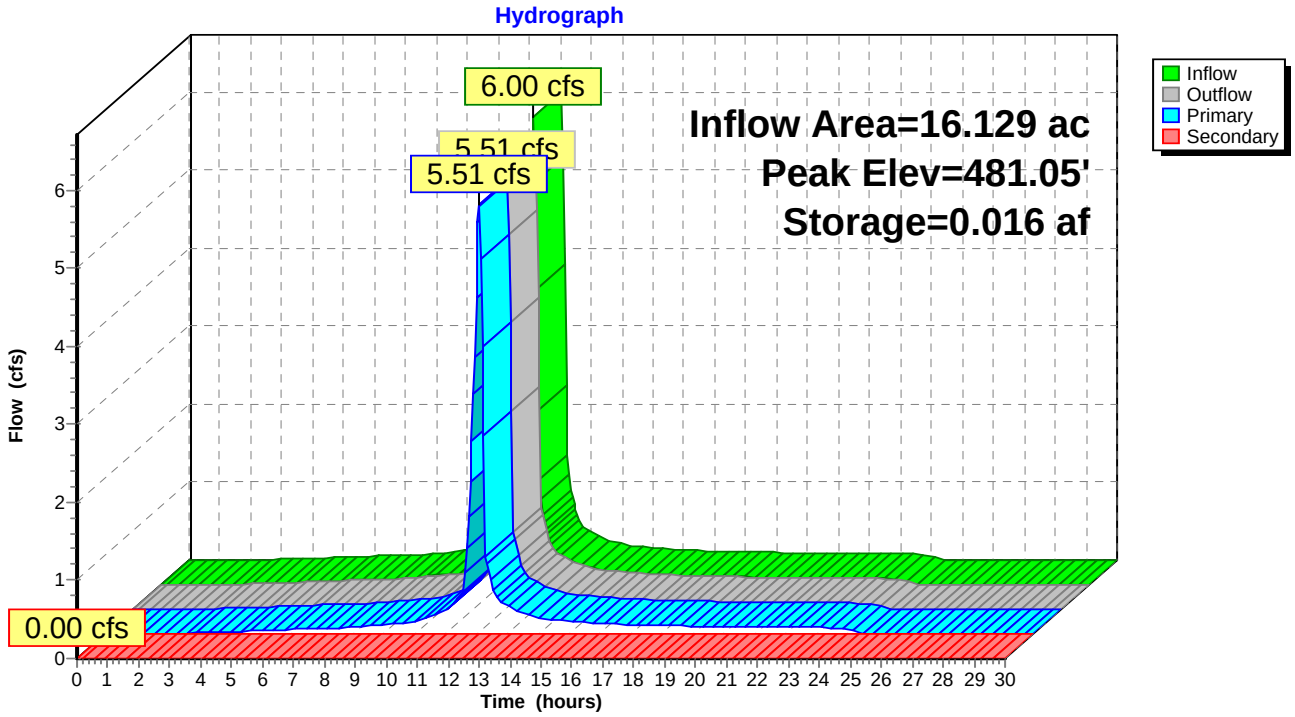
Volume	Invert	Avail.Storage	Storage Description
#1	470.00'	0.014 af	**8.00'D x 12.00'H Vertical Cone/Cylinder**
#2	473.20'	0.004 af	**18.0" Round Pipe Storage** L= 90.0' S= 0.0200 '/'
		0.017 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	470.00'	**8.0" Vert. Orifice/Grate (8.0")** C= 0.600
#2	Secondary	481.00'	**18.0" Horiz. Orifice/Grate (18")** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=5.42 cfs @ 12.09 hrs HW=480.74' (Free Discharge)
↑—**1=Orifice/Grate (8.0")** (Orifice Controls 5.42 cfs @ 15.53 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=470.00' (Free Discharge)
↑—**2=Orifice/Grate (18")** (Controls 0.00 cfs)

Pond 7P: Storage 2



Summary for Pond 8P: Storage 3

Inflow Area = 16.129 ac, 37.14% Impervious, Inflow Depth = 0.30" for 1 yr event
Inflow = 5.51 cfs @ 12.09 hrs, Volume= 0.397 af
Outflow = 5.15 cfs @ 12.13 hrs, Volume= 0.397 af, Atten= 6%, Lag= 2.8 min
Primary = 5.13 cfs @ 12.13 hrs, Volume= 0.397 af
Secondary = 0.02 cfs @ 12.15 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 477.18' @ 12.13 hrs Surf.Area= 0.001 ac Storage= 0.014 af

Plug-Flow detention time= 1.3 min calculated for 0.397 af (100% of inflow)
Center-of-Mass det. time= 1.3 min (784.0 - 782.7)

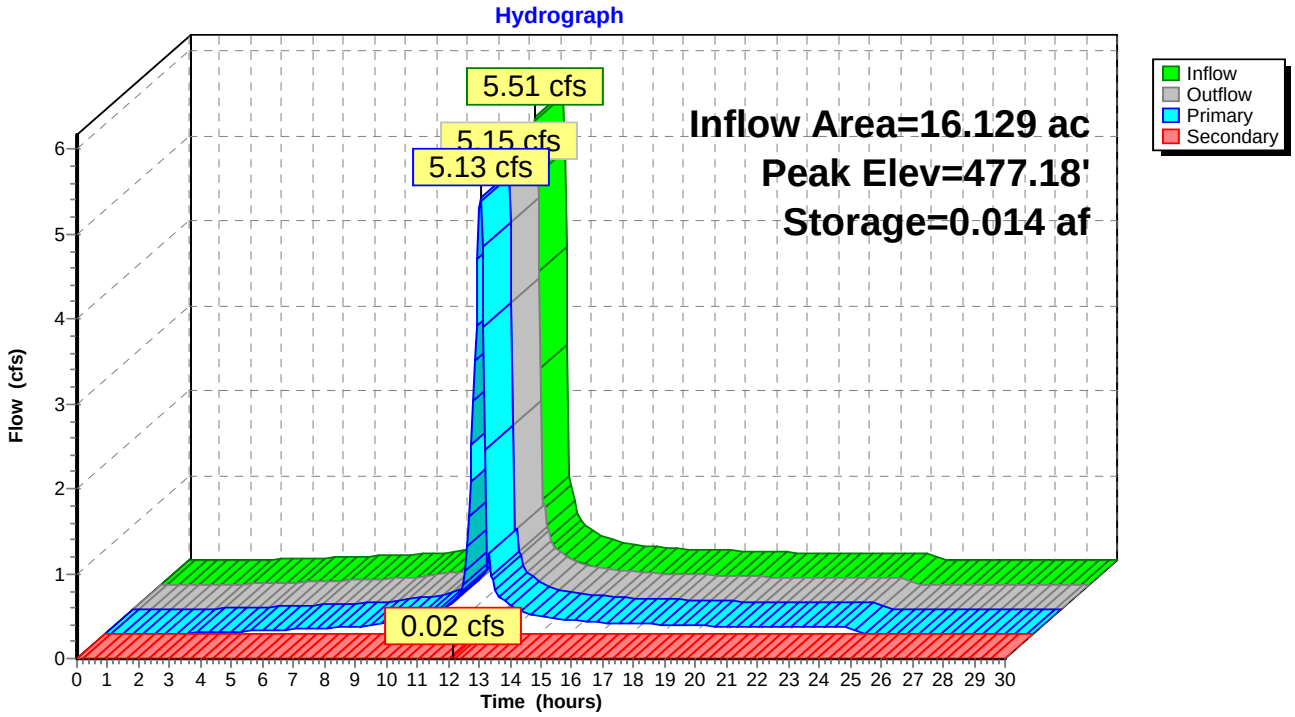
Volume	Invert	Avail.Storage	Storage Description
#1	466.00'	0.014 af	**8.00'D x 12.00'H Vertical Cone/Cylinder**
#2	470.50'	0.001 af	**18.0" Round Pipe Storage** L= 25.0' S= 0.0200 '/'
		0.015 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	466.00'	**7.7" Vert. Orifice/Grate (7.75")** C= 0.600
#2	Secondary	477.00'	**18.0" Horiz. Orifice/Grate (18")** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=5.06 cfs @ 12.13 hrs HW=476.90' (Free Discharge)
↑—**1=Orifice/Grate (7.75")** (Orifice Controls 5.06 cfs @ 15.66 fps)

Secondary OutFlow Max=0.01 cfs @ 12.15 hrs HW=477.01' (Free Discharge)
↑—**2=Orifice/Grate (18")** (Weir Controls 0.01 cfs @ 0.27 fps)

Pond 8P: Storage 3



Summary for Pond 9P: Storage 4

Inflow Area = 16.129 ac, 37.14% Impervious, Inflow Depth = 0.30" for 1 yr event
Inflow = 5.15 cfs @ 12.13 hrs, Volume= 0.397 af
Outflow = 4.68 cfs @ 12.20 hrs, Volume= 0.397 af, Atten= 9%, Lag= 3.8 min
Primary = 4.68 cfs @ 12.20 hrs, Volume= 0.397 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 468.35' @ 12.20 hrs Surf.Area= 0.001 ac Storage= 0.016 af

Plug-Flow detention time= 1.4 min calculated for 0.397 af (100% of inflow)
Center-of-Mass det. time= 1.4 min (785.4 - 784.0)

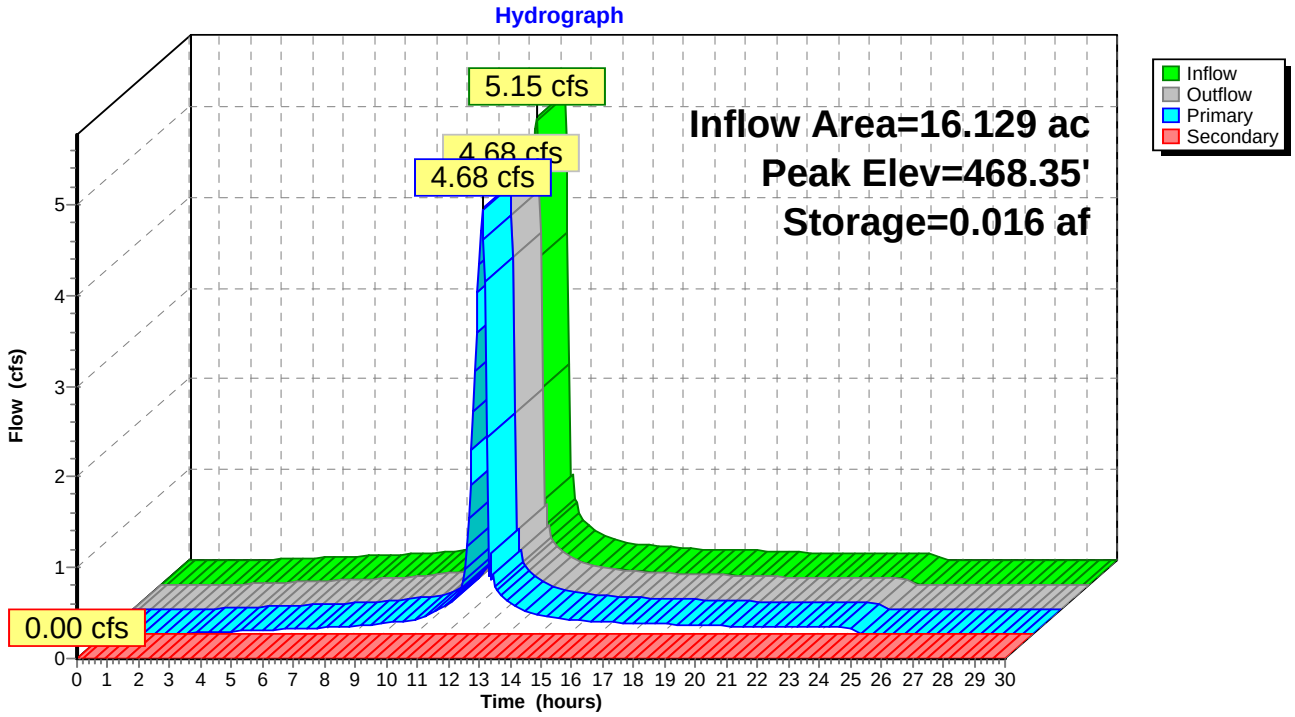
Volume	Invert	Avail.Storage	Storage Description
#1	458.00'	0.014 af	**8.00'D x 12.00'H Vertical Cone/Cylinder**
#2	464.00'	0.004 af	**18.0" Round Pipe Storage** L= 100.0' S= 0.0200 '/'
		0.018 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	458.00'	**7.5" Vert. Orifice/Grate (7.5")** C= 0.600
#2	Secondary	469.00'	**18.0" Horiz. Orifice/Grate (18")** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.66 cfs @ 12.20 hrs HW=468.26' (Free Discharge)
└**1=Orifice/Grate (7.5")** (Orifice Controls 4.66 cfs @ 15.18 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=458.00' (Free Discharge)
└**2=Orifice/Grate (18")** (Controls 0.00 cfs)

Pond 9P: Storage 4



Summary for Pond 15P: CATCH BASIN

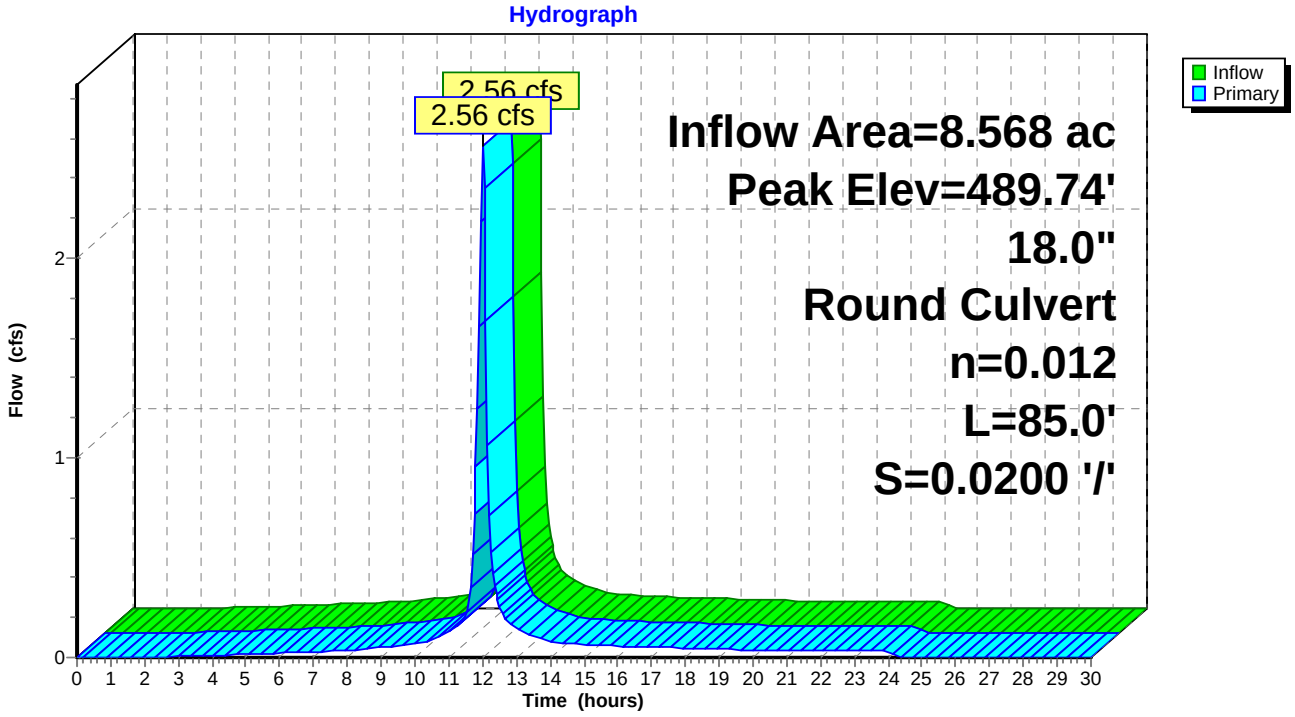
Inflow Area = 8.568 ac, 34.29% Impervious, Inflow Depth = 0.23" for 1 yr event
Inflow = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af
Outflow = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af, Atten= 0%, Lag= 0.0 min
Primary = 2.56 cfs @ 12.01 hrs, Volume= 0.163 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.74' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=2.53 cfs @ 12.01 hrs HW=489.74' (Free Discharge)
└**1=Culvert** (Inlet Controls 2.53 cfs @ 2.92 fps)

Pond 15P: CATCH BASIN



Summary for Pond 16P: CATCH BASIN

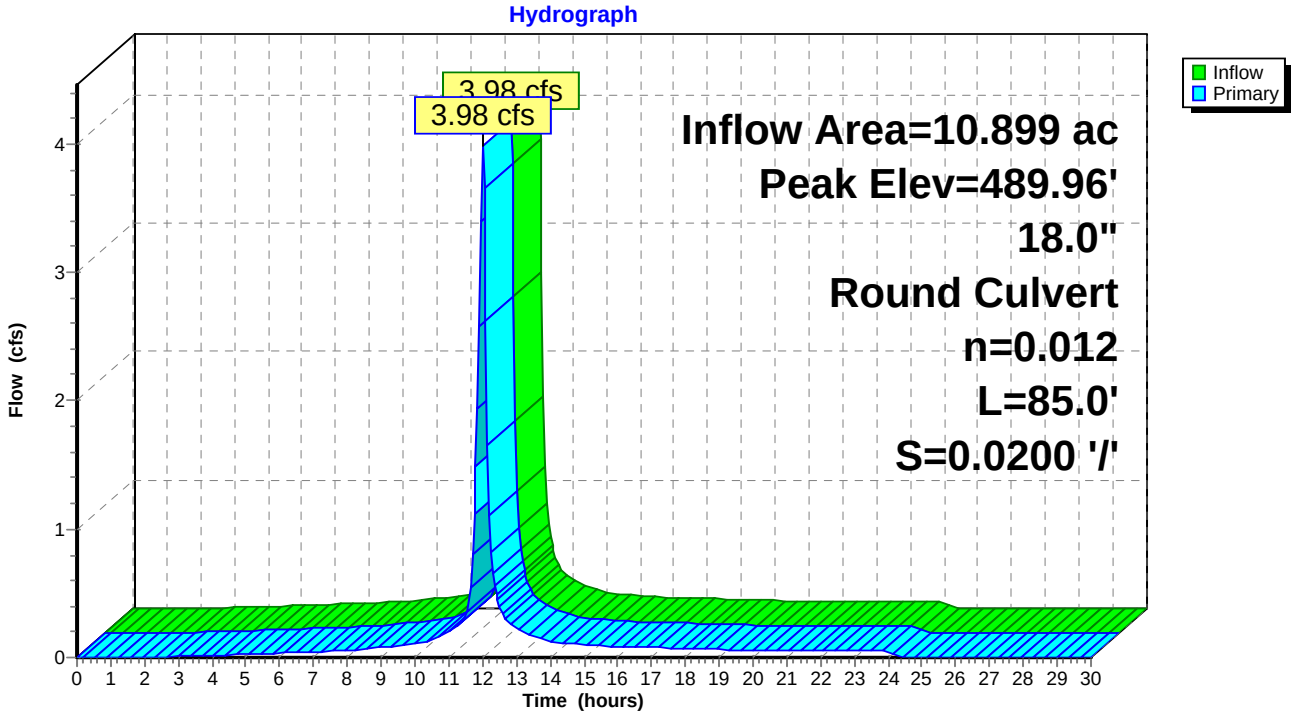
Inflow Area = 10.899 ac, 36.35% Impervious, Inflow Depth = 0.28" for 1 yr event
Inflow = 3.98 cfs @ 12.01 hrs, Volume= 0.252 af
Outflow = 3.98 cfs @ 12.01 hrs, Volume= 0.252 af, Atten= 0%, Lag= 0.0 min
Primary = 3.98 cfs @ 12.01 hrs, Volume= 0.252 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 489.96' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=3.93 cfs @ 12.01 hrs HW=489.95' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.93 cfs @ 3.32 fps)

Pond 16P: CATCH BASIN



Summary for Pond 18P: CATCH BASIN

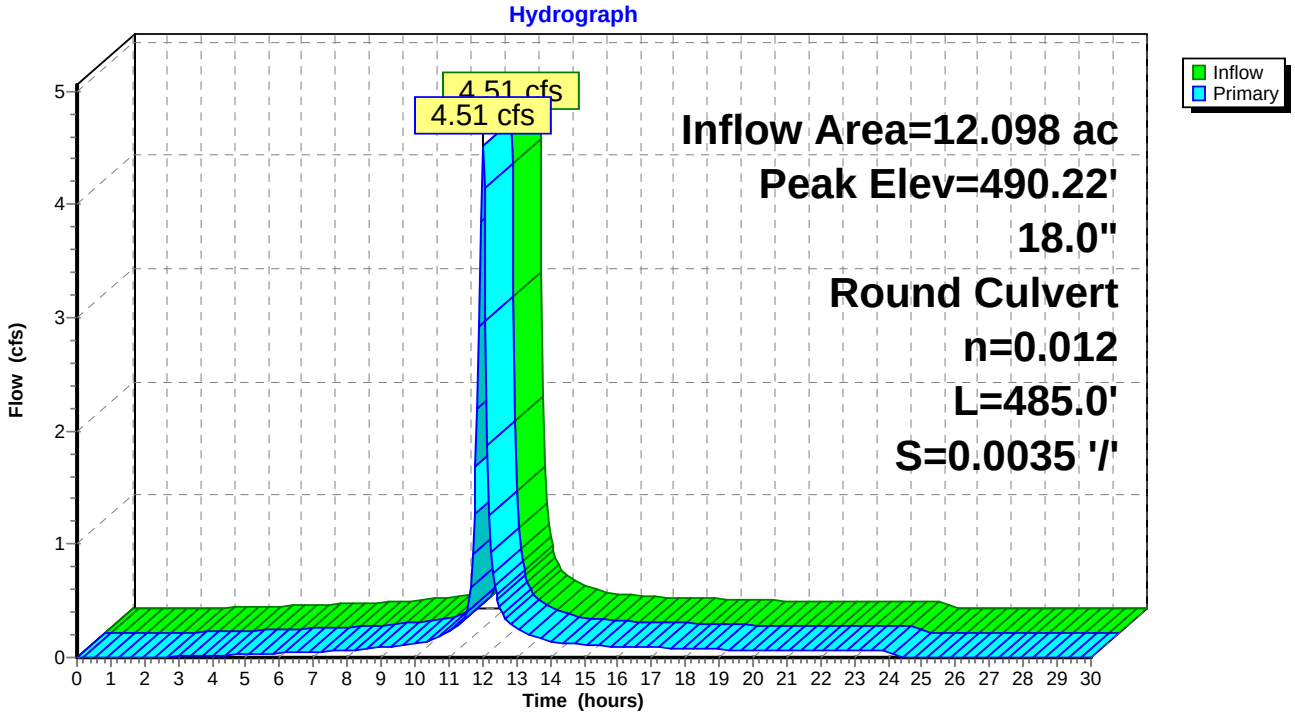
Inflow Area = 12.098 ac, 36.59% Impervious, Inflow Depth = 0.28" for 1 yr event
Inflow = 4.51 cfs @ 12.01 hrs, Volume= 0.285 af
Outflow = 4.51 cfs @ 12.01 hrs, Volume= 0.285 af, Atten= 0%, Lag= 0.0 min
Primary = 4.51 cfs @ 12.01 hrs, Volume= 0.285 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.22' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 485.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0035 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=4.45 cfs @ 12.01 hrs HW=490.21' (Free Discharge)
└**1=Culvert** (Barrel Controls 4.45 cfs @ 4.00 fps)

Pond 18P: CATCH BASIN



Summary for Pond 20P: CATCH BASIN

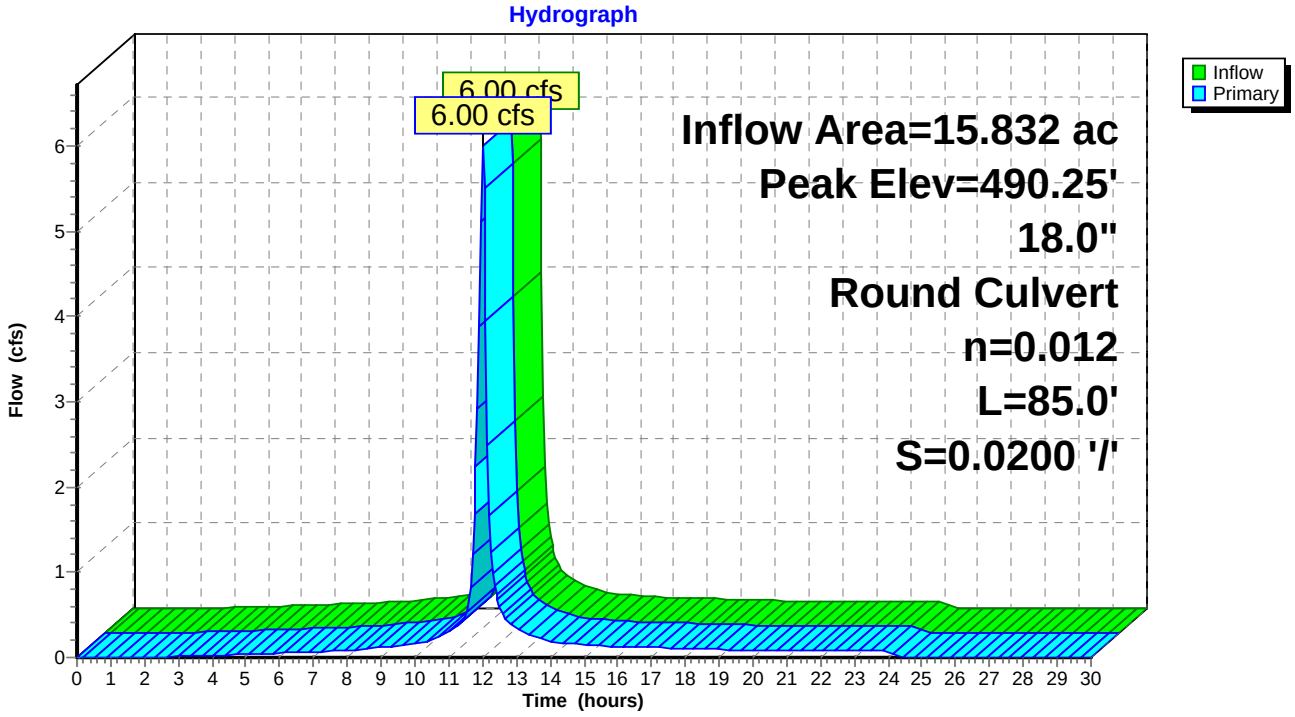
Inflow Area = 15.832 ac, 36.77% Impervious, Inflow Depth = 0.29" for 1 yr event
Inflow = 6.00 cfs @ 12.01 hrs, Volume= 0.378 af
Outflow = 6.00 cfs @ 12.01 hrs, Volume= 0.378 af, Atten= 0%, Lag= 0.0 min
Primary = 6.00 cfs @ 12.01 hrs, Volume= 0.378 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.25' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=5.92 cfs @ 12.01 hrs HW=490.24' (Free Discharge)
└**1=Culvert** (Inlet Controls 5.92 cfs @ 3.79 fps)

Pond 20P: CATCH BASIN



Summary for Pond 23P: CATCH BASIN

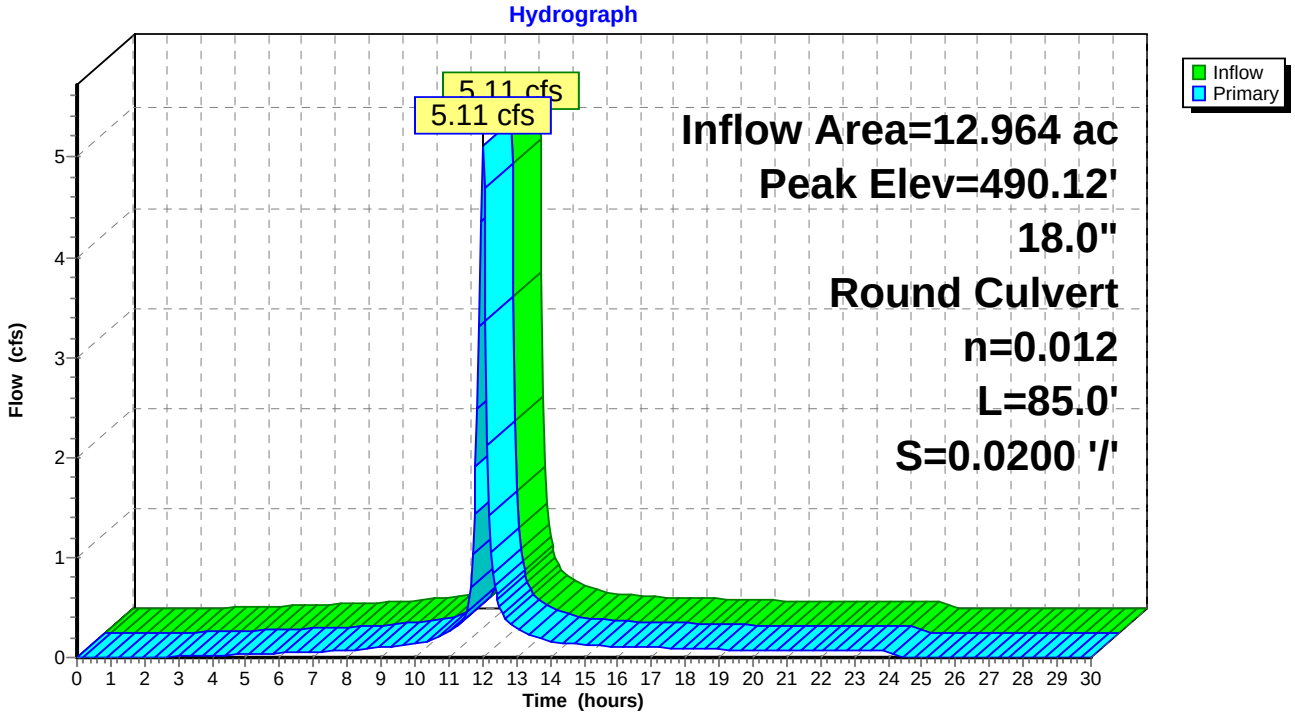
Inflow Area = 12.964 ac, 37.25% Impervious, Inflow Depth = 0.30" for 1 yr event
Inflow = 5.11 cfs @ 12.01 hrs, Volume= 0.322 af
Outflow = 5.11 cfs @ 12.01 hrs, Volume= 0.322 af, Atten= 0%, Lag= 0.0 min
Primary = 5.11 cfs @ 12.01 hrs, Volume= 0.322 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.12' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=5.04 cfs @ 12.01 hrs HW=490.11' (Free Discharge)
└**1=Culvert** (Inlet Controls 5.04 cfs @ 3.59 fps)

Pond 23P: CATCH BASIN



Summary for Pond 25P: CATCH BASIN

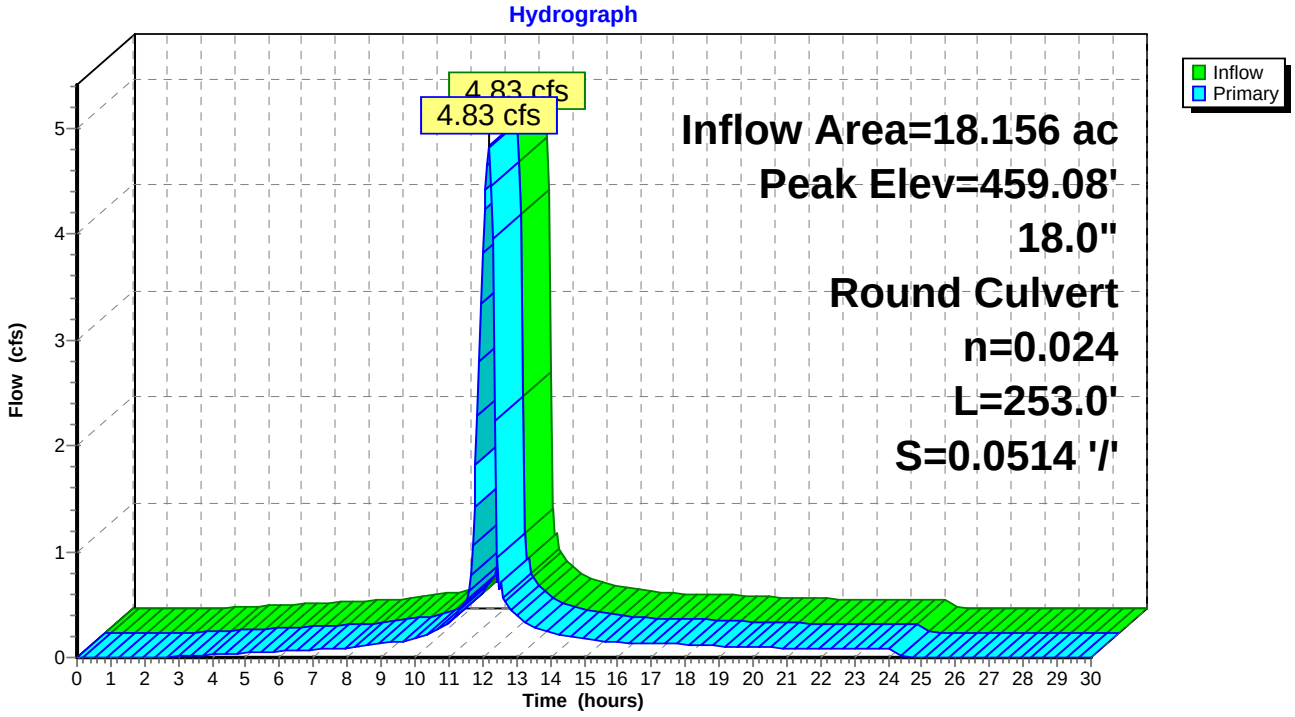
Inflow Area = 18.156 ac, 36.68% Impervious, Inflow Depth = 0.28" for 1 yr event
Inflow = 4.83 cfs @ 12.19 hrs, Volume= 0.431 af
Outflow = 4.83 cfs @ 12.19 hrs, Volume= 0.431 af, Atten= 0%, Lag= 0.0 min
Primary = 4.83 cfs @ 12.19 hrs, Volume= 0.431 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 459.08' @ 12.19 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	458.00'	**18.0" Round Culvert** L= 253.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 458.00' / 445.00' S= 0.0514 '/' Cc= 0.900 n= 0.024, Flow Area= 1.77 sf

Primary OutFlow Max=4.79 cfs @ 12.19 hrs HW=459.08' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.79 cfs @ 3.53 fps)

Pond 25P: CATCH BASIN



Summary for Pond 27P: CATCH BASIN

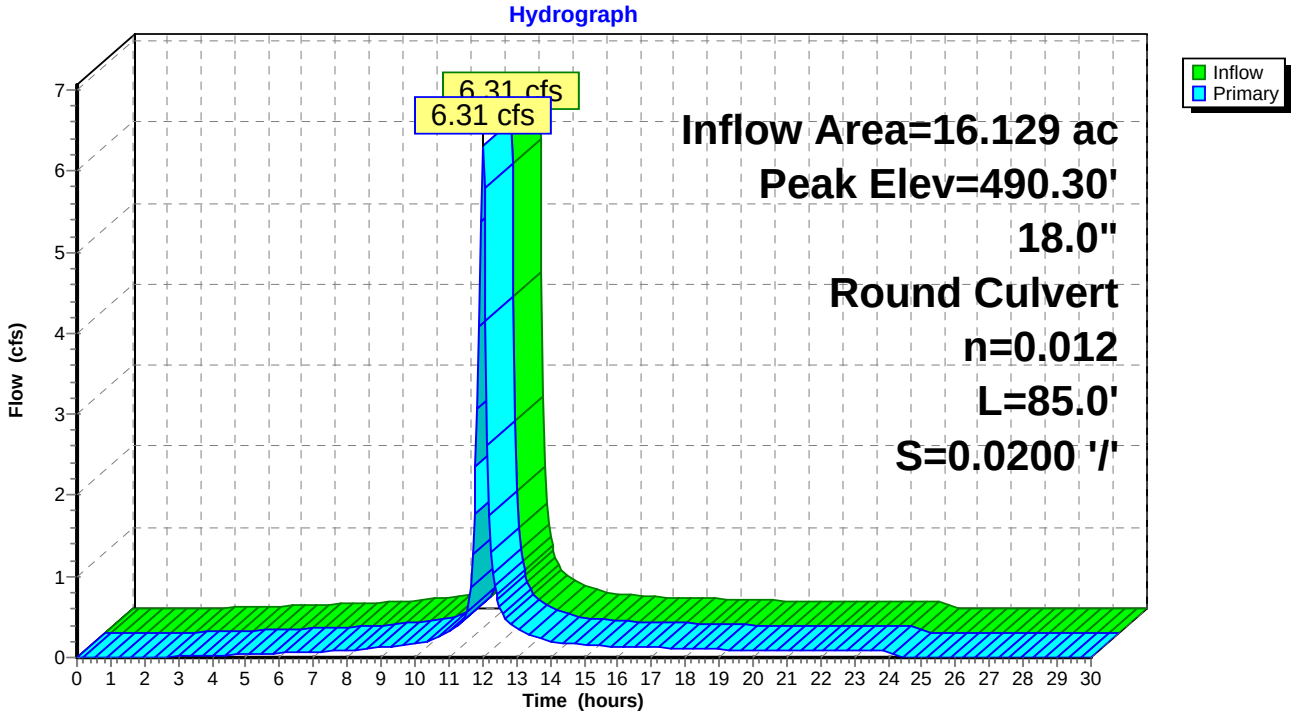
Inflow Area = 16.129 ac, 37.14% Impervious, Inflow Depth = 0.30" for 1 yr event
Inflow = 6.31 cfs @ 12.01 hrs, Volume= 0.397 af
Outflow = 6.31 cfs @ 12.01 hrs, Volume= 0.397 af, Atten= 0%, Lag= 0.0 min
Primary = 6.31 cfs @ 12.01 hrs, Volume= 0.397 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 490.30' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	489.00'	**18.0" Round Culvert** L= 85.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 489.00' / 487.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=6.22 cfs @ 12.01 hrs HW=490.29' (Free Discharge)
└**1=Culvert** (Inlet Controls 6.22 cfs @ 3.86 fps)

Pond 27P: CATCH BASIN

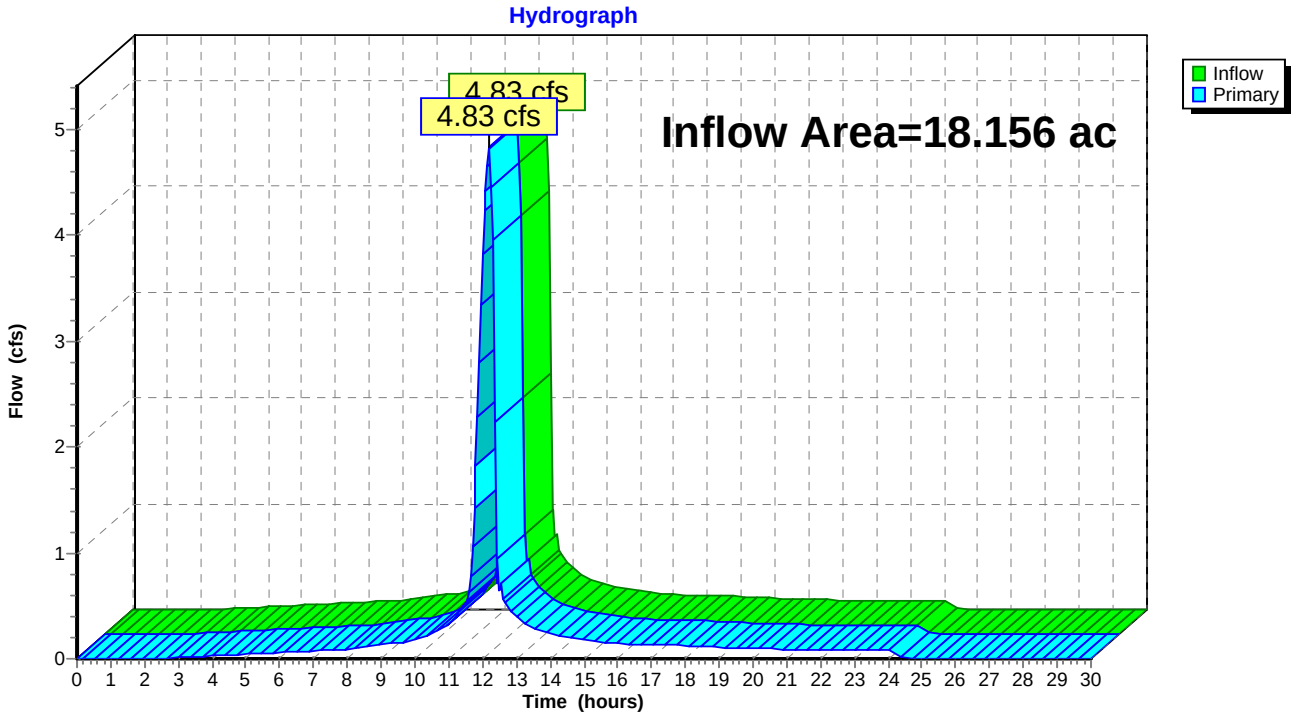


Summary for Link 24L: OUTLET TO FERN HOLLOW

Inflow Area = 18.156 ac, 36.68% Impervious, Inflow Depth = 0.28" for 1 yr event
Inflow = 4.83 cfs @ 12.19 hrs, Volume= 0.431 af
Primary = 4.83 cfs @ 12.19 hrs, Volume= 0.431 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link 24L: OUTLET TO FERN HOLLOW



APPENDIX B

Archeological Resource Assessment

HARTGEN
archeological associates inc

ARCHEOLOGICAL RESOURCE ASSESSMENT

Tanglewood Drive Shared-Use Path and Stormwater Project

Town of Essex
Chittenden County, Vermont

HAA # 5500.11

Submitted to:

Gregory G. Goyette, P.E.
Senior Associate
Stantec
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Direct: (802) 497-6403
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Prepared by:

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An ACRA Member Firm
www.acra-crm.org

August 2020

MANAGEMENT SUMMARY

SHPO Project Review Number:
Involved State and Federal Agencies: *Vermont Agency of Transportation (VTrans)*
Phase of Survey: *Archeological Resource Assessment (ARA)*

LOCATION INFORMATION

Municipality: *Town of Essex*
County: *Chittenden County, Vermont*

SURVEY AREA

Tanglewood Drive: *The area of potential effects (APE) for the ARA includes the areas directly adjacent to Tanglewood Drive, along an alignment measuring approximately 1,000 feet in length and an approximate 300-foot alignment along Fern Hollow Road. In addition, stormwater improvements are proposed along an approximate 300-foot alignment within and adjacent to a seasonal waterway.*

RESULTS OF RESEARCH

Total number of Precontact Archeological sites within one mile of the project area: *Six*
Historic Archeological sites within one mile: *None*
NR/NRE districts in or adjacent: *None*
Precontact Sensitivity: *Low*
Historic Sensitivity: *Low*

RECOMMENDATIONS

Archeological potential is low due to previous disturbance from road construction, driveways, curbing, sidewalks and utilities. The portion of the project area located within and adjacent to a seasonal waterway has been previously disturbed by erosion and man-made alterations for stormwater features.

Report Authors: *Elise Manning-Sterling*

Date of Report: *August 2020*

ARCHEOLOGICAL RESOURCE ASSESSMENT

INTRODUCTION

Hartgen Archeological Associates, Inc. (HAA, Inc.) was retained by Stantec to conduct an Archaeological Resource Assessment (ARA) for the proposed Tanglewood Drive Shared-Use Path and Stormwater Project located in the Village of Essex Junction, Chittenden County, Vermont (Map 1). Tanglewood Drive in Essex is a dead-end residential street with a curb-to-curb pavement width of approximately 40 feet and no sidewalks or shared-use paths. The Town of Essex would like to study possible pedestrian bicycling and stormwater improvements along Tanglewood Drive from Cindy Lane to Woodlawn Drive and along Fern Hollow Road (Map 2, 2a, 2b, 2c). The project is being undertaken by the Town with funding from the Chittenden County Regional Planning Commission. The cultural resources investigations required according to Section 106 of the National Historic Preservation Act. The project requires approval by the Vermont Agency of Transportation (VTrans), and the cultural resource report will be reviewed by the VTrans archaeology officer.

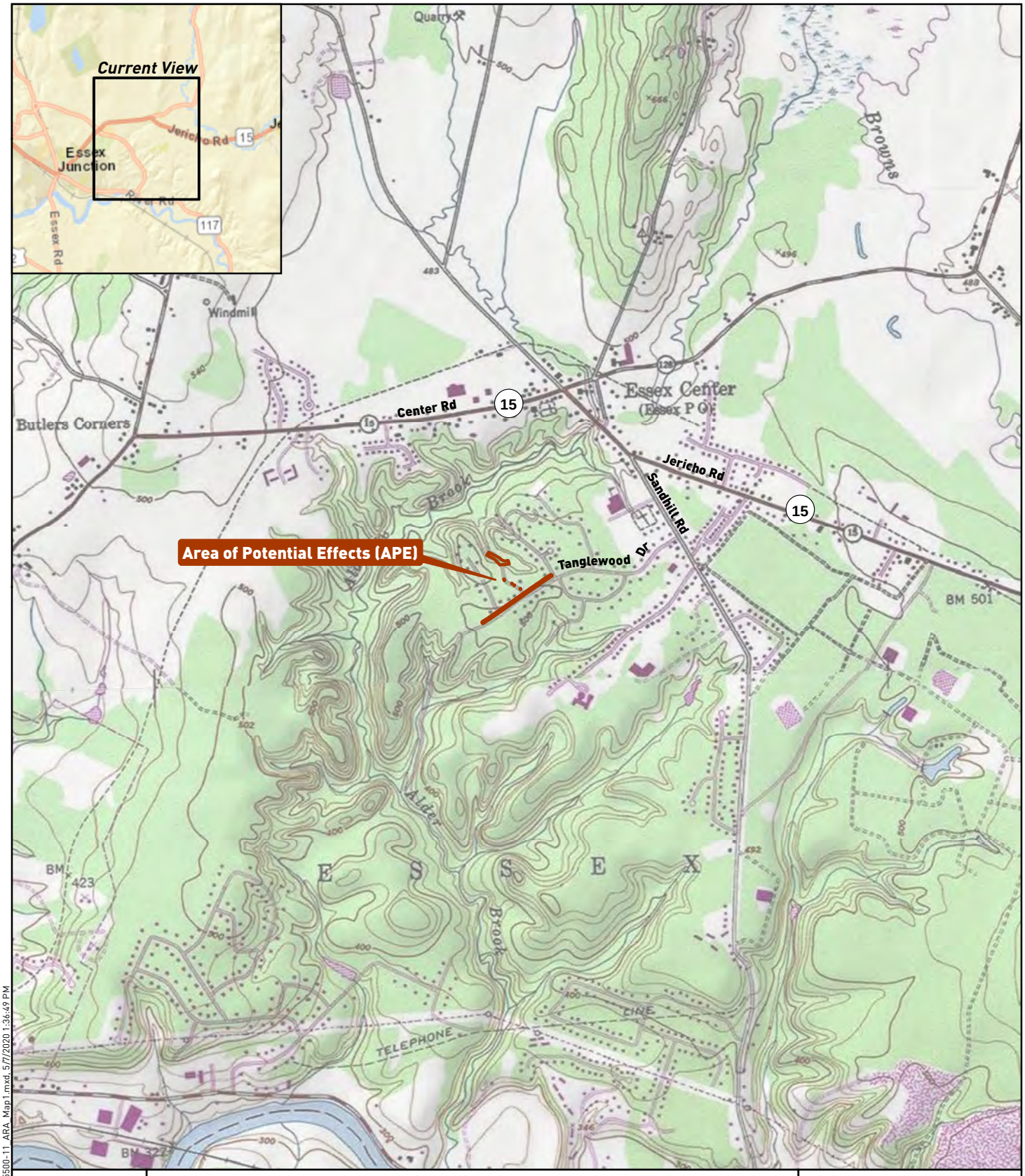
The primary objective of the ARA is to identify areas of archeological sensitivity based on environmental factors, known site information and historical information for the project Area of Potential Effects (APE). Reference to the general project vicinity is provided as appropriate to understanding the local cultural and historical context. Background research was conducted at the Vermont Division for Historic Preservation (VDHP) ORC (Online Resource Center) site where archeological site files, National Register (NR), State Register (SR) and town information were reviewed. A site visit was conducted by Elise Manning Sterling to observe and photograph existing conditions within the project area.

Current Conditions and Environmental Overview

The Tanglewood Drive project area is characterized as a late 20th-century housing development containing small to moderate sized well-kept residences set back a distance from the road, with grass lawns and gardens (Photos 1-4). The project plans also propose stormwater improvements along Fern Hollow which include the installation of several storage structures in the roadway and a filtering treatment structure at the end of the road (Photo 5). In the wooded area to the north of Fern Hollow where there is an existing drainage system, the proposed improvements include the importation of fill to stabilize existing channel and side slopes, and the extension of the closed drainage system further to the north where the existing channel is stable (Photos 6-9).

Environmental characteristics of an area are significant for determining the sensitivity for archeological resources. Precontact and historic groups often favored level, well-drained locations near wetlands and waterways. Therefore, topography, proximity to wetlands, and soils are examined to determine if there are landforms in the project area that are more likely to contain archeological resources. In addition, bedrock formations or other lithic sources may contain resources that may have been quarried by precontact groups. Other locations can also be special purpose sacred and traditional use sites. Soil conditions can provide a clue to past climatic conditions, as well as changes in local hydrology.

The Tanglewood and Fern Hollow project area is located on a broad terrace which slopes down to tributaries of Alder Brook to the north and south. The project area along Tanglewood Drive is relatively flat, with some small slopes leading up to houses and gardens. Fern Hollow Road is the closest area to a waterway, with a small seasonal tributary of Alder Brook located approximately 150 feet to the north. This is the area where stormwater improvements are proposed. The main channel of Alder Brook is located downslope, approximately 500 feet to the north of Fern Hollow Drive. A separate tributary of Alder Brook is located approximately 500 feet to the south of Tanglewood Drive. The confluence of Alder Brook with the Winooski River is located approximately one mile south of the project area.



N

1,000 0 1,000 2,000 Feet

300 0 300 600 Meters

Note: Contour interval is 20 feet.

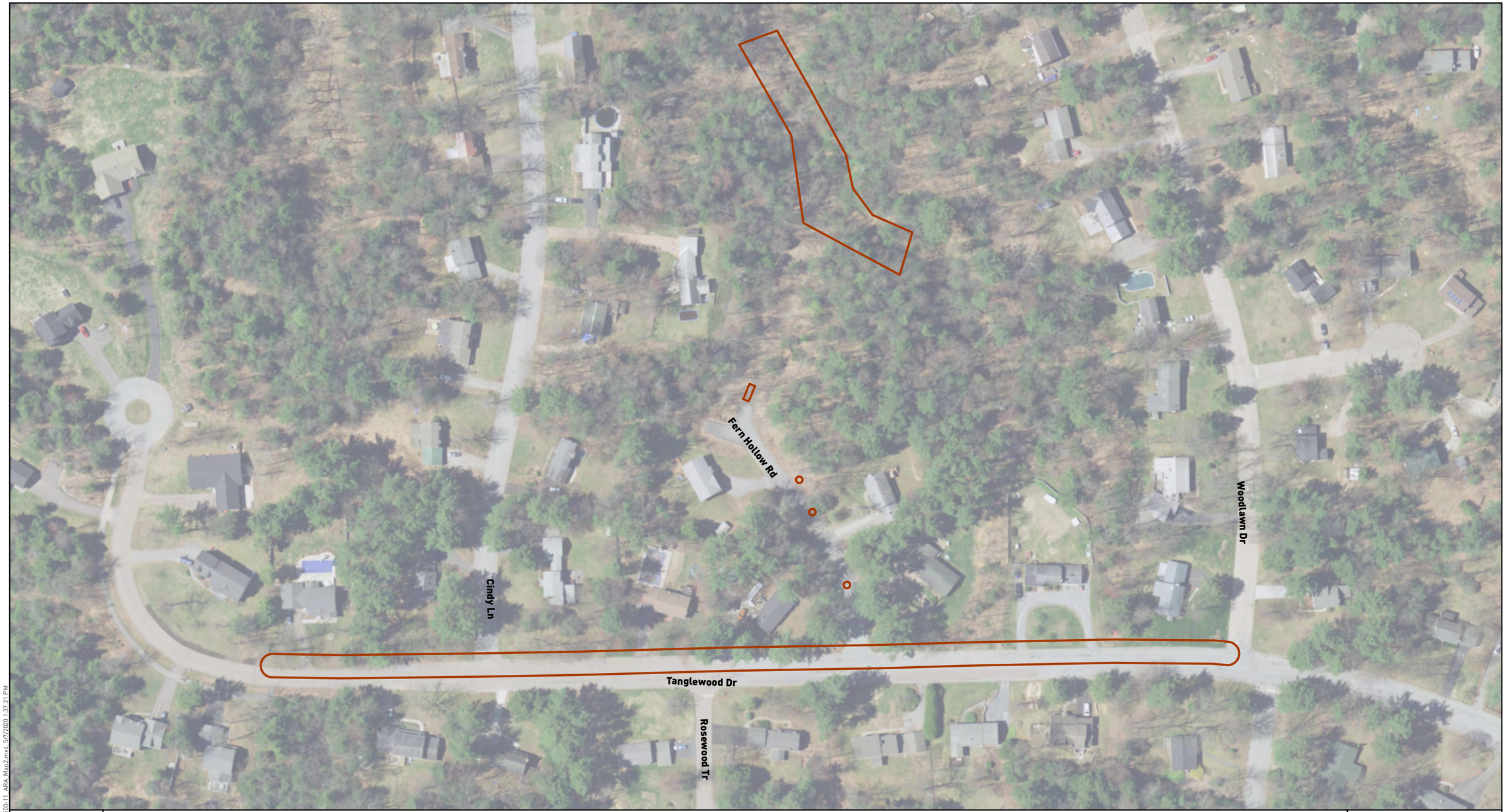
Project Location

GIS Services Accessed 5/7/2020: Environmental Systems Research Institute, Inc., World Street Map; USGS The National Map

HARTGEN archeological associates inc

Map 1

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60 0 60 120 Feet
18 0 18 36 Meters

Legend

Area of Potential Effects (APE)

Project Map

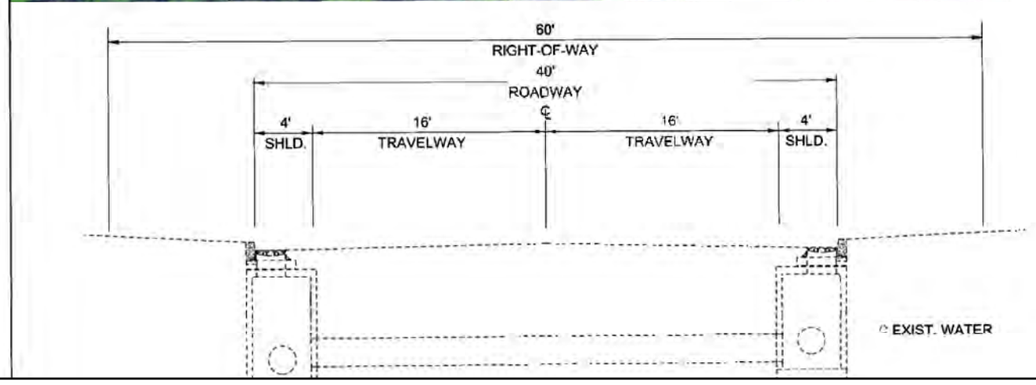
Environmental Systems Research Institute, Inc.,
World Imagery Accessed 5/7/2020

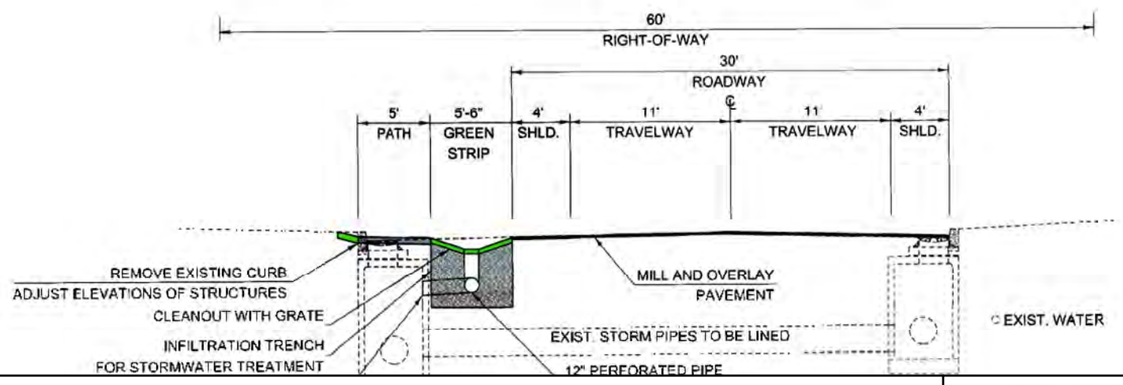
HARTGEN archeological associates inc

Map 2

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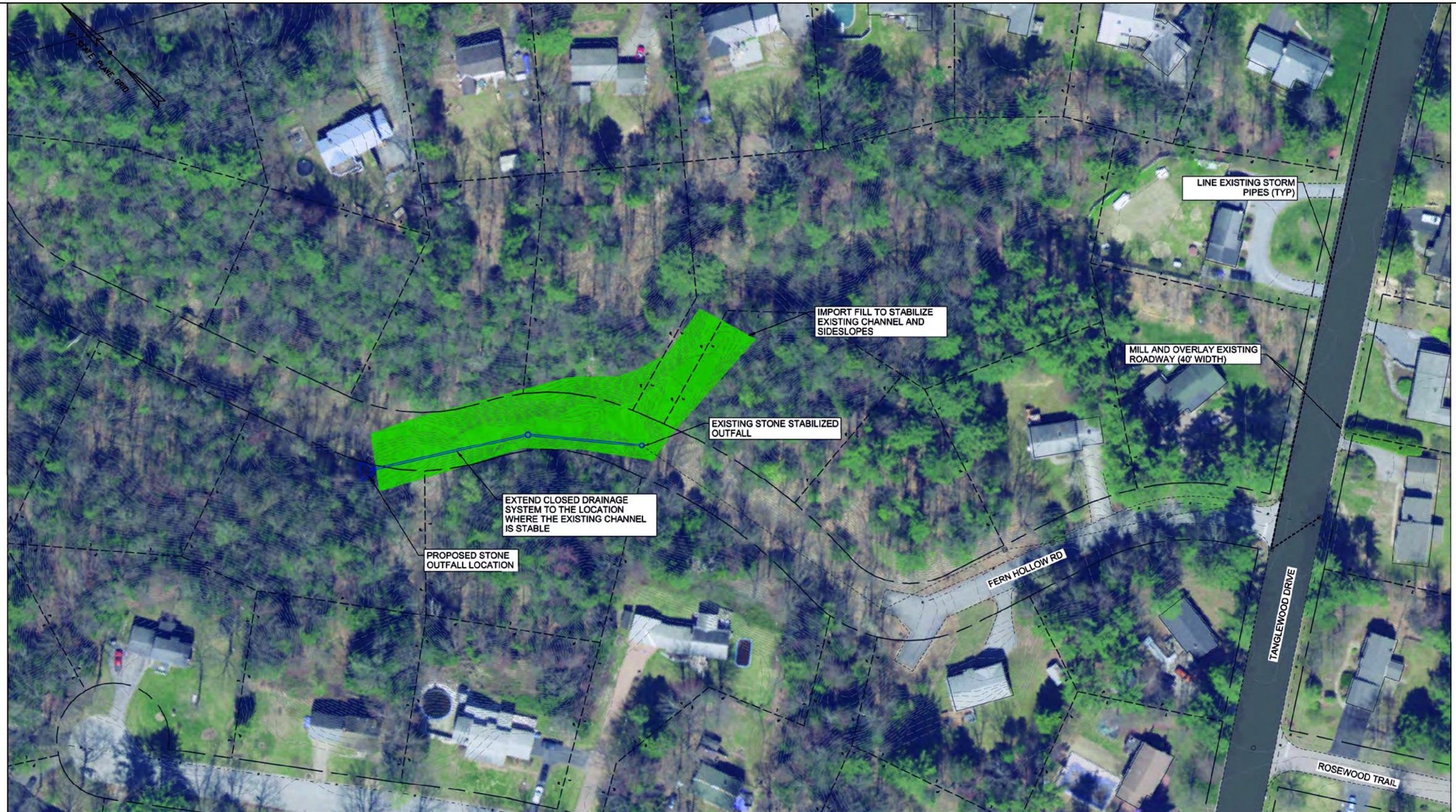
Tanglewood Scoping

Stantec 4/14/2020

HARTGEN archeological associates inc

Map 2a

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Tanglewood Scoping

Stantec 4/14/2020

HARTGEN archeological associates inc

Map 2b



Tanglewood Scoping

Stantec 4/14/2020

HARTGEN archeological associates inc

Map 2c

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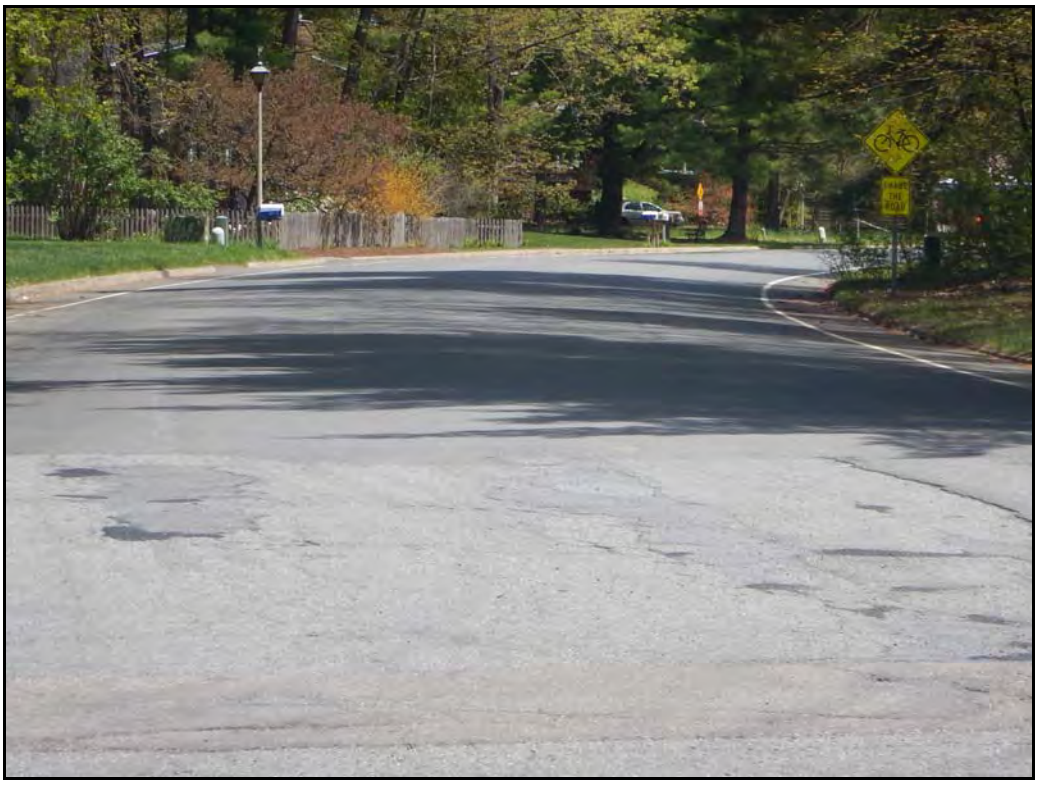


Photo 1. Photo shows the streetscape on Tanglewood Drive near its intersection with Woodlawn Drive. View is to the west.



Photo 2. Photo shows a typical streetscape along Tanglewood Drive. View is to the west.



Photo 3. Photo shows stone and garden features on Tanglewood Drive just east of the intersection with Cindy Lane. View is to the southwest.



Photo 4. Photo shows utility locations on Tanglewood Drive just west of the intersection with Cindy Lane. View is to the southwest.



Photo 5. Photo shows Fern Hollow Road. View is to the north.



Photo 6. Photo shows the sloping terrain within the project area. An eroded stream bank can be seen on the right, earthen and stone stormwater features in the center, and the earthen hiking path to the left. View is to the northwest.



Photo 7. Photo shows a close-up of the eroded stream channel where stormwater improvements are proposed. View is to the northwest.



Photo 8. Photo shows the stone stormwater features in the foreground and the eroded stream channel in the background. View is to the northwest.



Photo 9. Photo shows the stone stormwater features on the hillslope. View is to the southeast toward Fern Hollow Road.

The soil types present within the project area are typically located on terraces and are moderately to well-drained (USDA 2020). The soils consist of loam to fine sand loam derived from glaciofluvial or glaciolacustrine deposits. The soils on the eastern half of the Tanglewood Drive alignment are characterized as Adams and Windsor loam sand, 0-5% slope. The western portion of the project area, including Fern Hollow Drive, contains fine sand loam, 30-60% slope (USDA 2020).

DOCUMENTARY RESEARCH

Precontact Site File Research and Archeological Sensitivity

Examination of VDHP site files indicates that within several miles of the project area, there are several hundred precontact sites situated adjacent to Lake Champlain, the Winooski River, and their numerous tributaries, such as Alder Brook, Muddy Brook, Indian Brook, and their associated wetlands.

There are six precontact sites located approximately one mile distant from the project area VT-CH-207, VT-CH-840, VT-CH-841, VT-CH-842, VT-CH-964 and VT-CH-1043. Five of the sites were identified as small camps, based on the presence of lithics and fire-cracked rock. One isolated find site contained a chert core. All six precontact sites are situated in close proximity to a stream channel or other waterway. Four sites located northeast of the project area were situated adjacent to a pond or wetlands. A site located to the south was located on a high terrace overlooking the Winooski River. Located to the southwest, was a site situated adjacent to Alder Brook.

The VDHP Environmental Predictive Model (EPM) was completed for the three project areas which produced an overall rating of 20 (Appendix 1), with a rating of 32 or above indicating precontact sensitivity. The overall project areas received points based on its location in an area with a high density of recorded

precontact sites (32 points) situated on a valley edge landform (12 points), and located within close proximity to a small intermittent stream (8 points). This rating also reflects a large reduction (-32 points) for previous disturbance.

Precontact archeological potential is considered low due to previous disturbance from road construction, driveways, curbing, sidewalks and utilities. The portion of the project area located within and adjacent to a seasonal waterway has been previously disturbed by erosion and man-made alterations from installation and maintenance of stormwater features.

Historic Site File Search and Archeological Sensitivity

Historic Archaeological Sites, National and State Register, Cemeteries

There are no historic archeological sites, State Register or National Register sites located within or adjacent to the project Areas of Potential Effect (APE).

There are no known cemeteries located within or adjacent to the project area (Hyde and Hyde 1991).

Historic Maps

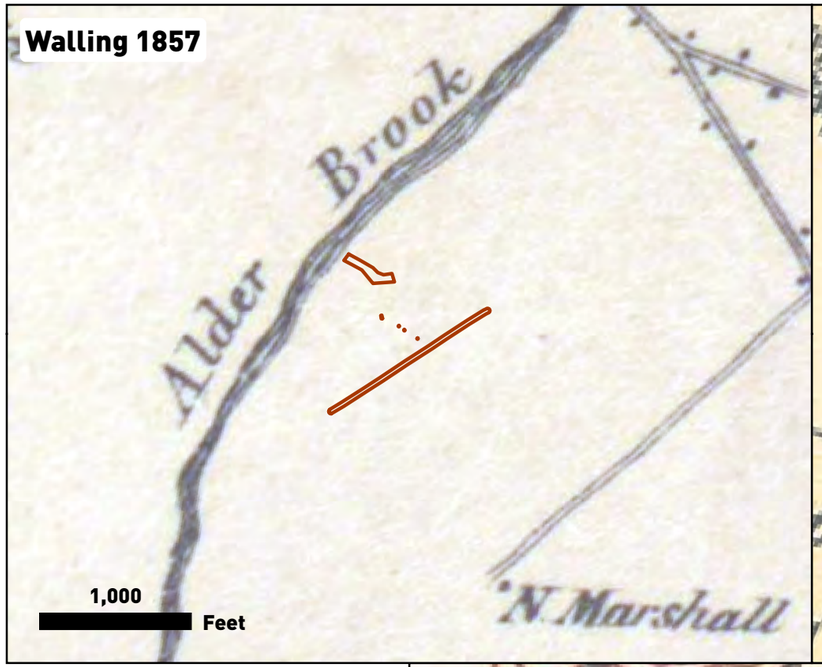
A review of historic maps of the project area was conducted to attain an overview of the changing historical and environmental landscape within the project area. This review includes the study of historic structures that may be or may no longer be extant, alterations to road and rail systems, and changes in stream and river courses. Two 19th-century maps, the 1857 Walling map and the 1869 Beers map, depict the roadways and river and stream courses in the project areas, as well as the names of the residents who lived there in those years (Map 3). These maps indicate that there was no historic development in the Tanglewood Drive area into the third quarter of the 19th century. Similarly, two 20th century USGS maps were studied, from 1913 and 1944, which showed no development, roads or structures represented through mid-century (Map 3). The Tanglewood Drive housing development was fully established by 1987, as shown on most recent USGS map (Map 3).

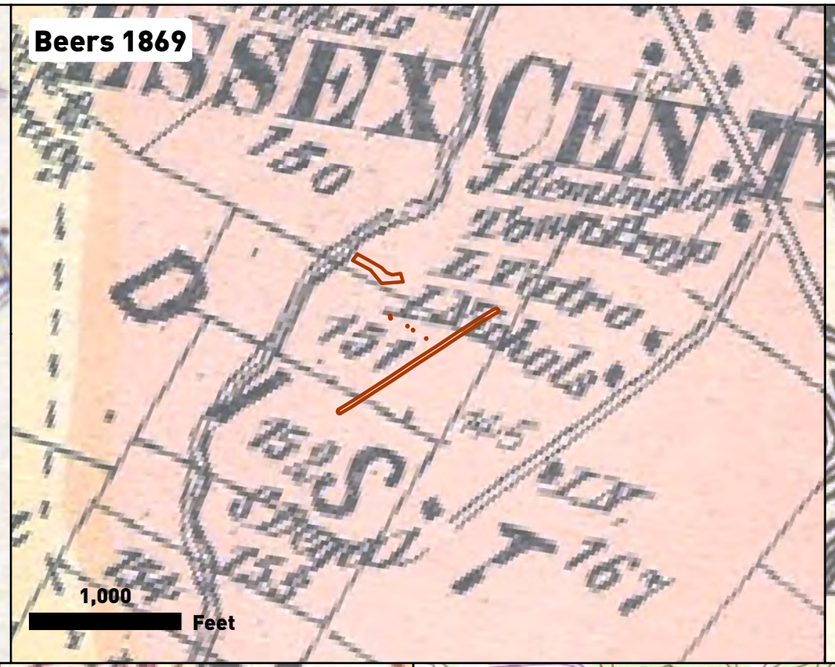
ARCHEOLOGICAL POTENTIAL AND RECOMMENDATIONS

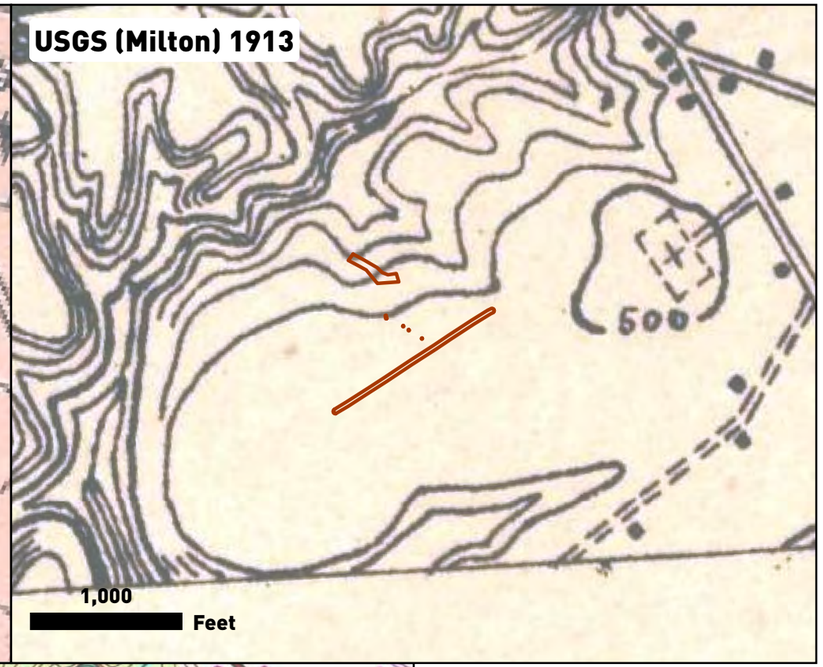
The areas directly adjacent to the Tanglewood Drive and Fern Hollow Road portions of the project alignment have been previously disturbed from the construction and installation of the roadway, driveways, curbing and utilities (Photos 1-5).

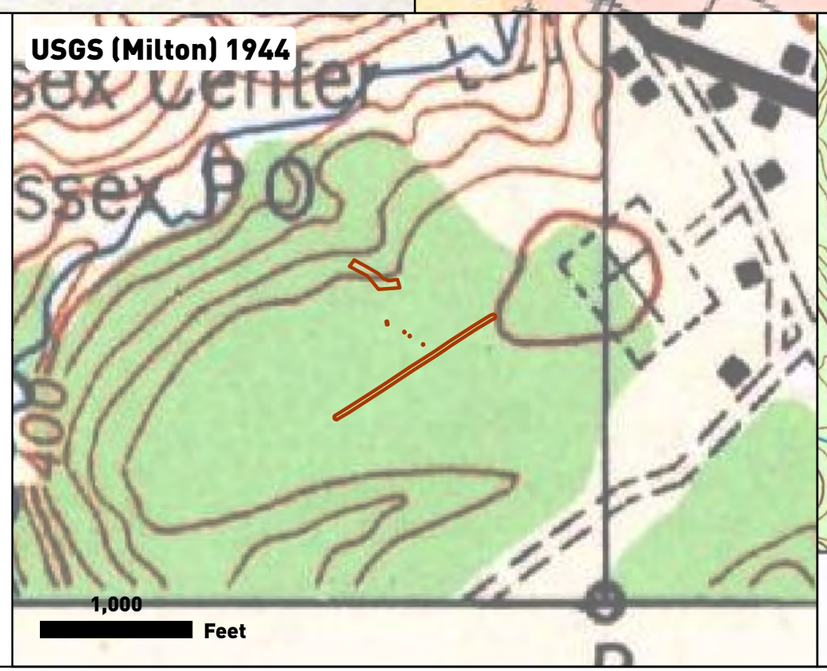
The portion of the project area located north of Fern Hollow road within and adjacent to a seasonal waterway is the proposed location of stormwater improvements. The area surrounding the seasonal stream is characterized as having moderate to steep slope and is bordered to the west by an earthen hiking path (Photo 6). The water channel exhibits exposed stream bank surfaces from erosion, and there are a number of modern stone stormwater features evident (Photos 7-9). The area of the proposed stormwater improvements has been previously disturbed by erosion and man-made alterations to stormwater features.

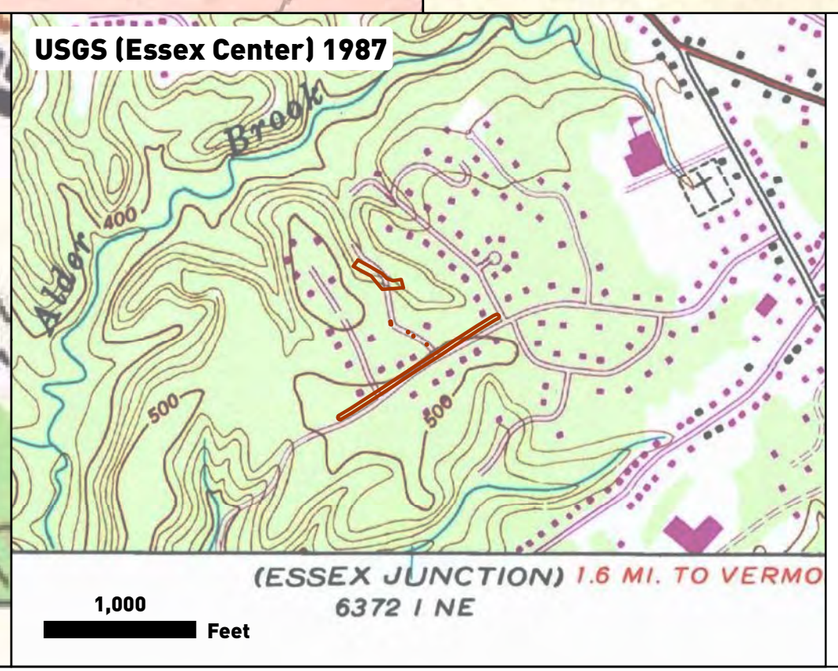
The project area is not considered to be archeologically sensitive for either historic or precontact resources. No further archeological investigation is recommended for the Tanglewood Drive Shared-Use Path and Stormwater Project. This ARA report should be submitted to VTrans archaeology officer for review and concurrence.











N

Legend

Area of Potential Effects (APE)

HARTGEN archeological associates inc

Historical Maps 1857-1987

Map 3

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APPENDIX 1: VDHP Archaeological Resources Assessment Form

VERMONT DIVISION FOR HISTORIC PRESERVATION

Environmental Predictive Model for Locating Pre-contact Archaeological Sites

Project Name St. Albans Shared Use Path **County** Franklin **Town** St. Albans
DHP No. **Map No.** **Staff Init.** **Date** 8/2020

Additional Information

Environmental Variable	Proximity	Value	Assigned Score
A. RIVERS and STREAMS (EXISTING or RELICT):			
1) Distance to River or Permanent Stream (measured from top of bank)	0- 90 m 90- 180 m	12 6	12
2) Distance to Intermittent Stream	0- 90 m 90-180 m	8 4	
3) Confluence of River/River or River/Stream	0-90 m 90 –180 m	12 6	
4) Confluence of Intermittent Streams	0 – 90 m 90 – 180 m	8 4	
5) Falls or Rapids	0 – 90 m 90 – 180 m	8 4	
6) Head of Draw	0 – 90 m 90 – 180 m	8 4	
7) Major Floodplain/Alluvial Terrace		32	
8) Knoll or swamp island		32	
9) Stable Riverine Island		32	
B. LAKES and PONDS (EXISTING or RELICT):			
10) Distance to Pond or Lake	0- 90 m 90 -180 m	12 6	
11) Confluence of River or Stream	0-90 m 90 –180 m	12 6	
12) Lake Cove/Peninsula/Head of Bay		12	
C. WETLANDS:			
13) Distance to Wetland (wetland > one acre in size)	0- 90 m 90 -180 m	12 6	12
14) Knoll or swamp island		32	
D. VALLEY EDGE and GLACIAL LAND FORMS:			
15) High elevated landform such as Knoll Top/Ridge Crest/ Promontory		12	
16) Valley edge features such as Kame/Outwash Terrace**		12	

17) Marine/Lake Delta Complex**		12	
18) Champlain Sea or Glacial Lake Shore Line**		32	
E. OTHER ENVIRONMENTAL FACTORS: 19) Caves /Rockshelters		32	
20) ☐ Natural Travel Corridor ☐ Sole or important access to another drainage ☐ Drainage divide		 12	
21) Existing or Relict Spring	0 – 90 m 90 – 180 m	8 4	
22) Potential or Apparent Prehistoric Quarry for stone procurement	0 – 180 m	32	
23)) Special Environmental or Natural Area, such as Milton acquifer, mountain top, etc. (these may be historic or prehistoric sacred or traditional site locations and prehistoric site types as well)		32	
F. OTHER HIGH SENSITIVITY FACTORS: 24) High Likelihood of Burials		32	
25) High Recorded Site Density		32	
26) High likelihood of containing significant site based on recorded or archival data or oral tradition		32	
G. NEGATIVE FACTORS: 27) Excessive Slope (>15%) or Steep Erosional Slope (>20)		- 32	
28) Previously disturbed land as evaluated by a qualified archeological professional or engineer based on coring, earlier as-built plans, or obvious surface evidence (such as a gravel pit)		- 32	
**** refer to 1970 Surficial Geological Map of Vermont** **Total Score**: 24			
Other Comments :			
0- 31 = Archeologically Non- Sensitive **32+ = Archeologically Sensitive**			

APPENDIX C

Construction Cost Estimate

Stantec

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223

Quantity Summary and Opinion of Probable Cost

Essex

Tanglewood Drive, Cindy Lane to Woodlawn Dr.

Stormwater and Pedestrian Mobility Scoping Study

Item No.	Item Name	Unit	Unit Price	Alternative 2		Alternative 3		Alternative 4		Alternative 5	
				Quantity	$	Quantity	$	Quantity	$	Quantity	$
201.10	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	LS	$5,000.00	-		1	$5,000.00	-		1	$5,000.00
204.20	TRENCH EXCAVATION OF EARTH	CY	$20.00	1050	$21,000.00	110	$2,200.00	170	$3,400.00	170	$3,400.00
203.32	GRANULAR BORROW	CY	$20.00	-		1000	$20,000.00			1000	$20,000.00
210.10	COARSE-MILLING, BITUMINOUS PAVEMENT	SY	$2.25	4200	$9,450.00	5400	$12,150.00	5400	$12,150.00	5400	$12,150.00
406.35	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	TON	$80.00	430	$34,400.00	465	$37,200.00	465	$37,200.00	465	$37,200.00
406.38	HAND-PLACED BITUMINOUS CONCRETE PAVEMENT, DRIVES	SY	$22.00	120	$2,640.00	55	$1,210.00	55	$1,210.00	55	$1,210.00
601.2610	15" CPEP(SL)	LF	$60.00	-		-		-		50	$3,000.00
601.0915	18" CPEP	LF	$65.00	-		240	$15,600.00	-		355	$23,075.00
601.7015	18" CPEPES	EACH	$300.00	-		1	$300.00	-		1	$300.00
605.13	UNDERDRAIN PIPE, 12 INCHES	LF	$70.00	1030	$72,100.00	1	$70.00	-		-	
604.20	PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE	EACH	$4,000.00	-		2	$8,000.00	-		3	$12,000.00
613.10	STONE FILL, TYPE I	CY	$60.00	-		5	$300.00	-		5	$300.00
629.54	CRUSHED STONE BEDDING	TON	$35.00	-		65	$2,275.00	-		110	$3,850.00
635.11	MOBILIZATION/DEMOBILIZATION	LS	10%	1	$22,610.90	1	$17,852.10	1	$16,413.60	1	$26,070.10
641.10	TRAFFIC CONTROL	LS	5%	1	$11,305.45	1	$8,926.05	1	$8,206.80	1	$12,946.25
646.402	DURABLE 4 INCH WHITE LINE, THERMOPLASTIC	LF	$0.80	2220	$1,776.00	2220	$1,776.00	2220	$1,776.00	2220	$1,776.00
646.482	DURABLE 24 INCH STOP BAR, THERMOPLASTIC	LF	$12.00	24	$288.00	-		-		-	
646.502	DURABLE CROSSWALK MARKING, THERMOPLASTIC	LF	$35.00	85	$2,975.00	-		-		-	
675.20	TRAFFIC SIGN, TYPE A	LF	$15.00	18	$270.00	-		-		-	
675.341	SQUARE TUBE SIGN POST AND ANCHOR	LF	$9.00	90	$810.00	-		-		-	
649.31	GEOTEXTILE UNDER STONE FILL	SY	$2.50	-		16	$40.00	-		16	$40.00
900.620	SPECIAL PROVISION (STORAGE STRUCTURE)	EACH	$9,000.00	-		-		4	$36,000.00	-	
900.620	SPECIAL PROVISION (12" INLINE DRAIN HDPE)	EACH	$1,000.00	8	$8,000.00	-		-		-	
900.620	SPECIAL PROVION (HYDRODYNAMIC SEPARATOR)	EACH	$15,000.00			-				1	$15,000.00
900.620	SPECIAL PROVION (PRECAST CONCRETE SUBSURFACE FILTER)	EACH	$50,000.00			-				1	$50,000.00
900.640	SPECIAL PROVISION (LINE STORMWATER PIPE)	LF	$80.00	905	$72,400.00	905	$72,400.00	905	$72,400.00	905	$72,400.00
			Construction Cost		$260,025.35		$200,299.15		$188,756.40		$294,717.35
			Contingency (20%)		$52,005.07		$40,059.83		$37,751.28		$58,943.47
			Total		$312,030.42		$240,358.98		$226,507.68		$353,660.82
			Say		**$320,000.00**		**$250,000.00**		**$230,000.00**		**$360,000.00**

APPENDIX D

Local Concerns Meeting

Tanglewood Drive Scoping Study

Local Concerns Meeting

October 23, 2019

Essex, Vermont



CHITTENDEN COUNTY RPC

TOWN OF Essex, Vermont

Stantec

Tonight's Purpose

- Introduce Project Team and review project area
- Review project development process
- Review existing conditions research
- **Gather feedback on issues, concerns, ideas - open public discussion**
- Discuss next steps

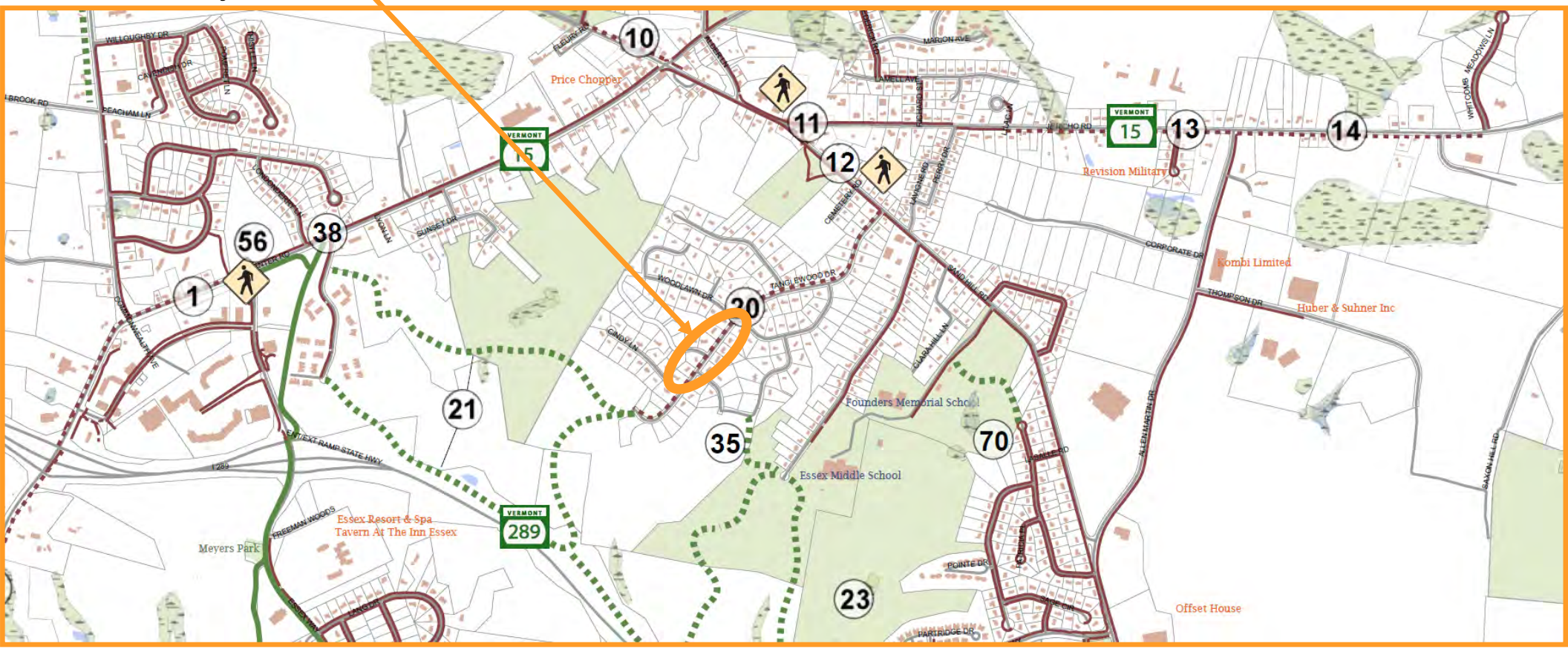
Stantec

Introductions : Project Team

- Essex Town Staff
  - Ann Costandi, Dennis Lutz
- CCRPC
  - Bryan Davis
  - Chris Dubin
- Stantec
  - Israel Maynard
  - Greg Goyette

Stantec

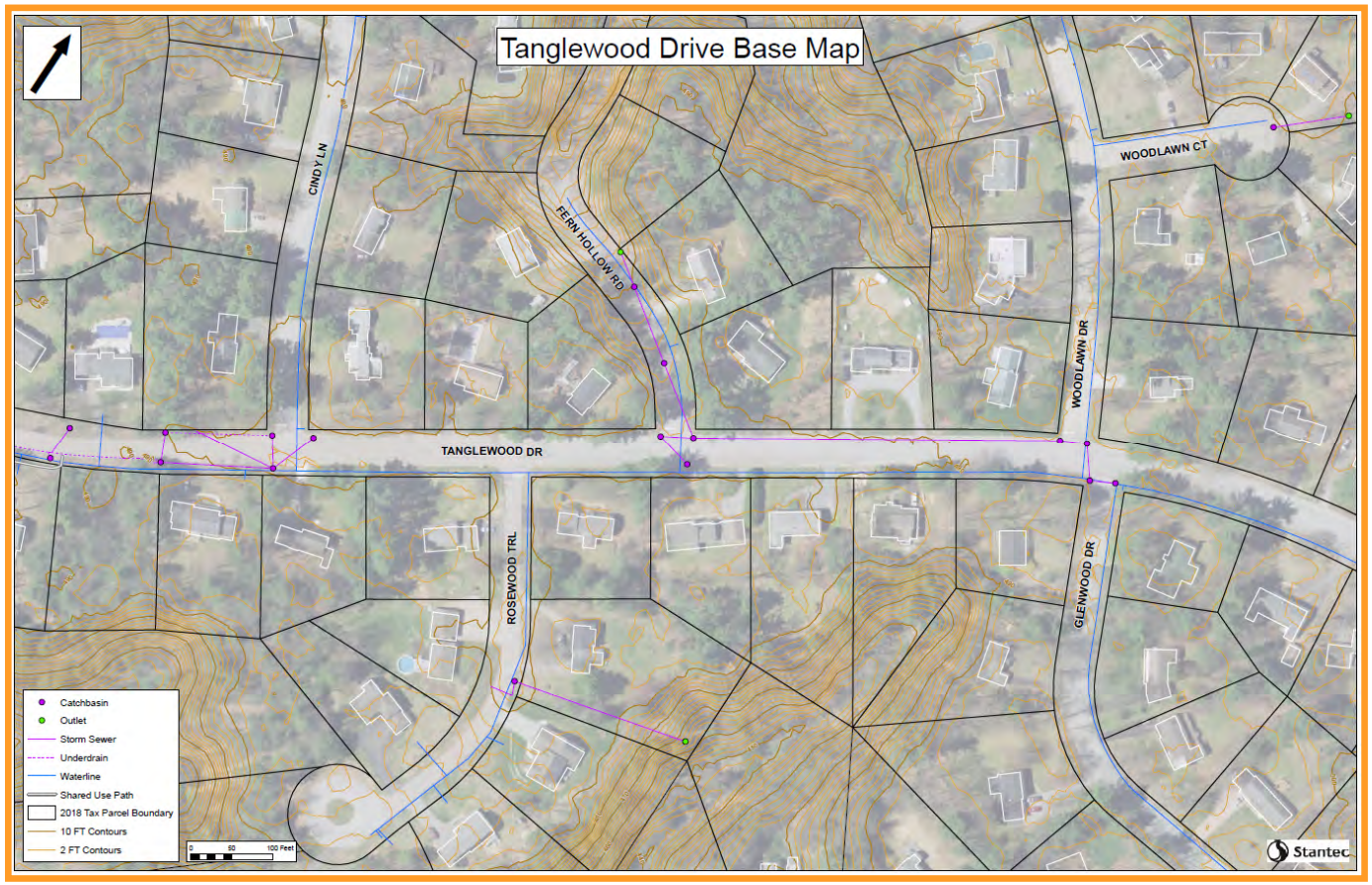
Project Background and Area



Map from Essex Bicycle and Pedestrian Plan

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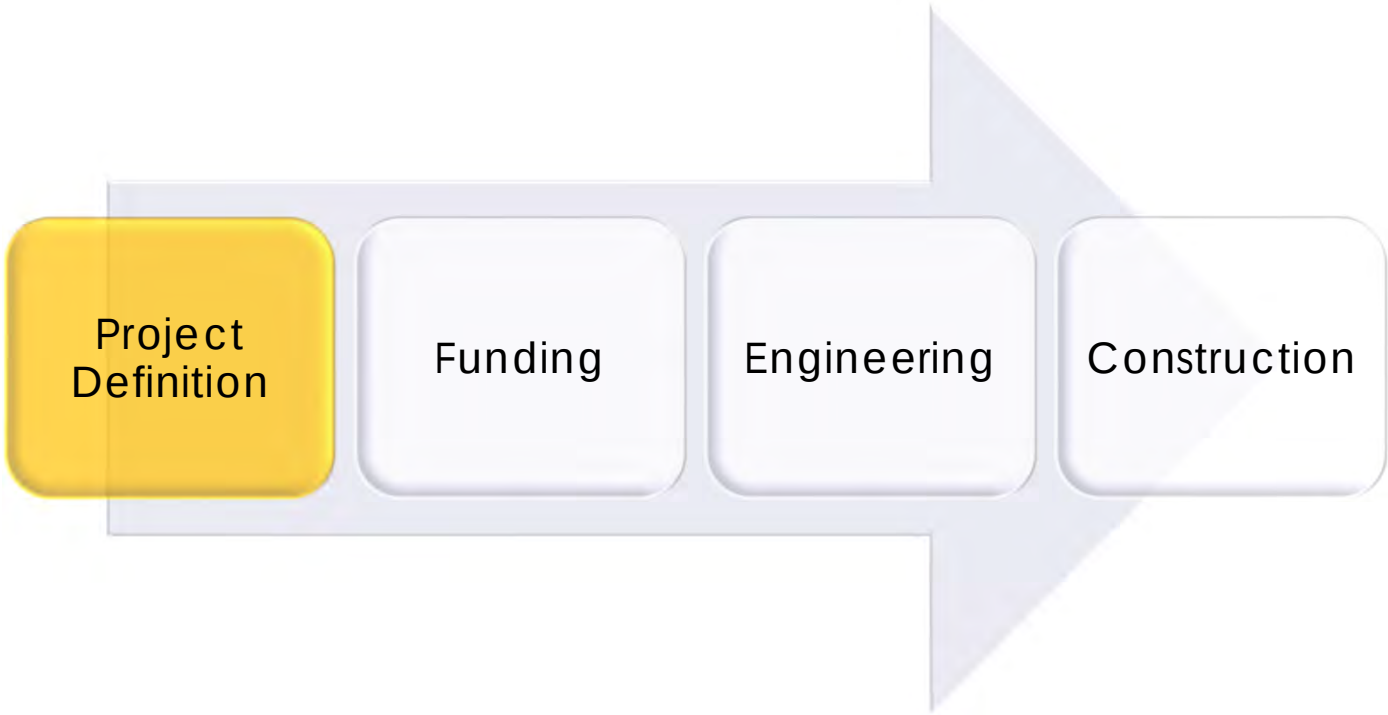
Project Background and Area



Study Focus: Bicycles, Pedestrians, Stormwater

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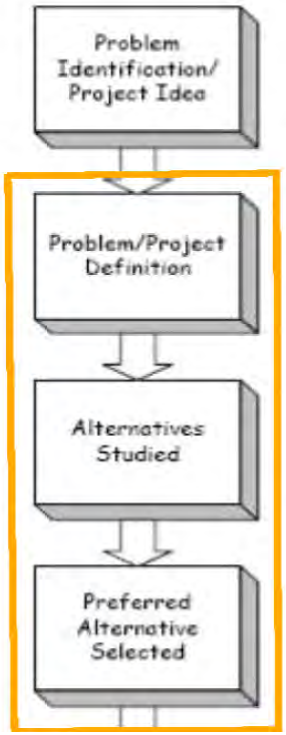
Typical Project Process



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Typical Project Process

Typical Stages in the Development and Funding of Transportation Projects



Problem Identification/Project Idea – The process starts when a particular transportation problem is identified or a new idea is put forward. This step can be initiated by members of the public, local elected officials, a private business, a community group, or a public agency. The CCMPO also often identifies problems and projects through its ongoing regional planning process.

Problem/Project Defined – The problem or project idea is brought to the CCMPO by local officials for definition and discussion (development of "purpose and need").

Alternatives Studied – As part of the Unified Planning Work Program (UPWP), the CCMPO studies the problem/project idea and examines alternatives through our Technical Assistance and/or Scoping and Project Definition process. In some cases, depending on the scale and complexity of the project, the CCMPO can develop a "quick fix" to resolve the problem quickly.

Preferred Alternative Selected – Working with affected community and the public, the CCMPO facilitates the selection of a preferred alternative, which flows from the study process, for implementation.

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Study Tasks and Timeline

- Task 1: Data gathering ,existing conditions analysis; **September - October**
- Task 2: Local concerns public meeting; **October**
- Task 3: Alternatives development; **November - December**
- Task 4: Alternative evaluation, draft scoping report; **January-February**
- Task 5: Alternative presentation, final report; **March-April**

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Tanglewood Existing Conditions



- Speed limit 25 mph
- ROW width – 60 ft.(typ.)
- Limited environmental resources
- Underground Water, Gas, Electric, Communications
- Private Septic Systems

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Tanglewood Existing Conditions

- 16 Foot Lanes,
- 4 Foot Shoulders
- Parking on the Street is occurring
- Entirely Residential
- Schools and Athletic Fields to the south
- Park and Town Pool to the North



Tanglewood Drainage Existing Conditions

- Collection System: Closed Drainage
- Outfall: 15” CPEP(SL) with Stabilized Outfall, Erosion Downstream
- Discharge Water: Alder Brook





Public Input and Solutions

What are the most important conditions, concerns, issues or solutions?

- Safety
- Pedestrian Accessibility
- Bicycle travel
- Drainage/Stormwater

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Next Steps and Public Meeting

- Develop ideas/solutions to address concerns
- Review with Team members
- Conduct public meeting to seek input on alternatives – **February/March**

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Thank you!

Contact information

Ann Costandi, Town of Essex:
acostandi@essex.org

Bryan Davis, CCPRC:
bdavis@ccprcvt.org

Israel Maynard, Stantec:
Israel.Maynard@stantec.com

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PROJECT: Essex Tanglewood Drive
MEETING: Local Concerns Meeting
LOCATION: Fire Station Community Room (190 Sand Hill Road)
DATE: 10/23/2019
TIME: 7:00 PM

	NAME	ADDRESS/REPRESENTING	E-MAIL
1	Israel Maynard	Stantec Consulting	israel.maynard@stantec.com
2	Ann Costandi	Essex Town	acostandi@essex,org
3	Bryan Davis	Chittenden County Regional Planning (CCRPC)	bdavis@ccrpcvt.org
4	TATRO	10 WOODLAWN	STATRO @ OMEGAVT.COM
5	Judy ERIKSEN	12 WOODLAWN DR	vtjudy43@comcast.net
6	Bill Silverstein	36 Tanglewood	bill.silverstein@gmail.com
7	Bruce & Mary POST	1 Cindy Lane	MARYPOST@GMAIL.COM
8	Dylan McNamara	51 Tanglewood Dr.	dnmcnama@gmail.com
9			
10			
11			

Essex Tanglewood public meeting notesA
October 23, 2019
Israel, Dennis, Annie, Chris, Bryan
9-10 members of the public

- Dennis gave an overview of the project, different issues being considered including stormwater, pedestrian safety with more kids walking to school since the district changed bus routes, on street parking, previous stormwater projects, TMDL issues generally, and a general overview of potential alternatives including lining the current stormwater pipe, reducing roadway width by 10 feet and add greenbelt/sidewalk, remove curb and add swales….
- Public comments:
    - People are speeding, how to slow them down?
    - Consider stop signs at intersections? Dennis notes that Town must follow MUTCD for stop warrants, which it won't meet. Residents need to work together with each other.
    - Could add bump outs at intersections to help slow people down.
    - Neighborhood needs a second access but it keeps getting waived and more houses are built.
    - Fire department access, impacts if road were to be narrowed.
    - Stormwater is an issue and need to do something about it.
    - Addition of sidewalk on Tanglewood doesn't solve connectivity issue (to other sidewalks). Also if it's not maintained in winter then would be unusable. Dennis notes that in the longer term a sidewalk could connect to new sections to be added later.
    - There is some parking on the street but not consistently.
        - Dennis asked about putting in flex posts on one side of the street as protected lane for walk/bike, could plow with sidewalk plow but not park in it. Some people don't like idea of white posts along street but could be OK without parking on one side of street.
        - Another option would be going through SB process to put up No Parking This Side of Street signs.
    - If Town removes the curb then could create swales to treat stormwater. Some peopled noted a preference to have consistency in curb/no curb. Dennis notes that over time the entire roadway could look the same.
    - Comment that stormwater issues are beyond Fern Hollow and include some of the side streets like Woodlawn. Annie notes that addressing Tanglewood stormwater may have positive effects on other streets. Another resident echoes concern/issues of flooding in first floor of raised ranch. Stormwater flow from street down driveway into house. Dennis notes that Town has 1800 catch basins, they sweep in spring and fall, do their best but can't keep up with everything.
    - Can't Town just take out the curb and be done with it? No, would have to do more work to add swales and get water after the road.
    - Cindy Lane and Tanglewood, known as Lake Tanglewood. What happened there? Catch basins failed and had to be replaced, some pipe replacement.
    - Need to address stormwater as part of larger environmental effort.

Suggestion to develop a short survey for residents to get input on issues, potential design options, etc. Residents could use Neighborhood Watch list and FPF to distribute.

Issues and ideas to include as part of survey:

- Introduction: ROW is 60 ft, roadway is 40 ft, summarize stormwater and safety issues, outline some potential ideas to consider:
    - Reduce roadway width to:
        - Add greenbelt/sidewalk
        - Remove curb and add swale
    - Keep roadway width and:
        - Break the curb at certain points to allow infiltration
        - No parking on one side (signs or flexposts) for walk/bike area
    - Remove pavement at 30-35 ft to create swale, leave remaining pavement at 35-40 ft as sidewalk/path

APPENDIX E

Online Survey Comments

Survey Additional Comments:

It seems odd to have just this section be different from the beginning of Tanglewood (intersection with Sandhill Road) to Woodlawn. If anything is done, I would like to have it be consistent on all of Tanglewood Drive.
1/3/2020 8:11 PM

Unless you can GUARANTEE the future funds will be in place to make the entire length of Tanglewood Drive look uniform (with a sidewalk or bike lane) then please just stick with dealing with the stormwater and leaving the road 'as is' (putting in the drains and re-pave that area quickly) or we will most likely get stuck with lengthy construction that eventually yield a 'hodge-podge' solution seeing as public works already struggles to afford the number of necessary projects within Essex in any given year. Having the solutions in the survey above for only 200-300 feet of the entire length of Tanglewood makes absolutely no sense whatsoever. My vote is to dig it up, fix the issue, and re-pave. I also have a rock garden at the edge of my road between Fernhollow and Cindy Lane that I have put significant money into and do not wish to move, without the curb it would fall towards the street.
12/27/2019 5:06 PM

You are trying to solve a problem that does not exist. Things are fine the way they are. Leave them alone. You are delinquent in your fiduciary duty to the taxpayers by proposing unnecessary expenditures. If anything, please have the plow crews keep the road at 40 feet during the Winter. In the past, they have failed to do so and the road narrows to the point it is a hazard to both pedestrians and their dogs in the morning. Also, please publish the results of this survey.
12/24/2019 8:33 AM

I like the idea of a multi purpose path over a sidewalk, as that's what is located at the end of Tangelwood. I am having a hard time with the fact that it is only for a small stretch of road. I would love for it to connect to the one at the end of Tangelwood and eventually extend towards Sandhill.
12/16/2019 9:16 PM

I live on Oakwood Lane
12/13/2019 1:19 PM

There is no second exit from The pinewood development. Severll years ago when a local development wish to extend the development at the end of Tanglewood where it intersects with Cindy Lan he was only allowed to do so after the town fire chief asserted that a second exit was not necessary because Tanglewood was 40 ft wide and that with would permit access and egress for emergency vehicles going or coming from the Cindy Lane Tanglewood extension area. I'm dictating a response here's to me Log Tanglewood is narrowed to 30 ft per your proposal the town of Essex will need to provide a second exit egress to ensure that emergency vehicles and residents could access and exit the area at the end of Tanglewood. This matter was resolved in State environmental Court in part because of the town's assertion that tanglewood's 40ft with provided for safe access and egress to the end of Tanglewood drive.
12/12/2019 7:52 PM

No
12/12/2019 6:53 PM

I live on Tanglewood immediately past Cindy Lane. I’m concerned that the integrity of the neighborhood will drastically change with some of the questions being asked. I honestly don’t feel as though many people would use a path or walkway and reducing the width of the road may create a safety hazard for those that bike regularly who would not use the path.
12/12/2019 6:40 PM

Our current roadway accommodates 12 month walking without risk of slipping on winter ice on sidewalks. Our FAMILY oriented roadway accommodates family reunions/graduations/birthdays with parking for the 8-20 cars of friends and family. FAMILY walks allow 3-4 people wide conversations while walking. Our

learning to ride a bike young children can be accompanied by an adult by their side as they gradually master skills. We love this neighborhood roadway for those reasons. Handicapped individuals have greater mobility for 12 months of the year. Aging seniors need dry surfaces for exercise and mobility. Large delivery vehicles have no issues.
12/12/2019 6:25 PM

Don't change anything, add anything and leave everything as is. Thank you
12/12/2019 5:32 PM

This is a very short section of Tanglewood and how this meshes with the rest of Tanglewood should be considered.
12/12/2019 5:28 PM

no
12/12/2019 5:26 PM

it would be nice to do the rest of the road. the white paint was a waste of money it would have been better to put a center strip
12/12/2019 5:24 PM

APPENDIX F

Alternatives Presentation Meeting Notes and Chat Log

Essex Tanglewood Public Meeting
March 16, 2021
Attendees (check chat log as well):
Dennis Lutz
Ann Costandi
Israel Maynard
Bryan Davis
Chris Dubin
Barbara Higgins
Essex Reporter
Mary Post
Bruce Post
Katherine McNamara
Rosina Cannizzaro
Sam Tatro
Laura Ennis
Erin Ennis
Dylan McNamara
Betsy Dunn
Irene Wrenner
Andy Elliston
Bill Silverstrum
Jacobs
Elizabeth Marvin
Patty
Bob Bates
Richard Divenere
Missie Thurston
Suzanne
David
Chris Yandell
Carolyn Lewis

1. Israel gave a presentation including a detailed review of the 2019 survey results
2. Public input about survey:
    - Dylan - Did survey go out by mail? Are we looking for more input tonight? Israel – survey responses helped guide alternatives development, which we'll share to night and accept more feedback
    - Bruce – survey asked about frontage, did rest of survey only ask them? Or open to all? Israel – open to all.
    - Bob – could Dennis respond to concern about reducing roadway width from 40 ft to 30 ft? Bob remembers previous (10-15 years ago) discussion about not having second exit from subdivision. Concern about safety of neighbors. Israel – path or sidewalk could have full roadbed underneath to support emergency vehicles.

- Betsy – worried about more impervious surfaces and stormwater impacts, would like to hear more about this plan.
- Jacobs – works for other public works. Is the bike/ped component a "feel good" part or can we just address the stormwater issue? Israel – one alternative has no bike/ped improvements, bike/ped could work in tandem with school busing (there was lack of busing) but if people don't want it, then we don't have to have it. Annie – town could consider other improvements besides white posts if people want something else.

3. Presentation of alternatives
   - Alt 1 no action but could add striped walk/bike lane on one side (this could be for all 40 ft alternatives)
   - Alt 2 – 30 ft with green strip buffer/drainage and sidewalk/path
   - Alt 3 – 40 ft roadway, relocated outfall
   - Alt 4 – 40 ft roadway, stormwater storage structures
4. Review of evaluation matrix

5. Questions from the public:
   - Bruce – what do you mean there's no bussing? Ann – there were bus staff shortages. Bruce – alt 2 does sidewalk/path get extended past Cindy Lane? Israel – existing shared use path is just off screen so this alt would connect by a crosswalk. Bruce – by observation very few people use sidewalk.
   - Patty – what are you going to do about phosphorous? Alt 3 talked about wetlands, we want to protect them. Also plowing isn't very good and leaves ice so people can't walk. Israel – phosphorous is a concern, Town has a plan. Dennis – agree 100%, working with the Village, got a grant to do a phosphorous plan, whatever alternative is chosen will have phosphorous removal component but might be as a separate effort. Israel – reducing flow and reducing impervious also reduces phosphorous load
   - Barbara – didn't get survey, prefer Alt 4 because we need four season ped access, don't see that with Alt 2 which could be preferred from engineering perspective. People walk in road not sidewalk because it's not plowed. Alt 4 doesn't change look of community.
   - Dylan – appreciate addressing phosphorous. Notes that roadway needs repaving. Like Alt 2 with sidewalk but if not maintained then can't use.
   - Dennis responded with info about TV through the pipes to check the condition, which will help Town understand what is needed.
   - Suzanne – prefer to keep flow out of stream to prevent erosion. Israel – Alt 3 guided by this thinking.
   - Jacobs – don't understand Town's policy on plowing, not curb to curb. Do you plow curb to curb? Dennis – with 40 ft wide road the plows don't reach the whole way with two passes. Town tries to get to this roadway sooner because it's in a school zone with walk/bike access. Even with 30 ft roads tough to get curb to curb. Even when you go back to get curb to curb you end up plowing people back in. Jacobs – Alt 2 with green strip – if road is already pitched why would you put that there, it will fill up. Why? Dennis – yes, plowing in winter will push snow into the swale and would have to melt for drainage to be effective. This could be curbed and would add 50,000-60,000 to project, but snow would still end up in green strip..

- Carolyn Lewis – what would be the maintenance of green strip in the summer? Israel – usually has grass and mowed. Carolyn – what are differences between Alts 3 and 4? Israel – for Alt 3 wouldn't change peak flow, only extend into stabilized area, about 300 ft downstream. Alt 4 benefit is that storage structures would reduce peak flow, could also filter out phosphorous. Carolyn – overly costly to do both alts? Israel we could take a look, might not be too expensive. Carolyn – inclined towards options without green strip, who could keep sidewalk plowed timely. Israel – how about the line striping for bikes/peds? Carolyn – seems pretty friendly, maybe put it on same side of road as existing sidewalk.
- Richard – issue is we like the wide road, striping side would be super, we see lots of people walking/biking. No complaints about the plow. My issue is concern about safety, Tanglewood has turned into a raceway, please do something to slow traffic down. Police clocked people doing 55 mph on straightaway.
- Chris Yandell – we don't really have a mobility issue with the road, we like the width, more people walking and biking on it than driving, I don't think people will use sidewalk with so many people out there. Main issue seems to be stormwater and erosion. Is there a ranking on what's most important or how you prioritize specific mitigations in the matrix? What's most important? Does more expensive alt do more/better? Would some alts be more likely to be funded? Israel – in purpose and need we don't weigh anything higher than something else, public comments are key. Annie – resident support is key to direction, there might be some things Town could do without grant funding (like striping or repaving) but grants could fund bigger/more expensive pieces. Dennis – we have to remove phosphorous within 20 years, and we need to figure out how we're going to pay for these projects, we're going to have to get grants. No guarantee on grant funding, Town puts away $150,000 each year and has been successful with grants in year's past, needs to be smart with investments. If alt 3 was chosen, for example, we'd still do something about flow, like what is in alt 4.
- Discussion about speed humps/bumps.
- Erin Ennis – long term maintenance costs? And hybrid of alt 2? Israel – what's proposed stays within existing impact even though ROW is 60 ft. Didn't look closely at long term maintenance costs.
- Bill Silverstrum – prefer alt 3 or 4. Another concern with narrowing road is that this is only for a portion of the roadway so there's still width on both ends. I also thought we were supposed to have a second access to neighborhood. Parking issue – can park on both sides right now, proposal would mean that people may have to park in front of neighbor. Storms knock down branches and roadway is only clear path. If I need to get to my yard I'll have to cross whatever it is you build, I have rock wall lined driveway. Grant money is hard to come by so we'd only have this one section done for years. Finally, if TV shows that pipes are good, then we don't need to dig anything? Israel – some catch basins may need to be cleaned out/replaced. Dennis – discussion of pipe materials.
- Barb H – are lining costs part of the project? Israel – cost would go up if pipes needed to be lined.
- Mary Post – feel like we're behind, if we had these problems then why did development continue? Couldn't developers pay to fix rather than taxpayers? Safety – we've asked for years for safety to be addressed, like put in stop signs but Dennis says have to follow federal guidelines but this isn't federal road. Like the wide road, it's safe for everyone to use. Painting

the sides – don't have a problem with it but sides are usually full of debris. Dennis – new development subject to planning commission approval, made up of residents, if project meets standards then it can be developed. Some standards being tightened up to control phosphorous, for example. Stop signs and other markings follow federal guidance, as do other towns. Water line issue – there's only one into the development and will continue to look at adding a second line for a reliable source.

- Bob – Bill brought up issue I raised about second entrance requirement. Also issue of safety, we feel safe but agree that speed is an issue, are there options besides stop signs, like speed bumps or (radar speed feedback sign)? Phosphorous also an issue to address immediately. Dennis – some of these are old issues so hard to address. This is one of a few 40 ft roadways, also pretty long. Bob B – regulations about second access…alt 2 is concerning because it reduces roadway width.
- David – proponent of sidewalks, advocate for white lines, speed is an issue, there is no perfect design, wouldn't want to miss an opportunity to take advantage of having most impact. Comment about upgrading electrical in addition to water. Israel – didn't look at electrical. David – like alt 2 but also like the bigger road that people use, is there a way to do a hybrid for other sections to have continuity. Use rumble strip to designate space? But have young children so safe space is desired. Understand why town doesn't like speed bumps in neighborhoods but I'm interested in safety. Dennis – speed bumps are problematic, installed a bunch years ago, took speed data before and after, found that 50% speeds went up 2 mph, 50% speed went down 2 mph. We took out some because residents were tired of hearing cars going over them at night. There are other things that can be done like bulb outs that narrow intersections and people tend to slow down. Rumble strip could be an idea. Project scope is somewhat limited through RPC funding. David – suggest doing something of scale that could be done for the rest of the road at some point, described modified version of alt 2.
- Dylan – helpful to hear the cons of speed bumps. Sounds like alt 3 or 4 is popular, as is modified alt 2. Next steps? Israel – project team to determine if we have enough info to make a decision, or maybe another survey. Dennis – next step, run TV, look at catch basins, have a good feel from tonight, could be combination of alt 3 and 4 with some other options. This is only scoping so only part of the process. Take preferred alternative, send out to everyone, bring to Selectboard,
- Dylan – agree with preference for alt 3 and 4 but with safety improvements
- Israel – pavement markings could help create some safety improvement
- Patty – I'm a runner and biker, what if snow was physically removed, wouldn't that mitigate everything at once? Town only has one bucket loader, in winter trucks have salt and sand in back so can't put snow in the back. Also, where would you put snow if removed? Would have to be safe space.
- Bob – thanks for describing the process. Good feelings about living here reinforced by this conversation. Hope that plan will incorporate what you've heard and maybe we'd have another hearing like this before it goes to Selectboard.
- Mary – 40 ft roadway is safe and everyone enjoys it, but speeding is an issue, so maybe take to the Selectboard.
- Betsy – we have bike lanes on Tanglewood, I called police chief who didn't know the rules about using them or where to park cars. Also debris in fall is seasonal, road cleaning isn't frequent. Reiterate waiving second access and safety issue. Israel – white lines are just painted shoulders

not bike lanes. Dennis – correct. If bike lanes then parking gets restricted, as they are now doesn't restrict parking.

Essex Tanglewood Public Meeting
MS Teams Chat Log
March 16, 2021

[7:00 PM] Essex ReTorter (Guest)
This meeting is being live streamed and recorded nd can be reviewed at the Essex ReTorter Face Book Page.

[7:00 PM] Unknown User "Irene Wrenner (Guest)" was invited to the meeting.

[7:00 PM] Unknown User Patty was invited to the meeting.

[7:00 PM] Unknown User Amy was invited to the meeting.

[7:01 PM] Unknown User Marvin, Elizabeth was invited to the meeting.

[7:02 PM] Unknown User "Bob BatesB (Guest)" was invited to the meeting.

[7:02 PM] Unknown User Chris yandell was invited to the meeting.

[7:05 PM] Dylan McNamara- EWSD (Guest)
I'm glad you are presenting this as I missed the survey and it'll be good to for folks to have a chance for additional input
(1 liked)

[7:06 PM] Unknown User richard divenere (Guest) was invited to the meeting.

[7:07 PM] Unknown User Missie Thurston (Guest) was invited to the meeting.

[7:21 PM] Dylan McNamara- EWSD (Guest)
It looks like only 6 people said they had frontage but more than that actually answered the questions even though the questions said "if your property fronts Tanglewood..."

[7:21 PM] Andy Elliston (Guest)
FYI, I live in that section and my residence is connected to town sewer.

[7:23 PM] Unknown User Chris Yandell (Guest) was invited to the meeting.

[7:23 PM] Unknown User Chris yandell no longer has access to the chat.

[7:23 PM] David (Guest)

I'd just like to comment on the white lines. I certainly don't think they were a waste. I have young kids who would love to feel safe traveling in the neighborhood, and having the lines in place of what we would really love, a sidewalk, was a small upgrade and a minimal expense.

[7:24 PM] Unknown User Knight, Stacey L was invited to the meeting.

[7:28 PM] Erin Ennis (Guest)
David, I agree. Our kids are in Middle School, but I don't feel particularly safe allowing them to walk to school on the road, especially in the winter. 25MPH is often a loose suggestion on Tanglewood. I'm curious if a 30' roadway + sidewalk would encourage adherence to the speed limit.

[7:31 PM] Sam Tatro (Guest)
Annie, what impact will these upgrades have regarding the existing flooding issues on Woodlawn Drive. (1 liked)

[7:34 PM] Unknown User Carolyn Lewis (Guest) was invited to the meeting.

[7:35 PM] Ann Costandi
Hi Sam. We did not look at the drainage on Woodlawn as part of this project, but drainage improvements on Tanglewood will reduce the amount of stormwater running down Woodlawn and we will take a closer look at the drainage on Woodlawn once we select an alternative and come up with a plan for this project.

[7:37 PM] Sam Tatro (Guest)
Thank you, Annie. We're very interested in this project and the solution to the flooding issue on Woodlawn.

[7:39 PM] Ann Costandi
We are planning to some televising work of the storm pipes in the spring so I'll make sure that Woodlawn is included. I have your contact info Sam and I will keep you updated when we start doing the additional work.

[7:39 PM] Erin Ennis (Guest)
Ann Costandi This may be beyond the scope of this project. There is a bridge in the Town Forest across the discharge gully about 100 yards downstream from Fern Hollow. This access point frequently washes out, rendering pedestrian access to the Town Forest trails from the end of Woodlawn Drive unsafe. 1) Is the proposed solution expected to address the cause of the washout. 2) Is the stabilization/repair of this access point/crossing of the gulley within the scope of any remediation of the drainage corridor between Tanglewood/Fern Hollow and Alder Brook?

[7:43 PM] Amy (Guest)
Annie, what were the markings for that were done all down Woodlawn before winter? My understanding was that was to make improvements for the drainage on Woodlawn. If not, what will be

the impact on drainage of these changes that come from the markings that town made that have been yet to be implemented?

[7:48 PM] Ann Costandi
Hi Erin - the Town Forest falls under the Parks and Rec jurisdiction. I do know that P&R have completed a study to look at all the crossings in the Town Forest and have come up with a plan to repair and fix some of these. It is one of their priorities projects. The work we want to do to improve the drainage will store a portion of the water that causes some of this erosion. Between this project and the work from P&R, the crossing will be addressed.
(1 liked)

[7:49 PM] Unknown User David (Guest) no longer has access to the chat.

[7:49 PM] Unknown User "David (Guest)" was invited to the meeting.

[7:50 PM] Ann Costandi
Hi Amy, The markings were for paving improvements not drainage improvements. I do not know the schedule for it, but I can find out for you.

[7:52 PM] Marvin, Elizabeth (Guest)
Q: If I understand correctly, this project is being funded by a grant. How much is the grant?

[7:52 PM] McNamara, Katherine (Guest)
will the pavement markings along the sides of the road prevent parking being allowed?

[8:10 PM] Dylan McNamara- EWSD (Guest)
Have you considered adding speed humps/bumps?

[8:12 PM] Marvin, Elizabeth (Guest)
I agree.

[8:12 PM] Unknown User richard divenere (Guest) no longer has access to the chat.

[8:15 PM] Knight, Stacey L (Guest)
We also enjoy having a wider road, but we are fine with having markings on both sides of the road like we have now.
(1 liked)

[8:16 PM] Carolyn Lewis (Guest)
I would like to hear if there is any reason not to add in speed bumps?

[8:17 PM] Ann Costandi
We discussed speed humps and bumps in the first public meeting and it was not a preferred method so we took it out when looking closer into the alternatives.

[8:18 PM] Dylan McNamara- EWSD (Guest)
Going with option 3 or 4 appears to address drainage. Adding lines and/or speed bumps would enhance safety and mobility and check those boxes.

[8:22 PM] Unknown User Sam Tatro (Guest) no longer has access to the chat.

[8:28 PM] McNamara, Katherine (Guest)
I'm in favor of options 3 or 4 or a hybrid of those to reduce storm flow and phosphorus, while maintaining the wide roadway. A sidewalk would not get used for all of the reasons mentioned by others. For added safety, add speed bumps.

[8:31 PM] "David (Guest)"
I've had my hand up for a while but havent had a chanmce yet, love to comment if possible

[8:48 PM] Unknown User Marvin, Elizabeth no longer has access to the chat.

[8:48 PM] Unknown User Chris Yandell (Guest) no longer has access to the chat.

[8:49 PM] Unknown User "Rosina Cannizzaro (Guest)" no longer has access to the chat.

[8:53 PM] sharon zukowski (Guest)
Its 50 homes that require a second access. Both of the two developments at the end of Tanglewood were approved by the PC AND in Court with Dennis and the Fire Chief's assurance that the second access could be waived based on the 40 foot width of Tanglewood. Birchwood has over 200 homes and no second access. This is not old news. It is a current safety issue, which Dennis is calling sour grapes.

[8:57 PM] "Irene Wrenner (Guest)"
Old Farm Road?

[8:57 PM] Ann Costandi
Old Farm Road is one and also Laurel Hill Drive in South Burlington

[9:01 PM] Unknown User McNamara, Katherine no longer has access to the chat.

[9:02 PM] Erin Ennis (Guest)
David said it clearer than I did, but replacing the sidewalk with the green strip for the 35' road was what I was trying to ask about earlier.

[9:06 PM] sharon zukowski (Guest)
Great ideas from Dylan McNamara.

[9:06 PM] Missie Thurston (Guest)

I agree that speed is a huge problem on Tanglewood impacting the safety of all, especially our small children. If speed bumps are not effective, are there flower planters or those pushouts or other things that periodically narrow the road to slow speed in the summer? Or environmental elements (like rumble strip or planters or other) that highlight the "pedestrian area" on the side of the street. Do these features create the sense of a narrowed road without narrowing the road, and has narrowing roads been shown to slow speed? These could add aesthetic beauty in the summer and slow traffic but leave the 40' roadway intact and have a 40' roadway in the winter that's completely open like it is now.

Tanglewood Drive Scoping Study Alternatives Presentation

Selectboard Meeting

September 13, 2021



Chittenden County RPC

Town of Essex, Vermont

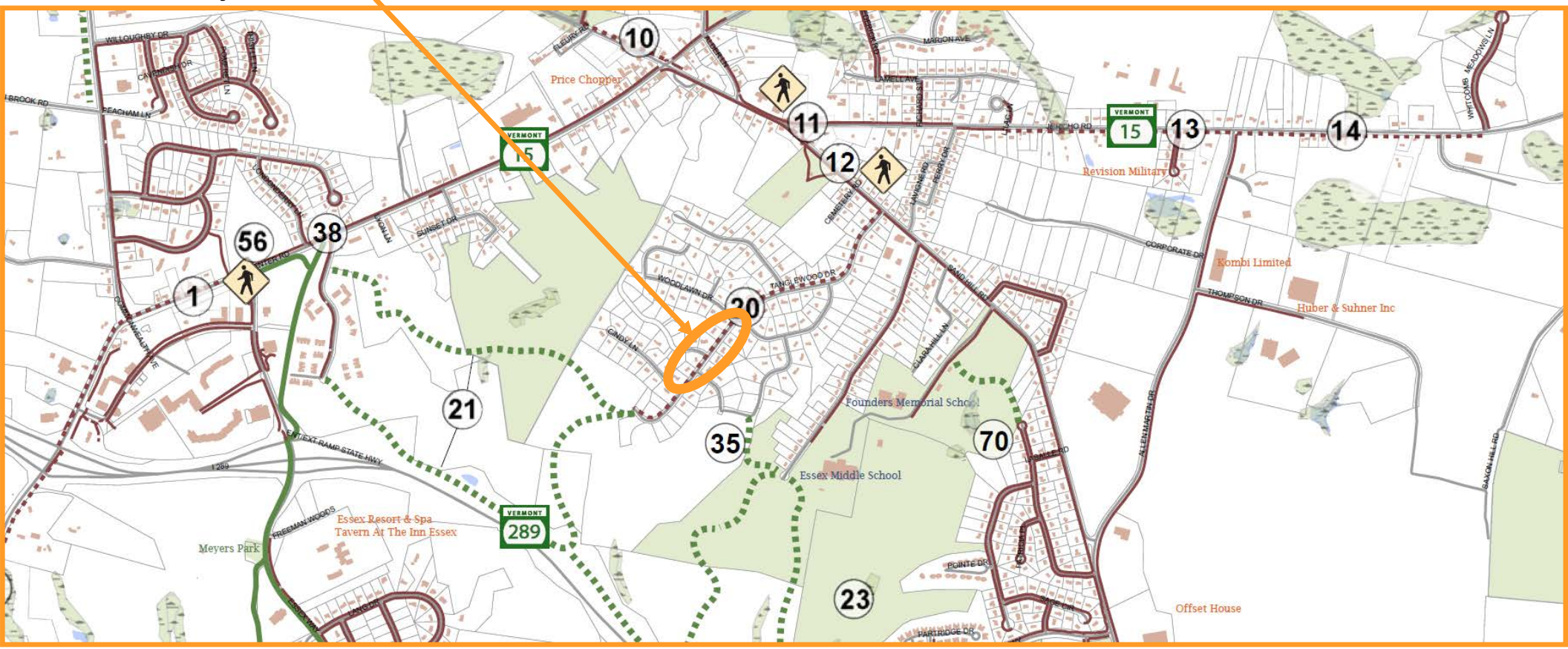
Stantec

Introductions : Project Team

- Essex Town Staff
  - Ann Costandi, Dennis Lutz
- CCRPC
  - Bryan Davis
  - Chris Dubin
- Stantec
  - Israel Maynard

Stantec

Project Background and Area



Map from Essex Bicycle and Pedestrian Plan

Stantec

Project Background and Area



Study Focus:

- Bicycles
- Pedestrians
- Stormwater Management

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Tanglewood Existing Conditions (Street)



- Speed limit 25 mph
- ROW width – 60 ft.(typ.)
- 16 Foot Lanes,
- 4 Foot Shoulders
- Parking on the Street is occurring
- Entirely Residential
- Schools and Athletic Fields to the south
- Park and Town Pool to the North

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Tanglewood Existing Conditions (Drainage)

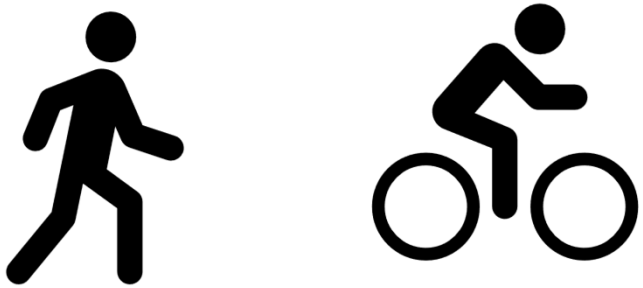
- Collection System: Closed Drainage
- Outfall: 15” CPEP(SL) with Stabilized Outfall, Erosion Downstream
- Discharge Water: Alder Brook

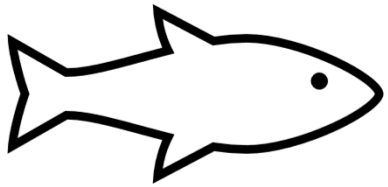




Project Purpose and Need

Purpose: The purpose of this project is to improve the drainage system along Tanglewood Drive and to provide safe, comfortable pedestrian and bicycle facilities for users of all ages and abilities while maintaining safe and efficient vehicular conditions.





Need:

1. Address drainage problems resulting in erosion at the closed drainage system outlet in Fern Hollow.
2. Provide an inviting pedestrian travel route for residents that reinforces the Town's and Region's goals for pedestrian and bicycle mobility.
3. Facilitate use by all age groups, experience levels, and trip purposes.

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Alternatives

- **Alternative 1** – No Action
- **Alternative 2** – 30’ Roadway, 5.5’ Green Strip, 5’ bike/ped path. Stormwater Treatment in the green strip
- **Alternative 3** – 40’ Roadway, Stabilize Fern Hollow erosion, extend closed drainage to stable outlet.
- **Alternative 4** – 40’ Roadway, Underground stormwater storage chambers to reduce peak flows to Fern Hollow.
- **Alternative 5** – 40’ Roadway, Stormwater Filter, Stabilize Fern Hollow erosion, extend closed drainage to stable outlet.

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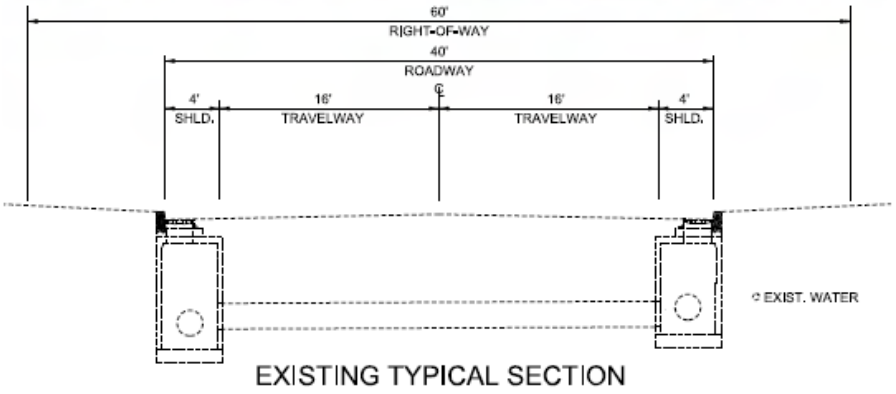
Alternatives

- Alternative 1 – No Action

Roadway would receive a regularly scheduled maintenance overlay.



Pedestrian/Bike lane could be added to the roadway with pavement markings



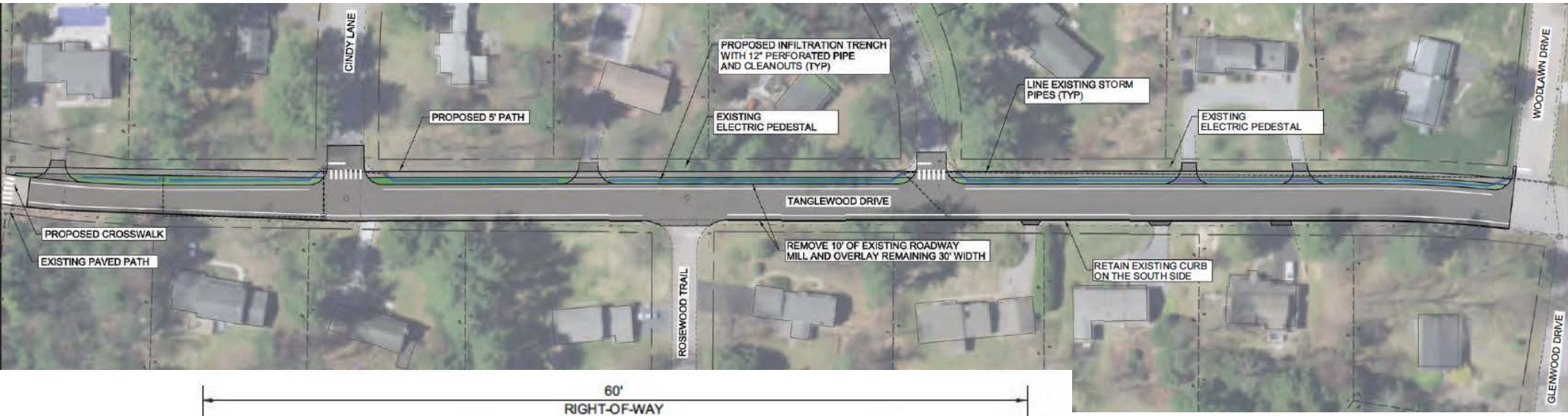
EXISTING TYPICAL SECTION

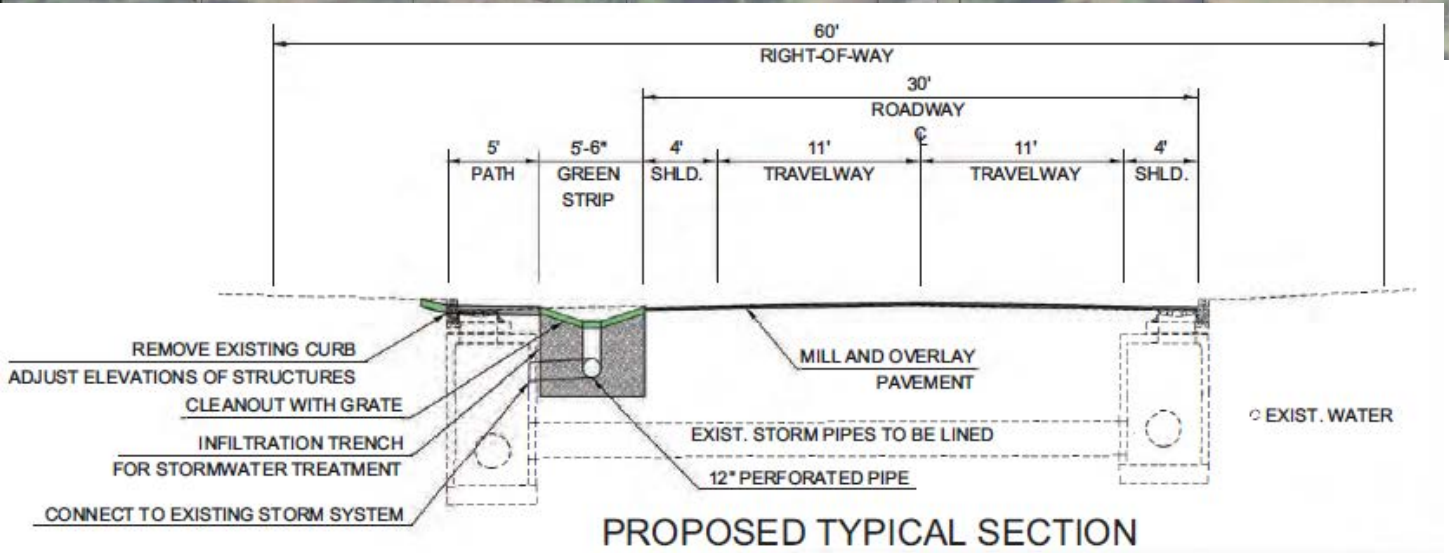


Pavement Markings for Bike/Pedestrian Lane

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Alternative 2 – 30’ Roadway, Green Strip, 5’ Path





PROPOSED TYPICAL SECTION

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Alternative 3 – 40’ Roadway, Relocated Outfall





- Roadway Width Remains the same.
- Pavement markings could be utilized to create a Pedestrian/Bicycle lane.
- Fill to repair existing damage to Fern Hollow
- Extend closed drainage system to a more stable outfall location.
- Line existing stormwater pipes for extended life.

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Alternative 4 – 40’ Roadway, Stormwater Storage Structures



- Roadway Width Remains the same.
- Pavement markings could be utilized to create a Pedestrian/Bicycle lane.
- Add storage structures adjacent to existing catch basins along Fern Hollow Road.
- Storage structures will be configured to reduce peak flows to the existing outlet location.
- Line existing stormwater pipes for extended life.

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Alternative 5 – 40’ Roadway, Stormwater Filter and Relocated Outfall



- Roadway Width Remains the same.
- Pavement markings could be utilized to create a 5’ shoulder
- Stormwater Filter at the end of Fern Hollow Rd
- Fill to repair existing damage to Fern Hollow
- Extend closed drainage system to a more stable outfall location.
- Line existing stormwater pipes for extended life.

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Alternatives Evaluation Matrix

CRITERIA	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5*
	No Action (Overlay Only)	30' Roadway, Green strip, Path	40' Roadway, Relocated Outfall	40' Roadway, Stormwater Storage	40' Roadway, Stormwater Filtration
Project Costs	$60,000	$410,000	$330,000	$310,000	$440,000
PURPOSE AND NEED					
Address Drainage Problems resulting in unstable channel slopes in Fern Hollow	No	Yes	Yes	Yes	Yes
Support goals for active mobility	No	Yes	No	No	No
Facilitate use by all ages and experience	No	Yes	No	No	No
IMPACTS					
Traffic Operations	None	None	None	None	None
Safety	No Improvement	Improved	No Improvement	No Improvement	No Improvement
Right-of-way	None	None	None	None	None
Environmental	None	None	Wetland	None	Wetland
Cultural Resources	None	None	None	None	None
Utilities	None	None	None	None	None
Stormwater	No Change	Reduce Peak Flow and Volume	No change; Stabilized Outfall	Reduce Peak Flow	Water Quality Treatment and Stabilized Outfall

Stantec

Thank you!

Questions?

Memorandum

TO: Evan Teich, Unified Manager and the Selectboard
FROM: Dennis Lutz, PE, Public Works Director
Aaron Martin, PE, Public Works Operations Director / Town Engineer
Annie Costandi, P.E., Director of Stormwater Operations / Staff Engineer
DATE: 3 August 2021
SUBJECT: Speed Limit Study Request for Osgood Hill Road

ISSUE: The issue for the Selectboard is whether or not to change the speed limit on Osgood Hill Road

DISCUSSION: A citizen request was presented to the Selectboard to lower the speed limit on Osgood Hill Road. The Selectboard forwarded this request to the Manager and Public Works Director to have a speed limit study conducted and results provided to the Selectboard for consideration.

A study has been completed following an extensive investigation of the road and collection of speed data. The attached speed study was conducted by the Public Works Director, a registered professional engineer and reviewed by Aaron Martin, also a registered professional engineer. Both have conducted many speed studies. The speed data was collected by Ann Costandi, a staff engineer who also hold a PE license.

The method used to conduct the study is outlined in the Federal Highway Safety Program (see excerpt attached) using the engineering approach. A certified copy of the study and information on the speed data is attached. A complete printout of all the speed data obtained is also available but not submitted with this memorandum due to size.

The recommendation is that no change be made to the speed limit, but that enforcement be increased. The set speed limit is already more than the recommended 5mph below the 85th percentile speed recorded. The Information from FHWA on page 12 of the attached document highlights the reason to not deviate by more than 5 mph (+ or -) from the 85th percentile actual number.

RECOMMENDATION: It is recommended that the Selectboard take no action to change the posted speed limit of 35 mph on Osgood Hill Road.

SPEED LIMIT ANALYSIS TOWN OF ESSEX, VERMONT

NAME: Osgood Hill Road from the intersection at VT128 (west) to the Westford Town line (east)

Town Highway Number:51
Gravel Collector Road, Class 3

1. **Road Surface Characteristics, shoulder conditions, grade, alignment and sight distance:**
   Class 3 Highway; rural, gravel collector Road, 2.46 miles in length; two intersecting roads with "T" intersections in Essex – Catella Road and Hanley Lane; road extends to a total length of 6.1 miles through Westford and intersects with VT128 in Westford; the majority of the traffic is local in the two towns due to VT 128 being the shorter route by .5 miles and the speed limit is 15 mph faster; road conditions vary during the course of the year; subject to mud season conditions in the spring; requires grading throughout the summer due to moderately high traffic count for a gravel road in Essex and pothole impacts; width of both travelled lanes varies from 16 feet to 22 feet, with most sections at 18 to 20 feet; shoulder width varies each side from 1 to 4 feet, with most shoulders at 2 feet; drainage ditches for majority of road with many stone-lined and at least 18 inches deep; no steep grades; road characterized by series of hills, curves and hilled curves -some with reduced sight distance as noted in the following table:

Approximate location from VT128 intersection	Type	Sight distance	Existing signage
	Hill	315 feet + or -	Limited sight distance sign with 25 mph advisory sign
	Hill	266 feet + or -	
Intersection with Catella from east	Intersection	660 feet + or -	
	Curve and Hill	312 ft + or -	
			Curve(s) warning sign with 25 mph advisory sign
Intersection with Hanley		435 ft + or -	
	Hill	300 ft + or -	
	Hill	300 ft + or -	
	Hill	250 ft + or -	

Stopping sight distances from ITE and FHWA:

Design speed	Distance
30	200 feet
35	250 feet
40	305 feet

Corner sight distance at intersections:

Design Speed	Distance
20	200 feet
30	300 feet
35	350 feet
40	400 feet

Sight distances all meet the required minimum standards for the current speed of 35 mph.

2. **The 85th percentile speed.** Speed data was collected at three locations on Osgood Hill Road during the late spring and early summer of 2021. A summary of the results and the location of the collection data points is included in a memorandum dated July 30, 2021 from Annie Costandi, PE, to Dennis Lutz, PE. Public Works Director. The 85th percentile speed at the three locations was: 42.8 mph at site #1, 40.9 mph at site #2 and 41.5 mph at site # 3. The current speed limit is 35 mph, 5 mph below the 85th percentile speeds.

3. **Roadside development and culture; roadside culture:** The road is classified in the Town Road Management System as a gravel road collector, characterized with primary functions of vehicle movement and a secondary function of land access; it connects VT128 in Essex to VT 128 in Westford and receives traffic from many vehicles making this connection; it provides collector road access to two Town roads -- Catella Road and Hanley Lane; it is entirely residential and serves approximately 69 houses on the three roads in Essex, most of which are on large lots and widely separated from adjacent driveways and dwellings; there are no sidewalks and in some places the shoulders are too narrow to accommodate walkers or bicyclists; school buses serve the area.

4. **Signage and Safe Speed for curves or other hazardous locations within the zone:** The road has posted speed limit signs twice along the roadway in both directions; a limited sight distance sign before a hill at approximately .43 miles form VT 128 heading east and a

companion sign heading west; a curved road sign in both directions at approximately 1.17 miles from VT 128; a "No Thru Truck sign", a horse riding sign and a Legal Load Limit of 24,000 lbs. on the eastern terminus of the road in Essex posted for vehicles heading west; There are no hazardous locations if travelling at the posted speed limit of 35 mph, although signs have been posted indicating two locations alerting drivers to either limited sight distance or a series of curves and advising a reduction in those areas to 25 mph; during the winter, mud season and when the road has significant potholes, drivers need to drive to the conditions and reduce their speed according to the conditions.

5. **Parking Practices and Pedestrian Activity:** No on-street parking is available on Osgood Hill Road due to the narrow width of the roadway and lack of wide shoulders; when parking occurs, the vehicle has to encroach on the travelled way; pedestrian activity is mostly limited to walking on the travelled way or on the road shoulder when the width is sufficient to enable it to occur; due to the gravel roadway surface, there is very limited if any bicycle activity.

6. **Recent Accident Experience:**
   - **a.** A total of eight reported accidents over the past five years with no fatalities.
   - **b.** Six of the accidents occurred in the winter due to icy or slippery roads.
   - **c.** Speed was listed as a contributor to the accident in two cases; one of which also involved impairment. Although not listed, going to fast for winter conditions was also a likely contributor to some of the other accidents.

7. **Recommended Speed Limit.**

   A continuation of the current speed limit of 35 mph is recommended for Osgood Hill Road. Although the fastest speeds recorded are well outside this proposed limit, those excessive speeds cannot be changed by further reducing the speed limit. Irresponsible driving not recognizing a 35mph limit will not change if the speed limit is reduced. Excessive and irresponsible speeding has to be addressed through enforcement. The existing speed limit is already more than 5 mph below the 85^{th} percentile taken based on data taken in three locations over a two-month period. There are sections along the road signed for reduced speeds and these signs are appropriate for the specific locations.

Memorandum

TO: Dennis Lutz, P.E., Public Works Director
FROM: Annie Costandi, P.E., Director of Stormwater Operations/Staff Engineer
DATE: July 30, 2021
SUBJECT: Osgood Hill Road Speed Study

Due to ongoing complaints from residents regarding the speed on Osgood Hill Road, Public Works staff set up a radar traffic counter to conduct a speed study.

The radar was set up at 3 locations on Osgood Hill Road. A brief description, map location, and the results are provided below for each site.

Osgood Hill Site 1: The radar was set up on a utility pole between the beginning of Osgood Hill Road and Catella Road from July 7th until July 14th. The closest driveway was 52 Osgood Hill Road.



Volume of Vehicles Analyzed: 4,552
Average speed: 38 mph
Fastest Speed: 75 mph
Percent of vehicles traveling faster than the posted speed limit of 35 mph: 71.1%
85th percentile: 42.8 mph

<u>Osgood Hill Site 2:</u> The radar was set up on a tree between Catella Road and Hanley Lane from July 15th until July 22nd. The closest driveway was 134 Osgood Hill Road.



Volumes of Vehicles Analyzed: 2836
Average Speed: 35.1 mph
Fastest Speed: 85 mph
Percent of vehicles traveling faster than the posted speed limit of 35 mph: 53.9%
85th percentile: 40.9 mph

Osgood Hill Site 3: The radar was set up on a utility pole between Hanley Lane and the Essex/Westford Town line from July 22nd until July 29th. The closest driveway was 249 Osgood Hill Road.



Volume of Vehicles Analyzed: 1,641
Average Speed: 35 mph
Fastest Speed: 71 mph
Percent of vehicles traveling faster than the posted speed limit of 35 mph: 59%
85th percentile: 41.5 mph

Methods and Practices for Setting Speed Limits:
An Informational Report







FHWA Safety Program

U.S. Department of Transportation
Federal Highway Administration

FHWA-SA-12-004

Institute of
Transportation Engineers

Safe Roads for a Safer Future
Investment in roadway safety saves lives

http://safety.fhwa.dot.gov

SETTING SPEED LIMITS

This section describes the main objectives and guiding principles of setting speed limits and provides a detailed description of the principal available methods.

Speed limits are set to inform motorists of appropriate driving speeds under favorable conditions. Drivers are expected to reduce speeds under certain conditions (e.g., poor visibility, adverse weather, congestion, warning signs, or presence of bicyclists and pedestrians). Legislation and statutes generally reflect this requirement. All speed control regulations provide the legal basis for adjudication and sanctions for violations of the law. Road authorities may also post advisory speed signs, which do not have the force of law but warn motorists of suggested safe speeds for specific conditions at a particular location (e.g., a turn or an intersection approach).[11] Having stated the above, however, a motorist exceeding an advisory speed could still be cited under the basic speed rule (i.e., driving too fast for the prevailing conditions).

The primary purpose of the speed limit is to advise drivers of the maximum reasonable and safe operating speed under favorable conditions. It provides a basis for enforcement and ought to be fair in the context of traffic law.

Methodologies for setting speed limits typically are designed to result in recommended speed limits that:

- Are related to crash risk;
- Provide a reasonable basis for enforcement;
- Are fair in the context of traffic law; and
- Are accepted as reasonable by a majority of road users.

The selected methodology is generally applicable on all road types and capable of being implemented with existing resources.

Factors that affect safe speeds along roadways, and also influence the speed selected by motorists, include:

- A vehicle's mechanical condition and characteristics;
- Driving ability/capabilities;
- Traffic volume: vehicles, pedestrians, and bicycles;
- Weather and visibility;
- Roadway design elements, including:
  - » Road function/purpose;
  - » Lane and shoulder width;
  - » Horizontal and vertical curves;
  - » Available sight distances;
  - » Driveways with restricted visibility and other roadside developments;

  - » High driveway density;
  - » Rural residential or developed areas; and
  - » Paved or improved shoulders.
- Pavement conditions; and
- Crash frequency and severity.

All of these factors should be considered when designing appropriate speed limits at locations where the speed limits need to be varied from the statutory limits. Special situations also exist that necessitate nighttime, school zone, work zone, minimum and variable speed limits or advisory speeds.

The above-mentioned factors to be considered in selecting a speed limit are also heavily influenced by geometric design features of the road and roadside development/activity. This is largely because drivers tend to select operating speeds based on the visual scene presented to them. Therefore, the speed limit and design of the road must work in concert if desired operating speeds are to be achieved.

Due to the lack of specific guidance and procedures from the *Manual on Uniform Traffic Control Devices* (MUTCD) and other documents, engineers often rely on their experience and judgment when considering factors that affect decisions about setting appropriate speed limits. The use of subjective procedures by decision-makers with various levels of experience, and the use of different procedures across jurisdictions, may lead to inconsistencies in how speed limits are set in different jurisdictions.

Methods of Setting Speed Limits

Within the traffic engineering community, there are four general approaches to setting speed limits:

- **Engineering approach:** A two-step process where a base speed limit is set according to the 85th percentile speed, the design speed for the road, or other criterion. This base speed limit is adjusted according to traffic and infrastructure conditions such as pedestrian use, median presence, etc. Within the engineering approach there are two approaches; 1) Operating Speed Method and 2) Road Risk Method.
- **Expert system approach:** Speed limits are set by a computer program that uses knowledge and inference procedures that simulate the judgment and behavior of speed limit experts. Typically, this system contains a knowledge base containing accumulated knowledge and experience (knowledge base), and a set of rules for applying the knowledge to each particular situation (the inference procedure).
- **Optimization:** Setting speed limits to minimize the total societal costs of transport. Travel time, vehicle operating costs, road crashes, traffic noise, and air pollution are considered in the determination of optimal speed limits.
- **Injury minimization or safe system approach:** Speed limits are set according to the crash types that are likely to occur, the impact forces that result, and the human body's tolerance to withstand these forces.

Engineering and expert system approaches are widely used in North America, injury minimization methods are gaining wide-spread use in countries that are at the forefront of global road safety (i.e., Sweden,

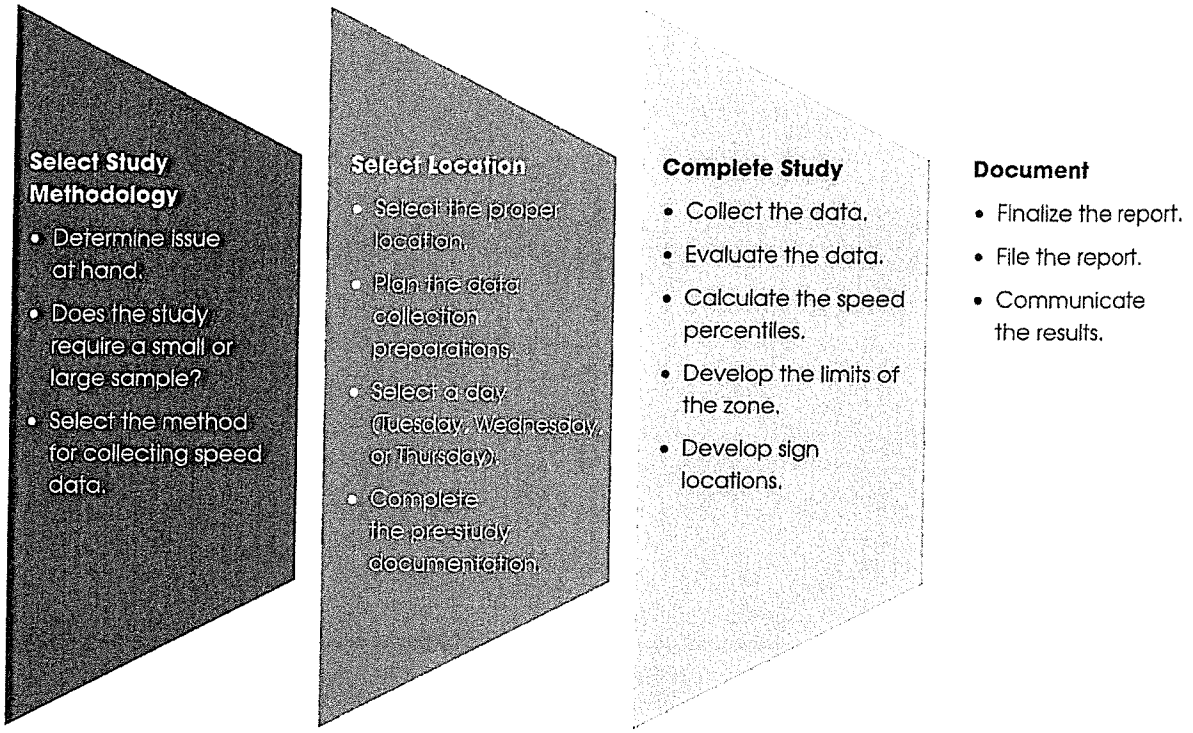


Figure 1. Speed Limit Study Process for Engineering and Expert Systems Methods.

Australia, etc.). The concept of setting optimal speed limits has been studied by some jurisdictions, but is not known to have been adopted by any road authority. However, the optimal speed limits approach seems applicable within the context of providing context sensitive solutions (CSS)—an approach that considers the total context within which a facility will exist—and has been considered for application on some New Jersey roads.[13]

Speed limits set by either an engineering method or an expert system use similar basic tenets. The engineering method is often limited to a basic study, while the expert system approach employs a more structured set of decision and judgment rules. For both methods, the speed limit is determined by considering the existing speed, roadway, and crash information. Figure 1 shows the steps that lead to producing the final report for either an engineering or an expert systems type of speed study.

Speed limit studies are most often undertaken in response to a request for a lower speed limit than currently posted. In some instances, however, the road authority finds itself in the position of recommending a higher speed limit than the one currently posted. In these latter instances, some jurisdictions require a road safety audit be conducted prior to a higher speed limit being approved.[14]

The following sections detail the steps to setting speed limits using the four methods.

Engineering Approach

The steps in the engineering approach to setting speed limits include planning, coordination, data collection and analysis, and finally, determination of the speed limits. A traffic engineering study is the observation and analysis of road and traffic characteristics to guide the application of traffic engineering principles. The study of speed limits includes the following:

- Review of the road's environment, features, and condition and traffic characteristics.
- Observation and measurement of vehicle speeds at one or more representative spots along the road in ideal weather and under free-flowing traffic conditions.
- Analysis of vehicle speeds to determine 85th percentile speed and other characteristics.
- Review of the road's crash history.
- Review of any unusual conditions not readily apparent.

Setting speed limits is complex and often controversial. The engineering approach requires the use of engineering judgment based on the engineering and traffic investigation. Quality data and good documentation provides support for the judgments that are made.

Within the engineering approach to setting speed limits there are two basic methods: the operating speed method and the road risk method. Each of these is detailed below.

Operating Speed Method

Most engineering approaches to speed limit setting are based on the 85th percentile speed—the speed at which 85 percent of free-flowing traffic is traveling at or below. The typical procedure is to set the speed limit at or near the 85th percentile speed of free-flow traffic. Adjustments to either increase or decrease the speed limits may be made depending on infrastructure and traffic conditions.

Setting a speed limit based on the 85th percentile speed was originally based on safety. Specifically, research at the time had shown that traveling at or around one standard deviation above the mean operating speed (which is approximately the 85th percentile speed) yields the lowest crash risk for drivers. Furthermore, crash risk increases rapidly for drivers traveling two standard deviations or more above or below the mean operating speed. Therefore, the 85th percentile speed separates acceptable speed behavior from unsafe speed behavior that disproportionately contributes to crash risk.*

The 85th percentile speed method is also attractive because it reflects the collective judgment of the vast majority of drivers as to a reasonable speed for given traffic and roadway conditions. This is aligned with the general policy sentiment that laws (i.e., speed limits) should not make people acting reasonably into law-breakers. Setting a speed limit even 5 mph (8 km/h) below the 85th percentile speed can make almost half the drivers illegal; setting a speed limit 5 mph (8 km/h) above the 85th percentile speed will likely make few additional drivers legal.

Under the operating speed method of setting speed limits, the first approximation of the speed limit is to set the speed limit at the 85th percentile speed. The MUTCD recommends that the speed limit be within 5 mph (8 km/h) of the 85th percentile speed of free-flowing traffic. The posted speed limit shall be in multiples of 5 mph[15], or 10 km/h for jurisdictions that employ metric.[22]

While the MUTCD recommends setting the posted speed limits near the 85th percentile speed, and traffic engineers say that agencies are using the 85th percentile speed to set speed limits, in reality the speed limit is often set much lower. At these locations, the 85th percentile operating speeds exceed the

* The original research between speed and safety which purported that the safest travel speed is the 85th percentile speed is dated research and may not be valid under scrutiny. See the section titled "The Safety of Speed" for a synopsis of current thinking on the relationship between speed and safety.

posted speed limits; and, in many cases, the 50th percentile operating speed is either near or exceeds that posted speed limit as well.[16] Many agencies deviate from their agency's written guidelines and instead post lower speed limits. According to an ITE Engineering Council Technical Committee survey, these reduced speed limits are often the result of political pressures.[17] ***However, it is important to note that setting speed limits lower than 85th percentile speed does not encourage compliance with the posted speed limit.***[16]

The 85th percentile speed can be adjusted on the basis of engineering and traffic investigation. The following are typical adjustments made by several States:

- Adjustments made for roadway factors and/or crash data may be lower than the 85th percentile speed, but normally no more than 7 mph (11 km/h) lower.[18]
- Adjustments for roadway factors may reduce the 85th percentile speed by as much as 10 mph (16 km/h) below the 85th percentile speed based on sound and generally accepted engineering judgment that includes consideration of the following factors:
  - » Narrow roadway pavement widths (20 feet (6 m) or less, for example).
  - » Horizontal and vertical curves (possible limited sight distance).
  - » Driveways with restricted visibility and other developments (possible limited sight distance).
  - » High driveway density (the higher the number of driveways, the higher the potential for encountering entering and turning vehicles).
  - » Rural residential or developed areas (higher potential for pedestrian and bicycle traffic).
  - » Narrow shoulder widths (constricted lateral movement).
- If the crash rate for a two-year period is much higher than the average for other highways of similar classifications, adjustments are considered.[18]
- Adjustments can be made based on crash data when enforcement agencies will assure a degree of enforcement that will make the speed zone effective.[19]
- A 12 mph (20 km/h) reduction for locations where roadway factors and crash rates are higher than the statewide average.[19]

After the 85th percentile speeds and zone lengths have been selected, some jurisdictions recommend that several test runs be made through the area in both directions driving at the selected speeds. This should show any irregularities in the zoning that need correction before the speed zone is implemented.[19]

The last step in the analysis process for the operating speed method is to draw conclusions based on the observed data and to prepare a report. The report can be elaborate or very basic depending on why the study was performed and how the results will be used.

The use of the 85th percentile speed as the primary criterion for selecting a suitable speed limit is founded on the following fundamental concepts deeply rooted in government and law:

- Driving behavior is an extension of social attitude, and the majority of drivers respond in a safe and reasonable manner as demonstrated by their consistently favorable driving records.
- The normally careful and competent actions of a reasonable person should be considered legal.
- Laws are established for the protection of the public and the regulation of unreasonable behavior on the part of individuals.
- Laws cannot be effectively enforced without the consent and voluntary compliance of the public majority.[20]

The operating speed method has the added advantage that a properly set speed limit will provide residents, businesses, and pedestrians with a realistic expectation of actual vehicular speeds on the street.

Criticisms of the operating speed method of setting speed limits are largely targeted at the use of the 85th percentile speed as the starting point for establishing the speed limit. They include:

- This criterion assumes that motorists are aware of and select the safest speed.
- Drivers are generally bad at accounting for the externalities of their driving.

A further criticism that has been leveled against the 85th percentile speed as a primary determinant of the speed limit is that this practice may lead to an upward drift or creep in average operating speeds over time.[52]

The engineering approach to setting speed limits has manifested itself in North America as the setting of "rational" speed limits. The premise is that speed limits based on a formal, analytical review of traffic flow, roadway design, local development, and historical crash data will result in a high percentage of drivers complying with the speed limit and traveling at about the same speed.

Despite wide-spread use of the operating speed method for setting speed limits in North America, there are few jurisdictions that have quantitative criteria for the adjustments to the 85th percentile speed. For example, how much should a speed limit be reduced if there is a high volume of pedestrian traffic on the street? For the most part, the analyst is to use "engineering judgment" to make such valuations. Two notable exceptions to the qualitative procedures are the *Policy on Establishing and Posting Speed Limits on the State Highway System* by the Illinois Department of Transportation (DOT)[21], and the Northwestern Speed Zoning Technique (which is a procedure used by several municipalities).

The Illinois procedure considers access, pedestrian traffic, curbside parking, and safety performance, in addition to existing speed profile to establish the recommended speed limit. Specific numerical adjustments are specified in the procedure for each of the above criterion. The Illinois procedure is described in Appendix C.

The Northwestern Speed Zoning Technique is similar to the Illinois DOT procedure mentioned above, but it considers a wider range of traffic and infrastructure factors including presence of a median, lane width, vertical alignment, etc. Again, numerical direction is provided concerning the adjustments that are required for different road features, making the process repeatable and reliable. The Northwestern Speed Zoning Technique is detailed in Appendix D.

Road Risk Method

Another method of setting speed limits using an engineering approach is the road risk method in which the speed limit is determined by the risks associated with the physical design of the road and the expected traffic conditions. This method has numerous guises, but the core methodology is to set the speed limit according to the function or classification of the road (which also tends to dictate the design of the road), and then to adjust the speed limit based on the relative risk introduced by various road and roadside design features. This method is currently employed by Canada and New Zealand.

The road risk method is the same as the operating speed method in that a selected base speed limit is adjusted by various factors to determine the recommended speed limit. The main difference between the two engineering methods is that the operating speed method uses the 85th percentile speed as the base speed limit, and the road risk method uses a base speed limit that is predicated on the functional classification of the road and its setting.

Under the road risk method to setting speed limits the level of roadside development and the function of a road are the primary determinants of the appropriate speed limit.[14] Although road geometry is also a factor in determining a speed limit, it is secondary to roadside development. In situations where the road design encourages users to travel at a higher speed than the speed limit determined by roadside development, engineering techniques should be used to lower vehicle speeds. When a road in a built-up area primarily serves through traffic, engineering and access control techniques should be used to provide safety at the higher speeds that will prevail.[14]

Table 2 provides the base speed limits for different land use and road classifications as used in the road risk methodology used in Canada.[22]

Table 2. Base Speed for the Classification and Land Use Combination

Classification		Land Use							
		Rural				Urban			
		Undivided		*Divided*		*Undivided*		*Divided*	
		1 lane per direction	2+ lanes per direction	1 lane per direction	2+ lanes per direction	1 lane per direction	2+ lanes per direction	1 lane per direction	2+ lanes per direction
Arterial	Major	55 mph (90 km/h)	60 mph (100 km/h)	60 mph (100 km/h)	70 mph (110 km/h)	50 mph (80 km/h)		55 mph (90 km/h)	
	Minor	50 mph (80 km/h)	55 mph (90 km/h)	55 mph (90 km/h)	60 mph (100 km/h)	45 mph (70 km/h)		50 mph (80 km/h)	
Collector	Major	45 mph (70 km/h)	50 mph (80 km/h)	50 mph (80 km/h)	55 mph (90 km/h)	45 mph (70 km/h)		50 mph (80 km/h)	
	Minor	35 mph (60 km/h)	45 mph (70 km/h)	45 mph (70 km/h)	50 mph (80 km/h)	35 mph (60 km/h)		45 mph (70 km/h)	
Local		35 mph (60 km/h)				30 mph (50 km/h)			

Lane = through lane

Divided = a median that separates travel lanes of traffic in opposing directions, which may be flush with, raised above, or depressed below adjacent travel lanes

By using the land use and functional classification of the road as the primary determinants of the desirable speed limit, road authorities that use the road risk method are attempting to reconcile the legislated speed of the road with the function of the road.

The road risk method used in New Zealand sets out the method for calculating the speed limit for a section of road from the following information:

- The existing speed limit;
- The character of the surrounding land environment (e.g., rural, fringe of city, fully developed);
- The function of a road (i.e., arterial, collector, or local);
- Detailed roadside development data (e.g., number of houses, shops, schools, etc.);
- The number and nature of side roads;
- Roadway characteristics (e.g., median divided, lane width and number of lanes, road geometry, street lighting, sidewalks, cycle lanes, parking, setback of fence line from the road);
- Vehicle, cycle, and pedestrian activity;
- Crash data; and
- Speed survey data.

The road risk method employed in New Zealand is detailed in Appendix E and includes a working example.

Despite the fact that the road risk method downplays operating speed as a factor in developing the speed limit, it is noted that the road risk method should recommend speed limits that are consistent with operating speeds.

Expert System—USLIMITS2:

An expert system is one approach that can be used to identify the appropriate speed limit for a speed zone. Transportation Research Board's (TRB) *Special Report 254* argues that the expert system approach deserves consideration because it provides a systematic and consistent method of examining and weighing factors other than vehicle operating speeds in determining an appropriate speed limit.[11]

Expert systems aim to mimic the expert's thought process in solving complex problems.

The original expert system for setting speed limits was developed by the Australian Road Research Board and was based on site studies at over 60 locations. The field data were reviewed by a panel of experts who used this information to come up with decision rules for appropriate speed limits for different types of roads and traffic conditions. This information was coded into a computer program which prompts users to respond to a series of questions, which the system uses to recommend a speed limit. It is important to note that the Australian expert system logic is hard coded, and this system does not learn from previous experience, as some other "smart" expert systems do.

Federal Highway Administration (FHWA) developed a knowledge-based expert system for recommending speed limits in speed zones that are considered to be credible and enforceable. The

Memo

To:	**Evan Teich, Unified Manager, Town Selectboard**
From:	**Dennis Lutz, P.E., Public Works Director** **Aaron Martin, P.E., Utilities Director / Town Engineer** **Tom Yandow, Buildings Manager**
Date:	**August 09, 2021**
Subject:	**Retainer Contracts for Small Scale Projects**

Issue:

The purpose of this memo is to provide information to the Selectboard regarding the proposed Contract selection process for small projects that do not require a full formal bid by use of a Retainer Contract method of procurement, and to adopt this method of contract procurement moving forward.

Discussion:

Public Works has been working on completing a retainer contract for civil site contractors for use during emergencies and when there is a need for small scale public works projects. Public Works is defining a small-scale project having a value of $1 to $39,999. Any individual projects $40,000 and above will be contracted out as outlined in the current purchasing policy.

The State of Vermont's SOW, Statement of Work proposal methods for their retainer contracts has been used as a model for the process put together here. The Town would first solicit bids from Contractors, having them provide a total cost per hour to provide the labor and equipment listed in the Town's bid package. This total cost will be used to competitively sort each contractor based on lowest overall bid. It is staff's recommendation that the Town take the three contractors with the lowest bids and enter into an agreement with each to provide services as requested. The term of this contract would have a duration of two years. Staff recommends contracting with at least three contractors, all having the lowest overall bids. A total project cost for an individual project would be negotiated on a project-by-project basis with the first available contractor to respond to a SOW.

This is being driven mainly by our most recent dealings with FEMA, and procedures used by municipalities to retain the services of outside contractors to aid the Town in response to emergency storm events. No longer will Time and Materials contracts be reimbursed under FEMA grant awards. The method of procurement Staff proposes is an acceptable method of procurement due to it being a competitive process. Furthermore, the Town Attorney has reviewed the draft bid package for this retainer contract process, has provided comment and a

few edits to the documents. This method of procurement meets the requirements of both the Town's purchasing policy and the FEMA contract procurement process.

A benefit to this method of contract acquisition is the ability to quickly procure the services needed at a moments notice. This is especially helpful during emergency events. Trying to solicit three quotes for emergency work and expect contractors to provide a cost to complete the work before the true scope of work is known can be problematic. Also, the availability of contractors during emergency situations can make getting three quotes a problem as well. Having a contractor with a retainer contract will help alleviate one of the unknowns during emergency situations.

This method of procurement for contract services will also be used to select contractors for projects other than heavy construction. The intent is to use this to contract with all trades, plumbers, electricians, HVAC contractors, and other service that my be required to manage other Town infrastructure and buildings. This method of procurement is a fair and equitable method of addressing the needs of the Town.

Cost:

As stated above, the retainer contract method of service procurement will only be used for small projects $39,999 and under. Any project with a value $40,000 and greater will be processed as directed in the Town of Essex purchasing policy. All project SOW's will adhere to the Town's Purchasing Policy with regards to authority to execute agreements with contractors.

Recommendation:

It is recommended that the Selectboard approve the retainer contract method of contract procurement for all projects $39,999 and under.

INVITATION TO BIDDERS

Sealed bids will be received for a retainer contract for on call emergency and small scale planned construction within the Town of Essex, at the Office of the Town Public Works Department, 5 Jericho Road, Essex Center (mailing address is Town of Essex, Public Works Department, 81 Main Street, Essex Jct., VT 05452) until **10:00 A.M. prevailing time on Friday, September ##, 2021**.

All bids shall be submitted in a sealed envelope marked on the outside with the words "**2021 CIVIL SITE CONSTRUCTION RETAINER CONTRACT BID**". All bids shall be delivered to the Public Works Office prior to the announced time for opening of bids. Submitted bids shall be submitted on the forms provided by the Town with the sum total of the list of crew time items being the basis for overall award of the retainer contract. Copies of both the Hold Harmless and the Certification of Bidders, both attached, shall be submitted with all bids, no exceptions.

The unit prices provided by the bidder for each line item are approximate only, being given as the basis for the comparison of bids. The Town of Essex Selectboard reserves the right to increase or decrease the work and amounts stated in the bids, as may be necessary; to reject any or all bids received; to waive any informalities in the bids or to accept any bids the Selectboard deems is in its best interests. The bid will be awarded on the basis of the lowest total base bid sum for all crew timeline items in accordance with the Town's Purchasing Policy.

The Town will award a retainer contract to the three lowest bidders. The selected Contractors will sign a **Three-Year-Agreement** with the Town of Essex to respond to both emergency Civil Site work and small scale planned work. An example of this agreement can be found as Attachment A of this bid document. Each project will be described in detail, job and site-specific requirements, within individual Statements of Work (SOW) / Request for Proposals (RFP). An example of a SOW can be found as Attachment B.

Examples of work to be completed under this retainer contract can be found below:

1. **Tree and limb removal from roadways**
2. **Washed out road surface repairs**
3. **Washed out drainage swales**
4. **Culvert repairs and/or replacements**
5. **Other emergency duties as assigned by the Town of Essex**
6. **Water service break or curb stop replacement**
7. **Water main break**
8. **Fire Hydrant repair or replacement**
9. **All civil site type of work as described in SOW's provided by the Town.**

All construction work shall conform to the latest versions of the current adopted building codes within the State of Vermont, the Vermont Agency of Transportation Standard Specifications for Construction and the Town of Essex Standard Specifications for Construction for all future projects.

In evaluating bids, the Unified Manager and his or her designee will consider the following criteria when selecting experienced Contractors:

1. No vendor may bid on a project if they owe any delinquent Town or Village payments including but not limited to taxes, water/sewer, miscellaneous receivables, etc. Purchasing agent shall consult with the Finance Department regarding this issue prior to award of bid.
2. Prices
3. Bidder's ability to perform within the specified time limits.
4. Bidder's experience and reputation, including past performance for the Town / Village.
5. Quality of the materials and services specified in the bid.
6. Bidder's ability to meet other terms and conditions, including insurance and bond requirements.
7. Bidder's financial responsibility.
8. Bidder's availability to provide future service, maintenance, and support.
9. Nature and size of bidder.
10. Contract provisions that are acceptable to the Town / Village.
11. For construction projects over $2,000 that use federal funds, Contractor's indication of acceptance of wages in the current wage determination provided as part of the Request for Bids.
12. Any other factors that the Unified Manager determines are relevant and appropriate in connection with a given project or service.
13. Qualified small, minority and women-owned businesses must be included in the solicitation list for the request or proposal.
14. The Unified Manager will not select a bidder who is listed on the Excluded Parties List System, website (https://www.sam.org)
15. The Unified Manager or designee will recommend a bid award for approval by the Town Selectboard / Village Trustees.
16. In addition to the above, in the case of a contract supported by federal funds, the additional criteria shall apply: There shall be no preference exercised for local contractors or suppliers.

The selected Contractor will provide satisfactory evidence of insurance prior to award, including:

1. Contractor's Liability Insurance and Workmen's Compensation in compliance with Vermont statutory limits.

2. Contractor's General Public Liability and Property Damage Insurance, including vehicle coverage issued to the Contractor and protecting him from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the Contract Documents, whether such operations be by himself or by any Subcontractor under him, or anyone directly or indirectly employed by the Contractor or by a Sub-Contractor under him. Insurance shall be written with a limit of liability of not less than $2,000,000 for all damages arising out of bodily injury, including death, at any time resulting there from, sustained by any one person in any one accident, and a limit of liability of not less than $2,000,000 aggregate for any such damages sustained by two or more persons in any one accident.
3. Insurance shall be written with a limit of liability of not less than $500,000 for all property damages sustained by any one person in any one accident; and a limit of liability of not less than $500,000 aggregate for any such damage sustained by two or more persons in any one accident.
4. The selected Contractors will be required to maintain a current insurance certificate throughout the duration of the three year agreement.

If the award of the contract aggrieves any company, they may appeal in writing to the Town of Essex Selectboard, 81 Main Street, Essex Junction, VT 05452. The appeal must be post-marked within fourteen (14) calendar days following the date of written notice to award the contract. Any decision of the Town of Essex Selectboard is final.

All questions related to this Invitation to Bid shall be directed to the Town of Essex Public Works Director, Dennis E. Lutz, P.E., 81 Main Street, Essex Junction, VT 05452. Phone (802) 878-1344, or email at dlutz@essex.org. Other than routine questions, all questions not affecting the Bid Price will be answered in writing and distributed to all prospective contractors.

Sincerely,

Evan Teich
Unified Manager

Quotation for equipment and labor:

Item Description	Unit	Unit Price
General Labor	Hour	
Foreman	Hour	
Pickup Truck	Hour	
8 Yard Dump Truck w/ Driver	Hour	
14 Yard Dump Truck w/ Driver	Hour	
Type I Loader w/ Operator	Hour	
Type I Excavator w/ Operator	Hour	

Total per hour cost for a **heavy construction** crew based on hourly rates above.

$_____ **Per Hour**

In Words:

_____

_____

Quote Submitted By:

_____ **Signature of Principal**	_____ **Name of Firm**
_____ **Name of Principal (PRINT)**	_____ **Mailing Address**
_____ **Date**	_____ **City, State, Zip**
_____ **Phone Number (office)**	_____ **Fax Number**
_____ **Phone Number (cell)**	_____ **Email Address**

HOLD HARMLESS AGREEMENT

The Contractor shall and does hereby agree to indemnify, save harmless and defend the Town from the payment of any sum or sums of money to any person whomsoever on account of claims or suits growing out of injuries to persons, including death, or damages to property caused by the Contractor, his employees, agents or subcontractors or in any way attributable to the performance and prosecution of the work herein contracted for, including (but without limiting the generality of the foregoing), all claims for service, labor performed, materials furnished, provisions and supplies, injuries to persons or damage to property, liens, garnishments, attachments, claims, suits, costs, attorneys' fees, costs of investigation and of defense. It is the intention of this paragraph to hold the Contractor responsible for the payment of any and all claims, suits, or liens, of any nature and character in any way attributable to or asserted against the Town, or the Town and the Contractor, or which the Town may be required to pay. In the event the liability of the Contractor shall arise by reason of the sole negligence of the Town and/or the sole negligence of the Town's agents, servants or employees, then and only then, the Contractor shall not be liable under the provisions of this paragraph.

_____

Authorized Representative of Firm

CERTIFICATION OF BIDDERS QUALIFICATIONS AND USE OF SUBCONTRACTED SERVICES

The data must be included in and made part of the submittal bid documents. Failure to comply may be regarded as justification for rejecting the Bidders proposal. Additional pages may be added as necessary by the Bidder.

The names and residences of all person and parties interested in their proposal as principals are as follows: (***Note: Give the first and last names in full. If a corporation, give names of all officers and directors. If a partnership, give name of all partners***).

The undersigned agrees that all work to be performed by sub-contractors and the approximate amount to be paid the sub-contractors, is as listed below. All sub-contractors must be listed and all sub-contractors must be approved by the Town of Essex.***: (Note: A list of specific sub-contractors will not be required at this time. This information will be required all future SOW submittals).***

Description of Sub-contract	Name and Address of Sub-Contract	Approximate Amount of Sub-Contract

The Undersigned submits the following information to enable the Town of Essex to judge his or her experience and ability to perform the proposed work.

1. Name(s) of resident supervisor(s) who will be assigned to this Project. State any of their special qualifications.

2. How many years has your organization been in business under the name in which you propose to execute this Contract? _____

3. What projects has your present organization completed of character similar to the proposed? (Give the information indicated by the following tabulation).

Name/Address of Owner for Whom Work Was Done	Work Done as Contractor or Sub-Contractor	Description of Work	Approx. Amount of Contract	Approx. Date Work Completed

4. Has your present organization ever failed to complete any work awarded to it? If so, state when, where and why.

_____

_____

_____

CERTIFICATION IS SUBMITTED BY:

_____
Name of Contractor

_____
Authorized Signature

_____
Title

_____
Business Address

_____
Date

ATTACHMENT A
AGREEMENT

TOWN OF ESSEX
AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20_____, by and between the Town of Essex, Vermont, hereinafter called "OWNER" and_____, doing business as a [corporation] [partnership] [sole proprietorship] hereinafter called the "Contractor".

WITNESSETH: That for and in consideration of the payment and agreements hereinafter mentioned:

1. The CONTRACTOR will be on retainer and on call to complete both emergency work and small scale planned work. Specific detail on work to be completed will be described in detail on individual Statements of Work (SOW's).
2. The CONTRACTOR will furnish all the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described within the SOW.
3. The CONTRACTOR will commence the WORK required by the SOW. All emergency type work shall commence immediately after execution of this AGREEMENT. All planned work shall commence within ten (10) calendar days after the date of the NOTICE TO PROCEED and will complete the same on or before **the completion date noted in the SOW,** unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS. The CONTRACTOR acknowledges that the date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS.
4. The CONTRACTOR further agrees to pay the sum of **$250.00** for each consecutive calendar day that the CONTRACTOR shall be in default after the completion date specified in the SOW. The CONTRACTOR acknowledges and agrees that any sums payable under this section shall constitute liquidated damages and not penalties. The CONTRACTOR further acknowledges that (i) the amount of loss or damages likely to be incurred by OWNER is incapable or is difficult to precisely estimate, (ii) the amounts specified in this section bears a reasonable relationship to, and are not plainly or grossly disproportionate to, the probable loss likely to be incurred in connection with the failure by the CONTRACTOR to complete the PROJECT by the completion date (iii) one of the reasons the CONTRACTOR agrees to such amount was the uncertainty and cost of litigation regarding the question of actual damages, and (iv) the CONTRACTOR is a sophisticated business party and has been represented by sophisticated and able legal counsel.
5. The CONTRACTOR agrees to perform all the WORK described in the SOW, and comply with the terms therein for the sum stated.
6. The term CONTRACT DOCUMENT, as referenced herein and in the SOW means and shall include the following:
    a. Advertisement for Bids
    b. Invitation to Bidders
    c. Bid
    d. Agreement

e. Statement of Work (SOW)
f. Payment bond (__X__ waived; _____ not waived)
g. Performance bond (__X__ waived; _____ not waived)
h. Notice of award
i. Notice to proceed
j. Change order
k. Specifications prepared or issued by The Town of Essex and the State of Vermont
l. Addenda:
   No. _____, dated _____, 20
   No. _____, dated _____, 20
   No. _____, dated _____, 20
m. Certificate of Bidders Qualification and Use of Subcontracted Services
n. Hold Harmless Agreement

7. The OWNER will pay to the CONTRACTOR in the manner and at such times as agreed to within the SOW. Retention of progress payments may be made by the OWNER for work not satisfactorily completed.
8. The CONTRACTOR represents and warrants that in relation to its submittal: (a) its bid was developed genuinely, independently and made with the intention to accept the contract for the PROJECT if awarded; (b) its bid was not prepared with any agreement, arrangement, communication, understanding, promise or undertaking with any person (including any other bidder/tenderer or competitor) regarding: (i) prices; (ii) methods, factors or formulas used to calculate prices; (iii) an intention or decision to submit, or not submit, a bid; (iv) an intention or decision to withdraw a bid; (v) the submission of a bid that does not conform with the requirements of the quotation/tender; (vi) the quality, quantity, specifications or delivery particulars of the products or services to which this quotation/tender relates; and (vii) the terms of the bid, and we undertake that we will not, prior to the award of the contract for the PROJECT, enter into or engage in any of the foregoing.
9. The CONTRACTOR understands that in the event of any breach or non-compliance with any warranties or undertakings in this Agreement, the OWNER may, at its discretion, invalidate the CONTRACTOR's bid, exclude the CONTRACTOR in future Requests for Proposals, pursue damages or other forms of redress from the CONTRACTOR (including but not limited to damages for delay, costs and expenses of re-quotation/re-tendering and other costs incurred), and/or (in the event that the CONTRACTOR is awarded the contract for the PROJECT) terminate the contract.
10. This AGREEMENT shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this AGREEMENT in (_____) each of which shall be deemed an original on the date first above written.

OWNER:

By: _____

Name: _____

Title: _____

(SEAL) If Applicable

ATTEST:

By: _____

Name: _____

Title: _____

Contractor:

By: _____

Name: _____

Address: _____

(SEAL) If Applicable

ATTEST:

By: _____

Name: _____
(Please Type)

Title: _____

ATTACHMENT B
STATEMENT OF WORK

TOWN OF ESSEX
STATEMENT OF WORK (SOW)

(NOTE: Text that appears in blue letters is instructive only and should be deleted from the final SOW. Text that appears in red must be updated or deleted. Utilize or delete paragraphs as appropriate to the SOW. Text that appears in black letters should be included in the SOW as-is.)

Construction Service Category: Civil Site, Electrical, Plumbing, HVAC, etc.
Project Name: NAME
Request for Proposal: Month DD, YYYY

1. ADMINISTRATIVE INFORMATION

1.1. DEPARTMENT RESPONSIBILE FOR SOW-RFP AND SOW AGREEMENT

1.1.1. Name of the person/s, Department

1.2. This SOW RFP is being issued in accordance with the Master Agreement between the Contractor and the Town of Essex, Department of Public Works. After an evaluation of Contractor's response to this SOW RFP, the Town of Essex may elect to enter into a specific Purchase Order (PO) which will outline all SOW requirements.

2. SOW PROPOSAL SUBMISSIONS

2.1. All SOW Proposals are due no later than: (Date) and Time

2.2. Proposals must be submitted by email, mail or in person to: EMAIL ADDRESS OF PROJECT MANAGER.

3. PRE-BID MEETING:

3.1. The contracting Department will hold a pre-bid meeting at LOCATION on DAY, DATE and TIME

4. STATEMENT OF RIGHTS

4.1. The Town of Essex reserves the right to obtain clarification or additional information necessary to properly evaluate a proposal. The Contractor may be asked to give a verbal presentation of its proposal after submission. Failure of Contractor to respond to a request for additional information or clarification could result in rejection of the Contractor's proposal. To secure a project that is deemed to be in the best interest of the Town of Essex, the Town reserves the right to accept or reject any and all bids, in whole or in part, with or without cause, and to waive technicalities in submissions. The Town also reserves the right to make purchases outside of the awarded contracts where it is deemed in the best interest of the Town of Essex.

5. METHOD OF AWARD AND PROCEDURE FOR AWARDING A SOW AGREEMENT

5.1. Contractor selection, or the determination to terminate the SOW-RFP without award, shall be done in the best interest of the Town of Essex.

5.2. EVALUATION CRITERIA:

5.2.1. The responses will be evaluated based on the following: (edit evaluation criteria below as appropriate for your project)

5.2.1.1. Cost

5.2.1.2. **Prior Experience with this type of work** (optional, if specialized, include requirement in SOW)

5.2.1.3. **Ability to meet completion dates in proposed project schedule** (must include schedule/completion date in SOW)

6. SCOPE OF WORK/PROJECT REQUIREMENTS:

6.1. **Describe project requirements in detail.**

7. CHANGE ORDERS

7.1. Change orders are not anticipated, however, if one becomes necessary, such work must be authorized by the Town in writing before such work can proceed and may require an amendment to the SOW Agreement.

8. SUBCONTRACTORS (if being used)

8.1. Identify all proposed subcontractors and their full roles that may be involved completing the Scope of Work. No work shall be subcontracted without knowledge of and approval by the Town. The Contractor will be responsible for submitting copies of Subcontractors proof of insurance to the Town of Essex.

9. REQUIRED PRICE PROPOSAL RESPONSE

9.1. All pricing must be fixed cost, inclusive of all expenses and fees if this Statement of Work proposal is for a fixed price agreement. All emergency storm work will be fixed price. (Remove if Time and Materials agreement)

9.2. For Time and Materials, the pricing proposal must include estimated effort hours, hourly rate for proposed personnel, projected timeline, NTE amount, and completion date. (Remove if not Time and Materials agreement)

10. INVOICING AND PAYMENT

10.1. All work performed by the Contractor must be approved in advance by the Town of Essex. Once work has been completed, delivered and accepted by the Town, invoicing can occur. The Town's payment terms are net 30 days.

TOWN OF ESSEX
PRICE PROPOSAL FOR SOW

PRICE PROPOSAL: $ _____

COMPLETION DATE: _____

ACKNOWLEDGEMENT OF ADDENDUMS (IF APPLICABLE)

1. _____
2. _____
3. _____

COMPANY NAME: _____

NAME: _____

SIGNATURE: _____

DATE: _____

COMMENCEMENT OF WORK UNDER A SOW AGREEMENT

Commencement of work as a result of the SOW process shall be initiated only upon issuance of a fully executed Purchase Order.

Memorandum

To: Selectboard; Evan Teich, Unified Manager
From: Greg Duggan, Deputy Manager
Re: Appointment of Selectboard member
Date: September 10, 2021

Issue

The issue is for the Selectboard to discuss the appointment process for a new Selectboard member.

Discussion

The Selectboard has an open seat following the resignation of Vince Franco in August. The Selectboard is accepting applications from candidates to fill the seat until the end of March 2022. At Town Meeting in March 2022 the ballot will contain a 1-year Selectboard term to fill the seat through March 2023, which is the end of the 3-year term seat.

Interviews for candidates will be held during a special Selectboard meeting in the coming weeks, with the specific date to be determined.

The last time the Selectboard had to fill a seat in the middle of a term, in 2020, the board held interviews in public and asked all candidates the same questions. Candidates had 15 minutes to interview. The following questions were used in 2020, with suggested edits for 2021 (in bold) to questions #4 and #5:

1. Opening statement from candidate (1 minute or less)
2. *Question*: What is your understanding of what it means to be a public servant?
3. *Question*: What do you see as the most pressing issues facing Essex right now and for the next few years?
4. *Question*: How do you feel the Selectboard should proceed when discussing ~~**merger**~~ **separation** of the Town of Essex and Village of Essex Junction?
5. *Question*: We meet a minimum of 3-4 nights a month, for several hours at a time. There is a lot of information to read and understand for each meeting, especially during budget time in **November,** ~~**late**~~ December and January. Are you prepared for that time commitment?
6. *Question*: Since there are _#_ individuals who have asked to be appointed, there is a chance that the seated Selectboard may not come to consensus and we would be required to call for an election. If that happens, are you willing to run a campaign for the seat?
7. Closing statement from candidate and/or opportunity for candidate to ask question(s)

The Selectboard may wish to revise the list of questions.

Cost

N/A

Recommendation

This memo is for discussion.

Memorandum

To: Selectboard; Evan Teich, Unified Manager

From: Greg Duggan, Deputy Manager

Re: Executive session for contracts and legal matters regarding Village of Essex Junction's proposed separation from Town of Essex

Date: September 10, 2021

Issue

The issue is for the Selectboard to discuss possible agreements for sharing services with an independent City of Essex Junction, and whether the Selectboard enters into executive session to discuss contracts and confidential attorney-client communications made for the purpose of providing professional legal services to the body.

Discussion

The Village of Essex Junction has provided a summary of proposals to the Selectboard (attached) and the following draft documents:

- Memorandum of Understanding regarding agreements for shared services
- Draft agreement for shared services of reappraisal
- Draft right of first refusal to purchase the Town Offices at 81 Main St.
- Draft agreement for shared police services

In order to have a complete and thorough discussion about this topic, it would appear that an executive session would be necessary because the premature disclosure of the information may put the Selectboard and the Town at a substantial disadvantage. Contracts and confidential attorney-client communications made for the purpose of providing professional legal services to the body can be protected discussions.

Cost

N/A

Recommendation

If the Selectboard wishes to enter executive session, the following motions are recommended:

Motion #1

"I move that the Selectboard make the specific finding that general public knowledge of contracts and confidential attorney-client communications made for the purpose of providing professional legal services to the body would place the Town at a substantial disadvantage."

Motion #2

"I move that the Selectboard enter into executive session to discuss contracts and confidential attorney-client communications made for the purpose of providing professional legal services to the body, pursuant to 1 V.S.A. § 313(a)(1)(A) and (F) to include the Unified Manager, Deputy Manager and Town Attorney."

Trustees / Selectboard Proposal Discussions

September 1, 2021

Complete package of proposals

The following is a list of proposals that the Trustees consider the "complete package". Upon reaching consensus between the Selectboard and Trustees on each item, the full package can be signed:

- Police
- Reappraisal
- 81 Main Street
- Finance
- Tax Delinquencies

The following items could be included in the package, should the Selectboard and Trustees want to pursue a partnership and agree on the terms. If this is not possible, the Trustees are fine with these not services not being shared at this time.

- Indian Brook
- Senior Services

Tentative Agreements

Based upon the 8/23 joint meeting, Staff and Counsel should draft tentative agreements for individual board discussion at the 9/13 Selectboard and 9/14 Trustee meetings so that a contract can be agreed to at the joint meeting on 9/20.

- Police - City contracting police services from the Town.
    - Multi-year contract with automatic extensions and multi-year notification of intent to cancel and mandatory board mediation to try to pursue the continuation of the contract, in the event of notification of intent to cancel, every six months until contract ends
    - Includes police, community justice, dispatch, police building
    - Acknowledge continued payment of the bond
    - Shared future maintenance & repairs through the budget
    - All police, community justice, and dispatch revenues and grants are a part of the budget and thus shared in the finances paid by both municipalities
    - Town will consider the future recommendations of the equity and inclusion group in regard to a police advisory board, and if one is formed, will provide the City with a number of seats on the board equivalent to its per capita percentage of the population between both municipalities
    - Chief is a Town employee – hired, supervised, and evaluated by the Town Manager
    - Boards agree to a spirit of cooperation and encourage the Town Manager to seek input and have regular communication with the City Manager related to police services, policies, and the hiring and evaluation of the Police Chief
    - Expenses shared per capita; to be re-assessed every 10-years with the new Census
    - All direct costs included plus indirect costs of administration, finance, HR, and IT – funding formula to be determined by finance director
    - Amount due from City is for anticipated actual expenses

    - According to the emergency operations plan, the Police Chief (a Town employee) may have control over City affairs
    - Municipally sponsored or supported community events shall be considered a part of regular policing and not billed back to either municipality. Non-municipal contracted special details shall minimally cover the expenses to provide such services. Any residual funds shall be a part of the police operations revenues and shared in the finances by both municipalities.
- Reappraisal – Town will oversee and conduct reappraisal for Town and Village/City using reappraisal funds and distribute any residual funds at the conclusion of the process to both the Town and City-based on percentage of parcels. If funds do not adequately cover, both municipalities will share any additional expense based on percentage of parcels.
- 81 Main Street – City will have first right of refusal for 100% fair market value if Town decides to sell the building at any point in the future.

<u>Continue to discuss in the short-term related to independence</u>

- Finance – awaiting SB response
- Tax Delinquencies – awaiting advice from legal counsel
- Indian Brook – awaiting SB response/Trustees considering counteroffer
- Senior Services – The City will plan to operate its own senior services – activities, busing, and center at 2 Lincoln. If the Town would like to discuss a partnership, the City is open to it.

<u>Items to be discussed regardless of separation</u>

The items below were included in the list of proposals for conversations but are not directly related to separation. While these conversations need to occur, they are not necessary for the full package of proposals to be tentatively agreed upon.

- Tree Farm
- FY23 Budget

<u>Proposals Trustees are fine with removing</u>

The items below were included in the list of proposals for conversation, based on the Selectboard's response the Trustees are not interested in further negotiation on these items at this time. The Trustees do not consider these part of the full package of proposals.

- Bonding
- Funds
- Transition Period

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding ("MOU"), dated this _____ day of _____, 202_, by and between the Town of Essex, a Vermont municipality located in the County of Chittenden and State of Vermont, ("Essex" or the "Town") and the Village of Essex Junction, a Vermont municipality located in County of Chittenden and State of Vermont, ("Essex Junction" or the "Village" and together the Village and Town are collectively referred to herein as the "Municipalities" or the "Parties").

WHEREAS, the Village is currently an incorporated Village located within the Town;

WHEREAS, the Village is pursuing separation from the Town with the intention of incorporating as an independent City ("City of Essex Junction" or "City") pursuant to legislative approval;

WHEREAS, the Town Selectboard and the Village Trustees are working collaboratively to plan for either the separation of all departments, municipal services and operations, or the contractual sharing of certain departments or services;

WHEREAS, the Town Selectboard and the Village Trustees have determined certain agreements will be necessary between the Town and the City of Essex Junction for purposes such as sharing or purchasing certain municipal services or operations;

WHEREAS, until the effective date of the City's Charter, there is no authority under which the Village may enter agreements on behalf of the City;

WHEREAS, the Village and the Town desire to prepare these agreements in advance with the understanding that the current Village Trustees will become the future City Councilors and intend to enter these agreements on behalf of the City;

WHEREAS, the Parties now wish to enter into this Memorandum of Understanding regarding the agreements necessary for separation of the Municipalities and establishment of the City of Essex Junction; and

NOW THEREFORE, based on the foregoing premises, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Town and the City hereby agree as follows:

1. The Town and Village have prepared the following agreements which are attached as Exhibits to this MOU:

a. Contract for Police Services;

b. Reappraisal Agreement;

c. Right of First Refusal for 81 Main Street;

d. …

e. …

2. Should the Vermont Legislature approve the City Charter, the City will enter a transitional period during which the separation of departments, municipal services, and operations will occur;

3. The Town and Village intend that the Town and City will enter the above referenced agreements in substantially the same form as those attached hereto as Exhibits A-_ during the transitional period. If a party refuses to enter into the attached agreement, said refusal shall constitute a breach of this MOU and the non-breaching party shall be entitled to seek specific performance from the Vermont Superior Court, Civil Division, and damages.

4. The Parties agree to first mediate any dispute prior to submitting the matter to court, provided that a mediator may be obtained within 14 days of such a dispute. The Parties, however, recognize that the contract for Police Services concerns an essential municipal function, and thus, any dispute between the Parties that arises concerning Police Services and which could cause an interruption of police services is emergent and in need of immediate attention by the court and therefore not subject to a mediation requirement prior to initiating a filing with the court.

5. This MOU may be amended or modified by mutual written agreement of the Parties.

6. Any notice required under this MOU shall be in writing and mailed to the addresses listed below (or such other address as a party may designate) or hand delivered to the other party.

To Town of Essex:	Municipal Manager 81 Main Street Essex Junction, VT 05452
To Village of Essex Junction:	Municipal Manager 2 Lincoln Street Essex Junction, VT 05452

14. This MOU shall be governed by the laws of the State of Vermont. All rights and remedies provided by this MOU or by law or in equity or by statute shall be cumulative and concurrent and shall be in addition to every other right, power, or remedy now or hereafter existing to enforce this MOU. If any provision of this MOU shall be deemed to be invalid or unenforceable by a court of competent jurisdiction, the remainder of this MOU shall not be affected thereby and shall continue in full force and effect and shall be enforceable to the fullest extent permitted by law.

17. Neither party shall assign this MOU or any interest hereunder without the written approval of all of the Parties, with the exception that the rights and obligations of the Village of Essex Junction shall flow to the City of Essex Junction once it has been established. This MOU shall be binding upon and inure to the benefit of the Parties and their respective successors and assigns.

18. No failure by either party to insist upon the strict performance of any term hereunder or to exercise any right, power, or remedy consequent upon a breach thereof shall constitute a waiver of any breach of any such term. No waiver of any breach shall affect or alter this MOU, which shall continue in full force and effect, or the rights of either party with respect to any other existing or subsequent breach.

DATED this ___ day of _____, 202_.

TOWN OF ESSEX

By:_____
Its Duly Authorized Agent

VILLAGE OF ESSEX JUNCTION

By:_____
Its Duly Authorized Agent

REAPPRAISAL AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 202_, by and between the Town of Essex, a Vermont municipality located in the County of Chittenden and State of Vermont, ("Essex" or the "Town") and the City of Essex Junction, a Vermont municipality located in County of Chittenden and State of Vermont, ("Essex Junction" or the "City" and together the City and Town are collectively referred to herein as the "Municipalities" or the "Parties").

WHEREAS, pursuant to 32 V.S.A. § 4041a, the Town has collected state reappraisal funds for properties located in the Town as well as for those now located within the City;

WHEREAS, the Town agrees to oversee and conduct a reappraisal for properties located in the Town and City using these reappraisal funds;

WHEREAS, the Town agrees to initiate and manage the reappraisal pursuant to 32 V.S.A. § 4041a;

WHEREAS, if the reappraisal funds are not sufficient to fully fund the reappraisal, the Town and City shall each contribute additional funds in proportion to each Municipality's percentage of parcels;

WHEREAS, if there are residual funds in the Town's reappraisal fund once the appraisal is completed, the residual funds will be distributed to the City and Town in proportion to each Municipality's percentage of parcels;

WHEREAS, the Parties now wish to enter into this Reappraisal Agreement; and

NOW THEREFORE, based on the foregoing premises, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Town and the City hereby agree as follows:

1. The Town shall use the existing reappraisal funds to conduct a reappraisal of all properties located within the Town and the City.
2. The Town shall initiate and manage the reappraisal pursuant to 32 V.S.A. § 4041a, unless by mutual agreement of the Parties.
3. The reappraisal fund balance ("Reappraisal Balance") shall be determined as of the date of the last payment by the State pursuant to 32 V.S.A. § 4041a to the Town which includes payment for parcels now located in the City.

4. If the Reappraisal Balance is insufficient to fund the reappraisal, the Town and City shall contribute additional funds in proportion to each Municipality's percentage of parcels.

5. The additional funds shall be due thirty (30) days after receipt of a detailed accounting and invoice.

6. If residual funds remain in the Reappraisal Balance at the conclusion of the reappraisal, the residual funds shall be distributed to the Town and City in proportion to each Municipality's percentage of parcels.

7. The residual funds shall be disbursed with a detailed accounting of the disbursement within thirty (30) days of the final payment for the reappraisal.

8. The City Board of Authority shall hear and address any tax appeals that arise from the reappraisal for properties that are located within the City.

9. The Town and City hereby agree to take or cause to be taken such further actions, and to execute, deliver and record, or cause to be executed, delivered and recorded, such further documents and instruments that may be reasonably necessary to fully effectuate the purposes, terms and conditions of this Agreement.

10. This Agreement may be amended or modified by mutual written agreement of the Parties.

11. Any notice required under this Agreement shall be in writing and mailed to the addresses listed below (or such other address as a party may designate) or hand delivered to the other party.

To Town of Essex:	Town of Essex Town Manager 81 Main Street Essex Junction, VT 05452
To City of Essex Junction:	City of Essex Junction City Manager 2 Lincoln Street Essex Junction, VT 05452

12. This Agreement shall be governed by the laws of the State of Vermont. All rights and remedies provided by this Agreement or by law or in equity or by statute shall be cumulative and concurrent and shall be in addition to every other right, power, or remedy now or hereafter existing to enforce this Agreement. If any provision of this Agreement shall be deemed to be invalid or unenforceable by a court of competent jurisdiction, the remainder of this Agreement shall not be

affected thereby and shall continue in full force and effect and shall be enforceable to the fullest extent permitted by law.

13. Neither party shall assign this Agreement or any interest hereunder without the written approval of all of the Parties. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and assigns.

14. No failure by either party to insist upon the strict performance of any term hereunder or to exercise any right, power, or remedy consequent upon a breach thereof shall constitute a waiver of any breach of any such term. No waiver of any breach shall affect or alter this Agreement, which shall continue in full force and effect, or the rights of either party with respect to any other existing or subsequent breach.

DATED this ____ day of _____, 2021.

TOWN OF ESSEX

By:_____
Its Duly Authorized Agent

CITY OF ESSEX JUNCTION

By:_____
Its Duly Authorized Agent

RIGHT OF FIRST REFUSAL AGREEMENT

KNOW ALL PERSONS BY THESE PRESENTS that the TOWN OF ESSEX, a Vermont municipal corporation in the County of Chittenden and State of Vermont, GRANTOR, in consideration of One and More Dollars paid to its full satisfaction by the CITY OF ESSEX JUNCTION, a Vermont municipal corporation in the County of Chittenden and State of Vermont, GRANTEE, does hereby GIVE, GRANT AND CONVEY unto the said CITY OF ESSEX JUNCTION, a right of first refusal on property known as 81 Main Street in the City of Essex Junction and more particularly described as being all and the same land and premises conveyed to the Town of Essex by Warranty Deed of Claude B. Gagne and Gerald C. Milot dated May 3, 1982 and recorded in Book 167 at Page 26 of the Essex Land Records ("Property").

In consideration of the mutual promises herein set forth and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

1) Grantor hereby unconditionally and irrevocably grants to Grantee the exclusive right of first refusal to purchase all or a portion of the Property, or any interest in the Property, on the terms and conditions contained in this Agreement.

2) In the event Grantor intends to accept a bona fide offer to sell the Property to a third party ("Offer"), it shall promptly give to the Grantee written notice of the terms of such contract. The written notice shall contain the material terms and conditions of the Offer, including, but not limited to, the name of the prospective bona fide transferee, the price, a description of the property to be transferred, the form of consideration, contingencies, and a copy of the contract.

3) In the event Grantor desires to sell the Property and does not have an Offer, the Parties may: a) together agree on the fair market value; b) use a mutually agreed upon appraiser to determine the fair market value of the Property; or c) each hire an independent appraiser and the appraisers shall together determine the fair market value of the Property. The appraisal costs shall be shared equally between the Parties.

4) Grantee shall have the option to purchase the Property on the same terms and conditions set forth in said contract or as determined in Section 3 above. Within sixty (60) days after the date it receives notice of the proposed sale or the fair market value is determined, Grantee shall either notify Grantor in writing that it will purchase the premises on the terms and conditions set forth or deliver to Grantor a written waiver of its right of first refusal in recordable form. In the event Grantee delivers to Grantor a written waiver of its right of first refusal in recordable form, or fails to respond to the notice of the proposed sale within sixty

(60) days, Grantor may thereafter sell the premises to the third party making the offer. If for any reason the premises are not sold to the third party, notice of any subsequent contract for the sale or conveyance of the above described property by Grantor shall be given to Grantee on the same terms and conditions for acceptance or refusal as set forth above.

5) If the transferred Property constitutes less than the entire interest of Grantor in the Property, then the terms and conditions of this Agreement shall remain in full force effect regarding any portion of, or interest in, the Property which was not part of the transferred Property.

6) In the event Grantee elects to exercise its right of first refusal and timely notifies Grantor thereof, it shall have not more than six months to close on said transaction. Grantor shall convey title via warranty deed in customary Vermont form, sufficient to convey to good and marketable title to the Property.

7) All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or: (a) personal delivery to the party to be notified, with signed notice of receipt; (b) five (5) days after having been sent by certified mail, return receipt requested, postage prepaid; or (c) one (1) business day after deposit with a nationally recognized overnight courier, freight prepaid, specifying next business day delivery, with written verification of receipt.

8) This right of first refusal shall be binding on the successors and assigns of Grantor and Grantee.

9) This Agreement shall be governed by and construed in accordance with the laws of the State of Vermont.

10) No modification, amendment, or deletion of this Agreement shall be effective unless in writing and signed by both Parties.

DATED at _____, Vermont this _____ day of _____, 20__.

TOWN OF ESSEX

_____
By:
Duly Authorized Agent

STATE OF VERMONT
COUNTY OF CHITTENDEN, SS.

At _____, Vermont, this _____ day of _____, 20__, _____, duly authorized agent of the Town of Essex personally appeared, and

they acknowledged this instrument, by them sealed and subscribed, to be their free act and deed and the free act and deed of the Town of Essex.

Before me,_____
Notary Public

Police Services Agreement

THIS AGREEMENT, made this _____ day of _____, 2022, by and between the Town of Essex, a Vermont municipality located in Chittenden County, ("Essex" or the "Town") and the City of Essex Junction, a Vermont municipality located in Chittenden County, ("Essex Junction" or the "City" and together the City and Town are collectively referred to herein as the "Municipalities" or the "Parties").

WHEREAS, the duly elected Town Selectboard and City Council have general supervisory authority over affairs of their respective Municipality; and

WHEREAS, the Essex Police Department ("Essex PD") has provided joint police services, including law enforcement, protection, community justice, dispatch, and emergency services (collectively described as "Services") to the Town and to the former Village of Essex Junction; and

WHEREAS, the police services provided by Essex PD serve the public good and fulfill an essential municipal function; and

WHEREAS, the Municipalities want to ensure that the Services provided by Essex PD continue and that an environment of cooperation, open communication, transparency and trust exists between the Town and the City; and

WHEREAS, it is the mutual goal of the Municipalities that the Essex PD serve the citizens of both the Town and the City and Essex PD maintains the trust and support of the taxpayers, to whom they each owe duties and obligations; and

WHEREAS, the Parties now wish to enter into this Agreement to provide future Services of the Essex PD to the City of Essex Junction; and

NOW THEREFORE, based on the foregoing premises, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Town and the City hereby agree as follows:

1. Term.

   The Initial Term of this Agreement shall be ten (10) years. This Agreement shall automatically renew for another five (5) years (Extended Term) at the conclusion of the Initial Term if the Parties do not either terminate the Agreement by providing the other Party with a formal Notice of Intent to Terminate the Agreement (See Section 10 herein) or enter into a new or revised agreement. This Agreement may continue to renew for an unlimited number of Extended Terms.

2. Agreement Review.

   The Parties hereby agree to review this Agreement if requested by either Party in either a joint meeting of the Selectboard and the City Council or a meeting of their representatives. The Parties agree to cooperate in making changes to this Agreement that may be necessary and mutually agreeable over time.

3. Cost and Payment.

   The City agrees to pay the Town for the Police Services described herein on a quarterly basis. The City shall be assessed the cost of these services by calculating, on a per capita basis, their share of the direct and indirect costs and expenses for maintaining the Essex PD. The direct costs shall include, but not be limited to, the following: salaries and wages, benefits, equipment, supplies, workers compensation insurance, property & casualty insurance, training, vehicles, technology, communications; as well as costs associated with operating the police facility to include, but not be limited to, heat, electricity, water and sewer, and buildings and grounds. The indirect costs shall include and be limited to: administration costs, human resources costs, Information Technology (IT) costs, and finance costs. The per capita basis shall be reassessed every ten years with new census released by the US Census Bureau.

   If an audit is conducted and a discrepancy is found in what was paid by the City and what should have been paid on a per capita basis, then the City shall be either refunded any amount overpaid or the City shall make payment on any underpayment in the next fiscal year in quarterly installments. The Town shall ensure that the Essex PD makes all reasonable efforts to stay within any prepared budget.

   An anticipated fee for services shall be provided by the Town to the City in advance of any budget meeting such that the City may include the costs of these services in its budget. Upon demand, the Town shall provide the City a detailed Police Services budget that shall be in such form, and contain such level of detail, as is mutually agreed upon by the Selectboard and the City Council, and at a minimum, shall include revenue and expenses for the Services to be provided.

   Upon request, a Town representative familiar with the proposed budget shall appear at any City Council meeting where there will be a discussion of the budget to answer any questions that the Council or the members of the public may have. The Town shall make expenditures consistent with the Police Services budget as presented and any material changes to an approved budget should be brought before the City Council in advance. Failure to do so shall constitute a breach of this Agreement.

The Municipalities recognize that a natural disaster (defined as a major, adverse, naturally occurring event such as a flood, wildfire, earthquake, hurricane or tornado) impacting the Municipalities may cause the Essex PD to exceed budgeted operating revenues. The Town agrees to promptly apply for any possible State or Federal grant funding that may be available to cover budget overruns that arise out of a natural disaster.

4. Level of Service; Changes in Service.

In exchange for the distribution of public funds, described above, Town shall provide the City with all of the following "Services": (1) 24-hour, 365-days per year police protection, response, prevention, law enforcement, investigation services, education, special event services, emergency response services (generally referring to action taken in response to an unexpected and dangerous occurrence in an attempt to mitigate its impact on people, property or the environment. Emergency situations can range from natural disasters to hazardous materials problems, transportation incidents and a wide range of manmade emergencies.), animal control, community justice, and dispatch services. Dispatch services shall include for Essex Rescue, Essex Junction Public Works,and Essex Junction Fire Department.

In the event that the Parties agree to modify the agreed upon level of service, either by increasing services provided, eliminating an existing service, or if the Essex PD seeks to expand services into another municipality, the Parties shall together agree upon a written description of the proposed change(s) and the rationale for the same. In addition, the Parties shall meet at a joint meeting of the Selectboard and City Council to discuss the budgetary and other consequences of any proposed change. If all Parties determine that the proposed change will not adversely affect the public good, will reasonably maintain public safety, and is fiscally prudent, the Parties may mutually approve the proposed change. No change in the agreed upon level of service shall occur within the contract term absent such mutual approval.

5. Personnel Management

All equipment and personnel necessary and proper for the performance of this Agreement shall be provided by the Town and all persons providing the Police Services shall be subject to the exclusive control, direction and supervision of the Town.

The Chief of the Essex PD ("Police Chief") shall be an employee of the Town and shall be supervised by the Town Manager. However, the Town Manager shall seek input from the City Manager in the evaluation of the Police Chief and in the

hiring of any new Chief. The Town Manager shall also freely accept input and cooperate with the City Manager. Minimally, the Police Chief, Town Manager, and City Manager shall meet at least once every six months to discuss the status, quality and execution of Police Services by the Essex PD.

The Police Chief and City Manager shall cooperate in the creation, modification and execution of any City emergency response plans. The Chief shall have control over the execution of the emergency response plan.

6. Equity Inclusion Group.

   The Town agrees to consider the recommendations of the Equity Inclusion Group. Should a Police Advisory Board ("Advisory Board") be formed in the future, the City shall be afforded a number of seats on the Advisory Board that are proportionate to the total population served by the Essex PD.

7. Insurance.

   The Essex PD shall at all times be covered under the Town's general municipal liability insurance policy.

8. Compliance with Law.

   The Essex PD shall at all times comply with all local, state, and federal laws, ordinances, orders and regulations in connection with its operations.

9. Necessary Actions.

   The Town and the City hereby agree to take or cause to be taken such further actions, if any, and to execute, deliver and record, or cause to be executed, delivered and recorded, such further documents and instruments that may be reasonably necessary to fully effectuate the purposes, terms and conditions of this Agreement.

10. Bond.

    The City shall continue to make payments, in the same manner as has been historically made, with the tax rate being established based on the budgeted bond payment for the year spread across the combined grand list of the two municipalities, on the Bond for the police station issued by the Vermont Municipal Bond Bank, 2017 Series 4 Refunding Bonds, in the current approximate total outstanding amount of Six Million One Hundred Forty-Six Thousand Six Hundred Eighty-Nine Dollars ($6,146,689.00).

11. Termination.

A Notice of Intent to Terminate this Agreement must be delivered to the other Party Three (3) Years Prior to the end of either the Initial Term or Extended Term. Should one Party notify the other that it intends to terminate this Agreement, then the Parties agree to enter into a mediation with an agreed upon mediator and they shall split the costs of the mediation. The Parties shall mediate in good faith.

This Agreement may also automatically terminate upon any of the following events:

a. The dissolution or insolvency of either of the Municipalities;

b. The date by which the Parties have agreed and resolved that the City has established a municipal Police Department that performs the Services;

c. The Parties enter into a new written agreement which expressly supersedes this Agreement.

12. Effects of Termination

Upon the termination of this Agreement all obligations of the Parties shall cease except for those obligations created by or pursuant to Sections 10 and 11.

13. Amendment.

This Agreement may be amended or modified by mutual written agreement of the Parties.

14. Notice.

Any notice required to be given under this Agreement shall be in writing and mailed to the addresses listed below (or such other address as a party may designate) or hand delivered to the other party at a duly warned meeting of the Town Selectboard or the City Council.

To the Town of Essex:
Town of Essex
Town Manager
81 Main Street
Essex Junction, VT 05452-3209

To City of Essex Junction:
City of Essex Junction
City Manager

2 Lincoln Street
Essex Junction, VT 05452

15. Governing Law; Severability

This Agreement shall be governed by the laws of the State of Vermont. All rights and remedies provided by this Agreement or by law or in equity or by statute shall be cumulative and concurrent and shall be in addition to every other right, power, or remedy now or hereafter existing to enforce this Agreement. If any provision of this Agreement shall be deemed to be invalid or unenforceable by a court of competent jurisdiction, the remainder of this Agreement shall not be affected thereby and shall continue in full force and effect and shall be enforceable to the fullest extent permitted by law.

16. Disputes.

In the event of any dispute arising out of this Agreement, the Municipalities shall first agree to mediate the dispute. The Municipalities may also agree to submit any dispute not resolved in mediation to binding arbitration. Otherwise all disputes arising out of or related to this Agreement shall be heard in the Vermont Superior Court, Chittenden Civil Division.

17. Entire Agreement.

This Agreement represents the entire agreement between the Parties. All prior agreements, offers, negotiations and representations not herein expressly contained shall be of no force and effect.

18. Assignment; Binding Agreement.

Neither party shall assign this Agreement or any interest hereunder without the written approval of all of the Parties. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and assigns.

19. No Waiver.

No failure by either party to insist upon the strict performance of any term hereunder or to exercise any right, power, or remedy consequent upon a breach thereof shall constitute a waiver of any breach of any such term. No waiver of any breach shall affect or alter this Agreement, which shall continue in full force and effect, or the rights of either party with respect to any other existing or subsequent breach.

20. Captions.

The captions or marginal words are inserted only as a matter of convenience and reference and in no way define, limit, or describe the scope of this Agreement nor the intent of any provisions hereof.

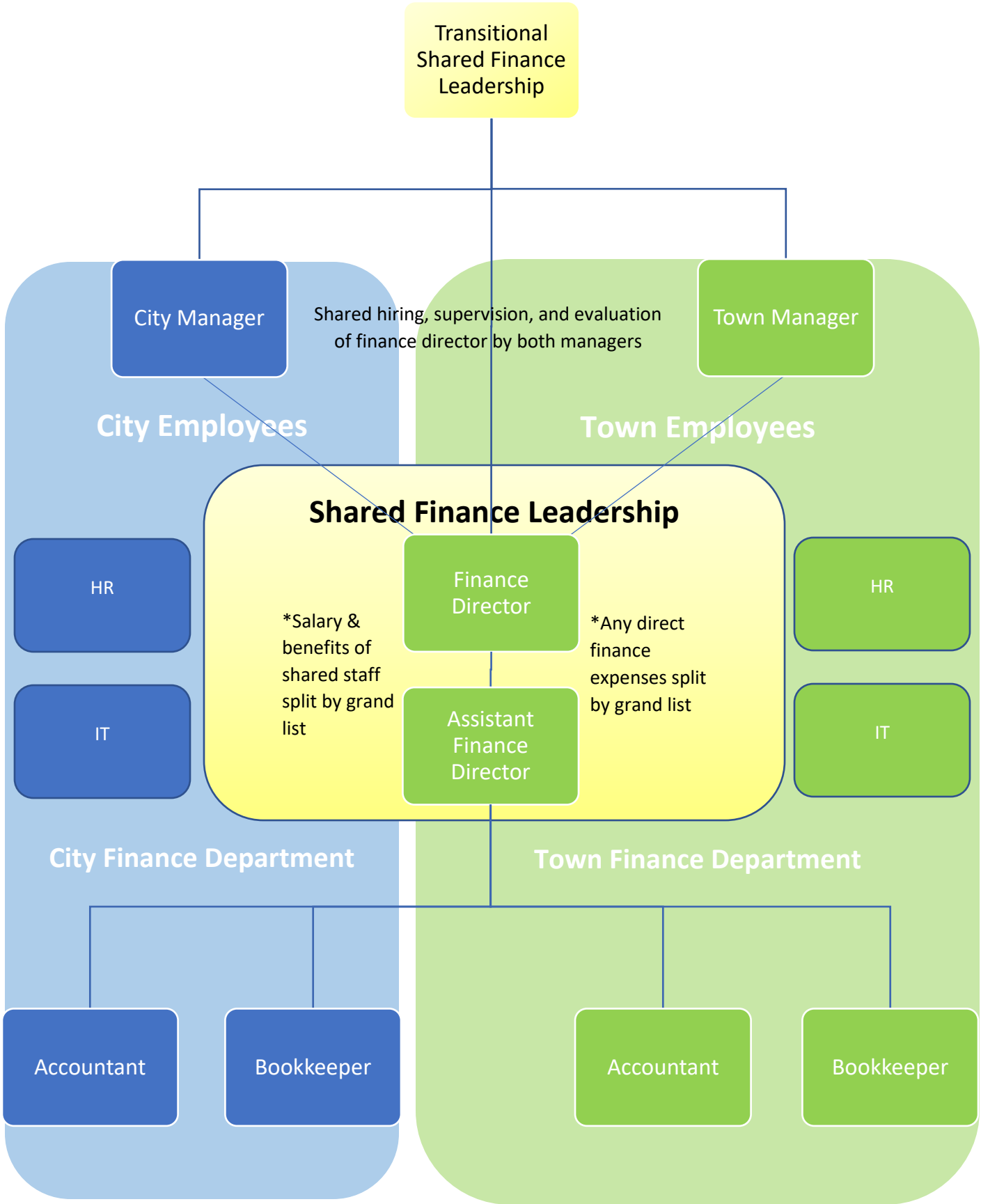
DATED this ____ day of _____, 2022.

TOWN OF ESSEX

By: _____
Its Duly Authorized Agent

CITY OF ESSEX JUNCTION

By: _____
Its Duly Authorized Agent


Transitional Shared Finance Leadership
City Manager
Shared hiring, supervision, and evaluation of finance director by both managers
Town Manager
City Employees
Town Employees
Shared Finance Leadership
HR
Finance Director
HR
*Salary & benefits of shared staff split by grand list
*Any direct finance expenses split by grand list
IT
Assistant Finance Director
IT
City Finance Department
Town Finance Department
Accountant
Bookkeeper
Accountant
Bookkeeper

Memorandum

To: Selectboard; Evan Teich, Unified Manager

Cc: Marguerite Ladd, Assistant Manager; Travis Sabataso, HR Director

From: Greg Duggan, Deputy Manager

Date: September 10, 2021

Issue
The issue is whether the Selectboard will enter into executive session to discuss the employment of public employees.

Discussion
In order to have a complete and thorough discussion, it would appear that an executive session may be necessary. The employment of a public employee can be a protected discussion, provided that the public body make a decision to hire a public employee in an open meeting.

Cost
N/A

Recommendation
If the Selectboard wishes to enter executive session, the following motion is recommended:

> "I move that the Selectboard enter into executive session to discuss the employment of a public employee in accordance with 1 V.S.A. Section 313(a)(3), to include the Unified Manager, Deputy Manager, Assistant Manager, and HR Director."

Memorandum

TO: For the Record
FROM: Dennis Lutz, P.E., Public Works Director
Aaron Martin, P.E., Director of Public Works Operations
DATE: 31 July 2021
SUBJECT: Boundary Line Adjustment Sally Fleury Trust and Towers Trust

Issue:
The issue is whether the Selectboard will approve the warning for a public hearing to approve the survey of Fleury Road for the October 18, 2021 Selectboard meeting, as per State statute.

Discussion:
Fleury Road has boundaries that are historically difficult to establish. The road is currently not depicted on the Town tax maps. However, the road exists as a Class 3 Town highway and has been a Town road since at least 1943. The road is .16 miles in length and has a U-shaped configuration. It is currently listed on the latest State Highway Map for Essex as Town Highway #708. The Town receives State aid for this roadway.

The problem is that no survey is available in the files documenting the width or location of the roadway on a set of drawings. If such documentation exists in the Town records, then the actual, old, surveyed plan will set the limits of the roadway width. In the absence of any documentation, as per 19 V.S.A. § 33 a (1), Public Works began the process of surveying this existing road per State Statute. This survey is a two-step process. In April of this year, Staff began with a meeting on site with all property owners with title to lands abutting the proposed survey of Fleury Road, to discuss the location and proposed boundaries of the survey. The Town Attorney and the Licensed Land Surveyor were also present at this meeting, and all agreed with the proposed layout with a few alterations. The attached map depicts the proposed survey with the discussed changes.

The final step in accepting the proposed survey is to warn and have a public hearing for the purpose of the Selectboard to vote and approve the proposed survey layout. State Statute, 19 V.S.A. § 33 f, requires a 30-Day notice prior to this Public Hearing. The appropriate sections of Title 19 have been provided for your reference.

Recommendation:
Approve the warning for a public hearing to approve the survey of Fleury Road for the October 18, 2021 Selectboard meeting.

TOWN OF ESSEX SELECTBOARD
NOTICE OF PUBLIC HEARING
October 18, 2021 – 6:35 PM
Municipal Offices, Conference Room
81 Main Street, Essex Junction, VT 05452

The Town of Essex Selectboard will hold a public meeting to discuss the Survey of Existing Class 3 Town Highway No. 708, Fluery Road.

Fleury Road, an existing Class 3 Town highway within the Town of Essex, and currently listed on the State Highway Map for Essex as Town Highway #708, has recently been surveyed, establishing new limits of Right of Way.

Before accepting the proposed survey a public hearing shall take place prior to filing the approved survey plat with the Town Clerk. for the purpose of the Selectboard to vote and approve the proposed survey layout. State Statute, 19 V.S.A. § 33 f, requires a 30-Day notice prior to this Public Hearing.

A public hearing will be held on Monday, October 18, 2021 at 6:35 pm, to discuss and approve the survey of Fleury Road. Please direct questions to Aaron Martin, Director of Public Works Operations, at (802) 878-1344 or amartin@essex.org.

Andy Watts, Chair
Essex Selectboard

VERMONT **GENERAL ASSEMBLY**

The Vermont Statutes Online

Title 19 : Highways

Chapter 001 : State Highway Law; General Transportation Provisions

(Cite as: 19 V.S.A. § 33)

§ 33. Survey of existing highways; damages

(a) For the purposes of this and the following section of this title, the word "survey" means:

(1) A survey of the existing highway where no previous survey has been properly recorded or the record of a previous survey has not been preserved, or the terminations and boundaries of a previous survey cannot be determined; or

(2) A resurvey to reproduce a previous survey or surveys.

(b) The Agency, for state highways, and the selectmen, for town highways, may authorize the survey of existing highways, and the rights-of-way, easements, or fee title associated with those highways. The purpose of the survey shall be to verify the location and width of the existing right-of-way, easement, or fee title and to determine the extent of the interest of the public in the title. A notice of intent to survey an existing highway shall be sent to all known abutting landowners by certified mail. In performance of the survey, the agency or selectmen shall attempt to determine from all available evidence, the type of highway, its location on the ground, its width, and the record title holder. The survey shall be based on all available evidence including survey descriptions, original survey bills, plats, plans, maps, photographs, discontinuances, court documents, Public Service Board orders, actions by the selectmen, existing monumentation, present road location, nearby intersections, topography, vegetation, past and current use patterns, and other additional information generally relied on by land surveyors. The surveys shall be carried out in accordance with the provisions of chapter 45 of Title 26.

(c) If, during the performance of the survey process under this section, the location or limits, or both, of the right-of-way, easement, or fee title cannot be determined on the ground from the available evidence, the agency or the selectmen may instead cause a survey to be made of the centerline of the existing traveled way and a width of one and one-half rods on each side of the centerline shall be assumed and controlled for highway purposes.

(d) Once a survey is completed, the Agency or selectmen shall cause the right-of-way, easement, or fee title to be monumented in accordance with the survey plat and in such a manner that will allow its limits to be readily apparent to all adjacent property owners. Monumentation shall be permanent and shall include not less than two intervisible monuments located on, within, or adjacent to the highway limits. Intervisible monuments

shall be at intervals of not more than 200 meters. All monuments shall be referenced to the Vermont State Plane Coordinate System in accordance with applicable statutes and standards in effect.

(e) The Agency or selectmen shall have the survey placed on record in the town Clerk's office in each town in which the survey is performed. The record shall include, but not be limited to, survey plats prepared and filed in accordance with 27 V.S.A. §§ 1401-1406, a written description of the survey, and an opinion naming the record title holder. The description and plat shall include coordinates referenced to the Vermont State Plane Coordinate System. All recorded or filed material shall be indexed.

(f) Notice of the completion of the survey shall be sent to all known abutting landowners by certified mail, not less than 30 days before the survey results are filed with the appropriate town Clerk, together with notice of statutory rights of appeal and damages.

(g) Upon recordation of the survey and upon final disposition of statutory appeals, all abutting and surrounding lands outside the limits of the survey shall be deemed discontinued, unless any rights deemed necessary are expressly reserved and clearly shown on the recorded survey plat. Title to the discontinued property shall belong to the owners of the abutting lands. If it is located between the lands of two different owners, it shall be returned to the lots to which it originally belonged, if they can be determined; if not, it shall be equally divided between the owners of the lands on each side.

(h) Damages. A property owner aggrieved by a survey may seek damages for the loss of property or for the loss of an interest in property. (Added 1985, No. 269 (Adj. Sess.), § 1; amended 1993, No. 195 (Adj. Sess.), § 1.)

VERMONT **GENERAL ASSEMBLY**

The Vermont Statutes Online

Title 19 : Highways

Chapter 001 : State Highway Law; General Transportation Provisions

(Cite as: 19 V.S.A. § 34)

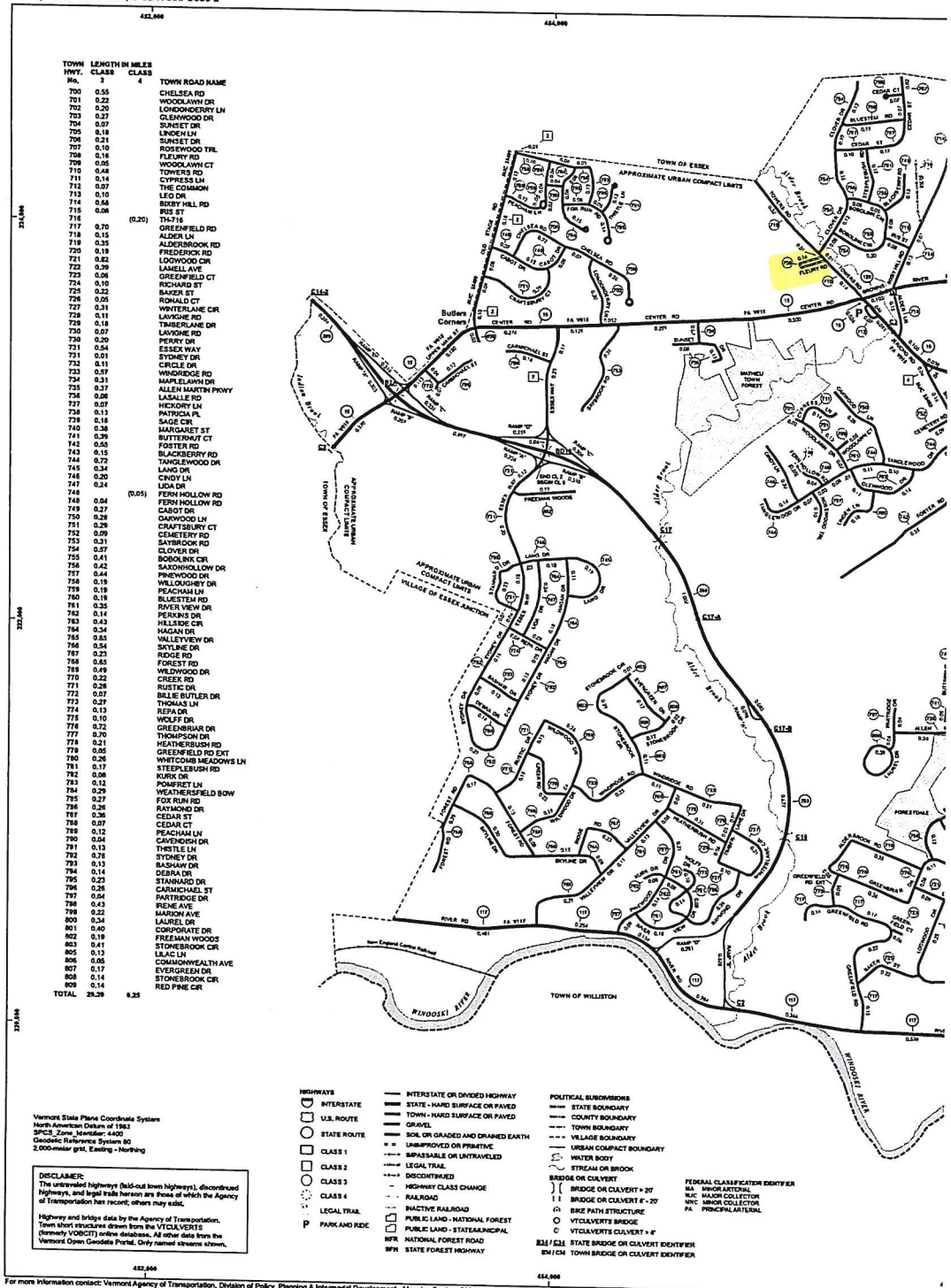
§ 34. Appeal from survey

(a) A person who has title to land abutting to a highway that is surveyed by the agency or the selectmen and who is dissatisfied with the survey may appeal the results of the survey in the superior court in the county in which the affected property is located. Any such appeal must be brought within 120 days from the date the results of the survey are filed with the town clerk. The results of the survey shall be binding against any property owner who does not appeal within the 120-day period.

(b) On a motion of a person, or the agency, or upon order of the court, any person who has a legally recorded interest in the property that is the subject of the superior court action may be joined as a party at any time before final determination, upon such terms as the court may prescribe. (Added 1985, No. 269 (Adj. Sess.), § 1; amended 1993, No. 195 (Adj. Sess.), § 2.)

County-Town Code 0406, Urban Area Code 2

TOWN HWY. No.	LENGTH IN MILES CLASS 3	CLASS 4	TOWN ROAD NAME
700	0.55		CHELSEA RD
701	0.22		WOODLAWN DR
702	0.20		LONDONDERRY LN
703	0.27		GLENWOOD DR
704	0.07		SUNSET DR
705	0.18		LINDEN LN
706	0.21		SUNSET DR
707	0.10		ROSEWOOD TRL
708	0.16		FLEURY RD
709	0.05		WOODLAWN CT
710	0.48		TOWERS RD
711	0.14		CYPRESS LN
712	0.07		THE COMMON
713	0.10		LEO DR
714	0.58		BIXBY HILL RD
715	0.08		IRIS ST
716		(0.20)	TH-716
717	0.70		GREENFIELD RD
718	0.15		ALDER LN
719	0.35		ALDERSBROOK RD
720	0.19		FREDERICK RD
721	0.82		LOGWOOD CIR
722	0.29		LAMELL AVE
723	0.06		GREENFIELD CT
724	0.10		RICHARD ST
725	0.22		BAKER ST
726	0.05		RONALD CT
727	0.31		WINTERLANE CIR
728	0.11		LAVIGNE RD
729	0.18		TIMBERLANE DR
730	0.07		LAVIGNE RD
730	0.20		PEARY DR
731	0.54		ESSEX WAY
731	0.01		SYDNEY DR
732	0.11		CIRCLE DR
733	0.57		WINDRIDGE RD
734	0.31		MAPLELAWN DR
735	0.37		ALLEN MARTIN PKWY
736	0.08		LASALLE RD
737	0.07		HICKORY LN
738	0.13		PATRICIA PL
739	0.18		SAGE CIR
740	0.38		MARGARET ST
741	0.39		BUTTERNUT CT
742	0.55		FOSTER RD
743	0.15		BLACKBERRY RD
744	0.72		TANGLEWOOD DR
745	0.34		LANG DR
746	0.20		CINDY LN
747	0.24		LIDA DR
748		(0.05)	FERN HOLLOW RD
748	0.04		FERN HOLLOW RD
749	0.27		CABOT DR
750	0.28		OAKWOOD LN
751	0.29		CRAFTSBURY CT
752	0.09		CEMETERY RD
753	0.31		SAYBROOK RD
754	0.57		CLOVER DR
755	0.41		BOBOLINK CIR
756	0.42		SAXONHOLLOW DR
757	0.44		PINEWOOD DR
758	0.19		WILLOUGHBY DR
759	0.19		PEACHAM LN
760	0.19		BLUESTEM RD
761	0.35		RIVER VIEW DR
762	0.14		PERKINS DR
763	0.43		HILLSIDE CIR
764	0.34		HAGAN DR
765	0.85		VALLEYVIEW DR
766	0.54		SKYLINE DR
767	0.23		RIDGE RD
768	0.85		FOREST RD
769	0.49		WILDWOOD DR
770	0.22		CREEK RD
771	0.28		RUSTIC DR
772	0.07		BILLIE BUTLER DR
773	0.27		THOMAS LN
774	0.13		REPA DR
775	0.10		WOLFF DR
776	0.72		GREENBRIAR DR
777	0.70		THOMPSON DR
778	0.21		HEATHERBUSH RD
779	0.05		GREENFIELD RD EXT
780	0.26		WHITCOMB MEADOWS LN
781	0.17		STEEPLEBUSH RD
782	0.08		KURIK DR
783	0.12		POMFRET LN
784	0.29		WEATHERSFIELD BOW
785	0.27		FOX RUN RD
786	0.26		RAYMOND DR
787	0.36		CEDAR ST
788	0.07		CEDAR CT
789	0.12		PEACHAM LN
790	0.04		CAVENDISH DR
791	0.13		THISTLE LN
792	0.76		SYDNEY DR
793	0.13		BASHAW DR
794	0.14		DEBRA DR
795	0.23		STANNARD DR
796	0.26		CARMICHAEL ST
797	0.04		PARTRIDGE DR
798	0.43		IRENE AVE
799	0.22		MARION AVE
800	0.34		LAUREL DR
801	0.40		CORPORATE DR
802	0.19		FREEMAN WOODS
803	0.41		STONEBROOK CIR
805	0.13		LILAC LN
806	0.05		COMMONWEALTH AVE
807	0.17		EVERGREEN DR
808	0.14		STONEBROOK CIR
809	0.14		RED PINE CIR
TOTAL	29.39	0.25	



HIGHWAYS
- INTERSTATE
- U.S. ROUTE
- STATE ROUTE
- CLASS 1
- CLASS 2
- CLASS 3
- CLASS 4
- LEGAL TRAIL
- P PARK AND RIDE

- INTERSTATE OR DIVIDED HIGHWAY
- STATE - HARD SURFACE OR PAVED
- TOWN - HARD SURFACE OR PAVED
- GRAVEL
- SOIL OR GRADED AND DRAINED EARTH
- UNIMPROVED OR PRIMITIVE
- IMPASSABLE OR UNTRAVELED
- LEGAL TRAIL
- DISCONTINUED
- HIGHWAY CLASS CHANGE
- RAILROAD
- INACTIVE RAILROAD
- PUBLIC LAND - NATIONAL FOREST
- PUBLIC LAND - STATE&MUNICIPAL
- NFR NATIONAL FOREST ROAD
- SFH STATE FOREST HIGHWAY

POLITICAL SUBDIVISIONS
- STATE BOUNDARY
- COUNTY BOUNDARY
- TOWN BOUNDARY
- VILLAGE BOUNDARY
- URBAN COMPACT BOUNDARY
- WATER BODY
- STREAM OR BROOK

BRIDGE OR CULVERT
- BRIDGE OR CULVERT > 20'
- BRIDGE OR CULVERT 6' - 20'
- BIKE PATH STRUCTURE
- VTCULVERTS BRIDGE
- VTCULVERTS CULVERT > 6'
- B34 / C34 STATE BRIDGE OR CULVERT IDENTIFIER
- B34 / C34 TOWN BRIDGE OR CULVERT IDENTIFIER

FEDERAL CLASSIFICATION IDENTIFIER
- MA MINOR ARTERIAL
- MJC MAJOR COLLECTOR
- MNC MINOR COLLECTOR
- PA PRINCIPAL ARTERIAL

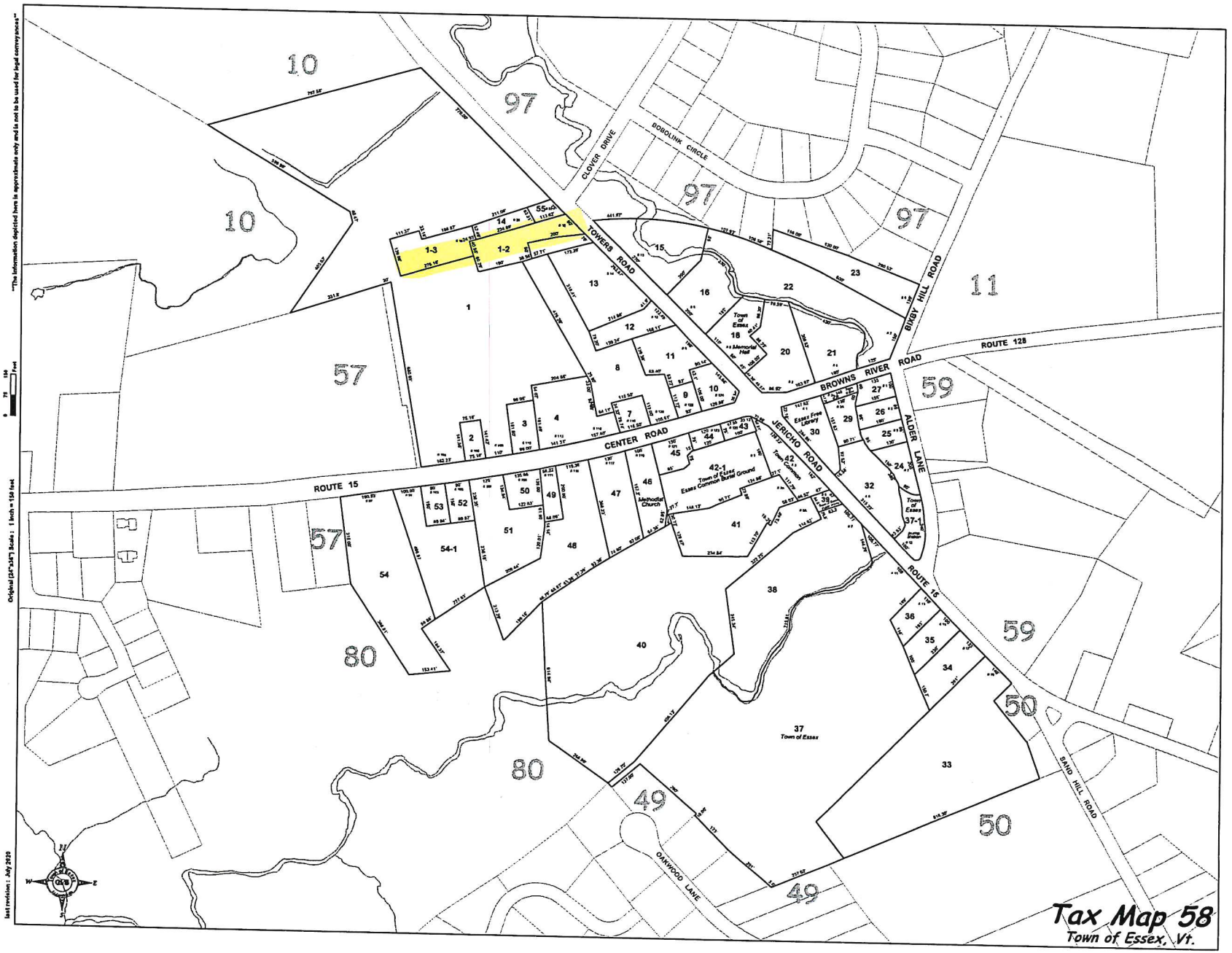
Vermont State Plane Coordinate System
North American Datum of 1983
SPCS_Zone_Identifier: 4400
Geodetic Reference System 80
2,000-meter grid, Easting - Northing

DISCLAIMER:
The untraveled highways (laid-out town highways), discontinued highways, and legal trails hereon are those of which the Agency of Transportation has record; others may exist.

Highway and bridge data by the Agency of Transportation. Town short structures drawn from the VTCULVERTS (formerly VORCIT) online database. All other data from the Vermont Open Geodata Portal. Only named streams shown.

For more information contact: Vermont Agency of Transportation, Division of Policy, Planning & Intermodal Development - Mapping Section, 219 North Main Street, Barre, VT 05641 Telephone: 802-828-2600.

This map was funded in part through grants from the Feders


"The information depicted here is approximate only and is not to be used for legal conveyances"
Original (24"x34") Scale : 1 Inch = 150 Feet
Last revision : July 2020
10
97
57
80
59
50
49
11
CLOVER DRIVE
BOBOLINK CIRCLE
TOWERS ROAD
BIXBY HILL ROAD
ROUTE 128
BROWNS RIVER ROAD
CENTER ROAD
ROUTE 15
JERICHO ROAD
ALDER LANE
ROUTE 15
SAND HILL ROAD
OAKWOOD LANE
1-3
1-2
Town of Essex
Memorial Hall
Essex Free Library
Methodist Church
Town of Essex Essex Common Burial Ground
Town of Essex
Town of Essex
Town of Essex
Tax Map 58
Town of Essex, Vt.

This is an Original Mylar

Survey Notes

1. This Property Survey has been compiled from field surveys and record evidence including the following plans:
a. "Property Line Agreement, Thomas & Yoshiko Blair", prepared by A.W. Harris & Associates, dated August 7, 1987 and filed in slide 245 of the Town of Essex Land Records.
b. "Plan of Warehouse Lot Owned by Stanley & Alice Fiske"; prepared by Hoag & Associates Inc., dated November 10, 1958 and filed in Book 72 Page 266 of the Town of Essex Land Records.
c. "Plan to show Surveys for Goddette Brothers & Servule & Midirise Corneau", prepared by Franklin Dewart C.E., dated October 1, 1926 and filed in Book 36 Page 188 of the Town of Essex Land Records.
d. "Plan to show Locations of Easements, Whiting Milk", prepared by Franklin Dewart C.E., dated November 18, 1926 and filed in Book 36 Page 245 of the Town of Essex Land Records.
e. "Two-Lot Subdivision Plat, Jeffrey & Dawn Lyon", prepared by Lamoureux & Dickinson Consulting Engineers, Inc., last revised February 13, 2009 and filed in slide 447 of the Town of Essex Land Records.
f. "Boundary Line Adjustment Plat, John & Beverly Hill and Jeffrey & Dawn Lyon", prepared by Lamoureux & Dickinson Consulting Engineers, Inc., last revised November 15, 2006 and filed in slide 432 of the Town of Essex Land Records.
g. "Survey Plat, Essex Square", prepared by Pinkham Engineering Associates, Inc., last revised August 14, 1992 and filed in slide 275 of the Town of Essex Land Records.
h. "4 Lot Subdivision for Donald Matthews", prepared by John Marsh, L.S., last revised February 26, 1979 and filed in slide 94 of the Town of Essex Land Records.
i. "Site Plan on Cota Property", prepared by Warren Robenstien L.S., dated August 1994 and filed in slide 309 of the Town of Essex Land Records.
j. "Plat of Survey Showing Boundary Line Agreement, Henry & Shirley Cota and Lester & Jeanette Pelkey", prepared by Warren Robenstien L.S., dated September 1996 and filed in slide 309 of the Town of Essex Land Records.
k. "Plan of Burlington & Lamoille Railroad", dated July 1938, and filed in Book 42 Page 398 of the Town of Essex land Records.
l. "Boundary Survey Prepared for Pelkey Property Holdings, LLC.", prepared by David Peatman, L.S., dated October 6, 2014 and filed in slide 471 of the Town of Essex Land Records.
m. "Plat of Property Owned by Fran Pelkey", prepared by John Marsh, L.S., dated May 1976 and filed in slide 102 of the Town of Essex Land Records.
o. "Boundary Line Adjustment, Sally Fleury Trust & Towers Trust", prepared by O'Leary-Burke Civil Associates, PLC., dated September 17, 2012 and filed in slide 461 of the Town of Essex Land Records.

2. Bearings are based on Vermont Grid computed from GPS observations made on May 16, 2012, March 28, 2013 and August 22, 2018 from a Trimble R6 GPS Unit with differential correction from Vermont CORS Burlington and St Albans.

3. Survey methods employed (total station) and the resulting error of closure/precision ratio, meet or exceed minimum precision requirements for Urban Surveys as outlined in, "Standards for the Practice of Land Surveying", adopted by the Vermont Board of Land Surveyors, effective 01/07/2013

4. There may be additional easements, restrictions, and/or reservations not shown hereon that may or may not be found in the Town of Essex Land Records.

5. This survey depicts the property lines of Fleury Road based on the Town of Essex Land Records as of November 5, 2018.

6. This plat is for the depiction of boundaries based upon V.S.A. Title 26 Chapter 45 § 2502 (3) a-c and (4) a-e. Any information identified graphically or noted on this plat which is outside the scope and expertise of a Vermont Licensed Land Surveyor as outlined in the statues herein referenced to, is not warranted to be correct and is not covered by the certification contained hereon.

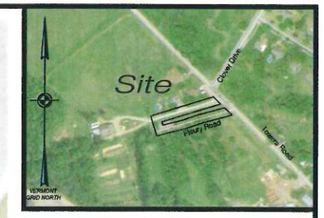
7. Where conflicts between physical evidence and written evidence are substantial, deed and/or documents should be executed to eliminate any color of title or conflict.

8. The original Right of Way for Fleury Road is shown as 3 Rods wide (66') based upon dedication and acceptance and existing monuments and plats references.

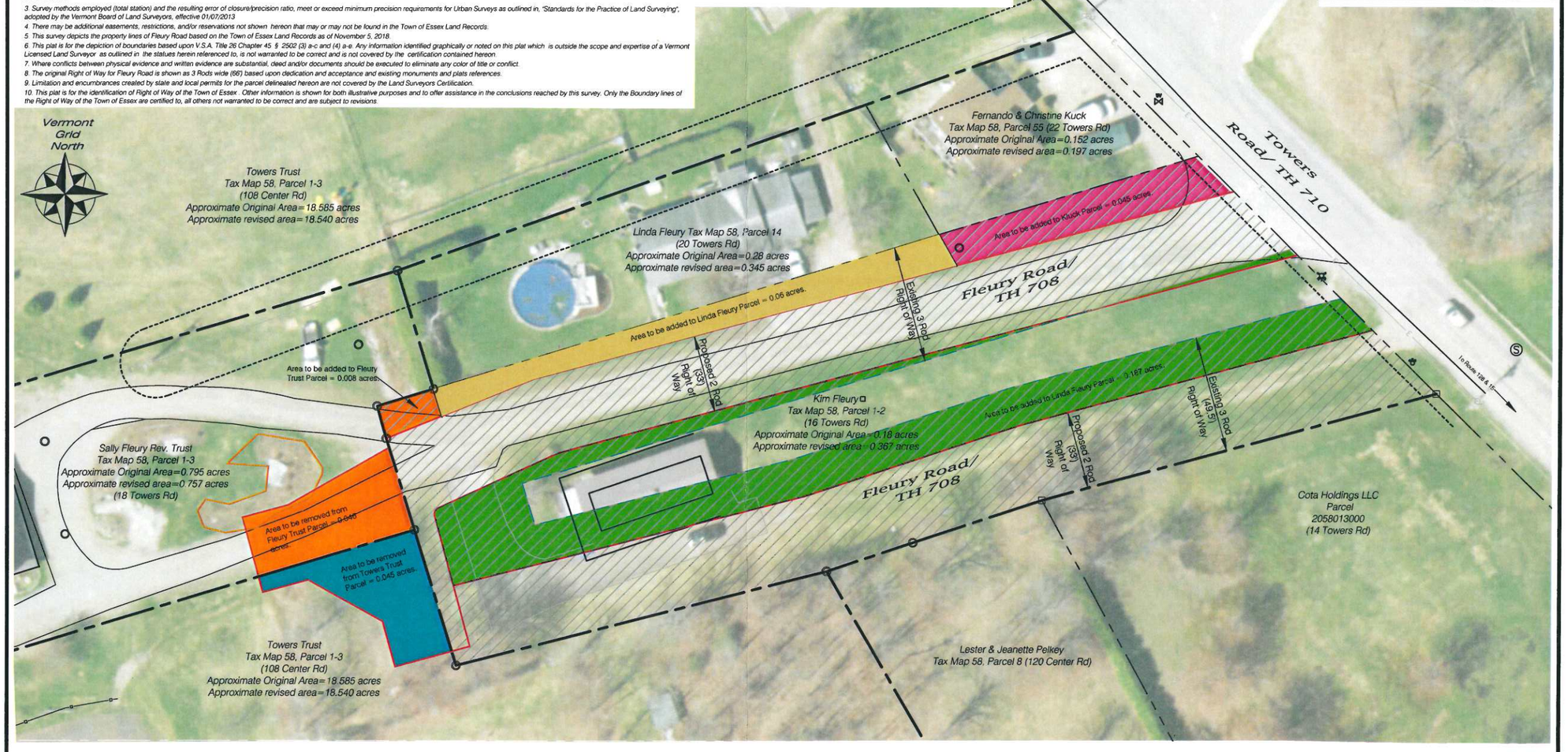
9. Limitation and encumbrances created by state and local permits for the parcel delineated hereon are not covered by the Land Surveyors Certification.

10. This plat is for the identification of Right of Way of the Town of Essex . Other information is shown for both illustrative purposes and to offer assistance in the conclusions reached by this survey. Only the Boundary lines of the Right of Way of the Town of Essex are certified to, all others not warranted to be correct and are subject to revisions.

Town of Essex
Received for Record
_____ A.D. _____
at _____ o'clock _____ minutes ___M
and recorded in _____
attest: _____
Town Clerk



Location Plan-n.t.s.



Legend

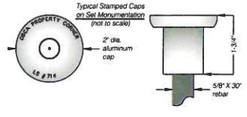
- Boundary Line
- Adjoining Property Line
- Easement Line
- Overhead Utility Line
- Concrete/Marble Monument Found
- Found Iron Pipe/ Rebar
- Set Iron Pipe/ Rebar
- Calculated Point
- Utility /Guywire

Graphic Scale

30 0 15 30 60 120

1 inch = 30 ft.

Typical Stamped Caps on Set Monumentation (not to scale)



I hereby certify that the information shown hereon is correct to the best of my knowledge and belief and is based upon a collaboration of pertinent deeds, plats, parol, and other recorded evidence. This plat was prepared in accordance with and complies with Vermont Statute Title 27, § 1403, (a) through (e).

Joseph R. Flynn, L.S. 714 Dated

STATE OF VERMONT — JOSEPH R. FLYNN No. 714 — LICENSED LAND SURVEYOR

DATE	REVISION	BY
SURVEY OBCA	☐ RECORD DRAWING ☐ PRELIMINARY ☐ FINAL ☐ SKETCH/CONCEPT	DATE 06/24/2021
DESIGN OBCA		JOB# 2020--85
DRAWN JRF		FILE 2020--85 FINAL--ROW
CHECKED PJO		PLAN SHEET #
SCALE 1"=30'		ROW

O'LEARY-BURKE CIVIL ASSOCIATES, PLC
13 Corporate Drive
Essex JCT., VT.
Phone: 878-9990
FAX: 878-9989
E-MAIL: poleary@olearyburke.com

Right of Way Plat
for
Fleury Road/TH708

Fleury Road - Essex, Vermont

TOWN OF ESSEX
SELECTBOARD MEETING MINUTES
Tuesday, August 17, 2021

SELECTBOARD: Andy Watts, Chair; Patrick Murray, Vice Chair; Tracey Delphia; Dawn Hill-Fleury

ADMINISTRATION and STAFF: Evan Teich, Unified Manager; Greg Duggan, Deputy Manager; Ron Hoague, Chief of Police

OTHERS PRESENT: Andy Champagne; Susan Cogley; Lana Cohen; Kevin Collins; J Cote; Patty Davis; Jon Demerritt; Erin Dickenson; Karen Lee; Deb McAdoo; Genevieve Melle; Bridget Meyer; Timothy Miller; J. Percy; Mary Post; Angel Segarra; Gabrielle Smith; Harlan Smith, Ken Signorello; Mike Sullivan; Dennis Thibeault; Mike Thorne; Irene Wrenner; RM; Sue and Bob.

1. CALL TO ORDER

Mr. Watts called the Essex Selectboard to order at 6:30 PM.

2. AGENDA ADDITIONS/ CHANGES

Mr. Duggan requested the addition of Mr. Franco's letter of resignation from the Selectboard, along with a new agenda item: Discussion about acting to fill the open Selectboard seat. Mr. Watts added this as new item 5e. Ms. Delphia requested that the minutes from August 2, 2021, be pulled from the Consent Items and added to the Business Items. Mr. Watts moved this item to become 5f. Previous item 5e, Legal discussion on Village of Essex Junction's proposed separation from Town of Essex, became 5g.

3. AGENDA APPROVAL

PATRICK MURRAY made a motion, seconded by DAWN HILL-FLEURY, to approve the agenda as amended. The motion passed 4-0.

4. PUBLIC TO BE HEARD

a. Comments from Public on Items Not on Agenda

Mr. Champagne posed multiple questions regarding Town and Village board representation, service, structure, and historical make-up; board member election platforms and costs; hypothetical scenarios of power and control between the Town and Village; roles and responsibilities in forming Selectboard agendas; and the status of charter change. He asked about what services the Village taxes pay for and what services the Town taxes pay for and suggested what he thought may happen if the municipalities separate. He said the discussion of separation should not be included in Selectboard agendas. Mr. Watts responded to Mr. Champagne's questions if information for a response was available and if the questions had a clear answer. He also pointed out when questions were based on assumptions, stances, or perspectives.

Ms. Davis requested wayfinding signs be placed at Saxon Hill so people using the park understand their distance from hunting locations. She said the maps already posted are ineffective and confusing. Ms. Davis said she would be willing to help pay for wayfinding signs. She also requested that a sign be posted reminding people to leash their dogs on the road and only unleash after they enter the Saxon Hill park gate. She asked why the Selectboard has not put this item on the agenda and said she has been requesting this for six years. Mr. Teich said he would discuss the issue with Public Works Director Dennis Lutz and Parks and Recreation Director Ally Vile.

Mr. Teich announced that masks are now required in all public buildings, due to COVID-19, but there is no plan to close the buildings. He said municipal meeting attendees must be masked and socially distanced. Mr. Teich also announced that, after many weeks of discussion, the "interim" label was removed from Ms. Makuku's Community Development Director title.

Ms. Melle thanked the Selectboard members for their work and cooperation with the Trustees. She said the situation with the Town and Village is difficult while some people do not understand that the Village is also part of the Town.

5. BUSINESS ITEMS

a. Discussion about first two public forums for the Essex community about how to prepare for the Village's coming separation vote and subsequent Vermont Legislature decision

Mr. Duggan invited the Selectboard to discuss the recent Essex community forums and share any feedback or adjustments to the agenda of August 21st forum. Ms. Delphia and Ms. Hill-Fleury attended the first two forums and said they were grateful for community member attendance. Ms. Hill-Fleury hoped more people who may not usually speak about their opinions would come out to for the next forum to share their thoughts. Ms. Delphia praised Ms. Knauer's agenda, facilitation skills, and summarization. She noticed that people who attended seemed concerned about childcare but may not realize that the Village arranged childcare with the schools. Ms. Hill-Fleury said community members expressed concerns about how merger and separation dynamics may affect consolidated departments. Mr. Teich discussed Public Works budgeting dynamics between the Town and Village.

There was consensus of the Selectboard that the next public forum be conducted with the same facilitation plan as the first two meetings. Ms. Delphia suggested that the agenda be adjusted accordingly to keep the forum from running over time.

b. Discussion about sharing municipal services with an independent City of Essex Junction

Mr. Watts provided an overview of the Selectboard's work to provide a response to the Village Board of Trustees' prioritized list of topics, in connection with their proposed separation from the Town. He said a summary was provided from legal counsel regarding some of the topics also discussed in forums, including childcare, open/transparent communication and sharing police services. Mr. Watts clarified that the Selectboard does not object to sharing police services with the Village. He said the Selectboard has discussed how to share the cost of these services. Mr. Watts said that, although they have made progress, the Selectboard cannot guarantee all of the Selectboard's responses to Trustees will be complete before their proposed deadline.

Mr. Murray said people in the Village are worried about the possibility of arriving at the November separation vote date without specific agreements with the Town. Mr. Watts explained that the Selectboard has been discussing concerns with the legality of locking into agreements before the separation vote takes place. They said they have been working through many details in executive session, to form their thoughts and ensure accuracy in their responses and possible frameworks. Mr. Murray said he appreciates public patience with the process and thanked the public's feedback through a recent petition about sharing the Police Department. Ms. Delphia said that the last paragraph of the memo in the packet should say the Selectboard will continue to work on an official response to the Trustees' proposals.

Ms. Smith thanked the Selectboard for working on this issue and asked that there be as much transparency as possible, by including discussions and deliberations in open session. She said she appreciated that they were working on accurate numbers. Mr. Watts and Mr. Teich clarified that they are aiming for framework accuracy but there may not be numbers included yet.

Mr. Teich said that the Police Department, Town Selectboard, and Village Trustees agree they do not want the department to change and discussions have focused on budget items and how much of the Police Department's work is for the Village. He said they are working on equity of services and costs, determining how to create a framework that can respond to changing future needs.

Ms. Meyer thanked the Selectboard and staff for hearing community members at the forums and for addressing public frustration with not knowing what was happening in executive sessions. She said she looks forward to the joint meeting of the Trustees and Selectboard where the executive session plans will be openly discussed. She talked about how she sees the history of the Police Department's creation by both communities of Essex as relevant to the current discussions.

Ms. Davis requested that the Selectboard ensure equitable opportunity for back and forth discussions during meetings.

c. **Discussion with Police Chief about incident on Pearl Street**

Chief Hoague talked about the Essex Police Department's response to a mid-July disturbance that included multiple assaults. He said that, after an internal review of the incident, the police determined that a citation issuance should not have been issued until more facts of the case had been gathered and the case was reviewed by the State's Attorney. He explained the steps being taken to make the incident right, as detailed in a recent press release.

Chief Hoague explained how this incident has become a learning opportunity for the force. He talked about how trainings with Tabitha Moore, former president of the Rutland branch of the NAACP and State Director, will be revisited and more scheduled on how to effectively integrate the training into daily jobs. Chief Hoague explained that a major lesson for the Police Department was to not be hasty in issuing citations so all of the facts are considered. He talked about how procedures can be changed to be more trauma-informed and how they can conduct better investigations. He said the Police Department will be putting together a panel for the public to learn about and discuss police procedures and how they determine what decisions are made. Chief Hoague said this incident brought negative publicity to the Department and they see there is more work to be done to better serve everyone in the community, especially those most impacted by racism and inequality.

Mr. Murray acknowledged that the incident was unfortunate but said he was pleased that the community was poised to make changes and the Police Department could quickly move on the issue. He said Essex's efforts on racial equity and work from the Racial Justice Task Force played a role in this. He said that this incident reveals how much work is being done to correct issues.

Ms. Post agreed with Mr. Murray's comment and said there were many citizens also engaged in pushing for police change. She said she likes the idea of learning from a panel about mechanics of how things are done in the Department. Chief Hoague said citizen involvement is welcome.

Ms. Hill-Fleury thanked Mr. Watts and Chief Hoague for their leadership on working on the municipality separation issue as it relates to the Police Department. Mr. Watts congratulated the Department for their successful National Night Out event.

d. **Discussion about planning for Fiscal Year 2023 budget**

Ms. Macy invited a discussion with the Selectboard about their goals and priorities for the FY2023 budget. She said she planned the budgeting process to be earlier by two months this year, to avoid a rush to be ready for the Australian ballot. She said the August 23rd joint meeting of the Trustees and Selectboard's will include a discussion of joint budget goals. The Selectboard members suggested the following be included in FY2023 budgeting:

- Funding for racial justice and equity initiatives, including staff diversification efforts.
- Prioritizing efforts that impact climate change, toward a goal of zero footprint. Mitigation efforts could include solar, hybrid vehicles, etc.
- Tighten spending in preparation for potential loss of tax base if the Village separates and consider using fund balance to help ease into the tax increase with loss of Village revenue.
- Determine which costs could be deferred to lessen the tax burden and make an explicit budget list to address tax equity if the Village Separation effort fails.
- Strengthen local mental health supports and consider funding that could improve immediate mental health services and wrap around support opportunities with policing. Create an explicit line item to show intent and dedication to support this.
- With the entire southern border of Essex as waterfront, prioritize establishing river access.
- Discuss new revenue sources such as a Local Option Tax, review of fee structures, and/or an increase to the Capital Tax.

Mr. Watts and Ms. Macy discussed the Capital Plan timeline and whether fund balance will be known in time for budget discussions in November. Ms. Macy talked about the rollout of new budgeting software's custom features that will be helpful with the upcoming budget season.

Ms. Davis expressed confidence in Mr. Watts' experience with money and budgeting.

Ms. Post agreed that limited mental health services in Essex is a big concern and said she was shocked to hear there is a three-year waiting list for children to receive mental health help.

Ms. Wrenner said a plan, previously approved, to merge and combine Public Works budgets should no longer move forward since the merger was defeated by public vote. She suggested continuing separate budgets for services that have not been consolidated, such as the Fire Department budgets, but if the Town of Essex pays for a merged service, the trucks should be labeled so it is clear to the public.

Mr. Percy suggested that the Manager's benefits be shared between the Town and Village, as the salary already is. He was also curious about why the benefits are not already shared and if there are other positions like this in Essex. Mr. Teich said this may be worth looking at again.

e. **Discussion about acting to fill the open Selectboard seat**

Mr. Duggan said Mr. Franco's letter of resignation from the Selectboard was received the previous day. He invited the Selectboard members to discuss how to proceed with filling this seat. He said they could either hold a special election or conduct interviews and appoint someone.

Mr. Watts said they should keep in mind, in the discussion, that the topic was not well warned for the public to consider. He said that it would be good to fill the seat soon, considering the budget cycle is starting early November. He suggested interviewing candidates using questions they drafted after the resignation of Ms. Cooper. The Selectboard members agreed with his suggestions. They discussed with Mr. Duggan how long they should run an open advertisement and also considered whether to hold a special meeting in September or October for the interviews. Mr. Duggan said he would look at already scheduled meeting dates and suggest some possible dates for a special meeting in late September or Early October, through a Doodle poll. Ms. Delphia requested that they consider changing the wording of the position to say selectperson instead of selectman. She also pointed out that this language is used in the Town Charter. The Selectboard discussed state legislation being considered to address this issue as well. Mr. Teich clarified that applicants normally provide their application with a cover letter and Ms. Hill-Fleury

requested applicants also include a job history also. Mr. Duggan said he will begin to advertise the vacant Selectboard seat and begin collecting applications.

The Selectboard members thanked Mr. Franco for his service.

f. **Approve Minutes: August 2, 2021**
Ms. Delphia requested replacing the rest of the paragraph, beginning at the end of line 201 with the word "The" with the sentences: "Due to issues of childcare, concerns over COVID and unfamiliarity with the technology available at Memorial Hall, the Selectboard members felt a hybrid meeting was preferable for the August 4th forum and decided to relocate the session to 81 Main Street. They agreed they would quickly and thoroughly update this change online and with signs."

DAWN HILL-FLEURY made a motion, seconded by PATRICK MURRAY, to accept the minutes as corrected. The motion passed 4-0.

g. ***Legal discussion on Village of Essex Junction's proposed separation from Town of Essex**
This agenda item took place in Executive Session as 8a.

6. CONSENT ITEMS

DAWN HILL-FLEURY made a motion, seconded by TRACEY DELPHIA, to accept the Consent Agenda and with thanks to Grace Vinson for her service:

a. ~~**Approve minutes: August 2, 2021**~~
- Approval of minutes from August 2, 2021, took place as item 5f.

b. **Check Warrants: # 17891 – 7/30/21; #17894 – 8/6/21; #17897 – 8/13/21**

The motion passed 4-0.

7. READING FILE

a. Board member comments
- Mr. Teich said the Senior Center will be reopening on September 3rd. He thanked Essex Parks and Recreation staff for keeping in touch with seniors and continuing to run the Senior Van. He said there is still a shortage of drivers for the van but it is running as best it can.
- Mr. Watts thanked Ms. Vinson for her service on the Conservation and Trails Committee. He thanked staff for the support provided to the Senior Swim Meet held at Sand Hill Pool, and acknowledged the successful National Night Out event. He also thanked staff for including thank you notes from the Essex Human Services funding recipients.

b. Memo from Chief Ron Hoague re: Recap of National Night Out
c. Email from Elaine Haney re: The Selectboard's responsibility regarding sharing EPD
d. Letter from Betsy Terry re: experience at Sand Hill Pool
e. Email from Grace Vinson re: Resignation from Conservation and Trails Committee
f. Thank you notes from Essex Human Services
g. Upcoming meeting schedule

8. EXECUTIVE SESSION

a. ***An executive session may be necessary to discuss legal matters.**

DAWN HILL-FLEURY made a motion, seconded by PATRICK MURRAY, that the Selectboard make the specific finding that general public knowledge of confidential attorney-client communications made for the purpose of providing professional legal services to the body would place the Town at a substantial disadvantage. The motion passed 4-0 at 8:16 PM.

DAWN HILL-FLEURY made a motion, seconded by TRACEY DELPHIA, that that the Selectboard enter into executive session to discuss confidential attorney-client communications made for the purpose of providing professional legal services to the body, pursuant to 1 V.S.A. § 313(a)(1)(F) to include the Unified Manager and Deputy Manager with legal counsel. The motion passed 4-0 at 8:18 PM.

DAWN HIL-FLEURY made a motion, seconded by PAT MURRAY, to exit executive session. The motion passed 4-0 at 9:43 PM.

9. ADJOURN

DAWN HILL-FLEURY made a motion, seconded by PAT MURRAY, to adjourn. The motion passed 4-0 at 9:44 PM.

Respectfully Submitted,
Cathy Ainsworth
Recording Secretary

Approved this _____ day of _____, 2021
(See minutes of this day for corrections, if any)

_____
Tracey Delphia, Clerk, Selectboard

TOWN OF ESSEX SELECTBOARD
VILLAGE OF ESSEX JUNCTION TRUSTEES
DRAFT JOINT MEETING MINUTES
MONDAY, AUGUST 23, 2021

SELECTBOARD: Andy Watts, Chair; Tracey Delphia; Dawn Hill-Fleury; Patrick Murray

TRUSTEES: Andrew Brown, President; Raj Chawla; Amber Thibeault; George Tyler

ADMINISTRATION and STAFF: Evan Teich, Unified Manager; Greg Duggan, Deputy Manager; Marguerite Ladd, Assistant Manager; Bill Ellis, Town Attorney; Brad Luck, Essex Junction Recreation & Parks (EJRP) Director; Claudine Safar, Village Attorney; Ally Vile, Essex Parks and Recreation (EPR) Director.

OTHERS PRESENT: Jim Barnes; Ben Bergeron; Andy Champagne; Annie Cooper; Patty Davis; Mike Dimitroff; Betsy Dunn; Sven Eklof, Tree Farm Board; Steve Eustis; William Hines; Jill Lampron, Tree Farm Management Group; Jim Goudie; Barbara Higgins; Deb McAdoo; Dylan McNamara; Meg Munson, Vermont Youth Soccer Association; Ed DeMulder, TOPSoccer; Mike Nick, Elite Eight Soccer League; Mary Post; Paula Sargent; Eric Senn; Cory Smith; Gabrielle Smith, Essex Housing Commission; Harlan Smith; Ken Willetts; Lorraine Zaloom; Mr. ____; Charles ____; Dustin ____

1. CALL TO ORDER

Mr. Watts called the Town of Essex Selectboard to order for the Joint meeting with the Village of Essex Junction Board of Trustees at 6:30 PM.

Mr. Brown called the Village of Essex Junction Board of Trustees to order for the Joint meeting with the Essex Selectboard at 6:30 PM.

2. AGENDA ADDITIONS/CHANGES

None.

3. APPROVE AGENDA

Not required.

4. PUBLIC TO BE HEARD

Mr. Watts explained that this is the time during the meeting for members of the public to speak on items not included in tonight's agenda.

- Ms. Dunn said that the Sand Hill Pool is difficult for families to use due to the pool depth and needs other updates. Maple Street Pool has a zero-entry pool; however, it is much more expensive to use for Town residents who are not also Village residents. Ms. Dunn expressed concern about the safety of the slides at Sand Hill Park during hot weather. She ended by saying that she believes that the Conservation and Trails Committee should be split into two different groups since the current committee has been focusing almost exclusively on trails.
- Ms. Post said that the Selectboard needs to pay more attention to Town Outside the Village (TOV) issues, specifically firearms discharge and safety in the Saxon Hill area. She requested that the Selectboard stop negotiating with the Trustees and said that the number of meetings currently happening is untenable. Mr. Teich said that the Town of Essex does not put-up signs for shooting

zones, since bullets can travel a long distance and the Town does not want to give a false sense of safety. Ms. Post responded that this issue should be brought up to the wider community.

- Ms. Sargent said that she is a former member of the Essex Senior Center and expressed concern that the Senior Center has not reopened. The reopening effort has been chaotic and not well-communicated, and members are unsure what the opening procedures will be. Mr. Teich said that the Senior Center will be open on September 3rd, and that it will be staffed by volunteers, rather than staff.
- Mr. Harlan Smith said that he is concerned with the boards' use of executive session. He said that reducing the number of conversations in executive session would help increase transparency and help the public to understand how decisions are made.
- Mr. Champagne expressed support for installing no-shooting zone signs in Saxon Hill.
- Ms. Davis also expressed support for installing no-shooting signs in Saxon Hill. She said that it is the Selectboard's responsibility to keep trail users safe and offered to assist the Conservation and Trails Committee in this initiative.

5. BUSINESS ITEMS

a. Update and discussion on Housing Commission

Ms. Smith, Vice Chair of the Essex Housing Commission, said the seven-member group first met last fall. The goal of the commission is to work to ensure that all residents have affordable, accessible, safe, and appropriate housing. The commission has been looking into developing a Housing Trust Fund and hopes to have a proposal for this in the next few months. The commission is also working on inclusionary zoning initiatives, renter/landlord surveys, and the possibility of a rental registry. The Housing Commission is a joint commission for the Town and Village. Ms. Smith said that the Commission is requesting a change to its charter so that quorum will consist of four members, rather than three. This will assist in more easily planning working group meetings, as presently these can consist of no more than two members. In addition, the Commission plans to present a budgetary request for the next fiscal year.

Mr. Watts referenced a statement in the Essex Housing Needs Assessment which said that many renters do not receive the financial support that they are entitled to and asked if the Commission planned to work with renters to educate them on eligibility. Ms. Smith said she would discuss this with the rest of the Commission. Mr. Teich asked Ms. Smith to estimate the amount of housing units Essex is lacking. Ms. Smith said that it is difficult to estimate, but the number has been rapidly growing due to large increases in prices. Ms. Smith said that one way that the Commission has been working to support an increase in housing units is to promote the addition of accessory units on existing dwellings. Ms. Delphia asked if there was interest on the part of the Commission to change their metrics of measuring housing affordability to something more uniform, rather than an income percentage. Ms. Smith will bring the issue back to the Commission to discuss.

In public comment, Ms. Higgins suggested consulting with legal council as she is concerned about setting a potential precedent for other committees to change their charter to avoid conducting business in warned meetings. Mr. Watts said that, in this case, the Board was removing an exception rather than creating one. Mr. Champagne said that housing in Essex is unaffordable. Ms. Zaloom asked if the Housing Commission collaborated in any way with the Champlain Housing Trust, as it seems like that group is already doing much of the work that the Commission hopes to do. Ms. Smith said that they do not formally collaborate, but that the two groups have had discussions. She said that many other municipalities throughout the state have a Housing Trust Fund, in addition to working with Champlain Housing Trust. Mr. Brown said that he has previously worked in affordable housing, and that a municipal Housing Trust could be one of a variety of sources to promote affordable housing and other economic

development. Ms. Post asked if there is anything that the community can do to enforce affordability in new developments. Ms. Smith said that this is one of the things can be done using inclusionary zoning, which could mandate that a certain number of affordable units be constructed with a project. Mr. Duggan said that the development regulations currently provide density bonuses for affordable housing, which would allow a developer to build more homes in an area than they normally would be allowed to do. Ms. Dunn said that she was happy to see the Housing Commission present to the Selectboard, and that she would like to see this done with all the volunteer boards. Mr. Chawla asked if the Housing Commission has been working with the Essex Junction Planning Commission on updates to the Land Development Code. Ms. Smith said that this has not been done but this is a goal for the future.

GEORGE TYLER made a motion, seconded by RAJ CHAWLA, that Trustees change the Housing Commission's charter so that a quorum shall consist of four members. The motion passed 4-0.

TRACEY DELPHIA made a motion, seconded by DAWN HILL-FLEURY, that the Selectboard update the Housing Commission's charter so that a quorum is defined as four members. The motion passed 4-0.

b. Discussion and possible action on Tree Farm Lease

Mr. Luck said that the Tree Farm parcel is co-owned by the Village and Town and that it is currently managed by the Tree Farm Management Group. Mr. Luck recommended the following: the lease not be renewed; the property to be managed by both Recreation Departments in the future; and that the parcel operates like a public park. He said he hopes this change will allow the community to have more of a say in how the parcel is used. It is anticipated that the Tree Farm Management Group will still have input and a seat on the advisory board in the future. Mr. Chawla suggested adding baseball and softball representation on the board as well and said that this property could bring forward increased recreational opportunities for other sports. Mr. Tyler asked if there were use restrictions on the property and whether it could be used for other recreational uses besides soccer and rugby. Mr. Luck said all recreational and educational uses were allowed. Mr. Brown asked how users will be impacted by this change and Ms. Vile said there will be minimal changes. Mr. Luck said that all fee and user agreements will be honored going forward. Ms. Delphia asked about the financial impact of this change as well as the impact on municipal staff. Ms. Vile said this will not have a large impact on staff as current seasonal staff can be used to staff this property. Ms. Hill-Fleury asked how seasonal staffing will work because their employment typically ends in August. Ms. Vile said that an experienced seasonal staffer could have their time extended for this purpose and Mr. Luck said that all direct expenses for the Tree Farm are paid for by facility users. Mr. Watts expressed concern that, should separation occur and the two communities not come to an agreement about how to manage the space, the facility could suffer. Mr. Luck said that this should be determined prior to the start of the next season and thus not be an issue. Mr. Tyler asked about the revenue generated by the Tree Farm and expressed concern that this budget is never reviewed by either Board. Mr. Teich said that this was never required since it is a lease.

Mr. Eklof, Tree Farm Board member, was invited to speak. He said expenses for the year are around $110,000 and revenues around $150,000. Mr. Eustis, a former Village Trustee, was invited to explain the history of the property. Mr. Eustis said this property was handed down from the State of Vermont as a sports and trails facility. It was intended to be available for members of the public for recreation. He said that the facility has been locked in recent years and that "no parking" signs are visible in nearby neighborhoods. Non-field areas and trails are also not being maintained or mowed. He said that both things are preventing the general public from being able to use the area for recreation other than team

sports. Mr. Eustis supports the transition of this property management to the Village and Town due to these concerns.

Public Comment:

- Mr. Nick said that he runs the Elite Eight Soccer League and has been playing at the facility for 15 years. The success of his league hinges on the success of the Tree Farm. He would like a guarantee given to current renters indicating they will be able to use the facility. He said there is not enough room at the Tree Farm for current soccer needs and he is concerned that adding other sports will worsen this problem.
- Mr. Champagne said that taking over the Tree Farm is a power grab by EJRP. He expressed concern with the conditions and maintenance at current parks. In addition, Mr. Champagne said that Stevens Park is not being mowed and falling into disrepair. He is concerned that the same thing will happen to the Tree Farm should it be taken over by either Recreation Department and that the money for its operation will be funneled to other facilities. In addition, he called for the resignation of the Town Manager. Mr. Brown and Mr. Murray reminded Mr. Champagne to refrain from attacking staff, making unsubstantiated accusations and encouraged him to remain civil.
- Mr. McNamara, a cross country coach at Essex High School, indicated his support for Mr. Eustis's comments as he believes that trails are not being maintained properly.
- Mr. DeMulder said when the state handed over the property, the original documents stated that there would be no permanent structures including little league backstops. He asked if this has changed. Mr. Teich said that he is not aware of anything in the deed that prevents recreation equipment from being placed on the property. Mr. DeMulder said that the use of this facility by sports other than soccer will impact soccer users. He is the state coordinator for Vermont TOPSoccer, which is a group for special needs soccer players. He has been very impressed with the Tree Farm Management group in their support of Vermont TOPSoccer and hopes that this relationship continues.
- Mr. _____ expressed concern that, should management change hands, the facility will not be as accessible to soccer players as it has in the past. He said that more notice should have been given to the regular lessees at the Tree Farm regarding this proposal and asked to hear more about the long-term plans for the property.
- Ms. Lampron said that she is the scheduler at the Tree Farm and prior to that was the parent of a soccer player. She said that the Tree Farm gate typically opened at dawn and closed at dusk. This changed due to COVID, however, residents can always park outside the gate and enter on foot or bike. The Tree Farm Management Group recently changed landscaping companies and will work to increase the amount of space mowed in the future. Ms. Lampron said that the high school cross-country team recently moved their Labor Day tournament to the Tree Farm and one of the conditions of this agreement was that they would maintain the trails that they created. She noted that an ultimate frisbee team currently practices at the Tree Farm.
- Mr. Barnes said that he is a parent of cross-country runners and that the Tree Farm is an amazing property. Much of the trail upkeep is done by the team and their parents. He suggested that they have some oversight from a professional landscaping company. With some work, the Tree Farm could be one of the best cross-country facilities in the state.
- Mr. Hines said that he runs the Vermont Amateur Soccer League and has been renting from the Tree Farm for years. He is concerned about his league being squeezed out of the space should it be taken over by the Recreation Departments. The Tree Farm Management Group has been great to work with and highly responsive. He would have upkeep concerns if the Recreation Departments were to take it over.
- Charles ____ requested the Boards consider the impact of this decision on the New American community, as many of them enjoy soccer. There is much less access to soccer facilities in the United

States than in other countries. Should other sports be allowed to use the space, it is inevitable that soccer will be given less space.

- Mr. Dimitroff said that he is a soccer parent, and that this decision seems to be rushed, even if it is in fact the best decision in the long-term. Some of the arguments made by the Recreation Directors are contradictory, as things will change at the facility if other sports fields are added. It is difficult to believe that this will have no tax impact, as this is a large parcel and facility. He said this decision should wait until the dust has settled with separation.
- Mr. Chawla clarified his earlier comments regarding adding additional sport fields at the Tree Farm. This was his idea alone and not included in any formal plans.
- Dustin _____ said that he encourages the communities to extend the lease and use this time to have the groups collaborate to form a better plan. The Tree Farm Management Group has tournaments planned for several years from now and does not believe that the community is ready for a change at this time.
- Mr. Cory Smith is a referee and player at the Tree Farm. He said the fields are overused and that turf fields are needed to increase the playing season.
- Mr. Bergeron said that he has been playing soccer for many years at the Tree Farm and is a current player in the Elite Eight. He believes that the facility is at capacity with soccer and cannot support any other sports.
- Ms. Zaloom asked what the sports capacity was in the Town. She also asked for quantification of the volunteer hours that go into maintaining the Tree Farm and asked if taking these hours away would impact staff time and thus taxes. She asked for clarification regarding ultimate frisbee and lacrosse representation on the Tree Farm Advisory Board. She asked if there has been an impact assessment done regarding the number of people brought into Essex through Tree Farm activities. She does not believe that the Town can manage the property as well as the current management group. She suggested adding a representative of running groups to the current Tree Farm Advisory Board.
- Ms. Munson said that she is the Executive Director of the Vermont Youth Soccer Association. She wants to advocate for the continued use of soccer at the Tree Farm, as it is an essential property for soccer in Vermont. She asked for more transparency on the planned use for the property in the future.
- Ms. Cooper asked where the profits from the Tree Farm go. In addition, she said that these conversations are common when contracts are up for renewal and that this does not seem rushed to her. She said the voices of soccer players will be heard no matter who is managing the property.
- Mr. Goudie said that the Tree Farm Management Group is a non-profit organization and that any profits are invested back into the Tree Farm operations and facility improvements.
- Ms. McAdoo said that she is a rugby player and encouraged that the road be fixed. She also said that she is happy with EJRP's management of current resources.
- Mr. Eklof said that he believes that this process has been rushed, and that there has been very limited discussion between the Town and Tree Farm Management Group. The Town and Village currently make up 1/3 of the Tree Farm Advisory Board. He is concerned that the two Recreation Departments are not getting along and this could impede the process. The Tree Farm Advisory Board has been doing a great job for the past 20 years. There are plans to fix the road this year, as well as creating a schedule to retire fields yearly to strengthen the grass.
- Ms. Dunn said that Tree Farm Management Group does a very good job managing the property for a low price. The Conservation and Trails Committee could assist with trail management. She read from legal documents and said that buildings can be built or altered on the property, however, there is a process that needs to be followed due to their historic status.
- Ms. Post said that this process felt similar to the Memorial Hall process, where there was a major change in management and it was not publicized to the general public. She would like to see these

items brought up at one meeting and voted on at the next to allow for citizen input and more transparency.

- Mr. Senn said that he was a previous president of the Tree Farm Advisory Board. He said that the gate was installed due to vandalism. The Tree Farm closes at dusk to prevent drug use on the property. He said he does not believe that the Recreation Directors understand the amount of work that will go into managing the property without increased staff or budget.
- Mr. Willetts said that he is a coach, soccer player, and has been involved in the Tree Farm for the past 17 years. This property is a huge value for the community and the Tree Farm Management Group does a great job managing it. The Town and Village should not be taking over the property during the middle of separation efforts and should consider extending the lease. Bringing in additional groups will harm the field and will displace groups who have put in hundreds of volunteer hours over the years. He said the Foster Road fields are maintained by the Little League due to EPR's inability to maintain the property to an appropriate level. Should his club be displaced, there would be no other comparable field for them to play on.
- Ms. Sargent said that the Recreation Departments need to build credibility at this time. They are unable to get the staffing needed to re-open the Senior Center and have been providing limited communication on this issue. They departments need to work on reestablishing existing programs before implementing new ones.
- Ms. Higgins said that she is not opposed to moving the Tree Farm to municipal management but now is not the time to do so. The lease should be extended through 2023, if not longer.
- Ms. Davis asked if the Tree Farm allows hunting. Mr. Watts said that it does not. Ms. Davis suggested that the same hold true for Saxon Hill.

Ms. Hill-Fleury asked how much land is available for uses besides soccer. Ms. Lampron said the space is split evenly between parking, trails, and fields. Mr. Brown said that he heard a lot of concerns regarding continuing the allow soccer to thrive at the Tree Farm, as well as the development of a business and maintenance plan. He would like to hear how other similar facilities are managed before making any decisions. Mr. Chawla said the MOU does not specifically mention soccer and said that it is important to see how all users can be included. He would also like information on how an Enterprise Fund would work for this purpose. Mr. Tyler said that there is no desire to push soccer outside of the Tree Farm. He also said most of the recreation budget consists of program fees, rather than tax revenue. Mr. Tyler said that the main issue in front of the Boards is that a non-profit organization is operating on municipal property and that this can affect efficient operations. Mr. Luck said that the intention of this change is not to stop the success of the Tree Farm and that this is not in jeopardy in any way. The Recreation Departments hope to establish a Field Management Plan. The departments are used to running events on the weekends and managing large groups. The goal of a Recreation Department is to maximize knowledge, use, and community management of publicly owned facilities and this is an effort to do so.

This issue will be discussed further at a future meeting. Mr. Brown called for a ten-minute recess. When the meeting was called back to order, the Boards choose to discuss items "E" and "G" prior to item "C."

e. Consider designating voting delegates for Vermont League of Cities and Towns' Annual Town Meeting, VLCT Employment and Resource Benefits Trust annual meeting, and Property and Casualty Intermunicipal Fund annual meeting

Mr. Watts said these meetings would be held on September 29 and that the Boards would need a representative for each. This could, but does not have to be, the same person for all three.

ANDY WATTS made a motion, seconded by DAWN HILL-FLEURY, that the Selectboard nominate Tracey Delphia as their voting delegate for the VLCT Annual Town Fair. The motion passed 4-0.

Mr. Brown discussed this commitment with the Trustees and no one in attendance was available. He suggested appointing Mr. Teich to attend this event.

RAJ CHAWLA made a motion, seconded by GEORGE TYLER, that the Trustees nominate Evan Teich as their voting delegate for the VLCT Annual Town Fair. The motion passed 4-0.

g. Consider appointment of Selectboard member to Cannabis Study Committee (Selectboard only)

TRACEY DELPHIA made a motion, seconded by PATRICK MURRAY to appoint Dawn Hill-Fleury as the Selectboard representative to the Cannabis Study Committee. The motion passed 3-0-1, with DAWN HILL-FLUERY abstaining.

c. Discussion of sharing services in event of creation of independent City of Essex Junction

Mr. Watts and Mr. Brown suggested prioritizing tonight's discussion to the following areas: Indian Brook, Senior Services, Police, Finance, and Reappraisal. Mr. Watts said that the Selectboard supports providing contracted Police services to the new City of Essex Junction. He said that this contract would include all Policing costs, including those which are not typically included in the Police budget. The Selectboard would support a contract cost on a per-capita basis, however, is also willing to looking at other metrics. While the Trustees asked for a long-term contract, Mr. Watts said that the Selectboard is considering a 3–5-year contract with an annual budgetary review. The Town Manager will have final say regarding the hiring of the Police chief, however the Village Manager will likely be consulted. Mr. Watts said that the Selectboard does not want to be contractually bound by any ordinance alignment, although he does support it. Special events, possibility including school dismissal at Five Corners, would be discussed on a case-by-case basis. All Police debt would be voted on by the Town only, but pricing based on these debts could be incorporated into contract pricing for the City. All future revenue would be retained by the Town but would be used to offset costs for the Police Department.

Mr. Brown said that it would be helpful to develop informal consensus at this meeting and that this would be used to develop into a contractual document in the future. Mr. Watts asked if the Trustees expect the Selectboard to sign a contract before separation is approved and Mr. Brown answered affirmatively. Mr. Ellis said that he supports a tentative agreement but recommended that singular agreements are not made for specific issues. A formal binding agreement will be put in place when all parties agree on all issues.

The Trustees agreed with the Selectboard that Policing costs be determined on a per-capita basis, with Mr. Tyler suggesting that the Police Chief be consulted to ensure that this is the best method. Mr. Brown indicated support for City funding the actual cost of the Police Department but asked that the Finance Department come up with a proposal for what this cost would actually look like. From the audience, Ms. Higgins asked for a point of order. She said that the Selectboard had never voted to enter into formal negotiations with the Trustees regarding separation. The public was told that this was an investigation, not a negotiation. Mr. Ellis said that the Trustees made a proposal and the Selectboard was responding. He said this discussion ought not be stopped for a procedural objection. Ms. Hill-Fleury suggested that the Selectboard listen to the Trustees responses during this time and not comment on them. Mr. Teich said that tonight's discussion was to set up the parameters for further detailed conversations as there is no

way for the Selectboard to plan for the future without having conversations with the Trustees. Mr. Ellis reiterated that the purpose of tonight's meeting was to see where each Board stands on specific issues.

Mr. Brown asked if revenue and surplus would go back to the Town and City equally and Mr. Ellis suggested having a true-up at the end of the year. Mr. Brown agreed with Mr. Watt's earlier suggestion of the inclusion equity groups on the Police Oversight Board. Mr. Watts also said this board would be established by the Town, as the Police Department is a Town department. It would be anticipated that at least one City resident would have a seat on the board. Mr. Chawla expressed support for including equal representation for Village residents on this board. Policing in the Village is different than in the Town and it will be important to provide this input to the Police Department. Mr. Watts asked if an advisory board membership was a "sticking point" for the Trustees. Mr. Chawla said that this was very important to him as the City residents need to have their own input and oversight on Policing. Mr. Brown said that this is desired but not a showstopper at this time. Mr. Watts asked if flexibility to go to other organizations is something that the City would be interested in pursuing. Mr. Teich said if there is a service that the Village desires that is not typically provided, such as the school crossing at the Five Corners, this ought to be listed as a separate contractual cost. He also suggested that manhours can be tracked for events in either the Town or City, if this is desired. Mr. Luck said that tracking manhours for events can become an administrative nightmare and could be seen as a challenge to the Chief's ability to manage the department.

Mr. Watts said that the Selectboard would also like to have the Village pay the complete costs associated with the Finance Department. He said Town employees will be hired at the full discretion of the Town Manager, however, the City Manager may be consulted. The Selectboard would like more information about the proposed sixth employee proposed by the Trustees and their role in the department. The Selectboard would also like to learn more about the City's intention for sharing the Clerk and Treasurer, as they may be interested in continuing to share the position. Mr. Brown said that current Town/Village Clerk/Treasurer has said that each community must have their own Clerk/Treasurer. Regarding the Finance Department, Mr. Brown said that, during the transition period, this would be a truly shared department. Finance is an essential service to the City and they need to have some authority. Mr. Watts said these are the same constraints the contract placed on the Police Department and asked why Finance was seen differently. Mr. Brown said Finance would only be for a specific period to allow for the unwinding of the department. Mr. Brown said his main concern is that the person who is responsible for finances needs to have some type of oversight by the City Manager or council. Mr. Ellis said that the Selectboard feels this would cause the Finance Director to have two bosses with separate priorities. Mr. Brown said this mirrors the current setup with the Unified Manager. Ms. Safar said there is no problem with this from a legal perspective but rather a lack of willingness to manage jointly and administratively. Mr. Teich said that it can be difficult to listen to two bosses and this is especially hard when they are not going in the same direction. Mr. Tyler said that, during the transitional period, the management will be people that we know and trust, and he feels comfortable with them being managed exclusively by the Town.

There was some discussion on whether the external costs of the Finance Department (e.g., IT, Workers Comp, etc.) would need to be paid for by the Village. Currently, there are five Finance employees, with another to be added under the Village's proposal. Currently, only one Finance employee is exclusively a Village employee. Most of these employees are Town employees who do work for the Village. During the transitional period, some of the costs would be transferred out as three of the six employees would become Village employees. Mr. Luck said that by the end of FY2023, there will be two Finance employees in both the Village and Town and the Finance Director and Assistant Director would be shared. Mr. Luck said that these positions would be full-time Town employees and the City would pay a share of

this. There was some discussion on whether or not a sixth employee would be required should separation not occur, as well as how their training would be provided. Mr. Luck said that the person would be brought on while the Finance team is still shared and would be needed regardless.

Mr. Watts noted that the time was now past 11 PM, and that a unanimous vote is required by the Selectboard to continue past this time.

PATRICK MURRAY made a motion, seconded by TRACEY DELPHIA, that the Selectboard continue the August 23rd meeting to 11:30 PM. Motion passed 4-0.

Regarding reappraisal: Mr. Watts said that the Selectboard would like to have a Common Reappraisal Fund with the City, as well as continuing with a shared Assessor. Mr. Teich said that reappraisal is likely to begin at the end of 2022 and may take 2-3 years to complete. Both Boards expressed a desire to figure out how separation would impact this process.

Regarding Senior Services: Mr. Watts said the Selectboard does not want to pay half for a Senior Center space that can be used for other services by the City. If this is the case, the Selectboard would like to find its own space for a Senior Center and would be happy to consider sharing the space. Mr. Brown said the Town could be charged for the time that the space would be used for Senior Services. Mr. Tyler said that the seniors are a vulnerable population and encouraged sharing the services. He would like to reassure our seniors that they are not going to lose their services because of politics.

Regarding Indian Brook, Mr. Watts said that the current fee structure does not cover the full cost of the park. The Selectboard said they would be open to offering the resident rate to City residents but the City would need to pay some of the costs of park management. In addition, the Town would like resident access to all EJRP programs including childcare. Mr. Brown said that this is not fair to the Village, as the Village would be supporting Indian Brook and losing revenue from EJRP programs. He said he would want to know more of the financial details for offering resident rate to Town residents.

Mr. Brown also said that, at future meetings, the Boards need to be willing to do the work needed for separation without having other agenda items interfere.

f. Discuss agenda topics for next joint meeting

The Boards discussed item "f" prior to item "d." Mr. Brown requested that the Tentative Agreements be presented at the next joint meeting and Mr. Watts said this could be difficult to do since the Selectboard only has one meeting prior to the next joint meeting. Other items suggested for the next meeting agenda include: retail cannabis sales, the Tree Farm property, and the evaluation of the Unified Manager.

PATRICK MURRAY made a motion, seconded by DAWN HILL-FLEURY that the Selectboard continue the August 23rd meeting to 12 AM. Motion passed 4-0.

d. Discussion about planning for Fiscal Year 2023 budget

Mr. Teich asked both Board members for their priorities for the next budgetary year. Some of the suggestions included: diversity and equity initiatives, economic development, sidewalk plowing, stormwater initiatives, and energy efficiency. Mr. Watts requested that tax equity between the Town and Village continue to be pursued. Mr. Brown stated, should the Selectboard move forward with this suggestion, that funding capital projects in the Village using the Town Capital Fund would be helpful.

6. READING FILE

a. Board member comments: None.

b. List of Boards/Committees/Commission openings

c. Memo from Karen Lemnah re: Reappraisal & Common Level of Appraisal (CLA)

d. Upcoming meeting schedule

7. EXECUTIVE SESSION

None.

8. ADJOURN

DAWN HILL-FLEURY made a motion, seconded by PATRICK MURRAY, that the Selectboard adjourn the meeting. The motion passed 4-0 at 11:41 PM.

GEORGE TYLER made a motion, seconded by RAJ CHAWLA, that the Trustees adjourn the meeting. The motion passed 4-0 at 11:41 PM.

Respectfully Submitted,
Darby Mayville
Recording Secretary

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
14400	ABOVE AND BEYOND	08/16/21	August cleaning - 81 Main 295	110-5-41-10-400.000 Contracted Services	830.00	35569	08/23/21
14400	ABOVE AND BEYOND	08/17/21	Monthly Janitorial Servic 6340	110-5-41-13-400.000 Contracted Services	1035.00	35569	08/23/21
42665	AMAZON/SYNCB	07/10/21	EJRP Amazon FY 21 0432266 072B	110-5-30-12-610.000 General Supplies	44.98	35574	08/23/21
42665	AMAZON/SYNCB	06/02/21	Adult DVD 547488875378	110-5-35-10-640.201 Adult Collection	17.29	35574	08/23/21
42665	AMAZON/SYNCB	05/30/21	Adult DVD 683789543439	110-5-35-10-640.201 Adult Collection	9.96	35574	08/23/21
42665	AMAZON/SYNCB	06/10/21	Adult DVD 784665738568	110-5-35-10-640.201 Adult Collection	12.99	35574	08/23/21
42665	AMAZON/SYNCB	05/17/21	Adult DVD 955874395379	110-5-35-10-640.201 Adult Collection	26.95	35574	08/23/21
42665	AMAZON/SYNCB	05/18/21	Adult DVDs 969877573964	110-5-35-10-640.201 Adult Collection	413.14	35574	08/23/21
25955	AT&T MOBILITY	08/04/21	FIRSTNET CELL SERVICE 8729196821	110-5-20-10-530.000 Communications	406.98	35575	08/23/21
02000	BAKER & TAYLOR, INC	07/30/21	Adult Books 5017098090	110-5-35-10-640.201 Adult Collection	14.81	35576	08/23/21
02000	BAKER & TAYLOR, INC	07/30/21	Adult Books 5017098090	110-5-35-10-610.000 General Supplies	0.70	35576	08/23/21
02000	BAKER & TAYLOR, INC	07/30/21	Adult Books 5017098091	110-5-35-10-640.201 Adult Collection	59.24	35576	08/23/21
02000	BAKER & TAYLOR, INC	07/30/21	Adult Books 5017098091	110-5-35-10-610.000 General Supplies	2.80	35576	08/23/21
07465	BIBENS ACE HARDWARE INC	08/10/21	Shop Keys 42131	110-5-30-12-610.000 General Supplies	39.75	35579	08/23/21
07465	BIBENS ACE HARDWARE INC	08/10/21	Shop Key 42134	110-5-30-12-431.000 R&M Buildings & Grounds	12.95	35579	08/23/21
07465	BIBENS ACE HARDWARE INC	08/11/21	materials for street sign 42136	110-5-40-12-610.000 General Supplies	8.97	35579	08/23/21
07465	BIBENS ACE HARDWARE INC	08/12/21	wet/dry vac for shop 42151	110-5-30-12-611.000 Small Tools and Equipment	59.99	35579	08/23/21
07465	BIBENS ACE HARDWARE INC	08/13/21	Maint Supplies 42170	110-5-30-11-610.000 General Supplies	20.98	35579	08/23/21
02235	BOUND TREE MEDICAL LLC	08/09/21	EMS SUPPLIES 84160140	110-5-25-10-611.000 Small Tools and Equipment	734.17	35580	08/23/21
02235	BOUND TREE MEDICAL LLC	08/12/21	EMS SUPPLIES 84165716	110-5-25-10-611.000 Small Tools and Equipment	164.00	35580	08/23/21
00530	BRODART CO	08/09/21	CD Sleeves 585145	110-5-35-10-610.000 General Supplies	60.45	35581	08/23/21
41505	BROWNELL'S INC	08/11/21	KARADZA ALLOWANCE 21394335	110-5-20-10-612.000 Uniforms	37.92	35582	08/23/21
02035	BURLINGTON FREE PRESS #10	08/01/21	Newspaper Subscription 080121D	110-5-35-10-640.201 Adult Collection	30.59	35583	08/23/21
11375	CASELLA WASTE MANAGEMENT	08/01/21	trash pick up Highway Gar 3196778	110-5-41-15-400.000 Contracted Services	317.03	35584	08/23/21
11375	CASELLA WASTE MANAGEMENT	08/01/21	trash pick up 81 Main St 3196779A	110-5-41-10-400.000 Contracted Services	141.52	35584	08/23/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
11375	CASELLA WASTE MANAGEMENT	08/01/21	SH Trash Removal - August 3196790	110-5-30-11-570.000 Other Purchased Services	214.00	35584	08/23/21
07710	CCR SALES AND SERVICE LLC	08/11/21	Brush Hog 55101	110-5-30-12-431.000 R&M Buildings & Grounds	499.14	35586	08/23/21
09040	CHANNEL 17 TOWN MEETING T	07/27/21	CCTV hybrid setup 072721D	110-5-11-10-330.000 Professional Services	6777.95	35589	08/23/21
25120	CLICKTIME.COM	08/05/21	Town Timesheets July 351486	110-5-13-10-505.000 Tech. Subs, Licenses	336.00	35590	08/23/21
25120	CLICKTIME.COM	08/05/21	Town Timesheets July 351486	110-5-30-10-505.000 Technology, Subscriptions	416.00	35590	08/23/21
04940	COMCAST	08/01/21	Internet hgwy complex 8/8 0167074 0821	110-5-41-15-530.000 Communications	99.92	35591	08/23/21
31545	COSTCO #314	07/01/21	Membership 21/22 111885869926	110-5-13-10-500.000 Training, Conf, Dues	130.50	35593	08/23/21
31545	COSTCO #314	08/31/21	COVID THANK YOU EVENT 314117266	110-5-10-10-500.000 Training, Conf, Dues	127.33	35594	08/23/21
21630	EEC EXCAVATING LLC	08/10/21	sidewalk work - Greenbria 167	110-5-40-12-573.000 Sidewalk and Curb Maint	4600.00	35597	08/23/21
21630	EEC EXCAVATING LLC	08/16/21	sidewalk work on Greenbri 168	110-5-40-12-573.000 Sidewalk and Curb Maint	7800.00	35597	08/23/21
23955	F.E. HART FENCE CO. INC	08/18/21	Posts for signs 029136	110-5-30-12-431.000 R&M Buildings & Grounds	58.75	35603	08/23/21
04640	FASTENAL INDUSTRIAL & CON	08/10/21	clevis pins for truck san VTBUR297972	110-5-40-12-430.001 R&M Vehicles - Supplies	8.29	35604	08/23/21
19005	FIRSTLIGHT FIBER	08/15/21	Phone svc PWO 7/15-8/14/2 9731700	110-5-41-14-530.000 Communications	195.79	35605	08/23/21
19005	FIRSTLIGHT FIBER	08/15/21	Internet/phone svc variou 9731701	110-5-41-10-530.000 Communications	83.12	35605	08/23/21
19005	FIRSTLIGHT FIBER	08/15/21	Internet/phone svc variou 9731701	110-5-41-12-530.000 Communications	61.62	35605	08/23/21
19005	FIRSTLIGHT FIBER	08/15/21	Internet/phone svc variou 9731701	110-5-41-13-530.000 Communications	63.41	35605	08/23/21
19005	FIRSTLIGHT FIBER	08/15/21	Internet/phone svc variou 9731701	110-5-41-16-530.000 Communications	14.85	35605	08/23/21
19005	FIRSTLIGHT FIBER	08/15/21	Phone svc Mem Hall 7/15-8 9731706	110-5-41-17-530.000 Communications	97.08	35605	08/23/21
19005	FIRSTLIGHT FIBER	08/15/21	Phone svc Hgwy 7/15-8/14/ 9731798	110-5-41-15-530.000 Communications	82.69	35605	08/23/21
19005	FIRSTLIGHT FIBER	08/15/21	Phone svc Pow Museum 7/15 9731922	110-5-41-18-530.000 Communications	39.67	35605	08/23/21
16000	FISHER AUTO PARTS	08/11/21	TRUCK WASH WAX 293342140	110-5-25-10-430.000 R&M Vehicles & Equipment	73.97	35606	08/23/21
14595	FOLEY SERVICES INC	08/10/21	CARPET RUNNERS 1383192	110-5-41-13-400.000 Contracted Services	48.40	35607	08/23/21
12685	FRONT PORCH FORUM INC	07/13/21	Town Highway FPF Ad 14649	110-5-10-10-540.000 Advertising	2306.00	35608	08/23/21
00445	G B MECHANICAL TRUCK CENT	08/03/21	pins for Sander 24207	110-5-40-12-430.001 R&M Vehicles - Supplies	20.58	35609	08/23/21
13570	GALE/CENGAGE LEARNING	07/21/21	Adult Large Print Books 74724350	110-5-35-10-640.201 Adult Collection	50.98	35610	08/23/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
13570	GALE/CENGAGE LEARNING	08/04/21	Adult Large Print Books 74788688	110-5-35-10-640.201 Adult Collection	60.78	35610	08/23/21
13570	GALE/CENGAGE LEARNING	08/09/21	Adult Large Print Book 74810504	110-5-35-10-640.201 Adult Collection	30.39	35610	08/23/21
07000	GALLS INC	07/28/21	UNIFORM SHIRT 18922109	110-5-20-10-612.000 Uniforms	85.63	35611	08/23/21
07000	GALLS INC	07/29/21	WINKLER ALLOWANCE 18933696	110-5-20-10-612.000 Uniforms	158.83	35611	08/23/21
07000	GALLS INC	08/02/21	UNIFORM SHIRT 18960659	110-5-20-10-612.000 Uniforms	61.03	35611	08/23/21
04035	GOT THAT RENTAL & SALES I	08/10/21	Shop Supplies 89358	110-5-30-12-431.000 R&M Buildings & Grounds	51.98	35612	08/23/21
04035	GOT THAT RENTAL & SALES I	08/11/21	grade stakes 89445	110-5-40-12-605.000 Summer Construction Suppl	24.50	35612	08/23/21
04035	GOT THAT RENTAL & SALES I	08/12/21	grass seed 89514	110-5-40-12-605.000 Summer Construction Suppl	89.99	35612	08/23/21
07010	GREEN MOUNTAIN POWER CORP	08/03/21	IBR Power July 26562 0821	110-5-30-12-570.000 Other Purchased Services	24.32	35614	08/23/21
07010	GREEN MOUNTAIN POWER CORP	08/11/21	PD ELECTRICITY 53233 0821	110-5-41-13-622.000 Electricity	1743.41	35615	08/23/21
10810	HARRISON REDI MIX CORP	08/09/21	stormwater repair - Circl 52240	110-5-40-12-610.000 General Supplies	340.00	35616	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/03/21	Juvenile Books 54119826	110-5-35-10-640.202 Juvenile Collection	14.62	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/03/21	Juvenile Books 54119826	110-5-35-10-610.000 General Supplies	3.98	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/03/21	Adult Books 54119827	110-5-35-10-640.201 Adult Collection	38.85	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/03/21	Adult Books 54119827	110-5-35-10-610.000 General Supplies	3.37	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/03/21	Juvenile Books 54119828	110-5-35-10-640.202 Juvenile Collection	17.45	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/03/21	Juvenile Books 54119828	110-5-35-10-610.000 General Supplies	0.69	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/04/21	Adult Books 54134361	110-5-35-10-640.201 Adult Collection	89.75	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/04/21	Adult Books 54134361	110-5-35-10-610.000 General Supplies	8.73	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/04/21	Adult Books 54134362	110-5-35-10-640.201 Adult Collection	120.31	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/04/21	Adult Books 54134362	110-5-35-10-610.000 General Supplies	7.51	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/04/21	Juvenile Books 54134363	110-5-35-10-640.202 Juvenile Collection	155.16	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/04/21	Juvenile Books 54134363	110-5-35-10-610.000 General Supplies	9.58	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/04/21	Adult Books 54134364	110-5-35-10-640.201 Adult Collection	24.54	35617	08/23/21
33495	INGRAM LIBRARY SERVICES I	08/04/21	Adult Books 54134364	110-5-35-10-610.000 General Supplies	1.99	35617	08/23/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
20005	INTEX PROPERTY MAINTENANC	08/16/21	soap dispenser for 81 Mai 192	110-5-41-10-431.000 R&M Buildings & Grounds	29.99	35618	08/23/21
20005	INTEX PROPERTY MAINTENANC	08/16/21	August cleaning 2358	110-5-41-11-400.000 Contracted Services	715.00	35618	08/23/21
20005	INTEX PROPERTY MAINTENANC	08/16/21	August cleaning 2358	110-5-41-17-400.000 Contracted Services	220.00	35618	08/23/21
20365	KEY CHEVROLET BUICK GMC C	06/03/21	Fuel Sensor trk 25 13388P	110-5-40-12-430.001 R&M Vehicles - Supplies	32.76	35620	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-10-10-210.000 Group Insurance	241.96	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-13-10-210.000 Group Insurance	179.19	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-12-10-210.000 Group Insurance	88.90	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-14-10-210.000 Group Insurance	167.10	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-40-10-210.000 Group Insurance	57.47	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-15-10-210.000 Group Insurance	61.08	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-16-10-210.000 Group Insurance	177.95	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-30-10-210.000 Group Insurance	204.81	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-30-12-210.000 Group Insurance	92.09	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-40-10-210.000 Group Insurance	61.80	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-40-12-210.000 Group Insurance	489.01	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-35-10-210.000 Group Insurance	174.72	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-20-11-210.000 Group Insurance	120.05	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-20-13-210.000 Group Insurance	232.64	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-20-12-210.000 Group Insurance	275.73	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-20-14-210.000 Group Insurance	1187.96	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-5-40-13-210.000 Group Insurance	75.46	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	110-2-00-00-210.005 Misc Deductions Payable	-15.85	35626	08/23/21
27840	MADISON NATIONAL LIFE INS	08/06/21	Payroll Transfer PR-08/06/21	110-2-00-00-210.005 Misc Deductions Payable	21.57	35628	08/23/21
27840	MADISON NATIONAL LIFE INS	08/13/21	Payroll Transfer PR-08/13/21	110-2-00-00-210.005 Misc Deductions Payable	21.57	35628	08/23/21
27840	MADISON NATIONAL LIFE INS	08/20/21	Payroll Transfer PR-08/20/21	110-2-00-00-210.005 Misc Deductions Payable	21.57	35628	08/23/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
14585	MUNICIPAL EMERGENCY SERVI	08/06/21	SCBA CYLINDER HYDRO TESTI 1607248	110-5-25-10-750.000 Machinery & Equipment	735.00	35632	08/23/21
14585	MUNICIPAL EMERGENCY SERVI	08/10/21	SCBA CYLINDER HYDRO TESTI 1608001	110-5-25-10-750.000 Machinery & Equipment	665.00	35632	08/23/21
14585	MUNICIPAL EMERGENCY SERVI	08/13/21	FILTER ADAPTERS IN1609389	110-5-25-10-750.000 Machinery & Equipment	306.81	35632	08/23/21
14585	MUNICIPAL EMERGENCY SERVI	08/13/21	TURNOUT COAT REPAIR IN1609393	110-5-25-10-612.000 Uniforms	191.49	35632	08/23/21
14585	MUNICIPAL EMERGENCY SERVI	08/16/21	TRAFFIC WAND LIGHTS IN1609922	110-5-25-10-611.000 Small Tools and Equipment	371.31	35632	08/23/21
27395	MVP HEALTH CARE INC 43118	08/08/21	Health Prem Sept 2021 090121V	110-2-00-00-210.006 Health Ins. Copay	538.88	35633	08/23/21
44275	MVP SELECT CARE INC.	08/03/21	Administrative Fee Invoic 202107A	110-5-13-10-505.000 Tech. Subs, Licenses	40.00	35634	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	110-5-25-10-442.000 Rental Vehicles/Equip	80.74	35635	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	110-5-20-10-442.000 Rental Vehicles/Equip	80.74	35635	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	110-5-20-10-442.000 Rental Vehicles/Equip	80.74	35635	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	110-5-35-10-442.000 Rental Vehicles/Equip	80.74	35635	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	110-5-40-10-442.000 Rental Vehicles/Equip	94.15	35635	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	110-5-13-10-442.000 Rental Vehicles/Equip	120.43	35635	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	110-5-20-10-442.000 Rental Vehicles/Equip	138.97	35635	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	110-5-12-10-442.000 Rental Vehicles/Equip	138.97	35635	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	110-5-40-10-442.000 Rental Vehicles/Equip	46.32	35635	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	110-5-40-12-442.000 Rental Vehicles/Equip	46.32	35635	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	110-5-10-10-442.000 Rental Vehicles/Equip	177.89	35635	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	110-5-25-10-442.000 Rental Vehicles/Equip	16.80	35636	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	110-5-20-10-442.000 Rental Vehicles/Equip	17.20	35636	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	110-5-20-10-442.000 Rental Vehicles/Equip	22.98	35636	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	110-5-35-10-442.000 Rental Vehicles/Equip	55.46	35636	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	110-5-40-10-442.000 Rental Vehicles/Equip	41.03	35636	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	110-5-13-10-442.000 Rental Vehicles/Equip	45.12	35636	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	110-5-20-10-442.000 Rental Vehicles/Equip	33.53	35636	08/23/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	110-5-12-10-442.000 Rental Vehicles/Equip	124.16	35636	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	110-5-40-10-442.000 Rental Vehicles/Equip	10.26	35636	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	110-5-40-12-442.000 Rental Vehicles/Equip	10.26	35636	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	110-5-10-10-442.000 Rental Vehicles/Equip	27.90	35636	08/23/21
V1643	NEMRC	08/05/21	Fixed Asset Project 48437	110-5-13-10-330.000 Professional Services	1160.00	35638	08/23/21
V1643	NEMRC	08/05/21	Tax Bill Assistance 48442	110-5-13-10-330.000 Professional Services	870.00	35638	08/23/21
40075	NEW YORK CLEANERS	07/31/21	JUL DRY CLEANING 073121D	110-5-20-10-612.000 Uniforms	358.50	35640	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-10-10-210.000 Group Insurance	304.79	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-13-10-210.000 Group Insurance	268.47	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-12-10-210.000 Group Insurance	199.29	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-14-10-210.000 Group Insurance	268.47	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-15-10-210.000 Group Insurance	69.18	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-40-10-210.000 Group Insurance	235.61	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-16-10-210.000 Group Insurance	174.68	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-20-11-210.000 Group Insurance	199.29	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-20-11-210.000 Group Insurance	650.55	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-20-13-210.000 Group Insurance	504.08	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-20-14-210.000 Group Insurance	1644.48	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-40-12-210.000 Group Insurance	665.72	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-40-13-210.000 Group Insurance	36.32	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-30-10-210.000 Group Insurance	556.76	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-30-12-210.000 Group Insurance	260.22	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-30-13-210.000 Group Insurance	130.11	35643	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	110-5-35-10-210.000 Group Insurance	105.50	35643	08/23/21
43010	NORTRAX INC	08/11/21	seal kit and paint for Lo 2101522	110-5-40-12-430.001 R&M Vehicles - Supplies	39.53	35645	08/23/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
23670	PARRO'S GUN SHOP & POLICE	08/11/21	399/410 VESTS W/CARRIERS 5028	110-5-20-10-612.000 Uniforms	2056.00	35648	08/23/21
01590	PETTINELLI & ASSOC INC	08/13/21	Playground Repair Myers 1072	110-5-30-12-431.000 R&M Buildings & Grounds	1400.00	35650	08/23/21
25140	PIKE INDUSTRIES INC	08/13/21	Asphalt / Emulsion 1146705	110-5-40-12-605.000 Summer Construction Suppl	324.00	35652	08/23/21
45475	RENE FOURNIER FARM EQUIP	07/27/21	Tractor Repairs Parts 76866	110-5-40-12-430.000 R&M Vehicles & Equipment	833.90	35653	08/23/21
45475	RENE FOURNIER FARM EQUIP	07/27/21	Tractor Repairs Parts 76866	110-5-30-12-430.000 R&M Vehicles & Equipment	833.90	35653	08/23/21
37965	S D IRELAND CONCRETE	08/09/21	storm grate for Circle Dr 358566	110-5-40-12-610.000 General Supplies	277.60	35654	08/23/21
43320	SAMMEL SIGN CO	06/28/21	Row Number Signs 5763	110-5-30-12-431.000 R&M Buildings & Grounds	220.00	35655	08/23/21
17505	SAND HILL SOLAR LLC	08/11/21	Town Solar July 132	110-5-41-11-622.000 Electricity	297.35	35656	08/23/21
17505	SAND HILL SOLAR LLC	08/11/21	Town Solar July 132	110-5-41-10-622.000 Electricity	1031.43	35656	08/23/21
17505	SAND HILL SOLAR LLC	08/11/21	Town Solar July 132	110-5-41-12-622.000 Electricity	354.73	35656	08/23/21
17505	SAND HILL SOLAR LLC	08/11/21	Town Solar July 132	110-5-41-15-622.000 Electricity	847.51	35656	08/23/21
17505	SAND HILL SOLAR LLC	08/11/21	Town Solar July 132	110-5-41-16-622.000 Electricity	106.78	35656	08/23/21
17505	SAND HILL SOLAR LLC	08/11/21	Town Solar July 132	110-5-30-11-622.000 Electricity	740.73	35656	08/23/21
42565	SEVEN DAYS	08/11/21	Legal Ad-ZBA 213799	110-5-16-10-540.000 Advertising	48.88	35659	08/23/21
42565	SEVEN DAYS	08/18/21	Legal Ad-PC 213968	110-5-16-10-540.000 Advertising	86.84	35659	08/23/21
26925	STAPLES CREDIT PLAN	08/18/21	office supplies 08182021-DT	110-5-41-15-610.000 General Supplies	170.99	35663	08/23/21
26925	STAPLES CREDIT PLAN	08/18/21	office supplies 08182021-DT	110-5-41-14-610.000 General Supplies	53.25	35663	08/23/21
37680	TARRANT, GILLIES & RICHAR	05/31/21	Dan Richardson research 15119	110-5-10-10-320.000 Legal Services	1960.01	35666	08/23/21
27145	VAILLANCOURT TREE SERVICE	08/06/21	tree and stump removal 19 12906	110-5-40-12-571.000 Streetscape Maintenance	2000.00	35672	08/23/21
44805	VMERS DB	07/02/21	Payroll Transfer PR-07/02/21	110-2-00-00-210.004 Retirement Payable	20664.03	35675	08/23/21
44805	VMERS DB	07/09/21	Payroll Transfer PR-07/09/21	110-2-00-00-210.004 Retirement Payable	21264.58	35675	08/23/21
44805	VMERS DB	07/16/21	Payroll Transfer PR-07/16/21	110-2-00-00-210.004 Retirement Payable	22226.55	35675	08/23/21
44805	VMERS DB	07/23/21	Payroll Transfer PR-07/23/21	110-2-00-00-210.004 Retirement Payable	21499.39	35675	08/23/21
44805	VMERS DB	07/30/21	Payroll Transfer PR-07/30/21	110-2-00-00-210.004 Retirement Payable	22255.99	35675	08/23/21
08000	VT BLACKTOP CORP	08/06/21	Type IV RAP 50000353	110-5-40-12-605.000 Summer Construction Suppl	188.48	35677	08/23/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
22015	VT DEPT OF HEALTH	08/12/21	Engraved Paper 733	110-5-12-10-610.000 General Supplies	50.00	35679	08/23/21
05935	VT HUMANITIES COUNCIL	08/03/21	Vermont Humanities Counci 622137559	110-5-35-10-830.000 Regular Programs	75.00	35680	08/23/21
27030	VT OFFICE OF CHILD SUPPOR	08/20/21	Payroll Transfer PR-08/20/21	110-2-00-00-210.005 Misc Deductions Payable	311.54	35681	08/23/21
07565	W B MASON CO INC	07/29/21	July office supplies C13055277292	110-5-20-10-610.000 General Supplies	117.87	35682	08/23/21
07565	W B MASON CO INC	07/29/21	July office supplies C13055277292	110-5-41-10-610.000 General Supplies	43.17	35682	08/23/21
07565	W B MASON CO INC	07/29/21	July office supplies C13055277292	110-5-12-10-610.000 General Supplies	197.66	35682	08/23/21
07565	W B MASON CO INC	07/29/21	July office supplies C13055277292	110-5-15-10-610.000 General Supplies	12.56	35682	08/23/21
07565	W B MASON CO INC	07/29/21	July office supplies C13055277292	110-5-30-11-610.000 General Supplies	34.17	35682	08/23/21
07565	W B MASON CO INC	07/29/21	July office supplies C13055277292	110-5-41-14-610.000 General Supplies	92.36	35682	08/23/21
07565	W B MASON CO INC	07/29/21	July office supplies C13055277292	110-5-35-10-610.000 General Supplies	97.76	35682	08/23/21
26380	WINOOSKI VALLEY PARK DIST	08/17/21	WVPD payment fy22 FY22	110-5-19-10-800.109 Winooski Valley Park Dist	61530.00	35685	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	122-5-22-10-210.000 Group Insurance	45.61	35626	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	122-5-22-10-442.000 Rental Vehicles/Equip	138.97	35635	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	122-5-22-10-442.000 Rental Vehicles/Equip	12.84	35636	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	122-5-22-10-210.000 Group Insurance	130.11	35643	08/23/21
07575	COURTLAND CONSTRUCTION CO	08/10/21	Allen Martin / Rte 15 Int 2	130-2-00-00-200.003 Retainage Payable	-2159.75	35595	08/23/21
07575	COURTLAND CONSTRUCTION CO	08/10/21	Allen Martin / Rte 15 Int 2	130-5-40-10-720.006 VT15/Allen Martin Dr	43195.00	35595	08/23/21
26290	CHAMPLIN ASSOC. INC.	08/06/21	emergency service call to 2279	151-5-51-30-570.000 Other Purchased Services	326.03	35588	08/23/21
04940	COMCAST	08/01/21	Internet hgwy complex 8/8 0167074 0821	151-5-51-10-530.000 Communications	99.92	35591	08/23/21
19005	FIRSTLIGHT FIBER	08/15/21	Internet/phone svc variou 9731701	151-5-51-10-530.000 Communications	55.99	35605	08/23/21
29500	LAMELL LUMBER CORP.	08/19/21	shavings for wet well cle 113390	151-5-51-30-433.000 R&M Infrastructure	42.50	35621	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	151-5-51-10-210.000 Group Insurance	294.42	35626	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	151-5-51-10-442.000 Rental Vehicles/Equip	46.32	35635	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	151-5-51-10-442.000 Rental Vehicles/Equip	10.26	35636	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	151-5-51-10-210.000 Group Insurance	410.29	35643	08/23/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
23420	P & P SEPTIC SERVICE INC.	08/13/21	wet well cleaning T560353	151-5-51-30-433.000 R&M Infrastructure	4130.00	35646	08/23/21
17505	SAND HILL SOLAR LLC	08/11/21	Town Solar July 132	151-5-51-30-622.000 Electricity	2913.79	35656	08/23/21
17505	SAND HILL SOLAR LLC	08/11/21	Town Solar July 132	151-5-51-10-622.000 Electricity	290.71	35656	08/23/21
24310	WALSH ELECTRIC SUPPLY	08/10/21	light bulbs for Alderbroo 157441600	151-5-51-30-433.000 R&M Infrastructure	2.94	35683	08/23/21
28890	ALWAYS SHOWTIME ENTERTAIN	08/10/21	Picnic in the Park Event 081021D	159-5-30-20-835.000 Program Instructor Fees	625.00	35572	08/23/21
25075	ESSEX HIGH SCHOOL STUDENT	08/09/21	Hornets Soccer Programs (080921D	159-5-30-14-835.000 Program Instructor Fees	3925.00	35601	08/23/21
43205	LINKS AT LANG FARM	08/09/21	Camp Programs- Joint 080921D	159-5-30-20-835.000 Program Instructor Fees	1848.00	35625	08/23/21
27840	MADISON NATIONAL LIFE INS	08/17/21	Life Prem Sept 2021 090121D	159-5-30-14-210.000 Group Insurance	41.39	35626	08/23/21
18890	MINDS IN MOTION OF NJ LLC	08/16/21	STEM Summer Programs 1183	159-5-30-14-835.000 Program Instructor Fees	4870.00	35630	08/23/21
27970	MINI GOLF ON THE GO LLC	08/14/21	Picnic in the Park Event 00000019	159-5-30-20-835.000 Program Instructor Fees	250.00	35631	08/23/21
05485	NATIONAL BUSINESS LEASING	08/10/21	Copier leases 8/15-9/14/2 73463774	159-5-30-14-442.000 Rental Vehicles/Equip	177.90	35635	08/23/21
06675	NATIONAL BUSINESS TECHNOL	08/19/21	Copier usage various 7/18 IN438111	159-5-30-14-442.000 Rental Vehicles/Equip	33.27	35636	08/23/21
24960	NORTHEAST DELTA DENTAL	08/16/21	Dental Prem Sept 2021 Tow 090121D	159-5-30-14-210.000 Group Insurance	130.11	35643	08/23/21
17565	PARVANOV DRAGOMIR	07/20/21	Soccer Sparks P FY portio 072021D 2	159-5-30-14-835.000 Program Instructor Fees	1120.00	35649	08/23/21
03905	THE EDGE	08/09/21	Tennis Camps July 721E	159-5-30-20-835.000 Program Instructor Fees	2465.00	35667	08/23/21
			Report Total		299628.50		

To the Treasurer of Town of Essex, We Hereby certify that there is due to the several persons whose names are listed hereon the sum against each name and that there are good and sufficient vouchers supporting the payments aggregating $ ***299,628.50
Let this be your order for the payments of these amounts.

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Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
19815	AMAZON CAPITAL SERVICES	08/22/21	CAMERA 1GH1XL3M7F9N	110-5-20-10-610.000 General Supplies	99.95	35690	08/27/21
23190	BAILEY SPRING & CHASSIS	08/24/21	SHOP LABOR BEARINGS S30778	110-5-20-10-430.000 R&M Vehicles & Equipment	150.00	35693	08/27/21
29295	BARTOL CURT R PHD	08/15/21	HENRY,ELLIOTT MMPI-2 081521D	110-5-20-10-330.000 Professional Services	25.00	35694	08/27/21
09345	BASIC	07/14/21	Quarterly Fee for COBRA A 602411	110-5-10-10-210.000 Group Insurance	153.60	35695	08/27/21
09345	BASIC	07/27/21	One Time ARPA Admin Fee- 607574	110-5-10-10-210.000 Group Insurance	225.00	35695	08/27/21
07465	BIBENS ACE HARDWARE INC	08/12/21	materials for stoop repla 42153	110-5-41-14-431.000 R&M Buildings & Grounds	60.97	35697	08/27/21
07465	BIBENS ACE HARDWARE INC	08/12/21	material to repair hose a 42157	110-5-41-14-431.000 R&M Buildings & Grounds	2.00	35697	08/27/21
07465	BIBENS ACE HARDWARE INC	08/25/21	GRAFFITI PAINT 42272	110-5-20-10-610.000 General Supplies	133.28	35697	08/27/21
07465	BIBENS ACE HARDWARE INC	08/26/21	supplies for PW office 42283	110-5-41-14-610.000 General Supplies	37.75	35697	08/27/21
02035	BURLINGTON FREE PRESS #10	08/01/21	ANNUAL SUBSCRIPTION 080121DA	110-5-20-10-500.000 Training, Conf, Dues	832.94	35699	08/27/21
07710	CCR SALES AND SERVICE LLC	07/13/21	blades for cub cadet mowe 54398	110-5-40-12-430.001 R&M Vehicles - Supplies	79.20	35701	08/27/21
03080	CHAMPLAIN DOOR CO INC	08/18/21	TACT BAY DOOR REPAIR 978541	110-5-41-13-431.000 R&M Buildings & Grounds	90.00	35702	08/27/21
23525	CLARK'S TRUCK CENTER INC	08/12/21	wheels for trk 104 112 450517	110-5-40-12-430.001 R&M Vehicles - Supplies	700.96	35705	08/27/21
23525	CLARK'S TRUCK CENTER INC	08/13/21	gloves for shop use 450644	110-5-41-15-610.000 General Supplies	138.00	35705	08/27/21
23525	CLARK'S TRUCK CENTER INC	08/18/21	air filter/sensor - trk 1 450785	110-5-40-12-430.001 R&M Vehicles - Supplies	170.99	35705	08/27/21
23525	CLARK'S TRUCK CENTER INC	08/18/21	sensor connector - trk 10 450790	110-5-40-12-430.001 R&M Vehicles - Supplies	30.54	35705	08/27/21
23525	CLARK'S TRUCK CENTER INC	08/23/21	floor mats - trk 106, 108 450937	110-5-40-12-430.001 R&M Vehicles - Supplies	553.11	35705	08/27/21
23525	CLARK'S TRUCK CENTER INC	08/20/21	front end alignment - trk 67770	110-5-40-12-430.000 R&M Vehicles & Equipment	430.55	35705	08/27/21
04940	COMCAST	08/17/21	Internet/cable 81 Main 8/ 0109571 0821	110-5-41-10-530.000 Communications	337.40	35707	08/27/21
05550	ESO SOLUTIONS INC	08/17/21	ESO ANNUAL SUBSCRIPTION 59548	110-5-25-10-500.000 Training, Conf, Dues	4916.00	35712	08/27/21
23090	FIRKEY JERRY	08/01/21	Aug health officer svc 080121d	110-5-18-10-330.000 Professional Services	797.00	35715	08/27/21
19005	FIRSTLIGHT FIBER	08/15/21	Phone svc 7/15-8/14/ vari 9731699	110-5-41-10-530.000 Communications	1211.31	35716	08/27/21
19005	FIRSTLIGHT FIBER	08/15/21	Phone svc 7/15-8/14/ vari 9731699	110-5-41-13-530.000 Communications	1040.25	35716	08/27/21
14595	FOLEY SERVICES INC	08/17/21	CARPET RUNNERS 1384417	110-5-41-13-400.000 Contracted Services	48.40	35717	08/27/21
26400	GMT/CCTA	07/07/21	GMT invoice 1 20220014 921	110-5-19-10-800.102 Green Mountain Transit	72598.00	35719	08/27/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
04035	GOT THAT RENTAL & SALES I	08/18/21	grass seed 89762	110-5-40-12-605.000 Summer Construction Suppl	179.98	35721	08/27/21
07010	GREEN MOUNTAIN POWER CORP	08/17/21	street lights 0001 081721D	110-5-40-12-622.200 Streetlight Electricity	123.40	35723	08/27/21
07010	GREEN MOUNTAIN POWER CORP	08/17/21	street lights 0004 081721D	110-5-40-12-622.200 Streetlight Electricity	43.06	35723	08/27/21
07010	GREEN MOUNTAIN POWER CORP	08/17/21	street lights 0007 081721D	110-5-40-12-622.200 Streetlight Electricity	1.79	35723	08/27/21
07010	GREEN MOUNTAIN POWER CORP	08/10/21	Power various locations 081021D	110-5-41-10-622.000 Electricity	217.78	35725	08/27/21
07010	GREEN MOUNTAIN POWER CORP	08/10/21	Power various locations 081021D	110-5-41-11-622.000 Electricity	51.66	35725	08/27/21
07010	GREEN MOUNTAIN POWER CORP	08/10/21	Power various locations 081021D	110-5-41-12-622.000 Electricity	50.85	35725	08/27/21
07010	GREEN MOUNTAIN POWER CORP	08/10/21	Power various locations 081021D	110-5-41-15-622.000 Electricity	173.24	35725	08/27/21
07010	GREEN MOUNTAIN POWER CORP	08/10/21	Power various locations 081021D	110-5-41-16-622.000 Electricity	26.12	35725	08/27/21
07010	GREEN MOUNTAIN POWER CORP	08/17/21	street lights 75974300008C	110-5-40-12-622.200 Streetlight Electricity	2.53	35727	08/27/21
20445	HD SUPPLY CONSTRUCTION &	08/09/21	For concrete forms 50016513343	110-5-40-12-610.000 General Supplies	66.19	35729	08/27/21
28070	HP FAIRFIELD LLC	08/04/21	air filters for trackless 7640839	110-5-40-12-430.001 R&M Vehicles - Supplies	272.89	35731	08/27/21
27670	IROQUOIS MANUFACTURING, I	08/18/21	plow guides 100184	110-5-40-12-430.001 R&M Vehicles - Supplies	50.60	35733	08/27/21
13760	JOHNSON HARDWARE & RENTAL	08/25/21	Culvert Pipe for stock 42664	110-5-40-12-610.000 General Supplies	781.68	35734	08/27/21
13760	JOHNSON HARDWARE & RENTAL	08/25/21	tie down ratchets 42673	110-5-30-12-611.000 Small Tools and Equipment	33.98	35734	08/27/21
03525	KITTELL BRANAGAN & SARGEN	08/19/21	Audit Services 81885	110-5-13-10-335.000 Audit	2337.50	35736	08/27/21
08645	LOWES BUSINESS ACCT/SYNCB	07/16/21	SH Pool Pump 01169	110-5-30-11-430.000 R&M Vehicles & Equipment	87.96	35738	08/27/21
08645	LOWES BUSINESS ACCT/SYNCB	07/30/21	FLEX TAPE BLACK 02081	110-5-20-10-610.000 General Supplies	12.34	35738	08/27/21
08645	LOWES BUSINESS ACCT/SYNCB	08/06/21	supplies for sill plate - 02092	110-5-41-14-431.000 R&M Buildings & Grounds	11.37	35738	08/27/21
08645	LOWES BUSINESS ACCT/SYNCB	07/16/21	materials to build curb f 02167	110-5-40-12-610.000 General Supplies	89.72	35738	08/27/21
08645	LOWES BUSINESS ACCT/SYNCB	08/11/21	new toilet for PW buildin 02447	110-5-41-14-431.000 R&M Buildings & Grounds	113.03	35738	08/27/21
08645	LOWES BUSINESS ACCT/SYNCB	07/20/21	for Town Clerks office re 03210	110-5-41-10-431.000 R&M Buildings & Grounds	114.00	35738	08/27/21
08645	LOWES BUSINESS ACCT/SYNCB	07/29/21	parts for Town Clerk reno 09673	110-5-41-10-431.000 R&M Buildings & Grounds	16.12	35738	08/27/21
08645	LOWES BUSINESS ACCT/SYNCB	07/29/21	part of Town Clerk renova 09707	110-5-41-10-431.000 R&M Buildings & Grounds	3.96	35738	08/27/21
08645	LOWES BUSINESS ACCT/SYNCB	08/12/21	supplies for Public Works 10717	110-5-41-15-431.000 R&M Buildings & Grounds	42.72	35738	08/27/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
08645	LOWES BUSINESS ACCT/SYNCB	07/20/21	for Town Clerks office re 11551	110-5-41-10-431.000 R&M Buildings & Grounds	7.76	35738	08/27/21
17175	LYDEN PRODUCTIONS LLC	06/30/21	RECRUIT VIDEO 29	110-5-20-10-540.000 Advertising	6320.00	35739	08/27/21
17860	MAYER & MAYER	08/06/21	Payroll Transfer PR-08/06/21	110-2-00-00-210.005 Misc Deductions Payable	25.00	35740	08/27/21
17860	MAYER & MAYER	08/13/21	Payroll Transfer PR-08/13/21	110-2-00-00-210.005 Misc Deductions Payable	25.00	35740	08/27/21
17860	MAYER & MAYER	08/20/21	Payroll Transfer PR-08/20/21	110-2-00-00-210.005 Misc Deductions Payable	25.00	35740	08/27/21
17860	MAYER & MAYER	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	25.00	35740	08/27/21
03070	MINUTEMAN PRESS	08/17/21	Tax Bills 53485	110-5-13-10-550.000 Printing and Binding	3180.42	35741	08/27/21
23080	MVP HEALTH CARE INC 43118	08/13/21	Health ins co pay 081321D	110-2-00-00-210.006 Health Ins. Copay	1649.59	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	08/08/21	Health Prem Sep 21 Town 090121D	110-5-10-10-210.000 Group Insurance	-0.01	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	08/08/21	Health Prem Sep 21 Town 090121D	110-5-14-10-210.000 Group Insurance	0.09	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	08/08/21	Health Prem Sep 21 Town 090121D	110-5-30-10-210.000 Group Insurance	0.01	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	08/08/21	Health Prem Sep 21 Town 090121D	110-5-40-10-210.000 Group Insurance	-8724.17	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	08/08/21	Health Prem Sep 21 Town 090121D	110-5-35-10-210.000 Group Insurance	0.01	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	08/08/21	Health Prem Sep 21 Town 090121D	110-5-20-12-210.000 Group Insurance	1918.16	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	08/08/21	Health Prem Sep 21 Town 090121D	110-5-20-14-210.000 Group Insurance	7.58	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	08/08/21	Health Prem Sep 21 Town 090121D	110-5-30-13-210.000 Group Insurance	184.47	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	07/16/21	Payroll Transfer PR-07/16/21	110-2-00-00-210.006 Health Ins. Copay	2693.27	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	07/23/21	Payroll Transfer PR-07/23/21	110-2-00-00-210.006 Health Ins. Copay	2693.27	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	08/06/21	Payroll Transfer PR-08/06/21	110-2-00-00-210.006 Health Ins. Copay	13048.02	35743	08/27/21
23080	MVP HEALTH CARE INC 43118	08/13/21	Payroll Transfer PR-08/13/21	110-2-00-00-210.006 Health Ins. Copay	79361.07	35743	08/27/21
05485	NATIONAL BUSINESS LEASING	08/21/21	Paper cut 8/15-9/14/21 73591685	110-5-14-10-505.000 Tech Subs & Licenses	295.00	35744	08/27/21
31335	NEW ENGLAND ASSOC CITY &	08/11/21	Conference Registration 210811	110-5-12-10-500.000 Training, Conf, Dues	325.00	35746	08/27/21
37605	NEW ENGLAND MUNICIPAL RES	08/18/21	NEMRC Annual Support/ Lic 48596	110-5-14-10-735.000 Tech: Equip/Hardware	5000.00	35748	08/27/21
25435	NEW ENGLAND REAL ESTATE N	10/01/21	Q421 incLudesl free month 114940	110-5-15-10-500.000 Training, Conf, Dues	42.00	35749	08/27/21
29535	NEW YORK LIFE INS. CO.	08/06/21	Payroll Transfer PR-08/06/21	110-2-00-00-210.005 Misc Deductions Payable	15.00	35750	08/27/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
29535	NEW YORK LIFE INS. CO.	08/13/21	Payroll Transfer PR-08/13/21	110-2-00-00-210.005 Misc Deductions Payable	15.00	35750	08/27/21
29535	NEW YORK LIFE INS. CO.	08/20/21	Payroll Transfer PR-08/20/21	110-2-00-00-210.005 Misc Deductions Payable	15.00	35750	08/27/21
29535	NEW YORK LIFE INS. CO.	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	15.00	35750	08/27/21
28030	ROUTE 15 AUTOMOTIVE SERVI	08/20/21	LOF 131155	110-5-20-10-430.000 R&M Vehicles & Equipment	34.95	35754	08/27/21
28030	ROUTE 15 AUTOMOTIVE SERVI	08/23/21	RR SPINDLE ASSY/BEARINGS 131156	110-5-20-10-430.000 R&M Vehicles & Equipment	195.00	35754	08/27/21
28030	ROUTE 15 AUTOMOTIVE SERVI	08/24/21	LOF/VSI/DR DOOR PAINT 131157	110-5-20-10-430.000 R&M Vehicles & Equipment	94.95	35754	08/27/21
21705	S&J CREATIONS	08/20/21	PATCHES SEWN 12413	110-5-20-10-612.000 Uniforms	16.00	35756	08/27/21
26925	STAPLES CREDIT PLAN	08/20/21	supplies for garage 08202021-DT	110-5-41-15-610.000 General Supplies	35.25	35764	08/27/21
04595	TMDE CALIBRATION LABS	08/18/21	LIDAR LASER CAL 42693	110-5-20-10-430.000 R&M Vehicles & Equipment	244.60	35766	08/27/21
21000	UNIFIRST CORPORATION	08/19/21	wiper rags and mats - hgw 1080036333	110-5-40-12-430.001 R&M Vehicles - Supplies	113.52	35770	08/27/21
14900	UNITED STATES TREASURY	06/30/21	Town PCORI Fees CY 2020 6/30/2021	110-5-10-10-210.000 Group Insurance	34.58	35772	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-10-10-210.000 Group Insurance	60.42	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-13-10-210.000 Group Insurance	52.97	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-12-10-210.000 Group Insurance	50.26	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-14-10-210.000 Group Insurance	53.17	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-40-10-210.000 Group Insurance	25.13	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-15-10-210.000 Group Insurance	14.02	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-40-10-210.000 Group Insurance	16.29	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-16-10-210.000 Group Insurance	37.71	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-20-11-210.000 Group Insurance	64.28	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-40-12-210.000 Group Insurance	142.90	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-30-10-210.000 Group Insurance	75.39	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-30-12-210.000 Group Insurance	50.26	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-30-13-210.000 Group Insurance	25.13	35777	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-35-10-210.000 Group Insurance	47.38	35777	08/27/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	110-5-40-13-210.000 Group Insurance	18.49	35777	08/27/21
08000	VT BLACKTOP CORP	08/13/21	Type IV RAP 50000380	110-5-40-12-605.000 Summer Construction Suppl	311.24	35778	08/27/21
22040	VT DEPT OF MOTOR VEHICLES	08/26/21	replacement plates for fa AAS197Plates	110-5-40-13-510.000 Permits, Licenses, Reg	14.00	35779	08/27/21
29825	VT GAS SYSTEMS	07/21/21	EPD GAS SERVICE 220228107212	110-5-41-13-621.000 Natural Gas/Heating	130.97	35780	08/27/21
25535	VT MUNICIPAL CLERKS & TRE	08/18/21	2021 Annual Conference 2021ClerksCo	110-5-12-10-500.000 Training, Conf, Dues	275.00	35781	08/27/21
25535	VT MUNICIPAL CLERKS & TRE	08/18/21	Membership Dues 2021Dues	110-5-12-10-500.000 Training, Conf, Dues	75.00	35782	08/27/21
27030	VT OFFICE OF CHILD SUPPOR	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	311.54	35783	08/27/21
17425	ICMA ROTH PLAN 706287	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.004 Retirement Payable	33.90	8250402	08/27/21
V1161	ICMA RETIREMENT TRUST-401	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.004 Retirement Payable	7487.72	8250403	08/27/21
V1160	ICMA RETIREMENT TRUST-457	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.004 Retirement Payable	1154.95	8250404	08/27/21
V2337	UNITED WAY OF CHITTENDEN	08/06/21	Payroll Transfer PR-08/06/21	110-2-00-00-210.005 Misc Deductions Payable	16.00	8250405	08/27/21
V2337	UNITED WAY OF CHITTENDEN	08/13/21	Payroll Transfer PR-08/13/21	110-2-00-00-210.005 Misc Deductions Payable	16.00	8250405	08/27/21
V2337	UNITED WAY OF CHITTENDEN	08/20/21	Payroll Transfer PR-08/20/21	110-2-00-00-210.005 Misc Deductions Payable	16.00	8250405	08/27/21
V2337	UNITED WAY OF CHITTENDEN	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	16.00	8250405	08/27/21
17140	THE EDGE (VILLAGE)	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	133.00	8250408	08/27/21
09005	ICMA - 457 (PLAN 302056)	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	4120.30	8260413	08/27/21
14545	ICMA-RC (PLAN 705508)	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	470.61	8260414	08/27/21
23055	ICMA - 401 (PLAN 10904	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.004 Retirement Payable	668.53	8260415	08/27/21
23040	AFSCME COUNCIL 93	08/06/21	Payroll Transfer PR-08/06/21	110-2-00-00-210.005 Misc Deductions Payable	254.00	8260416	08/27/21
23040	AFSCME COUNCIL 93	08/13/21	Payroll Transfer PR-08/13/21	110-2-00-00-210.005 Misc Deductions Payable	254.00	8260416	08/27/21
23040	AFSCME COUNCIL 93	08/20/21	Payroll Transfer PR-08/20/21	110-2-00-00-210.005 Misc Deductions Payable	254.00	8260416	08/27/21
23040	AFSCME COUNCIL 93	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	254.00	8260416	08/27/21
23025	ESSEX POLICE EMPLOYEES AS	08/06/21	Payroll Transfer PR-08/06/21	110-2-00-00-210.005 Misc Deductions Payable	360.00	8260417	08/27/21
23025	ESSEX POLICE EMPLOYEES AS	08/13/21	Payroll Transfer PR-08/13/21	110-2-00-00-210.005 Misc Deductions Payable	324.00	8260417	08/27/21
23025	ESSEX POLICE EMPLOYEES AS	08/20/21	Payroll Transfer PR-08/20/21	110-2-00-00-210.005 Misc Deductions Payable	348.00	8260417	08/27/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
23025	ESSEX POLICE EMPLOYEES AS	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	324.00	8260417	08/27/21
23030	UNITED WAY OF CHITTENDEN	08/06/21	Payroll Transfer PR-08/06/21	110-2-00-00-210.005 Misc Deductions Payable	29.25	8260418	08/27/21
23030	UNITED WAY OF CHITTENDEN	08/13/21	Payroll Transfer PR-08/13/21	110-2-00-00-210.005 Misc Deductions Payable	29.25	8260418	08/27/21
23030	UNITED WAY OF CHITTENDEN	08/20/21	Payroll Transfer PR-08/20/21	110-2-00-00-210.005 Misc Deductions Payable	29.25	8260418	08/27/21
23030	UNITED WAY OF CHITTENDEN	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	29.25	8260418	08/27/21
17135	THE EDGE (TOWN)	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	191.25	8260421	08/27/21
05375	ESSEX JUNCTION EMPLOYEES	08/06/21	Payroll Transfer PR-08/06/21	110-2-00-00-210.005 Misc Deductions Payable	36.00	21082701	08/27/21
05375	ESSEX JUNCTION EMPLOYEES	08/13/21	Payroll Transfer PR-08/13/21	110-2-00-00-210.005 Misc Deductions Payable	36.00	21082701	08/27/21
05375	ESSEX JUNCTION EMPLOYEES	08/20/21	Payroll Transfer PR-08/20/21	110-2-00-00-210.005 Misc Deductions Payable	36.00	21082701	08/27/21
05375	ESSEX JUNCTION EMPLOYEES	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.005 Misc Deductions Payable	36.00	21082701	08/27/21
05390	FAMILY SUPPORT REGISTRY	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.010 Judgements Payable	69.23	21082702	08/27/21
21385	HEALTH EQUITY	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.009 HSA Payable HE	159.50	21082704	08/27/21
14400	ABOVE AND BEYOND	08/10/21	CJC JANITORIAL 6321	122-5-22-10-330.000 Professional Services	195.00	35688	08/27/21
04940	COMCAST	08/14/21	CJC CABLE/INTERNET 0128886 0821	122-5-22-10-410.000 Water and Sewer Charges	179.10	35708	08/27/21
19005	FIRSTLIGHT FIBER	08/15/21	Phone svc 7/15-8/14/ vari 9731699	122-5-22-10-530.000 Communications	1.11	35716	08/27/21
07010	GREEN MOUNTAIN POWER CORP	08/19/21	CJC ELECTRICITY 95544100001D	122-5-22-10-622.000 Electricity	95.22	35728	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	122-5-22-10-210.000 Group Insurance	25.13	35777	08/27/21
25715	DONALD L. HAMLIN CONSULT	08/13/21	Gravel Wetland Project 20-802 08132	130-5-40-13-890.816 Brick/Mansfield CA0462	51.30	35710	08/27/21
07465	BIBENS ACE HARDWARE INC	08/19/21	clapper valve for Fort Pu 42220	151-5-51-30-433.000 R&M Infrastructure	15.98	35697	08/27/21
23435	CHAMPLAIN WATER DISTRICT	07/31/21	July 2021 water consumpti July2021Wate	151-5-51-20-411.000 CWD Water Purchase	72943.20	35703	08/27/21
19005	FIRSTLIGHT FIBER	08/15/21	Phone svc 7/15-8/14/ vari 9731699	151-5-51-30-530.000 Communications	656.08	35716	08/27/21
07010	GREEN MOUNTAIN POWER CORP	08/10/21	Power various locations 081021D	151-5-51-30-622.000 Electricity	505.77	35725	08/27/21
03525	KITTELL BRANAGAN & SARGEN	08/19/21	Audit Services 81885	151-5-51-10-335.000 Audit	412.50	35736	08/27/21
23080	MVP HEALTH CARE INC 43118	08/08/21	Health Prem Sep 21 Town 090121D	151-5-51-10-210.000 Group Insurance	-1822.62	35743	08/27/21
23590	SMITH & LOVELESS	08/13/21	parts for Heritage and Au 154982	151-5-51-30-433.000 R&M Infrastructure	1092.65	35760	08/27/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	151-5-51-10-210.000 Group Insurance	95.14	35777	08/27/21
24310	WALSH ELECTRIC SUPPLY	08/23/21	light bulbs for Alderbroo 157441601	151-5-51-30-433.000 R&M Infrastructure	14.41	35784	08/27/21
2940	ASHE PEYTON	08/17/21	Field Hockey 081721D	159-5-30-14-835.000 Program Instructor Fees	550.00	35692	08/27/21
2910	CORRIGAN NICHOLAS	08/11/21	Tom Perry's Baseball Camp 081121D	159-5-30-14-835.000 Program Instructor Fees	1152.00	35709	08/27/21
11260	GOLD STAR DOG TRAINING	08/17/21	Dog Training Programs 50	159-5-30-14-835.000 Program Instructor Fees	2580.00	35720	08/27/21
2925	KARKI HANNAH	08/17/21	Field Hockey Camp 081721D 2	159-5-30-14-835.000 Program Instructor Fees	550.00	35735	08/27/21
2920	KRAUSS SOPHIE	08/17/21	Field Hockey Camp 081721D	159-5-30-14-835.000 Program Instructor Fees	385.00	35737	08/27/21
28215	SOLI MUSIC INC	08/24/21	Picnic in the Park Music 1018	159-5-30-20-610.000 General Supplies	300.00	35761	08/27/21
2930	TUPAJ ELIZABETH	08/17/21	Field Hockey Camp 081721D	159-5-30-14-835.000 Program Instructor Fees	440.00	35769	08/27/21
25375	VISION SERVICE PLAN (CT)-	08/19/21	Vision Prem Sept 21 Town 090121D	159-5-30-14-210.000 Group Insurance	25.13	35777	08/27/21
	Report Total				298176.70		

To the Treasurer of Town of Essex, We Hereby certify that there is due to the several persons whose names are listed hereon the sum against each name and that there are good and sufficient vouchers supporting the payments aggregating $ ***298,176.70
Let this be your order for the payments of these amounts.

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Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
19815	AMAZON CAPITAL SERVICES	08/21/21	Ops Supplies 171NDXTHQQ4F	110-5-30-10-610.000 General Supplies	26.72	35787	09/03/21
19815	AMAZON CAPITAL SERVICES	08/25/21	CABLES-FAIR 1TPRQPVL333K	110-5-20-10-610.000 General Supplies	154.98	35787	09/03/21
19815	AMAZON CAPITAL SERVICES	08/22/21	Ops Supplies 1W6RNHN36RFH	110-5-30-10-610.000 General Supplies	11.99	35787	09/03/21
23875	AMERICAN PUBLIC WORKS ASS	08/31/21	Registration - Lutz 12666 08312021D	110-5-40-13-510.000 Permits, Licenses, Reg	399.00	35788	09/03/21
26320	AMERICAN WATER WORKS	08/31/21	registration - Costandi-7 08312021-D	110-5-40-10-500.000 Training, Conf, Dues	399.00	35789	09/03/21
26320	AMERICAN WATER WORKS	08/31/21	registration - Martin-654 08312021D	110-5-40-12-500.000 Training, Conf, Dues	399.00	35789	09/03/21
27490	AMILIA CONSULTING USA INC	04/20/21	Cost Recovery 2nd Payment INV0277	110-5-30-10-330.000 Professional Services	1493.75	35790	09/03/21
02000	BAKER & TAYLOR, INC	08/10/21	Adult Books 5017084794	110-5-35-10-640.201 Adult Collection	57.08	35791	09/03/21
02000	BAKER & TAYLOR, INC	08/10/21	Adult Books 5017084794	110-5-35-10-610.000 General Supplies	2.80	35791	09/03/21
07465	BIBENS ACE HARDWARE INC	06/02/21	supplies for clerks offic 41455	110-5-41-10-431.000 R&M Buildings & Grounds	3.80	35792	09/03/21
07465	BIBENS ACE HARDWARE INC	08/18/21	SH Pool Mulch 42211	110-5-30-11-610.000 General Supplies	9.98	35792	09/03/21
07465	BIBENS ACE HARDWARE INC	08/24/21	Cemetary Supplies 42256	110-5-30-12-431.000 R&M Buildings & Grounds	13.98	35792	09/03/21
07465	BIBENS ACE HARDWARE INC	08/24/21	supplies for fixing stoop 42265	110-5-41-14-431.000 R&M Buildings & Grounds	37.92	35792	09/03/21
07465	BIBENS ACE HARDWARE INC	08/25/21	for toilet repair at Fire 42269	110-5-41-12-431.000 R&M Buildings & Grounds	9.99	35792	09/03/21
07465	BIBENS ACE HARDWARE INC	08/25/21	toilet repair at Fire Dep 42274	110-5-41-12-431.000 R&M Buildings & Grounds	6.99	35792	09/03/21
07465	BIBENS ACE HARDWARE INC	08/26/21	brush for paving 42291	110-5-40-12-605.000 Summer Construction Suppl	4.99	35792	09/03/21
07465	BIBENS ACE HARDWARE INC	08/27/21	sprayer 42292	110-5-30-12-611.000 Small Tools and Equipment	16.99	35792	09/03/21
07465	BIBENS ACE HARDWARE INC	08/27/21	Shop Supplies 42298	110-5-30-12-610.000 General Supplies	12.99	35792	09/03/21
07465	BIBENS ACE HARDWARE INC	08/30/21	batteries for pager 42327	110-5-41-15-610.000 General Supplies	16.99	35792	09/03/21
07465	BIBENS ACE HARDWARE INC	08/30/21	mulch - 5 Jericho Rd 42330	110-5-40-12-571.000 Streetscape Maintenance	9.98	35792	09/03/21
24475	BOND O'REILLY AUTO-ESSEX	08/18/21	Trk 108 Hyd Filter 5677317776	110-5-40-12-430.001 R&M Vehicles - Supplies	22.08	35793	09/03/21
24475	BOND O'REILLY AUTO-ESSEX	08/19/21	parts - trk 26 5677317916	110-5-40-12-430.001 R&M Vehicles - Supplies	136.74	35793	09/03/21
02235	BOUND TREE MEDICAL LLC	08/17/21	EMS SUPPLIES 84171726	110-5-25-10-611.000 Small Tools and Equipment	5.29	35794	09/03/21
28910	BURNHAM MEMORIAL LIBRARY	08/18/21	Lost Book 081821D	110-5-35-10-640.201 Adult Collection	18.00	35797	09/03/21
40205	CDW-G	08/05/21	INK CARTRIDGE FAIR H873173	110-5-20-10-610.000 General Supplies	23.76	35798	09/03/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
40205	CDW-G	08/17/21	CARD READERS J414396	110-5-20-10-610.000 General Supplies	34.28	35798	09/03/21
39475	CLAUSSEN'S INC	08/18/21	SH Pool Landscape 24127	110-5-30-11-610.000 General Supplies	65.94	35801	09/03/21
04940	COMCAST	08/14/21	SH Phone/Internet Sept 8/ 0116220 0821	110-5-30-11-530.000 Communications	149.95	35803	09/03/21
04940	COMCAST	08/26/21	EPD CABLE/INTERNET 9/3-10 0136954 0821	110-5-20-10-432.000 R&M Technology	360.12	35804	09/03/21
04940	COMCAST	08/26/21	EPD CABLE/INTERNET 9/3-10 0136954 0821	110-5-20-10-530.000 Communications	118.05	35804	09/03/21
19330	CONSOLIDATED COMMUNICATIO	08/21/21	EPD POTS LINES 082121D PD	110-5-41-13-530.000 Communications	256.01	35808	09/03/21
19330	CONSOLIDATED COMMUNICATIO	08/18/21	Phone svc EFL 7/18-8/17/2 887138	110-5-41-11-530.000 Communications	158.97	35809	09/03/21
11115	DOMINION TECH COMPUTER SV	08/01/21	O365 Monthly Costs 20218417	110-5-14-10-735.000 Tech: Equip/Hardware	2817.30	35814	09/03/21
21630	EEC EXCAVATING LLC	08/29/21	sidewalk repairs 171	110-5-40-12-573.000 Sidewalk and Curb Maint	7350.00	35817	09/03/21
21630	EEC EXCAVATING LLC	08/29/21	sidewalk repairs 172	110-5-40-12-573.000 Sidewalk and Curb Maint	2600.00	35817	09/03/21
39060	ESSEX CAR WASH INC	08/31/21	AUG Monthly Car washes 3813	110-5-20-10-430.000 R&M Vehicles & Equipment	105.00	35819	09/03/21
04640	FASTENAL INDUSTRIAL & CON	08/25/21	EMS MASKS, CLEANING PRODU VTBUR298799	110-5-25-10-611.000 Small Tools and Equipment	743.20	35820	09/03/21
04640	FASTENAL INDUSTRIAL & CON	08/25/21	EMS MASKS, CLEANING PRODU VTBUR298799	110-5-25-10-610.000 General Supplies	270.51	35820	09/03/21
19445	FIRST NATIONAL BANK OMAHA	08/24/21	Website charges Aug2021CC976	110-5-14-10-735.000 Tech: Equip/Hardware	257.85	35824	09/03/21
21755	FIRST NATIONAL BANK OMAHA	07/23/21	Online services and Vermo 7383072321	110-5-35-10-500.000 Training, Conf, Dues	124.99	35825	09/03/21
21755	FIRST NATIONAL BANK OMAHA	08/24/21	Zoom Monthly Subscription 73830821	110-5-35-10-505.000 Tech. Subs, Licenses	14.99	35826	09/03/21
21755	FIRST NATIONAL BANK OMAHA	08/24/21	stormwater classes - Aar 9853 821	110-5-40-13-510.000 Permits, Licenses, Reg	578.00	35826	09/03/21
16000	FISHER AUTO PARTS	08/20/21	WHEEL BEARING/HUB 293343465	110-5-20-10-430.000 R&M Vehicles & Equipment	305.12	35827	09/03/21
16000	FISHER AUTO PARTS	08/23/21	BRAKE DISC/ROTORS 293343610	110-5-20-10-430.000 R&M Vehicles & Equipment	811.36	35827	09/03/21
16000	FISHER AUTO PARTS	08/27/21	BRAKE DISC/ROTOR RETURN 293344548	110-5-20-10-430.000 R&M Vehicles & Equipment	-511.22	35827	09/03/21
16000	FISHER AUTO PARTS	09/01/21	BRAKE PAD SET 293345085	110-5-20-10-430.000 R&M Vehicles & Equipment	67.35	35827	09/03/21
28400	FLEURY LINDA	08/17/21	Refund overpayment 210817	110-4-00-00-098.000 Misc Revenue	9.00	35828	09/03/21
14595	FOLEY SERVICES INC	08/24/21	CARPET RUNNERS 1385687	110-5-41-13-400.000 Contracted Services	48.40	35829	09/03/21
15035	FRANKLIN LAMOILLE FIRE SC	08/31/21	Fire School 083121D	110-5-25-10-500.000 Training, Conf, Dues	180.00	35830	09/03/21
07000	GALLS INC	08/24/21	GRAGG UNIFORM 19131264	110-5-20-10-612.000 Uniforms	570.68	35831	09/03/21

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07000	GALLS INC	08/26/21	UNIFORM EQUIPMENT 19151235	110-5-20-10-612.000 Uniforms	173.60	35831	09/03/21
07000	GALLS INC	08/30/21	WILLIGER ALLOWANCE 19178863	110-5-20-10-612.000 Uniforms	78.51	35831	09/03/21
30685	GOVERNMENT FINANCE OFF. A	08/25/21	CIP Course 3023137	110-5-13-10-500.000 Training, Conf, Dues	315.00	35835	09/03/21
07010	GREEN MOUNTAIN POWER CORP	08/10/21	SH Power July 0821 SHRR	110-5-41-16-622.000 Electricity	1120.93	35836	09/03/21
07010	GREEN MOUNTAIN POWER CORP	09/03/21	SH power July 0821 SHRR	110-5-41-16-622.000 Electricity	1120.93	35837	09/03/21
10810	HARRISON REDI MIX CORP	08/23/21	Sand Hill Curbing 52416	110-5-40-12-610.000 General Supplies	420.00	35839	09/03/21
20445	HD SUPPLY CONSTRUCTION &	08/19/21	expansion board 50016611641	110-5-40-12-610.000 General Supplies	423.90	35840	09/03/21
2955	HEART WILDLIFE REMOFAL	09/01/21	JUL ANIMAL CONTROL 090121D	110-5-20-15-330.000 Professional Services	2916.66	35841	09/03/21
33495	INGRAM LIBRARY SERVICES I	08/17/21	Adult Book 54329251	110-5-35-10-640.201 Adult Collection	14.81	35842	09/03/21
33495	INGRAM LIBRARY SERVICES I	08/17/21	Adult Book 54329251	110-5-35-10-610.000 General Supplies	0.69	35842	09/03/21
37715	INTEGRITY COMMUNICATIONS	08/27/21	Replacement Wireless Head 40138	110-5-14-10-735.000 Tech: Equip/Hardware	300.75	35843	09/03/21
20005	INTEX PROPERTY MAINTENANC	08/21/21	Trash bags EFL 193A	110-5-41-11-431.000 R&M Buildings & Grounds	45.00	35844	09/03/21
17710	KOFILE INC	08/23/21	August land recording KSW001384	110-5-12-10-505.000 Tech. Subs, Licenses	1205.00	35846	09/03/21
14585	MUNICIPAL EMERGENCY SERVI	08/18/21	SCBA CYLINDER HYDRO TEST IN1610972	110-5-25-10-750.000 Machinery & Equipment	630.00	35852	09/03/21
14585	MUNICIPAL EMERGENCY SERVI	08/19/21	TIC CAMERA STRAP IN1611403	110-5-25-10-430.000 R&M Vehicles & Equipment	57.31	35852	09/03/21
31335	NEW ENGLAND ASSOC CITY &	08/31/21	NE Conf - JW 210831	110-5-12-10-500.000 Training, Conf, Dues	200.00	35853	09/03/21
23420	P & P SEPTIC SERVICE INC.	08/24/21	IBR Portolet September T560907	110-5-30-12-570.000 Other Purchased Services	110.00	35859	09/03/21
27365	PETTY CASH-TOWN CLERK	09/02/21	Cash from Petty Cash Acco 210921	110-5-12-10-610.000 General Supplies	13.00	35861	09/03/21
18010	REYNOLDS & SON, INC.	08/09/21	SPARE AED 3394435	110-5-41-13-431.000 R&M Buildings & Grounds	279.22	35868	09/03/21
28030	ROUTE 15 AUTOMOTIVE SERVI	08/25/21	REAR BRAKE PADS/ROTORS 131158	110-5-20-10-430.000 R&M Vehicles & Equipment	75.00	35869	09/03/21
28030	ROUTE 15 AUTOMOTIVE SERVI	09/01/21	LOF/BRAKES 131159	110-5-20-10-430.000 R&M Vehicles & Equipment	99.95	35869	09/03/21
43275	RYCANDON MECHANICAL,INC.	08/25/21	SH Bathroom Repair 13843	110-5-30-11-430.000 R&M Vehicles & Equipment	291.28	35870	09/03/21
02550	SANEL NAPA	07/27/21	restock 9131443288	110-5-40-12-430.001 R&M Vehicles - Supplies	82.72	35872	09/03/21
02550	SANEL NAPA	08/03/21	restock 9131455247	110-5-40-12-430.001 R&M Vehicles - Supplies	96.62	35872	09/03/21
02550	SANEL NAPA	08/24/21	restock 9131489639	110-5-40-12-430.001 R&M Vehicles - Supplies	347.09	35872	09/03/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
02550	SANEL NAPA	08/24/21	restock 9131489648	110-5-40-12-430.001 R&M Vehicles - Supplies	116.35	35872	09/03/21
28405	TAKAMINE CHELSEA	09/02/21	Refund overpayment 210902	110-4-00-00-098.000 Misc Revenue	4.00	35881	09/03/21
36825	THE SMALL ENGINE CO INC	08/30/21	coil plug - Chainsaw 402 091473	110-5-40-12-430.001 R&M Vehicles - Supplies	55.00	35882	09/03/21
45210	TWOHIG POLYGRAPH SERVICES	08/24/21	LABONTE POLYGRAPH 082421D	110-5-20-10-330.000 Professional Services	350.00	35883	09/03/21
21000	UNIFIRST CORPORATION	09/02/21	wiper rags and mats - Hig 1080038716	110-5-40-12-430.001 R&M Vehicles - Supplies	114.72	35885	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	110-5-41-10-530.000 Communications	121.44	35886	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	110-5-20-10-432.000 R&M Technology	720.20	35886	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	110-5-20-10-530.000 Communications	206.93	35886	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	110-5-25-10-611.000 Small Tools and Equipment	240.06	35886	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	110-5-40-12-570.000 Other Purchased Services	277.22	35886	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	110-5-40-13-570.000 Other Purchased Services	40.01	35886	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	110-5-18-10-530.000 Communications	40.48	35886	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	110-5-30-12-530.000 Communications	40.48	35886	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	110-5-30-10-530.000 Communications	40.48	35886	09/03/21
44805	VMERS DB	08/06/21	Payroll Transfer PR-08/06/21	110-2-00-00-210.004 Retirement Payable	22126.26	35890	09/03/21
44805	VMERS DB	08/13/21	Payroll Transfer PR-08/13/21	110-2-00-00-210.004 Retirement Payable	22847.34	35890	09/03/21
44805	VMERS DB	08/20/21	Payroll Transfer PR-08/20/21	110-2-00-00-210.004 Retirement Payable	21351.77	35890	09/03/21
44805	VMERS DB	08/27/21	Payroll Transfer PR-08/27/21	110-2-00-00-210.004 Retirement Payable	22196.46	35890	09/03/21
22040	VT DEPT OF MOTOR VEHICLES	08/30/21	Replacement title 9055 Title	110-5-40-12-430.001 R&M Vehicles - Supplies	35.00	35892	09/03/21
29825	VT GAS SYSTEMS	08/23/21	EPR Maint Garage Gas Augu 2202232 0821	110-5-30-11-621.000 Natural Gas	39.32	35895	09/03/21
29825	VT GAS SYSTEMS	08/23/21	EPD NATURAL GAS 7/19-8/19 2202281 0821	110-5-41-13-621.000 Natural Gas/Heating	132.81	35896	09/03/21
29825	VT GAS SYSTEMS	08/23/21	SH Pool Gas August 2536530 0821	110-5-30-11-621.000 Natural Gas	59.44	35897	09/03/21
29825	VT GAS SYSTEMS	08/23/21	the Natural Gas charge 7/ 996488 0821	110-5-41-15-621.000 Natural Gas/Heating	39.32	35899	09/03/21
29825	VT GAS SYSTEMS	08/23/21	the Natural Gas charge 7/ 996488 0821	110-5-41-11-621.000 Natural Gas/Heating	68.41	35899	09/03/21
29825	VT GAS SYSTEMS	08/23/21	the Natural Gas charge 7/ 996488 0821	110-5-41-14-621.000 Natural Gas/Heating	39.32	35899	09/03/21

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29825	VT GAS SYSTEMS	08/23/21	the Natural Gas charge 7/ 996488 0821	110-5-41-12-621.000 Natural Gas/Heating	86.28	35899	09/03/21
29825	VT GAS SYSTEMS	08/23/21	the Natural Gas charge 7/ 996488 0821	110-5-41-17-621.000 Natural Gas/Heating	40.37	35899	09/03/21
29825	VT GAS SYSTEMS	08/23/21	the Natural Gas charge 7/ 996488 0821	110-5-41-10-621.000 Natural Gas/Heating	44.51	35899	09/03/21
29825	VT GAS SYSTEMS	08/23/21	the Natural Gas charge 7/ 996488 0821	110-5-41-18-621.000 Natural Gas/Heating	39.32	35899	09/03/21
25535	VT MUNICIPAL CLERKS & TRE	08/31/21	Annual Conf. - JW 210831	110-5-12-10-500.000 Training, Conf, Dues	80.00	35900	09/03/21
27030	VT OFFICE OF CHILD SUPPOR	09/03/21	Payroll Transfer PR-09/03/21	110-2-00-00-210.005 Misc Deductions Payable	311.54	35901	09/03/21
41630	VT STATE TREASURER	09/01/21	Dog fees to state 210831	110-2-00-00-215.004 Due to VT Dog Lic	1400.00	35902	09/03/21
14545	ICMA-RC (PLAN 705508)	09/03/21	Payroll Transfer PR-09/03/21	110-2-00-00-210.005 Misc Deductions Payable	454.95	9010685	09/03/21
23055	ICMA - 401 (PLAN 10904	09/03/21	Payroll Transfer PR-09/03/21	110-2-00-00-210.004 Retirement Payable	668.52	9010686	09/03/21
09005	ICMA - 457 (PLAN 302056)	09/03/21	Payroll Transfer PR-09/03/21	110-2-00-00-210.005 Misc Deductions Payable	4251.19	9010687	09/03/21
V1161	ICMA RETIREMENT TRUST-401	09/03/21	Payroll Transfer PR-09/03/21	110-2-00-00-210.004 Retirement Payable	7538.43	9020427	09/03/21
V1160	ICMA RETIREMENT TRUST-457	09/03/21	Payroll Transfer PR-09/03/21	110-2-00-00-210.004 Retirement Payable	1185.24	9020428	09/03/21
17425	ICMA ROTH PLAN 706287	09/03/21	Payroll Transfer PR-09/03/21	110-2-00-00-210.004 Retirement Payable	33.90	9020430	09/03/21
21385	HEALTH EQUITY	09/03/21	Payroll Transfer PR-09/03/21	110-2-00-00-210.009 HSA Payable HE	159.50	21090301	09/03/21
05390	FAMILY SUPPORT REGISTRY	09/03/21	Payroll Transfer PR-09/03/21	110-2-00-00-210.010 Judgements Payable	69.23	21090302	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	122-5-22-10-530.000 Communications	202.40	35886	09/03/21
43275	RYCANDON MECHANICAL,INC.	08/25/21	SH Pool Bathroom Repair 13842	130-5-30-12-750.001 Park Asset Replacement	972.50	35870	09/03/21
43275	RYCANDON MECHANICAL,INC.	08/25/21	SH Pool Project - Relocat 13844	130-5-30-12-750.001 Park Asset Replacement	627.91	35870	09/03/21
43275	RYCANDON MECHANICAL,INC.	08/25/21	SH Pool Hot Water Heating 13845	130-5-30-12-750.001 Park Asset Replacement	8462.50	35870	09/03/21
43275	RYCANDON MECHANICAL,INC.	08/25/21	SH Pool Phase 2 Complete 13846	130-5-30-12-750.001 Park Asset Replacement	9000.00	35870	09/03/21
24475	BOND O'REILLY AUTO-ESSEX	08/17/21	fuel filter Trk 604 5677317654	151-5-51-10-430.001 R&M Vehicles - Supplies	74.19	35793	09/03/21
24475	BOND O'REILLY AUTO-ESSEX	08/20/21	WS Trk 603 5677318028	151-5-51-10-430.001 R&M Vehicles - Supplies	35.54	35793	09/03/21
24475	BOND O'REILLY AUTO-ESSEX	08/24/21	WS pump 310 5677318579	151-5-51-10-430.001 R&M Vehicles - Supplies	24.94	35793	09/03/21
24475	BOND O'REILLY AUTO-ESSEX	08/25/21	supplies - Pump stn repai 5677318754	151-5-51-30-433.000 R&M Infrastructure	15.98	35793	09/03/21
03070	MINUTEMAN PRESS	07/20/21	bill printing ER 106045 183508	151-5-51-10-540.000 Advertising	1835.08	35851	09/03/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
28410	O'NEIL ROBERTA B	09/02/21	Refund double pymnt 2038008003	151-2-00-00-200.002 Overpayments Payable	417.48	35856	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	151-5-51-10-530.000 Communications	40.01	35886	09/03/21
29825	VT GAS SYSTEMS	08/23/21	the Natural Gas charge 7/ 996488 0821	151-5-51-10-621.000 Natural Gas/Heating	39.32	35899	09/03/21
29825	VT GAS SYSTEMS	08/23/21	the Natural Gas charge 7/ 996488 0821	151-5-51-10-621.000 Natural Gas/Heating	23.74	35899	09/03/21
19815	AMAZON CAPITAL SERVICES	08/20/21	Fall Soccer Supplies 1FMH6VXQLTLF	159-5-30-14-610.000 General Supplies	171.96	35787	09/03/21
09365	DELTA MARKETING GROUP	08/18/21	Fall Soccer Pins 10920	159-5-30-14-610.000 General Supplies	833.30	35812	09/03/21
09365	DELTA MARKETING GROUP	08/18/21	Fall Soccer Pins 10921	159-5-30-14-610.000 General Supplies	60.06	35812	09/03/21
09365	DELTA MARKETING GROUP	08/25/21	Fall Soccer Coach TShirts 10967	159-5-30-14-610.000 General Supplies	1038.45	35812	09/03/21
09365	DELTA MARKETING GROUP	08/25/21	Fall Soccer TShirts 10968	159-5-30-14-610.000 General Supplies	2873.75	35812	09/03/21
09365	DELTA MARKETING GROUP	08/25/21	Soccer TShirts 10969	159-5-30-14-610.000 General Supplies	156.16	35812	09/03/21
36130	VERIZON WIRELESS	08/18/21	CELL PHONE SERVICE 9886499827	159-5-30-14-530.000 Communications	40.48	35886	09/03/21

	Report Total				165810.16		
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To the Treasurer of Town of Essex, We Hereby certify that there is due to the several persons whose names are listed hereon the sum against each name and that there are good and sufficient vouchers supporting the payments aggregating $ ***165,810.16
Let this be your order for the payments of these amounts.

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Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
37985	A T & T MOBILITY	08/23/21	CELL PHONE SERVICE 878149869 08	110-5-14-10-735.000 Tech: Equip/Hardware	43.23	35904	09/10/21
37985	A T & T MOBILITY	08/23/21	CELL PHONE SERVICE 878149869 08	110-5-41-10-530.000 Communications	15.62	35904	09/10/21
37985	A T & T MOBILITY	08/23/21	CELL PHONE SERVICE 878149869 08	110-5-20-10-432.000 R&M Technology	43.23	35904	09/10/21
37985	A T & T MOBILITY	08/23/21	CELL PHONE SERVICE 878149869 08	110-5-40-12-570.000 Other Purchased Services	104.73	35904	09/10/21
37985	A T & T MOBILITY	08/23/21	CELL PHONE SERVICE 878149869 08	110-5-30-12-530.000 Communications	32.08	35904	09/10/21
37985	A T & T MOBILITY	08/23/21	CELL PHONE SERVICE 878149869 08	110-5-30-13-530.000 Communications	105.37	35904	09/10/21
19815	AMAZON CAPITAL SERVICES	09/03/21	CABLES FOR FAIR 13G1MMW9RNPW	110-5-20-10-610.000 General Supplies	20.90	35906	09/10/21
19815	AMAZON CAPITAL SERVICES	09/08/21	Power Strips 17PK-F3JR-1V	110-5-14-10-735.000 Tech: Equip/Hardware	163.75	35906	09/10/21
19815	AMAZON CAPITAL SERVICES	09/02/21	Wall File Holders 1KJR-LG1K-N7	110-5-14-10-735.000 Tech: Equip/Hardware	114.40	35906	09/10/21
07465	BIBENS ACE HARDWARE INC	06/01/21	tool for Town Clerks Reno 41440	110-5-41-10-431.000 R&M Buildings & Grounds	2.79	35910	09/10/21
07465	BIBENS ACE HARDWARE INC	06/01/21	tool for Town clerk renov 41446	110-5-41-10-431.000 R&M Buildings & Grounds	9.99	35910	09/10/21
07465	BIBENS ACE HARDWARE INC	09/04/21	PAINT/SUPPLIES 42374	110-5-41-13-431.000 R&M Buildings & Grounds	44.44	35910	09/10/21
07465	BIBENS ACE HARDWARE INC	09/08/21	PAINT SUPPLIES 42393	110-5-41-13-431.000 R&M Buildings & Grounds	12.58	35910	09/10/21
07465	BIBENS ACE HARDWARE INC	09/08/21	sawzall blade 42408	110-5-30-12-611.000 Small Tools and Equipment	27.99	35910	09/10/21
02035	BURLINGTON FREE PRESS #10	07/01/21	PW Free Press Job Ad 0004024729	110-5-10-10-540.000 Advertising	1170.50	35913	09/10/21
07710	CCR SALES AND SERVICE LLC	09/03/21	Mower Parts 55665	110-5-30-12-430.000 R&M Vehicles & Equipment	365.82	35914	09/10/21
40205	CDW-G	09/08/21	Adobe Yearly Licenses for K413217	110-5-14-10-735.000 Tech: Equip/Hardware	3058.38	35915	09/10/21
21210	CINTAS LOC # 68M 71 M	08/18/21	81 main first aid supplie 5073095297	110-5-41-10-610.000 General Supplies	102.39	35917	09/10/21
23525	CLARK'S TRUCK CENTER INC	09/01/21	parts- trk 104 451345	110-5-40-12-430.001 R&M Vehicles - Supplies	65.22	35918	09/10/21
23525	CLARK'S TRUCK CENTER INC	09/03/21	parts - trk 104 451483	110-5-40-12-430.001 R&M Vehicles - Supplies	135.00	35918	09/10/21
23525	CLARK'S TRUCK CENTER INC	09/08/21	credit for returned conne CM451345	110-5-40-12-430.001 R&M Vehicles - Supplies	-20.22	35918	09/10/21
25120	CLICKTIME.COM	09/01/21	Town Online Timesheets Au 353840	110-5-13-10-505.000 Tech. Subs, Licenses	344.00	35920	09/10/21
25120	CLICKTIME.COM	09/01/21	Town Online Timesheets Au 353840	110-5-30-10-505.000 Technology, Subscriptions	440.00	35920	09/10/21
04940	COMCAST	08/19/21	Internet 2 Lincoln 8/26-9 0136343 0821	110-5-41-10-900.000 Transfer btwn Town/Villag	163.39	35921	09/10/21
04940	COMCAST	08/27/21	Internet 5 Jericho Road 0167066 0921	110-5-41-14-400.000 Contracted Services	163.39	35921	09/10/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
28415	DIRICO PATRICK & DENTON K	09/07/21	Refund credit amount 1030001002	110-2-00-00-205.000 Clearing - Taxes	1335.15	35922	09/10/21
11115	DOMINION TECH COMPUTER SV	09/01/21	O365 Monthly Licenses 20218601	110-5-14-10-735.000 Tech: Equip/Hardware	2964.70	35923	09/10/21
11115	DOMINION TECH COMPUTER SV	09/01/21	O365 Monthly Licenses 20218601 0	110-5-14-10-735.000 Tech: Equip/Hardware	2964.70	35923	09/10/21
17215	DRAKE PETROLEUM CORPORATI	09/02/21	diesel fuel IN-0175028-2	110-5-41-15-626.000 Gasoline	5839.78	35924	09/10/21
05000	ESSEX DISCOUNT BEVERAGE I	09/06/21	FUEL 5562520	110-5-41-15-626.000 Gasoline	40.97	35928	09/10/21
28150	FITZGERALD ENVIRONMENTAL	09/06/21	Professional services 7-1 21006-02	110-5-40-13-330.000 Professional Services	1060.00	35933	09/10/21
14595	FOLEY SERVICES INC	08/31/21	CARPET RUNNERS 1386920	110-5-41-13-400.000 Contracted Services	48.40	35934	09/10/21
04340	FORD MOTOR CREDIT COMPANY	09/03/21	LEASE PAYMENT 33 1767560	110-5-95-00-970.901 Police Lease Principal	467.69	35935	09/10/21
04340	FORD MOTOR CREDIT COMPANY	09/03/21	LEASE PAYMENT 33 1767560	110-5-95-00-975.901 Police Lease Interest	11.01	35935	09/10/21
07000	GALLS INC	09/01/21	GRAGG ALLOWANCE 19195514	110-5-20-10-612.000 Uniforms	51.20	35936	09/10/21
04035	GOT THAT RENTAL & SALES I	09/07/21	fuel for weed whacker 90496	110-5-40-12-430.001 R&M Vehicles - Supplies	7.99	35939	09/10/21
07010	GREEN MOUNTAIN POWER CORP	08/27/21	Power various loc 7/27-8/ 082721D	110-5-41-14-622.000 Electricity	126.47	35940	09/10/21
07010	GREEN MOUNTAIN POWER CORP	08/27/21	Power various loc 7/27-8/ 082721D	110-5-41-16-622.000 Electricity	120.18	35940	09/10/21
07010	GREEN MOUNTAIN POWER CORP	08/27/21	Power various loc 7/27-8/ 082721D	110-5-41-17-622.000 Electricity	83.44	35940	09/10/21
07010	GREEN MOUNTAIN POWER CORP	08/27/21	Power various loc 7/27-8/ 082721D	110-5-41-18-622.000 Electricity	64.94	35940	09/10/21
07010	GREEN MOUNTAIN POWER CORP	08/27/21	Power various loc 7/27-8/ 082721D	110-5-41-24-622.000 Electricity	42.45	35940	09/10/21
07010	GREEN MOUNTAIN POWER CORP	08/27/21	Power various loc 7/27-8/ 082721D	110-5-40-12-622.200 Streetlight Electricity	8125.41	35940	09/10/21
28070	HP FAIRFIELD LLC	08/23/21	extended warranty on new 7672548	110-5-40-12-430.000 R&M Vehicles & Equipment	8500.00	35944	09/10/21
09001	IBM CORPORATION (PA)	08/31/21	5 ADD DEVICE MGMT SOFTWAR 6809207144	110-5-20-10-432.000 R&M Technology	20.00	35946	09/10/21
26765	INDUSTRIAL VIDEO & CONTRO	08/26/21	POLE CAMERA REPAIR 08262101	110-5-20-10-430.000 R&M Vehicles & Equipment	360.00	35947	09/10/21
37715	INTEGRITY COMMUNICATIONS	08/30/21	Cabling for video doorbel 40140A	110-5-14-10-735.000 Tech: Equip/Hardware	496.01	35949	09/10/21
37715	INTEGRITY COMMUNICATIONS	08/31/21	Data jack installation fo 40147	110-5-14-10-735.000 Tech: Equip/Hardware	169.13	35949	09/10/21
37715	INTEGRITY COMMUNICATIONS	09/01/21	PD Phone Service Maintena 40150	110-5-14-10-432.000 R&M Technology	432.00	35949	09/10/21
39100	J.M. ELLSWORTH CO INC	07/16/21	fuel pump supplies 0803770-IN	110-5-41-15-431.000 R&M Buildings & Grounds	461.41	35950	09/10/21
28255	JOHN LEO & SONS INC	08/27/21	Ditching - Lost Nation Ro 202921	110-5-40-12-451.000 Summer Construction Servi	12000.00	35951	09/10/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
28255	JOHN LEO & SONS INC	08/16/21	Ditching Alder Lane 202923	110-5-40-12-451.000 Summer Construction Servi	3110.00	35951	09/10/21
28255	JOHN LEO & SONS INC	08/16/21	Driveway Culvert - 197 Br 202930	110-5-40-12-575.000 Storm Sewer Maintenance	1190.00	35951	09/10/21
28255	JOHN LEO & SONS INC	08/19/21	sidewalk work - Sand Hill 202931	110-5-40-12-573.000 Sidewalk and Curb Maint	1135.00	35951	09/10/21
20370	K2 TOWERS II LLC	07/01/21	BRIGHAM HILL TOWER 18149	110-5-25-10-530.000 Communications	3254.65	35953	09/10/21
20370	K2 TOWERS II LLC	07/01/21	BRIGHAM HILL TOWER 18149	110-5-20-10-530.000 Communications	3254.64	35953	09/10/21
28420	LAYMAN JAMES & LAUREN	09/08/21	Refund Inst 1 overpmt 2082003235,	110-2-00-00-205.000 Clearing - Taxes	3772.08	35956	09/10/21
33195	LIMOGE & SONS GARAGE DOOR	08/30/21	SH Pool Garage Door 73574TE	110-5-30-11-430.000 R&M Vehicles & Equipment	1400.00	35958	09/10/21
10110	MCGOVERN MECHANICAL CORP	08/31/21	2 URINAL REPAIRS 1693	110-5-41-13-431.000 R&M Buildings & Grounds	498.21	35960	09/10/21
44275	MVP SELECT CARE INC.	09/03/21	Administrative Fee Invoic 2021-08	110-5-13-10-505.000 Tech. Subs, Licenses	40.00	35962	09/10/21
37605	NEW ENGLAND MUNICIPAL RES	08/18/21	Web Data Hosting Annual F 48613	110-5-14-10-735.000 Tech: Equip/Hardware	530.45	35963	09/10/21
41950	OCCUPATIONAL HEALTH CENTE	08/26/21	LABONTE PHYSICAL 1207191929	110-5-20-10-500.000 Training, Conf, Dues	109.50	35965	09/10/21
24890	ON SITE CONSTRUCTION LLC	08/29/21	replace front stoop - 5 J 1300	110-5-41-14-431.000 R&M Buildings & Grounds	5169.26	35966	09/10/21
23420	P & P SEPTIC SERVICE INC.	09/07/21	Pearl St Park Portolet Se T561742	110-5-30-12-570.000 Other Purchased Services	200.00	35967	09/10/21
23420	P & P SEPTIC SERVICE INC.	09/07/21	Saxon Portolet September T561743	110-5-30-12-570.000 Other Purchased Services	200.00	35967	09/10/21
23420	P & P SEPTIC SERVICE INC.	09/07/21	IBR Portolet September T561744	110-5-30-12-570.000 Other Purchased Services	200.00	35967	09/10/21
25140	PIKE INDUSTRIES INC	08/31/21	Asphalt 1150784	110-5-40-12-605.000 Summer Construction Suppl	132.66	35970	09/10/21
18005	REPRO	08/30/21	GIS Plotter Supplies 120471	110-5-14-10-735.000 Tech: Equip/Hardware	100.95	35975	09/10/21
18005	REPRO	08/31/21	Maintenance Contract for 120526	110-5-14-10-432.000 R&M Technology	693.00	35975	09/10/21
42565	SEVEN DAYS	09/01/21	Legal Ad-PC 214371	110-5-16-10-540.000 Advertising	114.92	35979	09/10/21
12145	SHRED-EX	08/31/21	AUG PAPER SHREDDING 20648	110-5-20-10-330.000 Professional Services	50.00	35981	09/10/21
11935	VIKING-CIVES USA	08/30/21	valve installed on Trk 11 4508521	110-5-40-12-430.000 R&M Vehicles & Equipment	625.00	35986	09/10/21
V2377	VLCT EMPLOYMENT RESOURCE	10/01/21	FY22Q2 Unemp Town REN031724-Q4	110-5-13-10-520.000 Insurance	3277.00	35987	09/10/21
27030	VT OFFICE OF CHILD SUPPOR	09/10/21	Payroll Transfer PR-09/10/21	110-2-00-00-210.005 Misc Deductions Payable	311.54	35988	09/10/21
07565	W B MASON CO INC	08/23/21	Aug office supplies C1305527 932	110-5-20-10-610.000 General Supplies	487.37	35989	09/10/21
07565	W B MASON CO INC	08/23/21	Aug office supplies C1305527 932	110-5-41-15-610.000 General Supplies	362.47	35989	09/10/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
07565	W B MASON CO INC	08/23/21	Aug office supplies C1305527 932	110-5-41-10-610.000 General Supplies	345.15	35989	09/10/21
07565	W B MASON CO INC	08/23/21	Aug office supplies C1305527 932	110-5-12-10-610.000 General Supplies	28.48	35989	09/10/21
07565	W B MASON CO INC	08/23/21	Aug office supplies C1305527 932	110-5-30-13-610.000 General Supplies	33.94	35989	09/10/21
07565	W B MASON CO INC	08/23/21	Aug office supplies C1305527 932	110-5-30-11-610.000 General Supplies	8.97	35989	09/10/21
07565	W B MASON CO INC	08/23/21	Aug office supplies C1305527 932	110-5-16-10-610.000 General Supplies	38.26	35989	09/10/21
20490	WHEELER BETTY	09/08/21	FAIR DISPATCH HOURS 9082021	110-5-20-16-570.000 Other Purchased Services	210.00	35990	09/10/21
23000	WHITCOMB	08/26/21	5" Minus stone 90023-00003B	110-5-40-12-605.000 Summer Construction Suppl	171.76	35991	09/10/21
09005	ICMA - 457 (PLAN 302056)	09/10/21	Payroll Transfer PR-09/10/21	110-2-00-00-210.005 Misc Deductions Payable	5406.59	9090416	09/10/21
14545	ICMA-RC (PLAN 705508)	09/10/21	Payroll Transfer PR-09/10/21	110-2-00-00-210.005 Misc Deductions Payable	916.12	9090417	09/10/21
23055	ICMA - 401 (PLAN 10904	09/10/21	Payroll Transfer PR-09/10/21	110-2-00-00-210.004 Retirement Payable	668.53	9090418	09/10/21
17425	ICMA ROTH PLAN 706287	09/10/21	Payroll Transfer PR-09/10/21	110-2-00-00-210.004 Retirement Payable	33.90	9090481	09/10/21
V1161	ICMA RETIREMENT TRUST-401	09/10/21	Payroll Transfer PR-09/10/21	110-2-00-00-210.004 Retirement Payable	7300.08	9090482	09/10/21
V1160	ICMA RETIREMENT TRUST-457	09/10/21	Payroll Transfer PR-09/10/21	110-2-00-00-210.004 Retirement Payable	981.69	9090486	09/10/21
21385	HEALTH EQUITY	09/10/21	Payroll Transfer PR-09/10/21	110-2-00-00-210.009 HSA Payable HE	159.50	9102104	09/10/21
V10636	HEALTH EQUITY	09/01/21	Monthly Fees for Sep 2021 1dfjvk3	110-5-13-10-330.000 Professional Services	23.70	9102105	09/10/21
21760	FIRST NATIONAL BANK OMAHA	07/26/21	EPR Credit Card August 0492 0821	110-5-30-11-612.000 Uniforms	13.91	9102106	09/10/21
21760	FIRST NATIONAL BANK OMAHA	07/26/21	EPR Credit Card August 0492 0821	110-5-30-11-570.000 Other Purchased Services	134.27	9102106	09/10/21
21760	FIRST NATIONAL BANK OMAHA	07/26/21	EPR Credit Card August 0492 0821	110-5-30-11-610.000 General Supplies	37.63	9102106	09/10/21
21760	FIRST NATIONAL BANK OMAHA	07/26/21	EPR Credit Card August 0492 0821	110-5-30-11-570.000 Other Purchased Services	301.00	9102106	09/10/21
21760	FIRST NATIONAL BANK OMAHA	07/26/21	EPR Credit Card August 0492 0821	110-5-30-11-580.000 Travel	227.70	9102106	09/10/21
21760	FIRST NATIONAL BANK OMAHA	07/26/21	EPR Credit Card August 0492 0821	110-5-30-11-570.000 Other Purchased Services	271.01	9102106	09/10/21
21760	FIRST NATIONAL BANK OMAHA	07/26/21	EPR Credit Card August 0492 0821	110-5-30-11-570.000 Other Purchased Services	-11.09	9102106	09/10/21
26030	THOMSON REUTERS - WEST	09/01/21	AUG CLEAR LE INVEST 844933140	121-5-00-00-750.000 Machinery & Equipment	194.78	35984	09/10/21
07565	W B MASON CO INC	08/23/21	Aug office supplies C1305527 932	122-5-22-10-610.000 General Supplies	42.36	35989	09/10/21
37985	A T & T MOBILITY	08/23/21	CELL PHONE SERVICE 878149869 08	151-5-51-10-530.000 Communications	145.84	35904	09/10/21

Vendor		Invoice Date	Invoice Description / Invoice Number	Account	Amount Paid	Check Number	Check Date
23215	ESSEX EQUIPMENT INC	09/02/21	oil and marking paint for #...10799942	151-5-51-20-433.000 R&M Infrastructure	90.83	35929	09/10/21
07010	GREEN MOUNTAIN POWER CORP	08/27/21	Power various loc 7/27-8/ 082721D	151-5-51-30-622.000 Electricity	944.61	35940	09/10/21
23420	P & P SEPTIC SERVICE INC.	08/31/21	Allderbrook P.Stn T-561480	151-5-51-30-570.000 Other Purchased Services	7730.00	35967	09/10/21
12775	PRATT & SMITH ELECTRICAL	08/31/21	electrical work - various 9178	151-5-51-30-570.000 Other Purchased Services	2025.66	35971	09/10/21
12775	PRATT & SMITH ELECTRICAL	08/31/21	electrical work - Alder B 9245	151-5-51-30-570.000 Other Purchased Services	79.00	35971	09/10/21
37985	A T & T MOBILITY	08/23/21	CELL PHONE SERVICE 878149869 08	159-5-30-15-530.000 Communications	37.23	35904	09/10/21
10585	CHALLENGER SPORTS INC	08/25/21	Challenger Soccer Camps SUM01	159-5-30-14-835.000 Program Instructor Fees	9235.00	35916	09/10/21
2950	KASPRISIN ANDREW	08/26/21	Summer Track Field Camp 082621D	159-5-30-14-835.000 Program Instructor Fees	1100.00	35954	09/10/21
25640	PELKEY'S ARCHERY INC	08/23/21	Archery Programs 210823	159-5-30-20-835.000 Program Instructor Fees	2040.00	35968	09/10/21
03905	THE EDGE	08/19/21	August Tennis Camps 821E	159-5-30-20-835.000 Program Instructor Fees	2100.00	35983	09/10/21
07565	W B MASON CO INC	08/23/21	Aug office supplies C1305527 932	159-5-30-14-610.000 General Supplies	35.96	35989	09/10/21
21760	FIRST NATIONAL BANK OMAHA	07/26/21	EPR Credit Card August 0492 0821	159-5-30-14-500.000 Training, Conf, Dues	46.99	9102106	09/10/21
21760	FIRST NATIONAL BANK OMAHA	07/26/21	EPR Credit Card August 0492 0821	159-5-30-14-610.000 General Supplies	91.96	9102106	09/10/21
	Report Total				125982.02		

To the Treasurer of Town of Essex, We Hereby certify that there is due to the several persons whose names are listed hereon the sum against each name and that there are good and sufficient vouchers supporting the payments aggregating $ ***125,982.02
Let this be your order for the payments of these amounts.

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Memorandum

TO: Evan Teich, Unified Manager and the Selectboard
Village of Essex Junction Trustees
FROM: Annie Costandi, P.E., Director of Stormwater Operations/Staff Engineer
Dennis Lutz, P.E., Director of Public Works
CC: Aaron Martin, P.E., Director of Public Works Operations
Gregory Duggan, Deputy Manager
Marguerite Ladd, Assistant Manager
Jim Jutras, Water Quality Superintendent
Brad Luck, Essex Junction Parks and Recreation Director
DATE: September 8, 2021
SUBJECT: Information regarding Stormwater Management related to Separation Discussion

ISSUE: The issue is to further clarify and provide added input on the stormwater program and the memo provided by the Village Stormwater Coordinator in a Memo dated September 7, 2021.

DISCUSSION:

Comment #1: The basis for joint stormwater operations is contained in a jointly agreed upon Memo of Understanding between the Town and Village elected officials entitled Stormwater Permitting and Management Services dated January 13, 2015. It was agreed that the Town would fund the combined costs of the Town and Village for meeting required State and Federal permit requirements in the Town's Storm Water Operating budget (general fund expense) and construction expenses associated with meeting those permit requirements in the Town's Capital Fund.

Separate permits have been issued to each community but the local funding to meet those permit requirements has come almost entirely from the Town accounts.

While the Town and Village share watersheds, the Town and the Village do not share stormwater permits. Each municipality is designated as a Municipal Separate Storm Sewer System (MS4) and has their own stormwater permits issued by the State. While the permit requirements are the same, each municipality is responsible for meeting these requirements separately.

Under the permits and using Town funding for the local share, the municipalities have created the following **joint** management plans:

- Flow Restoration Plans for Indian and Sunderland Brooks
- Stormwater Management Plan
- Phosphorus Control Plan
- Stormwater Infrastructure Replacement Plan – currently in progress as only Phase 1 has been completed.

While these plans were created jointly, both municipalities are individually responsible for meeting the requirements of the plan. If the Town does not meet the phosphorus reduction targets, it will have no impact on the Village.

All these plans are in some stage of completion. Grants were obtained for most of this work, with the local share agreed upon by both Boards as coming from the Town Capital Account. For example, under the jointly developed and Board(s) approved Flow Restoration Plan, the completion of four projects was required to meet the permit requirements of both communities. Two have been completed in the Village, one in the Town, and one more Town project is scheduled for completion in 2022/2023. Certifications were made to the State that the funds were available to complete the permit requirements by constructing all four projects. A similar situation exists with respect to all other already approved and uncompleted permit-required grant projects.

In summary, the funding source for all existing but yet uncompleted grants need to be preserved, irrespective of what occurs with respect to potential separation. Legal and binding commitments have been made.

Comment #2: In the Operating Budget for stormwater permit compliance, separation of these costs into Town and Village components would provide the following: In our opinion and assuming a similar program to what is in place today, the total budget for FY22 of $359,352, would be split approximately $121,500 for the Village and $237,852 for the Town (34% versus 66%). These costs would include state stormwater permit fees, stream flow monitoring, shared summer interns, employee education, travel, and training, GIS support for storm water system mapping, field data collection costs required under storm water permits, consultant studies, minor stormwater system design costs, and 33% of the Village Water Quality Superintendent and 20% of the Village Stormwater Coordinator's salaries.

In the Capital Budget, funds would have to be retained until all existing grants have been closed out. As stated, many times previously to both Boards, there is no adequate current funding source to meet either the projects required under the Phosphorus Control Plan or any future permit change such as Chloride reduction. Whether separate, current status or merged, a substantial funding source will be needed to meet those permit requirements. It will be costly for both communities, probably requiring an increase in Capital Funding, passage of a municipal bond, creation of a separate storm water fee or some similar source of revenue.

Comment #3: No new permits are required, and any new permits will be issued to each community, irrespective of separation.

Comment #4: Under separation, each community would be responsible for meeting their own mitigation costs. The Town has the advantage of available land area for many of its identified future projects and developers have land area to site treatment systems to reduce the impact of future costs on the Town. The Village has restricted land area and may have issues citing future systems.

Comment #5: The Joint Stormwater Committee may not be as viable an entity under separation. If both communities pursue a separate way to achieve permit compliance and the funding for those plans are distinct and separate, then the importance of this Committee in a joint recommendation process may diminish. The purpose was to provide an intermediary level of recommendation between staff and the elected officials so that issues brought to the two Boards were in synchronization between the communities. If the intent is to continue a joint effort, then it should be replaced with some form of stormwater utility that is truly joint. This would remove the power of both Boards from the decision process regarding stormwater implementation but would ensure a single approach to improving water quality. Town streams enter the Village and then accept Village stormwater and then enter the Town again (Indian Brook). Sunderland Brook starts in the Village and then enters the Town. Stream water is a non-political entity that affects both communities.

Comment #6: WE agree with the comment made by the Village under their item 5.

MEMORANDUM

TO: Town of Essex Selectboard and Village of Essex Junction Trustees
FROM: Chelsea Mandigo, Stormwater Coordinator/Wastewater Operator
cc: Evan Teich, Unified Municipal Manager,
Gregory Duggan, Deputy Manager,
Marguerite Ladd, Assistant Manager
Jim Jutras, Water Quality Superintendent
Brad Luck, Essex Jct Parks and Recreation Director
DATE: September 7, 2021
SUBJECT: Stormwater Permit and Clarification related to separation discussion

Issue: To answer questions from the Selectboard and the Trustees regarding stormwater permit and management relationship between Town and Village

Discussion: Below are answered to questions received from Selectboard via Brad:

1) **Given that the Village and Town share watersheds and thus stormwater permits, in Village independence, what changes?**

A: The Village and Town only share watersheds. WE DO NOT SHARE PERMITS! (looking back the wording in last email response we provided Brad was misleading). We each have OUR OWN INDIVIDUAL MS4 PERMITS issued by the State in which many of the requirements are the same for all MS4 towns in Chittenden County. We have however, created joint management and implementation plans since the watersheds in the Town/Village are the same as they relate to the permit requirements. In these management and implementation plans, capital projects are separated out by Village and Town municipal boundaries including costs.

In Village separation, we would have to change how permit required stormwater capital projects are funded as currently all money for these projects is through the Town with one account to fund all projects. The Town has also paid for Village Stormwater Coordinator education trainings, grant match money if related to the permit related capital projects, shared summer interns and some other miscellaneous items like water quality monitoring devices.

It should also be noted there is no other community that Jim nor I are aware has a set up where one community holds the capital money for both. The other communities use cost share formulas and pay separately for joint projects. For the Town/Village it made sense to share costs when we were working towards merging but now that we are discussing separation it does not make sense to share stormwater costs when the Village has less of a financial reach (by almost half) to meet current permit requirements.

In summary, in separation the City would need a consolidated and established stormwater budget that includes capital project funding and not have it split into various places as it is now between Town and Village Public Works.

2) **Are new permits needed?**

A: NO, we are considered separate by the State and Federal governments.

3) **Do the City and Town have to share the expense for mitigation efforts in each respective community or can this be done separately?**

A: We can pay separately for mitigation efforts.

To explain further: Our management and implementation plans have costs separated out for each community even though the plan to meet the set water quality targets was made jointly. Each community has their own phosphorus reduction targets set by the state. The Flow Restoration Plan which is also joint with VTRANS and Colchester have projects ID by community. However, we have already met the current requirements of that plan once the Town builds the LDS Church stormwater project in 2022/2023. If costs need to be shared on a project, there are ways we can calculate the cost for each town which how other towns in Chittenden County have completed joint stormwater projects in the shared watersheds.

4) **Does the joint stormwater committee continue?**

A: Yes. There has been a lot of great brainstorming in this group which will be even more important when working in a "separated" setting.

5) **Is there any other information that should be considered?**

A: Both the Town and Village will need to find a way to fund the next set of projects to meet the phosphorus reduction permit requirements as there is not enough money in the Town SW capital project fund. This is something that can be done separately as there are various paths that can be taken, and each community has a different reach to meet the requirements with the Town having almost twice the cost as the Village under the current requirements.

To: **Selectboard Members of the Town of Essex, Vermont**
Essex Town Managers Office
81 Main Street, Essex Jct., VT 05452

From: Jennifer Knauer, Facilitator
Jennifer Knauer, LLC
jenknauer@gmail.com

Date: 21 August 2021

Re.: **Summary Notes from "Town of Essex Public Forums" held on August 4th, August 6th, and August 21st 2021 regarding: "How to prepare for the Village of Essex Junction's upcoming separation vote and subsequent VT Legislative decision on the creation of an independent City of Essex Junction.** *Notes from 8/21/21 are added in red font.*

See Also: *Event Materials Prepared by the Town of Essex*
- *Event Flyer*
- *Event Handout*
- *Attendance Report(s) via Microsoft Teams Reports & Paper Sign In*

Discussion Prompt: What are you paying attention to during this interim phase?
(Ex. Level of Services, Cost of Services, Other?)

A) Retaining childcare, afterschool, enrichment opportunities that have been available in current environment
- Affordability. *Will cost go up?*
- Availability as a town resident. *Don't want to have to compete. This is an essential service. What options will be left if separation goes through?* I'm hoping to preserve alignment of these two departments & expand services; my children attend programs at both in order to make our child care coverage / situation work.
- PREDICTABILITY. How much notice will people have if there are significant changes to availability / affordability / accessibility? *ToV residents don't need another "what if" re options for camps and childcare. Need to be able to plan in collaboration with work commitments etc. It is a real concern that availability will diminish.*
- Expansion. Looking for increased child care services (not just retaining current level).

B) Retaining experience with Parks & Recreation

- How will our experience of programming and parks change? *Presence, availability, price – this was a welcoming element of living here / moving here. Worried that these things will be compromised.* Cost of accessing services / parks
- Access to Indian Brook / Saxon (shared park spaces)

C) Potential Tax Increases / Budgeting

- Looking for reliable information about what tax changes are likely.
  - Would be helpful to have scenarios / better information about the implications of removing 42% of tax base …for town …and for village.
  - A framework that would help the public think about these options / trade-offs (even if specifics are not available) would be helpful. *Looking for ways to support a more level-headed discussion rather than what feels like an emotional debate and/or an abundance of speculation.*
- Very worried about property taxes going up. *This will be VERY difficult for everybody. (How will this affect affordable housing? Residents with fixed income? Who is advocating for these points of view?)*
- Cost of staff / shared staff / expenses – how to anticipate how this would change? ***Paying attention (and wary of) any big budget changes during this Interim Phase.***
- Watching the Budget Process for Public Works, Fire Dept.s during this interim phase .

D) Concern: How discourse takes place regarding this issue

- How to ensure accurate information?
- How to stay engaging? *Concern that drama disengages & people will not be informed. The way we (as a community) engage this topic impacts how people may think about Essex – worried they will disengage, choose not to live here, etc.*
- How to reframe this discussion/process so that it is increasingly open for input, exchanges, discussion?
  - *At the moment, the swapping of proposals is leaving limited opportunity to explore options / consider options as a community.*
  - How might we increase options for **community building** discussions? "Public to Be Heard" is not the most effective venue for exchange. Example: offer chances to speak with SB reps (maybe 2 at a time) to gather and discuss – modeled after "coffee chats"
- How do we make decisions collectively? *More of a say in how separation occurs.*
- What can be learned / gleaned from "Separation & Share"? *Take a second look at these recommendations.*
- Concerned that discourse is more divisive than it needs to be, particularly with the manner in which residents and elected officials characterize proposals and swap considerations. *Example - framing "proposals" as "demands."*
  - *Hoping that neighbors are not "characterizing" neighbors.*

- *"Be kind – we may be walking in each others' shoes at some point"*
- *See frustration as a signal that there are concerns / questions / urgency – seek to understand, rather than characterize or attribute intent.*

E) Communication could be improved (Feedback for the Selectboard):

- Please increase communication with the public, transparency. *Seeking opportunities to have more dialogue about these topics / this transitionary time & process. Wish for the public information network to have good, reliable information. Looking for roactive, creative ways to inform town residents (especially those who do not want to get info from social media).*
- Concerned with how social media network disrupts accurate exchanges. *Is there a way to counter this? How to balance with good information and accurate signals about direction / tone / developments as planning goes forward. Looking for an increase in good information / facts and advertise where to get it – it is tough to know what is really going on without a "Clearing House" of reliable information.*
- Communication between the Boards is most important thing right now. *Signal that this taking place.*
- Would like to hear more from the Selectboard – looking for an accurate message about ongoing efforts, developments, challenges.
  - Are there ways to build in predictable, iterative opportunities to correct information / give information / Q&A **–** particularly on common misperceptions (i.e. a dedicated time during SB meetings?)
  - *Increase communication about the way that services work and how they are funded – this is complicated information – how to get better understanding about the rationale behind discrepancies (example Town & Village sidewalks)*
  - *"Best to overcommunicate than not communicate at all" – hopes that this would counter misinformation.*
- **Would be helpful to hear what topics the executive sessions are covering, even if the details cannot always be disclosed. *Ie. What <u>can</u> SB let the public know? And then share!*** *Paying attention to the number of executive sessions that are happening. Confusing / tricky to follow developments – may be missing input. Attention to equitable representation.*

F) Representation

- How to ensure that ToV residents' views are fully represented / considered DURING INTERIM PHASE. *Concern is that there is over representation of village views – which may drive direction of considerations. Current representation structure dilutes ToV vote*.
- What options could be set up for the interim phase to increase representation / to inform planning? *An Advisory Committee (ie. include folks from dense areas, suburbs, rural etc. – outside the village only residents)? A small citizen committee to research options / proposals and bring to elected officials for review and vetting? Note: any accommodations that may be provided to ToV also be provided to V residents and visa versa.*
- Current ToV is not monolithic – representation model needs to take this into account.
    - *Representation cannot be "at large" – everyone is elected town wide but there are very different areas of the town (consider options like Ward Gov etc.).*
    - *"Other areas outside of the village do not have the ability to uniquely weigh in based on its specific needs."*
- Paying attention to how Board(s) take into account and reflect input from focus groups and the community. *Note: this is on-going and spans many topics of interest, not just the separation.*

G) Service Availability:

- What will the impact be on services (like sidewalks plowing) if separation goes through?
- How complicated will it be to request updates / adjustments / services as needed or when gaps are noticed – particularly during this interim period?
- How are merged services being distributed between Village / Town during this interim phase? *Always evaluating what is available, when it is available, fairness / equity between two entities.*

H) Policing:

- Please do not stall on deciding how these services will be provided / organized (planning for interim and planning for future phases). *Bring definition and make the best decision for now, knowing that adjustments may be needed in the future.*
- Hoping for shared police services with both municipalities. *Concerned with discourse about the alternatives, if did not share police services. What can be ensured during this interim phase so that residents know what to expect in future?*

I) Culture:

- How do we take care of every single person in this community? *…during Interim Phases and beyond.*
- What are our collective values / ethics? How does our government reflect our community and visa versa?
- "Civility." Concerned about the Village vs ToV tenor – want to feel welcome in both spaces!
- How to counter perceived conflict between "ToV" "Village"? *How to change the way that this debate takes place? Can it be less divisive, polarizing? …can we still demonstrate and provide a welcoming community climate / place to live?*

J) How negotiation of issues related to the Separation / Independence takes place

- Looking for clarity from SB about when contractual changes / agreements are to be negotiated.
- Looking for active development / planning / engagement about what ToV residents might be facing if separation goes through
- Wary of making changes during the interim period
- Plan for a successful outcome if separation *does* take place, whether or not separation takes place! *"Separate & Share" referenced several times - giving attention to shared services pre/post separation.*
- Remain mindful of how the "interim" phase looks different depending on whether someone lives in the Village or the ToV. Seeking good information about conditions post VT Legislative vote in order to develop options and understand what impacts these options would have.

K) Bigger Picture

- There are so many other critical pieces of work to pick up (Climate change, etc.) – would like to the committee work that is moving forward be included on Selectboard Agenda. *Acknowledgment: the separation process takes so much bandwidth. But seeing progress of committee work on the agenda brings visibility, engagement, alignment.*
- Worried that prolonged limbo works against Essex in drawing talent / energy / availability to work on bigger issues that will affect future generations.

Discussion Prompt: What questions do you have?

1. Tax Base – what are implications of losing this as a town resident? (Worried about desirability to move here)

2. Cost of staff / shared staff / expenses – ways to anticipate how this would change? What ways might the cost of shared services be allocated between two separate entities? *(what makes sense? 50/50? Other percentage? What formula is fair?)*

3. What would happen to these services if separation happens? What preparations are being made if this takes place? Looking to anticipate impacts:
    - Childcare
    - Seasons Passes
    - Guardrails, Sidewalk Maintenance

4. Are there agreements / swaps that could be made?

5. If separation doesn't succeed, what options are being explored for equalization?

6. Is there a unified approach in leading up to the Vermont Legislative Decision? (increase the possibility of success)

7. How does this interim period affect people who provide services to the community (positions like Justice of the Peace, setting up Town Meeting, Elections)? Could this be a detail that is added to the Charter Proposal? ***Partial Answer provided – no changes occur until effective date per the State Legislature.***

8. Option/Possibility: How many ToV entities could be supported by the Highway Tax?

9. Are there creative options / proposals developed during this interim phase that would durable, useful and transferrable whether or not separation passes? *Example: Fair Representation*

10. Where may people send comments / input about separation? ***Send to Evan***

11. Note: these names / definitions of geographies is problematic (Center, Village, ToV, Junction, etc.) Are there alternative approaches to how we refer to these areas? How to deconstruct these terms as they impact how people relate to the issue / to each other.

12. Why are we still planning on "merging" / "shared services" during this interim phase if ultimate goal is separation? What signal is this sending?

13. REQUEST: can we get more specific information on what to expect in different scenarios. Looking for education about what the options / implications would be – how will this effect each person: Taxes, Budget, Services (needs assessment in different potential environments)

14. How will interim arrangements / shared services be voted on (this is also a representation Q)?

15. REQUEST: Prioritize clarity about decisions and changes that are being considered re. public safety and public health.

16. Why is this separation issue (which seemed so simple – one shared service -Police) getting so complicated? *"Please help simplify."*

17. What adjustments are possible with the **time frame** of this separation process in order to increase opportunities for community members to educate themselves, review information, exchange thoughts, ensure informed decision making?



July 24, '21

Dear Folks,

Thank you for the gift of $14,050. — for the work of the Ecumenical Ministry!

Sincerely, The ESU Ecumenical Ministry

Thank you for choosing to donate to the Essex Jericho Underhill Food Shelf. Many within our community depend on our organization to provide food for their families. With your generosity, we are able to respond and make a difference to those in need. Your kindness and generosity, are greatly appreciated.

TOWN AND VILLAGE OF ESSEX
BOARDS AND COMMITTEES VACANCIES

TOWN OF ESSEX

Selectboard - 1 vacancy
Conservation and Trails - 3 vacancies
Green Mountain Transit - 1 vacancy
Economic Development Commission - 1 vacancy
CCTV Representative - 1 vacancy

Housing Commission (JOINT boards) - 1 vacancy

VILLAGE OF ESSEX JUNCTION

Capital Program Review - 1 vacancy
Planning Commission - 1 vacancy
Green Mountain Transit - 1 vacancy
Zoning Board of Adjustment - 3 vacancies
CCTV Representative - 1 vacancy
Bike/Walk Advisory - 1 vacancy

PLEASE GO TO: ESSEXVT.BAMBOOHR.COM/JOBS/

SCROLL TO THE VOLUNTEERS SECTION FOR MORE INFORMATION & TO APPLY

OR EMAIL LMAHNS@ESSEX.ORG WITH YOUR LETTER OF INTEREST

MEETING SCHEDULES 08/27/2021

TOWN SELECTBOARD MEETINGS	VILLAGE TRUSTEES MEETINGS
September 13, 2021—6:30 PM	SB Regular -- Cathy
September 14, 2021—6:30 PM	VB Regular – Darby
September 20, 2021—6:30 PM	JB Special - Cathy
September 27, 2021—6:30 PM	JB Special - Darby
September 28, 2021—6:30 PM	SB Regular – Amy
October 4, 2021—6:30 PM	SB Regular – Darby
October 12, 2021—6:30 PM	VB Regular – Darby
October 18, 2021—6:30 PM	SB Regular -- Cathy
October 19, 2021—6:30 PM	JB Special - Darby
October 25, 2021—6:30 PM	JB Special - Darby
October 26, 2021—6:30 PM	VB Regular -- Amy
November 1, 2021—6:30 PM	SB Regular – Amy
November 2, 2021 – 8:30 AM	VB All day budget workshop – Darby
November 9, 2021 – 8:00 AM	SB All day budget workshop --
November 9, 2021—6:30 PM	VB Regular – Cathy
November 15, 2021—6:30 PM	SB Regular -- Darby
November 22, 2021—6:30 PM	JB Special - Amy
November 23, 2021—6:30 PM	VB Regular – Darby
December 6, 2021—6:30 PM	SB Regular -- Cathy
December 13, 2021—6:30 PM	JB Special -
December 14, 2021—6:30 PM	VB Regular -- Amy
December 20, 2021—6:30 PM	SB Regular – Cathy
December 21, 2021—6:30 PM	VB Regular -- Amy
January 3, 2022—6:30 PM	SB Regular -- Amy
January 11, 2022—6:30 PM	VB Regular – Darby
January 18, 2022—6:30 PM	SB Regular
January 25, 2022—6:30 PM	VB Regular -- Cathy
February 7, 2022—6:30 PM	SB Regular

February 8, 2022—6:30 PM	VB Regular
February 22, 2022—6:30 PM	VB Regular -- Cathy
February 23, 2022—6:30 PM	SB Regular meeting
February 28, 2022—6:30 PM	Town Informational hearing
March 7, 2022—6:30 PM	SB Regular
March 8, 2022—6:30 PM	VB Regular
March 21, 2022—6:30 PM	SB Regular
March 22, 2022—6:30 PM	VB Regular -- Cathy
April 4, 2022—6:30 PM	SB Regular
April 6, 2022 – 7:00 PM	Village Informational hearing -- Cathy
April 13, 2022—6:30 PM	VB Regular