



6 Church Street,
Gardiner, Maine 04345
Phone (207) 582-4200

Site Plan Review Application

Project Name: Gardiner Rental Center Project Cost: \$600,000

Date of Submission: September 6th, 2023 Received by: _____ Fees: \$250.00

A complete written description of the proposed project including all other local, state and federal permits required for the project. The applicant is proposing to construct three self-storage buildings on Brunswick Avenue. The buildings will have a total area of 8,300 sf. A detention pond has been designed to handle the peak storm events and is located along the east side of the parcel.

Anticipated beginning/completion dates of construction: October 2023/August 2024

1. General Information:

Name of Property Owner: Steve Bolduc & Suk In

Address: 440 Dingley Road Bowdoinham ME 04008

Phone/Fax No: 207-588-0566

Applicant/Agent Name: Steve Bolduc & Suk In

Address: 440 Dingley Road Bowdoinham ME 04008

Phone/Fax No 207-588-0566

Design Professional(s)/Contractor(s): Surveyor Engineer Architect Contractor

Name: E.S. Coffin Engineering & Surveying (c/o Jim Coffin)

Address: P.O. Box 4687 Augusta, ME 04330

Phone/Fax No 207-623-9475(p) / 207-623-0016(f)

Engineer Name: James Coffin (PE #8500)

Address: P.O. Box 4687 Augusta, ME 04330

Phone/Fax No 207-623-9475/207-623-0016

Surveyor Name: Kane Coffin (PLS #1292)

Address: P.O. Box 4687 Augusta, ME 04330

Phone/Fax No 207-623-9475/207-623-0016

Signature: _____ Date: September 6, 2023

2. Property Information:

Property Location: 743 Brunswick Avenue

Deed Ref: Book 9412 Page 92 City Tax Map(s) 16 Lot(s) 6A

Property Size/Frontage: Acres 2.8 Sq. Ft. 121,968 Road 350' Shore N/A

Zoning District(s): Planned Developed (PD)

3. Development Information:

One or more site maps drawn to scale, prepared and sealed by a professional engineer or architect showing the following:

a.) The existing conditions on the property including:

1. The property boundaries;
The property boundaries are shown on the Topographic Survey Plan and Site Plan.
2. The zoning district and zoning district boundaries if the property is located in more than one zone;
The parcel is within the Planned Development (PD) District.
3. The location of required setbacks, buffers and other restrictions:
All setbacks and buffers are shown on the Site Plan.
4. The location of any easements or rights-of-way;
All easements and rights-of-way can be found on the Site Plan or Topographic Survey.
5. The locations of existing structures and other existing improvements on the property including a description of the current use of the property;
The current use of the property is commercial and there is a 2,470-sf single-story building utilized as an office and maintenance area for Gardiner Tool Rental.
6. The locations of existing utilities on and adjacent to the property including sewers, water mains, stormwater facilities, gas mains, and electric and other telecommunication facilities;
All existing utilities mentioned above can be found on the Topographic Survey Plan.
7. The location of the nearest source of a fire protection water supply (hydrant, fire pond, etc.)
There is a fire hydrant located 600' southeast along the south side of Brunswick Avenue.
8. The general topography of the property indicating the general slope of the land and drainage patterns. The CEO and/or Planning Board may require a topographic survey of all or a portion of the property for projects involving the construction of new or expanded structures or site modifications.
A Topographic Survey Plan is included with this submission.
9. The location, type and extent of any natural resources on the property including wetlands, vernal pools, floodplains, waterbodies, significant wildlife habitats, rare or endangered plants or animals, or similar resources; and
There is a stream that extends from the 15" diameter reinforced concrete pipe approximately 320' northeast to the stonewall on the property line. Wetlands have been delineated on site by Vaughn Smith Associates and there will be 4,020 sf of wetland impacts and therefore a NRPA permit application is not required. There are not any deer wintering areas or Inland Water Fowl- Wading Bird Habitats on site according to the City's On-Line Mapping. A letter is included from the Maine Natural Areas Program indicating that there aren't any botanical features documented within the project area.

10. The location and type of any identified historic or archeological resource on the property.
[A letter is included from the Maine Historic Preservation commission indicating that there are not any historical resources on the property.](#)

b.) The proposed development activity for which approval is requested including:

1. The estimated demand for water supply and sewage disposal together with the proposed location and provisions for water supply and wastewater disposal including evidence of soil suitability if on-site sewage disposal is proposed;
[A letter has been sent to Zach Lovely of the Gardiner Water District even though the applicant is not utilizing any water for the proposed project.](#)
2. The direction of proposed surface water drainage across the site and from the site together with the proposed location of all stormwater facilities and evidence of their adequacy;
[All surface water flows in a northeast direction towards the rear property line. There is a small portion of land that flows towards the stream along the southwest property line.](#)
3. The location, dimensions, and ground floor elevations of all proposed buildings and structures including expansions or modifications to existing buildings that change the footprint of the building;
[These elements can be found on the site plan \(C-1\).](#)
4. The location, dimensions and materials to be used in the construction of drives, parking areas, sidewalks and similar facilities;
[These elements can be found on the site plan \(C-1\) and detail sheets.](#)
5. The proposed flow of vehicular and pedestrian traffic into and through the property;
[Vehicles enter off from Brunswick Avenue through the southeast curb cut and go in a northeast direction around the first two self-storage buildings as shown on the site plan \(C-1\).](#)
6. The location and details for any signs proposed to be install or altered;
[There is an existing free-standing sign for Gardiner Rental Center between the two curb cuts along Brunswick Avenue. The applicant is not proposing to add a sign for the self-storage business.](#)
7. The location and details for any exterior lighting proposed to be installed or altered;
[All exterior lights will be wall packs \(dark sky\) that are attached to the building.](#)
8. Provisions for landscaping and buffering; and
[Buffering is shown on the site plan \(C-1\).](#)
9. Any other information necessary to demonstrate compliance with the review criteria or other standards of the Land Use Ordinance.
[None at this time.](#)

c.) Evidence that the applicant has or can obtain all required permits necessary for the proposal.
[ES Coffin Engineering will obtain all pertinent permits needed.](#)

Additional Information Required:

Building and structure drawings showing the footprint, height, front, side and rear profiles and all design features necessary to show compliance with this Ordinance;
[The applicant has provided cut sheets for the proposed buildings.](#)

An estimate of the peak hour and average daily traffic to be generated by the project and evidence that the additional traffic can be safely accommodated on the adjacent streets;
[We have included a traffic report to show the maximum of 2.4 peak hour trips associated with this development.](#)

An erosion and sedimentation control plan; and
The erosion & sedimentation control plan is shown on Sheet C-2.

A stormwater management plan demonstrating how any increased runoff from the site will be handled if the project requires a stormwater permit from the Maine Department of Environmental Protection or if the Planning Board determines that such information is necessary based on the scale of the project and the existing conditions in the vicinity of the project.

A stormwater report is included that indicates the post-development flows will be less than the pre-development flows for the 2-, 10- and 25-year peak storm events. A detention pond has been implemented to provide stormwater storage for the project.

Elevation drawings prepared by a professional engineer or architect showing the façade and roof of the side of all proposed structures facing the road, and the side facing the customer entrance. The drawings shall clearly illustrate the profile of the roof. All façade and roof materials shall be identified including color and texture.

Building elevations are shown in the application.

Photographs or similar photo representations or drawings showing the architectural design and context of the proposed structures and adjacent properties on the both sides of the road.

Cut sheets are included depicting the proposed self-storage units.

Survey Requirements

The Planning Board may require the applicant to submit a survey of the perimeter of the tract, giving complete descriptive data by bearing and distances, made and certified by a Registered Land Surveyor. The survey may be required for the construction of new structures or any construction proposed on a undeveloped parcel or tract of land, whenever the Planning Board finds that a survey is necessary to show compliance with the requirements of this Ordinance due to the size of the lot, location of the lot or the placement of existing or proposed structures on the lot or neighboring properties.

The topographic survey shows the parcel boundaries.

Additional Studies

The Planning Board may require the applicant to perform additional studies or may hire a consultant to review the application or portions thereof. The cost to perform additional studies or hire a consultant shall be borne by the applicant.

4. Review Criteria

An applicant shall demonstrate that the proposed use or uses meet the review criteria listed below for the type of application. The Planning Board shall approve an application unless one or the other of them makes a written finding that one or more of the following criteria have not been met.

6.5.1.1 The application is complete and the review fee has been paid.

The application is complete and the Site Plan Review fee of \$250.00 has been submitted.

6.5.1.2 The proposal conforms to all the applicable provisions of this Ordinance.

The project conforms to all applicable provisions of the LUO.

6.5.1.3 The proposed activity will not result in water pollution, erosion or sedimentation to water bodies.

The application contains all pertinent erosion and sediment control devices needed for the project. The majority of the runoff flows north to the proposed detention pond in the rear of the property.

6.5.1.4 The proposal will provide for the adequate disposal of all wastewater and solid waste.

The proposed use does not require sewer service or solid waste removal.

6.5.1.5 The proposal will not have an adverse impact upon wildlife habitat, unique natural areas, shoreline access or visual quality, scenic areas and archeological and historic resources.

There are not any deer wintering areas or Inland Water Fowl- Wading Bird Habitats on site according to the City's On-Line Mapping. A letter is included from the Maine Historic Preservation commission indicating that there are not any historical resources on the property. A letter is included from the Maine Natural Areas Program indicating that there are not any unique natural areas.

6.5.1.6 The proposal will not have an adverse impact upon waterbodies and wetlands.

There is a stream along the southwest property line, but there will not be any disturbances within 25' of it. However, there are disturbances within 75' of the stream and a Permit By rule (PBR) will be filed with the DEP. Wetlands have been delineated on site by Vaughn Smith Associates and there will be 4,020 sf of wetland impacts and therefore a NRPA permit application is not required.

6.5.1.7 The proposal will provide for adequate storm water management.

A stormwater report is included that indicates the post-development flows will be less than the pre-development flows for the 2-, 10- and 25-year peak storm events. A detention pond has been implemented to provide stormwater storage for the project.

6.5.1.8 The proposal will conform to all applicable Shoreland Zoning requirements.

The project is not within Shoreland Zoning and this section is not applicable.

6.5.1.9 The proposal will conform to all applicable Floodplain Management requirements.

The project is not within the 100-year flood elevation as shown on the attached Firmette and this section is not applicable.

6.5.1.10 The proposal will have sufficient water available to meet the needs of the development.

The proposed use does not require any water and this section is not applicable.

6.5.1.11 The proposal will not adversely affect groundwater quality or quantity.

The project will not utilize public water or sewer services and groundwater quality & quantity will not be adversely affected with the proposed project.

6.5.1.12 The proposal will provide for safe and adequate vehicle and pedestrian circulation in the development.

The proposed site is being utilized for self-storage as well as the existing rental use. Vehicles can adequately maneuver on site to access the rental business or to get to their storage unit, but pedestrians will not be able to walk around on site.

6.5.1.13 The proposal will not result in a reduction of the quality of any municipal service due to an inability to serve the needs of the development.

A letter has been sent to John Cameron (Public Works Director) asking if the project will have any negative impacts to the public works department.

6.5.1.14 The applicant has the adequate financial and technical capacity to meet the provisions of this Ordinance.

E.S. Coffin Engineering & Surveying has the technical ability to complete the project. The applicant is currently getting pricing for the project and will provide a financial statement indicating that they have adequate financing to complete the project.

6.5.2 Site Plan Review Criteria

All applications for Site Plan Review shall meet the Review Criteria contained in 6.5.1 and the additional criteria contained in this section.

6.5.2.1. The proposal will be sensitive to the character of the site, neighborhood and the district in which it is located including conformance to any zoning district specific design standards;

The parcel has a commercial use to the northwest and residential homes on all other sides of the property. Adequate screening will be implemented to provide a visual barrier along all four property lines.

6.5.2.2 The proposal will not have an adverse impact upon neighboring properties;

The property is being utilized as a rental center and self-storage is proposed to be added. Self-storage is a permitted use within the Planned Development District and the developed parcel will not have an adverse impact on abutting properties in the immediate area.

6.5.2.3 The proposal contains landscaping, buffering, and screening elements which provide privacy to adjacent land uses in accordance with the appropriate performance standards;

The project will implement Partial Screen Option #3 along all property lines per the Land Use Ordinance. This option includes 6 understory trees and 6 shrubs per 100', which will equate to a total of 58 of each plant type mentioned above. The project will not have an adverse impact on neighboring properties.

6.5.2.4 The building site and roadway design will harmonize with the existing topography and conserve natural surroundings and vegetation to the greatest practical extent such that filling, excavation and earth moving is kept to a minimum;

The proposed project involves the erection of three self-storage buildings with two being perpendicular to Brunswick Avenue and the other running parallel to Brunswick Avenue. The lot slopes towards the rear of the property and the paved areas adjacent to the storage units will have a slope of 1%. The applicant will add some fill in the area of the storage units and to build the detention pond.

6.5.2.5 The proposal will reflect the natural capabilities of the site to support the development. Buildings, structures, and other features should be located in the areas of the site most suitable for development. Environmentally sensitive areas including waterbodies, steep slopes, floodplains, wetlands, significant plant and wildlife habitats, scenic areas, aquifers and archeological and historic resources shall be preserved to the maximum extent;

The site has been graded in such a way where the grades are locked in along the paved area along the northwest side of the Rental Center. From these elevations the site is graded at a 1% slope as the Trachte self-storage buildings are sloped at 1% to accommodate drainage in between them. There is a section of wetlands along the northeast property line as shown on the Topographic Survey Plan. There are not any deer wintering areas or Inland Water Fowl - Wading Bird Habitats on site according to the City's On-Line Mapping.

6.5.2.6 The proposal will provide for a system of pedestrian ways within the site appropriate to the development and the surrounding area. The system will connect building entrances/exits with the parking areas and with existing sidewalks, if they exist or are planned in the vicinity of the project;

There are not any sidewalks on either Brunswick Avenue and the project involves the erection of self-storage buildings where pedestrian access is not warranted. The entrances/exits into the site are existing and there are no proposed alterations to these access points.

6.5.2.7 In urban and built-up areas, buildings will be placed closer to the road in conformance with setback requirements and parking areas shall be located at the side or rear of the building;

The proposed buildings are situated on site towards the rear of the property and within the building setback lines as shown on the site plan. There isn't any parking required for this use as vehicles will park adjacent to their storage unit and load or unload as needed.

6.5.2.8 Proposals with multiple buildings will be designed and placed to utilize common parking areas to the greatest practical extent;

There are not any parking spaces required for the proposed use and this section is not applicable.

6.5.2.9 Building entrances will be oriented to the public road unless the layout or grouping of the buildings justifies another approach.

The proposed buildings have overhead doors on all four sides to access the self-storage units as shown on the site plan.

6.5.2.10 Exterior building walls greater than 50 feet in length which can be viewed from the public road will be designed with a combination of architectural features with a variety of building materials and shall include landscaping abutting the wall for at least 50% of the length of the wall.

Although the buildings are longer than 50' they have overhead doors along all sides because of the proposed self-storage use. There can't be any landscaping adjacent to the buildings because of all the overhead doors.

6.5.2.11 Building materials will match the character of those commonly found in the City and surrounding area including brick, wood, native stone, tinted/textured concrete block or glass products. Materials such as smooth-faced concrete block or concrete panels and steel panels will only be used as accent features. Materials shall be of low reflectance, subtle, neutral or earth tone colors. High-intensity and bright colors shall be prohibited except when used as trim or accent. Building materials for industrial or commercial buildings located within an approved industrial park or subdivision are not be required to comply with this provision.

The proposed self-storage buildings will have earth tone colors and are made out of steel panels.

6.5.2.12 Building entrances and points where the development intersects with the public road and sidewalk will be provided with amenities appropriate for the area such as benches, bike racks, bus stop locations and other similar landscape features.

The proposed site is being utilized for self-storage where pedestrians will not be able to walk around on site as this is a storage facility.

6.5.2.13 A proposal which includes drive-through service will be designed to minimize impact on the neighborhood. Drive-through lanes will be fully screened from adjacent residential properties and communication systems will not be audible on adjacent properties.

There are no drive-thru lanes associated with the project and this section is not applicable.

Applicant shall provide information that demonstrates that the proposal will be sensitive to the character of the site, neighborhood and the district in which it is located by considering the following:

In regard to the General Performance Standards in Section 8 of the LUO;

8.7 Exterior Lighting:

Wall-packs are depicted on the site plan and cut sheets of these fixtures are included with this submission. All of the fixtures will be shielded so that light shines in a downward direction. Electricity will be routed from the existing Rental Center to the three self-storage buildings.

8.8 Noise:

The only noise generated from the project will be from construction vehicles during the site work.

8.11 Bufferyard & Screening Standards:

The project is required to implement a partial screen along each property line. We are proposing to use Partial Screen-Option #3 along all four property lines as shown on the site plan (C-1).

In regard to Environmental Performance Standards in Section 9 of the LUO:

9.1 Air Quality:

Dust will be controlled during construction will be implemented by applying calcium and water as needed.

In regard to Special Activity Performance Standards in Section 10 of the LUO:

10.24.5.7.2 Free Standing Signs:

No new signs for the self-storage units are proposed at this time and there is an existing free-standing sign for the Rental Center as shown on the site plan (C-1).

6. Waivers

Waiver of Submission Requirements

The Planning Board may, for good cause shown and only upon the written request of an applicant specifically stating the reasons therefor, waive any of the application requirements provided such waiver will not unduly restrict the review process. The Planning Board may condition such a waiver on the applicant's compliance with alternative requirements. Good cause may include the Planning Board's finding that particular submissions are inapplicable, unnecessary, or inappropriate for a complete review. Notwithstanding the waiver of a submission requirement, the Planning Board may, at any later point in the review process, rescind such waiver if it appears that the submission previously waived is necessary for an adequate review. A request for a submission previously waived shall not affect the pending status of an application.

We are not asking for any waivers for the project.

September 6th, 2023

Mr. James Coffin, PE
E.S. Coffin Engineering & Surveying, LLC.
432 Cony Road
P.O. Box 4687
Augusta, Maine 04330

Subject: Agent Authorization
Gardiner Rental Center
734 Brunswick Avenue
Gardiner, Maine

Dear Mr. Coffin

The intent of this letter is to authorize E.S. Coffin Engineering & Surveying, Inc. to act as our agent in submitting applications and answering questions regarding our Planning Board Application to the City of Gardiner and any Maine Department of Environmental Protection permit applications for the proposed self-storage project located at 743 Brunswick Avenue in Gardiner.

Sincerely,

Steve Bolduc, Owner

A handwritten signature in cursive script that reads "Steven Bolduc".

**TRANSFER
TAX
PAID**

WARRANTY DEED

Grantor: Area Leasing & Development Corp.
588 River Road
Chelsea, ME 04330

Grantees: Steven G. Bolduc
In Suk Bolduc
440 Dingley Road
Bowdoinham, ME 04008

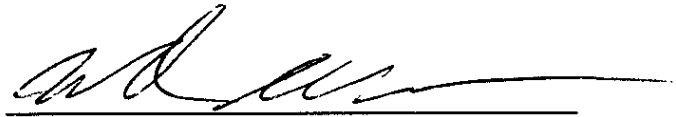
For consideration received, the Grantor hereby conveys to the Grantees, their heirs and assigns, as joint tenants and with warranty covenants, the land (with any improvements thereon) described in Schedule A, annexed hereto and incorporated herein.

In witness whereof, the Grantor, by Mark Warren, its duly authorized President, has set his hand and its corporate seal this 3rd day of July, 2007.

AREA LEASING & DEVELOPMENT CORP.



Witness



by: Mark Warren, its President

State of Maine
Kennebec, SS.

Then personally appeared before me the above-named Mark Warren, as President of Area Leasing and Development Corp., known to me or whose identity was reasonably established, who acknowledged the forgoing instrument to be his free act and deed in his said capacity and the free act and deed of said corporation.

Dated: 7/3/2007



Notary Public/ Attorney at Law
Stephen T. Hayes, Bar #65
Print or Type Name

2) P. Dawson

Schedule A

A certain lot or parcel of land with the buildings thereon situated in the City of Gardiner. County of Kennebec and State of Maine bounded and described as follows:

Commencing on the Northerly side of the Brunswick Road at the Southeasterly corner of land formerly of George Danforth, now or formerly of one Jenkins; thence Northerly on said Jenkins' line and following a stone wall a distance of three hundred fifty (350') feet; thence easterly and parallel with said Brunswick Road a distance of three hundred fifty (350') feet; thence Southerly a distance of three hundred fifty (350') feet to the aforesaid Brunswick Road and a point three hundred fifty (350') feet easterly of the point of beginning; thence Westerly on said Brunswick Road a distance of three hundred fifty (350') feet to the bounds begun at.

Excepting and reserving therefrom the following parcel of land, as conveyed by Laurence E. and Audrey H. Dick to the State of Maine by deed dated November 6, 1952 and recorded in Kennebec County Registry of Deeds in Book 933, Page 125, to wit:

a certain lot or parcel of land situate in the City of Gardiner. County of Kennebec and State of Maine, bounded and described as follows, to wit: Being Parcel (26) as shown on a Right of Way Map, State Highway "Q" Gardiner, "Federal Aid Project No. FI 01-2(1) dated June 1952, on file in the Office of the State Highway Commission (SHC File No.6-55) and recorded in Kennebec County Registry of Deeds.

Beginning at a point thirty-three (33) feet northerly from and as measured along a line at right angles to the Base Line at P.C. Station 1046/79.7;

thence N 60° 30' E three hundred nine and thirty-nine hundredths (309.39) feet to a point forty-three (43) feet northerly from and as measured along a line normal to a two degree (2°) curve of the Base Line at Station 1049/85;

thence N 66° 00' E two hundred thirty-four and three-tenths (234.3) feet to a point fifty (50) feet northerly from and as measured along a line at right angles to the Base Line at P. T. Station 1052/15.5;

thence N 70° 01' E six hundred twenty-three and five-tenths (623.5) feet a point fifty (50) feet northerly from and as measured along a line at right angles to the Base Line at P.C. Station 1058/39.0;

thence easterly along a curved line fifty (50) feet northerly from and concentric with a one degree (1°) curve of the Base Line four hundred seven and forty-one hundredths (407.41) feet to a point on a line normal to said curve of the Base Line at Station 1062/50;

thence continuing easterly along said curved concentric line about seven (7) feet to a point in the westerly line of land now or formerly of Mary B. McLaughlin, Trustee, said point being on a line normal to said curve of the Base Line at about Station 1062/57;

thence southerly along the westerly line of said McLaughlin about thirty-nine (39) feet to the present northerly line of State Highway "Q";

thence westerly along the present northerly line of State Highway "Q" as the same may run, about twelve hundred seventy (1270) feet to the southeasterly corner of land now or formerly of Clifford E. Dill;

thence northerly along the easterly line of said Dill about ten (10) feet to a point about thirty-eight (38) feet northerly from and as measured along a line at right angles to the Base Line at about Station 1046/19;

thence N 64° 35' E about sixty-one (61) feet to the point of beginning.

Including therewith a perpetual right to flow water over and across the land now or formerly of Laurence E. Dick and Audrey H. Dick outside of and adjoining the land herein conveyed from a culvert constructed as part of Federal Aid Project No. FI 01-2(1) at the following location as shown on the Right of Way Map above referred to: at about Station 1053/40 flowing northerly.

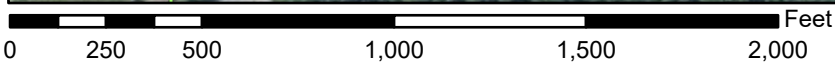
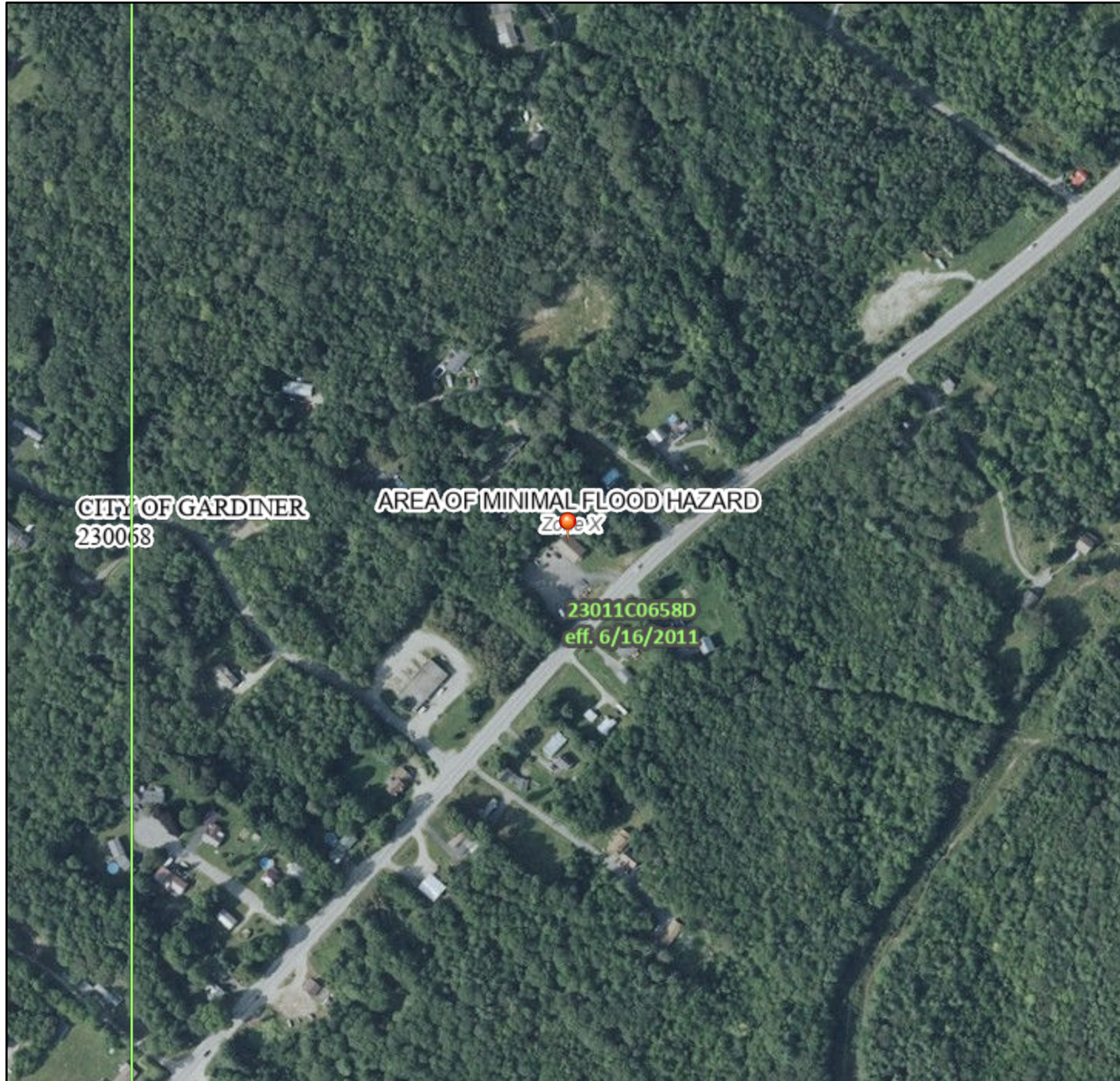
Meaning and intending to convey the same premises conveyed to Area Leasing and Development Corp. by deed of Franklin C. Brann dated October 14, 1986 and recorded October 17, 1986 in the Kennebec County Registry of Deeds in Book 3041, Page 182.

Received Kennebec SS.
07/03/2007 2:50PM
Pages 2 Attest:
BEVERLY BUSTIN-HATHEWAY
REGISTER OF DEEDS

National Flood Hazard Layer FIRMette



69°48'49"W 44°11'55"N



1:6,000

69°48'12"W 44°11'29"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped

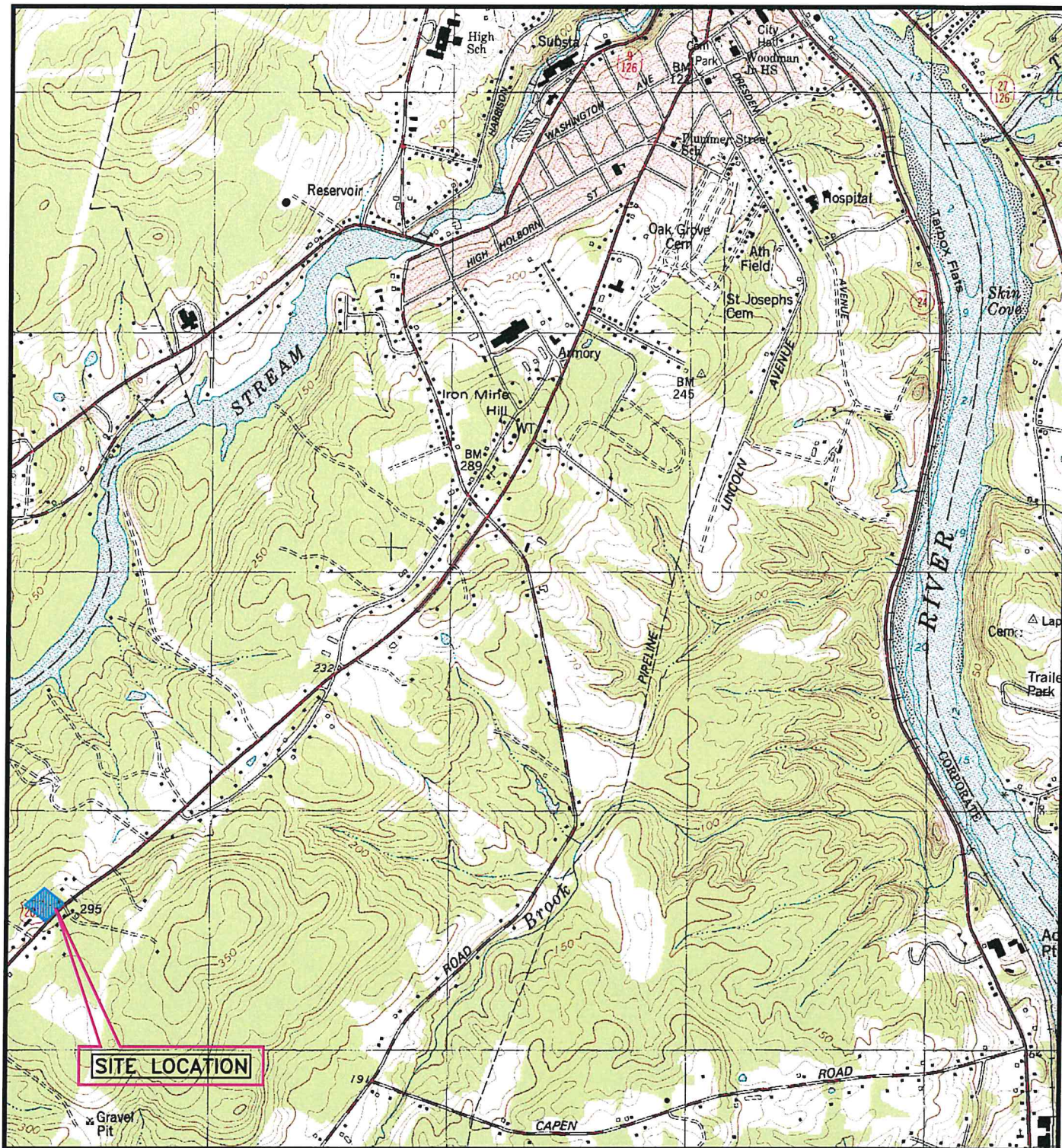
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **6/8/2023 at 12:23 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



LOCATION MAP
SCALE 1" = 2000'

CLIENT/PROJECT:	GARDINER RENTAL CENTER
LOCATION:	743 BRUNSWICK AVENUE
TOWN:	GARDINER
COUNTY:	KENNEBEC
STATE:	MAINE


ES COFFIN
 ENGINEERING & SURVEYING
EST. 1919
 ES COFFIN ENGINEERING & SURVEYING, INC.
 433 Coxy Road P.O. Box 4687 Augusta, Maine 04339
 Ph. (207) 623-9474 Fax (207) 623-9816 Toll Free 1-800-544-9475

SHEET TITLE:	SITE LOCATION MAP
SCALE:	1" = 2000'
DATE:	AUGUST 10, 2023

PROJ. NO. 2023-047


Client Name:
Gardiner Rental Center

Project No.
23-047

Photo No. 1

Date: 7-7-2023

Site Location:
743 Brunswick Avenue
Gardiner, Maine

Description:
Photo taken at the south entrance into the site looking south along Route 201.



Photo No. 2

Date: 7-7-2023

Site Location:
743 Brunswick Avenue
Gardiner, Maine

Description:
Photo taken at the south entrance into the site looking north along Route 201.



Client Name:
Gardiner Rental Center

Project No.
23-047

Photo No. 3

Date: 7-7-2023

Site Location:
743 Brunswick Avenue
Gardiner, Maine

Description:
Photo taken near Route 201 looking north at the front of the commercial building.



Photo No. 4

Date: 7-7-2023

Site Location:
743 Brunswick Avenue
Gardiner, Maine

Description:
Photo taken looking at the abutters building along the north side of the parcel.



Client Name:
Gardiner Rental Center

Project No.
23-047

Photo No. 5

Date: 7-7-2023

Site Location:
743 Brunswick Avenue
Gardiner, Maine

Description:
Photo taken near the west side of the site looking southeast at the commercial building.



Photo No. 6

Date: 7-7-2023

Site Location:
743 Brunswick Avenue
Gardiner, Maine

Description:
Photo looking at the south abutter's house located at 735 Brunswick Avenue.



Client Name:

Gardiner Rental Center

Project No.

23-047

Photo No. 7

Date: 7-18-2023

Site Location:

743 Brunswick Avenue
Gardiner, Maine

Description:

Photo taken from Route 201 looking at the abutter's house at 748 Brunswick Avenue.



Photo No. 8

Date: 7-18-2023

Site Location:

743 Brunswick Avenue
Gardiner, Maine

Description:

Photo taken from Route 201 looking at the abutter's house at 742 Brunswick Avenue.















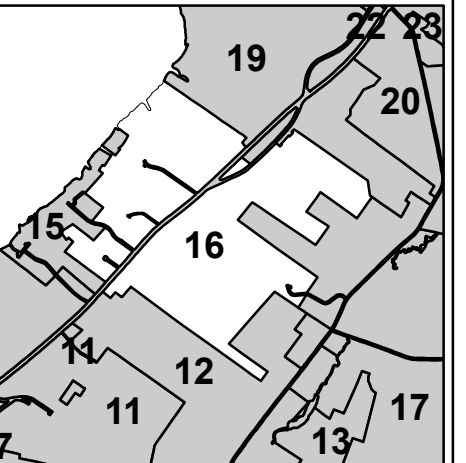
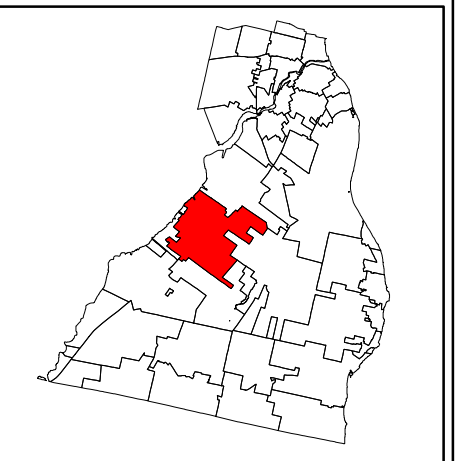
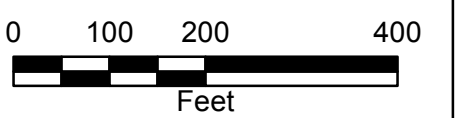
CITY OF
GARDINER
KENNEBEC CO.
MAINE



LEGEND

-  Lot Hook
-  Private Right of Way
-  Sub-lot Line
-  Transmission Line ROW
-  River, Stream or Pond
-  Railroad
-  Road
-  Town Line
-  Building
-  Parcel

For Assessment Purposes. Not to be used for conveyances.



Map 16

Printed: 9/7/2022
Effective Date: 4/1/2022



SEE MAP 12 LOT 6

SEE MAP 17 LOT 14

SEE MAP 12 LOT 20-4

SEE MAP 13 LOT 1B

SEE MAP 12 LOT 20

Foundation Details



TBS TRACHTE
Building Systems

800-356-5824 • trachte.com • tbs@trachte.com

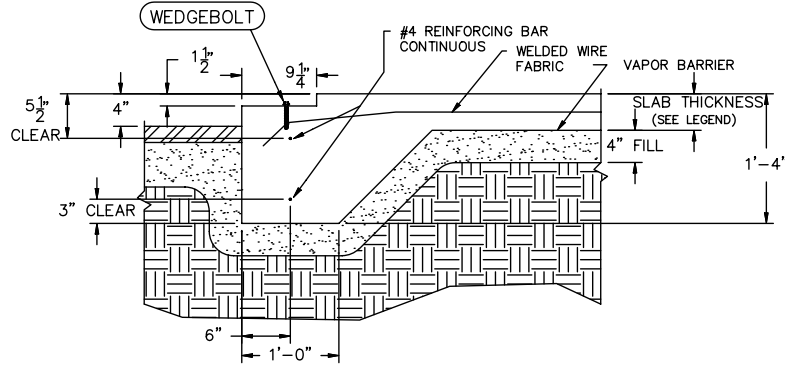
WATCH OUR VIDEO
CONCRETE AND GRADING AT
trachte.com

Floating Slab Detail

This detail is used in all non-frost areas and may also be used in some frost areas (Call your local building dept.

to see if they accept this design). There is no footing with the foundation. The concept is that the whole foundation moves up and down with the frost. The thickness of slab changes due to the snow and wind loads.

Trachte can only assume a 1,500 lb soil bearing capacity. If you have a soil report that states a higher capacity, this will impact the thickness of the foundation.



1 FLOATING SLAB DETAIL, NOTCHED

FLTN
SCALED UP 6X



Forms must be straight, level, and have adequate bracing. A 2" x 10" is used to form the required notch in the concrete.

Note: Photos only suggest how to pour the floating slab foundation.



video at
trachte.com

Look at our video
Concrete and Grading:
The Foundation to a
Great Project.



A 2" x 10" form is attached with screws so it can be dismantled during the finishing stage.

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.



The inside of the 2" x 10" form is staked to keep the form level during the pour. The stake is removed while the concrete is still workable. The required steel reinforcement bases are installed prior to the 2" x 10" form installation.



If the building requires interior column footings, locations are specified on the foundation plan. Mark the locations and shovel out to the depth denoted on the foundation plan.



A vapor barrier is placed under the concrete. 6" x 6" W1.4 x W1.4 welded wire fabric is specified on the plan. If you would prefer fiber mesh or rebar, Trachte will have to re-design the foundation because fiber mesh or rebar requires a thicker foundation.

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.

800.356.5824

A hand-held vibrator is used to work the concrete under the 2" x 10" form to help reduce the amount of air pockets.



The 2" x 10" form that shapes the notch must be removed while the concrete is still workable. If this is not done, there will be pock marks due to air pockets.



Curb edge the concrete to reduce chipping and hand trowel the notch to remove air pockets. Brush finishing the notch is also an option.



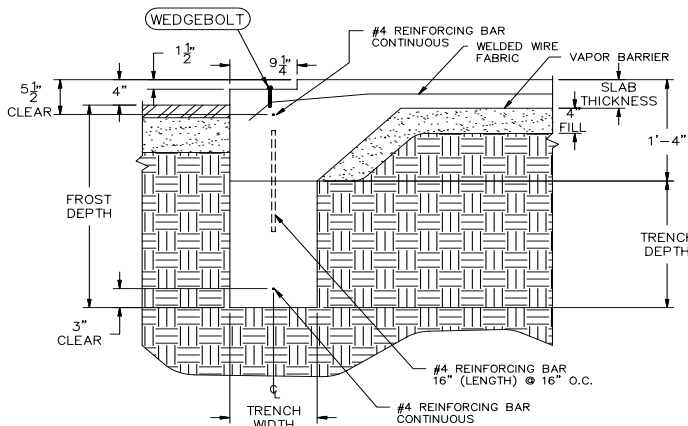
For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.



This is an alternative method to form your notch in the foundation. It will eliminate a lot of labor since you can trowel-finish your notch without removing any wood.



Steel angles are another alternative method for forming the notch.



1 STANDARD TRENCH DETAIL,
NOTCHED
TSTDN01
SCALED UP 6X

Trench Wall Foundations

This is a detail of Trachte's trenchwall foundation. The trench is poured to the depth of the frost line and the trench thickness can be either 8", 10", or 12" wide. The thickness of the slab changes due to the snow and wind loads. Trachte can only assume a 1,500 lb soil bearing capacity. If you have a soil report that states a higher capacity, it can impact the thickness of the foundation.

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.

800.356.5824

Dig a 12" wide trench in preparation for a 12" wide trench wall foundation.



The 12" wide trench is poured with #4 steel reinforcement bars protruding upward to anchor floor slabs. These bars are capped for safety.

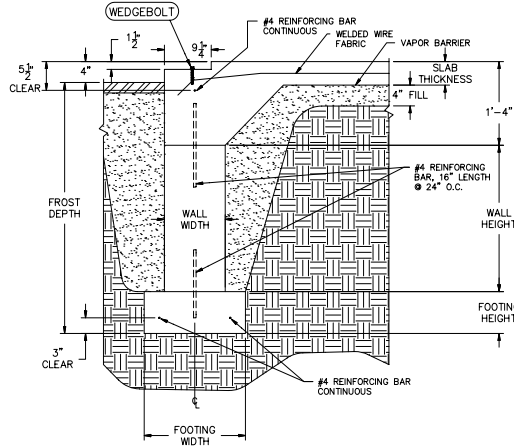


Alternative to the two step trench wall: surround the 12" wide trench wall foundation with forms and pour all concrete at once. The wood form stops the pour at the 12" step down.



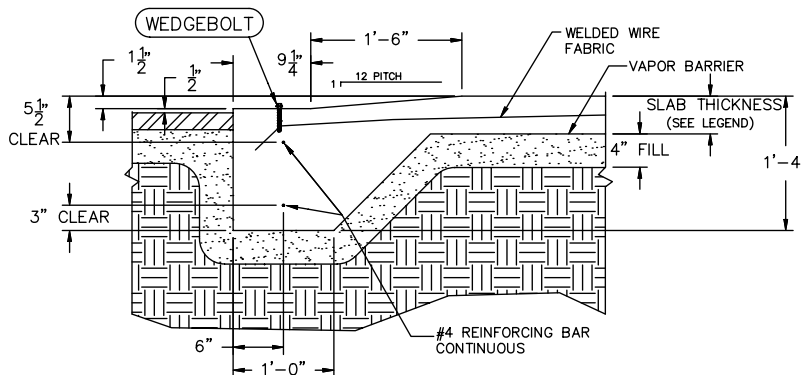
For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.

Foundation Details



① FROST WALL DETAIL, NOTCHED

FRSTN01
SCALED UP 6X



①B FLOATING SLAB DETAIL, ADA PITCH, NOTCHED

FLTADA
SCALED UP 6X

Frost Wall Foundations

The frost wall footing may be used in lieu of a trench wall footing. The footing is poured first, then forms are used for the walls. This system typically is more expensive than a trench wall foundation. This foundation is easiest to insulate.

The frost walls are poured, then the forms are taken off. Additional forms must be added to form the top portion of the slab and notch.

ADA Compliance

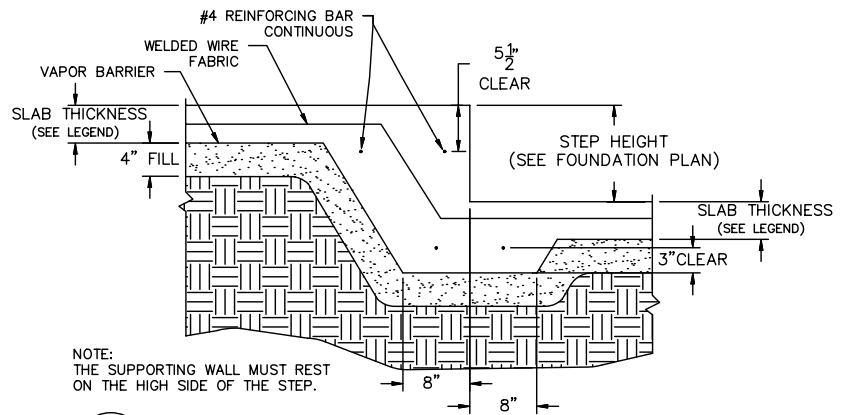
Units that are required to comply with the ADA (American Disability Act) must have the notch sloped at 1" and pitched to the finished floor height. Talk to your regional manager for details specific to your building code.

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.

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An ADA unit once poured.



NOTE:
THE SUPPORTING WALL MUST REST
ON THE HIGH SIDE OF THE STEP.

3 FLOATING SLAB DETAIL, STEP
STEPDOWN
SCALED UP 6X

Steps

If your building requires steps in the foundation, this detail illustrates how it is constructed.



Each section of foundation is poured to the next step.

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.



This photo depicts a finished building step. Stone or driveway base should be placed around the slab prior to arrival of building.



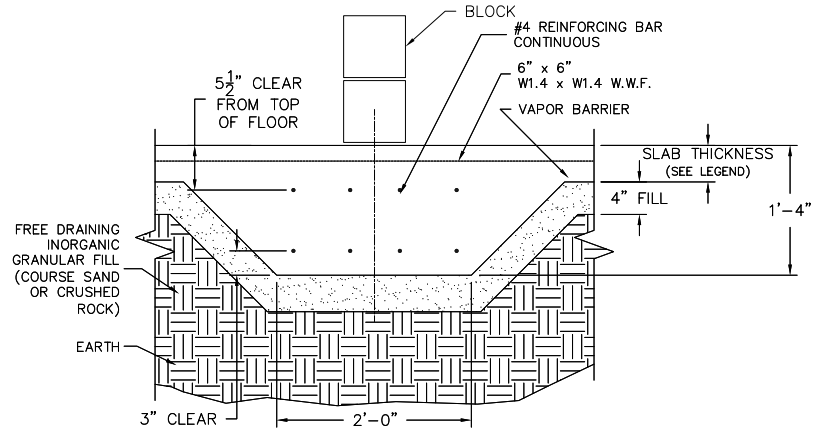
The finished stepped foundation.



A step may be added along the length of the building. The longitudinal step should be done in 6" increments. Trachte will design the building so that there is no step in the roof.

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.

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① FIREWALL FOOTING DETAIL

Firewalls

If your building requires a block firewall, the foundation must be installed underneath the block.



The block firewall rests directly on the slab.



The finished foundation with a corner bollard (6" minimum) and finished pavement. It is recommended to have 1"-3" from the bottom of the notch to the pavement. The ADA units must have pavement to within 1/2" of the bottom of the notch.

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.



Concrete Finishing

Once the concrete has set, mark and chalk line the foundation every 10' down the length of the building. The first line should be located 11' off the end wall so all the cuts are off the structural line. Note: Try to minimize the saw cut inside the interior hallways.



Saw cut the slab once along the width of the building and then every 10'-15' along the length. The center saw cut should not be placed on a structural line, or in the hallway if possible.



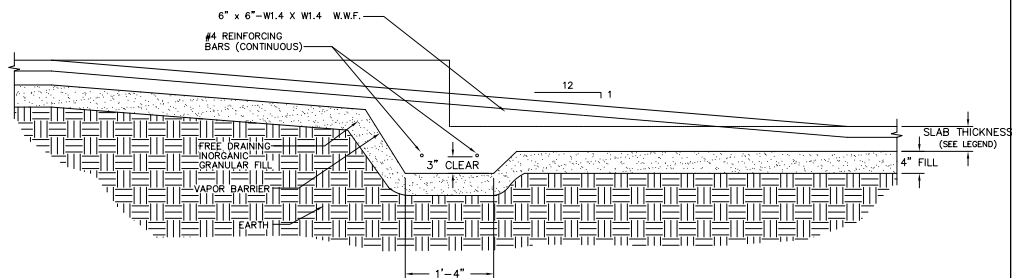
Saw cut should be located 12" off the structure line.

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.

A concrete sealer is applied to create a smooth, finished surface that is easier to clean and prevents spilled liquids from being absorbed.



The foundation is designed 2" wider than the building width. The added width allows for variations in the concrete. The foundation should be set out past the building by 1" as shown.



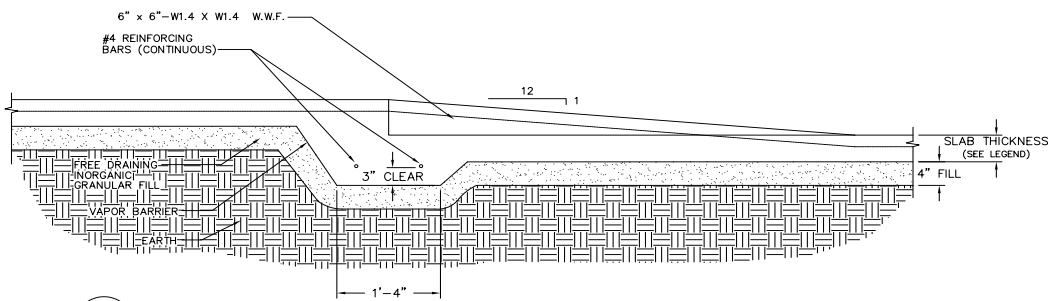
4 FLOATING SLAB DETAILS, RAMP INTERIOR SECTION THRU STEP

Ramps for Corridors
If you have a corridor in your building with a step in it, you must slope the corridor at a 1% grade. The typical detail is to center the ramp in the step.

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.



This ramp is centered in the step.



④ FLOATING SLAB DETAILS, RAMP
INTERIOR SECTION AT STEP

Details of an alternative ramp, which starts from the top of the step and slopes to the lower finished floor.



This ramp started at the top of the step and slopes at a 1":12" slope to the lower finished floor.

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.

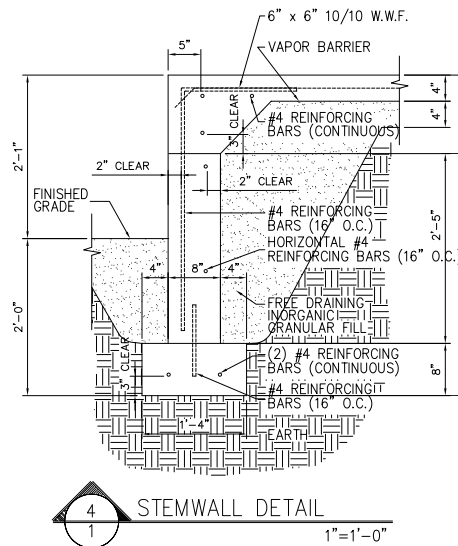
800.356.5824

Recessed Corridors

If the building has a recessed corridor, the foundation must be poured at a slope. Typically, the sloped area is poured after the slab is completed.



This photo shows a ramp in the foundation that is sloped back 5' for a recessed entryway. It will have an exterior swing door to access the interior corridor.



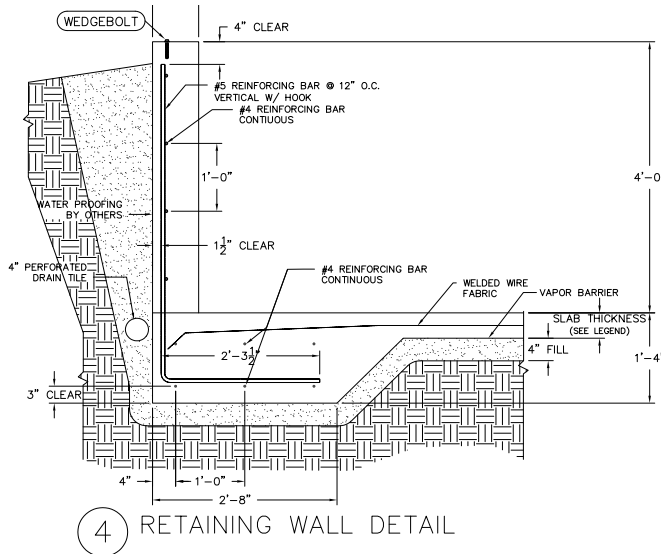
STEMWALL DETAIL

1"=1'-0"

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.



A finished stemwall.



Retaining Wall Details

If building into a hill, a retaining wall is needed to hold back the earth. It is highly recommended to have a soil report to minimize the retaining wall specifications.



A photo of a building built into a hill with a retaining wall.

For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.

800.356.5824

The retaining wall can also step with the foundation to conform to the slope of the land.



An inside view of the retaining wall.



video at
trachte.com

*Look at our video
Erecting Your Building
On A 1 Percent Slope.*

Foundations Poured on a 1% Grade

Foundations may also be poured on a slope of up to 1%. This building is 150' long and the right side is 1'6" higher than the left. This option can eliminate steps, but you must hire a very competent concrete contractor to ensure success of the project.



For more information and details on Trachte self-storage systems, please contact your regional manager at 800-356-5824.



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY

177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

August 11, 2023

James Coffin
ES Coffin Engineering and Surveying
PO Box 4687
Augusta, ME 04330

Via email: jcoffin@coffineng.com

Re: Rare and exemplary botanical features in proximity to: #2013-047, Gardiner Rental Center, 734 Brunswick Avenue, Gardiner, Maine

Dear James Coffin:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received August 10, 2023 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Gardiner, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-8044
WWW.MAINE.GOV/DACF/MNAP

Letter to ES Coffin
Comments RE: Gardiner Rental Center
August 11, 2023
Page 2 of 2

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of \$75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for \$150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov

**Rare and Exemplary Botanical Features within 4 miles of
Project: #2013-047, Gardiner Rental Center, 734 Brunswick Avenue, Gardiner, ME**

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Alpine Rush						
	SC	S3	G5T5	1908	4	Non-tidal rivershore (non-forested, seasonally wet)
American Ginseng						
	E	S3	G3G4	1912-07	17	Hardwood to mixed forest (forest, upland)
	E	S3	G3G4	1989	33	Hardwood to mixed forest (forest, upland)
Broad Beech Fern						
	SC	S2	G5	1912-08-09	10	Hardwood to mixed forest (forest, upland)
Eaton's Bur-marigold						
	SC	S2	G3	2013-10-04	29	Tidal wetland (non-forested, wetland)
Estuary Bur-marigold						
	SC	S3	G4	2013-10-04	30	Tidal wetland (non-forested, wetland)
Freshwater Tidal Marsh						
		S2	G4?	2013-09-10	16	
Parker's Pipewort						
	SC	S3	G3	2013-10-04	16	Tidal wetland (non-forested, wetland)
Pygmyweed						
	SC	S2S3	G5	2013-10-04	17	Open water (non-forested, wetland)
Spongy-leaved Arrowhead						
	SC	S3	G5T4	2013-10-04	15	Tidal wetland (non-forested, wetland)
Upper Floodplain Hardwood Forest						
		S3	GNR	2016-05-23	46	
Wild Garlic						
	SC	S2	G5	2016-05-23	26	Forested wetland,Hardwood to mixed forest (forest,

Date Exported: 2023-08-11 15:57

Conservation Status Ranks

State and Global Ranks: This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of critically imperiled (1) to secure (5). Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

Rank	Definition
S1 G1	Critically Imperiled – At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
S2 G2	Imperiled – At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
S3 G3	Vulnerable – At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
S4 G4	Apparently Secure – At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
S5 G5	Secure – At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
SX GX	Presumed Extinct – Not located despite intensive searches and virtually no likelihood of rediscovery.
SH GH	Possibly Extinct – Known from only historical occurrences but still some hope of rediscovery.
S#S# G#G#	Range Rank – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem.
SU GU	Unrankable – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
GNR SNR	Unranked – Global or subnational conservation status not yet assessed.
SNA GNA	Not Applicable – A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., non-native species or ecosystems).
Qualifier	Definition
S#? G#?	Inexact Numeric Rank – Denotes inexact numeric rank.
Q	Questionable taxonomy that may reduce conservation priority – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable. The “Q” modifier is only used at a global level.
T#	Intraspecific Taxon (trinomial) – The status of intraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

State Status: Endangered and Threatened are legal status designations authorized by statute. Please refer to MRSA Title 12, §544 and §544-B.

Status	Definition
E	Endangered – Any native plant species in danger of extinction throughout all or a significant portion of its range within the State or Federally listed as Endangered.
T	Threatened – Any native plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range in the State or Federally listed as Threatened.
SC	Special Concern – A native plant species that is rare in the State, but not rare enough to be considered Threatened or Endangered.
PE	Potentially Extirpated – A native plant species that has not been documented in the State in over 20 years, or loss of the last known occurrence.

Element Occurrence (EO) Ranks: Quality assessments that designate viability of a population or integrity of habitat. These ranks are based on size, condition, and landscape context. Range ranks (e.g., AB, BC) and uncertainty ranks (e.g., B?) are allowed. The Maine Natural Areas Program tracks all occurrences of rare plants and natural communities/ecosystems (S1-S3) as well as exemplary common natural community types (S4-S5 with EO ranks A/B).

Rank	Definition
A	Excellent – Excellent estimated viability/ecological integrity.
B	Good – Good estimated viability/ecological integrity.
C	Fair – Fair estimated viability/ecological integrity.
D	Poor – Poor estimated viability/ecological integrity.
E	Extant – Verified extant, but viability/ecological integrity not assessed.
H	Historical – Lack of field information within past 20 years verifying continued existence of the occurrence, but not enough to document extirpation.
X	Extirpated – Documented loss of population/destruction of habitat.
U	Unrankable – Occurrence unable to be ranked due to lack of sufficient information (e.g., possible mistaken identification).
NR	Not Ranked – An occurrence rank has not been assigned.

Visit the Maine Natural Areas Program website for more information
<http://www.maine.gov/dacf/mnap>



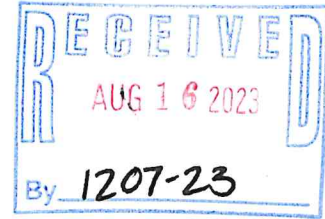
432 Cony Road
P.O. Box 4687
Augusta, ME 04330



(207) 623-9475
Fax (207) 623-0016
1-800-244-9475

August 10, 2023

Kirk Mohney
Maine Historic Preservation Commission
55 Capitol Street
State House Station 65
Augusta, Maine 04333



Subject: Gardiner Rental Center
743 Brunswick Avenue
Gardiner, Maine

Dear Kirk:

Gardiner Rental Center, herein called the applicant is proposing erect three self-storage buildings with associated paved areas at 743 Brunswick Avenue in Gardiner. The parcel is identified as Lot 6A on Tax Map 16 in the City of Gardiner Tax Maps and is in the Planned Development (PD) District as shown on the City's Zoning Map. The applicant is proposing to construct three self-storage buildings totaling 8,300 sf. A site location map has been included for your use.

Please identify any properties in the area of historic, architectural, or archaeological significance that this project may impact and if you should have any questions or concerns; please do not hesitate to contact me.

Sincerely,

James E. Coffin, PE

Based on the information submitted, I have concluded that there will be no historic properties affected by the proposed undertaking, as defined by Section 106 of the National Historic Preservation Act. Consequently, pursuant to 36 CFR 800.4(d)(1), no further Section 106 consultation is required unless additional resources are discovered during project implementation pursuant to 36 CFR 800.13.

Kirk F. Mohney,
State Historic Preservation Officer
Maine Historic Preservation Commission

8/29/23
Date

LITEPAK SERIES LNC2

Cat.# LNC2 12L U 4K 4

Job

Type



HUBBELL
Outdoor Lighting

Approvals

SPECIFICATIONS

Intended Use:

The compact LED LNC2 is designed for perimeter illumination for safety, security and identity. This compact fixture has no uplight and is neighbor friendly with typical mounting heights up to 15ft. Units are supplied with an acrylic diffuser accessory that can be used for lower LED brightness near building entrances or other pedestrian areas. Units have protective polyester finish for long lasting appearance.

Construction:

Decorative die-cast aluminum housing protects components and provides an architectural appearance. Casting thermally conducts LED heat to optimize performance and long life. Powder paint finish provides durability in outdoor environments.

Electrical:

- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option in 12L configuration
- Electronic drivers: One in 5L, 7L, 9L and 12L units Two drivers in 18L units
- Minimum operating temperature is -40°C/-40°F
- Driver RoHS and IP66
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion

LED(s) CCT:

- 3000K CCT nominal – 80 CRI, 4000K CCT nominal – 70 CRI, 5000K CCT nominal – 70 CRI
- 5, 7, 9, 12 and 18 LED configurations available see page 2 for electrical and photometric details

Optical:

Type II, III and IV distributions with zero uplight; Individual PMMA acrylic lenses for wide lateral throw, maximum control and efficiency; Acrylic diffuser included where reduced LED brightness is desired

Lumen Maintenance:

L96 at 60,000hrs (Projected per IESNA TM-21-11), see table on page 2 for all values

Installation:

Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box). Gasket seal and secured by two Allen-head hidden fasteners for tamper resistance. Designed for direct j-box mount or conduit feed in single SKU. Conduit feed not available with BBU.

Options:

Controls:

- Button photocontrol for dusk to dawn energy savings
- Occupancy sensor options available for complete on/off and dimming control (includes factory installed back box)

Egress (includes factory installed back box):

- Battery back-up option - 12L configuration only
- Provides 1 fc minimum over 10' x 10' at 11' mounting height (exceeds NEC requirement)
- 1,546 initial lumens in battery mode
- Meets UL924 90 minute discharge schedule
- -20°C to 30°C operating temperature

Listings:

- DLC Qualified (Types III and IV) Consult DLC website for details:
<http://www.designlights.org/QPL>
- Listed to UL 1598 for use in wet locations, 40° C ambient environments

Warranty:

Five year limited warranty (for more information visit: <http://www.hubbelloutdoor.com/resources/warranty/>)

- IES Progress Award Winner - 2013
- Building Operating Management 2014 Top Products Award - LNC2-18LU

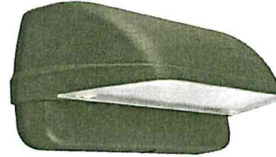
PRODUCT IMAGE(S)



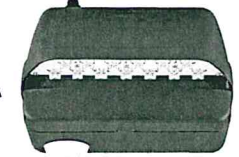
LNC2-12LU



LNC2-18LU

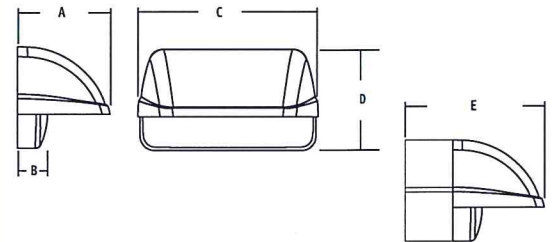


With diffuser



Battery Back-up or Sensor - See Page 2,3

DIMENSIONS



With Battery Back-up or sensors

A	B	C	D	E	Weight / BBU
6.25"	1.6"	10.25"	5.6"	10.25"	7.0 / 15.0 lbs.
158.7 mm	40.2 mm	260.4 mm	142.2 mm	260.4 mm	3.2 / 6.8 kg

SHIPPING INFORMATION

Catalog Number	G.W(kg)/CTN	Carton Dimensions			Carton Qty. per Master Pack
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)	
LNC2-12LU	14.3 (6.5)	14.5 (37)	11.4 (29)	8.4 (21.5)	2
LNC2-18LU	14.8 (6.7)	14.9 (38)	11.4 (29)	8.4 (21.5)	2

CERTIFICATIONS/LISTINGS



*3000K and warmer CCTs only

ORDERING INFORMATION – ORDERING EXAMPLE: LNC2-12LU-5K-3-1

SERIES	NUMBER OF LEDs	VOLTAGE ⁷	CCT	IES DISTRIBUTION	FINISH	OPTIONS
LNC2 LNC2	5L 5 LEDs 7L 7 LEDs 9L 9 LEDs 12L ³ 12 LEDs 18L 18 LEDs 12L5 12 LEDs, 480V 12LF 12 LEDs, 347V	U 120V-277V 1 120V 2 208V 3 240V 4 277V 5 480V (12L only) F 347V (12L only)	3K ² 3000K nominal 80 CRI 4K 4000K nominal 70 CRI 5K 5000K nominal 67 CRI AM Amber (590 nm available for "Turtle Friendly"/observatory applications, 350 mA (18L only versions))	2 ² Type II 3 Type III 4 Type IV	1 Bronze 2 Black 3 Gray 4 White 5 Platinum	PC Photocontrol BBU ^{1,5} Integral battery for 12L only (must specify 120V or 277V voltage in voltage category) rated for -20°C to 30°C SCP ^{4,5,6} Programmable motion sensor, factory default dimming is 10% light output

SPECIFY SCP HEIGHT

- 8F Up to 8ft mount height
- 20F Up to 20ft mount height

¹ Battery backup only available on 12L models, not available for Canada

² Does not qualify for DLC

³ Replace U with 1 for 120V or 4 for 277V for 12L with BBU

⁴ Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120V-277V only

⁵ PC option not applicable, included in sensor

⁶ BBU and motion sensor options cannot be combined



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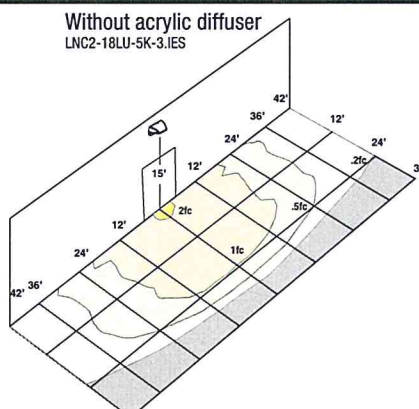
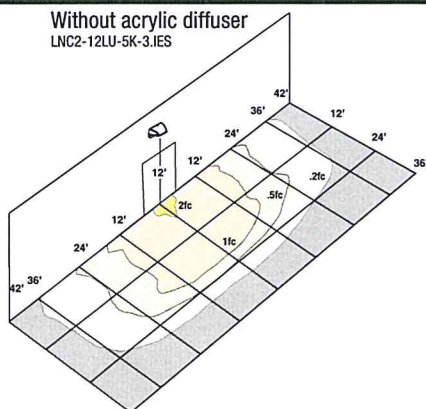
LARED0LNC2-SPEC 3/17

REPLACEMENT PART/ACCESSORIES

CATALOG NUMBER	DESCRIPTION
93044013	Frosted comfort shield, improves uniformity with only 5% lumen reduction
SCP-REMOTE*	Remote control for SCP option. Order at least one per project to program and control fixtures
BB-GEO-XX	Back box with 4 - 1/2" threaded conduit holes, XX = specify finish, eg. Dark Bronze - DB
LNC2-SCBB-XX	Plate to be used with GEO-BB-XX surface conduit box, XX=finish (see page 3)

*Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120V or 277V only

PHOTOMETRICS



PERFORMANCE DATA

# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	5K (5000K nominal, 70 CRI)		4K (4000K nominal, 70 CRI)		3K (3000K nominal, 80 CRI)	
				LUMENS	LPW ¹	LUMENS	LPW ¹	LUMENS	LPW ¹
5	STD. (700mA)	13W	2	1,150	88.5	1,052	81	883	68
			3	1,132	87	1,077	83	833	64
			4	1,146	88	1,053	81	849	65
7		17W	2	1,515	89	1,369	80.5	1,272	75
			3	1,500	88	1,539	90.5	1,392	82
			4	1,557	91.5	1,535	90	1,425	84
9		22W	2	2,069	94	2,033	92	1,588	72
			3	2,024	92	1,989	90	1,623	74
			4	2,095	95	2,059	93.5	1,680	76
12	28w	2	2,869	102.5	2,465	88	2,047	73	
		3	2,868	102.5	2,662	95	2,160	77	
		4	2,716	97	2,715	97	2,104	75	
18	42.7w	2	4,166	97.5	3,631	85	3,304	77	
		3	4,106	96	3,806	89	3,128	73	
		4	3,995	93.5	3,998	93.5	3,122	73	

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application. LNC2-12LU battery mode produces 1,546 initial lumens. Meets UL924 90 minute discharge pattern.

PROJECTED LUMEN MAINTENANCE

Ambient Temp.	OPERATING HOURS					L70 (hours)
	0	25,000	50,000	TM-21-11 ¹ L96 60,000	100,000	
25°C / 77°F	1.00	0.98	0.97	0.96	0.95	>791,000
40°C / 104°F	0.99	0.98	0.96	0.96	0.94	>635,000

1. Projected per IESNA TM-21-11 * (Nichia 219B, 700mA, 85°C Ts, 10,000hrs)
Data references the extrapolated performance projections for the LNC-12LU-5K base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0° C	32° F	1.02
10° C	50° F	1.01
20° C	68° F	1.00
25° C	77° F	1.00
30° C	86° F	1.00
40° C	104° F	0.99

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

ELECTRICAL DATA

# OF LEDS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	CURRENT (Amps)	SYSTEM POWER (w)	
7	STD. (700mA)	120	-	18	
		277	-	18	
120		0.183	22		
277		0.09	22.1		
9	STD. (700mA)	120	0.24	28.9	
		277	0.10	27.7	
		347	0.10	33.7	
480		0.06	28.9		
18	STD. (700mA)	120	0.35	41.0	
		277	0.15	41.5	
18 Amber		STD. (700mA)	120	2.68	32.0

MOTION SENSOR OPTION



Sensor offers greater control and energy savings with SCP programmable sensor with adjustable delay and dimming levels (Factory default is 10%)

Visit: <http://www.hubbellighting.com/solutions/controls/> for control application information



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LAREDLNC2-SPEC 3/17

LNC2 – BATTERY BACK UP

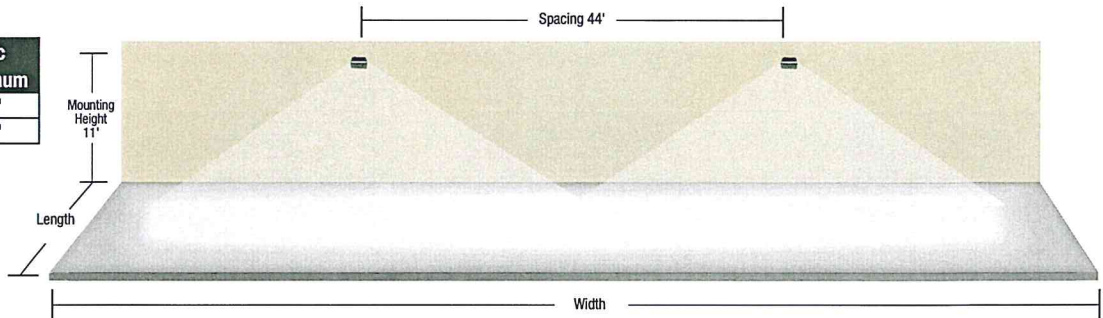


Side View

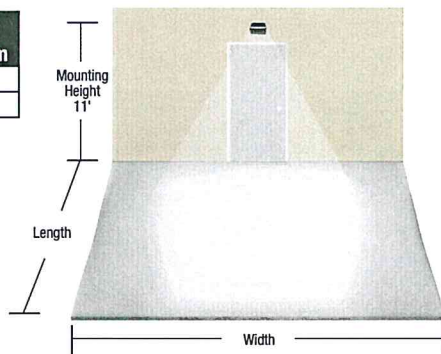


3/4 View

Multi Unit	1 fc Average	1 fc Minimum
Length	16'	15'
Width	112'	68'

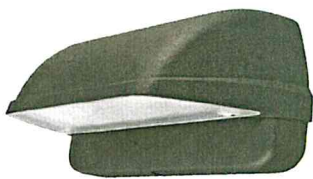


Single Unit	1 fc Average	1 fc Minimum
Length	16'	15'
Width	48'	24'

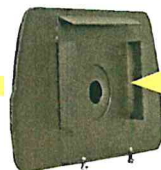


Provides Life Safety Code average illuminance of 1.0 fc. Assumes open space with no obstructions and mounting height of 11'.
Diagrams for illustration purposes only, please consult factory for application layout.

LNC2-SCBB-XX SURFACE CONDUIT BACK PLATE



LNC2 FIXTURE



LNC2-SCBB-XX



BB-GEO-XX



LNC2-SCBB-XX and BB-GEO-XX SHOWN ATTACHED TO FIXTURE

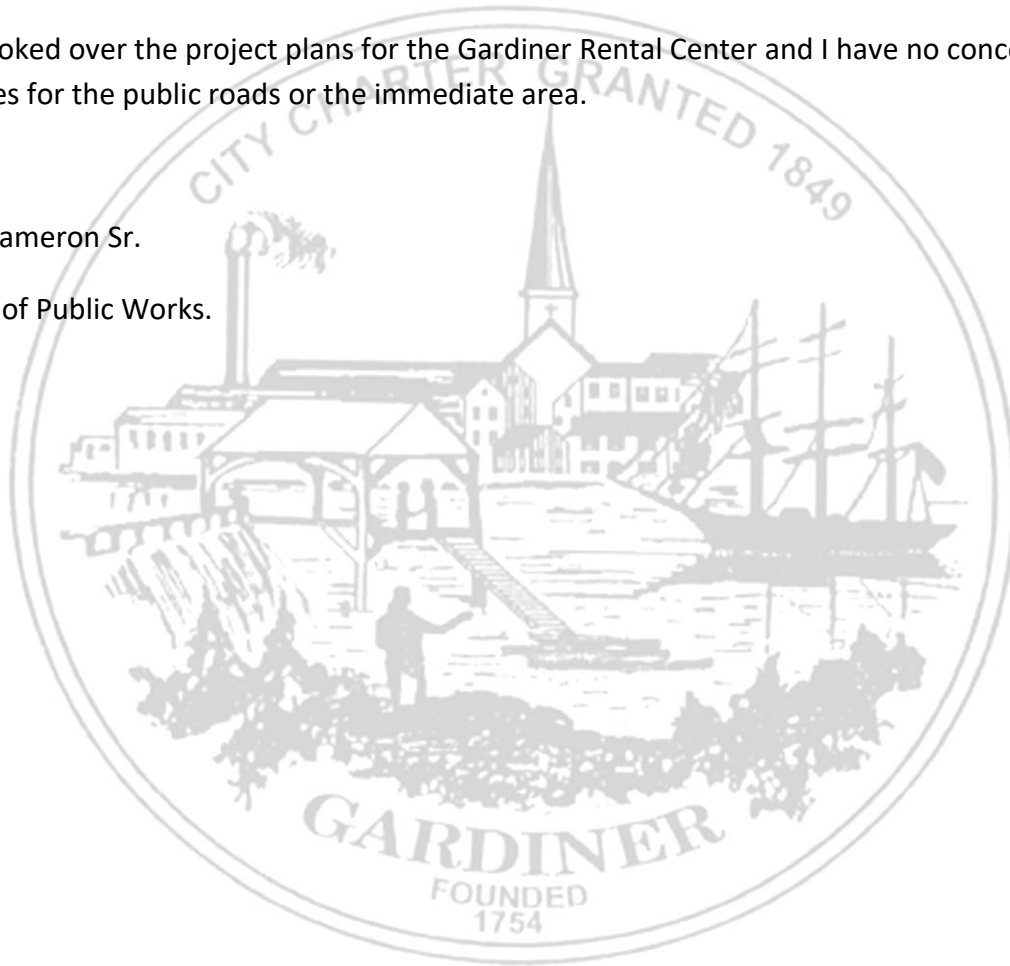


Dear James Coffin,

I have looked over the project plans for the Gardiner Rental Center and I have no concerns for any issues for the public roads or the immediate area.

John A Cameron Sr.

Director of Public Works.



Department of Public Works
6 Church Street | Gardiner, ME 04345
207-582-4800 | 207-582-6895 (fax) | jcameron@gardinermaine.com
www.GardinerMaine.com

432 Cony Road
P.O. Box 4687
Augusta, ME 04330



(207) 623-9475
Fax (207) 623-0016
1-800-244-9475

August 16, 2023

City of Gardiner
Ms. Debbie Willis, Planning Board Chairwoman
Gardiner City Hall
6 Church Street
Gardiner, Maine 04345

Subject: Traffic Report
Gardiner Rental Center
734 Brunswick Avenue
Gardiner, Maine

Dear Ms. Willis,

Gardiner Rental Center, herein called the applicant is proposing erect three self-storage buildings with associated paved areas at 743 Brunswick Avenue in Gardiner. The parcel is identified as Lot 6A on Tax Map 16 in the City of Gardiner Tax Maps and is in the Planned Development (PD) District as shown on the City's Zoning Map. The applicant is proposing to construct three self-storage buildings totaling 8,300 sf. A site plan has been included for your use.

Traffic is required to be evaluated under the Land Use Ordinance. The 8th Edition of the Institute of Transportation Engineers (ITE) Manual, have a "Mini-Warehouse" section that is described as buildings in which a number of storage units are rented for the storage of goods. They are typically referred to "self-storage" facilities. Each unit is physically separated from other units, and access is usually provided through an overhead door or other common access point. The peak hour trips generated are calculated from the ITE Manual (8th addition) under "Mini Warehouse" and is shown below:

Based on Building Size (8,300 sf):

Weekday AM Peak Hour Rate = 0.28

$(8,300 \text{ sf}/1,000 \text{ sf}) \times 0.28 = 2.3$ peak hour trips.

Weekday PM Peak Hour Rate = 0.29

$(8,300 \text{ sf}/1,000 \text{ sf}) \times 0.29 = 2.4$ peak hour trips.

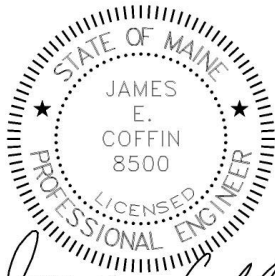
Maximum Peak Hour Trips = 2.4 (Weekday PM)

The maximum generator based on building size occurs during the PM peak hour (2.4 peak hour trips) for the proposed project. The project will not require a turning movement permit from the MDOT because there are less than 100-trips. The project will not cause unreasonable public road congestion and if you should have any questions or concerns, please do not hesitate to contact me at 623-9475.

Respectfully Submitted,



James E. Coffin, PE



Mini-Warehouse (151)

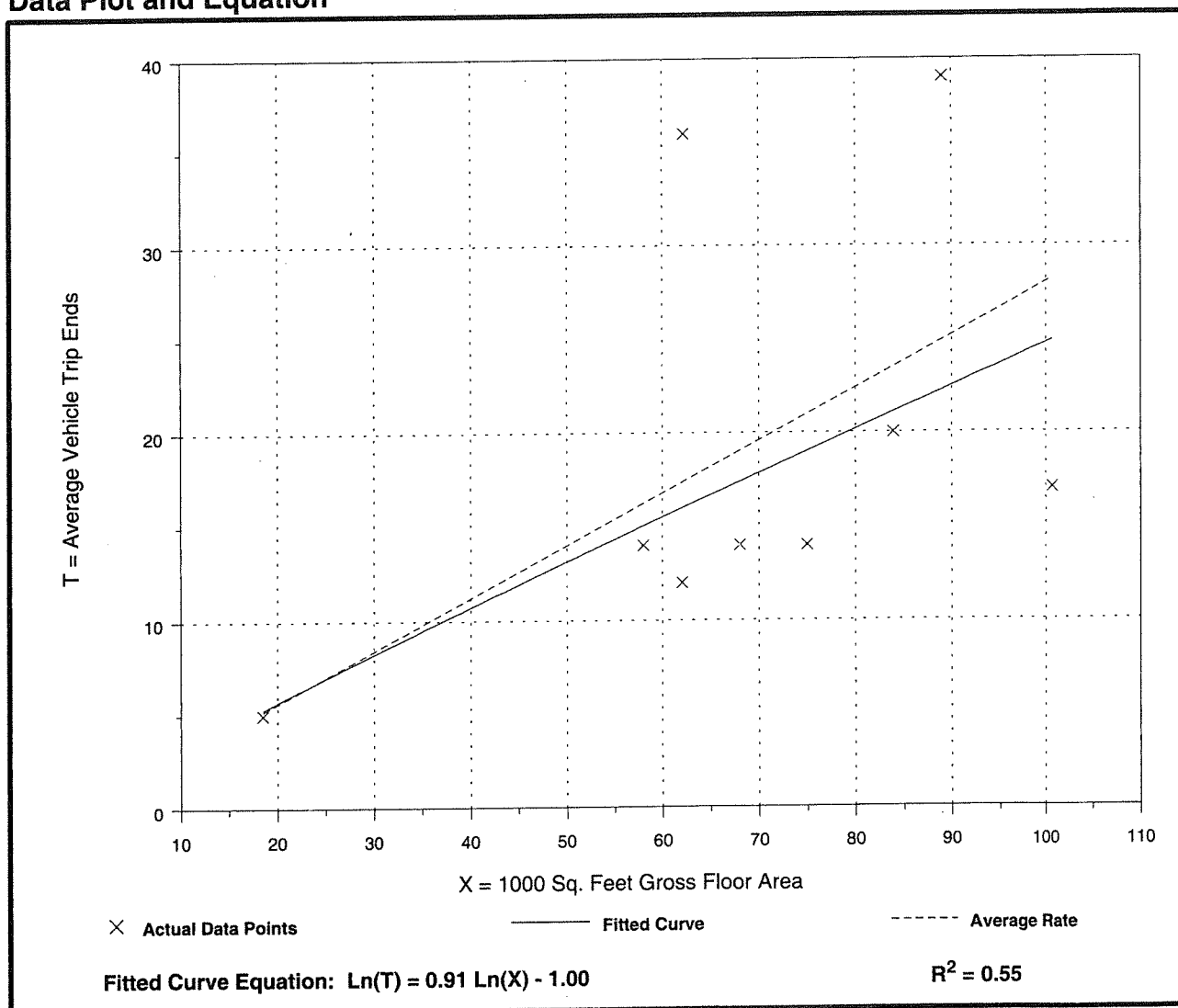
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
A.M. Peak Hour of Generator

Number of Studies: 9
 Average 1000 Sq. Feet GFA: 69
 Directional Distribution: 48% entering, 52% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
0.28	0.17 - 0.58	0.54

Data Plot and Equation



Mini-Warehouse (151)

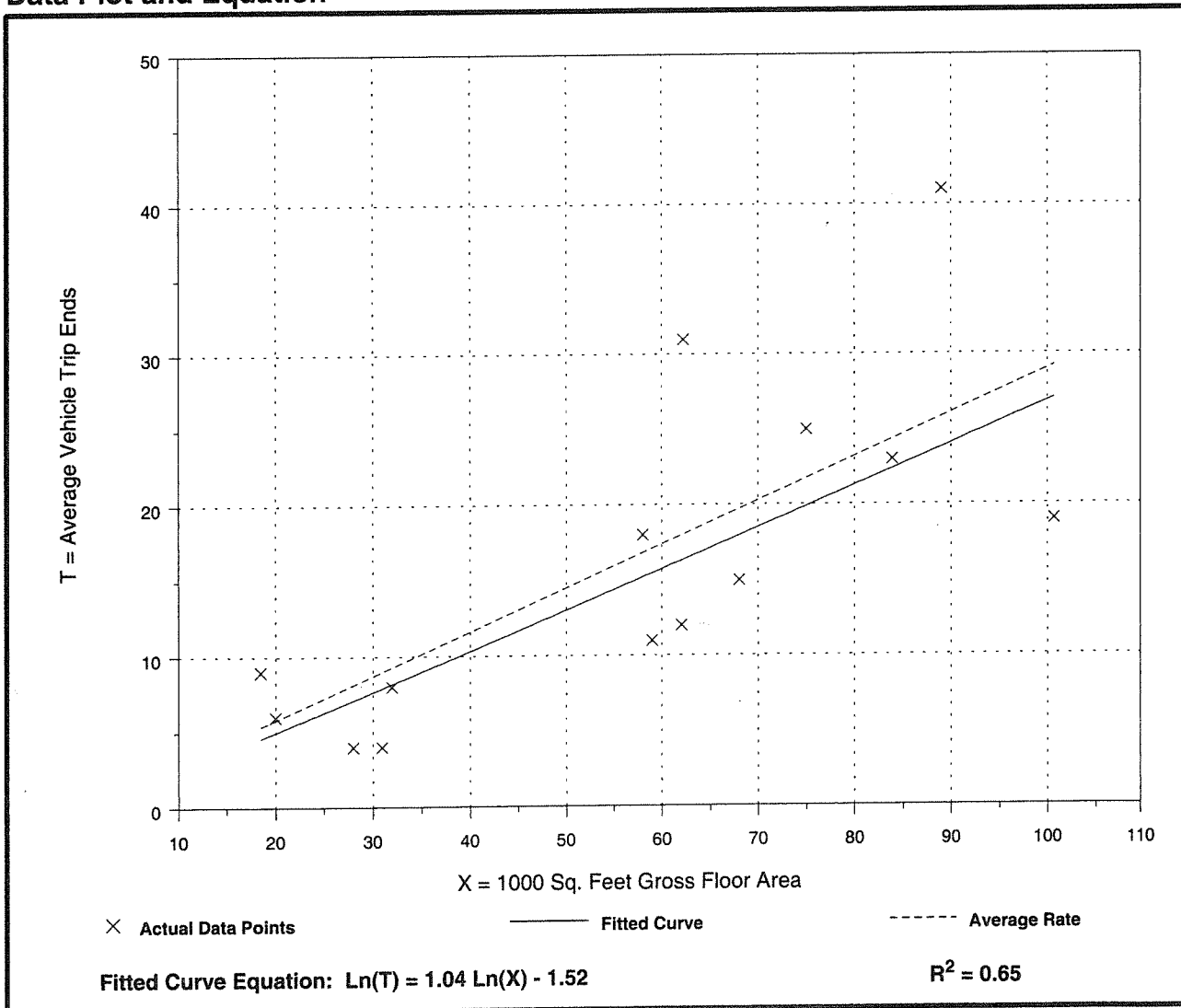
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
P.M. Peak Hour of Generator

Number of Studies: 14
 Average 1000 Sq. Feet GFA: 56
 Directional Distribution: 53% entering, 47% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
0.29	0.13 - 0.50	0.54

Data Plot and Equation





432 Cony Road
P.O. Box 4687
Augusta, ME 04330



(207) 623-9475
Fax (207) 623-0016
1-800-244-9475



August 17th, 2023

City of Gardiner
Mr. Kris McNeil, CEO
6 Church Street
Gardiner, Maine 04345

Subject: Stormwater Report
Gardiner Rental Center

Dear Kris,

E.S. Coffin Engineering & Surveying has completed the hydrologic calculations for Gardiner Rental Center and their project located at 743 Brunswick Avenue in Gardiner. The parcel of land is identified as Lot 6A on Tax Map 16 in the City of Gardiner tax maps. The applicant is proposing to develop a portion of the parcel into self-storage units.

The project results in 31,395 sf of new impervious area and therefore does not meet the threshold for a Department of Environmental Protection (DEP) Stormwater Permit Application. However, the project must comply with the City of Gardiner's Land Use Ordinance stating that the amount of flow (stormwater) in the post-development condition must be equal to or less than the flow in the pre-development condition for the 2-, 10- and 25-year peak storm events.

Modeling assumptions: The "Hydro-Cad" computer program was used to determine the peak storm water runoff for the pre- and post-development conditions. Hydro-Cad is a storm water modeling system, which utilizes the TR-20 method developed by the Soil Conservation Service (SCS).

The design assumptions used for this project are:

Design storm: 24-hour, Type III rainfall distribution.

Rainfall: 24-hour precipitation values from U.S. Weather Bureau Technical Release No. 40:

2-year storm = 2.8 inches
10-year storm = 4.2 inches
25-year storm = 5.2 inches

Site specific parameters for the project are listed below:

Soils: Soils information to determine the hydrologic soil group for the site is derived from the Soil Survey of Kennebec County by the United States Department of Agriculture Soil Conservation Service. The soils and hydrologic group are listed below:

<u>Soil Classification</u>	<u>Hydrologic Group</u>
Woodbridge (WsB)	"C"
Paxton Charlton (PeB)	"C"

Ground Cover:

Pre-Development: The existing watershed ground cover is modeled as impervious, meadow and lawn.

Post-Development: The proposed watershed ground cover is impervious, meadow and lawn.

<u>Cover Description</u>	<u>Curve Number:</u>
Impervious	98
Lawn "C"	74
Meadow "C"	71

Results:

The project will result in an increase of 31,395 sf of impervious area. These results are shown on the Hydro Cad output sheets enclosed at the end of the report. All of the runoff from the site ends up along the east side of the property. A detention pond is being utilized to reduce peak flows exiting the site.

Pre-development:

The hydrologic study evaluates a portion of the parcel that includes impervious (25,115 sf), lawn (4,355 sf) and meadow (56,460 sf) and is broken down into one drainage area (see plan entitled "PRE"). The peak flows for the 2-, 10- and 25-year events (see node labeled "SP") in the pre-development condition are 2.50 cfs (cubic feet per second), 5.24 cfs and 7.34 cfs.

Post Development:

The proposed site (see plan entitled "C-1") will be comprised of impervious area (56,510 sf), lawn (17,010 sf) and meadow (12,410 sf). The post-development is broken down into two drainage areas and is shown on the plan entitled "POST".

A detention pond is being installed to control the peak flows exiting the property. The detention pond will contain an outlet control structure with two orifices. The one at the bottom of the pond will be four (4) inches in diameter and the other 18" higher will be six (6) inches in diameter. The 4-inch orifice is small and may eventually clog. Therefore a 6"

diameter PVC pipe with sixteen (16) - 1" diameter holes, which equate to a 4-inch diameter hole, will be embedded in stone (see detail on sheet C-4).

Summary tables showing the input values and resulting peak flows for Sub Areas and reaches are also included at the end of the report. In the post development condition, the 2-, 10- and 25-year peak storm events for the study point "SP" yield 0.62 cfs, 1.43 cfs and 1.97 cfs. See the table on the next page for results.

PRE- & POST-DEVELOPMENT HYDROLOGIC RESULTS (SP)			
<u>Event</u>	<u>Pre-Develop.</u>	<u>Post-Develop.</u>	<u>Difference</u>
2 year	2.50 cfs	0.62 cfs	- 1.88 cfs
10 year	5.24 cfs	1.43 cfs	- 3.81 cfs
25 year	7.34 cfs	1.97 cfs	- 5.37 cfs

Conclusion:

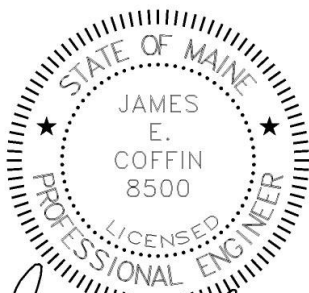
By comparing the node labeled "SP" in the post-development condition and in the pre-development condition, the results show that there will be a decrease in flow for all of the three peak storm events.

If you should have any questions or concerns, please do not hesitate to contact me at 623-9475.

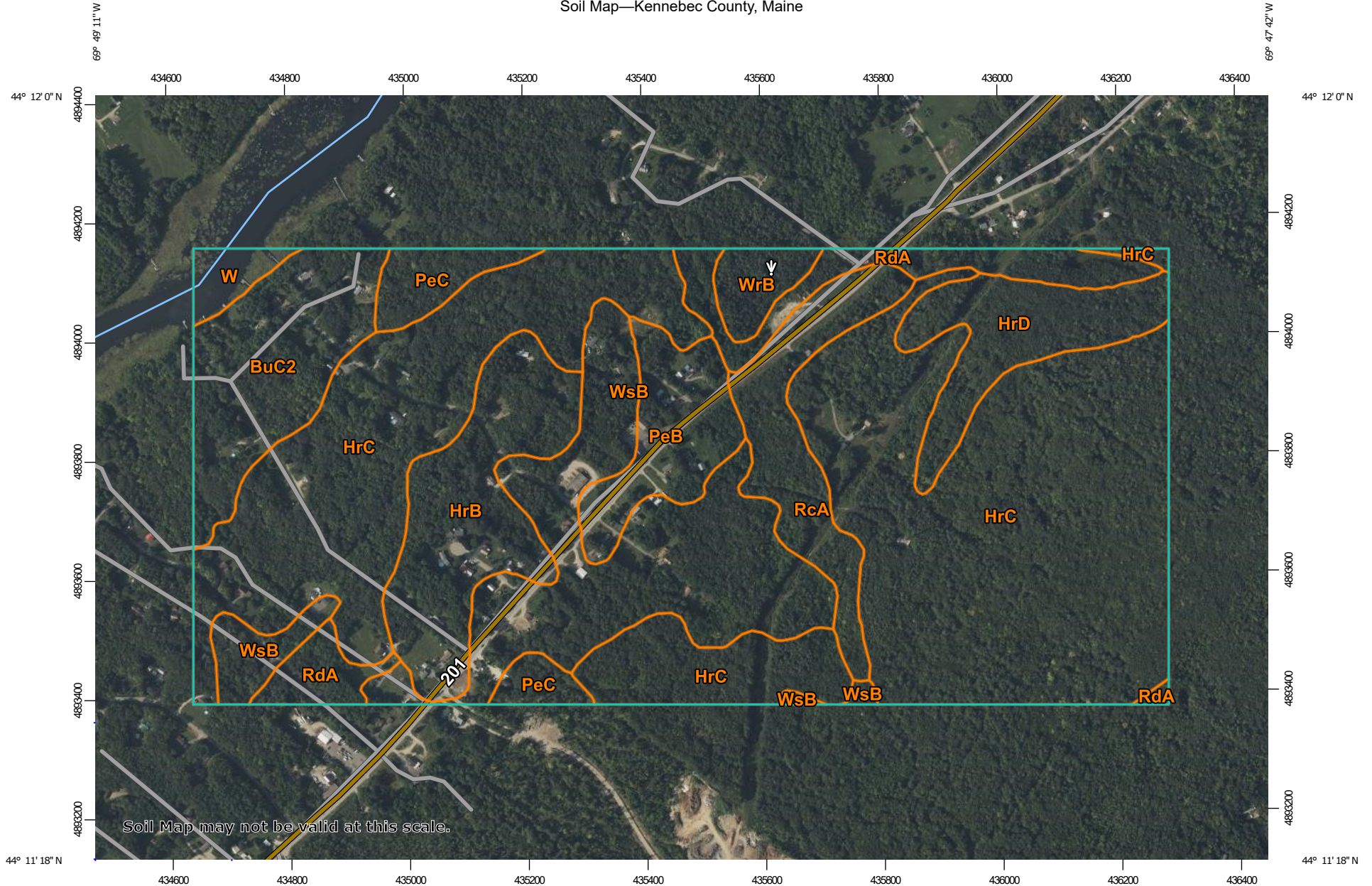
Respectfully submitted,



James E. Coffin, PE

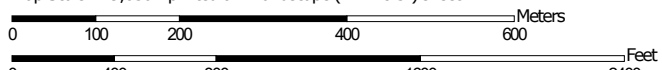


Soil Map—Kennebec County, Maine



Soil Map may not be valid at this scale.

Map Scale: 1:9,030 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge ticks: UTM Zone 19N WGS84




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Kennebec County, Maine

Survey Area Data: Version 21, Aug 30, 2022

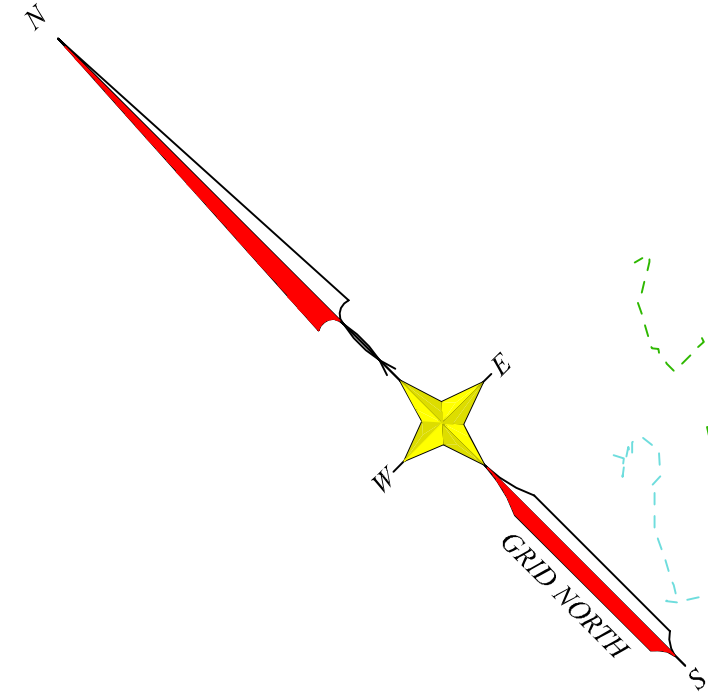
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 11, 2021—Oct 29, 2021

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BuC2	Buxton silt loam, 8 to 15 percent slopes	21.6	6.9%
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	24.9	8.0%
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	145.1	46.5%
HrD	Lyman-Tunbridge complex, 15 to 35 percent slopes, rocky	15.5	5.0%
PeB	Paxton-Charlton very stony fine sandy loams, 3 to 8 percent slopes	13.1	4.2%
PeC	Paxton-Charlton very stony fine sandy loams, 8 to 15 percent slopes	7.5	2.4%
RcA	Ridgebury fine sandy loam	16.2	5.2%
RdA	Ridgebury very stony fine sandy loam	14.8	4.7%
W	Water bodies	3.1	1.0%
WrB	Woodbridge fine sandy loam, 3 to 8 percent slopes	4.4	1.4%
WsB	Woodbridge very stony fine sandy loam, 3 to 8 percent slopes	45.8	14.7%
Totals for Area of Interest		312.0	100.0%



AARON HALL
Tax Map 1 G, Lot 5A
Book 14395, Page 279

THOMAS I. & LORNA N. PLOURDE
Tax Map 1 G, Lot 6B-3
Book 8530, Page 193

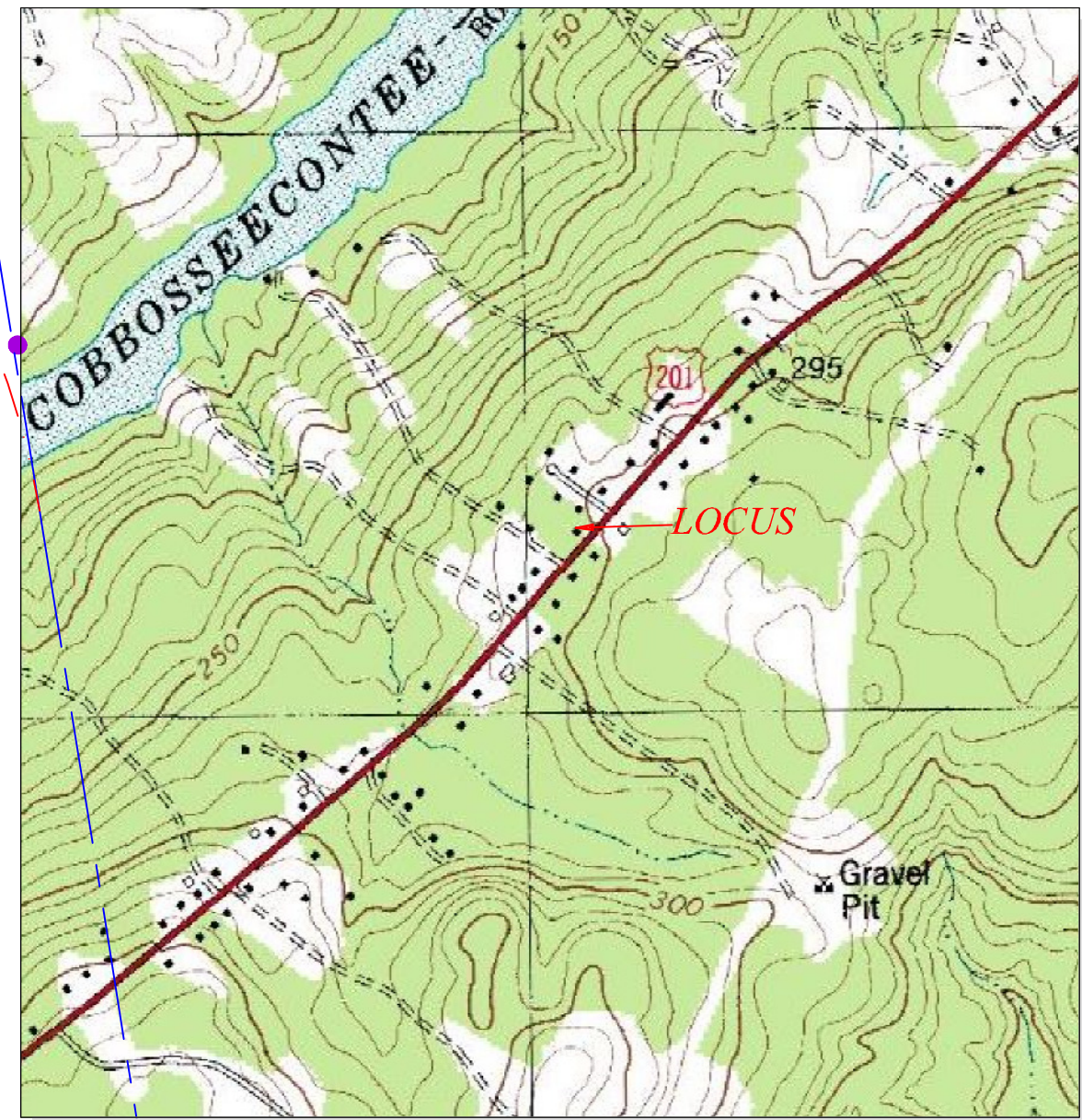
DON & CLAUDETTE LARRABEE
Tax Map 1 G, Lot 6B-2
Book 8535, Page 66

DONALD E. & PATRICIA V. MCLAUGHLIN
Tax Map 1 G, Lot 6B
Book 2100, Page 132

STEVEN G. & INSUC BOLDOC
Tax Map 1 G, Lot 6A
Book 9412, Page 92

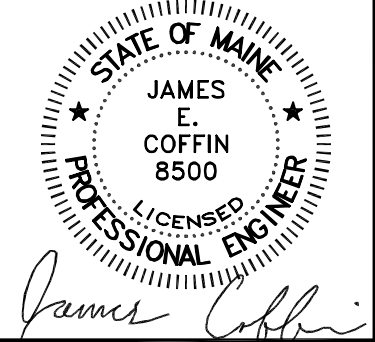
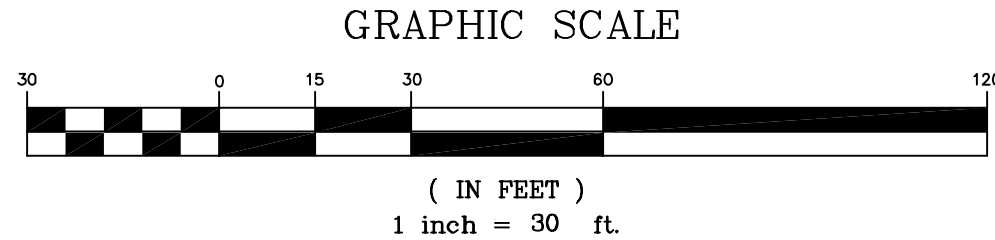
AREA LEASING & DEVELOPMENT
Tax Map 1 G, Lot 5
Book 3022, Page 74

SUB AREA 1
TOTAL AREA=85,930 SF
IMPERV.=25,115 SF
LAWN=4,355 SF
MEADOW=56,460 SF



LOCUS MAP
GARDINER
USGS QUAD SHEET
SCALE 1"=1000'

- LEGEND**
- IRON ROD FOUND
 - IRON PIPE FOUND
 - DRILL HOLE IN LEDGE
 - GRANITE MONUMENT FOUND
 - 5/8" REBAR PROPOSED
 - 4"x4" GRANITE MONUMENT PROPOSED
 - UTILITY POLE
 - GUY ANCHOR
 - OVERHEAD UTILITY LINE
 - BELOW GROUND ELECTRIC
 - LIGHT
 - HYDRANT
 - WATER VALVE
 - WELL
 - MONITORING WELL
 - UNDERGROUND WATER LINE
 - SIGN
 - EXISTING CONTOUR
 - SURVEYED LINE
 - STOCKADE FENCE
 - WIRE FENCE
 - GUARDRAIL
 - CATCH BASIN
 - STORM PIPE
 - SANITARY MANHOLE
 - SANITARY PUMP STATION
 - SANITARY LINE
 - SETBACK
 - FLAG
 - TEST PIT
 - CONIFEROUS TREE
 - DECIDUOUS TREE
 - VEGETATION
 - APPROXIMATE WETLANDS
 - PRIOR OWNER



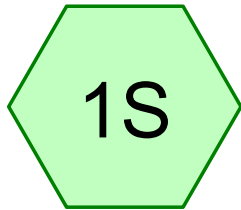
E.S. COFFIN
ENGINEERING & SURVEYING, INC.
432 Camp Road, Chelsea, Maine 04330
Phone (207) 863-9472 Fax (207) 863-9016

NO.	REVISIONS	DATE

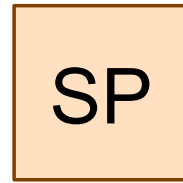
SHEET TITLE: PRE-DEVELOPMENT PLAN
SCALE: 1 INCH=30 FEET
DRAWN BY: TCH
CHECKED BY: JEC

CLIENT/PROJECT: GARDINER RENTAL CENTER STEVEN BOLDOC
LOCATION: 743 BRUNSWICK AVENUE
TOWN: GARDINER **COUNTY:** KENNEBEC **STATE:** MAINE
PROJ. NO.: 2023-047

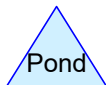
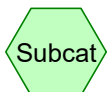
PRE



Sub Area 1



Study Point



Gardiner Rental Pre-Development

Type III 24-hr 2-Year Event Rainfall=2.80"

Prepared by E S Coffin Engineering & Survey

Printed 8/24/2023

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Page 2

Summary for Subcatchment 1S: Sub Area 1

Runoff = 2.50 cfs @ 12.06 hrs, Volume= 0.158 af, Depth> 0.96"
 Routed to Reach SP : Study Point

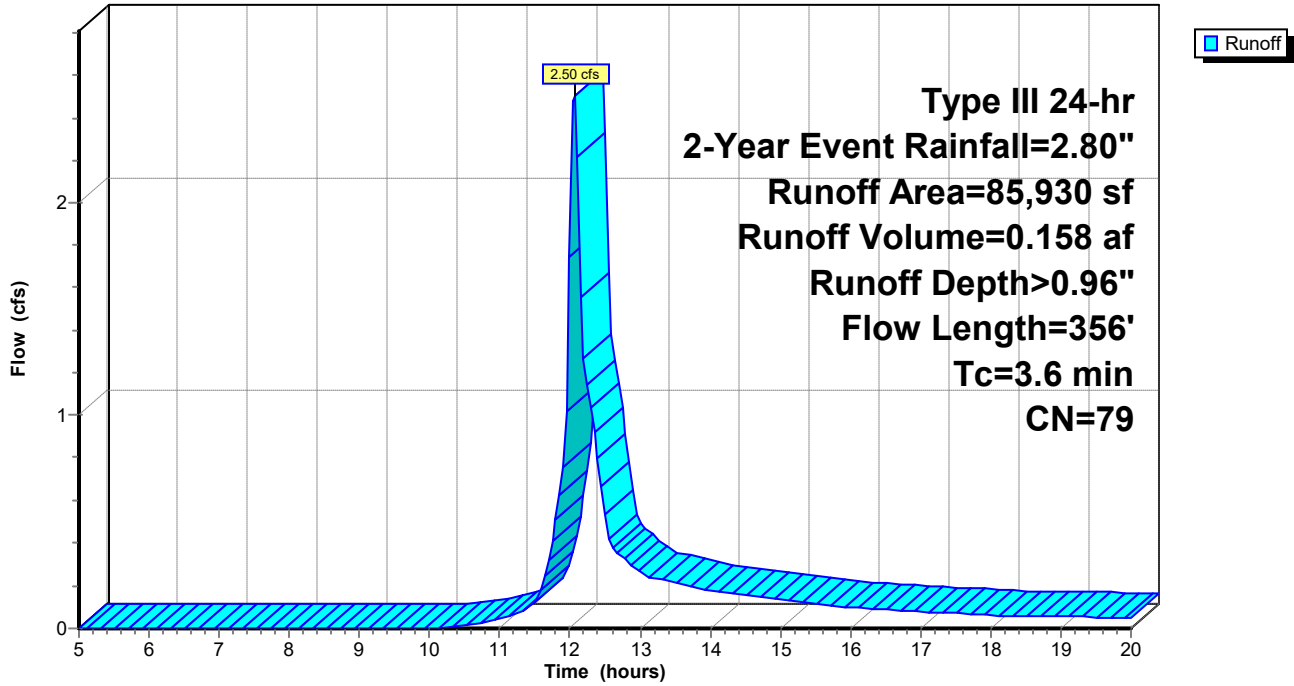
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Event Rainfall=2.80"

Area (sf)	CN	Description
25,115	98	Paved parking, HSG C
4,355	74	>75% Grass cover, Good, HSG C
56,460	71	Meadow, non-grazed, HSG C
85,930	79	Weighted Average
60,815		70.77% Pervious Area
25,115		29.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	100	0.0550	1.9		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 2.80"
0.4	60	0.0250	2.5		Shallow Concentrated Flow, BC Unpaved Kv= 16.1 fps
2.1	160	0.0344	1.3		Shallow Concentrated Flow, CD Short Grass Pasture Kv= 7.0 fps
0.0	18	0.6111	11.7		Shallow Concentrated Flow, DE Grassed Waterway Kv= 15.0 fps
0.2	18	0.0556	1.7		Shallow Concentrated Flow, EF Short Grass Pasture Kv= 7.0 fps
3.6	356	Total			

Subcatchment 1S: Sub Area 1

Hydrograph



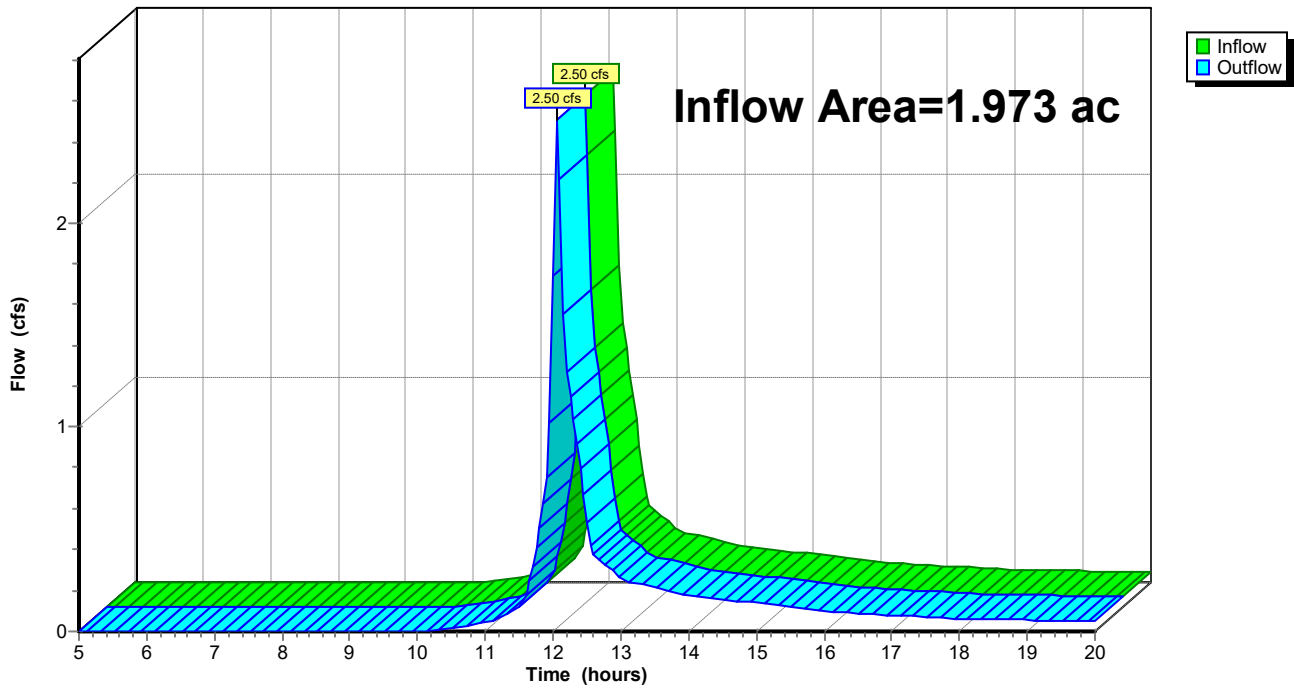
Summary for Reach SP: Study Point

Inflow Area = 1.973 ac, 29.23% Impervious, Inflow Depth > 0.96" for 2-Year Event event
Inflow = 2.50 cfs @ 12.06 hrs, Volume= 0.158 af
Outflow = 2.50 cfs @ 12.06 hrs, Volume= 0.158 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach SP: Study Point

Hydrograph



Gardiner Rental Pre-Development

Type III 24-hr 10-Year Event Rainfall=4.20"

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Page 5

Summary for Subcatchment 1S: Sub Area 1

Runoff = 5.24 cfs @ 12.06 hrs, Volume= 0.325 af, Depth> 1.98"
 Routed to Reach SP : Study Point

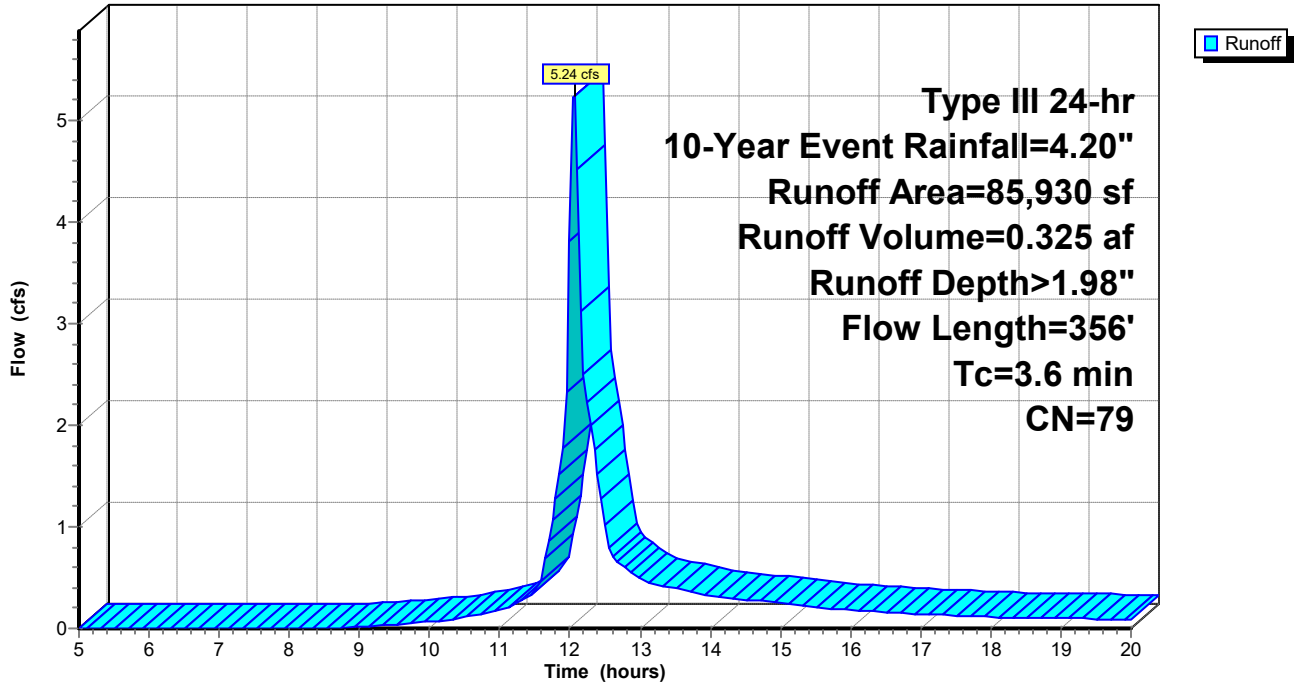
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Event Rainfall=4.20"

Area (sf)	CN	Description
25,115	98	Paved parking, HSG C
4,355	74	>75% Grass cover, Good, HSG C
56,460	71	Meadow, non-grazed, HSG C
85,930	79	Weighted Average
60,815		70.77% Pervious Area
25,115		29.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	100	0.0550	1.9		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 2.80"
0.4	60	0.0250	2.5		Shallow Concentrated Flow, BC Unpaved Kv= 16.1 fps
2.1	160	0.0344	1.3		Shallow Concentrated Flow, CD Short Grass Pasture Kv= 7.0 fps
0.0	18	0.6111	11.7		Shallow Concentrated Flow, DE Grassed Waterway Kv= 15.0 fps
0.2	18	0.0556	1.7		Shallow Concentrated Flow, EF Short Grass Pasture Kv= 7.0 fps
3.6	356	Total			

Subcatchment 1S: Sub Area 1

Hydrograph



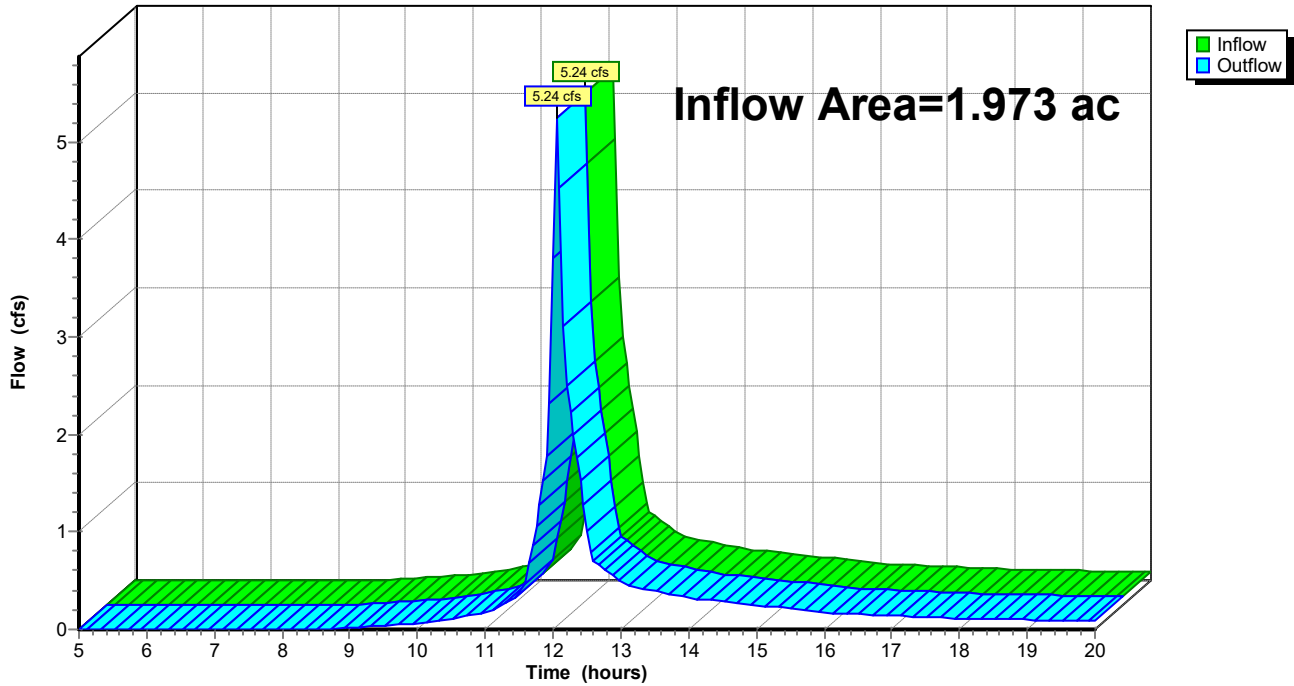
Summary for Reach SP: Study Point

Inflow Area = 1.973 ac, 29.23% Impervious, Inflow Depth > 1.98" for 10-Year Event event
Inflow = 5.24 cfs @ 12.06 hrs, Volume= 0.325 af
Outflow = 5.24 cfs @ 12.06 hrs, Volume= 0.325 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach SP: Study Point

Hydrograph



Gardiner Rental Pre-Development

Type III 24-hr 25-Year Event Rainfall=5.20"

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Page 8

Summary for Subcatchment 1S: Sub Area 1

Runoff = 7.34 cfs @ 12.06 hrs, Volume= 0.457 af, Depth> 2.78"
 Routed to Reach SP : Study Point

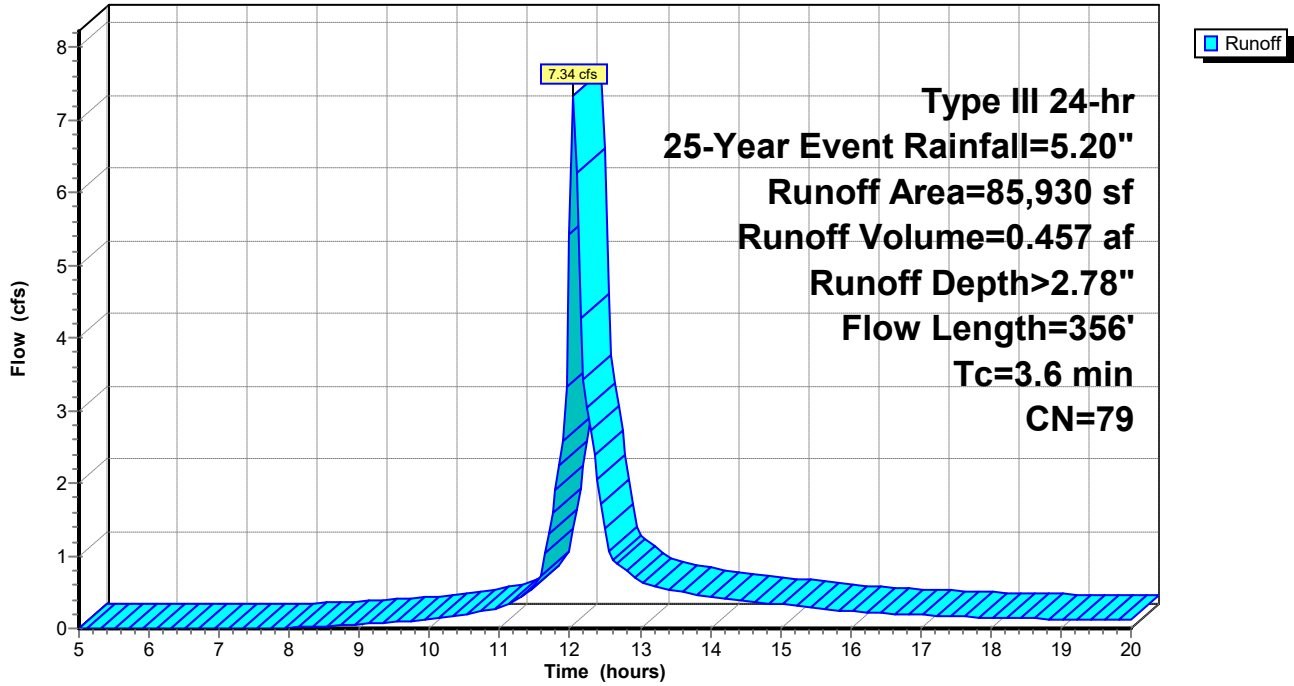
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25-Year Event Rainfall=5.20"

Area (sf)	CN	Description
25,115	98	Paved parking, HSG C
4,355	74	>75% Grass cover, Good, HSG C
56,460	71	Meadow, non-grazed, HSG C
85,930	79	Weighted Average
60,815		70.77% Pervious Area
25,115		29.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	100	0.0550	1.9		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 2.80"
0.4	60	0.0250	2.5		Shallow Concentrated Flow, BC Unpaved Kv= 16.1 fps
2.1	160	0.0344	1.3		Shallow Concentrated Flow, CD Short Grass Pasture Kv= 7.0 fps
0.0	18	0.6111	11.7		Shallow Concentrated Flow, DE Grassed Waterway Kv= 15.0 fps
0.2	18	0.0556	1.7		Shallow Concentrated Flow, EF Short Grass Pasture Kv= 7.0 fps
3.6	356	Total			

Subcatchment 1S: Sub Area 1

Hydrograph



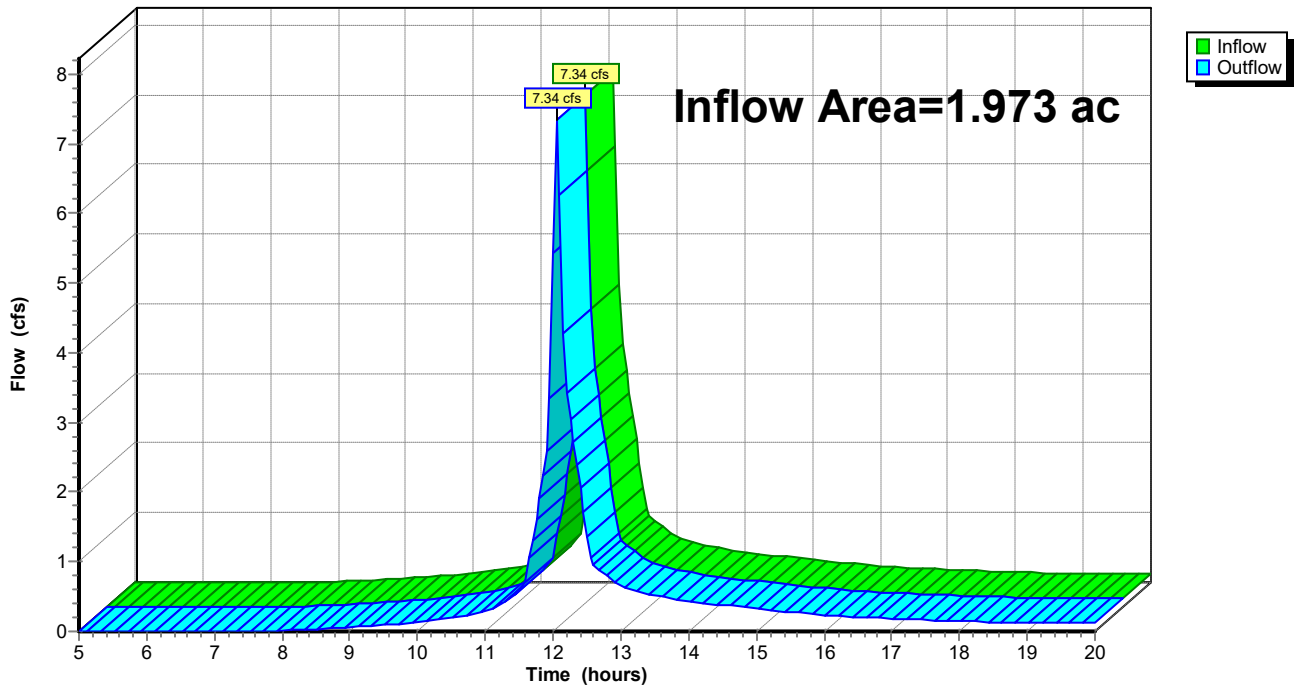
Summary for Reach SP: Study Point

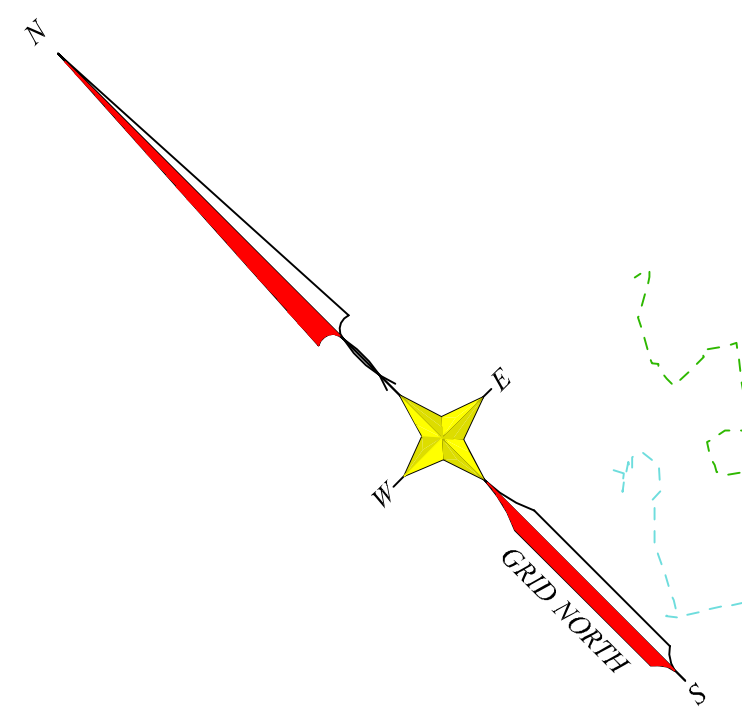
Inflow Area = 1.973 ac, 29.23% Impervious, Inflow Depth > 2.78" for 25-Year Event event
Inflow = 7.34 cfs @ 12.06 hrs, Volume= 0.457 af
Outflow = 7.34 cfs @ 12.06 hrs, Volume= 0.457 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach SP: Study Point

Hydrograph





AARON HALL
Tax Map 16, Lot 5A
Book 14395, Page 279

THOMAS I. & LORNA N. PLOURDE
Tax Map 16, Lot 6B-3
Book 4301, Page 193

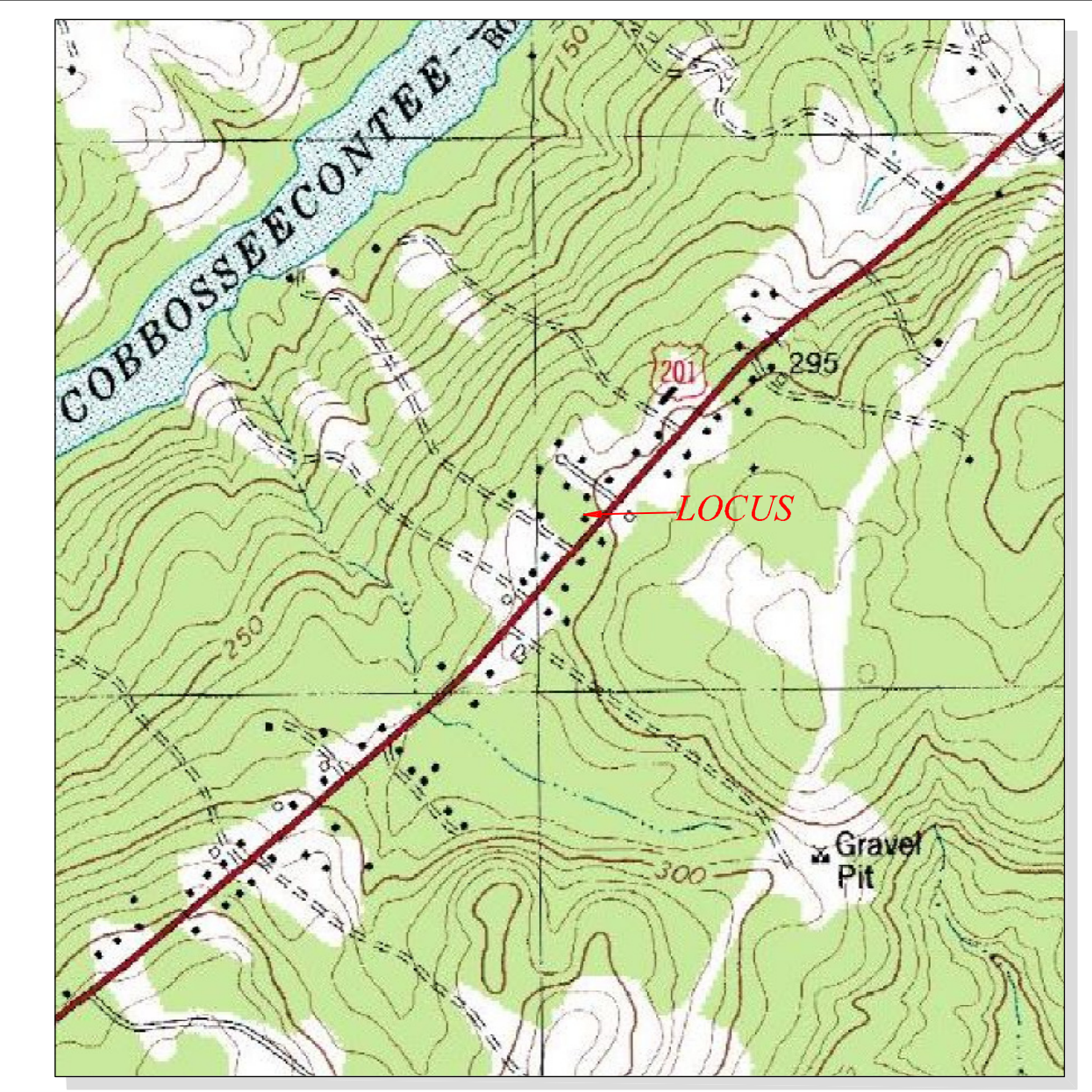
DON & CLAUDETTE LARRABEE
Tax Map 16, Lot 6B-2
Book 8535, Page 66

DONALD E. & PATRICIA V. MCLAUGHLIN
Tax Map 16, Lot 6B
Book 2100, Page 132

AREA LEASING & DEVELOPMENT
Tax Map 16, Lot 5
Book 3022, Page 74

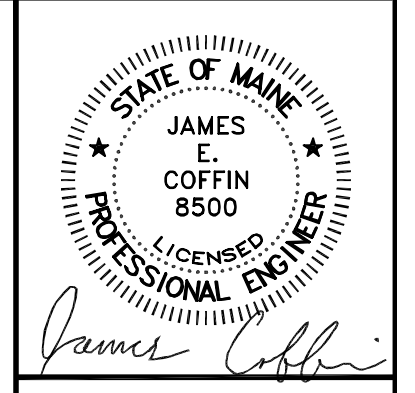
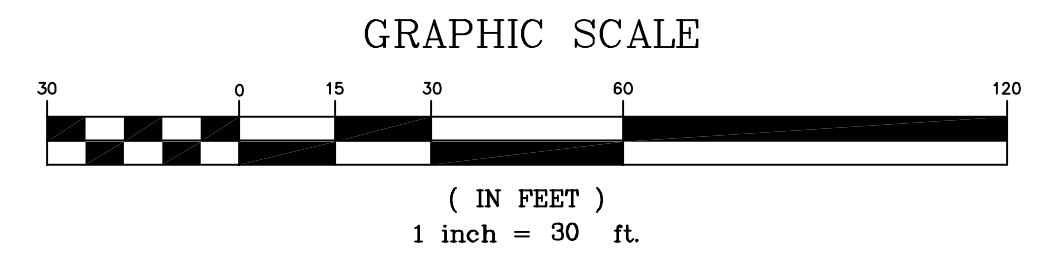
SUB AREA 2
TOTAL AREA=12,895 SF
IMPERV.=485 SF
LAWN=12,410 SF

SUB AREA 1
TOTAL AREA=73,035 SF
IMPERV.=56,025 SF
LAWN=17,010 SF



LOCUS MAP
GARDINER
USGS QUAD SHEET
SCALE 1"=1000'

LEGEND	
	IRON ROD FOUND
	IRON PIPE FOUND
	DRILL HOLE IN LEADGE
	GRANITE MONUMENT FOUND
	5/8" REBAR PROPOSED
	UTILITY POLE
	GUY ANCHOR
	OVERHEAD UTILITY LINE
	BELOW GROUND ELECTRIC
	HYDRANT
	WATER VALVE
	WELL
	MONITORING WELL
	UNDERGROUND WATER LINE
	SIGN
	EXISTING CONTOUR
	PROPOSED CONTOUR
	SURVEYED LINE
	STOCKADE FENCE
	WIRE FENCE
	GUARDRAIL
	STONE WALL
	CATCH BASIN
	STORM PIPE
	SANITARY MANHOLE
	SANITARY PUMP STATION
	SANITARY LINE
	SETBACK
	FLAG
	TEST PIT
	CONIFEROUS TREE
	DECIDUOUS TREE
	VEGETATION
	APPROXIMATE WETLANDS



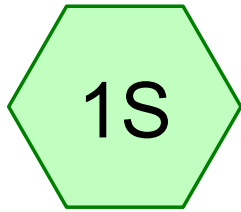
E.S. COFFIN
INCORPORATED
ENGINEERING & SURVEYING, INC.
432 Camp Road, Chelsea, Maine 04330
Phone (207) 653-9472 Fax (207) 653-9016

NO.	REVISIONS	DATE

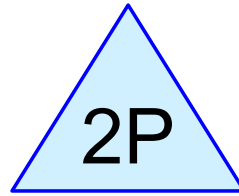
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SCALE:	1 INCH=30 FEET
DRAWN BY:	TCH
CHECKED BY:	JEC
DATE:	AUGUST 24, 2023

CLIENT/PROJECT:	GARDINER RENTAL CENTER STEVEN BOLDUC
LOCATION:	743 BRUNSWICK AVENUE
TOWN:	GARDINER
COUNTY:	KENNEBEC
STATE:	MAINE

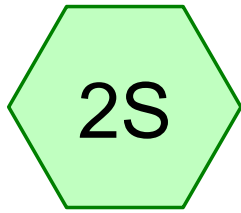
PROJ. NO. 2023-047
POST



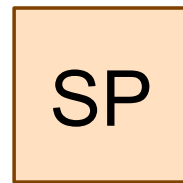
Sub Area 1



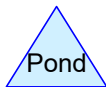
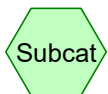
(new Pond)



Sub Area 2



Study Point



Gardiner Rental Post-Development

Prepared by E S Coffin Engineering & Survey

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Type III 24-hr 2-Year Event Rainfall=2.80"

Printed 8/24/2023

Page 2

Summary for Subcatchment 1S: Sub Area 1

Runoff = 4.16 cfs @ 12.04 hrs, Volume= 0.260 af, Depth> 1.86"
 Routed to Pond 2P : (new Pond)

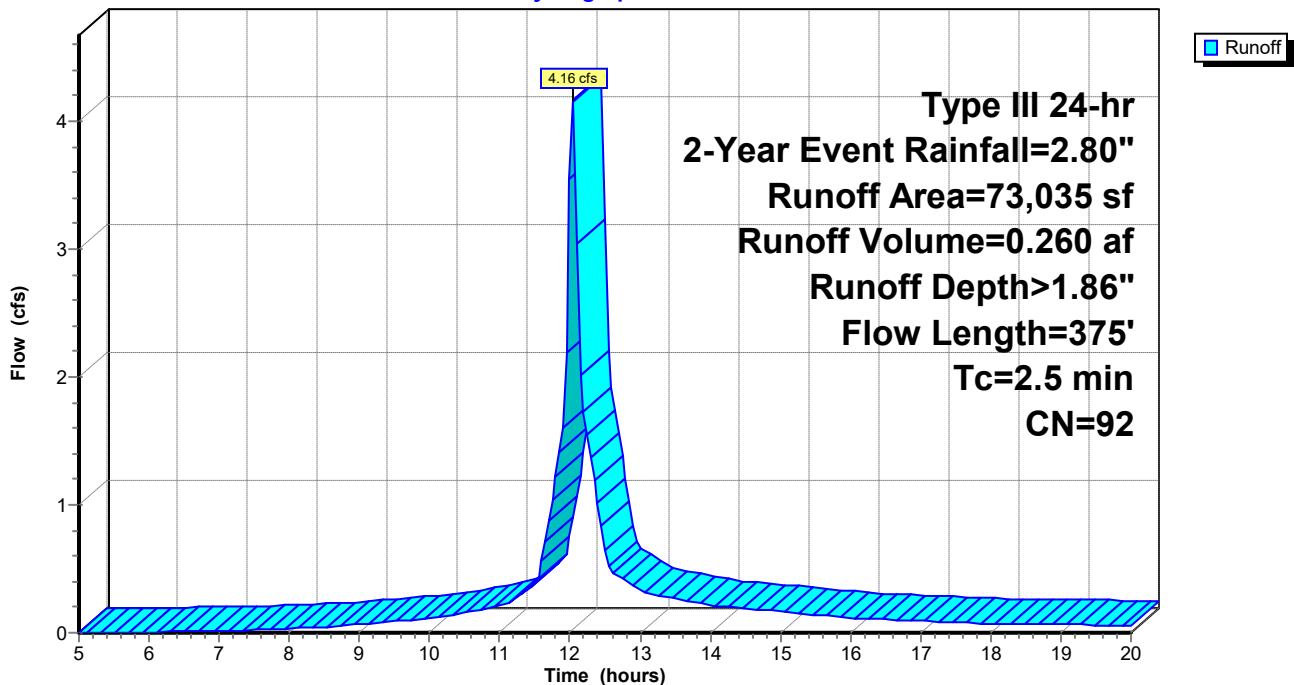
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Event Rainfall=2.80"

Area (sf)	CN	Description
56,025	98	Paved parking, HSG C
17,010	74	>75% Grass cover, Good, HSG C
73,035	92	Weighted Average
17,010		23.29% Pervious Area
56,025		76.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	100	0.0550	1.9		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 2.80"
1.4	205	0.0146	2.5		Shallow Concentrated Flow, BC Paved Kv= 20.3 fps
0.2	70	0.0286	5.7	22.64	Channel Flow, CD Area= 4.0 sf Perim= 7.2' r= 0.56' n= 0.030 Earth, grassed & winding
2.5	375	Total			

Subcatchment 1S: Sub Area 1

Hydrograph



Gardiner Rental Post-Development

Type III 24-hr 2-Year Event Rainfall=2.80"

Prepared by E S Coffin Engineering & Survey

Printed 8/24/2023

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Page 3

Summary for Subcatchment 2S: Sub Area 2

Runoff = 0.23 cfs @ 12.03 hrs, Volume= 0.015 af, Depth> 0.62"

Routed to Reach SP : Study Point

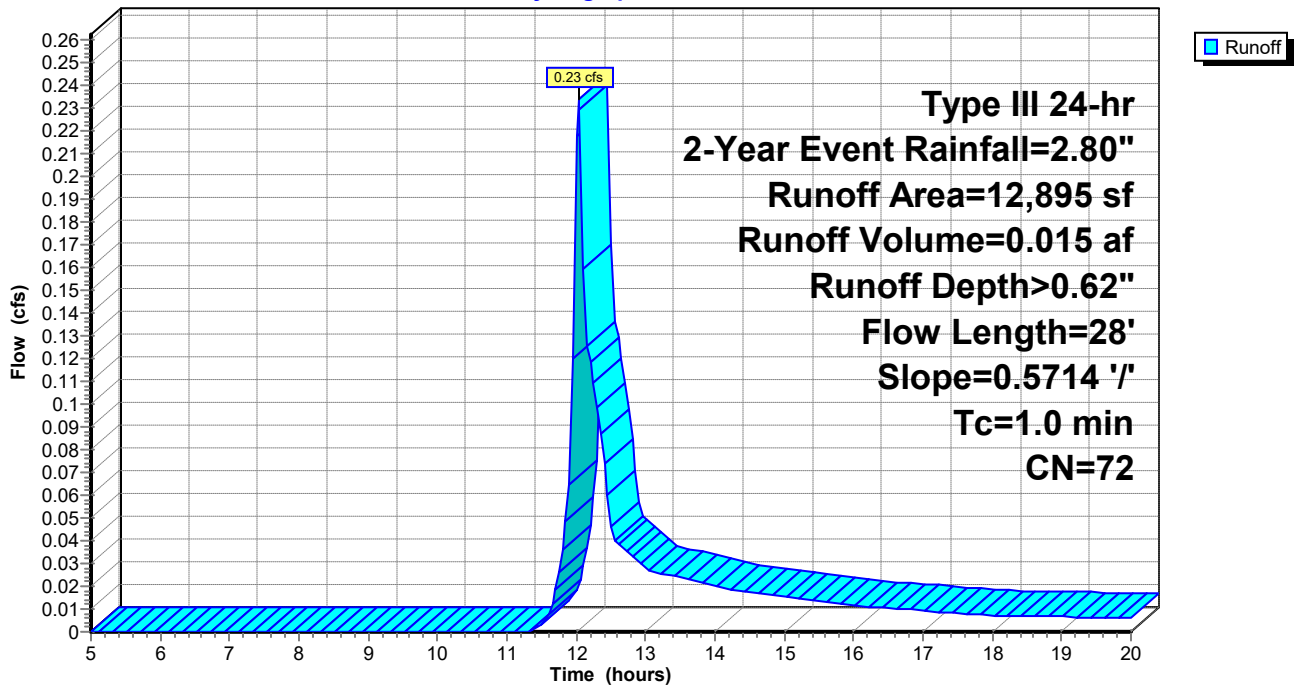
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Event Rainfall=2.80"

Area (sf)	CN	Description
485	98	Paved parking, HSG C
12,410	71	Meadow, non-grazed, HSG C
12,895	72	Weighted Average
12,410		96.24% Pervious Area
485		3.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	28	0.5714	0.5		Sheet Flow, AB
					Grass: Short n= 0.150 P2= 2.80"

Subcatchment 2S: Sub Area 2

Hydrograph



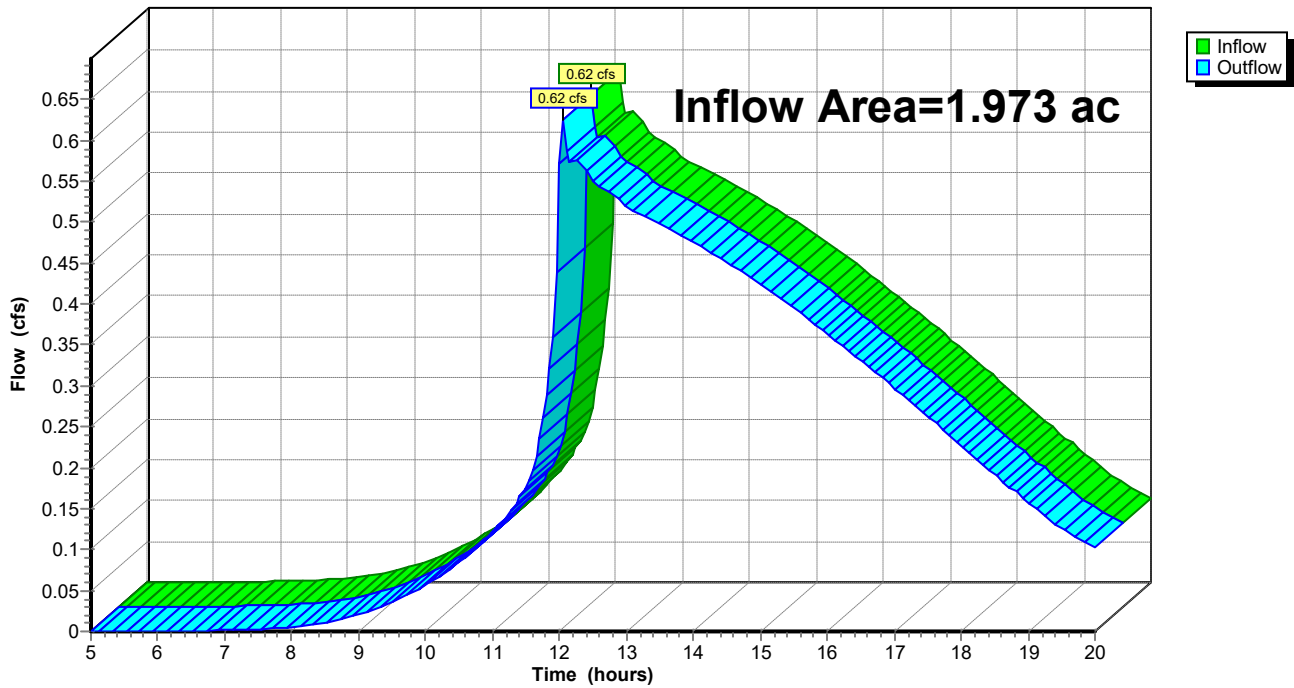
Summary for Reach SP: Study Point

Inflow Area = 1.973 ac, 65.76% Impervious, Inflow Depth > 1.59" for 2-Year Event event
Inflow = 0.62 cfs @ 12.05 hrs, Volume= 0.262 af
Outflow = 0.62 cfs @ 12.05 hrs, Volume= 0.262 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach SP: Study Point

Hydrograph



Gardiner Rental Post-Development

Type III 24-hr 2-Year Event Rainfall=2.80"

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Page 5

Summary for Pond 2P: (new Pond)

Inflow Area = 1.677 ac, 76.71% Impervious, Inflow Depth > 1.86" for 2-Year Event event
 Inflow = 4.16 cfs @ 12.04 hrs, Volume= 0.260 af
 Outflow = 0.51 cfs @ 12.57 hrs, Volume= 0.246 af, Atten= 88%, Lag= 31.7 min
 Primary = 0.51 cfs @ 12.57 hrs, Volume= 0.246 af
 Routed to Reach SP : Study Point

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 282.55' @ 12.57 hrs Surf.Area= 4,214 sf Storage= 5,250 cf

Plug-Flow detention time= 131.3 min calculated for 0.246 af (95% of inflow)
 Center-of-Mass det. time= 112.1 min (880.2 - 768.1)

Volume	Invert	Avail.Storage	Storage Description
#1	281.00'	24,622 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
281.00	2,580	0	0	2,580
282.00	3,615	3,083	3,083	3,634
282.50	4,155	1,941	5,024	4,185
283.00	4,720	2,217	7,241	4,762
284.00	6,330	5,505	12,747	6,393
285.00	8,280	7,283	20,030	8,366
285.50	10,120	4,592	24,622	10,214

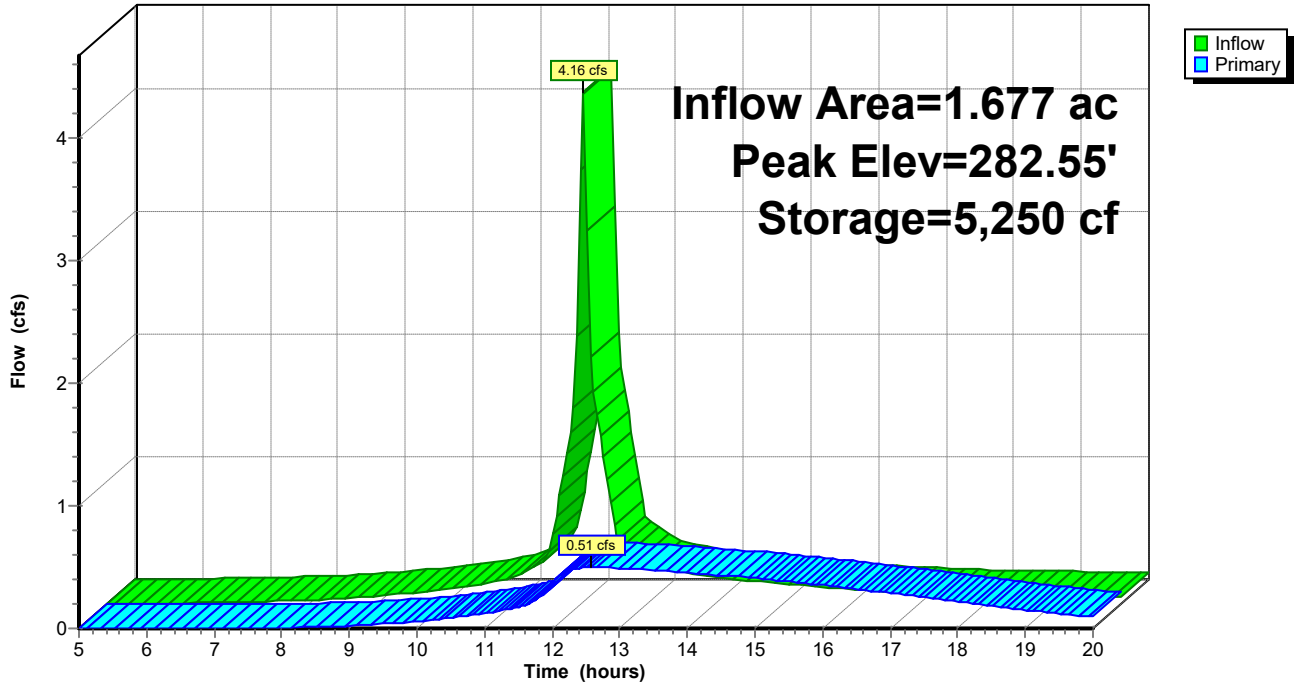
Device	Routing	Invert	Outlet Devices
#1	Primary	278.00'	18.0" Round Culvert L= 74.0' Ke= 0.9? Inlet / Outlet Invert= 278.00' / 271.50' S= 0.0878 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.76714586764426?
#2	Device 1	281.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	282.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.50 cfs @ 12.57 hrs HW=282.55' (Free Discharge)

- 1=Culvert (Passes 0.50 cfs of 13.10 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.49 cfs @ 5.7 fps)
- 3=Orifice/Grate (Orifice Controls 0.01 cfs @ 0.8 fps)

Pond 2P: (new Pond)

Hydrograph



Gardiner Rental Post-Development

Prepared by E S Coffin Engineering & Survey

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Type III 24-hr 10-Year Event Rainfall=4.20"

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Summary for Subcatchment 1S: Sub Area 1

Runoff = 6.81 cfs @ 12.04 hrs, Volume= 0.438 af, Depth> 3.13"
 Routed to Pond 2P : (new Pond)

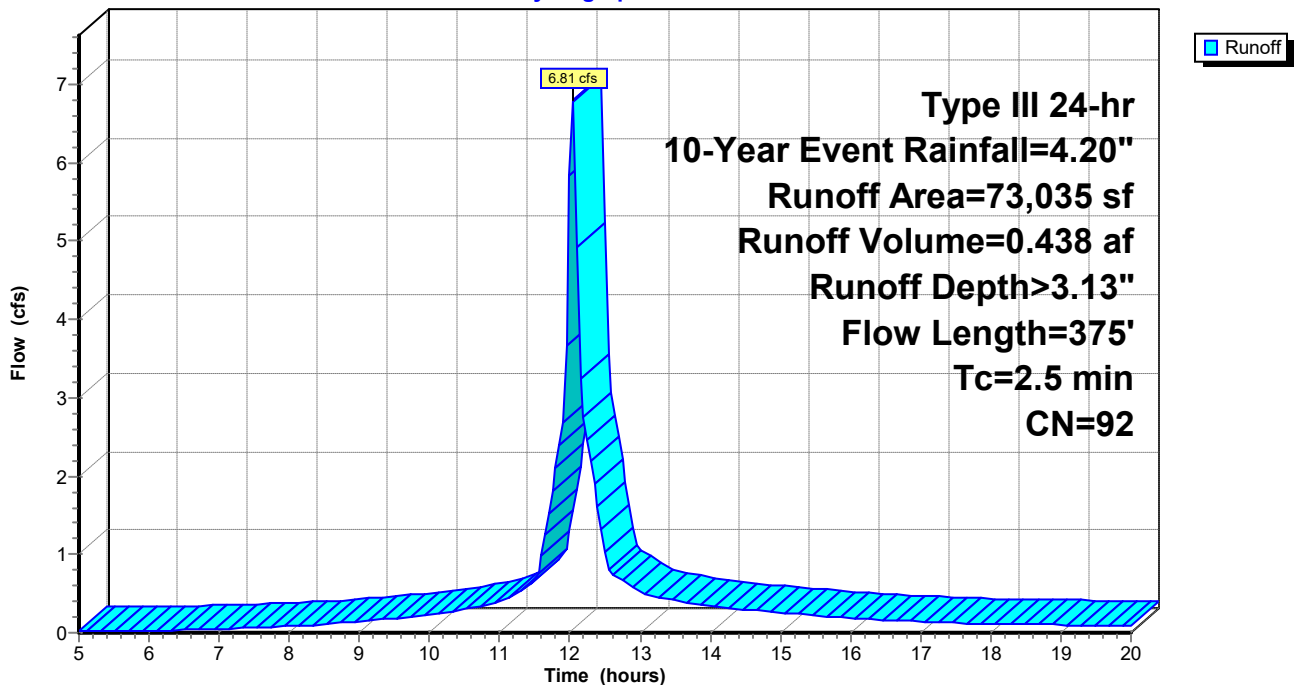
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Event Rainfall=4.20"

Area (sf)	CN	Description
56,025	98	Paved parking, HSG C
17,010	74	>75% Grass cover, Good, HSG C
73,035	92	Weighted Average
17,010		23.29% Pervious Area
56,025		76.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	100	0.0550	1.9		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 2.80"
1.4	205	0.0146	2.5		Shallow Concentrated Flow, BC Paved Kv= 20.3 fps
0.2	70	0.0286	5.7	22.64	Channel Flow, CD Area= 4.0 sf Perim= 7.2' r= 0.56' n= 0.030 Earth, grassed & winding
2.5	375	Total			

Subcatchment 1S: Sub Area 1

Hydrograph



Gardiner Rental Post-Development

Type III 24-hr 10-Year Event Rainfall=4.20"

Prepared by E S Coffin Engineering & Survey

Printed 8/24/2023

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Page 8

Summary for Subcatchment 2S: Sub Area 2

Runoff = 0.60 cfs @ 12.02 hrs, Volume= 0.036 af, Depth> 1.47"
Routed to Reach SP : Study Point

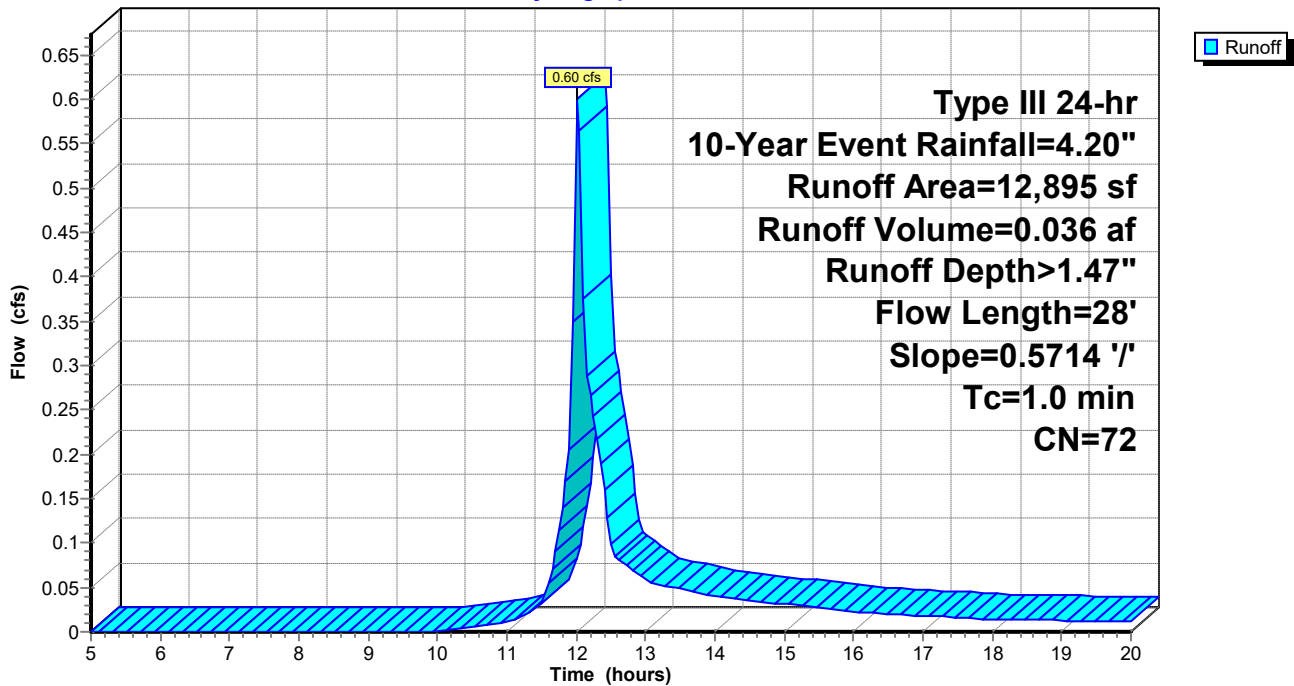
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Event Rainfall=4.20"

Area (sf)	CN	Description
485	98	Paved parking, HSG C
12,410	71	Meadow, non-grazed, HSG C
12,895	72	Weighted Average
12,410		96.24% Pervious Area
485		3.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	28	0.5714	0.5		Sheet Flow, AB
					Grass: Short n= 0.150 P2= 2.80"

Subcatchment 2S: Sub Area 2

Hydrograph



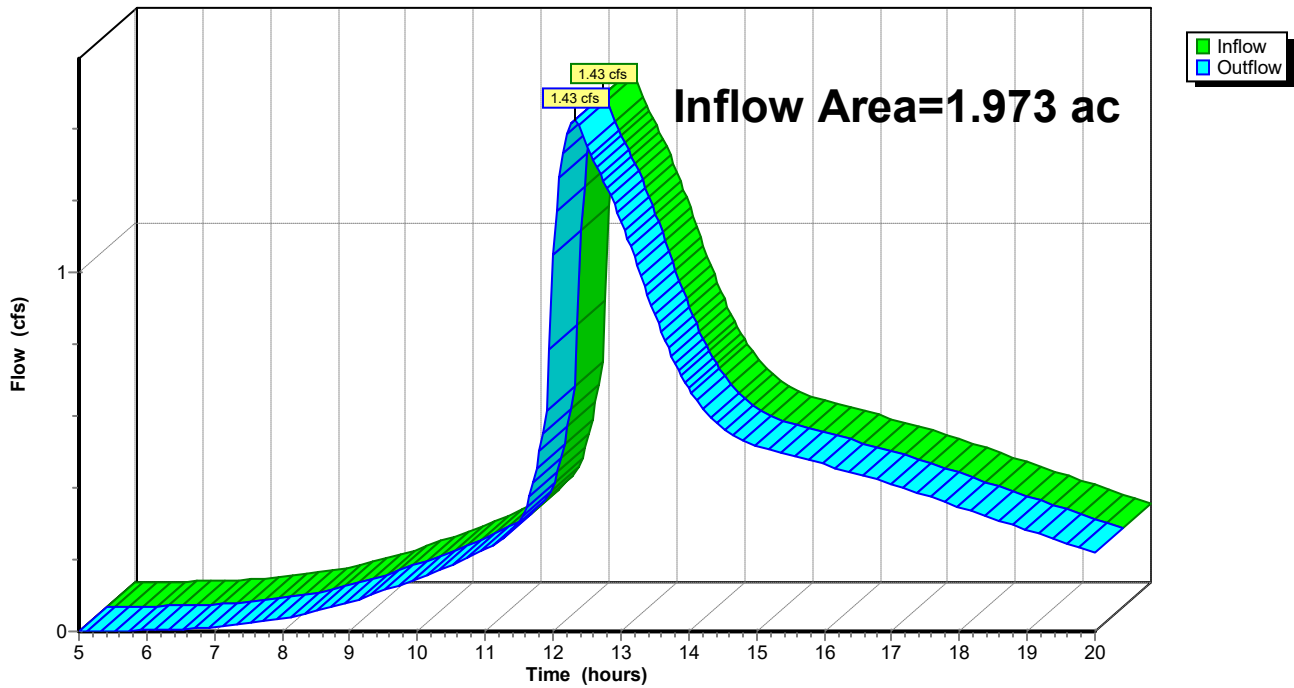
Summary for Reach SP: Study Point

Inflow Area = 1.973 ac, 65.76% Impervious, Inflow Depth > 2.72" for 10-Year Event event
Inflow = 1.43 cfs @ 12.32 hrs, Volume= 0.448 af
Outflow = 1.43 cfs @ 12.32 hrs, Volume= 0.448 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach SP: Study Point

Hydrograph



Gardiner Rental Post-Development

Type III 24-hr 10-Year Event Rainfall=4.20"

Prepared by E S Coffin Engineering & Survey

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Summary for Pond 2P: (new Pond)

Inflow Area = 1.677 ac, 76.71% Impervious, Inflow Depth > 3.13" for 10-Year Event event
 Inflow = 6.81 cfs @ 12.04 hrs, Volume= 0.438 af
 Outflow = 1.26 cfs @ 12.46 hrs, Volume= 0.412 af, Atten= 82%, Lag= 25.1 min
 Primary = 1.26 cfs @ 12.46 hrs, Volume= 0.412 af
 Routed to Reach SP : Study Point

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 283.23' @ 12.46 hrs Surf.Area= 5,064 sf Storage= 8,348 cf

Plug-Flow detention time= 123.3 min calculated for 0.410 af (94% of inflow)
 Center-of-Mass det. time= 101.3 min (857.5 - 756.1)

Volume	Invert	Avail.Storage	Storage Description
#1	281.00'	24,622 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
281.00	2,580	0	0	2,580
282.00	3,615	3,083	3,083	3,634
282.50	4,155	1,941	5,024	4,185
283.00	4,720	2,217	7,241	4,762
284.00	6,330	5,505	12,747	6,393
285.00	8,280	7,283	20,030	8,366
285.50	10,120	4,592	24,622	10,214

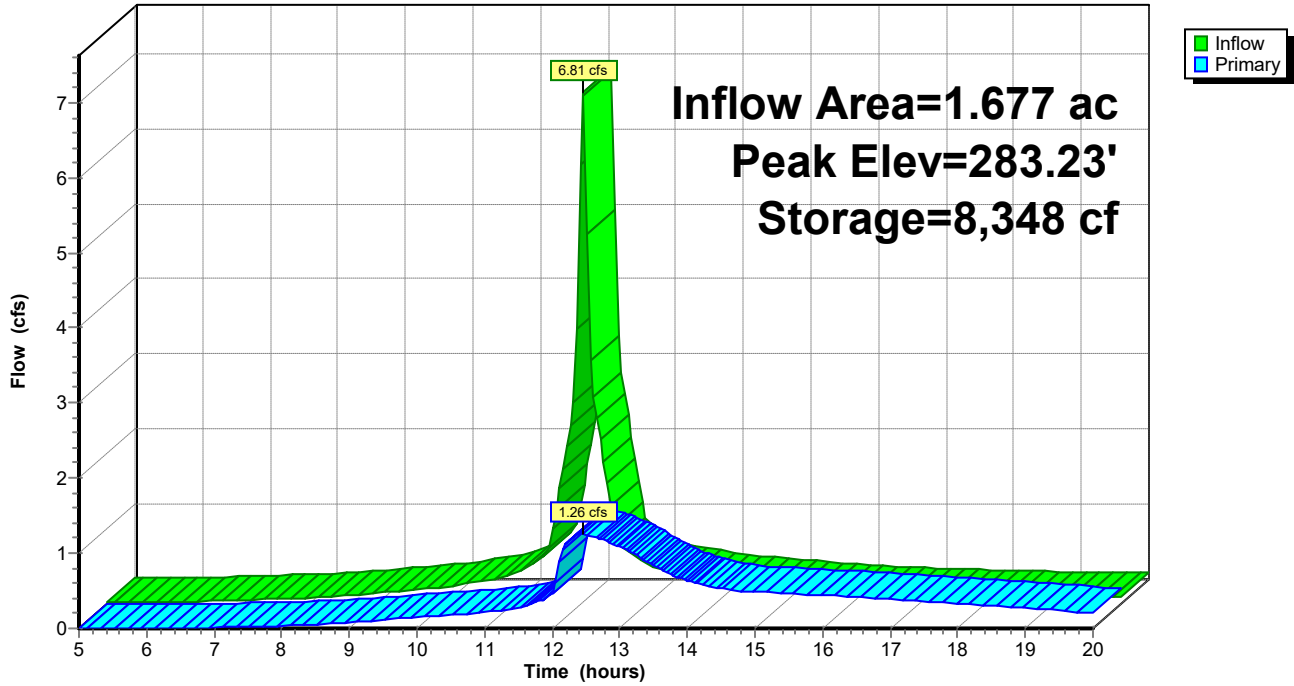
Device	Routing	Invert	Outlet Devices
#1	Primary	278.00'	18.0" Round Culvert L= 74.0' Ke= 0.9? Inlet / Outlet Invert= 278.00' / 271.50' S= 0.0878 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.76714586764426?
#2	Device 1	281.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	282.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.25 cfs @ 12.46 hrs HW=283.23' (Free Discharge)

- ↑ 1=Culvert (Passes 1.25 cfs of 14.21 cfs potential flow)
- ↑ 2=Orifice/Grate (Orifice Controls 0.60 cfs @ 6.9 fps)
- ↑ 3=Orifice/Grate (Orifice Controls 0.65 cfs @ 3.3 fps)

Pond 2P: (new Pond)

Hydrograph



Gardiner Rental Post-Development

Prepared by E S Coffin Engineering & Survey

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Type III 24-hr 25-Year Event Rainfall=5.20"

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Summary for Subcatchment 1S: Sub Area 1

Runoff = 8.68 cfs @ 12.04 hrs, Volume= 0.566 af, Depth> 4.05"
 Routed to Pond 2P : (new Pond)

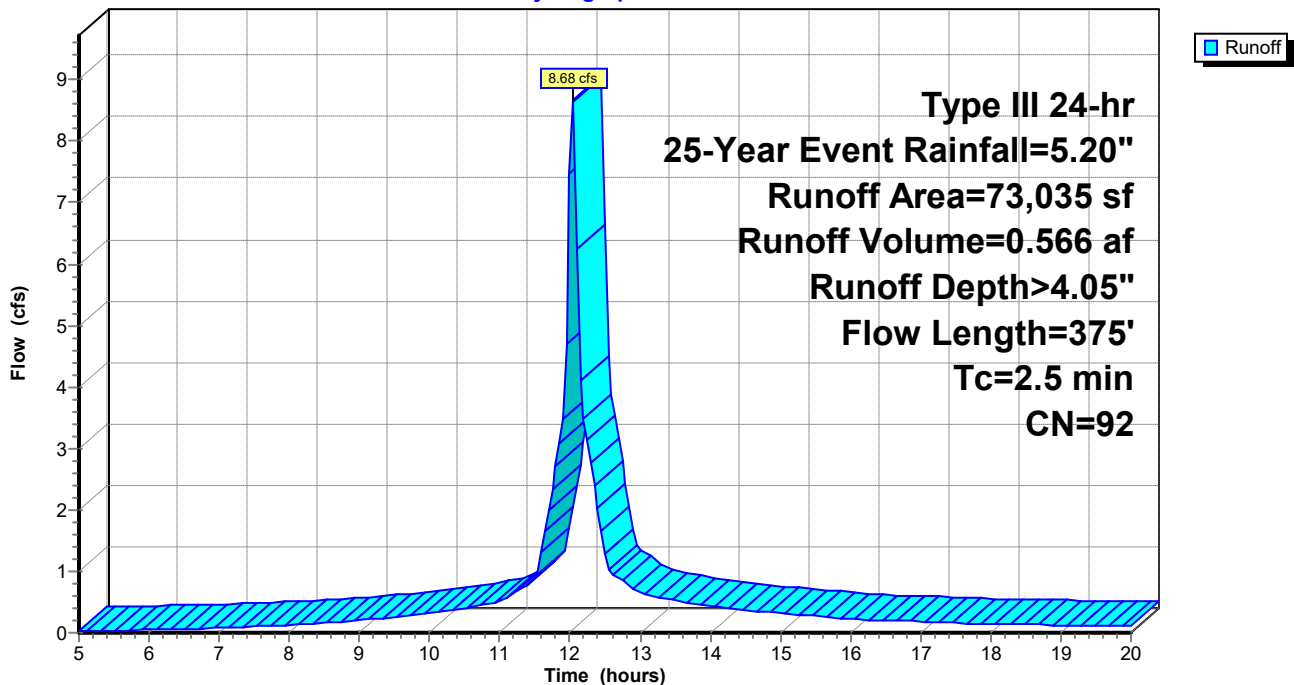
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25-Year Event Rainfall=5.20"

Area (sf)	CN	Description
56,025	98	Paved parking, HSG C
17,010	74	>75% Grass cover, Good, HSG C
73,035	92	Weighted Average
17,010		23.29% Pervious Area
56,025		76.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	100	0.0550	1.9		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 2.80"
1.4	205	0.0146	2.5		Shallow Concentrated Flow, BC Paved Kv= 20.3 fps
0.2	70	0.0286	5.7	22.64	Channel Flow, CD Area= 4.0 sf Perim= 7.2' r= 0.56' n= 0.030 Earth, grassed & winding
2.5	375	Total			

Subcatchment 1S: Sub Area 1

Hydrograph



Gardiner Rental Post-Development

Type III 24-hr 25-Year Event Rainfall=5.20"

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Summary for Subcatchment 2S: Sub Area 2

Runoff = 0.90 cfs @ 12.02 hrs, Volume= 0.054 af, Depth> 2.18"
 Routed to Reach SP : Study Point

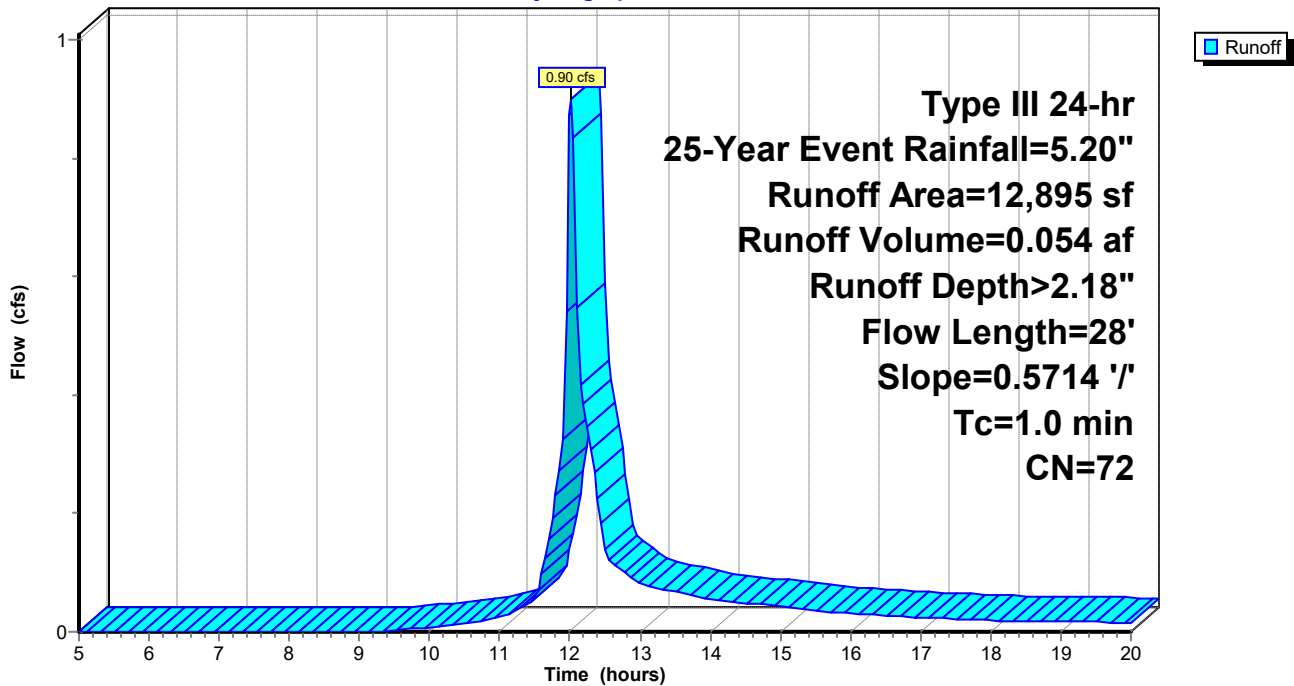
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25-Year Event Rainfall=5.20"

Area (sf)	CN	Description
485	98	Paved parking, HSG C
12,410	71	Meadow, non-grazed, HSG C
12,895	72	Weighted Average
12,410		96.24% Pervious Area
485		3.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	28	0.5714	0.5		Sheet Flow, AB Grass: Short n= 0.150 P2= 2.80"

Subcatchment 2S: Sub Area 2

Hydrograph



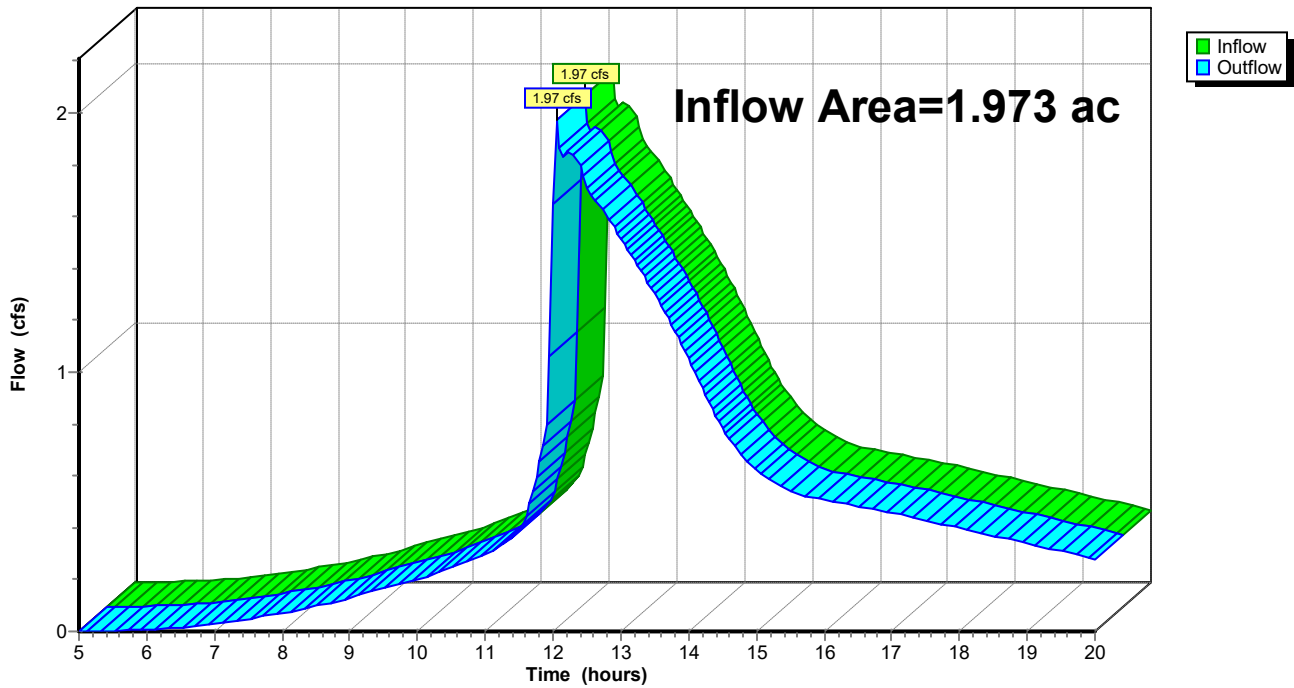
Summary for Reach SP: Study Point

Inflow Area = 1.973 ac, 65.76% Impervious, Inflow Depth > 3.55" for 25-Year Event event
Inflow = 1.97 cfs @ 12.06 hrs, Volume= 0.583 af
Outflow = 1.97 cfs @ 12.06 hrs, Volume= 0.583 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach SP: Study Point

Hydrograph



Gardiner Rental Post-Development

Type III 24-hr 25-Year Event Rainfall=5.20"

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Summary for Pond 2P: (new Pond)

Inflow Area = 1.677 ac, 76.71% Impervious, Inflow Depth > 4.05" for 25-Year Event event
 Inflow = 8.68 cfs @ 12.04 hrs, Volume= 0.566 af
 Outflow = 1.58 cfs @ 12.46 hrs, Volume= 0.530 af, Atten= 82%, Lag= 25.2 min
 Primary = 1.58 cfs @ 12.46 hrs, Volume= 0.530 af
 Routed to Reach SP : Study Point

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 283.68' @ 12.46 hrs Surf.Area= 5,785 sf Storage= 10,792 cf

Plug-Flow detention time= 118.7 min calculated for 0.528 af (93% of inflow)
 Center-of-Mass det. time= 94.9 min (845.9 - 751.0)

Volume	Invert	Avail.Storage	Storage Description
#1	281.00'	24,622 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
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Device	Routing	Invert	Outlet Devices
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#2	Device 1	281.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	282.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.58 cfs @ 12.46 hrs HW=283.68' (Free Discharge)

- ↑ **1=Culvert** (Passes 1.58 cfs of 14.91 cfs potential flow)
- ↑ **2=Orifice/Grate** (Orifice Controls 0.67 cfs @ 7.6 fps)
- ↑ **3=Orifice/Grate** (Orifice Controls 0.91 cfs @ 4.6 fps)

Pond 2P: (new Pond)

Hydrograph

