City of Auburn, Maine
Planning & Permitting Department
Eric Cousens, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

PLANNING BOARD AGENDA
January 14th, 2025 – 6:00 p.m.
City Council Chambers, 60 Court Street

1. **ROLL CALL:**

2. **MINUTES:** Review the December 10th 2024 meeting minutes. All meetings are available live and after airing on YouTube https://www.youtube.com/c/CityofAuburnMaine

3. **PUBLIC HEARING/ SITE PLAN REVIEW:** Penley Corner Residences: The Planning Board will host a Public Hearing and act on a site plan application submitted by TERRADYN CONSULTANTS LLC on behalf of the owners Vallieres Real Estate Investment, LLC proposing construction of two residential duplex buildings, the subject property is located at 1165 Riverside Drive, Tax Map Lot 163-001-001, and within the Rural Residential District and Agriculture and Resource Protection District

4. **PUBLIC HEARING/ SITE PLAN REVIEW:** Cooper Paving Sign: The Planning Board will host a Public Hearing and act on a site plan application submitted by Stoneybrook Land Use Inc. On behalf of Cooper Paving LLC to install a new sign at their site, the subject property is located at 2767 Turner Road, Tax Map Lot 367-032, and within the Low Density Country Residential (LDCR) District, the Agriculture and Resource Protection (AG) District, and the Lake Auburn Watershed.

5. **PUBLIC HEARING/ SITE PLAN REVIEW:** Stetson Road Multifamily: The Planning Board will host a Public Hearing and act on a site plan application and SLODA delegated review (Over three acres) submitted by DiPrete Engineering on behalf of the owners A.R. Building Company, to build 56 Residential buildings: 22 duplexes and 34 quadplexes, the subject property is located on Stetson Rd, Tax Map 291-011, and within the GB - General Business District.

6. **PUBLIC HEARING/ SITE PLAN REVIEW:** Danville Corner Housing Development: The Planning Board will host a Public Hearing and act on a site plan application and Stormwater delegated review (less than three but over one acre) submitted by Terradyn Consultants LLC on behalf of Timothy Millet to build 44 single family homes, the subject property is owned by Spurwink Services Incorporated, and located on Danville Corner Rd, Tax Map 122-004 and within the GB - General Business District.

7. **CHAIR AND VICE CHAIR ELECTION**

8. **PUBLIC COMMENT:**

9. MISCELLANEOUS:

a. Upcoming Agenda Items
    i. BWC Gulf Island Pond, LLC – Auburn Solar Project East Waterman Rd
    ii. Stetson Road Multifamily – tabled this meeting
    iii. Danville Corner Housing Development –tabled this meeting
    iv. Engine II
b. Joint Meeting – January 21, 2025 - AG zone with advice from our Legal Counsel on Bonafide Farms

10. ADJOURNMENT

Auburn Planning Board meetings can be viewed live on the City of Auburn YouTube channel (https://www.youtube.com/c/CityofAuburnMaine), and on Great Falls Television (Spectrum Cable Channel 11).

Following live broadcasts, Planning Board meetings are rebroadcast at 7:00AM, noon, and 7:00PM on Tuesdays on GFTV and are available anytime on our YouTube channel.

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PLANNING BOARD MEETING MINUTES - DRAFT
December 10th, 2024 – 6:00 p.m.
City Council Chambers, 60 Court Street

1. **ROLL CALL:** Bob Hayes, Dave Trask, Paul Jacques, Stacey LeBlanc (Chair), Riley Bergeron, Tim DeRoche, Maureen Hopkins (Associate Member). Absent: Amanda Guerrette (Associate Member) and Darren Finnegan.

2. **MINUTES:** Review the November 12, 2024 meeting minutes. All meetings are available live and after airing on YouTube https://www.youtube.com/c/CityofAuburnMaine

   Motion to Approve: Bob Hayes **Second**: Riley Bergeron **Vote**: 6-0-1 (Stacey LeBlanc Abstains) **Motion Carries**

3. **WORKSHOP:** Review possible text change proposal under Chapter 60, Article VII, Sec. 60-666. Uses of-Manufactured housing, trailers, office trailers to allow shipping containers, Conex boxes, railroad cars and tractor trailer bodies for storage. With recommendation to hold a Public Hearing and proposed text change to City Council.

   Staff Report presented by Natalie Thomsen. The ordinance text changes were presented to the City Council and was brought back to the Planning Board with some clarifying questions. The board discussed text related to requiring that the appearance of storage containers "must match the characteristics of the neighborhood", but City Council and Staff felt that the language was difficult to define and open to interpretation, so they settled on language regarding the location of where the storage containers can be placed and shielding them from public view.

   The board and staff further discuss industrial/commercial use versus residential use. Bob Hayes sees value in allowing temporary use for residential properties, but not permanently. Discussion about temporary use raised questions about time frame for length of time allowed as well as the need for screening the view of the container. The board also discussed tying the permit of a Conex box to the issuance of a building permit.

4. **WORKSHOP:** The Planning Board will hold a workshop to discuss the upcoming Comprehensive Plan, its various elements, and the role the Planning Board will take in relation to the plan.

   Presentation provided by Natalie Thomsen.

DRAFT

5. PUBLIC COMMENT:

John Cleveland – 183 Davis Ave – Mr. Cleveland wanted to compliment Natalie Thomsen on her presentation and summary for the Comprehensive Plan.

6. MISCELLANEOUS:

a. Upcoming Agenda Items
    i. Multiple development projects in the pipeline
    ii. LD 2003 edits with comments
    iii. Bonafide Agricultural use guidelines
    iv. Revisit Conex box ordinance text
b. Discussion about formatting for Meeting Minutes with regards to identifying members who vote in opposition or abstain from voting.
    i. Board supported breaking out the vote to mention those who object or abstain from the vote.

7. ADJOURNMENT

Motion to Adjourn: Tim DeRoche **Second:** Dave Trask **Vote:** 7-0
Motion Carries

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DRAFT

City of Auburn, Maine
Office of Planning & Permitting
www.auburnmaine.gov | 60 Court Street
Auburn, Maine 04210
207.333.6601

To: Auburn Planning Board
From: Natalie Thomsen, Planning Coordinator
Re: John Vallieres is applying for a Subdivision approval to construct two residential duplex buildings on each of his two existing lots on Riverside Drive, near Penley Corner, for a total of eight units, septic, and wells at 1165 Riverside Drive, also City Assessor's Parcel I.D. 163-001-001. The proposed project should be considered pursuant to Chapter 60, Article IV Subdivision, Article XVI and Article IV, Division 4 – Low Density Rural Residence District.
Date: January 14, 2025 Meeting



I. PROPOSAL – John Vallieres is applying for Subdivision approval to construct two residential duplex buildings on each of his two existing lots on Riverside Drive for a total of four residential units. The parcel is located at 1165 Riverside Drive in the Rural Residence Zoning District. The site is currently vacant (*see above aerial*).

II. ZONING CONSIDERATIONS – The proposed project is located in the **Rural Residential (RR) Zoning District**. Two-family dwellings are permitted in this district, provided they comply with applicable zoning standards. The maximum density in the district is one dwelling unit per acre, and each lot is over 1 acre in size, meeting the density and lot size requirements.

All setback requirements for the lot have been met:

- **Front yard setback**: 25 feet minimum.
- **Side yard setback**: 5 feet minimum, increasing by 1 foot for every 5 feet of street frontage over 50 feet, up to a maximum of 15 feet.
- **Rear yard setback**: 25 feet minimum or 25% of the average lot depth, whichever is less.

The project also meets the maximum height requirement of 35 feet for residential structures in the RR district.

The rear seven acres of the property will remain undeveloped as open space, preserving the rural character of the area and providing recreational opportunities for residents.

The proposed buildings and site improvements conform to the dimensional standards, density limitations, and use regulations for the Rural Residential District.

- The project is proposed to be accessed from Riverside Drive via two separate driveway entrances/exits.

Article V – Off-Street Parking and Loading:
Applicable standards under Section 60-608

Parking requirements – Multifamily; two-family: 1 per dwelling unit

Standard Met ✓

Article X – Access Management Standards:
Applicable standards under Section 60-799
Sight distance measurements based on the posted speed limit of the road.

Standard Met ✓

Applicable standards under Section 60-800
Curb cut and driveway spacing based on the posted speed limit of the road.

Standard Met ✓

WETLANDS/STORMWATER -
The stormwater impacts associated with this development are minimal. The project is proposed to create less than 1-acre impervious area and stormwater is proposed to be treated and discharged primarily to the wetland in the rear of the site. The project is designed to avoid wetland impacts.

OTHER PERTINENT ITEMS - NONE

IV. DEPARTMENT REVIEW-

a. **Police -** ✓
b. **Auburn Water and Sewer** – ✓
c. **Fire Department/Code Enforcement** – ✓
d. **Engineering** – ✓
e. **Public Services-** ✓

f. **Airport** – ✓

V. PLANNING BOARD ACTION- The proposed project requires review and findings for approval of Sections 60-1359:

A. Subdivision, Section 60-1359:

1. Will not result in undue water, air or noise pollution. In making this determination it shall at least consider:
    a. The elevation of land above sea level and its relation to the floodplains, the nature of soils and subsoils and their ability to adequately support waste disposal;
    b. The slope of the land and its effect on effluents;
    c. The availability of streams for disposal of effluents; and
    d. The applicable state and local health and water resources regulations, including stormwater management requirements in accordance with section 60-1301(14);
2. Has sufficient water available for the reasonably foreseeable needs of the subdivision;
3. Will not cause an unreasonable burden on an existing water supply, if one is to be utilized;
4. Will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result;
5. Will not cause unreasonable highway or public road congestion or unsafe conditions with respect to use of the highways or public roads existing or proposed;
6. Will provide for adequate sewage waste disposal;
7. Will not cause an unreasonable burden on the ability of a municipality to dispose of solid waste and sewage if municipal services are to be utilized;
8. Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas;
9. Is in conformance with a duly adopted subdivision regulation or ordinance, comprehensive plan, development plan, or land use plan, if any;
10. Is funded by a subdivider has adequate financial and technical capacity to meet the standards of this section;
11. Will not adversely affect the character of the surrounding neighborhood and will not tend to depreciate the value of property adjoining the neighboring property under application;
12. Has provisions for on site landscaping that are adequate to screen neighboring properties from unsightly features of the development;
13. Will not create a fire hazard and has provided adequate access to the site for emergency vehicles;
14. Will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater;
15. Does not have long-term cumulative effects of the proposed subdivision will that unreasonably increase a great pond phosphorus concentration during the construction phase and life of the proposed subdivision.

VI. STAFF RECOMMENDATIONS -

Staff recommends the Planning Board find that the Subdivision for the proposed development, meets the requirements of 60-1359. Staff recommends the following conditions:

a. *No development activity until any bonding or inspection fees is determined by the Auburn Engineering Department.*
b. *Blasting permit in advance of blasting from the City of Auburn, Planning, Permitting and Code Department.*

I make a motion that the proposal meets the requirements of Sections 60-1359 and approve the Subdivision to construct two residential duplex buildings on each of his two existing lots on Riverside Drive, near Penley Corner, for a total of eight units, septic, and wells 1165 Riverside Drive, also City Assessor's Parcel I.D. 163-001-001. The proposed project should be considered pursuant to Chapter 60, Article IV Subdivision, Article XVI and Article IV, Division 4 – Low Density Rural Residence District.

- No development activity until any bonding or inspection fees is determined by the Auburn Engineering Department.
- Blasting permit in advance of blasting from the City of Auburn, Planning, Permitting and Code Department.

Natalie Thomsen
Planning Coordinator

TERRADYN
CONSULTANTS, LLC

PENLEY CORNER RESIDENCES

RIVERSIDE DRIVE
AUBURN, MAINE

SUBDIVISION APPLICATION

PREPARED FOR:

VALLIERES REAL ESTATE INVESTMENTS, LLC
JOHN M. VALLIERES
35 EIGHTH STREET
AUBURN, MAINE 04210

PREPARED BY:

TERRADYN CONSULTANTS LLC
95 MAIN STREET, SUITE 201 BOX 10
AUBURN, ME 04210

DEC 2023

TERRADYN
CONSULTANTS, LLC

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    - ARC GIS ZONING CITY OF AUBURN
3. PLANS
    - ARCHITURAL PLANS (PROPOSED STRUCTURES)
    - SUBDIVISION PLAN

TERRADYN CONSULTANTS, LLC

207.926.5111
info@terradynconsultants.com
www.terradynconsultants.com

John Blais
Deputy Director of Planning & Permitting
City of Auburn
(207) 333-6601 Ext. 1334
Jblais@auburnmaine.gov

RE: Penley Corner Residences Subdivision – Map 163 Lot 1-1

Dear John and Board Members:

Please accept the following Subdivision Plan and Application for your review and approval. The Applicant, John Vallieres, wishes to construct two residential duplex buildings on each of his two existing lots (Lot 1 and Lot 2) on Riverside Drive, near Penley Corner, for a total of eight units.

The subject lots front on southwesterly side of Riverside Drive, between the Penley Corner Church and Cemetery, and the Schnopp parcel at Penley Corner. Lot 1 and Lot 2 lie within the Rural Residential District, while the rear seven acres of the larger existing parcel is zoned Agriculture and Resource Protection. The majority of Lot 1 and Lot 2 is open field with little to no slope. A stream & gully bisects the properties, running nearly along and parallel to the zone line. The zone line is exactly 400 feet off of and parallel to Riverside Drive. The banks of the gully and everything southwest of the stream is forested.

This rear seven acres of the greater parcel is proposed to be reserved as open space for the tenants of this subdivision. This is a very generous offering by the Applicant, but makes sense for a few reasons: 1) Mr. Vallieres recognizes the natural beauty of this wooded parcel and wants to preserve it for his tenants' enjoyment; 2) development of this area would be difficult considering the stream & gully crossing that would be needed to access it, and the strict development standards of the underlying municipal zone; 3) this rear parcel is adjacent to an existing CMP corridor, providing wildlife connectivity and possible connectivity to other existing or future preserved lands, either public or private.

each
Lot 1 and Lot 2 will be accessed by one driveway off Riverside Drive, as indicated on the Plan. The dwellings will be serviced by private sewer and water.

One building (Building #1) is currently under construction. It was not fully realized that this project would trigger subdivision review till after construction had already begun.

Terradyn Consultants, LLC has been retained by the Applicant to provide all necessary information and documentation for the Board's review and approval of this project. We very much appreciate your time and attention to this matter.

Regards,

Jimmy C. Courbron, PLS

City of Auburn, Maine
Planning & Permitting
Eric Cousens, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Application

PROJECT NAME: Penley Corner Residences

PROPOSED DEVELOPMENT ADDRESS: Riverside Drive

PARCEL ID #: 163-001-001

REVIEW TYPE:
Site Plan ☐ Site Plan Amendment ☐
Subdivision ☑ Subdivision Amendment ☐

PROJECT DESCRIPTION: 4 Unit Subdivision

CONTACT INFORMATION:

Applicant
Name: John Vallieres
Address: 335 Eighth Street
City / State Auburn, ME
Zip Code 004210
Work #:
Cell #:
Fax #:
Home #:
Email:

Property Owner
Name: Vallieres Real Estate Investment, LLC
Address: 335 Eighth Street
City / State AAuburn, ME
Zip Code 004210
Work #:
Cell #:
Fax #:
Home #:
Email:

Project Representative
Name: Jimmy Courbron
Address: 95 Main Street
City / State AAuburn ME
Zip Code 0042104210
Work #: 20207-200-16787-200-1678
Cell #: 2207-212-447807-212-4478
Fax #:
Home #:
Email: jjimmy@terradynconsultants.com

Other professional representatives for the project (surveyors, engineers, etc.),
Name:
Address:
City / State
Zip Code
Work #:
Cell #:
Fax #:
Home #:
Email:

PROJECT DATA

The following information is required where applicable, in order complete the application

IMPERVIOUS SURFACE AREA/RATIO

Existing Total Impervious Area	NAN/A	sq. ft.
Proposed Total Paved Area	NNA/A	sq. ft.
Proposed Total Impervious Area	NNA/A	sq. ft.
Proposed Impervious Net Change	N/NAA	sq. ft.
Impervious surface ratio existing	N/NAA	% of lot area
Impervious surface ratio proposed	NNA/A	% of lot area

BUILDING AREA/LOT COVERAGE

Existing Building Footprint	03600 SQ FT	sq. ft.
Proposed Building Footprint	4 UNITS	sq. ft.
Proposed Building Footprint Net change	4717 SQ FT/ 4066 SQ FT X 22	sq. ft.
Existing Total Building Floor Area	NA	sq. ft.
Proposed Total Building Floor Area	NNA/A	sq. ft.
Proposed Building Floor Area Net Change	NNA/A	sq. ft
New Building	YESY	(yes or no)
Building Area/Lot coverage existing	2.37% / 0%2.37%	% of lot area
Building Area/Lot coverage proposed	55.50 %/ / 6.23%.50%	% of lot area

ZONING

Existing	
Proposed, if applicable	RURAL RESIDENTIAL

LAND USE

Existing	RESIDENTIAL / VACANT
Proposed	RESIDENTIAL

RESIDENTIAL, IF APPLICABLE

Existing Number of Residential Units	1
Proposed Number of Residential Units	4
Subdivision, Proposed Number of Lots	2

PARKING SPACES

Existing Number of Parking Spaces	NNA/A
Proposed Number of Parking Spaces	N/NAA
Number of Handicapped Parking Spaces	N/NAA
Proposed Total Parking Spaces	NNA/A

ESTIMATED COST OF PROJECT: $500,000 PER UNIT

DELEGATED REVIEW AUTHORITY CHECKLIST

SITE LOCATION OF DEVELOPMENT AND STORMWATER MANAGEMENT

Existing Impervious Area	NNA/A	sq. ft.
Proposed Disturbed Area	N/NAA	sq. ft.
Proposed Impervious Area	NNA/A	sq. ft.

1. ***If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with MDEP.***
2. ***If the proposed impervious area is greater than one acre including any impervious area crated since 11/16/05, then the applicant shall apply for a MDEP Stormwater Management Permit, Chapter 500, with the City.***
3. ***If total impervious area (including structures, pavement, etc) is greater than 3 acres since 1971 but less than 7 acres, then the applicant shall apply for a Site Location of Development Permit with the City. If more than 7 acres then the application shall be made to MDEP unless determined otherwise.***
4. ***If the development is a subdivision of more than 20 acres but less than 100 acres then the applicant shall apply for a Site Location of Development Permit with the City. If more than 100 acres then the application shall be made to MDEP unless determined otherwise.***

TRAFFIC ESTIMATE

Total traffic estimated in the peak hour-existing (Since July 1, 1997) NA passenger car equivalents (PCE)

Total traffic estimated in the peak hour-proposed (Since July 1, 1997) NA passenger car equivalents (PCE)

If the proposed increase in traffic exceeds 100 one-way trips in the peak hour then a traffic movement permit will be required.

Zoning Summary

1. Property is located in the RURAL RESIDENTIAL zoning district.
2. Parcel Area: ~~3.477 / 3.00~~ acres / ~~151,440 / 130,680~~ square feet(sf).

Regulations	Required/Allowed	Provided
Min Lot Area	~~43,560 SQ FT~~	/ 3.477 / 3.00 ACRES0
Street Frontage	1150 FT	/ 258.86' / 245.26'
Min Front Yard	25 FT	/ 25 FT
Min Rear Yard	225 FT5 FT	/ 25 FT
Min Side Yard	115 FT	/ 15 FT
Max. Building Height	35 FT	/ 35 FT FT
Use Designation		/ RESIDENTIAL
Parking Requirement	1 space/ per_____ square feet of floor area	
Total Parking:	/	
Overlay zoning districts (if any):	/	/
Urban impaired stream watershed?	YES/NO If yes, watershed name_____	

DEVELOPMENT REVIEW APPLICATION SUBMISSION

Submissions shall include fifteen (15) complete packets containing the following materials:

1. 5 Full size plans and 10 smaller (no larger than 11" x 17") plans containing the information found in the attached sample plan checklist.
2. Application form that is completed and signed by the property owner or designated representative. (NOTE: All applications will be reviewed by staff and any incomplete application will not be accepted until all deficiencies are corrected.
3. Cover letter stating the nature of the project.
4. All written submittals including evidence of right, title and interest.
5. Copy of the checklist completed for the proposal listing the material contained in the submitted application.

Refer to the application checklist for a detailed list of submittal requirements.

To view the City of Auburn Zoning Ordinance, go to:
www.auburnmaine.gov under Government, select Departments of the City, then Planning, Permitting & Code. On the left menu, choose Subdivisions, Land Use, Zoning Ordinance. Or click HERE.

For additional information on Site Plan Review, please click HERE or scan code:

For additional information on Special Exceptions, please click HERE or scan code:

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, I certify that the City's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for development review only; a Performance Guarantee, Inspection Fee, Building Permit Application and other associated fees and permits will be required prior to construction.

Signature of Applicant:	**Date:**
	12-8-2023

City of Auburn, Maine
Office of Planning & Permitting
Eric J. Cousens, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Checklist

The following information is required where applicable to be submitted for an application to be complete

PROJECT NAME: Penley Corner Residences
PROPOSED DEVELOPMENT ADDRESS: RIVERSIDE DRIVE AUBURN MEE
PARCEL #: 163-001-001

Required Information		*Check when Submitted*		*Applicable Ordinance*
Site Plan		*Applicant*	*Staff*	
	Owner's Names/Address	X		
	Names of Development	X		
	Professionally Prepared Plan	X		
	Tax Map or Street/Parcel Number	X		
	Zoning of Property	X		
	Distance to Property Lines	X		
	Boundaries of Abutting land	X		
	Show Setbacks, Yards and Buffers	X		
	Airport Area of Influence	NA		
	Parking Space Calcs	NA		
	Drive Openings/Locations	X		
	Subdivision Restrictions	X		
	Proposed Use	X		
	PB/BOA/Other Restrictions	X		
	Fire Department Review			
	Open Space/Lot Coverage	X		

Required Information		*Check when Submitted*		*Applicable Ordinance*
Landscape Plan	NA	*Applicant*	*Staff*	
	Greenspace Requirements			
	Setbacks to Parking			
	Buffer Requirements			
	Street Tree Requirements			
	Screened Dumpsters			
	Additional Design Guidelines			
	Planting Schedule			
Stormwater & Erosion Control Plan	NA	*Applicant*	*Staff*	
	Compliance w/ chapter 500			
	Show Existing Surface Drainage			
	Direction of Flow			
	Location of Catch Basins, etc.			
	Drainage Calculations			
	Erosion Control Measures			
	Maine Construction General Permit			
	Bonding and Inspection Fees			
	Post-Construction Stormwater Plan			
	Inspection/monitoring requirements			
Lighting Plan	NA	*Applicant*	*Staff*	
	Full cut-off fixtures			
	Meets Parking Lot Requirements			
Traffic Information	NA	*Applicant*	*Staff*	
	Access Management			
	Signage			
	PCE - Trips in Peak Hour			

Required Information		*Check when Submitted*		*Applicable Ordinance*
	Vehicular Movements			
	Safety Concerns			
	Pedestrian Circulation			
	Police Traffic			
	Engineering Traffic			
Utility Plan	NA	*Applicant*	*Staff*	
	Water			
	Adequacy of Water Supply			
	Water main extension agreement			
	Sewer			
	Available city capacity			
	Electric			
	Natural Gas			
	Cable/Phone			
Natural Resources		*Applicant*	*Staff*	
	Shoreland Zone	NA		
	Flood Plain	NONE		
	Wetlands or Streams	X		
	Urban Impaired Stream	NA		
	Phosphorus Check	NA		
	Aquifer/Groundwater Protection	NA		
	Applicable State Permits	NA		
	Lake Auburn Watershed	NA		
	Taylor Pond Watershed	Type text here		
Right, Title or Interest		*Applicant*	*Staff*	
	Verify	X		
	Document Existing Easements, Covenants, etc.	X		

Required Information		*Check when Submitted*		*Applicable Ordinance*
Technical & Financial Capacity		***Applicant***	***Staff***	
	Cost Est./Financial Capacity	X		
	Performance Guarantee	X		
State Subdivision Law		***Applicant***	***Staff***	
	Verify/Check	X		
	Covenants/Deed Restrictions	NONE		
	Offers of Conveyance to City	NONE		
	Association Documents	NONE		
	Location of Proposed Streets & Sidewalks	NONE		
	Proposed Lot Lines, etc.	X		
	Data to Determine Lots, etc.	X		
	Subdivision Lots/Blocks	NA		
	Specified Dedication of Land	NONE		
Additional Subdivision Standards		***Applicant***	***Staff***	
	Mobile Home Parks	NA		
	PUD	NA		
A JPEG or PDF of the proposed site plan		***Applicant***	***Staff***	
		X		
Final sets of the approved plans shall be submitted digitally to the City, on a CD or DVD, in AutoCAD format R 14 or greater, along with PDF images of the plans for archiving				

MAINE
COMMUNITY BANK

December 6, 2023

To Whom it May Concern:

This letter is to confirm that Vallieres Real Estate Investments, LLC (John Vallieres) has an existing commercial banking relationship with Maine Community Bank. He currently maintains deposit balances of just above $70,000. He maintains a commercial line of credit of $127,200, and a personal home equity line of credit of $200,000.

Mr. Vallieres has been working with me on the development of land located on Riverside Drive in Auburn, ME. Currently, he maintains one loan for the construction of a duplex on one lot (this construction is near completion). Construction of a second duplex on a separate lot is currently with underwriting. Mr. Vallieres has expressed his intentions to split the land on Riverside Drive in Auburn again in order to construct more duplexes in the future. His plan is to continue to phase the construction in order to build a single duplex at a time.

Since forming his commercial banking relationship in 2021, Mr. Vallieres has handled everything as agreed.

Please feel free to reach out to me directly with further questions.

Christopher J. Hanks

VP, Commercial Loan Officer II

PO Box 558, Westbrook, ME 04098 207-786-5705 mainecb.com

MEMBER FDIC
EQUAL HOUSING LENDER

Bk 10907 Pg153 #23145
10-13-2021 @ 08:59a

NOT AN OFFICIAL COPY

1002140165876

WARRANTY DEED

Roger G. Gauthier Jr. of Auburn, Androscoggin County, Maine, for consideration paid, grant(s) to **John M. Vallieres** of Auburn, Androscoggin County, Maine (whose mailing address is 35 Eighth Street, Auburn, ME 04210) with Warranty Covenants, the following described real estate:

See "Exhibit A" Attached

For grantors' source of title, reference may be had to a deed from Linda L. Stevens and David C. Stevens to the grantor(s) herein, dated September 12, 2015, recorded in Androscoggin Registry of Deeds, Book 9223, Page 288.

Any and all other rights, easements, privileges and appurtenance belonging to the granted estate are hereby conveyed.

This conveyance is made subject to the property taxes assessed against the premises, which said taxes are to be prorated between the parties hereto as of the date of delivery of this deed in accordance with 36 M.R.S.A., sec. 558.

Witness my/our hand(s) and seal(s) this 30th day of September, 2021.

WITNESS:

_____

Roger G. Gauthier Jr.

STATE OF MAINE

Androscoggin, ss September 30, 2021

Then personally appeared the above named Roger G. Gauthier Jr. and acknowledged the foregoing instrument to be his/her free act and deed.

Before me,

Notary Public/Justice of the Peace
Commission Expiration: 11.13.2025

File No.: 2021-6995

Susan J. Hennessy
Notary Public - Maine
My Commission Expires
11-13-2025

File No: 2021-6995

NOT AN OFFICIAL COPY

"Exhibit A"

A certain lot or parcel of land, together with any buildings or improvements thereon, situated at the southwesterly side of Riverside Drive in the City of Auburn, County of Androscoggin, and State of Maine, described as follows:

Beginning at an iron pipe on the southwesterly line of Riverside Drive located 280 feet northwesterly of the intersection of said line of Riverside Drive and the northwesterly line of Penley Corner Road; thence continuing along said line of Riverside Drive 503 feet, more or less, to the line of land now or formerly of Penley Cemetery Corporation, as reserved by John Penley in his deed to Nathaniel Cobb, dated December 17, 1852, recorded in the Cumberland County Registry of Deeds in Book 244, Page 199; thence southwesterly along said land of Penley Cemetery Corporation to a corner; thence northwesterly along said land of Penley Cemetery Corporation to land of William C. Sylvester as described in a deed recorded in the Androscoggin County Registry of Deeds in Book 2087, Page 22; thence southwesterly along the land of said William C. Sylvester and the land of Roger G. Gauthier, Jr. to the line of land of Central Maine Power Company as described in a deed recorded in the Androscoggin County Registry of Deeds in Book 979, Page 303; thence southeasterly along said land of Central Maine Power Company to a point which is 280 feet from the northwesterly line of Penley Corner Road; thence northeasterly on a course parallel to and 280 feet northwesterly of said northwesterly line of Penley Corner Road to the point of beginning.

Excepting and reserving any portion of the property conveyed by Doreete L. Caron and Emile E. Caron to Central Maine Power Company dated September 7, 1967 and recorded in Androscoggin County Registry of Deeds in Book 979, Page 303

Maine Real Estate Transfer Tax Paid
TINA M. CHOUINARD, REGISTER
ANDROSCOGGIN COUNTY MAINE E-RECORDED

Bk 11400 Pg156 #10562
07-27-2023 @ 11:23a

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NOT AN OFFICIAL COPY

DLN: 1002340243066

QUITCLAIM DEED WITH COVENANT

JOHN M. VALLIERES of Auburn, County of Androscoggin, State of Maine, for consideration paid, **grants** to **VALLIERES REAL ESTATE INVESTMENTS LLC**, a Maine limited liability company with a mailing address of 35 Eighth Street, Auburn, ME 04210, with **quitclaim covenant**, real property situated at **Riverside Drive, Auburn**, County of Androscoggin, State of Maine, more particularly described on **Exhibit A** attached hereto.

WITNESS my hand and seal this 27th day of July, 2023.

Witness

JOHN M. VALLIERES

STATE OF MAINE
ANDROSCOGGIN, SS.

July 27 2023

Then personally appeared before me the above-named **John M. Vallieres** and acknowledged the foregoing instrument to be his free act and deed.

Alex S. Parker, Attorney-at-Law

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EXHIBIT A

NOT AN OFFICIAL COPY

A certain lot or parcel of land, together with any buildings or improvements thereon, situated at the southwesterly side of Riverside Drive in the City of Auburn, County of Androscoggin, and State of Maine, described as follows:

NOT AN OFFICIAL COPY

Beginning at an 5/8" capped rebar on the southwesterly sideline of said Riverside Drive at the southeasterly corner of land now or formerly of Penley Corner Church & Cemetery;

NOT AN OFFICIAL COPY

Thence S 16°55'46" E, along the southwesterly sideline of said Riverside Drive, a distance of 258.86 feet;

Thence S 73°04'14" W, through the land of the grantor herein, a distance of 100.00 feet;

Thence N 16°55'46" W, through the land of the grantor herein, a distance of 4.30 feet;

Thence S 73°04'14" W, through the land of the grantor herein, a distance of 300.00 feet;

Thence S 16°55'46" E, through the land of the grantor herein, a distance of 405.38 feet to the westerly sideline of land now or formerly of Danielle E. & Christopher P. Schnopp by a Warranty Deed dated July 25, 2017 and recorded in the Androscoggin County Registry of Deeds as Book 9651 Page 198;

Thence S 51°47'14" W, along land now or formerly of said Schnopp, a distance of 137.63 feet to a 5/8" capped rebar;

Thence N 61°48'20" W, along land now or formerly of Central Maine Power Company by a deed dated October 19, 1967 and recorded in the Androscoggin County Registry of Deeds as Book 981 Page 558, a distance of 769.91 feet to a 5/8" capped rebar at the southeasterly corner of land now or formerly of Roger G. Gauthier, Jr. by a deed dated October 20, 2009 and recorded in the Androscoggin County Registry of Deeds as Book 7814 Page 182;

Thence N 50°59'19" E, along land of said Gauthier, a distance of 1,038.41 feet to a 5/8" capped rebar at the northwesterly corner of land of said Penley Corner Church & Cemetary;

Thence S 18°27'34" E, along the westerly line of land of said Penley Corner Church & Cemetery, a distance of 227.44 feet to a 5/8" capped rebar;

Thence N 72°19'22" E, along the southerly line of land of said Penley Corner Church & Cemetery, a distance of 103.14 feet to the **Point of Beginning.**

The above described parcel contains approximately 10.51 acres. All Bearings refer to Magnetic North 2010 per a plan by Wayne Wood & Co. called "Plan of Land on Riverside Drive for Roger Gauthier, Jr." dated July 2021. Unrecorded

NOT
OFFICIAL
COPY

Meaning and intending to describe a portion of the land conveyed by Roger F. Gauthier, Jr. to John M. Vallieres by a Warranty Deed dated September 30, 2021 and recorded in the Androscoggin County Registry of Deeds as Book 10907 Page 153.

All Book and Page Numbers refer to the Androscoggin County Registry of Deeds. This description was prepared from a plan entitled "Plot Plan of Vallieres Parcel," prepared by Terradyn Consultants, LLC, dated June 2023.

NOT
OFFICIAL
COPY

No Transfer Tax Paid
TINA M. CHOUINARD, REGISTER
ANDROSCOGGIN COUNTY MAINE E-RECORDED

National Flood Hazard Layer FIRMette

FEMA

70°12'28"W 44°3'24"N



70°11'50"W 44°2'58"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- 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 *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

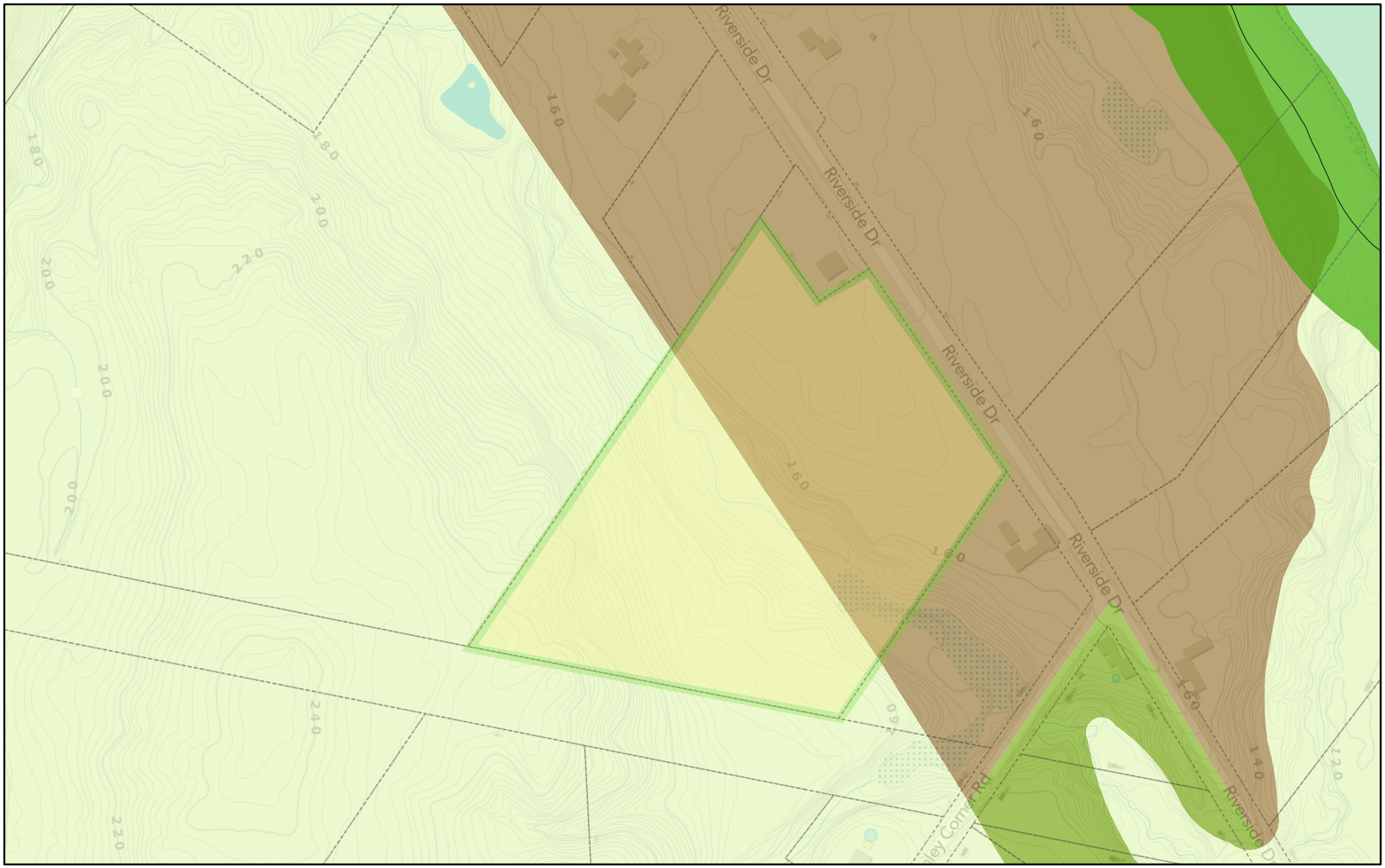
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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 9/22/2021 at 8:30 AM 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.

ArcGIS Web Map



9/20/2021, 3:44:27 PM

1:4,514

0 0.03 0.06 0.11 mi

0 0.04 0.09 0.17 km

2020 Parcels

ShorelandZoning - 100' Line

ShorelandZoning

250' Shoreland Zoning

Zoning

AG - Agriculture and Resource Protection

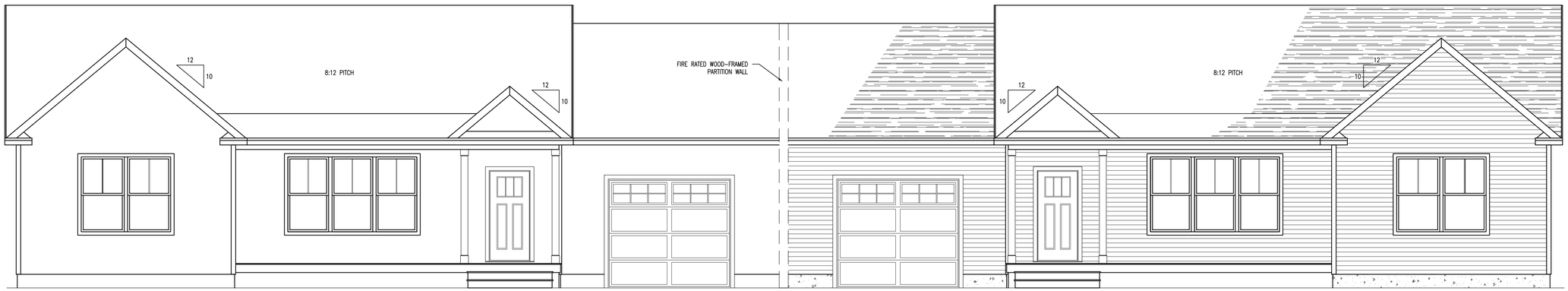
LDCR - Low Density Country Residential

RR - Rural Residential

Esri Community Maps Contributors, City of Lewiston, Maine,

Web AppBuilder for ArcGIS

Esri Community Maps Contributors, City of Lewiston, Maine, BuildingFootprintUSA, Esri Canada, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA | Unknown source, unknown date. |



FRONT ELEVATION
1/4" = 1'-0"

CONSTRUCTION NOTE:

CONTRACTOR IS TO VERIFY GRADE AND ALL DIMENSIONS IN FIELD BEFORE CONSTRUCTION. DESIGN SHOWN MAY DIFFER FROM ACTUAL FINISHED CONSTRUCTION. FINAL MATERIALS, WINDOW/DOOR LOCATIONS AND SIZES, TO BE DETERMINED PER OWNER/CONT. SITE CONDITIONS; AND OR LOCAL CODES.

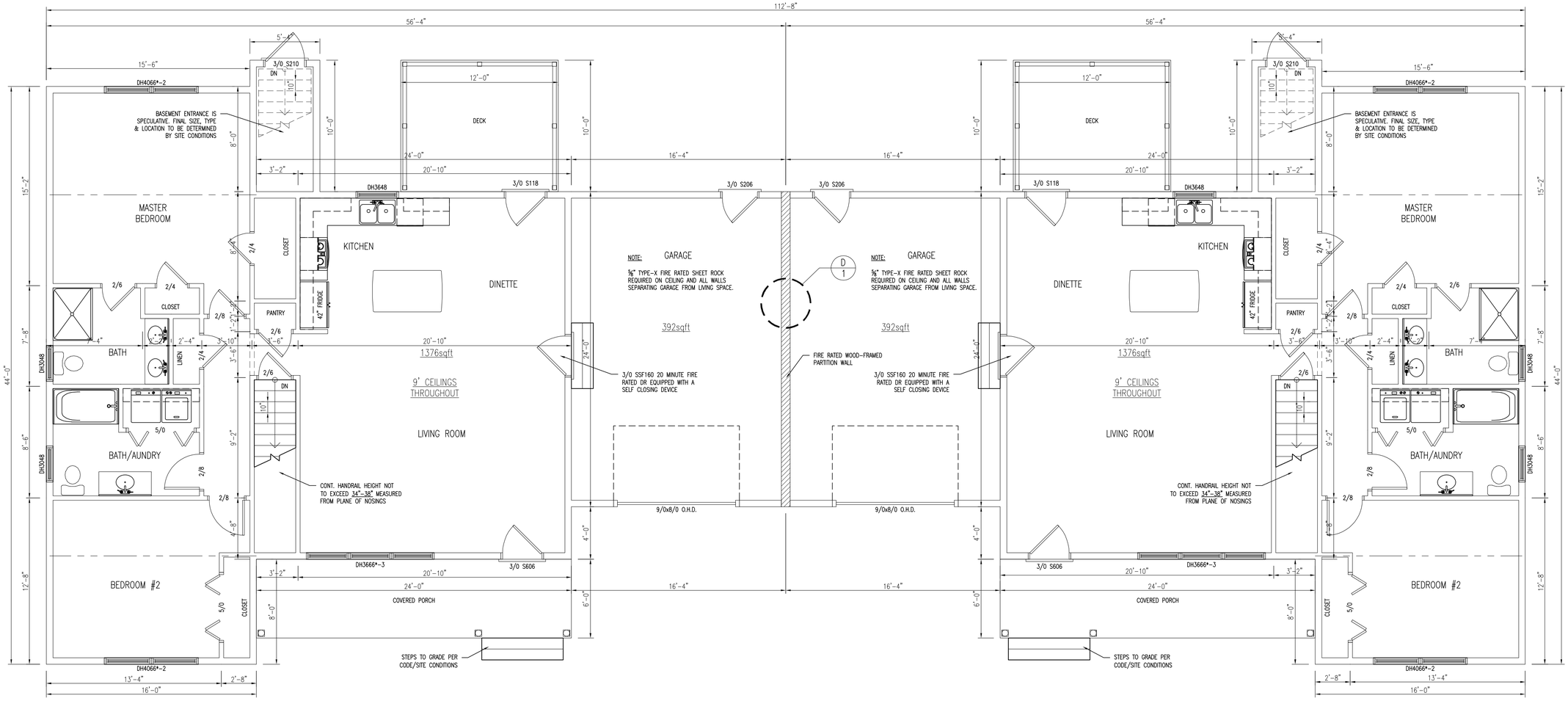
Drafting & Design ME LLC
224 Foxcroft Trail #34
Auburn, ME 04502
(207)-420-7484

Riverside Duplex, Building #3
PRELIMINARY DRAWINGS
Auburn, ME

DRAWINGS ARE PROVIDED FOR INFORMATIONAL/PERMITTING PURPOSES ONLY. IF USED FOR CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE. ALL DIMENSIONS, PLANS, SKETCHES ECT. ARE PROVIDED TO OUR CLIENTS BASED UPON INFORMATION PROVIDED BY THE CLIENT AND PREPARED IN ACCORDANCE WITH NORMAL PROFESSIONAL STANDARDS. DRAFTING & DESIGN ME, LLC ARE NOT REGISTERED ARCHITECTS, ENGINEERS OR LAND SURVEYORS AND MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY OF CONTRACTOR, ARCHITECT AND/OR CODE OFFICER BEFORE ACTUAL CONSTRUCTION. BUILDING DESIGNS AND PLANS ARE NOT STAMPED BY A LICENSED ENGINEER OR ARCHITECT. CONTRACTOR BEFORE ACTUAL CONSTRUCTION BEGINS DRAFTING & DESIGN ME, LLC WILL NOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS ON THESE PLANS. WE ARE NOT LIABLE FOR ANY COSTS INCURRED DUE TO THE USE OF THESE PLANS. CHANGES AND/OR REVISIONS MADE TO PLAN BY CLIENT AND/OR CONTRACTOR

Revisions:	
00/00/00	*

Date : 11/29/2023
Scale : 1/4"=1'-0"
Drawn By: JTM
Project: D112823
Sheet Number:
1 of 2



FIRST FLOOR PLAN

1/4" = 1'-0"

SMOKE ALARMS

SHALL BE INTERCONNECTED & INSTALLED IN THE FOLLOWING LOCATIONS

1. EACH SLEEPING AREA
2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS
3. ON EACH ADDITIONAL STORY OF THE DWELLING INCLUDING BASEMENTS
4. FIRE BLOCKING, FIRE RATED FIXTURES & CAULKING BETWEEN FLOORS WHEN/WHERE REQUIRED. 5/8 TYPE-X FIRE RATED SHEETROCK ON ALL WALLS & CEILINGS SEPARATING FLOORS WHEN/WHERE REQUIRED. PER TOWN AND LOCAL CODE

* DENOTES EGRESS WINDOW

DH DENOTES WINDOW TYPE & ROUGH OPENINGS

SG TEMPERED/SAFTY GLASS; AT ALL HAZARDOUS LOCATIONS, INCLUDING BUT NOT LIMITED TO TUB/SHOWERS, ENTRY DOORS AND STAIRS

CARBON MONOXIDE ALARMS:

SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS

1. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS
2. IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS WITHIN WHICH FUEL-FIRED APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES

CONSTRUCTION NOTE:

CONTRACTOR TO VERIFY GRADE IN FIELD, AND ALL DIMENSIONS ON PLANS BEFORE STARTING NEW CONSTRUCTION. DESIGN SHOWN MAY DIFFER FROM ACTUAL FINISHED CONSTRUCTION. FINAL MATERIALS, WINDOW/DOOR LOCATIONS AND SIZES, TO BE DETERMINED PER OWNER/CONT. OR LOCAL CODES.

Drafting & Design ME LLC
224 Poland Hill #34
Minot, ME 04252
(207)-420-7444

Riverside Duplex, Building #3
PRELIMINARY DRAWINGS
Auburn, ME

DRAWINGS ARE PROVIDED FOR INFORMATIONAL/PERMITING PURPOSES ONLY. IF USED FOR CONSTRUCTION, DRAWINGS SHALL BE REVIEWED BY CONTRACTOR TO ENSURE COMPLIANCE WITH ALL DIMENSIONS. SKETCHES ETC. ARE PROVIDED TO OUR CLIENTS BASED UPON INFORMATION PROVIDED BY THE CLIENT AND DRAWN IN ACCORDANCE WITH GENERALLY ACCEPTED STANDARDS OF PRACTICE BY DESIGNERS OF LAND, BUILDINGS AND INTERIORS. DRAFTING & DESIGN ME, LLC ARE REGISTERED ARCHITECTS, ENGINEERS OR LAND SURVEYORS. DRAWINGS ARE NOT TO BE SCALED FOR CONSTRUCTION PURPOSES. CONTRACTOR, ARCHITECT AND/OR CODE OFFICER BEFORE ACTUAL CONSTRUCTION BEGINS. DRAFTING & DESIGN ME, LLC IS NOT RESPONSIBLE FOR ANY CONSTRUCTION CONTRACTOR BEFORE ACTUAL CONSTRUCTION BEGINS. DRAFTING & DESIGN ME, LLC WILL NOT BE RESPONSIBLE FOR ANY CHANGES MADE TO PLAN BY CLIENT AND/OR CONTRACTOR CHANGES AND/OR REVISIONS MADE TO PLAN BY CLIENT AND/OR CONTRACTOR

Revisions:	
00/00/00	*

Date : 11/29/2023

Scale : 1/4"=1'-0"

Drawn By: JTM

Project: D112823

Sheet Number:

2 of 2

PLAN REFERENCES

1. "Standard Boundary Survey, Auburn, Maine for Linda and David Stevens" dated 12/3/10 by David Buker.
2. "Standard Boundary Survey, Auburn, Maine for William C. Sylvester" dated 10/20/10 by David Buker.
3. "Standard Boundary Survey Gauthier Farm, Penley Corner Road, Auburn Maine prepared for Lewiston Auburn Pollution Control Authority" dated November 12, 1991 by Technical Services, Inc.
4. "Central Maine Power Company Right of Way Map, Section 75, Mile 5"
5. "Definition of South River Road ~ Mill & First Sts to the Durham Line" Auburn, Maine by the County Commissioners" dated May 1, 1930.
6. "Definition of Penley Corner Road Auburn, Maine by the County Commissioners" dated October 19, 1938.
7. "Maine State Highway Commission Right of Way Map State Aid Highway No. 4, Auburn, Maine" dated July 1964. S.H.C. File No. 1–71.

N/F
William C. Sylvester
(2087/22)

Granite Monument Found
5/8" Capped Rebar Found
Pole
Concrete Monument Found
5/8" Capped Rebar Found
S 18°27'34" E 227.44'
N/F Penley Corner Church and Cemetery
5/8" Rebar Found
Pole
5/8" Capped Rebar Found
103.14'
N 72°19'22" E
5/8" Capped Rebar Found
Riverside
S 16°55'48" E 504.12'
(Formerly South River Road)
Pole
Drive
Pole
5/8" Capped Rebar Found
N 50°59'19" E 1038.41'
N/F
Roger Gauthier, Jr.
(7814/182)
Lot Area
13.48 Acres
5/8" Capped Rebar Found
5/8" Capped Rebar Set
Existing Fence
214.04'
S 61°48'20" E 769.91'
N 51°46'54" E 566.90'
352.86'
5/8" Capped Rebar Set
280.00'
Pole
N/F
Danielle E. Schnopp
Christopher P. Schnopp
(9651/198)
5/8" Rebar Found
5/8" Capped Rebar Found
284.68'
N 51°46'53" E 351.32'
Central Maine Power Company
N/F
(979/303)
Penley Corner Road
5/8" Capped Rebar Found

STATE OF MAINE
WAYNE T. WOOD
1328
PROFESSIONAL LAND SURVEYOR

0 100 200 300

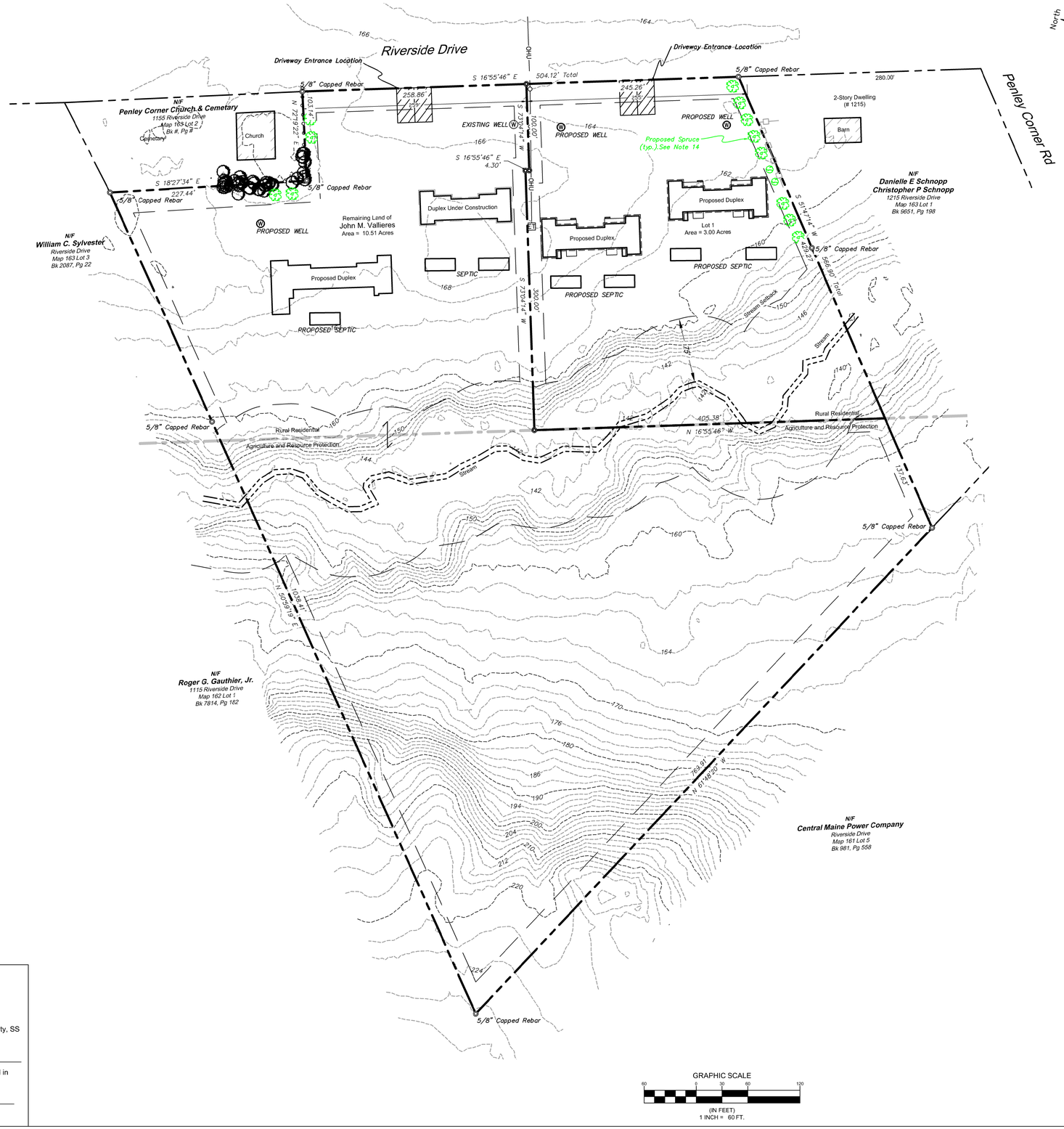
NOTES

1. Owner of record is Roger G. Gauthier, Jr. by deed recorded in the Androscoggin County Registry of Deeds in book 9223 page 288.
2. This property is shown as Lot 001–001 on the City of Auburn Tax Map 163.
3. All bearings are Magnetic of the year 2010 as per the plan in reference 1 and calculated from angles of an actual on the ground survey.

Plan of Land
On
Riverside Drive
Auburn, Maine
For
Roger Gauthier, Jr.
276 Penley Corner Road ~ Auburn, ME 04210

WAYNE WOOD &CO.
Gray, Maine 04039
30 Wood Drive
(207)657–3330

Drawn By: WtW/KlW	Date July 2021
Scale: 1" = 100'	
Checked By: WtW	Job No. 220141
Field Crew: JW/ BR	

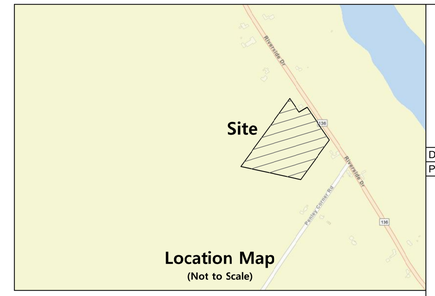


GRAPHIC SCALE

60 0 30 60 120

(IN FEET)
1 INCH = 60 FT.

North
Magnetic 2010



General Notes:

1. The purpose of this plan is to depict a subdivision of the subject parcels. In this case the Subdivision Law is triggered due to more than two dwelling units proposed within each of the subject parcels. No new lots are created by this subdivision, just dwelling units.
2. All Book and Page numbers refer to the Androscoggin County Registry of Deeds, unless otherwise noted.
3. The record owner of the subject parcels are Vallieres Real Estate Investments by the following deeds:

Map	Parcel	Book	Page	Date
163	PO 1-1	11351	119	May 11, 2023
163	PO 1-1	11400	156	July 27, 2023

4. The subject parcel is locatec in the Rural Resicential & the Agriculture and Resource Protection (ARP) Districts.
5. Space and bulk standards for the RR and ARP Districts as of the date of this plan are as follows:

	RR	ARP
Min. Lo: Size:	43,560 SQ FT	10 Acres
Min. Depth:	150 FT/127.50 FT (Shared Drive)	200 FT
Min. Frontage:	150 FT/127.50 FT (Shared Drive)	250 FT
Min. Front Setback:	25 FT (or 25% of average depth)	25 FT (or 25% of average depth)
Min. Side Setback:	15 FT	15 FT
Min. Rear Setback:	25 FT	25 FT
Max. Building Height:	35 FT	35 FT

*Please review the Zoning Ordinances of Auburn Maine for further detail.

6. Total area of the subject parcel is 13.48 Acres per plan Ref. 8.A.
7. Boundary information shown hereon is based on upon Plan Ref. 8.A. No field work performed by Terradyn Consultants, LLC.
8. Plan References:
   A. "Plan of Land on Riverside Drive Auburn, Maine for Roger Gauthier, Jr." Completed by Wayne T. Wood & Co. on July 2021
9. Plan orientation is based on Plan Ref. 8.A
10. The subject parcel is locatec within Zone X, Areas of Minimal Flood Hazard, as delineated on the Flood Insurance Rate Map for the City of Auburn, Androscoggin County, Community-Panel Number 2300I0337E, having an Effective Date of July 8, 2013.
11. The depth, size, location, exstence or nonexistence of underground utilities and/or structures were not investigated as part of this survey. Utilities depictec hereon may not necessarily represent all existing utilities. Owners, contractors, and/or designers need to contact Dig-Safe Systems, Inc. (call 811) and field verify existing utilities prior to digging or breaking ground.
12. Contours shown hereon are based solely upon Lidar Remote Sensing, collected in 2009 by the State Maine and distributed by the USGS as classified .LAZ point cloud. Ground classifications interpolated at a 10 foot grid, shown at 2 foot contours.
13. All disturbed areas shall be revegetated in accordance with the Maine Erosion and Sediment Control Practices Field Guide for Contractors, available from the Maine Department of Environmental Protection.
14. Twelve native trees of a minimum of three feet in height, such as Northern White Cedar (Thuja occidentalis L.) or Eastern White Pine (Pinus strobus L.) are proposed to be planted as indicated. In addition to trees, two native shrubs, such as Common Juniper (Juniperus Communis L.) or High Bush Blueberry (Vaccinium corymbosm L.) are also propcsed to be planted. Not tree shall be planted closer than ten feet from any existing tree.

LEGEND

- RECORD PROPERTY LINE/R.O.W
- ABUTTER PROPERTY LINE/R.O.W
- PROPOSED PROPERTY LINE
- SETBACKS
- ZONE LINES
- IRON PIPE/REBAR (AS NOTED)
- BUILDING
- EDGE OF PAVEMENT
- STOCKADE FENCE
- STREAM

Approval:

Approved by the City of Auburn Planning Board

Chairman Date

City Clerk Date

Surveyor's Certification

To the best of my knowledge, I have used ordinary and prudent conduct expected of Professional Land Surveyors and the results shown here represent the licensee's responsibility to the public as required under the Standards of Practice as defined by the Board of Licensure for Professional Land Surveyors (M.R.S.A Title 32, Chapter 141, Dated April 2001).

Except as Follows:

1. Survey Report Limited to Notes on the Plan
2. No Deed Description to Date

Plan Prepared by: _____

Jimmy C. Courbron PLS # 2532

STATE OF MAINE, Androscoggin County, SS
REGISTRY CF DEEDS

Received _____

At ____ h ____ m ____M and recorded in

Plan Book _____, Page _____

Attest _____
Registrar

STATE OF MAINE
JIMMY C. COURBRON
No. PLS2532
PROFESSIONAL LAND SURVEYOR

DATE: DATE
PLS: PLS

NO.	DATE	REVISIONS
1	07/07/2023	ADDED PROPOSED BUILDINGS

ADDRESS:
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260

PHONE:
(207) 926-5111

WEB SITE:
www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
VALLIERES PARCEL
RIVERSIDE DRIVE, AUBURN MAINE

SHEET TITLE:
SUBDIVISION PLAN

FOR RECORD OWNER:
JOHN VALLIERES
18 VALLIERES LANE
DURHAM, ME 04222

DATE: 11/16/2023
SCALE: 1"= 60'
JOB NO: 21-4091
SHEET: 1 OF 1

Sheet Size: 24"x 36"

C:\3D\Terradyn Consultants\Project Folders - Documents\2021 Jobs\21-4091 Vallieres Riverside Dr Auburn\CAD\Drawings\Survey\21-4091.dwt Bruce.dwg

City of Auburn, Maine
Office Economic and Community Development
www.auburnmaine.gov | 60 Court Street
Auburn, Maine 04210
207.333.6601

To: Auburn Planning Board
From: Natalie Thomsen, Planning Coordinator
Re: Site Plan Review for Cooper Paving Sign
Date: January 14, 2025 *Meeting*



I. <u>PROPOSAL</u> – Stoneybrook Land Use LLC submitted an application on behalf of Cooper Paving LLC to install a new sign at their business located at 2767 Turner Road (Tax Map 367-032) The proposed project should be considered pursuant to Chapter 60, Article XVI Division 2, Site Plan Review, and Article IV, Division 4 – Low Density Rural Residence District. Applicants have the option to use site plan review, per Sec. 60-638 (b) (5), to request a sign that is not normally permitted in a given district. The parcel has 14.63 acres and has about 675' of frontage on Turner Road. The existing sign is 74" by 48" or 24.7 square feet. The property is zoned Low Density Country Residential (LDCR).

Cooper Paving LLC is proposing a 5' x 10', 50 square foot, double-sided sign to be set near the center of the driveways at the edge of the right of way that is about 37' from the edge of roadway pavement, based upon the attached survey. The sign will be 20' high. Cooper Paving LLC is

requesting a waiver from Chapter 60, Sec. 60-637 (2)(a) General Provisions Regulations, pursuant to Chapter 60, Sec. 60-638 (b)(5). Cooper Paving LLC is also requesting a waiver from the following information under Chapter 60, Sec. 60-1301: 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 19, 21, 22, 23, and 24. The request is pursuant to Chapter 60, Sec. 60-1302.

The Site Viewing Distance for the proposed sign can be read for 3 seconds at from about 210' at 55 MPH (the speed limit on the proposed site). The sign will be set on two posts with a roof structure at the top. Lights will shine downward from light fixtures attached under the roof. Lights will include four Slim Basics LED Tapered Disk Lights, 120 volts, flush mounted under the sign roof.

DEPARTMENT REVIEW

Police Department - No issues with the sign as long as it's positioned out of the right of way.

Fire Department – No comment.

Water and Sewer District - No comment.

Engineering Department – No comment.

Planning Department – No comment.

III. PLANNING BOARD ACTION- Planning Board approval to allow signs is pursuant to a site plan review as an exception to the general standards of signs in a given district. Therefore, approval is subject to meeting the requirements of Chapter 60, Article XVI, Division 2 – Sec. 60-1277 Site Plan Review of the Auburn Code of Ordinances. The criteria are listed below.

A. SITE PLAN REVIEW- The Planning Board needs to make its decision based on the Site Plan Law, ***Sec. 60-1277. Objective-*** *"In considering a site plan, the planning board shall make findings that the development has made provisions for:"*

(1) Protection of adjacent areas against detrimental or offensive uses on the site by provision of adequate surface water drainage, buffers against artificial and reflected light, sight, sound, dust and vibration; and preservation of light and air;

(2) Convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent areas;

(3) Adequacy of the methods of disposal for wastes; and

(4) Protection of environment features on the site and in adjacent areas.

The applicant addresses these 4 criteria in the attached application.

C. WAIVER REQUEST FOR SITE PLAN REQUIREMENTS – Cooper Paving LLC is requesting a waiver from Chapter 60, Sec. 60-637 (2)(a) General Provisions Regulations, pursuant to Chapter 60, Sec. 60-638 (b)(5). Cooper Paving LLC is also requesting a waiver from

the following information under Chapter 60, Sec. 60-1301: 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 19, 21, 22, 23, and 24. The request is pursuant to Chapter 60, Sec. 60-1302.

IV. STAFF RECOMMENDATION – Staff has reviewed the application and it is the staff's opinion that the proposed sign is appropriate. In addition, staff believes that the application meets the 4 conditions of Chapter 60-1277 Site Plan Review of the Auburn Code of Ordinances as per Section III A of this report.

V. Conditions - Should the Planning Board approve the application; the approval is subject to the following conditions.

- No development activity until any bonding or inspection fees is determined by the Auburn Engineering Department.
- Prior to the issuance of a sign permit, the applicant must obtain approval from the Department of Transportation.
- Any additional signage added to the signpost must comeback to the Planning Board for review and approval.
- Blasting permit in advance of blasting from the City of Auburn, Planning, Permitting and Code Department.

Natalie J Thomsen

_____

Natalie Thomsen
Planning Coordinator

Stoneybrook
Land Use, Inc.

9172 SW 52nd Place Road
Ocala, FL 34481
(207) 513-6123

December 5, 2024

John Blais, Deputy Director
Planning and Permitting
City of Auburn
60 Court Street
Auburn, ME 04210

RE: Cooper Paving Sign
2767 Turner Road - Auburn

Dear John:

On behalf of Cooper Paving, LLC (Cooper), I am pleased to submit this letter and attachments to secure approvals to install a new sign at their site located at 2767 Turner Road. The property and business are owned by Theodore and Tasha Cooper and the parcel is identified as Parcel ID 367-032 on the City GIS system. According to a boundary survey, the lot contains 14.63 acres and has about 675' of frontage on Turner Road. The property is located partially in the Low Density Country Residential (LDCR) District along the road frontage and partially in the Agriculture and Resource Protection (AG) District at the rear of the parcel.

A recent topographic survey that was completed to support the construction of recent driveway improvements shows that the existing sign is located within the right of way of Turner Road. The driveway improvements were made to help improve truck movements in and out of this property safely at the posted speeds. Turner Road is a four-lane highway with a posted speed limit of 55 MPH.

Section 60-638 (b) 6. of your ordinance allows signs in a residential district to be a maximum of 16 square feet. The existing sign is 74" by 48" or 24.7 square feet. This sign is too small to be read at speeds of 55 MPH and, therefore, creates a traffic hazard for vehicles looking to enter the site. With the support of the attached guidelines "Sign Viewing Distance Information", Cooper is seeking a

waiver to increase the maximum allowed sign size from 16 square feet to 50 square feet. These guidelines were used previously to support a 72 square foot sign at a church on Turner Road. Also, several other businesses in this corridor have larger signs than what your ordinance allows.

This request can be reviewed under Section 60-637 (11) of your ordinance which allows the Planning Board to modify or relax sign requirements for those projects subject to Site Plan Review and Section 60-638 (b)(5) which allows signs approved under the Site Plan Review process in the residential districts. Cooper is proposing a 5' x 10', 50 square foot, double-sided sign to be set near the center of the driveways at the edge of the right of way that is about 37' from the edge of roadway pavement, based upon the attached survey. The sign will be 20' high. Cooper is requesting a waiver from Chapter 60, Sec. 60-637 (2)(a) General Provisions Regulations, pursuant to Chapter 60, Sec. 60-638 (b)(5). Cooper is also requesting a waiver from the following information under Chapter 60, Sec. 60-1301: 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 19, 21, 22, 23, and 24. The request is pursuant to Chapter 60, Sec. 60-1302.

Most of the letters proposed on the sign will be 6" high or less. According to the attached guidelines, those letters will be seen for about 3 seconds from about 210' at 55 MPH. The word "Cooper" is larger with letter heights ranging from 10" (letters O, E & R) to 28" (letter C) which can be visible from greater distances for about 10 seconds while traveling the speed limit of 55 MPH unless blocked by existing trees. The sign will have a white background with red and black letters. The sign will be set on two posts with a roof structure at the top. Lights will shine downward from light fixtures attached under the roof. Lights will include four Slim Basics LED Tapered Disk Lights, 120 volts, flush mounted under the sign roof.

The proposed sign location cannot block the view of other signs on abutting parcels, given the existing trees along the Turner Road frontage, and there are no signs on those abutting parcels. See the attached pictures. We have also included pictures of other signs currently found along Turner Road. There are no new buildings or additional site improvements proposed under this application. In

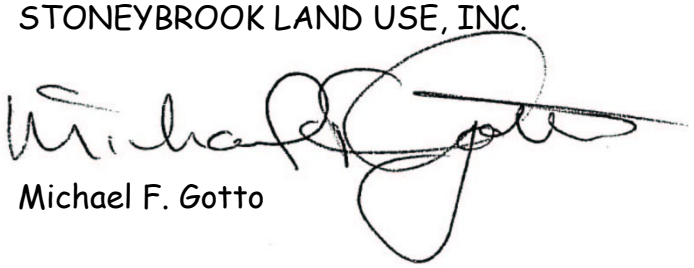
addition to paving and excavation company operations on site, there is a wood processing operation and marijuana grow facility on the property.

The new signposts were installed in June after discussions with Susan Merriman at MDOT and a misunderstanding about the status of the sign permit within the City permit process. Susan provided a verbal approval to Mike Spugnardi on May 13, 2024, as long as the sign was placed at least 50' from the centerline of the road. The signposts were installed about 73' from the centerline of the road. However, the right of way at this site is 75' wide, measured from the survey baseline, and the front signpost, as installed, is within the Turner Road right of way by survey by about 2' (3' including the roof structure). We have shown a relocation for those signposts on our site plan, but we also plan to discuss this with MDOT to see if the sign can remain as installed.

I have attached a Boundary Survey plan and site plan showing the sign location, existing site improvements and copies of the sign application materials previously submitted. We have also included a revised sign sketch with more dimensions and a colored version of the sign face. If you have questions or need additional information, please do not hesitate to call. We look forward to your review and approval of this waiver request.

Respectfully yours,

STONEYBROOK LAND USE, INC.



Michael F. Gotto

cc: Theodore & Tasha Cooper

City of Auburn, Maine
Planning & Permitting
Eric Cousens, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Application

PROJECT NAME: Cooper Paving Sign

PROPOSED DEVELOPMENT ADDRESS: 2767 Turner Road

PARCEL ID #: 367-032

REVIEW TYPE:
Site Plan ☑ Site Plan Amendment ☐
Subdivision ☐ Subdivision Amendment ☐

PROJECT DESCRIPTION: See Cover Letter

CONTACT INFORMATION:

Applicant

Name:	Cooper Paving, LLC
Address:	225 Center Minot Road
City / State	Minot, ME
Zip Code	04258
Work #:	
Cell #:	
Fax #:	
Home #:	
Email:	

Property Owner

Name:	Theodore & Tasha Cooper
Address:	225 Center Minot Road
City / State	Minot, ME
Zip Code	04258
Work #:	
Cell #:	
Fax #:	
Home #:	
Email:	

Project Representative

Name:	Mike Gotto - Stoneybrook Land Use, Inc.
Address:	9172 SW 52nd Place Road
City / State	Ocala, FL
Zip Code	34481
Work #:	
Cell #:	(207) 513-6123
Fax #:	
Home #:	
Email:	

Other professional representatives for the project (surveyors, engineers, etc.),

Name:	
Address:	
City / State	
Zip Code	
Work #:	
Cell #:	
Fax #:	
Home #:	
Email:	

PROJECT DATA

The following information is required where applicable, in order complete the application

IMPERVIOUS SURFACE AREA/RATIO

Existing Total Impervious Area	N/A sq. ft.
Proposed Total Paved Area	_____ sq. ft.
Proposed Total Impervious Area	_____ sq. ft.
Proposed Impervious Net Change	_____ sq. ft.
Impervious surface ratio existing	_____ % of lot area
Impervious surface ratio proposed	_____ % of lot area

BUILDING AREA/LOT COVERAGE

Existing Building Footprint	N/A sq. ft.
Proposed Building Footprint	_____ sq. ft.
Proposed Building Footprint Net change	_____ sq. ft.
Existing Total Building Floor Area	_____ sq. ft.
Proposed Total Building Floor Area	_____ sq. ft.
Proposed Building Floor Area Net Change	_____ sq. ft
New Building	_____ (yes or no)
Building Area/Lot coverage existing	_____ % of lot area
Building Area/Lot coverage proposed	_____ % of lot area

ZONING

Existing	LDCR/AG
Proposed, if applicable	

LAND USE

Existing	Commercial
Proposed	Commercial

RESIDENTIAL, IF APPLICABLE

Existing Number of Residential Units	N/A
Proposed Number of Residential Units	
Subdivision, Proposed Number of Lots	

PARKING SPACES

Existing Number of Parking Spaces	N/A
Proposed Number of Parking Spaces	
Number of Handicapped Parking Spaces	
Proposed Total Parking Spaces	

ESTIMATED COST OF PROJECT:

DELEGATED REVIEW AUTHORITY CHECKLIST

SITE LOCATION OF DEVELOPMENT AND STORMWATER MANAGEMENT

Existing Impervious Area	N/A sq. ft.
Proposed Disturbed Area	N/A sq. ft.
Proposed Impervious Area	N/A sq. ft.

1. ***If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with MDEP.***
2. ***If the proposed impervious area is greater than one acre including any impervious area crated since 11/16/05, then the applicant shall apply for a MDEP Stormwater Management Permit, Chapter 500, with the City.***
3. ***If total impervious area (including structures, pavement, etc) is greater than 3 acres since 1971 but less than 7 acres, then the applicant shall apply for a Site Location of Development Permit with the City. If more than 7 acres then the application shall be made to MDEP unless determined otherwise.***
4. ***If the development is a subdivision of more than 20 acres but less than 100 acres then the applicant shall apply for a Site Location of Development Permit with the City. If more than 100 acres then the application shall be made to MDEP unless determined otherwise.***

TRAFFIC ESTIMATE

Total traffic estimated in the peak hour-existing (Since July 1, 1997) N/A passenger car equivalents (PCE)

Total traffic estimated in the peak hour-proposed (Since July 1, 1997) _____ passenger car equivalents (PCE)

If the proposed increase in traffic exceeds 100 one-way trips in the peak hour then a traffic movement permit will be required.

Zoning Summary

1. Property is located in the LDCR/AG zoning district.
2. Parcel Area: 14.63 acres / _____ square feet(sf).

Regulations	Required/Allowed	Provided
Min Lot Area	3 acres	14.63 acres
Street Frontage	325'	675'
Min Front Yard	50'	184'
Min Rear Yard	50'	
Min Side Yard	25'	76'
Max. Building Height	35'	
Use Designation	Commercial	Commercial
Parking Requirement	1 space/ per square feet of floor area	
Total Parking:		
Overlay zoning districts (if any):		

Urban impaired stream watershed? ~~YES~~/NO If yes, watershed name_____

DEVELOPMENT REVIEW APPLICATION SUBMISSION

Submissions shall include fifteen (15) complete packets containing the following materials:

1. 5 Full size plans and 10 smaller (no larger than 11" x 17") plans containing the information found in the attached sample plan checklist.
2. Application form that is completed and signed by the property owner or designated representative. (NOTE: All applications will be reviewed by staff and any incomplete application will not be accepted until all deficiencies are corrected.
3. Cover letter stating the nature of the project.
4. All written submittals including evidence of right, title and interest.
5. Copy of the checklist completed for the proposal listing the material contained in the submitted application.

Refer to the application checklist for a detailed list of submittal requirements.

To view the City of Auburn Zoning Ordinance, go to:
www.auburnmaine.gov under Government, select Departments of the City, then Planning, Permitting & Code. On the left menu, choose Subdivisions, Land Use, Zoning Ordinance. Or click HERE.

For additional information on Site Plan Review, please click HERE or scan code:

For additional information on Special Exceptions, please click HERE or scan code:

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, I certify that the City's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for development review only; a Performance Guarantee, Inspection Fee, Building Permit Application and other associated fees and permits will be required prior to construction.

Signature of Applicant:	**Date:**
	12/5/24

City of Auburn, Maine
Office of Planning & Permitting
Eric J. Cousens, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Checklist

The following information is required where applicable to be submitted for an application to be complete

PROJECT NAME: Cooper Paving Sign
PROPOSED DEVELOPMENT ADDRESS: 2767 Turner Road
PARCEL #: 367-032

Required Information		*Check when Submitted*		*Applicable Ordinance*
Site Plan		*Applicant*	*Staff*	
	Owner's Names/Address	✔		
	Names of Development	✔		
	Professionally Prepared Plan	✔		
	Tax Map or Street/Parcel Number	✔		
	Zoning of Property	✔		
	Distance to Property Lines	✔		
	Boundaries of Abutting land	✔		
	Show Setbacks, Yards and Buffers	✔		
	Airport Area of Influence	N/A		
	Parking Space Calcs	N/A		
	Drive Openings/Locations	✔		
	Subdivision Restrictions	N/A		
	Proposed Use	✔		
	PB/BOA/Other Restrictions	N/A		
	Fire Department Review	N/A		
	Open Space/Lot Coverage	N/A		

Required Information		*Check when Submitted*		*Applicable Ordinance*
Landscape Plan		*Applicant*	*Staff*	
	Greenspace Requirements	N/A		
	Setbacks to Parking	N/A		
	Buffer Requirements	N/A		
	Street Tree Requirements	N/A		
	Screened Dumpsters	N/A		
	Additional Design Guidelines	N/A		
	Planting Schedule	N/A		
Stormwater & Erosion Control Plan		*Applicant*	*Staff*	
	Compliance w/ chapter 500	N/A		
	Show Existing Surface Drainage	N/A		
	Direction of Flow	N/A		
	Location of Catch Basins, etc.	N/A		
	Drainage Calculations	N/A		
	Erosion Control Measures	N/A		
	Maine Construction General Permit	N/A		
	Bonding and Inspection Fees	N/A		
	Post-Construction Stormwater Plan	N/A		
	Inspection/monitoring requirements	N/A		
Lighting Plan		*Applicant*	*Staff*	
	Full cut-off fixtures	N/A		
	Meets Parking Lot Requirements	N/A		
Traffic Information		*Applicant*	*Staff*	
	Access Management	N/A		
	Signage	✔		
	PCE - Trips in Peak Hour	N/A		

Required Information		*Check when Submitted*		*Applicable Ordinance*
	Vehicular Movements	N/A		
	Safety Concerns	N/A		
	Pedestrian Circulation	N/A		
	Police Traffic	N/A		
	Engineering Traffic	N/A		
Utility Plan		*Applicant*	*Staff*	
	Water	N/A		
	Adequacy of Water Supply	N/A		
	Water main extension agreement	N/A		
	Sewer	N/A		
	Available city capacity	N/A		
	Electric	N/A		
	Natural Gas	N/A		
	Cable/Phone	N/A		
Natural Resources		*Applicant*	*Staff*	
	Shoreland Zone	N/A		
	Flood Plain	N/A		
	Wetlands or Streams	N/A		
	Urban Impaired Stream	N/A		
	Phosphorus Check	N/A		
	Aquifer/Groundwater Protection	N/A		
	Applicable State Permits	N/A		
	Lake Auburn Watershed	✔		
	Taylor Pond Watershed	N/A		
Right, Title or Interest		*Applicant*	*Staff*	
	Verify	✔		
	Document Existing Easements, Covenants, etc.	N/A		

Required Information		*Check when Submitted*		*Applicable Ordinance*
Technical & Financial Capacity		***Applicant***	***Staff***	
	Cost Est./Financial Capacity	N/A		
	Performance Guarantee	N/A		
State Subdivision Law		***Applicant***	***Staff***	
	Verify/Check	N/A		
	Covenants/Deed Restrictions	N/A		
	Offers of Conveyance to City	N/A		
	Association Documents	N/A		
	Location of Proposed Streets & Sidewalks	N/A		
	Proposed Lot Lines, etc.	N/A		
	Data to Determine Lots, etc.	N/A		
	Subdivision Lots/Blocks	N/A		
	Specified Dedication of Land	N/A		
Additional Subdivision Standards		***Applicant***	***Staff***	
	Mobile Home Parks	N/A		
	PUD	N/A		
A JPEG or PDF of the proposed site plan		***Applicant***	***Staff***	
Final sets of the approved plans shall be submitted digitally to the City, on a CD or DVD, in AutoCAD format R 14 or greater, along with PDF images of the plans for archiving				

Character Size Max. Viewing Distance Max. Viewing Time (seconds)[3]

Character Size		Max. Viewing Distance		Max. Viewing Time (seconds)3				
				25mph /	35mph /	45mph /	55mph /	65mph /
inch	mm	foot	meter	40kph	56kph	72kph	89kph	104kph
2	51	70	21	2	1	1	1	1
4	102	140	41	4	3	2	2	1
5	127	175	52	5	3	3	2	2
6	152	210	62	6	4	3	3	2
8	203	280	83	8	5	4	3	3
9	229	315	93	9	6	5	4	3
10	254	350	104	10	7	5	4	4
12	305	420	124	11	8	6	5	4
16	406	560	166	15	11	8	7	6
20	508	700	207	19	14	11	9	7
24	610	840	249	23	16	13	10	9
36	914	1260	373	34	25	19	16	13
48	1219	1680	497	46	33	25	21	18

The max. viewing distance here is based on 35 feet per inch of character height as seen from a moving vehicle.
A max. viewing distance of 50 feet per inch could be applied for a static viewing condition.

Note:
1. LEDs emit light allowing the content to be visible further away than the same content on standard reflective surfaces.
2. Other factors, such as content size, traffic, distractions, weather, lighting conditions, etc. will affect the time required.
3. The values listed in the chart does not take into consideration the minimum required visibility distance (MRVD).
4. The information provided should not be taken as the definitive source on electronic sign visibility and viewing distance.

2 inch text works well in most foot traffic areas, such as for indoor applications.
- 4 to 6 inch text is ideal for 45mph or under traffic, such as outdoor church and school applications.
- 8 inch text or larger works is suited for most outdoor applications where traffic is 60mph or slower.

	25mph /	35mph /	45mph /	55mph /	65mph /
Distance traveled	40kph	56kph	72kph	89kph	104kph
Feet per second	37	51	66	81	95
Meters per second	11	16	20	25	29

United States Sign Council

Guideline Standards

Table 1. Lateral and Vertical Offsets as function of distance.

Detection Distance To Sign	Lateral Offset (Setback)	Vertical Offset (Height Limit)
200 ft.	35 ft.	21 ft.
400 ft.	70 ft.	38.5 ft.
600 ft.	106 ft.	55.5 ft.
800 ft.	141 ft.	73.5 ft.
1000 ft.	176 ft.	90.5 ft.

Table 3. Average Viewer Reaction Time

Road Conditions	Maneuver	
	Pre Sign	Post Sign
Simple	8 Sec.	4 Sec.
Complex	10 Sec.	5 Sec.
Multi Lane	11 Sec.	5 Sec.

Table 5.
Sign Size as Function of Travel Speed and Viewer Reaction Time

MPH	VRT (Seconds)	Sign Size (Square Feet)
25	4	12.5
	5	20
	8	50
	10	78
40	4	32
	5	50
	8	128
	10	200
55	4	60.5
	5	95
	8	242
	10	378

TABLE 2-1. THE RELATIONSHIP BETWEEN VEHICLE SPEED, LEGIBILITY DISTANCE, SETBACK, AND HEIGHT

Vehicle Speed		MRLD*	Setback	Mounting Height
in MPH	in feet per second	(in feet)	(in feet)	(in feet)
55	81	440	77	39
50	73	400	70	35
45	66	360	63	32
40	59	320	56	28
35	51	280	49	25
30	44	240	42	21
25	37	200	35	18

*MRLD is the minimum required legibility distance or the recommended distance at which a sign should be readable. Further discussion of MRLD is provided below in the section on sign design.

Source: Garvey et al. (1996)

TABLE 2-2. MINIMUM REQUIRED LEGIBILITY DISTANCES IN VARYING SITUATIONS

Speed MPH	MRLD @ 4 seconds (in feet)	MRLD @ 5.5 seconds (in feet)	MRLD @ with manuever (in feet)	MRLD @ without manuever (in feet)
25-30	175	225	410	155
35–40	235	325	550	185
45–50	290	405	680	220
55–60	350	485	720	265
>65	385	525	720	280

maine.gov

Sign Permit Application

Department of Planning & Permitting
60 Court St. Auburn, ME 04210
207.333.6601

City Use Only	
Permit #	SIGN-00015-2024
Zone:	
Fee:	$50.00
Invoice:	pd cash
Date Issued:	6.12.24
Temp Exp Date:	

PID#: 367-032 (Map / Lot / Sub Lot)

Property Address: 2767 Turner Road
Property Owner: Theodore + Tasha Cooper
Property Owner Address: 225 Center Minot Hill Rd Minot, ME 04258
Property Owner Phone # 207-650-7273

Business Name: Cooper Paving + Excavation, LLC
Business Owner: Theodore Cooper
Business Phone # 207-650-7273
Installer: Mike Spugnardi
Installer Phone # 225-2500

Email address to send permit cooperpaving@roadrunner.com and spsigns@megalink.net

Please attach a site plan or tax map for any pylon/ground signs showing the following:
1. Lot size and shape **2.** Location of building (if any) **3.** Location of sign **4.** Distance of sign from side lines & road travel way

TYPE OF SIGN AND DIMENSIONS

__ Temporary Sign ** *Temporary signs permitted for 90 days once approved*
✓ Permanent Sign

Wall/ Roof sign(s) Number of Signs: ____

Dimensions of sign 1: x
Dimensions of sign 2: x
Dimensions of sign 3: x
Dimensions of sign 4: x

Projecting Sign: *Height under side of sign to ground*
Roof Sign: *Height under side of sign to ground*
Height of sign

Method of Support:

Please attach a sketch or rendering of each sign

Ground sign(s) Number of Signs: 1

Dimensions of sign 5: 5' x 10'
Dimensions of sign 6: x
Dimensions of sign 7: x

Ground Sign: *Overall height of sign* 20'
Height under sign to ground 8'

Method of Support: STEEL POSTS IN CEMENT BASES

Please attach a sketch or rendering of each sign

Are any of these signs:
__ Projecting
__ Roof
__ Reflective
✓ Non illuminated
__ Illuminated*

IMPORTANT NOTE:
For illuminated signs, the Sign Permit will not be valid until an Electrical Permit has been obtained by a licensed electrician

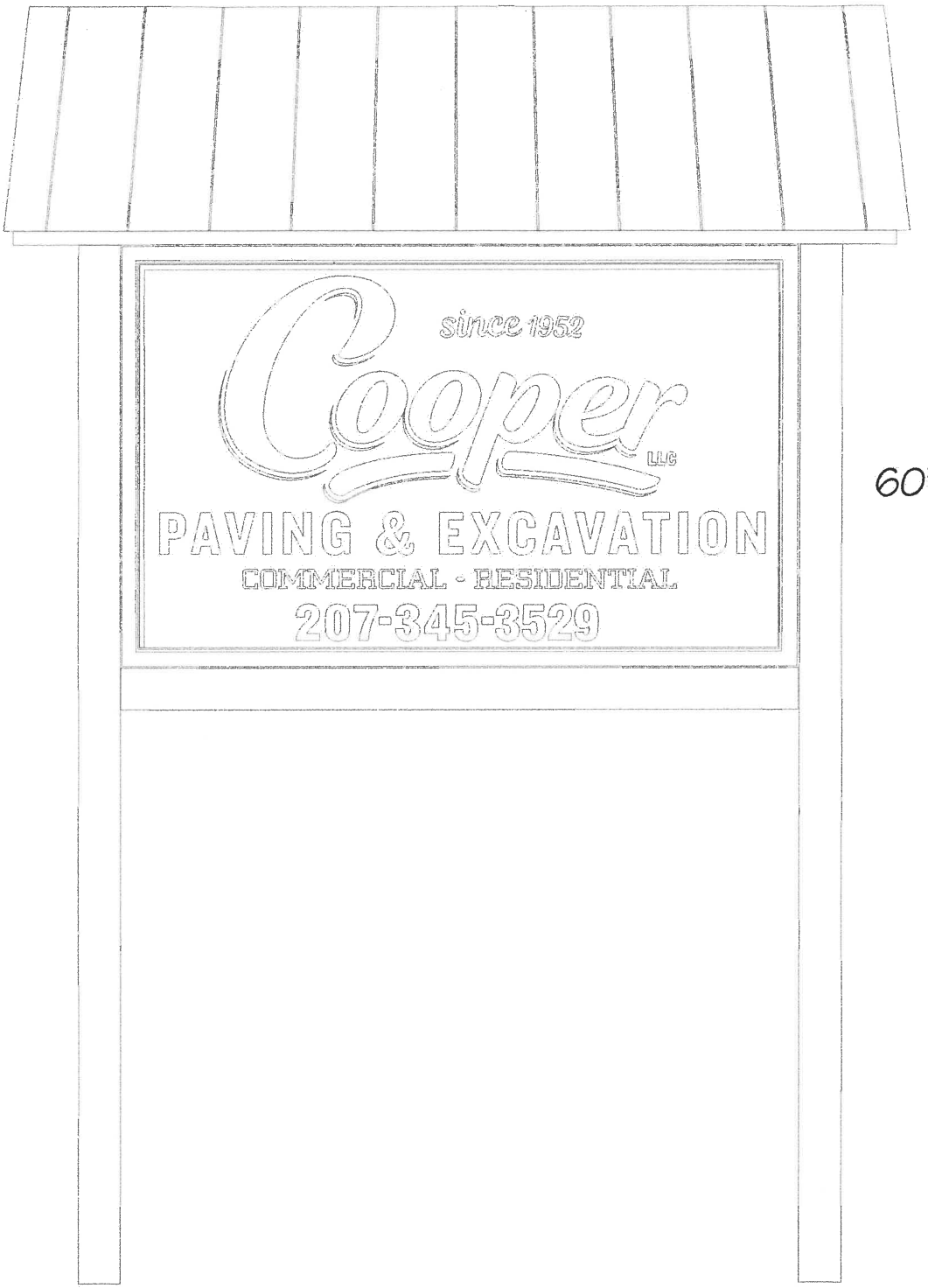
Value of Signs	
Sign 1:	
Sign 2:	
Sign 3:	
Sign 4:	
Sign 5:	$5000.
Sign 6:	
Sign 7:	
TOTAL VALUE:	

*** If the above property is not owned by the applicant, the signature of the Property Owner must be obtained prior to the permit being issued. A signed affidavit from the Property Owner giving permission is acceptable.*

Ted Cooper — **Property Owner Signature** — 6/11/24 — **Date**

Ted Cooper — **Applicant Signature** — 6/11/24 — **Date**

9/25/2023

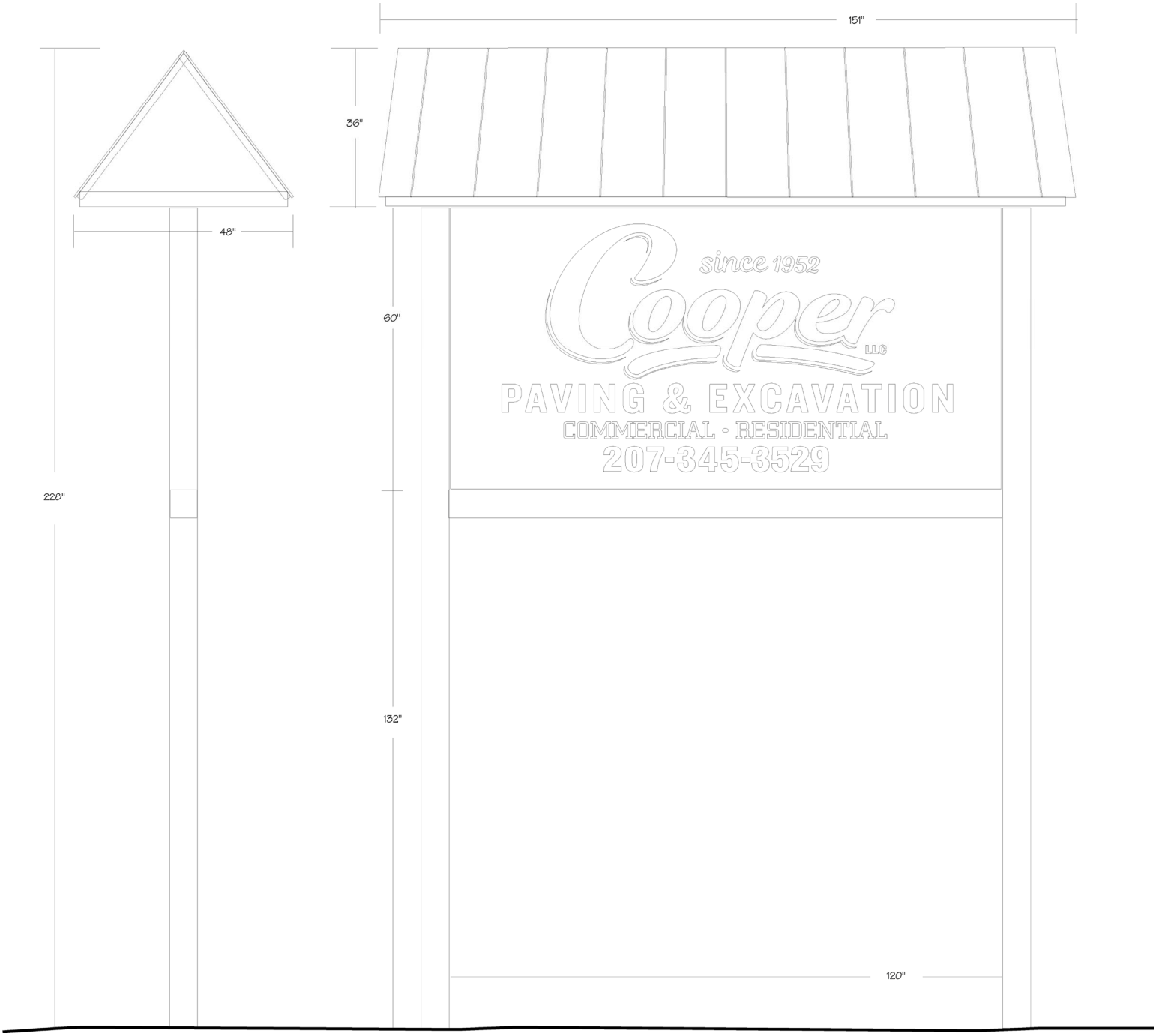

since 1952
Cooper
LLC
PAVING & EXCAVATION
COMMERCIAL - RESIDENTIAL
207-345-3529

60" X 120"



Sign is at least 50 feet from road (Route 4)


since 1952
Cooper
LLC
PAVING & EXCAVATION
COMMERCIAL • RESIDENTIAL
207-345-3529


151"
36"
48"
since 1952
Cooper
LLC
PAVING & EXCAVATION
COMMERCIAL · RESIDENTIAL
207-345-3529
228"
60"
132"
120"

JUNO

Juno SlimBasics™ JSBT Tapered Switchable White LED Surface Mount Disk Light

4" and 6" Round Disk Lights for JBox Installation

Project:
Fixture Type:
Location:
Contact/Phone:

JSBT 4IN/6IN Series



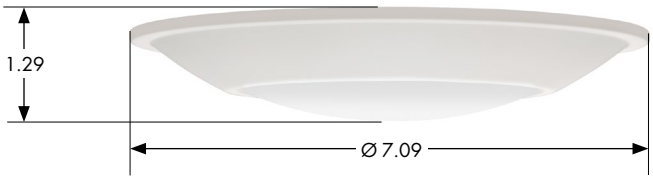
JSBT 4IN



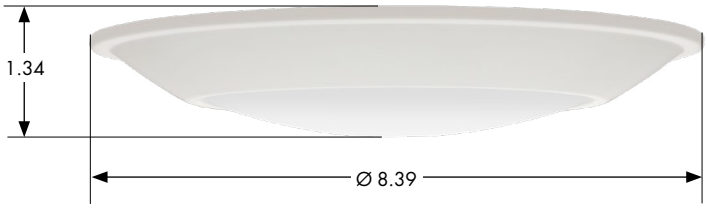
JSBT 6IN

ENERGY STAR | WET LOCATION™ | ETL LISTED | TITLE 24 PART 6 | SWITCHABLE WHITE 3000K 4000K 5000K

Dimensions



JSBT 4IN



JSBT 6IN

Product Features

The SlimBasics JSBT Switchable White Tapered LED Disk Lights are designed to be paired with an inexpensive recessed junction box providing an economical alternative to recessed downlighting. Additionally, the JSBT offers the ultimate in flexibility for both new construction and renovations. An integrated 3CCT switch (3000/4000/5000K) allows the end user to fine-tune the feel of their space, while the two available sizes (4" and 6") insure you will have the right amount of light.

Applications

- Designed to be used across an entire space where traditional downlights have been used in the past
- Ideal for residential single and multi-family, as well as light commercial and hospitality spaces
- The wet location rating makes them perfect for use in bathrooms, soffits, and outdoor covered ceiling areas.
- Installs directly into industry standard junction boxes
- Suitable for use in closets, compliant when installed to NFPA® 70 NEC® Section 410.16 (A)(1) and (C)(1)

Performance

Delivered Lumens	JSBT 4IN = Up to 830L JSBT 6IN = Up to 1090L
LED Color Temperature	3000K/4000K/5000K
CRI	90+
Voltage	Dedicated 120V
Dimming	Phase Dimming down to 10%

Specifications

	Width	Depth	Lens Opening
JSBT 4IN	7.09	1.29	4.13
JSBT 6IN	8.39	1.34	5.62

All dimensions are in Inches

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Juno SlimBasics JSBT Tapered Switchable White LED Surface Mount Disk Light

4" and 6" Round Disk Lights for JBox Installation



JSBT 4IN JSBT 6IN

ORDERING INFORMATION

Tapered LED Disk Light

Example: JSBT 4IN SWW2 90CRI WL MW M6

Series		Color Temperature		CRI		Wet Location		Color Finish	
JSBT 4IN	4" Juno Tapered Disk Light	**SWW2**	3000K/4000K/5000K	**90CRI**	90CRI	**WL**	Wet Location	**MW**	Matte White
JSBT 6IN	6" Juno Tapered Disk Light								

ACCESSORIES	
JSBTTRIM 4IN BL M6 [1]	Black 4" Trim
JSBTTRIM 6IN BL M6 [1]	Black 6" Trim
JSBTTRIM 4IN BZ M6 [1]	Bronze 4"
JSBTTRIM 6IN BZ M6 [1]	Bronze 6"
JSBTADPTR 4IN CNDA M50	Canadian 4" JBOX Adapter

Notes:

1 JSBTTRIM only compatible with SWW2 non-PIR fixtures.



Black



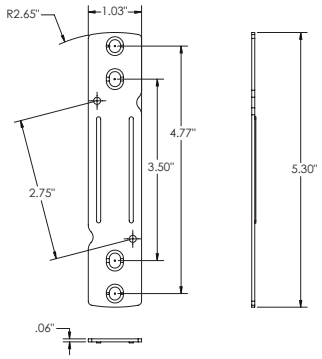
Bronze

JBOX Compatibility

	3-1/2" Octagon Box Steel	4" Drawn Octagon 1-1/2" Deep Steel	3-1/2" Drawn Round Ceiling Pan Steel / Old Work	4" Round Plastic / New York	4" Drawn Round Ceiling Pan Steel	4" Round Plastic / New Work	4" Dia. Ceiling Box With Bar Plastic / New York
							
Exterior LXWXH	3.2" x 3.2" x 1.55"	3.54" x 3.54" x 1.55"	3.38" Rd. x 0.5" Dep.	4" Dia. x 2.3"	4" Dia. x 0.5" Dep.	4" Dia. x 2.375"	14.5" x 4.5" x 4"
Mounting Dimension	2.75"	3.5"	2.75"	2.75" / 3.5"	3.5"	2.75" / 3.5"	2.75" / 3.5"
Fixture	JSBT 4IN/ JSBT 6IN	JSBT 6IN	JSBT 4IN/ JSBT 6IN	JSBT 4IN/ JSBT 6IN	JSBT 6IN	JSBT 4IN/ JSBT 6IN	JSBT 4IN/ JSBT 6IN

	4" Square Box	WiringPro 4" Square Box	Iberville 4" Octagonal Box
			
Exterior LXWXH	4"x 4" x 1.5"	4" X 4" X 1.5"	4" x 4' x 1.5"
Mounting Dimension	4"	4"	4"
Fixture	JSBT 4IN	JSBT 4IN	JSBT 4IN

Canadian 4IN J-Box Bracket



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Juno SlimBasics JSBT Tapered Switchable White LED Surface Mount Disk Light

4" and 6" Round Disk Lights for JBox Installation



JSBT 4IN JSBT 6IN

Install In 3 Simple Steps







Dimmer Compatibility

Forward Phase Dimmers	Reverse Phase Dimmers	Acuity Brands Dimmers
Lutron Maestro® STCL-153		Acuity SensorSwitch® Forward phase paddle dimmer/WPD WH
Lutron RadioRa® RRD-10ND	Lutron Maestro ELV® MAELV-600	
Lutron Diva® DVCL-153P		
Lutron Vive® MRF2S-6ND		
Lutron Caseta® PD-6WCL		
Leviton SureSlide® IPM06-1LZ		
Leviton Illumatech® IPL06-10Z		

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Juno SlimBasics JSBT Tapered Switchable White LED Surface Mount Disk Light

4" and 6" Round Disk Lights for JBox Installation



JSBT 4IN JSBT 6IN

Specifications

Construction
Low profile tapered aluminum trim frame with matte finish • Molded polycarbonate, UV stabilized diffuser dome lens conceals the LEDs from direct view and provides uniform lens luminance.

LED Light Engine
LED board mounted directly to aluminum housing designed to provide superior thermal management and ensure long life • Switchable white LED color temperature technology offers 3000K, 4000K, 5000K all in one disk light • 90 CRI minimum • Accommodates 120 volts AC at 60Hz • Dimmable with most standard magnetic low voltage and electronic low voltage dimmers.

Electrical Connections
Fixture provided with leads for direct wire connection in JBox.

Installation

Junction Box Mounting
The driverless JSBT installs directly into industry standard junction boxes that requires no separate mounting bracket for installation • Compatible boxes include 3-1/2" and 4" octagon junction boxes (1-1/2" minimum depth), round mud rings with 2-3/4" mounting centers, and 3" & 4" diameter non-metallic boxes • Provides fast installation of fully assembled fixture to JBox • Suitable for ceiling mount • Suitable for use in closets, compliant when installed to NFPA® 70 NEC® Section 410.16 (A)(1) and (C)(1).

Life
High performance, long functional life of 50,000 hrs (L70).

Labels
ETL listed for US and Canada • ENERGY STAR® Certified • Suitable for indoor wet locations • Certified to the high efficacy requirements of California T24 JA8-2019.

Testing
All reports are based on published industry procedures; field performance may differ from laboratory performance.

Warranty 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

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Juno SlimBasics JSBT Tapered Switchable White LED Surface Mount Disk Light

4" and 6" Round Disk Lights for JBox Installation

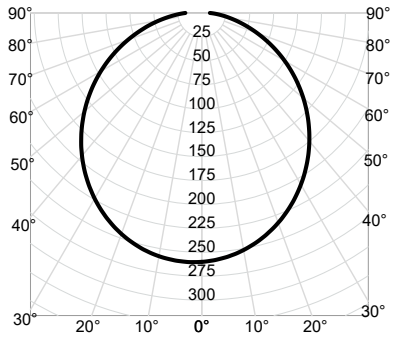


JSBT 4IN JSBT 6IN

PHOTOMETRICS

Distribution Curve | Distribution Data | Output Data | Coefficient of Utilization | Illuminance Data at 30" Above Floor for a Single Luminaire

JSBT 4IN SWW2 90CRI WL MW M6 - 3000K Input Watts: 10.5, Delivered Lumens: 757, LPW: 72.1, S/MH: 1.18, Test No: 220100620SHA-001



CP Summary

0°	
0°	260
5°	257
15°	244
25°	221
35°	192
45°	157
55°	119
65°	80
75°	44
85°	17
90°	8

Zonal Lumen Summary

Zone	Lumens	% Fixture
0° - 30°	200	26%
0° - 40°	325	43%
0° - 60°	570	75%
0° - 90°	743	98%
90° - 180°	14	2%
0° - 180°	757	100%

Coefficients of Utilization

ρf	20%			70%			50%		
ρc	80%								
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	110	110	110
1	103	98	94	100	96	92	95	92	89
2	89	82	76	87	81	75	83	78	73
3	78	70	63	76	69	62	73	66	61
4	69	60	53	68	59	53	65	58	52
5	62	53	46	61	52	46	58	51	45
6	56	47	40	55	46	40	53	45	39
7	50	42	35	50	41	35	48	40	35
8	46	37	32	45	37	31	44	36	31
9	42	34	28	42	34	28	40	33	28
10	39	31	26	38	31	26	37	30	25

Cone of Light

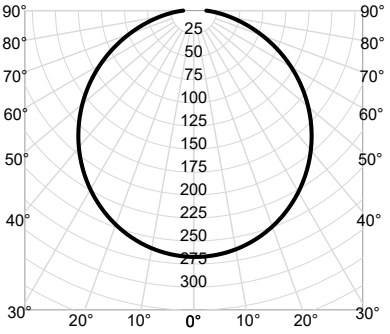
Mounting Height	Initial FC Center Beam	Beam Diameter
6.0	7.2	17.3
8.0	4.1	23.0
10.0	2.6	28.8
12.0	1.8	34.5
14.0	1.3	40.3

Beam Angle: 110.0°
Field Angle: 172.6°

Luminance (cd/sq.m)

	Average Luminance
0°	29,096
45°	24,847
55°	23,282
65°	21,299
75°	19,106
85°	22,210

JSBT 4IN SWW2 90CRI WL MW M6 - 4000K Input Watts: 10.5, Delivered Lumens: 804, LPW: 76.6, S/MH: 1.26, Test No: 220100620SHA-001



CP Summary

0°	
0°	267
5°	266
15°	257
25°	239
35°	213
45°	181
55°	143
65°	101
75°	59
85°	25
90°	14

Zonal Lumen Summary

Zone	Lumens	% Fixture
0° - 30°	207	26%
0° - 40°	340	42%
0° - 60°	603	75%
0° - 90°	787	98%
90° - 180°	17	2%
0° - 180°	804	100%

Coefficients of Utilization

ρf	20%			70%			50%		
ρc	80%								
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	110	110	110
1	102	98	94	100	96	92	95	92	89
2	89	82	76	87	80	75	83	77	73
3	78	70	63	76	68	62	73	66	61
4	69	60	53	67	59	53	65	57	52
5	62	52	46	60	52	45	58	50	45
6	55	46	40	54	46	39	52	45	39
7	50	41	35	49	41	35	47	40	34
8	46	37	31	45	37	31	43	36	31
9	42	34	28	41	33	28	40	33	28
10	39	31	25	38	30	25	37	30	25

Cone of Light

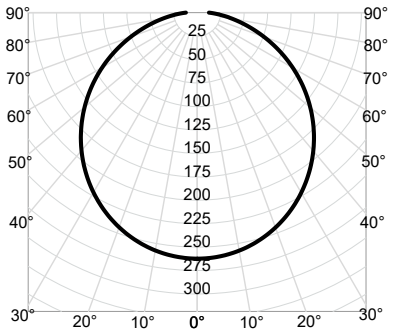
Mounting Height	Initial FC Center Beam	Beam Diameter
6.0	7.4	18.2
8.0	4.2	24.3
10.0	2.7	30.3
12.0	1.9	36.4
14.0	1.4	42.5

Beam Angle: 113.2°
Field Angle: 168.5°

Luminance (cd/sq.m)

	Average Luminance
0°	29,908
45°	28,581
55°	27,820
65°	26,698
75°	25,488
85°	32,467

JSBT 4IN SWW2 90CRI WL MW M6 - 5000K Input Watts: 10.6, Delivered Lumens: 789, LPW: 74.4, S/MH: 1.25, Test No: 220100620SHA-001



CP Summary

0°	
0°	262
5°	261
15°	252
25°	234
35°	208
45°	176
55°	138
65°	97
75°	56
85°	23
90°	12

Zonal Lumen Summary

Zone	Lumens	% Fixture
0° - 30°	204	26%
0° - 40°	334	42%
0° - 60°	592	75%
0° - 90°	772	98%
90° - 180°	17	2%
0° - 180°	789	100%

Coefficients of Utilization

ρf	20%			70%			50%		
ρc	80%								
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	110	110	110
1	102	98	94	100	96	92	95	92	89
2	89	82	76	87	80	75	83	77	73
3	78	70	63	76	68	62	73	66	61
4	69	60	53	67	59	53	65	57	52
5	61	52	46	60	52	45	58	50	45
6	55	46	40	54	46	39	52	45	39
7	50	41	35	49	41	35	47	40	34
8	46	37	31	45	37	31	43	36	31
9	42	34	28	41	33	28	40	33	28
10	39	31	25	38	30	25	37	30	25

Cone of Light

Mounting Height	Initial FC Center Beam	Beam Diameter
6.0	7.3	18.2
8.0	4.1	24.3
10.0	2.6	30.3
12.0	1.8	36.4
14.0	1.3	42.5

Beam Angle: 113.2°
Field Angle: 168.5°

Luminance (cd/sq.m)

	Average Luminance
0°	29,355
45°	27,777
55°	26,929
65°	25,644
75°	24,188
85°	30,161

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Juno SlimBasics JSBT Tapered Switchable White LED Surface Mount Disk Light

4" and 6" Round Disk Lights for JBox Installation

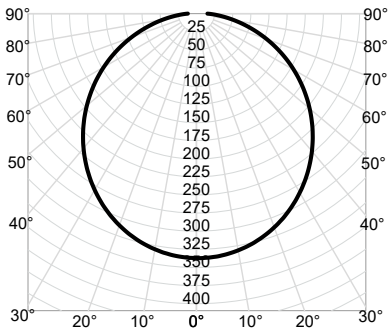


JSBT 4IN JSBT 6IN

PHOTOMETRICS

Distribution Curve | Distribution Data | Output Data | Coefficient of Utilization | Illuminance Data at 30" Above Floor for a Single Luminaire

JSBT 6IN SWW2 90CRI WL MW M6 - 3000K Input Watts: 14.5, Delivered Lumens: 1009, LPW: 69.6, S/MH: 1.25, Test No: 220100620SHA-002



CP Summary

0°	
0°	337
5°	336
15°	324
25°	301
35°	267
45°	227
55°	180
65°	129
75°	77
85°	32
90°	15

Zonal Lumen Summary

Zone	Lumens	% Fixture
0° - 30°	261	26%
0° - 40°	426	42%
0° - 60°	756	75%
0° - 90°	992	98%
90° - 180°	17	2%
0° - 180°	1,009	100%

Coefficients of Utilization

ρf	20%			70%			50%		
ρc	80%								
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	110	110	110
1	103	98	94	100	96	92	95	92	89
2	89	82	76	87	80	75	83	78	73
3	78	69	63	76	68	62	73	66	61
4	69	60	53	67	59	52	65	57	52
5	61	52	45	60	52	45	58	50	44
6	55	46	40	54	46	39	52	45	39
7	50	41	35	49	41	35	47	40	34
8	46	37	31	45	37	31	43	36	31
9	42	34	28	41	33	28	40	33	28
10	39	31	25	38	30	25	37	30	25

Cone of Light

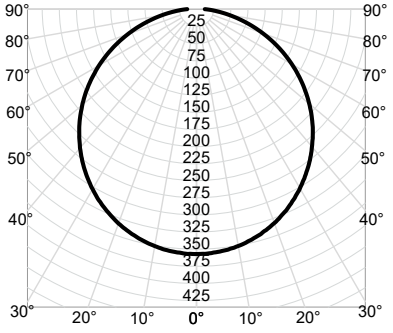
Mounting Height	Initial FC Center Beam	Beam Diameter
6.0	9.4	18.2
8.0	5.3	24.2
10.0	3.4	30.3
12.0	2.3	36.4
14.0	1.7	42.4

Beam Angle: 113.1°
Field Angle: 170.8°

Luminance (cd/sq.m)

	Average Luminance
0°	22,817
45°	21,680
55°	21,237
65°	20,726
75°	20,263
85°	24,764

JSBT 6IN SWW2 90CRI WL - M6 4000K Input Watts: 14.1, Delivered Lumens: 1078, LPW: 76.5, S/MH: 1.25, Test No: 220100620SHA-002



CP Summary

0°	
0°	357
5°	355
15°	343
25°	318
35°	283
45°	239
55°	188
65°	132
75°	74
85°	27
90°	12

Zonal Lumen Summary

Zone	Lumens	% Fixture
0° - 30°	277	26%
0° - 40°	455	42%
0° - 60°	810	75%
0° - 90°	1,055	98%
90° - 180°	23	2%
0° - 180°	1,078	100%

Coefficients of Utilization

ρf	20%			70%			50%		
ρc	80%								
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	110	110	110
1	103	98	94	100	96	92	95	92	89
2	89	82	76	87	81	75	83	78	73
3	78	70	63	76	68	62	73	66	61
4	69	60	53	67	59	53	65	57	52
5	62	52	46	60	52	45	58	50	45
6	55	46	40	54	46	39	52	45	39
7	50	41	35	49	41	35	47	40	34
8	46	37	31	45	37	31	43	36	31
9	42	34	28	41	33	28	40	33	28
10	39	31	25	38	30	25	37	30	25

Cone of Light

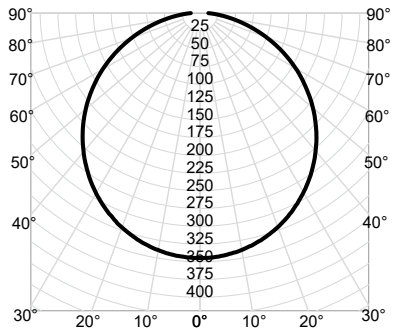
Mounting Height	Initial FC Center Beam	Beam Diameter
6.0	9.9	18.5
8.0	5.6	24.6
10.0	3.6	30.8
12.0	2.5	36.9
14.0	1.8	43.1

Beam Angle: 114.0°
Field Angle: 166.9°

Luminance (cd/sq.m)

	Average Luminance
0°	24,172
45°	22,920
55°	22,215
65°	21,148
75°	19,423
85°	20,698

JSBT 6IN SWW2 90CRI WL MW M6 5000K Input Watts: 14.3, Delivered Lumens: 1041, LPW: 72.8, S/MH: 1.25, Test No: 220100620SHA-002



CP Summary

0°	
0°	345
5°	343
15°	331
25°	307
35°	273
45°	231
55°	182
65°	128
75°	72
85°	26
90°	12

Zonal Lumen Summary

Zone	Lumens	% Fixture
0° - 30°	268	26%
0° - 40°	439	42%
0° - 60°	782	75%
0° - 90°	1,018	98%
90° - 180°	22	2%
0° - 180°	1,041	100%

Coefficients of Utilization

ρf	20%			70%			50%		
ρc	80%								
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	110	110	110
1	103	98	94	100	96	92	95	92	89
2	89	82	76	87	81	75	83	78	73
3	78	70	63	76	68	62	73	66	61
4	69	60	53	67	59	53	65	57	52
5	62	52	46	60	52	45	58	50	45
6	55	46	40	54	46	39	52	45	39
7	50	41	35	49	41	35	47	40	34
8	46	37	31	45	37	31	43	36	31
9	42	34	28	41	33	28	40	33	28
10	39	31	25	38	30	25	37	30	25

Cone of Light

Mounting Height	Initial FC Center Beam	Beam Diameter
6.0	9.6	18.5
8.0	5.4	24.7
10.0	3.4	30.9
12.0	2.4	37.1
14.0	1.8	43.2

Beam Angle: 114.1°
Field Angle: 166.5°

Luminance (cd/sq.m)

	Average Luminance
0°	23,334
45°	22,127
55°	21,452
65°	20,487
75°	18,778
85°	20,018

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1. Cooper frontage looking south.

SITE PHOTOS

2767 Turner Road
Auburn, Maine
Cooper Paving, LLC
Pictures taken on December 3, 2024 by MFG

Stoneybrook
Land Use, Inc.



2. Existing Cooper sign looking north from abutter's driveway. Proposed sign would be behind trees at right side of photo.

SITE PHOTOS

2767 Turner Road
Auburn, Maine
Cooper Paving, LLC
Pictures taken on December 3, 2024 by MFG

Stoneybrook
Land Use, Inc.



3. Looking south from proposed sign location.

SITE PHOTOS

2767 Turner Road
Auburn, Maine
Cooper Paving, LLC
Pictures taken on December 3, 2024 by MFG

Stoneybrook
Land Use, Inc.



4. Looking north from proposed sign location.



5. Proposed sign location from north driveway entrance.

SITE PHOTOS

2767 Turner Road
Auburn, Maine
Cooper Paving, LLC
Pictures taken on December 3, 2024 by MFG

Stoneybrook
Land Use, Inc.



6. Looking southerly at Cooper frontage.



7. Gammon sign

SITE PHOTOS

2767 Turner Road
Auburn, Maine
Cooper Paving, LLC
Pictures taken on December 3, 2024 by MFG

Stoneybrook
Land Use, Inc.



8. HE Callahan sign



9. Pine Acres sign

SITE PHOTOS

2767 Turner Road
Auburn, Maine
Cooper Paving, LLC
Pictures taken on December 3, 2024 by MFG

Stoneybrook
Land Use, Inc.



10. Roy's sign

SITE PHOTOS

2767 Turner Road
Auburn, Maine
Cooper Paving, LLC
Pictures taken on December 3, 2024 by MFG

Stoneybrook
Land Use, Inc.



11. Wallingford Equipment sign #1

SITE PHOTOS

2767 Turner Road
Auburn, Maine
Cooper Paving, LLC
Pictures taken on December 3, 2024 by MFG

Stoneybrook
Land Use, Inc.



12. Wallingford Equipment sign #2

SITE PHOTOS

2767 Turner Road
Auburn, Maine
Cooper Paving, LLC
Pictures taken on December 3, 2024 by MFG

Stoneybrook Land Use, Inc.



13. St. Philip Catholic Church sign – 72 square feet

SITE PHOTOS

2767 Turner Road
Auburn, Maine
Cooper Paving, LLC
Pictures taken on December 3, 2024 by MFG

Stoneybrook
Land Use, Inc.

BK 50 PG 182 Rec'd DEC 12, 2014 @ 9:35am

MAG. NORTH

TO TURNER

TURNER ROAD
(AKA ROUTE 4)

N 21°31'24" E
586.50

N/F
144 OLD TURNER ROAD
REALTY TRUST
4174/318

FIELD ROAD

DEER FENCE
(TYPICAL)

DIRT TRACK

POND

OVERFLOW
PIPE

S 58°42'43" E
1446.55'

POND

OVERFLOW
PIPE

POND

N/F
THEODORE & TASHA
COOPER
7509/241

HOUSE

DUG
WELL

GARAGE

SHED

DUG
WELL

HORSE
BARN

METAL STORAGE
TANK INSIDE
A CONCRETE
BUNKER

PUMP
HOUSE

STAIRS

S 74°33'23" E
1403.04'

135.00'
S 30°03'31" W

IRON
PIPE

N/F
ALETHA L.
BLACKMORE
4332/258

S 30°03'31" W
233.56'

1" IRON
PIPE

5/8" IRON
ROD

N 21°31'24" E
554.64'

N 16°32'28" E
33.36'

5/8" IRON
ROD

TO AUBURN

230.00'
N 74°33'23" W

1188.55'
N 71°02'20" W

N/F
JOSEPH
MARQUIS
6207/18

230.62'
S 17°45'11" W

N/F
JAMES
PETERSON
4542/68

N 76°08'27" W

NOTES:

1) ALL BEARINGS REFER TO MAGNETIC NORTH AS SHOWN ON A PLAN REFERENCED IN NOTE 5 BELOW. BEARINGS AS SHOWN ON THIS PLAN WERE ORIENTATED TO SAID PLAN.

2) ALL BOOK AND PAGE NUMBERS REFER TO THE ANDROSCOGGIN COUNTY REGISTRY OF DEEDS.

3) TOTAL AREA OF PARCEL SURVEYED = 14.63 ACRES.
AREA OF COOPER PARCEL = 12.63 ACRES.
AREA OF PARCEL TO BE PURCHASED FROM JAMES PETERSON = 2.00 ACRES

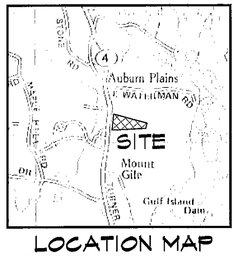
4) OWNER OF RECORD: THEODORE T. & TASHA A. COOPER - SEE DEED OF DIANA JO & ESAU COOPER, JR. TO THEODORE T. & TASHA A. COOPER DATED AUGUST 12, 2008, AND RECORDED AT SAID REGISTRY IN BOOK 7509, PAGE 241. SEE ALSO A DEED FROM JAMES I. PETERSON DATED SEPTEMBER 8, 2014, AND RECORDED AT SAID REGISTRY IN BOOK 8990, PAGE 289. REFERENCE IS ALSO MADE TO A DEED FROM NICHOLAS J. FUIIA & ANNA B. RIORDAN TO JAMES I. PETERSON DATED NOVEMBER 9, 2000, AND RECORDED AT SAID REGISTRY IN BOOK 4542, PAGE 68.

5) REFERENCE IS MADE TO A PLAN ENTITLED "MAINE STATE HIGHWAY COMMISSION - RIGHT OF WAY MAP - STATE HIGHWAY NO. 21" DATED JANUARY 1967, SHEET 5 OF 10, S.H.C. FILE NO. 1-79, AND RECORDED AT SAID REGISTRY IN PLAN FILE BOOK 41, PAGE 134. .

6) THIS PLAN WAS PREPARED UNDER THE DIRECT SUPERVISION OF GEORGE S. BOUCHLES, PLS 2295.

LEGEND:

o	IRON ROD WITH SURVEYOR'S I.D. CAP SET
....o....	UTILITY POLE WITH OVERHEAD UTILITY LINES
N/F	NOW OR FORMERLY
1738/312	BOOK AND PAGE NUMBERS
	GUY WIRE
	CULVERT
	APPARENT PROPERTY LINES
	FENCE
	BUILDING
	PAVEMENT
	GRAVEL



LOCATION MAP
(NOT TO SCALE)

SCALE : 1" = 60'
0 30' 60' 120' 180' 240'

REVISED: DECEMBER 12, 2014 - ADDED NEW SOURCE DEED REFERENCE

RECORDING DATA

ANDROSCOGGIN COUNTY REGISTRY OF DEEDS
RECEIVED December 12, 2014 AT 9 h 35 m A.M.
RECORDED IN PLAN BOOK 50 PAGE 182
ATTEST Tina M. Chaousard
REGISTRAR

BOUNDARY SURVEY
COOPER PROPERTY

2767 TURNER ROAD AUBURN, MAINE

ANDROSCOGGIN COUNTY

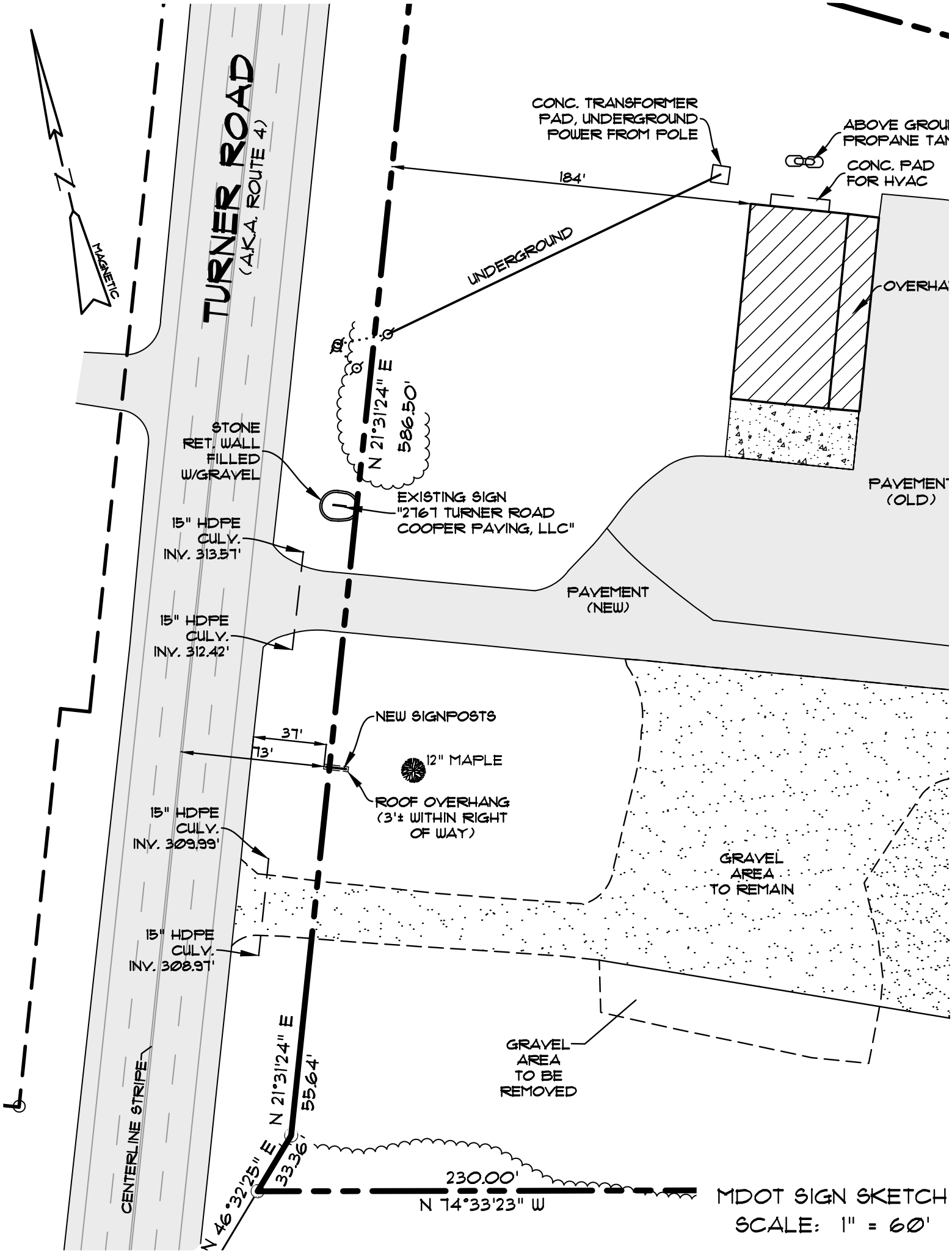
PREPARED FOR & OWNER OF RECORD

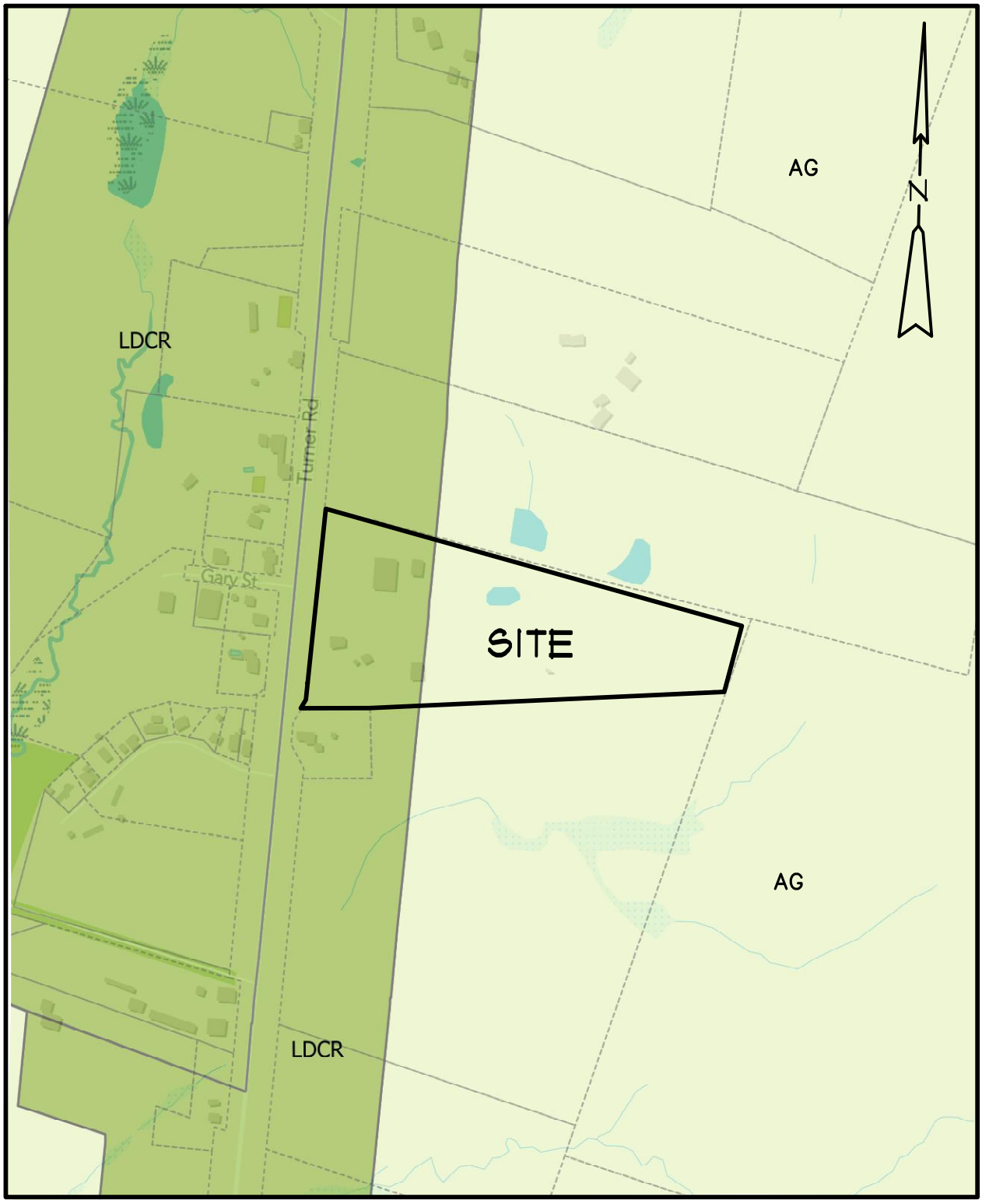
THEODORE & TASHA COOPER

103 CROSS ROAD MINOT, MAINE 04258

prepared by
CADmaster Drafting,
Land Surveying & Septic Designs
191 Madison St.- Auburn, ME 04210
tel./fax = 689-3232 cell=240-9567

DATE: JULY 22, 2014
JOB NUMBER: 14-048
SCALE: 1" = 60'
CADD: 14-048.DWG
SHEET 1


TURNER ROAD
(A.K.A. ROUTE 4)
N
MAGNETIC
CONC. TRANSFORMER PAD, UNDERGROUND POWER FROM POLE
184'
UNDERGROUND
N 21°31'24" E
586.50'
STONE RET. WALL FILLED W/GRAVEL
EXISTING SIGN "2767 TURNER ROAD COOPER PAVING, LLC"
15" HDPE CULV. INV. 313.57'
15" HDPE CULV. INV. 312.42'
15" HDPE CULV. INV. 309.99'
15" HDPE CULV. INV. 308.97'
PAVEMENT (NEW)
PAVEMENT (OLD)
NEW SIGNPOSTS
37'
73'
12" MAPLE
ROOF OVERHANG (3'± WITHIN RIGHT OF WAY)
GRAVEL AREA TO REMAIN
GRAVEL AREA TO BE REMOVED
CENTERLINE STRIPE
N 21°31'24" E
55.64'
N 46°32'25" E
33.36'
230.00'
N 74°33'23" W
MDOT SIGN SKETCH
SCALE: 1" = 60'



ZONING MAP

2767 TURNER ROAD, AUBURN
APPLICANT: COOPER PAVING, LLC
SCALE: 1" = 500'±
DATE OF GRAPHIC: DECEMBER 3, 2024
SOURCE: ACCESSAUBURN
PUBLICATION DATE: 2024

Stoneybrook
Land Use, Inc.

NOTES

1) THE PURPOSE OF THIS PLAN IS TO SHOW THE LOCATION OF THE NEW SIGN.

2) NEW IMPROVEMENTS ARE SHOWN BASED ON A PLAN ENTITLED "2024 SCHEMATIC PLAN - 2767 TURNER ROAD" PREPARED BY STONEYBROOK LAND USE, INC. REVISED THROUGH SEPTEMBER 17, 2024.

3) EXISTING CONDITIONS ARE BASED ON A PLAN ENTITLED "BOUNDARY SURVEY - COOPER PROPERTY" REVISED THROUGH DECEMBER 12, 2014, PREPARED BY CADMASTER DRAFTING, LAND SURVEYING & SEPTIC DESIGNS AND SURVEY DATA COMPILED BY DAVIS LAND SURVEYING, LLC IN JULY 2024.

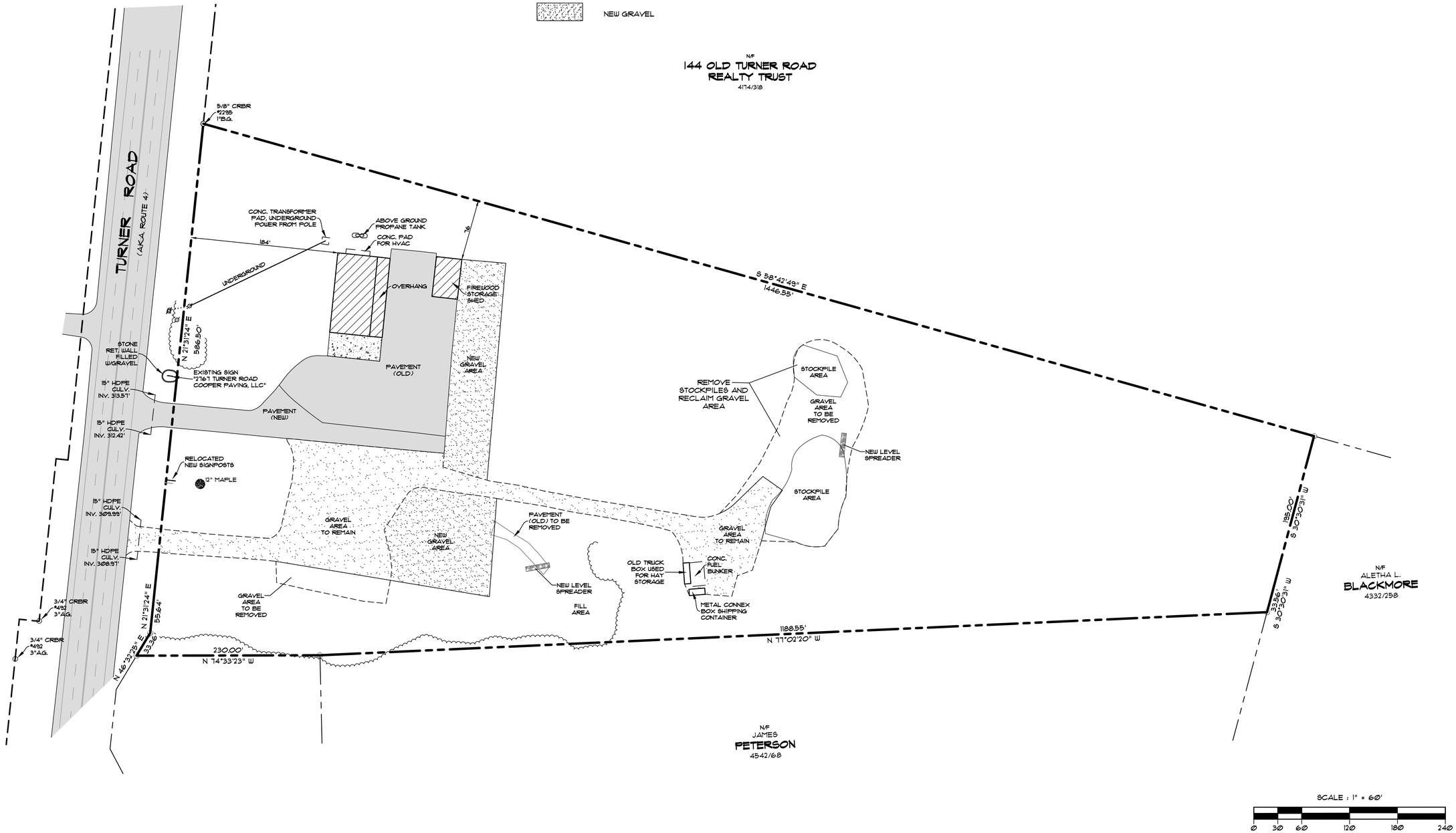
4) ALL BEARINGS REFER TO MAGNETIC NORTH AS SHOWN ON A PLAN ENTITLED "MAINE STATE HIGHWAY COMMISSION - RIGHT OF WAY MAP - STATE HIGHWAY NO. 21" DATED JANUARY 1967, SHEET 5 OF 10, S.H.C. FILE NO. 1-79, AND RECORDED AT SAID REGISTRY IN PLAN FILE BOOK 41, PAGE 134.

5) ALL BOOK AND PAGE NUMBERS REFER TO THE ANDROSCOGGIN COUNTY REGISTRY OF DEEDS.

6) OWNER OF RECORD: THEODORE T. & TASHA A. COOPER
BOOK 7509, PAGE 241 & BOOK 8990, PAGE 289
TAX MAP 367, LOT 32

LEGEND

- BOUNDARY LINE (SUBJECT PARCEL)
- BOUNDARY LINE (OTHER)
- N/F — NOW OR FORMERLY
- 2178/189 — BOOK AND PAGE NUMBER
- EXISTING TREE LINE
- EXISTING UTILITY POLE WITH OVERHEAD WIRES
- EXISTING BUILDING
- EXISTING GRAVEL
- EXISTING PAVEMENT
- EXISTING CONCRETE
- NEW GRAVEL



Stoneybrook
Land Use, Inc.
9172 SW 52nd Place Road
Ocala, FL 34481

REV.:	DATE:	CHANGES:

DO NOT MODIFY PLAN WITHOUT WRITTEN PERMISSION FROM STONEYBROOK LAND USE, INC.

SIGN SITE PLAN
2767 TURNER ROAD
AUBURN, MAINE
PREPARED FOR
COOPER PAVING, LLC
225 CENTER MINOT ROAD - MINOT, ME 04258

DATE	PROJECT
NOV. 2024	22-001
DRAWN BY	SCALE
BRJ	1" = 60'
FILE: 22-001 SIGN	

SHEET 1

City of Auburn, Maine
Office of Planning & Permitting
www.auburnmaine.gov | 60 Court Street
Auburn, Maine 04210
207.333.6601

To: Auburn Planning Board
From: Natalie Thomsen, Planning Coordinator
Re: DiPrete Engineering on behalf of owners A.R. Building Company are applying for a Site Plan approval to 56 Residential buildings: 22 duplexes and 34 quadplexes, sidewalks and a paved drive isle off Stetson Road, also City Assessor's Parcel I.D. 291-011. The proposed project should be considered pursuant to Chapter 60, Article XVI Division 2 – Site Plan Review, Article IV Subdivision, Division 3 – Special Exception, Article IV, Division 13 – GB - General Business District, and Article IV, Division 7- Multifamily Suburban District
Date: January 14, 2025



I. PROPOSAL – DiPrete Engineering on behalf of owners A.R. Building Company are applying for a Site Plan approval to 180 units - 56 Residential buildings: 22 duplexes and 34 quadplexes, sidewalks and a paved drive isle off. The parcel is located on Stetson Road, Tax Map 122-004 and within the GB - General Business District. The site is currently vacant (*see above aerial*).

II. ZONING CONSIDERATIONS – The proposed project is located in the General Business Zoning District. Multi Family dwellings are permitted in this district with Planning Board approval. Any development over adding three or more units must be approved by the Planning Board as a Subdivision. The maximum allowed density for Multifamily dwellings is 17-units per acre. 10,000 square feet is required for the first dwelling and 2,000 square feet minimum lot area for each additional dwelling unit. With 29.8 acres, the site would allow for 506 units on the site. All setback requirements for the lot have been met.

Specific standard for principal buildings under Sec. 60-307(3)(d) of the Multifamily Suburban District - more than one principal building may be erected on a lot, provided that the building meets all yard setback requirements and are separated by a distance equivalent to *the height of the higher building or 30 feet*, whichever is greater.

The building height is proposed to be less than 30-feet and the applicant is requesting a waiver from Sec. 60-307(3)(d) of the Multifamily Suburban District zoning standards. If approved the waiver would allow the buildings to be separated by less than the required 30 feet bringing the development into compliance with this section.

III. PARKING & ACCESS MANAGEMENT STANDARDS - The project is proposed to be accessed off Stetson via two private road entrances on two new proposed curb openings. The proposal includes parking for two vehicles per dwelling equaling 360 spaces. 136 Garage spaces and 224 surface spaces.

Article V – Off-Street Parking and Loading:
Applicable standards under Section 60-607
#4: Interior driveways and ingress and egress points serving parking areas shall be at least 20 feet in width to allow safe and expeditious movement of vehicles. Ingress and egress points shall be separated wherever possible and so signed. Ingress and egress points for one-way vehicular movement only, may be reduced to not less than 14-feet for angle parking areas or 12-feet for perpendicular parking areas.

Standard Met ✓

#15: On lots where one entrance and exit driveway or curb-cut is constructed, the curb-cut shall not exceed 32 feet in width. Where two or more driveways or curb-cuts are constructed, the curb cuts shall not exceed 20 feet in width. For automotive service stations, the curb cut widths may be increased to 32 feet for each driveway or access but shall not exceed two driveways. These widths may be increased up to a maximum of 44 feet on arterial roads if required by the city engineering department or the state department of transportation.

- The proposal includes a 24-foot curb, which complies with ordinance requirements solely based on the City Engineer's recommendation due to the specific distance and design considerations for this entrance.

Standard Met ✓

Applicable standards under Section 60-608
The proposed project exceeds the parking requirements for multi-family developments, one parking space per dwelling unit. With 180 dwelling units planned, the ordinance requires a minimum of 180 parking spaces. The project proposes a total of 360 parking spaces, double the required amount, including 136 garage spaces and 224 surface spaces

Standard Met ✓

Article X – Access Management Standards:
Applicable standards under Section 60-799
Sight distance measurements based on the posted speed limit of the road.

Standard Met ✓

Applicable standards under Section 60-800

The proposed development on Stetson Road adheres to the driveway and curb cut spacing standards outlined in Section 60-800 of the Auburn Zoning Ordinance. By ensuring that the two curb cuts meet the required spacing and sight distance standards, the project facilitates safe ingress and egress for vehicles while also creating opportunities for safe pedestrian crossings.
The inclusion of two proposed pedestrian crosswalks at the driveway entrances aligns with the intent of Section 60-800 by integrating pedestrian movement into the site's overall access design. These crosswalks

will connect to the sidewalks on Stetson Road, enhancing pedestrian safety and connectivity between the development and surrounding areas. This design minimizes conflicts between pedestrians and vehicles, supporting the ordinance's emphasis on safe and efficient access management.

Standard Met ✓

The applicant's traffic study indicates that the proposed development will generate **92 trips during the AM peak hour**, **104 trips during the PM peak hour**, and **109 trips during the Saturday peak hour**. Since the anticipated trip generation exceeds **100 peak-hour trips**, the project triggers the requirement for a Maine Department of Transportation (MDOT) Traffic Movement Permit. The applicant is coordinating with MDOT to meet this requirement and will provide the necessary permit documentation upon approval.

WETLANDS/STORMWATER -
The Stetson Road development involves 8,536 square feet of wetland impact and creates 2.28 acres of impervious area. To manage this, the project includes two large gravel wetlands designed to treat and discharge stormwater, adhering to the Maine DEP Chapter 500 Stormwater Management Law. Sediment forebays and infiltration methods are incorporated to enhance water quality, manage runoff, and preserve natural hydrology while minimizing effects on surrounding wetlands.

The City of Auburn has delegated the review of wetlands and stormwater management to state agencies, including the Maine DEP and MDOT, under the Maine Site Location of Development Act (SLODA). This ensures the project meets state standards for environmental protection and infrastructure, while streamlining the permitting process for compliance at both local and state levels.

OTHER PERTINENT ITEMS -

The applicant proposed an alternative to the originally requested sidewalk along the southern side of Stetson Road, suggesting pedestrian crosswalks at the site's driveway entrances to connect to the existing sidewalk on the north side of the road. However, after reviewing this proposal, staff did not support this alternative, as it does not adequately address the city's goals for pedestrian connectivity and safety. Instead, staff recommends that the applicant install sidewalks extending from the westerly entrance of the development to the bridge, covering a total of 948 feet. This adjusted proposal reduces the construction footprint while still maintaining critical pedestrian connections. To ensure this alignment is formalized and properly designed, staff recommends tabling the project to the February 11 meeting, at which time finalized plans reflecting this proposal can be reviewed.

Stetson Road is currently under a moratorium until August 2025, which restricts any new work within the right-of-way during this period.

IV. WAIVER REQUEST-

The applicant is requesting a waiver from the requirements of Sec. 60-307(3)(d) of the Multifamily Suburban District zoning standards, which mandate that multiple principal buildings on a lot must meet all yard setbacks and be separated by a distance equal to the height of the taller building or 30 feet, whichever is greater. This request seeks relief to allow reduced separation between the proposed buildings.

- The proposed design meets the intent of the ordinance by minimizing the development footprint and preserving natural features such as wetlands and wooded areas.
- The reduced separation does not negatively impact public health, safety, or welfare, as the proposed design complies with all applicable fire, building, and safety codes.

- The compact layout reduces environmental disturbances, minimizes impervious surface area, and enhances stormwater management practices.
- The varied building setbacks and heights create a visually engaging streetscape while maintaining sufficient access and circulation for emergency services.

I move to approve the waiver request submitted by DiPrete Engineering on behalf of A.R. Building Company to reduce the building separation distance required under Section 60-307(3)(d) of the Auburn Zoning Ordinance, which mandates a minimum separation of 30 feet or the height of the taller building, whichever is greater, for principal buildings on a lot.

V. DEPARTMENT REVIEW-

a. **Police -** ✓
b. **Auburn Water and Sewer** – The Applicant has worked with Auburn Water & Sewer and proposes to connect to the existing public sewer & lines.
c. **Fire Department/Code Enforcement** – ✓
d. **Engineering** – The applicant is working with engineering regarding external sidewalks
e. **Public Services-** ✓
f. **Airport** – ✓

VI. PLANNING BOARD ACTION- The proposed project requires review and findings for approval of Sections 60-1277, 60- 1336 and 60-771:

A. Site Plan Review, Section 60-1277:

1. Does the site plan protect adjacent areas against detrimental or offensive uses on the site by provision of adequate surface water drainage, buffers against artificial and reflected light, sight, sound, dust and vibration; and preservation of light and air?
2. Is the convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent areas adequately addressed?
3. Are the proposed methods of disposal for wastes adequately addressed?
4. Does the site plan provide adequate protection of environment features on the site and adjacent areas?

B. Special Exception, Section 60-1336. - The board shall require evidence of the following:

1. That the special exception sought fulfills the specific requirements, if any, set forth in the zoning ordinance relative to such exception.
2. That the special exception sought will neither create nor aggravate a traffic hazard, a fire hazard or any other safety hazard.
3. That the special exception sought will not block or hamper the master development plan pattern of highway circulation or of planned major public or semipublic land acquisition.
4. That the exception sought will not alter the essential characteristics of the neighborhood and will not tend to depreciate the value of property adjoining and neighboring the property under application.
5. That reasonable provisions have been made for adequate land space, lot width, lot area, stormwater management in accordance with section 60-1301 (14), green space, driveway layout, road access, off-street parking, landscaping, building separation, sewage disposal, water supply, fire safety, and where applicable, a plan or contract for perpetual maintenance of all the common green space and clustered off-street parking areas to ensure all such areas will be maintained in a satisfactory manner.

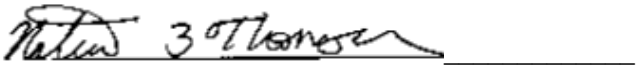
6. That the standards imposed are, in all cases, at least as stringent as those elsewhere imposed by the city building code and by the provisions of this chapter.
7. That essential city services which will be required for the project are presently available or can be made available without disrupting the city's master development plan.

VII. STAFF RECOMMENDATIONS -

Staff recommends tabling the Site Plan for the proposed development on Stetson Road until the February 11, 2025, Planning Board meeting due to the following:

- Additional time is needed to finalize plans for external sidewalks and associated design elements to meet city standards for pedestrian safety and connectivity.
- The traffic study indicates the development will generate 92 AM peak trips, 104 PM peak trips, and 109 Saturday peak trips, triggering the need for a Maine Department of Transportation (MDOT) Traffic Movement Permit. The City has delegated review on this permit under 200 peak trips
- If the waiver request for the 30-foot building separation is not accepted, alternative building designs and layouts must be developed and brought back to the Planning Board for review.
- The applicant must address the nine specific comments outlined in the January 8, 2025, peer review memo, including erosion control measures, gravel wetland details, and consistency between plan documents and modeling

I move to table the Site Plan for the proposed development on Stetson Road until the February 11, 2025, Planning Board meeting. This will allow the applicant to finalize plans for external sidewalks and associated design elements and meet the MDOT Traffic Movement Permit requirement to align the project with city goals for connectivity, safety, and traffic management.



Natalie Thomsen
Planning Coordinator

DiPrete Engineering

December 6, 2024

John Blais
Deputy Director of Planning & Permitting
City of Auburn
60 Court Street
Auburn, ME 04210

RE: Development Review – Stetson Road Multifamily
Auburn, ME
DE Project #: 2625-032

Dear Mr. Blais:

On behalf of A.R. Building Company, we are submitting the enclosed Development Review Application and supporting materials for the proposed multifamily development located at Stetson Road on Parcel ID 294-011. This letter is to accompany the submission materials and give an overview of the project.

Existing Site Conditions

The site is located on Parcel ID 294-011 and southwest of the intersection of Stetson Road and North Road. The surrounding area consists of various scale commercial and residential uses, with the Schooner Estates located north, Auburn Plaza west and the Androscoggin River to the east. The site is currently in the GB (General Business) zoning district.

The site is currently vacant with wood and meadow cover and wetlands along the east of the property. Stream fragments have been located on and surrounding the site along the eastern edge and southeastern corner of the property. No vernal pools are present onsite. The site grades range from elevation 303 to about 206 at the southeastern corner of the property, causing steep slopes throughout the site. There is a ridge in the center of the site splitting the site runoff into four catchment areas and predominantly east and west towards Stetson Road and an offsite channel along North Road. Soil evaluations were performed on site where restrictive soil layers and ledge were encountered.

Proposed Development

The proposed project consists of 57 residential buildings: 22 duplexes and 34 quadplexes, totaling 180 residential units. Each unit will have its own driveway for parking spaces. The quadplexes units will also include garages in addition to the driveway parking. Access to the development will be provided via two driveway connections along Stetson Road. Two interior roads are proposed onsite to service the development and will include drainage and utilities.

Vehicular access to the site is provided from Stetson Road. The proposed development is anticipated to generate peak hourly flows of 92 trips in the AM, 104 trips in the PM, and 109 trips for the Saturday hour. As the anticipated trip generation exceeds one hundred (100) peak-hour trips, the project will require a Maine Department of Transportation (MDOT) Traffic Movement Permit. The Applicant is currently coordinating with MDOT and a copy of all MDOT application and permit materials prepared by

the Traffic Engineer, Sebago Technics, Inc. will be provided to the City under separate cover once available.

An 8" water main connecting two points along Stetson Road is proposed to service the development. Two sewer networks consisting of a gravity sewer and pump station are proposed to service the site by two connections on to the Stetson Road sewer network. The development is proposed to be served by public water and sewer, provided by the Auburn Water & Sewer Department.

The site grades range from elevation 303 to about 206 at the southeastern corner of the property, causing steep slopes throughout the site. Due to grading and earthwork constraints, a combination of stepped foundations, units with no basement and walkout basements are proposed.

The post development stormwater will be treated for water quality using Best Management Practices (BMPs). The Site has been designed to meet the Maine Department of Environmental Protection Chapter 500 Stormwater Management Law (MESML) and the Maine Stormwater Best Practices Manual.

To mitigate post development flows on site, an infiltration pond with a sediment forebay and a gravel wetland is being proposed. Both stormwater systems have been designed for water quality and control runoff for the 2 through 25-year storm events. Uncontrolled runoff from the east embankment and steep slopes to tie into existing grade, result in an insignificant increase to stormwater flow in the 2-year storm. See Stormwater Management Report enclosed for further information.

If you have any further questions on this matter, please feel free to contact me at your earliest convenience.

Sincerely,
DiPrete Engineering Associates, Inc.

Pamela Aybar

Pamela Aybar
Project Manager
paybar@diprete-eng.com

DiPrete Engineering

January 6, 2025

John Blais
Deputy Director
Planning, Permitting & Code Department
City of Auburn
60 Court Street
Auburn, ME 04210

RE: Stetson Road Multifamily
Auburn, ME
DE Project #: 2625-032

Dear Mr. Blais:

This letter is to request a waiver from Sec. 60-307 of the Auburn Maine Code of Ordinances (Ordinance) specifically related to the dimensional regulations for building separation which states:

> *More than one principal building may be erected on a lot, provided that the buildings meet all yard setback requirements and are separated by a distance equivalent to the height of the higher building or 30 feet, whichever is greater.*

Under the current proposal, the required building separation would be 30 feet since no buildings are more than 30 feet in height as defined by the Ordinance.

The current proposal of 180 rental units contains two types of buildings; one story duplex units (approximately 10' in height) and three story 4-unit townhouses (approximately 27' in height). The proposed density is approximately 6 units per acre where the Ordinance allows for 17 units per acre.

In the current proposal, building separations vary across different sections of the project. At certain corners, the separation between buildings ranges from 15 to 20 feet, while others meet the required 30 feet. For building faces that are parallel, the design aims to maintain a minimum of 20 feet of separation. In areas where buildings are situated along curves, smaller separations are proposed at the interior of the curve, while larger separations (exceeding the 30-foot requirement) are planned for the exterior of the curve. Overall, this approach results in an "average separation" of 30 feet along curved roadway sections. Approximately 25% of the building separations in the plan meet the 30-foot requirement.



Image showing representative building spacing in western portion of the project

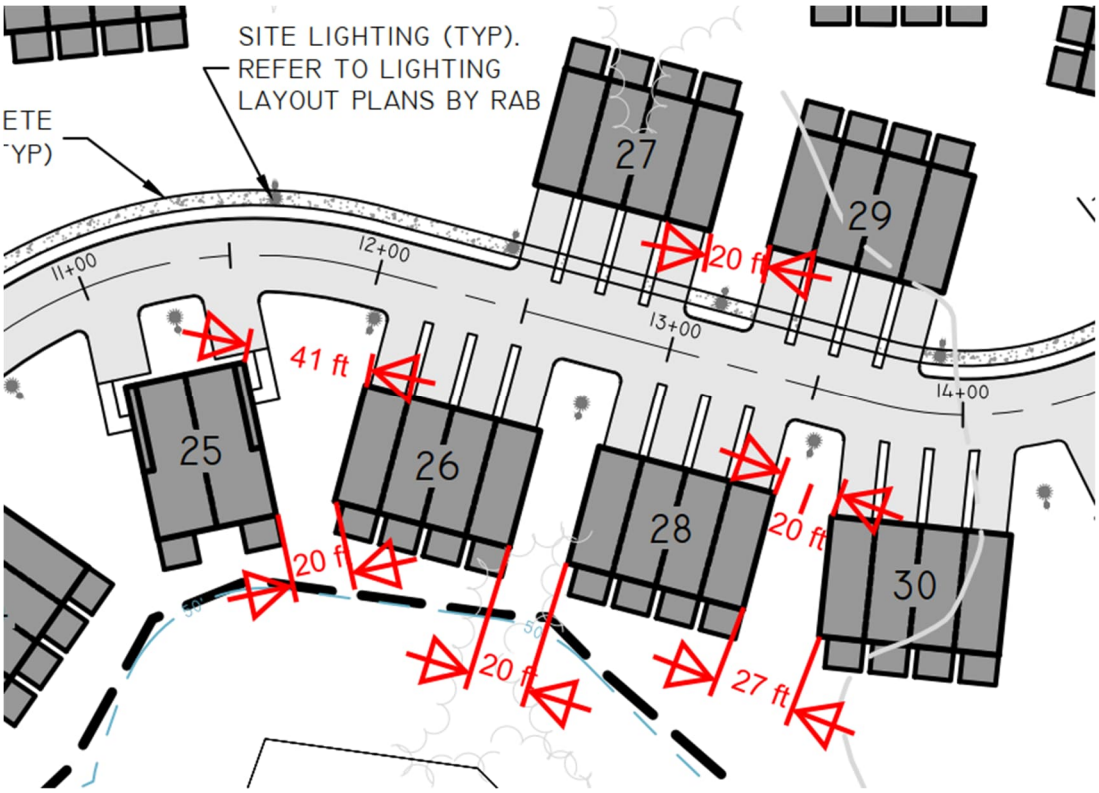


Image showing representative building spacing in eastern portion of the project

These areas of the development also demonstrate the intention to diversify the streetscape by incorporating a mix of one- and three-story buildings. The building faces are positioned at least 30 feet from the edge of the roadway to help break up the massing and create a more dynamic visual experience. As visitors move along the roadway, they will encounter a variety of building types, heights, and facades, contributing to an engaging and varied streetscape.

The current proposal is designed to align with the site's topography, aiming to minimize disturbance while achieving a financially viable number of units. The site features a flatter central area, with elevations dropping off to the west and east. As a result, the design focuses on concentrating development in the flatter, interior section to reduce earthwork and elevation changes. This approach also creates greater separation between the buildings and helps protect the wetlands on the property. In this proposal, we opted to reduce the building separation to minimize the overall development footprint, which in turn limits tree clearing and the amount of impervious surface needed for the 180 units.

As part of the site planning process and in collaboration with City staff during the review of the current application, several design alternatives have been explored to better meet the 30-foot building separation requirement, either fully or to a greater extent. While it is possible to modify the site layout to maintain the same unit count and mix while adhering to the 30-foot separation standard, doing so would result in a larger development footprint, more extensive earthwork, and increased impervious surface coverage, all of which would have a greater impact on both the site and surrounding properties. Additionally, we considered replacing some of the 2- and 4-unit buildings with six-unit townhouse buildings. This change would allow us to meet the 30-foot separation requirement in approximately 80% of the locations. However, we believe that replacing shorter 2- and 4-unit buildings with 32-foot-long, two-story six-unit buildings would lead to a more intense massing along the streetscape. For these reasons, we have determined that the current development proposal remains the preferred alternative.

In order to grant a waiver from this requirement of the Ordinance, the Planning Board must find:

> *due to special circumstances of a particular plan, provisions of certain required improvements are not requisite in the interest of public health, safety and welfare or are inappropriate because of inadequacy of lack of connecting facilities adjacent or in proximity to the proposed subdivision, it may waive such requirements, subject to appropriate conditions.*

In conclusion, we believe the unique conditions of the site—specifically its elevation changes and the presence of wetlands—make granting this waiver both appropriate and in the best interest of the community. This waiver would not negatively impact public health, safety, or welfare for the following reasons:

- The proposed project is more compact and efficient than what could be achieved under the allowed density, resulting in a less intense development.
- A variety of building types, street plantings, and adequate setbacks to the roadway will create a dynamic streetscape, which will primarily be visible from within the development itself.
- The building separation complies with all applicable building and fire codes, and the Fire Department has reviewed and approved the internal circulation and emergency access.

DiPrete Engineering

- The reduced earthwork and development footprint will minimize disturbances to neighboring properties while providing a greater buffer.
- The stormwater design fully complies with regulations for infiltration, water quality, and runoff control.

We believe the approach outlined above serves the best interests of both the community and the project, and we appreciate your consideration of this request. If you have any further questions on this matter, please feel free to contact me at your earliest convenience and we will be happy to discuss this matter at the January 14th meeting.

Sincerely,
DiPrete Engineering Associates, Inc.



Brandon Carr, PE, LEED AP
Principal
bcarr@diprete-eng.com

DiPrete Engineering

January 6, 2025

John Blais
Deputy Director
Planning, Permitting & Code Department
City of Auburn
60 Court Street
Auburn, ME 04210

RE: Stetson Road Multifamily
Auburn, ME
DE Project #: 2625-032

Dear Mr. Blais:

DiPrete Engineering has received your comments dated December 16, 2024. DiPrete Engineering has also received the Auburn Sewer and Water District comments dated December 18, 2024. We have reviewed these comments and offer the following in response. The original comments are provided in italics with responses in bold.

City of Auburn Comments:

1. *Sidewalk Extension: 879 feet of sidewalk along Stetson Road connecting to the existing sidewalk on the south side, linking the lot back to Center Street.*

   The applicant is requesting the city to consider an alternate pedestrian route consisting of two proposed pedestrian crosswalk connections to be located in the two driveway entrances of the site and connect to the pedestrian sidewalk on the north side of Stetson Road. See attached letter to Kris Bennett for further information.

2. *Internal Sidewalks: A detailed plan and construction detail for sidewalks within the development, with a minimum width of 5 feet.*

   An internal loop of 5' wide sidewalk has been added to the site (see plan sheet 6). A sidewalk detail has been added to Sheet 17.

3. *Utility Easements: Information regarding utilities, specifically detailing the easements required for each property. Easements should include the area from the watermain main to the curb stop, and additional details should address the comments provided by the Auburn Sewer and Water District*

   An easement for the public water service has been added to the plans (see plan sheets 11-13). Additional comments from Auburn Sewer and Water District are addressed below.

4. *Updated Digital Copy of the Whole Packet: Please provide an updated digital copy of the entire application packet for review.*

An updated digital copy of the whole packet has been sent to John Blais.

Auburn Sewer and Water District Comments:

1. *For the majority of the development the water mains are located within the shoulder of the Roads, this places the mains in direct conflict with curbing, driveways, etc. The District would prefer the water mains be located within the public road way, with 10' of horizontal separation from the sewer mains.*

   The utilities layout has been adjusted to move the watermain into the roadway. In areas where 10' of horizontal could not be provided between the water and sewer, vertical separation is provided.

2. *The plans do not show easements for the water and sewer mains. Because these roads will be privately owned and maintained the District requires permanent easements for both water and sewer. There is no standard detail for service boxes, main gates and or hydrants.*

   The site is proposed to have private sewer service and public water service. An easement has been added to the plans for the public water service (see plan sheets 11-13). A standard hydrant detail and a service installation detail have been added to plan sheet 17.

3. *All infrastructure must meet the District's material specifications. The Contractor will be required to provide material submittals prior to installation, provide as-builds for all mains and services and complete required acceptance testing prior to activation of the mains. This includes video inspection of all sewer mains, pressure testing and disinfection consistent with AWWA standards of all water mains prior to activation.*

   Acknowledged. A note has been to the Notes & Legend – See note #17 under "Grading and Utility Notes" on plan sheet 3.

4. *Water and sewer services are not shown on the plans. Is the intention to have these units individually metered? If so, they will need individual water and sewer services for all units. Service/Curb stops located on the property line will be required also.*

   It is the intention for the site to have a private sewer service and a public water service. Each unit will have an individual water meter and account with the district. The plan set has been updated to reflect this intent.

5. *There should be adequate isolation gates throughout the development, valves are currently shown at intersections only. If there are any sections greater than 500' without a valve, one should be included.*

   Additional gate valves have been added along the water main to ensure there are no sections greater than 500' without a gate valve.

6. *Is the intention for the E-one Pumping Station to be publicly owned and maintained? The plans do not show how gravity sewers from units 40-31 will connect to sewer.*

   It is the intention for the E-one Pumping Station to be privately owned and maintained. The plans have been revised to show the gravity sewer for units 31-40.

7. *The sewer pumping station, if intended to be public will need to be built to District Standards. This will require a detailed submission of plans for the station for District review and approval along with Depreciation Deposit for taking on ownership and perpetual O&M of the station.*

   It is the intention for the sewer pumping station to be privately owned and maintained.

Please, feel free to contact me if you have any further questions regarding this matter.

Sincerely,
DiPrete Engineering Associates, Inc.

Jenna Fannon

Jenna Fannon
Project Engineer
jfannon@diprete-eng.com

cc: Michael Broadbent – Auburn Water & Sewer District, Kris Bennett – City Engineer, Emily Mitchell – AR Building

Enclosure: Site Development Review Resubmission Package dated 1/6/2024 – See attached Transmittal Letter

DiPrete Engineering

January 6, 2025

Kris Bennett
City Engineer
City of Auburn
60 Court Street
Auburn, ME 04210

RE: Development Review – Stetson Road Multifamily
Auburn, ME
DE Project #: 2625-032

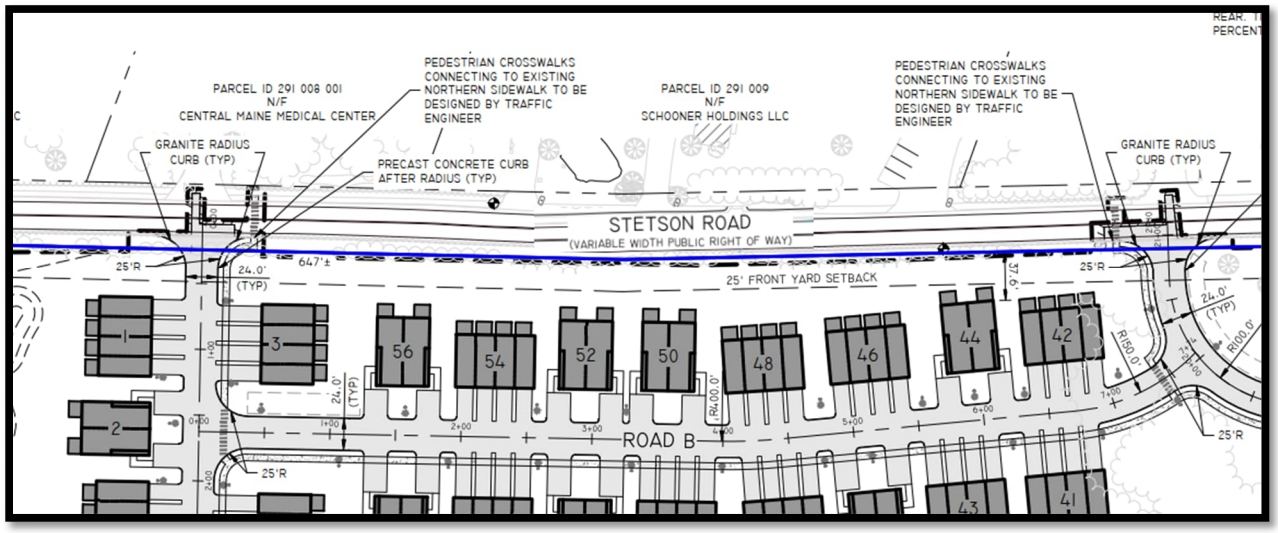
Dear Mr. Bennett:

On behalf of A.R. Building Company, we are submitting this letter to accompany the enclosed Development Review Application response to comments package for the proposed multifamily development located at Stetson Road, Parcel ID 294-011. The purpose of this letter is to formally request that the city consider an alternative solution to the Sidewalk Extension Request discussed at the City's Plan Review Committee meeting held on December 12, 2024.

The city has requested the extension of a sidewalk of approximately 900 linear feet along Stetson Road, connecting the existing sidewalk on the south side and linking the subject lot to Center Street. However, multiple structures along the southern side of Stetson Road and adjacent properties, including mailboxes, hydrants, utility poles, lighting fixtures, etc., may impact the construction of a sidewalk in this location.



For this reason, the applicant respectfully requests that the city consider an alternative connection to Center Street by proposing two pedestrian crosswalks at the site's driveway entrances, connecting to the existing pedestrian sidewalk on the north side of Stetson Road. These crosswalks will be designed to meet all applicable requirements and be designed, permitted and installed by the Applicant.



If you have any further questions on this matter, please feel free to contact me at your earliest convenience.

Sincerely,
DiPrete Engineering Associates, Inc.

Pamela Aybar
Project Manager
paybar@diprete-eng.com

AMENDMENT TO AGREEMENT OF SALE AND PURCHASE OF LAND

This Amendment to Agreement of Sale and Purchase of Land ("Amendment") is made and entered into this _____ day of _____, 2024, by and between Concord General Mutual Insurance Company, a New Hampshire corporation ("Seller"), and A.R. Building Company, Inc. ("Buyer").

WITNESSETH THAT:

WHEREAS, Buyer and Seller entered into an Agreement of Sale and Purchase of Land ("Agreement of Sale") effective the 6th day of May, 2024 for approximately 29.85 acres of land located in the City of Auburn, State of Maine; and,

WHEREAS, Seller and Buyer have agreed to amend the Agreement of Sale as hereinafter set forth.

NOW, THEREFORE, in consideration o[redacted]nd other good and valuable consideration and intending to be legally bound hereby, Seller and Buyer hereby amend the Agreement of Sale as follows:

1. Paragraph 13.A.1. of the Agreement of Sale is hereby deleted in its entirety and replaced with the following:

"1. **Buyer's Inspection and Permitting Rights:** Buyer shall have a period of five (5) months from July 30, 2024, the date it received notice of the recording of the subdivision referred to in Paragraph 13.D.1 to determine if any impediment exists with regard to the following subparagraphs 13.A.1.a, b, and d. ("Due Diligence Period") and twelve (12) months from July 30, 2024, the date it received notice of the recording of the subdivision referred to in Paragraph 13.D.1 to determine if any impediment exists with regard to the following subparagraphs 13.A.1.c and e. ("Extended Due Diligence Period"):"

2. Paragraph 6 of the Agreement of Sale is hereby deleted in its entirety and replaced with the following:

6. **Survey.** Within five (5) days after the receipt of the Title Commitment, Buyer, at its expense, will request that a survey of the Property be prepared by a registered land surveyor of Buyer's choosing and shall provide Seller with a copy of the survey within five (5) business days of Buyer's receipt thereof, but in any event within forty-five (45) days after July 30, 2024, the date Buyer received notice of the recording of the Subdivision referred to in Paragraph 13.D.1. The legal description from the Survey shall be used by Seller in Seller's deed, provided such legal

description is acceptable to Seller in Seller's reasonable discretion. Said survey shall be certified to Buyer, Seller and the Title Insurance Company.

3. The first two (2) sentences of Paragraph 7 of the Agreement of Sale are hereby amended and shall read as follows:

7. **Title Insurance.** Within ten (10) days after July 30, 2024, the date Buyer received notice of the recording of the Subdivision referred to in Paragraph 13.D.1, Buyer, at its expense, shall request a commitment for an owner's title insurance policy ("Title Commitment") from a title insurance company acceptable to Buyer (the "Title Insurance Company") on terms and conditions acceptable to Buyer, and shall provide Seller with a copy of said Title Commitment and all recorded exceptions from title disclosed therein within five (5) business days of Buyer's receipt thereof, but in no event later than thirty (30) days after July 30, 2024, the date Buyer received notice of the recording of the Subdivision referred to in Paragraph 13.D.1. Within ten (10) days after receipt of both the Title Commitment and the Survey, but in no event later than sixty (60) days after July 30, 2024, the date Buyer received notice of the recording of the Subdivision referred to in Paragraph 13.D.1, Buyer shall notify Seller of any exception in the Title Commitment or any matter disclosed in the Survey that makes the Premises unsuitable for Buyer's purposes ("Title Objections").

Except as amended hereby, the Agreement of Sale shall remain in full force and effect and is hereby ratified and confirmed by Seller and Buyer.

SIGNATURES ON FOLLOWING PAGE

BUYER:

A. R. BUILDING COMPANY, INC.

DATE: 8-7-24

BY _____
Daniel J. Mancosh
President Duly Authorized

SELLER:

CONCORD GENERAL MUTUAL INSURANCE COMPANY

DATE 8-9-24

By _____
Daniel L. McCabe, President & CEO

DiPrete Engineering

Letter of Transmittal

To:	City of Auburn Planning & Permitting Dept. John Blais, Director of Planning & Permitting 60 Court Street Auburn, ME 04210

Date:	1/6/2025
Job No:	2625-032-A01
Re:	Site Development Review- RETC Ref # 24-0893

Number of Copies:	Description:
2	24"x 36" Revised Site Development Plans (dated 1-04-2025)
11	11"x 17" Revised Site Development Plans (dated 1-04-2025)
13	Stormwater Management Report (dated 12-06-2024)
13	Stormwater System Operation & Maintenance Plan (dated 12-06-2024)
13	Cover Letter / Narrative (dated 12-06-2024)
13	Amendment to Agreement of Sale and Purchase of Land
2	24"x 36" Architectural Plans & Elevations by Rothchild Doyno (dated 12-04-2024)
13	11"x 17" Architectural Plans & Elevations by Rothchild Doyno (dated 12-04-2024)
2	24"x 36" Lighting Layout Version A Plans by RAB (dated 12-03-2024)
13	11"x 17" Lighting Layout Version A Plans by RAB (dated 12-03-2024)
13	Vernal Pool Assessment letter by Mark Hampton Associates (dated 01-16-2023)
13	Response to Comments Letter (dated 1-06-2025)
13	Stetson Road Sidewalk Letter to Kris Bennett (dated 1-06-2025)
13	Building Separation Waiver Request (dated 1-06-2025)

Remarks:

Please find attached the Site Development Review package (with revised response to comments documents) for the Stetson Road Project located in Auburn, ME. Feel free to contact our office with any questions or concerns.

Thank you,

From:
Jenna Fannon
Project Engineer
jfannon@diprete-eng.com

Copy:

MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

7337

January 16, 2023

Mr. Kerry Anderson
200 Graham Street LLC
P. O. Box 6799
Scarborough, ME 04070

Re: Vernal pool assessment, 30+ acre parcel, Stetson Road Auburn, ME

Dear Kerry,

I have completed a vernal pool assessment on the 30+ acre parcel located on Stetson Road Auburn, ME. The vernal pool assessment was conducted in accordance with Chapter 335 Significant Wildlife Habitat, Section 9 Significant Vernal Pools for the Maine Department of Environmental Protection. This section outlines the definition of a vernal pool as well as the requirements of a vernal pool to meet the definition of significance as related to the number of amphibian egg masses counted during the breeding season.

While I reviewed the site outside of the breeding season, evaluating all the wetlands on the property, there were no wetlands which would hold water to the depths needed to provide breeding habitat. Consequently, base on my experience, it is my professional opinion that there are no vernal pools on the on the property.

If you have any questions or require additional information, please contact me.

Sincerely,

Mark J. Hampton C.S.S., L.S.E.
Certified Soil Scientist #216
Licensed Site Evaluator #263

P.O. BOX 1931 • PORTLAND, ME 04104-1931 • 207-756-2900 • mhampto1@maine.rr.com

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T 207.774.2112
F 207.774.6635

MEMORANDUM



TO: Kristopher Bennett, PE, City Engineer

FROM: Lauren Swett, PE & Jackson Libby

DATE: January 8, 2025

RE: Peer Review of Stetson Road Multi Family Development
Auburn, ME

On behalf of the City of Auburn, Woodard & Curran has completed an engineering peer review of the Stormwater Management Plan for the proposed Multi Family Development on Stetson Road in Auburn, Maine. Our review focused on City and State regulations and general engineering design related to stormwater management. The following is a memo of our comments based on the documents received. It should be noted that further comments may be provided upon review of additional information.

Documents Reviewed

- Project Plan Set, prepared by DiPrete Engineering, dated December 6, 2024.
- Stormwater Management Report, prepared by DiPrete Engineering, dated December 6, 2024.
- Stormwater System Operation & Maintenance Plan, prepared by DiPrete Engineering, dated December 6, 2024.

Comments

1. We have the following comments on erosion control. It is noted that a written erosion control plan may have been submitted that could address these items, but we did not have that document to review.
    - Double rows of erosion control are required for work in proximity to wetland and natural resource areas. While the resource area will primarily remain outside of the project limit of work, it is recommended that a double row of sediment barrier be called out for the eastern portions of the limit of work that are in proximity to the flagged wetlands. The stream channel does extend into the limit of work, and while the project will ultimately impact this area, interim erosion control may be needed to ensure no impact on downstream resources during construction.
    - Specific areas for a "slope interruption" method of slope protection are called out on the plans. The detail for this system includes rolled erosion control blanket. It is noted that there are other areas on the site with steep slopes that may need this erosion control blanket as well, but not the full slope interruption system.
2. In the stormwater management report, the applicant references that one of the design points has an increase in post development peak flow. The applicant notes that this increase in peak flow, which only occurs in the 2-year storm, is 'insignificant'. Based on the information provided, this increase is considered minor, and the intent of the Maine DEP Chapter 500 Flooding Standard is being met.
    - The design point in question for this minor increase is an existing 18-inch culvert that will not be replaced as part of the project. The culvert has been included as

part of the HydroCAD model for the project. The applicant should provide information on the current condition of the culvert to ensure that is able to provide for the full capacity in its existing condition. The application notes that the culvert is located off-site, but if possible, the applicant should consider including the culvert in the site's stormwater O&M plan for at least a visual observation to ensure that it continues to provide for adequate conveyance from the site.

3. There are a few minor comments on the gravel wetland design.
    - On the design plans provided, for the stormwater gravel wetland detail plan on sheet 15, it is recommended that more detail be noted on locations of proposed cleanouts and risers on the underdrain piping within the gravel wetland. It may just be an issue with the line type used for the plan, but it is not clear on the plan view where these cleanouts are located.
    - The gravel wetland detail includes notes for the use of 6-inch diameter underdrain, while the details call for 8-inch pipes. The desired pipe size should be clarified.
    - It is recommended that the extent of the impermeable liner be shown on the plan view for the gravel wetland. The detail shows the liner beneath the forebay, and the spillway, and including the liner on the plan view will clarify the full extent and identify all pipe, structure, and other system feature elements that will need to cross the liner.
    - The plan view and detail call for a "top of berm elevation" of 260, however the plan view shows that the center top of berm contour is 257. The applicant should clarify to avoid confusion as this may just be a difference in what is being referred to as the "top of berm".
    - In the HydroCAD model for Cell 1 of the gravel wetland, the spillway was modeled as a sharp-crested weir. It is recommended that a broad-crested weir is more appropriate for the model considering the proposed shape of the weir.
    - In the HydroCAD model for Cell 2 of the gravel wetland, the outlet piping is modeled as 24-inch pipe. The plans call for 12-inch pipe. In addition, the invert called out for Device #1 for the secondary routing does not appear to correspond to any inverts on the plan. It is recommended that the HydroCAD model for the gravel wetland be cross-checked with the final plan to ensure consistency.

DiPrete Engineering

Project # 2625-032

December 6, 2024

Stormwater Management Report

Stetson Rd. Auburn, ME

Parcel ID 291-011

Applicant:

A.R. Building Company, Inc.
310 Seven Fields Boulevard, Suite 350
Seven Fields, PA 16046





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Executive Summary

On behalf of the Client, we are submitting drainage calculations for the proposed development on Stetson Road. The site is located on Parcel ID 291-011. The site exists today as almost entirely woods with areas of tall meadow. The client proposes to construct 57 residential buildings consisting of 22 duplexes and 34 quadplexes, totaling 180 residential units. The development will include roadways, drainage and utilities.

The post development stormwater will be treated for water quality using Best Management Practices (BMPs). The Site has been designed to meet the Maine Department of Environmental Protection Chapter 500 Stormwater Management Law (MESML) and the Maine Stormwater Best Practices Manual. There are several streams and stream fragments on and surrounding the property along with four wetland areas located along the Eastern and Southeastern edges of the property. There are no vernal pools located onsite. The site grades range from elevation 303 at the center of the site to about 206 at the southeastern corner of the property. Soil evaluations were performed on site where restrictive soil layers and ledge were encountered.

To mitigate post development flows on site, an infiltration pond with a sediment forebay is used to convey runoff for the western half of the site to the design point. A gravel wetland is designed to convey runoff for the eastern half of the site to the design point. Both stormwater systems were designed to control runoff for the 2 through 25-year storm events to the maximum extent practicable.

This report details how the proposed BMPs will provide water quality treatment for stormwater runoff and control stormwater runoff to the maximum extent practicable.

Design Points 1 and 2 present an overall reduction of peak runoff while design point 3 present a minor increase in the 2-year storm. The insignificant increase is predominantly due to the flows generated by uncontrolled runoff from the east embankment and steep slopes to tie into existing grade, this resulting in reduced ability to recharge and infiltrate the sites stormwater.

Pre development Conditions versus Post Development Conditions for each watershed are summarized below:

Subwatershed (design point)	2-yr Peak Flow		10-yr Peak Flow		25-yr Peak Flow	
	Pre	Post	Pre	Post	Pre	Post
DP-1:	2.53	1.07	6.05	5.75	9.49	8.32
DP-2:	2.76	0.69	6.21	1.59	9.51	2.46
DP-3:	5.84	5.85	15.06	13.11	24.36	20.19
DP-4:	3.57	0.45	10.05	0.65	16.64	0.77
DP-5:	0.39	0	0.79	0	1.17	0
Totals:	15.09	11.11	38.16	29.24	61.17	44.88

All flows in cubic feet per second (cfs)

1.0 Project Description

The purpose of this report is to specify a Stormwater Management System to be implemented in the new Project on Stetson Road.

The site is located on Parcel ID 219-011 consisting of 29.81 acres. The development will produce a limit of disturbance of approximately 18.51 acres. The site is located on the southern site of Stetson Road where it intersects with North River Road. The abutting properties include a YMCA Outdoor Education Center to the East, residential and medical centers located on the north side of Stetson Road, and a private residence by the Southeast corner. The site exists today as almost entirely woods with areas of tall meadow. There are several streams and stream fragments on and surrounding the property along with four wetland areas located along the eastern and southeastern edges of the property. The client proposes to construct 57 townhouse buildings consisting of 22 duplexes and 34 quadplexes, totaling 180 residential units. The site will be serviced by public water and sewer. Water and sewer are provided by Auburn Water & Sewer Department.

The stormwater quality will be improved by utilizing Best Management Practices (BMPs) as established by the MESML for the treatment of stormwater runoff from the proposed development. BMPs will consist of an infiltration pond with a sediment forebay along with a gravel wetland. The site has been designed to meet the Maine Stormwater Management Law.

2.0 Site Conditions

2.1 SOILS

There are the following soil types within the analyzed area of the Site as mapped by the NRCS USDA Soil Conservation service:

Soil Symbol	Description	Hydrologic Group
BgB	Nicholville very fine sandy loam, 0 to 8 percent slopes	C
BgC	Agawam fine sandy loam, 3 to 8 percent slopes	C
BuC2	Buxton silt loam, 8 to 15 percent slopes	C/D
HfB	Hartland very fine sandy loam, 2 to 8 percent slopes	B
HfC2	Hartland very fine sandy loam, 8 to 15 percent slopes, eroded	B
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	D
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	D

The onsite soils are listed above with Hydrologic Group of B, C and D.
Site specific soil evaluations can be found in Appendix A2.1.

2.2 EXISTING SITE CONDITIONS

Currently the site is predominately wooded with areas of tall meadow. Four wetland areas and several streams and stream fragments have been located on and surrounding the site along the eastern edge and southeastern corner of the property.

There is a ridge between two highpoints in the center of the site that splits the stormwater flow east and west. Stormwater from the western half of the site flows west uncontrolled to Design Points 1 (DP-1: Stetson Road) and Design Point 2 (DP-2: Western Neighbor). There is an existing drainage network in Stetson Road that splits directions at the high point to flow both west and east. The eastern portion of Stetson Road discharges to an existing stream offsite along the west side of North River Road. The stream flows South along North River Road to an existing 18" culvert located offsite near the southeastern corner of the property. The 18" existing culvert outlets to another existing swale on the eastern side of North River Road. Stormwater from the eastern half of the site flows east uncontrolled to Design Point 3 (DP-3: North River Road Culvert) and south uncontrolled to Design Point 4 (DP-4: Southern Property Wetland Edge). A small area near the center of the site flows south offsite to Design Point 5 (DP-5: Southern Neighbor).

None of the stormwater on site is treated or detained before being discharged to the onsite wetlands and the abutting properties.

2.3 POST SITE CONDITIONS

The proposed drainage analysis uses stormwater management systems to control and treat runoff from the proposed development. The following BMPs are used on site and have been designed to include the following elements:

- Sediment Forebays
  - Pretreatment of impervious areas
  - 3.0' forebay depth with proposed 2:1 reinforced slope or 3:1 grassed slopes.
  - Sandy-loam or other slower infiltrating soil to be placed under the sediment forebays to inhibit infiltration within sediment forebay in areas with high in situ infiltration rates.
- Gravel Wetland
  - Water Quality
  - Flooding
- Infiltration Basin
  - Fully infiltrates the water quality stormwater event
  - Designed to store and control outflow and rates for larger storms

The above elements will used to meet the design standards of the Maine Stormwater Best Practices Manual.

The primary goal of increasing water quality treatment is accomplished by providing water quality BMPs. Stormwater runoff mitigation is provided to the maximum extent practicable through the use of an infiltration basin and a gravel wetland.

There is an insignificant increase of peak runoff presented on the 2-year storm event for Design point 3. The minor increase is predominantly due to a combination of existing soils with limiting infiltrating capacities, the flows generated by uncontrolled runoff from the east embankment, steep existing slopes and required grading tying into existing. The existing and proposed grading results in the reduced ability to recharge runoff and infiltrate the sites stormwater for design point 3.

The proposed Gravel Wetland captures and treats the runoff from approximately half of the post development site and splits the discharge between southeast toward Design Point 3 (DP-3) and southwest towards Design Point 4 (DP-4). The existing 18" drainage culvert (DP-3) offsite will remain in place.

The BMPs were sized to improve and reduce the existing stormwater runoff peak flows at the designated Design Point. By reducing post development stormwater flow rate to a level no greater than the predevelopment rate, the second goal of the proposed drainage system is achieved. Any potential impacts from the proposed development on the Design Points have been mitigated.

3.0 Stormwater Standards

The site has been designed to meet the standards as outlined in Chapter 500 of the Maine Stormwater Law. The following sections outline how the site meets and exceeds the standards.

3.1 Basic Standards

3.1.1 Erosion and Sediment Control

A Soil Erosion and Sediment Control Plan for this development can be found under a separate document. See latest development Plans prepared by DiPrete Engineering. The plans contains information for construction pollution prevention.

3.1.2 Inspection and Maintenance

A separate Operation and Maintenance (O&M) has been prepared for this development, see separate document.

3.1.3 Housekeeping

See latest development Plans prepared by DiPrete Engineering which includes housekeeping notes.

3.1.4 Adverse Effects

The site has been designed so that grading and construction activities will not impede or alter drainageways or have unreasonable adverse impacts on wetlands, waterbodies and adjacent parcels. See Section 3.5 of this report for the Hydrology Analysis.

3.2 General Standards

3.2.1 Treatment Requirements

According to Chapter 500 of the Maine Stormwater Law, a project is required to meet the Maine DEP General Standards if it creates more than one acre of impervious area. The General Standards requirements are in addition to the Basic Standards. The General Standards require the submission of report narrative, drainage plans, drainage / BMP design calculations, BMP details, maintenance contract, and phosphorus export calculations (if applicable) per Maine DEP standards.

This project will create more than one area of impervious area and is required to meet the General Standards. This report is intended to provide a project narrative and present the associated drainage calculations, drainage plans, and BMP details as required. A Maintenance Contract will be established per the separate O&M report and in coordination with DEP guidance.

3.2.1.a Treatment Level

Per the General Standards requirements, the site is required to provide treatment of no less than 95% of the impervious area and no less than 80% of the developed area.

Total new impervious area = 7.17 ac
Untreated impervious = 0.02 ac (0.3%)
Treated impervious = 7.15 ac (99.7%)

Total new developed area = 18.39 ac
80% of developed area = 14.71 ac
Treated developed = 14.86 ac (80.8%)

- Area treated by the infiltration pond = 8.28 ac
- Area treated by the gravel wetland = 6.57 ac

The proposed site provides treatment for 99.7% of the impervious area and 80.8% of the developed area. This standard is met.

3.2.1.b Upgradient Runoff

Offsite areas have been directed away from the site stormwater management BMPs.

3.2.1.c Mitigation

No offsite mitigation is proposed as part of this development.

3.2.1.d Redevelopment Project

The site is not considered a redevelopment project.

3.2.2 Types of Treatment Measures Allowed

All stormwater is treated through an approved BMP before being discharged. The site uses a gravel wetland stormwater treatment system and an Infiltration Pond treatment system, both designed to treat the water quality volume.

Gravel Wetland Treatment System:

The subsurface gravel wetland is designed as a system with two horizontal flow-through treatment cells and a forebay in series and where stormwater passes through a saturated gravel substrate that acts as a natural microbial habitat capable of denitrification. From a process perspective, the forebay is maintained as a dry basin and provides pre-treatment under aerobic conditions, the basins of the wetland cells provide sedimentation and some quality treatment from the wetland plants. A multiple-staged outlet controls the channel protection volume as well as the volume from larger storms. The soil in the cells should remain continuously saturated 4 inches below the ground surface to promote water quality treatment conditions and to support wetland vegetation. The created wetland must contain the full water quality volume from one inch of runoff over the impervious area within the subarea and 0.4 inch over the vegetated or landscaped area. The target detention time for the treatment volume should be between 24 to 48 hours. The two wetland cells must be capable of holding 45% of the water quality volume each and may provide flood storage if necessary.

Infiltration Pond Treatment System:

The infiltration pond and sediment forebay working in series with a stoned spreader/curb weir is proposed where the forebay provides pre-treatment under aerobic conditions. The infiltration pond controls stormwater quantity and quality by retaining runoff on-site and discharging it into the ground through absorption, straining, microbial decomposition and trapping of particulate matter. Infiltration pond contains and infiltrates the water quality volume from one inch of runoff over the impervious area within the subarea and 0.4 inch over the vegetated or landscaped area. Additional capacity necessary to control the peak discharge from storms exceeding the infiltration design rate and water quality volume, is provided above the outlet control structure. The system has been designed to maintain at least 3' above the seasonal high groundwater table and 5' from bedrock.

Emergency spillways should independently convey the runoff from the 25-year, 24-hour storm while maintaining at least one foot of freeboard between the peak storage elevation and the top of the embankment crest; and should safely convey the 100-year storm without overtopping the embankment.

BMP design calculations can be found in Appendix A3.1.

3.2.3 Low Impact Development Credit

The site does not propose to use any LID credits, however the site is designed to minimize the land disturbance and protect wetlands and water courses to the maximum extent practicable.

3.2.4 Exceptions from General Standards

a) Pretreatment Measures. The pretreatment system forebays have been sized according with MaineDEP standards.

b) Discharge from a Wet Pond. Not applicable.

c) Liner Portion of a Project. Not applicable.

d) A Utility Corridor or Portion of a Utility Corridor. Not Applicable.

e) Wetland Crossing. Not Applicable.

f) Roofs. The site proposes a sloped non asphalt roof and the site is a non-industrial facility. Thus, the roof runoff needs to be treated from thermal impacts and channel protection only.

g) Treatment for existing developed areas. The site is not a redevelopment.

3.3 Phosphorus Standard

The site is not located within a lake watershed. This standard is not applicable

3.4 Urban Impaired Stream Standard

The site is not located within an Urban Impaired stream. This standard is not applicable.

3.5 Flooding Standard

This project will create more than three acres of new impervious area and is required to meet the Flooding Standards. Pre development conditions versus Post Development Conditions for each watershed can be found in Appendices A3.5.1 through A3.5.4.

3.5.1 Method of Analysis

USDA Soil Conservation Service Method as defined by Technical Release No. 20 (TR-20) determines Stormwater runoff rate and volume. Type III rainfall distribution is utilized. Time of concentration is determined using Technical Release No 55 (TR-55) methodology, through the computer program *HydroCAD ver. 10.0* by HydroCAD Software Solutions LLC.

The drainage system has been designed to mitigate all stormwater flows for the 2 through 25-year storm events. The emergency outlets have been sized to handle the 100-year storm event.

3.5.2 Design Storm

Analysis of 2-year, 10-year, 25-year are included. The following 24-hour rainfall intensities are obtained from Appendix H of the Maine Chapter 500 Stormwater Management.

For Androscoggin County, Type III 24 Hour Storm:

2 year	=	3.0 inches
10 year	=	4.3 inches
25 year	=	5.4 inches

3.5.3 Design Point Breakdown

The site is analyzed as 5 watershed areas. In the pre development stage there are 10 subcatchments. In the post development stage, there are 17 subcatchments. A description of each watershed and associated subcatchments are summarized as follows, for cover types see color watershed maps located in back of this report. Numbers in parentheses ( ) indicate the HydroCAD Node Number.

<u>Design Point 1:</u>

Watershed #1 flows to Design Point- 1 (DP-1). This watershed consists of the area of the site that flows to the existing drainage network in Stetson Road.

In pre development conditions there is only one watershed to Design Point-1.

- Pre-1 (10) contains the northwestern area of the property. Stormwater reaches DP-1 (11) via overland flow.

In post development conditions there are 5 sub watersheds:

- Post-1 (100) collects runoff from the western half of the proposed development. Stormwater is collected with the onsite drainage network and directed to Stormwater Pond Complex A prior to discharge to DP-1.
- Post-2 (101) contains the uncontrolled area that flows directly to the sediment forebay of the Stormwater Pond Complex A prior to discharge to DP-1.
- Post-3 (103) collects the uncontrolled area that flows to the infiltration basin prior to discharge to DP-1.
- Post-4 (105) contains the uncontrolled area along the northern edge of the property, between the two site entrances, that flows via overland flow to the existing drainage network in Stetson Road (DP-1).
- Post-5 (106) contains the uncontrolled area at the northwestern corner of the property that flows via overland flow to the existing drainage network in Stetson Road (DP-1).

Below is a summary of the hydrologic parameters for the pre and post development sub-areas in Design Point-1.

	Area (acres)	CN	Tc (min)
Pre-1	4.714	70	15.6
Post-1	6.374	89	6.0
Post-2	0.190	74	6.0
Post-3	1.011	69	6.0
Post-4	0.712	77	6.0
Post-5	0.365	68	6.0

Design Point 2:

Watershed #2 flows to Design Point- 2 (DP-2). This watershed consists the area of the site that flows to the Western Neighbor.

In pre development conditions there is only one watershed to Design Point-2.

- Pre-2 (20) contains the southwestern area of the property. Stormwater reaches DP-2 (21) via overland flow.

In post development conditions there is only one watershed to Design Point-2.

- Post-6 (200) collects runoff from the southwestern corner of the property. Stormwater reaches DP-2 (201) via overland flow.

Below is a summary of the hydrologic parameters for the pre and post development sub-areas in Design Point-2.

	Area (acres)	CN	Tc (min)
Pre-2	4.158	72	13.7
Post-6	1.135	71	14.2

Design Point 3:

Watershed #3 flows to Design Point- 3 (DP-3). This watershed consists of the area that flows to the 18" culvert located offsite between the southeastern corner of the property and North River Road. Design Point-3 is the existing 18" culvert.

In pre development conditions there are 6 sub watershed to Design Point-3.

- Pre-3 (30) contains the area of Stetson Road that flows into the existing drainage network in Stetson Road flowing east. This drainage network discharges at the northeastern corner of the property into a swale located between the eastern edge of the property and North River Road. This existing swale flows south the entire length of the property line where it reaches DP-3 (37).
- Pre-4 (31) contains the uncontrolled offsite area that flows into segment A of the offsite swale. Stormwater flows via overland flow to DP-3 (37).

- Pre-5 (32) contains the uncontrolled area at the northeastern corner of the site that flows via overland flow to segment B of the offsite existing swale. Stormwater flows via overland flow to DP-3 (37).
- Pre-6 (33) collects the uncontrolled area along eastern edge of the site that flows via overland flow to segment D of the offsite existing swale. Stormwater flows via overland flow to DP-3 (37).
- Pre-7 (34) collects the uncontrolled area along the southeastern edge of the site that flows via overland flow to segment E of the offsite existing swale. Stormwater flows via overland flow to DP-3 (37).
- Pre-8 (35) consists of the portion of North River Road which flows south along the roadway before reaching DP-3. Stormwater flows via overland flow to DP-3 (37).

In post development conditions there are 10 sub watersheds:

- Post-7 (300) contains the area of Stetson Road that flows into the existing drainage network in Stetson Road flowing east. This drainage network discharges at the northeastern corner of the property into a swale located between the eastern edge of the property and North River Road. This existing swale flows south the entire length of the property line where it reaches DP-3 (314).
- Post-8 (301) contains the uncontrolled offsite area that flows into segment A of the offsite swale. Stormwater flows via overland flow to DP-3 (314).
- Post-9 (302) contains the uncontrolled area at the northeastern corner of the site that flows via overland flow to segment B of the offsite existing swale. Stormwater flows via overland flow to DP-3 (314).
- Post-10 (303) collects the uncontrolled area along eastern edge of the site that flows via overland flow to segment D of the offsite existing swale. Stormwater flows via overland flow to DP-3 (314).
- Post-11 (304) collects the uncontrolled area along the southeastern edge of the site that flows via overland flow to segment E of the offsite existing swale. Stormwater flows via overland flow to DP-3 (314).
- Post-12 (305) consists of the uncontrolled area that flows directly to the sediment forebay of Stormwater Gravel Wetland Complex B. Two outlet control structures control the split of flow between Design Point-3 (314) and Design Point-4 (401). Smaller storms up to the 100 year storm are directed to Design Point-3 (314). The 100 year storm flow gets split between Design Point-3 and Design Point 4 (401).
- Post-13 (306) collects runoff from the eastern half of the proposed development. Stormwater is collected with the onsite drainage network and directed to the Stormwater Gravel Wetland Complex B prior to discharge to Design Point-3 and Design Point-4. Two outlet control structures control the split of flow between Design Point-3 (314) and Design Point-4 (401). Smaller storms up to the 100 year storm are directed to Design Point-3 (314). The 100 year storm flow gets split between Design Point-3 and Design Point 4 (401).
- Post-14 (308) consists of the uncontrolled area that flows directly to Gravel Wetland Cell 1 of Stormwater Gravel Wetland Complex B. Two outlet control structures control the split of flow between Design Point-3 and Design Point-4. Smaller storms up to the 100 year storm are directed to Design Point-3 (314). The 100 year storm flow gets split between Design Point-3 and Design Point 4 (401).

- Post-15 (310) consists of the uncontrolled area that flows directly to Gravel Wetland Cell 2 of Stormwater Gravel Wetland Complex B. Two outlet control structures control the split of flow between Design Point-3 and Design Point-4. Smaller storms up to the 100 year storm are directed to Design Point-3 (314). The 100 year storm flow gets split between Design Point-3 and Design Point 4 (401).
- Post-16 (312) consists of the portion of North River Road which flows south along the roadway before reaching DP-3. Stormwater flows via overland flow to DP-3 (314).

Below is a summary of the hydrologic parameters for the pre and post development sub-areas in Design Point-3.

	Area (acres)	CN	Tc (min)
Pre-3	0.536	96	6.0
Pre-4	0.229	80	6.0
Pre-5	3.523	63	8.5
Pre-6	4.615	66	9.7
Pre-7	1.554	69	9.1
Pre-8	0.274	91	6.0
Post-7	0.531	98	6.0
Post-8	0.229	80	6.0
Post-9	2.993	66	10.9
Post-10	2.896	72	8.9
Post-11	1.972	71	6.0
Post-12	0.155	71	6.0
Post-13	5.601	83	6.0
Post-14	0.451	64	6.0
Post-15	0.372	70	6.0
Post-16	0.274	91	6.0

Design Point 4:

Watershed #4 flows to Design Point-4 (DP-4). This watershed contains runoff from the site that flows to the southeast wetland which streams offsite to the southeast abutting property

In predevelopment conditions there is only one watershed to Design Point-4.

- Pre-9 (40) contains the central area of the site where stormwater flows to an existing stream near the southern edge of the property. Stormwater reaches DP-4 (41) via overland flow.

In post development conditions there is only one watershed to Design Point-4.

- Post-17 (400) collects runoff from the southeastern area of the property where stormwater flows to an existing stream near the southern edge of the property. Stormwater reaches DP-4 (401) via overland flow.

Below is a summary of the hydrologic parameters for the pre and post development sub-areas in Design Point-4.

	Area (acres)	CN	Tc (min)
Pre-9	10.215	66	17.1
Post-17	6.081	70	14.6

Design Point 5:

Watershed #5 flows to Design Point-5 (DP-5). This watershed consists of the small onsite area at the southern edge of the property that flows offsite to the southern neighbor. Design Point-5 is the southern abutting property.

In pre development conditions there is only one watershed to Design Point-5.

- Pre-10 (45) consists of the small area at the southern edge the property that flows offsite to Design Point-5 (51).

In post development conditions runoff from the site is redirected discharging no runoff and therefore no watersheds to Design Point-5.

Below is a summary of the hydrologic parameters for the pre and post development sub-areas in Design Point-5.

	Area (acres)	CN	Tc (min)
Pre-10	0.444	76	13.8

3.5.4 Drainage Network Calculations

Drainage Network Design Parameters:

Pipes

- All drainage pipes are HDPE or equivalent unless otherwise noted.
- Manning's coefficient = 0.012 for HDPE Pipe
- Diameters & lengths as specified
- The 10-year design storm is utilized for the drainage pipe design. The 25-year and 100-year storms have been evaluated to ensure that the drainage system contains and channels water to the BMP areas as shown on the plans.

Structures

- Catch basins – Pre-cast concrete with 2' sump unless otherwise noted and inverts as specified
- Manholes – Pre-cast concrete with inverts as specified.

3.5.5 Flooding Standard Conclusion

The tables below presents a summary of the pre development flows vs. the mitigated post development flows. The table shows a decrease in the rate of runoff for all storms included in the analysis.

Pre Development Flows vs. Post Development Flows Mitigated

Subwatershed (design point)	2-yr Peak Flow		10-yr Peak Flow		25-yr Peak Flow	
	Pre	Post	Pre	Post	Pre	Post
DP-1:	2.53	1.07	6.05	5.75	9.49	8.32
DP-2:	2.76	0.69	6.21	1.59	9.51	2.46
DP-3:	5.84	5.85	15.06	13.11	24.36	20.19
DP-4:	3.57	0.45	10.05	0.65	16.64	0.77
DP-5:	0.39	0	0.79	0	1.17	0
Totals:	15.09	8.09	38.19	21.10	61.17	31.74

As shown in the tables above, no increase in stormwater runoff flow will occur following the proposed construction during the 2 through 25 year storm events.

3.6 Easements and Deed Restrictions Standard

The site does not require off-site areas for control, disposal, or treatment of stormwater runoff. This standard does not apply.

3.7 Redistribution of Stormwater Standard

Point discharges are proposed on site and have been designed in accordance with the Chapter 500 Requirements.

Flow dissipators such as riprap aprons and reinforced turf mat are designed at the drainage pipe discharges and pond outlets. The rip rap aprons are designed to prevent scour at the storm water outlet and to minimize the potential for downstream erosion by reducing the velocity of concentrated storm water flows.

3.8 Discharge to Wetlands Standard

The site proposes discharges to onsite wetlands. The stormwater system has been designed to maintain hydrology to the wetlands from pre to post development conditions to the maximum extent practicable. The proposed stormwater systems do not increase the storage depth of the wetlands more than 2" for 24 hours after the 2 year storm event.

3.9 Discharges to Public Storm Sewer System Standard

The site does not discharge to a public storm sewer system. This standard is not applicable.

Appendix A

A2.1 Soil Evaluations

BORING LOG

BORING NO.:	**B- 1**
SHEET:	1 of 1
PROJECT NO.	24-0779
DATE START:	9/19/2024
DATE FINISH:	9/19/2024

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 11.3 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/18	2-2-3-5			0.3 Forest Duff / Topsoil Loose to medium dense, brown, clayey SILT AND FINE SAND		
	5		2D		5-7	24/20	8-7-7-5			5.0 Medium dense, light brown to brown, silty fine SAND		
	10		3D		10-11.3	16/8	10-22-50/4"			10.0 Dense, gray-brown, gravelly silty SAND (Till)		

Refusal at 11.3 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: **B- 1**

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B- 2
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/19/2024
DATE FINISH: 9/19/2024

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 19.5 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 5 ft Soils Wet to Saturated Below 5' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/15	2-2-2-2			Forest Duff / Topsoil (0.5) Loose, brown, SILT AND FINE SAND		
			2D		2-4	24/20	3-6-6-6	q_P=6 ksf		(2.0) Stiff, brown and gray-brown, sandy clayey SILT		
	5		3D		5-7	24/18	4-6-5-4			(5.0) Medium dense, brown and rust-brown, silty fine SAND	▽	
	10		4D		10-12	24/15	6-12-11-13			(10.0) Medium dense, gray-brown, gravelly silty SAND (Till)		
	15		5D		15-17	24/15	10-11-9-12					

Refusal at 19.5 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B- 2

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

CLIENT:	A.R. Building Company
PROJECT:	Proposed Housing Development
LOCATION:	Stetson Road, Auburn, ME

BORING NO.:	**B- 3**
SHEET:	1 of 1
PROJECT NO.	24-0779
DATE START:	9/19/2024
DATE FINISH:	9/19/2024

Drilling Information

LOCATION:	See Exploration Location Plan	**ELEVATION (FT):**		**TOTAL DEPTH (FT):**	12.8
LOGGED BY:	Evan Walker	**DRILLING CO.:**	Seaboard Drilling	**DRILLER:**	Ryan Hackett
DRILLING METHOD:	Hollow Stem Auger	**RIG TYPE:**	Track Mounted Diedrich D-50	**AUGER ID/OD:**	2 1/4 in / 5 5/8 in
SAMPLER:	Standard Split-Spoon	**HAMMER TYPE:**	Automatic	**HAMMER WEIGHT (lbs):**	140
CASING ID/OD:	N/A /N/A	**CORE BARREL:**	N/A	**HAMMER CORRECTION FACTOR:**	
HAMMER DROP (inch):	30				

WATER LEVEL DEPTHS (ft): ▽ 10 ft Soils Wet Below 10' +/-

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:

Water Level
▽ At time of Drilling
▼ At Completion of Drilling
▼ After Drilling

D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear

Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot

WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector

S_v = Field Vane Shear Strength, kips/sq.ft.
q_U = Unconfined Compressive Strength, kips/sq.ft.
Ø = Friction Angle (Estimated)
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/18	3-4-5-5	q_P=5 ksf		0.3 Forest Duff / Topsoil Stiff, brown, clayey SILT		
	5		2D		5-7	24/18	12-25-30-24	q_P=5 ksf		5.0 Dense, brown, silty fine SAND, with clayey silt layers		
										8.0 Medium dense, gray-brown, gravelly silty SAND (Till)		
	10										▽	

Refusal at 12.8 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: **B- 3**

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

BORING NO.: B- 4
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/19/2024
DATE FINISH: 9/19/2024

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 13.8 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 10 ft Soils Saturated Below 10' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/24	2-2-5-5	q_P=5 ksf		0.3 Forest Duff / Topsoil Loose, brown, silty fine SAND, with roots 1.3 Very stiff to stiff, brown, silty CLAY, with frequent silty sand and clayey silt seams and layers		
	5		2D		5-7	24/24	4-4-6-6	q_P=1.5-2 ksf				
	10		3D		10-12	24/24	1-1-2-4	q_P=0.5-1 ksf		10.0 Stiff, gray-brown, silty CLAY, with frequent sand seams and partings	▽	

Refusal at 13.8 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B- 4

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B- 5
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/17/2024
DATE FINISH: 9/17/2024

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 10.5 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-2	24/3	2-2-3-7			Dark brown, SILT AND SAND, with organics (FILL)		
			2D		2-4	24/20	9-9-7-9	q_P=9 ksf		2.0 Hard, brown, clayey sandy SILT		
	5		3D		5-7	24/22	4-3-4-5			5.0 Varved, brown, stiff silty CLAY, SILT AND SAND, and loose silty fine SAND		
										7.4 Dense, gray, gravelly silty SAND (Till)		
	10		4D		10-10.8	9/5	17-50/3"			Refusal at 10.5 feet Probable Boulder or Bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B- 5

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B- 6
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/19/2024
DATE FINISH: 9/19/2024

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 7.5 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/18	2-3-4-7			0.4 Forest Duff / Topsoil Loose to medium dense, gray-brown, clayey sandy SILT		
	5		2D		5-7	24/18	10-12-13-15			5.0 Medium dense, brown, silty SAND AND GRAVEL (Till)		
										7.3 Probable Boulder or Weathered Bedrock Refusal at 7.5 feet Proable Boulder or Bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B- 6

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B- 7
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/17/2024
DATE FINISH: 9/17/2024

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 7.1 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/15	2-2-3-3			Forest Duff / Topsoil		
										1.0 Loose, brown, sandy SILT, trace rootlets		
	5		2D		5-6.9	23/20	28-42-50-50/5"			4.2 Probable Weathered Bedrock		

Refusal at 7.1 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B- 7

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B- 8
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/17/2024
DATE FINISH: 9/17/2024

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** | **TOTAL DEPTH (FT):** 8.3 | **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling | **DRILLER:** Ryan Hackett | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft):
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/18	3-4-6-7	q_P=7-9 ksf		0.5 Forest Duff / Topsoil Medium dense, brown, sandy clayey SILT, with sand seams		
			2D		2-4	24/22	7-8-9-10					
	5		3D		5-7	24/18	4-6-12-12			5.8 Medium dense, gray-brown, silty SAND, some gravel (Till)		

Refusal at 8.3 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B- 9
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/17/2024
DATE FINISH: 9/17/2024

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 3.6 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level
▽ At time of Drilling
▼ At Completion of Drilling
▼ After Drilling
D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear
Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot
WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.
q_u = Unconfined Compressive Strength, kips/sq.ft.
Ø = Friction Angle (Estimated)
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/20	2-2-6-19			0.3 Forest Duff / Topsoil Brown SILT AND FINE SAND 1.8 Probable Weathered Bedrock		

Refusal at 3.6 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B- 9

BORING LOG

BORING NO.: B-10
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/19/2024
DATE FINISH: 9/19/2024

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 19.6 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 10 ft Soils Saturated Below 10' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level
▽ At time of Drilling
▼ At Completion of Drilling
▼ After Drilling
D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear
Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot
WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.
q_U = Unconfined Compressive Strength, kips/sq.ft.
Ø = Friction Angle (Estimated)
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/20	2-2-2-5			Forest Duff / Topsoil		
										0.5 Loose, brown, silty fine SAND, with roots		
										1.5 Medium dense, gray-brown, clayey SILT AND FINE SAND		
	5		2D		5-7	24/20	10-11-7-8			5.0 Layered, brown, stiff silty CLAY, clayey SILT, and medium dense silty fine SAND		
	10		3D		10-12	24/24	3-2-2-3	q_P=0.5 ksf			▽	
										14.0 Medium dense, gray-brown, silty gravelly SAND (Till)		
	15		4D		15-17	24/18	7-14-13-14					

Refusal at 19.6 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-10

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B-11
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/19/2024
DATE FINISH: 9/19/2024

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 8.2 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/18	2-2-4-5			0.3 Forest Duff / Topsoil Loose, brown, clayey SILT AND FINE SAND		
	5		2D		5-7	24/20	7-10-18-18			4.0 Medium dense to dense, brown, silty gravelly SAND (Till)		

Refusal at 8.2 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-11

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

BORING NO.: B-12
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/19/2024
DATE FINISH: 9/19/2024

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 15.2 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/14	1-2-2-2			0.2 Forest Duff / Topsoil Loose, light brown, silty SAND, some gravel, with roots		
			2D		2-4	24/16	3-4-3-4			2.0 Loose to dense, brown, gravelly silty SAND, with cobbles (Till)		
	5		3D		5-7	24/20	11-13-15-18					
	10											
	15									Refusal at 15.2 feet Probable Boulder or Bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-12

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

BORING NO.: B-13
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/19/2024
DATE FINISH: 9/19/2024

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 22.0 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 12 ft Soils Saturated Below 12' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth	Remarks
			1D		0-2	24/16	2-2-4-6			0.3 Forest Duff / Topsoil Loose to medium dense, brown, SILT AND FINE SAND, with roots		
										2.0 Brown, layered, stiff silty CLAY and medium dense silty fine SAND		
	5		2D		5-7	24/20	5-8-9-12					
	10		3D		10-12	24/22	3-7-6-6	q_P=3 ksf			▽	
										12.5 Medium dense to dense, gray-brown gravelly silty SAND (Till)		
	15		4D		15-17	24/16	8-6-16-9					
	20		5D		20-22	24/18	11-19-24-34					
										Bottom of Exploration at 22.0 feet		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-13

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B-14
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/17/2024
DATE FINISH: 9/17/2024

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** | **TOTAL DEPTH (FT):** 4.0 | **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling | **DRILLER:** Ryan Hackett | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level
▽ At time of Drilling
▼ At Completion of Drilling
▼ After Drilling
D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear
Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot
WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.
q_u = Unconfined Compressive Strength, kips/sq.ft.
Ø = Friction Angle (Estimated)
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/16	1-2-2-3			0.3 Forest Duff / Topsoil Loose, brown, SILT AND FINE SAND, trace rootlets		
			2D		2-4	24/18	5-6-10-25			2.0 Brown, layered, medium dense silty SAND, stiff silty CLAY		
										3.8 Dense, brown, silty gravelly SAND Refusal at 4.0 feet Probable Boulder or Bedrock		

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-14

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B-15
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/17/2024
DATE FINISH: 9/17/2024

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 6.7 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/18	2-2-3-5			Loose, dark gray-brown, silty SAND, with organics		
										1.3 Loose, gray-brown, SILT AND FINE SAND		
	5		2D		5-6.2	14/8	16-43-50/2"			4.5 Probable Weathered Bedrock		

Refusal at 6.7 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-15

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

BORING NO.: B-16
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/17/2024
DATE FINISH: 9/17/2024

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 15.3 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 12 ft Soils Saturated Below 12' +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/20	1-1-4-5			0.3 Forest Duff / Topsoil Loose to medium dense, brown, clayey sandy SILT		
			2D		2-4	24/22	7-6-5-7	q_P=3 ksf		2.0 Medium dense, brown, silty fine SAND 3.0 Stiff, brown, clayey SILT		
	5		3D		5-7	24/20	2-5-8-8	q_P=1.5-2 ksf		6.0 Stiff, brown to gray-brown, gravelly silty SAND (Till)		
	10		4D		10-12	24/16	7-9-10-10				▽	
	15		5D		15-15.3	3/3	50/3"					

Refusal at 15.3 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-16

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B-17
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/17/2024
DATE FINISH: 9/17/2024

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** | **TOTAL DEPTH (FT):** 4.2 | **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling | **DRILLER:** Ryan Hackett | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/10	1-2-4-15			0.2 Forest Duff / Topsoil Loose, brown, SILT AND SAND, with roots 1.8 Dense, brown, silty gravelly SAND (Till)		

Refusal at 4.2 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-17

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B-18
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/17/2024
DATE FINISH: 9/17/2024

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** | **TOTAL DEPTH (FT):** 7.6 | **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling | **DRILLER:** Ryan Hackett | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/12	1-1-2-4			0.2 Forest Duff / Topsoil Loose, brown, silty SAND, some gravel, with roots		
			2D		2-4	24/16	4-14-28-26			2.8 Dense, brown, silty SAND AND GRAVEL, with cobbles (Till)		
	5		3D		5-7	24/24	21-20-26-32					

Refusal at 7.6 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-18

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

BORING LOG

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

BORING NO.: B-19
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/17/2024
DATE FINISH: 9/17/2024

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 3.8 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-1.3	16/8	2-2-50/4"			0.3 Forest Duff / Topsoil Loose, brown, silty SAND, with roots 1.3 Probable Weathered Bedrock		

Refusal at 3.8 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-19

BORING LOG

BORING NO.: B-20
SHEET: 1 of 1
PROJECT NO. 24-0779
DATE START: 9/17/2024
DATE FINISH: 9/17/2024

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** **TOTAL DEPTH (FT):** 9.4 **LOGGED BY:** Evan Walker
DRILLING CO.: Seaboard Drilling **DRILLER:** Ryan Hackett **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted Diedrich D-50 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A /N/A **CORE BARREL:** N/A
HAMMER CORRECTION FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No Free Water Observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth	Remarks
			1D		0-2	24/18	2-2-5-6			Forest Duff / Topsoil		
										0.8 Medium dense, gray-brown, SAND AND SILT, with roots		
			2D		2-4	24/20	6-8-9-11	q_P=9 ksf		2.0 Brown, layered, hard to stiff silty CLAY, clayey SILT, and loose silty fine SAND		
	5		3D		5-7	24/22	2-2-3-2	q_P=1.5-2 ksf				
										7.6 Probable Granular Soils or Weathered Bedrock		

Refusal at 9.4 feet
Probable Boulder or Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-20

BORING / WELL 10-12-2022 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

TEST PIT LOGS

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

PROJECT NO.: 24-0779
LOGGED BY: Evan Walker
CONTRACTOR: Gendron
EQUIPMENT: Volvo EC160D

TEST PIT TP- 1

DATE: 9/6/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 11.0
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		0.4 Forest Duff / Topsoil					
		Brown, silty SAND, with silty clay layers					
5							
		7.0 Gray-brown, silty CLAY, with sand seams and layers					
10							

Bottom of Exploration at 11.0 feet

TEST PIT TP- 2

DATE: 9/6/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 11.0
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		0.4 Forest Duff / Topsoil					
		Brown, layered, silty CLAY, clayey SILT, and silty SAND					
5							
10							

Bottom of Exploration at 11.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:

Water Level
▽ At time of Digging
▼ At Completion of Digging
▼ After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

TEST PIT 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

TEST PIT LOGS

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

PROJECT NO.: 24-0779
LOGGED BY: Evan Walker
CONTRACTOR: Gendron
EQUIPMENT: Volvo EC160D

TEST PIT TP- 3

DATE: 9/6/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** _____ **COMPLETION DEPTH (FT):** 9.5
WATER LEVEL DEPTHS (FT): Seepage at 9.4' +/- **REMARKS:** _____

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
5		0.2 Forest Duff / Topsoil Brown, layered, silty CLAY, clayey SILT, and silty fine SAND	▽ 9.4				
		Refusal at 9.5 feet Probable Bedrock					

TEST PIT TP- 4

DATE: 9/6/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** _____ **COMPLETION DEPTH (FT):** 1.5
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:** _____

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		0.8 Forest Duff / Topsoil Brown, silty gravelly SAND					
		Refusal at 1.5 feet Probable Bedrock					

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:

Water Level
▽ At time of Digging
▼ At Completion of Digging
▼ After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

TEST PIT 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

TEST PIT LOGS

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

PROJECT NO.: 24-0779
LOGGED BY: Evan Walker
CONTRACTOR: Gendron
EQUIPMENT: Volvo EC160D

TEST PIT TP- 5

DATE: 9/5/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** _____ **COMPLETION DEPTH (FT):** 3.8
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:** _____

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		Brown, silty SAND, some gravel, with boulders, granite blocks, organics (FILL)					
		3.3 Probable Weathered Bedrock					

Refusal at 3.8 feet
Probable Bedrock

TEST PIT TP- 6

DATE: 9/5/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** _____ **COMPLETION DEPTH (FT):** 6.7
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:** _____

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		0.5 Forest Duff / Topsoil					
		Brown, SILT AND SAND					
		3.5 Brown, silty CLAY					
5							

Refusal at 6.7 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:

Water Level
▽ At time of Digging
▼ At Completion of Digging
▼ After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

TEST PIT 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

TEST PIT LOGS

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

PROJECT NO.: 24-0779
LOGGED BY: Evan Walker
CONTRACTOR: Gendron
EQUIPMENT: Volvo EC160D

TEST PIT TP- 7

DATE: 9/5/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 4.3
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		Vegetation / Topsoil (1.0)					
		Brown, gravelly silty SAND, with cobbles (3.2)					
		Weathered Bedrock					

Refusal at 4.3 feet
Probable Bedrock

TEST PIT TP- 8

DATE: 9/5/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 6.7
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		Vegetation / Topsoil (1.0)					
		Brown, SILT AND FINE SAND (4.3)					
5		Brown, silty SAND, some gravel (6.0)					
		Weathered Bedrock					

Refusal at 6.7 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:

Water Level
▽ At time of Digging
▼ At Completion of Digging
▼ After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

TEST PIT 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

TEST PIT LOGS

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

PROJECT NO.: 24-0779
LOGGED BY: Evan Walker
CONTRACTOR: Gendron
EQUIPMENT: Volvo EC160D

TEST PIT TP- 9

DATE: 9/5/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 4.5
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		Vegetation / Topsoil					
		1.0 Brown, SILT AND SAND					
		3.5 Brown, silty SAND, some gravel, with occasional cobbles					
		4.2 Probable Weathered Bedrock					
		Refusal at 4.5 feet Probable Bedrock					

TEST PIT TP-10

DATE: 9/5/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 10.5
WATER LEVEL DEPTHS (FT): Soils Moist Wet Below 5', Seepage at 10.5' **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		Forest Duff / Topsoil					
		0.8 Very stiff, brown, silty CLAY, with sand seams and layers					
5		5.3 Stiff, gray-brown, silty CLAY, with sand seams and layers					
10		10.3 Brown, silty gravelly SAND	▽ 10.5				
		Refusal at 10.5 feet Probable Bedrock					

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:

Water Level
▽ At time of Digging
▼ At Completion of Digging
▼ After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

TEST PIT 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

TEST PIT LOGS

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

PROJECT NO.: 24-0779
LOGGED BY: Evan Walker
CONTRACTOR: Gendron
EQUIPMENT: Volvo EC160D

TEST PIT TP-11

DATE: 9/6/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** _____ **COMPLETION DEPTH (FT):** 11.2
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:** _____

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		0.5 Forest Duff / Topsoil Brown, layered, silty CLAY, clayey SILT, and silty fine SAND					
5							
10		10.7 Probable Weathered Bedrock					

Refusal at 11.2 feet
Probable Bedrock

TEST PIT TP-12

DATE: 9/6/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** _____ **COMPLETION DEPTH (FT):** 10.7
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:** _____

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		0.4 Forest Duff / Topsoil Brown, layered, silty SAND, silty CLAY, and clayey SILT					
5							
10							

Bottom of Exploration at 10.7 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:

Water Level
▽ At time of Digging
▼ At Completion of Digging
▼ After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

TEST PIT 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

TEST PIT LOGS

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

PROJECT NO.: 24-0779
LOGGED BY: Evan Walker
CONTRACTOR: Gendron
EQUIPMENT: Volvo EC160D

TEST PIT TP-13

DATE: 9/6/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 10.0
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
0		0.8 Forest Duff / Topsoil					
		Brown to gray, sily SAND, with clayey silt seams and layers					
5							
10		Refusal at 10.0 feet Probable Bedrock					

TEST PIT TP-14

DATE: 9/6/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 8.0
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
0		0.5 Forest Duff / Topsoil					
		Brown, silty SAND, with clayey silt seams					
5		5.0 Gray, gravelly silty SAND, with cobbles and boulders (Till)					
		Bottom of Exploration at 8.0 feet					

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:

Water Level
▽ At time of Digging
▼ At Completion of Digging
▼ After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

TEST PIT 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

TEST PIT LOGS

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

PROJECT NO.: 24-0779
LOGGED BY: Evan Walker
CONTRACTOR: Gendron
EQUIPMENT: Volvo EC160D

TEST PIT TP-15

DATE: 9/6/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 8.8
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		0.8 Forest Duff / Topsoil					
		Orange-brown to light brown, silty fine SAND					
5		4.5 Gray-brown, layered, silty SAND and clayey SILT					

Refusal at 8.8 feet
Probable Bedrock

TEST PIT TP-16

DATE: 9/5/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 10.5
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		0.8 Forest Duff / Topsoil					
		Brown to gray-brown, silty CLAY, with silty sand layers					
5							
10		10.0 Gray, gravelly silty SAND, with cobbles and boulders (Till)					

Bottom of Exploration at 10.5 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:

Water Level
▽ At time of Digging
▼ At Completion of Digging
▼ After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

TEST PIT 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

TEST PIT LOGS

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

PROJECT NO.: 24-0779
LOGGED BY: Evan Walker
CONTRACTOR: Gendron
EQUIPMENT: Volvo EC160D

TEST PIT TP-17

DATE: 9/5/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 10.5
WATER LEVEL DEPTHS (FT): Soils Moist to Wet Below 5' **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		0.8 Forest Duff / Topsoil Brown, layered, silty CLAY and clayey SILT					
5		5.0 Brown, layered, silty fine SAND and gray-brown silty CLAY					
10							

Refusal at 10.5 feet
Probable Bedrock

TEST PIT TP-18

DATE: 9/6/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 7.5
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		1.0 Forest Duff / Topsoil Brown, layered, silty SAND and silty CLAY					
5		4.0 Gray-rown, gravelly silty SAND, with cobbles and boulders (Till)					

Refusal at 7.5 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:

Water Level
▽ At time of Digging
▼ At Completion of Digging
▼ After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

TEST PIT 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

TEST PIT LOGS

CLIENT: A.R. Building Company
PROJECT: Proposed Housing Development
LOCATION: Stetson Road, Auburn, ME

PROJECT NO.: 24-0779
LOGGED BY: Evan Walker
CONTRACTOR: Gendron
EQUIPMENT: Volvo EC160D

TEST PIT TP-19

DATE: 9/6/2024 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** **COMPLETION DEPTH (FT):** 11.0
WATER LEVEL DEPTHS (FT): No Free Water Observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		0.5 Forest Duff / Topsoil Brown to gray-brown, layered, silty CLAY, clayey SILT, and silty fine SAND					
5		5.0 Orange-brown, silty SAND					
		7.0 Gray-brown, silty CLAY, with sand seams					
10							

Refusal at 11.0 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:

Water Level
▽ At time of Digging
▼ At Completion of Digging
▼ After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

TEST PIT 24-0779.GPJ SWCE TEMPLATE.GDT 10/3/24

A2.2 Potential Vernal Pool Assessment & Wetland Findings

MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

7337

January 16, 2023

Mr. Kerry Anderson
200 Graham Street LLC
P. O. Box 6799
Scarborough, ME 04070

Re: Vernal pool assessment, 30+ acre parcel, Stetson Road Auburn, ME

Dear Kerry,

I have completed a vernal pool assessment on the 30+ acre parcel located on Stetson Road Auburn, ME. The vernal pool assessment was conducted in accordance with Chapter 335 Significant Wildlife Habitat, Section 9 Significant Vernal Pools for the Maine Department of Environmental Protection. This section outlines the definition of a vernal pool as well as the requirements of a vernal pool to meet the definition of significance as related to the number of amphibian egg masses counted during the breeding season.

While I reviewed the site outside of the breeding season, evaluating all the wetlands on the property, there were no wetlands which would hold water to the depths needed to provide breeding habitat. Consequently, base on my experience, it is my professional opinion that there are no vernal pools on the on the property.

If you have any questions or require additional information, please contact me.

Sincerely,

Mark J. Hampton C.S.S., L.S.E.
Certified Soil Scientist #216
Licensed Site Evaluator #263

DiPrete Engineering
Engineers • Planners • Surveyors

Date:	11/7/2024		
Print Date:	12/6/2024	Project:	2625-032 Stetson

BMP Design Calculations — **Infiltration Pond**

Per current revision of Maine DEP Stormwater Management Design Manual Volume III - Chapter 7.4

Subcatchment / Node Name =	**101-106**			
Impervious Area =	**173,091**	SF		
Landscaped Area =	**188,050**	SF		

Design Elevations

Basin Bottom =	**262.00**			
Water Quality Volume Elevation =	**263.85**			
Emergency Spillway Elevation =	**265.90**			
Top of Berm Elevation =	**267.00**			

Water Quality / Treatment Volume

1.0" x Impervious + 0.4" x Landscaped

Required Treatment Volume =	**20,693**	CF =	**0.475**	AF
Provided Infiltration Pond =	**21,764**	CF =	**0.500**	AF

Pretreatment Forebay Volume

Minimum Forebay Volume (10% Treatment Volume) =	**2,069**	CF =	**0.048**	AF
Provided Forebay Volume =	**4,773**	CF =	**0.110**	AF

Emergency Spillway & Berm Design

Top of Berm Elevation =	**267.00**	FT
Emergency Spillway Elevation =	**265.85**	FT
25-Year Peak Elevation =	**265.76**	FT
25-Year Freeboard =	**1.24**	FT
100-Year Peak Elevation =	**266.44**	FT
100-Year Freeboard =	**0.56**	FT

DiPrete Engineering
Engineers • Planners • Surveyors

Date:	11/7/2024		
Print Date:	12/6/2024	Project:	2625-032 Stetson

BMP Design Calculations — **GRAVEL WETLAND A**

Per current revision of Maine DEP Stormwater Management Design Manual Volume III - Chapter 7.4

Subcatchment / Node Name =	**305-306**	
Impervious Area =	**138,520**	SF
Landscaped Area =	**147,939**	SF

Design Elevations

Gravel Wetland Bottom =	**255.00**	
Water Quality Volume Elevation =	**255.00**	
Overflow Spillway Elevation =	**256.50**	
Emergency Spillway Elevation =	**259.00**	
Top of Berm Elevation =	**260.00**	

Minimum Bottom Surface Area

5% x Impervious + 2% x Landscaped

Required Bottom Surface Area =	**9,885**	SF
Provided Bottom Surface Area =	**11,475**	SF

Water Quality / Treatment Volume

1.0" x Impervious + 0.4" x Landscaped

Required Treatment Volume =	**16,475**	CF =	**0.378**	AF
Provided Treatment Volume =	**24,303**	CF =	**0.558**	AF
Minimum Wetland Cell Volume (45%) =	**7,414**	CF =	**0.170**	AF
Provided Wetland Cell Volume 1 =	**10,074**	CF =	**0.231**	AF
Provided Wetland Cell Volume 2 =	**14,229**	CF =	**0.327**	AF

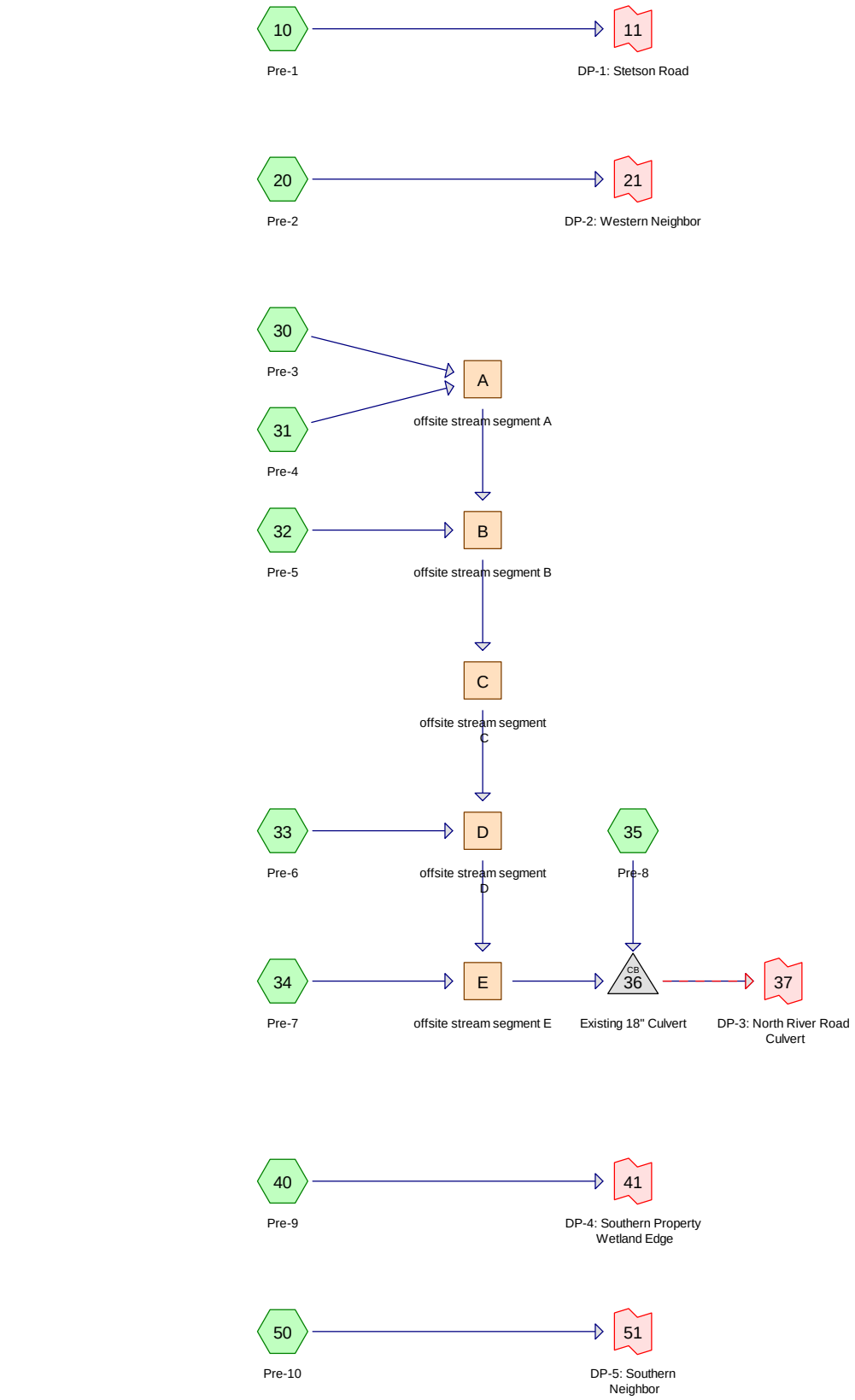
Pretreatment Forebay Volume

Minimum Forebay Volume (10% Treatment Volume) =	**1,647**	CF =	**0.038**	AF
Provided Forebay Volume =	**2,830**	CF =	**0.065**	AF

Emergency Spillway & Berm Design

Top of Berm Elevation =	**260.00**	FT
Emergency Spillway Elevation =	**259.00**	FT
25-Year Peak Elevation =	**257.85**	FT
25-Year Freeboard =	**2.15**	FT
100-Year Peak Elevation =	**258.76**	FT
100-Year Freeboard =	**1.24**	FT

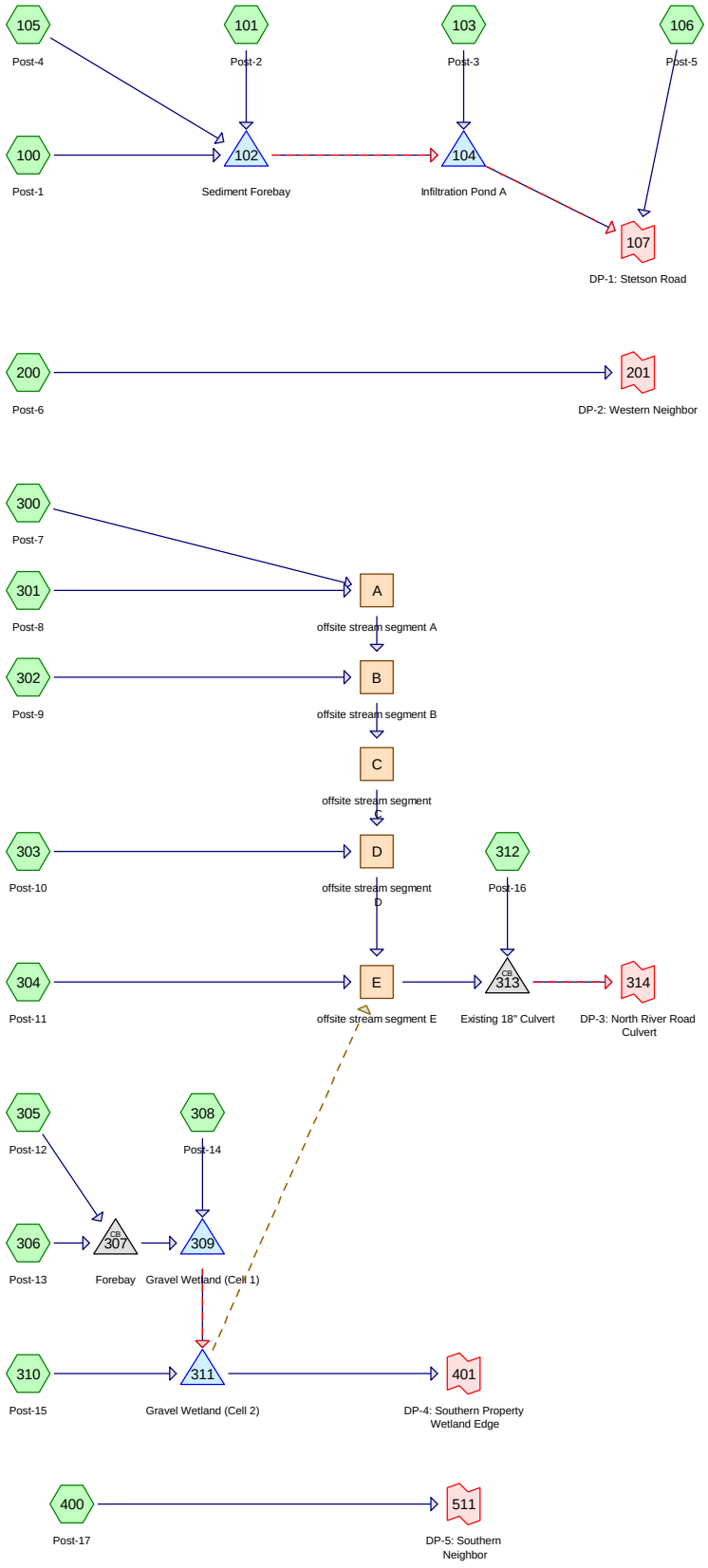
A3.5.1 HydroCAD Node Diagram



Routing Diagram for 2625-032-ALLS-EHCD-INHS
Prepared by DiPrete Engineering, Printed 12/6/2024
HydroCAD® 10.20-3g s/n 01125 © 2023 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.000	61	>75% Grass cover, Good, HSG B (32)
0.000	74	>75% Grass cover, Good, HSG C (10, 31, 32, 34)
0.000	80	>75% Grass cover, Good, HSG D (32)
0.413	65	Brush, Good, HSG C (31, 33, 34, 35)
0.000	73	Brush, Good, HSG D (34, 35)
2.333	58	Meadow, non-grazed, HSG B (10, 30, 32, 33, 34, 40)
3.968	71	Meadow, non-grazed, HSG C (10, 32, 33, 34, 40)
0.592	78	Meadow, non-grazed, HSG D (10, 30, 32, 33, 40)
0.410	98	Offsite Impervious, HSG B (30)
0.399	98	Offsite Impervious, HSG C (30, 31, 33, 35)
0.034	98	Offsite Impervious, HSG D (30)
6.665	55	Woods, Good, HSG B (10, 20, 32, 33, 34, 40)
10.015	70	Woods, Good, HSG C (10, 20, 31, 32, 33, 34, 40, 50)
6.511	77	Woods, Good, HSG D (10, 20, 32, 33, 40, 50)
31.341	**68**	**TOTAL AREA**



Routing Diagram for 2625-032-ALLS-PHCD-INHS
Prepared by DiPrete Engineering, Printed 12/6/2024
HydroCAD® 10.20-3g s/n 01125 © 2023 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.437	61	>75% Grass cover, Good, HSG B (100, 101, 103, 106, 200, 300, 302, 303, 305, 306, 308, 310, 400)
4.626	74	>75% Grass cover, Good, HSG C (100, 101, 103, 105, 106, 200, 301, 302, 303, 304, 305, 306, 308, 310, 400)
2.286	80	>75% Grass cover, Good, HSG D (100, 103, 105, 200, 300, 306, 400)
0.413	65	Brush, Good, HSG C (301, 303, 304, 312)
1.690	98	Impervious, HSG B (100, 306, 308)
1.223	98	Impervious, HSG C (100, 106, 306)
1.291	98	Impervious, HSG D (100, 105, 306)
0.708	58	Meadow, non-grazed, HSG B (106, 302, 303, 400)
2.665	71	Meadow, non-grazed, HSG C (106, 302, 303, 304, 400)
0.429	78	Meadow, non-grazed, HSG D (302, 303, 400)
0.411	98	Offsite Impervious, HSG B (300)
0.399	98	Offsite Impervious, HSG C (300, 301, 303, 312)
0.036	98	Offsite Impervious, HSG D (105, 300)
1.095	98	Roofs, HSG B (100, 306, 308)
0.932	98	Roofs, HSG C (100, 306)
0.944	98	Roofs, HSG D (100, 306)
1.068	55	Woods, Good, HSG B (106, 200, 302, 303, 400)
4.538	70	Woods, Good, HSG C (106, 301, 302, 303, 304, 400)
2.152	77	Woods, Good, HSG D (200, 302, 303, 400)
31.341	**77**	**TOTAL AREA**

A3.5.2 HydroCAD 2-Year Storm Analysis

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 10: Pre-1 Runoff Area=4.714 ac 0.00% Impervious Runoff Depth=0.71"
Flow Length=789' Tc=15.6 min CN=70 Runoff=2.53 cfs 0.281 af

Subcatchment 20: Pre-2 Runoff Area=4.158 ac 0.00% Impervious Runoff Depth=0.81"
Flow Length=718' Tc=13.7 min CN=72 Runoff=2.76 cfs 0.280 af

Subcatchment 30: Pre-3 Runoff Area=0.536 ac 98.54% Impervious Runoff Depth=2.77"
Tc=6.0 min CN=98 Runoff=1.56 cfs 0.124 af

Subcatchment 31: Pre-4 Runoff Area=0.229 ac 44.93% Impervious Runoff Depth=1.25"
Tc=6.0 min CN=80 Runoff=0.33 cfs 0.024 af

Subcatchment 32: Pre-5 Runoff Area=3.523 ac 0.00% Impervious Runoff Depth=0.43"
Flow Length=752' Tc=8.5 min CN=63 Runoff=1.05 cfs 0.127 af

Subcatchment 33: Pre-6 Runoff Area=4.615 ac 0.00% Impervious Runoff Depth=0.54"
Flow Length=620' Tc=9.7 min CN=66 Runoff=1.97 cfs 0.210 af

Subcatchment 34: Pre-7 Runoff Area=2.633 ac 0.00% Impervious Runoff Depth=0.67"
Flow Length=685' Tc=9.1 min CN=69 Runoff=1.56 cfs 0.147 af

Subcatchment 35: Pre-8 Runoff Area=0.274 ac 77.68% Impervious Runoff Depth=2.07"
Tc=6.0 min CN=91 Runoff=0.66 cfs 0.047 af

Subcatchment 40: Pre-9 Runoff Area=10.215 ac 0.00% Impervious Runoff Depth=0.54"
Flow Length=1,163' Tc=17.1 min CN=66 Runoff=3.57 cfs 0.464 af

Subcatchment 50: Pre-10 Runoff Area=0.444 ac 0.00% Impervious Runoff Depth=1.02"
Flow Length=186' Tc=13.8 min CN=76 Runoff=0.39 cfs 0.038 af

Reach A: offsite stream segment A Avg. Flow Depth=0.38' Max Vel=1.57 fps Inflow=1.89 cfs 0.147 af
n=0.080 L=283.0' S=0.0601 '/' Capacity=20.36 cfs Outflow=1.74 cfs 0.147 af

Reach B: offsite stream segment B Avg. Flow Depth=0.53' Max Vel=1.50 fps Inflow=2.73 cfs 0.275 af
n=0.080 L=132.0' S=0.0356 '/' Capacity=13.45 cfs Outflow=2.68 cfs 0.275 af

Reach C: offsite stream segment C Avg. Flow Depth=0.35' Max Vel=1.25 fps Inflow=2.68 cfs 0.275 af
n=0.080 L=180.0' S=0.0228 '/' Capacity=36.85 cfs Outflow=2.58 cfs 0.275 af

Reach D: offsite stream segment D Avg. Flow Depth=0.50' Max Vel=1.34 fps Inflow=4.53 cfs 0.484 af
n=0.080 L=296.0' S=0.0172 '/' Capacity=32.05 cfs Outflow=4.22 cfs 0.484 af

Reach E: offsite stream segment E Avg. Flow Depth=0.60' Max Vel=1.40 fps Inflow=5.57 cfs 0.631 af
n=0.080 L=143.0' S=0.0154 '/' Capacity=85.69 cfs Outflow=5.50 cfs 0.631 af

Pond 36: Existing 18" Culvert Peak Elev=206.51' Inflow=5.84 cfs 0.678 af
Primary=5.84 cfs 0.678 af Secondary=0.00 cfs 0.000 af Outflow=5.84 cfs 0.678 af

Link 11: DP-1: Stetson Road Inflow=2.53 cfs 0.281 af
Primary=2.53 cfs 0.281 af

Link 21: DP-2: Western Neighbor Inflow=2.76 cfs 0.280 af
Primary=2.76 cfs 0.280 af

Link 37: DP-3: North River Road Culvert Inflow=5.84 cfs 0.678 af
Primary=5.84 cfs 0.678 af

Link 41: DP-4: Southern Property Wetland Edge Inflow=3.57 cfs 0.464 af
Primary=3.57 cfs 0.464 af

Link 51: DP-5: Southern Neighbor Inflow=0.39 cfs 0.038 af
Primary=0.39 cfs 0.038 af

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 100: Post-1 Runoff Area=6.374 ac 61.92% Impervious Runoff Depth=1.90"
Tc=6.0 min CN=89 Runoff=14.14 cfs 1.009 af

Subcatchment 101: Post-2 Runoff Area=0.190 ac 0.00% Impervious Runoff Depth=0.91"
Tc=6.0 min CN=74 Runoff=0.19 cfs 0.014 af

Subcatchment 103: Post-3 Runoff Area=1.011 ac 0.00% Impervious Runoff Depth=0.67"
Tc=6.0 min CN=69 Runoff=0.67 cfs 0.056 af

Subcatchment 105: Post-4 Runoff Area=0.712 ac 3.69% Impervious Runoff Depth=1.07"
Tc=6.0 min CN=77 Runoff=0.86 cfs 0.064 af

Subcatchment 106: Post-5 Runoff Area=0.365 ac 5.38% Impervious Runoff Depth=0.63"
Tc=6.0 min CN=68 Runoff=0.22 cfs 0.019 af

Subcatchment 200: Post-6 Runoff Area=1.135 ac 0.00% Impervious Runoff Depth=0.76"
Flow Length=713' Tc=14.2 min CN=71 Runoff=0.69 cfs 0.072 af

Subcatchment 300: Post-7 Runoff Area=0.531 ac 99.72% Impervious Runoff Depth=2.77"
Tc=6.0 min CN=98 Runoff=1.54 cfs 0.123 af

Subcatchment 301: Post-8 Runoff Area=0.229 ac 44.93% Impervious Runoff Depth=1.25"
Tc=6.0 min CN=80 Runoff=0.33 cfs 0.024 af

Subcatchment 302: Post-9 Runoff Area=2.993 ac 0.00% Impervious Runoff Depth=0.54"
Flow Length=617' Tc=10.9 min CN=66 Runoff=1.22 cfs 0.136 af

Subcatchment 303: Post-10 Runoff Area=2.896 ac 0.00% Impervious Runoff Depth=0.81"
Flow Length=484' Tc=8.9 min CN=72 Runoff=2.24 cfs 0.195 af

Subcatchment 304: Post-11 Runoff Area=1.972 ac 0.00% Impervious Runoff Depth=0.76"
Tc=6.0 min CN=71 Runoff=1.56 cfs 0.125 af

Subcatchment 305: Post-12 Runoff Area=0.155 ac 0.00% Impervious Runoff Depth=0.76"
Tc=6.0 min CN=71 Runoff=0.12 cfs 0.010 af

Subcatchment 306: Post-13 Runoff Area=5.601 ac 56.81% Impervious Runoff Depth=1.45"
Tc=6.0 min CN=83 Runoff=9.47 cfs 0.675 af

Subcatchment 308: Post-14 Runoff Area=0.451 ac 0.00% Impervious Runoff Depth=0.47"
Tc=6.0 min CN=64 Runoff=0.17 cfs 0.018 af

Subcatchment 310: Post-15 Runoff Area=0.372 ac 0.00% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=70 Runoff=0.27 cfs 0.022 af

Subcatchment 312: Post-16 Runoff Area=0.274 ac 77.68% Impervious Runoff Depth=2.07"
Tc=6.0 min CN=91 Runoff=0.66 cfs 0.047 af

Subcatchment 400: Post-17 Runoff Area=6.081 ac 0.00% Impervious Runoff Depth=0.71"
Flow Length=817' Tc=14.6 min CN=70 Runoff=3.34 cfs 0.362 af

Reach A: offsite stream segment A Avg. Flow Depth=0.38' Max Vel=1.57 fps Inflow=1.87 cfs 0.146 af
n=0.080 L=283.0' S=0.0601 '/' Capacity=20.36 cfs Outflow=1.73 cfs 0.146 af

Reach B: offsite stream segment B Avg. Flow Depth=0.53' Max Vel=1.51 fps Inflow=2.82 cfs 0.282 af
n=0.080 L=132.0' S=0.0356 '/' Capacity=13.45 cfs Outflow=2.78 cfs 0.282 af

Reach C: offsite stream segment C Avg. Flow Depth=0.36' Max Vel=1.27 fps Inflow=2.78 cfs 0.282 af
n=0.080 L=180.0' S=0.0228 '/' Capacity=36.85 cfs Outflow=2.69 cfs 0.282 af

Reach D: offsite stream segment D Avg. Flow Depth=0.52' Max Vel=1.37 fps Inflow=4.78 cfs 0.477 af
n=0.080 L=296.0' S=0.0172 '/' Capacity=32.05 cfs Outflow=4.50 cfs 0.477 af

Reach E: offsite stream segment E Avg. Flow Depth=0.60' Max Vel=1.40 fps Inflow=5.54 cfs 0.602 af
n=0.080 L=143.0' S=0.0154 '/' Capacity=85.69 cfs Outflow=5.50 cfs 0.602 af

Pond 102: Sediment Forebay Peak Elev=265.25' Storage=4,322 cf Inflow=15.19 cfs 1.087 af
Outflow=15.15 cfs 0.998 af

Pond 104: Infiltration Pond A Peak Elev=264.15' Storage=25,656 cf Inflow=15.82 cfs 1.054 af
Discarded=0.16 cfs 0.676 af Primary=1.04 cfs 0.378 af Secondary=0.00 cfs 0.000 af Outflow=1.20 cfs 1.054 af

Pond 307: Forebay Peak Elev=257.21' Inflow=9.59 cfs 0.685 af
Outflow=9.59 cfs 0.685 af

Pond 309: Gravel Wetland (Cell 1) Peak Elev=256.28' Storage=9,434 cf Inflow=9.75 cfs 0.703 af
Primary=2.11 cfs 0.630 af Secondary=0.00 cfs 0.000 af Outflow=2.11 cfs 0.630 af

Pond 311: Gravel Wetland (Cell 2) Peak Elev=255.64' Storage=13,658 cf Inflow=2.32 cfs 0.652 af
Primary=0.45 cfs 0.495 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.45 cfs 0.495 af

Pond 313: Existing 18" Culvert Peak Elev=206.51' Inflow=5.85 cfs 0.649 af
Primary=5.85 cfs 0.649 af Secondary=0.00 cfs 0.000 af Outflow=5.85 cfs 0.649 af

Link 107: DP-1: Stetson Road Inflow=1.07 cfs 0.397 af
Primary=1.07 cfs 0.397 af

Link 201: DP-2: Western Neighbor Inflow=0.69 cfs 0.072 af
Primary=0.69 cfs 0.072 af

Link 314: DP-3: North River Road Culvert Inflow=5.85 cfs 0.649 af
Primary=5.85 cfs 0.649 af

Link 401: DP-4: Southern Property Wetland Edge Inflow=0.45 cfs 0.495 af
Primary=0.45 cfs 0.495 af

Link 511: DP-5: Southern Neighbor Inflow=3.34 cfs 0.362 af
Primary=3.34 cfs 0.362 af

A3.5.3 HydroCAD 10-Year Storm Analysis

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 10: Pre-1 Runoff Area=4.714 ac 0.00% Impervious Runoff Depth=1.53"
Flow Length=789' Tc=15.6 min CN=70 Runoff=6.05 cfs 0.602 af

Subcatchment 20: Pre-2 Runoff Area=4.158 ac 0.00% Impervious Runoff Depth=1.67"
Flow Length=718' Tc=13.7 min CN=72 Runoff=6.21 cfs 0.580 af

Subcatchment 30: Pre-3 Runoff Area=0.536 ac 98.54% Impervious Runoff Depth=4.06"
Tc=6.0 min CN=98 Runoff=2.25 cfs 0.182 af

Subcatchment 31: Pre-4 Runoff Area=0.229 ac 44.93% Impervious Runoff Depth=2.29"
Tc=6.0 min CN=80 Runoff=0.61 cfs 0.044 af

Subcatchment 32: Pre-5 Runoff Area=3.523 ac 0.00% Impervious Runoff Depth=1.09"
Flow Length=752' Tc=8.5 min CN=63 Runoff=3.63 cfs 0.319 af

Subcatchment 33: Pre-6 Runoff Area=4.615 ac 0.00% Impervious Runoff Depth=1.27"
Flow Length=620' Tc=9.7 min CN=66 Runoff=5.59 cfs 0.488 af

Subcatchment 34: Pre-7 Runoff Area=2.633 ac 0.00% Impervious Runoff Depth=1.47"
Flow Length=685' Tc=9.1 min CN=69 Runoff=3.88 cfs 0.322 af

Subcatchment 35: Pre-8 Runoff Area=0.274 ac 77.68% Impervious Runoff Depth=3.31"
Tc=6.0 min CN=91 Runoff=1.03 cfs 0.075 af

Subcatchment 40: Pre-9 Runoff Area=10.215 ac 0.00% Impervious Runoff Depth=1.27"
Flow Length=1,163' Tc=17.1 min CN=66 Runoff=10.05 cfs 1.081 af

Subcatchment 50: Pre-10 Runoff Area=0.444 ac 0.00% Impervious Runoff Depth=1.97"
Flow Length=186' Tc=13.8 min CN=76 Runoff=0.79 cfs 0.073 af

Reach A: offsite stream segment A Avg. Flow Depth=0.45' Max Vel=1.75 fps Inflow=2.86 cfs 0.225 af
n=0.080 L=283.0' S=0.0601 '/' Capacity=20.36 cfs Outflow=2.68 cfs 0.225 af

Reach B: offsite stream segment B Avg. Flow Depth=0.74' Max Vel=1.85 fps Inflow=6.27 cfs 0.544 af
n=0.080 L=132.0' S=0.0356 '/' Capacity=13.45 cfs Outflow=6.19 cfs 0.544 af

Reach C: offsite stream segment C Avg. Flow Depth=0.57' Max Vel=1.65 fps Inflow=6.19 cfs 0.544 af
n=0.080 L=180.0' S=0.0228 '/' Capacity=36.85 cfs Outflow=6.05 cfs 0.544 af

Reach D: offsite stream segment D Avg. Flow Depth=0.86' Max Vel=1.80 fps Inflow=11.60 cfs 1.032 af
n=0.080 L=296.0' S=0.0172 '/' Capacity=32.05 cfs Outflow=11.07 cfs 1.032 af

Reach E: offsite stream segment E Avg. Flow Depth=1.02' Max Vel=1.87 fps Inflow=14.59 cfs 1.354 af
n=0.080 L=143.0' S=0.0154 '/' Capacity=85.69 cfs Outflow=14.46 cfs 1.354 af

Pond 36: Existing 18" Culvert Peak Elev=207.51' Inflow=15.06 cfs 1.429 af
Primary=8.92 cfs 1.325 af Secondary=6.15 cfs 0.104 af Outflow=15.06 cfs 1.429 af

Link 11: DP-1: Stetson Road Inflow=6.05 cfs 0.602 af
Primary=6.05 cfs 0.602 af

Link 21: DP-2: Western Neighbor Inflow=6.21 cfs 0.580 af
Primary=6.21 cfs 0.580 af

Link 37: DP-3: North River Road Culvert Inflow=15.06 cfs 1.429 af
Primary=15.06 cfs 1.429 af

Link 41: DP-4: Southern Property Wetland Edge Inflow=10.05 cfs 1.081 af
Primary=10.05 cfs 1.081 af

Link 51: DP-5: Southern Neighbor Inflow=0.79 cfs 0.073 af
Primary=0.79 cfs 0.073 af

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 100: Post-1 Runoff Area=6.374 ac 61.92% Impervious Runoff Depth=3.11"
Tc=6.0 min CN=89 Runoff=22.74 cfs 1.650 af

Subcatchment 101: Post-2 Runoff Area=0.190 ac 0.00% Impervious Runoff Depth=1.82"
Tc=6.0 min CN=74 Runoff=0.40 cfs 0.029 af

Subcatchment 103: Post-3 Runoff Area=1.011 ac 0.00% Impervious Runoff Depth=1.47"
Tc=6.0 min CN=69 Runoff=1.66 cfs 0.124 af

Subcatchment 105: Post-4 Runoff Area=0.712 ac 3.69% Impervious Runoff Depth=2.05"
Tc=6.0 min CN=77 Runoff=1.70 cfs 0.122 af

Subcatchment 106: Post-5 Runoff Area=0.365 ac 5.38% Impervious Runoff Depth=1.40"
Tc=6.0 min CN=68 Runoff=0.57 cfs 0.043 af

Subcatchment 200: Post-6 Runoff Area=1.135 ac 0.00% Impervious Runoff Depth=1.60"
Flow Length=713' Tc=14.2 min CN=71 Runoff=1.59 cfs 0.152 af

Subcatchment 300: Post-7 Runoff Area=0.531 ac 99.72% Impervious Runoff Depth=4.06"
Tc=6.0 min CN=98 Runoff=2.23 cfs 0.180 af

Subcatchment 301: Post-8 Runoff Area=0.229 ac 44.93% Impervious Runoff Depth=2.29"
Tc=6.0 min CN=80 Runoff=0.61 cfs 0.044 af

Subcatchment 302: Post-9 Runoff Area=2.993 ac 0.00% Impervious Runoff Depth=1.27"
Flow Length=617' Tc=10.9 min CN=66 Runoff=3.49 cfs 0.317 af

Subcatchment 303: Post-10 Runoff Area=2.896 ac 0.00% Impervious Runoff Depth=1.67"
Flow Length=484' Tc=8.9 min CN=72 Runoff=5.01 cfs 0.404 af

Subcatchment 304: Post-11 Runoff Area=1.972 ac 0.00% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=71 Runoff=3.60 cfs 0.264 af

Subcatchment 305: Post-12 Runoff Area=0.155 ac 0.00% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=71 Runoff=0.28 cfs 0.021 af

Subcatchment 306: Post-13 Runoff Area=5.601 ac 56.81% Impervious Runoff Depth=2.55"
Tc=6.0 min CN=83 Runoff=16.73 cfs 1.190 af

Subcatchment 308: Post-14 Runoff Area=0.451 ac 0.00% Impervious Runoff Depth=1.15"
Tc=6.0 min CN=64 Runoff=0.55 cfs 0.043 af

Subcatchment 310: Post-15 Runoff Area=0.372 ac 0.00% Impervious Runoff Depth=1.53"
Tc=6.0 min CN=70 Runoff=0.64 cfs 0.047 af

Subcatchment 312: Post-16 Runoff Area=0.274 ac 77.68% Impervious Runoff Depth=3.31"
Tc=6.0 min CN=91 Runoff=1.03 cfs 0.075 af

Subcatchment 400: Post-17 Runoff Area=6.081 ac 0.00% Impervious Runoff Depth=1.53"
Flow Length=817' Tc=14.6 min CN=70 Runoff=8.01 cfs 0.777 af

Reach A: offsite stream segment A Avg. Flow Depth=0.45' Max Vel=1.75 fps Inflow=2.84 cfs 0.224 af
n=0.080 L=283.0' S=0.0601 '/' Capacity=20.36 cfs Outflow=2.66 cfs 0.224 af

Reach B: offsite stream segment B Avg. Flow Depth=0.72' Max Vel=1.82 fps Inflow=5.96 cfs 0.540 af
n=0.080 L=132.0' S=0.0356 '/' Capacity=13.45 cfs Outflow=5.90 cfs 0.540 af

Reach C: offsite stream segment C Avg. Flow Depth=0.56' Max Vel=1.63 fps Inflow=5.90 cfs 0.540 af
n=0.080 L=180.0' S=0.0228 '/' Capacity=36.85 cfs Outflow=5.79 cfs 0.540 af

Reach D: offsite stream segment D Avg. Flow Depth=0.82' Max Vel=1.76 fps Inflow=10.52 cfs 0.944 af
n=0.080 L=296.0' S=0.0172 '/' Capacity=32.05 cfs Outflow=10.08 cfs 0.944 af

Reach E: offsite stream segment E Avg. Flow Depth=0.94' Max Vel=1.80 fps Inflow=12.56 cfs 1.208 af
n=0.080 L=143.0' S=0.0154 '/' Capacity=85.69 cfs Outflow=12.48 cfs 1.208 af

Pond 102: Sediment Forebay Peak Elev=265.35' Storage=4,491 cf Inflow=24.84 cfs 1.800 af
Outflow=24.80 cfs 1.711 af

Pond 104: Infiltration Pond A Peak Elev=264.95' Storage=36,852 cf Inflow=26.46 cfs 1.835 af
Discarded=0.17 cfs 0.701 af Primary=5.59 cfs 1.134 af Secondary=0.00 cfs 0.000 af Outflow=5.76 cfs 1.835 af

Pond 307: Forebay Peak Elev=257.52' Inflow=17.01 cfs 1.210 af
Outflow=17.01 cfs 1.210 af

Pond 309: Gravel Wetland (Cell 1) Peak Elev=256.86' Storage=12,622 cf Inflow=17.55 cfs 1.253 af
Primary=2.11 cfs 0.442 af Secondary=10.67 cfs 0.739 af Outflow=12.47 cfs 1.181 af

Pond 311: Gravel Wetland (Cell 2) Peak Elev=256.86' Storage=25,586 cf Inflow=12.97 cfs 1.228 af
Primary=0.65 cfs 1.071 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.65 cfs 1.071 af

Pond 313: Existing 18" Culvert Peak Elev=207.45' Inflow=13.11 cfs 1.283 af
Primary=8.76 cfs 1.211 af Secondary=4.35 cfs 0.072 af Outflow=13.11 cfs 1.283 af

Link 107: DP-1: Stetson Road Inflow=5.75 cfs 1.176 af
Primary=5.75 cfs 1.176 af

Link 201: DP-2: Western Neighbor Inflow=1.59 cfs 0.152 af
Primary=1.59 cfs 0.152 af

Link 314: DP-3: North River Road Culvert Inflow=13.11 cfs 1.283 af
Primary=13.11 cfs 1.283 af

Link 401: DP-4: Southern Property Wetland Edge Inflow=0.65 cfs 1.071 af
Primary=0.65 cfs 1.071 af

Link 511: DP-5: Southern Neighbor Inflow=8.01 cfs 0.777 af
Primary=8.01 cfs 0.777 af

A3.5.4 HydroCAD 25-Year Storm Analysis

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 10: Pre-1 Runoff Area=4.714 ac 0.00% Impervious Runoff Depth=2.34"
Flow Length=789' Tc=15.6 min CN=70 Runoff=9.49 cfs 0.918 af

Subcatchment 20: Pre-2 Runoff Area=4.158 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=718' Tc=13.7 min CN=72 Runoff=9.51 cfs 0.870 af

Subcatchment 30: Pre-3 Runoff Area=0.536 ac 98.54% Impervious Runoff Depth=5.16"
Tc=6.0 min CN=98 Runoff=2.83 cfs 0.231 af

Subcatchment 31: Pre-4 Runoff Area=0.229 ac 44.93% Impervious Runoff Depth=3.24"
Tc=6.0 min CN=80 Runoff=0.87 cfs 0.062 af

Subcatchment 32: Pre-5 Runoff Area=3.523 ac 0.00% Impervious Runoff Depth=1.77"
Flow Length=752' Tc=8.5 min CN=63 Runoff=6.34 cfs 0.519 af

Subcatchment 33: Pre-6 Runoff Area=4.615 ac 0.00% Impervious Runoff Depth=2.01"
Flow Length=620' Tc=9.7 min CN=66 Runoff=9.25 cfs 0.771 af

Subcatchment 34: Pre-7 Runoff Area=2.633 ac 0.00% Impervious Runoff Depth=2.25"
Flow Length=685' Tc=9.1 min CN=69 Runoff=6.15 cfs 0.494 af

Subcatchment 35: Pre-8 Runoff Area=0.274 ac 77.68% Impervious Runoff Depth=4.37"
Tc=6.0 min CN=91 Runoff=1.34 cfs 0.100 af

Subcatchment 40: Pre-9 Runoff Area=10.215 ac 0.00% Impervious Runoff Depth=2.01"
Flow Length=1,163' Tc=17.1 min CN=66 Runoff=16.64 cfs 1.707 af

Subcatchment 50: Pre-10 Runoff Area=0.444 ac 0.00% Impervious Runoff Depth=2.87"
Flow Length=186' Tc=13.8 min CN=76 Runoff=1.17 cfs 0.106 af

Reach A: offsite stream segment A Avg. Flow Depth=0.50' Max Vel=1.87 fps Inflow=3.70 cfs 0.292 af
n=0.080 L=283.0' S=0.0601 '/' Capacity=20.36 cfs Outflow=3.48 cfs 0.292 af

Reach B: offsite stream segment B Avg. Flow Depth=0.88' Max Vel=2.07 fps Inflow=9.79 cfs 0.811 af
n=0.080 L=132.0' S=0.0356 '/' Capacity=13.45 cfs Outflow=9.69 cfs 0.811 af

Reach C: offsite stream segment C Avg. Flow Depth=0.73' Max Vel=1.90 fps Inflow=9.69 cfs 0.811 af
n=0.080 L=180.0' S=0.0228 '/' Capacity=36.85 cfs Outflow=9.50 cfs 0.811 af

Reach D: offsite stream segment D Avg. Flow Depth=1.11' Max Vel=2.08 fps Inflow=18.72 cfs 1.583 af
n=0.080 L=296.0' S=0.0172 '/' Capacity=32.05 cfs Outflow=18.02 cfs 1.583 af

Reach E: offsite stream segment E Avg. Flow Depth=1.32' Max Vel=2.15 fps Inflow=23.72 cfs 2.077 af
n=0.080 L=143.0' S=0.0154 '/' Capacity=85.69 cfs Outflow=23.54 cfs 2.077 af

Pond 36: Existing 18" Culvert Peak Elev=207.74' Inflow=24.38 cfs 2.177 af
Primary=9.49 cfs 1.834 af Secondary=14.89 cfs 0.343 af Outflow=24.38 cfs 2.177 af

Link 11: DP-1: Stetson Road Inflow=9.49 cfs 0.918 af
Primary=9.49 cfs 0.918 af

Link 21: DP-2: Western Neighbor Inflow=9.51 cfs 0.870 af
Primary=9.51 cfs 0.870 af

Link 37: DP-3: North River Road Culvert Inflow=24.38 cfs 2.177 af
Primary=24.38 cfs 2.177 af

Link 41: DP-4: Southern Property Wetland Edge Inflow=16.64 cfs 1.707 af
Primary=16.64 cfs 1.707 af

Link 51: DP-5: Southern Neighbor Inflow=1.17 cfs 0.106 af
Primary=1.17 cfs 0.106 af

Summary for Subcatchment 10: Pre-1

Runoff = 9.49 cfs @ 12.22 hrs, Volume= 0.918 af, Depth= 2.34"
Routed to Link 11 : DP-1: Stetson Road

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.000	74	>75% Grass cover, Good, HSG C
0.028	58	Meadow, non-grazed, HSG B
0.042	71	Meadow, non-grazed, HSG C
0.062	78	Meadow, non-grazed, HSG D
0.580	55	Woods, Good, HSG B
2.974	70	Woods, Good, HSG C
1.028	77	Woods, Good, HSG D
4.714	70	Weighted Average
4.714		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0760	0.13		**Sheet Flow, A** Woods: Light underbrush n= 0.400 P2= 3.30"
3.2	689	0.0510	3.64		**Shallow Concentrated Flow, B** Unpaved Kv= 16.1 fps
15.6	789	Total			

Summary for Subcatchment 20: Pre-2

Runoff = 9.51 cfs @ 12.19 hrs, Volume= 0.870 af, Depth= 2.51"
Routed to Link 21 : DP-2: Western Neighbor

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.922	55	Woods, Good, HSG B
0.301	70	Woods, Good, HSG C
2.936	77	Woods, Good, HSG D
4.158	72	Weighted Average
4.158		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.1060	0.15		**Sheet Flow, A** Woods: Light underbrush n= 0.400 P2= 3.30"
2.8	618	0.0530	3.71		**Shallow Concentrated Flow, B** Unpaved Kv= 16.1 fps
13.7	718	Total			

Summary for Subcatchment 30: Pre-3

Runoff = 2.83 cfs @ 12.08 hrs, Volume= 0.231 af, Depth= 5.16"
Routed to Reach A : offsite stream segment A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.002	58	Meadow, non-grazed, HSG B
0.006	78	Meadow, non-grazed, HSG D
0.410	98	Offsite Impervious, HSG B
0.083	98	Offsite Impervious, HSG C
0.034	98	Offsite Impervious, HSG D
0.536	98	Weighted Average
0.008		1.46% Pervious Area
0.528		98.54% Impervious Area

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

Summary for Subcatchment 31: Pre-4

Runoff = 0.87 cfs @ 12.09 hrs, Volume= 0.062 af, Depth= 3.24"
Routed to Reach A : offsite stream segment A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.000	74	>75% Grass cover, Good, HSG C
0.109	65	Brush, Good, HSG C
0.103	98	Offsite Impervious, HSG C
0.017	70	Woods, Good, HSG C
0.229	80	Weighted Average
0.126		55.07% Pervious Area
0.103		44.93% Impervious Area

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

Summary for Subcatchment 32: Pre-5

Runoff = 6.34 cfs @ 12.13 hrs, Volume= 0.519 af, Depth= 1.77"
Routed to Reach B : offsite stream segment B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.000	61	>75% Grass cover, Good, HSG B
0.000	74	>75% Grass cover, Good, HSG C
0.000	80	>75% Grass cover, Good, HSG D
0.874	58	Meadow, non-grazed, HSG B
0.481	71	Meadow, non-grazed, HSG C
0.171	78	Meadow, non-grazed, HSG D
1.063	55	Woods, Good, HSG B
0.736	70	Woods, Good, HSG C
0.199	77	Woods, Good, HSG D
3.523	63	Weighted Average
3.523		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	80	0.0975	0.21		**Sheet Flow, A** Grass: Dense n= 0.240 P2= 3.30"
1.5	447	0.1000	5.09		**Shallow Concentrated Flow, B** Unpaved Kv= 16.1 fps
0.8	225	0.0880	4.78		**Shallow Concentrated Flow, C** Unpaved Kv= 16.1 fps
8.5	752	Total			

Summary for Subcatchment 33: Pre-6

Runoff = 9.25 cfs @ 12.14 hrs, Volume= 0.771 af, Depth= 2.01"
Routed to Reach D : offsite stream segment D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.154	65	Brush, Good, HSG C
0.637	58	Meadow, non-grazed, HSG B
1.412	71	Meadow, non-grazed, HSG C
0.026	78	Meadow, non-grazed, HSG D
0.000	98	Offsite Impervious, HSG C
1.087	55	Woods, Good, HSG B
0.724	70	Woods, Good, HSG C
0.577	77	Woods, Good, HSG D
4.615	66	Weighted Average
4.615		100.00% Pervious Area
0.000		0.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.1	100	0.0800	0.21		**Sheet Flow, A** Grass: Dense n= 0.240 P2= 3.30"
1.6	520	0.1090	5.32		**Shallow Concentrated Flow, B** Unpaved Kv= 16.1 fps
9.7	620	Total			

Summary for Subcatchment 34: Pre-7

Runoff = 6.15 cfs @ 12.13 hrs, Volume= 0.494 af, Depth= 2.25"
Routed to Reach E : offsite stream segment E

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.000	74	>75% Grass cover, Good, HSG C
0.088	65	Brush, Good, HSG C
0.000	73	Brush, Good, HSG D
0.024	58	Meadow, non-grazed, HSG B
1.566	71	Meadow, non-grazed, HSG C
0.218	55	Woods, Good, HSG B
0.737	70	Woods, Good, HSG C
2.633	69	Weighted Average
2.633		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	85	0.0820	0.20		**Sheet Flow, A** Grass: Dense n= 0.240 P2= 3.30"
2.1	600	0.0860	4.72		**Shallow Concentrated Flow, B** Unpaved Kv= 16.1 fps
9.1	685	Total			

Summary for Subcatchment 35: Pre-8

Runoff = 1.34 cfs @ 12.08 hrs, Volume= 0.100 af, Depth= 4.37"
Routed to Pond 36 : Existing 18" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.061	65	Brush, Good, HSG C
0.000	73	Brush, Good, HSG D
0.213	98	Offsite Impervious, HSG C
0.274	91	Weighted Average
0.061		22.32% Pervious Area
0.213		77.68% Impervious Area

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

Summary for Subcatchment 40: Pre-9

Runoff = 16.64 cfs @ 12.25 hrs, Volume= 1.707 af, Depth= 2.01"
Routed to Link 41 : DP-4: Southern Property Wetland Edge

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.769	58	Meadow, non-grazed, HSG B
0.469	71	Meadow, non-grazed, HSG C
0.327	78	Meadow, non-grazed, HSG D
2.795	55	Woods, Good, HSG B
4.483	70	Woods, Good, HSG C
1.372	77	Woods, Good, HSG D
10.215	66	Weighted Average
10.215		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0680	0.13		**Sheet Flow, A** Woods: Light underbrush n= 0.400 P2= 3.30"
1.1	269	0.0610	3.98		**Shallow Concentrated Flow, B** Unpaved Kv= 16.1 fps
1.0	284	0.0890	4.80		**Shallow Concentrated Flow, C** Unpaved Kv= 16.1 fps
2.0	510	0.0680	4.20		**Shallow Concentrated Flow, D** Unpaved Kv= 16.1 fps
17.1	1,163	Total			

Summary for Subcatchment 50: Pre-10

Runoff = 1.17 cfs @ 12.19 hrs, Volume= 0.106 af, Depth= 2.87"
Routed to Link 51 : DP-5: Southern Neighbor

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.044	70	Woods, Good, HSG C
0.400	77	Woods, Good, HSG D
0.444	76	Weighted Average
0.444		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0630	0.12		**Sheet Flow, A**
					Woods: Light underbrush n= 0.400 P2= 3.30"
0.4	86	0.0430	3.34		**Shallow Concentrated Flow, B**
					Unpaved Kv= 16.1 fps
13.8	186	Total			

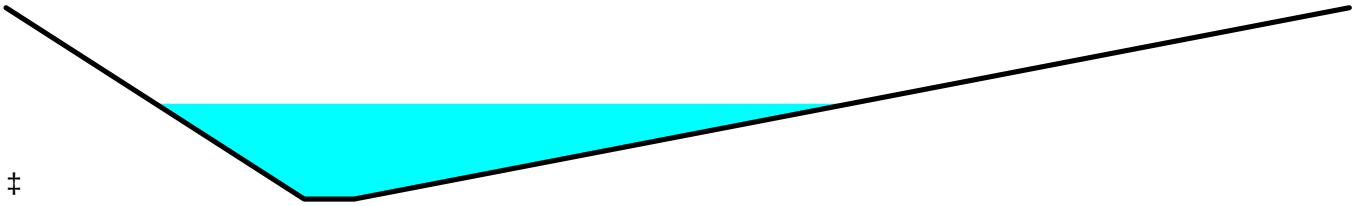
Summary for Reach A: offsite stream segment A

Inflow Area = 0.765 ac, 82.51% Impervious, Inflow Depth = 4.59" for 25-Year event
Inflow = 3.70 cfs @ 12.08 hrs, Volume= 0.292 af
Outflow = 3.48 cfs @ 12.11 hrs, Volume= 0.292 af, Atten= 6%, Lag= 1.7 min
Routed to Reach B : offsite stream segment B

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.87 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 0.67 fps, Avg. Travel Time= 7.0 min

Peak Storage= 527 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.50' , Surface Width= 6.98'
Bank-Full Depth= 1.00' Flow Area= 7.0 sf, Capacity= 20.36 cfs

0.50' x 1.00' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 3.0 10.0 '/' Top Width= 13.50'
Length= 283.0' Slope= 0.0601 '/'
Inlet Invert= 238.40', Outlet Invert= 221.40'



‡

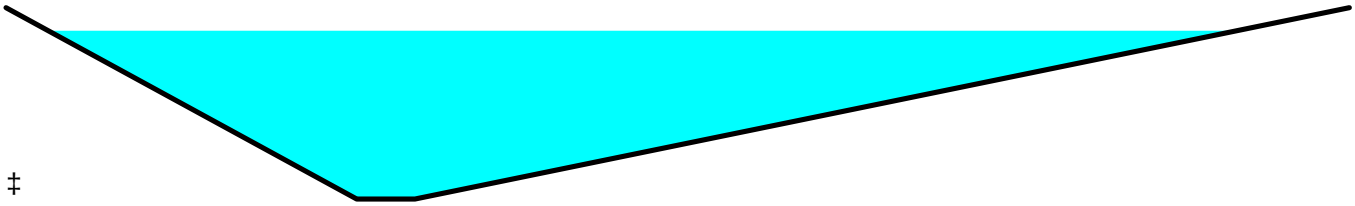
Summary for Reach B: offsite stream segment B

Inflow Area = 4.288 ac, 14.71% Impervious, Inflow Depth = 2.27" for 25-Year event
Inflow = 9.79 cfs @ 12.12 hrs, Volume= 0.811 af
Outflow = 9.69 cfs @ 12.14 hrs, Volume= 0.811 af, Atten= 1%, Lag= 0.8 min
Routed to Reach C : offsite stream segment C

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.07 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 0.70 fps, Avg. Travel Time= 3.1 min

Peak Storage= 619 cf @ 12.14 hrs
Average Depth at Peak Storage= 0.88' , Surface Width= 10.17'
Bank-Full Depth= 1.00' Flow Area= 6.0 sf, Capacity= 13.45 cfs

0.50' x 1.00' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 3.0 8.0 '/' Top Width= 11.50'
Length= 132.0' Slope= 0.0356 '/'
Inlet Invert= 221.40', Outlet Invert= 216.70'



‡

Summary for Reach C: offsite stream segment C

Inflow Area = 4.288 ac, 14.71% Impervious, Inflow Depth = 2.27" for 25-Year event
Inflow = 9.69 cfs @ 12.14 hrs, Volume= 0.811 af
Outflow = 9.50 cfs @ 12.16 hrs, Volume= 0.811 af, Atten= 2%, Lag= 1.1 min
Routed to Reach D : offsite stream segment D

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.90 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 0.47 fps, Avg. Travel Time= 6.4 min

Peak Storage= 900 cf @ 12.16 hrs
Average Depth at Peak Storage= 0.73' , Surface Width= 8.66'
Bank-Full Depth= 1.50' Flow Area= 13.1 sf, Capacity= 36.85 cfs

5.00' x 1.50' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 3.0 2.0 '/' Top Width= 12.50'
Length= 180.0' Slope= 0.0228 '/'
Inlet Invert= 216.70', Outlet Invert= 212.60'



‡

Summary for Reach D: offsite stream segment D

Inflow Area = 8.903 ac, 7.08% Impervious, Inflow Depth = 2.13" for 25-Year event
Inflow = 18.72 cfs @ 12.15 hrs, Volume= 1.583 af
Outflow = 18.02 cfs @ 12.18 hrs, Volume= 1.583 af, Atten= 4%, Lag= 1.8 min
Routed to Reach E : offsite stream segment E

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.08 fps, Min. Travel Time= 2.4 min
Avg. Velocity = 0.50 fps, Avg. Travel Time= 9.9 min

Peak Storage= 2,566 cf @ 12.18 hrs
Average Depth at Peak Storage= 1.11' , Surface Width= 10.57'
Bank-Full Depth= 1.50' Flow Area= 13.1 sf, Capacity= 32.05 cfs

5.00' x 1.50' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 3.0 2.0 '/' Top Width= 12.50'
Length= 296.0' Slope= 0.0172 '/'
Inlet Invert= 212.60', Outlet Invert= 207.50'



‡

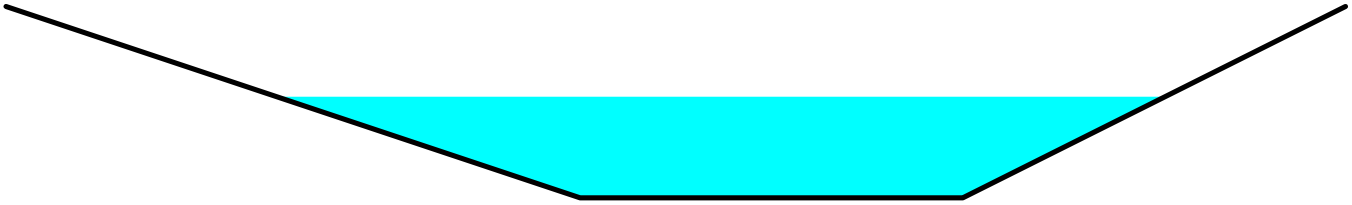
Summary for Reach E: offsite stream segment E

Inflow Area = 11.536 ac, 5.47% Impervious, Inflow Depth = 2.16" for 25-Year event
Inflow = 23.72 cfs @ 12.17 hrs, Volume= 2.077 af
Outflow = 23.54 cfs @ 12.18 hrs, Volume= 2.077 af, Atten= 1%, Lag= 0.8 min
Routed to Pond 36 : Existing 18" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.15 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 0.53 fps, Avg. Travel Time= 4.5 min

Peak Storage= 1,564 cf @ 12.18 hrs
Average Depth at Peak Storage= 1.32' , Surface Width= 11.59'
Bank-Full Depth= 2.50' Flow Area= 28.1 sf, Capacity= 85.69 cfs

5.00' x 2.50' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 3.0 2.0 '/' Top Width= 17.50'
Length= 143.0' Slope= 0.0154 '/'
Inlet Invert= 207.50', Outlet Invert= 205.30'



Summary for Pond 36: Existing 18" Culvert

Inflow Area = 11.809 ac, 7.14% Impervious, Inflow Depth = 2.21" for 25-Year event
Inflow = 24.38 cfs @ 12.18 hrs, Volume= 2.177 af
Outflow = 24.38 cfs @ 12.18 hrs, Volume= 2.177 af, Atten= 0%, Lag= 0.0 min
Primary = 9.49 cfs @ 12.18 hrs, Volume= 1.834 af
Routed to Link 37 : DP-3: North River Road Culvert
Secondary = 14.89 cfs @ 12.18 hrs, Volume= 0.343 af
Routed to Link 37 : DP-3: North River Road Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 207.74' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	205.00'	**18.00" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 205.00' / 204.00' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	207.20'	**14.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=9.49 cfs @ 12.18 hrs HW=207.74' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 9.49 cfs @ 5.37 fps)

Secondary OutFlow Max=14.89 cfs @ 12.18 hrs HW=207.74' TW=0.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 14.89 cfs @ 1.96 fps)

Summary for Link 11: DP-1: Stetson Road

Inflow Area = 4.714 ac, 0.00% Impervious, Inflow Depth = 2.34" for 25-Year event
Inflow = 9.49 cfs @ 12.22 hrs, Volume= 0.918 af
Primary = 9.49 cfs @ 12.22 hrs, Volume= 0.918 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link 21: DP-2: Western Neighbor

Inflow Area = 4.158 ac, 0.00% Impervious, Inflow Depth = 2.51" for 25-Year event
Inflow = 9.51 cfs @ 12.19 hrs, Volume= 0.870 af
Primary = 9.51 cfs @ 12.19 hrs, Volume= 0.870 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link 37: DP-3: North River Road Culvert

Inflow Area = 11.809 ac, 7.14% Impervious, Inflow Depth = 2.21" for 25-Year event
Inflow = 24.38 cfs @ 12.18 hrs, Volume= 2.177 af
Primary = 24.38 cfs @ 12.18 hrs, Volume= 2.177 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link 41: DP-4: Southern Property Wetland Edge

Inflow Area = 10.215 ac, 0.00% Impervious, Inflow Depth = 2.01" for 25-Year event
Inflow = 16.64 cfs @ 12.25 hrs, Volume= 1.707 af
Primary = 16.64 cfs @ 12.25 hrs, Volume= 1.707 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link 51: DP-5: Southern Neighbor

Inflow Area = 0.444 ac, 0.00% Impervious, Inflow Depth = 2.87" for 25-Year event
Inflow = 1.17 cfs @ 12.19 hrs, Volume= 0.106 af
Primary = 1.17 cfs @ 12.19 hrs, Volume= 0.106 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 100: Post-1 Runoff Area=6.374 ac 61.92% Impervious Runoff Depth=4.16"
Tc=6.0 min CN=89 Runoff=30.02 cfs 2.208 af

Subcatchment 101: Post-2 Runoff Area=0.190 ac 0.00% Impervious Runoff Depth=2.69"
Tc=6.0 min CN=74 Runoff=0.60 cfs 0.042 af

Subcatchment 103: Post-3 Runoff Area=1.011 ac 0.00% Impervious Runoff Depth=2.25"
Tc=6.0 min CN=69 Runoff=2.63 cfs 0.190 af

Subcatchment 105: Post-4 Runoff Area=0.712 ac 3.69% Impervious Runoff Depth=2.96"
Tc=6.0 min CN=77 Runoff=2.47 cfs 0.176 af

Subcatchment 106: Post-5 Runoff Area=0.365 ac 5.38% Impervious Runoff Depth=2.17"
Tc=6.0 min CN=68 Runoff=0.91 cfs 0.066 af

Subcatchment 200: Post-6 Runoff Area=1.135 ac 0.00% Impervious Runoff Depth=2.42"
Flow Length=713' Tc=14.2 min CN=71 Runoff=2.46 cfs 0.229 af

Subcatchment 300: Post-7 Runoff Area=0.531 ac 99.72% Impervious Runoff Depth=5.16"
Tc=6.0 min CN=98 Runoff=2.81 cfs 0.229 af

Subcatchment 301: Post-8 Runoff Area=0.229 ac 44.93% Impervious Runoff Depth=3.24"
Tc=6.0 min CN=80 Runoff=0.87 cfs 0.062 af

Subcatchment 302: Post-9 Runoff Area=2.993 ac 0.00% Impervious Runoff Depth=2.01"
Flow Length=617' Tc=10.9 min CN=66 Runoff=5.77 cfs 0.500 af

Subcatchment 303: Post-10 Runoff Area=2.896 ac 0.00% Impervious Runoff Depth=2.51"
Flow Length=484' Tc=8.9 min CN=72 Runoff=7.66 cfs 0.606 af

Subcatchment 304: Post-11 Runoff Area=1.972 ac 0.00% Impervious Runoff Depth=2.42"
Tc=6.0 min CN=71 Runoff=5.56 cfs 0.398 af

Subcatchment 305: Post-12 Runoff Area=0.155 ac 0.00% Impervious Runoff Depth=2.42"
Tc=6.0 min CN=71 Runoff=0.44 cfs 0.031 af

Subcatchment 306: Post-13 Runoff Area=5.601 ac 56.81% Impervious Runoff Depth=3.54"
Tc=6.0 min CN=83 Runoff=23.07 cfs 1.651 af

Subcatchment 308: Post-14 Runoff Area=0.451 ac 0.00% Impervious Runoff Depth=1.85"
Tc=6.0 min CN=64 Runoff=0.93 cfs 0.069 af

Subcatchment 310: Post-15 Runoff Area=0.372 ac 0.00% Impervious Runoff Depth=2.34"
Tc=6.0 min CN=70 Runoff=1.01 cfs 0.072 af

Subcatchment 312: Post-16 Runoff Area=0.274 ac 77.68% Impervious Runoff Depth=4.37"
Tc=6.0 min CN=91 Runoff=1.34 cfs 0.100 af

Subcatchment 400: Post-17 Runoff Area=6.081 ac 0.00% Impervious Runoff Depth=2.34"
Flow Length=817' Tc=14.6 min CN=70 Runoff=12.54 cfs 1.185 af

Reach A: offsite stream segment A Avg. Flow Depth=0.50' Max Vel=1.87 fps Inflow=3.68 cfs 0.290 af
n=0.080 L=283.0' S=0.0601 '/' Capacity=20.36 cfs Outflow=3.46 cfs 0.290 af

Reach B: offsite stream segment B Avg. Flow Depth=0.85' Max Vel=2.02 fps Inflow=9.00 cfs 0.791 af
n=0.080 L=132.0' S=0.0356 '/' Capacity=13.45 cfs Outflow=8.93 cfs 0.791 af

Reach C: offsite stream segment C Avg. Flow Depth=0.70' Max Vel=1.86 fps Inflow=8.93 cfs 0.791 af
n=0.080 L=180.0' S=0.0228 '/' Capacity=36.85 cfs Outflow=8.79 cfs 0.791 af

Reach D: offsite stream segment D Avg. Flow Depth=1.03' Max Vel=1.99 fps Inflow=16.07 cfs 1.396 af
n=0.080 L=296.0' S=0.0172 '/' Capacity=32.05 cfs Outflow=15.51 cfs 1.396 af

Reach E: offsite stream segment E Avg. Flow Depth=1.19' Max Vel=2.04 fps Inflow=19.43 cfs 1.795 af
n=0.080 L=143.0' S=0.0154 '/' Capacity=85.69 cfs Outflow=19.32 cfs 1.795 af

Pond 102: Sediment Forebay Peak Elev=265.76' Storage=5,266 cf Inflow=33.09 cfs 2.426 af
Outflow=33.05 cfs 2.337 af

Pond 104: Infiltration Pond A Peak Elev=265.76' Storage=48,877 cf Inflow=35.68 cfs 2.527 af
Discarded=0.19 cfs 0.717 af Primary=8.04 cfs 1.809 af Secondary=0.00 cfs 0.000 af Outflow=8.23 cfs 2.527 af

Pond 307: Forebay Peak Elev=257.85' Inflow=23.50 cfs 1.683 af
Outflow=23.50 cfs 1.683 af

Pond 309: Gravel Wetland (Cell 1) Peak Elev=257.85' Storage=18,954 cf Inflow=24.43 cfs 1.752 af
Primary=1.77 cfs 0.391 af Secondary=21.11 cfs 1.288 af Outflow=22.67 cfs 1.679 af

Pond 311: Gravel Wetland (Cell 2) Peak Elev=257.85' Storage=36,847 cf Inflow=23.63 cfs 1.752 af
Primary=0.77 cfs 1.594 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.77 cfs 1.594 af

Pond 313: Existing 18" Culvert Peak Elev=207.65' Inflow=20.19 cfs 1.894 af
Primary=9.25 cfs 1.644 af Secondary=10.94 cfs 0.250 af Outflow=20.19 cfs 1.894 af

Link 107: DP-1: Stetson Road Inflow=8.32 cfs 1.875 af
Primary=8.32 cfs 1.875 af

Link 201: DP-2: Western Neighbor Inflow=2.46 cfs 0.229 af
Primary=2.46 cfs 0.229 af

Link 314: DP-3: North River Road Culvert Inflow=20.19 cfs 1.894 af
Primary=20.19 cfs 1.894 af

Link 401: DP-4: Southern Property Wetland Edge Inflow=0.77 cfs 1.594 af
Primary=0.77 cfs 1.594 af

Link 511: DP-5: Southern Neighbor Inflow=12.54 cfs 1.185 af
Primary=12.54 cfs 1.185 af

Summary for Subcatchment 100: Post-1

Runoff = 30.02 cfs @ 12.09 hrs, Volume= 2.208 af, Depth= 4.16"
Routed to Pond 102 : Sediment Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.266	61	>75% Grass cover, Good, HSG B
0.954	74	>75% Grass cover, Good, HSG C
1.207	80	>75% Grass cover, Good, HSG D
0.335	98	Impervious, HSG B
0.746	98	Impervious, HSG C
1.195	98	Impervious, HSG D
0.193	98	Roofs, HSG B
0.583	98	Roofs, HSG C
0.895	98	Roofs, HSG D
6.374	89	Weighted Average
2.427	76	38.08% Pervious Area
3.947	98	61.92% Impervious Area

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

Summary for Subcatchment 101: Post-2

Runoff = 0.60 cfs @ 12.09 hrs, Volume= 0.042 af, Depth= 2.69"
Routed to Pond 102 : Sediment Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.006	61	>75% Grass cover, Good, HSG B
0.184	74	>75% Grass cover, Good, HSG C
0.190	74	Weighted Average
0.190	74	100.00% Pervious Area

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

Summary for Subcatchment 103: Post-3

Runoff = 2.63 cfs @ 12.09 hrs, Volume= 0.190 af, Depth= 2.25"
Routed to Pond 104 : Infiltration Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.506	61	>75% Grass cover, Good, HSG B
0.219	74	>75% Grass cover, Good, HSG C
0.286	80	>75% Grass cover, Good, HSG D
1.011	69	Weighted Average
1.011	69	100.00% Pervious Area

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

Summary for Subcatchment 105: Post-4

Runoff = 2.47 cfs @ 12.09 hrs, Volume= 0.176 af, Depth= 2.96"
Routed to Pond 102 : Sediment Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.380	74	>75% Grass cover, Good, HSG C
0.306	80	>75% Grass cover, Good, HSG D
0.026	98	Impervious, HSG D
0.000	98	Offsite Impervious, HSG D
0.712	77	Weighted Average
0.686	77	96.31% Pervious Area
0.026	98	3.69% Impervious Area

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

Summary for Subcatchment 106: Post-5

Runoff = 0.91 cfs @ 12.09 hrs, Volume= 0.066 af, Depth= 2.17"
Routed to Link 107 : DP-1: Stetson Road

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.134	61	>75% Grass cover, Good, HSG B
0.164	74	>75% Grass cover, Good, HSG C
0.020	98	Impervious, HSG C
0.016	58	Meadow, non-grazed, HSG B
0.002	71	Meadow, non-grazed, HSG C
0.030	55	Woods, Good, HSG B
0.000	70	Woods, Good, HSG C
0.365	68	Weighted Average
0.345	67	94.62% Pervious Area
0.020	98	5.38% Impervious Area

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

Summary for Subcatchment 200: Post-6

Runoff = 2.46 cfs @ 12.20 hrs, Volume= 0.229 af, Depth= 2.42"
Routed to Link 201 : DP-2: Western Neighbor

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.101	61	>75% Grass cover, Good, HSG B
0.048	74	>75% Grass cover, Good, HSG C
0.371	80	>75% Grass cover, Good, HSG D
0.256	55	Woods, Good, HSG B
0.359	77	Woods, Good, HSG D
1.135	71	Weighted Average
1.135	71	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0630	0.19		**Sheet Flow, A** Grass: Dense n= 0.240 P2= 3.30"
4.0	367	0.0480	1.53		**Shallow Concentrated Flow, C** Short Grass Pasture Kv= 7.0 fps
1.3	246	0.0414	3.28		**Shallow Concentrated Flow, C** Unpaved Kv= 16.1 fps
14.2	713	Total			

Summary for Subcatchment 300: Post-7

Runoff = 2.81 cfs @ 12.08 hrs, Volume= 0.229 af, Depth= 5.16"
Routed to Reach A : offsite stream segment A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.001	61	>75% Grass cover, Good, HSG B
0.001	80	>75% Grass cover, Good, HSG D
0.411	98	Offsite Impervious, HSG B
0.083	98	Offsite Impervious, HSG C
0.036	98	Offsite Impervious, HSG D
0.531	98	Weighted Average
0.001	69	0.28% Pervious Area
0.530	98	99.72% Impervious Area

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

Summary for Subcatchment 301: Post-8

Runoff = 0.87 cfs @ 12.09 hrs, Volume= 0.062 af, Depth= 3.24"
Routed to Reach A : offsite stream segment A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.000	74	>75% Grass cover, Good, HSG C
0.109	65	Brush, Good, HSG C
0.103	98	Offsite Impervious, HSG C
0.017	70	Woods, Good, HSG C
0.229	80	Weighted Average
0.126	66	55.07% Pervious Area
0.103	98	44.93% Impervious Area

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

Summary for Subcatchment 302: Post-9

Runoff = 5.77 cfs @ 12.16 hrs, Volume= 0.500 af, Depth= 2.01"
Routed to Reach B : offsite stream segment B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.436	61	>75% Grass cover, Good, HSG B
0.000	74	>75% Grass cover, Good, HSG C
0.647	58	Meadow, non-grazed, HSG B
0.481	71	Meadow, non-grazed, HSG C
0.171	78	Meadow, non-grazed, HSG D
0.324	55	Woods, Good, HSG B
0.735	70	Woods, Good, HSG C
0.199	77	Woods, Good, HSG D
2.993	66	Weighted Average
2.993	66	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	105	0.0700	0.20		**Sheet Flow, A** Grass: Dense n= 0.240 P2= 3.30"
0.5	67	0.0880	2.08		**Shallow Concentrated Flow, B** Short Grass Pasture Kv= 7.0 fps
1.5	445	0.1000	5.09		**Shallow Concentrated Flow, C** Unpaved Kv= 16.1 fps
10.9	617	Total			

Summary for Subcatchment 303: Post-10

Runoff = 7.66 cfs @ 12.13 hrs, Volume= 0.606 af, Depth= 2.51"
Routed to Reach D : offsite stream segment D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.190	61	>75% Grass cover, Good, HSG B
0.610	74	>75% Grass cover, Good, HSG C
0.154	65	Brush, Good, HSG C
0.003	58	Meadow, non-grazed, HSG B
0.628	71	Meadow, non-grazed, HSG C
0.026	78	Meadow, non-grazed, HSG D
0.000	98	Offsite Impervious, HSG C
0.008	55	Woods, Good, HSG B
0.700	70	Woods, Good, HSG C
0.577	77	Woods, Good, HSG D
2.896	72	Weighted Average
2.896	72	100.00% Pervious Area
0.000	98	0.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1200	0.24		**Sheet Flow, A** Grass: Dense n= 0.240 P2= 3.30"
1.4	199	0.1200	2.42		**Shallow Concentrated Flow, B** Short Grass Pasture Kv= 7.0 fps
0.6	185	0.0990	5.07		**Shallow Concentrated Flow, C** Unpaved Kv= 16.1 fps
8.9	484	Total			

Summary for Subcatchment 304: Post-11

Runoff = 5.56 cfs @ 12.09 hrs, Volume= 0.398 af, Depth= 2.42"
Routed to Reach E : offsite stream segment E

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.369	74	>75% Grass cover, Good, HSG C
0.089	65	Brush, Good, HSG C
1.088	71	Meadow, non-grazed, HSG C
0.428	70	Woods, Good, HSG C
1.972	71	Weighted Average
1.972	71	100.00% Pervious Area

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

Summary for Subcatchment 305: Post-12

Runoff = 0.44 cfs @ 12.09 hrs, Volume= 0.031 af, Depth= 2.42"
Routed to Pond 307 : Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.039	61	>75% Grass cover, Good, HSG B
0.116	74	>75% Grass cover, Good, HSG C
0.155	71	Weighted Average
0.155	71	100.00% Pervious Area

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

Summary for Subcatchment 306: Post-13

Runoff = 23.07 cfs @ 12.09 hrs, Volume= 1.651 af, Depth= 3.54"
Routed to Pond 307 : Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
1.900	61	>75% Grass cover, Good, HSG B
0.435	74	>75% Grass cover, Good, HSG C
0.084	80	>75% Grass cover, Good, HSG D
1.355	98	Impervious, HSG B
0.457	98	Impervious, HSG C
0.070	98	Impervious, HSG D
0.902	98	Roofs, HSG B
0.349	98	Roofs, HSG C
0.049	98	Roofs, HSG D
5.601	83	Weighted Average
2.419	64	43.19% Pervious Area
3.182	98	56.81% Impervious Area

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

Summary for Subcatchment 308: Post-14

Runoff = 0.93 cfs @ 12.09 hrs, Volume= 0.069 af, Depth= 1.85"
Routed to Pond 309 : Gravel Wetland (Cell 1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.338	61	>75% Grass cover, Good, HSG B
0.113	74	>75% Grass cover, Good, HSG C
0.000	98	Impervious, HSG B
0.000	98	Roofs, HSG B
0.451	64	Weighted Average
0.451	64	100.00% Pervious Area
0.000	98	0.00% Impervious Area

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

Summary for Subcatchment 310: Post-15

Runoff = 1.01 cfs @ 12.09 hrs, Volume= 0.072 af, Depth= 2.34"
Routed to Pond 311 : Gravel Wetland (Cell 2)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.108	61	>75% Grass cover, Good, HSG B
0.264	74	>75% Grass cover, Good, HSG C
0.372	70	Weighted Average
0.372	70	100.00% Pervious Area

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

Summary for Subcatchment 312: Post-16

Runoff = 1.34 cfs @ 12.08 hrs, Volume= 0.100 af, Depth= 4.37"
Routed to Pond 313 : Existing 18" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.061	65	Brush, Good, HSG C
0.213	98	Offsite Impervious, HSG C
0.274	91	Weighted Average
0.061	65	22.32% Pervious Area
0.213	98	77.68% Impervious Area

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

Summary for Subcatchment 400: Post-17

Runoff = 12.54 cfs @ 12.21 hrs, Volume= 1.185 af, Depth= 2.34"
Routed to Link 511 : DP-5: Southern Neighbor

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.413	61	>75% Grass cover, Good, HSG B
0.772	74	>75% Grass cover, Good, HSG C
0.031	80	>75% Grass cover, Good, HSG D
0.042	58	Meadow, non-grazed, HSG B
0.466	71	Meadow, non-grazed, HSG C
0.233	78	Meadow, non-grazed, HSG D
0.449	55	Woods, Good, HSG B
2.658	70	Woods, Good, HSG C
1.017	77	Woods, Good, HSG D
6.081	70	Weighted Average
6.081	70	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	59	0.1120	0.21		**Sheet Flow, A** Grass: Dense n= 0.240 P2= 3.30"
7.3	41	0.1900	0.09		**Sheet Flow, B** Woods: Dense underbrush n= 0.800 P2= 3.30"
2.7	717	0.0768	4.46		**Shallow Concentrated Flow, C** Unpaved Kv= 16.1 fps
14.6	817	Total			

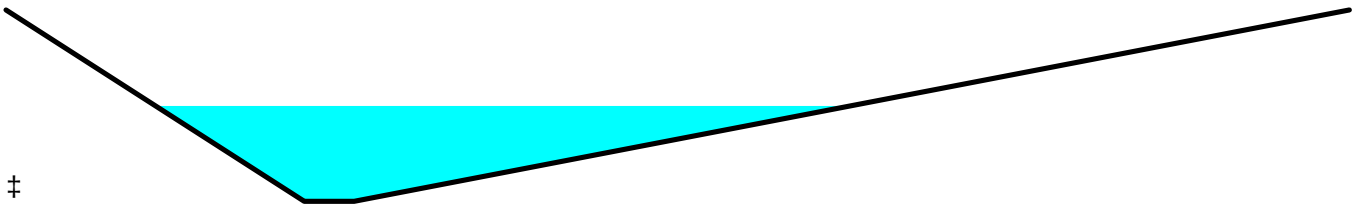
Summary for Reach A: offsite stream segment A

Inflow Area = 0.760 ac, 83.24% Impervious, Inflow Depth = 4.59" for 25-Year event
Inflow = 3.68 cfs @ 12.08 hrs, Volume= 0.290 af
Outflow = 3.46 cfs @ 12.11 hrs, Volume= 0.290 af, Atten= 6%, Lag= 1.7 min
Routed to Reach B : offsite stream segment B

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.87 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 0.67 fps, Avg. Travel Time= 7.0 min

Peak Storage= 525 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.50' , Surface Width= 6.96'
Bank-Full Depth= 1.00' Flow Area= 7.0 sf, Capacity= 20.36 cfs

0.50' x 1.00' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 3.0 10.0 '/' Top Width= 13.50'
Length= 283.0' Slope= 0.0601 '/'
Inlet Invert= 238.40', Outlet Invert= 221.40'



‡

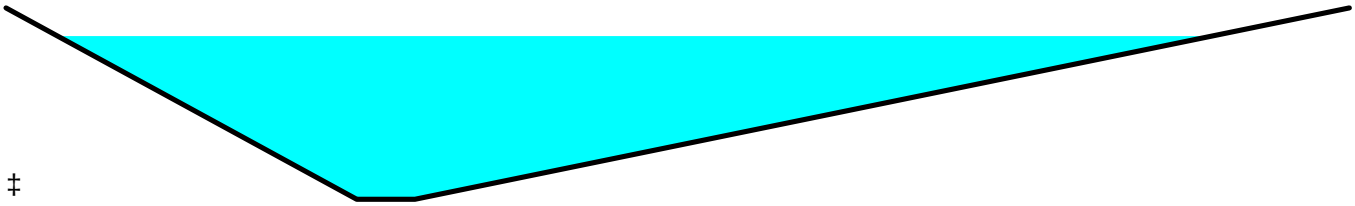
Summary for Reach B: offsite stream segment B

Inflow Area = 3.753 ac, 16.85% Impervious, Inflow Depth = 2.53" for 25-Year event
Inflow = 9.00 cfs @ 12.14 hrs, Volume= 0.791 af
Outflow = 8.93 cfs @ 12.15 hrs, Volume= 0.791 af, Atten= 1%, Lag= 0.8 min
Routed to Reach C : offsite stream segment C

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.02 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 0.70 fps, Avg. Travel Time= 3.1 min

Peak Storage= 582 cf @ 12.15 hrs
Average Depth at Peak Storage= 0.85' , Surface Width= 9.86'
Bank-Full Depth= 1.00' Flow Area= 6.0 sf, Capacity= 13.45 cfs

0.50' x 1.00' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 3.0 8.0 '/' Top Width= 11.50'
Length= 132.0' Slope= 0.0356 '/'
Inlet Invert= 221.40', Outlet Invert= 216.70'



‡

Summary for Reach C: offsite stream segment C

Inflow Area = 3.753 ac, 16.85% Impervious, Inflow Depth = 2.53" for 25-Year event
Inflow = 8.93 cfs @ 12.15 hrs, Volume= 0.791 af
Outflow = 8.79 cfs @ 12.17 hrs, Volume= 0.791 af, Atten= 2%, Lag= 1.2 min
Routed to Reach D : offsite stream segment D

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.86 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 0.47 fps, Avg. Travel Time= 6.4 min

Peak Storage= 852 cf @ 12.17 hrs
Average Depth at Peak Storage= 0.70' , Surface Width= 8.51'
Bank-Full Depth= 1.50' Flow Area= 13.1 sf, Capacity= 36.85 cfs

5.00' x 1.50' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 3.0 2.0 '/' Top Width= 12.50'
Length= 180.0' Slope= 0.0228 '/'
Inlet Invert= 216.70', Outlet Invert= 212.60'



‡

Summary for Reach D: offsite stream segment D

Inflow Area = 6.649 ac, 9.51% Impervious, Inflow Depth = 2.52" for 25-Year event
Inflow = 16.07 cfs @ 12.15 hrs, Volume= 1.396 af
Outflow = 15.51 cfs @ 12.18 hrs, Volume= 1.396 af, Atten= 3%, Lag= 1.9 min
Routed to Reach E : offsite stream segment E

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.99 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 0.48 fps, Avg. Travel Time= 10.3 min

Peak Storage= 2,305 cf @ 12.18 hrs
Average Depth at Peak Storage= 1.03' , Surface Width= 10.14'
Bank-Full Depth= 1.50' Flow Area= 13.1 sf, Capacity= 32.05 cfs

5.00' x 1.50' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 3.0 2.0 '/' Top Width= 12.50'
Length= 296.0' Slope= 0.0172 '/'
Inlet Invert= 212.60', Outlet Invert= 207.50'



‡

Summary for Reach E: offsite stream segment E

Inflow Area = 8.621 ac, 7.34% Impervious, Inflow Depth = 2.50" for 25-Year event
Inflow = 19.43 cfs @ 12.16 hrs, Volume= 1.795 af
Outflow = 19.32 cfs @ 12.18 hrs, Volume= 1.795 af, Atten= 1%, Lag= 0.9 min
Routed to Pond 313 : Existing 18" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.04 fps, Min. Travel Time= 1.2 min
Avg. Velocity = 0.51 fps, Avg. Travel Time= 4.7 min

Peak Storage= 1,357 cf @ 12.18 hrs
Average Depth at Peak Storage= 1.19' , Surface Width= 10.95'
Bank-Full Depth= 2.50' Flow Area= 28.1 sf, Capacity= 85.69 cfs

5.00' x 2.50' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 3.0 2.0 '/' Top Width= 17.50'
Length= 143.0' Slope= 0.0154 '/'
Inlet Invert= 207.50', Outlet Invert= 205.30'



Summary for Pond 102: Sediment Forebay

Inflow Area = 7.276 ac, 54.61% Impervious, Inflow Depth = 4.00" for 25-Year event
Inflow = 33.09 cfs @ 12.09 hrs, Volume= 2.426 af
Outflow = 33.05 cfs @ 12.09 hrs, Volume= 2.337 af, Atten= 0%, Lag= 0.2 min
Primary = 33.05 cfs @ 12.09 hrs, Volume= 2.337 af
Routed to Pond 104 : Infiltration Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 265.76' @ 12.50 hrs Surf.Area= 1,951 sf Storage= 5,266 cf

Plug-Flow detention time= 35.1 min calculated for 2.337 af (96% of inflow)
Center-of-Mass det. time= 13.7 min (808.7 - 795.0)

Volume	Invert	Avail.Storage	Storage Description
#1	262.00'	7,948 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
262.00	908	0	0
263.00	1,151	1,030	1,030
264.00	1,418	1,285	2,314
265.00	1,711	1,565	3,879
265.50	1,867	895	4,773
266.00	2,029	974	5,747
267.00	2,372	2,201	7,948

Device	Routing	Invert	Outlet Devices
#1	Primary	265.00'	**42.0' long x 0.5' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00
			Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=33.03 cfs @ 12.09 hrs HW=265.42' TW=264.83' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Weir Controls 33.03 cfs @ 1.89 fps)

Summary for Pond 104: Infiltration Pond A

Inflow Area = 8.287 ac, 47.95% Impervious, Inflow Depth = 3.66" for 25-Year event
Inflow = 35.68 cfs @ 12.09 hrs, Volume= 2.527 af
Outflow = 8.23 cfs @ 12.49 hrs, Volume= 2.527 af, Atten= 77%, Lag= 24.0 min
Discarded = 0.19 cfs @ 12.49 hrs, Volume= 0.717 af
Primary = 8.04 cfs @ 12.49 hrs, Volume= 1.809 af
Routed to Link 107 : DP-1: Stetson Road
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 107 : DP-1: Stetson Road

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 265.76' @ 12.49 hrs Surf.Area= 15,520 sf Storage= 48,877 cf

Plug-Flow detention time= 459.1 min calculated for 2.527 af (100% of inflow)
Center-of-Mass det. time= 459.1 min (1,270.6 - 811.5)

Volume	Invert	Avail.Storage	Storage Description
#1	262.00'	69,262 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
262.00	10,603	0	0
264.00	13,114	23,717	23,717
266.00	15,852	28,966	52,683
267.00	17,305	16,579	69,262

Device	Routing	Invert	Outlet Devices
#1	Secondary	266.00'	**30.0' long x 10.0' breadth Emergency Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#2	Discarded	262.00'	**0.520 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#3	Primary	261.00'	**15.00" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 261.00' / 260.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#4	Device 3	263.85'	**24.00" W x 8.00" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.19 cfs @ 12.49 hrs HW=265.76' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.19 cfs)

Primary OutFlow Max=8.04 cfs @ 12.49 hrs HW=265.76' TW=0.00' (Dynamic Tailwater)
↑—**3=Culvert** (Passes 8.04 cfs of 12.01 cfs potential flow)
↑—**4=Orifice/Grate** (Orifice Controls 8.04 cfs @ 6.03 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=262.00' TW=0.00' (Dynamic Tailwater)
↑—**1=Emergency Overflow** (Controls 0.00 cfs)

Summary for Pond 307: Forebay

Inflow Area = 5.755 ac, 55.29% Impervious, Inflow Depth = 3.51" for 25-Year event
Inflow = 23.50 cfs @ 12.09 hrs, Volume= 1.683 af
Outflow = 23.50 cfs @ 12.09 hrs, Volume= 1.683 af, Atten= 0%, Lag= 0.0 min
Primary = 23.50 cfs @ 12.09 hrs, Volume= 1.683 af
Routed to Pond 309 : Gravel Wetland (Cell 1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 257.85' @ 16.36 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	256.50'	**5.0' long x 0.5' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00
			Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=23.27 cfs @ 12.09 hrs HW=257.84' TW=257.01' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 23.27 cfs @ 3.47 fps)

Summary for Pond 309: Gravel Wetland (Cell 1)

Inflow Area = 6.206 ac, 51.27% Impervious, Inflow Depth = 3.39" for 25-Year event
Inflow = 24.43 cfs @ 12.09 hrs, Volume= 1.752 af
Outflow = 22.67 cfs @ 12.12 hrs, Volume= 1.679 af, Atten= 7%, Lag= 1.9 min
Primary = 1.77 cfs @ 12.04 hrs, Volume= 0.391 af
Routed to Pond 311 : Gravel Wetland (Cell 2)
Secondary = 21.11 cfs @ 12.12 hrs, Volume= 1.288 af
Routed to Pond 311 : Gravel Wetland (Cell 2)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 257.85' @ 16.35 hrs Surf.Area= 17,751 sf Storage= 18,954 cf

Plug-Flow detention time= 265.2 min calculated for 1.679 af (96% of inflow)
Center-of-Mass det. time= 242.1 min (1,055.0 - 812.8)

Volume	Invert	Avail.Storage	Storage Description
#1	252.08'	2,880 cf	**Stone (Prismatic)** Listed below (Recalc)
			7,200 cf Overall x 40.0% Voids
#2	254.08'	270 cf	**Gravel (Prismatic)** Listed below (Recalc)
			900 cf Overall x 30.0% Voids
#3	254.33'	724 cf	**Wetland (Prismatic)** Listed below (Recalc)
			2,412 cf Overall x 30.0% Voids
#4	255.00'	23,880 cf	**Detention (Prismatic)** Listed below (Recalc)
		27,754 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
252.08	3,600	0	0
254.08	3,600	7,200	7,200

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
254.08	3,600	0	0
254.33	3,600	900	900

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
254.33	3,600	0	0
255.00	3,600	2,412	2,412

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
255.00	3,600	0	0
256.00	4,770	4,185	4,185
257.00	5,980	5,375	9,560
257.50	6,600	3,145	12,705
258.00	7,100	3,425	16,130
259.00	8,400	7,750	23,880

Device	Routing	Invert	Outlet Devices
#1	Primary	252.08'	**8.00" Round Culvert** L= 26.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 252.08' / 252.08' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 0.35 sf
#2	Secondary	256.50'	**16.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=1.74 cfs @ 12.04 hrs HW=256.86' TW=255.13' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.74 cfs @ 5.00 fps)

Secondary OutFlow Max=21.11 cfs @ 12.12 hrs HW=257.05' TW=255.78' (Dynamic Tailwater)
2=Sharp-Crested Rectangular Weir (Weir Controls 21.11 cfs @ 2.42 fps)

Summary for Pond 311: Gravel Wetland (Cell 2)

Inflow Area = 6.578 ac, 48.37% Impervious, Inflow Depth = 3.20" for 25-Year event
Inflow = 23.63 cfs @ 12.12 hrs, Volume= 1.752 af
Outflow = 0.77 cfs @ 16.34 hrs, Volume= 1.594 af, Atten= 97%, Lag= 253.3 min
Primary = 0.77 cfs @ 16.34 hrs, Volume= 1.594 af
Routed to Link 401 : DP-4: Southern Property Wetland Edge
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach E : offsite stream segment E
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach E : offsite stream segment E

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Starting Elev= 38.33' Storage= 0 cf
Peak Elev= 257.85' @ 16.34 hrs Surf.Area= 35,369 sf Storage= 36,847 cf

Plug-Flow detention time= 631.7 min calculated for 1.594 af (91% of inflow)
Center-of-Mass det. time= 514.6 min (1,560.8 - 1,046.2)

Volume	Invert	Avail.Storage	Storage Description
#1	252.08'	6,240 cf	**Stone (Prismatic)** Listed below (Recalc) 15,600 cf Overall x 40.0% Voids
#2	254.08'	585 cf	**Gravel (Prismatic)** Listed below (Recalc) 1,950 cf Overall x 30.0% Voids
#3	254.33'	1,568 cf	**Wetland (Prismatic)** Listed below (Recalc) 5,226 cf Overall x 30.0% Voids
#4	255.00'	61,801 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		70,194 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
252.08	7,800	0	0
254.08	7,800	15,600	15,600

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
254.08	7,800	0	0
254.33	7,800	1,950	1,950

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
254.33	7,800	0	0
255.00	7,800	5,226	5,226

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
255.00	7,800	0	0
256.00	9,340	8,570	8,570
257.00	10,875	10,108	18,678
257.50	11,660	5,634	24,311
258.00	12,100	5,940	30,251
259.00	13,000	12,550	42,801
260.00	25,000	19,000	61,801

Device	Routing	Invert	Outlet Devices
#1	Secondary	256.00'	**24.00" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 256.00' / 253.00' S= 0.0600 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Primary	254.33'	**24.00" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 254.33' / 253.00' S= 0.0266 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#3	Device 2	254.33'	**4.00" Vert. OCS Orifice** C= 0.600 Limited to weir flow at low heads
#4	Tertiary	259.00'	**18.0' long x 0.5' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#5	Device 1	258.55'	**24.00" x 24.00" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#6	Device 2	258.50'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir**

Head (feet) 0.20 0.40 0.60 0.80 1.00
Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.77 cfs @ 16.34 hrs HW=257.85' TW=0.00' (Dynamic Tailwater)
└─**2=Culvert** (Passes 0.77 cfs of 24.02 cfs potential flow)
  ├─**3=OCS Orifice** (Orifice Controls 0.77 cfs @ 8.82 fps)
  └─**6=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=252.08' TW=207.50' (Dynamic Tailwater)
└─**1=Culvert** (Controls 0.00 cfs)
  └─**5=Orifice/Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=252.08' TW=207.50' (Dynamic Tailwater)
└─**4=Emergency Spillway** (Controls 0.00 cfs)

Summary for Pond 313: Existing 18" Culvert

Inflow Area = 8.895 ac, 9.50% Impervious, Inflow Depth = 2.56" for 25-Year event
Inflow = 20.19 cfs @ 12.17 hrs, Volume= 1.894 af
Outflow = 20.19 cfs @ 12.17 hrs, Volume= 1.894 af, Atten= 0%, Lag= 0.0 min
Primary = 9.25 cfs @ 12.17 hrs, Volume= 1.644 af
Routed to Link 314 : DP-3: North River Road Culvert
Secondary = 10.94 cfs @ 12.17 hrs, Volume= 0.250 af
Routed to Link 314 : DP-3: North River Road Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 207.65' @ 12.17 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	205.00'	**18.00" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 205.00' / 204.00' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	207.20'	**14.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=9.25 cfs @ 12.17 hrs HW=207.65' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 9.25 cfs @ 5.24 fps)

Secondary OutFlow Max=10.93 cfs @ 12.17 hrs HW=207.65' TW=0.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 10.93 cfs @ 1.74 fps)

Summary for Link 107: DP-1: Stetson Road

Inflow Area = 8.652 ac, 46.15% Impervious, Inflow Depth = 2.60" for 25-Year event
Inflow = 8.32 cfs @ 12.44 hrs, Volume= 1.875 af
Primary = 8.32 cfs @ 12.44 hrs, Volume= 1.875 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link 201: DP-2: Western Neighbor

Inflow Area = 1.135 ac, 0.00% Impervious, Inflow Depth = 2.42" for 25-Year event
Inflow = 2.46 cfs @ 12.20 hrs, Volume= 0.229 af
Primary = 2.46 cfs @ 12.20 hrs, Volume= 0.229 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link 314: DP-3: North River Road Culvert

Inflow Area = 8.895 ac, 9.50% Impervious, Inflow Depth = 2.56" for 25-Year event
Inflow = 20.19 cfs @ 12.17 hrs, Volume= 1.894 af
Primary = 20.19 cfs @ 12.17 hrs, Volume= 1.894 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link 401: DP-4: Southern Property Wetland Edge

Inflow Area = 6.578 ac, 48.37% Impervious, Inflow Depth > 2.91" for 25-Year event
Inflow = 0.77 cfs @ 16.34 hrs, Volume= 1.594 af
Primary = 0.77 cfs @ 16.34 hrs, Volume= 1.594 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link 511: DP-5: Southern Neighbor

Inflow Area = 6.081 ac, 0.00% Impervious, Inflow Depth = 2.34" for 25-Year event
Inflow = 12.54 cfs @ 12.21 hrs, Volume= 1.185 af
Primary = 12.54 cfs @ 12.21 hrs, Volume= 1.185 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

DiPrete Engineering
Engineers • Planners • Surveyors

Project Name: Stetson Apartments
Project Number: 2625-032

10-Year Storm
Date: 11/22/2024

Structure	Area	Inlet Time	Intensity	Runoff C	Q=Cia	Q Carry over	Q Captured	Q Bypassed	Bypass Structure	Inlet Type	Curb Opening	Curb Opening	Grate Length	Grate Width	Depth	Spread
	(sf)	(min)	(in/hr)	(C)	(cfs)	(cfs)	(cfs)	(cfs)			(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
32	5,904	6	6.15	0.57	0.48	0	0.40	0.08	34	Grate inlet	---	---	2	2	0.086	4.312
33	5,767	6	6.154	0.73	0.60	0	0.48	0.12	35	Grate inlet	---	---	2	2	0.094	4.69
35	10,511	6	6.154	0.62	0.93	0.123	0.74	0.31	38	Grate inlet	---	---	2	2	0.116	5.789
38	12,998	6	6.154	0.77	1.43	0.313	1.16	0.58	40	Grate inlet	---	---	2	2	0.121	6.064
40	10,938	6	6.154	0.77	1.20	0.575	1.18	0.59	42	Grate inlet	---	---	2	2	0.122	6.11
42	11,236	6	6.154	0.76	1.22	0.593	1.16	0.65	43	Grate inlet	---	---	2	2	0.13	6.521
43	37,806	6	6.154	0.38	2.05	0.994	1.85	1.19	55	Grate inlet	---	---	4	2	0.165	8.235
54	6,132	6	6.154	0.8	0.70	1.297	1.35	0.65	56	Grate inlet	---	---	4	2	0.141	7.032
56	9,304	6	6.154	0.82	1.09	0.647	1.21	0.52	---	Grate inlet	---	---	4	2	0.133	6.671
34	10,259	6	6.154	0.69	1.01	0.081	0.76	0.33	37	Grate inlet	---	---	2	2	0.117	5.867
37	10,061	6	6.154	0.76	1.09	0.331	1.00	0.42	39	Grate inlet	---	---	2	2	0.112	5.621
39	12,087	6	6.154	0.79	1.36	0.421	1.19	0.60	41	Grate inlet	---	---	2	2	0.122	6.119
41	14,048	6	6.154	0.67	1.34	0.596	1.22	0.72	54	Grate inlet	---	---	2	2	0.134	6.689
44	5,495	6	6.154	0.78	0.61	0	0.49	0.12	46	Grate inlet	---	---	2	2	0.09	4.51
45	3,714	6	6.154	0.73	0.39	0	0.34	0.05	47	Grate inlet	---	---	2	2	0.076	3.798
47	18,019	6	6.154	0.66	1.69	0.047	1.10	0.64	50	Grate inlet	---	---	2	2	0.134	6.682
50	7,845	6	6.154	0.45	0.50	0.638	0.80	0.34	52	Grate inlet	---	---	2	2	0.114	5.703
52	8,700	6	6.154	0.66	0.82	0.338	0.81	0.34	43	Grate inlet	---	---	2	2	0.115	5.729
53	8,723	6	6.154	0.78	0.97	0.66	1.05	0.58	54	Grate inlet	---	---	2	2	0.13	6.517
55	10,043	6	6.154	0.6	0.86	1.19	1.38	0.67	---	Grate inlet	---	---	4	2	0.142	7.101
49	11,452	6	6.154	0.81	1.32	0.46	1.12	0.66	53	Grate inlet	---	---	2	2	0.135	6.739
46	12,463	6	6.154	0.72	1.28	0.117	0.94	0.46	49	Grate inlet	---	---	2	2	0.123	6.149
2	7,980	6	6.154	0.54	0.61	0	0.50	0.12	5	Grate inlet	---	---	2	2	0.089	4.452
5	10,921	6	6.154	0.48	0.75	0.115	0.65	0.21	7	Grate inlet	---	---	2	2	0.101	5.057
7	10,472	6	6.154	0.6	0.90	0.21	0.79	0.32	10	Grate inlet	---	---	2	2	0.111	5.549
10	4,730	6	6.154	0.6	0.40	0.315	0.57	0.15	12	Grate inlet	---	---	2	2	0.094	4.724
12	5,389	6	6.154	0.75	0.58	0.153	0.57	0.16	29	Grate inlet	---	---	2	2	0.095	4.749
29	11,583	6	6.154	0.59	0.97	0.157	0.80	0.33	27	Grate inlet	---	---	2	2	0.112	5.598

1	4,981	6	6.154	0.72	0.51	0	0.43	0.08	4	Grate inlet	---	---	2	2	0.083	4.156
4	8,204	6	6.154	0.65	0.76	0.081	0.64	0.20	6	Grate inlet	---	---	2	2	0.1	5.01
6	24,180	6	6.154	0.41	1.41	0.201	1.05	0.56	9	Grate inlet	---	---	2	2	0.128	6.396
9	29,254	6	6.154	0.42	1.75	0.562	1.37	0.94	11	Grate inlet	---	---	2	2	0.146	7.321
11	11,560	6	6.154	0.51	0.84	0.943	1.13	0.65	14	Grate inlet	---	---	2	2	0.133	6.641
14	11,330	6	6.154	0.78	1.26	0.651	1.19	0.72	26	Grate inlet	---	---	2	2	0.136	6.814
16	3,870	6	6.154	0.67	0.37	0	0.34	0.03	18	Grate inlet	---	---	2	2	0.066	3.305
18	11,881	6	6.154	0.37	0.63	0.029	0.55	0.10	21	Grate inlet	---	---	2	2	0.082	4.096
21	2,958	6	6.154	0.46	0.19	0.104	0.28	0.02	23	Grate inlet	---	---	2	2	0.061	3.048
23	5,838	6	6.154	0.44	0.37	0.016	0.35	0.03	27	Grate inlet	---	---	2	2	0.067	3.346
26	19,663	6	6.154	0.5	1.40	1.135	2.54	0.00	---	Grate inlet	---	---	2	2	0.291	14.536
15	8,751	6	6.154	0.66	0.82	0	0.66	0.16	17	Grate inlet	---	---	2	2	0.089	4.462
17	8,957	6	6.154	0.69	0.88	0.16	0.80	0.24	20	Grate inlet	---	---	2	2	0.097	4.873
20	7,026	6	6.154	0.76	0.76	0.243	0.78	0.23	24	Grate inlet	---	---	2	2	0.096	4.808
24	11,982	6	6.154	0.71	1.21	0.228	1.03	0.42	26	Grate inlet	---	---	2	2	0.11	5.504
27	21,311	6	6.154	0.79	2.40	0.358	2.76	0.00	---	Grate inlet	---	---	2	2	0.306	15.311

Watershed Maps

STETSON ROAD
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)

NORTH RIVER ROAD
(VARIABLE WIDTH PUBLIC RIGHT OF Way)

DP-1 DP-2 DP-3 DP-4 DP-5

LEGEND

- WOODS - A SOILS
- WOODS - B SOILS
- WOODS - C SOILS
- WOODS - D SOILS
- GRASS - A SOILS
- GRASS - B SOILS
- GRASS - C SOILS
- GRASS - D SOILS
- GRAVEL - A SOILS
- GRAVEL - B SOILS
- GRAVEL - C SOILS
- GRAVEL - D SOILS
- IMPERVIOUS
- BRUSH - A SOILS
- BRUSH - B SOILS
- BRUSH - C SOILS
- BRUSH - D SOILS
- WATER

LEGEND

- TC LINE WITH ELEVATIONS
- SUBCATCHMENT AREA
- SOIL BOUNDARY
- REACH
- SUBCATCHMENT
- DRAINAGE POND/BIO RETENTION/SAND FILTER/INFILTRATING SWALE
- DRAINAGE STRUCTURE/POND WITH INSIGNIFICANT STORAGE
- REACH/SWALE
- DESIGN POINT

SCALE: 1"=100'
0 50' 100' 200'

PRE-DEVELOPMENT WATERSHED MAP

STETSON ROAD

DiPrete Engineering
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STETSON ROAD
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)

NORTH RIVER ROAD
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)

POTENTIAL FUTURE CLUBHOUSE

DP-1 DP-2 DP-3 DP-4 DP-5

B-1C GWT>NE R=10.0'
B-2C GWT>9.4' R=9.4'
TP119 GWT>11.0' R=11.0'

LEGEND

- WOODS - A SOILS
- WOODS - B SOILS
- WOODS - C SOILS
- WOODS - D SOILS
- GRASS - A SOILS
- GRASS - B SOILS
- GRASS - C SOILS
- GRASS - D SOILS
- GRAVEL - A SOILS
- GRAVEL - B SOILS
- GRAVEL - C SOILS
- GRAVEL - D SOILS
- IMPERVIOUS
- BRUSH - A SOILS
- BRUSH - B SOILS
- BRUSH - C SOILS
- BRUSH - D SOILS
- WATER

LEGEND

- TC LINE WITH ELEVATIONS (A 32.5, B 32.4)
- SUBCATCHMENT AREA
- SOIL BOUNDARY
- REACH
- SUBCATCHMENT (100)
- DRAINAGE POND/BIO RETENTION/SAND FILTER/INFILTRATING SWALE (100)
- DRAINAGE STRUCTURE/POND WITH INSIGNIFICANT STORAGE (100)
- REACH/SWALE (100)
- DESIGN POINT (100)

SCALE: 1"=100'
0 50' 100' 200'

POST-DEVELOPMENT WATERSHED MAP

STETSON ROAD

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DiPrete Engineering

Project # 2625-032

December 6, 2024

Stormwater System Operation & Maintenance

Stetson Road, Auburn, ME

Parcel ID 129-011

Applicant:

A.R. Building Company, Inc.
310 Seven Fields Boulevard, Suite 350
Seven Fields, PA 16046



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Operation & Maintenance Plan Overview

An essential component of a successful Stormwater System (SS) is the ongoing Operation and Maintenance (O&M) of the various components of the stormwater drainage, control, and conveyance systems. These components include swales, pipes, catch basins, and treatment/ control devices are commonly referred to as Best Management Practices (BMPs). Failure to provide effective maintenance can reduce the hydraulic capacity and the pollutant removal efficiency of stormwater practices.

Many people expect that stormwater facilities will continue to function correctly forever. However, it is inevitable that deterioration of the stormwater system will occur once it becomes operational. The question is not whether stormwater system maintenance is necessary but how often.

This plan has been developed to proactively address operations and maintenance to minimize potential problems and maximize potential stormwater runoff treatment and management. Ongoing inspections and maintenance will extend the service life of the Best Management Practices.

This plan addresses:

1. Stormwater management system(s) owners;
2. The party or parties responsible for operation and maintenance, including how future property owners will be notified of the presence of the stormwater management system and the requirement for proper operation and maintenance;
3. A description and delineation of public safety features;
4. The routine (scheduled) and non-routine (corrective) maintenance tasks for each BMP to be undertaken after construction is complete and a schedule for implementing those tasks;
5. A plan that is drawn to scale and shows the location of all stormwater BMPs in each treatment train along with the discharge point;
6. An estimated operation and maintenance budget; and
7. Funding source for operation and maintenance activities and equipment.

A major contributor to unmaintained stormwater facilities is a lack of clear ownership and responsibility definition. In order for an inspection and maintenance program to be effective, the roles for each responsibility must be clearly defined prior to construction of a system. This can be accomplished with a maintenance agreement between the site owners and the responsible authority.

This report is suitable for recording as an attachment to a maintenance agreement between the site owner and the responsible authority. A copy of a sample agreement prepared by RIDEM is attached to this report as Appendix B.

Stormwater System Owner / Party Responsible for O&M

Stormwater BMPs are maintained during construction by the site contractor as identified in the Soil Erosion and Sediment Control Plan (SESC) for the site. A copy of the SESC is required to be kept on site during construction. The SESC requires maintenance and inspection of the BMPs during the construction phase of project and requires a log be kept of these activities. Once construction is complete and the contractor's warranty period is elapsed, the contractor must obtain the signature of the stormwater system's owner releasing the contractor from his maintenance and inspection responsibilities. A copy of this release of contractor's responsibility must be attached to this document.

The Owners Association will be the owner of the stormwater system located outside of public right of ways and all stormwater BMP. Upon completion of construction, and creation of the Owners Association, their legal name along with mailing and emergency contact information must be added below.

Owner; _____

Mailing Address; _____

_____

Emergency Contact Name; _____

Phone; _____

Transfer of Ownership

In the event that the owner of any property included in the Owner's Association changes, the current owner (grantor) must provide a copy of this document to the new owner (grantee). In addition, the Owners Association must provide all new members with a copy of this document.

<u>The Stormwater System Owner is the Party Responsible for the ongoing O&M of the system.</u>

The two key components to adequately maintain the stormwater infrastructure are:

1. Performance of periodic and scheduled inspections
2. Performance of scheduled maintenance

The actual operation and maintenance of the system may be performed by a third party designated by the owner. If the owner contracts with a third party for O&M the name, address, and emergency contact information must be added below, and updated if the third-party designee changes.

Name: _____

Mailing Address: _____

_____

Emergency Contact Name: _____

Phone: _____

Public Safety

Public safety was a critical factor in designing the stormwater system. Public safety features included in this design are:

- Accessibility to Stormwater BMPs
- Winter & Non-Winter Maintenance

Accessibility to Stormwater BMPs

As shown on the site plans, all stormwater BMPs are accessible from the roadway.

Winter Maintenance

The following tasks must be performed to protect public safety during the winter season:

- Roadways and parking lots will be salted/ sanded/ plowed in accordance with applicable City of Auburn and MaineDOT guidelines;
- Inspect the open and closed drainage networks adjacent to the snow stockpiles to ensure they are free of clogging and debris;
- Inspect roadways and drainage structures post-storm event to alleviate any signs of icing or damming.

Non-Winter Maintenance

The following tasks must be performed to protect public safety during the non-winter seasons:

- Roadways and parking lots will be swept in accordance with applicable City of Auburn and MaineDOT guidelines;
- The stormwater management systems must be inspected and maintained in accordance with the enclosed Operations & Maintenance Plan.

Particular care must be taken in the operation and maintenance of these features.

Stormwater System Plan

A plan identifying each component of the stormwater system is included on the following page.



DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

O&M PLAN

STETSON ROAD

AUBURN, MAINE

PREPARED FOR:

A.R. BUILDING COMPANY, INC.

310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

DATE:
12-06-2024

SHEET 1 OF 1

DE JOB NO: 2625-032 COPYRIGHT 2024 BY DIPRETE ENGINEERING ASSOCIATES, INC.

Z:\DEMAIN\PROJECTS\2625-032 STETSON ROAD APARTMENTS\AUTOCAD DRAWINGS\2625-032-PLAN.DWG PLOTTED: 12/6/2024

Inspections & Maintenance

Inspections must be performed on a regular basis and scheduled based on the BMP type and configuration. It is not mandatory that all inspectors be trained engineers, but they must have some knowledge or experience with stormwater systems and in general, trained stormwater engineers should direct the inspectors. Follow-up inspections by registered professional engineers must be performed where a routine inspection has revealed a question of structural or hydraulic integrity affecting public safety.

Not all inspections can be conducted by direct human observation. For subsurface systems, video equipment may be required. There may be cases where other specialized equipment is necessary. The inspection program must be tailored to address the operational characteristics of the system.

The inspection process must document observations made in the field and must cover structural conditions, hydraulic operational conditions, evidence of vandalism, condition of vegetation, occurrence of obstructions, unsafe conditions, and build-up of trash, sediments and pollutants.

Maintenance of the stormwater management system is essential and can be divided into two types, scheduled and corrective.

Scheduled maintenance tasks are those that are typically accomplished on a regular basis and can generally be scheduled without referencing inspection reports. These items consist of such things as vegetation maintenance (such as mowing) and trash and debris removal. These tasks are required at well-defined time intervals and are a requirement for all stormwater structural facilities.

Corrective maintenance tasks consist of items such as sediment removal, stream bank stabilization, and outlet structure repairs that are done on an as-needed basis. These tasks are typically scheduled based on inspection results or in response to complaints.

Since specialized equipment may be required, some maintenance tasks can be effectively handled on a contract basis with an outside entity specializing in that field. In addition, some maintenance may also require a formal design and bid process to accomplish the work.

Appendix A provides an "Inspection Schedule & Maintenance Checklist" for the stormwater system components on this site. Completed checklists must be maintained as an ongoing record of inspections for each component of the stormwater system.

In addition to the maintenance of the stormwater system, maintenance of other site improvements can significantly enhance the ability for the BMPs to function as designed. Several of these have been listed below, along with the recommended maintenance.

Lawn, Garden and Landscape Management

- Lawns should be cut no shorter than 1-1/2" in the spring and fall to stimulate root growth, and no shorter than 2 to 3 inches throughout the summer.
- Infiltration ponds should be mowed at least twice per year.
- Fertilize no more than twice per year, once in May-June and once in September-October.
- Avoid spreading fertilizer on impervious surfaces.
- Weeds should be dug or pulled out. Large areas of weeds can be removed by covering with large plastic sheet(s) for a few days.
- Chemical pesticides should be used as a last resort. A healthy lawn is naturally disease resistant.
    - Visible insects can be removed by hand, by spraying with water, or even vacuum cleaning.
    - Store bought traps, specific for a species, can be used.
    - Slugs and other soft bodied insects can be eliminated using diatomaceous earth.
    - Plants infected with bacteria and fungi should be removed and disposed of.
    - Beneficial organisms should be maintained on the property and should be encouraged/ attracted to the property. Homeowners and property facility maintenance personal should become familiar with beneficial organisms.
- Irrigation should be minimal if required at all. Most lawns do not require watering and will become dormant during dry periods.
    - Established lawns require no more than one inch of water per week.
    - Areas should be watered before 9am to avoid evaporation.
    -

Road and Parking Area Management

Street and Parking Lot Sweeping

- All street and parking areas on site must be swept a minimum of 2 times per year.

Deicing:

- Salt storage areas must be completely covered and located on an impervious surface.
- Runoff must be contained in appropriate areas.
- See The Rhode Island Stormwater Design and Installation Standards Manual Appendix G for approved deicing agents and ways to reduce deicer impacts. The manual Appendices can be found online at: http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/stwater/pdfs/swdsnapd.pdf

Sealants:

- Only asphalt based sealants are permitted, no coal-tar based asphalt sealants can be used on site.

Snow Removal:

- Snow must not be dumped in any water body including rivers, reservoirs, ponds, lakes, wetlands, bays, or the ocean.
- Avoid disposing of snow on top of storm drain catch basins or stormwater drainage swales or ditches.
- Snow must be stored in upland areas, not in or adjacent to water bodies or wetlands. Snow must be stored in a location that will allow snow melt and enter the onsite drainage system so it can be treated by onsite BMPs.

Solid Waste Containment

- Trash and recycling receptacles must be located onsite for all commercial areas.

Reference: Additional information relating to operation and maintenance of specific BMPs can be found in Volume III of the Maine Stormwater Management Design Manual
https://www.maine.gov/dep/land/stormwater/stormwaterbmps/#

DEP 5-Year Re-Certification

Long-term inspection and maintenance by a DEP approved stormwater maintenance inspector shall be regularly provided under a five-year binding inspection and maintenance contract that must be renewed prior to contact expiration. A certification of the following must be submitted to the MEDEP withing three months of the expiration of each five-year interval from the date of issuance of the permit. The form is provided in Appendix B.

Upon completion of construction, the owner of the property and stormwater system must file the 5-Year re-certification with MEDEP.

Identification and Repair of Erosion
Certification that all areas of the development have been inspected for erosion, and appropriate steps have been taken to permanently stabilize these areas.

Identification and Repair of Stormwater Control System
Certification that all aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the failing systems.

Maintenance
Certification that the erosion control and stormwater maintenance plan for the site is being implemented as written, and a maintenance log has been created and is being maintained.

Appendix A – Inspection Schedule & Maintenance Checklists

Drainage Structures
(Catch Basins, Manholes, etc.)
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

Notes:

- Beyond inspection frequency noted, inspections shall be completed after storms equal to or greater than the 1-year 24-hour Type III storm event (2.7" of rain fall)
- All Checklist Maintenance items are MANDATORY.
- During inspections, if maintenance items are found not to be applicable, note as N/A in comments
- All removed sediments shall be disposed at an approved and permitted location.
- All hazardous debris removed shall be disposed of in accordance with state and federal regulations by a properly licensed contractor

MAINTENANCE ITEM	SATISFACTORY (YES/NO)	COMMENTS
Semi-annually inspect drainage structures for damage		
Use a vacuum truck or other means to clean out any sediment or debris present in any drainage structure or whenever sediments reach ½ of the sump depth, which ever comes first.		
Semi-annually inspect drainage structures for debris and remove as necessary		

Drainage Structures
(Catch Basins, Manholes, etc.)
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

COMMENTS:

ACTIONS TO BE TAKEN:

Sediment Forebay
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

Notes:

- Beyond inspection frequency noted in parenthesis, i.e. (quarterly), inspections shall be completed after storms equal to or greater than the 1-year 24-hour Type III storm event (2.7" of rain fall)
- All Checklist Maintenance items are MANDATORY.
- During inspections, if maintenance items are found not to be applicable, note as N/A in comments
- All removed sediments shall be disposed at an approved and permitted location.
- All hazardous debris removed shall be disposed of in accordance with state and federal regulations by a properly licensed contractor

MAINTENANCE ITEM	SATISFACTORY (YES/NO)	COMMENTS
1. Debris Cleanout (Quarterly)		
The sediment forebay and sediment trap isolation chamber clear of debris or		
Inflow pipes / inlet area clear of debris		
Outflow pipes / outlet area clear of debris		
Overflow Weir / outlet area clear of debris		
2. Sedimentation (Quarterly)		
Obvious trapping of sediment		
Greater than 50% of storage volume remaining. If less than 50% of storage volume remaining, sediments to be removed and disposed of. (see notes at end of Forebay		

Sediment Forebay
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

3. Vegetation (Quarterly)		
Vegetation within sediment forebay to be limited to 18" in height.		
4. Embankments (Quarterly)		
Evidence of erosion		
Seeps/leaks on downstream face		
Slope protection or riprap failure		
Slopes stabilized with vegetation, slope protection, riprap, etc		

COMMENTS:

Sediment Forebay
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

ACTIONS TO BE TAKEN:

Grassed Channel or Grassed Swale
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

Notes:

- **Beyond inspection frequency noted in parenthesis, i.e. (quarterly), inspections shall be completed after storms equal to or greater than the 1-year 24-hour Type III storm event (2.7" of rain fall)**
- **All Checklist Maintenance items are MANDATORY.**
- **During inspections, if maintenance items are found not to be applicable, note as N/A in comments**
- **All removed sediments shall be disposed at an approved and permitted location.**
- **All hazardous debris removed shall be disposed of in accordance with state and federal regulations by a properly licensed contractor**
- **If the surface of the grass channel becomes clogged to the point that standing water is observed on the surface 48 hours after precipitation events, the bottom should be roto-tilled or cultivated to break up any hard-packed sediment, and then reseeded**

MAINTENANCE ITEM	SATISFACTORY (YES/NO)	COMMENTS
1. Debris Cleanout (Quarterly)*		
The channel/swale bottom is clear of debris or litter.		
Inflow pipes / inlet areas clear of debris		
Outflow pipes / outlet area clear of debris		
Overflow Weir / outlet area clear of debris		
2. Sedimentation (Quarterly)*		
Obvious trapping of sediment		

Grassed Channel or Grassed Swale
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

When sediment accumulates to a depth of approximately ¼ of the original design depth, it should be removed, and the channel should be reconfigured to its original dimensions		
3. Vegetation (Quarterly)*		
The grass in the channel should be mowed at least 2 times during the growing season		
Dethatching swale bottom and removal of thatching		
4. Embankments (Quarterly)*		
Evidence of erosion		
Slopes stabilized with vegetation, slope protection, riprap, etc		

COMMENTS:

Grassed Channel or Grassed Swale
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

ACTIONS TO BE TAKEN:

Gravel Wetland
Operation, Maintenance, and Management
Inspection Checklist

Project:	Date:
Location:	Time:
Site Status:	Inspector:

Notes:

- **During the first year, the basin shall be inspected semi-annually and following major storm events.**
- **Debris and sediment buildup shall be removed from the forebay and basin as needed. Any bare area or erosion rills shall be repaired with new filter media or sandy loam then seeded and mulched. Maintaining good vegetative cover will minimize clogging with fine sediments and if ponding exceeds 48 hours, the top of the filter bed must be rototilled to reestablish the soil's filtration capacity.**
- **The gravel wetland should be inspected after every major storm in the first year to be sure it is functioning properly. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining within 48 hours following a one inch storm or greater. Following storms that fill the system and overflow is observed, the soil filter should drain in no less than 24 to 48 hours. If the system drains too fast, an orifice may need to be added on the underdrain outlet or, if already present, may need to be modified.**
- **Sediment Removal: Sediment and plant debris should be removed from the pretreatment structure at least annually.**
- **Check and clean the risers if there is evidence of standing water, discolored water or accumulated sediments in the cells.**
- **Removal any decaying vegetation, litter, and debris that may be found.**
- **Check for foreign species. Particular care must be used to avoid the unintended introduction of invasive species such as purple loosestrife (Lythrum salicaria) and common reed (Phragmites australis). It is recommended that a qualified wetland biologist be consulted when these are found in the area of the gravel wetland.**
- **Plant biomass shall be harvested annually.**

MAINTENANCE ITEM	SATISFACTORY (YES/NO)	COMMENTS
1. Debris Cleanout (Quarterly)		
Wetland and contributing areas clean of debris including yard waste, litter and limbs		

Gravel Wetland
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

Spillway/ Weir / outlet area clear of debris		
2. Sedimentation (Quarterly)		
Obvious trapping of sediment		
Removal of sediment when depth is greater than 1.0 inches over filter media bed.		
3. Vegetation (Quarterly)		
If there are plantings within the wetland areas: • Plant height is not less than design water depth. • Plant composition according to approved plans. No placement of inappropriate plans		
Vegetated areas should be replenished (to the original depth) every other year, as directed by inspection records.		
Seasonally plants may need to be watered, treating of diseased trees and shrubs, inspection of soil and repair eroded areas, and removal of litter and debris.		
Every 3 years pruning or replacement of wood vegetation.		
If 50% of vegetation coverage is not established after 2 years reinforcement planting is required.		

Gravel Wetland
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

4. Embankments (Quarterly)		
Evidence of erosion		
Slopes stabilized with vegetation, slope protection, riprap, etc		

Gravel Wetland
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

COMMENTS:

ACTIONS TO BE TAKEN:

Infiltration Pond
Operation, Maintenance, and Management
Inspection Checklist

Project:	Date:
Location:	Time:
Site Status:	Inspector:

Notes:

- Beyond inspection frequency noted in parenthesis, i.e. (semi-annually), inspections shall be completed:
    - after storms equal to or greater than the 1-year 24-hour Type III storm event (2.7" of rain fall)
    - after every storm during the first 3 months of operating (noting how long water remains standing in the basin after a storm
    - standing water within the basin 48 to 72 hours after a storm indicates that the infiltration capacity may have been overestimated)
    - twice a year thereafter and when there are discharges through the high outlet.
- All Checklist Maintenance items are MANDATORY.
- During inspections, if maintenance items are found not to be applicable, note as N/A in comments
- All removed sediments shall be disposed at an approved location or other facility permitted by MassDEP.
- All hazardous debris removed shall be disposed of in accordance with state and federal regulations (Hazardous waste Regulations, 310 CMR 30.000) by a properly licensed contr actor
- Infiltration Ponds Only: When infiltration rates decrease below design infiltration rates, remove accumulated surface sediments and rototill pond bottom. Revegetate bottom of infiltration pond as needed.
- Mow the buffer area, side slopes and basin bottom grassed floor; rake if stone bottom; remove trash grass clipping and accumulated organic matter semi-annually.
- Important items to check during the inspection include:
    - Signs of differential settlement
    - Cracking.
    - Erosion.
    - Leakage in the embankments
    - Tree growth on the embankments.
    - Condition of riprap.
    - Sediment accumulation and
    - The health of the turf.

Infiltration Pond
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

MAINTENANCE ITEM	SATISFACTORY (YES/NO)	COMMENTS
1. Embankment and Emergency Spillway (Semi-Annually)		
Vegetation and ground cover adequate. Area free of accumulated organic matter.		
Embankment erosion or tree growth.		
The area at the top of the basin must provide unimpeded vehicular access around the entire basin perimeter and shall be no less than 12 feet.		
Signs of differential settlement.		
The health of the vegetation.		
Animal burrows.		
Unauthorized planting.		
Cracking, bulging or sliding of dam.		
• Upstream face		
• Downstream face		
• At or beyond toe		
• Downstream		
• Upstream		
• Emergency spillway		
Basin, toe & chimney drains clear and functioning.		

Infiltration Pond
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

Seeps/leaks on downstream face.		
Slope protection or riprap failure.		
Vertical/horizontal alignment of top of dam "As-Built".		
Emergency Spillway clear of obstructions and debris.		
2. Riser and Principal Spillway (Semi-Annually)		
Type: Reinforced Concrete___ Corrugated Pipe_____ Masonry_____ Low-flow orifice obstructed		
Low-flow trash rack • Debris removal necessary		
• Corrosion control		
Weir trash rack maintenance • Debris removal necessary		
• Corrosion control		
Excessive Sediment accumulation inside riser.		
Concrete/Masonry condition riser and barrels • cracks or displacement		
• Minor spalling (<1")		
• Major spalling (rebars exposed)		
• Joint failures		
• Water tightness		
Metal pipe Condition.		
Control Valve • Operational/ Exercised		

Infiltration Pond
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

• Chained and Locked		
Basin Drain Valve • Operational/ Exercised		
Outfall channels functioning.		
3. Dry Basin Areas (Semi-Annually)		
Vegetation adequate. Area free of accumulated organic matter.		
Undesirable vegetative growth.		
Undesirable woody vegetation.		
Low-flow channels clear of obstructions.		
Standing water or wet spots.		
Annual mowing of vegetation along the maintenance access roads.		
Annual inspection of vegetation within basin.		
Prune all dead or dying vegetation within the extents of the basin or WVTS.		
Sediment and/or trash accumulation		
Remove all herbaceous vegetation root stock when overcrowding of the maintenance access to the facility, remove any vegetation that has a negative impact on stormwater flowage through facility, and trim any overgrown vegetation within the basin.		
Replace any/all original vegetation that has died off or has not fully established, as determined at the time of the inspection.		
Any invasive vegetation encroaching upon the perimeter of the facility should be pruned or removed if it is prohibiting access to the		

Infiltration Pond
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

facility, compromising sight visibility and/or compromising original design vegetation.		
4. Condition of Outfalls (Semi-Annually)		
Riprap failures.		
Slope erosion.		
Storm drain pipes.		
Endwalls/ Headwalls		
Other (specify).		
5. Emergent Vegetation (Semi-Annually)		
Semi-annual mowing of vegetation: Semi-Annual mowing of the basin setback is only required along maintenance rights-of-way and the embankment. The remaining setback can be managed as rangeland or forest.		
Dominant emergent plants: Survival of desired emergent plant species. Distribution according to planting plan.		
Evidence of invasive species.		
Maintenance of adequate water depths for desired emergent plant species.		
Harvesting of emergent plantings needed.		
Have sediment accumulations reduced pool volume significantly or are plants “choked” with sediment.		
Eutrophication level of the WVTS.		
6. Permanent Lined Concrete Chute Area (Semi-Annually)		
Upstream face.		

Infiltration Pond
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

Downstream face.		
Seeps/leaks on concrete face.		
Joint failures.		
Riprap failures.		
Concrete Chute not displacing .		
Spillway clear of obstructions, debris, sediment and/or trash accumulation.		
7. Monitoring Well (Semi-Annually)		
Opening clear of debris/ easily located.		
8. Draw Down System (Semi-Annually)		
Pipe outlet clear of debris/ easily located.		
Sock clear of sediment/ blockage.		
Perforated and solid pipe clear of sediment/ debris.		
Valve location clear of debris/ easily located.		

COMMENTS:

Infiltration Pond
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

ACTIONS TO BE TAKEN:

Street Sweeping
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

Notes:

- Beyond inspection frequency noted in parenthesis, i.e. (quarterly), inspections shall be completed after storms equal to or greater than the 1-year 24-hour Type III storm event (2.7" of rain fall)
- All Checklist Maintenance items are MANDATORY.
- During inspections, if maintenance items are found not to be applicable, note as N/A in comments
- All removed sediments shall be disposed at an approved and permitted location.
- All hazardous debris removed shall be disposed of in accordance with state and federal regulations by a properly licensed contractor

MAINTENANCE ITEM	SATISFACTORY (YES/NO)	COMMENTS
Sweep all roadways two times per year. One of these sweepings must occur after winter sanding operations have concluded.		

COMMENTS:

Street Sweeping
Operation, Maintenance, and Management
Inspection Checklist

Project: Date:

Location: Time:

Site Status: Inspector:

ACTIONS TO BE TAKEN:

Appendix B – Five-Year Recertification for Long-term Maintenance of Stormwater Management System

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Land Resources
17 State House Station
Augusta, Maine 04333

FIVE-YEAR RECERTIFICATION FOR LONG-TERM MAINTENANCE OF STORMWATER MANAGEMENT SYSTEMS

For Site Location & Stormwater Projects

This form complies with the condition that requires reporting every 5 years on the long-term maintenance of stormwater management structures of projects permitted under the Stormwater Management Law since 2005. Complete the following sections, include inspection photos, and use additional paper if needed. A copy of the report if the inspection was performed by a professional experienced in BMP maintenance should be included. Electronic copy of this form and information about the five-year recertication are available on the Maine DEP website at: http://www.maine.gov/dep/land/stormwater/stormwaterbmps/

Please type or print in black ink only

Owner/Licensee		**3rd Party Inspection Company** (if applicable)	
Name of Representative:		**Name of Inspector or preparer of report:**	
Company:		**Company:**	
Mailing Address:		**Mailing Address:**	
Daytime Phone #:		**Daytime Phone #:**	
E-mail Address:		**E-mail Address:**	

LOCATION OF DEVELOPMENT			
Name of Project:			
Address and Town:			
DEP Permit Number:		**Year of Permit:**	

PROJECT SPECIFICS	
If the project is unfinished, please describe its current status and your plans for the future. The filing of this report of on-site long-term maintenance activities is still required.	
If the project is within a MPDES Regulated Town, the maintenance report prepared for the town should be submitted with this form.	
If the project is a subdivision with a Homeowner's association, identify the responsible party.	
Confirm that the required recording of deed restrictions for the protection of buffers or conservation land has been done, and that the buffers are maintained according to the restrictions.	
Identify the contractor for the required renewal of a 5-year maintenance contract for the inspection, cleaning and maintenance of manufactured proprietary structures.	
Is a maintenance log available for review?	

LONG-TERM MAINTENANCE (please comment on the following):
All areas of the development have been inspected for erosion, and appropriate steps have been taken to permanently stabilize these areas.
All stormwater control structures have been inspected for damage, wear, malfunction, and appropriate steps have been taken to repair or replace the failing systems.
The erosion control and stormwater maintenance plan for the site is being implemented as written, and a maintenance log has been created and is being maintained.

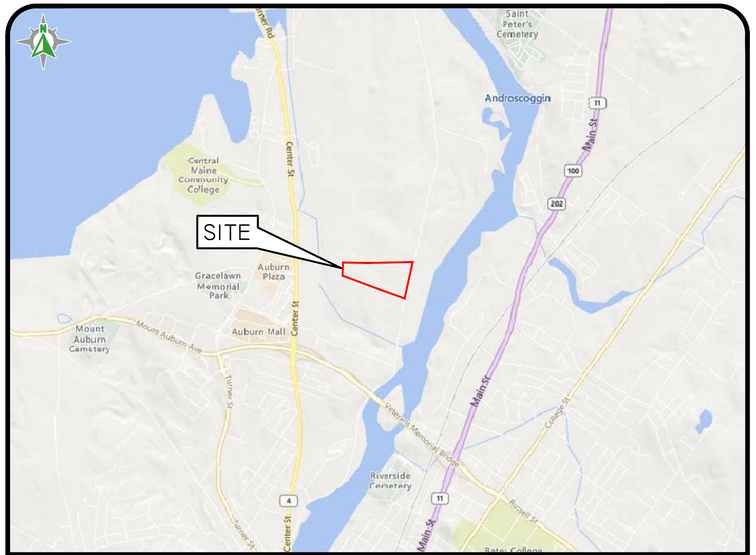
CERTIFICATIONS/SIGNATURES
By signing below. the owner (or authorized agent) certifies that all stormwater management structures at the project described above are stable and operational as designed.
Signed:_____ **Title**_____**Date:** 12/5/24
This completed form and all supporting documents summarized above shall be sent to the following address. An emailed report is appropriate and should be sent to Recert-DEP@maine.gov Five-year Recertification Bureau of Land Resources 17 State House Station Augusta, ME 04333 Tel: (207) 287-2624 or (207) 287-2602

Site Development Plans

Stetson Road

Located in
Auburn, Maine

Parcel ID 291-011



LOCATION MAP SCALE: 1" = 2000'

Sheet Index

1 Cover Sheet
2 Aerial Half-Mile Radius & USGS Map
3 Notes & Legend
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14 Stormwater Pond Complex A
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18 Detail Sheet - 3
19 Detail Sheet - 4
20 Landscape Plan
21 Landscape Notes & Details

SESC / O&M
THE SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC) AND STORMWATER OPERATION AND MAINTENANCE PLAN (O&M) ARE REQUIRED DOCUMENTS WITH THIS PLAN SET AND MUST BE MAINTAINED BY THE CONTRACTOR AND OWNER ON SITE.

DiPrete Engineering
Engineers · Planners · Surveyors
www.diprete-eng.com
Two Stafford Court, Cranston, RI 02920 · Tel 401-943-1000

STATE OF MAINE
BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

THIS PLAN SET MUST NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS STAMPED "ISSUED FOR CONSTRUCTION" AND STAMPED BY AN APPROVED PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING.

DIPRETE ENGINEERING ONLY WARRANTS PLANS ON A DIPRETE ENGINEERING TITLE BLOCK STAMPED BY REGISTERED PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING. DIPRETE ENGINEERING DOES NOT WARRANT PLANS BY ANY OTHER PARTY.

THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND OSHA COMPLIANCE IN THE IMPLEMENTATION OF THIS PLAN AND ENGINEERING.

EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR DAMAGES TO UNDERGROUND UTILITIES. CONTRACTOR TO CONTACT DIG SAFE AT 811 OR 1-888-DIG-SAFE (1-888-344-7233) PRIOR TO ANY EXCAVATION. SEE "UTILITY NOTE" ON SHEET 3.

NO.	DATE	DESCRIPTION	BY
1	01-04-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. J.M.F.

Cover Sheet

Stetson Road

PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. Building Company, Inc.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 1 OF 21

DE JOB NO. 2425-S2 COPYRIGHT 2024 BY DIPRETE ENGINEERING ASSOCIATES, INC.

Z:\DEPAWN\PROJECTS\2025-1122 STETSON ROAD APARTMENTS\AUTOCAD DRAWINGS\2025-1122-CVAR.DWG Plotted: 1/14/2025

PHOTO OBTAINED FROM NEARMAP
DATE OF PHOTOGRAPHY 04-27-2024

SCALE: 1"=400'
0 200' 400' 800'

USGS MAP SCALE: 1"=2000'

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STATE OF MAINE
BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

THIS PLAN SET MAY NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS STAMPED "ISSUED FOR CONSTRUCTION" AND SIGNED AND DATED BY A LICENSED PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING.

DIPRETE ENGINEERING ONLY WARRANTS PLANS ON A DIPRETE ENGINEERING TITLE BLOCK STAMPED BY REGISTERED PROFESSIONAL ENGINEER. DIPRETE ENGINEERING DOES NOT WARRANT PLANS BY ANY OTHER PARTY.

THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND OSHA COMPLIANCE IN THE IMPLEMENTATION OF THIS PLAN AND SHALL NOTIFY DIPRETE ENGINEERING IMMEDIATELY OF ANY DISCREPANCIES.

EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR FAILURE TO LOCATE ALL EXISTING UTILITIES OR THE ACCURACY OF LOCATIONS OF EXISTING UTILITIES SHOWN. CONTRACTOR SHALL CONTACT DIG SAFE AT 811 OR 1-888-DIG-SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION. SEE UTILITY NOTE ON SHEET 3.

NO.	DATE	DESCRIPTION	BY:
1	01-06-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. J.M.F.

AERIAL HALF-MILE RADIUS & USGS MAP

STETSON ROAD

PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

DE JOB NO. 2025-032 COPYRIGHT 2025 BY DIPRETE ENGINEERING ASSOCIATES, INC.

Z:\DEMAIN\PROJECTS\2025-032 STETSON ROAD APARTMENTS\AUTOCAD DRAWINGS\2025-032-CVAR.DWG Plotted: 1/6/2025

GENERAL NOTES:

1. THE SITE IS LOCATED ON THE CITY OF AUBURN, MAINE, PARCEL ID 291-011.
2. THE SITE IS APPROXIMATELY 29.8 ACRES AND IS ZONED GB - GENERAL BUSINESS.
3. THE OWNER OF PARCEL ID 291-011 IS:

   CONCORD GENERAL MUTUAL INSURANCE CO.
   P.O. BOX 1350
   AUBURN, ME 04211-1350

4. THIS SITE IS LOCATED IN FEMA FLOOD ZONE X (UNSHADED). REFERENCE FEMA FLOOD INSURANCE RATE MAP 23001C0214E, MAP REVISED JULY 8, 2013. (FLOOD PLAIN DESCRIPTIONS SHOWN BELOW)
   - ZONE X (UNSHADED) - THIS SITE IS LOCATED IN FEMA FLOOD ZONE X, WHICH ARE AREAS WHERE THERE IS MINIMAL FLOODING.
5. THE SITE IS WITHIN A:

   MANUFACTURED HOUSING OVERLAY (TOWN)
   FIREARMS RESTRICTED ZONE (TOWN)
   GAS ZONE (TOWN)

6. THE BOUNDARY LINE AS SHOWN ON THE ENGINEERING PLAN SET DEPICTS THE RESULTS OF A BOUNDARY RETRACEMENT SURVEY AS PERFORMED BY DIPRETE ENGINEERING. THIS PLAN IS NOT TO BE CONSTRUED AS A BOUNDARY RETRACEMENT SURVEY PLAN AND IS NOT SUITABLE FOR RECORDING AS A SURVEY PLAN IN CONFORMANCE WITH APPLICABLE RULES AND REGULATIONS.
7. ALL WORK PERFORMED HEREIN IS TO BE GOVERNED BY CURRENT EDITIONS OF THE MAINE DOT STANDARD DETAILS & SPECIFICATIONS, MUNICIPAL STANDARD SPECIFICATIONS AND DETAILS AND SPECIFICATIONS INCLUDED AS PART OF THE DRAWINGS. IN AREAS OF CONFLICT BETWEEN THE DIFFERENT SPECIFICATIONS, THE DESIGN PLANS AND PROJECT SPECIFICATIONS WILL TAKE PRECEDENCE OVER THE GENERAL SPECIFICATIONS AND THE DESIGN ENGINEER WILL INTERPRET THE CONSTRUCTION REQUIREMENT. THE CONTRACTOR IS ADVISED TO SUBMIT A REQUEST FOR INFORMATION (RFI) FOR ANY AREAS OF CONFLICT BEFORE COMMITTING TO CONSTRUCTION.
8. THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE PROJECT PLANS AND THE CONTRACTOR/OWNER MUST MAINTAIN THESE DOCUMENTS AS PART OF A FULL PLAN SET:
   - EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION. THE EROSION CONTROL PLAN INCLUDES THE FOLLOWING:
     - EROSION CONTROL MEASURES
     - SHORT TERM MAINTENANCE
     - ESTABLISHMENT OF VEGETATIVE COVER
     - CONSTRUCTION POLLUTION PREVENTION
     - SEQUENCE OF CONSTRUCTION
   - STORMWATER OPERATION AND MAINTENANCE PLAN (O&M). THE O&M CONTAINS:
     - LONG TERM MAINTENANCE
     - LONG TERM POLLUTION PREVENTION
9. THIS PLAN SET REFERENCES MAINE DEPARTMENT OF TRANSPORTATION (MAINEDOT) STANDARD DETAILS (DESIGNATED AS MAINEDOT DETAIL XXX). MAINEDOT STANDARD DETAILS ARE AVAILABLE FROM MAINEDOT.
10. THE SITE IS TO BE SERVICED BY PUBLIC WATER AND PUBLIC SEWER.
11. THE DRAINAGE SYSTEM IS DESIGNED TO MEDEP CHAPTER 500 STORMWATER MANAGEMENT REGULATIONS. THE STORMWATER MANAGEMENT SYSTEMS MEET THE MAINE DEP BEST MANAGEMENT PRACTICES.
12. THE SITE IS PROPOSED TO BE BUILT IN 1 PHASE.
13. BORINGS AND BORING LOGS, TEST PITS, SOIL EVALUATIONS, WERE COMPLETED BY SW COLE ON SEPTEMBER 17 2024.
14. WETLAND EDGE DELINEATED BY MARK HAMPTON ASSOCIATES IN JANUARY OF 2023.
15. ANY PROPRIETARY PRODUCTS REFERENCED IN THIS PLAN SET ARE REPRESENTATIVE OF THE MINIMUM DESIGN REQUIREMENTS FOR THE PURPOSE THEY PROPOSE TO SERVE. ALTERNATIVES TO ANY PROPRIETARY PRODUCT MAY BE SUBMITTED TO THE ENGINEER OF RECORD FOR CONSIDERATION, WHICH MUST BE ACCOMPANIED BY APPROPRIATE SPECIFICATION SHEETS/DESIGN CALCULATIONS THAT DEMONSTRATE THE ALTERNATIVE(S) MEET THE MINIMUM DESIGN PARAMETERS OF THE PRODUCT SHOWN ON THE PLANS. NO ALTERNATIVES MAY BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
16. THIS PLAN SET MAY REFERENCE AND/OR INCLUDE REPRODUCTIONS OF PROPRIETARY PRODUCTS/ DETAILS BY OTHERS, AND/OR THEIR ASSOCIATED SPECIFICATIONS. ANY REFERENCED OR REPRODUCED PROPRIETARY PRODUCT OR DETAIL BY OTHERS THAT IS SHOWN ON DIPRETE PLANS IS STRICTLY FOR INFORMATION/SPECIFICATION PURPOSES ONLY. DIPRETE ENGINEERING DOES NOT WARRANT ANY PROPRIETARY PRODUCTS, DETAILS BY OTHERS OR THEIR RESPECTIVE DESIGNS. IF A DIPRETE ENGINEERING PLAN INCLUDES A PROPRIETARY PRODUCT/DETAIL BY OTHERS (EITHER EXPLICITLY OR IMPLIED) AND IS STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND/OR REGISTERED LANDSCAPE ARCHITECT OF DIPRETE ENGINEERING, SAID STAMP DOES NOT EXTEND TO ANY PORTION OF THE PROPRIETARY PRODUCT/DETAIL BY OTHERS OR ITS DESIGN.

SOIL INFORMATION:

(REFERENCE: USDA NATURAL RESOURCES CONSERVATION SERVICE)

SOIL NAME	DESCRIPTION
AaB	AGAWAM FINE SANDY LOAM, 2 TO 8 PERCENT SLOPES
BaB	NICHOLVILLE VERY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES
BaC	NICHOLVILLE VERY FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES
BuC2	BUXTON SILT LOAM, 8 TO 15 PERCENT SLOPES
HrB	HARTLAND VERY FINE SANDY LOAM, 2 TO 8 PERCENT SLOPES
HrC2	HARTLAND VERY FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES, ERODED
HrD2	HARTLAND VERY FINE SANDY LOAM, 15 TO 25 PERCENT SLOPES, ERODED
HrB	LYMAN-TUNBRIDGE COMPLEX, 0 TO 8 PERCENT SLOPES, ROCKY
HrC	LYMAN-TUNBRIDGE COMPLEX, 8 TO 15 PERCENT SLOPES, ROCKY

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" MANUAL PUBLISHED BY BUREAU OF LAND AND WATER QUALITY MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
2. ALL AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE LOAM AND SEED PER DETAIL.
3. SEE GRADING AND UTILITY DRAWINGS FOR PIPE AND STRUCTURE DATA TABLES.
4. NOTE THE SOIL EROSION AND SEDIMENT CONTROL SHOWN ON THESE PLANS ARE THE MINIMUM QUANTITY/TYPE OF EROSION CONTROL DEVICES AND MATERIALS DEEMED REQUIRED BY DIPRETE ENGINEERING TO MEET THE APPLICABLE REGULATIONS.
5. TEMPORARY SWALES MUST BE USED TO CONTROL RUNOFF DURING CONSTRUCTION OF THE PROPOSED SITE WORK. TEMPORARY SWALES MUST BE VEGETATED AFTER CONSTRUCTION. EROSION CONTROL MATTING MUST BE INSTALLED, IF NECESSARY, TO PROVIDE ADEQUATE SUPPORT FOR SUFFICIENT VEGETATION. AFTER CONSTRUCTION IS COMPLETE AND TRIBUTARY AREAS TO THE SWALES HAVE BEEN STABILIZED, THE TEMPORARY SWALES MUST BE CLEARED AND FINAL DESIGN, INCLUDING INSTALLATION OF THE GRASS SWALES, TO BE PER THE DESIGN PLANS.
6. ONCE THE SEDIMENT MANAGEMENT MEASURES ARE NO LONGER REQUIRED AND ALL TRIBUTARY AREAS HAVE BEEN STABILIZED, THE TEMPORARY SEDIMENT MEASURES MUST BE CLEANED AND BROUGHT TO FINAL DESIGN GRADES.
7. INLET PROTECTION MUST BE INSTALLED ON ALL CATCH BASINS ONCE CONSTRUCTED.
8. CONTRACTOR MAY MODIFY SEQUENCE OF CONSTRUCTION WITH APPROVAL FROM DESIGN ENGINEER AND OWNER.

DEMOLITION NOTES:

1. CONTRACTOR MUST OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS PRIOR TO THE START OF CONSTRUCTION.
2. CONTRACTOR MUST PERFORM DAILY SWEEPING AT CONSTRUCTION ENTRANCE DURING DEMOLITION AND CONSTRUCTION TO MINIMIZE SEDIMENTS ON EXTERNAL STREETS.
3. ANY EXISTING BUILDING(S) AND PROPERTY PROPOSED TO REMAIN THAT ARE DAMAGED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS INDICATED ON THE PLANS UNLESS SPECIFIED OTHERWISE HERE IN. R&D MATERIALS MUST INCLUDE BUT ARE NOT LIMITED TO PAVEMENT, GRAVEL, CATCH BASINS, MANHOLES, GRATES/FRAMES/COVERS, AND ANY EXCESS SOIL THAT IS NOT INCORPORATED INTO THE WORK.
5. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, ALL DISTURBED AREAS, INCLUDING THE CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF WORK, MUST BE RESTORED TO MATCH THE DESIGN PLANS.
6. CONTRACTOR MUST DOCUMENT LOCATION OF ALL SUBSURFACE UTILITIES REMAINING IN PLACE AFTER DEMOLITION (ACTIVE AND INACTIVE/ABANDONED). LOCATION MUST BE DOCUMENTED BY FIELD SURVEY OR SWING TIES. COPIES OF LOCATION DOCUMENTATION MUST BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF DEMOLITION AND PRIOR TO START OF NEW CONSTRUCTION. A MARKER MUST BE INSTALLED TO FINISH GROUND AT ALL INSTALLED CAPS/PLUGS. THE MARKER CAN BE A POST IN CONSTRUCTION AREAS OR PAINTED ON A PERMANENT SURFACE.
7. ACTIVE UTILITY LINES AND STRUCTURES NOT SPECIFICALLY NOTED ON PLANS, BUT WHICH ARE ENCOUNTERED TO BE IN CONFLICT WITH THE PROPOSED WORK, MUST BE EXTENDED, PROTECTED, OR REWORKED BY THE CONTRACTOR AS DIRECTED OR REQUIRED BY THE UTILITY ENTITY OR OWNER UNLESS OTHERWISE NOTED.
8. CONTRACTOR MUST COORDINATE THE CUTTING AND CAPPING OF ALL UTILITIES WITH THE OWNER, THE MUNICIPALITY, AND ALL APPLICABLE UTILITY ENTITIES HAVING JURISDICTION.
9. INACTIVE SUBSURFACE UTILITIES NOT IN CONFLICT WITH THE PROPOSED WORK AREA MAY BE ABANDONED IN PLACE WITH WRITTEN PERMISSION FROM THE OWNER.

TRAFFIC NOTES:

1. ALL TRAFFIC CONTROL MUST CONFORM TO THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
2. DURING CONSTRUCTION, TRAFFIC CONES MUST BE USED FOR SEPARATION OF ACTIVE TRAFFIC FROM WORK ZONE PER MUTCD REQUIREMENTS.
3. DURING CONSTRUCTION FLAGGERS MUST BE EMPLOYED TO ENSURE SAFETY FOR INTERACTION OF CONSTRUCTION VEHICLES AND ACTIVE TRAFFIC.
4. ALL SIGNS, FLAGGERS, TRAFFIC CONTROL DEVICES, AND TEMPORARY TRAFFIC ZONE ACTIVITIES MUST MEET THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC (MUTCD) LATEST EDITION AND SUBSEQUENT ADDENDA.
5. TEMPORARY CONSTRUCTION SIGNS MUST BE MOUNTED ON MAINE DOT APPROVED SUPPORTS AND MUST BE REMOVED OR COVERED WHEN NOT APPLICABLE.

AS-BUILT NOTES:

ALL COMPONENTS OF THE DRAINAGE, SEWER, AND WATER SYSTEMS MUST BE MUST BE FIELD LOCATED PRIOR TO COVERING. NOTIFY SURVEYOR A MINIMUM OF SEVENTY-TWO (72) HOURS IN ADVANCE OF NEED FOR FIELD LOCATION OF IMPROVEMENTS. SURVEYOR MUST PROVIDE OWNER AND CONTRACTOR WITH WRITTEN NOTICE OF COMPLETION OF FIELD WORK PRIOR TO CONTRACTOR COVERING IMPROVEMENTS. OWNER/DIPRETE WILL NOT ACCEPT FIELD MEASUREMENTS FROM THE SITE CONTRACTOR.

LAYOUT AND MATERIALS:

1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2. CURBING MUST BE PRECAST CONCRETE OR AS LABELED ON THE PLANS.
3. SIDEWALK MUST BE CONCRETE OR AS LABELED ON THE PLANS.
4. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR MUST REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
5. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS PERTAINING TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
6. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION MUST BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
7. CONTRACTOR MUST NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS. CONTRACTOR MUST VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE STAMPED PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
8. ALL GUARDRAIL ONSITE MUST BE STEEL BACKED TIMBER GUARDRAIL WITH STEEL POSTS, IN CONFORMANCE WITH SECTION 5.4.1.7 OF THE AASHTO ROADSIDE DESIGN GUIDE. ALTERNATIVE GUARDRAILS WILL BE CONSIDERED BY THE DESIGN ENGINEER IF THEY ARE DOT APPROVED EQUAL AND ACCEPTABLE TO THE OWNER. ALTERNATIVES MUST BE APPROVED IN WRITING BY THE OWNER AND DESIGN ENGINEER PRIOR TO CONSTRUCTION.
9. INFRARED TREATMENT OF PAVEMENT IS REQUIRED AT ALL CURB CUTS, ANY DISTURBED PAVEMENT ON ROADWAYS AND WHERE ANY NEW PAVEMENT MEETS EXISTING PAVEMENT.
10. ALL EXISTING PAVEMENT MARKING REMOVED AS INCIDENTAL DURING CONSTRUCTION MUST BE REPLACED IN-KIND FOLLOWING COMPLETION OF CONSTRUCTION UNLESS OTHERWISE NOTED.
11. NEW PAVEMENT MARKING MUST BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE F. PAINT MUST BE APPLIED AS SPECIFIED BY THE MANUFACTURER.

GRADING AND UTILITY NOTES:

1. CONSTRUCTION TO COMMENCE FALL 2025 OR UPON RECEIPT OF ALL NECESSARY APPROVALS.
2. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION. PROTECT EXISTING ONSITE SEWER PIPE AND ADJUST MANHOLE RIMS TO GRADE WHERE APPLICABLE.
3. THE CONTRACTOR MUST COORDINATE WITH ALL OF THE APPROPRIATE UTILITY COMPANIES FOR AGREEMENTS TO SERVICE THE PROPOSED BUILDING. THIS MUST BE DONE PRIOR TO CONSTRUCTION. NO REPRESENTATIONS ARE MADE BY DIPRETE ENGINEERING THAT UTILITY SERVICE IS AVAILABLE.
4. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING FINISH GRADING AND DRAINAGE AROUND THE BUILDING TO ENSURE SURFACE WATER AND/OR GROUNDWATER ARE DIRECTED AWAY FROM THE STRUCTURE.
5. PRIOR TO START OF CONSTRUCTION, CONTRACTOR MUST VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES. CONTRACTOR MUST NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
6. ALL PROPOSED UNDERGROUND UTILITIES SERVING THE SITE AND BUILDINGS MUST BE COORDINATED WITH OWNER, ARCHITECT, AND ENGINEER PRIOR TO INSTALLATION.
7. ALL RETAINING WALLS AND STEEP SLOPES ARE SUBJECT TO FINAL STRUCTURAL DESIGN. DIPRETE ENGINEERING IS NOT PROVIDING THE STRUCTURAL DESIGN OF THESE ITEMS. ALL WALLS AND STEEP SLOPES MUST BE DESIGNED AND BUILT UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER SUITABLY QUALIFIED IN GEOTECHNICAL ENGINEERING AND CERTIFIED TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT. SHOP DRAWINGS MUST BE SUBMITTED PRIOR TO CONSTRUCTION. FINAL STRUCTURAL DESIGN MUST INCORPORATE THE INTENT OF THE GRADING SHOWN ON THESE PLANS AND ALL WORK MUST BE WITHIN THE LIMIT OF DISTURBANCE SHOWN ON THE PLANS.
8. ALL CUT AND FILL WORK MUST BE DONE UNDER THE DIRECTION OF A PROFESSIONAL GEOTECHNICAL ENGINEER, WITH TESTING AND CERTIFICATION PROVIDED TO THE APPLICANT AT THE COMPLETION OF THE PROJECT. DIPRETE ENGINEERING IS NOT PROVIDING THE FILL SPECIFICATION, GEOTECHNICAL ENGINEERING, STRUCTURAL ENGINEERING SERVICES, OR SUPERVISION AS PART OF THESE DRAWINGS.
9. MATERIAL STOCKPILES MUST NOT BE LOCATED IN THE RIGHT-OF-WAY, AND TRENCHES MUST NOT BE LEFT OPEN OVERNIGHT.
10. ALL LOAM IN DISTURBED AREAS MUST BE STOCKPILED FOR FUTURE USE.
11. ALL EXCESS SOIL, TREES, ROCKS, BOULDERS, AND OTHER REFUSE, MUST BE DISCARDED OFF SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. STUMPS MUST BE GROUND ON SITE OR REMOVED.
12. THE SITE WILL HAVE 6" CONCRETE CURBING. SITE GRADING/CONTOURS SHOWN ON THE PLANS DO NOT NECESSARILY REFLECT THE APPROPRIATE BERM/CURBING REVEAL. CONTRACTOR MUST INSTALL CURBING WITH APPROPRIATE REVEAL UNLESS OTHERWISE NOTED.
13. NO STUMP DUMPS ARE PROPOSED ON SITE.
14. ALL DRAINAGE OUTFALLS ARE DESIGNED TO BE INSTALLED AT EXISTING GROUND ELEVATION. CONTRACTOR MUST IMMEDIATELY NOTIFY DIPRETE ENGINEERING OF ANY DISCREPANCIES WHERE EXISTING GROUND IS HIGHER THAN OUTFALL DESIGN ELEVATION. ANY RESOLUTION OF DISCREPANCIES BY THE CONTRACTOR, UNLESS AUTHORIZED IN WRITING IN ADVANCE BY THE OWNER AND DIPRETE ENGINEERING, IS DONE AT THE CONTRACTOR'S RISK.
15. CONTRACTOR MUST PROVIDE SAW CUTTING AND FULL DEPTH PAVEMENT RESTORATION IN AREAS WHERE PAVEMENT AND/OR SIDEWALK IS REMOVED FOR UTILITY INSTALLATION.
16. IF ROADWAY SURFACE PAVEMENT COURSE IS NOT TO BE INSTALLED FOR 12 MONTHS OR MORE AFTER INSTALLATION OF DRAINAGE STRUCTURES, ALL CATCH BASIN RIMS MUST BE SET AT BINDER GRADE AND RAISED TO FINAL PAVEMENT GRADE PRIOR TO PLACEMENT OF SURFACE COURSE.
17. ALL INFRASTRUCTURE MUST MEET THE DISTRICT'S MATERIAL SPECIFICATIONS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE MATERIAL SUBMITTALS PRIOR TO INSTALLATION, PROVIDE AS-BUILTS FOR ALL MAINS AND SERVICES AND COMPLETE REQUIRED ACCEPTANCE TESTING PRIOR TO ACTIVATION OF THE MAINS. THIS INCLUDES VIDEO INSPECTION OF ALL SEWER MAINS, PRESSURE TESTING AND DISINFECTION CONSISTENT WITH AWWA STANDARDS OF ALL WATER MAINS PRIOR TO ACTIVATION.

DRAINAGE
ALL DRAINAGE PIPING MUST BE ADS N-12 DUAL WALL HIGH-DENSITY POLYETHYLENE (HDPE) WITH WATERTIGHT JOINTS WHERE INSTALLED WITHIN THE SEASONAL HIGH GROUNDWATER, UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS.

DRAINAGE STRUCTURES MUST BE FURNISHED AND INSTALLED IN ACCORDANCE WITH ALL APLICABLE REGULATIONS. ALL DRAINAGE STRUCTURES AND PIPES MUST BE WATERTIGHT.

DRAINAGE CONNECTIONS FROM ALL YARD DRAINS (YD), AREA DRAINS (AD), TRENCH DRAINS (TD), FRENCH DRAINS (FD), WALL DRAINS (WD), AND DOWNSPOUTS (DS) ARE SHOWN FOR SCHEMATIC PURPOSES ONLY. THE LEVEL OF DETAIL SHOWN DOES NOT INCLUDE ALL JOINTS THAT MAY BE REQUIRED FOR CONSTRUCTION. ALL FITTINGS AND PIPE SLOPES TO TIE INTO MAIN TRUNK LINE MUST BE FIELD FIT BY CONTRACTOR.

SANITARY SEWER
ALL SANITARY SEWER PIPING TO BE SDR 35 UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. ALL SEWER IMPROVEMENTS MUST COMPLY WITH THE MUNICIPAL WATER & SEWER AUTHORITY AND ANY APPLICABLE AUTHORITY HAVING JURISDICTION, INCLUDING (BUT NOT LIMITED TO) MATERIALS, DIMENSIONS AND ACCESS COVERS. CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR APPROVAL BY ENGINEER OF RECORD PRIOR TO CONSTRUCTION. ALL FITTINGS, STRUCTURE SEALS AND CONNECTIONS AT OR BELOW ELEVATION SPECIFIED IN APPLICABLE REGULATIONS MUST BE WATERTIGHT. ALL ACCESS OPENINGS AT OR BELOW ELEVATION SPECIFIED IN APPLICABLE REGULATIONS MUST BE BOLT DOWN.
ALL PIPES FROM BUILDING TO GREASE TRAP/INTERCEPTOR AND FROM GREASE TRAP/INTERCEPTOR TO THE NEXT STRUCTURE MUST BE CAST IRON AND IN ACCORDANCE WITH APPLICABLE REGULATIONS. FORCEMAIN PIPE SHALL BE DR-11 HDPE OR APPROVED EQUAL.

WATER
ALL WATER LINES MUST CONFORM TO APPLICABLE REGULATIONS. ALL WATER LINES MUST BE CEMENT LINED DUCTILE IRON PIPE (CLDIP). ALL WATER MAIN IMPROVEMENTS MUST COMPLY WITH THE LOCAL MUNICIPALITY WATER & SEWER AUTHORITY AND ANY APPLICABLE AUTHORITY HAVING JURISDICTION, INCLUDING (BUT NOT LIMITED TO) MATERIALS, DIMENSIONS AND ACCESS COVERS. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND SUBMITTALS TO THE ENGINEER OF RECORD FOR APPROVAL FOR ALL WATER IMPROVEMENTS AND APPURTENANCES INCLUDING BUT NOT LIMITED TO PIPES, VALVES, FITTINGS, HEAT ENCLOSURES, AND BACKFLOWS. ALL ACCESS OPENINGS AT OR BELOW ELEVATION SPECIFIED IN APPLICABLE REGULATIONS ARE TO BE BOLT DOWN.

IN THE CASE OF ANY NEW HYDRANT INSTALLED IN OR NEXT TO AN EXISTING SIDEWALK, THE CONTRACTOR MUST INCREASE THE WIDTH OF THE SIDEWALK, AS NECESSARY, TO MAINTAIN A MINIMUM OF 3'-0" CLEAR WIDTH FROM THE OUTERMOST COMPONENTS OF THE HYDRANT TO THE EDGE OF THE SIDEWALK. THE 3'-0" SIDEWALK WIDTH IS REQUIRED ONLY ON ONE SIDE OF THE HYDRANT TO PROVIDE A CLEAR PATH ON THE SIDEWALK.

ELECTRIC/TELECOM/GAS
PROPOSED GAS, ELECTRIC, CABLE AND DATA UTILITIES ARE SHOWN SCHEMATICALLY AND ARE PROPOSED TO BE UNDERGROUND. OWNER AND CONTRACTOR MUST COORDINATE FINAL DESIGN WITH APPROPRIATE UTILITY COMPANIES. ALL WORK MUST BE IN ACCORDANCE WITH EACH UTILITY COMPANY'S STANDARDS AND DETAILS, AS WELL AS LOCAL AND FEDERAL REGULATIONS. THIS INCLUDES BUT IS NOT LIMITED TO POLES, TRANSFORMERS, PULL BOXES, CONCRETE PADS, CONCRETE ENCASEMENTS AND CONDUITS. CONNECTION POINTS FOR ELECTRIC AND TELECOM UTILITIES, AT THE EXISTING INFRASTRUCTURE, ARE CURRENTLY SHOWN AS UNDERGROUND UTILITIES. THESE UTILITIES MAY BE UNDERGROUND OR OVERHEAD AND MUST BE COORDINATED WITH NATIONAL GRID/APPROPRIATE UTILITY AUTHORITY PRIOR TO CONSTRUCTION. ALL ACCESS OPENINGS AT OR BELOW ELEVATION SPECIFIED IN APPLICABLE REGULATIONS MUST BE BOLT DOWN WHERE APPLICABLE.

SITE LIGHTING
SITE LIGHTING (TEMPORARY AND PERMANENT) MUST BE DIRECTED AWAY FROM AND SHIELDED FROM ENVIRONMENTALLY SENSITIVE AREAS AND ABUTTING LANDS. EXACT LOCATIONS OF LIGHT POLE MUST BE COORDINATED WITH OTHER UTILITIES AND MUST BE LOCATED WITHIN THE STREET RIGHTS OF WAY. FINAL LIGHTING AND CONDUIT LOCATIONS BY OTHERS.

AMERICANS WITH DISABILITIES ACT (ADA) NOTES:

1. ALL IMPROVEMENTS MUST COMPLY WITH THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES" (ADAAG) BY THE US DEPARTMENT OF JUSTICE (CURRENT EDITION).
2. MAXIMUM RUNNING SLOPE ALONG ALL ACCESSIBLE PATHS OF TRAVEL MUST BE 4.5% (0.045 FT/FT), AND MAXIMUM CROSS SLOPE ACROSS ALL ACCESSIBLE PATHS OF TRAVEL MUST BE 1.5% (0.015 FT/FT).
3. ADA PARKING SPACES AND LOADING AREAS: THE STEEPEST SLOPE OF THE SPACE, MEASURED IN ANY DIRECTION (INCLUDING DIAGONALLY), MUST BE LESS THAN OR EQUAL TO 2% (0.02 FT/FT). DIPRETE ENGINEERING GENERALLY RECOMMENDS A MAXIMUM OF 1.4% (0.014 FT/FT) BE USED FOR BOTH RUNNING AND CROSS SLOPES IN ORDER TO COMPLY.
4. A MINIMUM 5'X5' LANDING MUST BE PROVIDED IN FRONT OF ALL PUBLICLY ACCESSIBLE BUILDING ENTRANCES/ EGRESSES. THE STEEPEST SLOPE OF THE LANDING, MEASURED IN ANY DIRECTION (INCLUDING DIAGONALLY), MUST BE LESS THAN OR EQUAL TO 2% (0.02 FT/FT). DIPRETE ENGINEERING GENERALLY RECOMMENDS A MAXIMUM OF 1.4% (0.014 FT/FT) BE USED FOR BOTH RUNNING AND CROSS SLOPES IN ORDER TO COMPLY.
5. FOR EVERY 6 (OR FRACTION OF 6) ADA PARKING SPACES, AT LEAST ONE MUST BE A VAN PARKING SPACE. FOR EXAMPLE, IF 7 ADA PARKING SPACES ARE REQUIRED, A MINIMUM OF 2 MUST BE VAN SPACES.
6. NOTWITHSTANDING THE NOTES LISTED ABOVE, TOWN OR STATE-SPECIFIC STANDARDS MAY BE MORE STRINGENT AND OVERRULE. IT IS THE RESPONSIBILITY OF THE USER OF THIS PLAN SET TO MAINTAIN COMPLIANCE WITH THE CONTROLLING STANDARD.
7. NOTE THAT THE GRADING/PLAN VIEWS AND DETAILS CONTAINED WITHIN THIS PLAN SET MAY NOT SHOW THE DETAIL NECESSARY TO CONSTRUCT WALKWAYS, RAMPS AND SPACES TO COMPLY WITH THE ABOVE REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE LEVEL OF CARE NECESSARY TO BE CERTAIN THAT THE CONSTRUCTED PRODUCT MEETS ADA/CONTROLLING STANDARDS. IN THE EVENT OF ANY NON COMPLIANCE THE CONTRACTOR MUST NOTIFY THE DESIGNER BEFORE CONSTRUCTION FOR ADVICE IN FINDING A RESOLUTION.

ABBREVIATIONS LEGEND

ADA	AMERICANS WITH DISABILITY ACT
AHJ	AUTHORITY HAVING JURISDICTION
AP	ASSESSOR'S
ARCH	ARCHITECT
BC	BOTTOM OF CURB
BT	BOTTOM OF TESTHOLE
BIT	BITUMINOUS (BERM)
BIO	BIORETENTION
BS	BASEMENT SLAB ELEVATION
BW	FINISHED GRADE AT BOTTOM OF WALL
CB	CATCH BASIN
(C)	CALCULATED
℄	CENTERLINE
(CA)	CHORD ANGLE
CLDIP	CONCRETE LINED DUCTILE IRON PIPE
CO	CLEAN OUT
CONC	CONCRETE
(D)	DEED
DCB	DOUBLE CATCH BASIN
DI	DROP INLET
DMH	DRAINAGE MANHOLE
DP	DETENTION POND
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
ESC	EROSION AND SEDIMENT CONTROL
EX	EXISTING
FES	FLARED END SECTION
FFE	FINISH FLOOR ELEVATION
GS	GARAGE SLAB ELEVATION
GWT	GROUND WATER TABLE
HW	HEADWALL
HC	HIGH CAPACITY CATCH BASIN GRATE
HDPE	HIGH DENSITY POLYETHYLENE
ID	INLINE DRAIN
INV	INVERT
IP	INFILTRATION POND
LARCH	LANDSCAPE ARCHITECT
LF	LINEAR FEET
LOD	LIMIT OF DISTURBANCE
LP	LIGHT POLE
(M)	MEASURED
MEP	MECHANICAL/ELECTRICAL/ PLUMBING ENGINEER
N/F	NOW OR FORMERLY
OHW	OVERHEAD WIRE
PE	POLYETHYLENE
℗	PROPERTY LINE
PR	PROPOSED
PVC	POLYVINYL CHLORIDE
R	RADIUS
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RL	ROOF LEADER
ROW	RIGHT-OF-WAY
S	SLOPE
SD	SUBDRAIN
SED	SEDIMENT FOREBAY
SF	SQUARE FOOT
SFL	STATE FREEWAY LINE
SFM	SEWER FORCE MAIN
SG	SLAB ON GRADE ELEVATION
SHL	STATE HIGHWAY LINE
SMH	SEWER MANHOLE
SNDF	SAND FILTER
SS	SIDE SLOPE
STA	STATION

GENERAL NOTES

1. THE PARCEL IS FOUND ON PARCEL ID 291-011 IN THE CITY OF AUBURN, ANDROSCOGGIN COUNTY, MAINE.
2. THE OWNER PER DEED 1796, PAGE 269 IS CONCORD GENERAL MUTUAL INSURANCE COMPANY.
3. THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. REFERENCE FEMA FLOOD INSURANCE RATE MAP 23001C0214E, MAP REVISED JULY 8, 2013. THIS DESIGNATION MAY CHANGE BASED UPON REVIEW BY A FLOOD ZONE SPECIALIST OR BY THE RESULTS OF A COMPREHENSIVE FLOOD STUDY.
4. THE PARCEL IS ZONED GB BASED ON THE CITY OF AUBURN ONLINE GIS. ANY OVERLAY DISTRICTS, SPECIAL PERMITS OR VARIANCES SPECIFIC TO THIS SITE ARE NOT TAKEN INTO CONSIDERATION. PLEASE CONTACT THE ZONING DEPARTMENT FOR ANY ADDITIONAL INFORMATION OR FOR A CERTIFICATE OF ZONING.
5. THERE WERE NO CEMETERIES, GRAVE SITES AND OR BURIAL GROUNDS OBSERVED WITHIN THE LIMITS OF THE SURVEY.
6. FIELD SURVEY PERFORMED BY DIPRETE ENGINEERING ON MAY 31, 2024. THIS PLAN REFLECTS ON THE GROUND CONDITIONS AS OF THAT DATE.
7. ELEVATIONS SHOWN HEREON, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), AS DETERMINED BY DIPRETE ENGINEERING USING REAL TIME KINEMATIC G.P.S. OBSERVATIONS.
8. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. DIPRETE ENGINEERING IS NOT RESPONSIBLE FOR ANY UNKNOWN OR UNRECORDED EASEMENTS, DEEDS OR CLAIMS THAT A TITLE REPORT WOULD DISCLOSE.
9. PLANIMETRIC FEATURES, CONTOUR LINES, AND SPOT ELEVATIONS WERE STEREO COMPILED AT A SCALE OF 1"=40' BY BLUE-SKY, NORTH ADAMS, MA. SUB-CONSULTANTS TO THE OWNER/DEVELOPER, FROM BLACK AND WHITE PHOTOGRAPHY TAKEN AT A SCALE OF 1"=500' AND FIT TO GROUND CONTROL POINTS SURVEYED BY DEA GROUND BY DEA USING REAL TIME KINEMATIC G.P.S. OBSERVATIONS. THE CONTOUR INTERVAL IS 2 FEET. NINETY PERCENT OF THE TOPOGRAPHY AS DEPICTED IS ACCURATE TO WITHIN HALF THE CONTOUR INTERVAL, AND THE REMAINING TEN PERCENT IS ACCURATE TO WITHIN ONE FULL CONTOUR INTERVAL.
10. WETLAND LOCATIONS ARE SHOWN BASED ON INFORMATION PROVIDED BY MARK HAMPTON ASSOCIATES, INC.

UTILITY NOTES

1. ALL EXISTING UTILITIES DEPICTED ARE SHOWN ACCORDANCE WITH UTILITY QUALITY LEVEL C AS DEFINED IN CI/ASCE STANDARD 38-02 *(STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA)*, LATEST REVISION.
2. ALL EXISTING UNDERGROUND UTILITIES SHOWN WERE PROVIDED BY OTHERS AND ARE APPROXIMATE ONLY. LOCATIONS MUST BE DETERMINED IN THE FIELD BEFORE EXCAVATION, BLASTING, UTILITY INSTALLATION, BACKFILLING, GRADING, PAVEMENT RESTORATION, AND ALL OTHER SITE WORK. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THESE DOCUMENTS. CONTACT DIG SAFE A MINIMUM OF 72 WORKING HOURS PRIOR TO ANY CONSTRUCTION AT 811. DIG SAFE IS RESPONSIBLE FOR CONTACTING MEMBER UTILITY COMPANIES. DIG SAFE MEMBER UTILITY COMPANIES ARE RESPONSIBLE TO MARK ONLY THE FACILITIES THAT THEY OWN OR MAINTAIN. NON DIG SAFE MEMBER COMPANIES ARE NOT NOTIFIED BY DIG SAFE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE AND NOTIFY IF ANY PRIVATELY OWNED OR NON DIG SAFE MEMBER UTILITIES ARE IN THE AREA.
3. PER THE CODE OF FEDERAL REGULATIONS - TITLE 29, PART 1926 IT IS THE SITE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ACCURATE UNDERGROUND UTILITY LINE LOCATIONS FROM THE UTILITY COMPANIES, UTILITY OWNERS AND, OR VIA UNDERGROUND UTILITY LOCATION EQUIPMENT AS NEEDED TO ESTABLISH ACCURATE LOCATIONS PRIOR TO ANY EXCAVATION. THE USE OF PROFESSIONAL UTILITY LOCATING COMPANIES PRIOR TO ANY EXCAVATION IS RECOMMENDED.
4. DIPRETE ENGINEERING IS NOT A PROFESSIONAL UTILITY LOCATION COMPANY, AND IS NOT RESPONSIBLE FOR UNDERGROUND UTILITIES, DEPICTED OR NOT, EITHER IN SERVICE OR ABANDONED. ANY SIZES, LOCATIONS, EXISTENCE, OR LACK OF EXISTENCE OF UTILITIES SHOWN ON THESE PLANS SHOULD BE CONSIDERED APPROXIMATE UNTIL VERIFIED BY A PROFESSIONAL UTILITY LOCATION COMPANY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED.
5. UTILITY PLAN REFERENCES
   - 5.1. WATER INFORMATION OBTAINED FROM THE CITY OF AUBURN
   - 5.2. SEWER INFORMATION OBTAINED ON THE GROUND BY DIPRETE ENGINEERING (SEE GENERAL NOTES FOR DATE OF FIELD SURVEY) AND FROM THE CITY OF AUBURN.
   - 5.3. GAS INFORMATION OBTAINED FROM UNITIL.
   - 5.4. DRAINAGE INFORMATION OBTAINED ON THE GROUND BY DIPRETE ENGINEERING. (SEE GENERAL NOTES FOR DATE OF FIELD SURVEY)

PLAN REFERENCES

1. SURVEY FOR SUNCREST DEVELOPMENT CORPORATION, 84 BOULDER DRIVE, AUBURN, MAINE ON STETSON ROAD & RIVER ROAD, AUBURN, MAINE, BY MAINE PLANNING & ENGINEERING ASSOCIATES, SCALE 1"=200', DATED MARCH 11, 1985, RECORDED IN PLAN BOOK 31, PAGE 72.
2. BOUNDARY & TOPOGRAPHIC PLAT PREPARED FOR CONCORD GROUP INSURANCE COMPANY, 4 BOUTON STREET, CONCORD, N.H., 03301, PROJECT: STETSON & RIVER ROAD, AUBURN, ME, LOCATION: MAP 5, LOT 7, SCALE 1"=100', DATED MAY 2, 2000, PLAN BY RICHARD D. BARTLETT & ASSOCIATES, INC., RECORDED IN PLAN BOOK 41, PAGE 144.
3. LOT SPLIT PLAN OF: STETSON ROAD PROPERTY, STETSON ROAD, AUBURN, ME. FOR: AUBURN-LEWISTON YMCA, RECORD OWNER: CONCORD GENERAL MUTUAL INSURANCE, SCALE 1"=100', DATED MAY 13, 204 AND LAST REVISED JUNE 12, 2024, PLAN BY SEBAGO TECHNICS, RECORDED IN PLAN BOOK 55, PAGE 48.

STATE OF MAINE
ROBERT G. BABCOCK
No. 2611
PROFESSIONAL LAND SURVEYOR

ROBERT G. BABCOCK, PLS #2611 — 9/4/24

LEGEND

W	WATER LINE	123/1234	DEED BOOK/PAGE
S	SEWER LINE	AP	ASSESSOR'S PLAT
SFM	SEWER FORCE MAIN	N/F	NOW OR FORMERLY
G	GAS LINE	(R)	RECORD
E	ELECTRIC LINE	(CA)	CHORD ANGLE
OHW	OVERHEAD WIRES	▲/▲	NAIL/SPIKE FOUND/SET
D	DRAINAGE LINE	○/●	DRILL HOLE FOUND/SET
	MINOR CONTOUR LINE	◎/◉	IRON ROD/PIPE FOUND/SET
5	MAJOR CONTOUR LINE	■/■	BOUND FOUND/SET
	PROPERTY LINE	HC	HANDICAPPED
	ASSESSORS LINE	LC	LANDSCAPING
	TREELINE	S	SIGN POST
	GUARDRAIL	S	SEWER MANHOLE
X	FENCE		SEWER CLEANOUT
	RETAINING WALL	H	HYDRANT
	STONE WALL	I	IRRIGATION VALVE
		U	UNKNOWN MANHOLE
			BOLLARD
			SOIL EVALUATION
			CATCH BASIN
			DOUBLE CATCH BASIN
			WATER VALVE
			GAS VALVE
		B-I	WETLAND FLAG
			DRAINAGE MANHOLE
			FLARED END SECTION
			GUY POLE
			ELECTRIC MANHOLE
		UP	UTILITY/POWER POLE
			LIGHTPOST
			WELL
			MONITORING WELL
			BENCH MARK
			TREE



LOCUS MAP NOT TO SCALE

ME (WEST) STATE PLANE NAD 83

STETSON ROAD
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)

NORTH ROAD
(A.K.A. RIVER ROAD)
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)

PARCEL ID 291-011
1,298,612 SF
(29.81 AC)

PARCEL ID 291-012
N/F
THE YOUNG MEN'S CHRISTIAN ASSOCIATION OF AUBURN-LEWISTON

PARCEL ID 292-002
N/F
LAURIE GUAY

"PROPOSED LOT" PER PLAN REFERENCE 3

BOUNDARY ALONG STONE WALL

S88°41'04"E 646.76' (686.76' (DEED))
N88°50'44"E 1298.82' (1298.82' (DEED))
N1°53'30"E 368.56'
N19°35'22"E 336.27'
152.00'
1281.77' (DEED) N20.43' N69°30'56"W
718.07' N70°16'49"W 717.71' (DEED)
105.13' (DEED) 104.48' S12°23'00"W

BENCHMARK NAIL IN UP 67 ELEV.=221.01

WOODED
BRUSH
STREAM
FLAGGED WETLAND EDGE
WELL
IRON ROD WITH DISK FOUND UNDER BOLDER
IRON PIPE FOUND
BASE OF BENT IRON ROD FOUND/HELD
LEANING IRON ROD WITH DISK FOUND 0.58' SOUTHWEST OF CORNER

LIST OF POSSIBLE ENCROACHMENTS

- A — GUY WIRE 17.2' & 7.5' OVER PROPERTY LINE
- B — GUY WIRE 6.7' OVER PROPERTY LINE
- C — GUY WIRE 7.2' OVER PROPERTY LINE
- D — 12" HDPE PIPE 8.9' OVER PROPERTY LINE
- E — MAINTAINED LAWN OVER PROPERTY LINE

SCALE: 1"=80'
0 40' 80' 160'

EXISTING CONDITIONS PLAN

STETSON ROAD

PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350.
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 4 OF 18

NO.	DATE	DESCRIPTION	BY:
0	9/4/24	EXISTING CONDITIONS PLAN	A.J.F.

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

DE JOB NO: 2025-032 COPYRIGHT 2024 BY DIPRETE ENGINEERING ASSOCIATES, INC.

z:\dena\projects\2025-032 stetson road apartments\autocad drawings\2025-032-exco.dwg Plotted: 9/4/2024

SOIL EROSION CONTROL LEGEND

- EROSION CONTROL (COMPOST SOCK, SILT FENCE (RI STD 9.2.0, OR APPROVED EQUAL)
- LIMIT OF DISTURBANCE (NO SEDIMENT CONTROL)
- LIMIT OF DISTURBANCE (WITH CLASS C SEDIMENT CONTROL)
- CONSTRUCTION ENTRANCE (RIDOT STD 9.9.0)
- INFILTRATING AREA (TO BE PROTECTED BY COMPOST SOCK OR SILT FENCE)
- FINAL CONTOUR GRADE (308)
- INLET SEDIMENT CONTROL
- CLASS C SILT FENCE (SEE DETAIL ON SHEET 17)
- SLOPE INTERRUPTOR (SEE DETAIL ON SHEET 17)

SCALE: 1"=80'
0 40' 80' 160'

DiPrete Engineering
Engineers · Planners · Surveyors
www.diprete-eng.com
Two Stafford Court, Cranston, RI 02920 · Tel.401-943-1000

STATE OF MAINE
BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

THIS PLAN SET MUST NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS STAMPED "ISSUED FOR CONSTRUCTION" AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING.

DIPRETE ENGINEERING ONLY WARRANTS PLANS ON A DIPRETE ENGINEERING TITLE BLOCK STAMPED BY REGISTERED PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING. DIPRETE ENGINEERING DOES NOT WARRANT PLANS BY ANY OTHER PARTY.

THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK AND FOR COMPLIANCE WITH ALL APPLICABLE SAFETY REGULATIONS, INCLUDING OSHA AND MSHA REGULATIONS, IN THE IMPLEMENTATION OF THIS PLAN AND DIPRETE ENGINEERING DOES NOT HAVE CONTROL OVER OR CHARGE OF AND IS NOT RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR ALL OR COMPLETENESS OF EXISTING UTILITY LOCATIONS. SEE "UTILITY NOTE" ON SHEET 3

NO.	DATE	DESCRIPTION	BY:
1	01-04-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.
			J.M.F.

DRAWN BY: J.A.R.

SOIL EROSION & SEDIMENT CONTROL PLAN

STETSON ROAD

PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 5 OF 21

DE-JOB NO: 2025-032 COPYRIGHT 2024 BY DIPRETE ENGINEERING ASSOCIATES, INC.

Z:\DEMAIN\PROJECTS\2025-032 STETSON ROAD APARTMENTS\AUTOCAD DRAWINGS\2025-032-PLAN.DWG PLOTTED: 1/14/2025

DEVELOPMENT DATA:

TOTAL SITE AREA:	29.8± ACRES
TOTAL NUMBER OF DUPLEX RESIDENTIAL BUILDINGS:	22
TOTAL NUMBER OF QUADPLEX RESIDENTIAL BUILDINGS:	34
TOTAL NUMBER OF BUILDINGS:	56
TOTAL NUMBER OF UNITS:	180
LENGTH OF ROAD A:	2110'
LENGTH OF ROAD B:	774'
PAVEMENT WIDTH:	24'

DIMENSIONAL REGULATIONS:

CURRENT ZONING:	GB - GENERAL BUSINESS MFS - MULTIFAMILY SUBURBAN DISTRICT	
	MFS ZONE REGULATIONS REQUIRED	PROVIDED
MINIMUM LOT AREA:	10,000 SF*	1,298,612 SF
MINIMUM FRONTAGE AND LOT WIDTH:	100'	1,946'
MINIMUM FRONT AND CORNER SIDE YARD:	25'**	37.6'
MINIMUM SIDE YARD:	5-15'***	NA
MINIMUM REAR YARD:	25'****	NA
MAXIMUM STRUCTURE HEIGHT:	45'	<45'
MAXIMUM LOT COVERAGE:	50%	10%

AUBURN ZONING ORDINANCE - SEC 60-307 - DIMENSIONAL REGULATIONS

* (1)c
MULTIFAMILY BUILDINGS: 10,000 SQUARE FEET MINIMUM LOT AREA FOR THE FIRST DWELLING UNIT AND 2,000 SQUARE FEET MINIMUM LOT AREA FOR EACH ADDITIONAL DWELLING UNIT. NO LOT SHALL BE LESS THAN 100 FEET WIDTH AND 100 FEET IN DEPTH. MORE THAN ONE PRINCIPAL BUILDING PER LOT IS ALLOWED.

(2)
DENSITY. MULTIFAMILY = 17 UNITS PER ACRE.

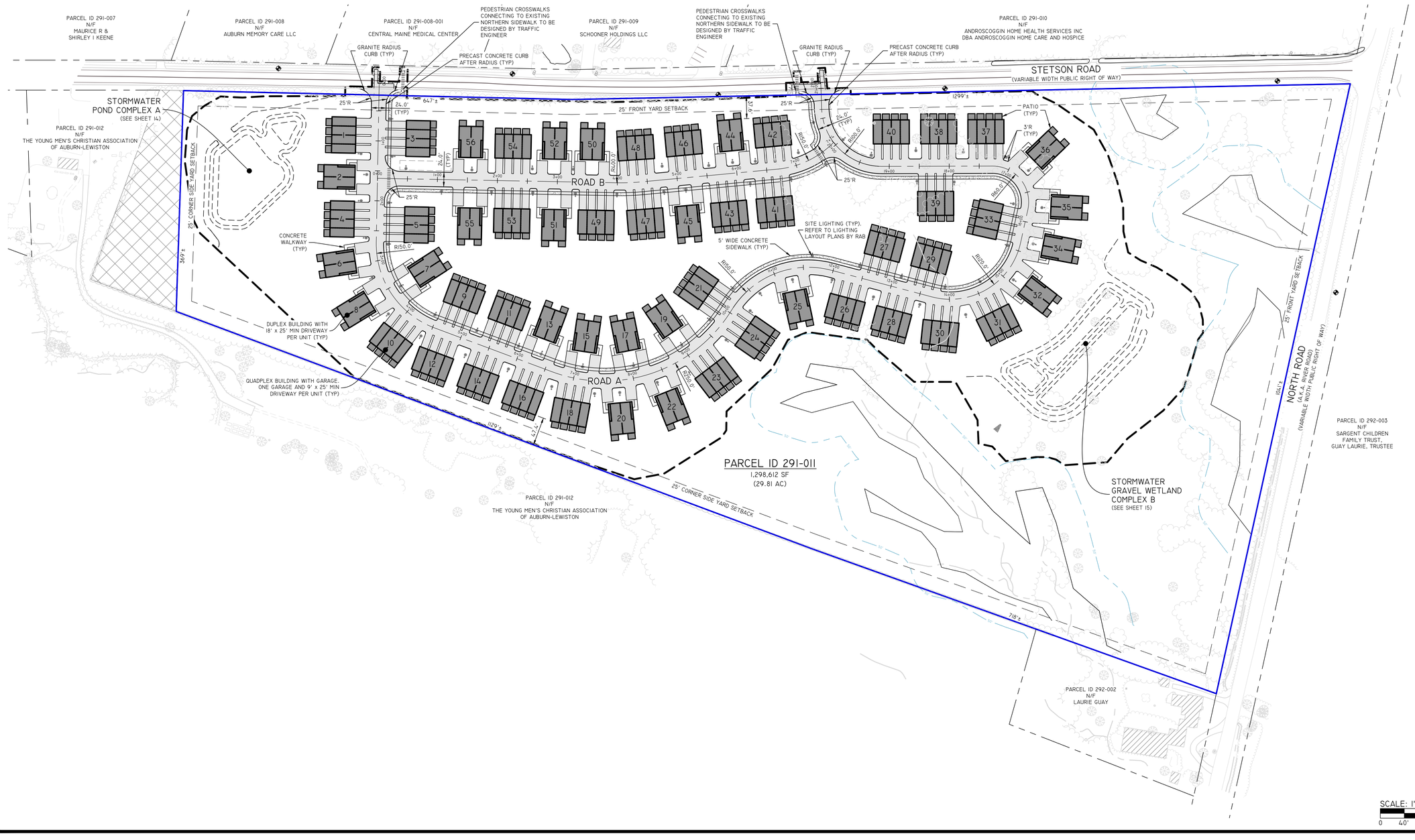
** (3)c
FRONT. THERE SHALL BE IN FRONT OF EVERY BUILDING A FRONT YARD HAVING A MINIMUM DEPTH OF 25 FEET OR 25 PERCENT OF THE AVERAGE DEPTH OF THE LOT WHICHEVER IS LESS.

*** (3)B
SIDE. THERE SHALL BE A MINIMUM DISTANCE OF FIVE FEET BETWEEN ANY BUILDING AND THE SIDE PROPERTY LINE PLUS THE SIDE YARD SETBACK SHALL BE INCREASED ONE FOOT FOR EVERY FIVE FEET OR PART THEREOF INCREASE IN STREET FRONTAGE OVER 50 FEET TO A MAXIMUM OF 15 FEET FOR SIDE YARD SETBACK.

**** (3)A
REAR. THERE SHALL BE BEHIND EVERY BUILDING A REAR YARD HAVING A MINIMUM DEPTH OF 25 FEET OR 25 PERCENT OF THE AVERAGE DEPTH OF LOT, WHICHEVER IS LESS.

PARKING REGULATIONS:

PARKING USE:	MULTIFAMILY: TWO-FAMILY
PARKING REQUIREMENT:	1 SPACE PER UNIT
NUMBER OF UNITS:	180
PARKING CALCULATION:	180 x 1 = 180 SPACES REQUIRED
TOTAL PARKING SPACES PROVIDED:	360 SPACES (136 GARAGE, 224 SURFACE)



SCALE: 1"=80'
0 40' 80' 160'

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Two Stafford Court, Cranston, RI 02920 · Tel 401-943-1000

STATE OF MAINE
BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

THIS PLAN SET MAY NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS STAMPED "ISSUED FOR CONSTRUCTION" AND SIGNED BY A DIPRETE ENGINEERING PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING.

DIPRETE ENGINEERING ONLY WARRANTS PLANS ON A DIPRETE ENGINEERING TITLE BLOCK STAMPED BY REGISTERED PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING. DIPRETE ENGINEERING DOES NOT WARRANT PLANS BY ANY OTHER PARTY.

THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, METHODS, AND SAFETY PRACTICES REQUIRED BY OSHA FOR CONFORMANCE IN THE IMPLEMENTATION OF THIS PLAN AND ASSUMES ALL RESPONSIBILITY FOR THE SAME.

EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR LOCATIONS OF EXISTING UTILITIES. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. SEE "UTILITY NOTE" ON SHEET 4.

NO.	DATE	DESCRIPTION	BY:
1	01-06-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.
			J.M.F.

DRAWN BY: J.A.R.

SITE LAYOUT PLAN

STETSON ROAD

PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 6 OF 21

DE JOB NO. 2425-132 COPYRIGHT 2024 BY DIPRETE ENGINEERING ASSOCIATES, INC.

Z:\DEMAIN\PROJECTS\2025-132 STETSON ROAD APARTMENTS\AUTOCAD DRAWINGS\2025-132-PLAN.DWG PLOTTED: 1/6/2025

PARCEL ID 291-007
N/F
MAURICE R &
SHIRLEY I KEENE

PARCEL ID 291-008
N/F
AUBURN MEMORY CARE LLC

PARCEL ID 291-008-001
N/F
CENTRAL MAINE MEDICAL CENTER

PARCEL ID 291-009
N/F
SCHOONER HOLDINGS LLC

PARCEL ID 291-012
N/F
THE YOUNG MEN'S CHRISTIAN ASSOCIATION
OF AUBURN-LEWISTON

STORMWATER
POND COMPLEX A
(SEE SHEET 14)

SMH-70
RIM=268.51

DCB-56 (5' DIA)
RIM=269.76

SMH-76
RIM=270.11

DCB-55
RIM=269.76

DOME GRATE-146
RIM=270.00

DCB-54
RIM=271.85

DCB-43
RIM=271.86

DMH-158
RIM=272.84

24" HDPE
26 LF
S=3.73%

SMH-69
RIM=273.62

SMH-74
RIM=279.15

CB-42
RIM=274.05

CB-53
RIM=274.82

CB-41
RIM=274.05

CB-52
RIM=276.82

DOME GRATE-15
RIM=275.65

DOME GRATE-150
RIM=279.00

CB-50
RIM=279.95

SMH-68
RIM=278.97

CB-49
RIM=279.95

SMH-67
RIM=281.52

CB-47
RIM=284.83

CB-46
RIM=284.80

SMH-66
RIM=285.15

SMH-77
RIM=289.61

CB-45
RIM=291.14

CB-44
RIM=291.16

SMH-65
RIM=292.68

SMH-78
RIM=293.03

SMH-79
RIM=292.18

CB-1
RIM=291.47

CB-2
RIM=291.47

DOME GRATE-149
RIM=290.17

CB-40
RIM=280.89

CB-59
RIM=280.89

SMH-73
RIM=286.02

CB-38
RIM=287.23

CB-37
RIM=287.23

SMH-72
RIM=289.44

CB-35
RIM=290.75

CB-34
RIM=290.75

SMH-75
RIM=292.72

CB-33
RIM=294.39

CB-32
RIM=294.39

CB-6
RIM=283.58

CB-4
RIM=286.83

CB-5
RIM=286.83

SMH-81
RIM=287.33

SMH-83
RIM=287.52

ROAD A

ROAD B

56	TF=291.00	
54	GS=283.50 TF=284.00	GS=285.00 TF=285.50
52	TF=288.00	
50	TF=290.00	
48	GS=291.00 TF=291.50	GS=292.50 TF=293.00
46	GS=291.00 TF=291.50	GS=292.50 TF=293.00
44	TF=295.00	
1	GS=271.50 TF=272.00	
3	GS=273.00 TF=273.50	
2	TF=276.00	
4	GS=277.00 TF=277.50	GS=278.50 TF=279.00
5	GS=277.00 TF=277.50	GS=278.50 TF=279.00
55	TF=281.00	
53	GS=283.50 TF=284.00	GS=285.00 TF=285.50
51	TF=288.00	
49	GS=289.00 TF=289.50	GS=290.50 TF=291.00
47	GS=291.00 TF=291.50	GS=292.50 TF=293.00
45	TF=294.00	
43	GS=294.00 TF=294.50	GS=295.50 TF=296.00
6	TF=281.00	
7	TF=284.00	
8	TF=281.00	
9	GS=287.00 TF=287.50	GS=288.50 TF=289.00
10	GS=284.00 TF=284.50	GS=285.50 TF=286.00
11	GS=290.00 TF=290.50	GS=291.50 TF=292.00
12	GS=287.00 TF=287.50	GS=288.50 TF=289.00
13	TF=293.00	
14	GS=290.00 TF=290.50	GS=291.50 TF=292.00
15	TF=294.00	
16	GS=293.00 TF=293.50	GS=293.00 TF=293.50
17	TF=293.00	
18	GS=294.00 TF=294.50	
19	TF=290.00	
20	TF=294.00	
21	GS=285.50 TF=286.00	GS=287.00 TF=287.50
22	TF=292.00	
23	GS=290.00 TF=290.50 WO=282.00	GS=288.50 TF=289.00 WO=281.00
24	GS=287.00 TF=287.50 WO=279.50	GS=285.50 TF=286.00 WO=278.00

SEE SHEET 8

SCALE: 1"=40'
0 20' 40' 80'

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THE STATE OF MAINE
BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

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EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE AND DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF EXISTING UTILITIES
SEE "UTILITY NOTE" ON SHEET 4

NO.	DATE	DESCRIPTION	BY
1	01-04-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R.

GRADING & SURFACE DRAINAGE PLAN - I

STETSON ROAD

PARCEL ID 291-011
AUBURN, MAINE

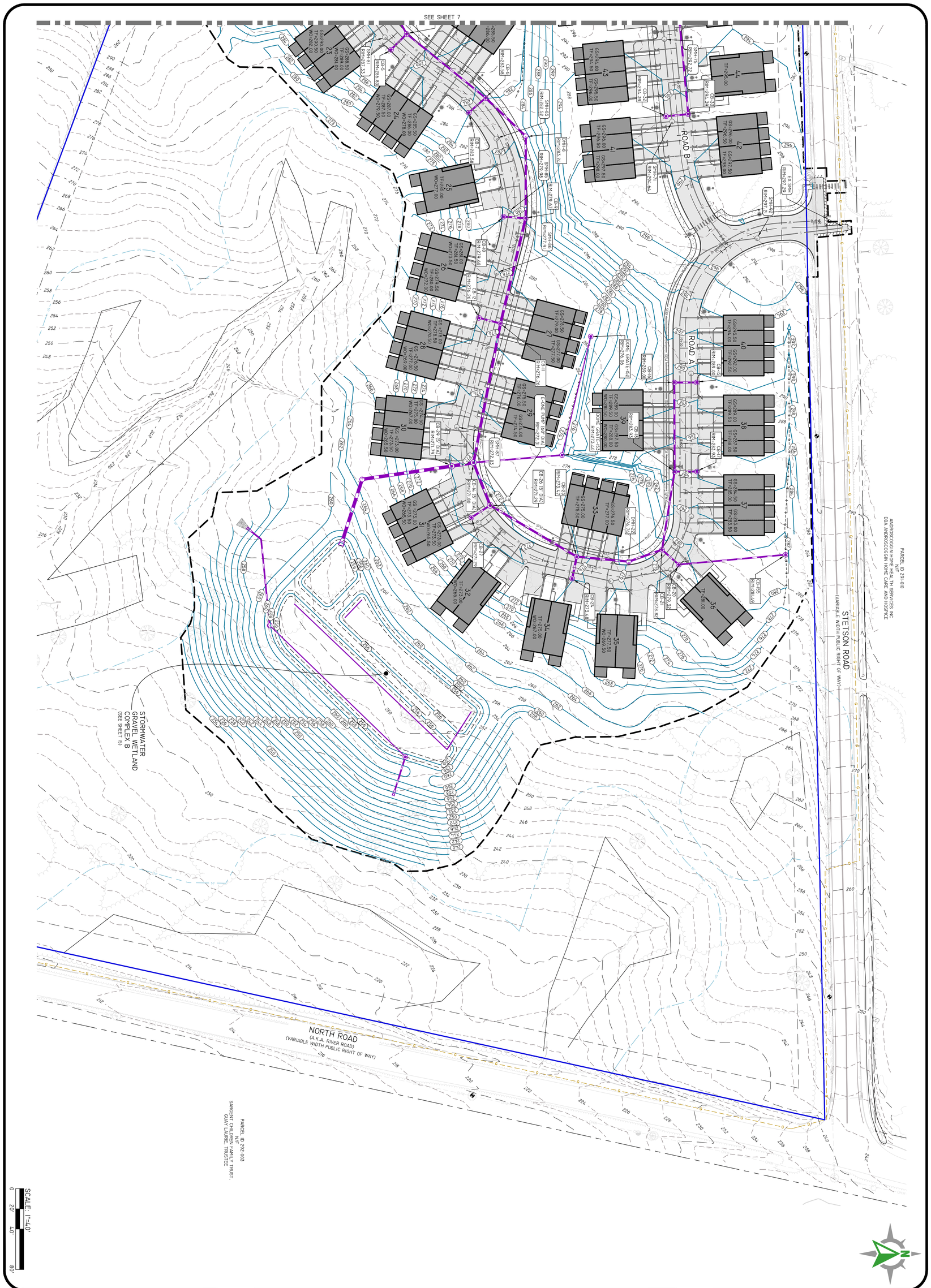
PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 7 OF 21

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Z:\DEMAIN\PROJECTS\2625-032 STETSON ROAD APARTMENTS\AUTOCAD DRAWINGS\2625-032-PLAN.DWG Plotted: 1/4/2025



Grading & Surface Drainage Plan - 2

Stetson Road

PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. Building Company, Inc.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 8 OF 21

NO.	DATE	DESCRIPTION	BY:
1	01-06-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. J.M.F.

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THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, SAFETY PRECAUTIONS AND REQUIREMENTS, AND OSHA CONFORMANCE IN THE IMPLEMENTATION OF THIS PLAN AND DESIGN.

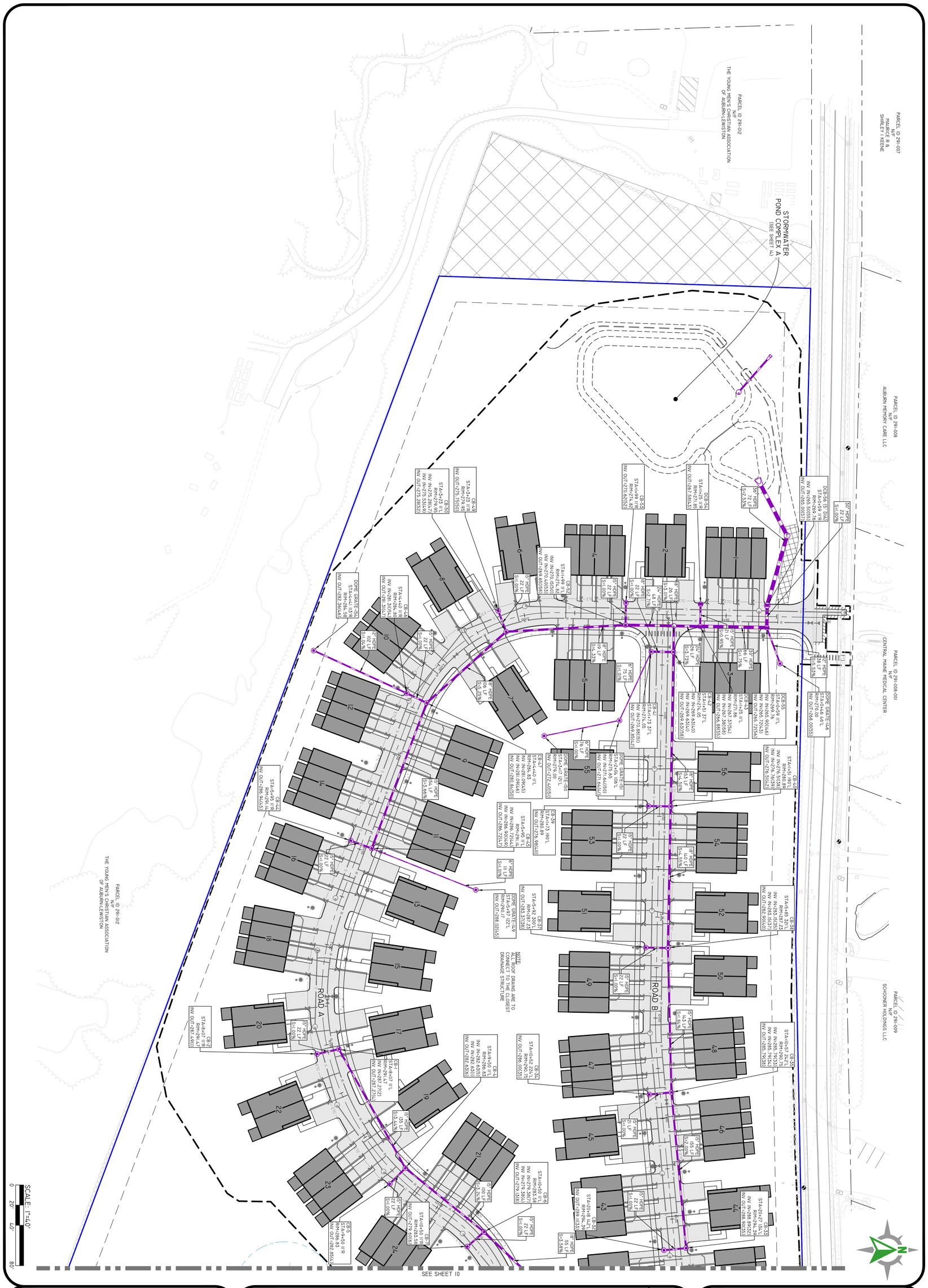
EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED DUE TO LOCATIONS OF EXISTING UTILITIES. SEE 'UTILITY NOTE' ON SHEET 2.

PROFESSIONAL ENGINEER
No. 16851
CARR
JASON A. DAVIS
LICENSED

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Drainage Plan - I

Stetson Road

PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. Building Company, Inc.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 9 OF 21

NO.	DATE	DESCRIPTION	BY:
1	01-06-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. J.M.F.

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JULIE E. DIPRETE
No. 16851
REGISTERED PROFESSIONAL ENGINEER
STATE OF RHODE ISLAND
12/06/2024

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PARCEL ID 291-010
N/F
ANDROSCOGGIN HOME HEALTH SERVICES INC
DBA ANDROSCOGGIN HOME CARE AND HOSPICE

STETSON ROAD
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)

ROAD A

ROAD B

NOTE:
ALL ROOF DRAINS ARE TO CONNECT TO THE CLOSEST DRAINAGE STRUCTURE

CB-33
STA=20+27 15A'L
RIM=294.39
INV IN=288.89(32)
INV OUT=288.90(35)

CB-32
STA=20+18 14Z'L
RIM=294.39
INV OUT=289.11(33)

CB-15
STA=18+60 11'R
RIM=289.00
INV OUT=285.03(16)

CB-17
STA=17+72 11'R
RIM=283.93
INV OUT=279.95(18)

CB-15S
STA=17+14 103'R
RIM=281.49
INV OUT=277.63(20)

CB-16
STA=18+60 11'L
RIM=289.01
INV IN=284.80(15)
INV OUT=284.80(18)

DOME GRATE-152
STA=19+06 94'L
RIM=276.06
INV OUT=269.17(153)

CB-11
STA=12+75 11'L
RIM=276.26
INV IN=272.81(12)
INV IN=272.06(9)
INV OUT=272.06(14)

CB-9
STA=11+70 11'L
RIM=279.67
INV IN=275.72(10)
INV IN=275.47(8)
INV OUT=274.97(11)

DMH-8
STA=10+98 25'L
RIM=283.24
INV IN=277.17(6)
INV OUT=277.17(9)

CB-6
STA=10+50 11'L
RIM=283.58
INV IN=279.38(7)
INV IN=279.38(4)
INV OUT=279.13(8)

CB-7
STA=10+50 11'R
RIM=283.58
INV OUT=279.60(6)

CB-5
STA=9+50 11'R
RIM=286.83
INV OUT=282.85(4)

CB-10
STA=11+70 11'R
RIM=279.68
INV OUT=275.94(9)

CB-12
STA=12+75 11'R
RIM=276.26
INV OUT=273.03(11)

CB-18
STA=17+72 11'L
RIM=283.93
INV IN=279.73(16)
INV IN=279.73(17)
INV OUT=279.73(21)

CB-14 (5' DIA)
STA=14+21 11'L
RIM=271.80
INV IN=263.60(11)
INV IN=263.60(26)
INV IN=264.60(153)
INV OUT=263.10(29)

CB-29 (5' DIA)
STA=14+21 11'R
RIM=271.79
INV IN=262.00(14)
INV OUT=262.00(30)

CB-20
STA=16+84 11'R
RIM=279.32
INV IN=275.09(155)
INV OUT=274.84(21)

CB-21
STA=16+84 11'L
RIM=278.82
INV IN=274.62(18)
INV IN=274.62(20)
INV OUT=274.37(22)

DMH-22
STA=16+38 15'L
RIM=276.74
INV IN=272.10(21)
INV OUT=272.10(23)

CB-23
STA=15+82 11'L
RIM=273.47
INV IN=269.27(22)
INV IN=269.27(24)
INV OUT=269.27(26)

CB-24
STA=15+82 11'R
RIM=273.48
INV OUT=269.49(23)

CB-26 (5' DIA)
STA=14+71 11'L
RIM=271.29
INV IN=266.81(27)
INV IN=265.86(23)
INV OUT=265.36(14)

CB-27
STA=14+71 11'R
RIM=271.29
INV OUT=267.03(26)

DOME GRATE-153
STA=14+56 98'L
RIM=273.40
INV IN=267.97(152)
INV OUT=267.97(14)

15" HDPE
22 LF
S=1.00%

15" HDPE
88 LF
S=5.77%

15" HDPE
78 LF
S=6.54%

15" HDPE
22 LF
S=1.00%

18" HDPE
55 LF
S=3.58%

18" HDPE
81 LF
S=2.09%

15" HDPE
22 LF
S=1.00%

15" HDPE
100 LF
S=3.24%

15" HDPE
22 LF
S=1.00%

24" HDPE
107 LF
S=2.72%

15" HDPE
22 LF
S=1.00%

24" HDPE
140 LF
S=6.04%

24" HDPE
45 LF
S=3.88%

12" HDPE
106 LF
S=2.40%

15" HDPE
22 LF
S=1.00%

18" HDPE
55 LF
S=6.47%

18" HDPE
52 LF
S=5.50%

18" HDPE
99 LF
S=3.43%

18" HDPE
22 LF
S=1.00%

6" HDPE
121 LF
S=1.00%

12" HDPE
88 LF
S=3.84%

37 38 39 40 41 42 43 44 23 24 25 26 27 28 29 30 31 32 33 34 35 36

SEE SHEET 9

NORTH ROAD
(A.K.A. RIVER ROAD)
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)

PARCEL ID 292-003
N/F
SARGENT CHILDREN FAMILY TRUST,
GUAY LAURIE, TRUSTEE

STORMWATER
GRAVEL WETLAND
COMPLEX B
(SEE SHEET 15)

SCALE: 1"=40'
0 20' 40' 80'

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STATE OF MAINE
BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

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NO.	DATE	DESCRIPTION	BY:
1	01-04-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. J.M.F.

DRAINAGE PLAN - 2

STETSON ROAD

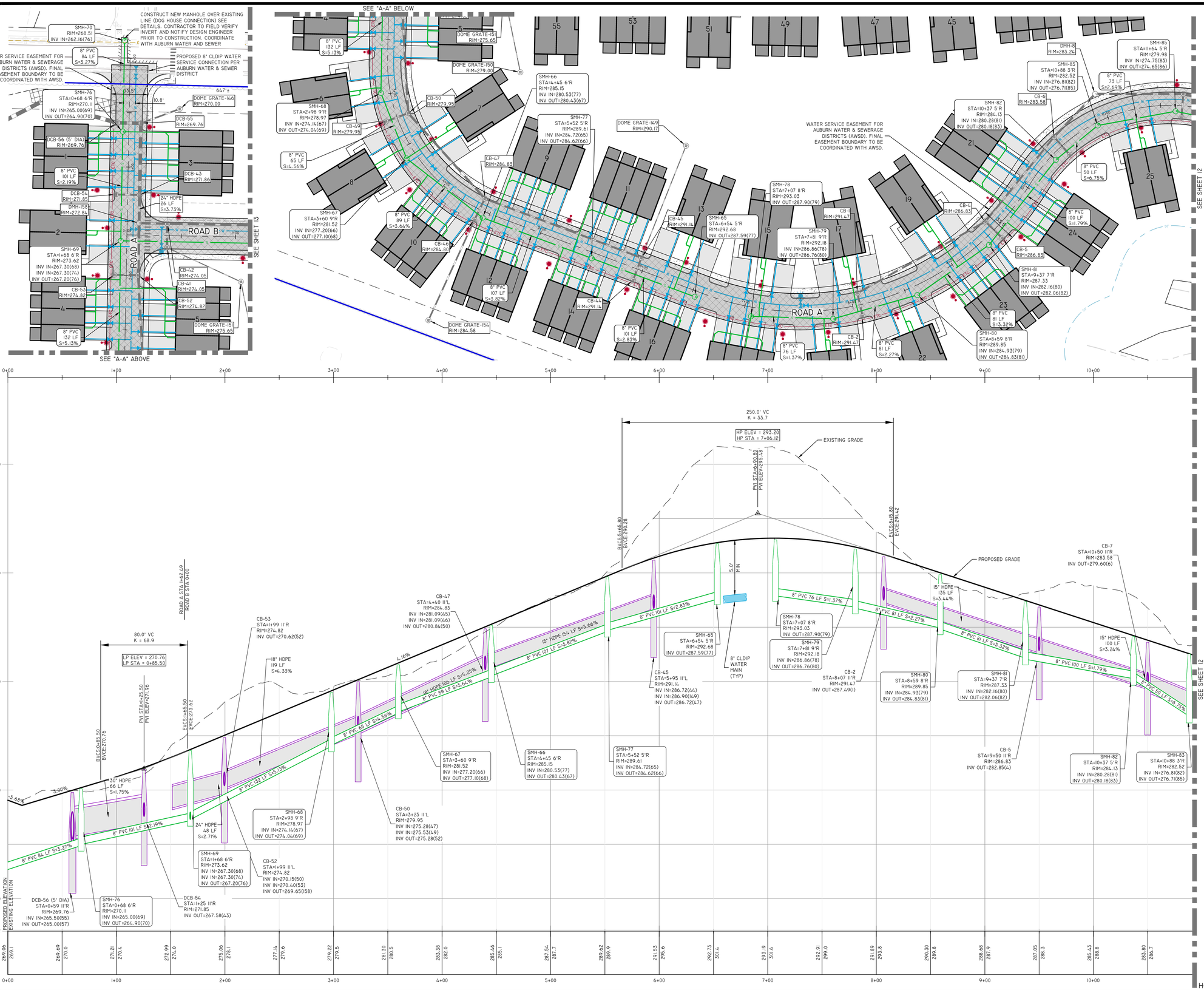
PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 10 OF 21

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TYPICAL UTILITY SERVICE CONNECTION LAYOUT FOR ALL DUPLEXES AND QUADPLEXES

SCALE: 1" = 40'

NOTE:
FOR ALL WATER AND SEWER CONNECTIONS INTO BUILDINGS SEE "UTILITY SERVICE CONNECTION LAYOUT FOR ALL DUPLEXES AND QUADPLEXES" DETAIL ON SHEET 13.

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BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION	BY:
1	01-06-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. J.M.F.

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EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR ADDITIONAL UTILITIES NOT SHOWN OR LOCATIONS OF EXISTING UTILITIES SEE "UTILITY NOTES" ON SHEET 4.

PLAN & PROFILE - I

STETSON ROAD

PARCEL ID 29I-011
AUBURN, MAINE

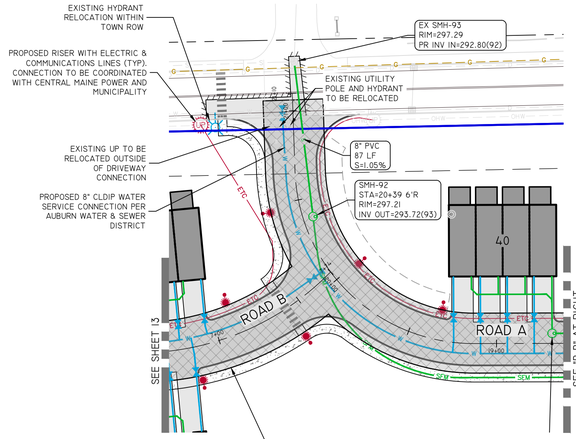
PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

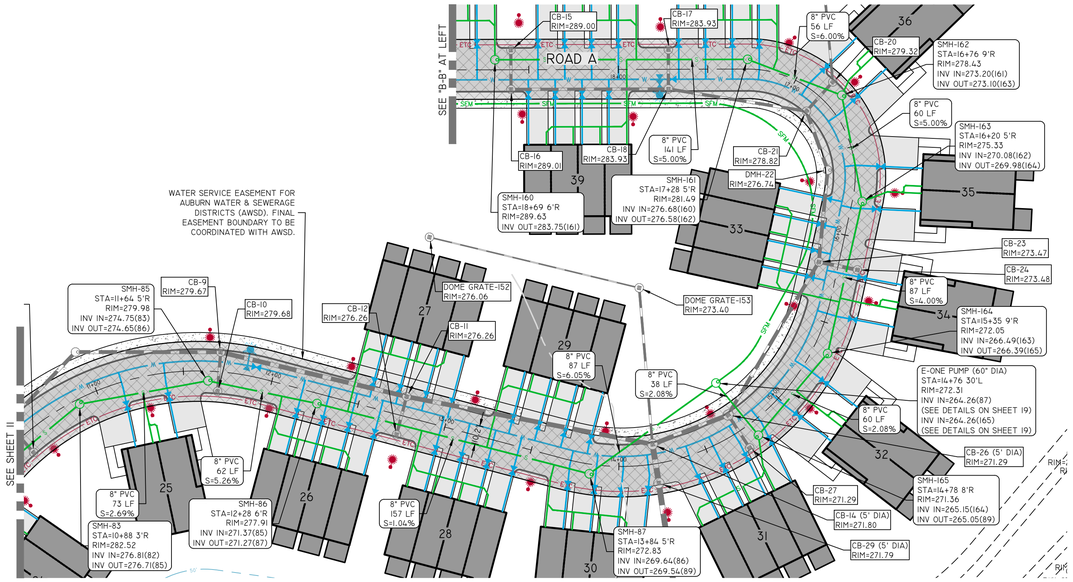
SHEET 11 OF 21

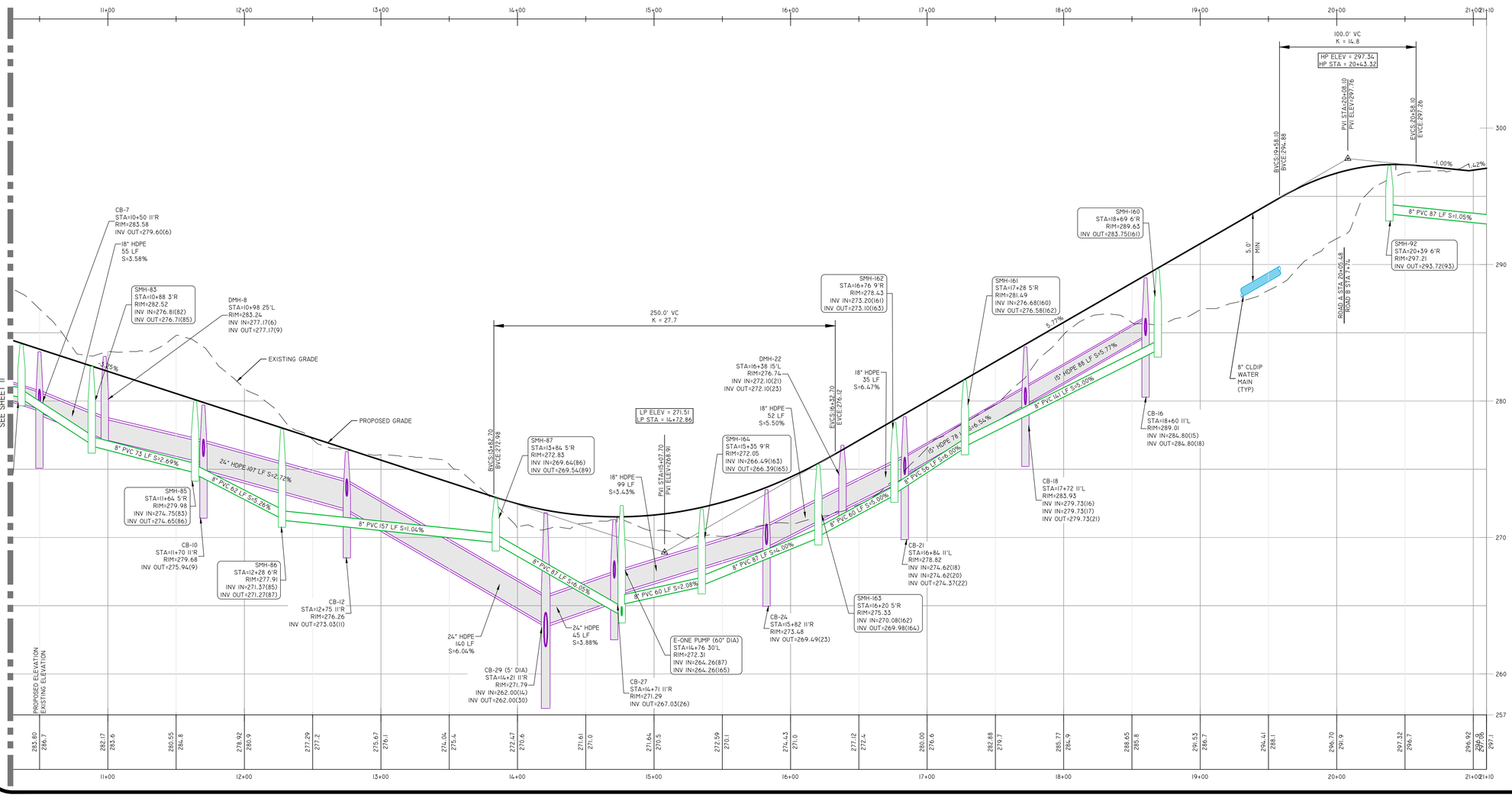
DE JOB NO. 2425-332

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NOTE:
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STATE OF MAINE
BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

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NO.	DATE	DESCRIPTION	BY:
1	01-04-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. | J.M.F.

PLAN & PROFILE - 2

STETSON ROAD

PARCEL ID 291-011
AUBURN, MAINE

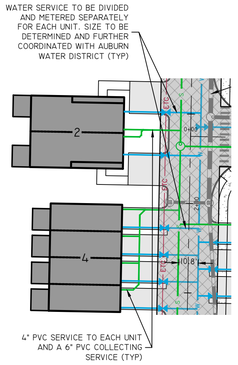
PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 12 OF 21

DE JOB NO. 2625-02

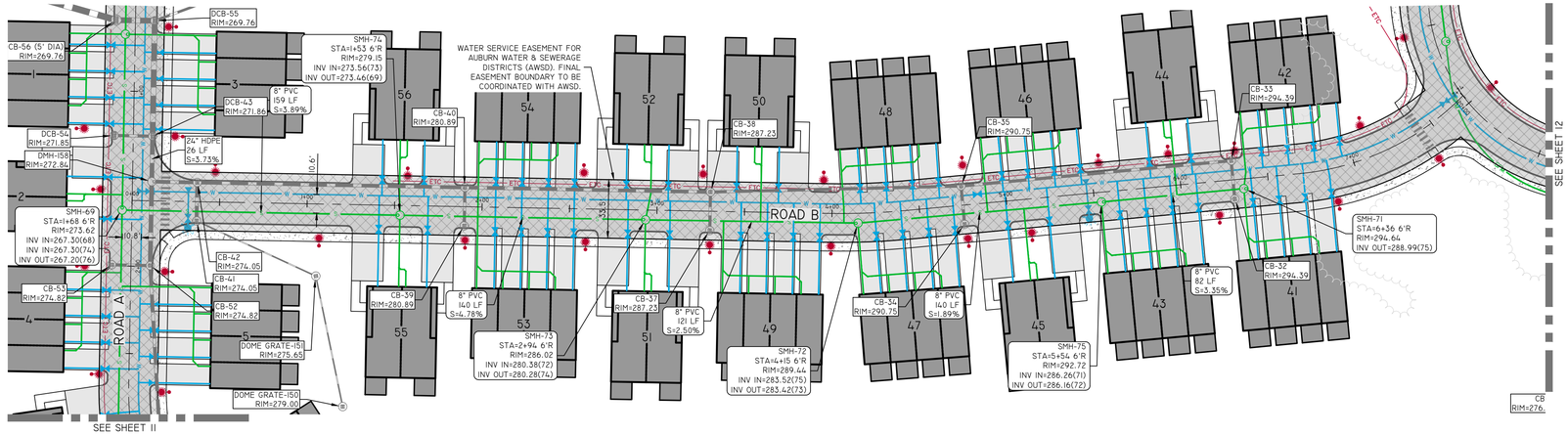
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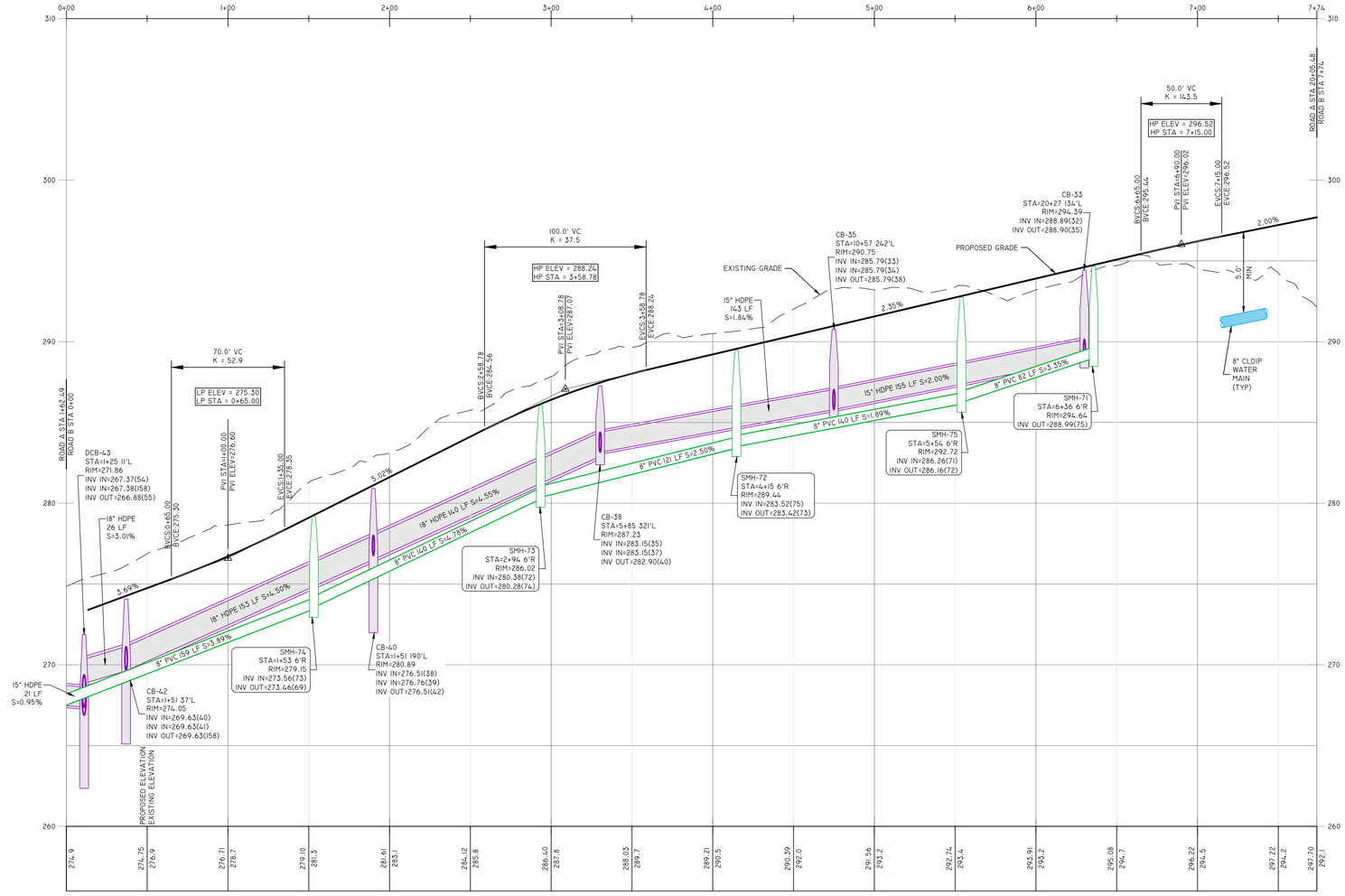
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UTILITY SERVICE CONNECTION LAYOUT FOR ALL DUPLEXES AND QUADPLEXES

SCALE: 1" = 40'





VERTICAL: 0 2' 4' 8'

HORIZONTAL: 0 20' 40' 80'

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STATE OF MAINE
BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

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DIPRETE ENGINEERING ONLY WARRANTS PLANS ON A DIPRETE ENGINEERING TITLE BLOCK STAMPED BY REGISTERED ENGINEER OF DIPRETE ENGINEERING. DIPRETE ENGINEERING DOES NOT WARRANT PLANS BY ANY OTHER PARTY.

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EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR DAMAGE TO, OR INTERRUPTION OF, EXISTING UTILITIES NOT SHOWN OR IN THE LOCATIONS OF EXISTING UTILITIES SHOWN. SEE "UTILITY NOTE" ON SHEET 5.

NO	DATE	DESCRIPTION	BY
1	01-06-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. CHECKED BY: J.M.F.

PLAN & PROFILE - 3

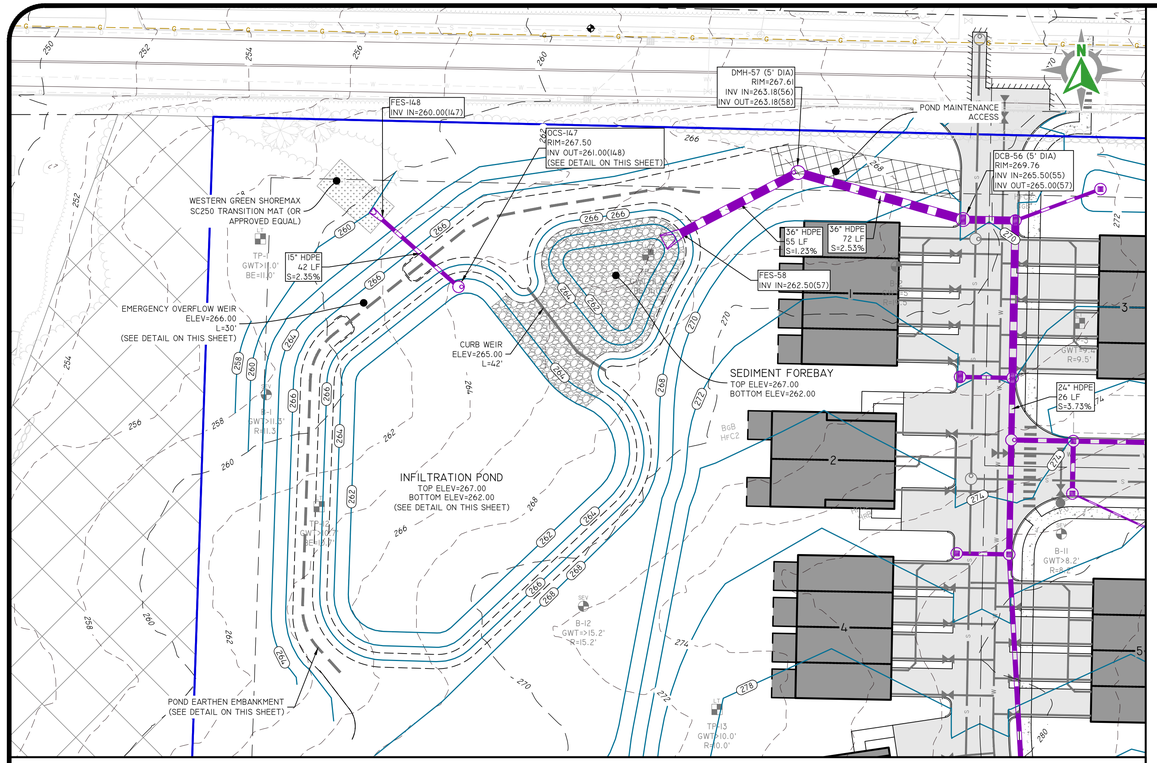
STETSON ROAD

PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 13 OF 21

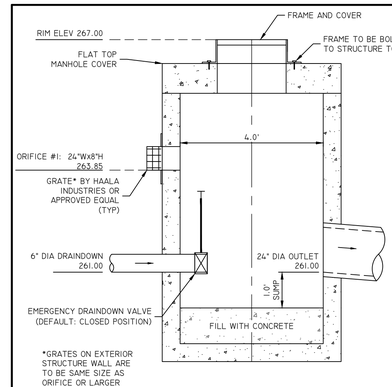
DE JOB NO. 2625-032 COPYRIGHT 2024 BY DIPRETE ENGINEERING ASSOCIATES, INC.



STORMWATER POND COMPLEX A

SCALE: 1"=30'

0 15' 30' 60'



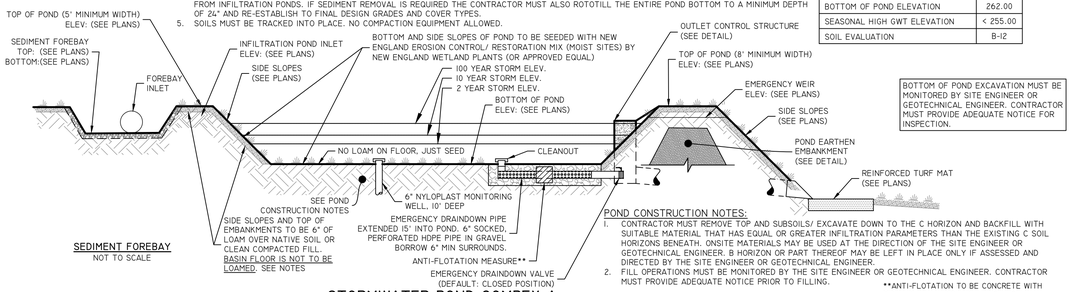
OUTLET CONTROL STRUCTURE (OCS-147)
4' DIAMETER MANHOLE

SCALE: 1"=2'

NOTES:

1. LIMITS OF INFILTRATION POND MUST BE STAKED OUT AND MUST NOT BE USED AS A TEMPORARY SEDIMENT BASIN DURING CONSTRUCTION (NO CONSTRUCTION TRAFFIC ALLOWED WITHIN POND LIMITS).
2. INFILTRATION PONDS MUST NOT BE USED FOR STOCKPILING, VEHICLE PARKING OR ANY OTHER ANCILLARY STORING OF OBJECTS OR MATERIALS, TEMPORARY OR PERMANENT, AT ANY TIME.
3. INFILTRATION PONDS MUST BE ADEQUATELY PROTECTED FROM SEDIMENT LADEN RUNOFF DURING CONSTRUCTION.
4. FOLLOWING CONSTRUCTION AND STABILIZATION OF ALL UPSTREAM AREAS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY AND ALL SEDIMENT FROM INFILTRATION PONDS. IF SEDIMENT REMOVAL IS REQUIRED THE CONTRACTOR MUST ALSO ROTOTILL THE ENTIRE POND BOTTOM TO A MINIMUM DEPTH OF 24" AND RE-ESTABLISH TO FINAL DESIGN GRADES AND COVER TYPES.
5. SOILS MUST BE TRACKED INTO PLACE. NO COMPACTION EQUIPMENT ALLOWED.

DESCRIPTION	IP
TOP OF POND ELEVATION	267.00
100 YEAR STORM ELEVATION	266.44
10 YEAR STORM ELEVATION	264.95
2 YEAR STORM ELEVATION	264.15
BOTTOM OF POND ELEVATION	262.00
SEASONAL HIGH GWT ELEVATION	< 255.00
SOIL EVALUATION	B-12



SEDIMENT FOREBAY
NOT TO SCALE

STORMWATER POND COMPEX A
NOT TO SCALE

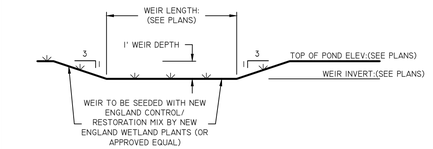
BOTTOM OF POND EXCAVATION MUST BE MONITORED BY SITE ENGINEER OR GEOTECHNICAL ENGINEER. CONTRACTOR MUST PROVIDE ADEQUATE NOTICE FOR INSPECTION.

POND CONSTRUCTION NOTES:

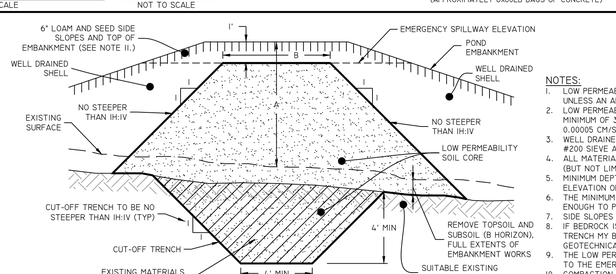
1. CONTRACTOR MUST REMOVE TOP AND SUBSOILS/ EXCAVATE DOWN TO THE C HORIZON AND BACKFILL WITH SUITABLE MATERIAL THAT HAS EQUAL OR GREATER INFILTRATION PARAMETERS THAN THE EXISTING C SOIL HORIZONS BENEATH. ONSITE MATERIALS MAY BE USED AT THE DIRECTION OF THE SITE ENGINEER OR GEOTECHNICAL ENGINEER. B HORIZON OR PART THEREOF MAY BE LEFT IN PLACE ONLY IF ASSESSED AND DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
2. FILL OPERATIONS MUST BE MONITORED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER. CONTRACTOR MUST PROVIDE ADEQUATE NOTICE PRIOR TO FILLING.

**ANTI-FLOTATION TO BE CONCRETE WITH MINIMUM DIMENSIONS OF 13"Wx13"Hx5'L. (APPROXIMATELY 6x80LB BAGS OF CONCRETE)

INFILTRATION POND
NOT TO SCALE



EMERGENCY OVERFLOW WEIR
NOT TO SCALE



WELL DRAINED SHELL TO BE GRAVEL BORROW AND MEET THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT FINER BY WEIGHT
3-INCH	60-100
¼ INCH	50-85
¾ INCH	45-80
NO. 4	40-75
NO. 40	0-45
NO. 200	0-10

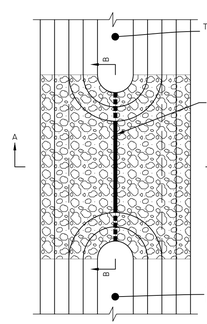
NOTE TO CONTRACTOR: COORDINATE WITH THE OWNER'S GEOTECHNICAL ENGINEER/ INSPECTOR A MINIMUM OF FIVE DAYS PRIOR TO CONSTRUCTION OF THE EMBANKMENT, FOR APPROVAL OF PROPOSED CORE MATERIALS, TESTING COMPANY AND EMBANKMENT INSPECTION SCHEDULE. INTERIM INSPECTION REPORTS TO BE PROVIDED TO THE OWNER AND DESIGN ENGINEER AT INTERVALS AS DETERMINED BY THE GEOTECHNICAL ENGINEER.

POND EMBANKMENT HEIGHT "A" (FT)	TOP WIDTH OF CORE "B" (FT)
0-7.0	6.0
OVER 7.0	PER GEOTECH

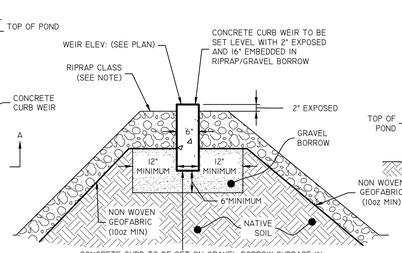
NOTES:

1. LOW PERMEABILITY SOIL CORE TO BE PROVIDED FOR ALL POND EMBANKMENTS UNLESS AN ALTERNATIVE METHOD IS SPECIFICALLY NOTED ON THE PLANS.
2. LOW PERMEABILITY SOIL CORE TO BE CONSTRUCTED OF A MATERIAL WITH A MINIMUM OF 30% PASSING THE #200 SIEVE AND A MAXIMUM PERMEABILITY OF 0.00005 CM/S.
3. WELL DRAINED SHELL TO BE GRAVEL BORROW WITH LESS THAN 10% PASSING THE #200 SIEVE AND MEET THE GRADATION AS SHOWN ON THIS DETAIL.
4. ALL MATERIAL MUST BE FREE FROM DELETERIOUS/ ORGANIC MATTER, INCLUDING (BUT NOT LIMITED TO) ROOTS, SOD, RUBBLE, SNOW, ICE, RUBBISH ETC.
5. MINIMUM DEPTH OF CUT-OFF TRENCH SHALL BE 4' MEASURED FROM THE LOWEST ELEVATION OF THE UNDISTURBED EXISTING SURFACE INTERFACE. SEE DETAIL.
6. THE MINIMUM BOTTOM WIDTH OF THE CUT-OFF TRENCH SHALL BE 4', AND WIDE ENOUGH TO PERMIT OPERATION OF COMPACTION EQUIPMENT.
7. SIDE SLOPES OF THE CUT-OFF TRENCH SHALL BE NO STEEPER THAN IH:IV.
8. IF BEDROCK IS ENCOUNTERED BELOW THE POND EMBANKMENT THE CUT OFF TRENCH MY BE MODIFIED AT THE DIRECTION OF A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.
9. THE LOW PERMEABILITY CORE AT A MINIMUM SHALL EXTEND UP BOTH ABUTMENTS TO THE EMERGENCY SPILLWAY ELEVATION.
10. COMPACTION REQUIREMENTS FOR THE SHELL AND LOW PERMEABILITY CORE TO BE 95% OF THE MODIFIED PROCTOR PER ASTM D1557. ALL FILL TO BE PLACED IN LIFTS NOT EXCEEDING 12".
11. SIDE SLOPE OF POND EMBANKMENT TO BE NO STEEPER THAN THE SLOPES SHOWN ON THE POND-SPECIFIC DESIGN PLANS WITHOUT WRITTEN DIRECTION FROM THE DESIGN ENGINEER. IF ANY POND SIDE SLOPE IS STEEPER THAN 3H:1V, SLOPE PROTECTION MUST BE UTILIZED ON POND EMBANKMENT, WHICH MAY INCLUDE (BUT NOT BE LIMITED TO) RIPRAP AND/ OR EROSION CONTROL MATS.
12. THE LOW PERMEABILITY CORE MUST BE KEPT FREE FROM STANDING WATER DURING THE BACKFILL OPERATION.
13. ALL EMBANKMENT INSTALLATIONS TO BE SUPERVISED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER. SEE 'NOTE TO CONTRACTOR'.
14. ANY PROPOSED DEVIATIONS FROM THIS DETAIL MUST BE DESIGNED BY A SUITABLY QUALIFIED PROFESSIONAL GEOTECHNICAL ENGINEER AND SUBMITTED TO THE SITE ENGINEER (AND AHJ WHERE REQUIRED) FOR REVIEW PRIOR TO CONSTRUCTION.

POND EARTHEN EMBANKMENT: LOW PERMEABILITY CORE
NOT TO SCALE



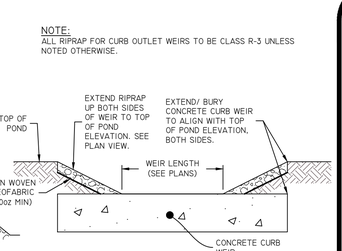
PLAN VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE

CURB OUTLET WEIR
NOT TO SCALE

NOTE:
ALL RIPRAP FOR CURB OUTLET WEIRS TO BE CLASS R-3 UNLESS NOTED OTHERWISE.



SECTION B-B
NOT TO SCALE

NOTE:
ALL CONCRETE CURB WEIRS MUST BE MONOLITHIC. CONCRETE CURB. WEIRS CANNOT BE MULTIPLE PRECAST CURBS JOINED IN SEQUENCE.

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STATE OF MAINE
BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

THIS PLAN SET IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNLESS STAMPED "ISSUED FOR CONSTRUCTION" AND STAMPED BY ENGINEER OF RECORD PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING.

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EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR ADDITIONAL UTILITIES NOT SHOWN ON THIS PLAN AND FOR THE ACCURACY OF EXISTING UTILITIES SHOWN. SEE "UTILITY NOTE" ON SHEET 4.

NO.	DATE	DESCRIPTION	BY:
1	10-04-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R.

STORMWATER POND COMPLEX A

STETSON ROAD

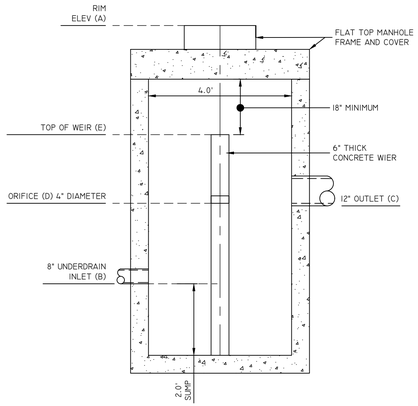
PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 14 OF 21

DE JOB NO. 2425-332 COPYRIGHT 2024 BY DIPRETE ENGINEERING ASSOCIATES, INC.

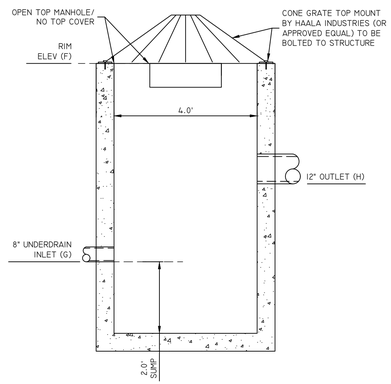
Z:\DEPAW\PROJECTS\2425-332 STETSON ROAD APARTMENTS\AUTOCAD DRAWINGS\2425-432-PLAN.DWG PLOTTED: 1/4/2025



LOCATION	POINT	ELEV.
OCS RIM	A	261.65
OCS INVERT IN	B	252.08
OCS INVERT OUT	C	254.33
OCS ORIFICE	D	254.33
OCS TOP OF WEIR	E	258.50

OUTLET CONTROL STRUCTURE
4' DIAMETER MANHOLE (OCS-136)

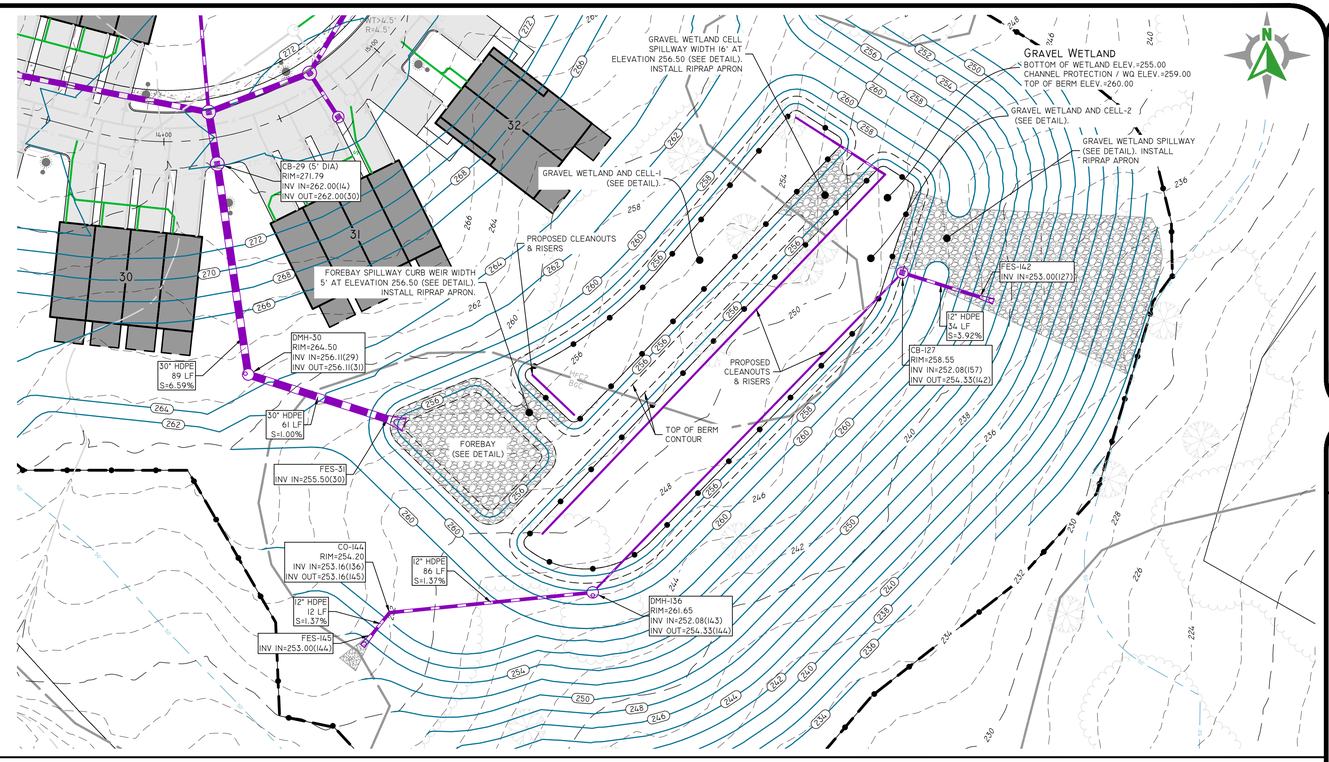
SCALE: 1"=2'



LOCATION	POINT	ELEV.
OCS RIM	F	258.55
OCS INVERT IN	G	252.08
OCS INVERT OUT	H	254.33

OUTLET CONTROL STRUCTURE
4' DIAMETER MANHOLE (OCS-127)

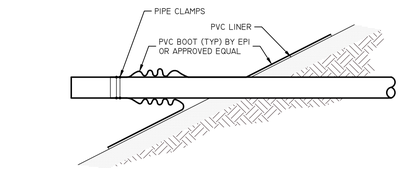
SCALE: 1"=2'



STORMWATER GRAVEL WETLAND COMPLEX B

SCALE: 1"=30'

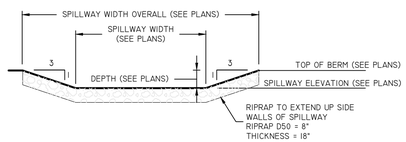
0 15' 30' 60'



NOTES:
1. INSTALL LINER & BOOT IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.

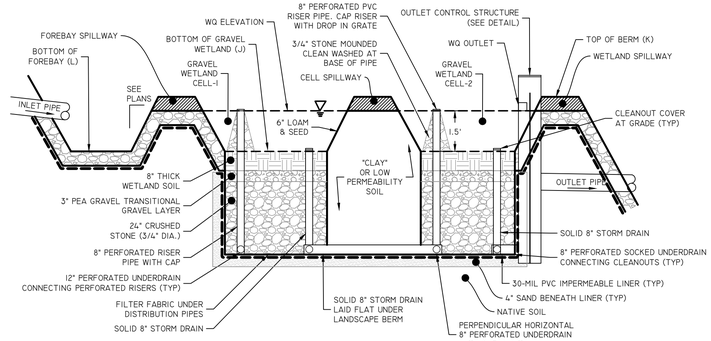
PIPE PENETRATION IN PVC

NOT TO SCALE



SPILLWAY

LOCATION	POINT	ELEV.
BOTTOM OF GRAVEL WETLAND	J	255.0
TOP OF BERM	K	260.0
BOTTOM OF FOREBAY	L	255.0



NOTE:
ALL RIPRAP FOR CURB OUTLET WEIRS AND FOREBAY TO BE CLASS D50 = 8" AND 18" THICKNESS UNLESS NOTED OTHERWISE.

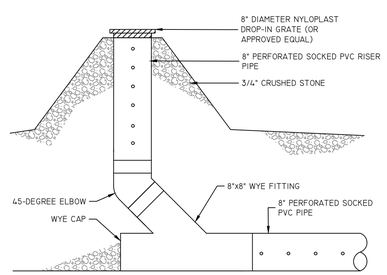
CROSS SECTION

GRAVEL WETLAND NOTES:

1. GRAVEL WETLANDS MUST BE INSTALLED AND CONSTRUCTED PER MAINE DEP STANDARDS (VOLUME III). BMP TECHNICAL DESIGN MANUAL CHAPTER 7.4.
2. THE SUBAREA DRAINING TO A CREATED WETLAND MUST BE COMPLETELY STABLE BEFORE RUNOFF IS DIRECTED TO THE BASIN TO PREVENT SEDIMENTATION OF THE DRAINAGE LAYER; OR ALL RUNOFF SHOULD BE RE-DIRECTED UNTIL CONSTRUCTION IS FINALIZED. THE VEGETATION WITHIN THE STRUCTURE IS EQUALLY IMPORTANT AND MUST BE WELL ESTABLISHED BEFORE IT CAN ACCEPT ANY RUNOFF. CONSTRUCTION SHOULD BE STARTED NO LATER THAN SEPTEMBER 1 OR EARLIER THAN JUNE 1; AND IF VEGETATION CANNOT BE ESTABLISHED BY THE END OF THE GROWING SEASON, CONSTRUCTION SHOULD BE DELAYED TO THE FOLLOWING YEAR. SEEDING OR STABILIZATION MUST OCCUR BY SEPTEMBER 15 IN PREPARATION FOR THE WINTER SEASON.
3. PERFORATED/SLOTTED RISER PIPES SHOULD EXTEND 18-24 INCHES ABOVE THE SURFACE OF THE WETLAND SOIL. A RISER SHOULD BE PROVIDED FOR EVERY 10 FEET OF LINEAR INFLOW SUB-DRAIN.
4. UNDERDRAIN PIPING SHOULD BE 6 INCH DIAMETER WITH SLOTTED, RIGID SCHEDULE 40 PVC OR SDR35 PIPE.
5. CLEANOUT PORT SHOULD BE PROVIDED FOR EACH OF THE HORIZONTAL UNDERDRAIN PIPE STRUCTURE IN BOTH BASINS. CLEANOUTS SHALL BE CAPPED AT GRADE.
6. BERMS AND WEIRS SEPARATING THE FOREBAY AND TREATMENT CELLS SHOULD BE CONSTRUCTED WITH CLAY, OR NON-CONDUCTIVE SOILS, OR A FINE GEOTEXTILE, OR SOME COMBINATION THEREOF TO AVOID WATER SEEPAGE AND SOIL PIPING THROUGH THESE EARTHEN DIVIDERS (I.E. FOUNDATION CUTOFF OR APPROVED EQUAL).
7. OUTLET CONTROL STRUCTURE SHALL BE LOCATED WITHIN THE EMBANKMENT FOR MAINTENANCE ACCESS, SAFETY AND AESTHETICS.
8. CONSTRUCTION ACTIVITIES, OBSERVATION & OVERSIGHT TO BE CONDUCTED IN ACCORDANCE WITH CHAPTER 500 AND MAINE DEP STANDARDS (VOLUME III).

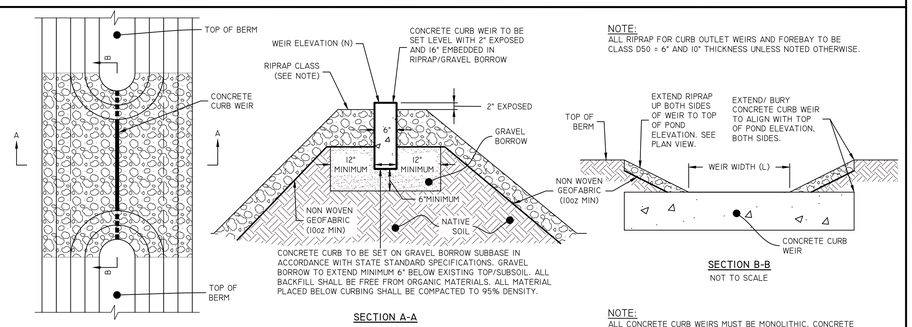
GRAVEL WETLAND DETAIL

NOT TO SCALE



RISER DETAIL

NOT TO SCALE



PLAN VIEW
NOT TO SCALE

SECTION A-A
NOT TO SCALE

NOTE:
ALL RIPRAP FOR CURB OUTLET WEIRS AND FOREBAY TO BE CLASS D50 = 6" AND 10" THICKNESS UNLESS NOTED OTHERWISE.

SECTION B-B
NOT TO SCALE

NOTE:
ALL CONCRETE CURB WEIRS MUST BE MONOLITHIC. CONCRETE CURB WEIRS CANNOT BE MULTIPLE PRECAST CURBS JOINED IN SEQUENCE.

SPILLWAY DETAIL & CURB OUTLET WEIR

NOT TO SCALE

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Two Stafford Court, Cranston, RI 02920 · Tel 401-943-1000

STATE OF MAINE
BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

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NO	DATE	DESCRIPTION	BY
1	01-06-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R.
CHECKED BY: J.M.F.

GRAVEL WETLAND DETAILS

STETSON ROAD

PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

DR JOB NO. 2625-02

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SHEET 15 OF 21

Z:\DEPAIN\PROJECTS\2625-02\ STETSON ROAD APARTMENTS\AUTOCAD DRAWINGS\2625-02-PLAN.DWG PLOTTED: 1/6/2025

EROSION AND SEDIMENTATION CONTROL NOTES:

IN ORDER TO ETFCTIVELY PREVENT AND CONTROL EROSION RELATED TO SOIL DISTURBANCE, THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) SHALL BE EMPLOYED:

1. POLLUTION PREVENTION:
MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWNGRADIENT BUTFR AREAS TO THE EXTENT PRACTICABLE. CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE SOIL EROSION. MINIMIZE THE DISTURBANCE OF STEEP SLOPES. CONTROL STORMWATER DISCHARGES, INCLUDING PEAK FLOW RATES AND VOLUME, TO MINIMIZE EROSION AT OUTLETS. THE DISCHARGE MAY NOT RESULT IN EROSION OF ANY OPEN DRAINAGE CHANNELS, SWALES, STREAM CHANNELS OR STREAM BANKS, UPLAND, OR COASTAL OR FRESHWATER WETLANDS OFF THE PROJECT SITE.

WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE. IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 FEET AND 50 FEET OF ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS.

2. TEMPORARY SOIL STABILIZATION BMPS:
TEMPORARY MULCHING SHALL BE APPLIED IMMEDIATELY TO ANY AREAS THAT HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED. ANY DISTURBED SOIL WITHIN 75' OF A STREAM, WATER BODY OR WETLAND MUST RECEIVE TEMPORARY MULCH WITHIN 48 HOURS FOLLOWING DISTURBANCE AND BEFORE ANY STORM EVENT. ALL OTHER AREAS SHALL RECEIVE TEMPORARY MULCH WITHIN 7 DAYS OF DISTURBANCE. AREAS WHICH CANNOT BE SEEDED DURING THE GROWING SEASON SHALL BE MULCHED FOR OVER-WINTER PROTECTION. THE FOLLOWING ARE ACCEPTABLE TEMPORARY MULCHING METHODS:

HAY OR STRAW MULCHES NEED TO BE AIR-DRIED, FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS. APPLICATION RATE MUST BE 2 BALES (70-90 POUNDS) PER 1000 SQ FT OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 85-90% OF THE GROUND SURFACE. HAY OR STRAW CAN BE DRIVEN INTO THE GROUND WITH TRACKED EQUIPMENT IF SLOPES ARE LESS THAN 3%, OR CAN BE ANCHORED WITH JUTE, WOOD FIBER OR PLASTIC NETTING ON STEEPER SLOPES.

EROSION CONTROL MIX MUST CONSIST PRIMARILY OF ORGANIC MATERIAL AND WILL INCLUDE ANY OF THE FOLLOWING: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR OTHER ACCEPTABLE PRODUCTS BASED ON A SIMILAR RAW SOURCE. WOOD OR BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS ARE NOT ACCEPTABLE. EROSION CONTROL MIX CAN BE USED AS A STANDALONE REINFORCEMENT ON SLOPES OF 2 HORIZONTAL TO 1 VERTICAL OR LESS AND DRAINING IN SHEET FLOW. IT CAN BE PLACED WITH A HYDRAULIC BUCKET, WITH A PNEUMATIC BLOWER OR BY HAND, AND MUST PROVIDE 100% SOIL COVERAGE.

EROSION CONTROL MIX SHALL MEET THE FOLLOWING SPECIFICATIONS:
- ORGANIC MATTER CONTENT SHALL BE BETWEEN 80-100%, DRY WEIGHT BASIS.
- PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6 IN. SCREEN AND BETWEEN 70-85% PASSING 0.75 IN. SCREEN
- ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX

WHEN USED AS MULCH, THE THICKNESS OF THE EROSION CONTROL MIX IS BASED UPON THE FOLLOWING:

LENGTH OF SLOPE	3:1 SLOPE OR LESS	BETWEEN 2:1 AND 3:1 SLOPE
LESS THAN 20 FT	2.0 IN.	4.0 IN.
BETWEEN 20 - 60 FT	3.0 IN.	5.0 IN.
BETWEEN 60 - 100 FT	4.0 IN.	6.0 IN.

CHEMICAL MULCHES AND SOIL BINDERS MAY BE USED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL CONSULT WITH THE MANUFACTURER TO DETERMINE ADEQUATE APPLICATION RATES AND METHODS.

EROSION CONTROL BLANKETS AND MATS SHALL BE USED ON STEEP SLOPES AND IN THE BOTTOM OF GRASSED WATERWAYS, OR AS OTHERWISE DIRECTED BY THE ENGINEER. THE MAT SHALL BE INSTALLED WITH FIRM CONTINUOUS CONTACT WITH THE SOIL AND STAPLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

TEMPORARY MULCH SHALL BE INSPECTED FOLLOWING ANY SIGNIFICANT RAINFALL EVENT. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. EROSION CONTROL MATS AND MULCH ANCHORING MUST BE INSPECTED AFTER RAINFALL EVENTS FOR DISLOCATION OR FAILURE, AND REPAIRED IMMEDIATELY. INSPECTIONS SHALL TAKE PLACE UNTIL 95% OF THE SOIL SURFACE IS COVERED WITH PERMANENT VEGETATION. WHERE MULCH IS USED WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE, AND REPAIR AS NEEDED.

TEMPORARY VEGETATION SHALL BE ESTABLISHED ON SOILS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 30 DAYS. IF TEMPORARY VEGETATION CANNOT BE ESTABLISHED PRIOR TO OCTOBER 15, TEMPORARY MULCH SHALL BE APPLIED THROUGH THE WINTER AND TEMPORARY VEGETATION SHALL BE PLANTED AT THE BEGINNING OF THE GROWING SEASON THE FOLLOWING YEAR. TO PREPARE THE SEEDBED, THE CONTRACTOR SHALL APPLY FERTILIZER AT A RATE OF 600 POUNDS PER ACRE OF 10-10-10 (N-P205-K20) OR EQUIVALENT AND LIMESTONE AT A RATE OF 3 TONS PER ACRE, IF NECESSARY. LOOSEN SOIL TO A DEPTH OF 2 INCHES IN AREAS THAT HAVE BEEN COMPACTED BY CONSTRUCTION ACTIVITIES. GRASS SEED SHALL BE SELECTED BASED UPON THE TIME OF YEAR THE PLANTING WILL TAKE PLACE AS SUMMARIZED IN THE FOLLOWING TABLE:

SEED	LB. PER ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	112	8/15 - 10/1
OATS	80	4/1 - 7/1 8/15 - 9/15
ANNUAL RYEGRASS	40	4/1 - 7/1

TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED TO MAINTAIN AT LEAST 95% VEGETATIVE COVER OF SOIL SURFACE. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES SHALL BE USED IN THE INTERIM SUCH AS TEMPORARY MULCH, FILTER BARRIERS, ETC.

3. SEDIMENT BARRIER BMPS:
PRIOR TO CONSTRUCTION TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED AT THE DOWNGRADIENT EDGE OF ANY AREA TO BE DISTURBED AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE DISTURBED AREA . SEDIMENT BARRIERS INCLUDE ANY OF THE FOLLOWING:

FILTER BARRIER FENCE, ALSO CALLED SILT FENCE, SHALL BE INSTALLED WHERE SHOWN ON THE PLANS AND IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. THE FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL PROVIDE A MINIMUM OF 6 MONTHS USABLE CONSTRUCTION LIFE INCLUDING PROTECTION AGAINST ULTRA-VIOLET LIGHT. THE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES INSTALLED AND POST SPACING SHALL NOT EXCEED 6 FEET. JOINTS IN THE FENCE SHALL BE AVOIDED TO THE EXTENT POSSIBLE, AND IF NECESSARY SHALL BE SPLICED TOGETHER AT A SUPPORT POST WITH A MINIMUM 6 INCH OVERLAP. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP, AND THE BOTTOM 6-8 INCHES OF FABRIC SHALL BE "TOED-IN" TO THE TRENCH AND COMPACTED. THE TRENCH SHOULD BE UPHILL OF THE FABRIC PRIOR TO BURIAL.

STRAY/HAY BALES SHALL BE INSTALLED WHERE SPECIFIED ON THE PLANS IN A SINGLE ROW WITH THE ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER. ALL BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED. THE BARRIER SHALL BE ENTRENCHED AND BACKFILLED TO A DEPTH OF AT LEAST 4 INCHES, AND THE BALES SHALL BE SECURED WITH AT LEAST TWO WOODEN STAKES OR STEEL REBAR PER BALE STAKES SHALL BE DRIVEN IN A DIRECTION TO PUSH THE BALES TOGETHER. GAPS BETWEEN BALES SHALL BE CHINKED WITH HAY.

EROSION CONTROL MIX BERMS ARE LINEAR BARRIERS COMPOSED OF EROSION CONTROL MIX AS SPECIFIED ABOVE. THE BERM MUST BE A MINIMUM OF 12 INCHES TALL AND 24 INCHES WIDE AT THE BASE IF UPHILL SLOPES ARE LESS THAN 5%. STEEPER SLOPES OR SLOPES GREATER THAN 20 FEET LONG MAY REQUIRE A LARGER WIDTH BERM. EROSION CONTROL MIX BERMS AT THE BASE OF A LONG OR STEEP SLOPE MAY ALSO REQUIRE A FILTER FENCE TO BE INSTALLED ON THE DOWNHILL SIDE OF THE BERM TO PROVIDE ADDITIONAL STABILIZATION AGAINST HIGH RUNOFF FLOWS.

CONTINUOUS CONTAINED BERMS, WHICH ARE ALSO REFERRED TO AS A FILTER SOCK, PROVIDES ADDITIONAL STABILITY TO AN EROSION CONTROL MIX BERM AND SHOULD BE USED IN FROZEN GROUND CONDITIONS OR IN AREAS THAT RECEIVE CONCENTRATED FLOW.

SEDIMENT BARRIERS SHOULD BE INSTALLED DOWNGRADIENT OF SOIL OR SEDIMENT STOCKPILES AND STORMWATER PREVENTED RUNNING ONTO THE STOCKPILE. SEDIMENT BARRIERS SHALL BE INSPECTED AFTER ANY SIGNIFICANT RAINFALL EVENT AND REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE BARRIERS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR EDGES OF THE BARRIER, OR IF LARGE VOLUMES OF WATER ARE IMPOUNDED BEHIND THE BARRIER, IT MAY BE NECESSARY TO REPLACE THE BARRIER WITH A TEMPORARY STONE CHECK DAM. SEDIMENT SHALL BE REMOVED ONCE IT REACHES HALF THE BARRIER HEIGHT. AFTER THE BARRIER IS REMOVED, ANY REMAINING SILT SHALL EITHER BE REMOVED OR GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

4. TEMPORARY CHECK DAMS:
STONE CHECK DAMS SHALL BE INSTALLED IN SWALES OR DRAINAGE DITCHES TO REDUCE STORMWATER VELOCITIES AS SHOWN ON THE PLANS. STONE CHECK DAMS ARE NOT ETFCTIVE IN REMOVING SEDIMENT AND SHOULD BE USED IN CONJUNCTION WITH SEDIMENT BARRIERS IDENTIFIED ABOVE. TEMPORARY CHECK DAMS MAY BE LEFT IN PLACE PERMANENTLY IN MOST CASES. CHECK DAMS SHOULD BE NO HIGHER THAN 24 INCHES, AND THE CENTER OF THE CHECK DAM MUST BE AT LEAST 6 INCHES LOWER THAN THE OUTSIDE EDGES. CHECK DAMS SHOULD BE SPACED SUCH THAT THE CREST OF THE DOWNSTREAM CHECK DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM CHECK DAM. CHECK DAMS IN A DRAINAGE DITCH OR WATERWAY SHOULD BE INSTALLED PRIOR TO DIRECTING RUNOFF TO THEM.

5. STORM DRAIN INLET PROTECTION:
STORM DRAIN INLETS THAT ARE MADE OPERATIONAL BEFORE THEIR DRAINAGE AREA IS STABILIZED SHALL BE PROTECTED WITH A FILTER UNTIL THE DRAINAGE AREA IS EITHER PAVED OR STABILIZED WITH 95% VEGETATIVE GROWTH. THE FOLLOWING ARE ACCEPTABLE BMPS ASSOCIATED WITH STORM DRAIN INLET PROTECTION:

HAY BALE OR SILT FENCE INLET STRUCTURE CONSISTS OF HAY BALES OR SILT FENCE CONFIGURED AROUND A CATCH BASIN INLET FRAME AND INSTALLED ACCORDING TO THE METHODS OUTLINED ABOVE. THIS METHOD IS SUITABLE FOR OPEN PIPE (CULVERT) INLETS, FIELD INLETS OR ROAD INLETS THAT HAVE NOT YET BEEN PAVED.

MANUFACTURED SEDIMENT FILTERS ARE THE PREFERRED METHOD FOR PROTECTING CATCH BASIN INLETS IN PAVED OR GRAVEL ROADWAYS. THE FILTERS TYPICALLY CONSIST OF A FABRIC OR OTHER PERVIOUS MATERIAL THAT IS PLACED ABOVE OR BELOW THE GRATE THAT TRAPS SEDIMENT ON THE SURFACE AND ALLOWS WATER TO FLOW THROUGH THE GRATE. CONSIDERATIONS SUCH AS WEATHER CONDITIONS, SLOPES, TRIBUTARY WATERSHED AREA AND EXPECTED SEDIMENT ACCUMULATION SHOULD BE FACTORED INTO MAKING A DECISION ON ANY PARTICULAR PRODUCT, AND THE MANUFACTURER'S RECOMMENDATIONS ON INSTALLATION AND MAINTENANCE SHALL BE STRICTLY ADHERED TO.

6. STABILIZED CONSTRUCTION ENTRANCE/EXIT:
TO REDUCE THE TRACKING OF SEDIMENT ONTO ROADWAYS, A STABILIZED CONSTRUCTION EXIT SHALL BE INSTALLED AT ALL POINTS OF EGRESS WHERE VEHICLES MAY TRAVEL FROM THE PROJECT SITE TO A PUBLIC ROAD OR OTHER PAVED AREA. THE STONE PAD SHALL CONSIST OF A MINIMUM 6-INCH DEPTH OF 2-3 INCH CRUSHED STONE, AND SHALL BE PLACED ON A GEOTEXTILE FABRIC. THE PAD SHALL EXTEND AT LEAST 50 FEET INTO THE PROJECT SITE AND BE A MINIMUM OF 10 FEET WIDE. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, AND THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS THAT HAVE EXPERIENCED ANY MUD-TRACKING. MAINTAIN THE PAD UNTIL ALL DISTURBED AREAS ARE STABILIZED.

7. DUST CONTROL:
THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST ON THE PROJECT SITE AND ON ADJACENT ROADWAYS. EXPOSED SOIL SURFACES SHALL BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST. GRAVEL SURFACES SHALL EITHER BE TREATED WITH AN APPLICATION OF CALCIUM CHLORIDE OR COVERED WITH CRUSHED STONE IF DUST CONTROL BECOMES DIFFICULT WITH NORMAL WATER APPLICATIONS.

8. LAND GRADING AND SLOPE PREPARATION:
GRADING SHALL BE PLANNED SO AS TO MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL SOIL EXPOSURE AND FINAL GRADING. ON LARGE PROJECTS THIS SHOULD BE ACCOMPLISHED BY PHASING THE OPERATION AND COMPLETING THE FIRST PHASE UP TO FINAL GRADING AND SEEDING BEFORE STARTING THE NEXT PHASE. ANY EXPOSED AREA THAT WILL NOT BE FINISH GRADED WITHIN 14 DAYS SHALL BE TREATED WITH MULCH OR PLANTED WITH TEMPORARY VEGETATION. PROVISIONS SHALL BE MADE TO SAFELY CONVEY SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR TO STABLE WATER COURSES TO ENSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS. CUT AND FILL SLOPES THAT ARE TO BE STABILIZED WITH GRASS SHALL NOT BE STEEPER THAN 2:1. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIALS. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES. ALL FILLS SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS. FILL MATERIAL SHALL BE FREE OF STUMPS, BUILDING DEBRIS AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL SLOPES OR STRUCTURAL FILLS. FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED APPROPRIATELY. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.

9. TOPSOIL:
IF POSSIBLE, TOPSOIL SHALL BE STOCKPILED ON THE PROJECT SITE AND REUSED. HIGH QUALITY TOPSOIL SHALL BE FRIABLE AND LOAMY (LOAM, SANDY LOAM, SILT LOAM, SANDY CLAY LOAM, CLAY LOAM), AND SHALL BE FREE OF DEBRIS, TRASH, STUMPS, ROCKS, ROOTS AND NOXIOUS WEEKS. AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, AND IMMEDIATELY PRIOR TO SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENED BY SCARIFYING TO A DEPTH OF AT LEAST 2 INCHES TO ENSURE BONDING WITH SUBSOIL. THE TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED TO A MINIMUM COMPACTED DEPTH OF 4 INCHES. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS. IT IS NECESSARY TO COMPACT THE TOPSOIL ENOUGH TO ENSURE GOOD CONTACT WITH THE UNDERLYING SOIL, BUT UNDUE COMPACTION IS TO BE AVOIDED.

10. PERMANENT SOIL STABILIZATION:
IF THE AREA WILL NOT BE WORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE, THEN PERMANENTLY STABILIZE THE AREA WITHIN 7 DAYS BY PLANTING VEGETATION, SEEDING, SOD, OR THROUGH THE USE OF PERMANENT MULCH, OR RIPRAP, OR ROAD SUB-BASE. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS; AMEND AREAS OF DISTURBED SUBSOILS WITH TOPSOIL, COMPOST, OR FERTILIZERS; PROTECT SEEDED AREAS WITH MULCH OR, IF NECESSARY, EROSION CONTROL BLANKETS; AND SCHEDULE SODDING, PLANTING, AND SEEDING SO TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS. NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL-ESTABLISHED WITH 90% COVER BY HEALTHY VEGETATION. IF NECESSARY, AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY, OR TOPSOIL EROSION IS EVIDENT. ONE OR MORE OF THE FOLLOWING MAY APPLY TO A PARTICULAR SITE.

SEEDED AREAS: TO PREPARE THE SEEDBED, APPLY 10-20-20 FERTILIZER AT A RATE OF 800 POUNDS PER ACRE AND GROUND LIMESTONE AT A RATE OF 3 TONS PER ACRE. WORK THE FERTILIZER AND LIMESTONE INTO THE TOPSOIL TO A DEPTH OF 4 INCHES AND REMOVE ANY STONES, ROOTS OR OTHER VISIBLE DEBRIS. SELECT A SEED MIXTURE THAT IS APPROPRIATE FOR THE SOIL TYPE AND MOISTURE CONTENT AS FOUND AT THE SITE, AND FOR THE AMOUNT OF SUN EXPOSURE THE AREA WILL RECEIVE AFTER USE. REFER TO THE USDA SOIL CONSERVATION SERVICE OR THE LOCAL SOIL AND WATER CONSERVATION DISTRICT FOR APPROPRIATE SEED MIXTURES. APPLY SEED UNIFORMLY IN ACCORDANCE WITH SUPPLIER RECOMMENDATIONS AND IMMEDIATELY COVER WITH MULCH AS DESCRIBED IN THE TEMPORARY MULCHING SECTION OF THIS PLAN.

HYDROSEEDING SHALL BE DONE IN ACCORDANCE WITH SUPPLIERS RECOMMENDATIONS. FOR SEEDED AREAS TO BE PERMANENTLY STABILIZED, 90% OF THE DISTURBED SOIL SHALL BE COVERED WITH MATURE HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OF THE TOPSOIL.

SOD STRIPS SHALL BE LAID AT RIGHT ANGLES TO DIRECTION OF SLOPE OR FLOW OF WATER STARTING AT LOWEST ELEVATION. JOINTS SHALL BE STAGGERED, AND ALL STRIPS SHALL BE ROLLED OR TAMPED INTO PLACE. ON SLOPES, SOD SHALL BE ANCHORED WITH STAPLES, WIRE OR PINS. IRRIGATE SODDED AREA IMMEDIATELY AFTER INSTALLATION. FOR SODDED AREAS TO BE PERMANENTLY STABILIZED, THE ROOTS OF THE SOD MUST BE COMPLETELY BOUND INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

PERMANENT MULCH IS A LONG TERM COVER THAT PROVIDES A GOOD BUTFR AROUND DISTURBED AREAS. THE EROSION CONTROL MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND MAY INCLUDE SHREDDED BARK, STUMP GRINDINGS OR COMPOSTED BARK. WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, REPROCESSED WOOD PRODUCTS OR BARK CHIPS ARE NOT ACCEPTABLE. THE EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS AND MATERIAL TOXIC TO PLANT GROWTH.

RIPRAP STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNEVEN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. THE DEPTH OF STONE SHALL BE A MINIMUM OF 2.2 TIMES THE MAXIMUM STONE DIAMETER. A GRAVEL OR GEOTEXTILE FILTER BLANKET SHALL BE PLACED BETWEEN THE RIPRAP AND UNDERLYING SOIL SURFACE. GRAVEL FILTER BLANKETS SHALL MEET MDOT TYPE-C UNDERDRAIN MATERIAL SPECIFICATIONS AND BE AT LEAST 6 INCHES THICK. GEOTEXTILE FILTER BLANKETS SHALL BE SPECIFIED BASED ON SITE CONDITIONS. RIPRAP SLOPES SHALL BE TOED INTO THE BASE OF THE EMBANKMENT BY EXCAVATING A TRENCH AT THE BOTTOM OF THE SLOPE AND INSTALLING A STABLE BASE OF RIPRAP TO GRADE.

DITCHES, CHANNELS AND SWALES ARE CONSIDERED PERMANENTLY STABILIZED WHEN THE CHANNEL HAS 90% COVER OF HEALTHY VEGETATION WITH A WELL GRADED RIPRAP LINING, EROSION CONTROL BLANKET, OR WITH ANOTHER NON-EROSIVE LINING SUCH AS CONCRETE OR ASPHALT PAVEMENT. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE CHANNEL LINING, UNDERCUTTING OF THE BANKS, OR DOWNCUTTING OF THE CHANNEL.

11. STORMWATER CHANNELS:
EACH CHANNEL SHOULD BE CONSTRUCTED IN SECTIONS SO THAT THE SECTION'S GRADING, SHAPING, AND INSTALLATION OF THE PERMANENT LINING CAN BE COMPLETED THE SAME DAY. IF A CHANNEL'S FINAL GRADING OR LINING INSTALLATION MUST BE DELAYED, THEN DIVERSION BERMS MUST BE USED TO DIVERT STORMWATER AWAY FROM THE CHANNEL, PROPERLY-SPACED CHECK DAMS MUST BE INSTALLED IN THE CHANNEL TO SLOW THE WATER VELOCITY, AND A TEMPORARY LINING INSTALLED ALONG THE CHANNEL TO PREVENT SCOURING.

WINTER EROSION AND SEDIMENTATION CONTROL NOTES:

THE WINTER CONSTRUCTION PERIOD TYPICALLY BEGINS IN EARLY NOVEMBER AND ENDS IN MID APRIL. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS TO OCCUR DURING THE FOLLOWING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. AN AREA SHALL BE CONSIDERED DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN THE ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. A COVER OF EROSION CONTROL MIX IS THE PREFERRED TEMPORARY MULCH DURING WINTER CONDITIONS.

1. NATURAL RESOURCE PROTECTION:
ANY AREAS WITHIN 75 FEET FROM ANY REGULATED NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION COVER, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH A PLASTIC NETTING OR PROTECTED WITH AN EROSION CONTROL COVER. DURING WINTER CONSTRUCTION, A DOUBLE ROW OF SEDIMENT BARRIERS (FOR EXAMPLE, SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY REGULATED NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE REGULATED NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

2. SEDIMENT BARRIERS:
DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

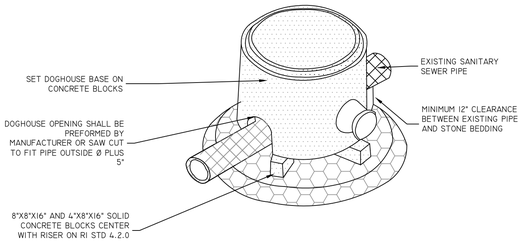
3. MULCHING:
ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 3 TONS PER ACRE (TWICE THE NORMAL ACCEPTED RATE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCHES THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. SNOW MUST BE REMOVED DOWN TO AT LEAST A ONE-INCH DEPTH PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERTY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WITH THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4. SOIL STOCKPILING:
STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR-INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STACKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED WITHIN 100 FEET FROM ANY REGULATED NATURAL RESOURCE.

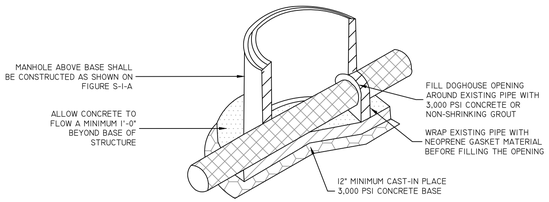
5. SEEDING:
BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1 AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINE GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF DORMANT SEEDING IS USED, ALL DISTURBED AREAS SHALL RECEIVE 4 INCHES OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS PER 1,000 S.F. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75%) IN THE SPRING SHALL BE RE-VEGETATED.

6. OVER-WINTER STABILIZATION OF DITCHES AND CHANNELS:
ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED BY NOVEMBER 1. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE INSTALLED AND STABILIZED BY SEPTEMBER 1. IF A GRASS-LINED DITCH OR CHANNEL IS STABILIZED BY SEPTEMBER 1, THEN EITHER A SOD LINING SHALL BE INSTALLED PRIOR TO OCTOBER 1 OR THE DITCH MUST BE LINED WITH STONE RIPRAP BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE PRIOR TO NOVEMBER 1.

7. OVER-WINTER STABILIZATION OF DISTURBED SLOPES:
ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 15 AND ESTABLISHED BY SEPTEMBER 1. IF A GRASS-LINED DITCH OR CHANNEL IS STABILIZED BY SEPTEMBER 1, THEN EITHER A SOD LINING SHALL B



DOGHOUSE MANHOLE BASE

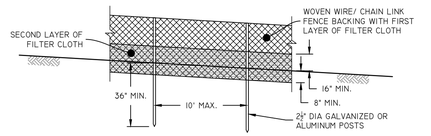


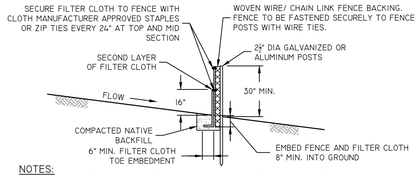
FOUNDATION SECTION VIEW

NOTES:
1. CONSTRUCT A FORMED INVERT FROM NEW SEWER LINE TO ALLOW FLOW TO THE EXISTING PIPE.
2. POUR A SHELF TO THE LOWER HALF OF THE EXISTING PIPE.
3. CUT AND REMOVE THE TOP HALF OF EXISTING PIPE TO WITHIN 6" OF THE MANHOLE WALLS AFTER THE INVERT AND SHELF HAVE BEEN FORMED AND THE MANHOLE HAS BEEN FULLY TESTED IN ACCORDANCE WITH THE SEWER AUTHORITY SPECIFICATIONS.

TYPICAL MANHOLE BASE (DOGHOUSE INSTALLATION)

NOT TO SCALE

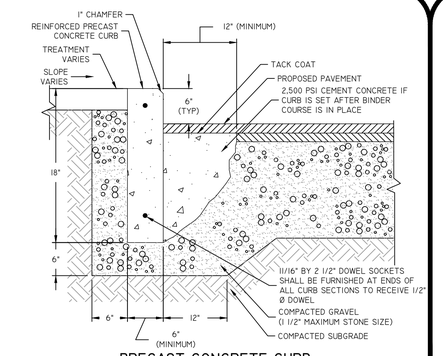




NOTES:
1. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY MUST BE OVERLAPPED BY A MINIMUM OF 6" AND FOLDED.
2. FILTER CLOTH TO BE MIRAFI 100 OR APPROVED EQUAL

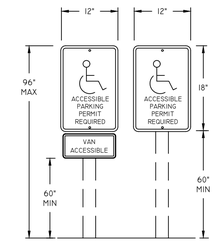
CLASS C SILT FENCE

NOT TO SCALE



PRECAST CONCRETE CURB

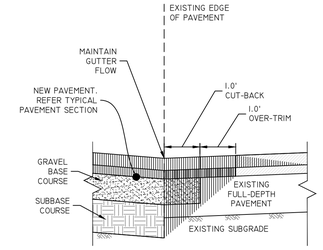
NOT TO SCALE



NOTES:
1. SIGN MUST BE PLACED BEHIND APPLICABLE VAN ACCESSIBLE OR ACCESSIBLE SPACE AS SHOWN ON SITE PLAN.
2. ACCESSIBLE PARKING SPACES AND SIGNAGE MUST COMPLY WITH LATEST VERSION OF THE ADA STANDARDS FOR ACCESSIBLE DESIGN, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) OR THE APPLICABLE STATE/ MUNICIPAL BUILDING CODE, WHICHEVER STANDARD CONTROLS.
3. THE MAXIMUM HEIGHT OF THE TOP OF THE HIGHEST SIGN SHALL BE 96".
4. THE MINIMUM HEIGHT OF THE BOTTOM OF THE LOWEST SIGN SHALL BE 60".
5. THE ABOVE NOTES APPLY REGARDLESS OF ADA SIGN MOUNTING TYPE (I.E. POLE MOUNTED, BOLLARD MOUNTED, WALL MOUNTED ETC)

TYPICAL ACCESSIBLE PARKING SIGN

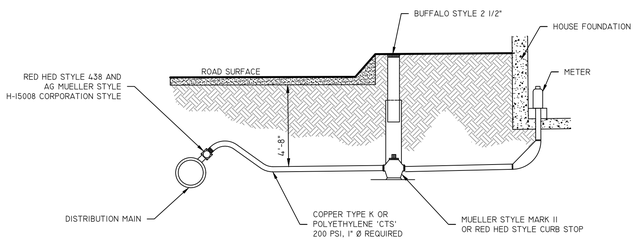
NOT TO SCALE



PRIME COAT VERTICAL FACE OF SAWCUT PRIOR TO INSTALLATION OF NEW PAVEMENT LAYERS.

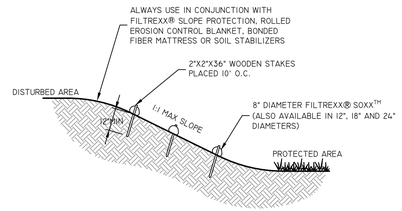
PAVEMENT TIE-IN DETAIL

NOT TO SCALE

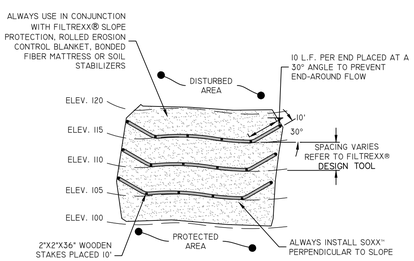


WATER SERVICE INSTALLATION (TYP)

NOT TO SCALE



SECTION



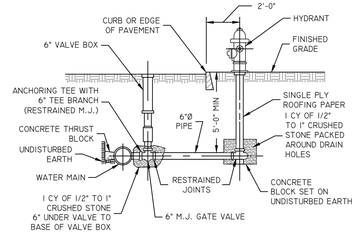
PLAN

NOTES:
1. REMOVE SEDIMENT FROM THE UPSLOPE SIDE OF THE SOXX™ WHEN ACCUMULATION HAS REACHED 1/2 OF EFFECTIVE HEIGHT OF SOXX™.
2. LOOSE FILTER MEDIA MAY BE BACKFILLED ON THE UPSLOPE SIDE OF THE SOXX™ TO ENHANCE PERFORMANCE.

FILTREXX SLOPE INTERRUPTION (OR APPROVED EQUAL)

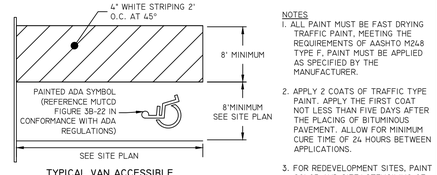
NOT TO SCALE

NOTES:
1. INSTALLATION SHALL NOT OBSTRUCT SIDEWALK TO PEDESTRIAN OR PHYSICALLY IMPAIRED.
2. REMOVAL OF EXISTING HYDRANT MAY REQUIRE ADDITIONAL RESTRAINT DESIGNED BY A PROFESSIONAL ENGINEER.
3. MECHANICAL JOINT PIPE WITH RESTRAINED JOINTS FOR BRANCHES OVER ONE LENGTH OF PIPE.
4. HYDRANT AND HYDRANT INSTALLATION MUST COMPLY WITH THE CITY OF AUBURN FIRE DEPARTMENT, MUNICIPALITY WATER & SEWER AUTHORITY AND ANY APPLICABLE AUTHORITY HAVING JURISDICTION INCLUDING, (BUT NOT LIMITED TO) MATERIALS, DIMENSIONS AND ACCESS COVER.

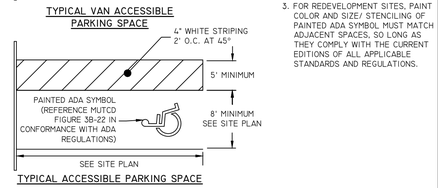


HYDRANT

NOT TO SCALE



TYPICAL VAN ACCESSIBLE PARKING SPACE



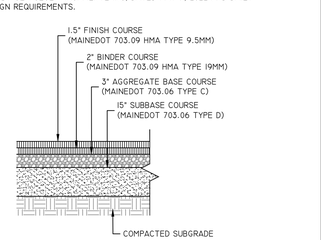
TYPICAL ACCESSIBLE PARKING SPACE

NOTES
1. ALL PAINT MUST BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE F, PAINT MUST BE APPLIED AS SPECIFIED BY THE MANUFACTURER.
2. APPLY 2 COATS OF TRAFFIC TYPE PAINT. APPLY THE FIRST COAT NOT LESS THAN FIVE DAYS AFTER THE PLACING OF BITUMINOUS PAVEMENT. ALLOW FOR MINIMUM CURE TIME OF 24 HOURS BETWEEN APPLICATIONS.
3. FOR REDEVELOPMENT SITES, PAINT COLOR AND SIZE/ STENCILING OF PAINTED ADA SYMBOL MUST MATCH ADJACENT SPACES, SO LONG AS THEY COMPLY WITH THE CURRENT EDITIONS OF ALL APPLICABLE STANDARDS AND REGULATIONS.

TYPICAL ACCESSIBLE PARKING SPACES

NOT TO SCALE

NOTE:
1. THIS PAVEMENT SECTION DETAIL REFLECTS ASSUMED MINIMUM REQUIREMENTS BASED ON FINALIZED GEOTECHNICAL DATA BY GZA GEOENVIRONMENTAL, INC DATED FEBRUARY 3, 2022, GEOTECHNICAL RESPONSE TO RFI'S PROPOSED RESIDENTIAL APARTMENTS BY GZA GEOENVIRONMENTL INC, DATED MAY 9, 2022 AND DAILY TRAFFIC DESIGN REQUIREMENTS.

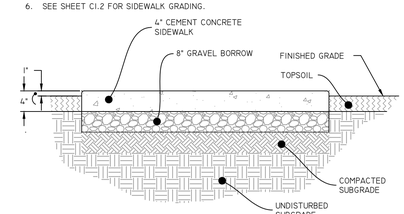


STANDARD PAVING (CAR TRAFFIC)

TYPICAL PAVEMENT SECTION

NOT TO SCALE

NOTES:
1. SURFACE TEXTURE SHALL BE A LIGHT BROOMING, TRANSVERSE TO THE LENGTH OF THE WALK. CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE, FREE OF SAGS AND SHORT GRADE CHANGES.
2. CONTRACTION JOINTS SHALL BE SPACED EQUAL TO THE WIDTH BUT SHALL NOT EXCEED 6' WITHOUT REINFORCING.
3. EXPANSION JOINTS SHALL BE SPACED AT A MINIMUM OF 25' OR WHEN ABUTTING A FIXED OBJECT.
4. SUBGRADE MATERIAL IS TO BE FREE OF ALL ORGANICS.
5. MATERIALS USED SHALL BE IN ACCORDANCE WITH THE R.I. STANDARD SPECIFICATION.
6. SEE SHEET C1.2 FOR SIDEWALK GRADING.



TYPICAL SIDEWALK/SLAB CONSTRUCTION (AS SPECIFIED ON PLANS)

NOT TO SCALE

DiPrete Engineering
Engineers · Planners · Surveyors
www.diprete-eng.com
Two Stafford Court, Cranston, RI 02920 · Tel 401-943-1000

STATE OF MAINE
BRANDON DAVID CARR
No. 16931
LICENSED PROFESSIONAL ENGINEER

THIS PLAN SET IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNLESS STAMPED "ISSUED FOR CONSTRUCTION" AND STAMPED BY A MAINE LICENSED PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING.

DIPRETE ENGINEERING ONLY WARRANTS PLANS ON A DIPRETE ENGINEERING TITLE BLOCK STAMPED BY REGISTERED PROFESSIONAL ENGINEER. DIPRETE ENGINEERING DOES NOT WARRANT PLANS BY ANY OTHER PARTY.

THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND SAFETY PRECAUTIONS AND PROGRAMS IN CONFORMANCE IN THE IMPLEMENTATION OF THIS PLAN AND OSHA STANDARDS.

THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND SAFETY PRECAUTIONS AND PROGRAMS IN CONFORMANCE IN THE IMPLEMENTATION OF THIS PLAN AND OSHA STANDARDS.

ONLY DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE AND/OR NOT NECESSARILY ALL INCLUSIVE. THE CONTRACTOR ASSUMES NO RESPONSIBILITY FOR THE ACTUAL LOCATIONS OF EXISTING UTILITIES.
SEE UTILITY NOTE ON SHEET 4.

NO.	DATE	DESCRIPTION	BY:
1	01-04-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. J.M.F.

DETAIL SHEET - 2

STETSON ROAD

PARCEL ID 29I-011
AUBURN, MAINE

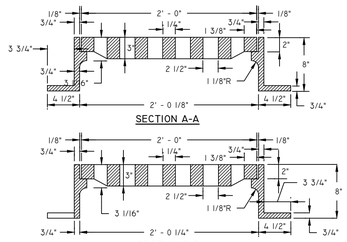
PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

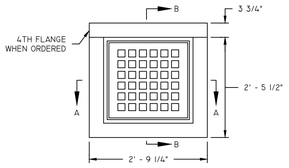
SHEET 17 OF 21

DE JOB NO. 2425-332 COPYRIGHT 2024 BY DIPRETE ENGINEERING ASSOCIATES, INC.

Z:\DEPAIN\PROJECTS\2425-332 STETSON ROAD APARTMENTS\AUTOCAD DRAWINGS\2425-332-PLAN.DWG PLOTTED: 1/4/2025

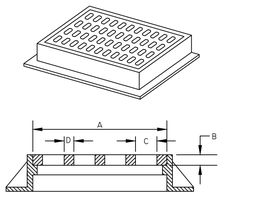
NOTE:
FRAME AND GRATE SHALL CONFORM TO THE APPLICABLE SECTION OF THE MAINE STANDARD SPECIFICATIONS.





SQUARE FRAME AND GRATE

NOT TO SCALE



CAT. NO.	A	B	C	D	WT. (LBS)
R-4853-A	24"x45"	3"	1 1/2"x 6 1/4"	1 1/4"	520

DOUBLE FRAME & GRATE NEENAH FOUNDRY CORP. (OR EQUAL)

NOT TO SCALE

A. LATERAL PLACEMENT OF SEWERS AND WATER MAINS

SEWERS SHALL BE LAID AT LEAST 10' HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED OUTSIDE EDGE-TO-OUTSIDE EDGE. THERE IS NO MINIMUM VERTICAL SEPARATION REQUIRED PROVIDED THE 10' HORIZONTAL SEPARATION IS MAINTAINED. STRUCTURES, OTHER THAN PIPELINES OR CONDUITS, THROUGH WHICH SANITARY WASTEWATER FLOWS SUCH AS, BUT NOT LIMITED TO, MANHOLES, VALVE VAULTS, METER PITS AND PUMP STATION WET WELLS SHALL ALSO BE CONSTRUCTED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER LINE, MEASURED EDGE-TO-EDGE.

IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10' HORIZONTAL SEPARATION, THE AUTHORITY HAVING JURISDICTION, MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATER MAIN, PROVIDED THAT:

1. THE SEWER AND WATER MAIN ARE LAID IN SEPARATE TRENCHES, OR
2. THE SEWER AND WATER MAIN MAY BE INSTALLED IN THE SAME TRENCH WITH THE WATER MAIN PLACED ON A BENCH OF UNDISTURBED EARTH, AND
3. IN EITHER CASE, THE CROWN OF THE SEWER SHALL BE AT LEAST 18" BELOW THE INVERT OF THE WATER MAIN.

IN SITUATIONS WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE FOLLOWING PROTECTION SHALL BE PROVIDED:

1. ENCASEMENT OF THE SEWER PIPE IN CONCRETE (MINIMUM 6" THICKNESS) OR A CARRIER PIPE FOR AT LEAST 10' EITHER SIDE OF THE AREA NOT COMPLYING WITH THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION, OR
2. DESIGN AND CONSTRUCTION OF THE SEWER EQUAL TO WATER MAIN PIPE (CEMENT-LINED DUCTILE IRON OR OTHER AWWA-APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE), AND PRESSURE TESTED IN ACCORDANCE WITH AWWA SPECIFICATIONS.
3. IN INSTANCES OF CONFLICT WITH SANITARY WASTEWATER STRUCTURES MENTIONED ABOVE, RELOCATE THE WATER LINE TO ACHIEVE EITHER A 10 FOOT HORIZONTAL OR 18 INCH VERTICAL SEPARATION.

B. SEWERS CROSSING WATER MAINS

SEWERS CROSSING OVER WATER MAINS SHOULD BE AVOIDED, BUT IF CONDITIONS WARRANT THIS SITUATION, THEN ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO MAINTAIN LINE AND GRADE. SEWERS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN THE INVERT OF THE WATER MAIN AND THE CROWN OF THE SEWER. RELOCATION OF AN EXISTING WATER LINE MAY BE NECESSARY TO ACHIEVE THIS VERTICAL SEPARATION. RELOCATED WATER LINES SHALL BE CONSTRUCTED OF AN AWWA-APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE AND DESIGNED FOR THE REQUIRED WATER SERVICE PRESSURE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.

WHERE CONDITIONS PREVENT AN 18" VERTICAL SEPARATION FROM BEING MAINTAINED, THE FOLLOWING METHODS SHALL BE SPECIFIED:

A. THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER MAIN PIPE (CEMENT-LINED DUCTILE IRON PIPE, PVC OR OTHER AWWA APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE) FOR A DISTANCE OF 12' ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN AND PRESSURE TESTED IN ACCORDANCE WITH AWWA SPECIFICATIONS, OR

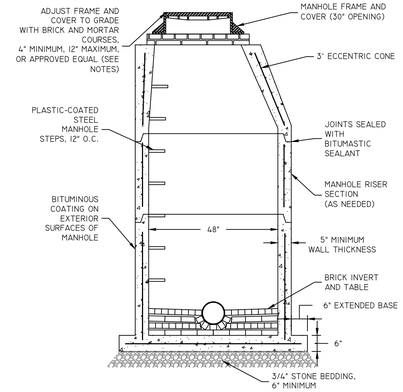
B. EITHER THE WATER MAIN OR THE SEWER MAY BE ENCASED IN CONCRETE (MINIMUM 6" THICKNESS) OR A CARRIER PIPE FOR A DISTANCE OF 12' ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE DESIGNED AND CONSTRUCTED OF MATERIALS WHICH ARE SATISFACTORY TO THE AUTHORITY HAVING JURISDICTION, OR

C. ANY OTHER METHODS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER, WHICH ENSURE ADEQUATE WATER TIGHTNESS AND ARE SATISFACTORY TO THE AUTHORITY HAVING JURISDICTION.

WATER LINES ARE DEFINED AS ANY CONDUITS OR PIPELINES THAT CONVEY POTABLE WATER.

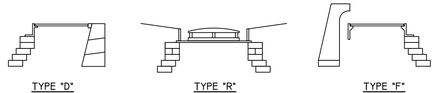
SEWER LINE/WATER MAIN SEPARATION POLICY FOR DESIGN OF SANITARY SEWERS

NOTES:
1. MANHOLE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM-C478.
2. INVERT AND TABLE SHALL CONSIST ENTIRELY OF BRICK AND MORTAR. NO SAND FILLER SHALL BE ALLOWED.
3. MANHOLES SHALL BE VACUUM TESTED PRIOR TO ACCEPTANCE, IN ACCORDANCE WITH THE SEWER AUTHORITY SANITARY RULES AND REGULATIONS. UNDER NO CIRCUMSTANCES WILL EXFILTRATION TESTING BE ACCEPTED.
4. TAPPING OF MANHOLES MUST BE AUTHORIZED AND INSPECTED BY THE SEWER AUTHORITY. THE ONLY APPROVED METHOD FOR TAPPING MANHOLES SHALL BE BY CORE-DRILLING THE MANHOLE AND INSTALLING A "KOR-N-SEAL" BOOT.
5. PRECAST CONCRETE GRADE RINGS, HDPE GRADE RINGS, OR OTHER RIM ADJUSTMENT PRODUCTS MAY BE USED IN LIEU OF BRICK AND MORTAR WITH THE PERMISSION OF THE SEWER AUTHORITY.



SEWER MANHOLE

NOT TO SCALE



TYPE CATCH BASIN AS REQUIRED

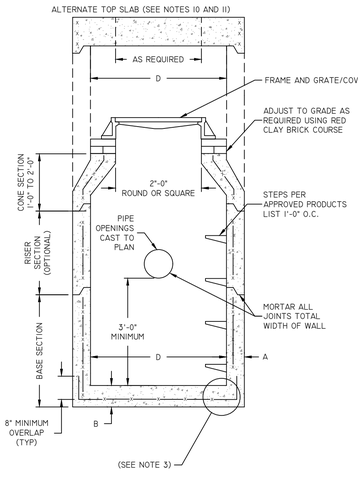


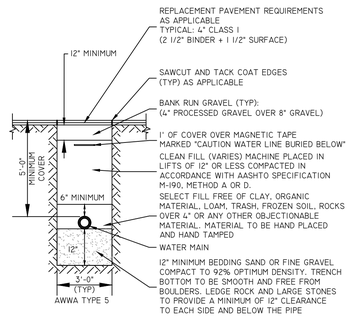
TABLE I			
CATCH BASIN DIAMETER (D)	A	B	CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED*
4'-0"	5"	6"	0.12 SQ. IN./LIN. FT.
5'-0"	6"	7"	0.15 SQ. IN./LIN. FT.
6'-0"	7"	8"	0.18 SQ. IN./LIN. FT.

* FOR LONGITUDINAL (VERTICAL STANDING) REINFORCEMENT REFER TO ASTM C478, ITEM 8.1.2

NOTES:
1. SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTION OF THE MAINE STANDARD SPECIFICATIONS.
2. SEE TABLE I FOR STEEL REINFORCEMENT REQUIREMENTS.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQUARE INCH/LIN. FOOT (BOTH WAYS).
4. STEPS SHALL CONFORM TO MAINE STANDARDS AND SHALL BE INSTALLED AT THE CASTING PLANT.
5. ONE POUR MONOLITHIC BASE SECTION.
6. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAWCUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
7. CORBEL MADE OF RED CLAY BRICK WILL BE PERMITTED FOR THE "CONE SECTION" OF THE 4'-0" CATCH BASIN ONLY.
8. FOR CATCH BASIN TYPES "D" AND "F" STEPS MUST BE INSTALLED ON THE CURB SIDE OF THE STRUCTURE.
9. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
10. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING.
11. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.

PRECAST ROUND CATCH BASIN

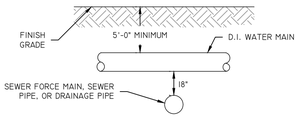
NOT TO SCALE



WATER TRENCH DETAIL

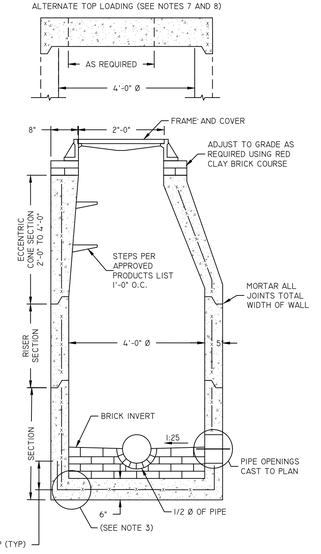
NOT TO SCALE

NOTES:
1. THE VERTICAL SEPARATION BETWEEN THE WATER MAIN AND THE PROPOSED UTILITY SHOULD BE A MINIMUM OF 18".
2. THE HORIZONTAL SEPARATION BETWEEN THE WATER MAIN AND THE PROPOSED UTILITY SHALL BE A MINIMUM OF 10'.
3. IF 1 OR 2 CAN NOT BE MAINTAINED THE PROPOSED UTILITY IS TO BE ENCASED IN CONCRETE 12' ON EITHER SIDE OF THE CROSSING.



UTILITY SEPARATION

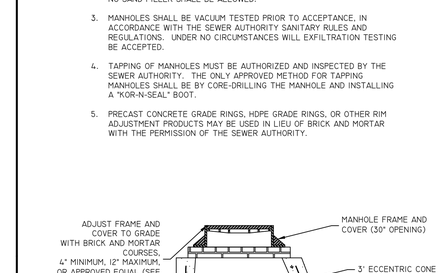
NOT TO SCALE



NOTES:
1. SHALL BE IN ACCORDANCE WITH APPLICABLE SECTION OF MAINE STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.12 SQUARE INCH/LIN. FOOT MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQUARE INCH/LIN. FOOT (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAWCUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO MAINE STANDARDS AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING.
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.

PRECAST 4'-0" ROUND MANHOLE

NOT TO SCALE



NOTES:
1. WIDTH (W) OF TRENCH IS EQUAL TO THE INSIDE DIAMETER OF THE PIPE PLUS 12".
2. SOIL UNDER CRUSHED STONE FOUNDATION SHALL BE UNDISTURBED AND COMPACTED MATERIAL WITH SEVERAL PASSES OF A VIBRATORY PLATE COMPACTOR.
3. STONE FOUNDATION ¾" MINUS SHALL BE PLACED 6" UNDER THE PIPE AND UP TO THE PIPE LAID THEREON. STONE PULLED AGAINST THE PIPE SIDES TO FIRMLY HOLD THE PIPE IN PLACE.
4. ¾" MINUS SHALL BE BROUGHT LEVEL TO THE TOP OF THE PIPE AND OUT TO THE TRENCH WALL AT THIS ELEVATION FOR ALL PIPE.
5. IF ¾" CRUSHED OR WASHED STONE IS USED IN LIEU OF ¾" MINUS, STONE BEDDING MUST BE WRAPPED IN NON WOVEN FILTER FABRIC.

SEWER TRENCH DETAIL

NOT TO SCALE

INSTALLATION NOTES:

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

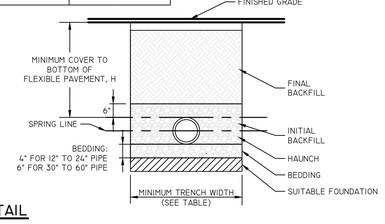
MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS**

	SURFACE LIVE LOADING CONDITION	
PIPE Ø	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD)
12" - 48"	12"	48"
60"	24"	60"

*VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER.
**SEE BACKFILL REQUIREMENTS IN NOTE 6.

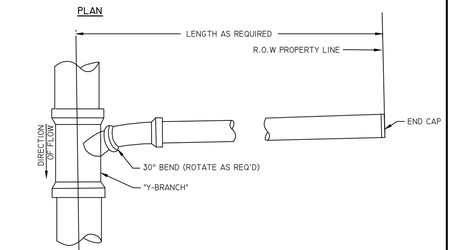
PIPE Ø	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"

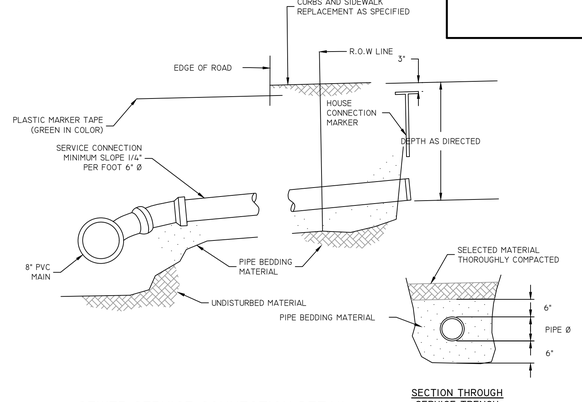
PIPE Ø	MIN. TRENCH WIDTH
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
60"	96"



HDPE TRENCH DETAIL

NOT TO SCALE





SEWER SERVICE CONNECTION DETAIL

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THIS PLAN SET PROVIDED AT NO COST FOR CONSTRUCTION PURPOSES UNLESS STAMPED "ISSUED FOR CONSTRUCTION" AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING.

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THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS AND METHODS OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS IN CONFORMANCE WITH THE IMPLEMENTATION OF THIS PLAN AND OSHA.

EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR ANY INACCURACIES IN THE LOCATIONS OF EXISTING UTILITIES. SEE "UTILITY NOTE" ON SHEET 1.

NO.	DATE	DESCRIPTION	BY
1	01-04-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. — J.M.F.

DETAIL SHEET - 3

STETSON ROAD
PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350.
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 18 OF 21

DE JOB NO. 2625-02 COPYRIGHT 2024 BY DIPRETE ENGINEERING ASSOCIATES, INC.

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DRAWN FOR: F.R. MAHONY & ASSOCIATES, INC.	PO# –––	DISCONNECTS: 1 1/4" AK125CB	SHEET 2 OF 2 Revision 0
	QUOTE # –––	PUMPS: E-ONE	"THE BEST AROUND UNDERGROUND"
JOB REFERENCE / Notes: QUAD – SCITUATE	BASIN DESCRIPTION: 60 X 144–300	DRAWN BY: A.HARTUNG DATE: 11/23/20	PH: (574)-936-6022 FX: (574)-936-5811 WWW.AKINDUSTRIES.COM
	COVER DESCRIPTION: 1/4" ALUMINUM HDC W/ SAFETY GRATE	CHECKED BY: DATE CHECKED:	

DRAWN FOR: F.R. MAHONY & ASSOCIATES, INC.	PO# –––	DISCONNECTS: 1 1/4" AK125CB	SHEET 1 OF 2 Revision 0
	QUOTE #	PUMPS: E-ONE	"THE BEST AROUND UNDERGROUND"
JOB REFERENCE / Notes: QUAD RAIL	BASIN DESCRIPTION: 60 X 144–301	DRAWN BY: DATE: 12/20/24	PH: (574)-936-6022 FX: (574)-936-5811 WWW.AKINDUSTRIES.COM
	COVER DESCRIPTION: 1/4" ALUMINUM HDC W/ SAFETY GRATE	CHECKED BY: DATE CHECKED:	

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DIPRETE ENGINEERING ONLY WARRANTS PLANS ON A DIPRETE ENGINEERING TITLE BLOCK IS STAMPED BY REGISTERED ENGINEERING. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR ENGINEERING DOES NOT WARRANT PLANS BY ANY OTHER PARTY: CHANGES MADE TO THE ORIGINAL DESIGN WITHOUT THE WRITTEN CONFORMANCE IN THE IMPLEMENTATION OF THIS PLAN AND ITS DESIGN.

THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT, UNLESS SPECIFICALLY NOTED OTHERWISE. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY OR TO PROTECT THEM FROM DAMAGE, INJURY OR LOSS. THE CONTRACTOR SHALL ERECT AND MAINTAIN ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION. THE CONTRACTOR SHALL NOTIFY OWNERS OF ADJACENT PROPERTY AND UTILITY COMPANIES WHEN PROCEDURES ARE LIKELY TO AFFECT THEIR PROPERTY.

THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITIES SHOWN ON THIS PLAN AND ALL UTILITIES THAT MAY BE ENCOUNTERED. SEE "UTILITY NOTE" ON SHEET 3

NO.	DATE	DESCRIPTION	BY:
1	01-06-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. CHECKED BY: J.M.F.

DETAIL SHEET - 4

STETSON ROAD

PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 19 OF 21

DR. JOB NO. 2625-02

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PLANTING NOTES:

1. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS BY NOTIFYING DIG-SAFE (811) AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION OR SITE PREPARATION AND ANY/OR ALL LOCAL UTILITY COMPANIES AS REQUIRED.
2. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS BY THE CONTRACTOR. CONTRACTOR MUST OBTAIN ALL NECESSARY PERMITS FOR THIS PROJECT.
3. CONTRACTOR TO PROVIDE A ONE (1) YEAR GUARANTEE FOR ALL MATERIALS. CONTRACTOR GUARANTEES THAT PLANTS WILL REMAIN HEALTHY FOR ONE (1) GROWING SEASON. CONTRACTOR TO MAINTAIN ALL PLANTING AND LAWNS UNTIL FINAL PROJECT ACCEPTANCE. GUARANTEE PERIOD TO COMMENCE AT FINAL ACCEPTANCE. ANY REPLACEMENT PLANTS SHALL BE OF THE SAME SIZE AND SPECIES AS SPECIFIED WITH NEW GUARANTEE COMMENCING ON THE DATE OF REPLACEMENT.
4. ALL PLANT MATERIAL MUST CONFORM, IN ALL RESPECTS, TO THE GUIDELINES OF "THE AMERICAN STANDARD FOR NURSERY STOCK," LATEST EDITION, PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION, INC. ALL PLANTS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS.
5. COMPATIBLE PLANT SUBSTITUTIONS ARE PERMITTED TO ACCOMMODATE AVAILABILITY AND SEASONAL VARIATIONS. PLANT SUBSTITUTION SELECTION MUST BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
6. ALL PLANTS TO BE PLANTED SO THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS TO THEIR ORIGINAL GRADE BEFORE DIGGING.
7. CREATE SAUCER AROUND INDIVIDUAL PLANTS CAPABLE OF HOLDING WATER. ALL PLANTS TO BE FLOODED WITH CLEAN WATER TWICE WITHIN THE FIRST 24 HOURS OF PLANTING. ADDITIONAL WATERING MUST BE MADE AS REQUIRED TO KEEP PLANTS FROM WILTING AND DRYING OUT UNTIL FINAL ACCEPTANCE.
8. ALL PLANTS TO RECEIVE MULCH AS SPECIFIED IN THE LANDSCAPE PLANTING DETAILS AND MUST COVER PLANTING BEDS AS SHOWN ON DRAWINGS WITHIN 72 HOURS AFTER PLANTING.
9. TRIM BROKEN AND DEAD BRANCHES FROM TREES AND SHRUBS AFTER PLANTING. NEVER CUT A LEADER.
10. ALL LANDSCAPED AREAS MUST BE KEPT FREE OF WEEDS AND DEBRIS. ALL VEGETATION WITHIN SAID AREAS MUST BE MAINTAINED FREE OF PHYSICAL DAMAGE CAUSED BY CHEMICALS, INSECTS, DISEASES, LACK OF WATER OR OTHER CAUSES. DAMAGED PLANTS SHALL BE REPLACED WITH THE SAME OR SIMILAR VEGETATION ON AN ANNUAL BASIS.
11. LOAM MOVED ON SITE TO BE STOCKPILED AND RETAINED AND TO BE USED AS REQUIRED FOR THE LANDSCAPE DESIGN. LOAM MUST NOT BE MIXED WITH ANY UNSUITABLE MATERIALS OR SUBSOIL. EXCESS LOAM TO REMAIN ON THE OWNER'S PROPERTY AND ONLY REMOVED WITH THE OWNERS PERMISSION. NEW LOAM SHALL BE FRIABLE, FERTILE, MEDIUM TEXTURED SANDY LOAM THAT IS FREE OF TOXIC MATERIALS TO HEALTHY PLANT GROWTH AND SURVIVAL. LOAM SHALL BE FREE OF MATTER 1" OR GREATER IN DIAMETER AND WHEN TESTED SHALL HAVE A PH BETWEEN 5.5 AND 7.5. CONTRACTOR TO PROVIDE 6 INCHES OF GOOD QUALITY, LOAM AND/OR REUSE EXISTING LOAM TO PROVIDE A MINIMUM 6 INCH DEPTH OR AS STATE AND LOCAL REGULATIONS REQUIRE.
12. NY ADDITIONAL DISTURBED AREA DURING CONSTRUCTION MUST BE LOAM AND SEEDED BY THE CONTRACTOR BEFORE COMPLETION OF THE PROJECT.
13. IRRIGATION DESIGN, INSTALLATION AND MAINTENANCE BY OTHERS OR AS DIRECTED BY OWNER.
14. LIGHTING PHOTOMETRICS/DESIGN BY OTHERS.
15. THESE PLANS ARE FOR LANDSCAPE PLANTING ONLY.
16. THESE PLANS ARE NOT FOR CONSTRUCTION AND ARE FOR PERMITTING PURPOSES ONLY.

AUBURN, ME ZONING

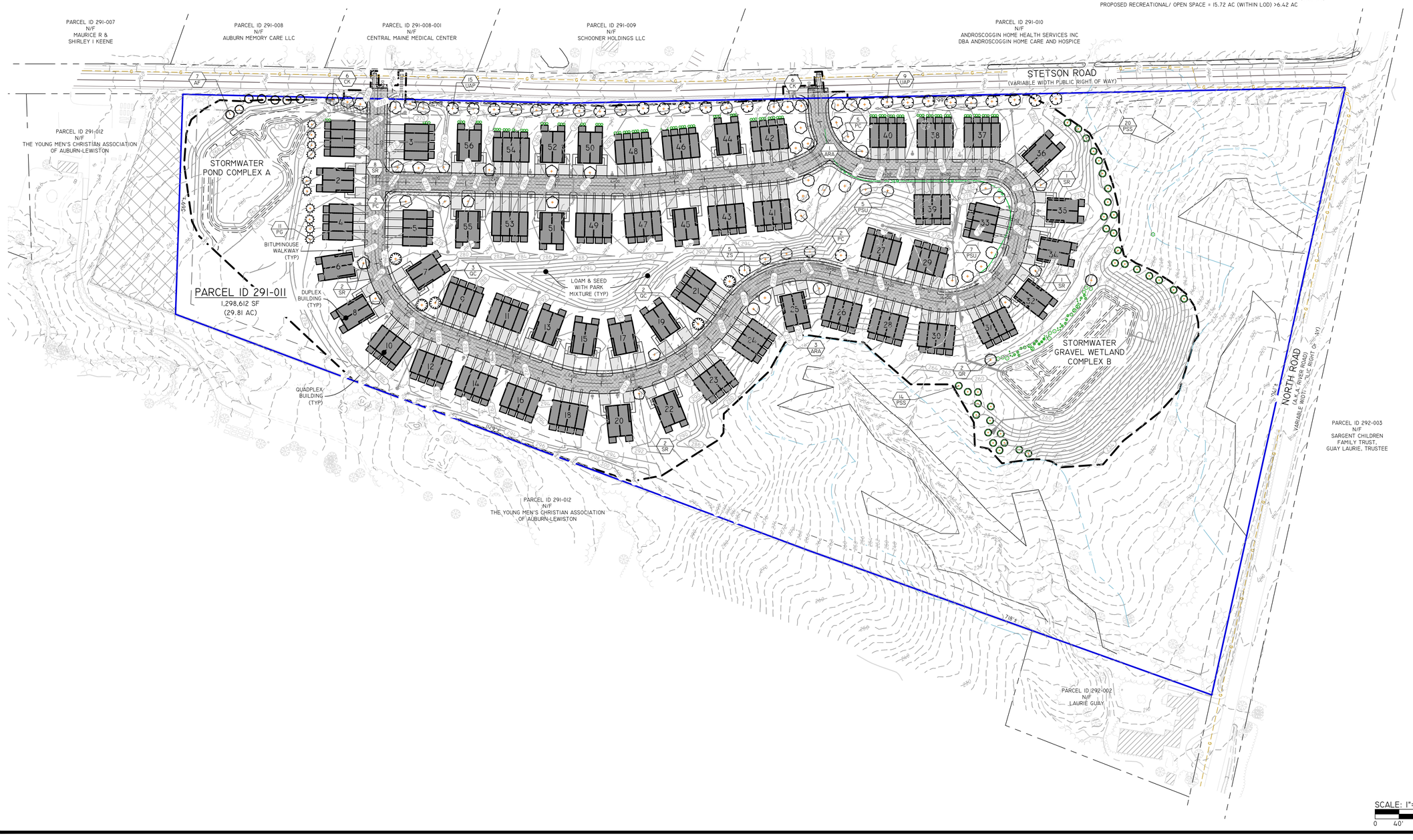
3.44 MULTI-FAMILY SUBURBAN (MFS)
A. PURPOSE – THIS DISTRICT IS INTENDED TO STABILIZE AND PROTECT MEDIUM TO HIGH DENSITY RESIDENTIAL AREAS BY PROVIDING FOR A VARIED DENSER URBAN PATTERN MADE SUITABLE TO THE NEEDS OF THE POPULATION BY ENCOURAGING A RANGE OF DWELLING TYPES. THIS MULTI-FAMILY ZONE HAS A MAXIMUM DENSITY OF 17 DWELLING UNITS PER ACRE, YET RETAINS THE OPEN CHARACTER OF RESIDENTIAL AREAS BY REQUIRING 50 PERCENT GREEN SPACE. IT IS INTENDED THAT THIS DISTRICT WILL PROVIDE THE MAXIMUM POSSIBLE FREEDOM IN THE DESIGN OF STRUCTURES AND THEIR GROUPING AND WILL ENCOURAGE FLEXIBLE AND IMAGINATIVE LAYOUTS AND DESIGNS.

GREEN SPACE CALCULATION
TOTAL SITE AREA = 29.81 ACRES (OVERALL PROPERTY LINE)
TOTAL IMPERVIOUS AREA = 4.28 ACRES
29.81 - 4.28 = 25.53 ACRES GREEN SPACE
25.53/ 29.81 = 85% GREEN SPACE >50%

TOTAL LOD AREA = 20.00 ACRES
TOTAL IMPERVIOUS AREA = 4.28 ACRES
20.00 - 4.28 = 15.72 ACRES GREEN SPACE
15.72/ 20.00 = 78% GREEN SPACE >50%

7.3 SUBDIVISION
I. RECREATION AREA/OPEN SPACE STANDARDS
1. EVERY DEVELOPER OF A RESIDENTIAL SUBDIVISION SHALL INCLUDE AS PART OF A SUBDIVISION PROPOSAL A PROVISION FOR RECREATIONAL AND OPEN SPACE WHICH IS ADEQUATE TO MEET THE REASONABLY FORESEEABLE NEEDS OF THE RESIDENTS OF THE SUBDIVISION.
THE STANDARD ESTABLISHED BY THE CITY TO SATISFY THIS PURPOSE IS AN AREA OF NOT LESS THAN 43,560 CONTIGUOUS SQUARE FEET OR ONE (1) ACRE OF LAND FOR THE FIRST TEN (10) LOTS OR UNITS. THE AMOUNT OF LAND REQUIRED IS INCREASED AT A RATE OF 5,000 SQUARE FEET PER UNIT FOR EACH UNIT OVER TEN (10) UNITS.

RECREATIONAL/ OPEN SPACE CALCULATION
PROPOSED UNITS = 56
REQUIRED RECREATIONAL/ OPEN SPACE = 5,000 SF/UNIT x 56 = 280,000 SF (6.42 AC)
PROPOSED RECREATIONAL/ OPEN SPACE = 15.72 AC (WITHIN LOD) >6.42 AC



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LICENSED LANDSCAPE ARCHITECT
ALEXANDRA AVERY
No. 5206
STATE OF MAINE

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DIPRETE ENGINEERING ONLY WARRANTS PLANS ON A DIPRETE ENGINEERING TITLE BLOCK STAMPED BY REGISTERED ENGINEER. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR ANY CHANGES MADE TO THESE PLANS BY ANY OTHER PARTY. DIPRETE ENGINEERING DOES NOT WARRANT PLANS BY ANY OTHER PARTY.
THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA REGULATIONS AND SHALL PERFORM THE WORK IN CONFORMANCE IN THE IMPLEMENTATION OF THIS PLAN AND SHALL BE SOLELY RESPONSIBLE FOR THE PROJECT SITE CONDITIONS, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY.
EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR ADDITIONAL UTILITIES NOT SHOWN. FOR LOCATIONS OF EXISTING UTILITIES SEE "UTILITY NOTE" ON SHEET 3.

NO.	DATE	DESCRIPTION	BY:
1	01-06-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. J.M.F.

LANDSCAPE PLAN

STETSON ROAD

PARCEL ID 291-011
AUBURN, MAINE

PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 20 OF 21

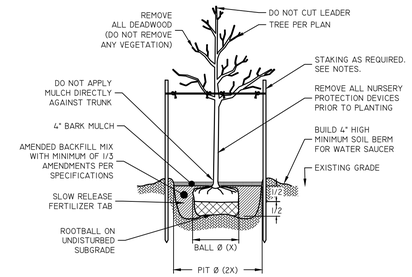
DE JOB NO: 2025-032 COPYRIGHT 2024 BY DIPRETE ENGINEERING ASSOCIATES, INC.

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PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT
TREES					
	ARA	4	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	2.5/3" CAL B&B
	CK	12	CORNUS KOUSA	KOUSA DOGWOOD	2.5/3" CAL B&B
	PSU	12	PRUNUS SUBHIRTELLA	HIGAN CHERRY	2.5/3" CAL B&B
	PC	9	PYRUS CALLERYANA 'CLEVELAND SELECT'	CHANTICLEER CALLERY PEAR	2.5/3" CAL B&B
	QC	5	QUERCUS COCCINEA	SCARLET OAK	2.5/3" CAL B&B
	QR	2	QUERCUS RUBRA	RED OAK	2.5/3" CAL B&B
	SR	15	SYRINGA RETICULATA `IVORY SILK`	JAPANESE TREE LILAC	2.5/3" CAL B&B
	UAP	24	ULMUS AMERICANA 'PRINCETON'	PRINCETON AMERICAN ELM	2.5/3" CAL B&B
	ZS	5	ZELKOVA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN SAWLEAF ZELKOVA	2.5/3" CAL B&B
EVERGREEN TREES					
	AF	7	ABIES FRASERI	FRASER FIR	6/7` HT
	PG	11	PICEA GLAUCA	WHITE SPRUCE	5/6` HT
	PSS	34	PINUS STROBUS	WHITE PINE	6/7` HT
SYMBOL	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**
SHRUBS					
	IG	114	ILEX GLABRA `SHAMROCK`	INKBERRY	3-4` HT
WETLAND COMPLEX PLANTING					
	AMC	10	AMELANCHIER CANADENSIS	CANADIAN SERVICEBERRY	24-30" HT
	HF	15	HEMEROCALLIS FULVA	ORANGE DAYLILY	1 GAL
	ILV	11	ILEX VERTICILLATA	WINTERBERRY	18-24" HT
	IRV	5	IRIS VERSICOLOR	BLUE FLAG	1 GAL
	JUV	4	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	24-30" HT
	RP	5	ROSA PALUSTRIS	SWAMP ROSE	18-24" HT
	SCA	2	SAMBUCUS CANADENSIS	AMERICAN ELDERBERRY	24-30" HT

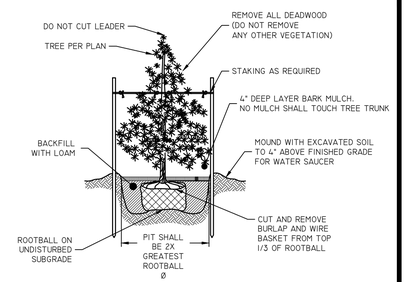
NOTES:
1. STAKING MAY BE REQUIRED TO ASSURE STRAIGHT TRUNK. STAKING MUST FOLLOW INDUSTRY STANDARDS.
2. REMOVE TOP 1/3 OFBURLAP AND WIRE BASKET. EXISTING BALL SHALL BE EVEN OR SLIGHTLY ABOVE EXISITNG GRADE.
3. ALL PLANTINGS SHALL COMPLY WITH CURRENT STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.



BALL & BURLAP TREE PLANTING DETAIL

NOT TO SCALE

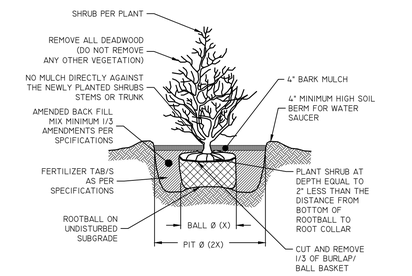
NOTES:
1. ALL PLANTINGS SHALL COMPLY WITH CURRENT STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.



EVERGREEN TREE PLANTING DETAIL (4'-0" HIGH AND GREATER)

NOT TO SCALE

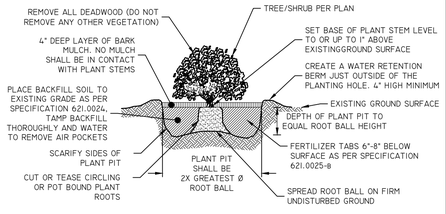
NOTES:
1. ALL PLANTINGS SHALL COMPLY WITH CURRENT STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.



BALL AND BURLAP SHRUB PLANTING DETAIL

NOT TO SCALE

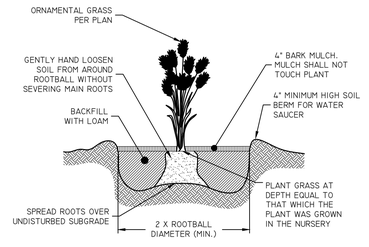
NOTES:
1. ALL PLANTINGS SHALL COMPLY WITH CURRENT STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
2. REMOVE AND PROPERLY DISPOSE OF CONTAINERS, TAGS, LABELS, AND FLAGGING TAP, UNLESS OTHERWISE DIRECTED BY AN AUTHORIZED MAINEDOT EMPLOYEE.
3. PRUNE BROKEN AND DEAD BRANCHES AT TIME OF PLANTING. NEVER CUT A LEADER.



CONTAINER TREE/SHRUB PLANTING DETAIL

NOT TO SCALE

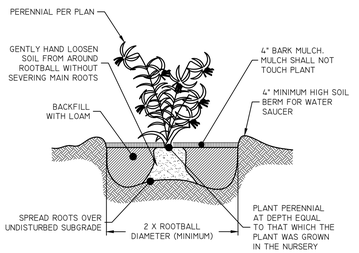
NOTES:
1. ALL PLANTINGS SHALL COMPLY WITH CURRENT STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.



ORNAMENTAL GRASS PLANTING DETAIL

NOT TO SCALE

NOTES:
1. ALL PLANTINGS SHALL COMPLY WITH CURRENT STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.



PERENNIAL PLANTING DETAIL

NOT TO SCALE

DiPrete Engineering
Engineers · Planners · Surveyors
www.diprete-eng.com
Two Stafford Court, Cranston, RI 02920 · Tel 401-943-1000

LICENSED LANDSCAPE ARCHITECT
ALEXANDRA AVERY
No. 5206
STATE OF MAINE

THIS PLAN SET IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNLESS STAMPED "ISSUED FOR CONSTRUCTION" AND SIGNED AND STAMPED BY A MAINE REGISTERED PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING.

DIPRETE ENGINEERING ONLY WARRANTS PLANS ON A DIPRETE ENGINEERING TITLE BLOCK STAMPED BY REGISTERED ENGINEER. DIPRETE ENGINEERING DOES NOT WARRANT PLANS BY ANY OTHER PARTY: ENGINEERING DOES NOT WARRANT PLANS BY ANY OTHER PARTY: DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR CONFORMANCE WITH INSTALLATION OF THE PLAN AND IMPLEMENTATION OF THIS PLAN AND ASSOCIATED DOCUMENTS.

THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, METHODS, AND SAFETY PRECAUTIONS REQUIRED BY OSHA TO PERFORM THE WORK SHOWN ON THIS PLAN IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS.

EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR ANY ACTIONS BASED ON THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN. SEE "UTILITY NOTES" ON SHEET 4.

NO.	DATE	DESCRIPTION	BY:
1	01-04-2025	RESPONSE TO COMMENTS	J.M.F.
0	12-06-2024	SITE DEVELOPMENT PLANS	J.A.R.

DRAWN BY: J.A.R. J.M.F.

LANDSCAPE NOTES & DETAILS

STETSON ROAD

PARCEL ID 29-1011
AUBURN, MAINE

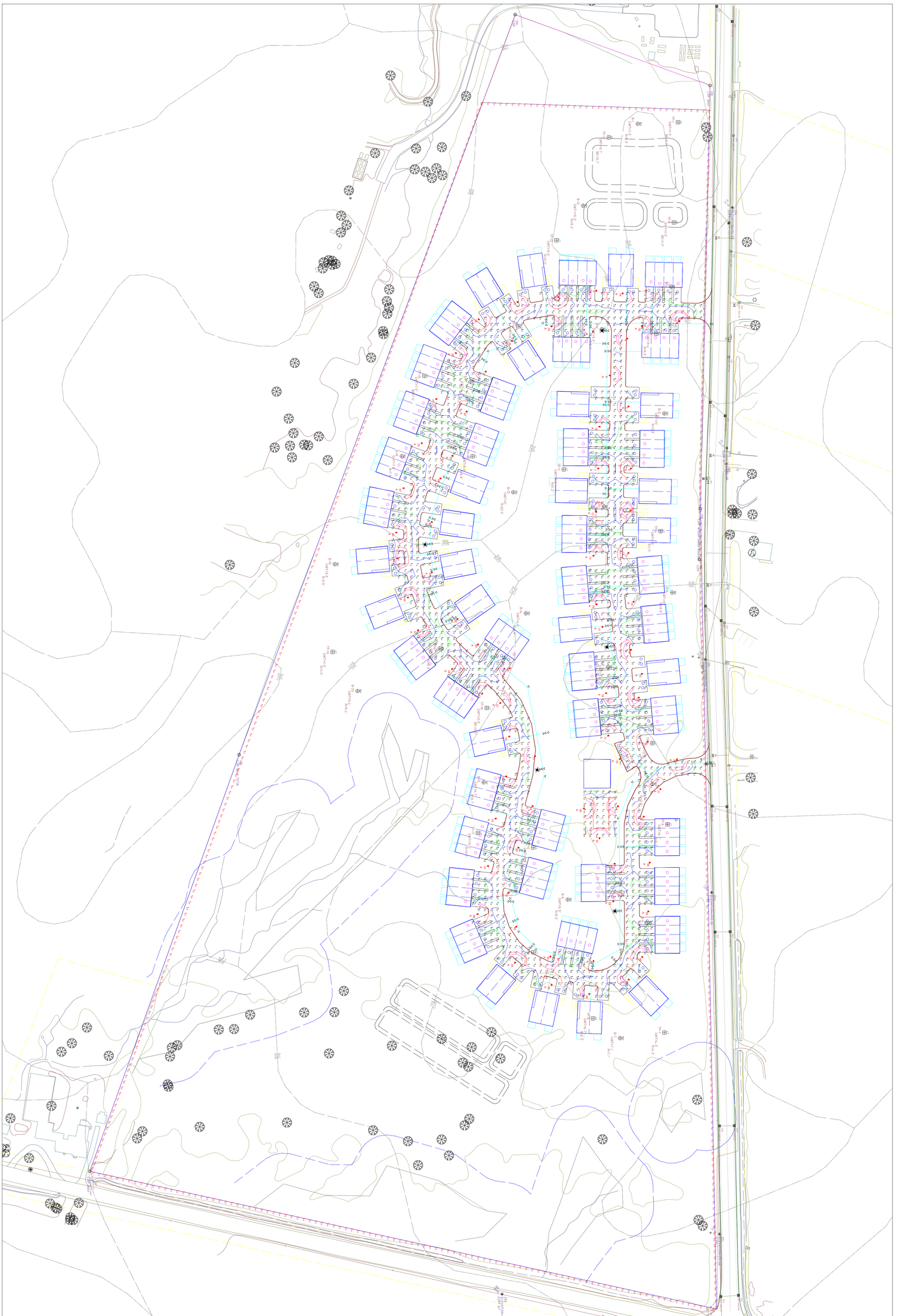
PREPARED FOR:
A.R. BUILDING COMPANY, INC.
310 SEVEN FIELDS BOULEVARD, SUITE 350,
SEVEN FIELDS, PENNSYLVANIA, 16046

SHEET 21 OF 21

DE JOB NO. 2425-332 COPYRIGHT 2024 BY DIPRETE ENGINEERING ASSOCIATES, INC.

Z:\DEPAW\PROJECTS\2425-332 STETSON ROAD APARTMENTS\AUTOCAD DRAWINGS\2425-332-LARC.DWG PLOTTED: 1/4/2025

Scale: 1 inch= 70 Ft.



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Prepared For:
Holbrook Associated Warehouse
PO Box 401
35 Reservoir Park Dr
Rockland, MA 02370

Job Name:
Stetson Road
Lighting Layout
Version A

Scale: as noted	PROJECT # 242051
Date:12/3/2024	CASE # 01481748
Filename: Stetson Road Lighting Layout 01481748A.AGI	
Drawn By: S Elliott	

Filename: C:\Users\sharon.elliott\Desktop\Stetson Road Lighting Layout 01481748A.AGI

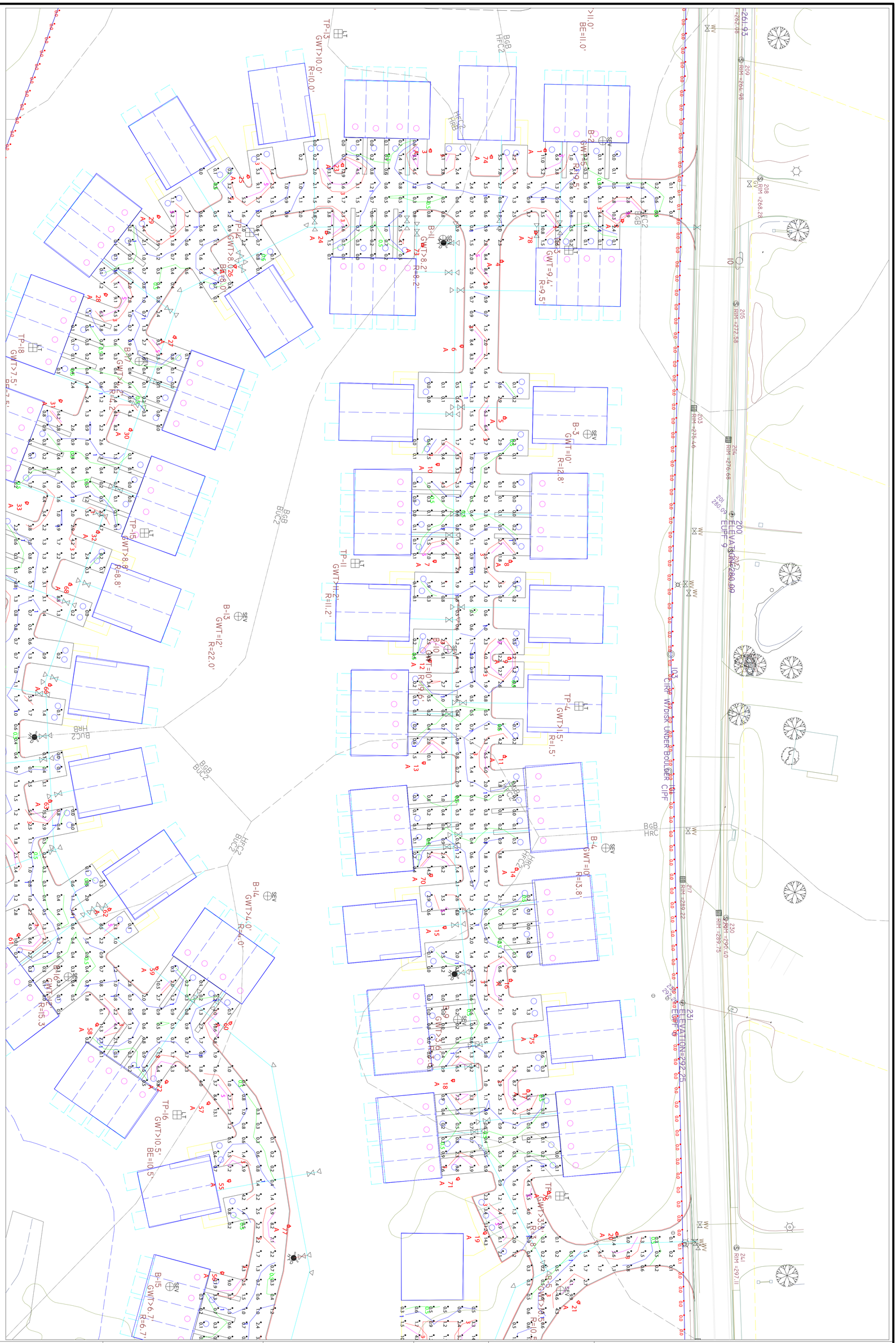
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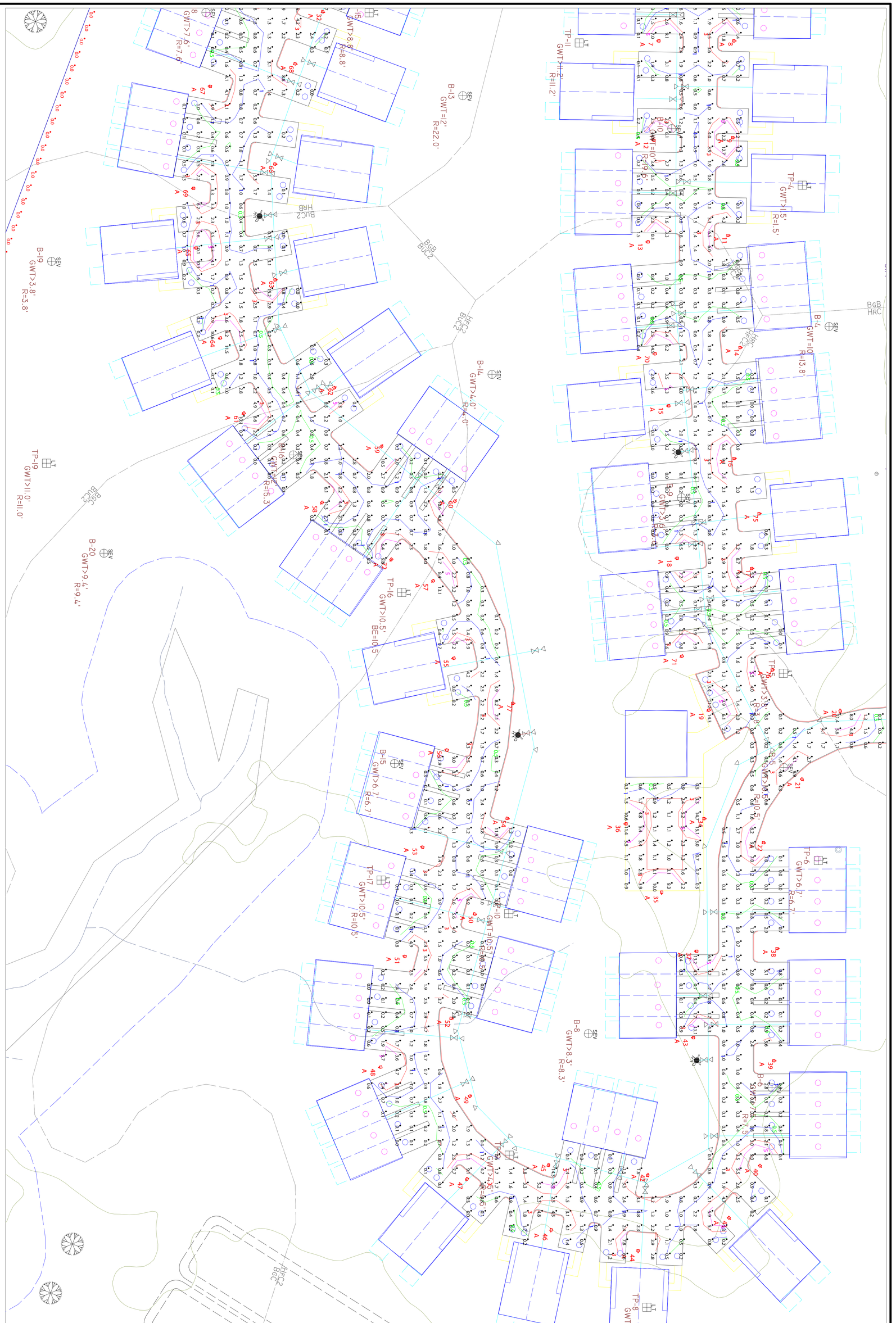
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PLOT TO 22"X34" PAGE


Scale: 1 inch= 30 ft.
TP-13 GWT>10.0' R=10.0'
B-2 GWT=9.5' R=9.5'
TP-14 GWT>8.2' R=8.2'
B-11 GWT=8.2' R=8.2'
TP-18 GWT>7.5'
TP-15 GWT>8.8' R=8.8'
B-13 GWT=12' R=22.0'
TP-11 GWT>11.2' R=11.2'
B-3 GWT=10' R=12.8'
B-10 GWT=10' R=12.8'
TP-4 GWT>5.5' R=5.5'
B-4 GWT=10' R=13.8'
B-14 GWT>4.0' R=4.0'
TP-16 GWT>10.5' BE=10.5'
B-15 GWT>6.7' R=6.7'
TP-8 GWT>3.8' R=3.8'
B-8 GWT=3.8' R=3.8'
B-9 GWT=3.8' R=3.8'
TP-5 GWT>3.8' R=3.8'
B-5 GWT=3.8' R=3.8'
B-6 GWT=3.8' R=3.8'
B-7 GWT=3.8' R=3.8'
TP-6 GWT>3.8' R=3.8'
TP-7 GWT>3.8' R=3.8'
TP-12 GWT>3.8' R=3.8'
TP-17 GWT>3.8' R=3.8'
TP-9 GWT>3.8' R=3.8'
TP-10 GWT>3.8' R=3.8'
TP-3 GWT>3.8' R=3.8'
TP-2 GWT>3.8' R=3.8'
TP-1 GWT>3.8' R=3.8'
>11.0' BE=11.0'
B&B HEC2
B&B HRB
B&B BUC2
B&B HRC
B&B HEC2 BUC2
B&B HRC HEC2
B&B HEC2 HRB
B&B BUC2 HRB



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Prepared For:
Holbrook Associated Warehouse
PO Box 401
35 Reservoir Park Dr
Rockland, MA 02370

Job Name:
Stetson Road
Lighting Layout
Version A

Scale: as noted	PROJECT # 242051
Date:12/3/2024	CASE # 01481748
Filename: Stetson Road Lighting Layout 01481748A.AGI	
Drawn By: S Elliott	

Filename: C:\Users\sharon.elliott\Desktop\Stetson Road Lighting Layout 01481748A.AGI

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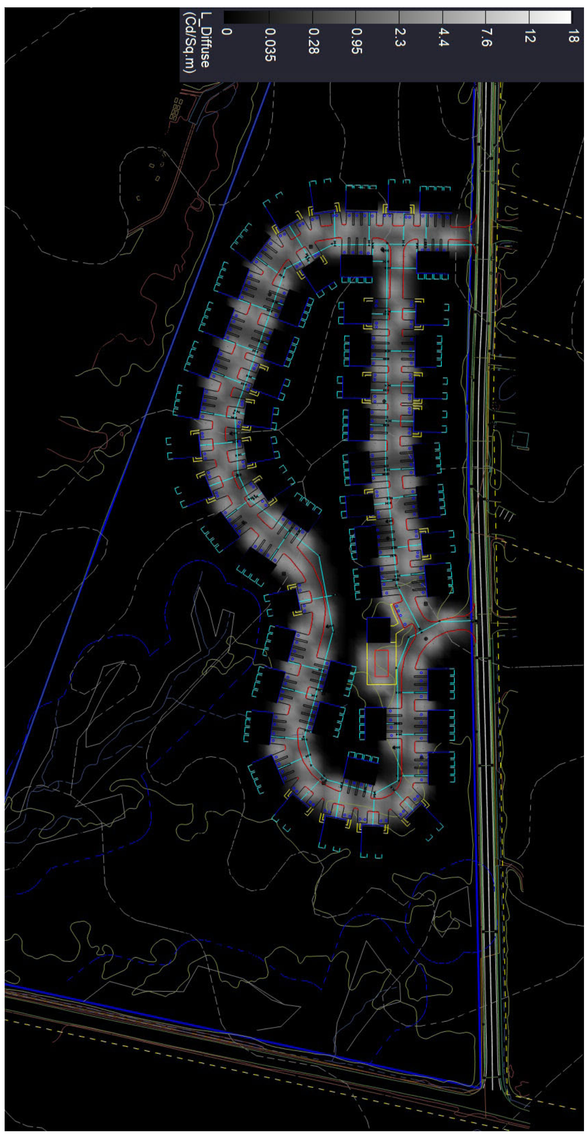
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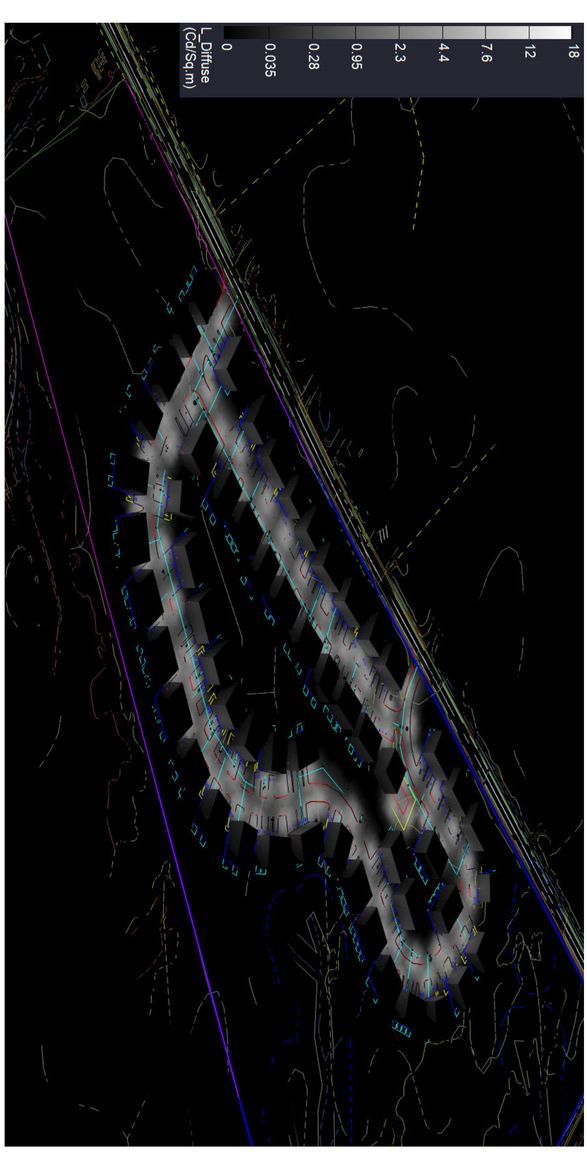
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PLOT TO 22"X34" PAGE

Plan View



Iso View



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PLOT TO 22"X34" PAGE

Calculation Summary											
Label	**CalcType**	**Units**	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**	**Description**	**PtSpcLr**	**PtSpcTb**	**Meter Type**
CalcPts Parking and Drives	Illuminance	Fc	1.70	15.2	0.0	N.A.	N.A.	Readings Taken at 0'-0"AFG	10	10	Horizontal
CalcPts Pool	Illuminance	Fc	3.20	15.1	0.3	10.67	50.33	Readings Taken at 0'-0"AFG	10	10	Horizontal
CalcPts Property Line	Illuminance	Fc	0.00	0.1	0.0	N.A.	N.A.	Readings Taken at 0'-0"AFG	10	N.A.	Horizontal

Luminaire Tag Summary	
Tag	**Qty**
A	78

Luminaire Schedule			All quotes/orders generated from this layout must be forwarded to the Local Rep Agency									
Symbol	**Qty**	**Tag**	**Label**	**Arrangement**	**Lum. Lumens**	**Arr. Lum. Lumens**	**LLF**	**Description**	**Lum. Watts**	**Arr. Watts**	**Total Watts**	**BUG Rating**
	78	A	ALEDS3TN	Single	5650	5650	1.000	40w 4k 3T	40.5	40.5	3159	B1-U0-G1

Expanded Luminaire Location Summary						
LumNo	**Tag**	**X**	**Y**	**MTG HT**	**Orient**	**Tilt**
1	A	2939057.498	471542.776	10	0	0
2	A	2939108.291	471597.061	10	180	0
3	A	2939057.8	471462.218	10	0	0
4	A	2939136.044	471512.902	10	270	0
5	A	2939245.978	471515.022	10	270	0
6	A	2939195.705	471483.612	10	90	0
7	A	2939346.677	471464.654	10	90	0
8	A	2939346.677	471519.081	10	270	0
9	A	2939414.818	471518.324	10	270	0
10	A	2939278.725	471466.836	10	90	0
11	A	2939483.716	471514.916	10	270	0
12	A	2939416.711	471461.247	10	90	0
13	A	2939488.259	471457.083	10	90	0
14	A	2939562.711	471523.426	10	275.194	0
15	A	2939603.815	471471.641	10	96.204	0
16	A	2939640.826	471519.21	10	274.4	0
17	A	2939718.372	471531.589	10	273.366	0
18	A	2939711.203	471477.586	10	91.734	0
19	A	2939818.508	471499.971	10	117.699	0
20	A	2939818.088	471593.047	10	8.183	0
21	A	2939867.4	471566.729	10	224.091	0
22	A	2939911.651	471539.874	10	263.155	0
23	A	2939067.883	471400.482	10	0	0
24	A	2939116.56	471389.244	10	180	0
25	A	2939076.064	471334.03	10	28.909	0
26	A	2939140.219	471325.564	10	208.01	0
27	A	2939189.718	471283.262	10	240.255	0
28	A	2939159.194	471233.763	10	57.599	0
29	A	2939104.313	471270.926	10	45.831	0
30	A	2939254.608	471252.292	10	249.676	0
31	A	2939233.771	471202.015	10	65.854	0
32	A	2939326.343	471229.365	10	250.908	0
33	A	2939305.478	471178.36	10	66.8	0
34	A	2939894.641	471498.004	10	270	0
35	A	2939947.187	471467.41	10	180	0
36	A	2939898.281	471441.581	10	90	0
37	A	2939988.021	471491.329	10	90	0
38	A	2939986.128	471549.471	10	270	0
39	A	2940065.242	471547.253	10	270	0
40	A	2940139.722	471537.165	10	224.028	0
41	A	2940176.394	471515.28	10	223.996	0
42	A	2940145.227	471457.74	10	350.69	0
43	A	2940048.969	471489.048	10	90	0
44	A	2940199.83	471450.771	10	180	0
45	A	2940138.107	471387.844	10	343.495	0
46	A	2940185.067	471389.448	10	165.952	0
47	A	2940149.081	471329.934	10	148.241	0
48	A	2940069.777	471268.786	10	99.462	0
49	A	2940089.804	471332.947	10	298.073	0
50	A	2939962.029	471336.435	10	253.612	0
51	A	2939991.492	471285.909	10	71.565	0
52	A	2940035.458	471319.853	10	259.694	0
53	A	2939914.548	471298.346	10	75.256	0
54	A	2939894.612	471359.356	10	258.111	0
55	A	2939781.75	471320.355	10	103.241	0
Total Quantity: 78 (55 shown, 1 through 55)						

Expanded Luminaire Location Summary						
LumNo	**Tag**	**X**	**Y**	**MTG HT**	**Orient**	**Tilt**
56	A	2939846.06	471315.509	10	69.706	0
57	A	2939727.541	471305.901	10	126.869	0
58	A	2939672.429	471227.732	10	136.637	0
59	A	2939631.85	471270.525	10	323.879	0
60	A	2939670.428	471322.287	10	315.745	0
61	A	2939609.386	471172.477	10	124.506	0
62	A	2939590.776	471237.46	10	295.018	0
63	A	2939514.942	471195.867	10	277.125	0
64	A	2939556.226	471155.868	10	109.983	0
65	A	2939492.579	471138.761	10	92.729	0
66	A	2939433.585	471195.73	10	261.467	0
67	A	2939378.581	471148.808	10	81.118	0
68	A	2939363.025	471209.936	10	257.618	0
69	A	2939450.587	471136.987	10	92.384	0
70	A	2939567.249	471462.052	10	97.016	0
71	A	2939780.495	471481.034	10	116.843	0
72	A	2939712.57	471276.551	10	140.71	0
73	A	2939125.34	471456.767	10	180	0
74	A	2939062.112	471505.033	10	0	0
75	A	2939679.729	471536.759	10	274.397	0
76	A	2939789.762	471546.05	10	277.254	0
77	A	2939813.415	471363.317	10	270	0
78	A	2939116.604	471536.221	10	177.878	0
Total Quantity: 78 (23 shown, 56 through 78)						

NOTES:
* The light loss factor (LLF) is a product of many variables. RAB's standard is to use the initial 1.0 LLF in accordance with most municipal lighting ordinance light trespass requirements, unless otherwise noted.

* Illumination values shown (in footcandles) are the predicted results for planes of calculation either horizontal, vertical or inclined as designated in the calculation summary. Meter orientation is normal to the plane of calculation.

* The calculated results of this lighting simulation represent an anticipated prediction of system performance. Actual measured results may vary from the anticipated performance and are subject to means and methods which are beyond the control of RAB Lighting Inc.

* Mounting height determination is job site specific, our lighting simulations assume a mounting height (insertion point of the luminaire symbol) to be taken at the top of the symbol for ceiling mounted luminaires and at the bottom of the symbol for all other luminaire mounting configurations.

* RAB disclaims all responsibility for the suitability of existing or proposed poles and bases to support proposed fixtures. This is the owner's, installer's and/or end-user's responsibility based on the weight and effective projected area ("EPA") of the proposed fixtures and the owner's site and soil conditions, wind zone, and many other factors. A professional engineer licensed to practice in the state the site is located should be engaged to assist in this determination.

* The landscape material shown hereon is conceptual and is not intended to be an accurate representation of any particular plant, shrub, bush, or tree, as these materials are living objects, and subject to constant change. The conceptual objects shown are for illustrative purposes only. The actual illumination values measured in the field will vary.

* Photometric model elements such as buildings, rooms, plants, furnishings or any architectural details which impact the dispersion of light must be detailed by the customer documents for inclusion in the RAB Lighting Design. The owner/contractor/customer/end-user must provide accurate and complete construction drawings that reflect what will be the final construction RAB is not responsible for any inaccuracies caused by incomplete, inaccurate, or outdated information provided by the owner/contractor/customer/end-user.

* RAB Lighting Inc. luminaire and product designs are protected under U.S. and International intellectual property laws. Patents issued or pending may apply. Please see www.rablighting.com/ip.

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PLOT TO 22"X34"PAGE

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PROJECT # 2420051

CASE # 01481748

Scale: as noted

Date:12/3/2024

Filename: Stetson Road Lighting Layout 01481748A.AGI

Drawn By: S Elliott

Job Name:
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Version A

Prepared For:
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PO Box 401
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Filename: C:\Users\sharon.elliott\Desktop\Stetson Road Lighting Layout 01481748A.AGI

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ALEDS3TN



Color: Bronze

Weight: 13.2 lbs

Project:	**Type:**
Prepared By:	**Date:**

Driver Info

Type	Constant Current
120V	0.67A
208V	0.40A
240V	0.34A
277V	0.30A
Input Watts	40.5/57.5/81.2W

LED Info

Watts	80W
Color Temp	4000K (Neutral)
Color Accuracy	82 CRI
L70 Lifespan	100,000 Hours
Lumens	5650/7778/10458 lm
Efficacy	139.5/135.3/128.8 lm/W

Technical Specifications

Field Adjustability

Field Adjustable (Wattage):
Field adjustable light output in 3 discrete steps:
Small Housing: 80W/60W/40W (factory default 80W)

Compliance

UL Listed:
Suitable for wet locations

IP Rating:
Ingress protection rating of IP66 for dust and water

IESNA LM-79 & LM-80 Testing:
RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

Trade Agreements Act Compliant:
This product is a product of Cambodia and a "designated country" end product that complies with the Trade Agreements Act

DLC Listed:
This product is listed by Design Lights Consortium (DLC) as an ultra-efficient premium product that qualifies for the highest tier of rebates from DLC Member Utilities. Designed to meet DLC 5.1 requirements.
DLC Product Code: S-36E5G8

LED Characteristics

LEDs:
Long-life, high-efficacy, discrete, surface-mount LEDs

Color Consistency:
7-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color

Color Stability:
LED color temperature is warrantied to shift no more than 200K in color temperature over a 5-year period

Color Uniformity:
RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for (SSL) Products, ANSI C78.377-2017.

Electrical

Driver:
40W: Constant Current, Class 2, 120-277V, 50/60 Hz, 120V: 0.34A, 208V: 0.20A, 240V: 0.17A, 277V: 0.15A

60W: Constant Current, Class 2, 120-277V, 50/60 Hz, 120V: 0.50A, 208V: 0.30A, 240V: 0.25A, 277V: 0.22A

80W: Constant Current, Class 2, 120-277V, 50/60 Hz, 120V: 0.67A, 208V: 0.40A, 240V: 0.34A, 277V: 0.30A

Dimming Driver:
Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims down to 10%.

THD:
2.02% at 120V, 8.16% at 277V

Power Factor:
99.9% at 120V, 96.5% at 277V

Surge Protection:
Line to Line: 10kV
Line to Ground: 6kV

Performance

Lifespan:
100,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

Wattage Equivalency:
Equivalent to 250W Metal Halide

Construction

IES Classification:
The Type III distribution is meant to be located near the side of an area, projecting the light outward to fill the area. Ideal for roadways, general parking areas, lighting applications and where a large pool of light is required.

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Technical Specifications (continued)

Cold Weather Starting:
The minimum starting temperature is -40°C (-40°F)

Ambient Temperature :
Max Power Temp Rating: 40°C (104°F)
Middle Power Temp Rating: 52°C (125°F)
Low Power Temp Rating: 58°C (137°F)

Housing:
Die-cast aluminum

Reflector:
Aluminum reflector with white polycarbonate

Vibration Rating:
3G vibration rating per ANSI C136.31

Effective Projected Area:
1 Fixture: 0.35
2 Fixtures at 90°: 0.54
2 Fixtures at 180°: 0.7
3 Fixtures at 90°: 0.9
4 Fixtures at 90°: 0.9

Gaskets:
High-temperature silicone gaskets

Finish:
Formulated for high durability and long-lasting color

Green Technology:
Mercury and UV free. RoHS-compliant components.

Installation

Mounting:
Universal mounting arm compatible for hole spacing patterns from 1" to 3" center to center. Round Pole Adaptor plate included as a standard. Easy slide and lock to mount fixture with ease.

Optical

Bug Rating:
80W: B1 U0 G2
60W: B1 U0 G2
40W: B1 U0 G1

Other

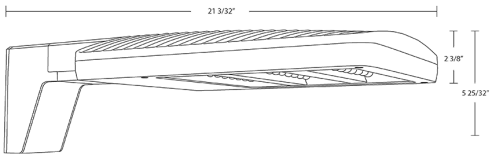
Warranty:
RAB warrants that our LED products will be free from defects in materials and workmanship for a period of ten (10) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

Buy American Act Compliance:
RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

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ALEDS3TN

Dimensions



Features

- 0-10V dimmable standard
- IP66 Rated
- 100,000-Hour LED lifespan
- 10-Year, No-Compromise Warranty

Ordering Matrix

Family	Housing Size	Distribution	Mounting	Color Temp	Finish	Driver	Options
ALED	S	3T		N			
	M = Medium (150W/90W/78W) **L =** Large (260W/220W/170W) **XL =** Extra Large (385W/345W/300W) **S =** Small (80W/60W/40W)	**2T =** Type II **3T =** Type III **4T =** Type IV **5T =** Type V **AT =** Auto Dealership Optic	**Blank =** Universal Pole Mount **SF =** Slipfitter **WM =** Wall Mount	**Blank =** 5000K Cool **Y =** 3000K Warm [1] **N =** 4000K Neutral	**Blank =** Bronze **W =** White **B =** Black	**Blank =** 120-277V, 0-10V Dimming **/480 =** 480V, 0-10V Dimming	**Blank =** No Option **/7PR =** 7 Pin Twistlock Receptacle **/WS2 =** Wattstopper, 20ft lens **/WS4 =** Wattstopper, 40ft lens [3]

[1] *Dark sky approved in 3000K, available only on Small and Medium fixtures*
[2] *480V available only on Medium, Large & Extra Large fixtures*
[3] *Wattstopper option available only 0n Large & Extra Large fixtures*

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PS4-11-10D2



Square steel poles drilled for 2 Area Lights at 180°. Designed for ground mounting. Poles are stocked nationwide for quick shipment. Protective packaging ensures poles arrive at the job site good as new.

Color: Bronze

Weight: 72.8 lbs

Project:	Type:
Prepared By:	Date:

Technical Specifications

Compliance

CSA Listed:
Suitable for wet locations

Construction

Shaft:
46,000 p.s.i. minimum yield.

Hand Holes:
Reinforced with grounding lug and removable cover

Base Plates:
Slotted base plates 36,000 p.s.i.

Shipping Protection:
All poles are shipped in individual corrugated cartons to prevent finish damage

Color:
Bronze powder coating

Height:
10 ft

Weight:
73 lbs

Gauge:
11

Wall Thickness:
1/8"

Shaft Size:
4"

Hand Hole Dimensions:
3" x 5"

Bolt Circle:
8 1/2"

Base Dimension:
8"

Anchor Bolt:
Galvanized anchor bolts and galvanized hardware and anchor bolt template. All bolts have a 3" hook.

Anchor Bolt Templates:
WARNING Template must be printed on 11" x 17" sheet for actual size. CHECK SCALE BEFORE USING. Templates shipped with anchor bolts and available online.

Pre-Shipped Anchor Bolts:
Bolts can be pre-shipped upon request for additional freight charge

Max EPA's/Max Weights:
70MPH 28.8 ft/800 lb.
80MPH 21.6 ft/510lb.
90MPH 16.5 ft/510 lb.
100MPH 12.9 ft/510 lb.
110MPH 10.3 ft/500 lb.
120MPH 8.3 ft/495lb.
130MPH 6.7 ft/495 lb.
140MPH 5.5 ft/485 lb.
150MPH 4.5 ft/480 lb

Other

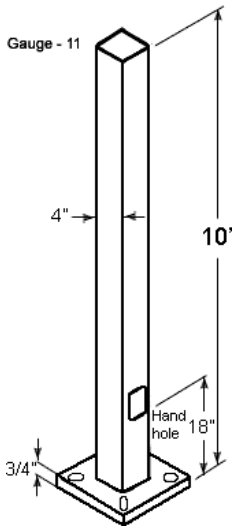
Terms of Sale:
Pole Terms of Sale is available online.

Buy American Act Compliance:
RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

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PS4-11-10D2

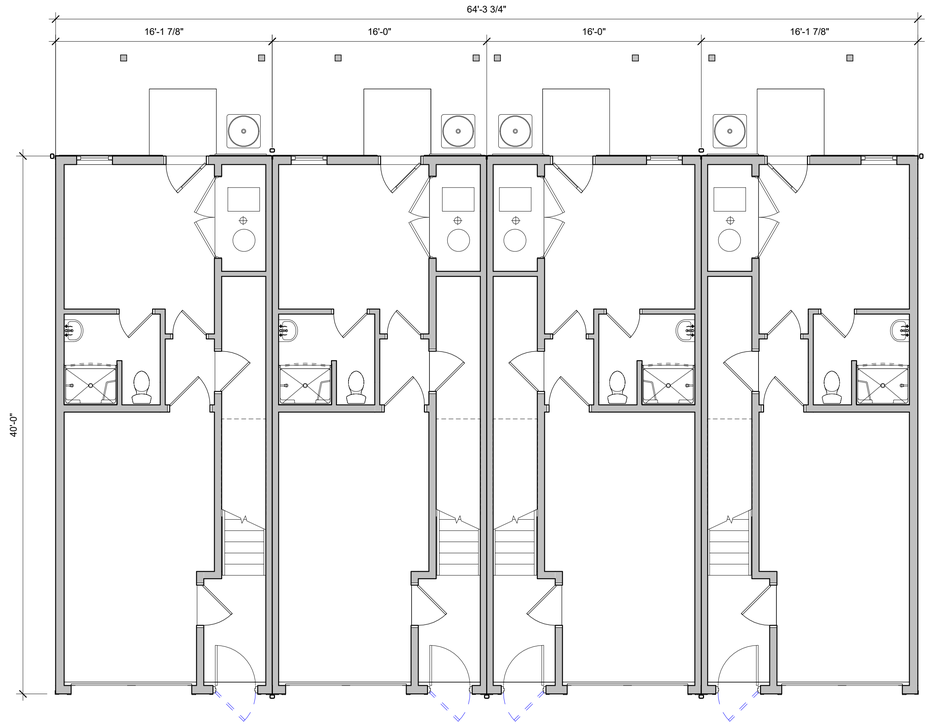
Dimensions



Features

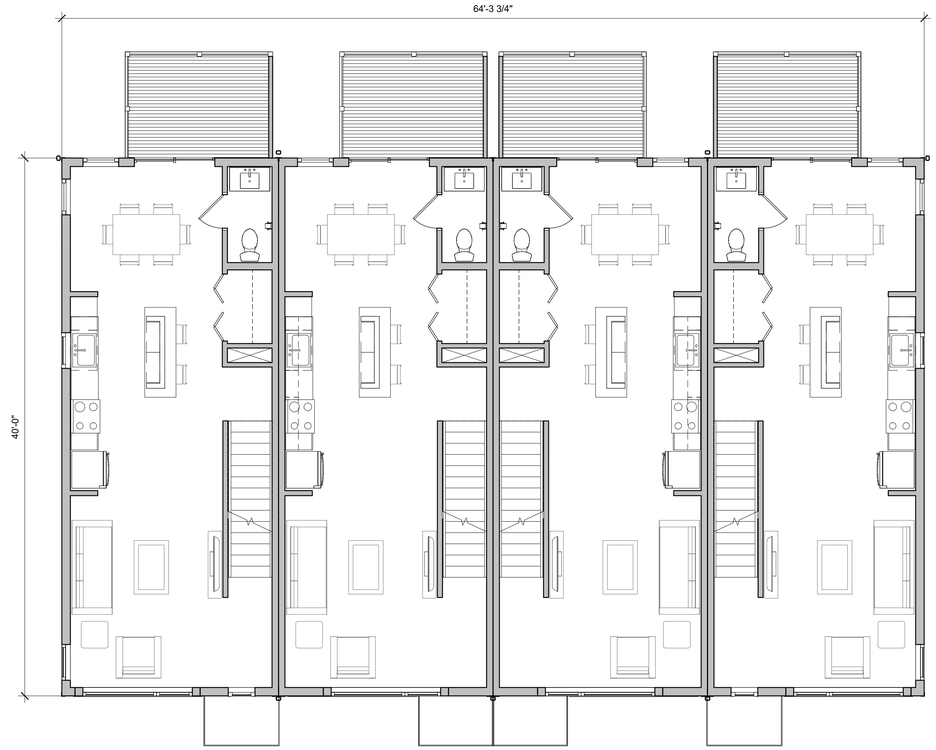
- Designed for ground mounting
- Heavy duty TGIC polyester coating
- Reinforced hand holes with grounding lug and removable cover for easy wiring access
- Pole caps, base covers & bolts are sold separately
- Custom manufactured for each application

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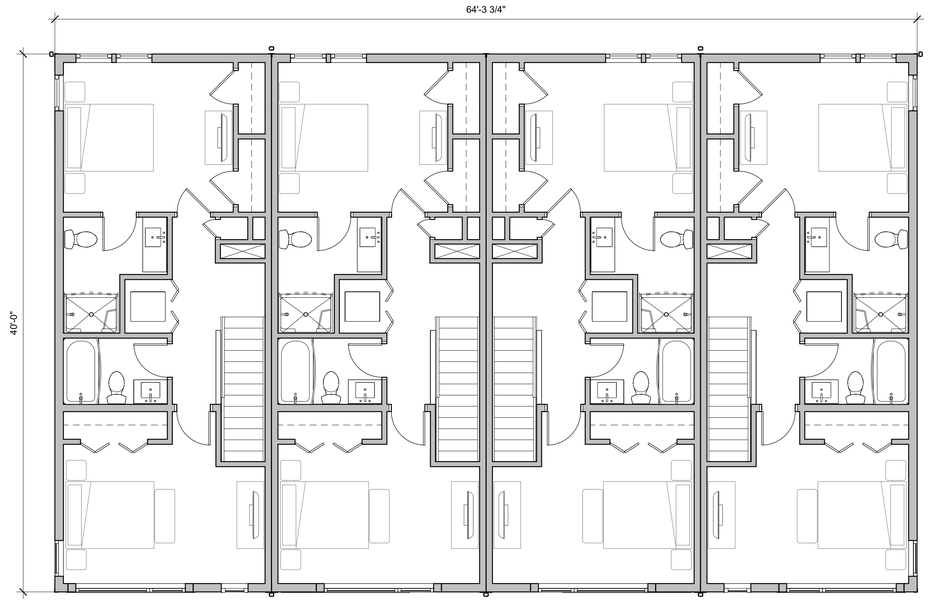
TOWNHOME GROUND FLOOR PLANS

3/16" = 1'-0"



TOWNHOME MAIN LEVEL PLANS

3/16" = 1'-0"



TOWNHOME UPPER LEVEL PLANS

3/16" = 1'-0"

STETSON ROAD TOWNHOMES

Auburn, Maine

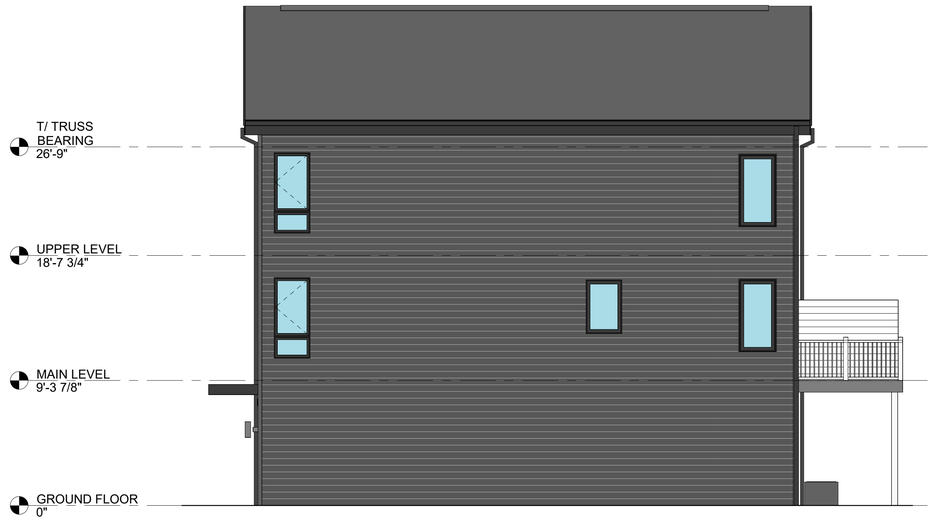
A.R. Building Company
310 Seven Fields Blvd. , Suite 350, Seven Fields, Pennsylvania 16046

Rothschild Doyno COLLABORATIVE
ARCHITECTURE AND URBAN DESIGN
PENN AT 29TH
2847 PENN AVENUE
PITTSBURGH PA 15222
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WWW.RDCOLLAB.COM



TOWNHOME FRONT ELEVATION

3/16" = 1'-0"



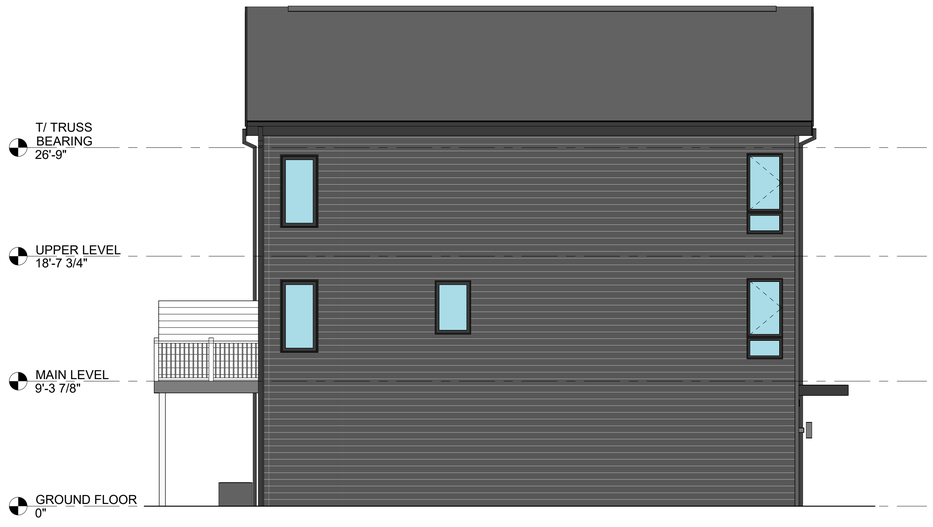
TOWNHOME SIDE ELEVATION 1

3/16" = 1'-0"



TOWNHOME REAR ELEVATION

3/16" = 1'-0"



TOWNHOME SIDE ELEVATION 2

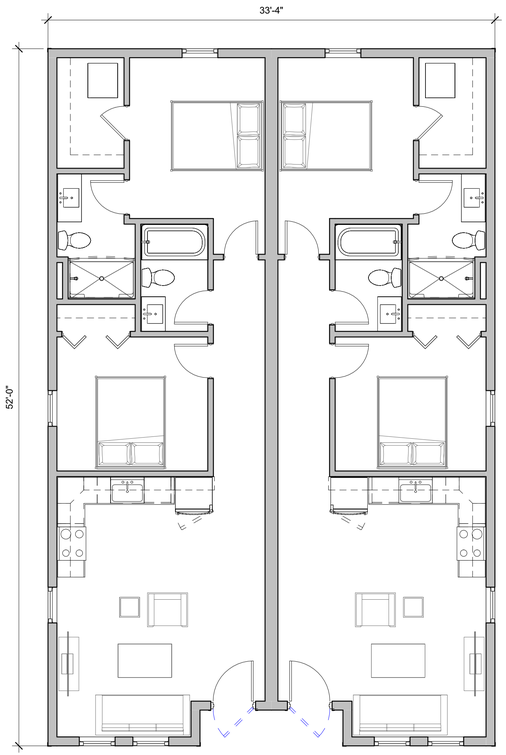
3/16" = 1'-0"

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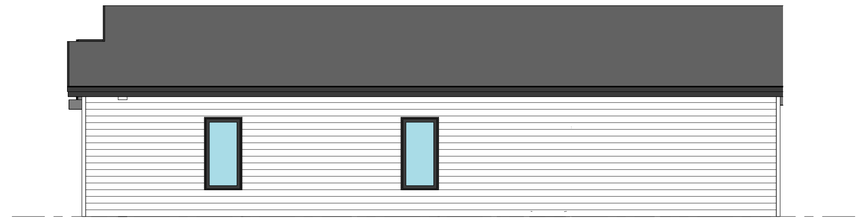
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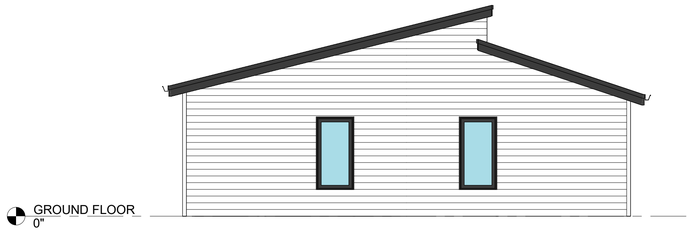
DUPLEX FLOOR PLAN
3/16" = 1'-0"



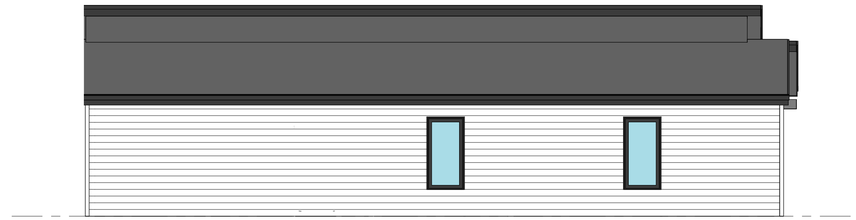
DUPLEX FRONT ELEVATION - OPT 1
3/16" = 1'-0"



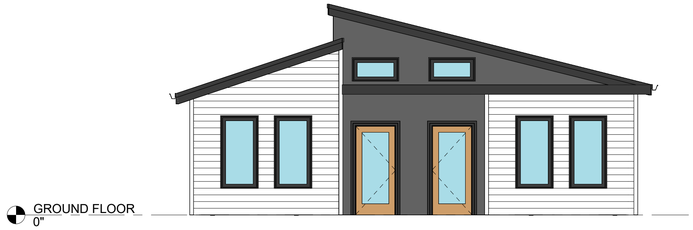
DUPLEX SIDE ELEVATION 1
3/16" = 1'-0"



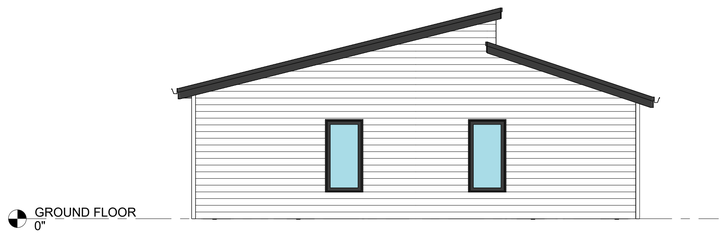
DUPLEX REAR ELEVATION - OPT 1
3/16" = 1'-0"



DUPLEX SIDE ELEVATION 2
3/16" = 1'-0"



DUPLEX FRONT ELEVATION - OPT 2
3/16" = 1'-0"



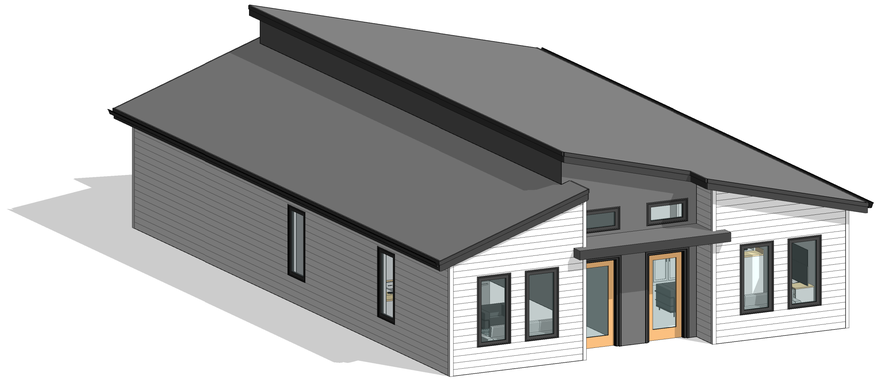
DUPLEX REAR ELEVATION - OPT 2
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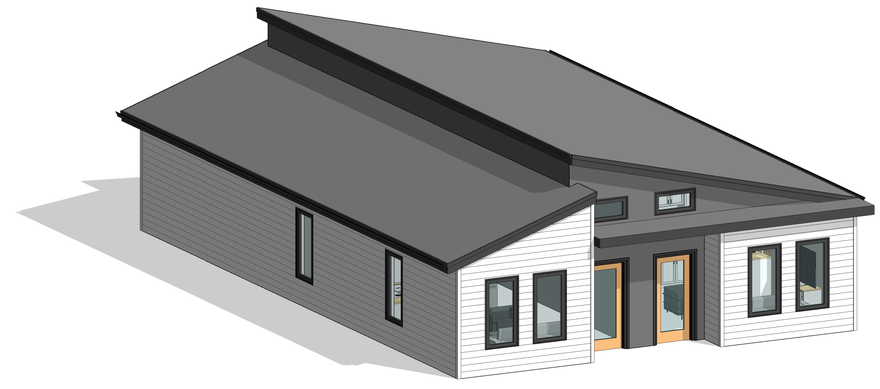
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City of Auburn, Maine
Office of Planning & Permitting
www.auburnmaine.gov | 60 Court Street
Auburn, Maine 04210
207.333.6601

To: Auburn Planning Board
From: Natalie Thomsen, Planning Coordinator
Re: Timothy Millet is applying for a Site Plan approval to construct 44 single-family homes with two car driveways, sidewalks and a paved drive isle off Danville Corner Road, also City Assessor's Parcel I.D. 122-004. The proposed project should be considered pursuant to Chapter 60, Article XVI Division 2 – Site Plan Review, Article IV Subdivision, Division 3 – Special Exception, Article IV, Division 13 – GB - General Business District and Division 7- Multifamily Suburban District
Date: January 14, 2025



I. PROPOSAL – Timothy Millet is applying for a Site Plan approval to construct 44 single-family homes with two car driveways, sidewalks and a paved drive isle. Each home will be 897-square-foot, with 2-bedroom, and 2-bathrooms. The parcel is located on Danville Corner Rd, Tax Map 122-004 and within the GB - General Business District. The site is currently vacant (*see above aerial*).

II. ZONING CONSIDERATIONS – The proposed project is located within the General Business (GB) Zoning District, where single-family dwellings are a permitted use. Projects involving the addition of three or more dwelling units must be approved by the Planning Board as a subdivision. The maximum allowed density for multifamily dwellings in this district is 17 units per acre, while single-family dwellings are limited to 4 units per acre. Based on the 7.27-acre lot size, the site could accommodate up to 123 units if classified under the multifamily density standard or 29 units under the single-family density standard. The proposed project includes 44 single-family units, exceeding the allowable density under the single-family classification
The Public Services Director in the attached memo dated January 14, 2025 has recommended applying the multifamily density standard to this project due to its configuration as 44 detached single-family units on a single lot. This approach reflects the hybrid nature of the development, which combines the benefits of

detached housing with shared infrastructure, similar to a multifamily development. Applying the multifamily density standard would align with city goals to increase housing diversity and provide attainable homeownership options

GB does have specific standards for principal buildings under Sec. 60-526(3)(d) - more than one principal building may be erected on a lot, provided that the building meets all yard setback requirements and are separated by a distance equivalent to *the height of the higher building or 30 feet*, whichever is greater.

The proposed development includes multiple principal buildings on a single lot, which is permissible under Sec. 60-526(3)(d) of the zoning ordinance, provided all buildings meet yard setback requirements and are separated by a distance equal to the height of the taller building or 30 feet, whichever is greater. As the proposed building heights are less than 30 feet, the required separation is 30 feet. However, the submitted plans indicate that the current building alignment does not comply with this 30-foot separation standard.

Staff is actively working with the applicant to explore potential design adjustments to meet the required separation distances or evaluate the feasibility of a waiver request. Without this compliance or waiver approval, the project cannot proceed under the existing ordinance provisions.

Given the outstanding issue with building separation and the need for further coordination with the applicant, staff recommends that the Planning Board table this item. This will allow the applicant additional time to revise the site layout or formally request a waiver, ensuring compliance with zoning requirements and allowing for a more thorough review.

III. PARKING & ACCESS MANAGEMENT STANDARDS - The project is proposed to be accessed off Danville Corner Rd via one private road entrance on a new proposed curb opening. The proposal includes paved parking for two vehicles per dwelling equaling 88 spaces.

Article V – Off-Street Parking and Loading:
Applicable standards under Section 60-607
#4: Interior driveways and ingress and egress points serving parking areas shall be at least 20 feet in width to allow safe and expeditious movement of vehicles. Ingress and egress points shall be separated wherever possible and so signed. Ingress and egress points for one-way vehicular movement only, may be reduced to not less than 14-feet for angle parking areas or 12-feet for perpendicular parking areas.

Standard Met ✓

#15: On lots where one entrance and exit driveway or curb-cut is constructed, the curb-cut shall not exceed 32 feet in width. Where two or more driveways or curb-cuts are constructed, the curb cuts shall not exceed 20 feet in width. For automotive service stations, the curb cut widths may be increased to 32 feet for each driveway or access but shall not exceed two driveways. These widths may be increased up to a maximum of 44 feet on arterial roads if required by the city engineering department or the state department of transportation.

- The proposal includes a 25-foot curb which meets the ordinance requirements.

Standard Met ✓

Applicable standards under Section 60-608
Parking requirements – single-family: 1 per dwelling unit

Standard Met ✓

Article X – Access Management Standards:
Applicable standards under Section 60-799

Sight distance measurements based on the posted speed limit of the road.

Standard Met ✓

Applicable standards under Section 60-800
Curb cut and driveway spacing based on the posted speed limit of the road.

Standard Met ✓

WETLANDS/STORMWATER -
The stormwater impacts associated with this development are minimal. The project is proposed to create less than 1-acre impervious area and stormwater is proposed to be treated and discharged primarily to a large gravel wetland located along the easter portion of the property.

OTHER PERTINENT ITEMS -
The Developer is proposing an in-lieu fee to go towards the future construction of a sidewalk in this vicinity.

IV. DEPARTMENT REVIEW-

a. **Police -** ✓
b. **Auburn Water and Sewer** – The Applicant has worked with Auburn Water & Sewer and proposes to connect to the existing public sewer & lines.
c. **Fire Department/Code Enforcement** – ✓
d. **Engineering** – ✓
e. **Public Services-** ✓
f. **Airport** – ✓

V. PLANNING BOARD ACTION- The proposed project requires review and findings for approval of Sections 60-1277, 60- 1336 and 60-771:

A. Site Plan Review, Section 60-1277:

1. Does the site plan protect adjacent areas against detrimental or offensive uses on the site by provision of adequate surface water drainage, buffers against artificial and reflected light, sight, sound, dust and vibration; and preservation of light and air?
2. Is the convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent areas adequately addressed?
3. Are the proposed methods of disposal for wastes adequately addressed?
4. Does the site plan provide adequate protection of environment features on the site and adjacent areas?

B. Special Exception, Section 60-1336. - The board shall require evidence of the following:

1. That the special exception sought fulfills the specific requirements, if any, set forth in the zoning ordinance relative to such exception.
2. That the special exception sought will neither create nor aggravate a traffic hazard, a fire hazard or any other safety hazard.
3. That the special exception sought will not block or hamper the master development plan pattern of highway circulation or of planned major public or semipublic land acquisition.
4. That the exception sought will not alter the essential characteristics of the neighborhood and will not tend to depreciate the value of property adjoining and neighboring the property under application.

5. That reasonable provisions have been made for adequate land space, lot width, lot area, stormwater management in accordance with section 60-1301 (14), green space, driveway layout, road access, off-street parking, landscaping, building separation, sewage disposal, water supply, fire safety, and where applicable, a plan or contract for perpetual maintenance of all the common green space and clustered off-street parking areas to ensure all such areas will be maintained in a satisfactory manner.
6. That the standards imposed are, in all cases, at least as stringent as those elsewhere imposed by the city building code and by the provisions of this chapter.
7. That essential city services which will be required for the project are presently available or can be made available without disrupting the city's master development plan.

VI. STAFF RECOMMENDATIONS -

Staff recommends that the Planning Board consider and determine the appropriate density standard for the project. Options include applying multifamily density criteria, allowing up to 17 units per acre, which aligns with the configuration of multiple units on a single lot, or adhering to single-family density standards of 4 units per acre based on traditional interpretations of individual unit development.

Staff recommends that the Planning Board table the project to allow the developer to address the following:
Plan Updates: Table the project, allowing the developer to address the following:

- **Building Separations:** Revise plans for Units 1, 2, 3, 4, 18, 19, 20, 23, 24, 25, 26, 27, and 31 to meet the 30-foot separation required by Section 60-307(3)(d)
- **Snow Storage:** Relocate snow storage areas from Units 17 and 32 .
- **Stormwater Management:** Modify the placement of stormwater pipes currently located under Unit 17
- **Trail Location:** Realign the trail away from Unit 23
- **Document Year Updates:** Update plan sheets to reflect the year 2025
- **Easement Details:** Provide detailed easement descriptions for sewer and water systems, including a widened water easement to cover the curb stop
- **Sanitary System Notes:** Remove internal sanitary easement notes and explicitly show the easement along the road
- **Design and Layout Adjustments:** The project's design and layout may require modifications based on the Planning Board's determination of the applicable density standard. This could impact the number of units, lot configurations, and overall site planning to ensure compliance with the selected standard.

I move to table the Danville Corner project to the February 11, 2025, Planning Board meeting to allow the applicant time to update the plans to address necessary revisions identified by staff.

Natalie Thomsen
Planning Coordinator

City of Auburn, Maine
Office of Planning & Permitting
www.auburnmaine.gov | 60 Court Street
Auburn, Maine 04210
207.333.6601

To: Auburn Planning Board
From: Eric Cousens, Public Services Director
Re: Density Considerations to construct 44 single-family homes with two car driveways, sidewalks and a paved drive isle at Danville Corner Rd, Tax Map 122-004 within the GB - General Business District.
Date: January 14, 2025

The proposal includes the construction of a private access road and supporting infrastructure for 44 dwelling units at the parcel connected to public water and sewerage. I have recommended that we consider using the density standard for multifamily housing for this project because it is 44 units of housing on a single lot and is not traditional single-family housing on individual parcels. Multifamily housing usually consists multiple dwelling units in one or more structures on a single parcel. This project provides multiple housing units on a single lot, but not multiple housing units in a single structure and doesn't fit what we have traditionally seen as multifamily housing. That said, it also is not clearly excluded by the common zoning definition of multifamily housing below. The proposal is really in between traditional single-family housing and traditional multifamily housing and provides the benefits of home ownership at an attainable price point that we usually only achieve with traditional multifamily housing cost efficiencies. Attainable housing is needed in Auburn and we are seeing more rental units than units available for owner occupancy. For this reason, staff wanted to offer a possible path to applying the multifamily density to this project to achieve positive outcome.

Multifamily residential, also known as multi-dwelling unit (MDU), is a classification of housing where multiple separate housing units for residential inhabitants are contained within one building or several buildings within one complex.

Medium-density housing is characterized by a range of multi-family or clustered housing types that are still compatible in scale and heights with single-family or transitional neighborhoods.

Background

The proposed development is in the General Business Zoning District which allows for a mix of residential and commercial uses as we see in the Mall Area and along Center Street. The lot size is 7.2 acres.

Housing Type	Allowed Density	Total Units allowed
One-Family	**4 Units per Acre**	**29**
Two-Family	**6 Units Per Acre**	**43**
Multi-Family	**17 Units per Acre**	**122**

Recommended Outcome

Determine that the proposed siting of 44 units on the single parcel *is a classification of housing where multiple separate housing units for residential inhabitants are contained within one building or several buildings within one complex allows the use of the multifamily density standard.*

Alternative Outcomes

There are multiple ways that a higher density than what is proposed can be achieved at this site that may not be as desirable as what is proposed.

1. Traditional Multifamily - Require that the applicant reduce the number of individual structures on the site so that there is a mix of housing types in traditional multi-family configurations and the individual structures with a single unit. Could yield up to 122 Units.
2. Require the applicant to designate a 50% portion of the development as affordable and they could construct 73 individual single-family units with income and sales price restrictions. 37 affordable and 36 market rate.

Related Comprehensive Plan Excerpts with comments

Strategy G.2.10.c: Limit the need for new roads by encouraging infill development within the identified growth areas. (See Chapter 2. Future Land Use Plan). The Parcel is in a growth area.

COMMERCIAL DEVELOPMENT DISTRICT (GBD) Objective – Allow for the development of a wide range of uses including those that involve the sales of motor vehicles and/or that generate significant truck traffic (see Figures 2.3 and 2.5) the District should allow for both existing and new residential use at a density of up to 16 units per acre. Allowed Uses – The Commercial Development District generally follows the boundaries of the General Business and General Business II (Minot Avenue) Zoning Districts, in effect at the time of the 2021 Comprehensive Plan update (see appendix _). The following general types of uses should be allowed in the General Business Development District: ● Low and High Residential Density Uses. The Parcel is located in this district.

COMMERCIAL FORM-BASED CODE GATEWAY DEVELOPMENT DISTRICT (WASHINGTON STREET) (CFBCGD-W) Objective –. To allow for mixed use development while protecting and providing transitions to the abutting residential neighborhoods. Within this area attractive road fronts should be established that enhance a complete street city gateway and provide the essence of a welcoming, vibrant community, with neighborhood and community retail, business and service establishments that are oriented to and built close to the street. The zone is appropriate in areas where a more compact urban development pattern exists or where a neighborhood-compatible commercial district is established which exhibits a pedestrian scale and character. The CFBCGD-W should enhance development and design standards to allow this area to evolve into an attractive gateway into the City. Specifically, a portion of this designation pushes a transformation of Washington Street South/Routes 4 and 100 to a two-lane high-speed connector while Washington Street North Routes 4 and 100 becomes a local connector with future Form Based Code Commercial Development. Residential uses should be allowed at a density of up to 16 units per acre provided they are accessory to commercial uses. Allowed Uses – The Commercial Form-Based Code Gateway Development District – W generally follows the boundaries of the existing General Business areas along Washington Street, in effect at the time of the 2021 Comprehensive Plan update (see appendix _). The Commercial Form-Based Code Gateway Development District – W should allow for medium-scale, multi dwelling development with up to three stories (plus attic space), with multiple commercial uses allowed that mirror existing form based code within the city to include, but not be limited to general offices, government uses, lab and research

facilities, low impact industrial, studios, parks and open spaces, veterinary services, medical and dental clinics, general retail, restaurants, schools, churches, convenience stores with gas stations, specialty shops, auto service stations, care facilities, lodging, clinics and hotels. The Parcel is located adjacent to this district and a significant transportation and land use study is underway to increase infill development, maintain mobility and increase safety.
Goal H.2: Promote various housing options to meet the needs of Auburn residents and support neighborhood stability.

Objective H.2.5: Create opportunities for the private development of a range of new housing outside of the existing built-up areas to meet the needs of a variety of groups. Outside of the built-up area of Auburn, the role of the private development community is to build new housing to address the various housing needs of the City's residents. The City's role is primarily as an enabler – to assure that the City's development requirements, zoning regulations, and infrastructure give the private sector the opportunity to produce the types of housing desired to achieve the community's housing goals.

Strategy H.2.5.a: Revise zoning and other land use requirements to allow for the development of a wide range on housing outside of the built-up area of the city to meet the housing needs of various segments of the population. (See Chapter 2. Future Land Use Plan) i. Create both rental and homeownership opportunities for singles and young families by allowing relatively high-density multifamily housing, including apartments and townhouse style developments, at densities up to 12-18 units per acre in areas served by public sewerage and water. ii. Create senior and empty-nester housing opportunities by allowing medium density housing such as townhouses (condominiums and rental), "housominiums", and small homes to be constructed at densities up to 10-12 units per acre, with house lots as small as 5,000 square feet, in areas that can be served by public sewerage and water. iii. Create the opportunity for the development of moderate-density single family housing at densities up to 4-6 units per acre, with house lots as small as 7,500-10,000 square feet, in areas that can be served with public sewerage.

Strategy H.2.5.c: Reduce the cost of new residential development by reviewing and revising the City's development standards to allow the use of private roads with reduced design standards subject to appropriate review and to use more of a performance-based approach based on density to provide flexibility in the layout and design of projects. (See Transportation and Other Land Use Policy sections)

TERRADYN CONSULTANTS, LLC

207.926.5111
info@terradynconsultants.com
www.terradynconsultants.com

December 6, 2024 24-164

John Blais
Deputy Director of Planning & Permitting
City of Auburn
60 Court Street
Auburn, ME 04210

Danville Corner Housing Development
Timothy Millet
Danville Corner Road, Auburn, ME

Dear John,

On behalf of Timothy Millet, we are pleased to submit the Development Review Application for Danville Corner Housing Development, which features 44 single-family units designed using the City's Site Plan Standards. We are requesting to be placed on the agenda for the next available Planning Board meeting.

EXISTING PROJECT SITE

The project site is located south of the intersection of Danville Corner Road where it crosses the Maine Turnpike. The property is approximately 7.20 acres in size and is depicted on the City of Auburn Tax Map 122 as Lot 4. The site is located within the General Business District, where single-family homes are allowed use.

The Development parcel consists of sloping wooded areas.

PROPOSED PROJECT

The Danville Corner Development features the construction of 44 single-family homes, each building will be two-bedroom homes. The homes will be listed for sale with the Applicant retaining ownership of the remaining land and infrastructure. Each unit will feature a separate driveway with enough parking for 2 cars. A copy of an example floor plan and building elevations is attached to this letter.

Schematic Layout: The site was designed to work with existing elevation constraints. The 24' wide entrance is located along the southern portion of the property's frontage. The design features a loop roadway approximately 1,400 feet in length. The plan will feature approximately 65% of the property to remain lawn/wooded greenspace area.

Parking: The plan features 2 parking spaces per unit within a separate driveway for each unit.

Access: The project will be accessed off of a newly proposed roadway off Danville Corner Road. The proposed roadway will feature a large loop approximately 1,400 ft in length. The road has been designed to meet the requirements of the City of Auburn with 24 ft wide travel ways and sidewalks.

Daily and peak hour trip generation was determined for the proposed project based upon trip tables presented in the tenth edition of the Institute of Transportation Engineers (ITE) "Trip Generation" handbook. The ITE publication provides numerous land use categories and the average volume of trips generated by each category. Site trip estimates for this project are based upon LUC #210 (Single Family Detached Housing. Calculations of the total number of trips generated per each corresponding time period are summarized below:

Land Use	Single Family Detached Housing – LUC 210		
Time Period	Size # of units	Trip Generation Rate (Trips per Units)	Trips Generated
Weekday	44	9.43	415
AM Weekday Peak Hour (Street)	44	0.71	31
PM Weekday Peak Hour (Street)	44	0.94	41
AM Weekday Peak Hour (Generator)	44	0.75	33
PM Weekday Peak Hour (Generator)	44	0.99	44
Saturday	44	9.48	417
Saturday Peak Hour	44	0.92	40
Sunday	44	8.48	373
Sunday Peak Hour	44	0.83	37

Utilities: The property is proposed to be served by the existing public water, sewer, natural gas and overhead power currently connected to the building.

Stormwater Management: The project has been designed to meet the current City and Maine DEP requirements for stormwater quality and quantity control. The majority of the development will drain to a large gravel wetland located along the easter portion of the property. A full stormwater report is attached.

Snow Removal: We have designated snow storage areas on the site plan.

Landscaping & Lighting: Landscaping is shown on the attached site plan Drawings

ATTACHMENTS

The following items have been attached:

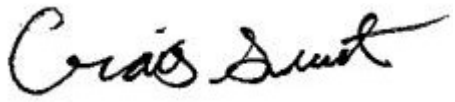
1. Application Form & Checklist
2. Property Deed
3. Standards Compliance Narrative
4. Stormwater Report
5. Financial Capacity
6. Cost Estimate
7. Building Plans
8. Utility Correspondence

CLOSING

The project has been designed to meet the review standards of the City of Auburn's Zoning and Land Use Code. Narratives describing how these criteria and standards are met is attached to the Development Review Application. Please do not hesitate to reach out if you have any questions or require additional information.

Sincerely,

TERRADYN CONSULTANTS, LLC



Craig Sweet, P.E.
Project Engineer

Terradyn Consultants, LLC has been retained by the Applicant to act as their agent and to provide all necessary information and documentation for the Board's review and approval of this project. We very much appreciate your time and attention to this matter.

Attachment 1

Application Form & Checklist

City of Auburn, Maine
Office of Planning & Permitting
Eric J. Cousens, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Application

PROJECT NAME: Danville Corner Housing Project

PROPOSED DEVELOPMENT ADDRESS: Danville corner road , Auburn, ME 04210

PARCEL ID #: 122-004

REVIEW TYPE:
Site Plan x□ Site Plan Amendment □
Subdivision □ Subdivision Amendment □

PROJECT DESCRIPTION: Please see attached Cover Letter

CONTACT INFORMATION:

Applicant	
Name:	Timothy Millet
Address:	154 Baily Hill Road
City / State	Poland, ME
Zip Code	04274
Work #:	
Cell #:	(207) 754-6332
Fax #:	
Home #:	
Email:	tamillett@gmail.com

Property Owner	
Name:	
Address:	
City / State	
Zip Code	
Work #:	
Cell #:	
Fax #:	
Home #:	
Email:	

Project Representative	Terradyn Consultants, LLC
Name:	Craig Sweet, PE
Address:	41 Campus Dr. Suite 301
City / State	New Gloucester, ME 04260
Zip Code	
Work #:	(207) 926-5111
Cell #:	
Fax #:	
Home #:	
Email:	craig@terradynconsultants.com

Other professional representatives for the project (surveyors, engineers, etc.),	
Name:	Nicholas Racioppi, PLS
Address:	95 Main St. Second Floor
City / State	Auburn, ME
Zip Code	04210
Work #:	(207) 926-5111
Cell #:	
Fax #:	
Home #:	
Email:	nick@terradynconsultants.com

PROJECT DATA

The following information is required where applicable, in order complete the application

IMPERVIOUS SURFACE AREA/RATIO

Existing Total Impervious Area	0	sq. ft.
Proposed Total Paved Area	23,399	sq. ft.
Proposed Total Impervious Area	51,040	sq. ft.
Proposed Impervious Net Change	51,040	sq. ft.
Impervious surface ratio existing	0	% of lot area
Impervious surface ratio proposed	3.77	% of lot area

BUILDING AREA/LOT COVERAGE

Existing Building Footprint	0	sq. ft.
Proposed Building Footprint	60,243	sq. ft.
Proposed Building Footprint Net change	100%	sq. ft.
Existing Total Building Floor Area	0	sq. ft.
Proposed Total Building Floor Area	40,128	sq. ft.
Proposed Building Floor Area Net Change	100%	sq. ft
New Building	yes	(yes or no)
Building Area/Lot coverage existing	0	% of lot area
Building Area/Lot coverage proposed	12	% of lot area

ZONING

Existing	General Business
Proposed, if applicable	N/A

LAND USE

Existing	forested
Proposed	Residential

RESIDENTIAL, IF APPLICABLE

Existing Number of Residential Units	0
Proposed Number of Residential Units	44
Subdivision, Proposed Number of Lots	N/A

PARKING SPACES

Existing Number of Parking Spaces	0
Proposed Number of Parking Spaces	88
Number of Handicapped Parking Spaces	n/a
Proposed Total Parking Spaces	88

ESTIMATED COST OF PROJECT: $747,120

DELEGATED REVIEW AUTHORITY CHECKLIST

SITE LOCATION OF DEVELOPMENT AND STORMWATER MANAGEMENT

Existing Impervious Area	0	sq. ft.
Proposed Disturbed Area	289,674	sq. ft.
Proposed Impervious Area	101,059	sq. ft.

1. ***If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with MDEP.***
2. ***If the proposed impervious area is greater than one acre including any impervious area crated since 11/16/05, then the applicant shall apply for a MDEP Stormwater Management Permit, Chapter 500, with the City.***
3. ***If total impervious area (including structures, pavement, etc) is greater than 3 acres since 1971 but less than 7 acres, then the applicant shall apply for a Site Location of Development Permit with the City. If more than 7 acres then the application shall be made to MDEP unless determined otherwise.***
4. ***If the development is a subdivision of more than 20 acres but less than 100 acres then the applicant shall apply for a Site Location of Development Permit with the City. If more than 100 acres then the application shall be made to MDEP unless determined otherwise.***

TRAFFIC ESTIMATE

for elementary school with approx. 137 students

Total traffic estimated in the peak hour-existing (Since July 1, 1997) 0 passenger car equivalents (PCE)

Total traffic estimated in the peak hour-proposed (Since July 1, 1997) 44 passenger car equivalents (PCE)

If the proposed increase in traffic exceeds 100 one-way trips in the peak hour then a traffic movement permit will be required.

Zoning Summary

1. Property is located in the General Buisness zoning district.
2. Parcel Area: 7.20 acres / 313,632 square feet(sf).

Regulations	Required/Allowed	Provided
Min Lot Area	10,000	**7.20 ac**
Street Frontage	100'	507
Min Front Yard	25'	25'
Min Rear Yard	25'	25'
Min Side Yard	15'	15'
Max. Building Height	2.5 story	1 Story
Use Designation	single family allowed	single family proposed
Parking Requirement	1 space/ per unit	
Total Parking:	44	88
Overlay zoning districts (if any):	None	
Urban impaired stream watershed?	YES/NO If yes, watershed name	

DEVELOPMENT REVIEW APPLICATION SUBMISSION

Submissions shall include fifteen (15) complete packets containing the following materials:

1. 5 Full size plans and 10 smaller (no larger than 11" x 17") plans containing the information found in the attached sample plan checklist.
2. Application form that is completed and signed by the property owner or designated representative. (NOTE: All applications will be reviewed by staff and any incomplete application will not be accepted until all deficiencies are corrected.
3. Cover letter stating the nature of the project.
4. All written submittals including evidence of right, title and interest.
5. Copy of the checklist completed for the proposal listing the material contained in the submitted application.

Refer to the application checklist for a detailed list of submittal requirements.

To view the City of Auburn Zoning Ordinance, go to:
www.auburnmaine.gov under City Departments / Planning, Permitting & Code / Subdivisions / Land Use /Zoning Ordinance

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, I certify that the City's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for development review only; a Performance Guarantee, Inspection Fee, Building Permit Application and other associated fees and permits will be required prior to construction.

Signature of Applicant:	**Date:**
Craig Saint	December 5, 2024

City of Auburn, Maine
Office of Planning & Permitting
Eric J. Cousens, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Checklist

The following information is required where applicable to be submitted for an application to be complete

PROJECT NAME: Danvillle Corner Housing
PROPOSED DEVELOPMENT ADDRESS: Danville Corner Road
PARCEL #: 122-004

Required Information		*Check when Submitted*		*Applicable Ordinance*
Site Plan		*Applicant*	*Staff*	
	Owner's Names/Address	✓		
	Names of Development	✓		
	Professionally Prepared Plan	✓		
	Tax Map or Street/Parcel Number	✓		
	Zoning of Property	✓		
	Distance to Property Lines	✓		
	Boundaries of Abutting land	✓		
	Show Setbacks, Yards and Buffers	✓		
	Airport Area of Influence	N/A		
	Parking Space Calcs	✓		
	Drive Openings/Locations	✓		
	Subdivision Restrictions	None		
	Proposed Use	✓		
	PB/BOA/Other Restrictions	None		
	Fire Department Review	✓		
	Open Space/Lot Coverage	✓		

Required Information		*Check when Submitted*		*Applicable Ordinance*
Landscape Plan		*Applicant*	*Staff*	
	Greenspace Requirements	✓		
	Setbacks to Parking	✓		
	Buffer Requirements	None		
	Street Tree Requirements	N/A		
	Screened Dumpsters	✓		
	Additional Design Guidelines	✓		
	Planting Schedule	✓		
Stormwater & Erosion Control Plan		*Applicant*	*Staff*	
	Compliance w/ chapter 500	✓		
	Show Existing Surface Drainage	✓		
	Direction of Flow	✓		
	Location of Catch Basins, etc.	✓		
	Drainage Calculations	✓		
	Erosion Control Measures	✓		
	Maine Construction General Permit	✓		
	Bonding and Inspection Fees	✓		
	Post-Construction Stormwater Plan	✓		
	Inspection/monitoring requirements	N/A		
Lighting Plan		*Applicant*	*Staff*	
	Full cut-off fixtures	✓		
	Meets Parking Lot Requirements	✓		
Traffic Information		*Applicant*	*Staff*	
	Access Management	✓		
	Signage	✓		
	PCE - Trips in Peak Hour	✓		

Required Information		*Check when Submitted*		*Applicable Ordinance*
	Vehicular Movements	✓		
	Safety Concerns	✓		
	Pedestrian Circulation	✓		
	Police Traffic	✓		
	Engineering Traffic	✓		
Utility Plan		*Applicant*	*Staff*	
	Water	✓		
	Adequacy of Water Supply	✓		
	Water main extension agreement	✓		
	Sewer	✓		
	Available city capacity	✓		
	Electric	✓		
	Natural Gas	✓		
	Cable/Phone	✓		
Natural Resources		*Applicant*	*Staff*	
	Shoreland Zone	N/A		
	Flood Plain	None		
	Wetlands or Streams	None		
	Urban Impaired Stream	None		
	Phosphorus Check	N/A		
	Aquifer/Groundwater Protection	None		
	Applicable State Permits			
	Lake Auburn Watershed	N/A		
	Taylor Pond Watershed	N/A		
Right, Title or Interest		*Applicant*	*Staff*	
	Verify	✓		
	Document Existing Easements, Covenants, etc.	✓		

Required Information		*Check when Submitted*		*Applicable Ordinance*
Technical & Financial Capacity		***Applicant***	***Staff***	
	Cost Est./Financial Capacity	✓		
	Performance Guarantee			
State Subdivision Law		***Applicant***	***Staff***	
	Verify/Check	N/A		
	Covenants/Deed Restrictions	None		
	Offers of Conveyance to City	None		
	Association Documents	N/A		
	Location of Proposed Streets & Sidewalks	N/A		
	Proposed Lot Lines, etc.	N/A		
	Data to Determine Lots, etc.	N/A		
	Subdivision Lots/Blocks	N/A		
	Specified Dedication of Land	None		
Additional Subdivision Standards		***Applicant***	***Staff***	
	Mobile Home Parks	N/A		
	PUD	N/A		
A JPEG or PDF of the proposed site plan		***Applicant***	***Staff***	
		✓		
Final sets of the approved plans shall be submitted digitally to the City, on a CD or DVD, in AutoCAD format R 14 or greater, along with PDF images of the plans for archiving	Available after approval & upon Request.			

Attachment 2

Property Deed

Bk 10063 Pg194 #5716
04-16-2019 @ 11:29a

NOT AN OFFICIAL COPY

WARRANTY DEED

(Maine Statutory Short Form)

KNOW ALL PERSONS BY THESE PRESENTS, that **DIAMOND PROPERTIES INC.**, a Maine corporation with a mailing address of P.O. Box 1150, Auburn, Maine 04211-1150 (the "Grantor"), for consideration paid, hereby grants to **SPURWINK SERVICES INCORPORATED**, a Maine nonprofit corporation with a mailing address of 901 Washington Avenue, Suite 100, Portland, Maine 04103 (the "Grantee"), with **WARRANTY COVENANTS**, a certain lot or parcel of land, together with the buildings thereon, situated at Danville Corner Road in the City of Auburn, County of Androscoggin, State of Maine, and more particularly described in **Exhibit A** attached hereto and made a part hereof.

MAINE REAL ESTATE TRANSFER TAX PAID

IN WITNESS WHEREOF, the Grantor has executed this Warranty Deed this 12th day of April, 2019.

DIAMOND PROPERTIES INC.

Witness

By: _____
Emile L. Clavet, President

STATE OF MAINE
COUNTY OF Cumberland, ss

April 12, 2019

PERSONALLY APPEARED the above-named Emile L. Clavet, President of Diamond Properties Inc., and acknowledged the foregoing instrument to be his free act and deed and in said capacity the free act and deed of Diamond Properties Inc.

Before me,

_____
~~Notary Public~~ Attorney at Law

Print Name: Timothy H. Norton
Bar No. 3895

My commission expires:

EXHIBIT A

A certain lot or parcel of land situated in the City of Auburn, Androscoggin County, State of Maine, and being bounded and described as follows:

Beginning at a found iron pipe marking the northwesterly corner of land now or formerly of Paul M. Beegel et al (Book 1009, Page 699), said iron pipe being situated on the easterly or northeasterly line of the Marston's Corner Road (also known as the Beech Hill Road); thence North sixty-three degrees, forty-eight minutes East (N 63° 48' E) four hundred and fifty and sixty-six hundredths (450.66) feet by land now or formerly of said Beegel to a set 5/8" iron rod; thence North seventy-nine degrees, twenty minutes East (N 79° 20' E) fifty-eight and seventy-three hundredths (58.73) feet by land now or formerly of said Beegel to a set 5/8" iron rod; thence South seven degrees, forty-six minutes East (S 7° 46' E) sixty-four and five hundredths (64.05) feet by land now or formerly of said Beegel to a found iron rod at land now or formerly of Robert E. Felton et al (See Book 1042, Page 557); thence North eighty-three degrees, forty-three minutes East (N 83° 43' E) two hundred eighty and fifty hundredths (280.50) feet by land now or formerly of said Felton to a found iron rod at land now or formerly of Daniel St. Hilaire (See Book 1810, Page 223); thence North two degrees, forty-five minutes, fifteen seconds East (N 2° 45' 15" E) seven hundred twenty-seven and fifty-four hundredths (727.54) feet by land now or formerly of said St. Hilaire to a found iron rod; thence North eleven degrees, thirty-five minutes, fifteen seconds East (N 11° 35' 15" E) six hundred twenty-two and thirty hundredths (622.30) feet by land now or formerly of said St. Hilaire to a found iron rod; thence continuing on the same course of North eleven degrees, thirty-five minutes, fifteen seconds East (N 11° 35' 15" E) fifty (50) feet, more or less, and by land now or formerly of said St. Hilaire, to land now or formerly of the Maine Turnpike Authority; thence southwesterly by the southerly line now or formerly of the Maine Turnpike Authority to the easterly line of the Marston's Corner Road (this unsurveyed distance is approximately 670 feet); thence southerly by the easterly line of said Marston's Corner Road to the found iron pipe marking the point of beginning.

The bearings contained in the above description are based on magnetic north of record (Book 1810, Page 223 and Book 1009, Page 699).

Also conveying all rights, easements, privileges and appurtenances belonging to the herein conveyed premises.

Subject to all easements of record.

Being the same premises conveyed to Diamond Properties, Inc. by Quitclaim Deed of Advantage Payroll Services, Inc., recorded in the Androscoggin County Registry of Deeds in Book 6244, Page 88.

Excepting from the above-described conveyance the following:

1. Deed to Edward G. Godbout and Hilda M. Godbout dated April 5, 1963 recorded in the Androscoggin County Registry of Deeds at Book 891, Page 52;

NOT
OFFICIAL
COPY

2. Deed from Advantage Business Services, to Diazo Associates dated July 18, 1988 recorded in the Androscoggin County Registry of Deeds at Book 2285, Page 332;

NOT
OFFICIAL
COPY

3. Deed from Advantage Business Services, Inc. to The Spurwink School dated June 22, 1994 recorded in the Androscoggin County Registry of Deeds at Book 3285, Page 284; and

NOT
OFFICIAL
COPY

4. Deed from Diamond Properties, Inc. to Brian Bilodeau dated January 20, 2015 and recorded in the Androscoggin County Registry of Deeds at Book 9077, Page 111.

The above-described premises may be subject to the provisions of a boundary line agreement more fully described in an instrument dated April 29, 1985 recorded in Androscoggin County Registry of Deeds at Book 1810, Page 223.

The above-described premises may also be subject to a pipeline easement evidenced by an instrument dated November 19, 1947 recorded in the Androscoggin County Registry of Deeds at Book 612, Page 26, as assigned pursuant to assignment date of November 30, 1959 recorded in the Androscoggin County Registry of Deeds at Book 822, Page 308.

ANDROSCOGGIN COUNTY
TINA M CHOUINARD
REGISTER OF DEEDS

Attachment 3

Standards Compliance Narratives

TERRADYN CONSULTANTS, LLC

207.926.5111
info@terradynconsultants.com
www.terradynconsultants.com

December 4, 2024 Project# 24-164

COMPLIANCE WITH CITY OF AUBURN ZONING AND LAND USE CODE

Danville Corner, Auburn, Maine

The following information describes how the proposed project complies with Chapter 60 of the City of Auburn Zoning Ordinance. Although these performance standards are listed under Division 4. Subdivision section 60-1359, it is felt that they provide value as part of the Site Plan Review process:

1. *Will not result in undue water, air or noise pollution*

   The proposed project is a residential development and is not expected to result in any undue water, air or noise pollution.

2. *Has sufficient water available for the reasonably foreseeable needs of the subdivision;*

   The project is proposed to connect to the Auburn Water & Sewer District (AWSD). AWSD is currently reviewing the project and additional correspondence will be forwarded once received.

3. *Will not cause an unreasonable burden on the existing water supply, if one is to be utilized;*

   The proposed project will not cause an unreasonable burden to the existing water supply. The project is proposed to connect to the Auburn Water & Sewer District (AWSD). AWSD is currently reviewing the project and additional correspondence will be forwarded once received.

4. *Will not cause unreasonable soil erosion or reduction in capacity of the land to hold water so that a dangerous or unhealthy condition may result;*

The proposed project will not cause unreasonable soil erosion or a reduction in the of the land to hold water. Erosion and sediment controls are shown on the attached plans.

5. *Will not cause unreasonable highway or public road congestion or unsafe conditions with respect to the use of the highways or public roads existing or proposed;*

   The project will not cause unreasonable highway or public congestion or unsafe conditions.

6. *Will provide for adequate sewage waste disposal;*

   The project is proposed to connect to the Auburn Water & Sewer District (AWSD). AWSD is currently reviewing the project and additional correspondence will be forwarded once received.

7. *Will not cause an unreasonable burden on the ability of a municipality to dispose of solid waste and sewage if municipal services are to be utilized*

   The proposed development is not anticipated to cause any unreasonable burden on the ability of a municipality to dispose of solid waste.

8. *Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or areas and irreplaceable natural areas;*

   The proposed development will not have an adverse effect on the scenic or natural beauty of the area.

9. *In conformance with a duly adopted subdivision regulation or ordinance, comprehensive plan, development plan, or land use plan, if any;*

   The proposed development has been designed in conformance with all applicable regulations.

10. *Is funded by a [developer] that has adequate financial and technical capacity to meet the standards;*

    The applicant has adequate funding to complete the project; please see the attached letter from Maine Community Bank.

The Applicant has assembled a highly qualified team of professionals to plan, permit and develop construction documents for the project. The team services will be provided by the following companies:

CONSULTANT TEAM

Civil Engineer	Craig Sweet, P.E. Terradyn Consultants, LLC 41 Campus Drive, Suite 301 New Gloucester, ME 04260 (207) 370-2776
Surveyor	Nicholas Racioppi, P.L.S. Terradyn Consultants, LLC 41 Campus Drive, Suite 301 New Gloucester, ME 04260 (207) 926-5111

The team of consultants retained by the Developer has expertise and experience in the design of similar projects. Resumes of key personnel for the development team can be provided upon request.

11. *Will not adversely affect the character of the surrounding neighborhood and will not tend to depreciate the value of property adjoining the neighboring property under application;*

The proposed project will not adversely impact the surrounding area.

12. *Has provisions for on-site landscaping that are adequate to screen neighboring properties from unsightly features of the development;*

The proposed development is a residential development located within a residential area; there is not intended to be any outdoor storage or dumpsters, which would be unsightly from neighboring properties.

13. *Will not create a fire hazard and has provided adequate access to the site for emergency vehicles:*

Adequate access has been provided for emergency vehicles.

14. *Will not, alone or in conjunction with existing activities adversely affect the quality or quantity of groundwater;*

The proposed project will not adversely impact the quality or quantity of groundwater.

15. *Does not have long-term cumulative effects on the proposed subdivision that will unreasonably increase a great pond phosphorus concentration during the construction phase and life of the proposed subdivision.*

The proposed project is not located within a great pond watershed.

Attachment 4

Stormwater Report

207.926.5111
info@terradynconsultants.com
www.terradynconsultants.com

DANVILLE CORNER HOUSING PROJECT

DANVILLE CORNER ROAD, AUBURN, MAINE

STORMWATER MANAGEMENT REPORT

PREPARED FOR:

Timothy Millet
154 Baily Hill Road
Poland, Maine 04274

PREPARED BY:

TERRADYN CONSULTANTS LLC
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, MAINE 04260

December 2024

Introduction

The following Stormwater Management Plan has been prepared for the proposed Danville Corner Housing Project to evaluate stormwater runoff and erosion control for the proposed project.

Site Calculations

Total Property Area	7.202 Ac (+/-)
Total Impervious Area	2.32Ac
Total Developed Area	6.65 Ac

Existing Project Site

The project site is located south of the intersection of Danville Corner Road where it crosses the Maine Turnpike. The property is approximately 7.202 acres in size and is depicted on the City of Auburn Tax Map 122 as Lot 4. The site is located within the General Business District, where single-family housing is allowed.

The development parcel consists of sloping wooded areas that drain towards the east of the property, and ultimately the Androscoggin River

The subject parcel is located in Zone x according to the Federal Insurance Rate Map 23001C0317E.

The following existing conditions figures are provided in Appendix 1:

Figure 1	NRCS Medium Intensity Soil Survey
Figure 2	Federal Insurance Rate Map

Proposed Project

The proposed development features the construction of 44 single-family units that will be placed for sale and accessed via a new 1,400 ft road.

A structural Best Management Practice (BMPs) has been designed to collect, store, and treat runoff from onsite impervious areas prior to discharge from the site. Runoff from the developed areas of the site will be directed through large gravel wetland, to then be discharged on site.

Applicable Design Standards

The project requires a stormwater permit pursuant to the Site Location of Development Act 38 M.R.S §420-D. The project must meet the following standards of Chapter 500:

Basic Standards: These standards include erosion and sediment control, inspection and maintenance, and housekeeping requirements.

General Standards: The General Standard requires that a project's stormwater management system includes measures that will provide pollutant removal from runoff and mitigate for the increased frequency of channels erosive flows due to runoff from smaller storms and potential temperature impacts.

Best Management Practices (BMPs) will be implemented to reduce the impacts of site development on downstream water quality. BMP sizing calculations are attached to this report.

Water Quality (BMP Standard): The water quality requirements will be met by the use of a gravel wetland to treat and detain stormwater.

Basic Standards

A site specific Erosion & Sedimentation Control Plan has been developed for the project. Means and methods to control erosion and sedimentation during and after construction are detailed in the erosion control plan narrative and construction details, which are included directly on the project drawings for ease of reference during construction.

Requirements for inspection and maintenance of the stormwater management system are provided in the stormwater management system inspection and maintenance plan located in Appendix 3.

Housekeeping requirements are included in the Erosion & Sediment Control Narrative located on the project drawings.

Water Quality (BMP Standard)

The water quality requirements will be met by utilizing a gravel wetland buffers to treat the development.

The project will result in the creation of approximately 101,059 SF of impervious area. The proposed BMPs will result in the treatment of approximately 95% of the new impervious area.

Percentage of Treatment of the Impervious Area =95% (95% required)

The project will result in the creation of approximately 289,674 SF of developed area. The proposed BMPs will result in the treatment of approximately 92% of the area.

Percentage of Treatment of the Developed Area = 92% (80% required)

Housekeeping and Maintenance & Inspection guidelines are attached to this report.

Stormwater Quantity Control

As part of best engineering practices, the proposed development has been designed to minimize stormwater runoff from the site in excess of the natural pre-development conditions. A hydrologic analysis of pre-development and post-development conditions was conducted based upon the methodology contained in the USDA Soil Conservation Service's Technical Releases No. 22 and 55 (SCS TR-20 and TR-55). For Androscoggin, Maine a 24-hour SCS Type III Storm distribution was used for the analysis using the following storm frequencies and rainfall amounts, per Maine DEP Chapter 500:

Storm Event	24-Hour Rainfall
2–Year Storm	3.0 inches
10–Year Storm	4.3 inches
25–Year Storm	5.4 inches

Runoff curve numbers, time of concentration, and travel time data were established based on methods outlined in the USDA TR-55 manual.

A minimum time of concentration of 6 minutes and a maximum sheet flow distance of 150 linear feet was used in the models.

Pre-Development Conditions

The pre-development HydoCAD model includes two (2) subcatchement and two (2) study points. Stormwater runoff from the project site currently drains primarily towards the eastern portion of the property, with a small portion draining towards Danville Crossing Road.

A Pre-Development Watershed Map, showing sub-watershed boundaries, time of concentration flow paths, and Study Points is provided in Appendix 6. The Pre-development HydroCAD model is attached in Appendix 4.

Post-Development Conditions

The post-development HydoCAD model includes three (3) subcatchement and two (2) study points. Stormwater runoff from the project site ultimately drains to the Androscoggin River, stormwater runoff from the stie primarily flows through a large

gravel wetland located along the eastern portion of the property with a small amount of runoff flowing towards Danvill Corner Road.

A post-Development Watershed Map, showing sub-watershed boundaries, time of concentration flow paths, and Study Points is provided in Appendix 6. The Post-development HydroCAD model is attached in Appendix 5.

Stormwater Analysis

The results of the pre-development and post-development models were analyzed at the defined Study Points described above. The direct comparison of the pre-development and post-development conditions at the Study Points are as follows:

Peak Runoff Flow Rates Comparison		
Storm Event	**Pre-Development (cfs)**	**Post-Development (cfs)**
	Study Point SP1	
2-Year	1.82	0.46
10-Year	4.32	1.35
25-Year	6.79	5.11
	Study Point SP2	
2-Year	0.30	0.30
10-Year	0.69	0.66
25-Year	1.06	0.99

The peak rate of runoff will decrease or remain the same in the 2, 10 & 25-year storm events.

Summary

Based upon the results of this evaluation, the proposed stormwater design is not expected to cause flooding, erosion, or other significant adverse effects downstream of the site.

Appendices

1 – Existing Conditions Figures
2 – BMP Design Calculations
3 – Housekeeping & Maintenance
4 – Pre-Development HydroCAD Model
5 – Post-Development HydroCAD Model
6 – Watershed Maps

APPENDIX 1

EXISTING CONDITIONS FIGURES

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Androscoggin and Sagadahoc Counties, Maine



December 6, 2024

Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map



Map Scale: 1:3,190 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: 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 INFOR

The soil surveys that comprise your
1:15,800.

Warning: Soil Map may not be valid

Enlargement of maps beyond the sc
misunderstanding of the detail of ma
line placement. The maps do not sh
contrasting soils that could have bee
scale.

Please rely on the bar scale on each
measurements.

Source of Map: Natural Resources
Web Soil Survey URL:
Coordinate System: Web Mercator

Maps from the Web Soil Survey are
projection, which preserves direction
distance and area. A projection that
Albers equal-area conic projection, s
accurate calculations of distance or

This product is generated from the U
of the version date(s) listed below.

Soil Survey Area: Androscoggin ar
Maine
Survey Area Data: Version 25, Aug

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

Date(s) aerial images were photogra
2021

The orthophoto or other base map o
compiled and digitized probably diffe

MAP LEGEND

MAP INFOR

imagery displayed on these maps. A
shifting of map unit boundaries may

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CfB	Charlton fine sandy loam, 0 to 8 percent slopes	3.4	9.6%
CfC2	Charlton fine sandy loam, 8 to 15 percent slopes, eroded	3.7	10.5%
ChC	Charlton very stony fine sandy loam, 8 to 15 percent slopes	7.2	20.3%
ChD	Charlton very stony fine sandy loam, 15 to 25 percent slopes	0.1	0.2%
HkC	Hinckley gravelly sandy loam, 8 to 15 percent slopes	2.3	6.6%
MkB	Merrimac fine sandy loam, 0 to 8 percent slopes	3.9	11.0%
MkC2	Merrimac fine sandy loam, 8 to 15 percent slopes, eroded	0.1	0.3%
NgB	Ninigret fine sandy loam, 0 to 8 percent slopes	11.9	33.7%
SyC	Sutton very stony loam, 8 to 15 percent slopes	2.8	7.8%
Totals for Area of Interest		**35.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They

generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

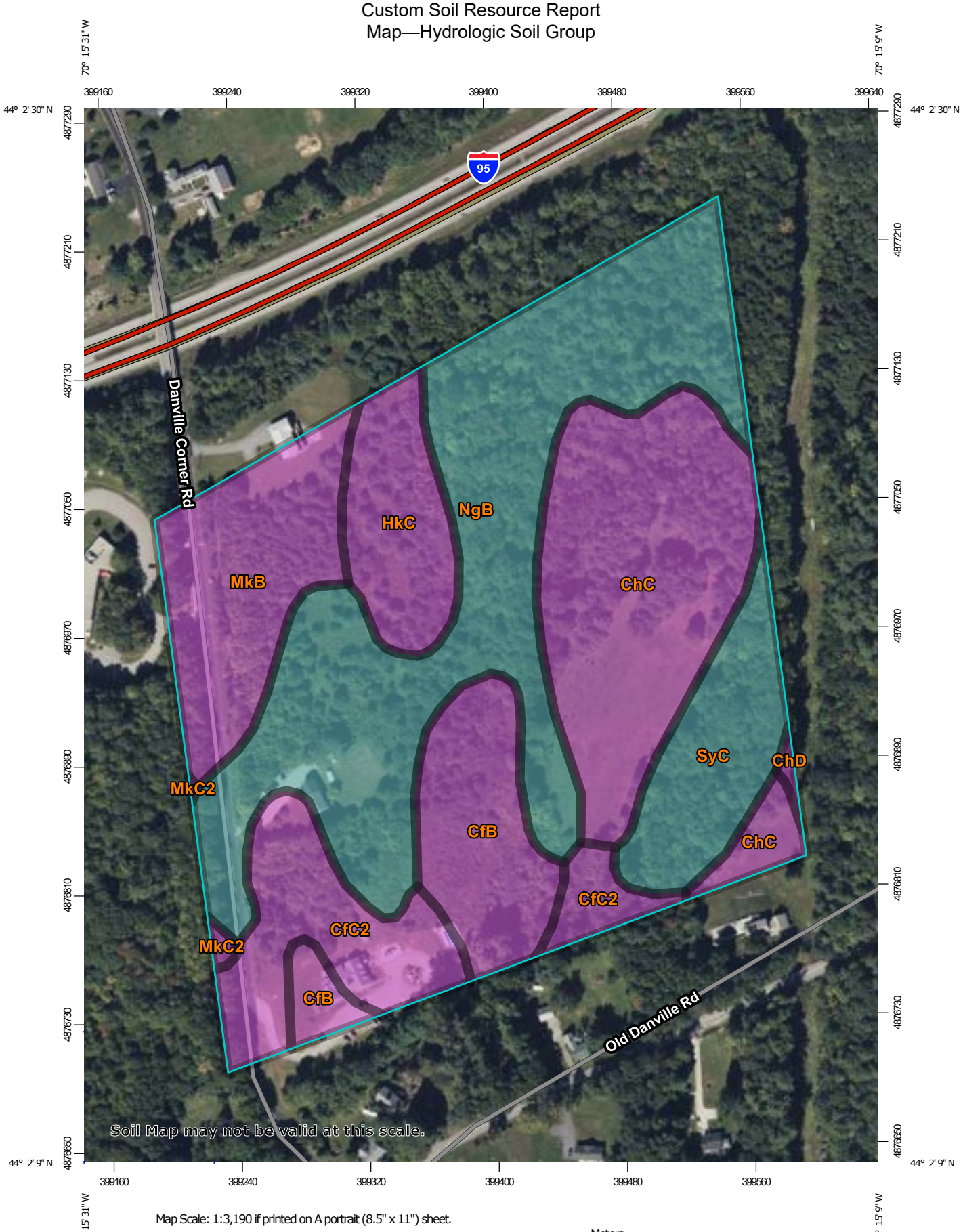
A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Map—Hydrologic Soil Group



Map Scale: 1:3,190 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFOR

The soil surveys that comprise your
1:15,800.

Warning: Soil Map may not be valid

Enlargement of maps beyond the sc
misunderstanding of the detail of ma
line placement. The maps do not sh
contrasting soils that could have bee
scale.

Please rely on the bar scale on each
measurements.

Source of Map: Natural Resources
Web Soil Survey URL:
Coordinate System: Web Mercator

Maps from the Web Soil Survey are
projection, which preserves direction
distance and area. A projection that
Albers equal-area conic projection, s
accurate calculations of distance or

This product is generated from the U
of the version date(s) listed below.

Soil Survey Area: Androscoggin ar
Maine
Survey Area Data: Version 25, Aug

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

Date(s) aerial images were photogra
2021

The orthophoto or other base map o
compiled and digitized probably diffe

MAP LEGEND

MAP INFOR

imagery displayed on these maps. A
shifting of map unit boundaries may

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CfB	Charlton fine sandy loam, 0 to 8 percent slopes	A	3.4	9.6%
CfC2	Charlton fine sandy loam, 8 to 15 percent slopes, eroded	A	3.7	10.5%
ChC	Charlton very stony fine sandy loam, 8 to 15 percent slopes	A	7.2	20.3%
ChD	Charlton very stony fine sandy loam, 15 to 25 percent slopes	A	0.1	0.2%
HkC	Hinckley gravelly sandy loam, 8 to 15 percent slopes	A	2.3	6.6%
MkB	Merrimac fine sandy loam, 0 to 8 percent slopes	A	3.9	11.0%
MkC2	Merrimac fine sandy loam, 8 to 15 percent slopes, eroded	A	0.1	0.3%
NgB	Ninigret fine sandy loam, 0 to 8 percent slopes	C	11.9	33.7%
SyC	Sutton very stony loam, 8 to 15 percent slopes	C	2.8	7.8%
Totals for Area of Interest			**35.3**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 19. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from the Maine Office of Geographic Information Systems (MEGIS) at a scale of 1:4,800 or better from photography dated 2001 or later.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

State of Maine Floodway Note: Under the Maine Revised Statutes Annotated (M.R.S.A.) Title 38 § 439-A, 7C where the floodway is not designated on the Flood Insurance Rate Map, the floodway is considered to be the channel of a river or other water course and the adjacent land areas to a distance of one-half the width of the floodplain, as measured from the normal high water mark to the upland limit of the floodplain, unless a technical evaluation certified by a registered professional engineer is provided demonstrating the actual floodway based upon approved FEMA modeling methods.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% Annual Chance Floodplain Boundary
	0.2% Annual Chance Floodplain Boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

A ⟷ A	Cross section line
23 ⟷ 23	Transect line
45° 02' 08", 93° 02' 12"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
3100000 FT	5000-foot ticks: Maine State Plane West Zone (FIPS Zone 1802), Transverse Mercator projection
4988000m N	1000-meter Universal Transverse Mercator grid values, zone 19
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
FT1,000	River Station

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
July 8, 2013

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0317E

FIRM

FLOOD INSURANCE RATE MAP

ANDROSCOGGIN COUNTY, MAINE (ALL JURISDICTIONS)

PANEL 317 OF 470
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
AUBURN, CITY OF	230001	0317	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
23001C0317E
EFFECTIVE DATE
JULY 8, 2013

Federal Emergency Management Agency

APPENDIX 2

BMP DESIGN CALCULATIONS

TERRADYN CONSULTANTS, LLC
P.O. Box 339
41 Campus Drive, Suite 301
New Gloucester, ME 04260
(207)926-5111 Fax (207)221-1317

Job: Danville Corne
Sheet Number: 1
Calculated By: PG
Date: 10/11/2024

STAGE STORAGE CALCULATIONS

GRAVEL WETLAND #1

WATERSHED IMPERVIOUS AREA=	91829	SF	1"
WATERSHED LANDSCAPED AREA=	175282	SF	0.4"
REQUIRED WQV=	13495	CF	
PROVIDED WQV=	14280	CF	
REQUIRED SA=	8097.0	SF	
PROVIDED SA=	8149.0	SF	

Forebay

STAGE (FT)	AREA (SF)	STORAGE (CF)
264	801	0
265	1156	978
265.5	1333	1601

Cell #1

STAGE (FT)	AREA (SF)	STORAGE (CF)
264	3557	0
265	4288	3923
265.5	4654	6158

Cell #2

STAGE (FT)	AREA (SF)	STORAGE (CF)
264	3791	0
265	4533	4162
265.5	4904	6521

Total Pond

STAGE (FT)	AREA (SF)	STORAGE (CF)
264	8149	0
265	9977	9063
265.5	10891	14280
265.51	11751	14280
266	12465	20213
267	13983	33023

APPENDIX 3

HOUSEKEEPING & MAINTENANCE

207.926.5111
info@terradynconsultants.com
www.terradynconsultants.com

DANVILLE CORNER HOUSING PROJECT
AUBURN, MAINE
STORMWATER MANAGEMENT SYSTEM INSPECTION & MAINTENANCE PLAN

Project Owner/Developer: Timothy Millet
154 Baily Hill Road
Poland, ME 04274

Responsible Party: Timothy Millet
154 Baily Hill Road
Poland, ME 04274

Prepared By: Craig Sweet, P.E.
Terradyn Consultants, LLC
41 Campus Drive, Suite 101
New Gloucester, Maine 04260
(207) 926-5111

INTRODUCTION:

Regular inspection and maintenance of the entire stormwater management system is crucial to the long-term effectiveness of the system. The responsible party must provide regular inspection and maintenance of all permanent erosion control measures and stormwater management structures, establish any contract services required to implement the program, and keep records and a maintenance log book of inspection and maintenance activities. At a minimum, the inspection and maintenance activities outlined herein should be performed at the recommended intervals.

All measures must be maintained in effective operating condition. A person with knowledge of erosion and sedimentation practices, stormwater management, and the standards and conditions of all local, state and federal permits for the project shall conduct the inspections. The following areas, facilities, and measures must be inspected and identified deficiencies must be corrected.

INSPECTION TASKS

1. Inspect **vegetated areas**, particularly slopes and embankments, early in the growinpg season or after heavy rains to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

2. Inspect **ditches, swales and other open stormwater channels** in the spring, in late fall, and after heavy rains to remove any obstructions to flow, remove accumulated sediments and debris, to control vegetated growth that could obstruct flow, and to repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or sideslopes.

3. Inspect **culverts** in the spring, in late fall, and after heavy rains to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the culvert's inlet and outlet.

4. Inspect **gravel wetlands** semiannually. The plant biomass should be harvested annually, and accumulated sediment removed at intervals of 5-10 years. These activities may disrupt the wetlands system and may require some vegetation re-establishment. The riser pipes may clog and will require annual clean-out (it should be done in the winter time when one can walk on the wetland).

    a. First Year Post-Construction: Inspection frequency should occur after every major storm in the first year following construction.
        i. Inspect that the system drains within 24-48 hours.
        ii. The plants may need watering if necessary during the first growing season. Revegetate if the vegetation is poorly establishing.
        iii. Identify areas of erosion and make timely repairs.
        iv. Check all inlets, outlets and subdrains for proper functioning. Risers may need to be cleaned.
    b. Post-Construction: Inspection frequency should occur at least every 6 months and after every major storm. Activities are expected to include:
        i. Check the basin for a dense root mat establishment of wetland vegetation.
        ii. Check and clean the risers if there is evidence of standing water, discolored water or accumulated sediments in the cells.
        iii. Check and clean the forebay for sediments, trash and debris. When sediments have accumulated to a depth of 12 inches, standing water is persistent or wetland vegetation become established, the forebay will need to be excavated and reformed.

iv. Verify that the cells drain within 24-48 hours. Sediment will need to be removed when an accumulation of 4 inches is evident over the wetland surface.
v. Check and clean all outlets and overflow spillway if blocked or there is evidence of structural damage or erosion.
vi. Remove decaying vegetation, litter and debris.
vii. Check for foreign species. Particular care must be used to avoid the unintended introduction of invasive species such as purple loosestrife (Lythrum salicaria) and common reed (Phragmites australis). It is recommended that a qualified wetland biologist be consulted when these are found in the area of the gravel wetland.

Recertification requirement:

Within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following to the Department.

(a) All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

(b) All aspects of the stormwater control system are operating as approved, have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the system, or portions of the system, as necessary.

(c) The stormwater maintenance plan for the site is being implemented as approved by the Department, and the maintenance log is being maintained.

(d) All proprietary systems have been maintained according to the manufacturer's recommendations. Where required by the Department, the permittee shall execute a 5-year maintenance contract with a qualified professional for the coming 5-year interval. The maintenance contract must include provisions for routine inspections, cleaning and general maintenance.

(e) The Department may waive some or all of these recertification requirements on a case-by-case basis for permittees subject to the Department's Multi-Sector General Permit ("MSGP") and/or Maine Pollutant Discharge Elimination System ("MEPDES") programs where it is demonstrated that these programs are providing stormwater control that is at least as effective as required pursuant to this Chapter.

Conveyance & Distribution Systems: (Stormwater Channels & Culverts, etc.)

1. Inspection schedule:

a. Inspect ditches, swales and other open stormwater channels in the spring, in late fall, and after heavy rains (one inch of rain in 24 hours) to remove any obstructions to flow, remove accumulated sediments and debris, to control vegetated growth that could obstruct flow, and

to repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or side-slopes.

b. Inspect culverts in the spring, in late fall, and after heavy rains to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the culvert's inlet and outlet.

c. Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

2. Mowing: Grass should not be trimmed extremely short, as this will reduce the filtering effect of the swale (MPCA, 1989). The cut vegetation should be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale. The mowed height of the grass should be 2-4 inches taller than the maximum flow depth of the design water quality storm. A minimum mow height of 6 inches is generally recommended (Galli, 1993).

3. Erosion: It is important to install erosion and sediment control measures to stabilize this area as soon as possible and to retain any organic matter in the bottom of the trench.

4. Fertilization: Routine fertilization and/or use of pesticides is strongly discouraged. If complete re-seeding is necessary, half the original recommended rate of fertilizer should be applied with a full rate of seed.

5. Sediment Removal: The level of sediment deposition in the channel should be monitored regularly, and removed from grassed channels before permanent damage is done to the grassed vegetation, or if infiltration times are longer than 12 hours. Sediment should be removed from riprap channels when it reduces the capacity of the channel.

Roadway Surfaces:

Paved surfaces shall be swept or vacuumed at least once annually in the Spring to remove all Winter sand, and periodically during the year on an as-needed basis to minimize transportation of sediment during rainfall events.

Vegetated Swales:

Mowing: Grass should not be trimmed extremely short, as this will reduce the filtering effect of the swale (MPCA, 1989). The cut vegetation should be removed to prevent the decaying organic litter

from adding pollutants to the discharge from the swale. The mowed height of the grass should be 2-4 inches taller than the maximum flow depth of the design water quality storm. A minimum mow height of 6 inches is generally recommended (Galli, 1993).

Routine Maintenance and Inspection: The area should be inspected for failures following heavy rainfall (one inch of rain in 24 hours) and repaired as necessary for newly formed channels or gullies, reseeding/sodding of bare spots, removal of trash, leaves and/or accumulated sediments, the control of woody or other undesirable vegetation and to check the condition and integrity of the check dams.

Aeration: The buffer strip may require periodic mechanical aeration to restore infiltration capacity. This aeration must be done during a time when the area can be reseeded and mulched prior to any significant rainfall.

Erosion: It is important to install erosion and sediment control measures to stabilize this area as soon as possible and to retain any organic matter in the bottom of the trench.

Fertilization: Routine fertilization and/or use of pesticides is strongly discouraged. If complete re-seeding is necessary, half the original recommended rate of fertilizer should be applied with a full rate of seed.

Sediment Removal: The level of sediment deposition in the channel should be monitored regularly, and removed from grassed channels before permanent damage is done to the grassed vegetation, or if infiltration times are longer than 12 hours. Sediment should be removed from riprap channels when it reduces the capacity of the channel.

DOCUMENTATION

Keep a log (report) summarizing inspections, maintenance, and any corrective actions taken. The log must include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal. The log must be made accessible to Department of Environmental Protection staff and a copy provided to the Department upon request. The permittee shall retain a copy of the log for a period of at least five years from the completion of permanent stabilization.

The log attached at the end of this plan is from the *Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers (May 2016)*. The log may be used or adapted for this project.

ATTACHMENTS:
Stormwater Management Facilities Inspection & Maintenance Log

Stormwater Management Facilities
Inspection & Maintenance Log
Danville Corner Housing Project

General Information:		
Inspected by:	Date:	Weather:
Reason for Inspection: (Regular Inspection) (Major Rain Event)		

BMP	Conditions Observed	Repairs Needed?
1. Vegetated Areas		
2. Ditches, Swales, Open Channels		
3. Culverts		
5. Gravel Wetland		

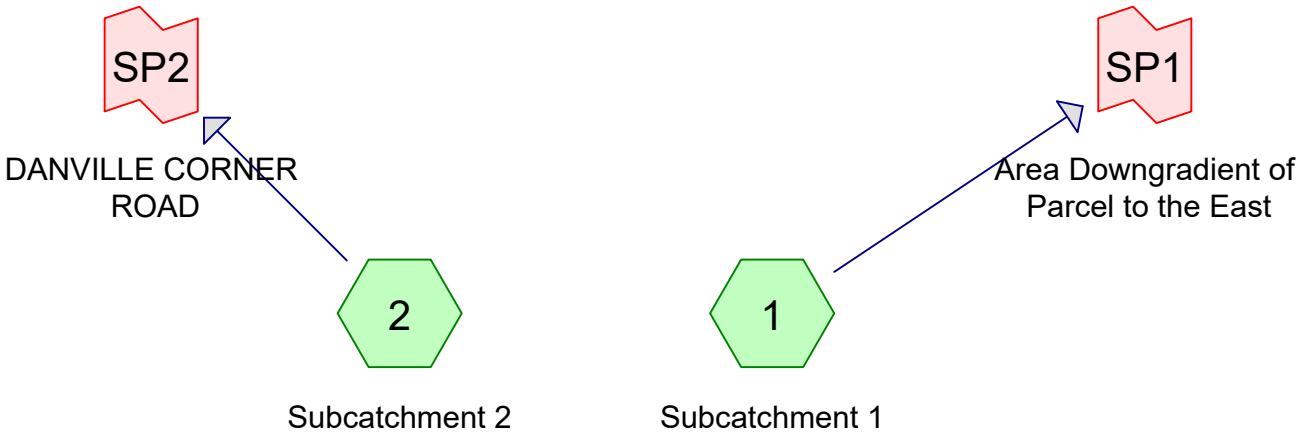
Detailed Repair Notes:

BMP Type	Date	Description of Repairs & Sediment Disposal

Notes:
If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal. A copy of this log shall be retained for a period of at least five years from the completion of permanent stabilization. The log must be made accessible to Department of Environmental Protection staff and a copy provided to the Department upon request.

APPENDIX 4

PRE-DEVELOPMENT HYDROCAD MODEL



Subcat Reach Pond Link

Routing Diagram for 24-164 PRE
Prepared by {enter your company name here}, Printed 12/3/2024
HydroCAD® 10.00-26 s/n 11267 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.067	39	>75% Grass cover, Good, HSG A (1, 2)
0.165	98	Driveway and Roof, HSG C (1, 2)
7.316	70	Woods, Good, HSG C (1, 2)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.067	HSG A	1, 2
0.000	HSG B	
7.481	HSG C	1, 2
0.000	HSG D	
0.000	Other	

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.067	0.000	0.000	0.000	0.000	0.067	>75% Grass cover, Good	1, 2
0.000	0.000	0.165	0.000	0.000	0.165	Driveway and Roof	1, 2
0.000	0.000	7.316	0.000	0.000	7.316	Woods, Good	1, 2

Summary for Subcatchment 1: Subcatchment 1

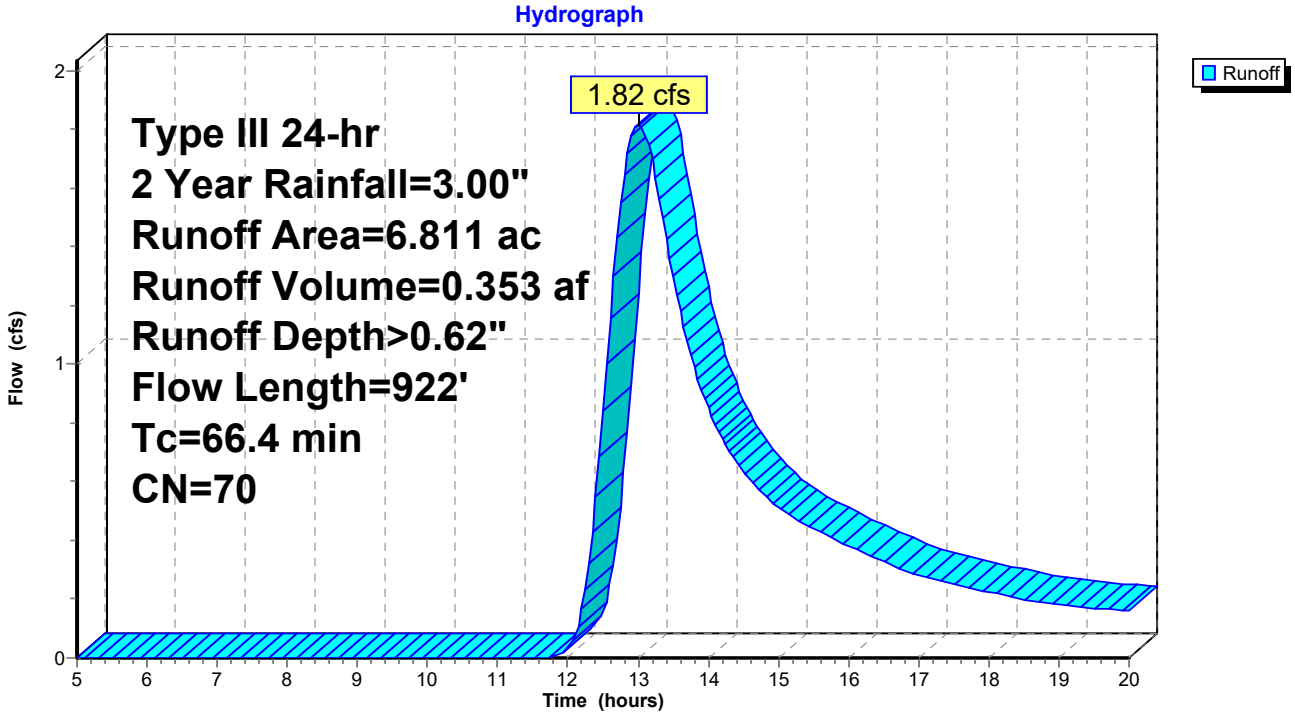
Runoff = 1.82 cfs @ 13.01 hrs, Volume= 0.353 af, Depth> 0.62"

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 Rainfall=3.00"

	Area (ac)	CN	Description
	3.336	70	Woods, Good, HSG C
	3.381	70	Woods, Good, HSG C
	0.018	39	>75% Grass cover, Good, HSG A
*	0.076	98	Driveway and Roof, HSG C
	6.811	70	Weighted Average
	6.735		98.88% Pervious Area
	0.076		1.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.4	150	0.0300	0.06		**Sheet Flow, Woods** Woods: Dense underbrush n= 0.800 P2= 3.00"
21.0	772	0.0600	0.61		**Shallow Concentrated Flow, Woods** Forest w/Heavy Litter Kv= 2.5 fps
66.4	922	Total			

Subcatchment 1: Subcatchment 1



Summary for Subcatchment 2: Subcatchment 2

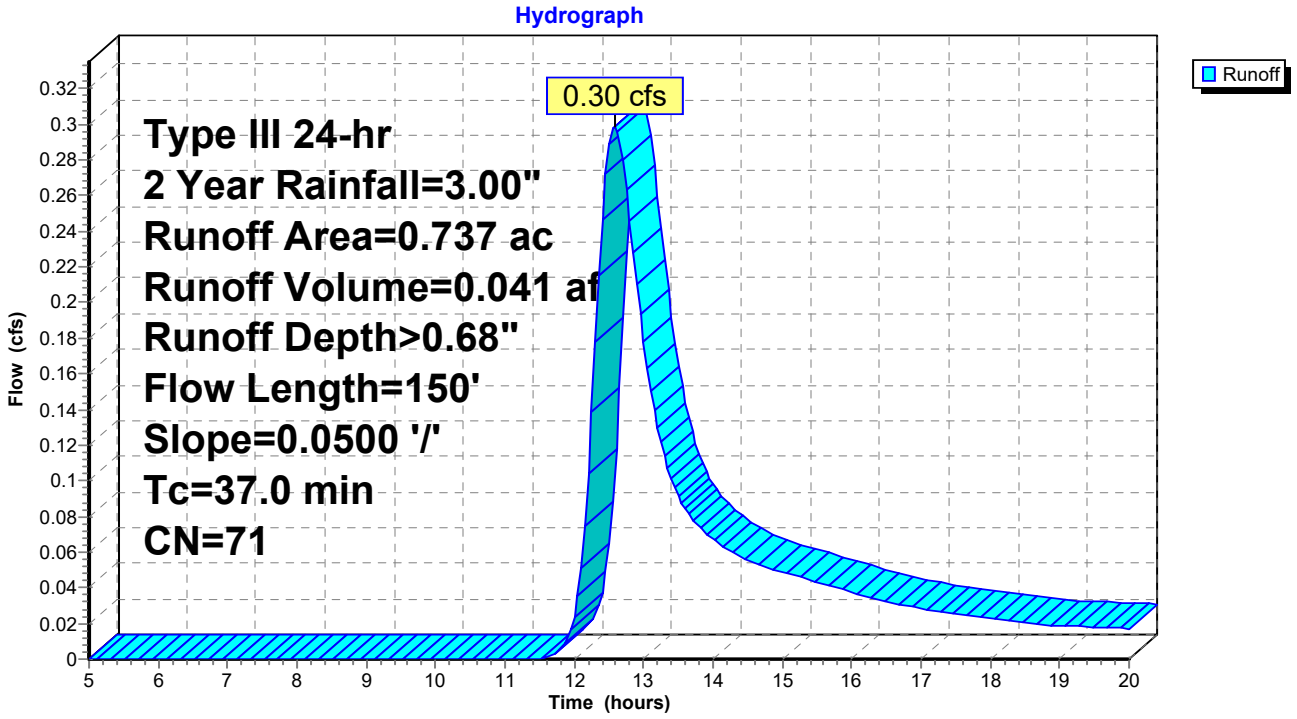
Runoff = 0.30 cfs @ 12.58 hrs, Volume= 0.041 af, Depth> 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (ac)	CN	Description
	0.377	70	Woods, Good, HSG C
	0.222	70	Woods, Good, HSG C
	0.049	39	>75% Grass cover, Good, HSG A
*	0.089	98	Driveway and Roof, HSG C
	0.737	71	Weighted Average
	0.648		87.92% Pervious Area
	0.089		12.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.0	150	0.0500	0.07		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"

Subcatchment 2: Subcatchment 2

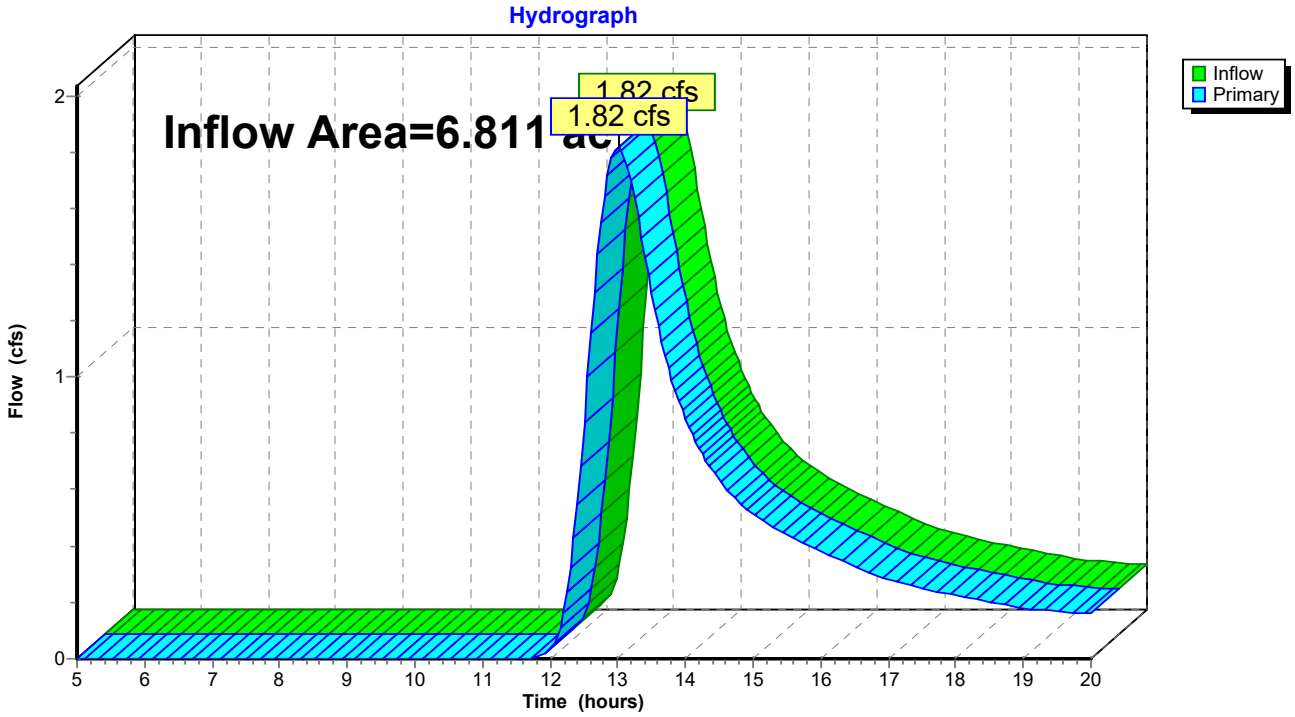


Summary for Link SP1: Area Downgradient of Parcel to the East

Inflow Area = 6.811 ac, 1.12% Impervious, Inflow Depth > 0.62" for 2 Year event
Inflow = 1.82 cfs @ 13.01 hrs, Volume= 0.353 af
Primary = 1.82 cfs @ 13.01 hrs, Volume= 0.353 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP1: Area Downgradient of Parcel to the East

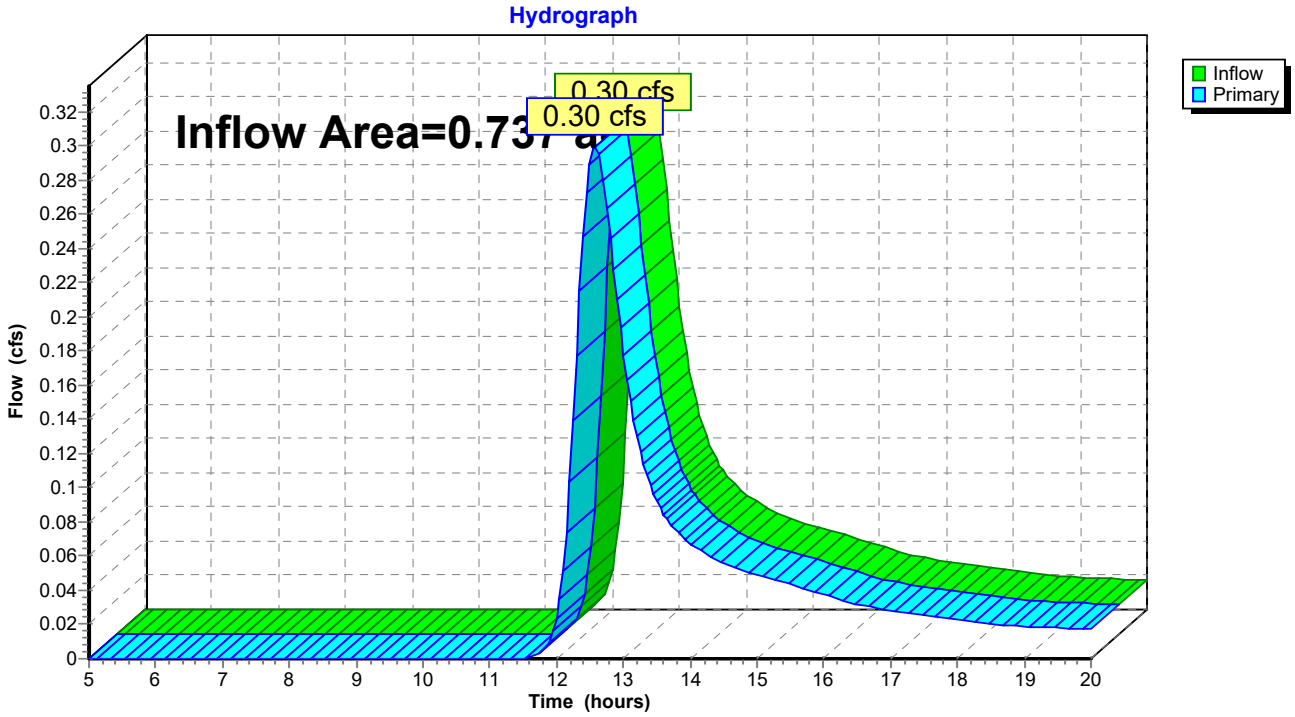


Summary for Link SP2: DANVILLE CORNER ROAD

Inflow Area = 0.737 ac, 12.08% Impervious, Inflow Depth > 0.68" for 2 Year event
Inflow = 0.30 cfs @ 12.58 hrs, Volume= 0.041 af
Primary = 0.30 cfs @ 12.58 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP2: DANVILLE CORNER ROAD



Summary for Subcatchment 1: Subcatchment 1

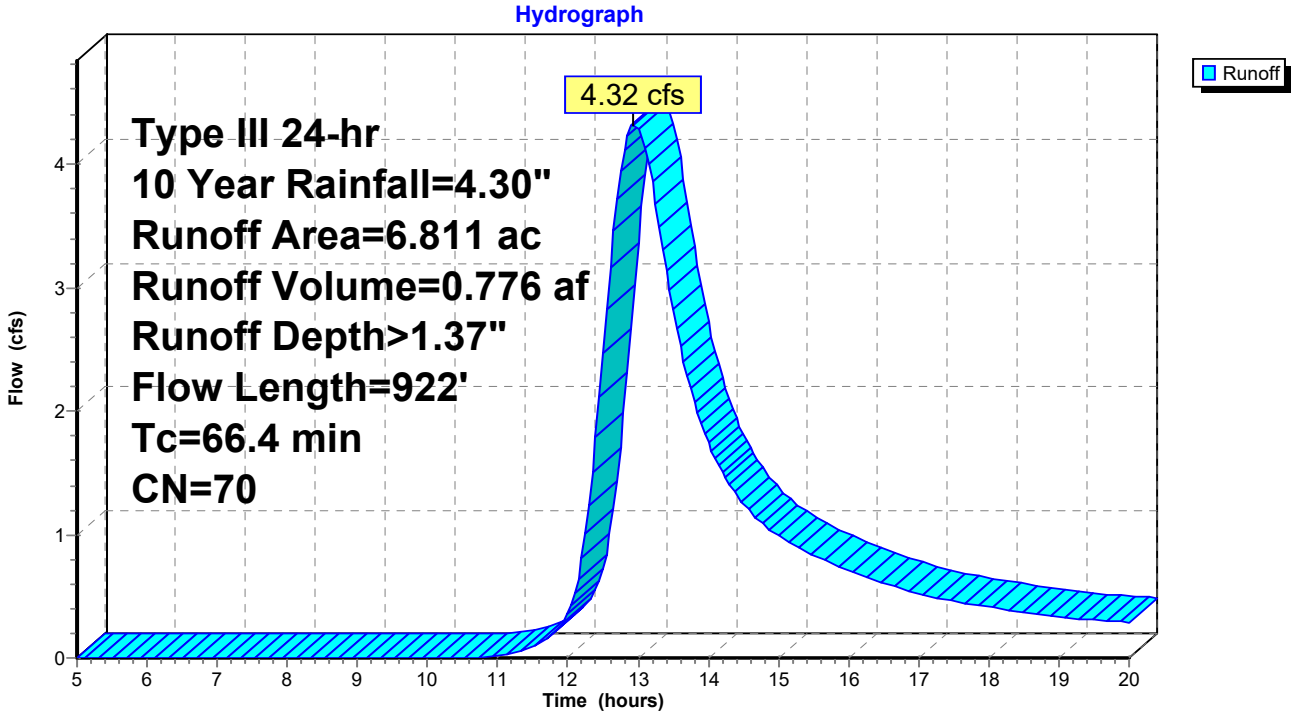
Runoff = 4.32 cfs @ 12.94 hrs, Volume= 0.776 af, Depth> 1.37"

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 Rainfall=4.30"

	Area (ac)	CN	Description
	3.336	70	Woods, Good, HSG C
	3.381	70	Woods, Good, HSG C
	0.018	39	>75% Grass cover, Good, HSG A
*	0.076	98	Driveway and Roof, HSG C
	6.811	70	Weighted Average
	6.735		98.88% Pervious Area
	0.076		1.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.4	150	0.0300	0.06		**Sheet Flow, Woods** Woods: Dense underbrush n= 0.800 P2= 3.00"
21.0	772	0.0600	0.61		**Shallow Concentrated Flow, Woods** Forest w/Heavy Litter Kv= 2.5 fps
66.4	922	Total			

Subcatchment 1: Subcatchment 1



Summary for Subcatchment 2: Subcatchment 2

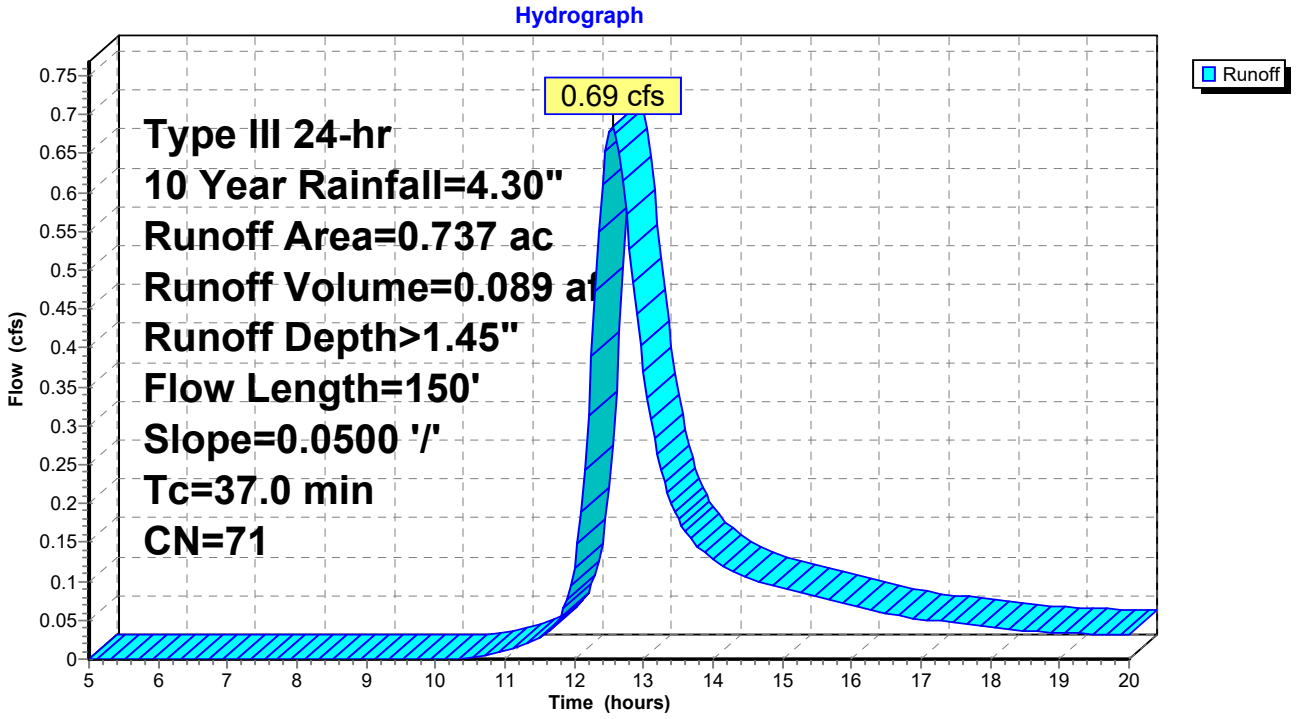
Runoff = 0.69 cfs @ 12.55 hrs, Volume= 0.089 af, Depth> 1.45"

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 Rainfall=4.30"

	Area (ac)	CN	Description
	0.377	70	Woods, Good, HSG C
	0.222	70	Woods, Good, HSG C
	0.049	39	>75% Grass cover, Good, HSG A
*	0.089	98	Driveway and Roof, HSG C
	0.737	71	Weighted Average
	0.648		87.92% Pervious Area
	0.089		12.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.0	150	0.0500	0.07		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"

Subcatchment 2: Subcatchment 2

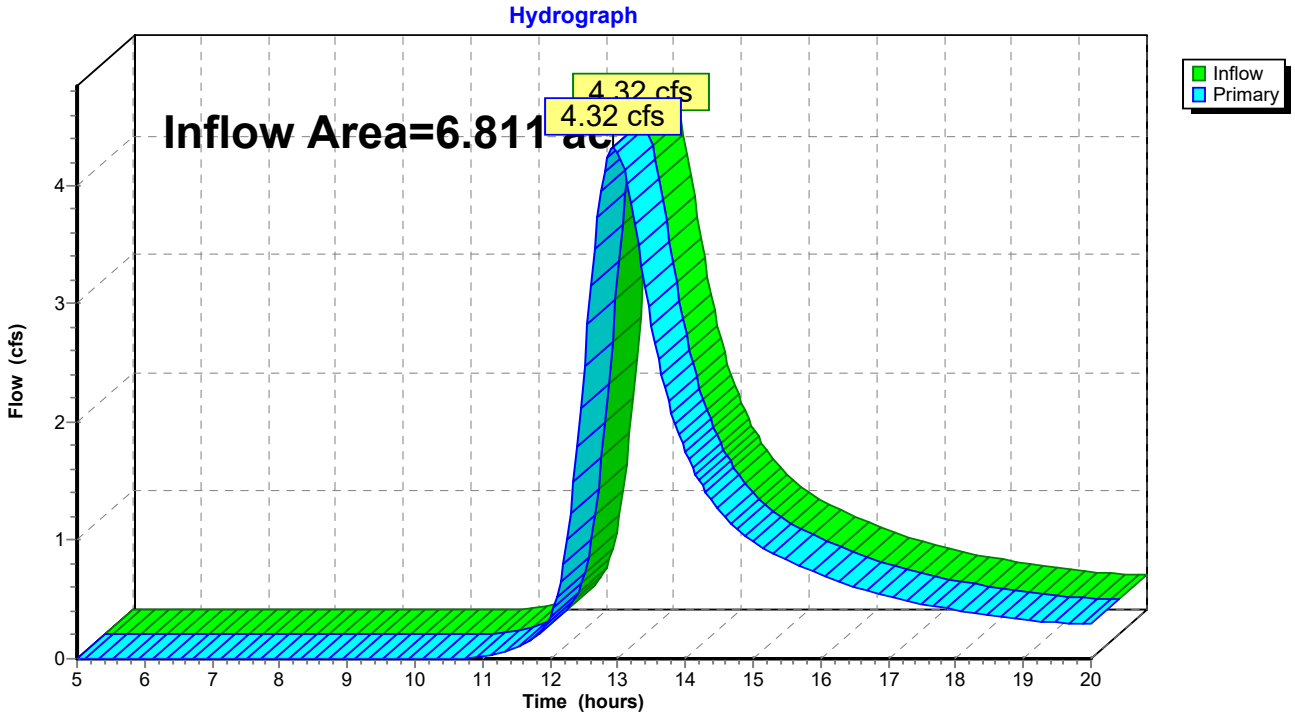


Summary for Link SP1: Area Downgradient of Parcel to the East

Inflow Area = 6.811 ac, 1.12% Impervious, Inflow Depth > 1.37" for 10 Year event
Inflow = 4.32 cfs @ 12.94 hrs, Volume= 0.776 af
Primary = 4.32 cfs @ 12.94 hrs, Volume= 0.776 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP1: Area Downgradient of Parcel to the East

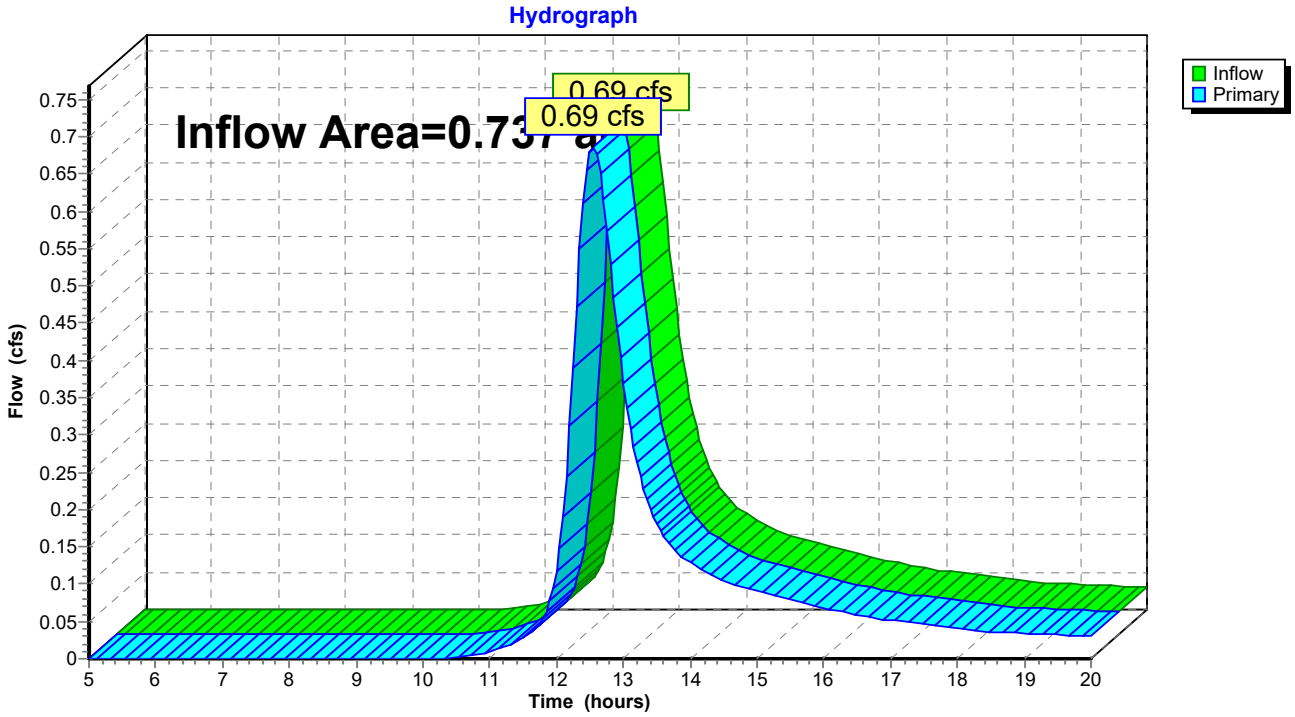


Summary for Link SP2: DANVILLE CORNER ROAD

Inflow Area = 0.737 ac, 12.08% Impervious, Inflow Depth > 1.45" for 10 Year event
Inflow = 0.69 cfs @ 12.55 hrs, Volume= 0.089 af
Primary = 0.69 cfs @ 12.55 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP2: DANVILLE CORNER ROAD



Summary for Subcatchment 1: Subcatchment 1

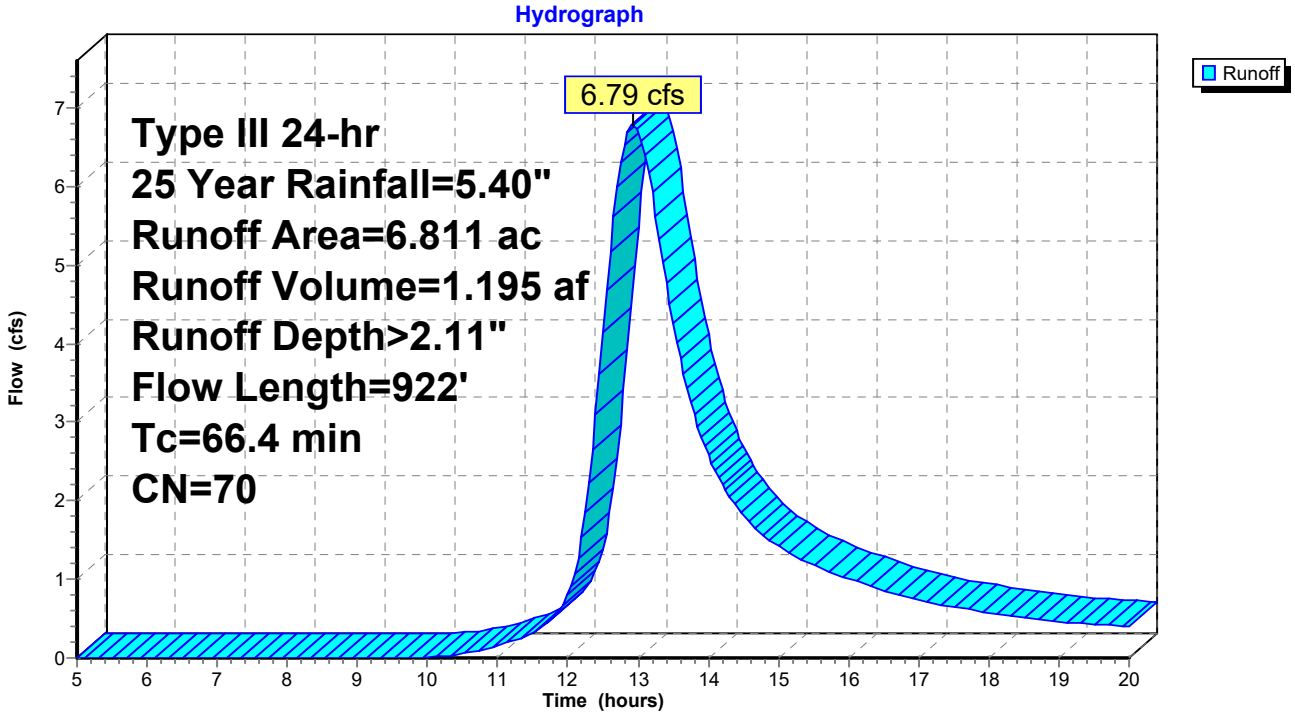
Runoff = 6.79 cfs @ 12.92 hrs, Volume= 1.195 af, Depth> 2.11"

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 Rainfall=5.40"

	Area (ac)	CN	Description
	3.336	70	Woods, Good, HSG C
	3.381	70	Woods, Good, HSG C
	0.018	39	>75% Grass cover, Good, HSG A
*	0.076	98	Driveway and Roof, HSG C
	6.811	70	Weighted Average
	6.735		98.88% Pervious Area
	0.076		1.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.4	150	0.0300	0.06		**Sheet Flow, Woods** Woods: Dense underbrush n= 0.800 P2= 3.00"
21.0	772	0.0600	0.61		**Shallow Concentrated Flow, Woods** Forest w/Heavy Litter Kv= 2.5 fps
66.4	922	Total			

Subcatchment 1: Subcatchment 1



Summary for Subcatchment 2: Subcatchment 2

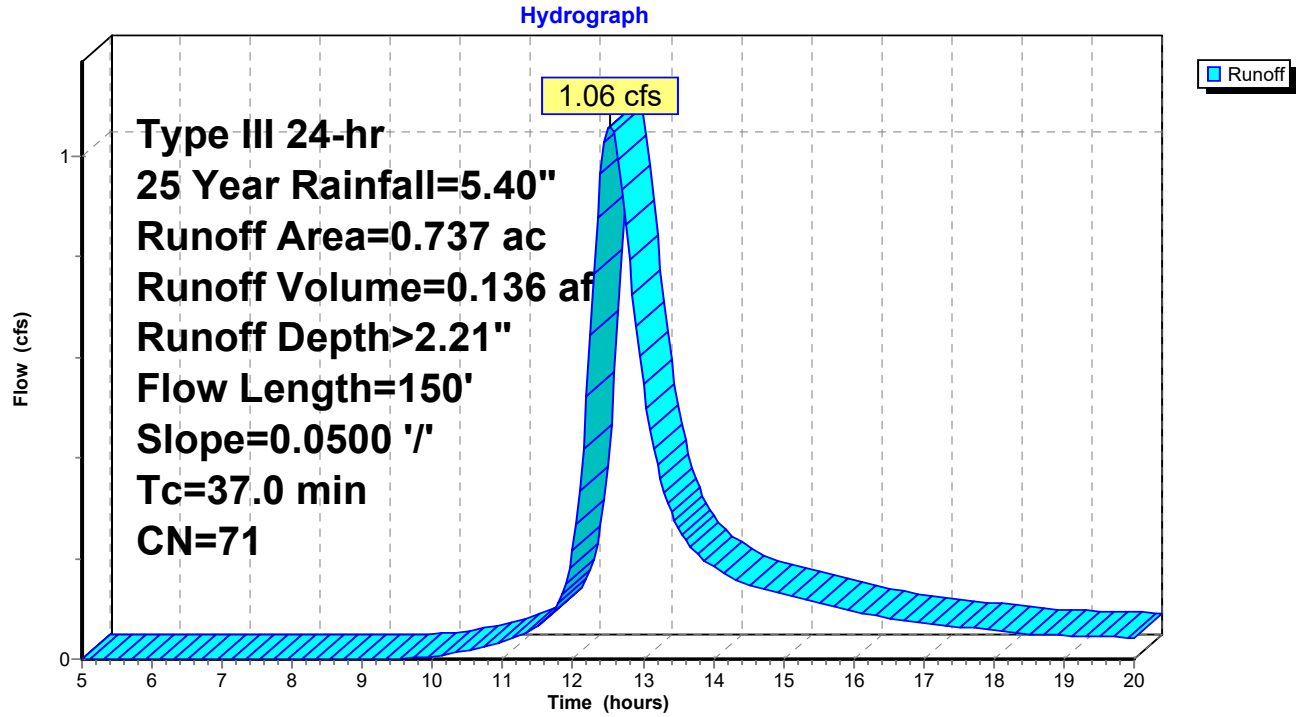
Runoff = 1.06 cfs @ 12.53 hrs, Volume= 0.136 af, Depth> 2.21"

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 Rainfall=5.40"

	Area (ac)	CN	Description
	0.377	70	Woods, Good, HSG C
	0.222	70	Woods, Good, HSG C
	0.049	39	>75% Grass cover, Good, HSG A
*	0.089	98	Driveway and Roof, HSG C
	0.737	71	Weighted Average
	0.648		87.92% Pervious Area
	0.089		12.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.0	150	0.0500	0.07		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"

Subcatchment 2: Subcatchment 2

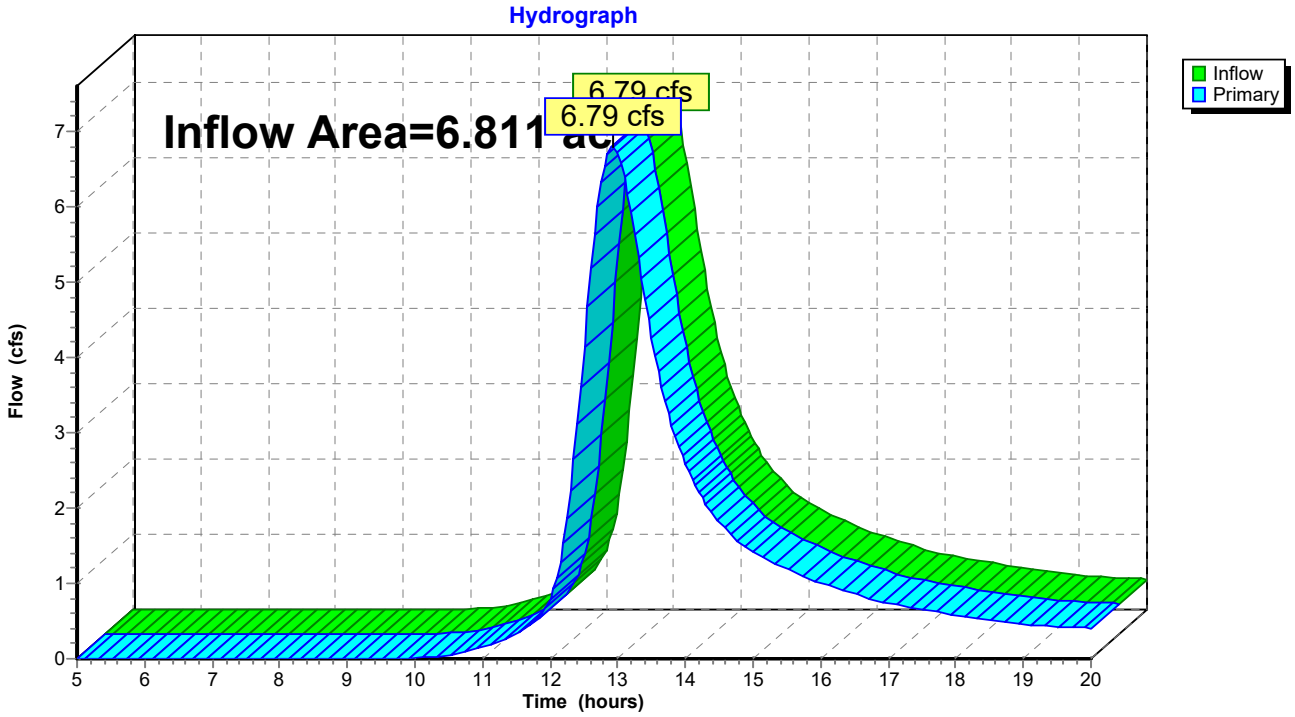


Summary for Link SP1: Area Downgradient of Parcel to the East

Inflow Area = 6.811 ac, 1.12% Impervious, Inflow Depth > 2.11" for 25 Year event
Inflow = 6.79 cfs @ 12.92 hrs, Volume= 1.195 af
Primary = 6.79 cfs @ 12.92 hrs, Volume= 1.195 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP1: Area Downgradient of Parcel to the East

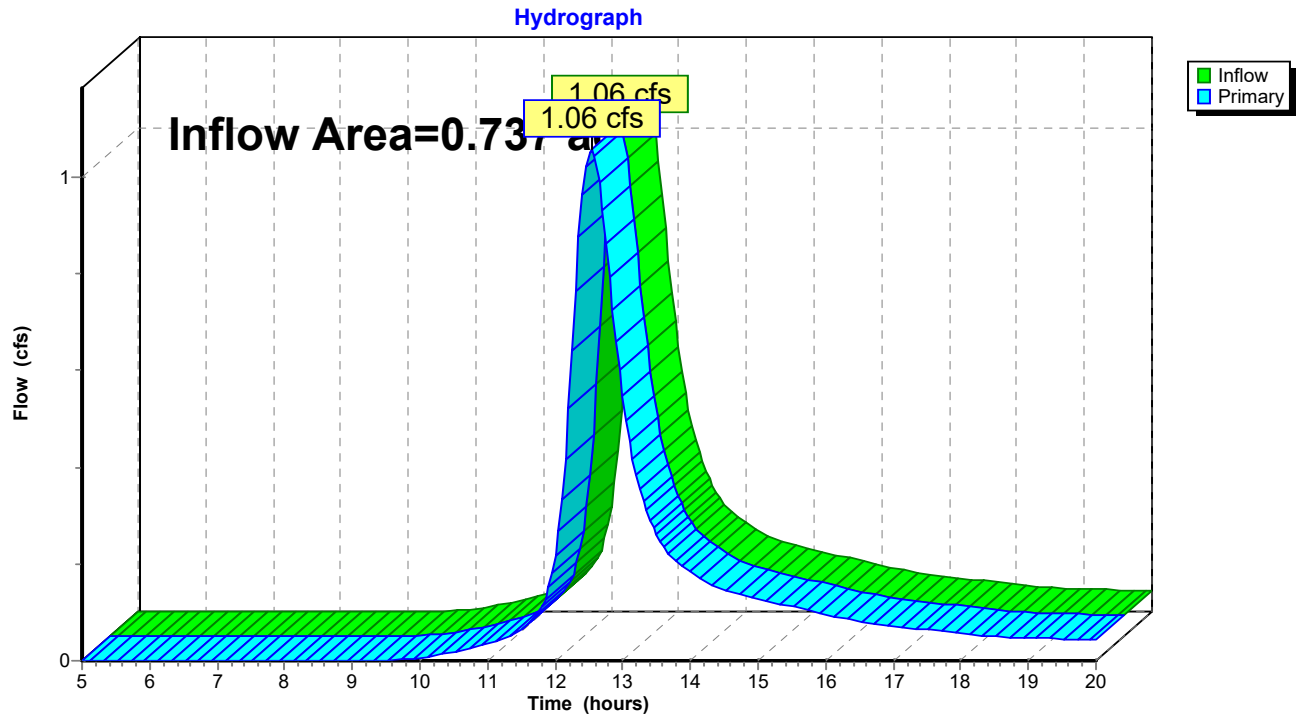


Summary for Link SP2: DANVILLE CORNER ROAD

Inflow Area = 0.737 ac, 12.08% Impervious, Inflow Depth > 2.21" for 25 Year event
Inflow = 1.06 cfs @ 12.53 hrs, Volume= 0.136 af
Primary = 1.06 cfs @ 12.53 hrs, Volume= 0.136 af, Atten= 0%, Lag= 0.0 min

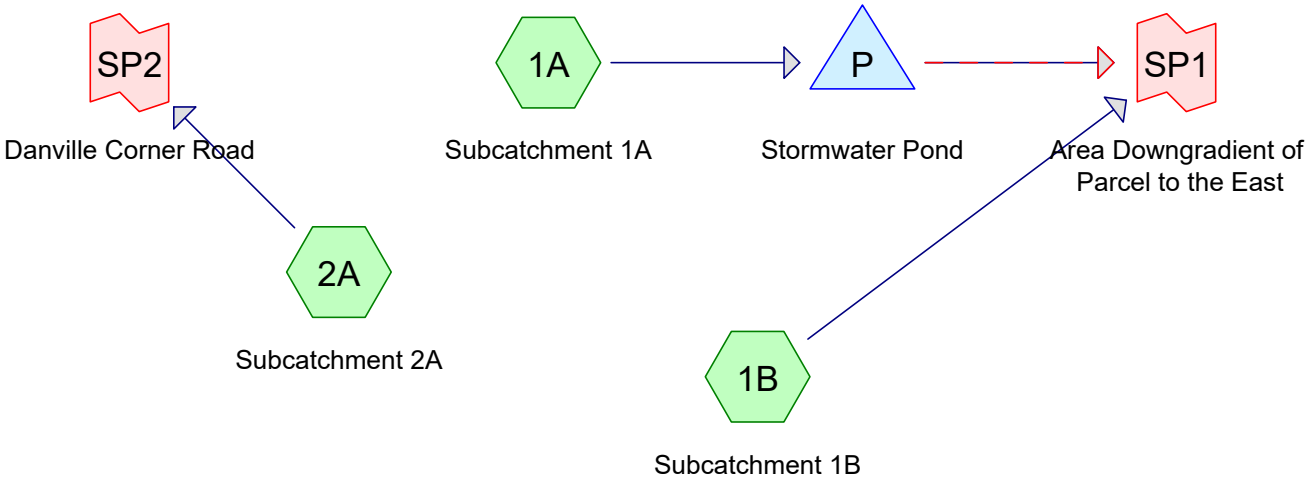
Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP2: DANVILLE CORNER ROAD



APPENDIX 5

POST-DEVELOPMENT HYDROCAD MODEL



Subcat Reach Pond Link

Routing Diagram for 24-164 POST
Prepared by {enter your company name here}, Printed 12/5/2024
HydroCAD® 10.00-26 s/n 11267 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.049	39	>75% Grass cover, Good, HSG A (2A)
4.628	74	>75% Grass cover, Good, HSG C (1A, 1B)
0.107	98	Driveway & Roof, HSG C (1B)
1.233	98	Driveways & Roofs, HSG C (1A)
0.107	98	Driveways & Roofs, HSG D (2A)
0.875	98	Paved roads w/curbs & sewers, HSG C (1A)
0.549	70	Woods, Good, HSG C (1B, 2A)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.049	HSG A	2A
0.000	HSG B	
7.392	HSG C	1A, 1B, 2A
0.107	HSG D	2A
0.000	Other	

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.049	0.000	4.628	0.000	0.000	4.677	>75% Grass cover, Good	1A, 1B, 2A
0.000	0.000	0.107	0.000	0.000	0.107	Driveway & Roof	1B
0.000	0.000	1.233	0.107	0.000	1.340	Driveways & Roofs	1A, 2A
0.000	0.000	0.875	0.000	0.000	0.875	Paved roads w/curbs & sewers	1A
0.000	0.000	0.549	0.000	0.000	0.549	Woods, Good	1B, 2A

Summary for Subcatchment 1A: Subcatchment 1A

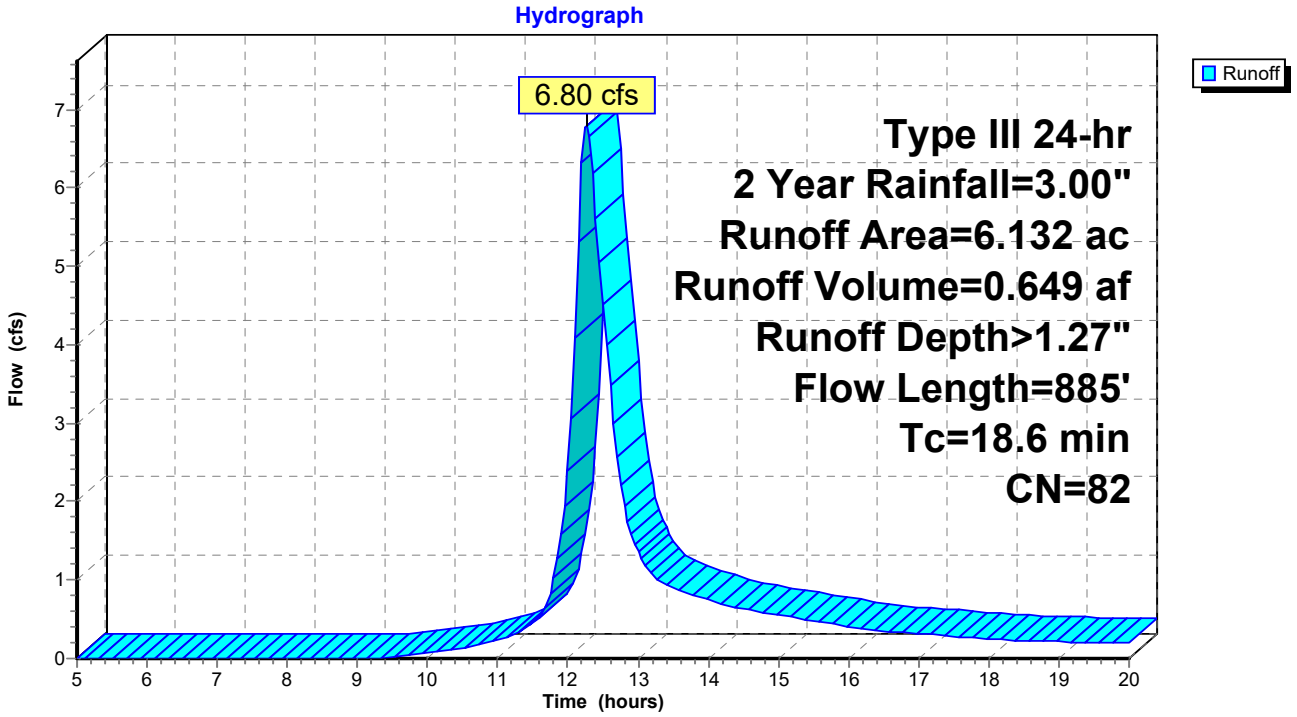
Runoff = 6.80 cfs @ 12.27 hrs, Volume= 0.649 af, Depth> 1.27"

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 Rainfall=3.00"

	Area (ac)	CN	Description
	0.875	98	Paved roads w/curbs & sewers, HSG C
	4.024	74	>75% Grass cover, Good, HSG C
*	1.233	98	Driveways & Roofs, HSG C
	6.132	82	Weighted Average
	4.024		65.62% Pervious Area
	2.108		34.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	150	0.0300	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.00"
0.3	40	0.0200	2.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.1	40	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	655	0.0450	12.10	14.85	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
18.6	885	Total			

Subcatchment 1A: Subcatchment 1A



Summary for Subcatchment 1B: Subcatchment 1B

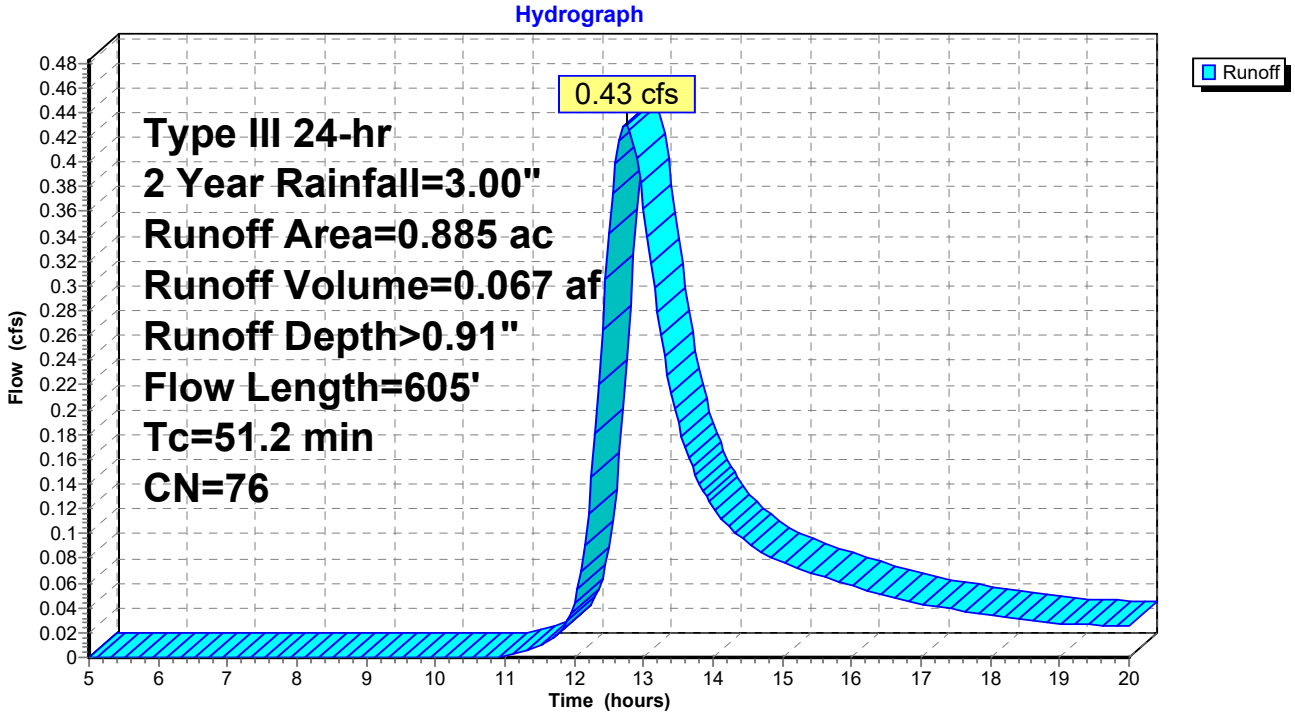
Runoff = 0.43 cfs @ 12.75 hrs, Volume= 0.067 af, Depth> 0.91"

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 Rainfall=3.00"

	Area (ac)	CN	Description
	0.174	70	Woods, Good, HSG C
	0.604	74	>75% Grass cover, Good, HSG C
*	0.107	98	Driveway & Roof, HSG C
	0.885	76	Weighted Average
	0.778		87.91% Pervious Area
	0.107		12.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.5	150	0.0400	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
10.7	455	0.0800	0.71		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
51.2	605	Total			

Subcatchment 1B: Subcatchment 1B



Summary for Subcatchment 2A: Subcatchment 2A

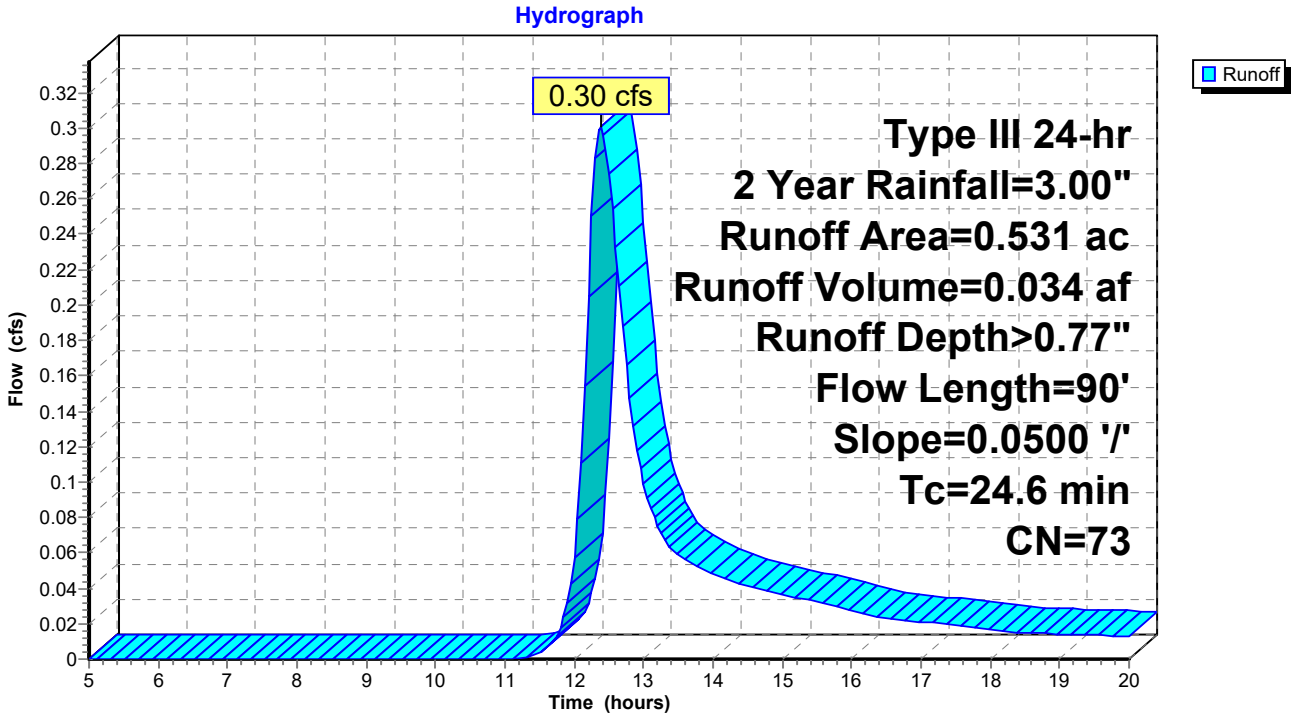
Runoff = 0.30 cfs @ 12.38 hrs, Volume= 0.034 af, Depth> 0.77"

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 Rainfall=3.00"

	Area (ac)	CN	Description
	0.234	70	Woods, Good, HSG C
	0.141	70	Woods, Good, HSG C
	0.049	39	>75% Grass cover, Good, HSG A
*	0.107	98	Driveways & Roofs, HSG D
	0.531	73	Weighted Average
	0.424		79.85% Pervious Area
	0.107		20.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.6	90	0.0500	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"

Subcatchment 2A: Subcatchment 2A



Summary for Pond P: Stormwater Pond

[44] Hint: Outlet device #3 is below defined storage
[44] Hint: Outlet device #5 is below defined storage
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=19)

Inflow Area = 6.132 ac, 34.38% Impervious, Inflow Depth > 1.27" for 2 Year event
Inflow = 6.80 cfs @ 12.27 hrs, Volume= 0.649 af
Outflow = 2.08 cfs @ 12.77 hrs, Volume= 0.649 af, Atten= 69%, Lag= 30.6 min
Discarded = 2.05 cfs @ 12.77 hrs, Volume= 0.637 af
Primary = 0.03 cfs @ 12.77 hrs, Volume= 0.013 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 265.03' @ 12.77 hrs Surf.Area= 10,024 sf Storage= 9,321 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 49.4 min (860.3 - 810.9)

Volume	Invert	Avail.Storage	Storage Description
#1	264.00'	33,550 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
264.00	8,149	0	0
265.00	9,977	9,063	9,063
265.50	10,891	5,217	14,280
265.51	11,751	113	14,393
266.00	12,465	5,933	20,326
267.00	13,983	13,224	33,550

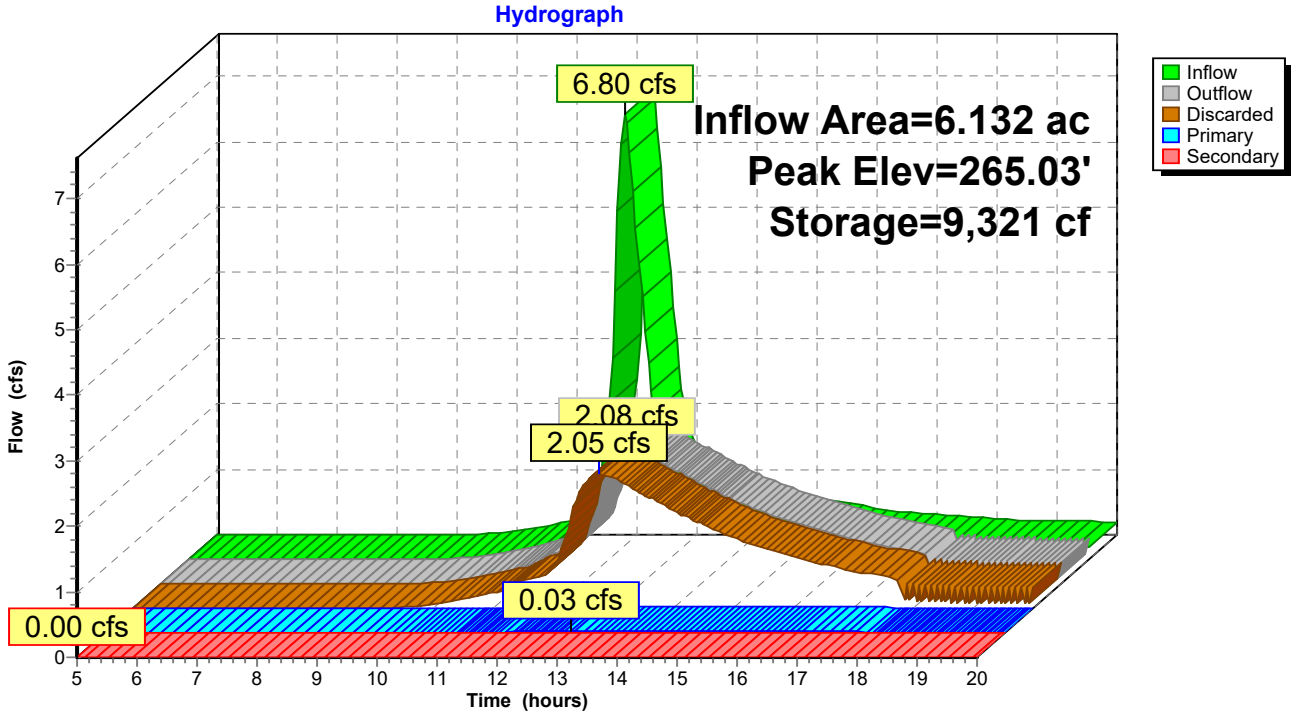
Device	Routing	Invert	Outlet Devices
#1	Primary	263.75'	**15.0" Round Culvert** L= 42.0' Ke= 0.500 Inlet / Outlet Invert= 263.75' / 263.67' S= 0.0019 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#2	Device 1	265.50'	**4.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#3	Device 1	261.25'	**1.0" Vert. Orifice/Grate** C= 0.600
#4	Device 2	265.40'	**15.0" Round Culvert** L= 8.0' Ke= 0.500 Inlet / Outlet Invert= 265.40' / 264.47' S= 0.1162 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#5	Device 4	261.25'	**6.0" Round Culvert** L= 40.0' Ke= 0.500 Inlet / Outlet Invert= 261.25' / 261.25' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#6	Discarded	264.00'	**2.400 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 263.67'
#7	Secondary	266.25'	**40.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=2.05 cfs @ 12.77 hrs HW=265.03' (Free Discharge)
└**6=Exfiltration** (Controls 2.05 cfs)

Primary OutFlow Max=0.03 cfs @ 12.77 hrs HW=265.03' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.03 cfs of 3.48 cfs potential flow)
  └**2=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)
    └**4=Culvert** (Controls 0.00 cfs)
      └**5=Culvert** (Controls 0.00 cfs)
  └**3=Orifice/Grate** (Orifice Controls 0.03 cfs @ 5.44 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=264.00' TW=0.00' (Dynamic Tailwater)
└**7=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P: Stormwater Pond

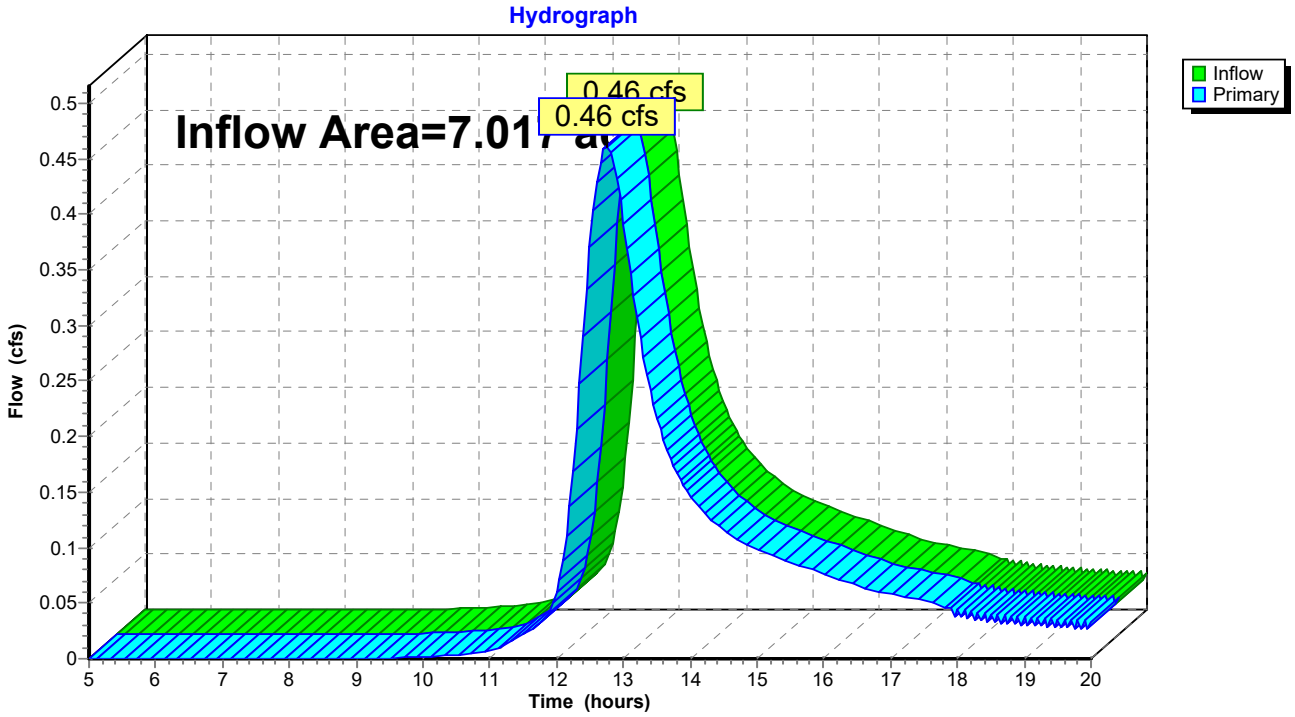


Summary for Link SP1: Area Downgradient of Parcel to the East

Inflow Area = 7.017 ac, 31.57% Impervious, Inflow Depth > 0.14" for 2 Year event
Inflow = 0.46 cfs @ 12.75 hrs, Volume= 0.080 af
Primary = 0.46 cfs @ 12.75 hrs, Volume= 0.080 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP1: Area Downgradient of Parcel to the East

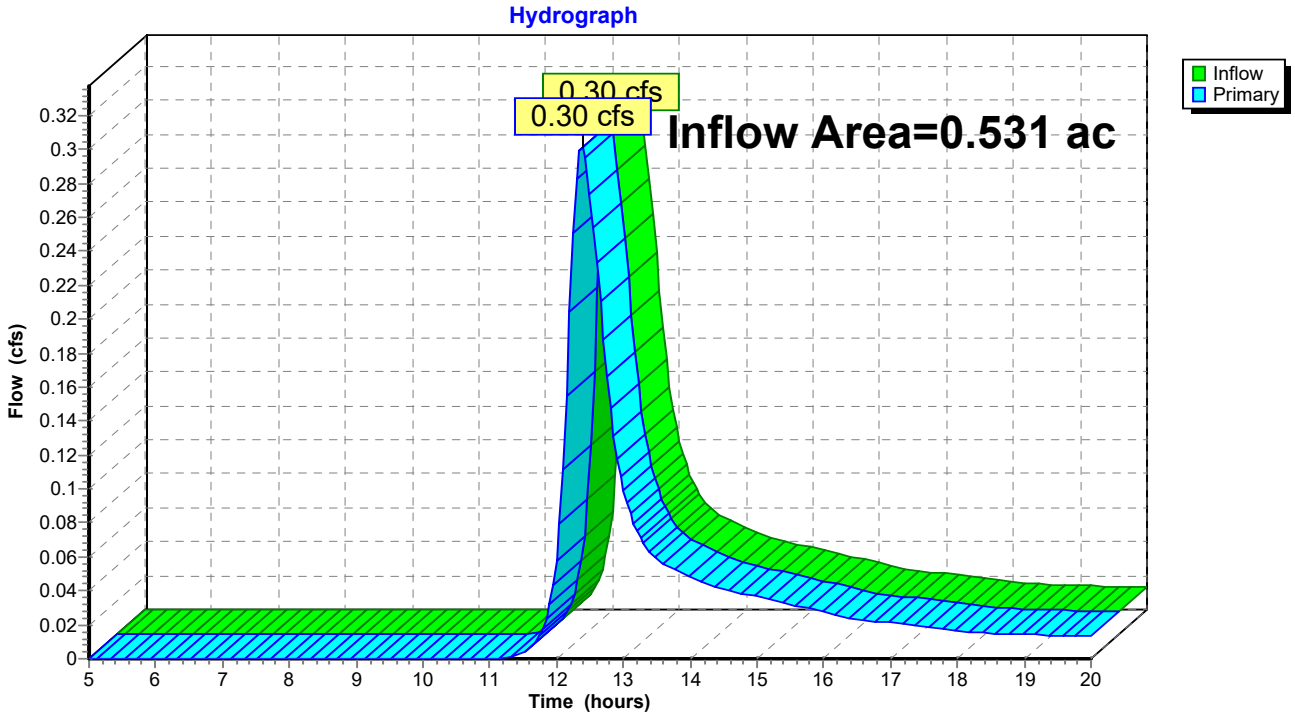


Summary for Link SP2: Danville Corner Road

Inflow Area = 0.531 ac, 20.15% Impervious, Inflow Depth > 0.77" for 2 Year event
Inflow = 0.30 cfs @ 12.38 hrs, Volume= 0.034 af
Primary = 0.30 cfs @ 12.38 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP2: Danville Corner Road



Summary for Subcatchment 1A: Subcatchment 1A

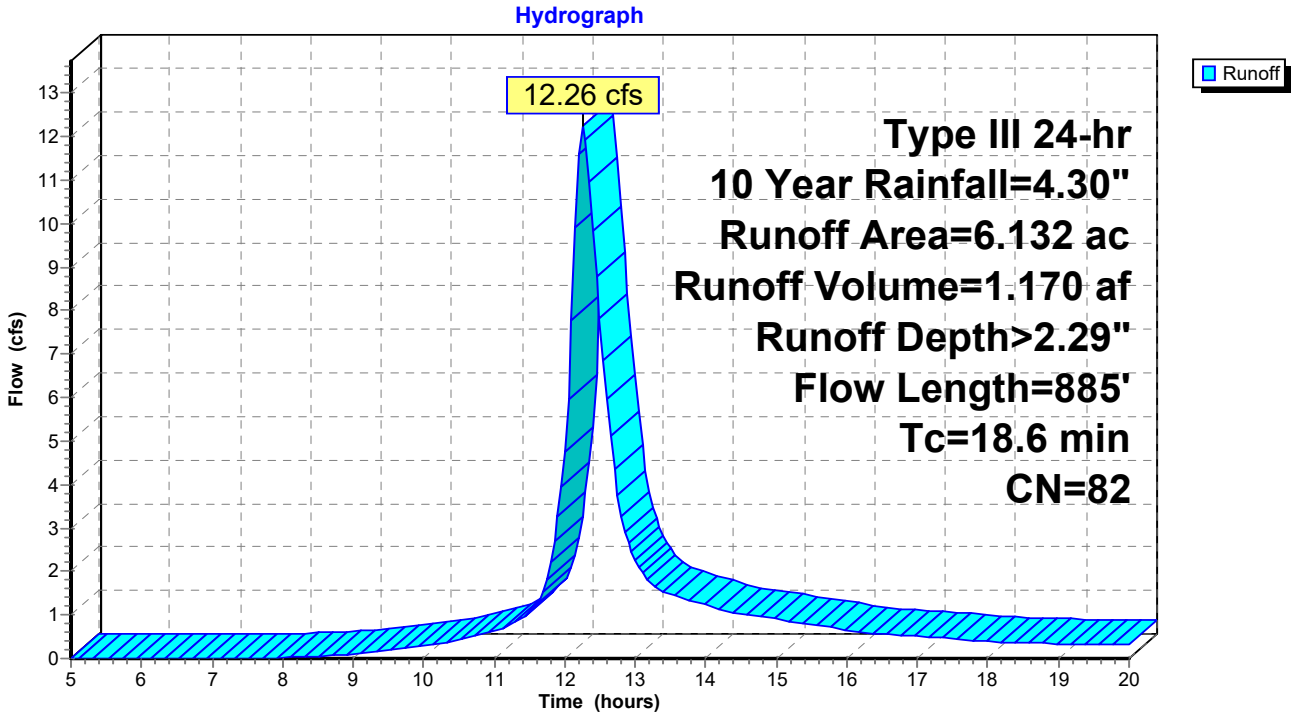
Runoff = 12.26 cfs @ 12.26 hrs, Volume= 1.170 af, Depth> 2.29"

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 Rainfall=4.30"

	Area (ac)	CN	Description
	0.875	98	Paved roads w/curbs & sewers, HSG C
	4.024	74	>75% Grass cover, Good, HSG C
*	1.233	98	Driveways & Roofs, HSG C
	6.132	82	Weighted Average
	4.024		65.62% Pervious Area
	2.108		34.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	150	0.0300	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.00"
0.3	40	0.0200	2.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.1	40	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	655	0.0450	12.10	14.85	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
18.6	885	Total			

Subcatchment 1A: Subcatchment 1A



Summary for Subcatchment 1B: Subcatchment 1B

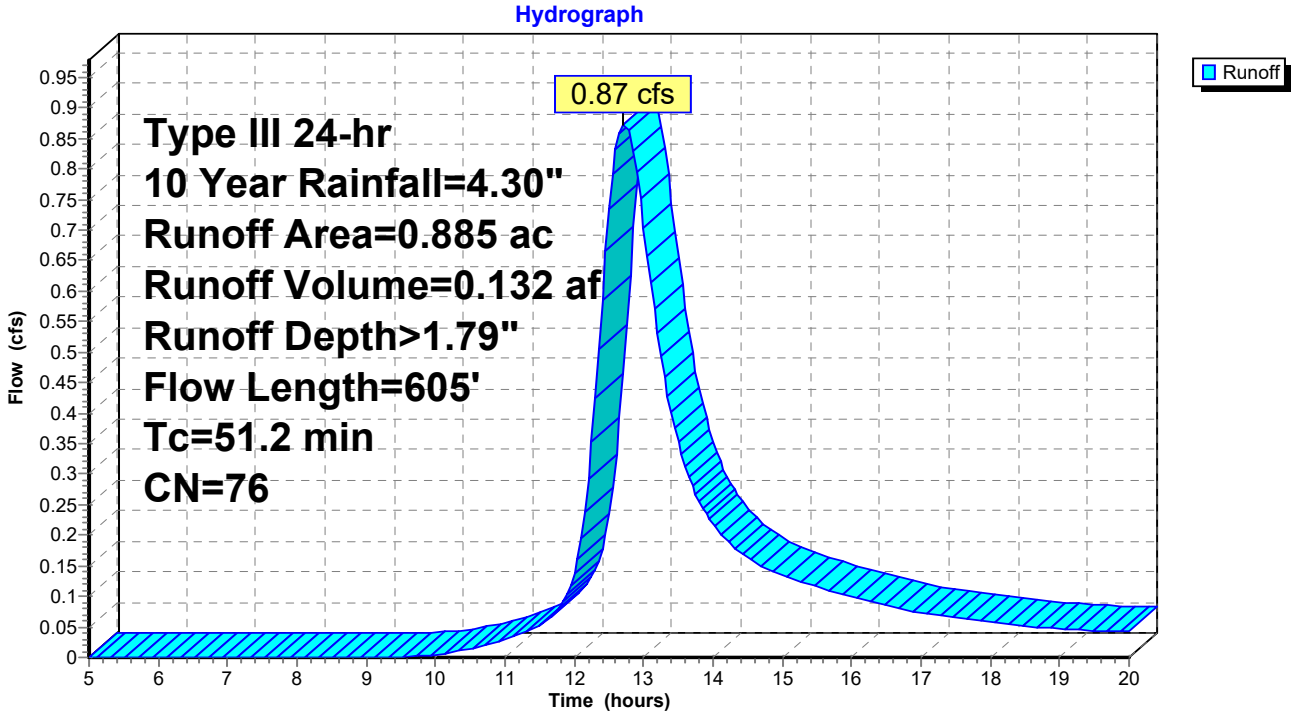
Runoff = 0.87 cfs @ 12.71 hrs, Volume= 0.132 af, Depth> 1.79"

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 Rainfall=4.30"

	Area (ac)	CN	Description
	0.174	70	Woods, Good, HSG C
	0.604	74	>75% Grass cover, Good, HSG C
*	0.107	98	Driveway & Roof, HSG C
	0.885	76	Weighted Average
	0.778		87.91% Pervious Area
	0.107		12.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.5	150	0.0400	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
10.7	455	0.0800	0.71		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
51.2	605	Total			

Subcatchment 1B: Subcatchment 1B



Summary for Subcatchment 2A: Subcatchment 2A

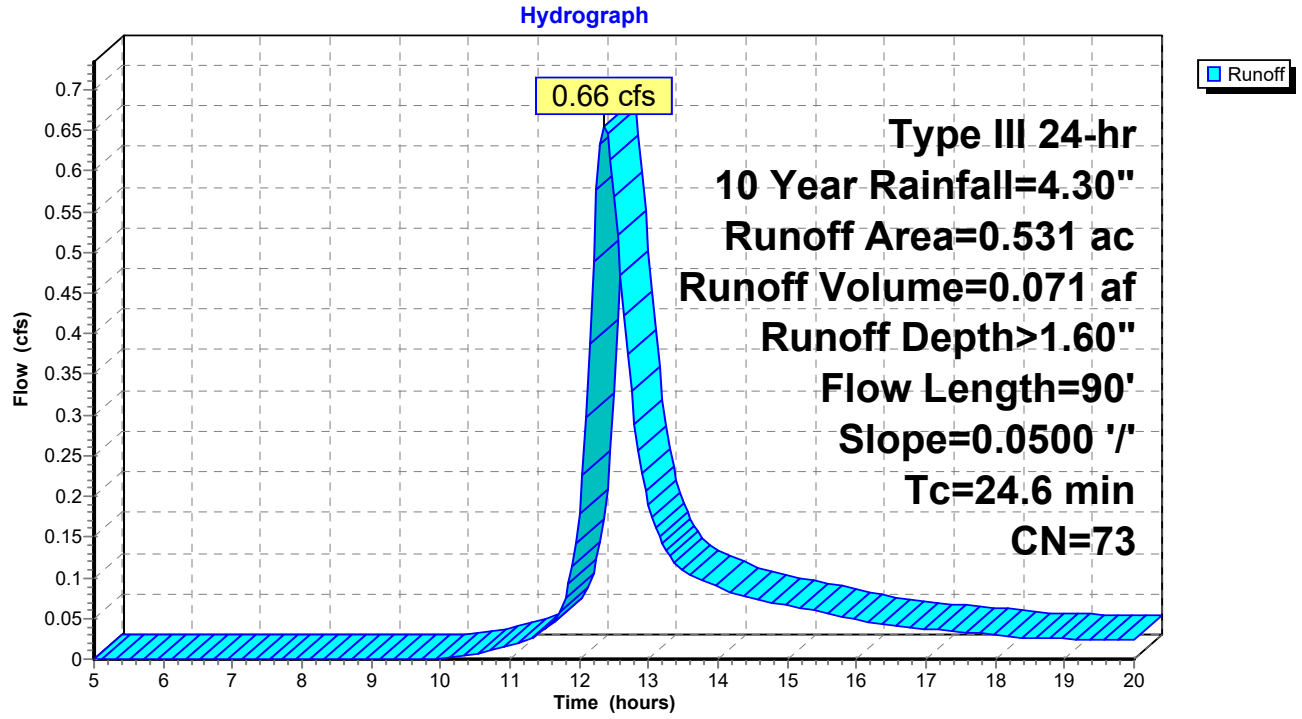
Runoff = 0.66 cfs @ 12.36 hrs, Volume= 0.071 af, Depth> 1.60"

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 Rainfall=4.30"

	Area (ac)	CN	Description
	0.234	70	Woods, Good, HSG C
	0.141	70	Woods, Good, HSG C
	0.049	39	>75% Grass cover, Good, HSG A
*	0.107	98	Driveways & Roofs, HSG D
	0.531	73	Weighted Average
	0.424		79.85% Pervious Area
	0.107		20.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.6	90	0.0500	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"

Subcatchment 2A: Subcatchment 2A



Summary for Pond P: Stormwater Pond

[44] Hint: Outlet device #3 is below defined storage
[44] Hint: Outlet device #5 is below defined storage

Inflow Area = 6.132 ac, 34.38% Impervious, Inflow Depth > 2.29" for 10 Year event
Inflow = 12.26 cfs @ 12.26 hrs, Volume= 1.170 af
Outflow = 3.88 cfs @ 12.74 hrs, Volume= 1.170 af, Atten= 68%, Lag= 28.9 min
Discarded = 3.40 cfs @ 12.74 hrs, Volume= 1.124 af
Primary = 0.48 cfs @ 12.74 hrs, Volume= 0.046 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 265.82' @ 12.74 hrs Surf.Area= 12,207 sf Storage= 18,143 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 61.9 min (859.6 - 797.7)

Volume	Invert	Avail.Storage	Storage Description
#1	264.00'	33,550 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
264.00	8,149	0	0
265.00	9,977	9,063	9,063
265.50	10,891	5,217	14,280
265.51	11,751	113	14,393
266.00	12,465	5,933	20,326
267.00	13,983	13,224	33,550

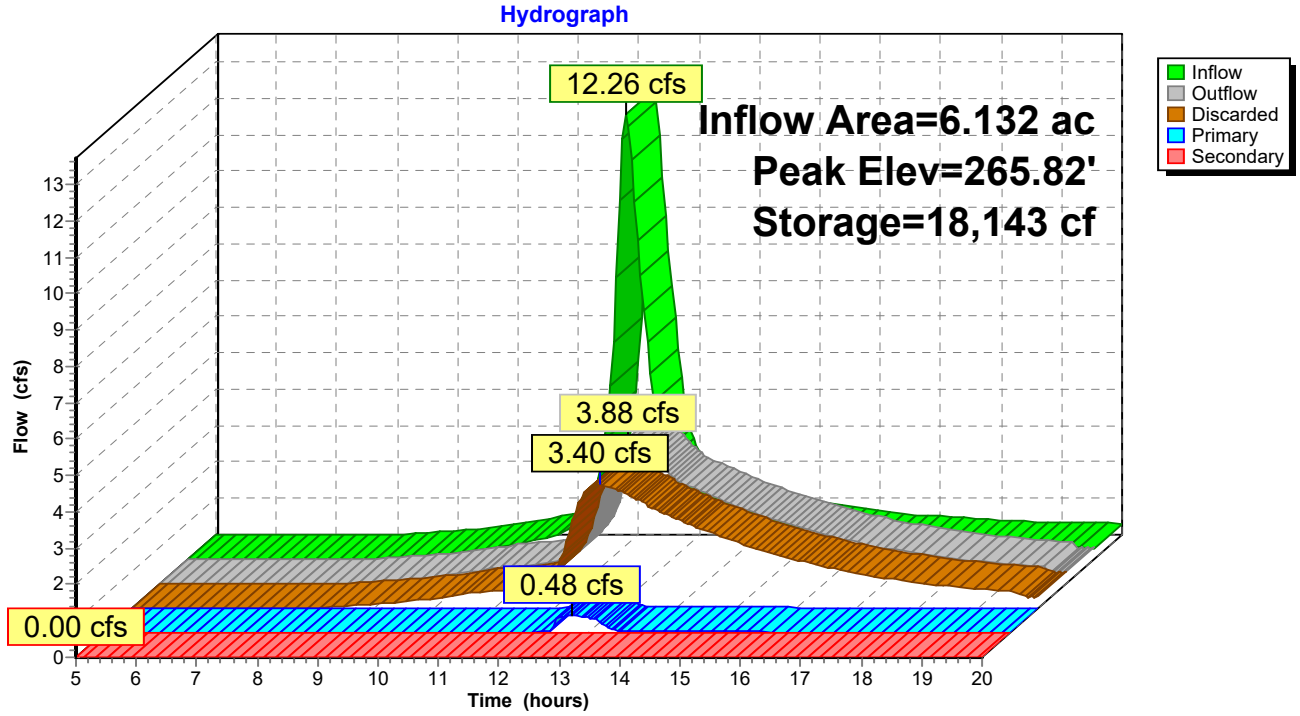
Device	Routing	Invert	Outlet Devices
#1	Primary	263.75'	**15.0" Round Culvert** L= 42.0' Ke= 0.500 Inlet / Outlet Invert= 263.75' / 263.67' S= 0.0019 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#2	Device 1	265.50'	**4.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#3	Device 1	261.25'	**1.0" Vert. Orifice/Grate** C= 0.600
#4	Device 2	265.40'	**15.0" Round Culvert** L= 8.0' Ke= 0.500 Inlet / Outlet Invert= 265.40' / 264.47' S= 0.1162 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#5	Device 4	261.25'	**6.0" Round Culvert** L= 40.0' Ke= 0.500 Inlet / Outlet Invert= 261.25' / 261.25' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#6	Discarded	264.00'	**2.400 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 263.67'
#7	Secondary	266.25'	**40.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=3.40 cfs @ 12.74 hrs HW=265.82' (Free Discharge)
└**6=Exfiltration** (Controls 3.40 cfs)

Primary OutFlow Max=0.47 cfs @ 12.74 hrs HW=265.82' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.47 cfs of 6.12 cfs potential flow)
  └**2=Sharp-Crested Vee/Trap Weir** (Passes 0.44 cfs of 2.40 cfs potential flow)
    └**4=Culvert** (Passes 0.44 cfs of 0.81 cfs potential flow)
      └**5=Culvert** (Outlet Controls 0.44 cfs @ 2.22 fps)
  └**3=Orifice/Grate** (Orifice Controls 0.04 cfs @ 6.93 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=264.00' TW=0.00' (Dynamic Tailwater)
└**7=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P: Stormwater Pond

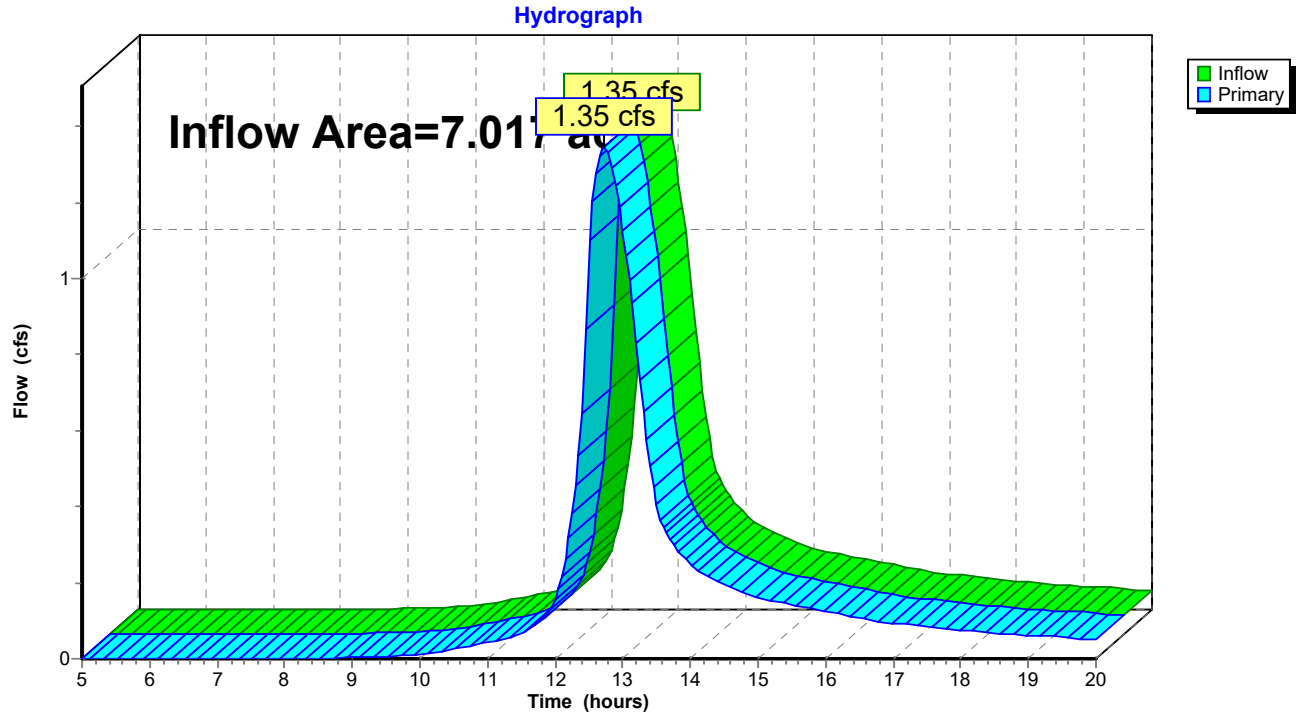


Summary for Link SP1: Area Downgradient of Parcel to the East

Inflow Area = 7.017 ac, 31.57% Impervious, Inflow Depth > 0.30" for 10 Year event
Inflow = 1.35 cfs @ 12.72 hrs, Volume= 0.178 af
Primary = 1.35 cfs @ 12.72 hrs, Volume= 0.178 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP1: Area Downgradient of Parcel to the East

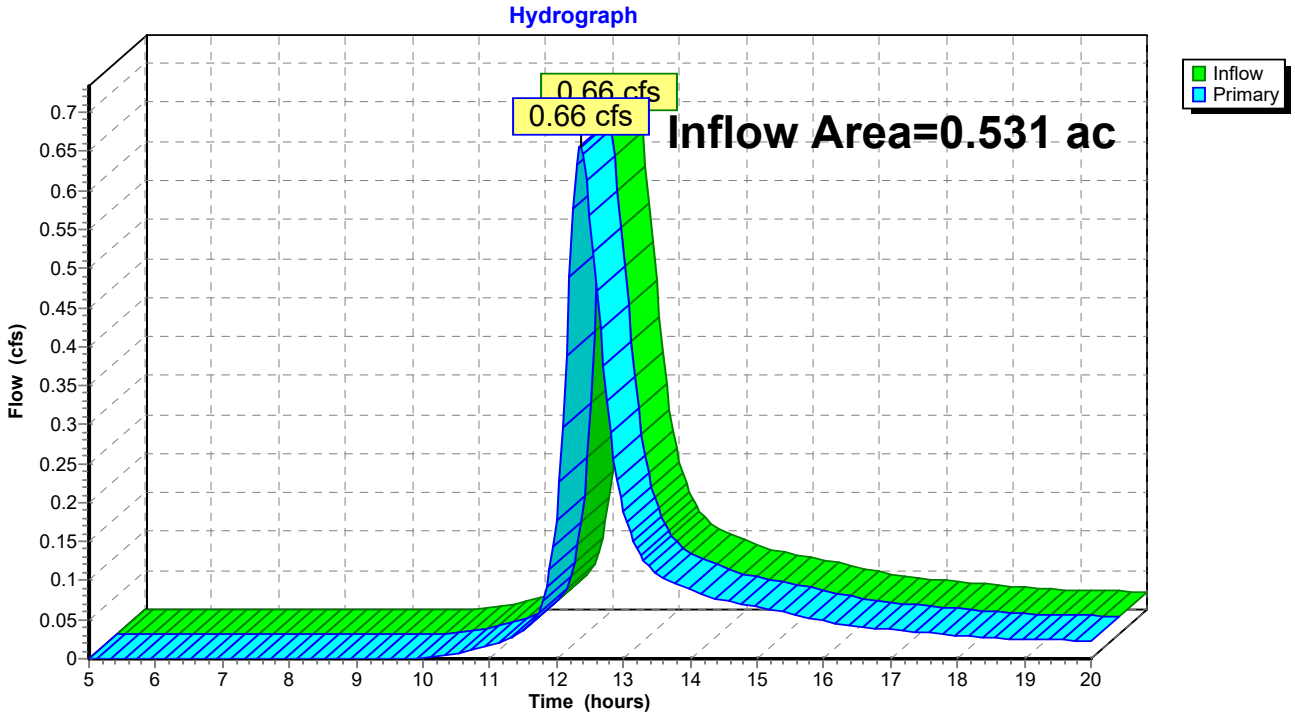


Summary for Link SP2: Danville Corner Road

Inflow Area = 0.531 ac, 20.15% Impervious, Inflow Depth > 1.60" for 10 Year event
Inflow = 0.66 cfs @ 12.36 hrs, Volume= 0.071 af
Primary = 0.66 cfs @ 12.36 hrs, Volume= 0.071 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP2: Danville Corner Road



Summary for Subcatchment 1A: Subcatchment 1A

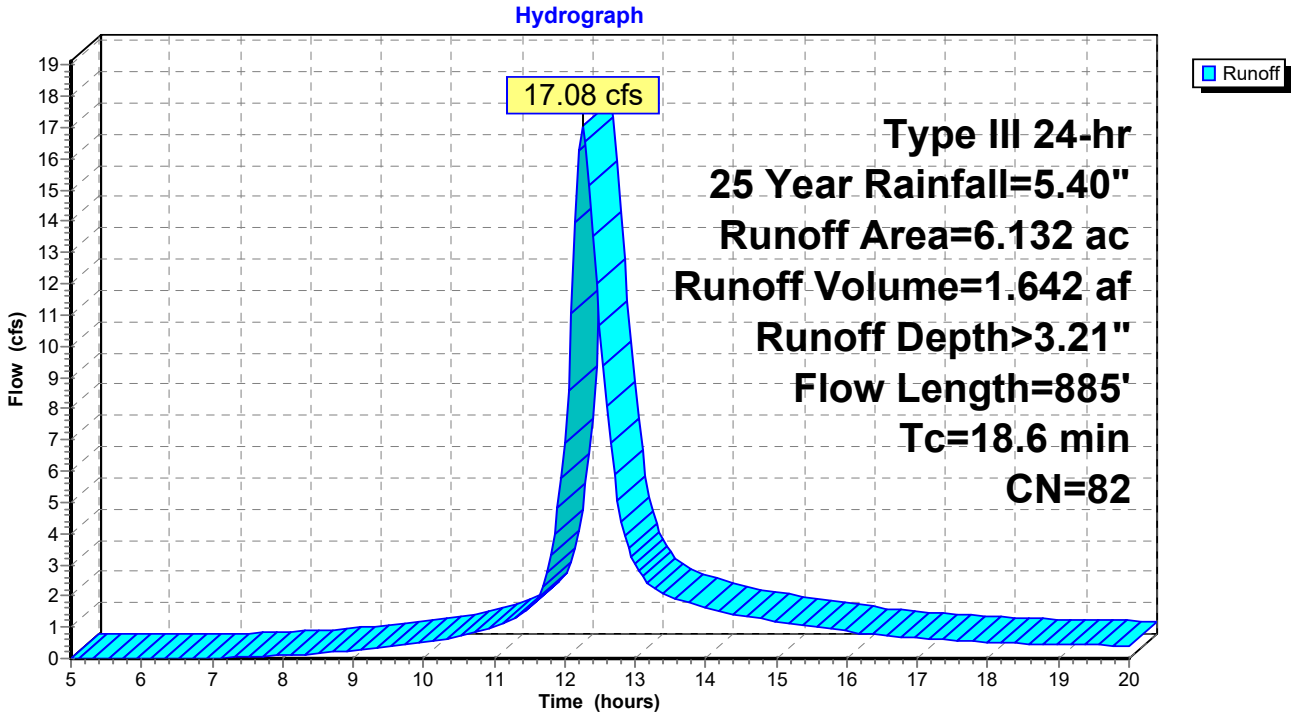
Runoff = 17.08 cfs @ 12.25 hrs, Volume= 1.642 af, Depth> 3.21"

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 Rainfall=5.40"

	Area (ac)	CN	Description
	0.875	98	Paved roads w/curbs & sewers, HSG C
	4.024	74	>75% Grass cover, Good, HSG C
*	1.233	98	Driveways & Roofs, HSG C
	6.132	82	Weighted Average
	4.024		65.62% Pervious Area
	2.108		34.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	150	0.0300	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.00"
0.3	40	0.0200	2.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.1	40	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	655	0.0450	12.10	14.85	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
18.6	885	Total			

Subcatchment 1A: Subcatchment 1A



Summary for Subcatchment 1B: Subcatchment 1B

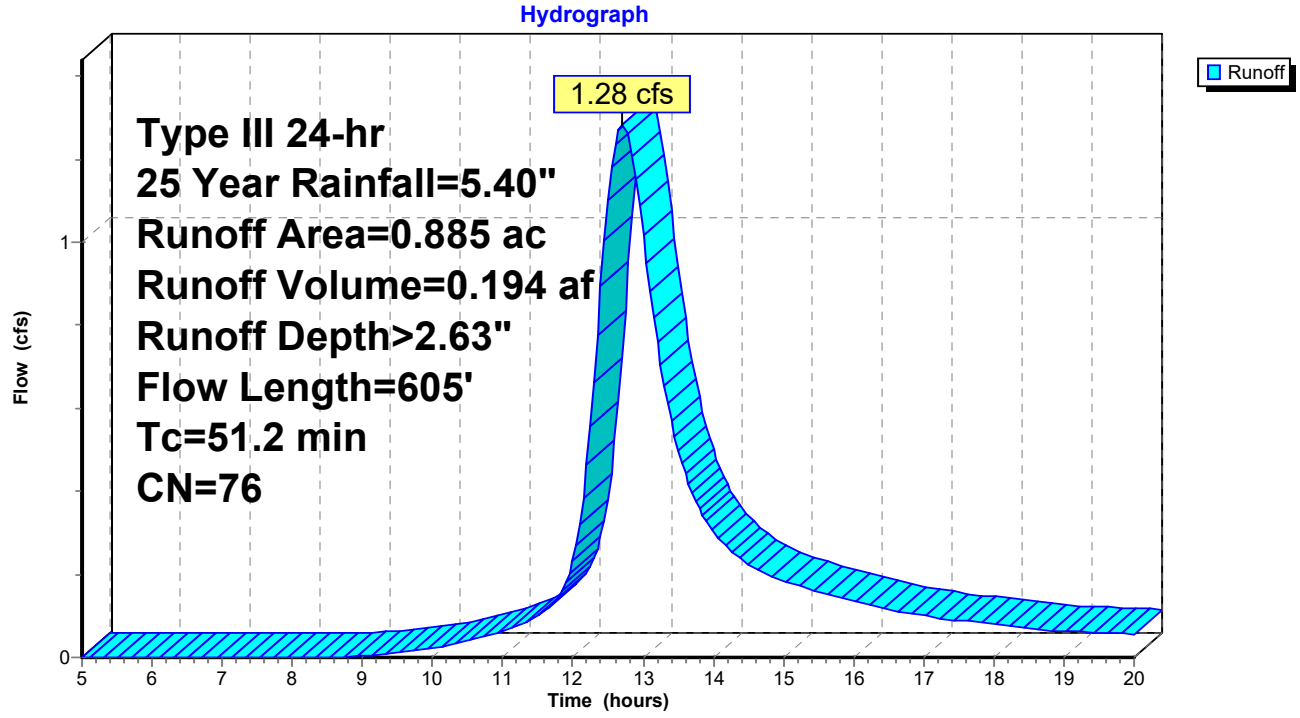
Runoff = 1.28 cfs @ 12.70 hrs, Volume= 0.194 af, Depth> 2.63"

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 Rainfall=5.40"

	Area (ac)	CN	Description
	0.174	70	Woods, Good, HSG C
	0.604	74	>75% Grass cover, Good, HSG C
*	0.107	98	Driveway & Roof, HSG C
	0.885	76	Weighted Average
	0.778		87.91% Pervious Area
	0.107		12.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.5	150	0.0400	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"
10.7	455	0.0800	0.71		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
51.2	605	Total			

Subcatchment 1B: Subcatchment 1B



Summary for Subcatchment 2A: Subcatchment 2A

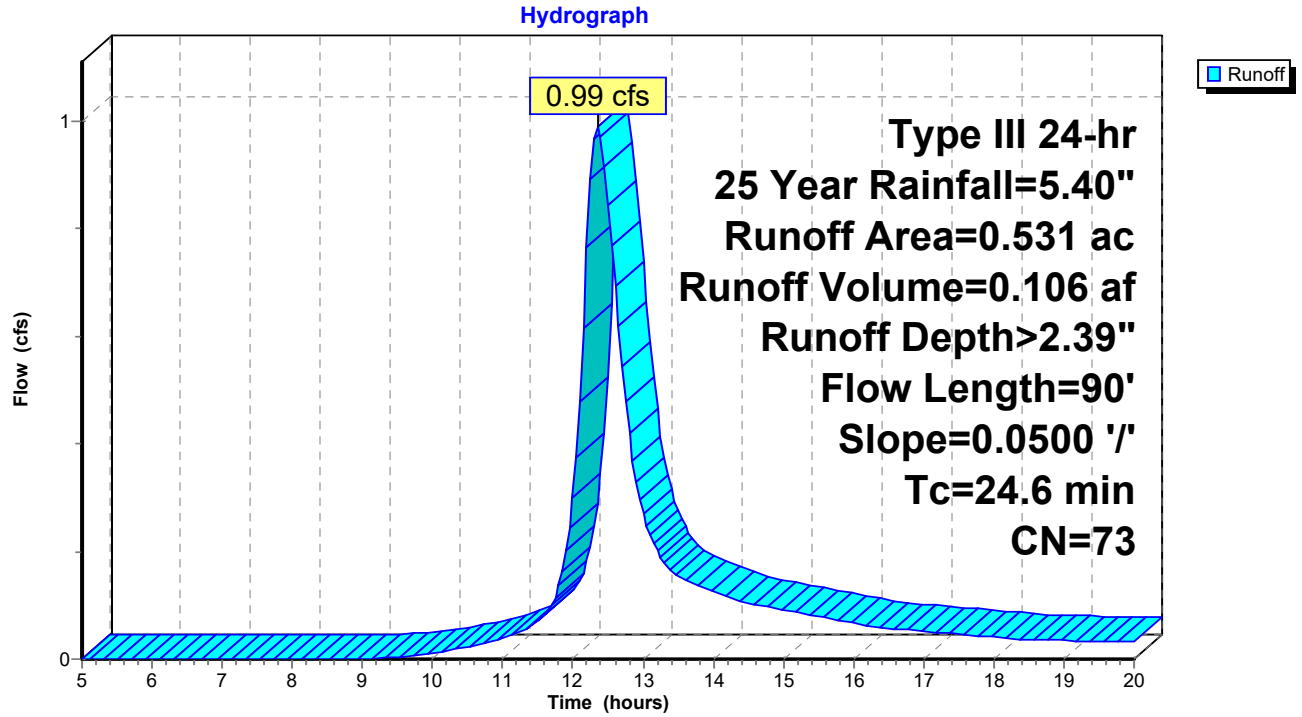
Runoff = 0.99 cfs @ 12.35 hrs, Volume= 0.106 af, Depth> 2.39"

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 Rainfall=5.40"

	Area (ac)	CN	Description
	0.234	70	Woods, Good, HSG C
	0.141	70	Woods, Good, HSG C
	0.049	39	>75% Grass cover, Good, HSG A
*	0.107	98	Driveways & Roofs, HSG D
	0.531	73	Weighted Average
	0.424		79.85% Pervious Area
	0.107		20.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.6	90	0.0500	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 3.00"

Subcatchment 2A: Subcatchment 2A



Summary for Pond P: Stormwater Pond

[44] Hint: Outlet device #3 is below defined storage
[44] Hint: Outlet device #5 is below defined storage

Inflow Area = 6.132 ac, 34.38% Impervious, Inflow Depth > 3.21" for 25 Year event
Inflow = 17.08 cfs @ 12.25 hrs, Volume= 1.642 af
Outflow = 8.15 cfs @ 12.61 hrs, Volume= 1.628 af, Atten= 52%, Lag= 21.1 min
Discarded = 4.28 cfs @ 12.61 hrs, Volume= 1.467 af
Primary = 0.75 cfs @ 12.61 hrs, Volume= 0.103 af
Secondary = 3.12 cfs @ 12.61 hrs, Volume= 0.058 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 266.35' @ 12.61 hrs Surf.Area= 12,995 sf Storage= 24,773 cf

Plug-Flow detention time= 64.4 min calculated for 1.628 af (99% of inflow)
Center-of-Mass det. time= 60.9 min (850.8 - 789.9)

Volume	Invert	Avail.Storage	Storage Description
#1	264.00'	33,550 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
264.00	8,149	0	0
265.00	9,977	9,063	9,063
265.50	10,891	5,217	14,280
265.51	11,751	113	14,393
266.00	12,465	5,933	20,326
267.00	13,983	13,224	33,550

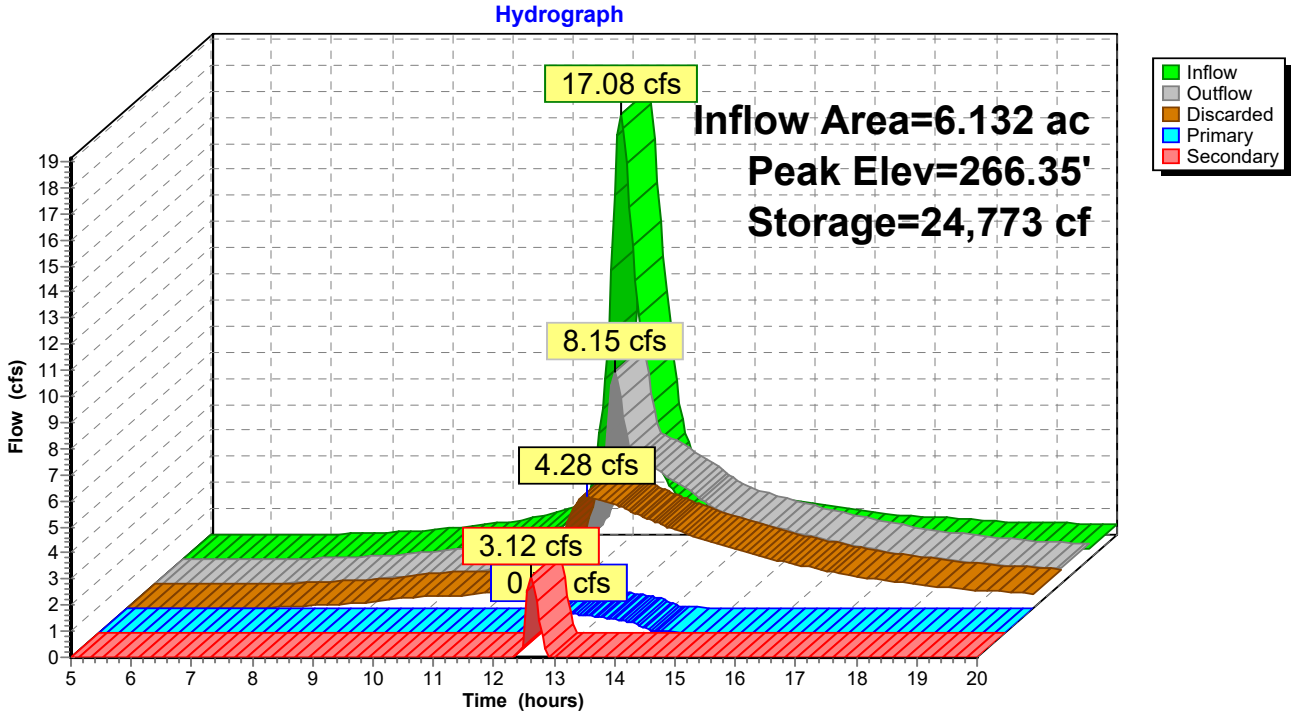
Device	Routing	Invert	Outlet Devices
#1	Primary	263.75'	**15.0" Round Culvert** L= 42.0' Ke= 0.500 Inlet / Outlet Invert= 263.75' / 263.67' S= 0.0019 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#2	Device 1	265.50'	**4.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#3	Device 1	261.25'	**1.0" Vert. Orifice/Grate** C= 0.600
#4	Device 2	265.40'	**15.0" Round Culvert** L= 8.0' Ke= 0.500 Inlet / Outlet Invert= 265.40' / 264.47' S= 0.1162 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#5	Device 4	261.25'	**6.0" Round Culvert** L= 40.0' Ke= 0.500 Inlet / Outlet Invert= 261.25' / 261.25' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#6	Discarded	264.00'	**2.400 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 263.67'
#7	Secondary	266.25'	**40.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=4.28 cfs @ 12.61 hrs HW=266.35' (Free Discharge)
└**6=Exfiltration** (Controls 4.28 cfs)

Primary OutFlow Max=0.75 cfs @ 12.61 hrs HW=266.35' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.75 cfs of 7.70 cfs potential flow)
  └**2=Sharp-Crested Vee/Trap Weir** (Passes 0.71 cfs of 10.23 cfs potential flow)
    └**4=Culvert** (Passes 0.71 cfs of 3.31 cfs potential flow)
      └**5=Culvert** (Outlet Controls 0.71 cfs @ 3.61 fps)
  └**3=Orifice/Grate** (Orifice Controls 0.04 cfs @ 7.76 fps)

Secondary OutFlow Max=3.07 cfs @ 12.61 hrs HW=266.35' TW=0.00' (Dynamic Tailwater)
└**7=Broad-Crested Rectangular Weir** (Weir Controls 3.07 cfs @ 0.78 fps)

Pond P: Stormwater Pond

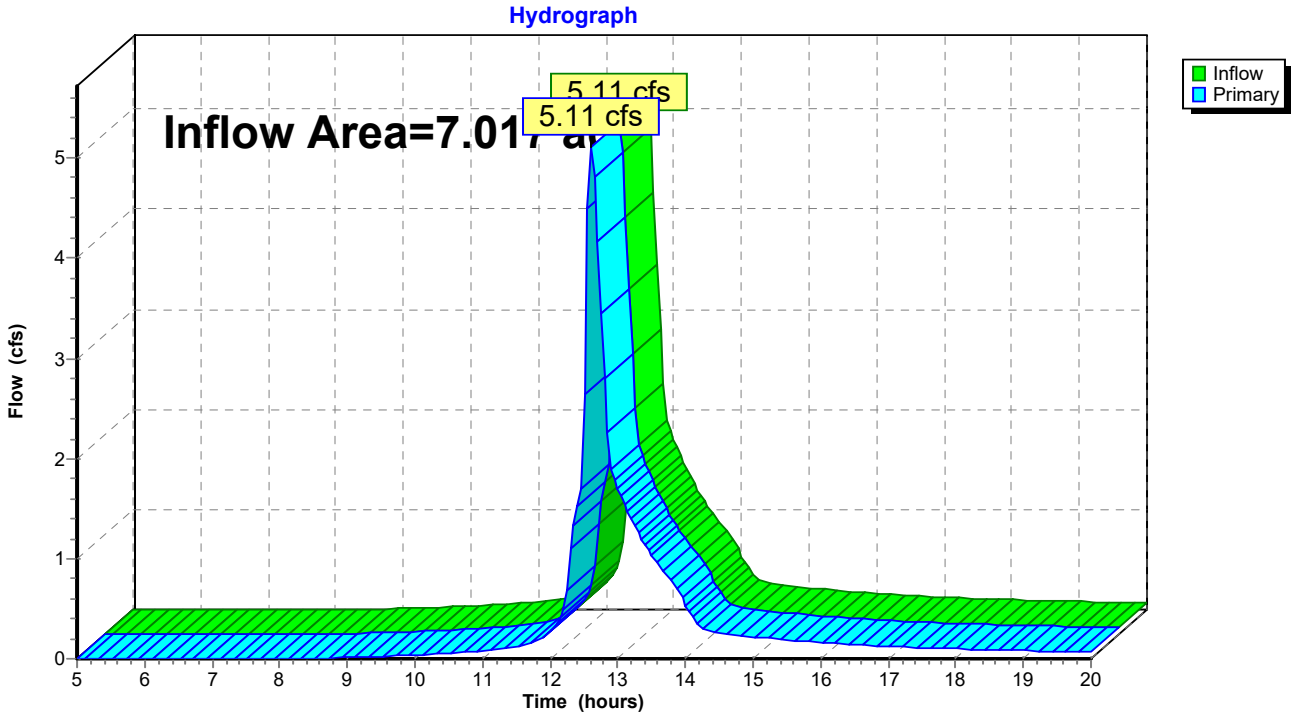


Summary for Link SP1: Area Downgradient of Parcel to the East

Inflow Area = 7.017 ac, 31.57% Impervious, Inflow Depth > 0.61" for 25 Year event
Inflow = 5.11 cfs @ 12.61 hrs, Volume= 0.355 af
Primary = 5.11 cfs @ 12.61 hrs, Volume= 0.355 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP1: Area Downgradient of Parcel to the East

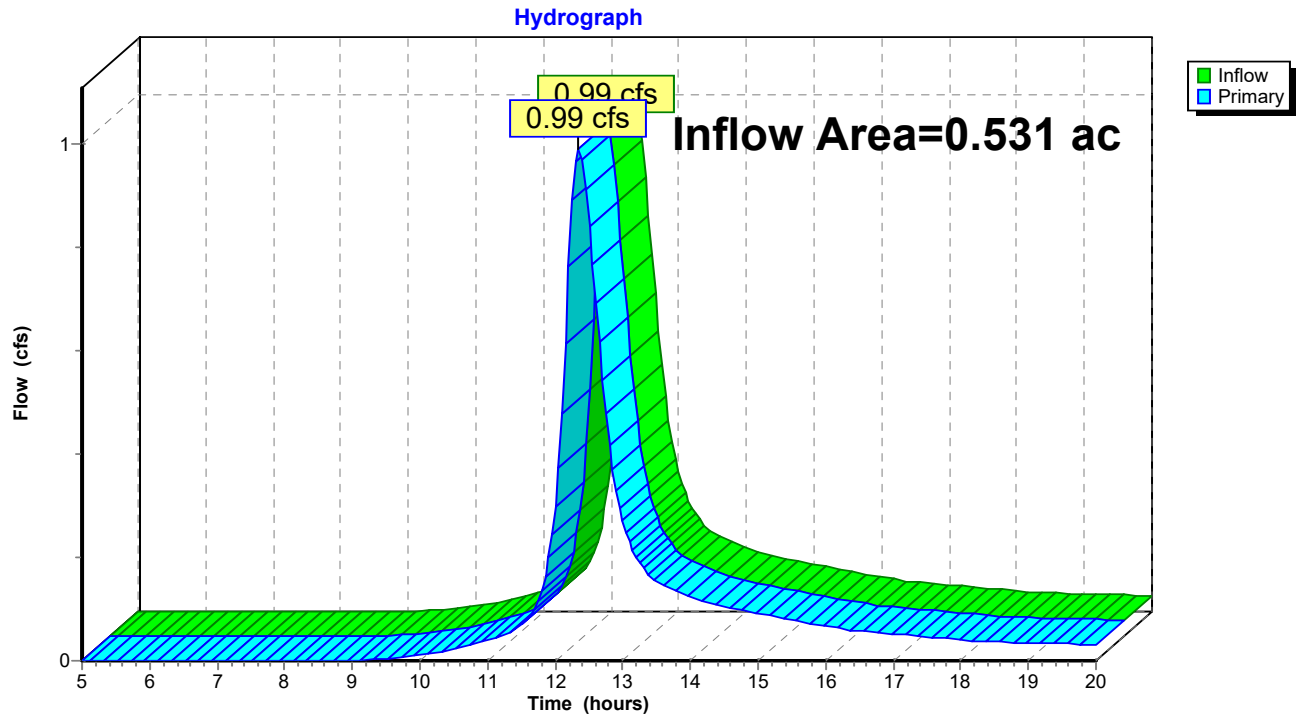


Summary for Link SP2: Danville Corner Road

Inflow Area = 0.531 ac, 20.15% Impervious, Inflow Depth > 2.39" for 25 Year event
Inflow = 0.99 cfs @ 12.35 hrs, Volume= 0.106 af
Primary = 0.99 cfs @ 12.35 hrs, Volume= 0.106 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP2: Danville Corner Road



APPENDIX 6

WATERSHED MAPS

WATERSHED LEGEND

PRE DEVELOPMENT		POST DEVELOPMENT
	WATERSHED BOUNDARY	
	Tc FLOWPATH	
	REACH PATH	
	SOILS BOUNDARY	
000	SUBCATCHMENT	000
000	POND	000
000	REACH	000
000	STUDY POINT	000
A	Tc LABEL	A

GRID NORTH

DANVILLE CORNER ROAD

SP2

SP1

1

2

MkB (A)

HkC (A)

NgB (C)

SCF L=772' S=0.06

MkC2 (A)

SF L=150' S=0.05

SF L=150' S=0.03

NgB (C)

NgB (C)

NgB (C)

ChC (A)

CfB (A)

CfC2 (A)

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 INCH = 50 FT.

DATE: DATE

NO.	DATE	REVISION	DATE	REVISIONS

ADDRESS:
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260

PHONE:
(207) 926-5111

WEB SITE:
www.terradyncosultants.com

TERRADYN CONSULTANTS, LLC

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE

SHEET TITLE:
PRE-DEVELOPMENT WATERSHED PLAN

CLIENT:
TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE:	09/16/2024
SCALE:	
JOB NO:	24-164
SHEET:	WS-1.0

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WATERSHED LEGEND

PRE DEVELOPMENT		POST DEVELOPMENT
	WATERSHED BOUNDARY	
	Tc FLOWPATH	
	REACH PATH	
	SOILS BOUNDARY	
000	SUBCATCHMENT	000
000	POND	000
000	REACH	000
000	STUDY POINT	000
A	Tc LABEL	A

GRID NORTH

DANVILLE CORNER ROAD

SP2

SP1

POND

1A

1B

2A

MkB (A)
SF
L=150'
S=0.04
WOODS

HkC (A)
SCF
L=455'
S=0.08'
WOODS

NgB (C)

NgB (C)

NgB (C)

NgB (C)

ChC (A)

CfB (A)

CfC2 (A)

SE
L=40'
S=0.02
GRASS

SE
L=150'
S=0.03
GRASS

SE
L=40'
S=0.05
WOODS

PF
L=650'
S=0.045
PIPE FLOW

N 84°28'08" E 754.05'

N 12°06'45" W 132.01'

N 78°04'17" W 430.00'

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 INCH = 50 FT.

DATE: DATE

NO.	DATE	REVISION
NO.	DATE	REVISIONS

ADDRESS:
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260

PHONE:
(207) 926-5111

WEB SITE:
www.terradynconsultants.com

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PROJECT:
DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE

SHEET TITLE:
POST-DEVELOPMENT WATERSHED PLAN

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TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE: 09/16/2024
SCALE:
JOB NO: 24-164
SHEET: WS-2.0

C:\DD\Terradyn Consultants\Project Folders - Documents\2024 Jobs\24-164 Millett Danville Corner Auburn Map 122 Lot 4\CAD\Permitting\24-164 SWP.dwg

Attachment 5

Financial Capacity

MAINE
COMMUNITY BANK

December 4, 2024

City of Auburn
60 Court Street
Auburn, Maine 04210

Re: Real Estate Development – Timothy A. Millett – Danville Corner Road, Lot 122-004, Auburn, Maine 04210

To Whom It May Concern:

Please be advised that Mr. Timothy A. Millett is a valued client of Maine Community Bank ("the Bank") and has been for many years. As the relationship manager for the banking relationship with Mr. Millett, I can attest that all accounts have been and continue to be handled as agreed.

It is our understanding that Mr. Millett is in the process of completing all the necessary requirements to obtain the appropriate approvals for the proposed real estate development located at Danville Corner Road, Lot 122-004, Auburn, Maine 04210, which includes the development of multiple single-family homes. The Bank and Mr. Millett have had preliminary conversations regarding the proposed project and although the Bank has not received any formal request to be involved in financing of the proposed project, the Bank is confident that Mr. Millett, along with potential investment sponsors, will have the capacity to construct and manage the proposed project.

If you should need any additional information, please feel free to contact me directly at 207 333-4505 or tsavage@mainecb.com.

Sincerely,

Todd L. Savage
Regional Vice President
Commercial Banking

MEMBER FDIC

EQUAL HOUSING LENDER

Attachment 6

Cost Estimate

TERRADYN CONSULTANTS, LLC
P.O. Box 339
New Gloucester, ME 04260
(207) 926-5111

JOB NO. 24-164
SHEET NO. 1 OF 1
CALCULATED BY CMS DATE 12/4/2024

BUDGETARY COST ESTIMATE - SITE WORK
DANVILLE CORNER HOUSING - AUBURN MAINE

ITEM	DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	AMOUNT
	EARTHWORK				
1	GRUB OPEN AREA	AC	$2,000.00	7	$13,000.00
	ROADWAY AND SIDEWALKS				
2	HOT BITUMINOUS SURFACE PAVEMENT	TON	$100.00	255	$25,500.00
3	HOT BITUMINOUS BINDER PAVEMENT	TON	$120.00	355	$42,600.00
4	BASE GRAVEL MDOT TYPE A	CY	$33.00	312	$10,296.00
5	SUBBASE GRAVEL MDOT TYPE D	CY	$21.00	1564	$32,844.00
6	SLIPFORM CURB (ROAD & PARKING)	LF	$15.00	2800	$42,000.00
7	5' WIDE SIDEWALK	SY	$40.00	445	$17,800.00
8	STRIPING	LS	$2,000.00	1	$2,000.00
	SITE IMPROVEMENTS				
9	SIGNS	EA	$250.00	2	$500.00
	DRAINAGE				
11	15" DIAMETER STORM DRAIN	LF	$40.00	1620	$64,800.00
14	4' DIAMETER CATCH BASIN	EA	$5,000.00	12	$60,000.00
15	4' DIAMETER DRAINAGE MANHOLE	EA	$5,000.00	6	$30,000.00
16	Gravel Wetland	EA	$50,000.00	1	$50,000.00
	UTILITIES				
17	8" SEWER LINE	LF	$80.00	1688	$135,040
18	6" SEWER LINE	LF	$60.00		$0
19	4' DIAMETER SEWER MANHOLE	EA	$5,000.00	10	$50,000
20	8" WATER LINE - PRIVATE	LF	$60.00	1529	$91,740
21	4" WATER LINE - PRIVATE	LF	$45.00	0	$0
22	2" WATER LINE - PRIVATE	LF	$25.00	0	$0
23	8" TAPPING SLEEVE & 8" GATE VALVE	EA	$2,500.00	1	$2,500
24	8"x8" TEE & 8" GATE VALVE	EA	$1,500.00	2	$3,000
25	4" GATE VALVE	EA	$1,500.00	0	$0
26	TRANSFORMER PAD	EA	$1,500.00	10	$15,000
27	LIGHT POLE BASES	EA	$600.00	0	$0
28	SITE ELECTRICAL	LF	$15.00	2000	$30,000
	EROSION & SEDIMENT CONTROL				
29	STABILIZED CONSTRUCTION ENTRANCE	EA	$2,000.00	1	$2,000.00
30	RIPRAP	CY	$40.00	0	$0.00
31	EROSION CONTROL BLANKET	SY	$15.00	0	$0.00
32	SILT FENCE	LF	$5.00	2500	$12,500.00
33	LOAM & SEED	CY	$8.00	500	$4,000.00
34	LANDSCAPING	LS	$10,000.00	1	$10,000.00

SITE WORK TOTAL= $747,120.00

NOTES

1. THE OPINION OF PROBABLE CONSTRUCTION COST IS BASED UPON THE PERMITTING PLANS FOR DANVILLE CORNER HOUSING DEVELOPMENT DATED DECEMBER 6, 2024, PREPARED BY TERRADYN CONSULTANTS, LLC. THIS ESTIMATE IS IN NO WAY, IMPLIED OR EXPRESSED OTHERWISE, A WARRANTEE THAT THE PROJECT CAN BE CONSTRUCTED FOR THE ABOVE COSTS. THIS ESTIMATE IS INTENDED TO BE USED AS A SITE WORK ALLOWANCE FOR PERFORMANCE GUARANTEE PURPOSES ONLY. IT DOES NOT INCLUDE COST ASSOCIATED WITH THE BUILDING CONSTRUCTION, ENGINEERING DESIGN FEES, LAND ACQUISITION, LEGAL FEES, PERMITING FEES, TESTING SERVICES OR CONSTRUCTION PHASE SERVICES.

2. THE ONSITE PAVEMENT AND GRANULAR MATERIAL QUANTITIES FOR THE PARKING LOT ARE BASED UPON THE FOLLOWING SECTION:

MATERIAL DESCRIPTION	PAVEMENT BUILDUP (IN)		
	ROAD	PARKING LOT	DRIVEWAY
BITUMINOUS CONCRETE SURFACE COURSE (INCHES)	N/A	1	N/A
BITUMINOUS CONCRETE BINDER COURSE (INCHES)	N/A	2	N/A
AGGREGATE BASE GRAVEL (INCHES)	N/A	3	N/A
AGGREGATE SUBBASE GRAVEL (INCHES)	N/A	15	N/A

Attachment 7

Building Plans

architecturaldesigns.com

COUNTRY COTTAGE

897 Sq Ft | 2 BED | 2 BATHS





677031NWL

Attachment 8

Utility Correspondence

Outlook

Danville Corner Development, Request for Ability to Serve

From Craig Sweet <craig@terradynconsultants.com>
Date Tue 11/26/2024 9:03 AM
To Mike Broadbent <mbroadbent@awsd.org>

1 attachment (793 KB)
Danville Corner Overall Utility Plan.pdf;

Good Morning Michael,

Our office has been retained by Timmothy Millet, to prepare site plans and permit applications for a proposed 44 unit development off of Danville Corner Road. As part of the proposed development, we are hoping to connect to existing water and sewer services which appear to be stubbed to the site. I've attached a plan depicting the overall development.

The development will consist of 44 single-family home units accessed via a new loop road off of Danville Corner Road. The current proposed plan is to have a new 8" water service run into the development off of the existing water line which is stubbed into the ROW adjacent to the site. Additionally, the applicant is proposing to tie into the existing sewer via a new manhole and a force main. The proposed development will feature gravity sewer manholes to a pump station located at the low point of the proposed roadway which would be pumped into a new proposed manhole and entire the existing system via gravity.

Table 4A- design flows for single-family dwelling units of the State of Maine Subsurface Wastewater Disposal Rules provides information that the anticipated average daily flow for single family dwelling units with 2 or less bedrooms is calculated at 180 gallons per day (GPD). Based on this information, the average daily flow for the proposed development is anticipated to be approximately 7,920 GPD.

We are writing to inquire if the Auburn Water and Sewer District has the ability to serve the proposed development, and if so if you could please provide a letter stating capacity to serve.

Please do not hesitate to reach out if you have any questions or require any additional information. My direct number is 207-370-2776.

Thank you,

Craig Sweet, P.E.
Terradyn Consultants, LLC
41 Campus Drive
Cumberland Hall, Suite 301
Office: 207-926-5111
Cell: 207-370-2776

DANVILLE CORNER PARCEL

DANVILLE CORNER ROAD, AUBURN, MAINE

APPLICANT / OWNER
TIMOTHY MILLET
154 BAILEY HILL ROAD
POLAND MAINE 04274

PROJECT PARCEL SITE
CITY OF AUBURN TAX ASSESSOR'S MAP & LOT NUMBERS

MAP	LOT
122	4

PREPARED BY

CIVIL ENGINEER:
TERRADYN CONSULTANTS, LLC
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, MAINE 04260
(207) 926-5111

SURVEYOR:
TERRADYN CONSULTANTS, LLC
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, MAINE 04260
(207) 926-5111

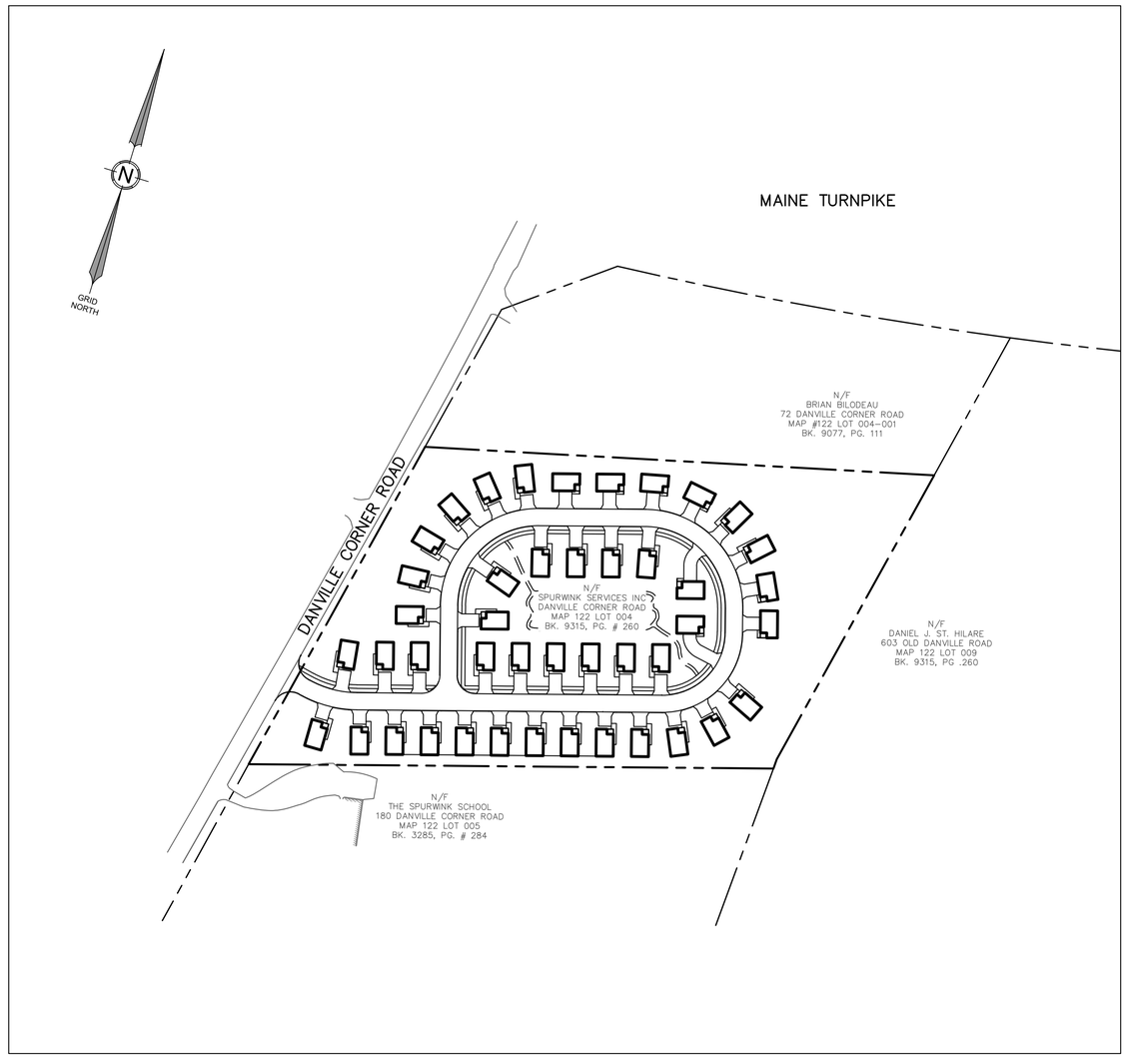
SHEET INDEX

SHT. NO.	SHEET NAME
C-0.0	COVER SHEET / LOCATION MAP
C-1.0	SITE PLAN
C-2.0	GRADING & DRAINAGE PLAN
C-2.1	GRADING & DRAINAGE PLAN
C-2.2	GRAVEL WETLAND PLAN
C-3.0	UTILITY PLAN
C-3.1	UTILITY PLAN
C-4.0	PROFILE 1
C-4.1	PROFILE 2
C-5.0	EROSION & SEDIMENT CONTROL DETAILS
C-5.1	SITE DETAILS
C-5.2	SITE DETAILS

APPROVAL: CITY OF AUBURN PLANNING BOARD

_____ DATE

_____ CHAIRPERSON



LOCATION MAP
SCALE: 1" = 100'

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	LOCUS PROPERTY LINE	
	PROPERTY LINE	
	INTERIOR PROPERTY LINE	
	DEED LINE	
	TIE LINE	
	BUFFER LINE	
	SETBACK LINE	
	EASEMENT LINE	
	CENTER LINE	
	FLOOD ZONE	
	FLOODWAY	
	SURVEY CONTROL POINT	
	SOIL BOUNDARY	
	ZONE LINE	
	MONUMENT	
	IRON PIPE	
	DRILLHOLE	
	STREET / SITE SIGN	
	BUILDING	
	BUILDING OVERHANG	
	BITUMINOUS PAVEMENT	
	CURBING	
	GRAVEL	
	CONCRETE PAVEMENT	
	CHAIN LINK FENCE	
X	BARB WIRE FENCE	X
	STOCKADE FENCE	
	STONE WALL	
	METAL GUARD RAIL	
	WOOD GUARD RAIL	
	RAILROAD TRACKS	
	EDGE OF WATER	
	TREE LINE	
	STREAM	
	WETLAND AREA	
	UPLAND AREA	
	ROCK OUTCROP	
TP-A	TEST PIT	TP-A
MW-8	MONITORING WELL	MW-8
B-9	BORING	B-9
W	WELL	W
124	MINOR CONTOUR LINE	124
130	MAJOR CONTOUR LINE	130
+ 30.20	SPOT GRADE	30.20
SD	STORM DRAIN	SD
UD	UNDER DRAIN	UD
	CATCH BASIN	
D	DRAINAGE MANHOLE	
S	SANITARY SEWER	S
FM	FORCE MAIN	FM
S	SANITARY MANHOLE	
W	WATER LINE	W
	WATER VALVE	
	HYDRANT	
	CURB STOP	
W	WATER MANHOLE	W
OHU	OVERHEAD UTILITY	OHU
	OVERHEAD ELECTRIC	OHE
	OVERHEAD TELEPHONE	OHT
UGU	UNDERGROUND UTILITY	UGU
UGE	UNDERGROUND ELECT.	UGE
UGT	UNDERGROUND TEL.	UGT
T	TRANSFORMER	T
	LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
EM	ELECTRIC METER	
H	HVAC UNIT	
E	ELECTRICAL MANHOLE	
T	TELEPHONE MANHOLE	
G	GAS LINE	G
GM	GAS METER	
	GAS VALVE	
G	GAS MANHOLE	
	SILT FENCE	SF
	FILTER BARRIER	FB
	MULCH BERM	MB
	SILT BARRIER	SB
	RIPRAP	
	TURF REINFORCEMENT BLANKET	
	FORESTED BUFFER	

GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1 INCH = 100 FT.

STATE OF MAINE
CRAIG M. SWEET
No. 15060
REGISTERED PROFESSIONAL ENGINEER
LICENSED

DATE: 12-06-2024

NO.	DATE	REVISIONS

ADDRESS: 41 CAMPUS DRIVE, SUITE 301 NEW GLOUCESTER, ME 04260
PHONE: (207) 926-5111
WEB SITE: www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC

Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE
SHEET TITLE: COVER SHEET / LOCATION MAP
CLIENT: TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE:	09-16-2024
SCALE:	1" = 100'
JOB NO:	24-164
SHEET:	C-0.0

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LEGEND

EXISTING	DESCRIPTION
	RECORD PROPERTY LINE/R.O.W.
	ABUTTER PROPERTY LINE/R.O.W.
	SETBACK LINE
	ZONE LINE
	MONUMENT (AS NOTED)
	IRON PIPE/REBAR (AS NOTED)
	BUILDING
	EDGE OF PAVEMENT
	CURBING
	EDGE OF CONCRETE
	CHAIN LINK FENCE
	WOVEN WIRE FENCE
124	MINOR CONTOUR LINE
130	MAJOR CONTOUR LINE
SD	STORM DRAIN
	CATCH BASIN
W	WATER LINE
	HYDRANT
	WATER SHUT OFF
OHU	OVERHEAD UTILITY
T	TRANSFORMER
	UTILITY POLE
H	HVAC UNIT
	STONE WALL
	CAPPED 5/8" REBAR (TO BE SET)

SURVEYOR'S CERTIFICATION

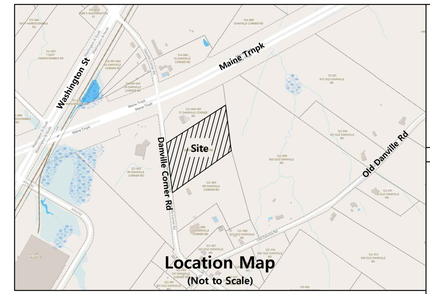
To the best of my knowledge, I have used ordinary and prudent conduct expected of Professional Land Surveyors and the results shown here represent the licensee's responsibility to the public as required under the Standards of Practice as defined by the Board of Licensure for Professional Land Surveyors (M.R.S.A Title 32, Chapter 141, Dated April 2001).

Except as Follows:

1. Survey Report Limited to Notes on the Plan
2. No Deed Description to Date

Plan Prepared by: _____

Nicholas Racioppi PLS # 2621



Location Map
(Not to Scale)

GENERAL NOTES

1. The purpose of this plan is to depict the results of a Boundary Retracement Survey and an Existing Conditions/Topographic Survey of the subject parcel.
2. All Book and Page numbers refer to the Androscoggin County Registry of Deeds, unless otherwise noted.
3. The record owner of the subject parcel is Spurwink Services Incorporated by deed dated April 12, 2019 and recorded in Book 10063, Page 195.
4. The subject parcel is shown on the City of Auburn Tax Map 122 as Lot 4 and is in the General Business District.
5. The City's General Business District Space and bulk standards refer to to the Multifamily Suburban District's standards for residential uses. Space and bulk standards for the Multifamily Suburban District as of the date of this plan are as follows:

   Min. Lot Size: 10,000 Sq ft

   Min. Width: 100 ft

   Min. Front Setback: 25 ft

   Min. Depth: 100 ft

   Min. Side Setback: 15 ft

   Min. Rear Setback: 25 ft

   Max. Building Height: 2 ½ stories or 35 ft
6. Total area of the subject parcel is 7.202 acres.
7. Boundary information shown hereon is based on an on-the-ground survey performed by Terradyn Consultants, LLC in August of 2024. Topographic information shown hereon is based on publicly available Maine GIS Data collected in 2020 by the State of Maine and distributed by the USGS as classified . LAZ point cloud.

Plan References:

A. "Boundary Survey of Diamond Properties, Inc. Lot" prepared by Technical Services, Inc., dated December 19, 2005 and being previously unrecorded.

B. B. "Plan of Property of Advantage Business Services, Inc., Beech Hill Road, Auburn, Maine" dated January 13, 1988 and found on the Auburn GIS as Plan #338

9. Plan orientation is Grid North, Maine State Plane Coordinate System, West Zone 1802-NAD83. Elevations depicted hereon are NAVD88, based on dual-frequency GPS observations.
10. The subject parcel is located within Zone X, Areas of Minimal Flood Hazard, as delineated on the Flood Insurance Rate Map for the City of Auburn, Androscoggin County, Community-Panel Number 23001C0317E, having an Effective Date of July 8, 2013.
11. The depth, size, location, existence or nonexistence of underground utilities and/or structures were not investigated as part of this survey. Utilities depicted hereon may not necessarily represent all existing utilities. Owners, contractors, and/or designers need to contact Dig-Safe Systems, Inc. (CALL 811) and field verify existing utilities prior to digging or breaking ground.

STATE OF MAINE

Androscoggin County Registry of Deeds

Received _____, 20___

At ___h _____m _____M. and recorded in Plan Book _____ Page _____

Attest _____
Registrar

STATE OF MAINE
NICHOLAS RACIOPPI
No. 2621
PROFESSIONAL LAND SURVEYOR

NO.	DATE	REVISION
NO.	DATE	REVISIONS

ADDRESS: 41 CAMPUS DRIVE, SUITE 301, NEW GLOUCESTER, ME 04260
PHONE (207) 926-5111
WEB SITE: www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PROJECT: DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN MAINE

SHEET TITLE: BOUNDARY RETRACEMENT SURVEY & EXISTING CONDITIONS/TOPOGRAPHIC SURVEY

CLIENT: TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE: AUGUST 19, 2024
SCALE: 1" = 40'
JOB NO: 24-164
SHEET: 1 OF 1

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GENERAL NOTES

1. THE RECORD OWNER OF THE SUBJECT PARCEL IS SPURWINK SERVICES INCORPORATED BY DEED DATED APRIL 12, 2019 AND RECORDED IN BOOK 10063, PAGE 195.
2. THE SUBJECT PARCEL IS SHOWN ON THE CITY OF AUBURN TAX MAP 122 AS LOT 4 AND IS IN THE GENERAL BUSINESS DISTRICT.
3. THE CITY'S GENERAL BUSINESS DISTRICT SPACE AND BULK STANDARDS REFER TO TO THE MULTIFAMILY SUBURBAN DISTRICT'S STANDARDS FOR RESIDENTIAL USES. SPACE AND BULK STANDARDS FOR THE MULTIFAMILY SUBURBAN DISTRICT AS OF THE DATE OF THIS PLAN ARE AS FOLLOWS:

   MIN. LOT SIZE: 10,000 SQ FT

   MIN. WIDTH: 100 FT

   MIN. FRONT SETBACK: 25 FT

   MIN. DEPTH: 100 FT

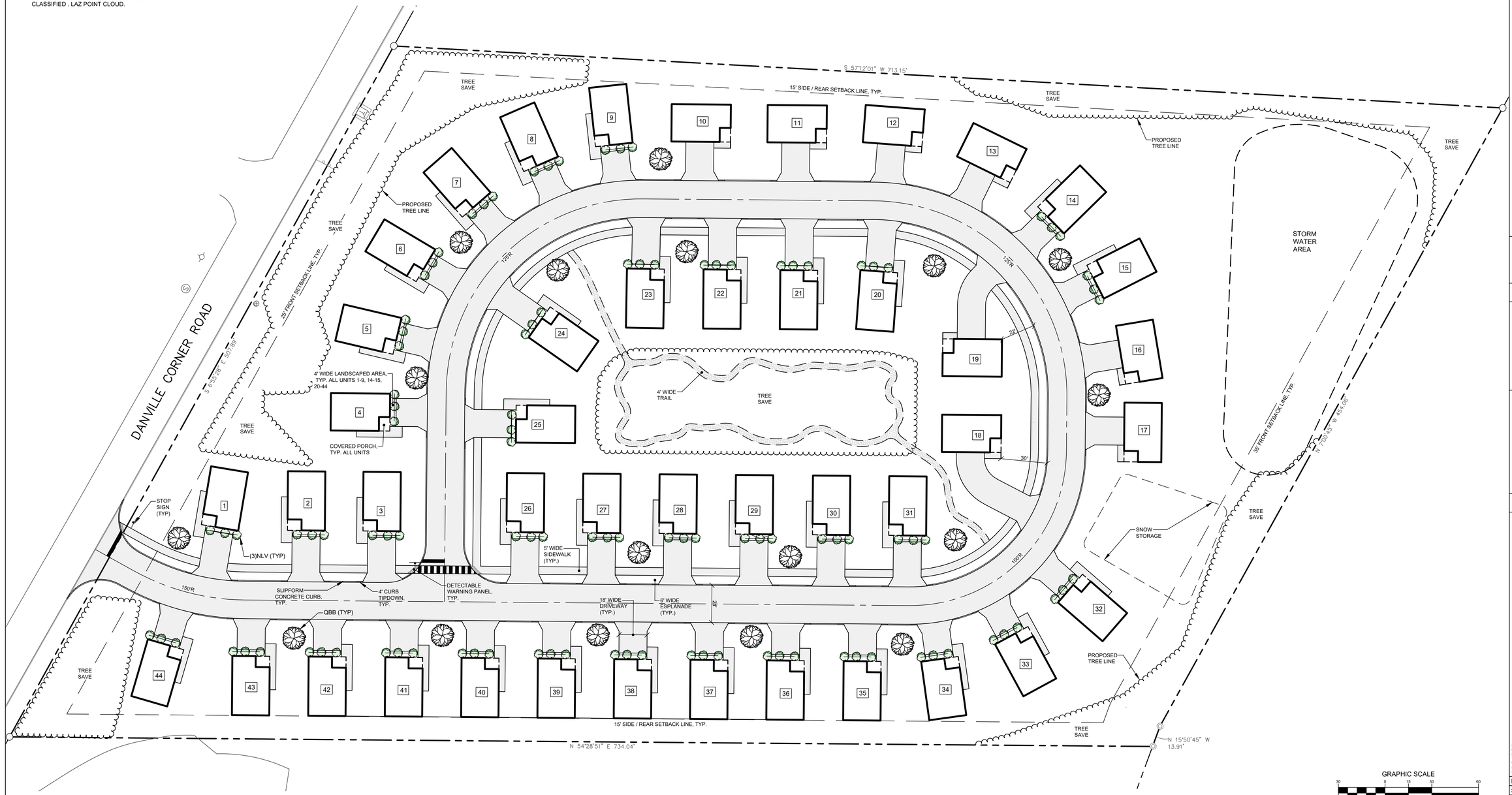
   MIN. SIDE SETBACK: 15 FT

   MIN. REAR SETBACK: 25 FT

   MAX. BUILDING HEIGHT: 2 ½ STORIES OR 35 FT
4. TOTAL ARE OF THE SUBJECT PARCEL IS 7.202 ACRES.
5. BOUNDARY INFORMATION SHOWN HEREON IS BASED ON AN ON-THE-GROUND SURVEY PERFORMED BY TERRADYN CONSULTANTS, LLC IN AUGUST OF 2024. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON PUBLICLY AVAILABLE MAINE GIS DATA COLLECTED IN 2020 BY THE STATE OF MAINE AND DISTRIBUTED BY THE USGS AS CLASSIFIED . LAZ POINT CLOUD.
8. PLAN REFERENCES:
   A. "BOUNDARY SURVEY OF DIAMOND PROPERTIES, INC. LOT" PREPARED BY TECHNICAL SERVICES, INC., DATED DECEMBER 19, 2005 AND BEING PREVIOUSLY UNRECORDED.
   B. B. "PLAN OF PROPERTY OF ADVANTAGE BUSINESS SERVICES, INC., BEECH HILL ROAD, AUBURN, MAINE" DATED JANUARY 13, 1988 AND FOUND ON THE AUBURN GIS AS PLAN #338
9. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83. ELEVATIONS DEPICTED HEREON ARE NAVD88, BASED ON DUAL-FREQUENCY GPS OBSERVATIONS.
10. THE SUBJECT PARCEL IS LOCATED WITHIN ZONE X, AREAS OF MINIMAL FLOOD HAZARD, AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR THE CITY OF AUBURN, ANDROSCOGGIN COUNTY, COMMUNITY-PANEL NUMBER 23001C0317E, HAVING AN EFFECTIVE DATE OF JULY 8, 2013.

Plant Species List

Key	Botanical Name	Common Name	Size	Remarks
QBB	Quercus bicolor 'Bonnie and Mike'	Beacon Oak	2.5"-3" cal	B&B
NLV	Viburnum lentago	Nanny Berry Viburnum	3'-4'	6' o.c.



GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

DATE: 12-06-2024

NO.	DATE	REVISIONS

ADDRESS: 41 CAMPUS DRIVE, SUITE 301, NEW GLOUCESTER, ME 04260
PHONE: (207) 926-5111
WEB SITE: www.terradynconsultants.com
TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE

SHEET TITLE: SITE PLAN

CLIENT: TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE: 09-16-2024
SCALE: 1" = 30'
JOB NO: 24-164
SHEET: C-1.0

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STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-1	306.66		302.25 (SD-1)	48"
CB-2	306.66	302.00 (SD-1)	303.40 (SD-2)	48"
CB-3	305.90		301.95 (SD-4)	48"
CB-4	304.78	301.75 (SD-3) 301.75 (SD-4)	301.75 (SD-5)	48"
CB-5	297.99		293.50 (SD-6)	48"
CB-6	296.41	293.25 (SD-5) 293.25 (SD-6)	293.25 (SD-7)	48"
CB-13	294.59		289.90 (SD-21)	48"
CB-14	294.27	289.00 (SD-18) 289.00 (SD-21)	289.00 (SD-17)	48"
CB-15	302.23	299.00 (SD-20)	299.00 (SD-19)	48"
CB-16	303.50		299.53 (SD-20)	48"
DMH-1	308.85	303.00 (SD-2)	303.00 (SD-3)	48"
DMH-6	299.30	294.50 (SD-19)	294.50 (SD-18)	48"

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-1	12"	18'	1.39%
SD-2	15"	70'	0.57%
SD-3	15"	136'	0.92%
SD-4	12"	30'	0.66%
SD-5	15"	144'	5.92%
SD-6	12"	27'	0.92%
SD-7	15"	142'	7.76%
SD-17	15"	114'	4.84%
SD-18	15"	119'	4.63%
SD-19	15"	77'	5.84%
SD-20	12"	34'	1.56%



GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 INCH = 20 FT.

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

DATE: 12-06-2024

NO.	DATE	REVISIONS

ADDRESS:
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260

PHONE:
(207) 926-5111

WEB SITE:
www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC

Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

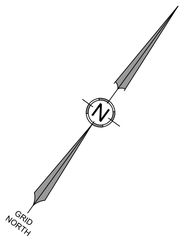
PROJECT:
DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE

SHEET TITLE:
GRADING & DRAINAGE PLAN

CLIENT:
TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE:	09-16-2024
SCALE:	1" = 20'
JOB NO:	24-164
SHEET:	C-2.0

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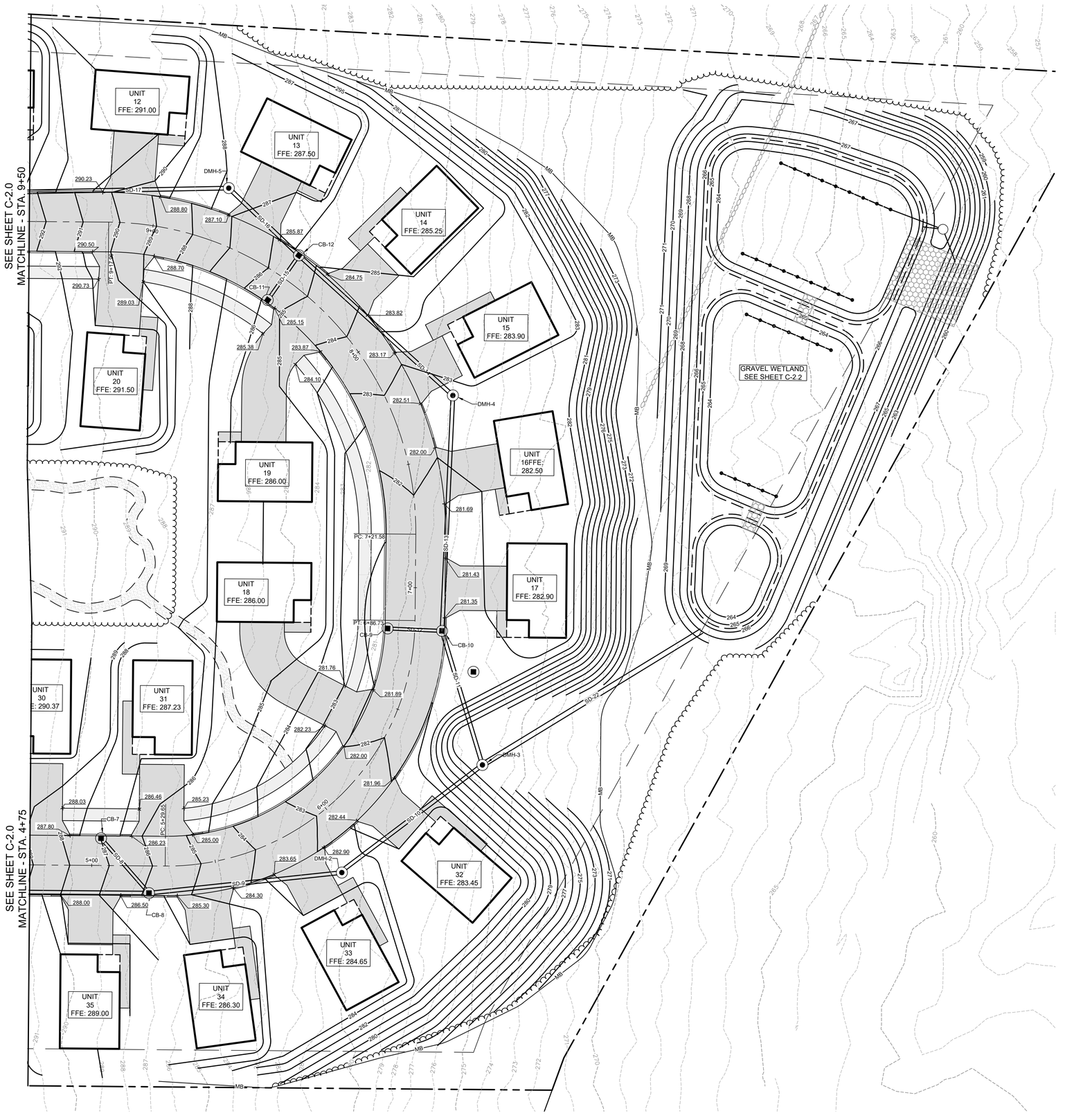


STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-7	286.89		282.50 (SD-8)	48"
CB-8	285.75	282.25 (SD-7) 282.25 (SD-8)	282.25 (SD-9)	48"
CB-9	281.27		278.00 (SD-12)	48"
CB-10	281.27	277.50 (SD-12) 277.50 (SD-13)	277.50 (SD-11)	48"
CB-11	285.29		282.00 (SD-15)	48"
CB-12	285.29	281.75 (SD-15) 281.75 (SD-16)	281.75 (SD-14)	48"
DMH-2	280.36	277.00 (SD-9)	277.00 (SD-10)	48"
DMH-3	277.59	273.75 (SD-10) 273.75 (SD-11)	274.75 (SD-22)	48"
DMH-4	282.87	278.50 (SD-14)	278.50 (SD-13)	48"
DMH-5	287.60	283.50 (SD-17)	283.50 (SD-16)	48"

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-7	15"	142'	7.76%
SD-8	12"	25'	0.98%
SD-9	15"	74'	7.06%
SD-10	15"	68'	4.81%
SD-11	15"	53'	7.13%
SD-12	12"	18'	2.77%
SD-13	15"	91'	1.10%
SD-14	15"	80'	4.06%
SD-15	12"	18'	1.39%
SD-16	15"	35'	4.96%
SD-17	15"	114'	4.84%



GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 INCH = 20 FT.

STATE OF MAINE
CRAIG M. SWEET
No. 15060
REGISTERED PROFESSIONAL ENGINEER
LICENSED

DATE: 12-06-2024

NO.	DATE	REVISIONS

ADDRESS:
41 CAMPUS DRIVE, SUITE 301
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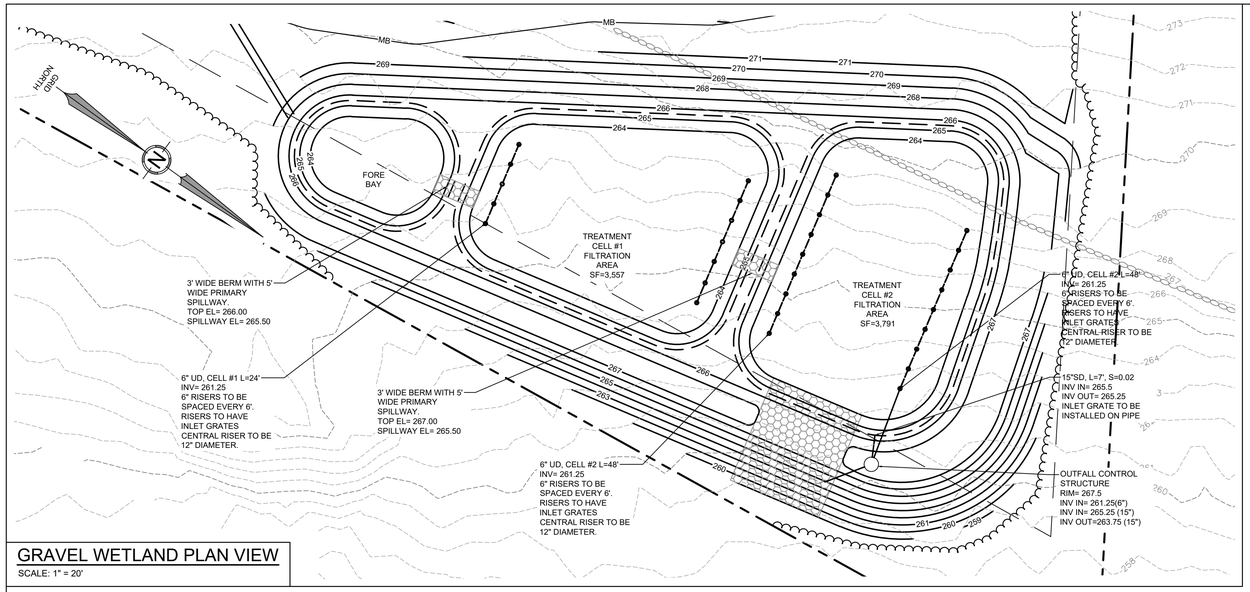
PROJECT:
DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE

SHEET TITLE:
GRADING & DRAINAGE PLAN

CLIENT:
TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE:	09-16-2024
SCALE:	1" = 20'
JOB NO:	24-164
SHEET:	C-2.1

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GRAVEL WETLAND PLAN VIEW

SCALE: 1" = 20'

GRAVEL WETLAND INSTALLATION NOTES:

1. THE MINIMUM SPACING BETWEEN THE SUBSURFACE PERFORATED DISTRIBUTION LINE AND THE SUBSURFACE PERFORATED COLLECTION DRAIN AT EITHER END OF THE GRAVEL IN EACH TREATMENT CELL IS 15 FT.

2. THERE SHOULD BE A MINIMUM HORIZONTAL TRAVEL DISTANCE OF 15 FT WITHIN THE GRAVEL LAYER IN EACH CELL.

3. VERTICAL PERFORATED OR SLOTTED RISER PIPES DELIVER WATER FROM THE SURFACE DOWN TO THE SUBSURFACE, PERFORATED OR SLOTTED DISTRIBUTION LINES. THESE RISERS SHALL HAVE A MAXIMUM SPACING OF 10 FEET.

4. SLOTTED VERTICAL RISERS SHALL HAVE A MINIMUM DIAMETER OF 12" FOR THE CENTRAL RISER AND 6" FOR END RISERS. THE VERTICAL RISERS SHALL NOT BE CAPPED, BUT RATHER COVERED WITH AN INLET GRATE.

5. VERTICAL CLEANOUTS CONNECTED TO THE DISTRIBUTION AND COLLECTION SUBDRAINS, AT EACH END, SHALL BE PERFORATED OR SLOTTED ONLY WITHIN THE GRAVEL LAYER, AND SOLID WITHIN THE WETLAND SOIL AND STORAGE AREA ABOVE.

6. TREATMENT CELL FLOOR TO BE GRADED FLAT.

7. BERMS AND WEIRS SEPARATING THE FOREBAY AND TREATMENT CELLS SHOULD BE CONSTRUCTED WITH CLAY, OR NON-CONDUCTIVE SOILS, AND/OR A FINE GEOTEXTILE, OR SOME COMBINATION THEREOF, TO AVOID WATER SEEPAGE AND SOIL PIPING THROUGH THESE EARTHEN DIVIDERS.

8. THE SYSTEM SHOULD BE PLANTED TO ACHIEVE A RIGOROUS ROOT MAT WITH GRASSES, FORBS, AND SHRUBS WITH OBLIGATE AND FACULTATIVE WETLAND SPECIES.

9. THE SUBAREA DRAINING TO A CREATED WETLAND MUST BE COMPLETELY STABLE BEFORE RUNOFF IS DIRECTED TO THE BASIN TO PREVENT SEDIMENTATION OF THE DRAINAGE LAYER; OR ALL RUNOFF SHOULD BE RE-DIRECTED UNTIL CONSTRUCTION IS FINALIZED. THE VEGETATION WITHIN THE STRUCTURE IS EQUALLY IMPORTANT AND MUST BE WELL ESTABLISHED BEFORE IT CAN ACCEPT ANY RUNOFF.

10. GRAVEL WETLAND STORMWATER AREA TO BE SEEDED WITH "NEW ENGLAND WETMIX" AS DISTRIBUTED BY NEW ENGLAND WETLAND PLANTS, INC., 820 WEST STREET, AMHERST, MA 01002, PHONE 413-548-8000, EMAIL INFO@NEWP.COM, OR APPROVED EQUIVALENT. APPLY AT A RATE OF 1 LB/2,500 SF.

11. THE SEEDS WILL NOT GERMINATE UNDER INUNDATED CONDITIONS. IF PLANTED DURING THE FALL MONTHS THE SEED MIX WILL GERMINATE THE FOLLOWING SPRING. DURING THE FIRST SEASON OF GROWTH SEVERAL SPECIES WILL PRODUCE SEEDS WHILE OTHER SPECIES WILL PRODUCE SEEDS AFTER THE SECOND GROWING SEASON. NOT ALL SPECIES WILL GROW IN ALL WETLAND SITUATIONS. THIS MIX IS COMPRISED OF THE WETLAND SPECIES MOST LIKELY TO GROW IN CREATED/RESTORED WETLANDS AND SHOULD PRODUCE MORE THAN 75% GROUND COVER IN TWO FULL GROWING SEASONS.

12. THE WETLAND SEEDS IN THIS MIX CAN BE SOWN BY HAND, WITH A HAND-HELD SPREADER, OR HYDRO-SEEDED ON LARGE OR HARD TO REACH SITES. LIGHTLY RAKE TO ENSURE GOOD SEED-TO-SOIL CONTACT. SEEDING CAN TAKE PLACE ON FROZEN SOIL, AS THE FREEZING AND THAWING WEATHER OF LATE FALL AND LATE WINTER WILL WORK THE SEED INTO THE SOIL. IF SPRING CONDITIONS ARE DRIER THAN USUAL, WATERING MAY BE REQUIRED. IF SOWING DURING THE SUMMER MONTHS, SUPPLEMENTAL WATERING WILL LIKELY BE REQUIRED UNTIL GERMINATION. A LIGHT MULCH OF CLEAN, WEED FREE STRAW IS RECOMMENDED.

13. THE POND CONSTRUCTION SHOULD BE ONLY CONSTRUCTED UNDER THE SUPERVISION OF THE DESIGN ENGINEER.

POND CONSTRUCTION NOTES:
1. CONTRACTOR SHALL REMOVE ALL TOPSOIL AND ORGANIC MATERIAL FROM EMBANKMENT AND POND CONSTRUCTION AREA.
2. SCARIFY SUBGRADE TO ESTABLISH INTERFACE FOR ALL FILLS.
3. CONSTRUCTION MATERIAL SHALL MEET M.D.O.T. SPEC 703.18
4. COMPACT IN 12" LIFTS TO 92% OF MAXIMUM DRY DENSITY.
5. INSTALL RIPRAP AND EROSION CONTROL MESH WHERE SPECIFIED.
6. LOAM, SEED & STABILIZE IN ACCORDANCE WITH SEDIMENTATION AND EROSION CONTROL PLAN & NOTES.

CONSTRUCTION INSPECTION NOTES:
INSPECTION BY A PROFESSIONAL ENGINEER WILL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE INSTALLATION OF EACH POND'S EMBANKMENT CONSTRUCTION, STORMWATER INLET, UNDERDRAINS, FILTER MATERIAL MAKEUP AND PLACEMENT, OUTLET CONTROL STRUCTURE, CLAY LINER (IF APPLICABLE), AND EMERGENCY SPILLWAY CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE POND. AN INSPECTION OF THE UNDERDRAINED GRAVEL OUTLET SHALL ALSO BE PERFORMED ONE YEAR AFTER THE FINAL STABILIZATION OF THE POND.

ORGANIC WETLAND SOIL MIXTURE:
THE WETLAND SOIL SHOULD HAVE A LOW HYDRAULIC CONDUCTIVITY (0.1-0.01 FT/DAY). THIS SOIL CAN BE MANUFACTURED USING COMPOST, SAND AND FINE SOILS, INTO A BLEND WITH MORE THATN 15% ORGANIC MATTER. IT SHOULD CONTAIN MORE THAN 15% SILT (PASSING THE #200 SIEVE); BUT WITH A CLAY SIZE PORTION THAT IS LESS THAN 15%. DO NOT USE GEOTEXTILES BETWEEN THE HORIZONTAL LAYERS OF THIS SYSTEM AS THEY WILL CLOG DUE TO FINES AND MAY RESTRICT ROOT GROWTH.

WETLAND SOIL GRADATION	
SIEVE SIZE	% PASSING BY WEIGHT
1/2 IN	100
NO. 10	75-90
NO. 100	40-50
NO. 200	25-50

EMBANKMENT CONSTRUCTION:
1. CONSTRUCTION OF COMMON BORROW MATERIAL MEETING M.D.O.T. SPECIFICATION 703.
2. PLACE BORROW MATERIAL IN 12" LIFTS COMPACTED TO 95% OF MAXIMUM DRY DENSITY.
3. INSTALL RIPRAP AND EROSION CONTROL MESH WHERE SPECIFIED ON PLANS.
4. LOAM, SEED, AND STABILIZE IN ACCORDANCE WITH SEDIMENTATION AND EROSION CONTROL PLAN.

POST CONSTRUCTION REQUIREMENTS:

RESPONSIBLE PARTY:
TIMOTHY MILLET
154 BAILY HILL ROAD
POLAND, MAINE 04274

1. INSPECT **GRAVEL WETLANDS** SEMIANNUALLY. THE PLANT BIOMASS SHOULD BE HARVESTED ANNUALLY, AND ACCUMULATED SEDIMENT REMOVED AT INTERVALS OF 5-10 YEARS. THESE ACTIVITIES MAY DISRUPT THE WETLANDS SYSTEM AND MAY REQUIRE SOME VEGETATION RE-ESTABLISHMENT. THE RISER PIPES MAY CLOG AND WILL REQUIRE ANNUAL CLEAN-OUT (IT SHOULD BE DONE IN THE WINTER TIME WHEN ONE CAN WALK ON THE WETLAND).

   a. FIRST YEAR POST-CONSTRUCTION: INSPECTION FREQUENCY SHOULD OCCUR AFTER EVERY MAJOR STORM IN THE FIRST YEAR FOLLOWING CONSTRUCTION.
   i. INSPECT THAT THE SYSTEM DRAINS WITHIN 24-48 HOURS.
   ii. THE PLANTS MAY NEED WATERING IF NECESSARY DURING THE FIRST GROWING SEASON. REVEGETATE IF THE VEGETATION IS POORLY ESTABLISHING.
   iii. IDENTIFY AREAS OF EROSION AND MAKE TIMELY REPAIRS.
   iv. CHECK ALL INLETS, OUTLETS AND SUBDRAINS FOR PROPER FUNCTIONING. RISERS MAY NEED TO BE CLEANED.
   b. POST-CONSTRUCTION: INSPECTION FREQUENCY SHOULD OCCUR AT LEAST EVERY 6 MONTHS AND AFTER EVERY MAJOR STORM. ACTIVITIES ARE EXPECTED TO INCLUDE:
   i. CHECK THE BASIN FOR A DENSE ROOT MAT ESTABLISHMENT OF WETLAND VEGETATION.
   ii. CHECK AND CLEAN THE RISERS IF THERE IS EVIDENCE OF STANDING WATER, DISCOLORED WATER OR ACCUMULATED SEDIMENTS IN THE CELLS.
   iii. CHECK AND CLEAN THE FOREBAY FOR SEDIMENTS, TRASH AND DEBRIS. WHEN SEDIMENTS HAVE ACCUMULATED TO A DEPTH OF 12 INCHES, STANDING WATER IS PERSISTENT OR WETLAND VEGETATION BECOME ESTABLISHED, THE FOREBAY WILL NEED TO BE EXCAVATED AND REFORMED.
   iv. VERIFY THAT THE CELLS DRAIN WITHIN 24-48 HOURS. SEDIMENT WILL NEED TO BE REMOVED WHEN AN ACCUMULATION OF 4 INCHES IS EVIDENT OVER THE WETLAND SURFACE.
   v. CHECK AND CLEAN ALL OUTLETS AND OVERFLOW SPILLWAY IF BLOCKED OR THERE IS EVIDENCE OF STRUCTURAL DAMAGE OR EROSION.
   vi. REMOVE DECAYING VEGETATION, LITTER AND DEBRIS.
   vii. CHECK FOR FOREIGN SPECIES. PARTICULAR CARE MUST BE USED TO AVOID THE UNINTENDED INTRODUCTION OF INVASIVE SPECIES SUCH AS PURPLE LOOSESTRIFE (LYTHRUM SALICARIA) AND COMMON REED (PHRAGMITES AUSTRALIS). IT IS RECOMMENDED THAT A QUALIFIED WETLAND BIOLOGIST BE CONSULTED WHEN THESE ARE FOUND IN THE AREA OF THE GRAVEL WETLAND.

RECERTIFICATION REQUIREMENT:

WITHIN THREE MONTHS OF THE EXPIRATION OF EACH FIVE-YEAR INTERVAL FROM THE DATE OF ISSUANCE OF THE PERMIT, THE PERMITTEE SHALL CERTIFY THE FOLLOWING TO THE DEPARTMENT.

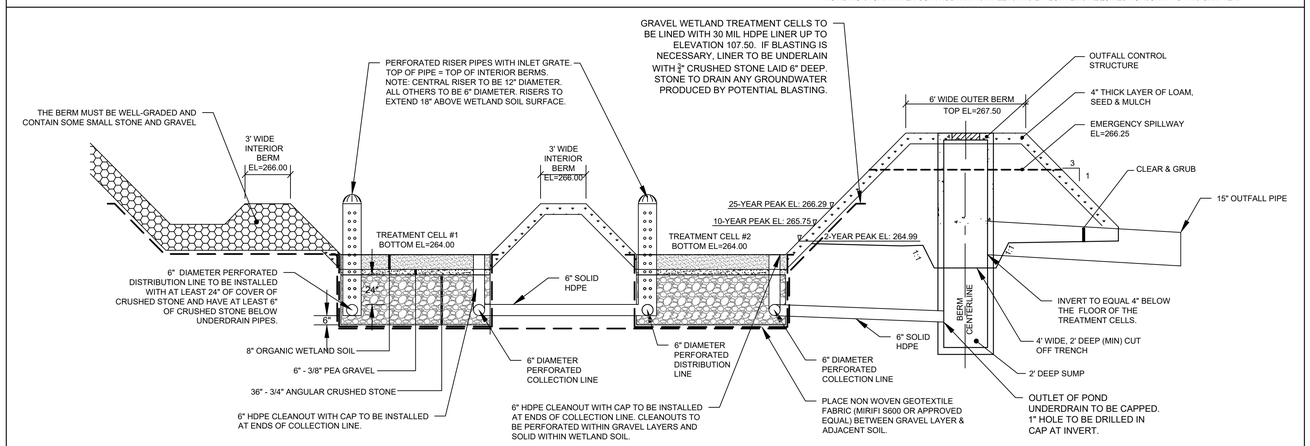
(a) ALL AREAS OF THE PROJECT SITE HAVE BEEN INSPECTED FOR AREAS OF EROSION, AND APPROPRIATE STEPS HAVE BEEN TAKEN TO PERMANENTLY STABILIZE THESE AREAS.

(b) ALL ASPECTS OF THE STORMWATER CONTROL SYSTEM ARE OPERATING AS APPROVED, HAVE BEEN INSPECTED FOR DAMAGE, WEAR, AND MALFUNCTION, AND APPROPRIATE STEPS HAVE BEEN TAKEN TO REPAIR OR REPLACE THE SYSTEM, OR PORTIONS OF THE SYSTEM, AS NECESSARY.

(c) THE STORMWATER MAINTENANCE PLAN FOR THE SITE IS BEING IMPLEMENTED AS APPROVED BY THE DEPARTMENT, AND THE MAINTENANCE LOG IS BEING MAINTAINED.

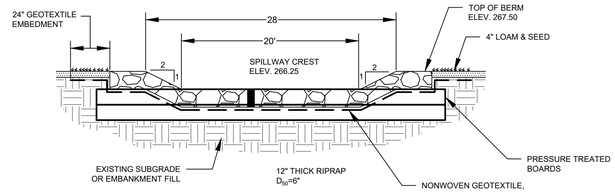
(d) ALL PROPRIETARY SYSTEMS HAVE BEEN MAINTAINED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. WHERE REQUIRED BY THE DEPARTMENT, THE PERMITTEE SHALL EXECUTE A 5-YEAR MAINTENANCE CONTRACT WITH A QUALIFIED PROFESSIONAL FOR THE COMING 5-YEAR INTERVAL. THE MAINTENANCE CONTRACT MUST INCLUDE PROVISIONS FOR ROUTINE INSPECTIONS, CLEANING AND GENERAL MAINTENANCE.

(e) THE DEPARTMENT MAY WAIVE SOME OR ALL OF THESE RECERTIFICATION REQUIREMENTS ON A CASE-BY-CASE BASIS FOR PERMITTEES SUBJECT TO THE DEPARTMENT'S MULTI-SECTOR GENERAL PERMIT ("MSGP") AND/OR MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM ("MEPDES") PROGRAMS WHERE IT IS DEMONSTRATED THAT THESE PROGRAMS ARE PROVIDING STORMWATER CONTROL THAT IS AT LEAST AS EFFECTIVE AS REQUIRED PURSUANT TO THIS CHAPTER.



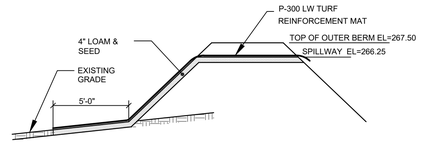
CROSS SECTION VIEW - GRAVEL WETLAND

NOT TO SCALE



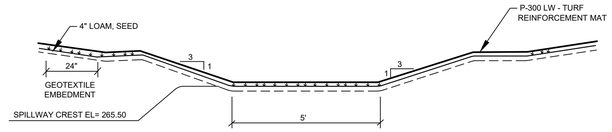
EMERGENCY SPILLWAY CROSS SECTION

NOT TO SCALE



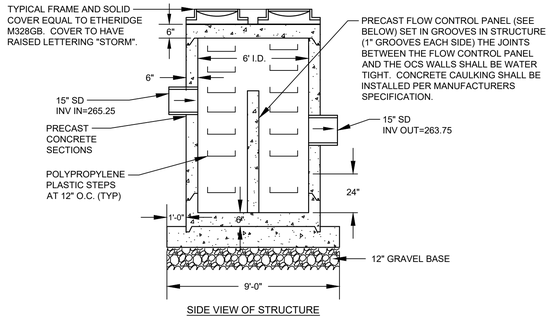
SPILLWAY EMBANKMENT SECTION

NOT TO SCALE

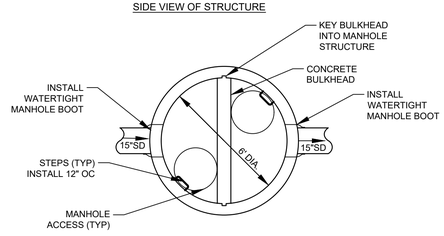


INTERNAL BERM SPILLWAY CROSS-SECTIONS

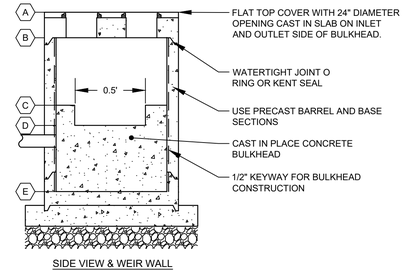
NOT TO SCALE



SIDE VIEW OF STRUCTURE



TOP VIEW OF STRUCTURE



SIDE VIEW & WEIR WALL

NOTES:
1. SUBMIT SHOP DRAWINGS FOR OWNER/ ENGINEER APPROVAL.
2. STRUCTURE SHALL BE DESIGNED FOR H-20 LOADING.
3. CASTINGS SHALL PROVIDE FOR A 24" CLEAR OPENING.

SCHEDULE A
OUTLET CONTROL STRUCTURE

ITEM DESCRIPTION		DIMENSION / ELEVATION
A.	TOP OF STRUCTURE	267.50
B.	UNDERSIDE OF SLAB	267.00
C.	TOP OF CONCRETE BULKHEAD	267.00
D.	BOTTOM OF WEIR SLOT	266.25
E.	BOTTOM OF STRUCTURE	261.75

OUTLET CONTROL STRUCTURE (OCS)

NOT TO SCALE

STATE OF MAINE — CRAIG M. SWEET — No. 15060 — LICENSED PROFESSIONAL ENGINEER

DATE: 12-06-2024

NO.	DATE	REVISIONS

ADDRESS: 41 CAMPUS DRIVE, SUITE 301, NEW GLOUCESTER, ME 04260
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WEB SITE: www.terradyneconsultants.com
TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE

SHEET TITLE: GRAVEL WETLAND PLAN

CLIENT: TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE: 09-16-2024
SCALE: 1" = 20'
JOB NO: 24-164
SHEET: C-2.2

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SANITARY SEWER STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-1	307.54		301.25 (SS-1)	48"
SMH-2	308.54	300.72 (SS-1)	300.62 (SS-2)	48"
SMH-3	299.49	293.67 (SS-2)	293.57 (SS-3)	48"
SMH-9	299.50	291.32 (SS-9)	291.22 (SS-8)	48"
SMH-10	303.95	295.43 (SS-10)	295.33 (SS-9)	48"
SMH-11	305.21		298.93 (SS-10)	48"

SANITARY SEWER PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SS-1	8"	58'	0.92%
SS-2	8"	232'	2.99%
SS-3	8"	192'	7.16%
SS-8	8"	238'	4.85%
SS-9	8"	112'	3.58%
SS-10	8"	69'	5.04%



STATE OF MAINE
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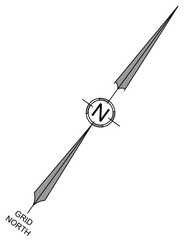
PROJECT:
DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE

SHEET TITLE:
UTILITY PLAN

CLIENT:
TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE:	09-16-2024
SCALE:	1" = 20'
JOB NO:	24-164
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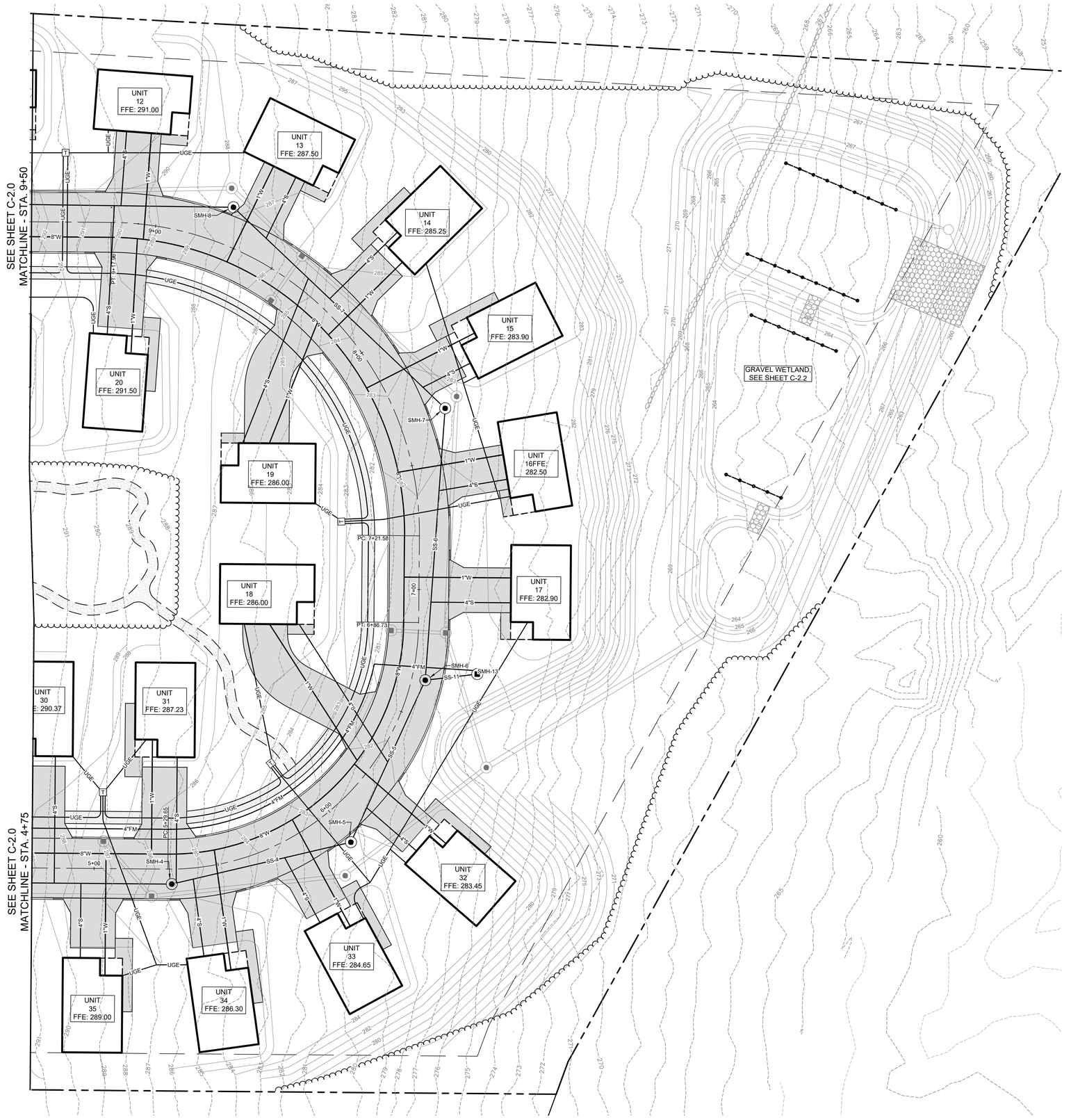


SANITARY SEWER STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-4	285.53	279.84 (SS-3)	279.74 (SS-4)	48"
SMH-5	283.20	274.00 (SS-4)	273.90 (SS-5)	48"
SMH-6	281.56	272.65 (SS-5) 272.65 (SS-6)	281.23 (SS-11)	48"
SMH-7	282.80	274.41 (SS-7)	274.31 (SS-6)	48"
SMH-8	287.40	279.68 (SS-8)	279.58 (SS-7)	48"

SANITARY SEWER PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SS-3	8"	192'	7.16%
SS-4	8"	70'	8.20%
SS-5	8"	68'	1.85%
SS-6	8"	106'	1.57%
SS-7	8"	113'	4.56%
SS-8	8"	238'	4.85%



GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 INCH = 20 FT.

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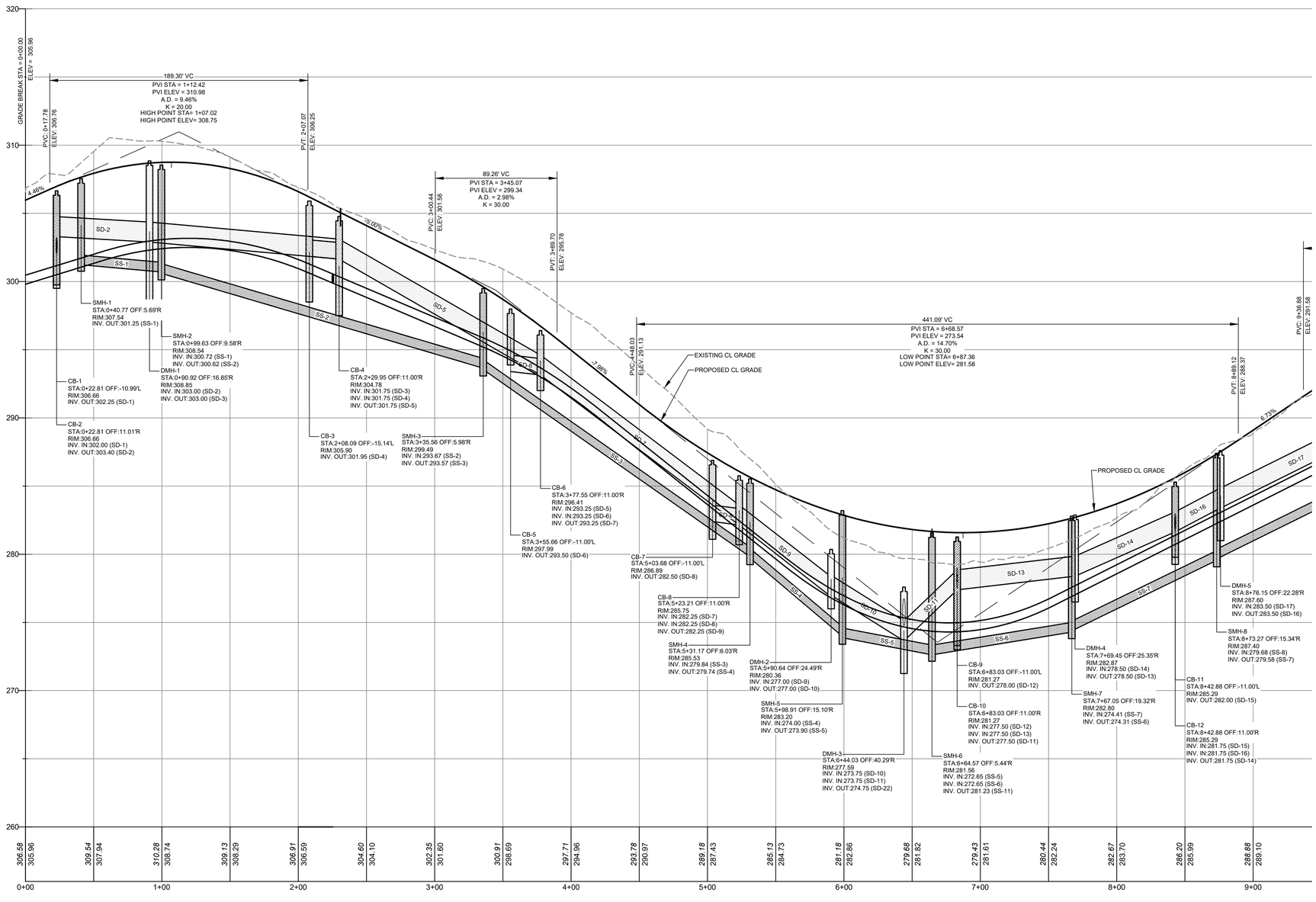
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SHEET TITLE:
UTILITY PLAN

CLIENT:
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154 BAILEY HILL ROAD
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ROAD NAME: STA. 0+00 TO STA. 9+00

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

STATE OF MAINE
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PERMIT DRAWING
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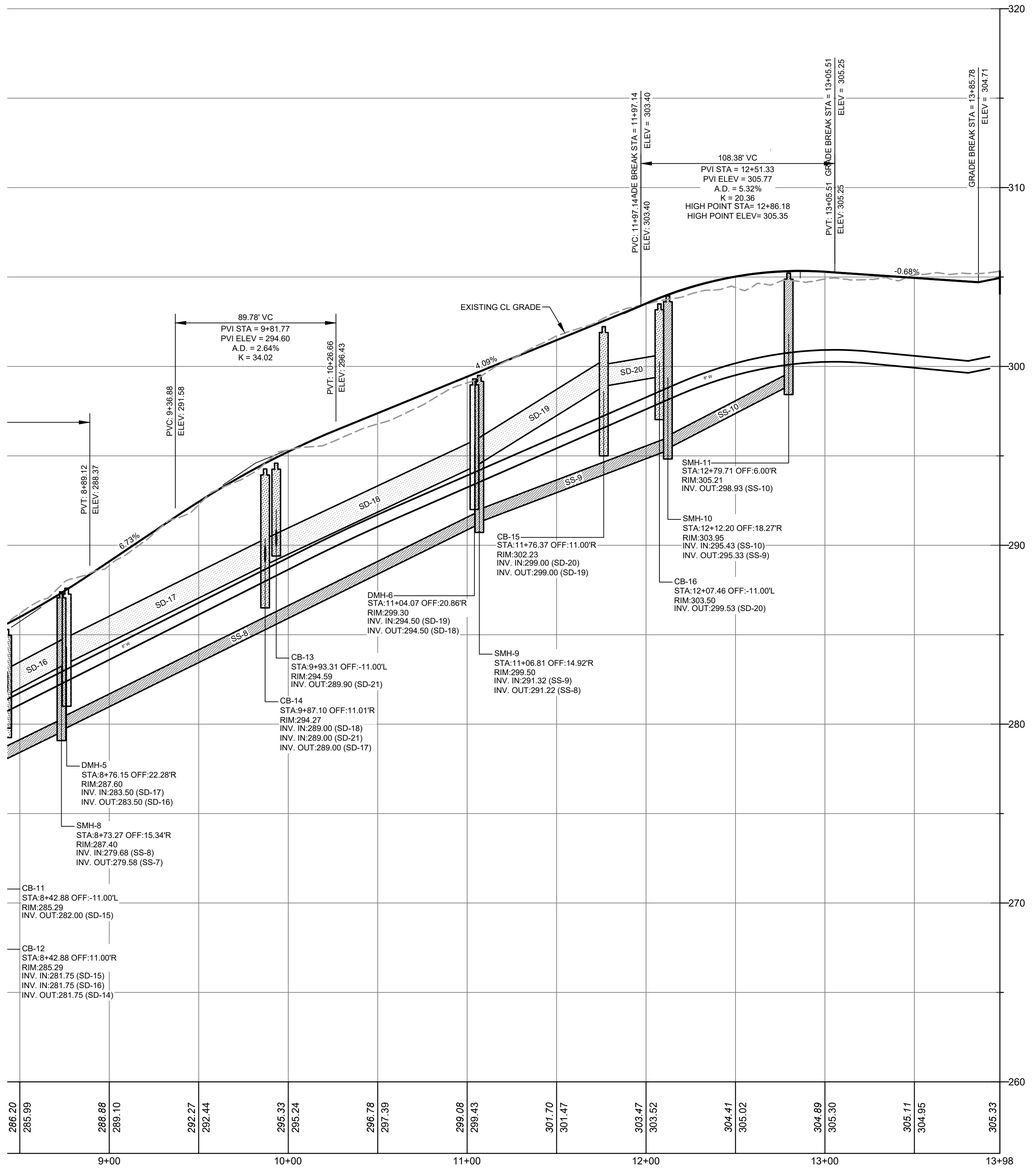
PROJECT:
DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE

SHEET TITLE:
ROAD PROFILE - 1

CLIENT:
TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE:	09-16-2024
SCALE:	1" = 40'
JOB NO:	24-164
SHEET:	C-4.0

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ROAD NAME: STA. 9+00 TO STA. 13+98

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

DATE: 12-06-2024

NO.	DATE	REVISIONS

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41 CAMPUS DRIVE, SUITE 301
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TERRADYN CONSULTANTS, LLC

Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE

SHEET TITLE:
ROAD PROFILE - 2

CLIENT:
TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE:	09-16-2024
SCALE:	AS SHOWN
JOB NO:	24-164
SHEET:	C-4.1

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EROSION AND SEDIMENT CONTROL PLAN

Pre-Construction Phase
A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in 38 mrsa § 480-b. Erosion control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken. The site must be maintained to prevent unreasonable erosion and sedimentation. Minimize disturbed areas and protect natural downgradient buffer areas to the extent practicable.

BMP Construction Phase
A. Sediment barriers. Prior to the beginning of any construction, properly install sediment barriers at the edge of any downgradient disturbed area and adjacent to any drainage channels within the proposed disturbed area. Maintain the sediment barriers until the disturbed area is permanently stabilized.

B. Construction entrance: Prior to any clearing or grubbing, a construction entrance shall be constructed at the intersection with the proposed access drive and the existing roadway to avoid tracking of mud, dust and debris from the site.

C. Riprap: Since riprap is used where erosion potential is high, construction must be sequenced so that the riprap is put in place with the minimum delay. Disturbance of areas where riprap is to be placed should be undertaken only when final preparation and placement of the riprap can follow immediately behind the initial disturbance. Where riprap is used for outlet protection, the riprap should be placed before or in conjunction with the construction of the pipe or channel so that it is in place when the pipe or channel begins to operate. Maintain temporary riprap, such as temporary check dams until the disturbed area is permanently stabilized.

D. Temporary stabilization. Stabilize with temporary seeding, mulch, or other non-erodable cover any exposed soils that will remain unworked for more than 14 days except, stabilize areas within 100 feet of a wetland or waterbody within 7 days or prior to a predicted storm event, whichever comes first. If hay or straw mulch is used, the application rate must be 2 bales (70-90 pounds) per 1000 sf or 1.5 to 2 tons (90-100 bales) per acre to cover 75 to 90% of the ground surface. Hay mulch must be kept moist or anchored to prevent wind blowing. An erosion control blanket or mat shall be used at the base of grassed waterways, steep slopes (15% or greater) and on any disturbed soil within 100 feet of lakes, streams and wetlands. Grading shall be planned so as to minimize the length of time between initial soil exposure and final grading. On large projects this should be accomplished by phasing the operation and completing the first phase up to final grading and seeding before starting the second phase, and so on.

E. Vegetated waterway. Upon final grading, the disturbed areas shall be immediately seeded to permanent vegetation and mulched and will not be used as outlets until a dense, vigorous vegetative cover has been obtained. Once soil is exposed for waterway construction, it should be immediately shaped, graded and stabilized. Vegetated waterways need to be stabilized early during the growing season (prior to September 15). If final seeding of waterways is delayed past September 15, emergency provisions such as sod or riprap may be required to stabilize the channel. Waterways should be fully stabilized prior to directing runoff to them.

Permanent stabilization defined
A. Seeded areas. For seeded areas, permanent stabilization means an 90% cover of the disturbed area with mature, healthy plants with no evidence of washing or rilling of the topsoil.

B. Sodded areas. For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.

C. Permanent mulch. For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.

D. Riprap. For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.

E. Agricultural use. For construction projects on land used for agricultural purposes (e.G., pipelines across crop land), permanent stabilization may be accomplished by returning the disturbed land to agricultural use.

F. Paved areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed.

G. Ditches, channels, and swales. For open channels, permanent stabilization means the channel is stabilized with mature vegetation at least three inches in height, with well-graded riprap, or with another non-erosive lining capable of withstanding the anticipated flow velocities and flow depths without reliance on check dams to slow flow. There must be no evidence of slumping of the lining, undercutting of the banks, or down-cutting of the channel.

General Construction Phase
The following erosion control measures shall be followed by the contractor throughout construction of this project:

A. All topsoil shall be collected, stockpiled, seeded with rye at 3 pounds/1,000 sf and mulched, and reused as required. Silt fencing shall be placed down gradient from the stockpiled loam. Stockpile to be located by designation of the owner and inspecting engineer.

B. The inspecting engineer at his/her discretion, may require additional erosion control measures and/or supplemental vegetative provisions to maintain stability of earthworks and finish graded areas. The contractor shall be responsible for providing and installing any supplemental measures as directed by the inspecting engineer. Failure to comply with the engineer's directions will result in discontinuation of construction activities.

C. Erosion control mesh shall be applied in accordance with the plans over all finish seeded areas as specified on the design plans.

D. All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved erosion and sediment control plan until they are adequately stabilized.

E. All erosion, and sediment control practices and measures shall be constructed, applied and maintained in accordance with the approved erosion and sediment control plan.

F. Areas to be filled shall be cleared, grubbed and stripped of topsoil to remove trees, vegetation, roots or other objectionable materials.

G. Areas shall be scarified to a minimum depth of 3 inches prior to placement of topsoil.

H. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc., shall be compacted in accordance with local requirements or codes.

I. All fills shall be placed and compacted in layers not to exceed 8 inches in thickness.

J. Except for approved landfills or non-structural fills, fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris and other objectionable materials that would interfere with or prevent construction of satisfactory lifts.

K. Frozen material or soft, mucky or highly compressible materials shall not be incorporated into fill slopes or structural fills.

L. Fill shall not be placed on a frozen foundation.

M. Seeps or springs encountered during construction shall be handled appropriately.

N. All graded areas shall be permanently stabilized immediately following finished grading.

O. Remove any temporary control measures, such as silt fence, within 30 days after permanent stabilization is attained. Remove any accumulated sediments and stabilize.

Permanent vegetation
Permanent vegetative cover should be established on disturbed areas where permanent, long lived vegetative cover is needed to stabilize the soil, to reduce damages from sediment and runoff, and to enhance the environment.

Seedbed preparation
A. Grade as feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance.

B. Apply limestone and fertilizer according to soil tests such as those offered by the university of Maine soil testing laboratory. Soil sample mailers are available from the local cooperative extension service office. If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 800 pounds per acre or 18.4 pounds per 1,000 square feet using 10-20-20 (n-p2o5-k2o) or equivalent. Apply ground limestone (equivalent to 50% calcium plus magnesium oxide) at
a rate of 3 tons per acre (138 lb. Per 1,000 sq. Ft).

C. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, spring tooth harrow or other suitable equipment. The final harrowing operation should be on the general contour. Continue tillage until a reasonably uniform, fine seedbed is prepared. All but clay or silty soils and coarse sands should be rolled to firm the seedbed wherever feasible.D. Remove from the surface all stones 2 inches or larger in any dimension. Remove all other debris, such as wire, cable, tree roots, concrete, clods, lumps or other unsuitable material.

E. Inspect seedbed just before seeding. If traffic has left the soil compacted; the area must be tilled and firmed as above.

F. Permanent seeding should be made 45 days prior to the first killing frost or as a dormant seeding with mulch after the first killing frost and before snowfall. When crown vetch is seeded in later summer, at least 35% of the seed should be hard seed (unscarified). If seeding cannot be done within the seeding dates, mulch according to the temporary mulching bmp and overwinter stabilization and construction to protect the site and delay seeding until the next recommended seeding period.

G. Following seed bed preparation, swale areas, fill areas and back slopes shall be seeded at a rate of 3 lbs./1,000 s.F. With a mixture of 35% creeping red h. Fescue, 6% red top, 24% kentucky bluegrass, 10% perennial ryegrass, 20% annual ryegrass and 5% white dutch clover.

I. Areas which have been temporarily or permanently seeded shall be mulched immediately following seeding.

J. Areas which cannot be seeded within the growing season shall be mulched for over-winter protection and the area should be seeded at the beginning of the growing season.

Winter construction phase
If an area is not stabilized with temporary or permanent measures by November 15, then the site must be protected with additional stabilization measures.

A. Permanent stabilization consists of at least 90% vegetation, pavement/gravel base or riprap.

B. Do not expose slopes or leave slopes exposed over the winter or for any other extended time of work suspension unless fully protected with mulch.

C. Apply hay mulch at twice the standard rate (150 lbs. Per 1,000 sf). The mulch must be thick enough such that the ground surface will not be visible and must be anchored.

D. Use mulch and mulch netting or an erosion control mulch blanket or all slopes greater than 8 % or other areas exposed to direct wind.

E. Install an erosion control blanket in all drainageways (bottom and sides) with a slope greater than 3 %.

F. See the vegetation measures for more information on seeding dates and types.

G. Winter excavation and earthwork shall be completed so that no more than 1 acre of the site is without stabilization at any one time.

H. An area within 100 feet of a protected natural resource must be protected with a double row of sediment barrier.

I. Temporary mulch must be applied within 7 days of soil exposure or prior to any storm event, but after every workday in areas within 100 feet from a protected natural resource.

J. Areas that have been brought to final grade must be permanently mulched that same day.

K. If snowfall is greater than 1 inch (fresh or cumulative), the snow shall be removed from the areas due to be seeded and mulched.

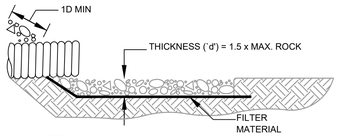
L. Loam shall be free of frozen clumps before it is applied.

M. All vegetated ditch lines that have not been stabilized by November 1, or will be worked during the winter construction period, must be stabilized with an appropriate stone lining backed by an appropriate gravel bed or geotextile unless specifically released from this standard by the department.

Maintenance and inspection phase
A. Minimum erosion control measures will need to be implemented and the applicant will be responsible to maintain all components of the erosion control plan until the site is fully stabilized. However, based on site and weather conditions during construction, additional erosion control measures may need to be implemented. All areas of instability and erosion must be repaired immediately during construction and need to be maintained until the site is fully stabilized or vegetation is established. A construction log must be maintained for the erosion and sedimentation control inspections and maintenance

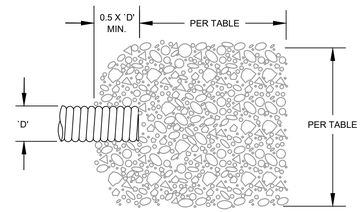
B. A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and major observations relating to operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include: bmps that need to be maintained; location(s) of bmps that failed to operate as designed or proved inadequate for a particular location; and location(s) where additional bmps are needed that did not exist at the time of inspection. Follow-up to correct deficiencies or enhance controls must also be indicated in the log and dated, including what action was taken and when.

Dewatering
A dewatering plan is needed to address excavation de-watering following heavy rainfall events or where the excavation may intercept the groundwater table during construction. The collected water needs treatment and a discharge point that will not cause downgradient erosion and offsite sedimentation or within a resource. Please follow the details of such a plan.



NOTE:
1. GEOTEXTILE FILTER FABRIC BENEATH STONE BASED ON UNDISTURBED SOILS, OR 6" OF 4" MINUS BAN RUN GRAVEL FREE OF FINES, CLAYS, SILTS.
2. GEOTEXTILE TO BE MIRAFI 600X OR APPROVED EQUAL.

SECTION



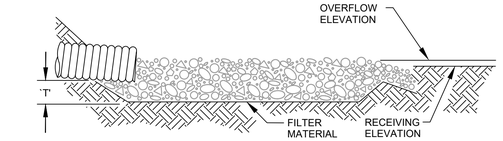
HARD ANGULAR ROCK
D50 SELECTION PER CHART

PLAN

PIPE INLET PROTECTION SIZING TABLE (MINIMUM)		
SIZE	RIPRAP SIZING (D50)	WIDTH AT THE NARROW END OF THE PIPE
12"	5"	3-4'
18"	8"	4-6'
24"	10"	6-8'
30"	12"	8-10'
36"	14"	10-12'

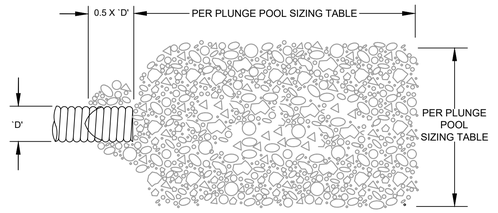
NOTES:
1. IN DEFINED CHANNELS, APRON SHALL EXTEND FULL WIDTH OF BOTTOM AND ONE FOOT ABOVE MAX. HEADWATER OR UP TO BANK FULL, WHICHEVER IS LESS.

PIPE INLET PROTECTION
NOT TO SCALE



THICKNESS (`T') = 1.5 x MAX. ROCK DIAMETER

SECTION

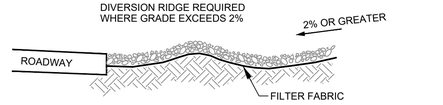


PLAN

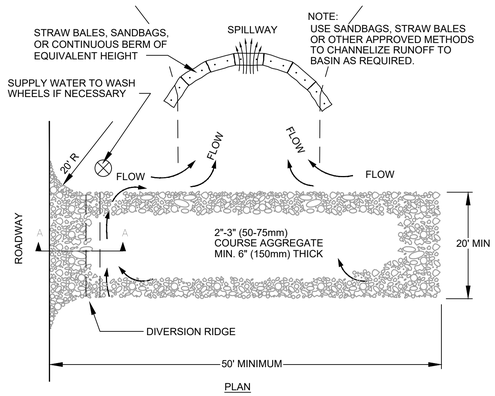
PLUNGE POOL SIZING (MINIMUM)				
SIZE	RIPRAP SIZING (D50)	WIDTH AT THE NARROW END OF THE PIPE	LENGTH FOR SLOW FLOWS (NO PRESSURE HEAD)	LENGTH FOR HIGH FLOWS (WITH PRESSURE HEAD)
12"	5"	3-4'	4-6'	8-10'
18"	8"	4-6'	6-8'	12-18'
24"	10"	6-8'	8-10'	18-22'
30"	12"	8-10'	12-14'	22-28'
36"	14"	10-12'	14-16'	28-32'

NOTES:
1. THE DIAMETER OF THE LARGEST STONE SIZE IN THE MIX SHOULD BE ABOUT 1.5 TIMES THE D50 AND THE SMALLEST ONE ABOUT ONE HALF THE SIZE. THE THICKNESS OF RIPRAP SHOULD NEVER BE LESS THAN 2 TIMES THE ROCK D50.
2. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC (MIRAFI 600X OR APPROVED EQUAL) OR 6" (150mm) THICK MINIMUM GRADED GRAVEL LAYER.

PIPE OUTLET PROTECTION
NOT TO SCALE



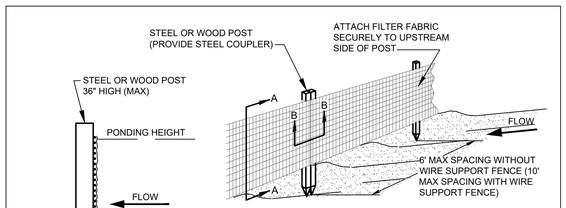
SECTION A - A



PLAN

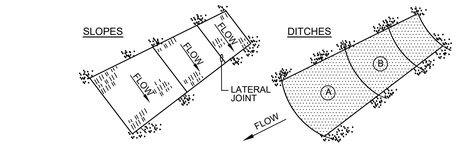
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



SECTION A-A

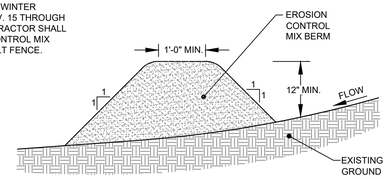
SILT FENCE
NOT TO SCALE



NOTES:
1. BURY THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCHING SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.
2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.
3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER.
4. STAPLE OUTSIDE LATERAL EDGE 2' ON CENTER.
5. WIRE STAPLES TO BE MIN. OF #11 WIRE, 6" LONG & 1-1/2" WIDE.
6. USE NORTH AMERICAN GREEN DS 150 (OR APPROVED EQUAL) ON SLOPES BETWEEN 4:1-2:1. USE NORTH AMERICAN GREEN VMAX SC250 PERMANENT TURF REINFORCEMENT MAT (OR APPROVED EQUAL) ON SLOPES 2:1 AND STEEPER..

EROSION CONTROL BLANKET
NOT TO SCALE

NOTE:
DURING PERIODS OF WINTER CONSTRUCTION (NOV. 15 THROUGH APRIL 15), THE CONTRACTOR SHALL INSTALL EROSION CONTROL MIX BERMS IN LIEU OF SILT FENCE.



EROSION CONTROL MIX:
EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES & MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:
- THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80% - 100% DRY WEIGHT BASIS
- PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85% PASSING A 0.75" SCREEN
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 mmhos/cm.
- ph SHALL FALL BETWEEN 5.0 - 8.0.

EROSION CONTROL MIX BERM
NOT TO SCALE

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

DATE: 12-06-2024

NO.	DATE	REVISIONS

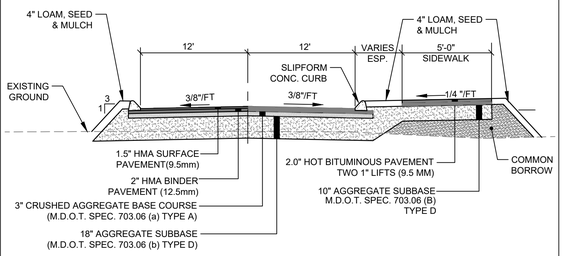
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PHONE: (207) 926-5111
WEB SITE: www.terradynconsultants.com
TERRADYN CONSULTANTS, LLC
CWI Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE
SHEET TITLE: EROSION & SEDIMENT CONTROL DETAILS
CLIENT: TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

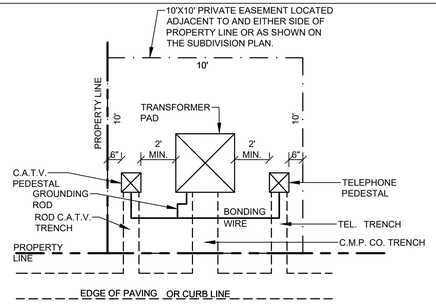
DATE:	09-16-2024
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SHEET:	C-5.0

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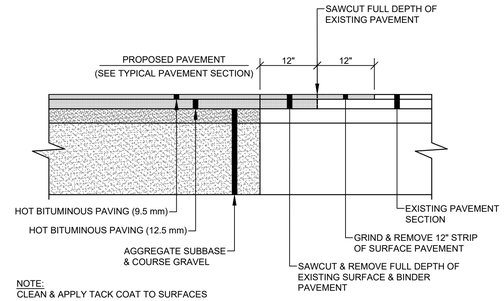
NOTES:
1. ALL CONSTRUCTION MATERIALS AND METHODS SHALL ADHERE TO ARTICLE 11 OF THE CITY OF SACO SUBDIVISION ORDINANCE AND MAINEDOT STANDARD SPECIFICATIONS.

TYPICAL ROAD SECTION
NOT TO SCALE



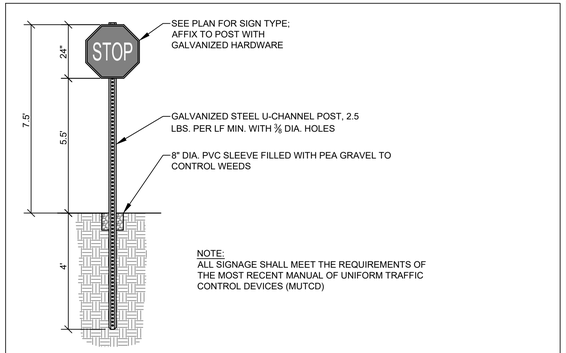
NOTES:
TRANSFORMER PAD AND COVER TO BE FIBERGLASS MEETING CENTRAL MAINE POWER SPECIFICATIONS.

TRANSFORMER DETAIL
NOT TO SCALE



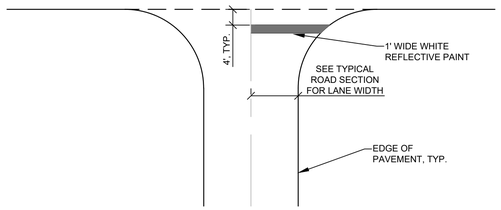
NOTE:
CLEAN & APPLY TACK COAT TO SURFACES WHERE NEW BIT. PAVEMENT IS INSTALLED

TYPICAL PAVEMENT JOINT
NOT TO SCALE

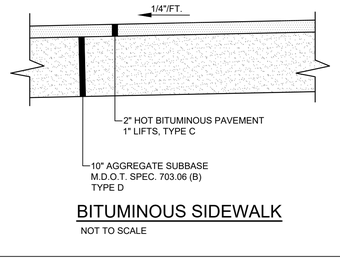


NOTE:
ALL SIGNAGE SHALL MEET THE REQUIREMENTS OF THE MOST RECENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

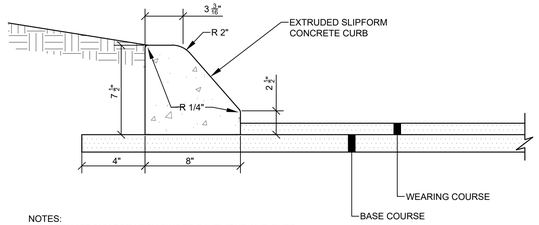
STREET SIGN
NOT TO SCALE



STOP BAR DETAIL
NOT TO SCALE

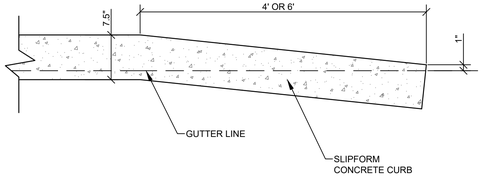


BITUMINOUS SIDEWALK
NOT TO SCALE

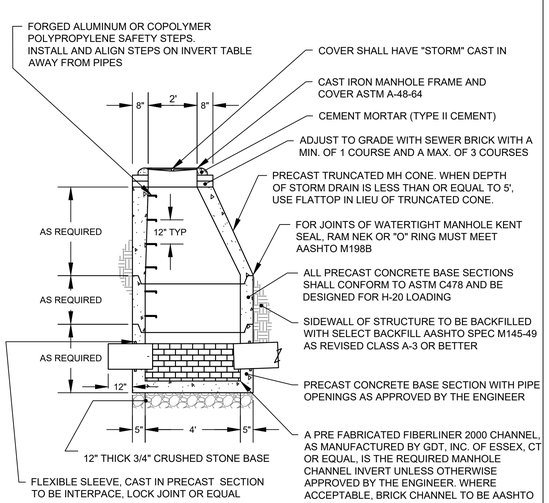


NOTES:
1. APPLY EPOXY BETWEEN BINDER PAVEMENT AND CURB
2. 1" TO 2" SLUMP
3. 5% TO 7% AIR ENTRAINMENT
4. 4,000 PSI CONCRETE WITH FIBER REINFORCEMENT

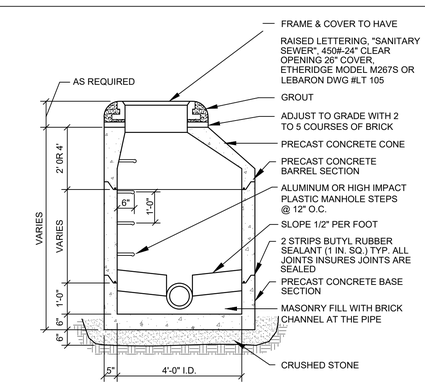
SLOPED SLIPFORM CONCRETE CURB DETAIL
NOT TO SCALE



SLIPFORM CURB TIPDOWN DETAIL
NOT TO SCALE

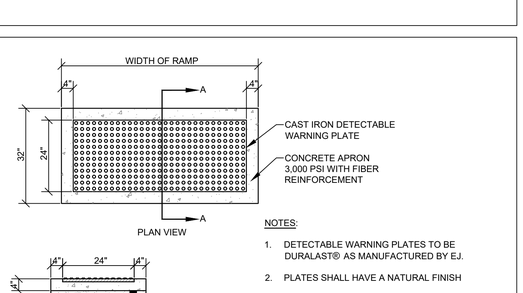


4' DIAMETER PRECAST STORM DRAIN MANHOLE
NOT TO SCALE



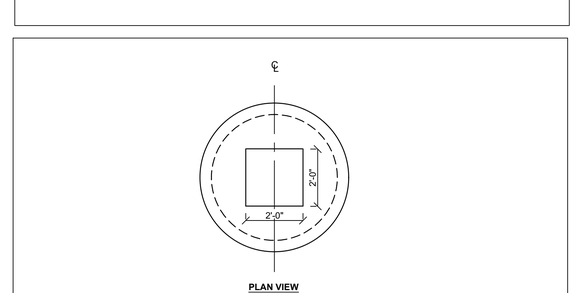
NOTE: PIPE CONNECTIONS SHALL BE WATERTIGHT FLEXIBLE BOOT CONNECTORS PROVIDES LEAKPROOF CONNECTION

PRECAST SEWER MANHOLE
NOT TO SCALE



NOTES:
1. DETECTABLE WARNING PLATES TO BE DURALAST® AS MANUFACTURED BY EJ.
2. PLATES SHALL HAVE A NATURAL FINISH
3. PLATE SHALL BE ORIENTED SO THAT THE DOMES ARE PARALLEL AND PERPENDICULAR TO THE PRIMARY DIRECTION OF TRAVEL
4. RADIAL PLATES SHALL BE USED ON RADIAL RAMPS

DETECTABLE WARNING PLATE DETAIL
NOT TO SCALE

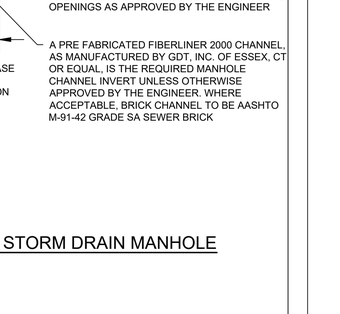


DESIGN NOTES:
1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF..

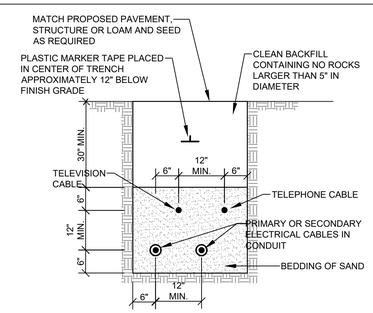
SECTION VIEW

NOTE:
CASCADE GRATES SHALL BE INSTALLED ON GRADIENT OF GUTTER IF PROFILE GRADE EXCEEDS 5% GRATES SHALL BE DEPRESSED 2" BELOW NORMAL GUTTER GRADE UNLESS THIS DEPRESSION INTERFERES WITH TRAFFIC. PARALLEL BAR GRATES SHALL BE INSTALLED ON A LEVEL GRADIENT.

TYPICAL CATCH BASIN
NOT TO SCALE



TYPICAL TRENCH SECTION
NOT TO SCALE



CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT WHEN RUN BENEATH PAVED AREAS.

TYPICAL UNDERGROUND CABLE INSTALLATION
NOT TO SCALE

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

DATE: 12-06-2024

NO.	DATE	REVISIONS
1	10-16-2024	PERMIT DRAWING NOT FOR CONSTRUCTION

ADDRESS: 41 CAMPUS DRIVE, SUITE 301 NEW GLOUCESTER, ME 04260
PHONE: (207) 926-5111
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TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

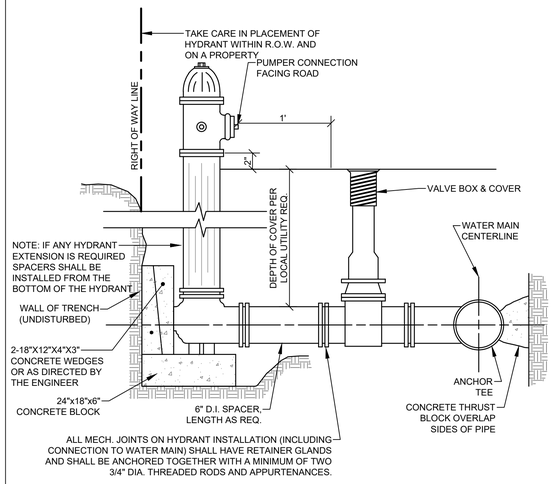
PROJECT: DANVILLE CORNER PARCEL
DANVILLE CORNER ROAD, AUBURN, MAINE

SHEET TITLE: SITE DETAILS

CLIENT: TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

DATE: 09-16-2024
SCALE: NOT TO SCALE
JOB NO: 24-164
SHEET: C-5.1

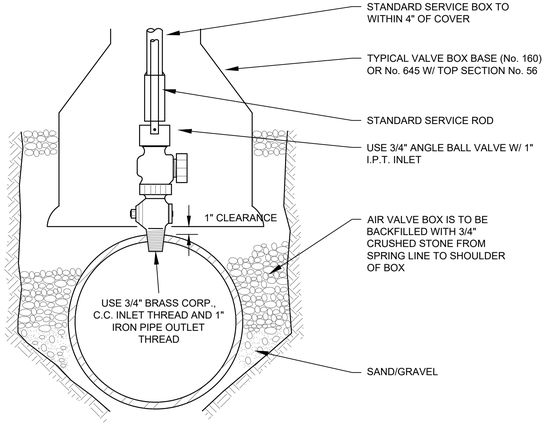
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NOTES:
1. ALL MATERIALS SHALL CONFORM TO THE KENNEBUNK, KENNEBUNKPORT & WELLS WATER DISTRICT REQUIREMENTS
2. HYDRANT SHALL BE OPEN RIGHT
3. ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE

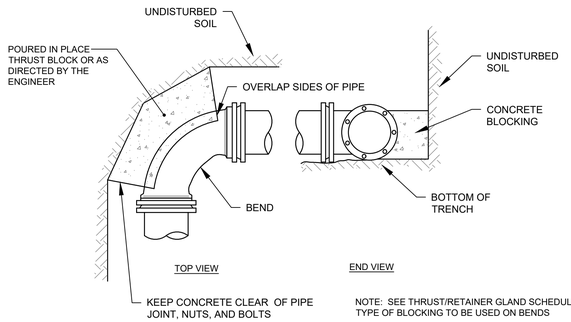
TYP. HYDRANT INSTALLATION

NOT TO SCALE



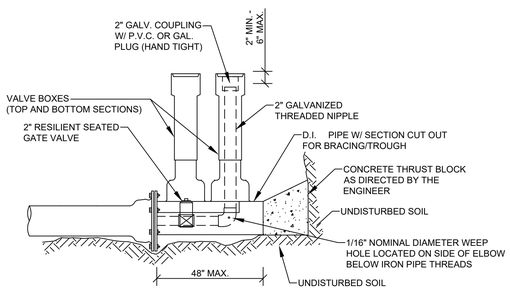
TYPICAL AIR VALVE (1)

NOT TO SCALE



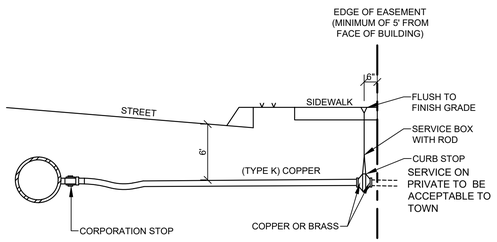
STANDARD BEND BLOCKING

NOT TO SCALE



STANDARD 2" BLOW OFF

NOT TO SCALE



TYPICAL WATER SERVICE CONNECTION

NOT TO SCALE

STATE OF MAINE
CRAIG M. SWEET
No. 15060
LICENSED PROFESSIONAL ENGINEER

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PROJECT: DANVILLE CORNER PARCEL
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SHEET TITLE: SITE DETAILS

CLIENT: TIMOTHY MILLETT
154 BAILEY HILL ROAD
POLAND, MAINE 04274

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SCALE: NOT TO SCALE
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SHEET: C-5.2

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