CITY OF BANGOR
PLANNING DIVISION

COMMUNITY & ECONOMIC DEVELOPMENT

PLANNING BOARD AGENDA
TUESDAY, JUNE 16, 2026, 7:00 P.M.
COUNCIL CHAMBERS, 1ST FLOOR OF CITY HALL, 73 HARLOW STREET

1. CHAIR INTRODUCTION

2. OLD BUSINESS

A. Meeting Minutes – June 2, 2026

3. NEW BUSINESS

A. Land Development Permits

i. Land Development Permit – Major Site Development, Conditional Use, and Major SLODA Modification – 205 Corporate Drive – Map-Lot R25-001-A – Land Development Permit Application – Major Site Development, Conditional Use, and Major SLODA Modification for the construction of a 30-unit permanent supportive housing building with a total floor area of 19,100 square feet at property located at 205 Corporate Drive, Map-Lot R25-001-A, in the Government & Institutional Service District (G&ISD). Applicant: Bangor Housing Development Corporation. Owner: City of Bangor.

B. Land Development Code Amendments

i. Amending the Land Development Code, §165-30, to Add a New Accessory Use for Farmstands and to Exempt Agricultural and Outdoor Recreational Uses from Paving Requirements

ii. Amending the Land Development Code, §165-26, to Add a New Seasonal Storage Use and to Add Flexibility for Temporary Storage Uses

4. OTHER BUSINESS

A. Workshop on Proposed Changes to Manufactured Home Ordinance

B. Follow-Up/Thoughts on Land Use Plan Updates

C. Adjournment

73 HARLOW STREET, BANGOR, ME 04401
TELEPHONE: (207) 992-4280 FAX: (207) 945-4447
WWW.BANGORMAINE.GOV

CITY OF BANGOR
PLANNING DIVISION

COMMUNITY & ECONOMIC DEVELOPMENT

PLANNING BOARD MEMO
TUESDAY, JUNE 16, 2026, 7:00 P.M.
COUNCIL CHAMBERS, 1ST FLOOR OF CITY HALL, 73 HARLOW STREET

1. CHAIR INTRODUCTION

2. OLD BUSINESS

A. Meeting Minutes – June 2, 2026

3. NEW BUSINESS

A. Land Development Permits

i. **Land Development Permit – Major Site Development, Conditional Use, and Major SLODA Modification – 205 Corporate Drive – Map-Lot R25-001-A –** Land Development Permit Application – Major Site Development, Conditional Use, and Major SLODA Modification for the construction of a 30-unit permanent supportive housing building with a total floor area of 19,100 square feet at property located at 205 Corporate Drive, Map-Lot R25-001-A, in the Government & Institutional Service District (G&ISD). Applicant: Bangor Housing Development Corporation. Owner: City of Bangor.

a. The applicant seeks to construct permanent supportive housing containing 30 units with a floor area of 19,100 square feet. Permanent supportive housing is a conditional use in the Government and Institutional Service District (G&ISD). This project is also located in the airport Site Location of Development (SLODA) area and therefore requires a modification of that permit.

b. Staff review focused primarily on providing one or more pedestrian connections to nearby sidewalk, clearance for the Fire Department's vehicles, Urban Impaired Stream Standards, and the location and species of plantings. The applicant resolved all questions regarding completeness and compliance for the project and therefore, staff have no further concerns.

B. Land Development Code Amendments

i. **Amending the Land Development Code, §165-30, to Add a New Accessory Use for Farmstands and to Exempt Agricultural and Outdoor Recreational Uses from Paving Requirements**

This amendment would add a farmstand section to the Accessory Use and Structures section of the Land Development Code to allow for small-scale retail sales of food or non-food crops grown on a site (excluding cannabis). The amendments would require this use to be 200 square feet or less in area and would exempt it from land development permitting. This use would be allowed in the Rural Residence and Agricultural (RR&A), Neighborhood Service District (NSD), and Urban Service District (USD). The amendments would also remove the requirement to pave the driveway and parking areas of agricultural and outdoor recreational uses. These changes align with guidance in the 2022 Comprehensive Plan to revise zoning to provide flexibility for agricultural uses and the sale of agricultural products, including in urban areas.

After the workshops with Council and the Planning Board, staff discussed with Legal, Public Health, and Code staff the intersection of this amendment with food sovereignty laws at both the State and City level. Based on those conversations, staff left in the ability for someone to sell animal products or value-added products at farmstands, but added that applicants would need to comply with the City's food sovereignty laws, zoning restrictions on animal agriculture, and State laws regarding licensing for certain agricultural products, along with any other applicable laws.

ii. **Amending the Land Development Code, §165-26, to Add a New Seasonal Storage Use and to Add Flexibility for Temporary Storage Uses**

This amendment would add a new seasonal storage use to accommodate temporary storage uses that may not be present in a location year-round, but may require the flexibility to be placed on a lot for more than 2 years (since the current ordinance on temporary storage limits this use to being placed for a maximum of 2 years). Additionally, for temporary storage uses, the requirement to receive approval from Board of Appeals is unusual for a use in the Land Development Code and onerous for applicants. Some of the limitations on temporary storage are also either redundant or subjective (and therefore difficult to enforce). Therefore, these amendments propose to amend the

approval process and remove some limitations on this use that have been determined to be unnecessary or unenforceable.

Staff discussed with Code Enforcement whether it was necessary to add a provision onto these amendments that temporary or seasonal storage containers could not be lived in. Code Enforcement advised that this was already addressed under the building code and since these storage containers would still have to meet building code requirements, it wouldn't be necessary to add this language in the land development code.

4. OTHER BUSINESS

A. Workshop on Proposed Changes to Manufactured Home Ordinance

Staff are proposing to allow the more flexible, alternative development requirements in the manufactured home park ordinance to apply to all parks existing as of 2026 rather than just those existing prior to 1971. There is a memo to the Business & Economic Development Committee and the proposed language change in your packets to provide more detail on this proposal.

B. Follow-Up/Thoughts on Land Use Plan Updates

C. Adjournment

CITY OF BANGOR
PLANNING DIVISION

COMMUNITY & ECONOMIC DEVELOPMENT

PLANNING BOARD
TUESDAY, JUNE 2, 2026, 7:00 P.M.
COUNCIL CHAMBERS, 1ST FLOOR OF CITY HALL
73 HARLOW STREET

MEETING MINUTES

Board Members Present:
Chair Jonathan Boucher
Ted Brush
Trish Hayes
Greg Hobson
Ken Huhn
Ross Whitford

City Staff Present:
Matt Altiero, Planning Analyst
Anja Collette, Planning Officer
Grace Innis, Assistant Solicitor

Chair Boucher called the meeting to order at 7:05 P.M.

OLD BUSINESS

1. **Meeting Minutes** – May 19, 2026

Member Brush moved to approve the minutes of May 19, 2026, seconded by Member Hobson. Roll call vote conducted – all voting members in favor, none opposed. Motion passed.

2. **Adoption of Findings & Decision for 1011 Union Street, 375 Pushaw Road, and 10 Broadway**

Member Brush moved that the Board adopt the Findings & Decision for 1011 Union Street, 375 Pushaw Road, and 10 Broadway. Seconded by Member Hobson. Roll call vote conducted – all voting members in favor, none opposed. Motion passed.

NEW BUSINESS

3. **Land Development Code Amendments:** Amending the Land Development Code Section 165-31 Temporary Sales of Food and Merchandise to Allow Increased Flexibility for this Use.

Chair Boucher introduced the agenda item.

Planning Officer Collette presented on the amendment to expand flexibility for temporary sales, providing food trucks and farm products as examples. Collette explained it would allow temporary sales of food outside the Waterfront Development District, including in the Neighborhood Service District and on vacant lots, as well as increase the maximum square footage of this use on a lot to 2,000 square feet in the primary commercial zones. Collette added that the amendment would eliminate parking requirements for this use, reduce setbacks to 10 feet from property lines, and prohibit drive through service.

Member Brush asked if it would be helpful to include a definition of what a lot is. Planning Officer Collette confirmed this is defined in the code. Collette and Brush discussed that a lot would still be limited to 2,000 square feet of the temporary sales use no matter the lot size.

Chair Boucher asked if parks are considered vacant lots under this purpose. Planning Officer Collette explained that parks are not, and that commercial uses are prohibited in parks except for the Waterfront Park. Collette also confirmed that commercial uses are not allowed in the Government & Institutional Service District (G&ISD) or residential zones.

Member Brush asked if temporary sellers are allowed to park on public streets. Planning Officer Collette answered they are not allowed to.

Chair Boucher opened the public comments – there were none. Public comments closed.

Chair Boucher asked staff for any comments – there were none.

Chair Boucher asked the Board for any questions or comments – there were none.

Member Brush moved that the Board recommends that City Council ought to pass the amendment to the Land Development Code Section 165-31 Temporary Sales of Food and Merchandise to Allow Increased Flexibility for this Use. Seconded by Member Hobson. Roll call vote conducted – all voting members in favor, none opposed. Motion passed.

OTHER BUSINESS

4. Follow-Up/Thoughts on Land Use Plan Updates

Chair Boucher introduced the agenda item.

Planning Officer Collette said there is nothing new to report and staff continues to work on reviewing the Land Development Code.

Chair Boucher asked staff for any further comments – there were none.

Chair Boucher asked the Board for any questions or comments – there were none.

Meeting adjourned at 7:15 PM.

Respectfully submitted,
Kayleigh Rienas
Development Assistant
Planning Division

CITY OF BANGOR
PLANNING DIVISION

COMMUNITY & ECONOMIC DEVELOPMENT

June 16, 2026

Bangor Planning Board

Findings and Decision

Applicant:	Bangor Housing Development Corporation Attn: Cindy Witas 86 Davis Road, Bangor, ME
Owner:	City of Bangor 73 Harlow Street, Bangor, ME
Property Address:	205 Corporate Drive, Map-Lot R25-001-A
Zoning District:	Government & Institutional Service District (G&ISD)
Permit Request:	Land Development Permit for Conditional Use, Major Site Development, and Major SLODA Modification
Description:	Proposal to construct a 30-unit permanent supportive housing building with a total floor area of 19,100 square feet
Public Hearing Date:	June 16, 2026
Permitting Requirements:	§165.111A(1)(5) and 38 M.R.S.A. §481-488
Board Members Present:	_____
Board Vote:	Motion carried ____ to approve the Land Development Permit

I. The Record

The Planning Board reviewed the following exhibits:

1. Land Development Permit application, submitted by Bangor Housing Development Corporation on 05.01.2026
2. Revised Plan Set, submitted on 05.29.2026
3. Proof of payment, submitted by Bangor Housing Development Corporation on

05.01.2026
4. Cover Letter, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
5. Revised Project Description and Site Map, submitted by Sevee & Maher Engineers, Inc. on 05.29.2026
6. Revised SLODA Narrative, submitted by Sevee & Maher Engineers, Inc. on 05.29.2026
7. [Deleted]
8. Department of Agriculture, Conservation, and Forestry response letter, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
9. Architectural Narrative, Drawings, and Renderings, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
10. BWD Capacity letter, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
11. Revised Construction Stormwater Pollution Prevention Plan, submitted by Sevee & Maher Engineers, Inc. on 05.29.2026
12. Deed & Interest, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
13. FEMA Map, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
14. Financial Capacity Letter, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
15. Department of Inland Fish and Wildlife Letter, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
16. Revised Inspection Checklist and Report Form, submitted by Sevee & Maher Engineers, Inc. on 05.29.2026
17. Lighting Details, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
18. Maine Historic Preservation Commission Letter, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
19. Revised Pre-development HydroCAD Calculations, submitted by Sevee & Maher Engineers, Inc. on 05.29.2026
20. Revised Post-development HydroCAD Calculations, submitted by Sevee & Maher Engineers, Inc. on 05.29.2026
21. Revised Redevelopment and Stormwater Summary and BMP Sizing, submitted by Sevee & Maher Engineers, Inc. on 05.29.2026
22. Sewer Capacity Letter, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
23. Revised NRCS SOIL REPORT, submitted by Sevee & Maher Engineers, Inc. on 05.29.2026
24. Revised Stormwater Management Report, submitted by Sevee & Maher Engineers, Inc. on 05.29.2026
25. Wetlands and Protected Natural Resources Report, submitted by Sevee & Maher Engineers, Inc. on 05.01.2026
26. Autoturn Figure, submitted by Sevee & Maher Engineers, Inc. on 05.29.2026
27. Urban Impaired Stream Watershed Maps, submitted by Sevee & Maher Engineers, Inc. on 05.29.2026
28. Land Development Permit checklist, sent to Sevee & Maher Engineers, Inc on 05.13.2026
29. Bangor Water District sign-off, received via email on 05.13.2026
30. Fire Comments, sent to Sevee & Maher Engineers, Inc on 05.13.2026
31. Fire Comments regarding clearance for trucks, sent to Sevee & Maher Engineers, Inc on 05.13.2026

32. Engineering Comments, sent to Sevee & Maher Engineers, Inc on 05.14.2026
33. Engineering Sewer Capacity Verification, received via email on 05.14.2026
34. Forestry Division Correspondence, received via email on 05.14.2026
35. Response to Staff Comments, submitted by Sevee & Maher Engineers, Inc on 05.29.2026
36. Code sign-off, received via email on 05.29.2026
37. Fire Prevention sign-off, received via email on 05.29.2026
38. Additional Planning Comments, sent to Sevee & Maher Engineers, Inc on 06.04.2026
39. Additional Engineering Comments, sent to Sevee & Maher Engineers, Inc on 06.04.2026
40. Engineering Sign-off and Correspondence, received via email on 06.10.2026
41. List of abutters within 500 ft of the subject property, generated by staff on 06.04.2026
42. Public notice sent to abutters within 500 ft on 06.05.2026
43. Notice of mailing by Walter Ryan via email on 06.05.2026
44. BDN Ad Proof, run by BDN on 06.06.2026

II. Project Description and Permit Requirements

The Project will consist of constructing a 30-unit permanent supportive housing building with a total floor area of 19,100 square feet. The property is located at 205 Corporate Drive, Map-Lot R25-001-A, in the Government & Institutional Service District (G&ISD). This project will result in 84,750 square feet of developed area and 37,339 square feet of net new impervious area (due to the demolishment of an existing walkway and paved turnaround on the site).

As a conditional use in the Government and Institutional Service District, per §165-97B, the project must also meet the requirements of Article II through XII, any applicable development standards of Article XIX, and the Conditional Use standards of Chapter 165-9.

This project must also meet the land development approval standards in §165-114 and as a SLODA modification, the requirements of §38 M.R.S.A. § 484 and Department of Environmental Protection regulations, Chapters 371, 372, 373, 375, 376, 377, 500, 501. and 502. The SLODA permit being modified is the Post 1971 Bangor International Airport (BIA) Site Location of Development Permit, with local file number SLODA-BGR-00040 and DEP file number #L-2976-18-B-N.

III. Procedural Background

1. The Application was deemed complete on June 16th, 2026.
2. The Applicant paid all applicable fees (Exhibit 3).
3. The proposed Project is a Major Site Development, Conditional Use, and Major SLODA Modification.

IV. Applicable Provisions and Findings

Part 1 – The Project meets the requirements of Articles II through XII

1. The Board finds that, based on Exhibits 2,11, 16, and 24, the applicant satisfied §165-33.1 of the Land Development Code regarding best management practices of Erosion and Sediment Control.

2. The Board finds, that based on Exhibit 2, the applicant satisfied §165-62 of the Land Development Code regarding providing adequate visual clearance on corner lots, §165-64's requirements for side yard width, and §165-68's requirements of minimum lot frontage

3. The Board finds that, based on Exhibit 2, the applicant satisfied §165-72 of the Land Development Code regarding the required number of parking spaces, §165-73's requirements regarding parking area location and screening, and §165-74's requirements regarding parking area design, construction and maintenance.

4. The Board finds that, based on Exhibit 2, the applicant satisfied §165-76 of the Land Development Code regarding the required number of loading spaces, §165-77's requirements regarding loading space sizes, and §165-78's general requirements for loading spaces.

5. The Board finds that, based on Exhibits 2, 29, 33, and 40, the applicant satisfied §165-79 of the Land Development Code regarding providing the necessary utility services required, §165-80's requirements regarding providing adequate water and sewerage services, and 165-83's requirements regarding providing adequate electrical service.

6. The Board finds that, based on Exhibits 2 and 17, the applicant satisfied §165-81 of the Land Development Code regarding providing adequate lighting and preventing light pollution and trespass.

7. The Board finds that, based on Exhibits 2 and 37, the applicant satisfied §165-82's requirements regarding having adequate fire protection.

8. The Board finds that, based on Exhibits 2, 19-21, 24, 32, 39, and 40, the applicant satisfied §165-84 of the Land Development Code regarding providing adequate storm drainage and stormwater offset.

9. The Board finds that, based on Exhibits 22 and 33, the applicant satisfied §165-85 and §165-86 of the Land Development Code regarding providing information on sanitary flows and compliance with sewer regulations.

Part 2 – The Project meets the District Site Development Standards under Article XIX

The Board finds that, based on Exhibits 2 and 36, the applicant satisfied § 165-135 of the Land Development Code regarding height limit, floor area ratio, impervious surface ratio, and buffer yards.

Part 3 – The Project meets the requirements of § 165-97 – Government and Institutional Service District (G&ISD)

The Board finds that, based on the findings made in Parts 1 and 2 of this document, the Project meets the requirements of §165-97B for uses within the Government and Institutional Service District (G&ISD).

Part 4 – The Project meets the requirements of §165-114 – Land Development Approval Standards

1. The Board finds that, based on Exhibits 2, 35, and 40, the applicant satisfied Land Development Code §165-114B's requirement that the proposed parking and loading layout are arranged in a reasonable and safe configuration, including the provision for safe pedestrian travel to all on-site uses, and §165-114C's requirement that all proposed access drives are reasonably necessary and safe.

2. The Board finds that, based on Exhibits 2, 15, 21, 24, 25, 27, 32, and 40, the applicant satisfied Land Development Code §165-114D's requirement that the proposed development will not have unreasonable adverse effects on abutting or downstream properties or protected resources such as wetlands, lakes, streams or brooks, and that all downstream channels or municipal stormwater collection systems have adequate capacity to carry the flow without significant negative effects.

3. The Board finds that, based on Exhibits 2 and 17, the applicant satisfied Land Development Code §165-114E's requirements that all outdoor lighting shall be designed, installed and maintained to avoid unreasonable adverse effects from light pollution.

4. The Board finds that, based on Exhibits 2 and 35, the applicant satisfied Land Development Code §165-114F's requirements for landscaping.

5. The Board finds that, based on Exhibit 2, the applicant satisfied Land Development Code §165-114G, requiring buildings to be situated to avoid unreasonable adverse effects on adjacent properties or public rights-of-way.

6. The Board finds that, based on Exhibits 2, 6-27, 29, 33, 35, and 40, the applicant is in compliance with 38 M.R.S.A §484 and applicable Department of Environmental Protection regulations, which includes Chapters 371-373, 375-377, and 500-502.

Part 5 – The Project meets the criteria for a Conditional Use under of §165-9A

1. The Board finds that, based on the findings made in Parts 1-4 of Section IV of this document, the applicant satisfied Land Development Code §165-9A(1)'s requirements regarding not requiring a variance of development or other standards.

2. The Board finds that, based on Exhibits 2 and 5, the applicant satisfied Land Development Code §165-9A(2)'s requirements regarding not creating unreasonable traffic congestion or hazardous conditions on contiguous or adjacent streets.

3. The Board finds that, based on the findings made in Parts 1-4 of Section IV of this document, the applicant satisfied Land Development Code §165-9A(3)'s requirements for providing and maintaining adequate and appropriate utilities, fire protection, drainage, parking and loading and other necessary site improvements.

4. The Board finds that, based on Exhibits 2, 5, and 9, the applicant satisfied Land Development Code §165-9A(4)'s requirements regarding the proposed use being appropriate for the location in which it is sought because it conforms to the general physical development pattern of the immediate area.

V. Decision

The Board finds that the project meets the requirements for a Land Development Permit for a Major Site Development, Conditional Use, and Major SLODA Modification and therefore, the Board grants the Land Development Permit for the proposed project.

VI. General Permit Requirements:

A. This permit does not relieve the applicant from any other state or federal permits that may be required for the project.

B. Prior to construction, the applicant should contact the Code Enforcement Office and Engineering Office for any additional permits that may be required.

C. Applicant must commence construction within one year from the date of approval and complete the project by June 16, 2028, unless extensions of time are granted per the provisions of Chapter 165-113E.

D. No certificate of occupancy for any structure will be issued by the Code Enforcement Division until the property for which the certificate is sought is in compliance with all applicable regulations, including but not limited to building, zoning, and stormwater requirements. A temporary certificate of occupancy may be issued when necessary under the provisions of § 165-113G of the City's Land Development Code.

E. Upon completion, a digital as-built plan or plans shall be submitted to the Code Enforcement Officer. Additionally, a certificate of compliance stamped by a registered professional engineer or a registered land surveyor must be submitted to the Code Enforcement Office indicating that the site development has been completed in accordance with the approved revised plan.

F. No change shall be made to a property approved for a conditional use that would cause the property to fail to comply with the details of the Board's approval under the standards of §165-9A, unless approved by the Planning Board through a review of the changed conditional use.

(a) Building details. Changes to building elevations which impact the elements reviewed and approved by the Board may only be approved by the Planning Board. Changes to architectural details not within the scope of § **165-9A(4)** do not require Planning Board approval.

(b) Traffic analysis. Changes to trip generation or peak hour of generation do not require Planning Board approval if the following standards are met as determined by the Code Enforcement Officer in consultation with the City Engineer:

(1) The number of trips during the peak hour does not increase.
(2) The peak hour does not change to a different hour.
(3) The peak hour does not change from a weekday to a weekend day, or vice versa.

G. Conditional uses which are discontinued for more than 12 consecutive months are deemed abandoned.

Failure to comply with the conditions listed above constitutes a violation of the Bangor Land Development Code as prescribed in Chapter 165-10G.

This If you should have any questions or desire further information, please do not hesitate to give the Planning Division a call at 207.992.4280.

Sincerely,

City of Bangor Planning Board

CC: City of Bangor Planning Division

City of Bangor Code Enforcement Division

Building Permit and Certificate of Occupancy Checklist

Before applying for a Building Permit:

- Please contact the Code Enforcement and Engineering Departments for any other permits that may be necessary.
- Please contact the Engineering Department for an E-911 address.

Before applying for a Certificate of Occupancy:

- Digital as-built plan or plans shall be submitted to the Code Enforcement Officer. Additionally, a certificate of compliance stamped by a registered professional engineer or a registered land surveyor must be submitted to the Code Enforcement Office indicating that the site development has been completed in accordance with the approved revised plan.

CITY OF BANGOR
LAND DEVELOPMENT PERMIT APPLICATION

Permit No.: _____

Date: _____

Site Development Plan: ✓ *Conditional Use: ✓ *Both: ✓

Subdivision Development: _____ *Preliminary: _____ Final: _____

*Mobilehome Park: _____

Applicant: Bangor Housing Development Corporation Telephone No.: 207-357-1280

Address: 86 Davis Road, Bangor, ME 04401

Location of Site: 205 Corporate Drive, Bangor, ME 04401 Map: R25 Lot: 001-A

Watershed: Sucker Brook Total Area Proposed to be Disturbed: 1.95 acres

Owner of Site if different from applicant: City Of Bangor Zoning District: G&ISD and T&S

Address: 73 Harlow Street, Bangor 04401

Primary Contact Person: Cindy Witas, cwitas@bangorhousing.org

Description of interest of applicant in site, if not owner (e.g., owner, lease, option, purchase & sales agreement): Option to Purchase If not owner include copy of said agreement

Describe proposed use and indicate floor area (If combination of uses, give floor area devoted to each):

30-unit Permanent Supportive Housing with a total floor area of 19,100 square feet.

LID techniques help retain stormwater on site. They include such things as pervious pavement, rain gardens, bioretention cells, and infiltration systems.

Were LID techniques used on this project? Yes If not, why? _____

Projected Starting Date: August 2026 Projected Completion Date: August 2027

Signature of applicant(s) or agent: _____ Printed Name: Michael Myatt

Submittal Requirements

Submittal Requirements of development types are described in the Land Development Code for:

1. Site Development Plan, Chapter 165, Article XVI, Section 112
2. Subdivisions, Chapter 165, Article XVIII, Sections 126 and 128
3. Mobilehome Parks, Chapter 165, Article XVIII, Section 19

Processing Fees: _____ Advertising Fees: _____

A COMPLETED APPLICATION FORM, PLAN SUBMITTALS, EVIDENCE OF STANDING, PROCESSING AND ADVERTISING FEES ARE ALL REQUIRED IN ORDER TO HAVE A COMPLETE APPLICATION.

Date Received by Planning Division Office: _____

Decision and reason of Code Enforcement Office for Conditional Use: _____

Action taken by Planning Board: _____

* Any advertising costs above the amount listed in Schedule of Fees must be paid by applicant

* There is no guarantee a project will be on a certain Planning Board meeting; agenda assignments depend on timing of application submission and extent of application completeness

ATTACHMENT 6

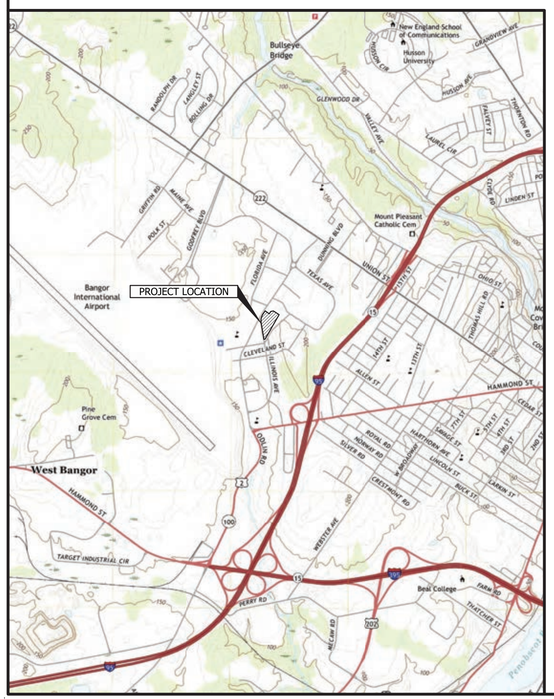
REVISED PLAN SET

SME
SEVEE & MAHER
ENGINEERS

YELLEN PINES
BANGOR HOUSING DEVELOPMENT CORPORATION
205 CORPORATE DRIVE
BANGOR, MAINE

TITLE	DWG NO
COVER SHEET	
GENERAL NOTES, LEGEND, AND ABBREVIATIONS	C-100
EXISTING CONDITIONS AND DEMOLITION PLAN	C-101
SITE OVERVIEW PLAN	C-102
SITE LAYOUT AND UTILITY PLAN	C-103
SITE GRADING AND DRAINAGE PLAN	C-104
EROSION AND SEDIMENTATION CONTROL PLAN	C-105
EROSION CONTROL NOTES AND DETAILS	C-300
SECTIONS AND DETAILS	C-301
SECTIONS AND DETAILS	C-302
SECTIONS AND DETAILS	C-303
STORMWATER MANAGEMENT PLAN PRE-DEVELOPMENT CONDITIONS	D-100
STORMWATER MANAGEMENT PLAN POST-DEVELOPEMENT CONDITIONS	D-101
PLANTING & SITE LAYOUT PLAN	L101
SITE DETAIL	L200
TOPOGRAPHIC SURVEY	

LOCATION MAP



APPLICANT/PROJECT OWNER

BANGOR HOUSING
DEVELOPMENT CORPORATION
86 DAVIS ROAD
BANGOR, ME 04401
(207) 942-6365

CIVIL ENGINEER

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND, ME 04021
(207) 829-5016

SURVEYOR

PLISGA & DAY LAND SURVEYING
72 MAIN STREET
BANGOR, ME 04401
(207) 947-0019

WETLAND SPECIALIST

WATERSHED RESOURCE CONSULTANTS, LLC
1366 STATE HIGHWAY 102, #6
BAR HARBOR, ME 04609
(207) 944-7288

LANDCAPE ARCHITECT

SASHIE MISNER
LANDSCAPE ARCHITECTURE, LLC
72 WALTON STREET
PORTLAND, MAINE 04103
(207) 406-0734

SME
SEVEE & MAHER
ENGINEERS

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

STATE OF MAINE
DANIEL J. DIFFIN
11841
LICENSED PROFESSIONAL ENGINEER

C:\Users\jpm\OneDrive - SME\SHARE\POINT\Users\ Turgeon - Bangor Housing\Plans\COVER.dwg, C-000, 5/1/2026 11:42 AM, jpm

GENERAL SITE NOTES:

1. EXISTING SITE FEATURES AND TOPOGRAPHY FROM GPS SURVEY PERFORMED BY PLISGA & DAY LAND SURVEYORS, BANGOR, MAINE DURING THE MONTH OF JANUARY, 2026. ADDITIONAL TOPOGRAPHY OUTSIDE OF SURVEY LIMITS IS LIDAR FROM MAINE GIS DATA CATALOG. HORIZONTAL DATUM: ME WEST STATE PLANE COORDINATE SYSTEM NAD 1983. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988.
2. NATURAL RESOURCE INFORMATION FROM WATERSHED RESOURCE CONSULTANTS, LLC DATED JANUARY 14, 2025.
3. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO ENGINEER. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION IS NOT GUARANTEED. VERIFY SITE CONDITIONS INCLUDING TEST PITS FOR LOCATIONS AND INVERTS OF UTILITIES AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING WITH THAT PORTION OF THE WORK.
4. AERIAL IMAGE FROM GOOGLE EARTH DATED 9/11/2025.
5. EXCAVATE AND STOCKPILE ON-SITE TOPSOIL. TOPSOIL IS TO REMAIN ON THE PROPERTY OF THE OWNER DURING CONSTRUCTION, AND SHALL NOT BE REMOVED FROM THE SITE.
6. PAVEMENT EDGES SHALL BE TRUE TO LINE. SAWCUT EXISTING PAVEMENT IN SMOOTH STRAIGHT LINE WHERE NEW PAVEMENT JOINS, PROVIDE TACK COAT LAYER AS SPECIFIED.
7. THE PROPERTY IS LOCATED OUTSIDE OF THE 100-YEAR FLOOD ZONE.

DIG SAFE NOTES:

PRIOR TO EXCAVATION, VERIFY THE UNDERGROUND UTILITIES, PIPES, STRUCTURES AND FACILITIES. PROVIDE THE FOLLOWING MINIMUM MEASURES:

1. PRE-MARK THE BOUNDARIES OF YOUR PLANNED EXCAVATION WITH WHITE PAINT, FLAGS OR STAKES, SO UTILITY CREWS KNOW WHERE TO MARK THEIR LINES.
2. CALL DIG SAFE, AT 811, AT LEAST THREE BUSINESS DAYS - BUT NO MORE THAN 30 CALENDAR DAYS - BEFORE STARTING WORK. DO NOT ASSUME SOMEONE ELSE WILL MAKE THE CALL.
3. IF BLASTING, NOTIFY DIG SAFE AT LEAST ONE BUSINESS DAY IN ADVANCE.
4. WAIT THREE BUSINESS DAYS FOR LINES TO BE LOCATED AND MARKED WITH COLOR-CODED PAINT, FLAGS OR STAKES. NOTE THE COLOR OF THE MARKS AND THE TYPE OF UTILITIES THEY INDICATE. TRANSFER THESE MARKS TO THE AS-BUILT DRAWINGS.
5. CONTACT THE LANDOWNER AND OTHER "NON-MEMBER" UTILITIES (WATER, SEWER, GAS, ETC.). FOR THEM TO MARK THE LOCATIONS OF THEIR UNDERGROUND FACILITIES. TRANSFER THESE MARKS TO THE AS-BUILT DRAWINGS.
6. RE-NOTIFY DIG SAFE AND THE NON-MEMBER UTILITIES IF THE DIGGING, DRILLING OR BLASTING DOES NOT OCCUR WITHIN 30 CALENDAR DAYS, OR IF THE MARKS ARE LOST DUE TO WEATHER CONDITIONS, SITE WORK ACTIVITY OR ANY OTHER REASON.
7. HAND DIG WITHIN 18 INCHES IN ANY DIRECTION OF ANY UNDERGROUND LINE UNTIL THE LINE IS EXPOSED. MECHANICAL METHODS MAY BE USED FOR INITIAL SITE PENETRATION, SUCH AS REMOVAL OF PAVEMENT OR ROCK.
8. DIG SAFE REQUIREMENTS ARE IN ADDITION TO CITY AND/OR STATE DOT STREET OPENING PERMIT REQUIREMENTS.
9. FOR COMPLETE DIG SAFE REQUIREMENTS, CALL THE PUBLIC UTILITIES COMMISSION (PUC) AT 1-800-452-4699 OR VISIT WWW.STATE.ME.US/MPUC
10. IF YOU DAMAGE, DISLOCATE OR DISTURB ANY UNDERGROUND UTILITY LINE, IMMEDIATELY NOTIFY THE AFFECTED UTILITY. IF DAMAGE CREATES SAFETY CONCERNS, CALL THE FIRE DEPARTMENT AND TAKE IMMEDIATE STEPS TO SAFEGUARD HEALTH AND PROPERTY.
11. ANY TIME AN UNDERGROUND LINE IS DAMAGED OR DISTURBED OR IF LINES ARE IMPROPERLY MARKED, YOU MUST FILE AN INCIDENT REPORT WITH THE PUC FOR AN INCIDENT REPORT FORM VISIT WWW.STATE.ME.US/MPUC OR CALL THE PUC AT 1-800-452-4699.

GRADING NOTES:

1. ADD 6" LOAM, SEED AND MULCH TO DISTURBED AREAS UNLESS OTHERWISE NOTED. PROVIDE EROSION CONTROL MESH ON ALL SLOPES 3:1 OR STEEPER, AND ALONG DITCH CHANNELS.
2. MAINTAIN TEMPORARY EROSION CONTROL MEASURES FOR THE FULL DURATION OF CONSTRUCTION. INSPECT WEEKLY AND AFTER EACH STORM AND REPAIR AS NEEDED. PLACE IN AREA OF LOW EROSION POTENTIAL, AND STABILIZE WITH SEED AND MULCH.
3. PLACE TEMPORARY SOIL STABILIZATION WITHIN 14 DAYS OF INITIAL DISTURBANCE. PLACE PERMANENT SOIL STABILIZATION WITHIN 7 DAYS OF FINAL GRADING.

TYPICAL ABBREVIATIONS:

ACCMP	ASPHALT COATED CMP	EA	EACH	NITC	NOT IN THIS CONTRACT
ACP	ASBESTOS CEMENT PIPE	EG	EXISTING GROUND OR GRADE	NTS	NOT TO SCALE
AC	ACRE	ELEC	ELECTRIC	N/F	NOW OR FORMERLY
AGG	AGGREGATE	EL	ELEVATION	NO OR #	NUMBER
ALUM	ALUMINUM	ELB	ELBOW		
APPD	APPROVED	EOP	EDGE OF PAVEMENT	OC	ON CENTER
APPROX	APPROXIMATE	EQUIP	EQUIPMENT	OD	OUTSIDE DIAMETER
ARMH	AIR RELEASE MANHOLE	EST	ESTIMATED		
ASB	ASBESTOS	EXC	EXCAVATE	PC	POINT OF CURVE
ASP	ASPHALT	EXIST	EXISTING	PD	PERIMETER DRAIN
AUTO	AUTOMATIC			PI	POINT OF INTERSECTION
AUX	AUXILIARY	FI	FIELD INLET	PIV	POST INDICATOR VALVE
AVE	AVENUE	FG	FINISH GRADE	PJ	PACK JOINT
AZ	AZIMUTH	FBRGL	FIBERGLASS	PT	POINT OF TANGENT
		FDN	FOUNDATION	PERF	PERFORATED
BCCMP	BITUMINOUS COATED CMP	FLEX	FLEXIBLE	PP	POWER POLE
BM	BENCH MARK	FLG	FLANGE	PSI	POUNDS PER SQUARE INCH
BIT	BITUMINOUS	FLR	FLOOR	PVC	POLYVINYL CHLORIDE
BLDG	BUILDING	FPS	FEET PER SECOND	PVMT	PAVEMENT
BOT	BOTTOM	FT OR '	FEET		
BRG	BEARING	FTG	FOOTING	QTY	QUANTITY
BV	BALL VALVE				
		GA	GAUGE	RCP	REINFORCED CONCRETE PIPE
CB	CATCH BASIN	GAL	GALLON	ROW	RIGHT OF WAY
CEN	CENTER	GALV	GALVANIZED	RAD	RADIUS
CEM LIN	CEMENT LINED	GPD	GALLONS PER DAY	REQD	REQUIRED
CMP	CORRUGATED METAL PIPE	GPM	GALLONS PER MINUTE	RT	RIGHT
CO	CLEAN OUT			RTE	ROUTE
CF	CUBIC FEET	HDPE	HIGH DENSITY POLYETHYLENE		
CFS	CUBIC FEET PER SECOND	HORIZ	HORIZONTAL	S	SLOPE
CI	CAST IRON	HP	HORSEPOWER	SCH	SCHEDULE
CL	CLASS	HYD	HYDRANT	SF	SQUARE FEET
CONC	CONCRETE			SHT	SHEET
CONST	CONSTRUCTION	ID	INSIDE DIAMETER	SMH	SANITARY MANHOLE
CONTR	CONTRACTOR	IN OR "	INCHES	ST	STREET
CS	CURB STOP	INV	INVERT	STA	STATION
CTR	CENTER	INV EL	INVERT ELEVATION	SY	SQUARE YARD
CTS	COPPER TUBING SIZE				
CU	COPPER	LB	POUND	TAN	TANGENT
CY	CUBIC YARD	LC	LEACHATE COLLECTION	TDH	TOTAL DYNAMIC HEAD
		LD	LEAK DETECTION	TEMP	TEMPORARY
D	DEGREE OF CURVE	LF	LINEAR FEET	TYP	TYPICAL
DBL	DOUBLE	LOC	LOCATION		
DEG OR °	DEGREE	LT	LEACHATE TRANSPORT	UD	UNDERDRAIN
DEPT	DEPARTMENT				
DI	DUCTILE IRON	MH	MANHOLE	V	VOLTS
DIA OR Ø	DIAMETER	MJ	MECHANICAL JOINT	VA TEE	VALVE ANCHORING TEE
DIM	DIMENSION	MATL	MATERIAL	VERT	VERTICAL
DIST	DISTANCE	MAX	MAXIMUM		
DN	DOWN	MFR	MANUFACTURE	WG	WATER GATE
DR	DRAIN	MIN	MINIMUM	W/	WITH
DWG	DRAWING	MIP	MALE IRON PIPE	W/O	WITHOUT
		MISC	MISCELLANEOUS		
		MON	MONUMENT	YD	YARD

UTILITY NOTES:

1. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION IS NOT GUARANTEED. VERIFY SITE CONDITIONS INCLUDING TEST PITS FOR LOCATIONS AND INVERTS OF UTILITIES AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING WITH THAT PORTION OF THE WORK.
2. COORDINATE WORK ON UTILITY LINES OR WITHIN ROAD RIGHT-OF-WAY WITH THE UTILITY COMPANIES AND CITY ROAD DEPARTMENT AND MAINE DOT.
3. ALL PIPING AND DRAINAGE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BANGOR MUNICIPAL STANDARDS.
4. WATER LINES TO BE INSTALLED WITH BANGOR WATER DISTRICT SPECIFICATIONS.
5. PLACE 4-FOOT WIDE BY 2-INCH THICK TRENCH INSULATION CENTERED OVER SEWER LINES WHERE DEPTH OF COVER IS LESS THAN 5-FEET.
6. SLOPE CONDUITS AWAY FROM BUILDING TO HAND HOLE OF UTILITY POLE TO AVOID GROUNDWATER SEEPAGE INTO BUILDING.

ZONING NOTES:

PROPERTY OWNER: CITY OF BANGOR
73 HARLOW STREET
BANGOR, MAINE

DEVELOPER/APPLICANT: BANGOR HOUSING DEVELOPMENT CORPORATION
86 DAVIS ROAD
BANGOR, MAINE

1. LOT INFORMATION - VOL/PAGE/MAP/LOT: 8107/215/R25/001-A
2. ZONING DISTRICT: GOVERNMENT AND INSTITUTIONAL SERVICES DISTRICT (G&IS) AND TECHNOLOGY AND SERVICE DISTRICT (T&S)
3. PROPOSED USE: TRANSITIONAL HOUSING, PERMANENT SUPPORTIVE HOUSING
4. ZONING REQUIREMENTS: DIMENSIONAL STANDARDS TO BE IN ACCORDANCE WITH THE APPROVED ZONE AS SHOWN BELOW:

	CONDITIONAL USE	PROVIDED
MINIMUM LOT AREA	None	
MAXIMUM LOT COVERAGE	30%	12.8%
MINIMUM LOT WIDTH	None	151 FT
FRONT SETBACK	30 FT	30 FT
SIDE SETBACK	20 FT	>20 FT
REAR SETBACK	30 FT	>30 FT
MAXIMUM BUILDING HEIGHT	80 FT	<80 FT
MAXIMUM FLOOR AREA RATIO	2.0	1

5. THERE ARE NO WETLANDS PRESENT ON SITE.
6. SITE UTILITIES WILL BE UNDERGROUND AND PROVIDED AS FOLLOWS:

ELECTRIC/COMMUNICATIONS	NEW SERVICE
WATER	NEW " WATER SERVICE, AND NEW " DIA SPRINKLER WATER SERVICE
SEWER	NEW " SERVICE CONNECTION
GAS	NEW SERVICE CONNECTION

7. EXISTING BUILDING AREA: 0 SF PROPOSED BUILDING AREA: 19,100 SF
8. PARKING REQUIREMENTS:

REQUIRED	PROVIDED
1 SPACE PER 6 CLIENTS TO BE HOUSED (5 PARKING SPACES) PLUS 1 SPACE PER STAFF PERSON TO BE ON PREMISES (4 PARKING SPACES)	11 PARKING SPACES

9. OFF STREET LOADING REQUIREMENTS:

REQUIRED:	
1 OFF STREET LOADING SPACE FOR APARTMENTS WITH 10 OR MORE UNITS (1 LOADING SPACE)	1 OFF STREET LOADING SPACE

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	BUILDING	
	CONCRETE	
	EDGE OF PAVEMENT	
	CURB	
100	CONTOUR	100
	SPOT GRADE	114.23
	STORM DRAIN	SD
	UNDERDRAIN	UD
	CLEANOUT	
SS	SEWER LINE	S
UGU	UNDERGROUND UTILITY	UGU
OHU	OVERHEAD UTILITY	
	UTILITY POLE	
	LIGHT POLE	
S	SEWER MANHOLE	
MH	DRAINAGE MANHOLE	
	CATCH BASIN	
	WATER VALVE	
	SIGN	
	GUARDRAIL	
	DETECTABLE WARNING PAD	
	DEMOLITION AREA	
	SILT FENCE	
	RIPRAP	
	STABILIZED CONSTRUCTION ENTRANCE/EXIT	

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STATE OF MAINE · DANIEL P. DIFFIN · 11841 · LICENSED PROFESSIONAL ENGINEER

BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
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DESIGN BY:	AJD
DRAWN BY:	ZCF
DATE:	5/28/2026
CHECKED BY:	DPD
LMN:	NONE
CTB:	SME-STD.CTB
JOB NO.	251269
DWG FILE	GEN-NOTES
	C-100

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N/F
CITY OF BANGOR
BOOK 1419, PAGE 335
TAX MAP R25 - LOT 20

N/F
CITY OF BANGOR
BOOK 2148, PAGE 67
TAX MAP R25 - LOT 1A

GRANITE MONUMENT, FOUND

PROVIDE INSERTION VALVES AND REMOVE WATER LINE IN AREAS OF WORK (TYP)

EASEMENT TO BANGOR WATER DISTRICT BOOK 9770, PAGE 111

REMOVE PAVED APRON

MAINE AVENUE

18" CMP
INV 156.84

PROVIDE INSERTION VALVES AND REMOVE WATER LINE IN AREAS OF WORK (TYP)

NOW OR FORMERLY OF BANGOR WATER DISTRICT
BOOK 2211, PAGE 769
CITY OF BANGOR
TAX MAP R25 - LOT 1C

CB#1
RIM 157.96"

N 34°24'29" E
101.25'

12" CPP
INV 156.92

12" CPP
INV 157.58

SEWER MANHOLE-SMH#1
RIM 161.34

FIRE HYDRANT

RADIUS: 340.0'
ARC LENGTH: 259.17'

30" CPP
INV 154.15

¾" DIAMETER REBAR WITH CAP "PLISGA & DAY PLS 2404", FOUND

20' FRONT PARKING SETBACK

30' FRONT BUILDING SETBACK

REFER TO A NOTICE OF LAYOUT AND TAKING BOOK 2946, PAGE 200
REFER ALSO TO PLAN D92-83

UTILITY POLE (TYP)

REMOVE ABANDONED 10" DIA WATER LINE

REMOVE ABANDONED 8" DIA WATER LINE

REMOVE GRAVEL TURNAROUND AREA

N 54°29'57" W
140.02'

N/F
OHI
BOOK 1419, PAGE 335
TAX MAP R25 - LOT 21

12" CMP
INV 156.61

REMOVE EXISTING CULVERT

12" CMP
INV 156.51

20' SIDE BUILDING SETBACK

5' SIDE/REAR PARKING SETBACK

¾" DIAMETER REBAR WITH CAP "PLISGA & DAY PLS 2404", FOUND

N 34°21'11" E
79.07'

S 79°21'11" W
72.65'

ABANDONED 8" DIA WATER LINE

XX" DIA WATER MAIN

ABANDONED 12" DIA WATER LINE

16" DIA WATER MAIN

WATER GATE VALVE

REMOVE VEGETATION IN AREA OF DITCH IMPROVEMENTS

EXISTING VEGETATED DRAINAGE SWALE

CONCRETE WALKWAY

¾" DIAMETER REBAR WITH CAP "PLISGA & DAY PLS 2404", FOUND

¾" DIAMETER REBAR WITH CAP "PLISGA & DAY PLS 2404", FOUND

FENCE

N 09°19'01" W
511.16'

CORPORATE DRIVE

REMOVE VEGETATION IN AREA OF NEW ACCESS DRIVE

ABANDONED 10" DIA WATER LINE

N/F
CITY OF BANGOR
PORTION OF
BOOK 8107, PAGE 215
FOR CONVEYANCE TO BANGOR HOUSING AUTHORITY
AREA: 5.064 ACRES
CITY OF BANGOR
TAX MAP R25 - LOT 1A

N 34°29'57" W
151.21'

TREELINE (TYP)

INV. 8 INCH CAST IRON, ELEV.: 161.96'

CULVERT - ABANDONED 8" CAST IRON WATER LINE NOW USED AS STORM DRAIN

33.50'
S 80°43'59" W

789.84'
S 30°03'55" W

INV. 24 INCH CONCRETE, ELEV.: 165.33'

CULVERT

SMH #2
RIM 174.53

TEXAS AVENUE
SHOWN ON MAP FILE D655-76
NO LAYOUT WAS FOUND FOR THIS PORTION OF ROAD

N 30°03'55" E
377.37'

INV. 36 INCH CONCRETE, ELEV.: 165.64'

INV. 15 INCH CPP, ELEV.: 168.15'

¾" DIAMETER REBAR FOUND

S 30°03'55" E
559.48'

S 47°26'55" E
91.48'

N/F
CITY OF BANGOR
REMAINING PORTION OF
BOOK 8107, PAGE 215
REFER TO BOOK 2156, PAGE 449
CITY OF BANGOR
TAX MAP R25 - LOT 1A

REFER TO A LEASEHOLD / MORTGAGE MODIFICATION AGREEMENT BETWEEN PENOBSCOT COMMUNITY HEALTH CENTER & THE CITY OF BANGOR
BOOK 17445, PAGE 98
PARCEL ONE
CITY OF BANGOR
TAX MAP R25 - LOT 17

PENOBSCOT

REFER

15 0 30 60 FEET

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STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED PROFESSIONAL ENGINEER

BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

EXISTING CONDITIONS AND DEMOLITION PLAN

SME
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Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	AJD
DRAWN BY:	SJM
DATE:	5/2026
CHECKED BY:	DPD
LMN:	EXCON
CTB:	SME-STD.CTB

JOB NO. 251269 DWG FILE BASE

C-101

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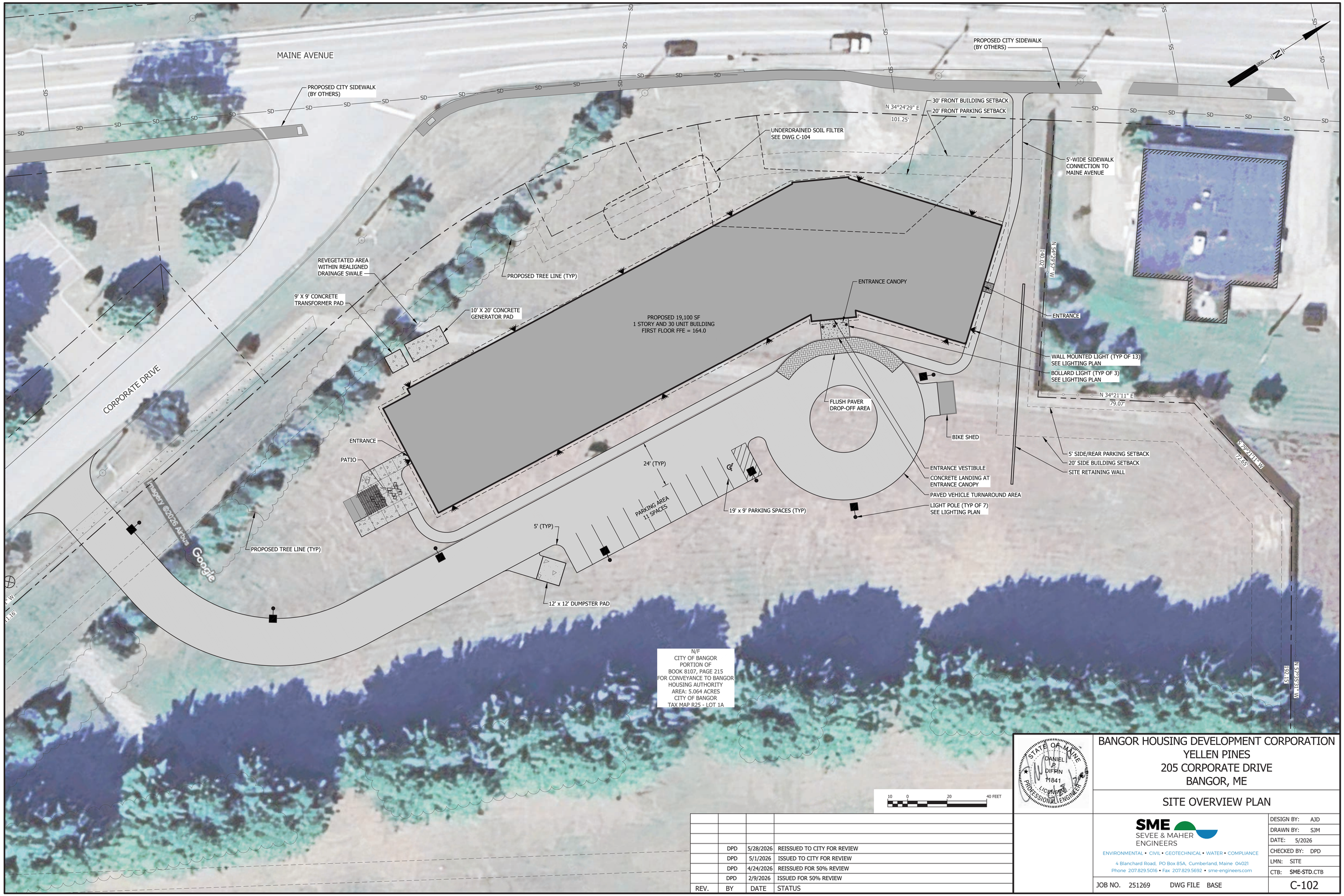

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SITE OVERVIEW PLAN

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CTB:	SME-STD.CTB
JOB NO.	251269
DWG FILE	BASE
	C-102

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MAINE AVENUE

PROPOSED CITY SIDEWALK BY OTHERS

CB#1
RIM 157.96"

PROVIDE CURB TO MATCH EXISTING (BY OTHERS)

PROPOSED 6'-WIDE CITY SIDEWALK (BY OTHERS)

CORE HOLE AND GROUT NEW SEWER INLET

UNDERDRAINED SOIL FILTER
SEE DWG C-104

20' FRONT PARKING SETBACK
30' FRONT BUILDING SETBACK

CONNECT TO PROPOSED CITY SIDEWALK

R5' (TYP)

SEWER MANHOLE
SMH#1
RIM 161.34
INV IN 151.1
(EX) INV OUT 151.0

SMH-2 4' SEWER MANHOLE
RIM EL 159.5
INV IN 152.9
INV OUT 152.8

5'-WIDE PAVED WALKWAY (TYP)

6" DIA SANITARY SEWER LINE

6" SANITARY SEWER LINE
INV 153.5

N 415823.16
E 904705.35

EXISTING FIRE HYDRANT

EXISTING UTILITY POLE (TYP)

CONNECT TO EXISTING MAIN
COORDINATE WITH BANGOR WATER DISTRICT

TAPPING SLEEVE AND GATE VALVE FOR 4" DIA DOMESTIC WATER SERVICE

TAPPING SLEEVE AND GATE VALVE FOR 6" DIA SPRINKLER SERVICE

UNDERGROUND ELECTRICAL CONDUIT AND COMMUNICATIONS

10' X 20' CONCRETE GENERATOR PAD

9' X 9' CONCRETE TRANSFORMER PAD

PROVIDE ELECTRICAL HANDHOLE

MAIN ENTRANCE/EXIT

CANOPY

BUILDING ENTRANCE/EXIT

5'-WIDE PAVED WALKWAY (TYP)

PAVER ENTRANCE
SEE LANDSCAPE PLAN L101

PROPOSED 19,100 SF
1 STORY AND 30 UNIT BUILDING
FIRST FLOOR FFE = 164.0

ROOF DRIP LINE FILTER (TYP)
SEE DWG C-303

N 415508.94
E 904617.66

4" DIA DOMESTIC WATER SERVICE
COORDINATE BUILDING ENTRANCE
WITH MECHANICAL DWGS
INV 158.5

6" DIA SPRINKLER SERVICE
COORDINATE BUILDING ENTRANCE
WITH MECHANICAL DWGS
INV 158.5

BUILDING ENTRANCE/EXIT

EXISTING ABANDONED 8" DIA WATER LINE

EXISTING 12" DIA WATER MAIN

EXISTING 12" DIA WATER LINE

EXISTING 16" DIA DI WATER

WATER GATE VALVE

24'-WIDE PAVED DRIVE

DRAINAGE MANHOLE (TYP)

2- 1" DIA ELECTRICAL CONDUIT

R15'

R13'

R18'

R5'

R1'

R75'

R99'

11 TOTAL SPACES

18' (TYP)

NO PARKING
ACCESSIBLE PARKING SPACE

335 LF OF VERTICAL GRANITE CURB (TYP)
SEE DWG C-301

WALL MOUNTED LIGHT (TYP OF 13)
SEE LIGHTING PLAN

LIGHT POLE (TYP OF 7)
SEE LIGHTING PLAN

OUTDOOR PATIO SPACE
SEE DWG L101

CATCH BASIN (TYP)

12'x12' DUMPSTER ENCLOSURE
WITH SCREEN FENCE
SEE DWG C-302

R15.5'

R4'

R41'

34'

R7'

R12'

BIKE SHED

BOLLARD LIGHT (TYP OF 3)
SEE LIGHTING PLAN

24'-WIDE PAVED DROP-OFF CIRCLE

FIRE TRUCK CLEARANCE RADIUS

5' SIDE/REAR PARKING SETBACK

20' SIDE BUILDING SETBACK

RETAINING WALL (TYP)

CORPORATE DRIVE

EXISTING DRAINAGE SWALE

EXISTING 10" DIA WATER LINE

8" CAST IRON
INV 161.96

CULVERT - ABANDONED 8" CAST IRON WATER LINE
NOW USED AS STORM DRAIN

INV. 24 INCH CONCRETE, ELEV.: 165.33'

CULVERT

TEXAS AVENUE
SHOWN ON MAP FILE D655-76
NO LAYOUT WAS FOUND FOR THIS PORTION OF ROAD

INV. 36 INCH CONCRETE, ELEV.: 165.64'

INV. 15 INCH CPP, ELEV.: 168.15'

¾" DIAMETER REBAR FOUND

15 0 30 60 FEET

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DWG FILE	BASE
	C-103

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MAINE AVENUE

CORPORATE DRIVE

112 LF OF 15" DIA SD PIPE
INV OUT 155.5
4" INV OUT 155.5
4" INV OUT 154.25
N 34°24'29" E
101.25'
SMH 2
RIPRAP INLET/OUTLET PROTECTION (TYP)
INV IN 157.7
12" INV OUT 158.0
152 LF OF 12" DIA SD PIPE
GRADE SIDEWALK AT 5% MINIMUM
N 54°29'57" W
140.02'
TW 164.0
BW 163.0
RETAINING WALL
TW 168.0
BW 163.0
N 34°21'11" E
79.07'
S 79°21'11" W
72.55'
FI #2
RIM 161.5
4" INV IN 158.6
12" INV OUT 158.5
TW 172.5
BW 172.5
N 5°39'57" W
192.15'

RIP RAP OVERFLOW SPILLWAY EL 158.0
UNDERDRAIN SOIL FILTER BOTTOM EL 156.5
INV OUT 156.6
4'-WIDE ROOF DRIPLINE FILTER #2
4'-WIDE ROOF DRIPLINE FILTER #1
4'-WIDE ROOF DRIPLINE FILTER #4
4'-WIDE ROOF DRIPLINE FILTER #3
TRANSITION FROM FLUSH TO VERTICAL CURB
TC 163.1
BC 163.1
PROPOSED 19,100 SF
1 STORY AND 30 UNIT BUILDING
FIRST FLOOR FFE = 164.0
TRANSITION FROM VERTICAL TO FLUSH CURB
FLUSH CURB
TC 163.5
BC 163.0
CB #3
RIM 162.3
12" INV OUT 159.3
TC 162.9
BC 162.4
10' X 20' CONCRETE GENERATOR PAD
EL 159.3
9' X 9' CONCRETE TRANSFORMER PAD
EL 159.3
INV OUT 157.5
DMH #2
RIM 159.8
12" INV IN 157.3
12" INV OUT 157.2
REALIGN EXISTING DRAINAGE SWALE AND REVEGETATE SEE LANDSCAPE PLANS
GRADE AREA AROUND MANHOLE AT 159.8 AND SLOPING AWAY
CB #1
RIM 161.5
12" INV IN 158.6
12" INV OUT 158.5
12" DIA CULVERT
L=43'
INV IN 158.4
INV OUT 158.0
CB #2
RIM 163.8
12" INV IN 158.1
12" INV OUT 158.1
DMH #1
RIM 164.0
4" INV IN 160.0
12" INV IN 157.9
12" INV OUT 157.9
TC 165.5
BC 165.0
PARKING AREA
11 SPACES
TC 163.6
BC 163.1
R15'
116'
DOUBLE 24" DIA CULVERT
INV IN 160.0
INV OUT 159.5
12' X 12' CONCRETE DUMPSTER PAD
EL 163.0
3H:1V SLOPE
PROVIDE EROSION CONTROL MATTING ON ALL SLOPES STEEPER THAN 6H:1V
SEE DWG C-301
FI #1
RIM 161.5
12" INV OUT 158.5
6'-WIDE DRAINAGE SWALE (TYP)

N/F
CITY OF BANGOR
PORTION OF
BOOK 8107, PAGE 215
FOR CONVEYANCE TO BANGOR HOUSING AUTHORITY
AREA: 5.064 ACRES
CITY OF BANGOR
TAX MAP R25 - LOT 1A

10 0 20 40 FEET

REV.	BY	DATE	STATUS
	DPD	5/28/2026	REISSUED TO CITY FOR REVIEW
	DPD	5/1/2026	ISSUED TO CITY FOR REVIEW
	DPD	4/24/2026	REISSUED FOR 50% REVIEW
	DPD	2/9/2026	ISSUED FOR 50% REVIEW

STATE OF MAINE
DANIEL P. DIPRIN
11841
LICENSED PROFESSIONAL ENGINEER

BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

SITE GRADING AND DRAINAGE PLAN

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	AJD
DRAWN BY:	SJM
DATE:	5/2026
CHECKED BY:	DPD
LMN:	SITE
CTB:	SME-STD.CTB

JOB NO. 251269 DWG FILE BASE

C-104

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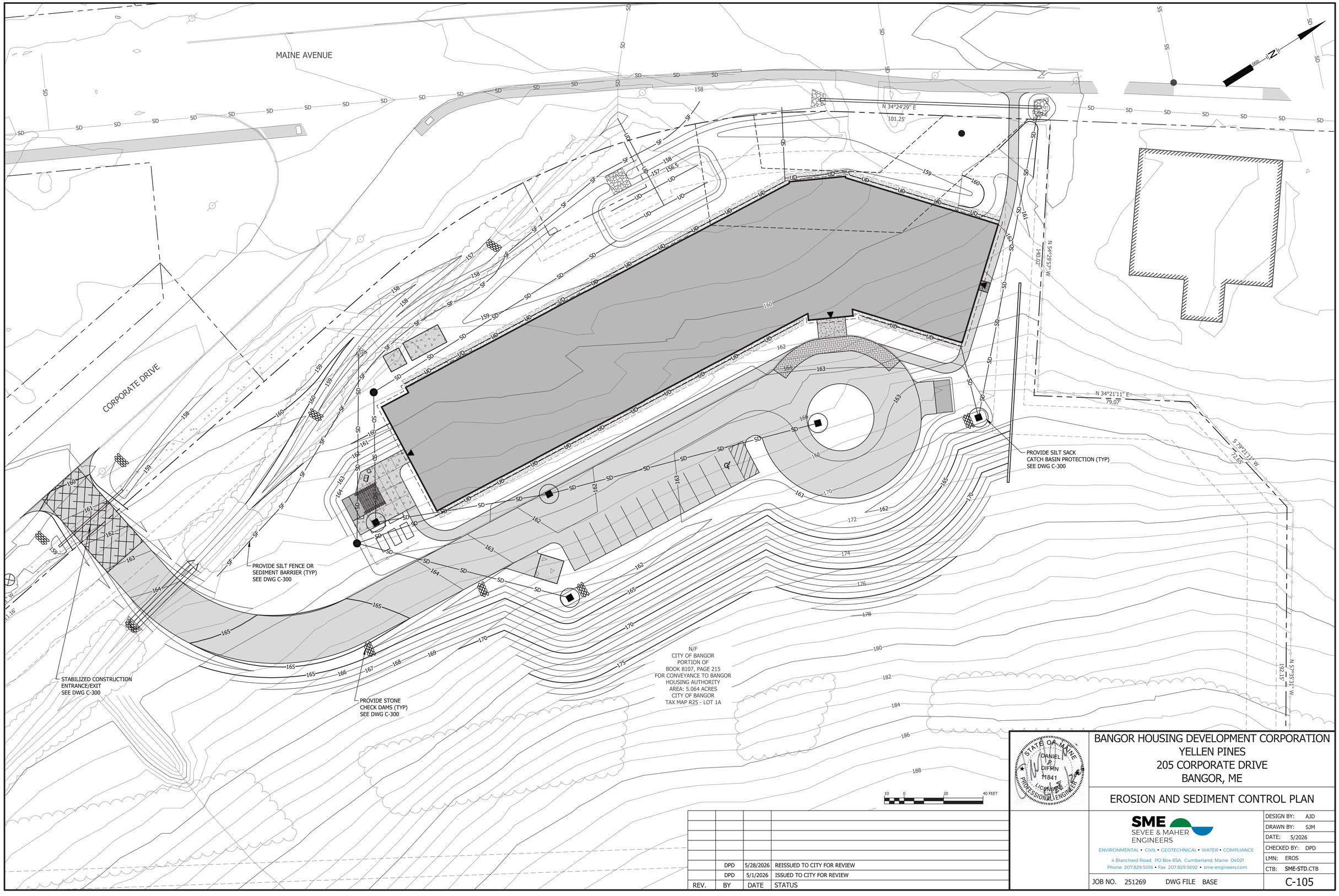

REV.	BY	DATE	STATUS
	DPD	5/28/2026	REISSUED TO CITY FOR REVIEW
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STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED PROFESSIONAL ENGINEER

BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

EROSION AND SEDIMENT CONTROL PLAN

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	AJD
DRAWN BY:	SJM
DATE:	5/2026
CHECKED BY:	DPD
LMN:	EROS
CTB:	SME-STD.CTB

JOB NO. 251269 DWG FILE BASE

C-105

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EROSION CONTROL NOTES:

A. GENERAL

1. All soil erosion and sediment control will be done in accordance with: (1) the Maine Erosion and Sediment Control Handbook: Best Management Practices, Maine Department of Environmental Protection (MEDEP), October 2016.

2. The site Contractor (to be determined) will be responsible for the inspection and repair/replacement/maintenance of all erosion control measures, disturbed areas, material storage areas, and vehicle access points until all disturbed areas are stabilized.

3. Disturbed areas will be permanently stabilized within 7 days of final grading. Disturbed areas not to be worked upon within 14 days of disturbance will be temporarily stabilized within 7 days of the disturbance.

4. In all areas, removal of trees, bushes and other vegetation, as well as disturbance of topsoil will be kept to a minimum while allowing proper site operations.

5. Any suitable topsoil will be stripped and stockpiled for reuse as directed by the Owner. Topsoil will be stockpiled in a manner such that natural drainage is not obstructed and no off-site sediment damage will result. In any event, stockpiles will not be located within 100 feet of wetlands and will be at least 50 feet upgradient of the stockpile's perimeter silt fence. The sideslopes of the topsoil stockpile will not exceed 2:1. Silt fence will be installed around the perimeter of all topsoil stockpiles. Topsoil stockpiles will be surrounded with siltation fencing and will be temporarily seeded with Aroostook rye, annual or perennial ryegrass within 7 days of formation, or temporarily mulched.

6. Winter excavation and earthwork will be completed so as to minimize exposed areas while satisfactorily completing the project. Limit exposed areas to those areas in which work is to occur during the following 15 days and that can be mulched in one day. All areas will be considered denuded until the subbase gravel is installed in roadway areas or the areas of future loam and seed have been loamed, seeded, and mulched.

   Install any added measures necessary to control erosion/sedimentation. The particular measure used will be dependent upon site conditions, the size of the area to be protected, and weather conditions.

   To minimize areas without erosion control protection, continuation of earthwork operations on additional areas will not begin until the exposed soil surface on the area being worked has been stabilized.

B. TEMPORARY MEASURES

1. STABILIZED CONSTRUCTION ENTRANCE/EXIT

   A crushed stone stabilized construction entrance/exit will be placed at any point of vehicular access to the site, in accordance with the detail shown on this sheet.

2. SILT FENCE

   a. Silt fence will be installed prior to all construction activity, where soil disturbance may result in erosion. Silt fence will be erected at locations shown on the plans and/or downgradient of all construction activity.

   b. Silt fences will be removed when they have served their useful purpose, but not before the upgradient areas have been permanently stabilized.

   c. Silt fences will be inspected immediately after each rainfall and at least daily during prolonged rainfall. They will be inspected if there are any signs of erosion or sedimentation below them. Any required repairs will be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, they will be replaced with a temporary crushed stone check dam.

   d. Sediment deposits will be removed after each storm event if significant build-up has occurred or if deposits exceed half the height of the barrier.

3. STONE CHECK DAMS

   Stone check dams should be installed before runoff is directed to the swale. Stone check dams will be installed in grass-lined swales and ditches during construction. Remove stone check dams when they have served their useful purpose, but not before upgradient areas have been permanently stabilized.

4. EROSION CONTROL MIX SEDIMENT BARRIER

   a. It may be necessary to cut, pack down, or remove tall grasses, brush, or woody vegetation to avoid voids and bridges that allow the washing away of fine soil particles.

   b. Where approved, erosion control mix sediment barriers may be used as a substitute for silt fence. See the details in this drawing set for specifications.

   c. Rock Filter Berms: To provide more filtering capacity or to act as a velocity check dam, a berm's center can be composed of clean crushed rock ranging in size from the french drain stone to riprap.

5. TEMPORARY SEEDING

   Stabilize disturbed areas that will not be brought to final grade and reduce problems associated with mud and dust production from exposed soil surface during construction with temporary vegetation.

6. TEMPORARY MULCHING

   Use temporary mulch in the following locations and/or circumstances:

   - In sensitive areas (within 100 feet of streams, wetlands and in lake watersheds) temporary mulch will be applied within 7 days of exposing spill or prior to any storm event.
   - Apply temporary mulch within 14 days of disturbance or prior to any storm event in all other areas.
   - Areas which have been temporarily or permanently seeded will be mulched immediately following seeding.
   - Areas which cannot be seeded within the growing season will be mulched for over-winter protection and the area will be seeded at the beginning of the growing season.
   - Mulch can be used in conjunction with tree, shrub, vine, and ground cover plantings.
   - Mulch anchoring will be used on slopes greater than 5 percent in late fall (past October 15), and over-winter (October 15 - April 15).

   The following materials may be used for temporary mulch:

   a. Hay or Straw material shall be air-dried, free of seeds and coarse material. Apply 2 bales/1,000 sf or 1.5 to 2 tons/acre to cover 90% of ground surface.

   b. Erosion Control Mix: It can be used as a stand-alone reinforcement:
      - 2-inches thick for slopes flatter than 3H:1V;
      - 4-inches thick for slopes greater than 3H:1V;
      - on slopes 2 horizontal to 1 vertical or less;
      - on frozen ground or forested areas; and
      - at the edge of gravel parking areas and areas under construction.

   c. Erosion control mix alone is not suitable:
      - on slopes with groundwater seepage;
      - at low points with concentrated flows and in gullies;
      - at the bottom of steep perimeter slopes exceeding 100 feet in length;
      - below culvert outlet aprons; and around catch basins and closed storm systems.

   d. Chemical Mulches and Soil Binders: Wide ranges of synthetic spray-on materials are marketed to protect the soil surface. These are emulsions that are mixed with water and applied to the soil. They may be used alone, but most often are used to hold wood fiber, hydro-mulches or straw to the soil surface.

   e. Erosion Control Blankets and Mats: Mats are manufactured combinations of mulch and netting designed to retain soil moisture and modify soil temperature. During the growing season (April 15th to November 1st) use mats indicated on drawings or North American Green (NAG) S75 (or mulch and netting) on:
      - the base of grassed waterways;
      - steep slopes (15 percent or greater); and
      - any disturbed soil within 100 feet of lakes, streams, or wetlands.

   During the late fall and winter (November 1st to April 15th) use heavy grade mats indicated on drawings for NAG SC250 on all areas noted above plus use lighter grade mats NAG S75 (or mulch and netting) on:
      - sideslopes of grassed waterways; and moderate slopes (between 8 and 15 percent).

C. TEMPORARY DUST CONTROL

To prevent the blowing and movement of dust from exposed soil surfaces, and reduce the presence of dust, use water or calcium chloride to control dusting by preserving the moisture level in the road surface materials.

D. CONSTRUCTION DE-WATERING

1. Water from construction de-watering operations shall be cleaned of sediment before reaching wetlands, water bodies, streams or site boundaries. Utilize temporary sediment basins, erosion control soil filter berms backed by staked hay bales, A Dirt Bag 55" sediment filter bag by ACF Environmental, or other approved Best Management Practices (BMP's).

2. In sensitive areas near streams or ponds, discharge the water from the de-watering operation into a temporary sediment basin created by a surrounding filter berm of uncompacted erosion control mix immediately backed by staked hay bales (see the site details). Locate the temporary sediment basin at lease 100 feet from the nearest water body, such that the filtered water will flow through undisturbed vegetated soil areas prior to reaching the water body or property line.

E. PERMANENT MEASURES

1. Riprapped Aprons: All storm drain pipe outlets and the inlet and outlet of culverts will have riprap aprons to protect against scour and deterioration.

2. Topsoil, Seed, and Mulch: All areas disturbed during construction, but not subject to other restoration (paving, riprap, etc.) will be loamed, limed, fertilized, seeded, and mulched.

   Seeded Preparation: Use stockpiled materials spread to the depths shown on the plans, if available. Approved topsoil substitutes may be used. Grade the site as needed.

   a. Seeding will be completed by August 15 of each year. Late season seeding may be done between August 15 and October 15. Areas not seeded or which do not obtain satisfactory growth by October 15, will be seeded with Aroostook Rye or mulched. After November 1, or the first killing frost, disturbed areas will be seeded at double the specified application rates, mulched, and anchored.

   PERMANENT SEEDING SPECIFICATIONS

Mixture:	Roadside (lbs/acre)	Lawn (lbs/acre)
Kentucky Bluegrass	20	55
White Clover	5	0
Creeping Red Fescue	20	55
Perennial Ryegrass	5	15

   b. Mulch in accordance with specifications for temporary mulching.

   c. If permanent vegetated stabilization cannot be established due to the season of the year, all exposed and disturbed areas not to undergo further disturbance are to have dormant seeding applied and be temporarily mulched to protect the site.

3. Ditches and Channels: All ditches on-site will be lined with North American Green S75 erosion control mesh (or an approved equal) upon installation of loam and seed.

F. WINTER CONSTRUCTION AND STABILIZATION

1. Natural Resource Protection: During winter construction, a double-row of sediment barriers (i.e., silt fence backed with hay bales or erosion control mix) will be placed between any natural resource and the disturbed area. Projects crossing the natural resource will be protected a minimum distance of 100 feet on either side from the resource.

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 will be considered to be denuded until seeded and mulched. Hay and straw mulch will be applied at a rate of twice the normal accepted rate.
   - Mulch will not be spread on top of snow.
   - After each day of final grading, the area will be properly stabilized with anchored hay or straw or erosion control matting.
   - Between the dates of November 1 and April 15, all mulch will be anchored by either mulch netting, emulsion chemical, tracking or wood cellulose fiber.

5. 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 4-inch layer of erosion control mix. This will be done within 24 hours of stocking and re-established prior to any rainfall or snowfall. Any soil stockpiles shall not be placed (even covered with mulch) within 100 feet from any natural resources. Sediment barriers should be installed downgradient of stockpiles. Stormwater shall be directed away from stockpiles.

6. Seeding: Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas will receive 4 inches of loam and seed at an application rate of three times the rate for permanent seeding. All areas seeded during the winter will be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75 percent catch) will be revegetated by replacing loam, seed, and mulch.

   If dormant seeding is not used for the site, all disturbed areas will be revegetated in the spring.

7. Maintenance: Maintenance measures will be applied as needed during the entire construction season. After each rainfall, snow storm, or period of thawing and runoff, and at least once a week, the site Contractor will perform a visual inspection of all installed erosion control measures and perform repairs as needed to ensure their continuous function.

8. Identified repairs will be started no later than the end of the net work day and be completed within seven (7) calendar days.

   Following the temporary and/or final seeding and mulching, the Contractor will, in the spring, inspect and repair any damages and/or bare spots. An established vegetative cover means a minimum of 85 to 90 percent of areas vegetated with vigorous growth.

G. OVER-WINTER CONSTRUCTION EROSION CONTROL MEASURES

1. Stabilization of Disturbed Soil: By October 15, all disturbed soils on areas having a slope less than 15 percent will be seeded and mulched. If the Contractor fails to stabilize these soils by this date, then the Contractor shall stabilize the soil for late fall and winter, by using either temporary seeding or mulching.

2. Stabilization of Disturbed Slopes: All slopes to be vegetated will be completed by October 15. The Owner will consider any area having a grade greater than 15 percent (6.5H:1V) to be a slope. Slopes not vegetated by October 15 will receive one of the following actions to stabilize the slope for late fall and winter:

   a. Stabilize the soil with temporary vegetation and erosion control mesh.
   b. Stabilize the slope with erosion control mix.
   c. Stabilize the slope with stone riprap.
   d. Slopes steeper than 1.5:1 are prohibited.

3. Stabilization of Ditches and Channels: All stone-lined ditches and channels to be used to convey runoff through the winter will be constructed and stabilized by November 15. Grass-lined ditches and channels will be complete by September 15. Grass-lined ditches not stabilized by September 15 shall be lined with either sod or riprap.

H. MAINTENANCE PLAN

1. Routine Maintenance: Inspection will be performed as outlined in the project's Erosion Control Plan. Inspection will be by a qualified person during wet weather to ensure that the facility performs as intended. Inspection priorities will include checking erosion controls for accumulation of sediments.

I. Housekeeping

1. Spill prevention. Controls must be used to prevent pollutants from being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

2. Groundwater protection. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

3. Fugitive sediment and dust. Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control. If off-site tracking occurs roadways should be swept immediately and no loss once a week and prior to significant storm events.

4. Debris and other materials. Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

5. Trench or foundation de-watering. Trench de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the department.

6. Authorized Non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

   (a) Discharges from firefighting activity;

   (b) Fire hydrant flushings;

   (c) Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);

   (d) Dust control runoff in accordance with permit conditions and section I3;

   (e) Routine external building washdown, not including surface paint removal, that does not involve detergents;

   (f) Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;

   (g) Uncontaminated air conditioning or compressor condensate;

   (h) Uncontaminated groundwater or spring water;

   (i) Foundation or footer drain-water where flows are not contaminated;

   (j) Uncontaminated excavation dewatering (see requirements in section I5);

   (k) Potable water sources including waterline flushings; and

   (l) Landscape irrigation.

7. Unauthorized non-stormwater discharges. The Department's approval under this Chapter does not authorize a discharge that is mixed with a source of non stormwater, other than those discharges in compliance with section I6. Specifically, the Department's approval does not authorize discharges of the following:

   (a) Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;

   (b) Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;

   (c) Soaps, solvents, or detergents used in vehicle and equipment washing; and

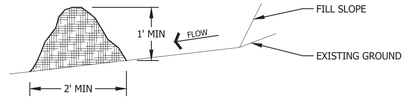
   (d) Toxic or hazardous substances from a spill or other release.

8. Additional requirements. Additional requirements may be applied on a site-specific basis.

J. CONSTRUCTION SEQUENCE

In general, the expected sequence of construction for each phase is provided below. Construction is proposed to start in Fall 2026 and end in Fall 2027.

- Mobilization
- Install temporary erosion control measures
- Site Grading
- Construct storm drains
- Install retaining walls/site utilities
- Construct building
- Site stabilization, pavement, loam and seed, and landscaping
- Remove temporary erosion control



EROSION CONTROL MIX SEDIMENT BARRIER

NOTES:

1. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR FLUME GRIT AND FRAGMENTED WOOD GENERATED FROM WATER-FLUME LOG HANDLING SYSTEMS. WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, REPROCESSED WOOD PRODUCTS OR BARK CHIPS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX. EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND 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:
   A. ORGANIC MATERIAL: BETWEEN 20% - 100% (DRY WEIGHT BASIS)
   B. PARTICLE SIZE: BY WEIGHT, 100% PASSING 6" SCREEN, 70-85% PASSING 0.75" SCREEN
   C. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
   D. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
   E. SOLUBLE SALTS CONTENT SHALL BE LESS THAN 4.0 MMHOS/CM.
   F. PH: 5.0 - 8.0

2. ON SLOPES LESS THAN 5% OR AT THE BOTTOM OF SLOPES 2:1 OR LESS UP TO 20 FEET LONG, THE BARRIER MUST CONFORM TO THE ABOVE DIMENSIONS. ON THE LONGER OR STEEPER SLOPES, THE BARRIER SHOULD BE WIDER TO ACCOMMODATE THE ADDITIONAL FLOW.

3. THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL ELEVATION. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.

4. LOCATIONS WHERE OTHER BMP'S SHOULD BE USED:
   A. AT LOW POINTS OF CONCENTRATED FLOW
   B. BELOW CULVERT OUTLET APRONS
   C. WHERE A PREVIOUS STAND-ALONE EROSION CONTROL MIX APPLICATION HAS FAILED
   D. AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM (LARGE UPGRADIENT WATERSHED)
   E. AROUND CATCH BASINS AND CLOSED STORM DRAIN SYSTEMS

5. THE EROSION CONTROL MIX BARRIERS SHOULD BE INSPECTED REGULARLY AND AFTER EACH LARGE RAINFALL. REPAIR ALL DAMAGED SECTIONS OF BERM IMMEDIATELY BY REPLACING OR ADDING ADDITIONAL MATERIAL PLACED ON THE BERM TO THE DESIRED HEIGHT AND WIDTH.

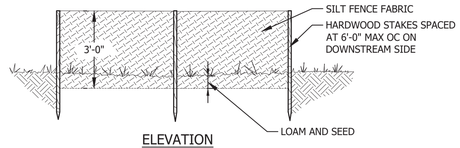
6. IT MAY BE NECESSARY TO REINFORCE THE BARRIER WITH SILT FENCE OR STONE CHECK DAMS IF THERE ARE SIGNS OF UNDERCUTTING OR THE IMPOUNDMENT OF LARGE VOLUMES OF WATER.

7. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

8. REPLACE SECTIONS OF BERM THAT DECOMPOSE, BECOME CLOGGED WITH SEDIMENT OR OTHERWISE BECOME INEFFECTIVE. THE BARRIER SHOULD BE RESHAPED AS NEEDED.

9. EROSION CONTROL MIX BARRIERS CAN BE LEFT IN PLACE AFTER CONSTRUCTION. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER BARRIER IS NO LONGER REQUIRED SHOULD BE SPREAD TO CONFORM TO THE EXISTING GRADE AND BE SEEDED AND MULCHED. WOODY VEGETATION CAN BE PLANTED INTO THE BARRIERS, OR THEY CAN BE OVER-SEEDED WITH LEGUMES. IF THE BARRIER NEEDS TO BE REMOVED, IT CAN BE SPREAD OUT INTO THE LANDSCAPE.

10. IF TEMPORARY BERMS ARE USED AS SILT BARRIERS, THEY ARE PROHIBITED AT THE BASE OF SLOPES STEEPER THAN 8% OR WHERE THERE IS FLOWING WATER WITHOUT THE SUPPORT OF ADDITIONAL MEASURES SUCH AS SILT FENCE.

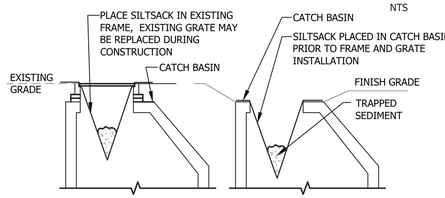


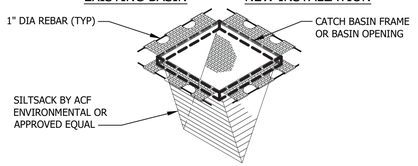
SILT FENCE

NOTE:
CONTRACTORS OPTION TO USE SEDIMENT BARRIER OR SILT FENCE FOR SLOPE PROTECTION.

SURFACE DRAINAGE SEDIMENT CONTROL

NTS



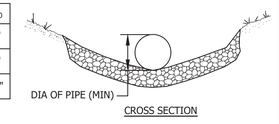


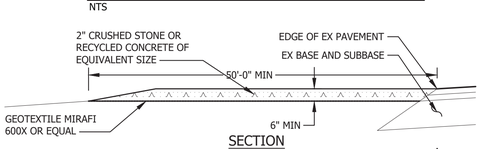
SILTSACK CATCH BASIN PROTECTION

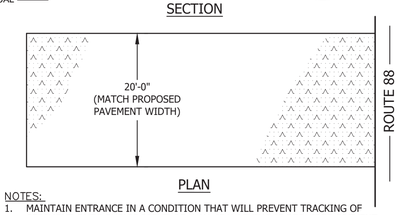
NTS

RIPRAP PAD MUST BE INSTALLED WITHIN 48 HOURS OF INSTALLING NEW PIPE OR CULVERT.

PIPE DIA	A	B	C	D	E	PAD DEPTH	D_{50}
12" OR LESS	3 FT.	2 FT.	3 FT.	4 FT.	6 FT.	10"	5"
15"	3.75 FT.	2.5 FT.	3.75 FT.	5 FT.	8 FT.	16"	8"
24"	6 FT.	4 FT.	6 FT.	10 FT.	12 FT.	20"	10"



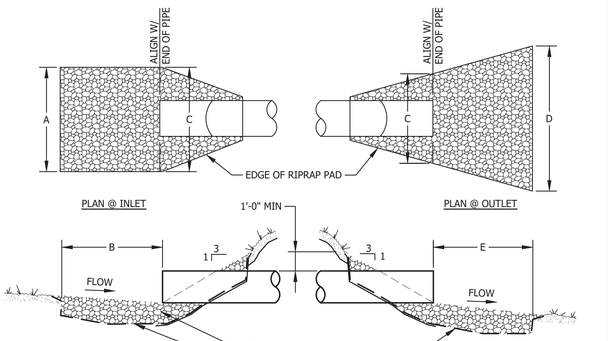




NOTES:
1. MAINTAIN ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. IF WASHING IS REQUIRED PREVENT SEDIMENT FROM ENTERING WATERWAYS, DITCHES OR STORM DRAINS.
2. REMOVE STABILIZED CONSTRUCTION ENTRANCE TO FINISH ROAD CONSTRUCTION AND PAVEMENT.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

NTS



RIPRAP INLET/OUTLET PROTECTION

NTS

REV.	BY	DATE	STATUS
	DPD	5/28/2026	REISSUED TO CITY FOR REVIEW
	DPD	5/1/2026	ISSUED TO CITY FOR REVIEW
	DPD	4/24/2026	REISSUED FOR 50% REVIEW
	DPD	2/9/2026	ISSUED TO CITY FOR REVIEW

STATE OF MAINE — DANIEL J. DIFFIN — 11841 — LICENSED PROFESSIONAL ENGINEER

BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

EROSION CONTROL NOTES AND DETAILS

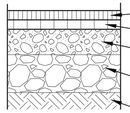
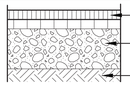
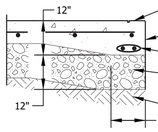
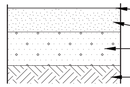
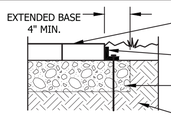
SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	AJD
DRAWN BY:	ZCF
DATE:	5/2026
CHECKED BY:	DPD
LMN:	LMN
CTB:	SME-STD.CTB

JOB NO. 251269 DWG FILE DETAILS

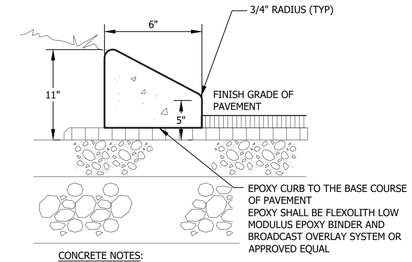
C-300

C:\Users\jmh\OneDrive - SME\SHARED\NOTGowen Turgeon - Bangor Housing\Plans\ZTALS.dwg, G-300, 6/8/2026 12:12:29 PM, kjm

CONSTRUCTION	USE
	BITUMINOUS ACCESS ROAD PARKING LOT
	BITUMINOUS PEDESTRIAN WALK
	CONCRETE EQUIPMENT PADS DUMPSTER PAD DOOR STOOP
	GRASS ALL DISTURBED AREAS OTHER THAN PLAY FIELDS
	CONCRETE PAVERS PLAZA AREAS

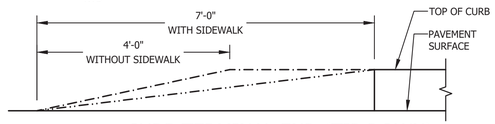
NOTES:
1. HMA = HOT MIX ASPHALT.
   MDOT = MAINE DEPARTMENT OF TRANSPORTATION.
2. ALL COURSE THICKNESS AFTER FINAL COMPACTION.

SCHEDULE OF SURFACE FINISHES
NTS

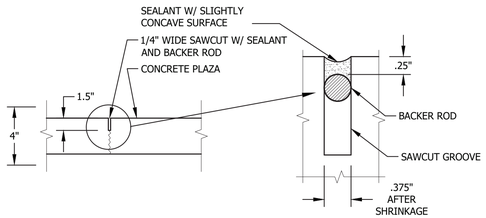


CONCRETE NOTES:
1. MINIMUM 28 DAY COMPRESSIVE STRENGTH: 4,000 PSI
2. AIR ENTRAINMENT: 4% TO 6%
3. REINFORCING: FIBERMESH OR EQUIVALENT GRACE PRODUCT
4. STRAND LENGTH 1-1/2", 1" TO 1-1/2 LB/CUBIC YARD
5. SLUMP: 1" TO 1-1/2"
6. FINISH:
   a. VERTICAL AND TOP FACES: SMOOTH SLIPFORM
   b. SLOPED FACES: BROOM
7. JOINTS: SAWCUT 10' OC 3" DEEP THE DAY AFTER PLACING
8. SEALER: SALTGUARD OR EQUAL WATER BASED SEALER

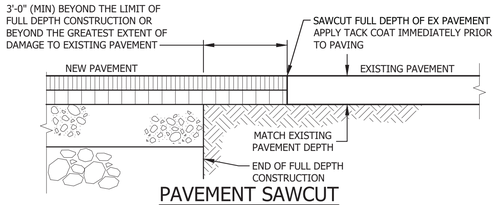
SLIPFORM CONCRETE CURB
NTS



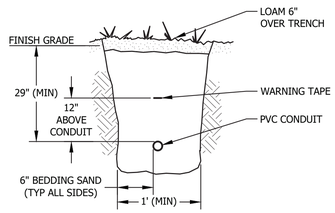
CURB TERMINAL END (TIP DOWN)
NTS



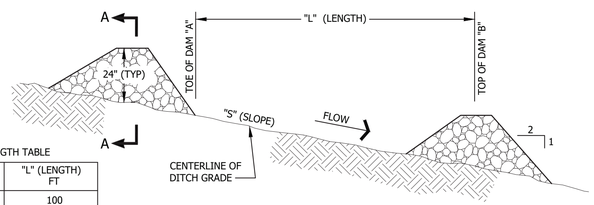
SAWCUT CONTROL JOINT FOR CONCRETE WALKS AND SLABS-ON-GRADE
NTS



PAVEMENT SAWCUT
NTS



UNDERGROUND LIGHTING CONDUIT
NTS

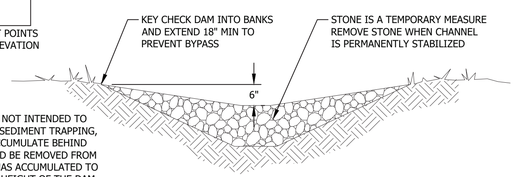


SLOPE & LENGTH TABLE

"S" (SLOPE) FT/FT	"L" (LENGTH) FT
0.020	100
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13

L= THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

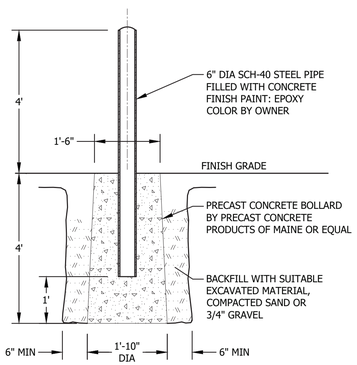
ELEVATION VIEW



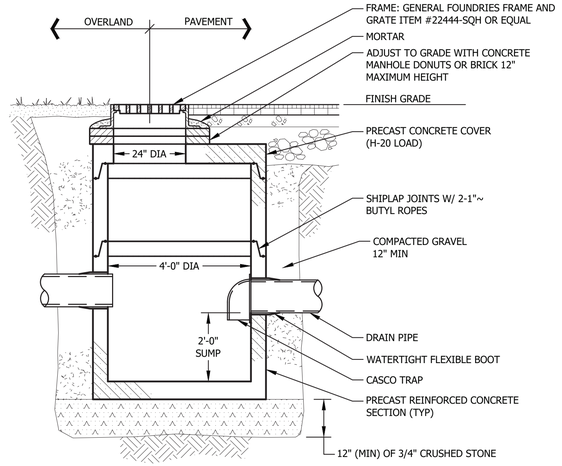
NOTES:
1. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND DAMS. SEDIMENT SHOULD BE REMOVED FROM BEHIND DAMS WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE DAM.
2. STONE: 1"-6" WELL GRADED CRUSHED STONE

SECTION A-A

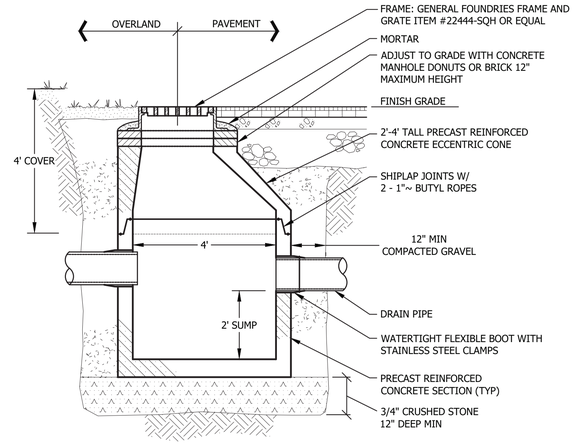
STONE CHECK DAM
NTS



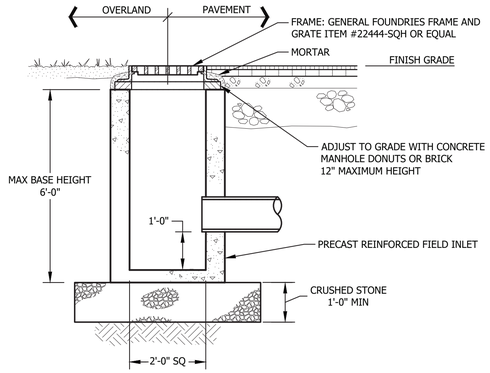
STEEL BOLLARD
NTS



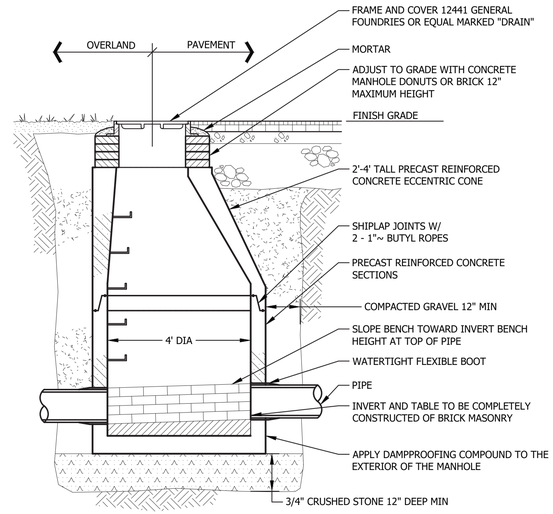
TYPICAL FLAT TOP CATCH BASIN
NTS



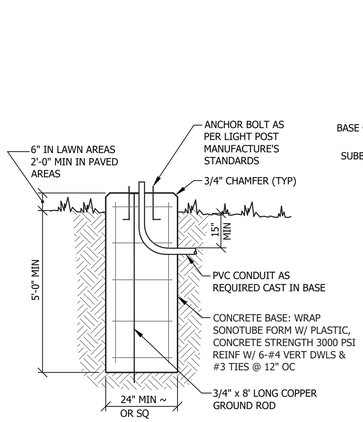
CATCH BASIN
NTS



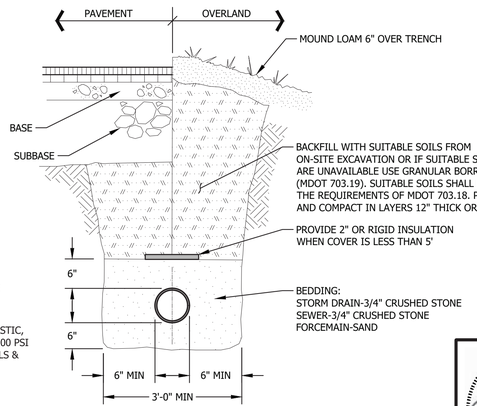
FIELD INLET
NTS



CONCRETE MANHOLE
NTS



LIGHT POLE BASE
NTS



TYPICAL TRENCH SECTION
NTS

MANHOLE AND CATCH BASIN ANTI-FLOTATION NOTES:
THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE ENGINEER FOR APPROVAL. SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:

PRODUCT DATA: SUBMIT PRODUCT DATA FOR ALL MATERIALS USED ON THE JOB FOR REVIEW FOR LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION GIVEN AND DESIGN CONCEPT EXPRESSED IN CONTRACT DOCUMENTS.

SHOP DRAWINGS: SUBMIT FOR REVIEW SHOP DRAWINGS OF ALL PRECAST UNITS. MANUFACTURER'S INFORMATION SHALL BE SUBMITTED FOR JOINT SEALANTS AND WATERPROOFING. MANUFACTURE SHALL PROVIDE ANTI-FLOTATION DESIGN SHOP DRAWINGS AND CALCULATIONS, INCLUDING ANY EXTENDED BASE SLABS AS NECESSARY, FOR PROPOSED MANHOLES. MANUFACTURER SHALL ASSUME GROUNDWATER LEVELS EQUAL TOP OF GROUND ELEVATIONS AND PROVIDE FOR A 1.2 FACTOR OF SAFETY AGAINST FLOTATION.

REV.	BY	DATE	STATUS
	DPD	5/28/2026	REISSUED TO CITY FOR REVIEW
	DPD	5/1/2026	ISSUED TO CITY FOR REVIEW
	DPD	4/24/2026	REISSUED FOR 50% REVIEW
	DPD	2/9/2026	ISSUED FOR 50% REVIEW

STATE OF MAINE — DANIEL P. DIFFIN 11841 LICENSED PROFESSIONAL ENGINEER

BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

SECTIONS AND DETAILS

SME SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	AJD
DRAWN BY:	ZCF
DATE:	5/2026
CHECKED BY:	DPD
LMN:	LMN
CTB:	SME-STD.CTB
JOB NO.	251269
DWG FILE	DETAILS
	C-301

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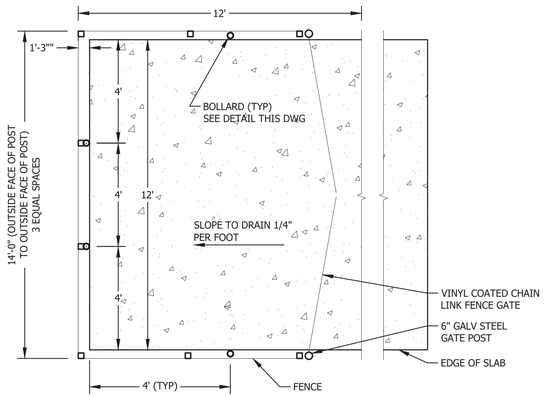
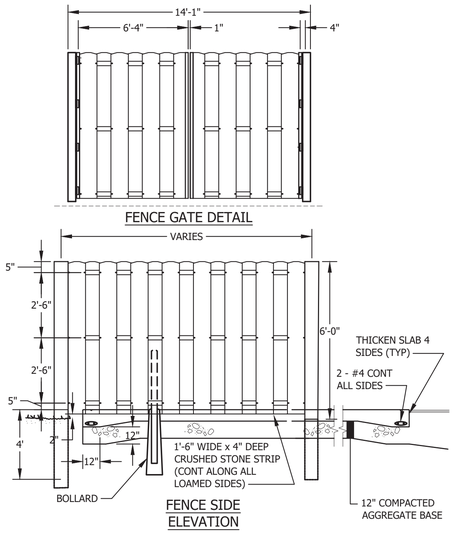
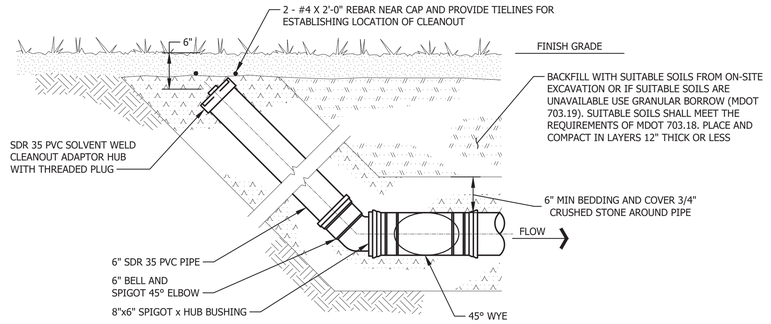
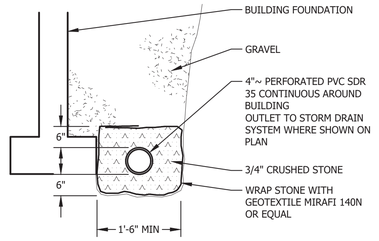




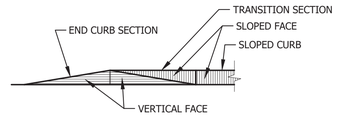
DUMPSTER ENCLOSURE AND STOCKADE FENCE
NTS



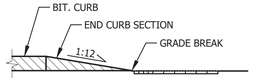
TYPICAL CLEANOUT DETAIL
NTS



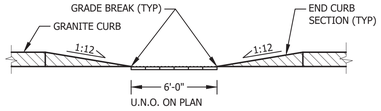
FOUNDATION DRAIN @ BUILDING SECTION
NTS



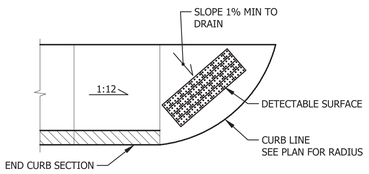
TRANSITION STONE



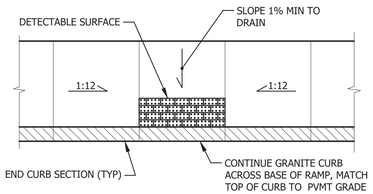
ELEVATION



ELEVATION

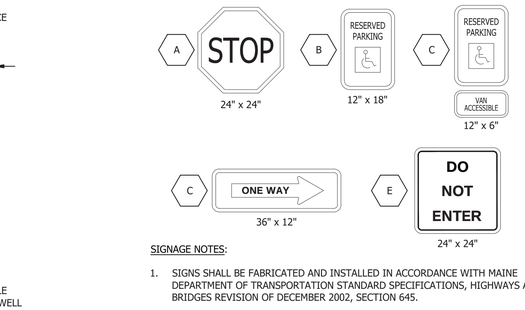


RAMP WITH END LANDING - PLAN

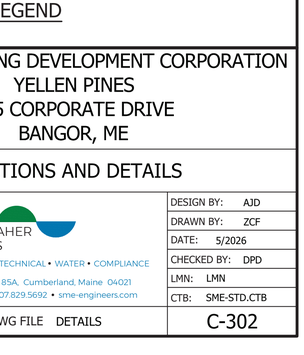


FLARED SIDE RAMP - PLAN

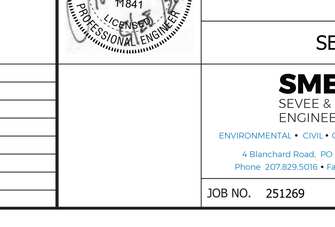
SIDEWALK RAMP WITH DETECTABLE WARNING
NTS



NO PARKING



PAINTED STOP BAR



CROSSWALK

PARKING SPACE

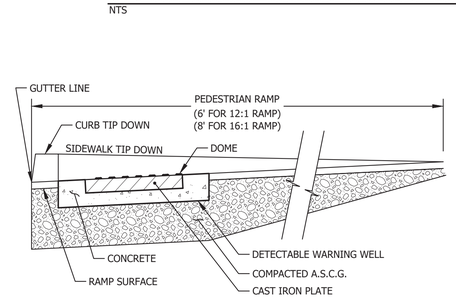
ADA ACCESSIBLE PARKING

STRIPING DETAILS
NTS

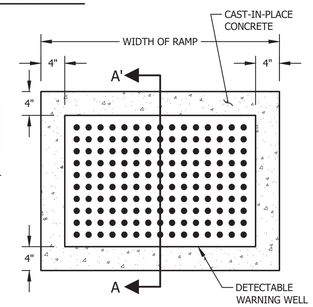
SIGNAGE NOTES:

1. SIGNS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES REVISION OF DECEMBER 2002, SECTION 645.
2. ALL PERMANENT SIGNS ON THIS PROJECT ARE CLASSIFIED UNDER SECTION 645.03(b) TYPE 1 REGULATORY WARNING AND ROUTE MARKER ASSEMBLY SIGNS.
3. SIGN MATERIAL SHALL BE AS SPECIFIED IN SECTION 719 OF THE MDOT STANDARD SPECIFICATIONS.

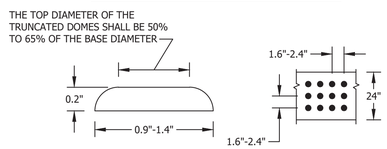
SIGN LEGEND
NTS



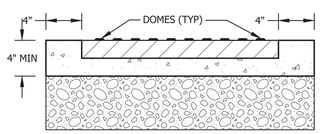
SIDE SECTION VIEW OF DETECTABLE WARNING, WELL, CURB AND GUTTER



PLAN VIEW OF DETECTABLE WARNING AND WELL



DOME AND DETECTABLE WARNING DETAILS



SECTION A-A'

DETECTABLE WARNING SECTIONS
NTS

1. PREPARE BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S). INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6"DEEPx6"WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.

*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

SLOPE INSTALLATION
NTS

NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS
14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
800-772-2040
www.nagreen.com

REV.	BY	DATE	STATUS
	DPD	5/28/2026	REISSUED TO CITY FOR REVIEW
	DPD	5/1/2026	ISSUED TO CITY FOR REVIEW
	DPD	4/24/2026	REISSUED FOR 50% REVIEW
	DPD	2/9/2026	ISSUED FOR 50% REVIEW

STATE OF MAINE DANIEL P. DIFFIN 11841 LICENSED PROFESSIONAL ENGINEER

BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

SECTIONS AND DETAILS

SME SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	AJD
DRAWN BY:	ZCF
DATE:	5/2026
CHECKED BY:	DPD
LMN:	LMN
CTB:	SME-STD.CTB

JOB NO. 251269 DWG FILE DETAILS

C-302

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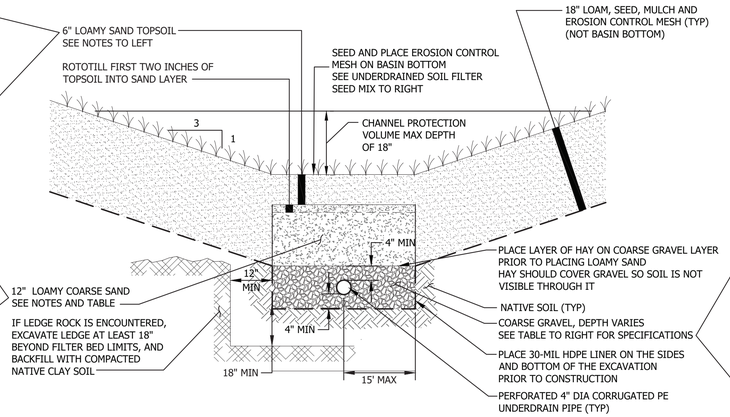
THE LOAMY SAND TOPSOIL SHALL BE TESTED AT A SOIL TESTING LAB AND:

- MATCH THE USDA SANDY LOAM TOPSOIL CLASSIFICATION
- HAVE 5-8% HUMIFIED ORGANIC MATTER
- HAVE A CLAY CONTENT OF LESS THAN 2%
- BE FREE OF STONES, STUMPS, ROOTS OR OTHER OBJECTS GREATER THAN 2".

IF THE TOPSOIL DOES NOT CONTAIN SUFFICIENT NUTRIENT CONTENT TO SUPPORT GRASS GROWTH, SUPPLEMENT WITH SUPERHUMUS ORGANIC MATTER AND RETEST ORGANIC MATTER AND CLAY CONTENT.



UNDERDRAINED SOIL FILTER SEED MIX	
Name	LBS/ACRE
Creeping Red Fescue	20
Tall Fescue	20
Birdsfoot trefoil	8
Total	48

SOIL FOR 12" LOAMY COARSE SAND LAYER (MEDOT #703.01)	
SIEVE SIZE	% BY WEIGHT
#10	85-100
#20	70-100
#60	15-40
#200	8-15
#200 (CLAY SIZE)	< 2.0

COARSE GRAVEL MEDOT SPECIFICATIONS FOR UNDERDRAINS (MEDOT #703.22)	
SIEVE SIZE	% PASSING BY WEIGHT
UNDERDRAIN TYPE B	
1"	95-100
1/2"	75-100
#4	50-100
#20	15-80
#50	0-15
#200	0-5

CONSTRUCTION OVERSIGHT:

CONSTRUCTION SEQUENCE: THE SOIL FILTER MEDIA AND VEGETATION MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION UNLESS THE RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA IS DIVERTED AROUND THE FILTER UNTIL STABILIZATION IS COMPLETE.

COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90% AND 92% STANDARD PROCTOR.

CONSTRUCTION OVERSIGHT: INSPECTION BY A PROFESSIONAL ENGINEER FAMILIAR WITH CONSTRUCTION REQUIREMENTS OF OF UNDERDRAINED SOIL FILTERS WILL OCCUR AT A MINIMUM:

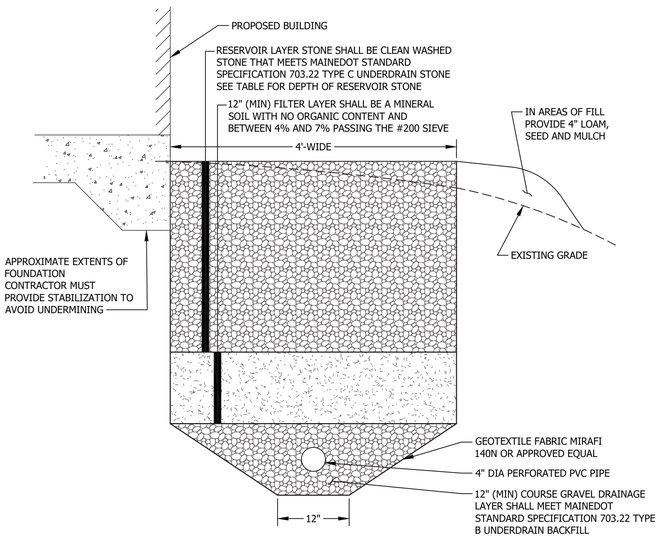
- AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED,
- AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA,
- AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDED.
- AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS, AND
- ALL THE MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY TO SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.
- WITHIN 30 DAYS OF COMPLETION OF THE UNDERDRAINED FILTER BASIN, THE APPLICANT MUST SUBMIT A LOG OF INSPECTION REPORTS DETAILING THE ITEMS INSPECTED, PHOTOS TAKEN, AND THE DATES OF EACH INSPECTION TO THE BUREAU OF LAND RESOURCES FOR REVIEW.

TESTING AND SUBMITTALS: THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL:

- SELECT SAMPLES OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
- PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES 1996A) ON EACH TYPE OF THE SAMPLE MATERIAL.

TYPICAL UNDERDRAINED SOIL FILTER

NTS



RESERVOIR STONE DEPTH	
ROOF DRIPLINE FILTER	RESERVOIR DEPTH
#1	2.25 FEET
#2	2.25 FEET
#3	2.00 FEET
#4	2.75 FEET

ROOF DRIPLINE FILTER

NTS

REV.	BY	DATE	STATUS
	DPD	5/28/2026	REISSUED TO CITY FOR REVIEW
	DPD	5/1/2026	ISSUED TO CITY FOR REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED PROFESSIONAL ENGINEER

BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

SECTIONS AND DETAILS

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
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DESIGN BY:	AJD
DRAWN BY:	ZCF
DATE:	5/2026
CHECKED BY:	DPD
LMN:	LMN
CTB:	SME-STD.CTB
JOB NO.	251269
DWG FILE	DETAILS

C-303

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ANALYSIS POINT 1 (AP-1)

ANALYSIS POINT 2 (AP-2)

SC-1A

SC-1

SC-2

SC-1B

TCC

CTB

1A-R

1B-R

1C-R

Shc L=205' S=0.060

Shc L=288' S=0.024

Shc L=320' S=0.066

Shc L=311' S=0.077

Shc L=159' S=0.097

Shc L=35' S=0.114

Shc L=31' S=0.119

Shc L=5' S=0.080

Shc L=44' S=0.091

Shc L=4' S=0.060

Sht L=100' S=0.080

Shc L=100' S=0.077

Sht L=100' S=0.060

Shc L=23' S=0.020

Shc L=35' S=0.072

Sht L=100' S=0.030

CF L=79' S=0.020

Shc L=28' S=0.089

Shc L=117' S=0.034

Shc L=219' S=0.041

Shc L=34' S=0.088

Shc L=147' S=0.104

Shc L=79' S=0.044

Sht L=100' S=0.033

N 57°35'31" W 719.75'

STORMWATER MANAGEMENT LEGEND

SC-1	SUBCATCHMENT DESIGNATION
	SUBCATCHMENT BOUNDARY
A B C	TIME OF CONCENTRATION SEGMENT DESIGNATION TIME OF CONCENTRATION PATH
Sht L=50' S=0.005	TIME OF CONCENTRATION TYPE, LENGTH AND SLOPE
Sht	SHEET FLOW
Shc	SHALLOW CONCENTRATED FLOW
Cf	CHANNEL FLOW
	DRAINAGE REACH
R4	REACH DESIGNATION (HYDROCAD)
P9	POND/STRUCTURE DESIGNATION (HYDROCAD)
tc 1	TIME OF CONCENTRATION WITH SUBCATCHMENT DESIGNATION
	SOIL TYPE BOUNDARY
Sn	SOIL TYPE DESIGNATION

25 0 50 100 FEET

REV.	BY	DATE	STATUS
	DPD	5/28/2026	REISSUED TO CITY FOR REVIEW
	DPD	5/1/2026	ISSUED TO CITY FOR REVIEW
	DPD	2/9/2026	ISSUED FOR 50% REVIEW

STATE OF MAINE
DANIEL P. DIFFIN
11841
LICENSED PROFESSIONAL ENGINEER

BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

STORMWATER MANAGEMENT PLAN
PRE-DEVELOPMENT CONDITIONS

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	AJD
DRAWN BY:	SJM
DATE:	5/2026
CHECKED BY:	DPD
LMN:	SMP-E
CTB:	SME-STD.CTB
JOB NO.	251269
DWG FILE	BASE
	D-100

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STORMWATER MANAGEMENT LEGEND

- SC-2 — SUBCATCHMENT DESIGNATION
- SUBCATCHMENT BOUNDARY
- A B C — TIME OF CONCENTRATION SEGMENT DESIGNATION / TIME OF CONCENTRATION PATH
- Sht L=100' S=0.035 — TIME OF CONCENTRATION TYPE, LENGTH AND SLOPE
- Sht — SHEET FLOW
- Shc — SHALLOW CONCENTRATED FLOW
- Cf — CHANNEL FLOW
- DRAINAGE REACH
- R4 — REACH DESIGNATION (HYDROCAD)
- P3 — POND/STRUCTURE DESIGNATION (HYDROCAD)
- tc 2 — TIME OF CONCENTRATION WITH SUBCATCHMENT DESIGNATION
- SOIL TYPE BOUNDARY
- Sn — SOIL TYPE DESIGNATION

25 0 50 100 FEET

REV.	BY	DATE	STATUS
	DPD	5/28/2026	REISSUED TO CITY FOR REVIEW
	DPD	5/1/2026	ISSUED TO CITY FOR REVIEW
	DPD	2/9/2026	ISSUED FOR 50% REVIEW

STATE OF MAINE — DANIEL J. DIFFIN 11841 — LICENSED PROFESSIONAL ENGINEER

BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

STORMWATER MANAGEMENT PLAN POST-DEVELOPMENT CONDITIONS

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ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
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DESIGN BY:	AJD
DRAWN BY:	SJM
DATE:	5/2026
CHECKED BY:	DPD
LMN:	UTIL
CTB:	SME-STD.CTB

JOB NO. 251269 DWG FILE BASE

D-101

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GENERAL PLANTING NOTES

1. CALL DIG-SAFE (1-888-344-7233) PRIOR TO BEGINNING WORK. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO OWNER.
2. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.
3. DO NOT SCALE FROM DRAWINGS. ANY OMISSIONS IN DIMENSIONING SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, NOTES AND SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT FOR FURTHER DIRECTION AND RESOLUTION BEFORE ANY ADDITIONAL WORK PROCEEDS.
4. PROVIDE SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.
5. CONTRACTOR SHALL FURNISH AND PLACE 12 INCHES OF LOAM IN SHRUB BEDS, 30 INCHES IN L TREE PITS, AND 6 INCHES UNDER TURF AREAS. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
6. PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARDS FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN".
7. PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
8. PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM THE OWNER.
9. GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM PLANTING AREAS PRIOR TO PLANTING.
10. SHRUB BEDS AND TREE PITS SHALL BE MULCHED WITH 3" CLEAN SHREDDED BLACK MULCH.
11. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY, OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. DAMAGE TO EXISTING SITE IMPROVEMENTS DURING INSTALLATION OF LANDSCAPE MATERIAL SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
14. BOULDERS SHOWN WITHIN PLANT BEDS AND WITHIN EDGING REPRESENT THE QUANTITY OF BOULDERS EXPECTED. BOULDERS SHALL BE FIELD LOCATED AND PLACED TO APPEAR NATURALLY WITHIN PLANTED AREAS.
15. PLANT QUANTITIES ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR RESPONSIBLE FOR TAKEOFFS OF PLANT QUANTITIES.

SEED MIX SLOPES

NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES
APPLICATION RATE: 35 lb/acre | 1250 sq ft/lb

SPECIES: Red Fescue (Festuca rubra), Canada Wild Rye (Elymus canadensis), Annual Ryegrass (Lolium multiflorum), Perennial Ryegrass (Lolium perenne), Little Bluestem (Schizachyrium scoparium), Indian Grass (Sorghastrum nutans), Switch Grass (Panicum virgatum), Upland Bentgrass (Agrostis perennans).

LAWN

PARK MIX
APPLICATION RATE: 1LB PER 200 SQ. FT

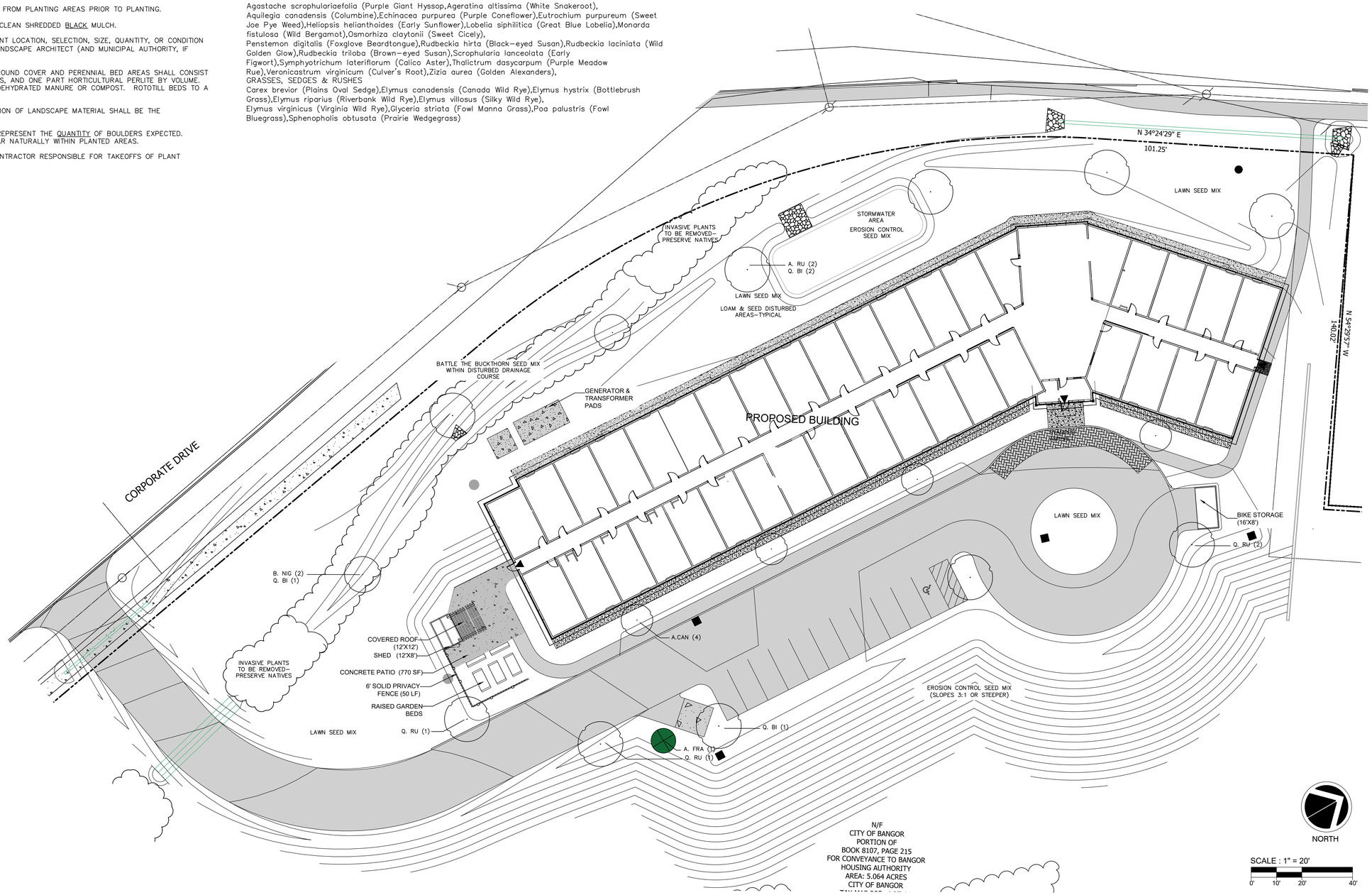
SPECIES: 35% VNS Kentucky Bluegrass, 20% VNS Creeping Red Fescue, 15% Improved Turf Type Tri-Rye, 15% VNS Chewings Fescue, 15% VNS Annual Ryegrass

EXISTING DRAINAGE COURSE
BATTLE THE BUCKTHORN - UNDERSTORY REVEGETATION SEED MIX
PRAIRIE MOON®NURSERY
APPLICATION RATE:14.35 LBS PER ACRE | 115 SEEDS PER SQ/FT

SPECIES
WILDFLOWERS
Agastache scrophulariaefolia (Purple Giant Hyssop,Ageratina altissima (White Snakeroot), Aquilegia canadensis (Columbine),Echinacea purpurea (Purple Coneflower),Eutrochium purpureum (Sweet Joe Pye Weed),Heliopsis helianthoides (Early Sunflower),Lobelia siphilitica (Great Blue Lobelia),Monarda fistulosa (Wild Bergamot),Osmorhiza claytonii (Sweet Cicely), Penstemon digitalis (Foxglove Beardtongue),Rudbeckia hirta (Black-eyed Susan),Rudbeckia laciniata (Wild Golden Glow),Rudbeckia triloba (Brown-eyed Susan),Scrophularia lanceolata (Early Figwort),Symphyotrichum lateriflorum (Calico Aster),Thalictrum dasycarpum (Purple Meadow Rue),Veronicastrum virginicum (Culver's Root),Zizia aurea (Golden Alexanders),
GRASSES, SEDGES & RUSHES
Carex brevior (Plains Oval Sedge),Elymus canadensis (Canada Wild Rye),Elymus hystrix (Bottlebrush Grass),Elymus riparius (Riverbank Wild Rye),Elymus villosus (Silky Wild Rye), Elymus virginicus (Virginia Wild Rye),Glyceria striata (Fowl Manna Grass),Poa palustris (Fowl Bluegrass),Sphenopholis obtusata (Prairie Wedgegrass)

PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
A. RU	2	ACER RUBRUM	RED MAPLE	2.75" CAL
A. CAN	4	AMELANCHIER 'ROBIN HILL'	COLUMNAR SHADBLOW	1.75" CAL SINGLE STEM
A. FRA	1	ABIES FRASERI	FRASER FIR	7'-8' HT
B. NIG	2	BETULA NIGRA	NATIVE RIVER BIRCH	7'-8' HT
Q. BI	4	QUERCUS BICOLOR	SWAMP WHITE OAK	3" CAL
Q. RU	4	QUERCUS RUBRUM	RED OAK	2.75" CAL



LICENSED LANDSCAPE ARCHITECT
SARAH E. MISNER
No. 3657
STATE OF MAINE

Sashie Misner Landscape Architecture LLC
www.landscapeplay.com | 207-406-0734
GAWRON TURGEON DILLON ARCHITECTS, P.C.

BANGOR HOUSING DEVELOPMENT CORPORATION: YELLEN PINES
236 MAINE AVENUE
BANGOR, MAINE

REVISIONS

#	DATE	DESCRIPTION
1	05-29-26	Per staff comments

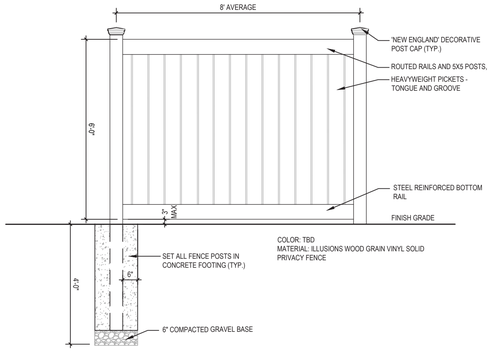
DATE:	04-30-26
PROJECT #	2517
DRAWN BY:	
CHECKED BY:	
DRAWING SCALE	AS NOTED

NOT FOR CONSTRUCTION

PLANTING & SITE LAYOUT PLAN

L101

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SASHIE MISNER LANDSCAPE ARCHITECTS. ALTERATIONS AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SASHIE MISNER LANDSCAPE ARCHITECTURE.



FENCE SECTION/ELEVATION

1 L200 PRIVACY FENCE

NOT TO SCALE

LICENSED LANDSCAPE ARCHITECT
SARAH E. MISNER
No. 3657
STATE OF MAINE

Sashie Misner Landscape Architecture LLC
www.landscapeplay.com | 207-406-0734
GAWRON TURGEON DILLON ARCHITECTS P.C.

BANGOR HOUSING DEVELOPMENT CORPORATION: YELLEN PINES
236 MAINE AVENUE
BANGOR, MAINE

REVISIONS

#	DATE	DESCRIPTION

DATE:	04-30-26
PROJECT #	2517
DRAWN BY:	
CHECKED BY:	
DRAWING SCALE	AS NOTED

NOT FOR CONSTRUCTION

SITE DETAIL

L200

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SASHIE MISNER LANDSCAPE ARCHITECTS. ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SASHIE MISNER LANDSCAPE ARCHITECTURE.

NOTES

(1) Documents referenced on this plan are recorded in the Penobscot County Registry of Deeds unless otherwise noted.

(2) Coordinate values and North orientation reference the Maine Coordinate System of 1983, East Zone with units of U.S. Survey Feet, NAD_83(2011)(EPOCH:2010.0000). Coordinate values shown are provided as an aid in location. The physical location of a coordinate labeled point supercedes said coordinate values.

(3) Formerly known as Illinois Avenue and Texas Avenue, 80 feet wide. Refer to City of Bangor Road Book 5, Page 101 & 103. Refer to a layout in Book 2179, Page 200 (65 feet wide). Refer also to Map File 2021-100.

(4) Formerly known as Illinois Avenue, Refer to layout in Book 2179, Page 200 and also refer to City of Bangor Road Book 5, Page 101.

(5) The deed from the City of Bangor to Bangor Water District, dated April 30, 1971, and recorded at the Penobscot County Registry of Deeds in Book 2211, Page 769, paragraph 4, describes "*the right of access to all existing water distribution and transmission systems at Bangor International Airport, subject to the condition that no construction, maintenance or repairs shall be done by the Bangor Water District to said systems beyond a distance of 15 feet measured from the center line of any water line conveyed herein. There is further granted to the District the right to access to any and all surface structures in said water distribution and transmission systems, such as hydrants, post indicators, valves, manholes and other water distribution and transmission fixtures, facilities and equipment located at Bangor International Airport.*" Book 2211, Page 769 is a quit claim deed. Records found at the Penobscot County Registry of Deeds indicate that the proposed lot for conveyance to Bangor Housing Authority was owned by the United States of America at the time the deed recorded at said Registry of Deeds in Book 2211, Page 769 was executed. A confirmatory easement is recommended to confirm the easements (as noted) to Bangor Water District.

(6) The Bangor Water GIS sketch, dated December 1, 2025, shows an inactive line in this area. Portions of this section of water line have been removed.

(7) Paper streets exist on the proposed property for conveyance (not shown on this survey) and are shown on the plan referenced below as plan reference #5.

(8) Any airport easements that may exist on the subject property were not investigated.

(9) Refer to a deed from City of Bangor to Bangor Water District recorded at the Penobscot County Registry of Deeds in Book 1582, Page 265, dated May 27, 1957.

(10) The location shown on this plan for above and underground utilities, including water, electricity, telephone, sewer, and storm drains are approximate and should be verified before any excavation. Federal and state laws require anyone performing any sort of excavation, including digging, boring, backfilling or grading to notify "dig safe", (1-888-344-7233), at least 72 hours before they begin work. The underground utilities shown have been located using visible surface structures, paint markings, and data downloaded from the City of Bangor GIS. Plisga & Day Land Surveyors (P&D) makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. P&D further does not warrant that the underground utilities are in the exact location indicated, although P&D does certify that they are located as accurately as possible from information available. P&D has not physically located the underground utilities.

(11) Visible features shown hereon were located on the ground by Plisga & Day Land Surveyors, January 2, 2026 under snow and ice conditions using a network corrected RTK GPS with a 2drms horizontal precision of 0.1 feet.

(12) Spot elevations and contours shown reference the North American Vertical Datum of 1988 [NAVD88 (computed using geoid18)] based on a MDOT network gps position on point number 1 observed on November 11, 2023.

(13) The LIDAR contour lines shown are based on data downloaded from noaa data access viewer at: https://coast.noaa.gov/dataviewer/#/. the elevations shown reference navd88, were collected in 2021 and in 2022 under no snow conditions, and have an estimated vertical accuracy of 7.54 cm at 95% confidence level in open terrain.

PLAN REFERENCES

(1) "*BOUNDARY SURVEY OF MPBC FACILITIES PREPARED FOR MAINE PUBLIC BROADCASTING CORP.*", by Shyka, Sheppard & Garster, dated May 10, 2001 and recorded at the Penobscot County Registry of Deeds, Map File 2001-37 and 2001-38.

(2) "*STATE OF MAINE DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS RIGHT OF WAY MAP STATE AID HIGHWAY NO. 20*", D.O.T. FILE NO. 10-251, dated November 1978, and recorded at the Penobscot County Registry of Deeds as Plan Book D92, Page 83.

(3) "*Water Supply System, Dow Air Force Base*", dated January 5, 1960, on file at the City Engineer's Office.
NOTE: PLAN WAS NOT FOUND

(4) "*REVISION BANGOR INTERNATIONAL AIRPORT PROPERTY MAP*", dated December 10,1968, Plan no. G-791, on file at the City Engineer's Office.

(5) "*MAP OF WESTLAND PARK BANGOR, MAINE OWNED AND DEVELOPED BY THE GRAHAM IVERS COMPANY FIRST NATIONAL BANK BLDG. BANGOR, MAINE, BY DAVID J. NASON C.E. OCTOBER 31, 1921 REVISED JAN. 1926*", recorded at the Penobscot County Registry of Deeds as Plan Book 13, Page 3.

LEGEND

- ¾ INCH IRON ROD SET (CAPPED PLS 2404)
- IRON ROD, FOUND
- IRON PIPE, FOUND
- UTILITY POLE
- ANCHOR
- HYDRANT
- SEWER MANHOLE
- MANHOLE
- CATCH BASIN
- WATER GATE / VALVE
- SIGN
- LAMP
- BOUNDARY LINE
- EASEMENT LINE
- ADJOINER, INTERIOR LOT LINE
- EDGE OF GRAVEL OR PAVEMENT
- OVERHEAD WIRES
- WATER LINE (BANGOR WATER DISTRICT, DIGITIZED)
- WATER LINE (BANGOR WATER DISTRICT, ABANDONED, DIGITIZED)
- SEWER LINE (BANGOR GIS)
- STORM DRAIN LINE (BANGOR GIS)
- TREE LINE / VEGETATION LINE
- GROUND CONTOUR LINE (1' INTERVAL)
- LIDAR CONTOUR LINE (1' INTERVAL)

Now or formerly of
City of Bangor
Bangor International Airport
Book 2148, Page 67
TRACT ONE

from the
United States of America
dated December 18, 1968
Refer also to
Book 2156, Page 449
TRACT ONE

GRID NORTH
MAINE COORDINATE SYSTEM OF 1983
EAST ZONE

Maine Avenue
Refer to note #4

Rim Elev.: 161.34'

Rim Elev.: 157.96'

Curb

Digitized location of a pump house (demolished)

Inv. 18 inch CMP, Elev.: 156.84'

Inv. 12 inch CPP, Elev.: 156.92'

Inv. 30 inch CPP, Elev.: 154.15'

Inv. 12 inch CPP, Elev.: 157.58'

N 34°24'29" E
101.25'

16" Abandoned

10" Abandoned

8" Abandoned

Easement to Bangor Water District
Book 9770, Page 111

Refer to a Notice of Layout and Taking
Book 2946, Page 200
Refer also to Plan D92-83

Radius: 340.0 feet
arc length: 259.17 feet

Inv. 12 inch CMP, Elev.: 156.61'

Now or formerly of
Bangor Water District
Book 2211, Page 769
Paragraph #2
Confirmatory deed recommended
See note #5
City of Bangor
Tax Map R25 - Lot 1C

Inv. 12 inch CMP, Elev.: 156.51'

concrete walkway

140.02'
S 54°29'57" E

N 34°21'11" E
79.07'

N 79°21'11" E
72.65'

S 57°35'31" E
192.15'

Refer to Book 14189, Page 273 for an amendment to the easement described in Book 2211, Page 769

8" Abandoned

Curb

12" Abandoned

N 09°16'01" W
470.26'

drainage

See note #5, rights may exist 15' from a water line
Confirmatory deed recommended

10" Abandoned

See note #5

Now or formerly of
City of Bangor
portion of
Book 8107, Page 215
from the United States of America
dated March 7, 2002
for conveyance to
Bangor Housing Development Corporation
AREA: 5.013 ACRES
City of Bangor
Tax Map R25 - Lot 1A

Corporate Drive
see note #3

TBM #1: 6 inch spike set in utility pole #298251 elev.(NAVD88): 162.76'

Inv. 8 inch cast iron, Elev.: 161.96'

Culvert (abandoned water line, now used as a storm drain) marked by Bangor Water District December 4, 2025 (Confirmatory deed recommended, See note #5)

S 60°43'59" W
33.50'

789.84'
S 30°03'55" W

Now or formerly of
University of Maine System
Book 8224, Page 118
recorded June 6, 2002
from the City of Bangor
City of Bangor
Tax Map R25 - Lot 25

Inv. 24 inch concrete, Elev.: 165.33'

Rim Elev.: 174.53'

Texas Avenue (O Street)
shown on map file D655-76
no layout was found for this portion of road

Culvert

Ground contours

LIDAR contours

Inv. 36 inch concrete, Elev.: 165.64'

Inv. 15 inch CPP, Elev.: 168.15'

Refer to a leasehold / mortgage modification agreement between
Penobscot Community Health Center
&
the City of Bangor
Book 17445, Page 98
Parcel One
City of Bangor
Tax Map R25 - Lot 17

Now or formerly of
City of Bangor
remaining portion of
Book 8107, Page 215
City of Bangor
Tax Map R25 - Lot 1A
Refer to a deed from the
City of Bangor
to the
United States of America
Book 1205, Page 345

PLISGA & DAY
LAND SURVEYORS
72 MAIN STREET
BANGOR, MAINE
DATE: JANUARY 7, 2026
PROJ. NO. 25299
Email: info@WeMapIt.com
Phone: (207) 947-0019
Toll-Free: 1-800-734-0019
DRAWING FILE: 25299.DWG
www.WeMapIt.com

SCALE: 1"= 30'

30' 0' 30' 60' 90' 120'

grid distances listed
ground to grid scale factor: 0.999902509

TOPOGRAPHIC SURVEY

SHOWING A PORTION OF PROPERTY OF THE
CITY OF BANGOR
MAINE AVENUE & CORPORATE DRIVE
BANGOR, MAINE
PENOBSCOT COUNTY REGISTRY OF DEEDS
PORTION OF BOOK 8107, PAGE 215
FOR
BANGOR HOUSING DEVELOPMENT CORPORATION

Bangor Housing Development Corp.

City of Bangor **Check Number: 100001503** **Date: 4/30/2026** **Amount: $2,613.00**

Invoice Number	*Date*	*PO Number*	*Item Description*	*Item Amount*	*Discount*	*Paid*
04/30/2026	04/30/2026		Application Fee-Yellen Pines 205 Corporate Dr	$2,613.00		$2,613.00

SME
SEVEE & MAHER
ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 ○ Fax: 207.829.5692
info@smemaine.com
smemaine.com

May 1, 2026

Anja Collete, Planning Officer
City of Bangor
262 Harlow Street
Bangor, ME 04401

Subject: Land Development and Conditional Use Permit Application
Bangor Housing Development Corporation
Yellen Pines
205 Corporate Drive
Bangor, Maine

Dear Anja:

On behalf of Bangor Housing Development Corporation (BHDC), Sevee & Maher Engineers, Inc. (SME) is pleased to submit the attached Land Development Permit and Conditional Use Application for a permanent supportive housing project at 205 Corporate Drive in Bangor, Maine. Please consider this project for placement on the Planning Board meeting agenda for June 2, 2026.

The Bangor Housing property is regulated under an existing Maine Department of Environmental Protection (MEDEP) Site Location of Development Act (SLODA) permit, which is required to be amended for changes to the property including redevelopment. Since the City of Bangor has Delegated Authority from MEDEP to review SLODA projects, the SLODA Amendment has been included with the Land Development Application.

In accordance with submission requirements, we are including five (5) hard copies of the Application and supporting documents for Staff and Planning Board review. An electronic copy of the Application materials will be forwarded to your office via email later this afternoon.

We appreciate your consideration of our Application and look forward to reviewing the project in more detail with the Planning Board on June 2, 2026. Please feel free to contact me at 207.829.5016 or dpd@smemaine.com if you have any questions or need additional information.

Very truly yours,

SEVEE & MAHER ENGINEERS, INC.

Daniel P. Diffin, P.E., LEED AP BD+C
Vice President/Senior Civil Engineer

Attachments

LAND DEVELOPMENT AND CONDITIONAL USE PERMIT APPLICATION
BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, MAINE

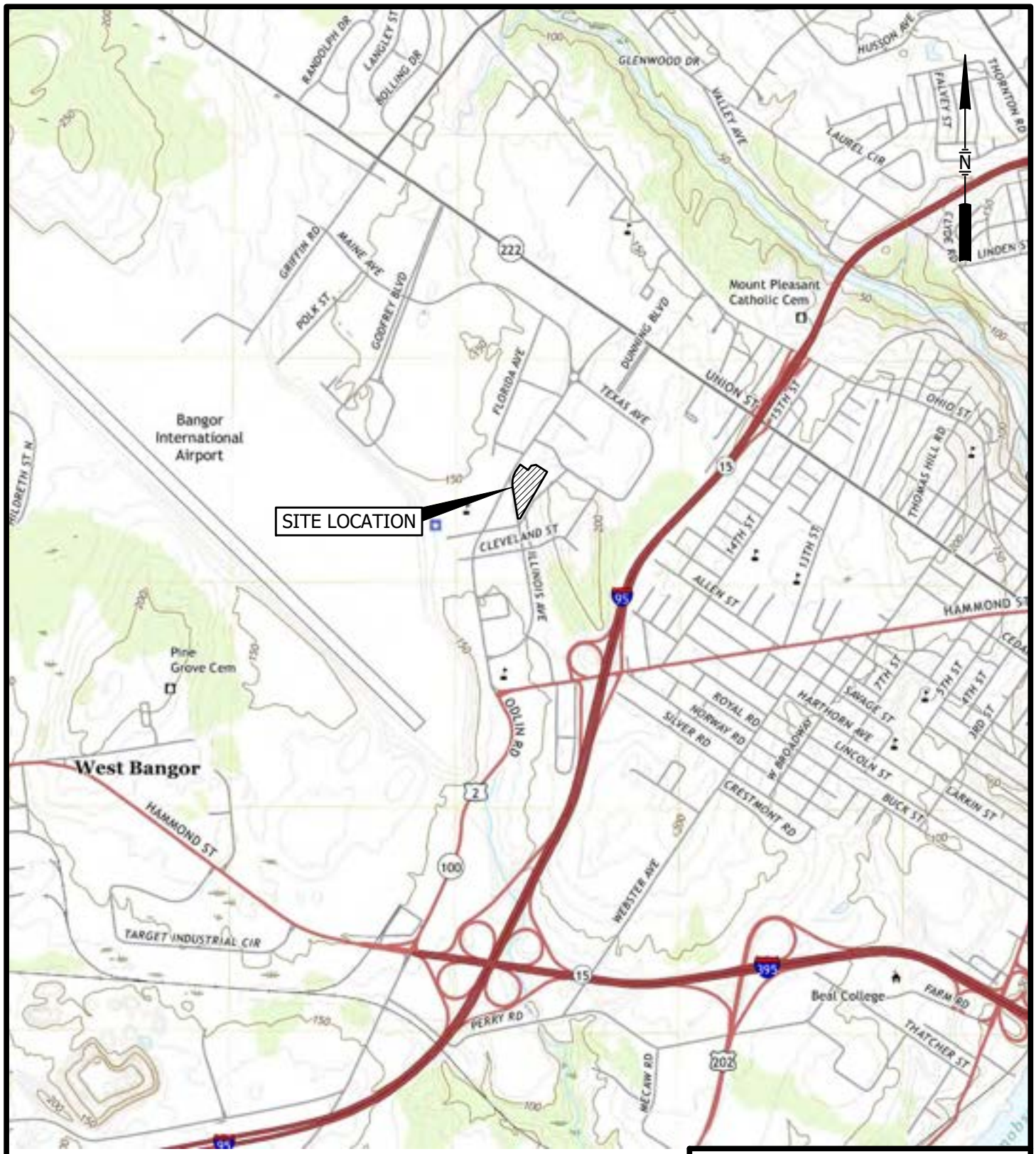
PROJECT DESCRIPTION

Bangor Housing Development Corporation (BHDC) proposes to develop a new 30-unit permanent supportive housing building called Yellen Pines on property currently at 205 Corporate Drive. The location of the project is shown in Figure 1, Site Location Map. The project is subject to a Land Development Permit from the City of Bangor Planning Board. This application provides detailed project information and outlines compliance with the applicable sections of the City Ordinance.

The project is located on the 5.05-acre parcel identified as Lot 001-A on City Tax Map R25 within the Government and Institutional Services District (G&ISD) and Technology and Service District (T&S) on the City's Official Zoning Map. A copy of the deed is provided in Appendix A, as well as the Option to Purchase the property between the City and BHDC. The property is bounded by Maine Avenue to the west, Texas Avenue to the east, Corporate Drive to the south, and a developed University of Maine Office Building property to the north. The property is currently developed as a vegetated slope maintained as lawn with a row of trees, a concrete walkway and a paved entrance off of Maine Avenue. The property is within the Urban Impaired Stream of Birch Stream and is primarily developed land.

The permanent supportive housing project will include a single story 19,100-square-foot building that will include thirty (30) one-bed units with support offices and lounge area. The construction will include area for eleven (11) parking spaces with one (1) ADA accessible parking space. The project will have a new 24-foot paved access drive from Corporate Drive sized for access by City fire and emergency vehicles. Additional site improvements include a patio along the southern side of the building, public water and sewer, underground utilities, stormwater management, site lighting, and landscaping.

The housing project will result in approximately 84,740 square feet of developed area, all of which will be considered redevelopment given the nature of the existing site. This redeveloped area will include 41,156 square feet of new impervious area. The existing concrete walkway and paved turnaround on-site will be demolished, resulting in a net increase of approximately 37,339 square feet of impervious area post-redevelopment.



BASE MAP ADAPTED FROM 7.5 MIN USGS TOPO QUADS
BANGOR, ME - 2021

1000 0 2000 FEET

DWG: SITELOC LMN: NONE CTB: SME-STD REV: 5/1/2026

FIGURE 1
SITE LOCATION MAP
BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

SME
SEVEE & MAHER ENGINEERS

C:\Users\zander.foster\OneDrive - SME_SP\Civil-ME\Gawron Turgeon\Bangor Housing\Acad\Figures\SITELOC.dwg, A_FIG 1, 5/1/2026 9:08:56 AM, Zander.Foster

The Bangor Housing property is regulated under an existing Maine Department of Environmental Protection (MEDEP) Site Location of Development Act (SLODA) permit, which is required to be amended for changes to the property including redevelopment. Since the City of Bangor has Delegated Authority from the MEDEP to review SLODA projects, standards are addressed in Appendix B.

As a result of the SLODA Amendment, the project is subject to the redevelopment standards of MEDEP Chapter 500 for treating stormwater runoff. Stormwater management for this project will be accomplished using a closed stormwater management system including catch basins, storm drains, roof dripline filters, and a grassed underdrained soil filter. The redevelopment and treatment calculations are included in Appendix F – Stormwater Management.

The following sections outline additional project details and conformance with applicable Chapters of the Bangor Ordinance.

CHAPTER 165, PART 1, LEGAL PROVISIONS, ORGANIZATIONS AND ADMINISTRATION

Article I: General Provisions

§ 165-9 Conditional uses

The project requires conditional use approval from the Planning Board for permanent supportive housing in the G&ISD zone.

(1) Development Standards and Use Conditions: The proposed development will consist of a permanent supportive housing building and associated site improvements. Permanent supportive housing buildings are a conditional use in the G&ISD. Proposed construction complies with standards and use conditions of the G&ISD;

(2) Traffic congestion or Hazardous Conditions: There will be limited vehicular use for this project for staff, resident, and visitor traffic; therefore, the proposed use will not create unreasonable traffic congestion or hazardous conditions on contiguous or adjacent streets;

(3) Proper Operation: The property will be owned and operated by Bangor Housing Development Corporation. Utilities, fire protection, drainage, parking and loading, and other necessary site improvements are designed to provide adequate service for the proposed development. Long-term maintenance and operation will be managed by Bangor Housing Development Corporation; and

(4) Appropriate for Location: An Architectural Narrative and Plan is provided in Appendix D, which demonstrates conformance with this Standard.

CHAPTER 165, PART 2, GENERAL REQUIREMENTS

Article VI: Quarries, Excavations and Earthmoving Activities

§165-33 Filling, Grading, and Earthmoving Activities

This project will disturb more than 10,000 square feet of land and qualifies as a Major Site Plan as defined by Section 165-11 of the Municipal Land Development Ordinance. The project will be reviewed by City staff and the Planning Board as part of the Land Development Permit application process.

Article VIA: Erosion and Sediment Control

§165-33.1 Best Management Practices

All grading, filling, and associated site construction will be conducted in accordance with the Maine Erosion and Sediment Control Best Management Practices (BMPs), latest edition dated October 2016. This will be the minimum standard for erosion and sedimentation control for the project, as adopted by the

City of Bangor from the MEDEP standards. Erosion and sedimentation control notes and details are included on Drawing C-104, and Drawing C-300 in Appendix H.

Article VII: Height Regulations

§165-58 Airport Glide Zones

The project is within 10,000 feet of the Bangor International Airport. The proposed permanent supportive housing building will be 29.5 feet tall and well below the 80-foot maximum height requirement for the G&ISD.

Article X: Off Street Parking

§165-72 Required Number of Spaces

The proposed project will service up to 30 clients at one time with four staff on premises during the peak shift. The ordinance requires one space for every six clients, plus one space for each staff person to be on the premises during the peak shift for a group home, halfway house, community living facility, or emergency shelter uses. Therefore, the project will require five parking spaces for the number of clients and four parking spaces for staff, totaling nine spaces. The project is designed to provide 11 total spaces with one of those being an ADA accessible space and meets the parking requirements.

§165-73 Parking Area Location and Screening

Parking will be located more than 20 feet from the closest street line and more than 5 feet from any other lot line and conform to the minimum distances from the street line, side lot line, and rear lot line outlined for Government & Institutional Services District. The proposed parking lot will be primarily screened from views by the proposed building and by the plantings designed by a registered landscape architect. Buffer yards and screening are shown on the Site Planting Plan included in the project plan set.

§165-74 Design, Construction and Maintenance

The proposed parking area was designed to meet the requirements for off-street parking and provide well-defined circulation routes for vehicles and pedestrians. Traffic control signs and pedestrian crossings are included to minimize points of conflict between traffic and pedestrians. The Site Layout and Utility Plan, Drawing C 103, outlines design and construction for the proposed parking lot

Article XI: Off Street Loading

§ 165-76 Required loading spaces

The supportive housing building requires one (1) space for off-street loading. This will be accomplished using the proposed circular entry plaza of the access drive which is reserved for drop off and pick up, emergency vehicle access, and off-street loading. Based on building use, deliveries are limited to box trucks, vans, and smaller vehicles.

§ 165-77 Size of loading spaces

The existing entry plaza is adequately sized to provide 10 feet by 50 feet loading space to accommodate delivery vehicles anticipated for this facility. Minimum clearance in the loading area will be 10 feet. The loading spaces meet the requirements for off-street loading for buildings with a gross floor area of 10,000 square feet or more.

Article XII: Utility Service

§ 165-79 Utilities required

The proposed building will be served by major utilities, including domestic and fire protection water services, sewer, and electric. Proposed catch basins have been located to meet the grading requirements for proposed site improvements. Site lighting is designed to comply with State and local codes to provide safe access to and from the building and parking areas. Proposed utilities are outlined on the Site Layout and Utility Plan, Drawing C-103.

§ 165-80 Water and sewage

The building will be served by public water through connection to the Bangor Water District's 16-inch water main in Corporate Drive. The proposed water services will include a 4-inch domestic water service and a 6-inch-diameter sprinkler service. The building sewer will connect with the 8-inch sewer main in Maine Avenue as shown on the Site Layout and Utility Plan, Drawing C-103.

§ 165-81 Lighting

Exterior site lighting was designed to address safety, efficiency, the environment, and aesthetics. The lighting will include wall-mounted lights along the building, and new light poles and fixtures within the parking area to provide visibility and safe passage during nighttime use.

Exterior lighting will include shielded, full cut-off fixtures to ensure no undesirable illumination or glare will be produced on adjacent streets or abutting properties. The Photometrics Plan included in Appendix E

demonstrates light levels of half-foot-candle or less at the property line in accordance with lighting requirements. Cut sheets for the poles and fixtures planned for the project are included in Appendix E.

§ 165-82 Fire hydrants

There are existing fire hydrants adjacent to the proposed development on the north side of Corporate Drive, approximately 325 feet from proposed building and to the east side of Maine Avenue approximately 94 feet from the proposed building. These are shown within the plan set provided with this application.

The proposed building will be sprinkled and served by a new 6-inch service connection from the 16-inch Bangor Water District water main in Corporate Drive. No new hydrants are planned for this project.

§ 165-83 Electricity

The building will be powered through the connection to the existing overhead service lines along Corporate Drive. The primary power connection is proposed at the utility pole near the intersection of Corporate Drive and Maine Avenue and will connect to the proposed transformer near the western corner of the building.

§ 165-84 Storm drainage and stormwater offset

Site improvements have been designed to ensure the stormwater flows from the development does not result in impacts to abutting properties or off-site drainage infrastructure. Stormwater management is detailed in the Stormwater Management Report included in Appendix F.

§ 165-85 Sanitary sewage discharge information

The proposed building will include 30, one-bedroom units with approximately four employees at a given time. Based on design flows from the Maine Subsurface Wastewater Disposal Rules, the anticipated sewer flows for the project are estimated at 120 gallons per day (gpd) per each one bedroom unit and 12 gpd per employee. Therefore, the estimated sanitary flow from the project is 3,648 gpd. To convey this flow, a 6-inch sewer service from the building will connect into a proposed sewer manhole northwest of the building and then connect into an existing manhole and 8-inch sewer main that flows along Maine Avenue.

§ 165-86 Compliance with sewer regulations

The project and sewer connection will be completed in conformance with the requirements of the Bangor City Code Chapter 252, Sewers and Drains. Improvements are outlined on the Site Utility Plan, Drawing C-103.

CHAPTER 165, PART 4, LAND DEVELOPMENT PERMIT

Article XVI: Land Development Permit

§165-114 Land Development Approval Standards

A. Subdivision

This project is a Site Development project. Criteria established under 30-A M.R.S.A. § 4404, and the requirements of Article XVIII of the Land Development Ordinance do not apply to this project.

B. On-Site Parking, Loading, and Access

As previously described, the project will include an 11-space parking lot to provide the required parking for the residents, employees and visitors. The primary access to the site will be through a new curb cut on Corporate Drive as outlined in the Site Layout and Utility Plan, Drawing C-103.

The proposed parking area will include an 82-foot-radius drop-off area to provide adequate access for fire trucks and emergency vehicles. The drop off area will also accommodate deliveries to the building, which are anticipated to be from box trucks or smaller vehicles only.

C. Driveways

Traffic will access the site from the proposed curb cut off Corporate Drive. The single point of access will have adequate sight distance in both directions along Corporate Drive, and conforms to the requirements of Chapter 271, Streets, Article VIII, Curb Cuts. Corporate Drive does not have a posted speed limit, so the minimum required sight distance is 250 feet. Sight distance to the north along Corporate Drive is approximately 280 feet and ends with the intersection with Maine Avenue. Sight distance to the south exceeds 1,000 feet. The site has an existing curb cut off Maine Avenue that used to provide access to Bangor Water District buildings which have now been abandoned and demolished. This project will remove the curb cut and revegetate the area.

The projected traffic for this type of development is seven trips during the a.m. peak hour and 10 trips during the p.m. peak hour, which is well below the 100 trips that would require further review or a Traffic Impact Study.

D. Stormwater Management

The stormwater management for this project is described further in the Stormwater Management Report included in Appendix F.

The construction will be completed in accordance with the most recent version of the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices and as detailed on Drawings C-104 and C-300 included in the drawing set.

E. Outdoor Display Storage and Lighting

Proposed dumpsters are enclosed with fencing designed to fully screen the dumpsters from adjacent properties as shown on the drawings included in this application.

Site lighting will include shielded, full cut-off fixtures to ensure light levels at the property line do not exceed half-foot-candle or less in accordance with the Photometrics Plan included in Appendix E.

F. Landscaping of Unpaved Areas or Other Treatment of the Site

Screening, buffering, and landscaping on the property are designed by a registered landscape architect in accordance with the standards outlined in this section. Buffer yards and screening are shown on the Site Planting Plan included in the project plan set.

G. Building Location

The building was sited on the parcel to minimize impacts and impervious areas, match into the grades on the property to limit cuts and fills and provide the site program needed to support the use of the building.

H. Environment Impacts.

The site is currently developed and located in an urban area. There are no historic sites, significant wildlife habitats, or rare and irreplaceable natural areas within a 250-foot radius of the proposed redevelopment. A copy of the wetlands delineation and report documenting the lack of natural resources on the property is included in Appendix C.

I. Water Resource and Shoreline Preservation

There are no ponds, lakes, rivers, streams, or tidal waters within 250 feet of the limits of the proposed development. This section does not apply to this project. A copy of the FEMA floodplain map is included in Appendix G for reference.

J. Approval Under 38 M.R.S.A. §§ 481 through 488

This site requires approval under the provisions of 38 M.R.S.A. §§ 481 through 488. The Bangor Housing property is regulated under an existing Maine Department of Environmental Protection (MEDEP) Site

Location of Development Act (SLODA) permit, which is required to be amended for changes to the property including redevelopment. Since the City of Bangor has Delegated Authority from the MEDEP to review SLODA projects, standards are addressed in Appendix B.

§165-114 Impact Fees

As a site development project with minimal impact to infrastructure in the area, impact fees are not anticipated for this project.

CHAPTER 271, STREETS

Article VIII: CURB Cuts

271- 45 – Width

The maximum curb cut for a driveway allowed by the City ordinance is 36 feet. However, this does not provide enough width at this project site to allow a fire truck to turn into the driveway. The proposed curb cut at Corporate Drive is 54 feet wide at the curb line and 24-feet wide at the tangent point of the curb radius

SITE LOCATION OF DEVELOPMENT ACT AMENDMENT APPLICATION NARATIVE
BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
236 MAINE AVENUE
BANGOR, MAINE

SITE LOCATION OF DEVELOPMENT ACT AMENDMENT NARATIVE

This narrative has been prepared in accordance with Maine Department of Environmental Protection (MEDEP) Site Location of Development Act (SLODA) amendment application for Bangor Housing Development Corporation (the Applicant) for new building and associated site improvements on a 5.05-acre parcel of land at 236 Maine Avenue in Bangor, Maine.

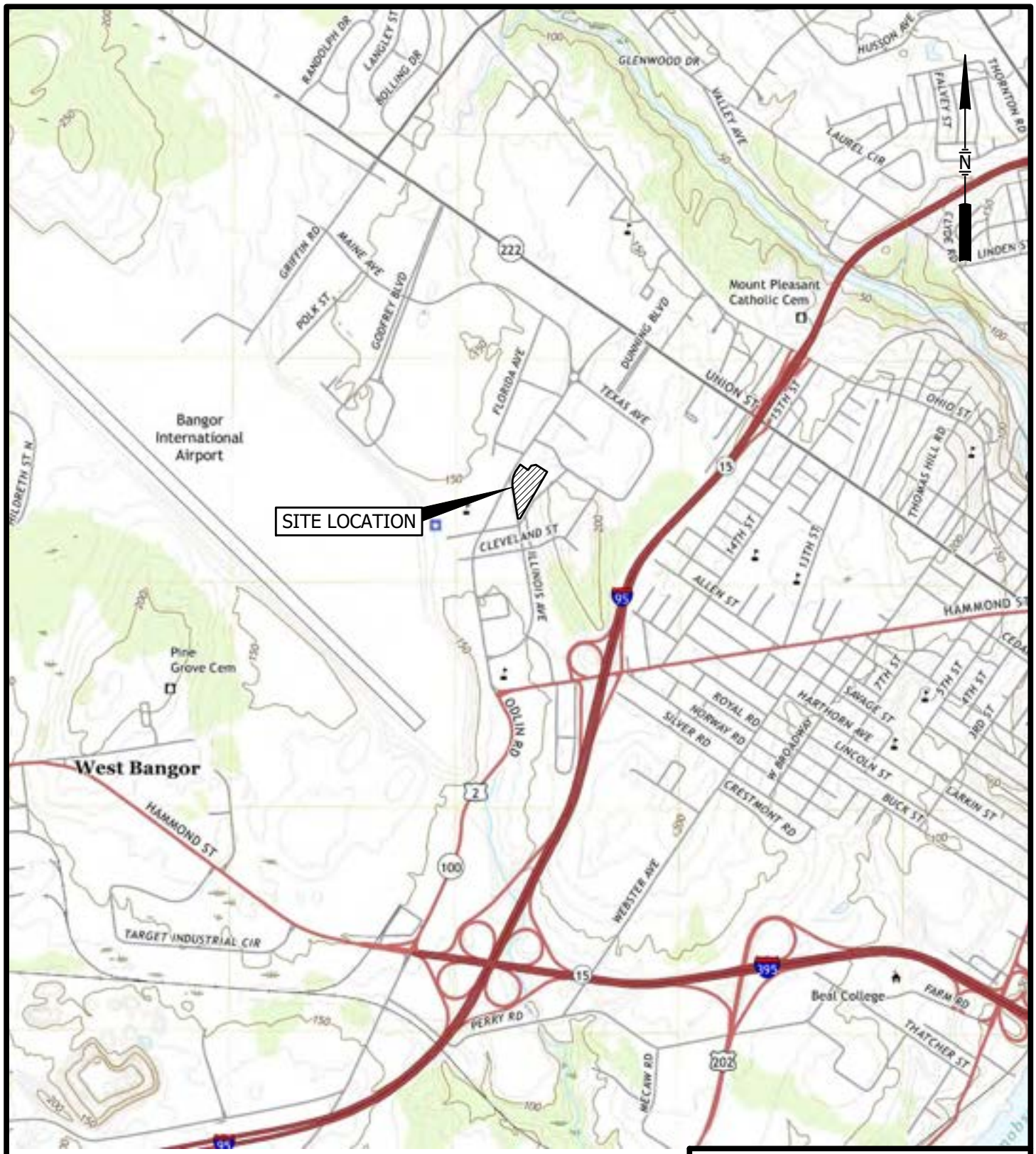
SLODA SECTIONS

Section 1 – Development Description

Bangor Housing Development Corporation (BHDC) proposes to develop a new 30-unit permanent supportive housing building called Yellen Pines on property currently at 236 Maine Avenue. The location of the project is shown in Figure 1, Site Location Map. The project is subject to a Land Development Permit from the City of Bangor Planning Board. This application provides detailed project information and outlines compliance with the applicable sections of the City Ordinance.

The project is located on the 5.05-acre parcel identified as Lot 001-A on City Tax Map R25 within the Government and Institutional Services District (G&ISD) and Technology and Service District (T&S) on the City's Official Zoning Map. A copy of the deed is provided in Appendix A, as well as the Option to Purchase the property between the City and BHDC. The property is bounded by Maine Avenue to the west, Texas Avenue to the east, Corporate Drive to the south, and a developed University of Maine Office Building property to the north. The property is currently developed as a vegetated slope maintained as lawn with a row of trees, a concrete walkway and a paved entrance off Maine Avenue. The property is within the Urban Impaired Stream of Birch Stream and is primarily developed land.

The permanent supportive housing project will include a single story 19,100-square-foot building that will include thirty (30) one-bed units with support offices and lounge area. The construction will include area for eleven (11) parking spaces with one (1) ADA accessible parking space. The project will have a new 24-foot paved access drive from Corporate Drive sized for access by City fire and emergency vehicles. Additional site improvements include a patio along the southern side of the building, public water and sewer, underground utilities, stormwater management, site lighting, and landscaping.



BASE MAP ADAPTED FROM 7.5 MIN USGS TOPO QUADS
BANGOR, ME - 2021

1000 0 2000 FEET

DWG: SITELOC LMN: NONE CTB: SME-STD REV: 5/1/2026

FIGURE 1
SITE LOCATION MAP
BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

SME
SEVEE & MAHER ENGINEERS

C:\Users\zander.foster\OneDrive - SME_SP\Civil-ME\Gawron Turgeon\Bangor Housing\Acad\Figures\SITELOC.dwg, A_FIG 1, 5/1/2026 9:08:56 AM, Zander.Foster

The housing project will result in approximately 84,740 square feet of developed area, all of which will be considered redevelopment given the nature of the existing site. This redeveloped area will include 41,156 square feet of new impervious area. The existing concrete walkway and paved turnaround on-site will be demolished, resulting in a net increase of approximately 37,339 square feet of impervious area post-redevelopment.

The Bangor Housing property is regulated under an existing Maine Department of Environmental Protection (MEDEP) Site Location of Development Act (SLODA) permit, which is required to be amended for changes to the property including redevelopment.

As a result of the SLODA Amendment, the project is subject to the redevelopment standards of MEDEP Chapter 500 for treating stormwater runoff. Stormwater management for this project will be accomplished using a closed stormwater management system including catch basins, storm drains, roof dripline filters, and a grassed underdrained soil filter. The redevelopment and treatment calculations are included in Appendix F – Stormwater Management.

Section 2: Title, Right or Interest

The property deed conveying the property to City of Bangor is provided in Appendix A to show the current ownership of the property. Appendix A also includes an Option to Purchase agreement from City of Bangor to Bangor Housing Development Corporation, a not-for-profit corporation for a parcel of land containing approximately 5.05 acres of land.

Section 3: Financial Capacity

The anticipated construction cost for the project will total approximately $6.5 million. Appendix B includes a letter outlining the Applicant's financial capacity to complete the proposed project.

Section 4: Technical Ability

BHDC has contracted with Sevee & Maher Engineers, Inc. (SME) to assist with project design and permitting. The following personnel are integral to the site planning, design and permitting of the housing project in Bangor.

Daniel P. Diffin, P.E., LEED AP - Site Design and Permitting
Sevee & Maher Engineers, Inc.

Dan Diffin has more than 22 years of experience on a wide variety of civil engineering design and construction management projects for private and public sector clients. Dan has been responsible for the engineering, design and oversight, and construction services for land development projects, commercial,

industrial, and medical site developments, educational campuses, stormwater management and erosion control projects, and local, state, and federal permitting. Typical projects include: Bath Iron Works, Bath, Maine – Facility Build-out Plan; Bangor Savings Bank, Bangor, Maine – Headquarters Campus Redevelopment; Estabrook's Farms and Greenhouse, Pownal, Maine – Commercial Greenhouse Development and Irrigation Pond; Washington County Council of Governments, multiple towns – Coastal resilience and public safety projects; and PK Realty, South Portland, Maine – Liberty Shipyard Redevelopment engineering and permitting services. Dan Diffin also oversees various projects in his role as the Town Engineer for the Town of Cumberland, including roadway improvements, public facilities projects, and recreational areas.

SME is working with the following subconsultants to support the SLODA Permit application:

- Aleita Berman, LSS, LSE, NH CWS – Natural Resource Identification and Delineation, Watershed Resource Consultants, LLC (WRC);
- Jon P. Pinkham, LSE – Surveyor, Plisga &Day Land Surveyors (P&DS);
- Building Architect, Gawron Turgeon Dillon Architects, P.C. (GTDA); and
- Sashie Misner - Landscape Architect – Land and Play (L&P)

Section 5: Noise

The noise levels of the proposed project will meet the requirements of the municipal ordinance. Anticipated sound levels will be under 60 decibels (dB).

Section 6: Visual Quality and Scenic Character

The proposed project will look very similar to the existing Hope House and properties within the UMA Bangor campus and Bangor International Airport areas. The project will not have any negative aesthetic impacts on the area.

Section 7: Wildlife and Fisheries

The Maine Department of Inland Fisheries and Wildlife (MDIFW) did not map any Essential Habitats within the project area or in vicinity of the property. MDIFW identified Bats as species protected under Maine's Endangered Species Act; however, it also states that significant impacts are not anticipated as a result of this project.

A copy of the MDIFW review letter is in Appendix C for review. Copies of the Environmental Review of Fish and Wildlife Observations and Priority Habitats map and the MDIFW Information for Planning and Consultation (IPaC) official species list are also Appendix C for reference.

Section 8: Historic Sites

The Maine Historic Preservation Commission (MHPC) has determined that no historic properties (archaeological or architectural) will be affected by this project. A copy of the MHPC review letter is in Appendix D for reference.

Section 9: Unusual Natural Areas

The Maine Natural Areas Program (MNAP) was contacted and has determined that there are no rare and exemplary botanical features documented specifically within the project parcel. A copy of their review letter and email correspondence is in Appendix E for review.

Section 10: Buffers

There are no existing or proposed buffers on the site.

Section 11: Soils

On-site soils were identified using the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil information for Penobscot County, Maine, Southern Part. A copy of the custom Soil Resource Report is included in Appendix F – Stormwater Management Report. The soil in the area of work consists of Chesuncook-Telos complex (TcC), Telos-Chesnucook complex (CTB), Elliottsville-Chesuncook association (ElB), and Pushaw-Swanville-Urban land association (PuB). The soil natural drainage classifications are “Moderately well drained,” “well drained,“ and “somewhat poorly drained.” The hydrologic soil groups are Type C/D, D, C, and C/D, respectively.

Section 12: Stormwater Management

A Stormwater Management Report and Construction Stormwater Pollution Prevention Plan (SWPPP) is in Appendix F.

Section 13: Urban Impaired Streams

The property is within the delineated boundary of an Urban Impaired Stream, Birch Stream. The project will not have any impact on the Urban Impaired Stream. Stormwater treatment will be provided through a combination of roof dripline filters and an underdrained grass soil filter to capture and treat runoff from the redevelopment areas. Additional details on compliance with the Urban Impaired Stream standards is included in the Stormwater management Report included as Appendix F.

Section 14: Basic Standards

A Stormwater Pollution Prevention Plan (SWPPP) is included with the Stormwater Management Report in Appendix F.

Section 15: Groundwater

There will not be any impact on the groundwater resources from the project.

Section 16: Water Supply

The building will require 2-inch domestic and 6-inch sprinkler water services. Public water will be provided with connections into the existing 16-inch water main in Corporate Drive. The design of the connection has been coordinated with the Bangor Water District (BWD). BWD has verified they have capacity to serve the project. A copy of their letter is included in Appendix G.

Section 17: Wastewater Disposal

The apartment building will require a 6-inch sewer service into the existing 8-inch sewer main in Maine Avenue. The design of the connection has been coordinated with the City of Bangor Engineering Department – Sewer (BED). A letter of request has been sent to BED to verify they have capacity to serve the project. A copy of the request letter is included in Appendix H. A copy of the capacity to serve letter will be provided upon receipt.

Section 18: Solid Waste

Solid waste from normal building operations will be disposed of at a dumpster located on the east end of the Corporate Drive parking lot. The solid waste will be removed through a contract with a private waste hauler such as Pine Tree Waste or Waste Management of Maine.

Section 19: Flooding

The Federal Emergency Management Agency (FEMA) map for this area, included in Appendix I shows that the project site is located within Zone X, an area of minimal flooding. The site areas are shown on the outlined Firm Panel (see attached Panel 14 of 20) on FEMA Map 23019C 2116 D, effective July 19, 2023.

The proposed project will not cause or increase flooding or cause an unreasonable flood hazard to any structure on the property or on abutting parcels. See the Stormwater Management Report in Appendix F for additional detail.

Section 20: Blasting

The geotechnical investigations at this property did not identify ledge or large boulders in the area of excavation that would require blasting. This section is not applicable to this project.

Section 21: Air Emissions

This section is not applicable to this project.

Section 22: Odors

This section is not applicable to this project.

Section 23: Water Vapor

This section is not applicable to this project.

Section 24: Sunlight

This section is not applicable to this project.

Section 25: Notices

The City of Bangor will have a public hearing for the Land Development Permit as a public informational meeting. The public hearing will be notified by the City per the requirements of this application.

A list of the names and addresses of properties within 1,000 feet from the project site and abutting property owners to the overall property is included in Appendix J.

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

February 13, 2026

Anna Dedon
Sevee & Maher Engineers, Inc.
4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021

Via email: Anna.Dedon@smemaine.com

Re: Rare and exemplary botanical features in proximity to: #251269.05, Bangor Housing Development Corporation, Home for Good Bangor, 236 Maine Avenue, Bangor, Maine

Dear Anna Dedon:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received February 10, 2026 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Bangor, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

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

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

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

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

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

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

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

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

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

Sincerely,

Abby Stepanauskas

Abby Stepanauskas | Ecologist | Maine Natural Areas Program
207-287-8048 | abby.stepanauskas@maine.gov

Rare and Exemplary Botanical Features within 4 miles of

Project: #251269.05, Bangor Housing Development Corporation, 236 Maine Avenue, Bangor, Maine.

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Bicknell's Sedge						
	E	S1	G5	1931-06-26	1	Old field/roadside (non-forested, wetland or upland)
Estuary Bur-marigold						
	SC	S3	G4	2005-09-19	34	Tidal wetland (non-forested, wetland)
Mudwort						
	SC	S3	G5	2005-09-19	36	Tidal wetland (non-forested, wetland)
Nantucket Shadbush						
	T	S2	G3Q	2017-05-16	5	Dry barrens (partly forested, upland),Non-tidal rivershore (non-forested, seasonally wet),Old field/roadside (non-forested, wetland or upland)
Orono Sedge						
	T	S3	G3	1908-07-07	2	Old field/roadside (non-forested, wetland or upland)
Parker's Pipewort						
	SC	S3	G3	2005-09-19	36	Tidal wetland (non-forested, wetland)
Purple Clematis						
	SC	S3	G5T5	1916-08	14	Non-tidal rivershore (non-forested, seasonally wet),Hardwood to mixed forest (forest, upland)

Pygmyweed					
SC	S2S3	G5	2005-09-19	26	Open water (non-forested, wetland)
Raised Level Bog Ecosystem					
	S4	GNR	2002	12	
Showy Lady's-slipper					
SC	S3	G4G5	1906-07-13	25	Forested wetland,Open wetland, not coastal nor rivershore (non-forested, wetland)
Sparse-flowered Sedge					
SC	S3	G5	1905-06-25	11	Forested wetland,Open wetland, not coastal nor rivershore (non-forested, wetland)
Spongy-leaved Arrowhead					
SC	S3	G5T4	1937-08-16	24	Tidal wetland (non-forested, wetland)
SC	S3	G5T4	1958-08-20	23	Tidal wetland (non-forested, wetland)

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Conservation Status Ranks

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

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

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

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

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

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

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

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

GAWRON TURGEON DILLON ARCHITECTS, P.C.

ARCHITECTURE
INTERIOR DESIGN
PLANNING

March 03, 2026

RE: Section 165-9. Conditional Uses

To Whom it May Concern:

The use, architectural style, and bulk of our proposed building is appropriate for this location. Within the 500 foot radius defined as the "immediate area," there is minimal architectural context aside from a single story, flat roof brick office building currently occupied by the University of Maine. Beyond this radius, development is uniformly low in scale due to the site's proximity to the airport, consisting mainly of single story residential and 1 to 2 story office buildings with simple sloped roofs and brick or clapboard siding—materials and forms that match those proposed for the project.

The building's architectural style aligns with this context through the use of similar exterior materials, modest massing, and a compatible roof form. Its single-story height and footprint conform to the low building to land ratio characteristic of nearby properties. The proposed use also reflects the low intensity pattern of surrounding office and residential activity, ensuring seamless integration into the existing development pattern.

Overall, the project appropriately fits the physical and architectural character of all properties within the same block and within 500 feet of the site, meeting the requirements of this section.

Devin Cough

Project Architect
Gawron Turgeon Dillon Architects, P.C.

O: 29 BLACK POINT ROAD
SCARBOROUGH, MAINE 04074
M: PO BOX 776,
SCARBOROUGH, MAINE 04070
T: 207-883-6307 | F: 207-883-0361

PRINCIPALS | DEIRDRE PIO, REBECCA DILLON
RETIRED PRINCIPALS | MARY TURGEON, STAN GAWRON
GTDARCHITECTS.COM

BHDC YELLEN PINES

236 MAINE AVENUE — BANGOR, MAINE

SITE LOCATION MAP

PHASING PLAN/ KEY PLAN

DRAWING INDEX

			04.03.2026 50% PROGRESS SET	04.24.2026 REVISED 50% PROGRESS SET			
GENERAL	G101	COVER SHEET	•	•			
	G102	CODE REVIEW - RESIDENTIAL APARTMENTS (RA)	•	•			
	G103	CODE PLAN	•	•			
	G104	ADA DETAILS	•	•			
SITE/CIVIL	C100	Unnamed					
	C200	Unnamed					
	C300	Unnamed					
	C400	Unnamed					
LANDSCAPING	L100	Unnamed					
	L200	Unnamed					
	L300	Unnamed					
	L400	Unnamed					
STRUCTURAL	S100	Unnamed					
	S200	Unnamed					
	S300	Unnamed					
	S400	Unnamed					
ARCHITECTURAL	A001	ASSEMBLY TYPES AND NOTES	•	•			
	A101	OVERALL PLANS	•	•			
	A110	PARTIAL FIRST FLOOR PLAN - EAST	•	•			
	A111	PARTIAL FIRST FLOOR PLAN - WEST	•	•			
	A120	ENLARGED UNIT PLANS & ELEVATIONS	•	•			
	A200	ATTIC PLAN	•	•			
	A201	OVERALL ROOF PLAN	•	•			
	A202	ROOF DETAILS	•	•			
	A301	PARTIAL FIRST FLOOR RCP - WEST	•	•			
	A302	PARTIAL FIRST FLOOR RCP - EAST	•	•			
	A401	BUILDING ELEVATIONS	•	•			
	A402	BUILDING ELEVATIONS	•	•			
	A501	BUILDING SECTIONS	•	•			
	A502	BUILDING SECTIONS	•	•			
	A601	WALL SECTIONS	•	•			
	A602	WALL SECTION & DETAILS	•	•			
	A603	WALL DETAILS	•	•			
	A801	DOOR SCHEDULE, TYPES, & FRAMES	•	•			
	A802	WINDOW SCHEDULES & DETAILS	•	•			
	A901	PARTIAL FIRST FLOOR FINISH PLAN - WEST	•	•			
	A902	PARTIAL FIRST FLOOR FINISH PLAN - EAST	•	•			
	A920	INTERIOR ELEVATIONS	•	•			
	A921	INTERIOR ELEVATIONS	•	•			
	A930	INTERIOR DETAILS					
	A941	INTERIOR SCHEDULES	•	•			
MECH/PLUMBING	M100	Unnamed					
	M200	Unnamed					
	M300	Unnamed					
	M400	Unnamed					
	P100	Unnamed					
	P200	Unnamed					
	P300	Unnamed					
	P400	Unnamed					
ELECTRICAL	E100	Unnamed					
	E200	Unnamed					
	E300	Unnamed					
	E400	Unnamed					

ABBREVIATIONS

ADA	AMERICANS WITH DISABILITIES ACT (COMPLIANT)	FO	FACE OF	PTD	PAINTED
ALUM	ALUMINUM	FR	FIRE RATING	PL	PLATE
AL	ALIGN	FRMG	FRAMING	PLAM	PLASTIC LAMINATE
AWP	ACOUSTICAL WALL PANEL	FT	FEET (FOOT)	PLY WD	PLYWOOD
ACT	ACOUSTICAL CEILING TILE	FV	FIELD VERIFY	PKT	POCKET
BIT	BITUMINOUS	FWC	FABRIC WALL COVERING	PNL	PANEL
BM	BENCH MARK	G	GROUT	PT	PRESSURE TREATED
BOT	BOTTOM	GA	GAUGE	PT & D	PAPER TOWEL AND WASTE DISP.
BRG	BEARING	GALV	GALVANIZED	PTN	PARTITION
BRK	BRICK	GB	GRAB BARS	PTRY	PANTRY
C	CARPET	GC	GENERAL CONTRACTOR	RD	ROOF DRAIN
CAB	CABINET	GWB	GYPSUM WALL BOARD	RE	REFER
CB	CHALK BOARD	HD WD	HARDWOOD	REF	REFRIGERATOR
CC	CENTER TO CENTER	HDR	HEADER	REINF	REINFORCED
CH	CONCRETE HARDENER	HDWE	HARDWARE	REQD	REQUIRED
CIRC	CIRCULATION	HH	HEAD HEIGHT	RM	ROOM
CJ	CONTROL JOINT	HM	HOLLOW METAL	RO	ROUGH OPENING
CL	CENTER LINE	HORZ	HORIZONTAL	RR	RESTROOM
CLG	CEILING	HT	HEIGHT	RTS	REFER TO SCHEDULE
CM	CONSTRUCTION MANAGER	HW	HAND WASHING	S	SOUTH
CMU	CONCRETE MASONRY UNITS	ID	INSIDE DIAMETER	SC	SEALED CONCRETE
CONC	CONCRETE	IF	INSIDE FACE	SD	SOAP DISPENSER
CONT	CONTINUOUS	IN	INCHES	SCHED	SCHEDULE
CONST	CONSTRUCTION	INSUL	INSULATION	SECT	SECTION
CONTR	CONTRACTOR	INT	INTERIOR	SHT	SHEET
CORR	CORRIDOR	LOC	LOCATION	SIM	SIMILAR
CT	CERAMIC TILE	M	MARBLE	SND	SANITARY NAPKIN DISPOSAL
DBL	DOUBLE	MAS	MASONRY	SQ	SQUARE
DF	DRINKING FOUNTAIN	MAX	MAXIMUM	SSS	SYNTHETIC SPORTS SURFACE
DIA	DIAMETER	MB	MARKER BOARD	STD	STANDARD
DIM	DIMENSION	MECH	MECHANICAL	STL	STEEL
DNA	DOES NOT APPLY	MFGR	MANUFACTURER	STOR	STORAGE
DTL	DETAIL	MICRO	MICROWAVE	STRUCT	STRUCTURAL
DWG	DRAWING	MIN	MINIMUM	SV	SHEET VINYL
E	EAST	MIR	MIRROR	T	TILE
EA	EACH	MISC	MISCELLANEOUS	TEMP	TEMPERED (GLASS)
EF	EACH FACE	MO	MASONRY OPENING	TB	TILE BASE
EJ	EXPANSION JOINT	MR	MOP RECEPTOR	TBD	TO BE DETERMINED
EL	ELEVATION	MRGB	MOISTURE RESISTANT GYPSUM BOARD	THK	THICKNESS
ELEC	ELECTRICAL	MTL	METAL	TO	TOP OF
ELEV	ELEVATOR	N	NORTH	TOB	TOP OF BEAM
EMHO	ELECTROMAGNETIC HOLD OPEN	NA	NOT APPLICABLE	TOM	TOP OF MASONRY
EP	ELECTRICAL PANEL	NBHD	NEIGHBORHOOD	TOW	TOP OF WALL
EQ	EQUAL	NIC	NOT IN CONTACT	TP	TOILET PAPER DISPENSER
ETR	EXISTING TO REMAIN	NO	NUMBER	TYP	TYPICAL
EW	EACH WAY	NOM	NOMINAL	UNO	UNLESS NOTED OTHERWISE
EWC	ELECTRIC WATER COOLER	NTS	NOT TO SCALE	VPB	VAPOR BARRIER
EXIST OR (E)	EXISTING	OA	OVERALL	VCT	VINYL COMPOSITION TILE
EXP	EXPANSION	OC	ON CENTER	VERT	VERTICAL
EXT	EXTERIOR	OD	OUTSIDE DIAMETER	VEST	VESTIBULE
FD	FLOOR DRAIN	OF	OUTSIDE FACE	VWC	VINYL WALL COVERING
FDN	FOUNDATION	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED	W	WEST
FE	FIRE EXTINGUISHER			W/	WITH
FFE	FINISH FLOOR ELEVATION	OH	OVERHANG	WC	WATER CLOSET
FIN	FINISH	OPNG	OPENING	WD	WOOD
FIN FL OR FF	FINISH FLOOR	OPP	OPPOSITE	WDW	WINDOW
FIN GR	FINISH GRADE			WP	WALL PAPER
FL	FLOOR			VIF	VERIFY IN FIELD

LEGEND

- Room name / 101 — ROOM LABEL
- 101 — DOOR TAG
- 1 — WINDOW TYPE
- EW6 / TYPE HGT. — WALL TYPE
- CEILING LABEL
- 01 — DEMO LABEL
- 0 — COLUMN LINE LABEL
- Ref / 1 / A101 — BUILDING ELEVATION
- SIM / 1 / A101 — BUILDING SECTION
- 1 / A101 — WALL SECTION
- SIM / 1 / A101 — DETAIL SECTION
- Ref / 1 / A101 — INTERIOR ELEVATION
- NAME / ELEVATION — VERTICAL ELEVATION
- CLEAR FLOOR AREA FOR DOOR, APPLIANCES, FIXTURES, ETC.

- F.E. FIRE EXTINGUISHER
- P.P. ADA PUSH PAD
- E.H.O. ELECTRIC HOLD OPEN
- CHAIR RAIL
- HANDRAIL
- FLOOR DRAIN

GENERAL NOTES

1. THE BUILDING SHALL BE CONSTRUCTED TO CONFORM WITH ALL APPLICABLE CODES INCLUDING, BUT NOT LIMITED TO, THE LATEST EDITIONS OF MUBEC, IBC, NFPA 101, & ANSI.
2. THE LOCATIONS OF DOORS NOT DIMENSIONED SHALL BE 4 INCHES AS MEASURED FROM THE DOOR LEAF TO THE ADJACENT WALL FINISH ON THE HINGE SIDE.
3. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE PRESERVATIVE TREATED & ALL CONNECTIONS TO BE STAINLESS STEEL.
4. CONTRACTOR SHALL WORK FROM GIVEN DIMENSIONS AND LARGE SCALE DETAILS ONLY. DO NOT SCALE THE DRAWINGS.
5. INSTALL BLOCKING BEHIND ALL SURFACE APPLIED FIXTURES, TRIM, CABINETS, COUNTER TOPS, SIGNAGE, SECURITY DEVICES, AND GRAB BARS WHEN MOUNTED ON STUD WALLS.
6. INSTALL MOISTURE RESISTANT GYPSUM BOARD IN LAVATORIES, JANITOR CLOSETS, INTERIOR FACES OF EXTERIOR WALLS, AND ALL OTHER HIGH HUMIDITY AREAS.
7. ALL EXPOSED SURFACES ARE TO BE PAINTED, WHETHER OR NOT INDICATED ON THE DRAWINGS, EXCEPT AS FOLLOWS: WHERE SPECIAL COATINGS ARE INDICATED; PREFINISHED ITEMS, CONCEALED SURFACES, OPERATING PARTS, AND LABELS. IF PREFINISHED, PAINTING THE FOLLOWING: EXPOSED MECHANICAL DUCTWORK, WALL DIFFUSERS, GRILLES AND LOUVERS, ROOF TOP MECHANICAL EQUIPMENT, AND SPEAKER GRILLES. FINISHED METAL SURFACES, EXCEPT AS LISTED ABOVE. SEE SPECIFICATIONS ON DRAWINGS IDENTIFYING THE TYPES OF PAINTS AND SPECIALTY COATINGS TO BE USED IN ACCORDANCE WITH MATERIAL BEING PAINTED OR COATED.
8. BUILDING INSULATION: PROVIDE AS INDICATED ON WALL DETAILS AND IN ACCORDANCE WITH PARTITION TYPES, WHETHER OR NOT SHOWN IN DETAILS AND DRAWINGS. FOR DRAWING CLARITY, INSULATION MAY NOT BE SHOWN, EVEN IF IT IS PROVIDED.
9. CONTRACTOR SHALL SUBMIT SAMPLES OF ALL INTERIOR FINISHES FOR ARCHITECT'S REVIEW.
10. CONSTRUCTION MANAGER/ GENERAL CONTRACTOR SHALL PROVIDE A SCHEDULE FOR ALL WORK TO BE COMPLETED.
11. EACH CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN, FOR THE DURATION OF CONSTRUCTION, ALL REQUIRED SCAFFOLDS, TARPAULINS, WARNING SIGNS, FENCES, AND OTHER TEMPORARY CONSTRUCTION ITEMS FOR THE PROPER AND SAFE COMPLETION OF THE WORK AND FOR COMPLIANCE WITH ALL APPLICABLE REGULATIONS, INCLUDING OSHA.
12. PRE-CONSTRUCTION MEETING - A PRE-CONSTRUCTION MEETING WITH CONTRACTOR, OWNER, AND ARCHITECT SHALL BE SCHEDULED TO REVIEW PROJECT TEAM, PROJECT/ WORK SCHEDULE AND PROCEDURES, BUILDING ACCESS, OWNER RULES AND GUIDELINES FOR CONSTRUCTION, SPECIALITY REQUIREMENTS, INITIAL CLEANING OF INTERIOR FINISHES.
13. THE DESIGN AND INSTALLATION OF THE LIFE SAFETY AND FIRE ALARM SYSTEM SHALL MEET THE LATEST EDITION OF NFPA PER THE STATE FIRE MARSHALS OFFICE.
14. ALL MATERIALS, FABRICATION, AND/OR INSTALLATION SHALL COMPLY WITH ALL TECHNICAL AND INDUSTRY STANDARDS AND SPECIFICATIONS FOR EACH DIVISION OF WORK.
15. ALL GRAB BARS SHALL BE ABLE TO SUPPORT A DEAD WEIGHT OF 250 LBS AT ANY POINT.
16. ALL FLOORS SHALL BE LEVELED TO A TOLERANCE OF 1/8" IN 10'-0" WHEN CHECKED AT ANY AREA WITH A 10' STRAIGHT EDGE (EXCEPT AS REQUIRED WHERE SLOPED TO DRAIN).
17. COORDINATE LOCATION OF FLOOR DRAINS WITH PLUMBING DRAWINGS.
18. ALL AREAS WITH FLOOR DRAINS SHALL HAVE POSITIVE PITCH TO AVOID STANDING WATER.

PROJECT DIRECTORY

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4/22/2026 10:27:26 AM DML, BVV

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BHDC YELLEN PINES
HOME FOR GOOD
205 CORPORATE DRIVE, BANGOR ME

REVISIONS

#	DATE	DESCRIPTION
A	02.09.2026	50% PROGRESS SET
B	04.24.2026	REVISED 50% PROGRESS SET

DATE:	04.24.26
PROJECT #	050725
DRAWN BY:	DML, BVV
CHECKED BY:	DEC
DRAWING SCALE	As indicated

SHEET TITLE
COVER SHEET

NOT FOR CONSTRUCTION

G101

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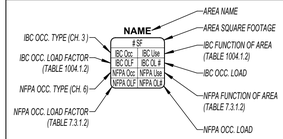
FAIR HOUSING ACT (FHAG) REQUIREMENTS:

- *ALL HOUSING PROJECTS WITH 4 OR MORE UNITS UNDER THE SAME ROOF NEED TO MEET FHAG:*
  - *HTTPS://WWW.HUDUSER.GOV/PORTAL/PUBLICATIONS/PDF/FAIRHOUSING/FAIRFULL.PDF*
  - *COVERED UNITS ARE ALL THOSE ON GROUND FLOOR IF THERE IS NO ELEVATOR. IF THERE IS AN ELEVATOR, ALL DWELLING UNITS ARE COVERED.*
- *AT LEAST 1 BUILDING ENTRANCE SHALL BE ON AN ACCESSIBLE ROUTE*
- *PUBLIC AND COMMON USE AREAS SHALL BE ACCESSIBLE AND USABLE (INCLUDING COMMON HALLWAYS, LOUNGES, LOBBIES, LAUNDRY ROOMS, REFUSE ROOMS, MAIL ROOMS, RECREATIONAL AREAS, STORAGE ROOMS, TOILET ROOMS, AND PASSAGEWAYS BETWEEN BUILDINGS)*
- *ALL DOORS DESIGNED TO ALLOW PASSAGE INTO AND WITHIN ALL PREMISES MUST BE USABLE BY PEOPLE IN WHEELCHAIRS (MIN. 32" CLEAR OPENING)*
  - *ACCESSIBLE DOORS - DOORS IN ACCESSIBLE ROUTE IN PUBLIC/ COMMON SPACES AND PRIMARY ENTRY DOORS TO DWELLING UNITS - EXTERIOR SIDE ONLY - MUST MEET ANSI A 4.13 REQUIREMENTS FOR CLEAR WIDTH, MANEUVERING CLEARANCES, THRESHOLDS, HARDWARE, AND OPENING FORCE.*
  - *USABLE DOORS - WITHIN DWELLING UNIT AND SECONDARY EXTERIOR DOORS. INTENDED FOR USER PASSAGE - MIN 32" CLEAR WIDTH, LOW THRESHOLD*
- *THERE MUST BE AN ACCESSIBLE ROUTE INTO AND THROUGH THE DWELLING UNITS.*
- *ALL PREMISES WITHIN THE DWELLING UNITS MUST CONTAIN LIGHT SWITCHES, ELECTRICAL OUTLETS, THERMOSTATS, AND OTHER OPERABLE ENVIRONMENTAL CONTROLS IN ACCESSIBLE LOCATIONS.*
- *ALL PREMISES WITHIN DWELLING UNITS MUST CONTAIN REINFORCEMENTS IN BATHROOM WALLS TO ALLOW LATER INSTALLATION OF GRAB BARS AROUND TOILET, TUB, SHOWER STALL, AND SHOWER SEAT, WHERE SUCH FACILITIES ARE PROVIDED.*
  - *PROVIDE REINFORCING MIN 24" LONG BEHIND & BESIDE TOILETS - HEIGHT FROM 30" MAX A.F.F. TO 36" MIN. A.F.F.*
  - *PREFERRED REINFORCING BEHIND TOILET - LENGTH OF 38", HEIGHT FROM 30" MAX A.F.F. TO 38" MIN A.F.F.*
  - *PREFERRED TOILET SIDE WALL REINFORCING - LENGTH OF 42" MAX 12" FROM BACK WALL, HEIGHT FROM 30" MAX A.F.F. TO 38" MIN A.F.F.*
  - *WHERE TOILETS DON'T HAVE FULL SIDE WALLS, REINFORCING BEHIND TOILET MUST BE ENLARGED TO SUPPORT A FOLDING GRAB BAR, PER MANUFACTURER'S INSTRUCTIONS.*
  - *PROVIDE REINFORCING FOR GRAB BARS IN SHOWERS ON BACK & SIDE WALLS - HEIGHT FROM 32" MAX A.F.F. (30" MAX. PREFERRED) TO 38" MIN A.F.F.*
  - *PROVIDE REINFORCING FOR WALL-HUNG SHOWER SEAT IN 36" X 36" SHOWERS, LOCATED ON WALL OPPOSITE CONTROLS AND RUNNING FULLL WIDTH OF STALL - HEIGHT FROM FLOOR TO MIN. 24" A.F.F.*
- *DWELLING UNITS MUST CONTAIN USABLE KITCHENS AND BATHROOMS SUCH THAT AN INDIVIDUAL WHO USES A WHEELCHAIR CAN MANEUVER ABOUT THE SPACE.*
  - *KITCHENS:*
    - *ADEQUATE SPACE WITHIN KITCHEN TO PROVIDE 30" X 48" CLEAR FLOOR SPACE AT OVEN, DISHWASHER, REFRIGERATOR, FREEZER, TRASH COMPACTOR, SINK, OVEN, AND MICROWAVE - POSITIONED EITHER PARALLEL OR PERPENDICULAR TO AND CENTERED ON THE APPLIANCE OR FIXTURE*
    - *MIN. 40" CLEAR BETWEEN ALL OPPOSING BASE CABINETS, COUNTERTOPS, APPLIANCES, AND WALLS*
    - *WHERE KNEE SPACES ARE PROVIDED BELOW SINKS AND COOKTOPS, PROVIDE PIPE INSULATION OR ENCLOSURE. KNEE SPACE SHALL BE MIN. 30" WIDE BY 27" HIGH. WALL AND FLOOR SURFACES AT KNEE SPACES MUST BE FINISHED.*
  - *BATHROOMS:*
    - *30" X 48" MIN. CLEAR FLOOR SPACE OUTSIDE SWING OF DOOR REQUIRED*
    - *CLEAR FLOOR SPACE REQUIRED AT EACH FIXTURE. CLEAR SPACES PERMITTED TO OVERLAP EACH OTHER. DOORS MAY SWING INTO CLEAR FLOOR SPACE AT FIXTURES, PROVIDED THERE IS A 30"X48" MIN. CLEAR SPACE OUTSIDE THE SWING OF THE DOOR*
      - *CLEAR FLOOR SPACE AT TOILET: 48" X 66", 48" X 56", OR 60" X 56". LAVATORY OR VANITY PERMITTED TO OVERLAP CLEAR FLOOR SPACE AT TOILET AS LONG AS THERE IS MIN. 15" CLEAR FROM THE CENTERLINE OF THE TOILET TO THE EDGE OF THE LAVATORY VANITY.*
      - *CLEAR FLOOR SPACE AT SINK: 30" X 48", PARALLEL TO AND CENTERED ON BASIN. BASE CABINETS BELOW SINKS MUST BE REMOVABLE WHERE THERE IS INSUFFICIENT SPACE FOR PARALLEL APPROACH CENTERED ON BASIN, WALLS AND FLOOR IN KNEE SPACE MUST BE FINISHED, AND PLUMBING BELOW LAVATORY SHOULD BE COVERED FOR PROTECTION.*
      - *CLEAR FLOOR SPACE AT SHOWER: 30" X 48", FLUSH AND PARALLEL WITH CONTROL WALL. SHOWERS ARE NOT PERMITTED TO BE INSTALLED ADJACENT TO TOILETS.*

CODE REVIEW PLAN LEGEND



PROPOSED:

- *NON-RATED WALL*
- *NON-RATED SMOKE PARTITION*
- *1 HOUR RATED SMOKE BARRIER*
- *2 HOUR RATED SMOKE BARRIER*
- *1 HOUR RATED FIRE BARRIER*
- *1 HOUR RATED FIRE PARTITION*
- *1 HOUR RATED BEARING WALL*

- *AREA BOUNDARY*
- *LONGEST DIAGONAL DIMENSION/ DISTANCE BETWEEN EXITS*
- *TRAVEL DISTANCE TO EXIT*
- *COMMON PATH OF TRAVEL*
- *TRAVEL DISTANCE TO FIRE EXTINGUISHER / FEC*
- *1 HOUR RATED ROOM ENCLOSURE*
- *FE — FIRE EXTINGUISHER- NO CABINET*
- *FEC — SEMI-RECESSED FIRE EXTINGUISHER- IN CABINET. FIRE RATED CABINET REQUIRED IN RATED WALLS.*

NOTE: COORDINATE FIRE EXTINGUISHER LOCATIONS WITH LOCAL AHJ PRIOR TO INSTALLATION.

- *P.P. — ADA PUSHPAD*
- *K.P. — KEYPAD*
- *CP — CARD READER*

(E) DENOTES DEVICES EXISTING TO REMAIN,
(N) DENOTES NEW DEVICES,
(RL) DENOTES RELOCATED DEVICES

- *EXIT SIGN*
- *HORN/ STROBE*
- *STROBE*
- *PS — PULL STATION*
- *EMERGENCY BATTERY WALL LIGHT UNIT*
- *SD — SMOKE DETECTOR*
- *EXIT SIGN/ EMERGENCY LIGHT COMBO*

- *A — ASSEMBLY A-3 OCCUPANCY*
- *B — BUSINESS OCCUPANCY*
- *R-2 — RESIDENTIAL R-2 OCCUPANCY*
- *S-1 — STORAGE S-1 OCCUPANCY*
- *S-2 — STORAGE S-2 OCCUPANCY*

IECC 2021 - PRESCRIPTIVE COMPLIANCE PATH
CLIMATE ZONE 6

(TABLE C402.1.3):
ROOFS
INSULATION ENTIRELY ABOVE ROOF DECK: R-30 CI
ATTIC AND OTHER : R-49

WALLS, ABOVE GRADE
MASS - RESIDENTIAL: R-15.2 CI
WOOD FRAMED AND OTHER: R-13 + R-7.5 CI

WALLS, BELOW GRADE
BELOW-GRADE WALL: R-10 CI

SLAB-ON-GRADE FLOORS:
UNHEATED SLABS : R-20 FOR 24" BELOW

(TABLE C402.1.4):
OPAQUE DOORS:
NON-SWINGING: U-0.31
SWINGING: U-0.37
GARAGE DOOR <14% GLAZING: U-0.31

(TABLE C402.4):
VERTICAL FENESTRATION MAXIMUM U-FACTOR:
FIXED FENESTRATION: .34
OPERABLE FENESTRATION: .42
ENTRANCE DOORS: .63

SHGC:
PF< 2: .38 FIXED, .34 OPERABLE
.2<=PF <.5: .46 FIXED, .41 OPERABLE
PF >/= .5: .61 FIXED, .54 OPERABLE

SKYLIGHTS:
U-FACTOR: .50
SHGC: .40

ICC A117.1 2017 CHAPTER 11 DWELLING/ SLEEPING UNIT REQUIREMENTS - TYPE A UNITS:

- *PRIMARY ENTRANCE ON ACCESSIBLE ROUTE FROM PUBLIC/ COMMON AREAS*
- *ALL ROOMS SERVED BY AN ACCESSIBLE ROUTE SHALL PROVIDE A TURNING SPACE (EXCEPT FOR SECONDARY BATHROOMS AND CLOSETS OR PANTRIES <48" DEEP). (* **TURNING SPACE** *SHALL BE 67" MIN DIAMETER FOR NEW BUILDINGS OR 60" MIN DIAMETER FOR EXISTING BUILDINGS)*
- *PRIMARY ENTRANCE DOOR TO UNIT AND ALL OTHER DOORWAYS INTENDED FOR USER PASSAGE SHALL COMPLY WITH SECTION 404 - MIN 32" CLEAR WIDTH, MANEUVERING CLEARANCES PER 404.2.3, THRESHOLD HEIGHT MAX 1/2"*
- *ALL BATHROOMS SHALL COMPLY WITH 1103.11.1:*
  - *1103.11.1: PROVIDE REINFORCEMENT FOR FUTURE INSTALLATION OF:*
    - *GRAB BARS AT WATER CLOSETS TO COMPLY WITH SECTION 604.5:*
      - *SIDE WALL - HORIZONTAL GRAB BAR 42" MIN LONG, LOCATED 12" MAX FROM REAR WALL AND EXTEND 54" MIN FROM REAR WALL*
      - *(NOT REQUIRED FOR TYPE A/B UNITS:) SIDE WALL - VERTICAL GRAB BAR 18" MIN LONG, MOUNTED WITH BOTTOM OF BAR AT 39" - 41" A.F.F., CENTERLINE OF BAR LOCATED 39" - 41" FROM REAR WALL*
      - *REAR WALL - HORIZONTAL GRAB BAR 36" MIN LONG, LOCATED 6" MAX FROM SIDE WALL, EXTEND 42" MIN FROM SIDE WALL. PERMITTED TO BE 24" MIN LONG, CENTERED ON WATER CLOSET, WHERE WALL SPACE DOESN'T PERMIT A GRAB BAR 36" LONG DUE TO THE LOCATION OF A RECESSED FIXTURE ADJACENT TO THE WATER CLOSET OR THE LAVATORY OVERLAPS THE WATER CLOSET CLEARANCE IN ACCORDANCE WITH THE EXCEPTION TO SECTION 1103.11.2.4.4*
    - *GRAB BARS AT BATHTUBS TO COMPLY WITH SECTION 607.4.*
    - *GRAB BARS AND SHOWER SEATS AT SHOWERS TO COMPLY WITH SECTIONS 608.3, 608.2.1.3, 608.2.2.3, 608.2.3.2*
  - *MIN 1 BATHROOM PER UNIT TO COMPLY WITH SECTION 1103.11.2.*
    - *DOOR SHALL NOT SWING INTO CLEAR FLOOR SPACE FOR ANY FIXTURE. UNLESS THE BATHROOM IS FOR INDIVIDUAL USE AND* **CLEAR FLOOR SPACE** *(30" X 52" FOR NEW BUILDINGS, 30" X 48" FOR EXISTING BUILDINGS) IS PROVIDED WITHIN THE ROOM BEYOND THE ARC OF THE DOOR SWING.*
    - *LAVATORY SHALL COMPLY WITH SECTION 606, EXCEPT THAT CABINETRY IS PERMITTED UNDER THE LAVATORY AS LONG AS IT IS REMOVABLE AND THE FLOORS AND WALLS UNDER AND SURROUNDING THE CABINETRY ARE FINISHED.*
    - *MIRROR ABOVE LAVATORY - BOTTOM EDGE OF REFLECTING SURFACE SHALL BE LOCATED AT 40" MAX. A.F.F.*
    - *WATER CLOSET SHALL BE LOCATED WITH A WALL TO THE REAR AND TO ONE SIDE. WITH ITS CENTERLINE 16" - 18" FROM THE SIDE WALL.*
      - *CLEARANCE AROUND WATER CLOSET SHALL BE 60" MIN WIDE. MEASURED PERPENDICULAR FROM THE SIDE WALL, AND 56" MIN DEEP, MEASURED PERPENDICULAR FROM THE REAR WALL.*
        - *PER 1103.11.2.4 (C), THE LAVATORY IS PERMITTED TO OVERLAP THE WATER CLOSET CLEARANCE AS LONG AS THERE IS MIN 18" FROM CENTERLINE OF TOILET TO SIDE OF LAVATORY AND THERE IS MIN 66" CLEARANCE MEASURED PERPENDICULAR FROM THE REAR WALL.*
      - *THE HEIGHT OF THE SEAT SHALL BE 15" - 19" A.F.F., MEASURED TO TOP OF SEAT.*
      - *HAND-OPERATED FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET.*
    - *BATHTUBS SHALL COMPLY WITH SECTION 607, EXCEPT THAT COUNTERTOPS AND CABINETRY SHALL BE PERMITTED AT ONE END OF THE CLEARANCE, AS LONG AS THE COUNTERTOP AND CABINETRY ARE REMOVABLE AND THE FLOORS AND WALLS UNDER AND SURROUNDING THE CABINETRY ARE FINISHED.*
      - *CLEARANCE IN FRONT OF BATHTUBS EXTENDING LENGTH OF BATHTUB AND MIN 30" DEEP.*
      - *A PERMANENT SEAT AT THE HEAD END OF THE BATHTUB OR A REMOVABLE IN-TUB SEAT SHALL BE PROVIDED. SEATS TO COMPLY WITH SECTION 610.*
      - *GRAB BARS SHALL COMPLY WITH EITHER SECTION 607.4.1 OR 607.4.2*
    - *SHOWERS SHALL COMPLY WITH SECTION 608, EXCEPT THAT AT STANDARD ROLL-IN SHOWER COMPARTMENTS COMPLYING WITH 608.2.2, LAVATORIES, COUNTERTOPS, AND CABINETRY SHALL BE PERMITTED AT ONE END OF THE CLEARANCE, AS LONG AS THE COUNTERTOP AND CABINETRY ARE REMOVABLE AND THE FLOORS AND WALLS UNDER AND SURROUNDING THE CABINETRY ARE FINISHED.*
      - *TRANSFER-TYPE SHOWERS SHALL HAVE A CLEAR INSIDE DIMENSION OF 30" X 36". AN ENTRY 36" MIN WIDE SHALL BE PROVIDED.*
        - *CLEARANCE (MIN 52" LONG X 36" DEEP IN NEW BUILDINGS OR MIN 48" LONG X 36" DEEP IN EXISTING BUILDINGS) SHALL BE PROVIDED ADJACENT TO THE OPEN FACE OF THE COMPARTMENT, MEASURED PERPENDICULAR FROM THE CONTROL WALL*
        - *A FOLDING OR NON-FOLDING SEAT COMPLYING WITH SECTION 610 SHALL BE PROVIDED ON THE WALL OPPOSITE THE CONTROL WALL*
      - *ROLL-IN SHOWERS SHALL HAVE A CLEAR INSIDE DIMENSION OF 60" MIN WIDE BY 30" MIN DEEP, AN ENTRY 60" MIN WIDE SHALL BE PROVIDED.*
        - *PROVIDE CLEARANCE OF 60" MIN LENGTH ADJACENT TO THE 60" WIDTH OF THE OPEN FACE OF THE SHOWER AND MIN 30" DEEP.*
          - *A LAVATORY COMPLYING WITH SECTION 606 IS PERMITTED AT THE END OF THE CLEARANCE OPPOSITE THE SEAT.*
        - *A FOLDING SEAT COMPLYING WITH SECTION 610 SHALL BE PROVIDED ON AN END WALL.*
          - *A FIXED SEAT SHALL BE PERMITTED WHERE THE SEAT DOES NOT OVERLAP THE MINIMUM CLEAR DIMENSION.*
        - *ALTERNATE ROLL-IN SHOWERS SHALL COMPLY WITH SECTION 608.2.3*
- *KITCHENS SHALL COMPLY WITH SECTION 1103.12:*
  - *CLEAR SPACE BETWEEN OPPOSING BASE CABINETS, COUNTERTOPS, APPLIANCES, OR WALLS WITHIN KITCHEN WORK AREAS - MIN 40" IN ALL KITCHENS, MIN. 60" IN U-SHAPED KITCHENS*
  - *AT LEAST 1 SECTION OF COUNTER SHALL PROVIDE AN ACCESSIBLE WORK SURFACE 30" MIN. IN LENGTH. CABINETRY AT ACCESSIBLE WORK SURFACE SHALL BE REMOVABLE. AND FLOOR AND WALLS BELOW AND SURROUNDING THE CABINETRY SHALL BE FINISHED. THE WORK SURFACE SHALL BE 34" MAX A.F.F. OR ADJUSTABLE IN HEIGHT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER EXPOSED PORTIONS OF WORK SURFACE COUNTERS.*
  - *KITCHEN SINK - PROVIDE CLEAR FLOOR SPACE POSITIONED FOR FORWARD APPROACH, AS WELL AS KNEE AND TOE CLEARANCE COMPLYING WITH SECTION 306. CABINETRY IS PERMITTED UNDER THE SINK AS LONG AS IT IS REMOVABLE REMOVABLE AND THE FLOOR AND WALLS BELOW AND SURROUNDING THE CABINETRY ARE FINISHED. CLEAR FLOOR SPACE PROVIDING PARALELL APPROACH AND CENTERED ON THE SINK SHALL BE PERMITTED AT A KITCHEN SINK IN A SPACE WHERE A COOK TOP OR CONVENTIONAL RANGE IS NOT PROVIDED. THE FRONT OF THE SINK SHALL BE 34" MAX. A.F.F. OR ADJUSTABLE IN HEIGHT. WATER SUPPLY AND DRAIN PIPES UNDER SINKS SHALL BE PROTECTED.*
  - *AT EACH KITCHEN APPLIANCE, PROVIDE CLEAR FLOOR SPACE POSITIONED FOR PARALELL OR FORWARD APPROACH, CENTERED ON THE APPLIANCE.*
    - *PROVIDE CLEAR FLOOR SPACE ADJACENT TO THE DISHWASHER DOOR. THE DISHWASHER DOOR IN THE OPEN POSITION SHALL NOT OBSTRUCT THE CLEAR FLOOR SPACE FOR THE DISHWASHER OR AN ADJACENT SINK.*
    - *WHERE THE CLEAR FLOOR SPACE FOR A COOKTOP IS POSITIONED FOR A FORWARD APPROACH, KNEE AND TOE CLEARANCE SHALL BE PROVIDED AND THE UNDERSIDE OF THE COOKTOP SHALL BE INSULATED OR OTHERWISE PROTECTED.*
    - *COMBINATION REFRIGERATORS AND FREEZERS SHALL HAVE AT LEAST 50% OF THE FREEZER COMPARTMENT SHELVES, INCLUDING THE BOTTOM OF THE FREEZER, 54" MAX. A.F.F. WHEN THE SHELVES ARE INSTALLED AT THE MAXIMUM HEIGHTS POSSIBLE.*
- *OPERABLE WINDOWS REQUIRED TO PROVIDE NATURAL VENTILATION SHALL COMPLY WITH SECTION 309.2 AND 309.3. OPERABLE WINDOWS REQUIRED TO PROVIDE AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL COMPLY WITH SECTION 309.2. WINDOWS IN KITCHENS AND BATHROOMS ARE NOT REQUIRED TO COMPLY.*
- *WHERE STORAGE FACILITIES ARE PROVIDED, AT LEAST 1 OF EACH TYPE SHALL COMPLY WITH SECTION 905. KITCHEN CABINETS ARE NOT REQUIRED TO COMPLY.*

CODE REVIEW - LIFE SAFETY OCCUPANT LOAD SCHEDULE

Name	Area	IBC Occ. Type	IBC Use	IBC O.L.F.	IBC O.L.	NFPA Occ. Type	NFPA Use	NFPA O.L.F.	NFPA O.L.
STORAGE	7788 SF	S1	STORAGE	500	16	STORAGE	STORAGE	500	16
Area	798 SF	S1							
APPROX. GRADE AT MAINE AVE	8586 SF				16				16
COMMUNITY KITCHEN	2407 SF	A3	UNC.ASSY	15	161	RES APT	ASSY	15	161
APARTMENTS	11549 SF	R2	RES	200	58	RES APT	RES APT	200	58
APARTMENTS	3986 SF	R2	RES	200	20	RES APT	RES APT	200	20
OFFICES	283 SF	R2	BUS	150	2	RES APT	BUS	150	2
OFFICES	299 SF	R2	BUS	150	2	BUS	BUS	150	2
OFFICES	780 SF	R2	BUS	150	6	RES APT	BUS	150	6
T.O. SLAB	19305 SF				249				249
Total	27891 SF				265				265

CODE REVIEW ABBREVIATIONS:

A	*ASSEMBLY GROUP*	*IND.*	*INDUSTRIAL*
ACC.	*ACCESSORY*	*INP.*	*INPATIENT*
A.H.C.	*AMBULATORY HEALTH CAR*	*M*	*MERCANTILE GROUP*
A.H.J.	*AUTHORITY HAVING JURISDICTION*	*MAX*	*MAXIMUM*
		MIN	*MINIMUM*
B	*BUSINESS GROUP*	*OCC.*	*OCCUPANT(S)/ OCCUPANCY*
C.K.	*COMMERCIAL KITCHEN*	*O.L.*	*OCCUPANT LOAD*
COLLAB.	*COLLABORATION*	*O.L.F.*	*OCCUPANT LOAD FACTOR*
COMM.	*COMMERCIAL*	*O.P.*	*OUTPATIENT*
D.C.	*DAYCARE*	*R*	*RESIDENTIAL GROUP*
D.F.	*DRINKING FOUNTAIN/ BOTTLE FILLER*	*RB&C*	*RESIDENTIAL BOARD & CARE*
		RM	*ROOM*
E	*EDUCATIONAL GROUP*	*REQD*	*REQUIRED*
F	*FACTORY GROUP*	*S*	*STORAGE GROUP*
H	*HIGH HAZARD GROUP*	*SMK CMP*	*SMOKE COMPARTMENT*
H.C.	*HEALTHCARE*	*U*	*UTILITY & MISC. GROUP*
I	*INSTITUTIONAL GROUP*	*UNC.*	*UNCONCENTRATED (IBC) / LESS CONCENTRATED (NFPA)*
INC.	*INCIDENTAL*	*W.C.*	*WATER CLOSET (TOILET)*

CODE REVIEW GENERAL NOTES:

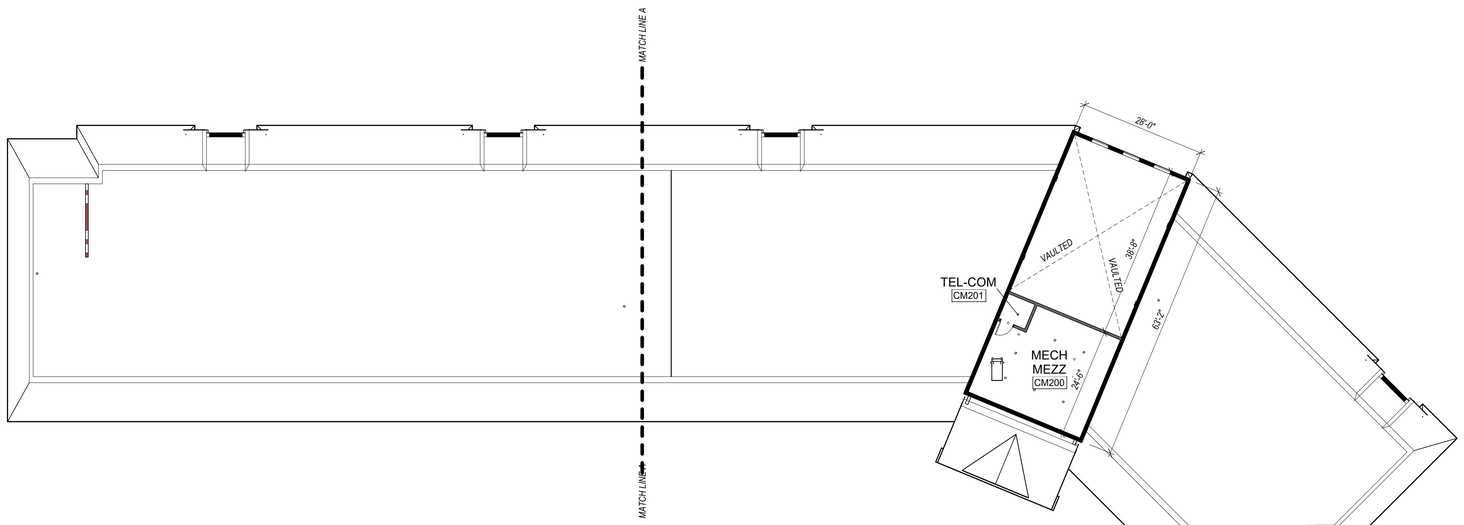
1. *CODE REVIEW SHEET SHALL BE PRINTED IN COLOR.*
2. *ALL PENETRATIONS OF SMOKE BARRIERS, PARTITIONS, FIRE RATED WALLS AND FLOORS SHALL BE SEALED WITH PROPER APPROVED MATERIALS*
3. *ALL WORK SHALL CONFORM TO LOCAL AND STATE CODES, ORDINANCES, AND REQUIREMENTS, ACCESSIBILITY PER A.D.A.A.G.*
4. *REFER TO SHEET G103 FOR ADA DETAILS.*
5. *CODE ANALYSIS FOR REFERENCE ONLY. SEE ALL OTHER PLAN SHEETS FOR CONTRACT DOCUMENT INFORMATION.*
6. *THIS CODE ANALYSIS IDENTIFIES SOME SPECIFIC BUILDING CODE REQUIREMENTS BUT IS NOT INTENDED TO LIST ALL BUILDING CODE REQUIREMENTS.*
7. *SEE PLANS AND OTHER DETAIL SHEETS FOR ACCESSIBILITY CONFORMANCE.*
8. *MAINTAIN FIRE RATING AND AIR SEALING OF WALLS AROUND FIRE EXTINGUISHERS, CABINETS, AND OTHER RECESSED ITEMS.*
9. *PROVIDE ACOUSTICAL SEALANT AT FLOOR / CEILING/ WALL TRANSITIONS, RECESSED BOXES, AND PENETRATIONS OF ALL ASSEMBLIES AND OTHER CONSTRUCTION AS REQUIRED TO ACHIEVE NOTED STC RATINGS.*
10. *CONTRACTOR TO FIELD VERIFY FIRE EXTINGUISHER LOCATIONS AND COORDINATE WITH LOCAL A.H.J.; ARCHITECT TO REVIEW AND APPROVE NEW FEC LOCATIONS AS REQUIRED.*
11. *DOORS IN MEANS OF EGRESS, IN EXIT ENCLOSURES, AND IN EXIT PASSAGEWAYS SHALL BE EQUIPPED WITH DOOR CLOSERS AS REQUIRED BY CODE.*
12. *BUILDING AND AREA SQUARE FOOTAGES ARE CALCULATED FROM INTERIOR FINISH FACES OF EXTERIOR WALLS AND INCLUDE PORCHES/ PATIOS COVERED BY ROOFS.*

CODE REVIEW - MAINE UNIFORM BUILDING CODE - IBC 2021 - RESIDENTIAL APARTMENTS

Code Description IBC	Code Data IBC - RA
USE GROUP CLASSIFICATION(S)	*(CHAPTER 3) RESIDENTIAL APARTMENTS (R-2)*
ACCESSORY OCCUPANCIES	*(CHAPTER 3, 508.2)*
OCCUPANT LOAD FACTOR(S)	*(TABLE 1004.5) RESIDENTIAL AREAS - 200 GROSS, STORAGE AREAS/ MECH EQUIPMENT ROOMS - 300 GROSS, ASSEMBLY AREAS - 15 NET*
CALCULATED OCCUPANT LOAD	*271*
TYPE OF CONSTRUCTION	*(TABLE 601) TYPE 5B*
PROPOSED BUILDING AREA	*30231 SF*
ALLOWABLE AREA FACTOR	*(TABLE 506.2) 21,000 SF*
CALCULATED MAXIMUM ALLOWABLE BUILDING AREA	*(506.2) 82,0000 SF*
PROPOSED BUILDING HEIGHT ABOVE GRADE	*38'-9 1/4", 2 STORIES*
ALLOWABLE BUILDING HEIGHT ABOVE GRADE	*(TABLE 504.3, TABLE 504.4) 60'-0", 3 STORIES*
FIRE EXTINGUISHERS	*LOCATIONS TO BE VERIFIED BY LOCAL AHJ PRIOR TO INSTALLATION - MAX 75' TRAVEL DISTANCE FROM ANYWHERE IN BUILDING TO FE AT CLASS A HAZARD, TYPE K EXTINGUISHER IN COMMERCIAL KITCHEN - 30' MAX TRAVEL DISTANCE TO FE*
FIRE SUPPRESSION:	*(420.4) TOTAL BUILDING AUTOMATIC SPRINKLER SYSTEM REQUIRED FOR R OCCUPANCY*
	NOTE: FIRE ALARM SYSTEM, SMOKE DETECTION, CO2 AND SMOKE ALARMS TO MEET MUBC 420.6 AND NFPA 101 32.3.3.4
FIRE ALARM & DETECTION SYSTEM	*(420.5) REQUIRED*
EXIT WIDTH FACTORS	*(1005.3.1, 1005.3.2) STAIRS. OCC. LOAD x .3" , OTHER EGRESS COMPONENTS (DOORS): OCCUPANT LOAD X .2"*
SPACES REQUIRING 2 EXITS	*(TABLE 1006.2.1) R-2 OCC. LOAD > 20, STORAGE OCC LOAD> 29*
MAXIMUM COMMON PATH OF TRAVEL TO EXIT	*(TABLE 1006.2.1) R-2 - 125' w/ SPRINKLER SYSTEM*
MINIMUM NUMBER OF EXITS PER FLOOR	*(TABLE 1006.3.3) 2 FOR STORY OCC. LOAD 1-500, 3 FOR STORY OCC. LOAD 501 - 1000, 4 FOR STORY OCC LOAD > 1,000, EXCEPT WHERE SINGLE EXIT PERMITTED BY 1006.3.4*
MAXIMUM TRAVEL DISTANCE TO EXIT	*(TABLE 1017.2) R - 200' / 250' W/ SPRINKLER SYSTEM)*
MINIMUM CORRIDOR WIDTH	*(TABLE 1020.3) 36" WHERE OCC. LOAD SERVED <50, 44" OTHERWISE*
MAXIMUM DEAD END CORRIDOR LENGTH	*(1020.5) 20' OR 50' W/ SPRINKLER SYSTEM IN OCCUPANCY R-2*
RATING REQUIREMENTS:	
OCCUPANCY SEPARATION	*(TABLE 508.4) # HOUR RATING*
UNIT SEPARATION	*(420.2) FIRE PARTITION PER 708 - 30 MIN RATING (W/ SPRINKLER SYSTEM)*
PRIMARY STRUCTURAL FRAME	*(TABLE 601) 0 HOUR RATING*
BEARING WALLS EXTERIOR	*(TABLE 601) 0 HOUR RATING*
BEARING WALLS INTERIOR	*(TABLE 601) 0 HOUR RATING*
NON BEARING WALLS AND PARTITIONS - EXTERIOR	*(TABLE 705.5) 0 HOUR RATING*
NON BEARING WALLS AND PARTITIONS - INTERIOR	*(TABLE 601) 0 HOUR RATING*
FLOOR CONSTRUCTION & ASSOCIATED SECONDARY MEMBERS	*(TABLE 601) 0 HOUR RATING*
ROOF/CEILING CONSTRUCTION & ASSOCIATED SECONDARY MEMBERS	*(TABLE 601)0 HOUR RATING*
MECHANICAL ROOMS	*(TABLE 509.1) NON-RATED (W/ AUTOMATIC SPRINKLER SYSTEM)*
LAUNDRY ROOMS > 100 SF	*(TABLE 509.1) NON-RATED (W/ AUTOMATIC SPRINKLER SYSTEM)*
WASTE AND LINEN COLLECTION ROOMS > 100 SF	*(TABLE 509.1) NON-RATED (W/ AUTOMATIC SPRINKLER SYSTEM)*
SHAFTS	*(713.4) [1 HOUR WHERE CONNECTING LESS THAN 4 STORIES, 2 HOURS WHERE CONNECTING 4 STORIES OR MORE]*
EXIT STAIR ENCLOSURES	*(1019.3) 1 HOUR RATING*
EXIT ACCESS CORRIDORS	*(TABLE 1020.2) R: 30 MIN RATING (W/ SPRINKLER SYSTEM)*
FLAME SPREAD RATINGS:	
INTERIOR WALL AND CEILING FINISH REQUIREMENTS:	
..INTERIOR EXIT STAIRWAYS & RAMPS & EXIT PASSAGEWAYS	*(TABLE 803.13) R-2 W/ SPRINKLER SYSTEM: CLASS C*
..CORRIDORS & ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS	*(TABLE 803.13) R-2 W/ SPRINKLER SYSTEM: CLASS C*
..ROOMS & ENCLOSED SPACES	*(TABLE 803.13) R-2 W/ SPRINKLER SYSTEM: CLASS C*
INTERIOR FLOOR FINISH REQUIREMENTS:	*(804.4.2) R-2: DOC FF-1 PILL TEST (w/ SPRINKLER SYSTEM)*
REQUIRED NUMBER OF TYPE A UNITS (TO COMPLY W/ APPLICABLE ICC A117.1 CH 11 REQUIREMENTS)	*(1108.6.2.2.1) R-2: MIN 2% OF TOTAL # UNITS / MIN 1 TYPE A UNIT REQUIRED WHERE MIN 20 DWELLING/ SLEEPING UNITS ON SITE*
REQUIRED NUMBER OF TYPE B UNITS (TO COMPLY W/ APPLICABLE ICC A117.1 CH 11 REQUIREMENTS)	*(1108.6.2.2.2) R-2: EVERY DWELLING/ SLEEPING UNIT REQUIRED TO BE TYPE B WHERE MIN 4 UNITS IN SINGLE STRUCTURE*
REQUIRED NUMBER OF ACCESSIBLE UNITS (TO COMPLY W/ APPLICABLE ICC A117.1 CH11 REQUIREMENTS)	*(1108.6.2.3.1, TABLE 1108.6.1.1)*

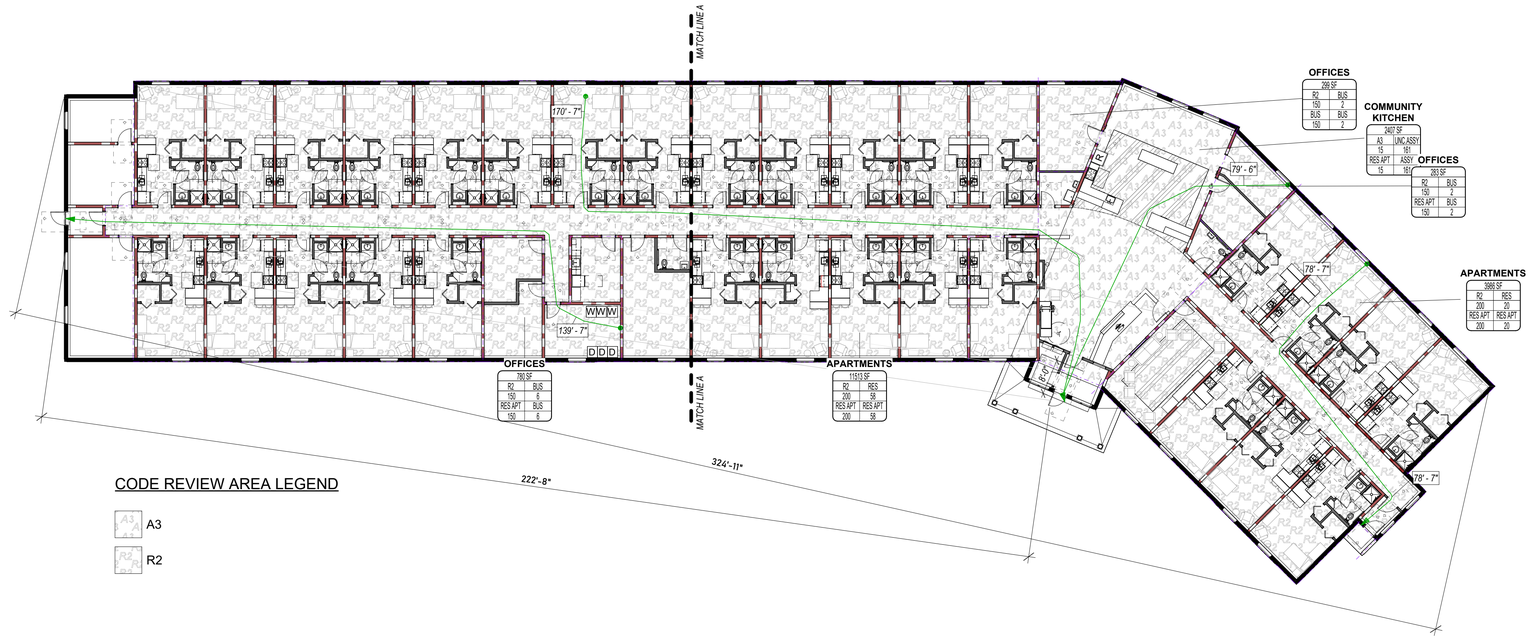
CODE REVIEW - 2018 NFPA 101 - RESIDENTIAL APARTMENTS

CODE DESCRIPTION NFPA	CODE DATA NFPA
USE GROUP CLASSIFICATION(S)	*NEW APARTMENT BUILDING - CHAPTER 30*
OCCUPANT LOAD FACTOR(S)	*(TABLE 7.3.1.2) APARTMENT BUILDINGS - 200, STORAGE - 500*
CALCULATED OCCUPANT LOAD	*271*
TYPE OF CONSTRUCTION	*TYPE V(000)*
PROPOSED BUILDING AREA	*30,231 SF*
PROPOSED BUILDING HEIGHT	*39'-9 1/2", 2 STORIES*
FIRE SUPPRESSION:	*(30.3.5.1) APPROVED, SUPERVISED AUTOMATIC SPRINKLER SYSTEM*
	NOTE: FIRE ALARM SYSTEM, SMOKE DETECTION, CO2 AND SMOKE ALARMS TO MEET MUBC 420.6 AND NFPA 101 32.3.3.4
FIRE ALARM DETECTION	*(30.3.4.1.1) APARTMENTS - FIRE ALARM SYSTEM REQUIRED (FOR > 11 UNITS)*
FIRE EXTINGUISHERS	*LOCATIONS TO BE VERIFIED BY LOCAL AHJ PRIOR TO INSTALLATION - MAX 75' TRAVEL DISTANCE FROM ANYWHERE IN BUILDING TO FE. TYPE K IN COMMERCIAL KITCHEN - 30' MAX TRAVEL DISTANCE TO FE*
MAXIMUM COMMON PATH OF TRAVEL	*(30.2.5.3.2) APARTMENTS - 50' NOT INCLUDING TRAVEL WITHIN UNIT (W/ SPRINKLER SYSTEM)*
MINIMUM EGRESS CORRIDOR WIDTH	*(30.2.3.4) APARTMENTS - 36" F



J1 MEZZANINE CODE PLAN

1/16" = 1'-0"



CODE REVIEW AREA LEGEND

A3

R2

A1 FIRST FLOOR CODE PLAN

1/16" = 1'-0"

4/22/2026 10:27:42 AM Author

OFFICE: 29 BLACK POINT ROAD
SCARBOROUGH, MAINE 04074
MAIL: PO BOX #776
SCARBOROUGH, MAINE 04070
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BHDC YELLEN PINES

HOME FOR GOOD

205 CORPORATE DRIVE, BANGOR ME

REVISIONS

#	DATE	DESCRIPTION
B	04.20.2026	REVISED 50% PROGRESS SET

DATE:	04.24.26
PROJECT #	050725
DRAWN BY:	Author
CHECKED BY:	Checker
DRAWING SCALE	1/16" = 1'-0"

SHEET TITLE

CODE PLAN

NOT FOR CONSTRUCTION

G103

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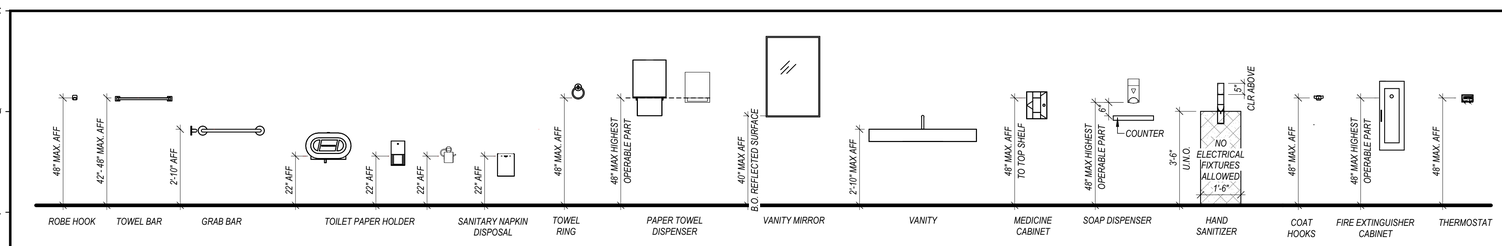


O1 ACCESSIBLE MOUNTING AND CLEARANCE REQUIREMENTS

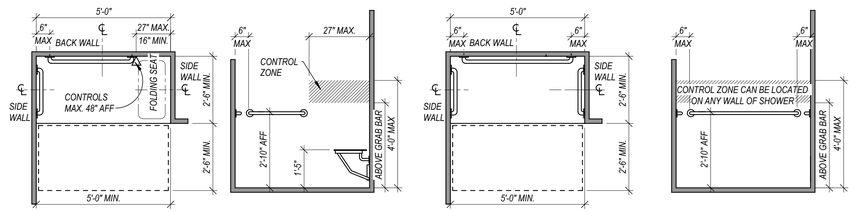
NOTE:

1. *VERIFY ALL ACCESSIBILITY REQUIREMENTS WITH CURRENT CODE AND LOCAL JURISDICTION.*
2. *DIAGRAMS ARE INTENDED AS A REFERENCE ONLY AND ARE NOT ALL INCLUSIVE. REFERENCE CURRENT CODE AND PROJECT DOCUMENTATION FOR ADDITIONAL REQUIREMENTS.*
3. *CROSS CHECK WITH ALL INTERIOR ELEVATIONS FOR DEVIATIONS TO TYPICAL LOCATIONS.*
4. *NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN DIMENSIONS SHOWN HERE AND PROPOSED WORK.*
5. *INSTALL BLOCKING AS REQUIRED FOR ALL GRAB BARS AND TOILET ACCESSORIES.*

2010 ADA STANDARD:

A1 - SECTION 404: MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS
A8 - SECTION 308: REACH RANGE APPROACH
A13 - SECTION 307: PROTRUDING OBJECTS
A16 - SECTION 607: BATHTUBS
D13 - SECTION 305 ALCOVES
D16 - SECTION 608: SHOWER - TRANSFER TYPE SHOWER
E1 - SECTION 306: KNEE AND TOE CLEARANCE
H1 - SECTION 606: LAVATORIES AND SINKS
H5 - SECTION 602: DRINKING FOUNTAINS
H10 - SECTION 308: REACH RANGE APPROACH AND SECTION 306: KNEE AND TOE CLEARANCE
G13 - SECTION 608: SHOWER - ALTERNATIVE ROLL-IN TYPE SHOWER
L1 - SECTION 603, 604, 609: WATER CLOSET / GRAB BARS / ACCESSORIES
L8 - SECTION 605: URINALS
L10 - DIAPER CHANGING STATION
L14 - SECTION 608: SHOWER - STANDARD ROLL-IN TYPE SHOWER
O1 - ADA ACCESSIBLE MOUNTING HEIGHTS
O14 - GENERAL NOTES

O14 GENERAL SHEET NOTES



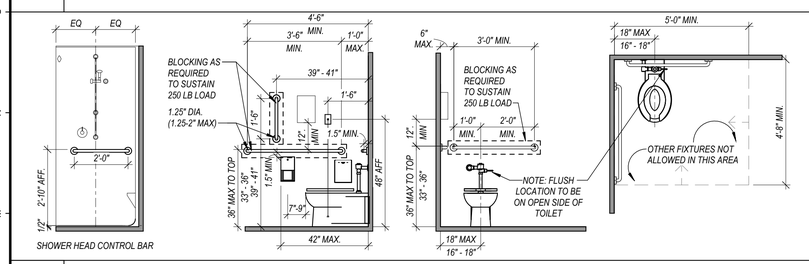
PLAN - WITH SEAT
STANDARD ROLL-IN TYPE SHOWER COMPARTMENT SIZE & CLEARANCE

BACK WALL - WITH SEAT
STANDARD ROLL-IN SHOWER CONTROLS AND HAND SHOWER LOCATION

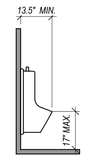
PLAN - WITHOUT SEAT
STANDARD ROLL-IN TYPE SHOWER WITHOUT SEAT COMPARTMENT SIZE & CLEARANCE

BACK WALL - WITHOUT SEAT
STANDARD ROLL-IN SHOWER CONTROLS AND HAND SHOWER LOCATION

L1 WATER CLOSET / GRAB BARS / ACCESSORIES

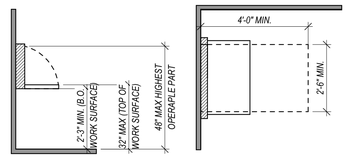


L8 URINAL

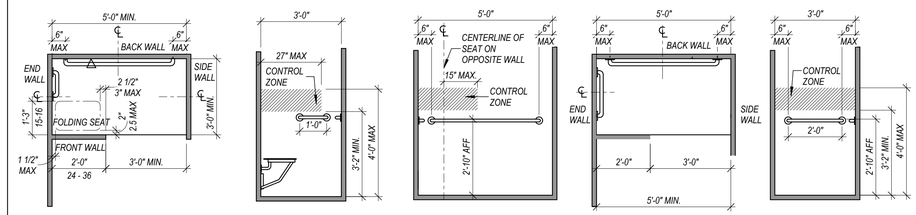


WALL HUNG TYPE

L9 DIAPER CHANGING STATION



L14 SHOWER - STANDARD ROLL-IN TYPE SHOWER



PLAN - WITH SEAT
ALTERNATIVE ROLL-IN TYPE SHOWER

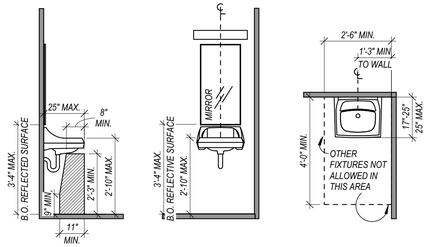
END WALL - WITH SEAT
ALTERNATIVE ROLL-IN TYPE SHOWER CONTROL AND HAND SHOWER LOCATION

BACK WALL - WITH SEAT
ALTERNATIVE ROLL-IN TYPE SHOWER CONTROL AND HAND SHOWER LOCATION

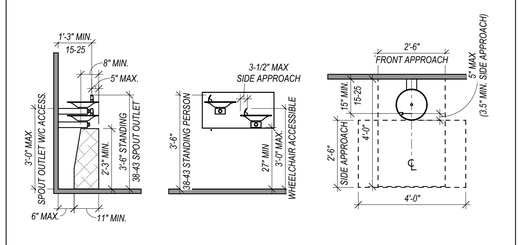
PLAN - WITHOUT SEAT
ALTERNATIVE ROLL-IN TYPE SHOWER

END WALL - WITHOUT SEAT
ALTERNATIVE ROLL-IN TYPE SHOWER CONTROL AND HAND SHOWER LOCATION

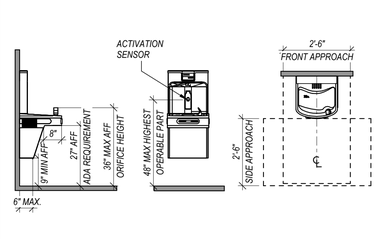
H1 LAVATORIES AND SINKS



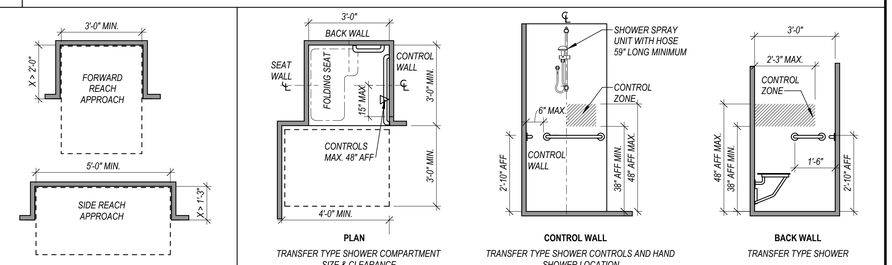
H5 DRINKING FOUNTAIN



H10 BOTTLE FILLING STATION



G13 SHOWER - ALTERNATIVE ROLL-IN TYPE SHOWER

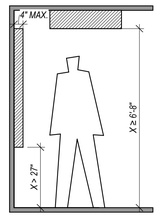


PLAN
TRANSFER TYPE SHOWER COMPARTMENT SIZE & CLEARANCE

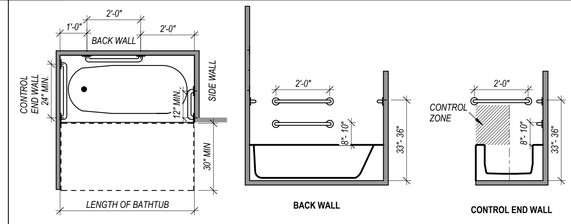
CONTROL WALL
TRANSFER TYPE SHOWER CONTROLS AND HAND SHOWER LOCATION

BACK WALL
TRANSFER TYPE SHOWER

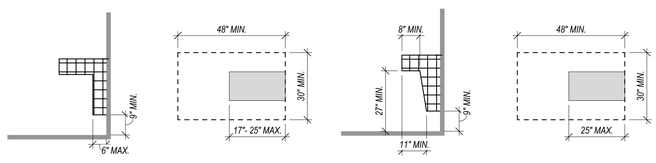
D13 ALCOVE



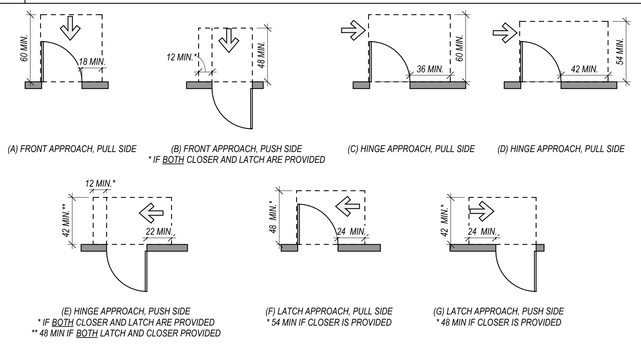
D16 SHOWER - TRANSFER TYPE SHOWER



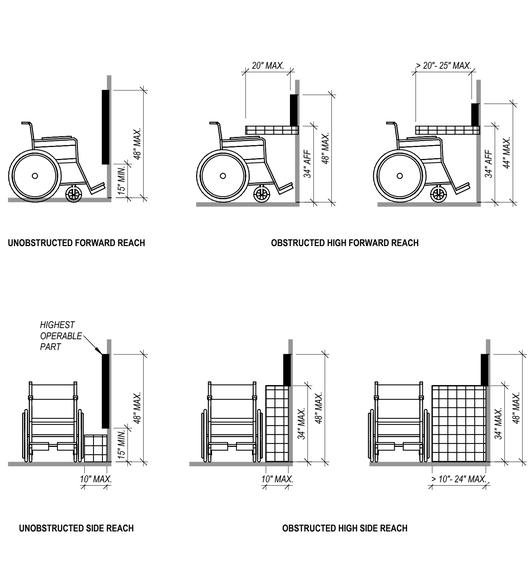
E1 KNEE AND TOE CLEARANCE



A1 MANEUVERING CLEARANCE AT MANUAL SWING DOORS



A8 ADA REACH RANGE APPROACH



A13 PROTRUDING OBJECT

A16 BATHTUB - WITHOUT PERMANENT SEAT

GAWRON TURGEON DILLON ARCHITECTS PC
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BHDC YELLEN PINES

HOME FOR GOOD

205 CORPORATE DRIVE, BANGOR ME

REVISIONS

#	DATE	DESCRIPTION
A	02.09.2026	50% PROGRESS SET

DATE:	04.24.26
PROJECT #	050725
DRAWN BY:	KMD, BW
CHECKED BY:	RLD
DRAWING SCALE	3/8" = 1'-0"

SHEET TITLE

ADA DETAILS

NOT FOR CONSTRUCTION

G104

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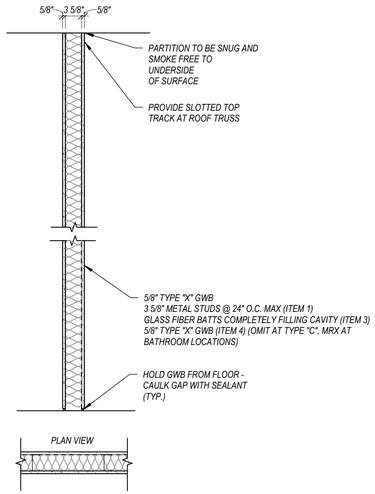
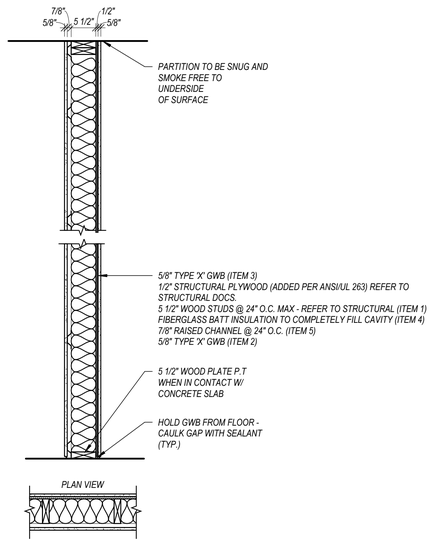
4/23/2026 10:27:50 AM BW



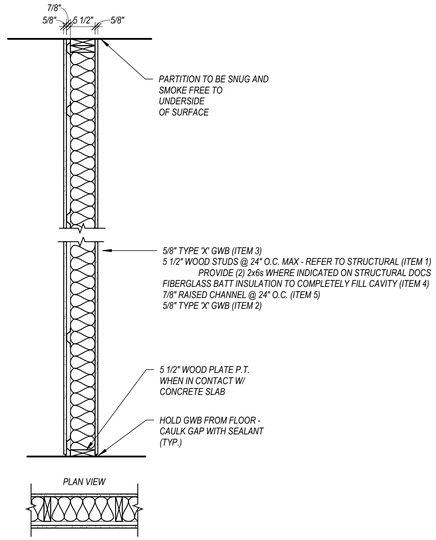
W1 WALL DETAIL (NON RATED) SCALE 3/4"=1'-0"

W1B WALL DETAIL (NON RATED) SCALE 3/4"=1'-0"
OMIT GWB FROM ONE SIDE

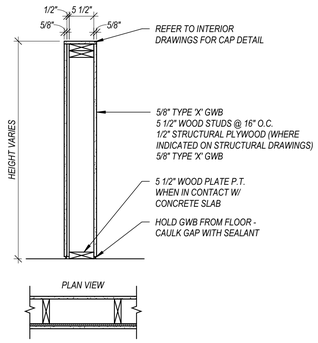
W1C WALL DETAIL (NON RATED) SCALE 3/4"=1'-0"
W/ 6" METAL STUD



W2 UNIT SEPARATION WALL (1-1/2HR RATED) SCALE 3/4"=1'-0"
U.L. DES: U309
STC: 52 +/-



W3 CORRIDOR WALL DETAIL (1HR RATED) SCALE 3/4"=1'-0"
U.L. DES: U304
STC: 52 +/-



W5 HALF WALL DETAIL (NON RATED) SCALE 3/4"=1'-0"

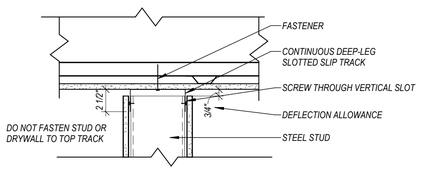
GENERAL PARTITION NOTES:

1. PROVIDE 5/8" TYPE "MRX" GWB AT ALL BATHROOMS, LAUNDRY ROOMS, KITCHENS, INTERIOR FACES OF EXTERIOR WALLS, AND AREAS OF EXCESSIVE MOISTURE WHETHER INDICATED IN DRAWINGS OR NOT.
2. SEAL ALL PENETRATIONS THROUGH ALL RATED WALL ASSEMBLIES UTILIZING U.L. DESIGN DETAILING AND APPLICABLE MATERIALS. SUBMIT ALL DETAILS TO ARCHITECT FOR APPROVAL. ENGINEERING JUDGEMENTS WILL NOT BE ACCEPTED UNLESS ADDRESSING NOVEL CONDITIONS.
3. SEAL TOP AND BOTTOM OF RATED PARTITIONS UTILIZING U.L. DESIGN DETAILING AND APPLICABLE MATERIALS.
4. REFER TO FINISH SCHEDULE FOR WALL FINISHES.
5. WALL BASES, LEAN RAILS, CHAIR RAILS AND TRIM NOT SHOWN FOR CLARITY. REFER TO FINISH SCHEDULE FOR SELECTIONS AND LOCATIONS.
6. REFER TO STRUCTURAL DRAWINGS FOR SHEAR WALL AND LOAD-BEARING WALL LOCATIONS.
7. DOUBLE TOP PLATE AT ALL WOOD-FRAMED WALLS. REFER TO STRUCTURAL DOCUMENTS FOR T.O. NON-BEARING WALLS ATTACHMENT TO TRUSS/FRAMING.
8. RATED WALLS TO CONTINUE TO BOTTOM OF SHEATHING AT ALL FLOORS AND ROOF.
9. ALL FRAMING AND FINISHES OF INTERIOR WALLS TO EXTEND TO THE UNDERSIDE OF STRUCTURE ABOVE UNLESS NOTED OTHERWISE.
10. FIBERGLASS MESH DRYWALL TAPE SHALL NOT BE PERMITTED.
11. INSTALL GWB PANELS UTILIZING FASTENERS AND SPACING SPECIFIED IN UL ASSEMBLY OR PER SPECIFICATIONS.
12. PROVIDE CONTROL JOINTS IN GWB PER ASTM C840. ALIGN W/ DOOR FRAMES WHERE POSSIBLE, REVIEW LOCATIONS W/ ARCHITECT.
13. ALL STEEL STUDS SHALL BE 20-GAUGE U.N.O.
14. PREFILL AND SETTING OF TAPE SHALL BE IN SETTING TYPE COMPOUND.
15. MAINTAIN FIRE RATING OF WALLS AROUND FIRE EXTINGUISHERS, CABINETS, AND OTHER RECESSED ITEMS WITH CONTINUOUS GYPSUM WALLBOARD MEMBRANES.
16. PROVIDE ACOUSTICAL SEALANT AT FLOOR / CEILING / WALL TRANSITIONS, RECESSED BOXES, AND PENETRATIONS OF SOUND RATED ASSEMBLIES AND OTHER CONSTRUCTION AS REQUIRED TO ACHIEVE NOTED STC RATINGS.
17. METAL STUD FRAMING ATTACHED TO WOOD TRUSSES TO RECEIVE SLOTTED DEFLECTION RECEIVER TRACK. DO NOT ATTACH GWB TO DEFLECTION TRACK.
18. SEE REFERENCED UL/GA ASSEMBLY LISTING FOR ADDITIONAL INFORMATION AND REQUIREMENTS OF ASSEMBLY.
19. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY TO BE PRESSURE TREATED.
20. WHERE PARTITIONS ARE SOUND OR FIRE RATED AND INCLUDE PROPRIETARY MANUFACTURERS, NO SUBSTITUTION ALLOWED.
21. WALLS OVER 13' HIGH REQUIRE BLOCKING AT MID-SPAN.

OCCASIONAL NOTES:
1. PROVIDE FULL LAYER OF TYPE X GWB AT SHOWER FLANGE WHERE SHOWER IS AGAINST SOUND/ FIRE-RATED WALLS - REFER TO DETAIL:

NOTE:
- PROJECT ARCHITECT/ MANAGER TO REVIEW ABOVE NOTES - WE MAY NOT NEED ALL/ ANY OF THESE NOTES ON PROJECTS WHERE WE HAVE SPECIFICATIONS.
- FOR SMALLER PROJECTS WHERE WE PUT WALL DETAILS ON ANOTHER SHEET, COPY THESE NOTES TO THE SAME SHEET WHERE YOUR PARTITION DETAILS ARE GOING.
-GO TO NETWORK REVIT DRIVE FOR TYPICAL PARTITIONS - OR REFER TO DRAFTING DETAILS

G1 INTERIOR PARTITION TYPES



A1 SLOTTED SLIP TRACK

1 1/2" = 1'-0"

BUILDING AIR SEALING NOTES:

1. SEAL ALL PENETRATIONS THROUGH THE BUILDING AIR BARRIER.
2. SEAL ALL POLYVAPOR BARRIER OR DRYWALL.
3. PROVIDE GASKETS OR SILL SEALS UNDER MUD SILLS ALONG FOUNDATION WALLS.
4. USE CONSTRUCTION ADHESIVE OR CAULKING BETWEEN MULTIPLE SILL PLATES.
5. WINDOW FRAMES AND DOOR JAMBS MUST BE SEALED TO THEIR ROUGH OPENINGS USING BACKER ROD AND CAULK.
6. ALL PENETRATIONS THROUGH THE BUILDING ENVELOPE MUST BE CAREFULLY SEALED AS DETAILED, OR WITH EXPANDING SPRAY FOAM IF NOT NOTED. TYPICAL PENETRATIONS INCLUDE CHIMNEY, DUCT & PLUMBING CHASES, AND PENETRATIONS OF PIPES AND WIRES THROUGH THE TOP PLATES OF TOP STORY WALLS. IT IS PARTICULARLY IMPORTANT TO SEAL ALL POSSIBLE AIR PATHS TO THE ATTIC.
7. ELECTRICAL BOXES ON EXTERIOR WALLS AND CEILINGS TO EITHER BE AIR-SEALED OR PLACED IN AIRTIGHT ENCLOSURES (LESSCO BOX OR EQUIVALENT).
8. DO NOT STUFF BATT INSULATION INTO SPACES THAT ARE TOO NARROW. CUT BATTS TO FIT EXACT WIDTH TO FIT SNUG AND AVOID COMPRESSING THE INSULATION. NOTCH BATTS AROUND ELECTRICAL BOXES AND SPLIT BATTS AROUND CABLES AND PIPES.

A18 NOTES

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SHEET TITLE
ASSEMBLY TYPES AND NOTES
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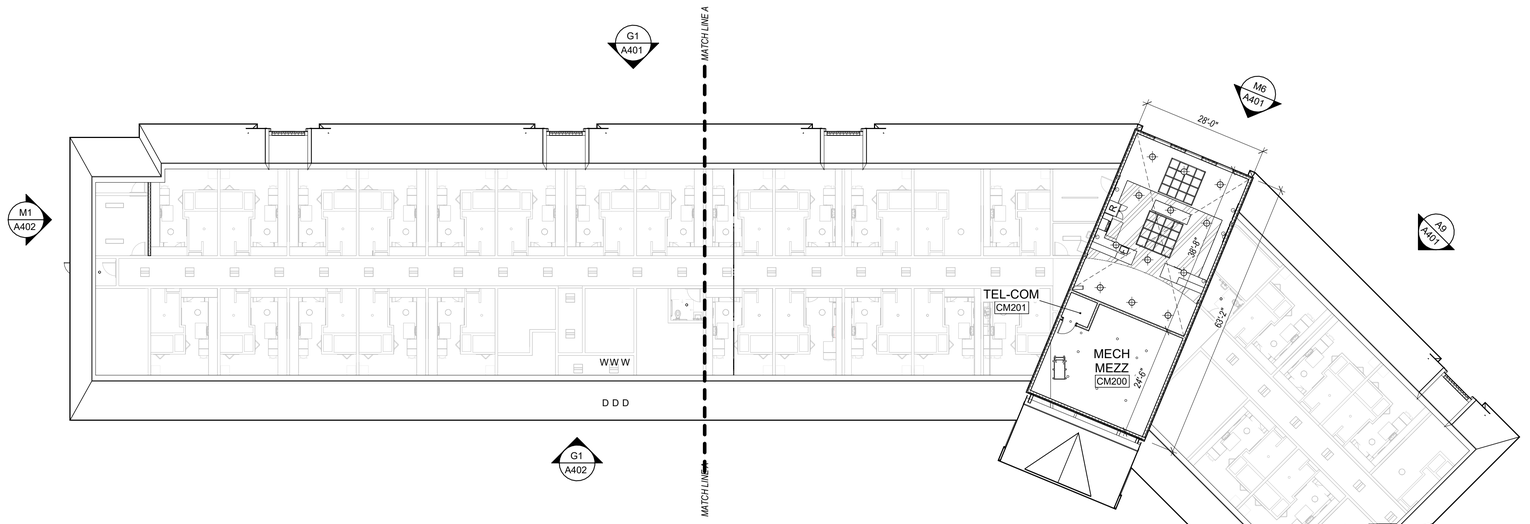
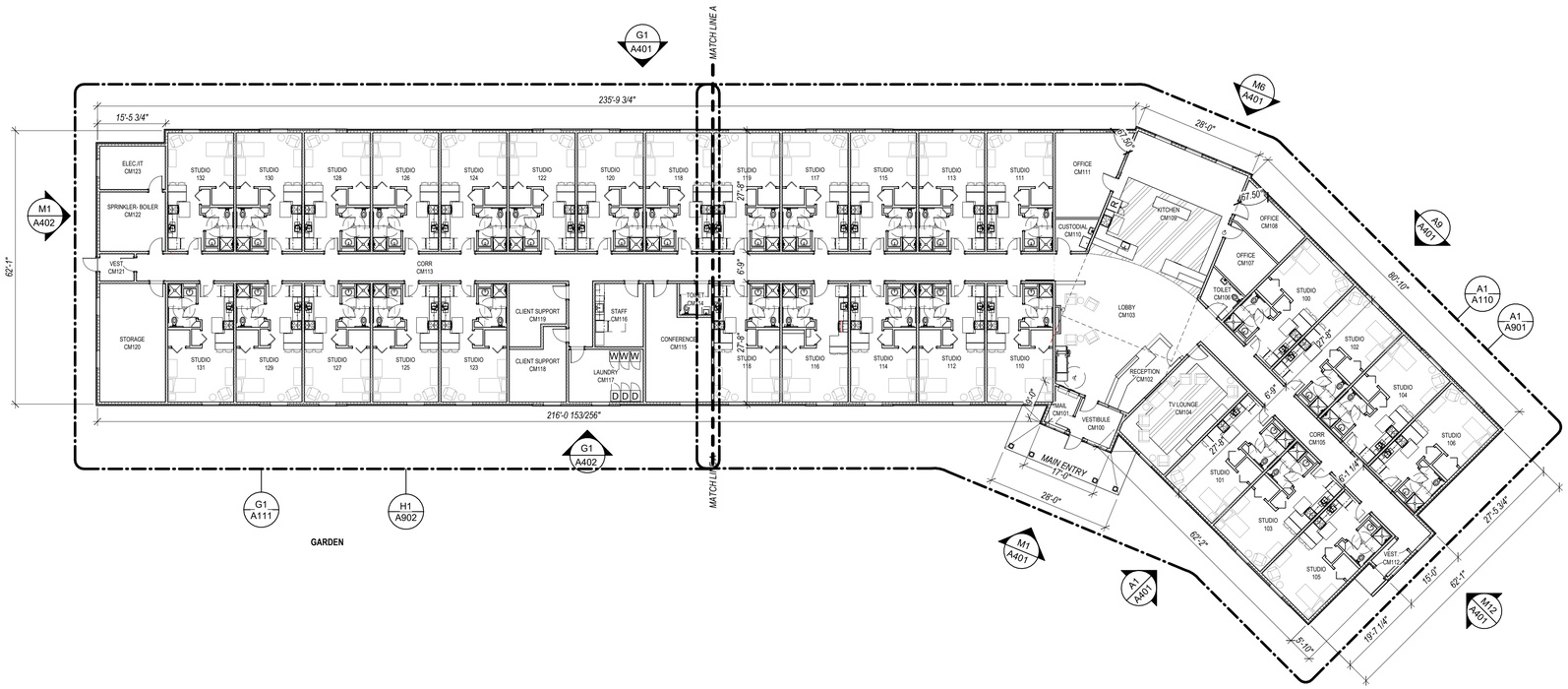


J1 MEZZANINE PLAN

1/16" = 1'-0"

NORTH PLAN



A1 OVERALL FIRST FLOOR PLAN

1/16" = 1'-0"

NORTH PLAN

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OVERALL PLANS

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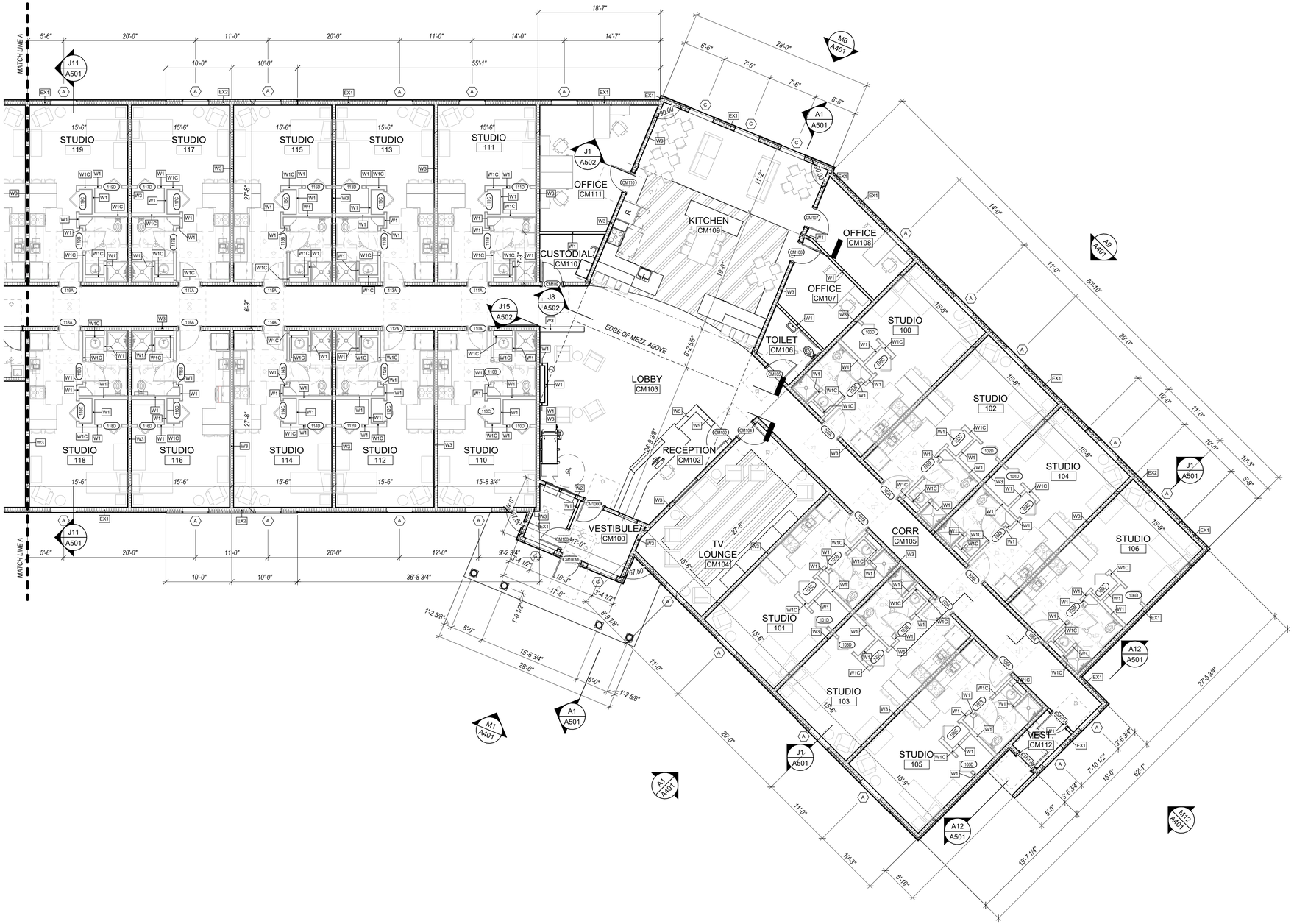

A1 PARTIAL FIRST FLOOR PLAN - EAST

1/8" = 1'-0"

NORTH PLAN

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PARTIAL FIRST FLOOR PLAN - EAST

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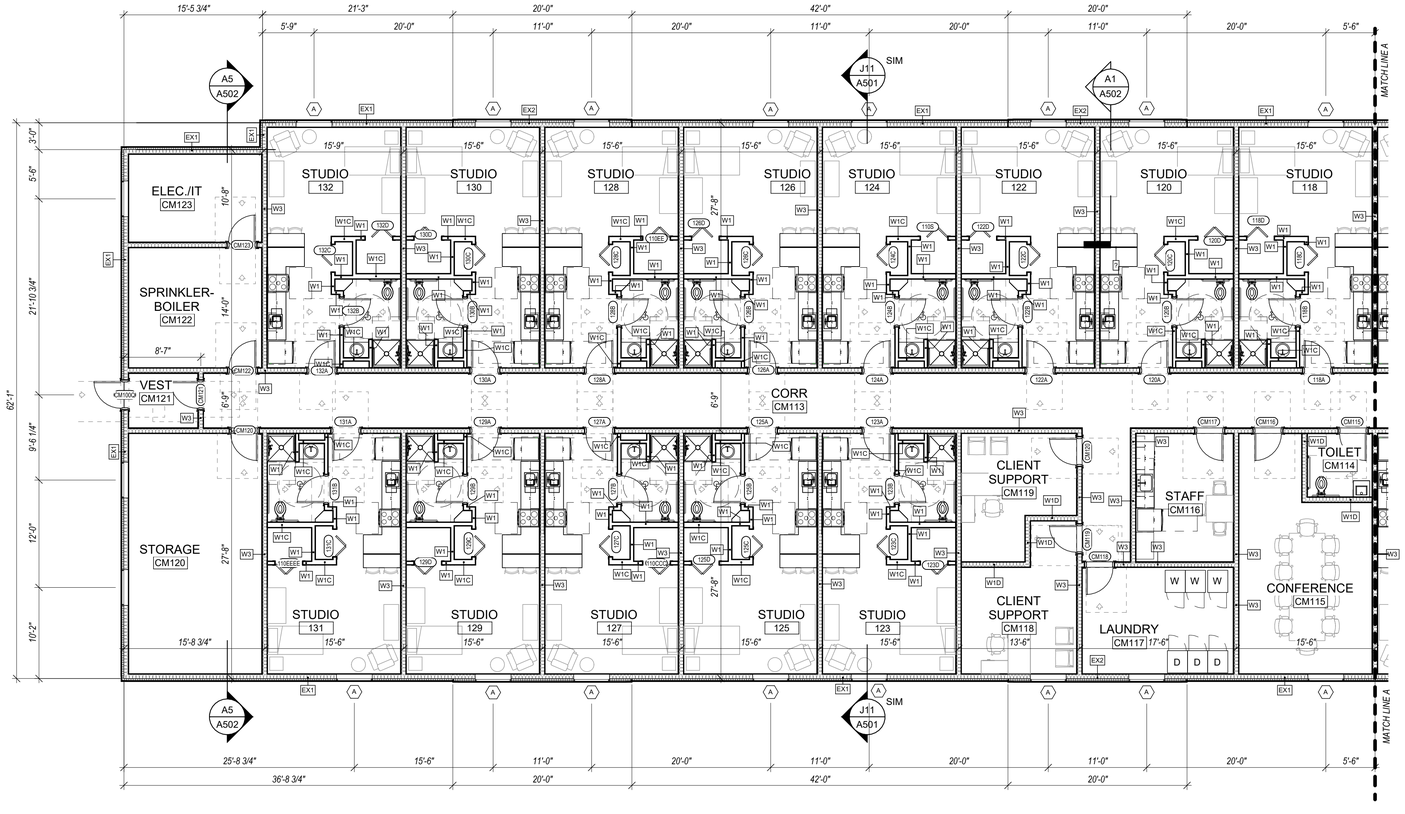

G1 PARTIAL FIRST FLOOR PLAN - WEST

1/8" = 1'-0"

NORTH PLAN

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SHEET TITLE

PARTIAL FIRST FLOOR PLAN - WEST

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AIII

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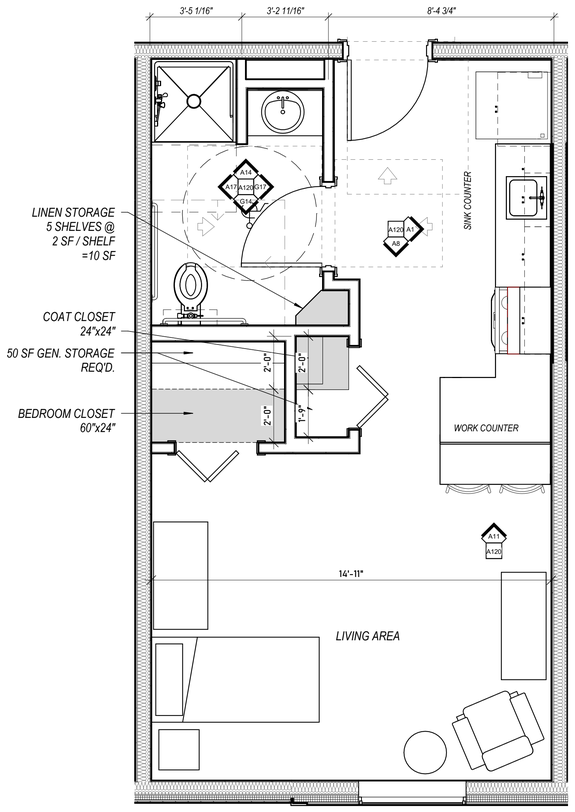
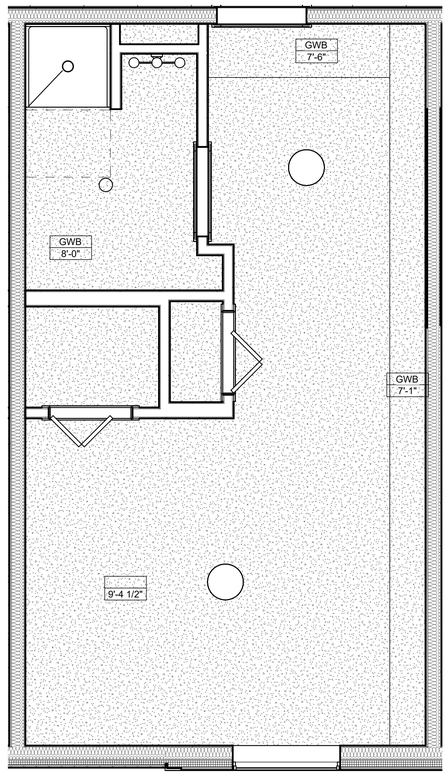


G1 ENLARGED UNIT PLAN

3/8" = 1'-0"



G7 ENLARGED UNIT RCP

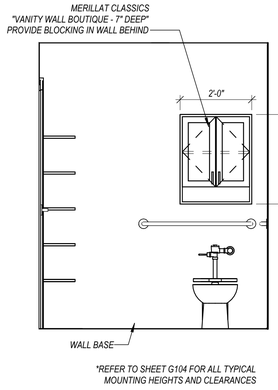
3/8" = 1'-0"

BATHROOM/ UNIT ACCESSORY LEGEND

- (C.S.C.) CEILING TRACK WITH HOOKS AND SHOWER CURTAIN
- (C.H.) COAT HOOK
- (CNTR) SOLID SURFACE COUNTERTOP - RADIUS ANY INSIDE AND OUTSIDE CORNERS
- (F.D.) FLOOR DRAIN - SLOPE FLOOR TO DRAIN
- (G.B.-F) FLIP DOWN GRAB BARS
- (G.B.-H) HORIZONTAL GRAB BARS
- (G.B.-V) VERTICAL GRAB BAR
- (LITE) DECORATIVE VANITY LIGHT - CENTER OVER SINK
- (M.C.) RECESSED MEDICINE CABINET - NO MIRROR. PROVIDE GWB RATED SURROUND AS REQUIRED IF RECESSED IN RATED WALLS.
- (MIR) 24"W X 36"H BEVELED EDGE WALL MIRROR - CENTER OVER SINK
- (P.T.D.) PAPER TOWEL DISPENSER
- (R.H.) ROBE HOOK
- (SCTRL) ADA HAND HELD SHOWER CONTROLS
- (S.D.) SOAP DISPENSER
- (SHLVS) (5) 18" DEEP ADJUSTABLE SHELVES
- (SHWR) ADA COMPLIANT ROLL-IN FIBERGLASS SHOWER UNIT W/ GRAB BARS, SEAT, & SOAP SHELF
- (S.N.D.) SANITARY NAPKIN DISPOSAL (FEMALE & UNISEX RR'S ONLY, PROVIDE 1 PER STALL IN MULTI-FIXTURE FEMALE RR'S)
- (S.R.C.) SHOWER ROD AND CURTAIN WITH HOOKS (FACTORY INSTALLED)
- (S&R) CLOSET SHELF & ROD
- (T.B.) 18" TOWEL BAR
- (T.P.) TOILET PAPER HOLDER
- (T.R.) TOWEL RING

BATHROOM/ UNIT NOTES:

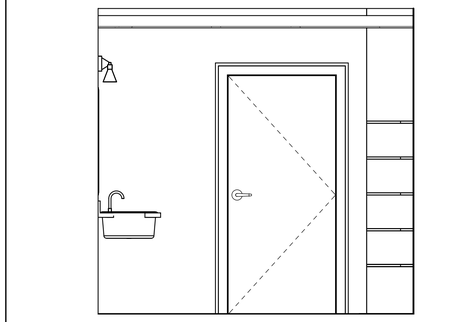
1. *REFER TO ADA DETAILS (SHEET **G103**) FOR ACCESSORY MOUNTING LOCATIONS & FIXTURE LOCATIONS.*
2. *INSTALL BLOCKING BEHIND ALL SURFACE MOUNTED ACCESSORIES, CABINETS, GRAB BARS, ETC.*
3. *ALL CLOSETS TO HAVE CLEAR DEPTH OF 2'-0" (U.N.O.). PROVIDE SHELF & ROD AT 5'-3" A.F.F. TO TOP OF SHELF TYPICAL (U.N.O.). ALL ADA UNITS TO HAVE SHELF & ROD AT 4'-0" AFF TO TOP OF SHELF.*
4. *REFER TO FLOOR PLANS FOR DIMENSIONS OF DEMISING WALLS, EXTERIOR WALLS, & EXTERIOR WINDOW/ DOOR LOCATIONS*
5. *PROVIDE FINISHED END PANELS FOR ALL EXPOSED CABINETRY EDGES.*
6. *VERIFY ALL DIMENSIONS PRIOR TO ORDERING/ MANUFACTURING CABINETRY.*
7. *G.C. TO COORDINATE RECESSED MEDICINE CABINETS DURING CONSTRUCTION TO AVOID FRAMING / ELECTRICAL CONFLICTS.*
8. *SLOPE SLAB TO FLOOR DRAINS.*
9. *SHOWER THRESHOLDS TO MEET ADA - SHOWERS TO BE RECESSED IN SLAB / FEATHER FLOOR UP TO SHOWER/ REFER TO TRANSITION DETAIL: ___/___. G.C. TO COORDINATE WITH FLOOR FINISH.*
10. *CONTINUE FLOORING UNDER VANITY AND BASE CABINETS - TYP. ALL RESIDENT UNITS.*
11. *COORDINATE SHOWER WALLS & ADJACENT SHELVING WITH SHOWER UNIT SELECTED.*



**REFER TO SHEET G104 FOR ALL TYPICAL MOUNTING HEIGHTS AND CLEARANCES*

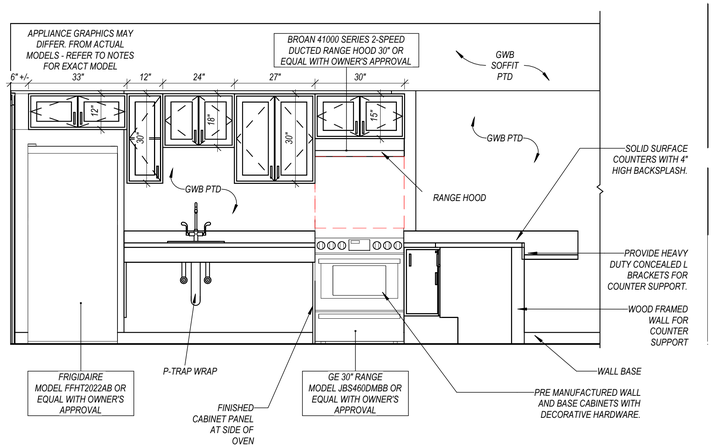
G14 BATHROOM - C

1/2" = 1'-0"



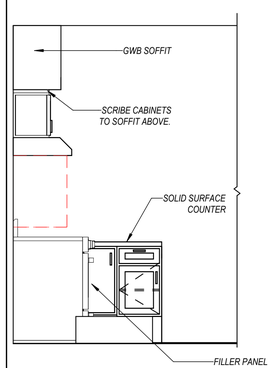
G17 BATHROOM - D

1/2" = 1'-0"



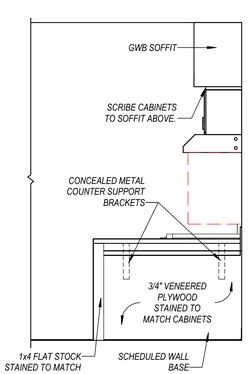
A1 TYPICAL UNIT KITCHEN - A

1/2" = 1'-0"



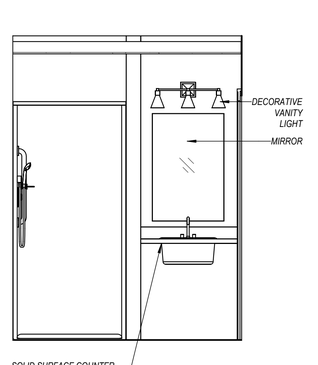
A8 KITCHEN - B

1/2" = 1'-0"



A11 KITCHEN - C

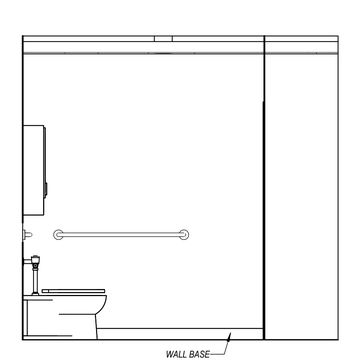
1/2" = 1'-0"



**REFER TO SHEET G104 FOR ALL TYPICAL MOUNTING HEIGHTS AND CLEARANCES*

A14 BATHROOM - A

1/2" = 1'-0"



**REFER TO SHEET G104 FOR ALL TYPICAL MOUNTING HEIGHTS AND CLEARANCES*

A17 BATHROOM - B

1/2" = 1'-0"

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SHEET TITLE

ENLARGED UNIT PLANS & ELEVATIONS

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IBC SECTION 1203 VENTILATION REQUIREMENTS:

1203.2: ENCLOSED ATTICS & RAFTER SPACES SHALL HAVE CROSS-VENTILATION FOR EACH SEPARATE SPACE BY VENTILATION OPENINGS PROTECTED AGAINST PRECIPITATION. BLOCKING AND BRIDGING SHALL BE ARRANGED SO AS NOT TO INTERFERE WITH THE MOVEMENT OF AIR. AN AIRSPACE OF MIN 1" SHALL BE PROVIDED BETWEEN THE INSULATION AND ROOF SHEATHING. THE NET FREE VENTILATING AREA SHALL BE MIN 1/300 OF THE AREA OF THE SPACE VENTILATED, IF A VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING, AND AT LEAST 40% BUT NOT MORE THAN 50% IS PROVIDED BY VENTILATORS IN THE UPPER PART OF THE VENTILATED SPACE.

ATTIC AREA: SF
REQUIRED VENTILATION: SF / 300 = SF
PROVIDED VENTILATION:
RIDGE VENTS - ' AGGREGATE LENGTH x .25 SF / LIN. FT. (ASSUMED NFA FOR 3" WIDE RIDGE VENT) = SF
INTAKE VENTILATION - SOFFITS: SF X 10 sq. in. (0.069 SF) NFA PER SF (ASSUMED) = SF

MATCH LINE A

220'-4"
21'-3" 10'-0" 10'-0" 42'-0" 10'-0" 10'-0" 42'-0" 10'-0" 10'-0" 55'-1"
3'-0" 3'-0"
62'-1"
A5 A502
J11 A501
EX1 EX2 D

6'-6" 7'-6" 7'-6" 6'-6" 28'-0"
B A1 A501
MECH MEZZ CM200
55'-1" 80'-10" 10'-0" 10'-0" 5'-9"
J1 A501
A12 A501
1'-0" 26'-0" 1'-0" 26'-0"
A1 A501
J1 A501
A12 A501
27'-5 3/4" 15'-0" 6'-8 1/2" 12'-10 3/4"

A1 ATTIC PLAN
3/32" = 1'-0"
NORTH PLAN

4/22/2026 10:28:45 AM Author

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ATTIC PLAN
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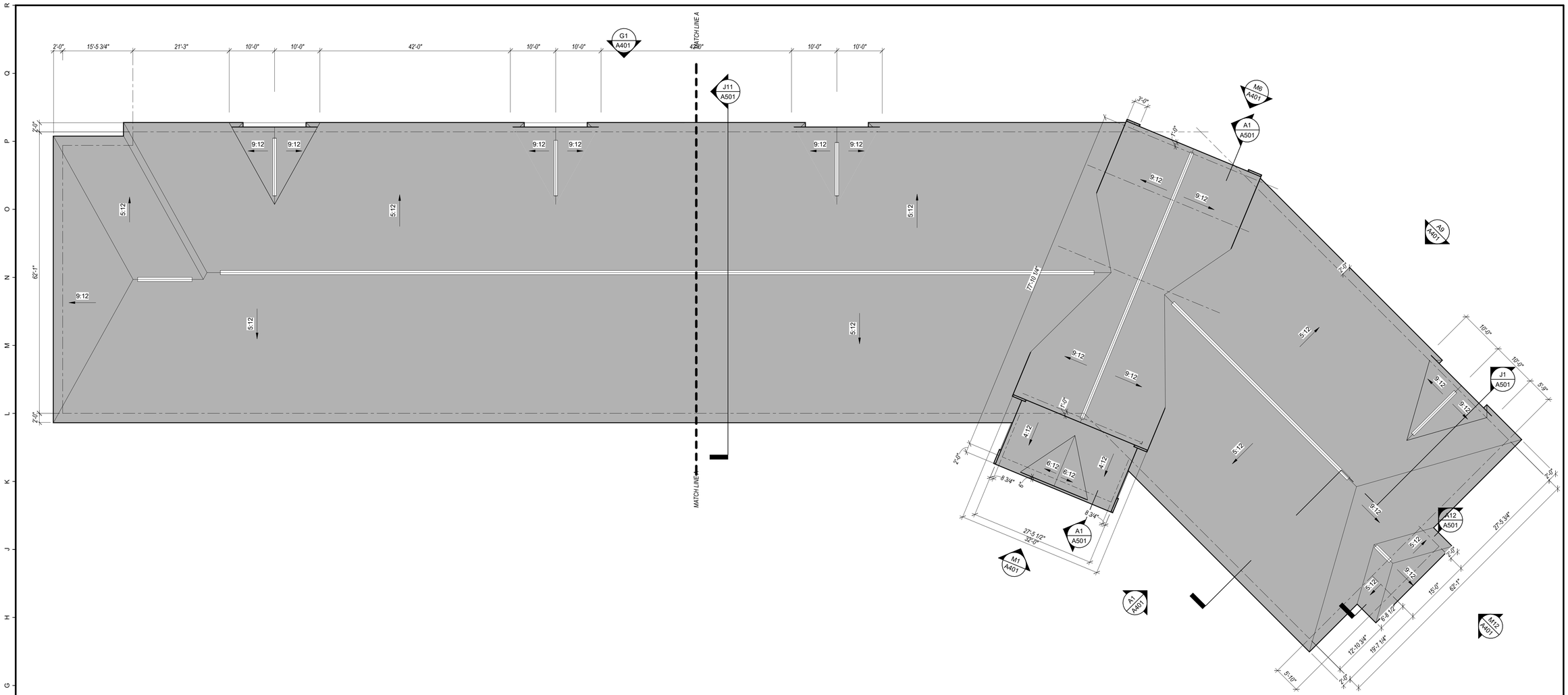

ROOF PLAN LEGEND

NOTE: REFER TO EXTERIOR ELEVATIONS FOR COLORS (TYP.)

- ASPHALT SHINGLE ROOF
- RIDGE VENT
- EXTERIOR FACE OF FOUNDATION/ FRAMING BELOW
- (RG) ROOF GUTTER
- (GDS) GUTTER DOWNSPOUT
- (CAN) CANOPY ROOF
- ICE & WATER SHIELD
- ROOF VENT UNIT

ROOFING NOTES:

1. ICE & WATER SHIELD - MIN. 6' UP ROOF FROM INSIDE FACE OF EXTERIOR WALL. MIN. 3' FROM RAKE EDGE, MIN. 4' - 6" UP EACH SIDE @VALLEY & 18" MIN. UP WALLS ABOVE LOW ROOF. PROVIDE COMPLETE ICE & WATER SHIELD COVERAGE TO ENTIRE CANOPY OR PORCH ROOF(S).
2. INSTALL SELF-ADHERING SHEET UNDERLAYMENT, WRINKLE FREE ON ROOF DECK. COMPLY WITH LOW-TEMPERATURE INSTALLATION RESTRICTIONS OF UNDERLAYMENT MANUFACTURER IF APPLICABLE. INSTALL AT LOCATIONS INDICATED BELOW AND ON DRAWINGS, LAPPED IN DIRECTION TO SHED WATER. APPLY IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. LAP SIDES NOT LESS THAN 3-1/2 INCHES. LAP ENDS NOT LESS THAN 6 INCHES STAGGERED 24 INCHES BETWEEN COURSES. ROLL LAPS WITH ROLLER.
3. EAVES: EXTEND FROM EDGE OF EAVES UP SLOPE NOT LESS THAN 6 FEET BEYOND INTERIOR FACE OF EXTERIOR WALL.
4. RAKES: EXTEND FROM EDGES OF RAKE 36 INCHES BEYOND INTERIOR FACE OF EXTERIOR WALL.
5. VALLEYS: EXTEND FROM LOWEST TO HIGHEST POINT NOT LESS THAN 3 FEET OUT FROM EACH SIDE OF VALLEY CENTERLINE. LAP ROOF UNDERLAYMENT OVER VALLEY UNDERLAYMENT NOT LESS THAN 6 INCHES AND SEAL WITH ASPHALT PLASTIC CEMENT.
6. RIDGES: EXTEND 36 INCHES ON EACH SIDE WITHOUT OBSTRUCTING CONTINUOUS RIDGE VENT SLOT.
7. SIDEWALLS: EXTEND BEYOND SIDEWALL NOT LESS THAN 3 FEET AND RETURN VERTICALLY AGAINST SIDEWALL NOT LESS THAN 18 INCHES.
8. HIPS: EXTEND 18 INCHES ON EACH SIDE.
9. DORMERS, CHIMNEYS, SKYLIGHTS, AND OTHER ROOF-PENETRATING ELEMENTS: EXTEND BEYOND PENETRATING ELEMENT NOT LESS THAN 3 FEET AND RETURN VERTICALLY AGAINST PENETRATING ELEMENT NOT LESS THAN 8 INCHES.
10. RIDGE VENT(S) NOT REQUIRED AT "HOT" (UNVENTED) ROOFS.

A1 OVERALL ROOF PLAN

3/32" = 1'-0"

NORTH PLAN

4/22/2026 10:28:54 AM Author

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OVERALL ROOF PLAN

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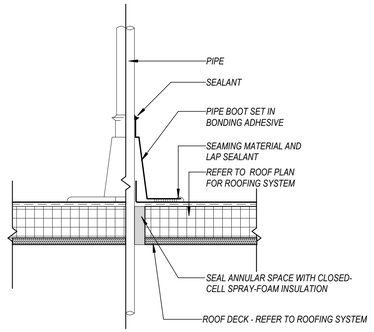
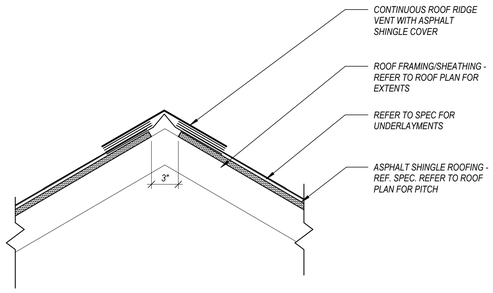


N1 PIPE BOOT DETAIL

1 1/2" = 1'-0"



J1 RIDGE VENT DETAIL

1 1/2" = 1'-0"

LICENSED ARCHITECT
REBECCA DAY-DILLON
No. 3044
STATE OF MAINE

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SHEET TITLE

ROOF DETAILS

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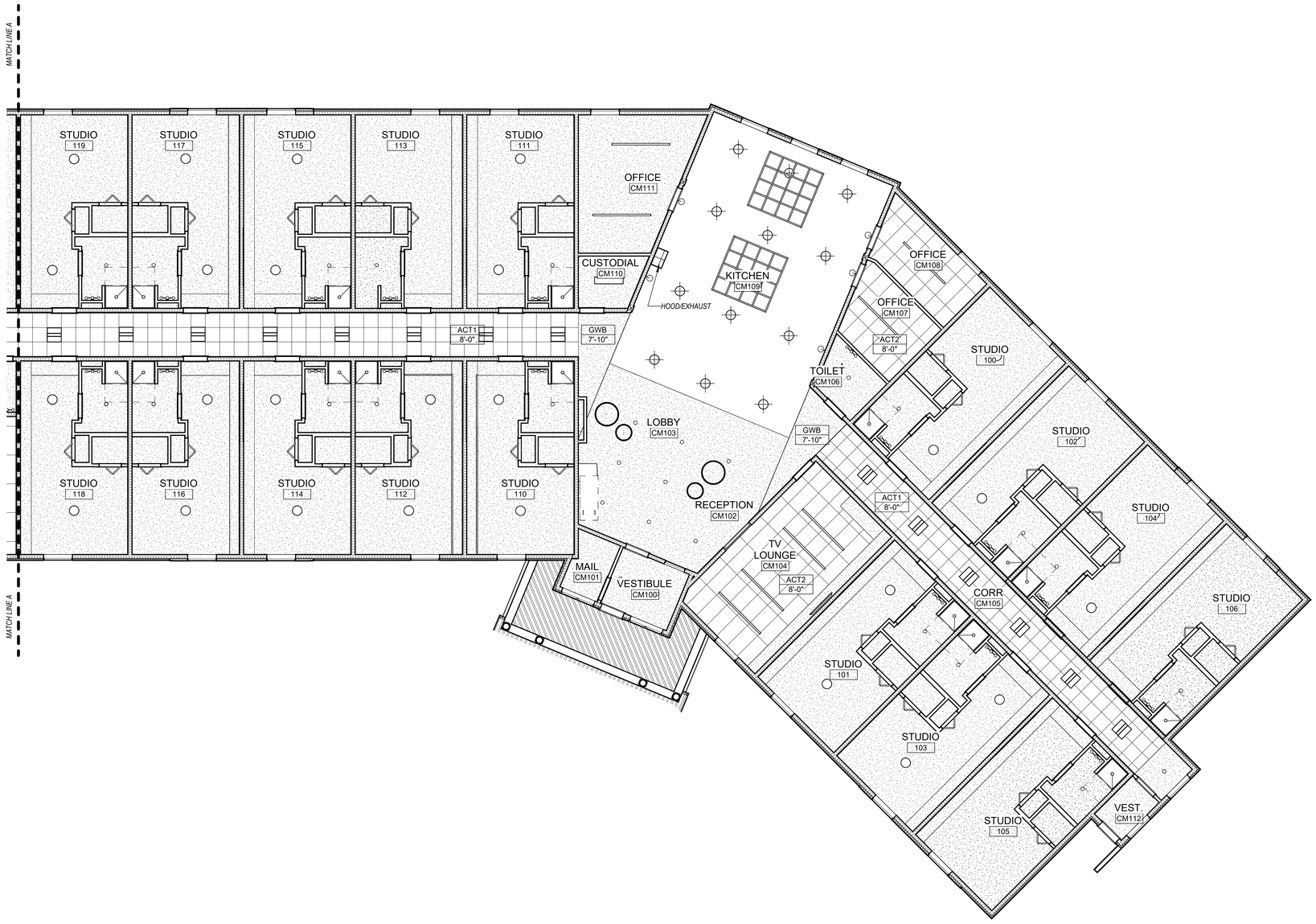

CEILING LEGEND

- GWB CEILING
- EXTERIOR VINYL CEILING/ SOFFIT
- 2X2 ACT CEILING
- SUSPENDED ACOUSTICAL BAFFLE SYSTEM
- 2X4 ACT CEILING

LIGHTING LEGEND

- VANITY LIGHT
- ACOUSTICAL DRUM STYLE PENDANT LIGHT (28" AND 40" DIA.)
- RECESSED LED CAN LIGHT
- WALL SCONCE LIGHT
- 2X4 DIRECT/INDIRECT LIGHT
- 2X2 DIRECT/INDIRECT LIGHT
- LINEAR PENDANT - LENGTHS VARY
- 1X4 LINEAR BOX LIGHT
- SURFACE-MOUNTED CEILING LIGHT
- UC — UNDER-CABINET LIGHT
- CEILING FAN
- HIGH BAY PENDANT FIXTURE

KEYED NOTES

- 01 EXISTING CEILING TO REMAIN - NEW LIGHTING
- 02 EXISTING CEILING GRID TO REMAIN - NEW TILES & LIGHTING
- 03 EXTEND EXISTING GRID AS REQUIRED FOR NEW CONSTRUCTION
- 04 NEW CEILING GRID, TILES, & LIGHTING

NOTE:

1. ALL NEW GRID TO BE CENTERED IN EACH ROOM, U.N.O.
2. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING FIXTURE SCHDULE
3. REFER TO INTERIOR ELEVATIONS FOR WALL SCONCE HEIGHTS
4. PROVIDE AND INSTALL NEW BUILDING STANDARD EXIT SIGNS AND EMERGENCY LIGHTING AS REQUIRED BY DESIGN, CODE, AND NEW LAYOUT. RELOCATE AND REUSE EXIT SIGNS, WHERE APPLICABLE
5. REFER TO TYP. UNIT ELNARGED RCP'S FOR IN-UNIT CEILINGS.
6. ALL EXTERIOR LIGHTS SHALL BE EXTERIOR-RATED.
7. ALL LIGHTS IN BATHROOMS SHALL BE MOISTURE-RATED.

A1 PARTIAL FIRST FLOOR RCP - WEST
1/8" = 1'-0"

NORTH PLAN

A18 LEGEND

OFFICE: 29 BLACK POINT ROAD SCARBOROUGH, MAINE 04074
MAIL: PO BOX #776 SCARBOROUGH, MAINE 04070
PHONE: 207-883-6307
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REVISIONS

#	DATE	DESCRIPTION
A	02.09.2026	50% PROGRESS SET
B	04.20.2026	REVISED 50% PROGRESS SET

DATE:	04.24.26
PROJECT #	050725
DRAWN BY:	HAS
CHECKED BY:	Checker
DRAWING SCALE	1/8" = 1'-0"

SHEET TITLE

PARTIAL FIRST FLOOR RCP - WEST

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A301

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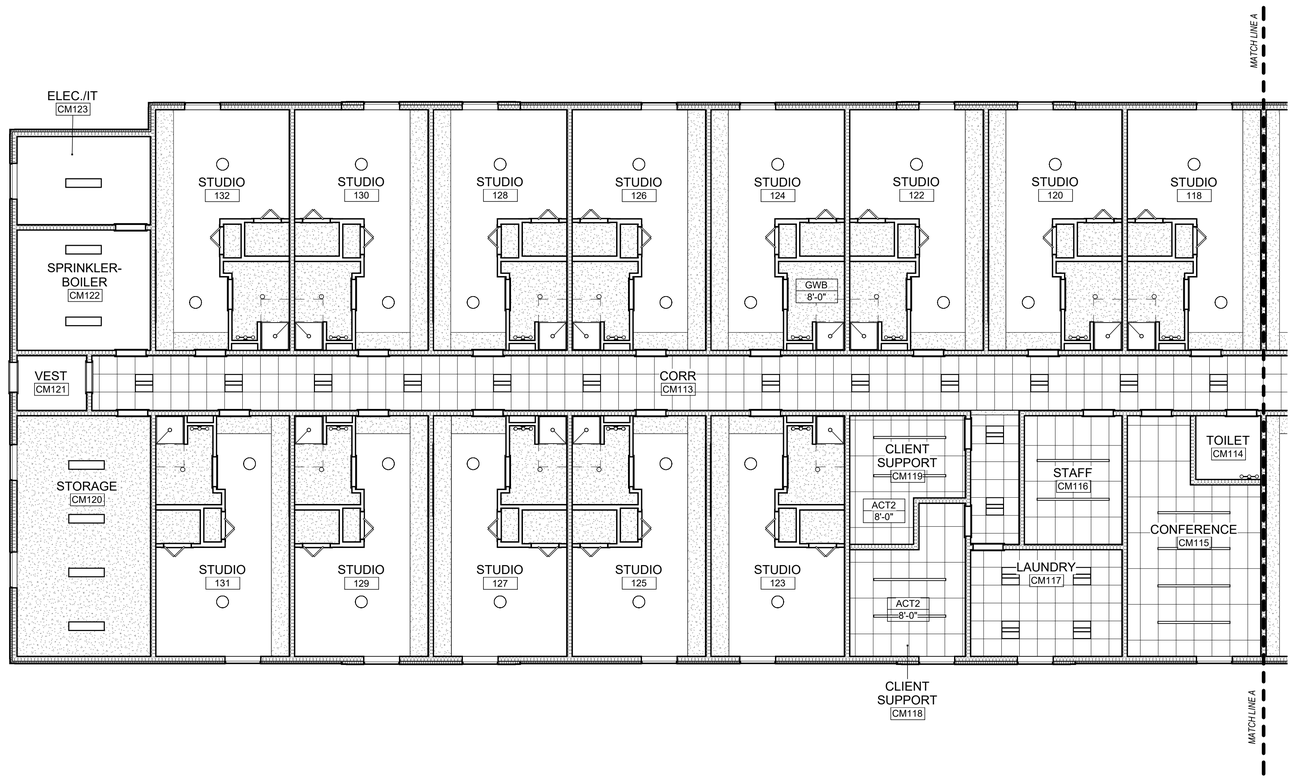

H1 PARTIAL FIRST FLOOR RCP - EAST

1/8" = 1'-0"

NORTH PLAN

CEILING LEGEND

- GWB CEILING
- EXTERIOR VINYL CEILING/ SOFFIT
- 2X2 ACT CEILING
- SUSPENDED ACOUSTICAL BAFFLE SYSTEM
- 2X4 ACT CEILING

LIGHTING LEGEND

- VANITY LIGHT
- ACOUSTICAL DRUM STYLE PENDANT LIGHT (28" AND 40" DIA.)
- RECESSED LED CAN LIGHT
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- 2X4 DIRECT/INDIRECT LIGHT
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- 1X4 LINEAR BOX LIGHT
- SURFACE-MOUNTED CEILING LIGHT
- UNDER-CABINET LIGHT
- CEILING FAN
- HIGH BAY PENDANT FIXTURE

KEYED NOTES

- 01 EXISTING CEILING TO REMAIN - NEW LIGHTING
- 02 EXISTING CEILING GRID TO REMAIN - NEW TILES & LIGHTING
- 03 EXTEND EXISTING GRID AS REQUIRED FOR NEW CONSTRUCTION
- 04 NEW CEILING GRID, TILES, & LIGHTING

NOTE:

1. ALL NEW GRID TO BE CENTERED IN EACH ROOM, U.N.O.
2. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING FIXTURE SCHEDULE
3. REFER TO INTERIOR ELEVATIONS FOR WALL SCONCE HEIGHTS
4. PROVIDE AND INSTALL NEW BUILDING STANDARD EXIT SIGNS AND EMERGENCY LIGHTING AS REQUIRED BY DESIGN, CODE, AND NEW LAYOUT. RELOCATE AND REUSE EXIT SIGNS, WHERE APPLICABLE
5. REFER TO TYP. UNIT ELNARGED RCP'S FOR IN-UNIT CEILINGS.
6. ALL EXTERIOR LIGHTS SHALL BE EXTERIOR-RATED.
7. ALL LIGHTS IN BATHROOMS SHALL BE MOISTURE-RATED.

A18 LEGEND

OFFICE: 29 BLACK POINT ROAD
SCARBOROUGH, MAINE 04074
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REVISIONS

#	DATE:	DESCRIPTION
A	02.09.2026	50% PROGRESS SET
B	04.20.2026	REVISED 50% PROGRESS SET

DATE:	04.24.26
PROJECT #	050725
DRAWN BY:	HAS
CHECKED BY:	Checker
DRAWING SCALE	1/8" = 1'-0"

SHEET TITLE

PARTIAL FIRST FLOOR RCP - EAST

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A302

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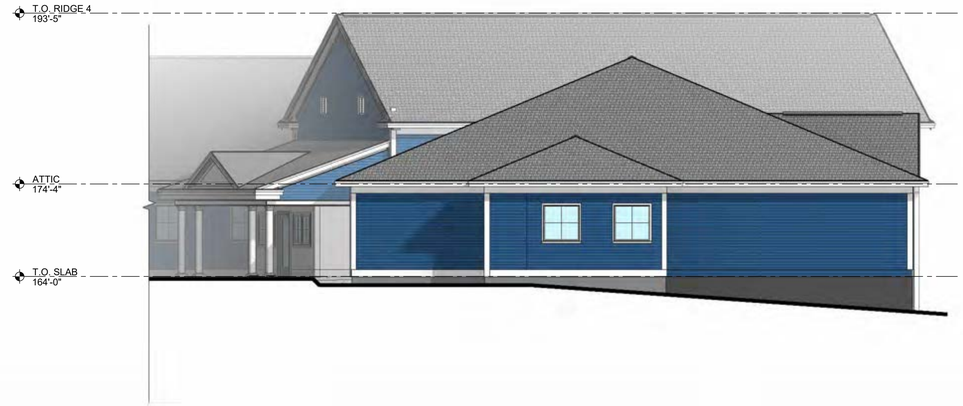
M1 BUILDING ELEVATIONS

1/8" = 1'-0"

M6 BUILDING ELEVATIONS

1/8" = 1'-0"



M12 BUILDING ELEVATIONS

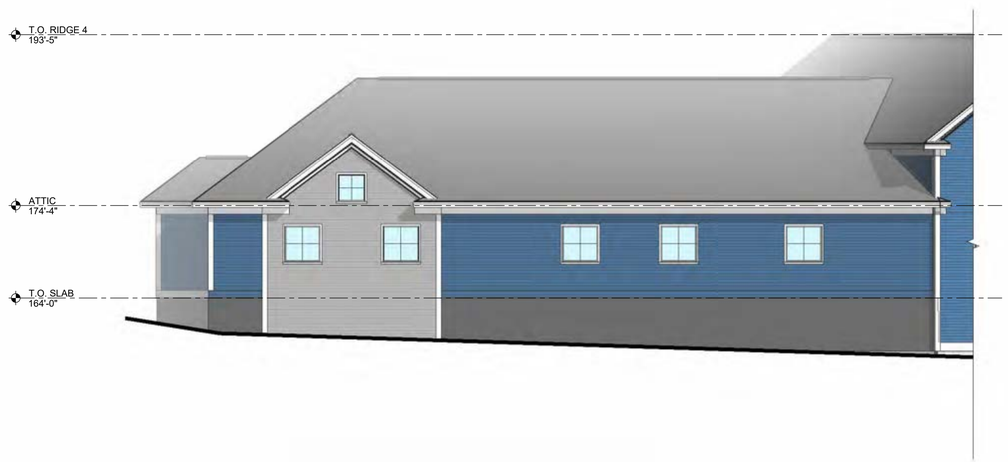
1/8" = 1'-0"

G1 BUILDING ELEVATIONS

1/8" = 1'-0"

A1 BUILDING ELEVATIONS

1/8" = 1'-0"



A9 BUILDING ELEVATIONS

1/8" = 1'-0"

EXTERIOR ELEVATION NOTES :

1. *COLORS ARE FOR GRAPHICAL PURPOSES ONLY. ACTUAL COLORS MAY VARY.*
2. *GRADES MAY VARY FROM SHOWN - REFER TO CIVIL / SITE.*

EXTERIOR MATERIALS LEGEND

ROOFING - ASPHALT SHINGLES, COLOR TO BE SELECTED (TYP)

SYNTHETIC FASCIA - SIZE, COLOR TO BE SELECTED (TYP)

EXTERIOR COLUMN - TO BE SELECTED (TYP)

SYNTHETIC TRIM - CORNERBOARD - SIZE, COLOR TO BE SELECTED (TYP)

SIDING - VINYL CLAPBOARD, PRIMARY COLOR TO BE SELECTED (TYP)

SIDING - VINYL CLAPBOARD, ACCENT COLOR TO BE SELECTED

SIDING - VINYL STONE VENEER-LOOK, COLOR TO BE SELECTED (LOWER LEVEL)

EXTERIOR DOORS - HOLLOW METAL, PTD COLOR TO BE SELECTED (TYP)

TRIM: SIZE, MATERIAL, COLOR TO BE SELECTED (TYP)

WINDOWS - MATERIAL, COLOR, AND TRIM TO BE SELECTED

A18 LEGEND

OFFICE: 29 BLACK POINT ROAD
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#	DATE	DESCRIPTION
A	02.09.2026	50% PROGRESS SET
B	04.20.2026	REVISED 50% PROGRESS SET

DATE:	04.24.26
PROJECT #	050725
DRAWN BY:	Author
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DRAWING SCALE	1/8" = 1'-0"

SHEET TITLE

BUILDING ELEVATIONS

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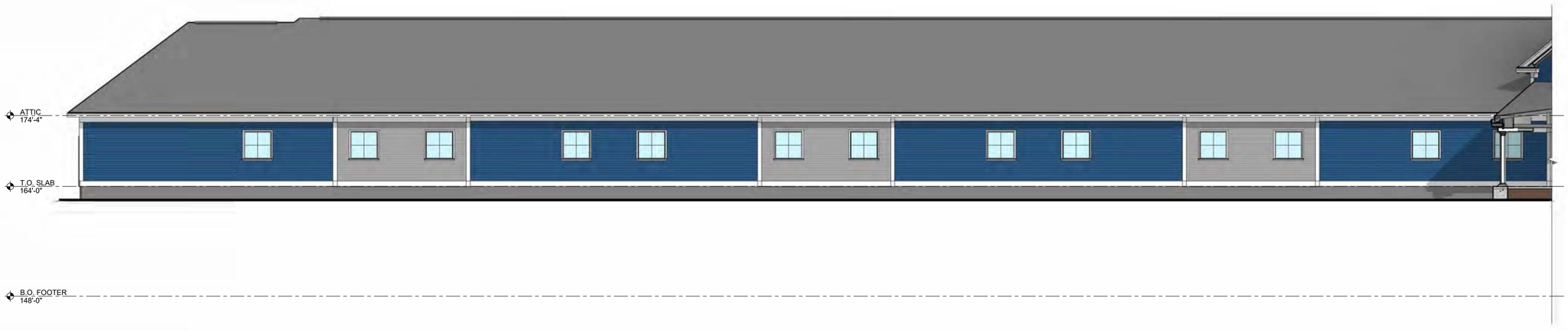
M1 BUILDING ELEVATIONS

1/8" = 1'-0"



G1 BUILDING ELEVATIONS

1/8" = 1'-0"

EXTERIOR ELEVATION NOTES :

1. *COLORS ARE FOR GRAPHICAL PURPOSES ONLY. ACTUAL COLORS MAY VARY.*
2. *GRADES MAY VARY FROM SHOWN - REFER TO CIVIL / SITE.*

EXTERIOR MATERIALS LEGEND

- *ROOFING - ASPHALT SHINGLES, COLOR TO BE SELECTED (TYP)*
- *SYNTHETIC FASCIA - SIZE, COLOR TO BE SELECTED (TYP)*
- *EXTERIOR COLUMN - TO BE SELECTED (TYP)*
- *SYNTHETIC TRIM - CORNERBOARD - SIZE, COLOR TO BE SELECTED (TYP)*
- *SIDING - VINYL CLAPBOARD, PRIMARY COLOR TO BE SELECTED (TYP)*
- *SIDING - VINYL CLAPBOARD, ACCENT COLOR TO BE SELECTED*
- *SIDING - VINYL STONE VENEER-LOOK, COLOR TO BE SELECTED (LOWER LEVEL)*
- *EXTERIOR DOORS - HOLLOW METAL, PTD COLOR TO BE SELECTED (TYP)*
- *TRIM: SIZE, MATERIAL, COLOR TO BE SELECTED (TYP)*
- *WINDOWS - MATERIAL, COLOR, AND TRIM TO BE SELECTED*

A18 LEGEND

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DATE:	04.24.26
PROJECT #	050725
DRAWN BY:	Author
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DRAWING SCALE	1/8" = 1'-0"

SHEET TITLE

BUILDING ELEVATIONS

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A402

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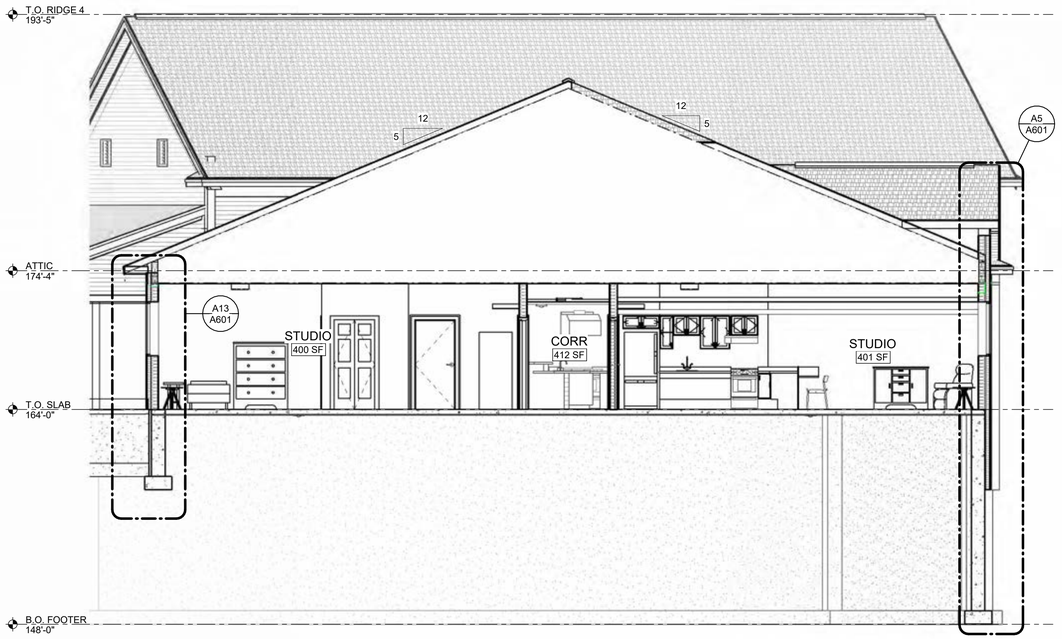
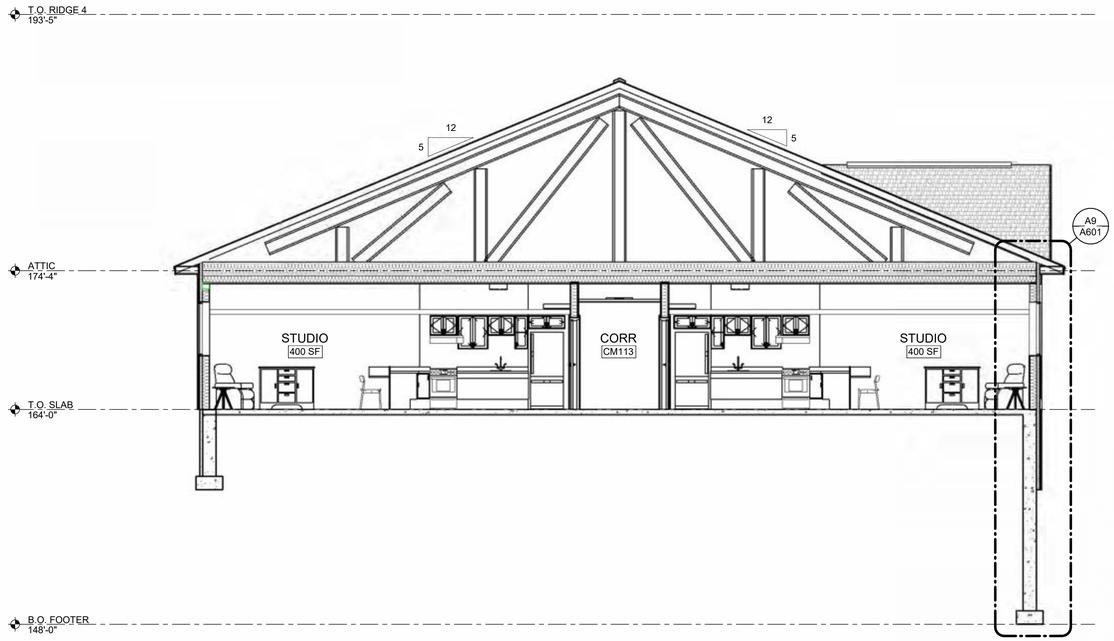


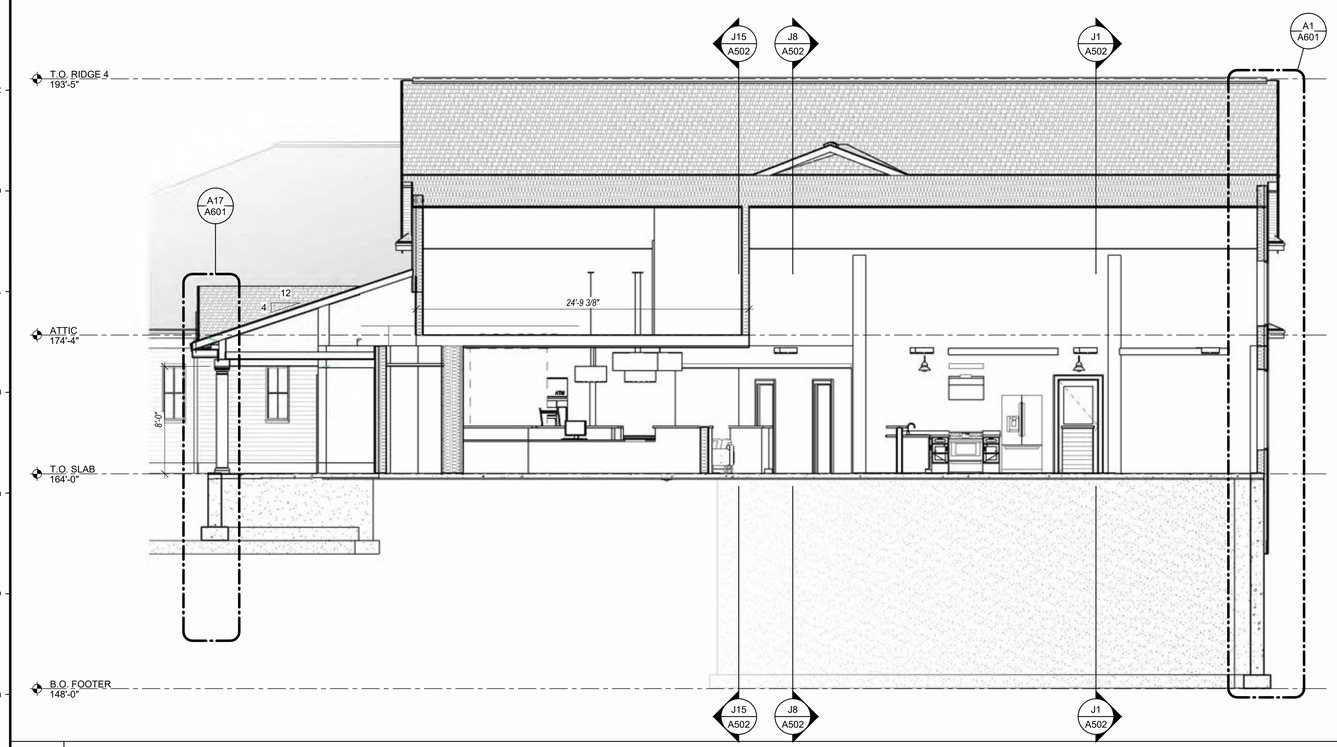
J1 BUILDING SECTION

3/16" = 1'-0"



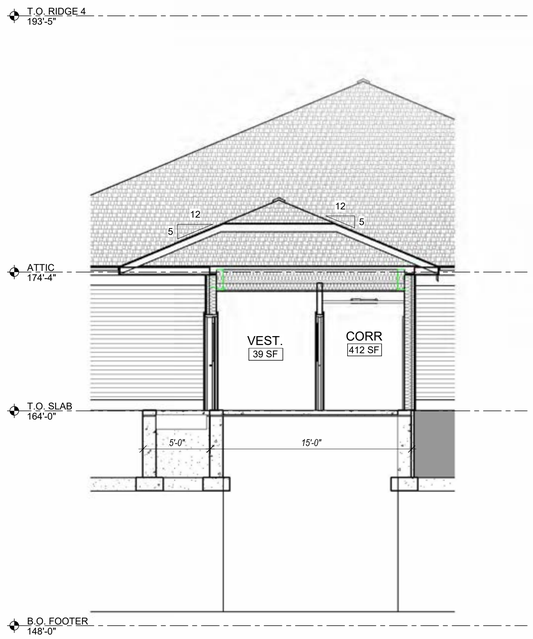
J11 BUILDING SECTION

3/16" = 1'-0"



A1 BUILDING SECTION

3/16" = 1'-0"



A12 BUILDING SECTION

3/16" = 1'-0"

BUILDING SECTION LEGEND

DELINIATES THERMAL BUILDING ENVELOPE (INTERIOR SIDE)

NOTES:

1. *THE AIR BARRIER SHALL BE CONTINUOUS FOR ALL ASSEMBLIES THAT ARE THE THERMAL ENVELOPE OF THE BUILDING AND ACROSS THE JOINTS AND ASSEMBLIES.*
2. *AIR BARRIER JOINTS AND SEAMS SHALL BE SEALED, INCLUDING SEALING TRANSITIONS IN PLACES AND CHANGES IN MATERIALS. THE JOINTS AND SEALS SHALL BE SECURELY INSTALLED IN OR ON THE JOINT FOR ITS ENTIRE LENGTH SO AS NOT TO DISLODGE, LOOSEN, OR OTHERWISE IMPAIR ITS ABILITY TO RESIST POSITIVE AND NEGATIVE PRESSURE FROM WIND, STACK EFFECT, AND MECHANICAL VENTILATION.*
3. *PENETRATIONS OF THE AIR BARRIER SHALL BE CAULKED, GASKETED, OR OTHERWISE SEALED IN A MANNER COMPATIBLE WITH THE CONSTRUCTION MATERIALS AND LOCATION. JOINTS AND SEALS ASSOCIATED WITH PENETRATIONS SHALL BE SEALED IN THE SAME MANNER OR TAPED OR COVERED WITH MOISTURE VAPOR-PERMEABLE WRAPPING MATERIAL. SEALING MATERIALS SHALL BE APPROPRIATE TO THE CONSTRUCTION MATERIALS BEING SEALED AND SHALL BE SECURELY INSTALLED AROUND THE PENETRATION SO AS NOT TO DISLODGE, LOOSEN, OR OTHERWISE IMPAIR THE PENETRATIONS' ABILITY TO RESIST POSITIVE AND NEGATIVE PRESSURE FROM WIND, STACK EFFECT, AND MECHANICAL VENTILATION. SEALING OF CONCEALED FIRE SPRINKLERS, WHERE REQUIRED, SHALL BE IN A MANNER THAT IS RECOMMENDED BY THE MANUFACTURER. CAULKING OR OTHER ADHESIVE SEALANTS SHALL NOT BE USED TO FILL VOIDS BETWEEN FIRE SPRINKLER COVER PLATES AND WALLS OR CEILINGS.*
4. *RECESSED LIGHTING FIXTURES SHALL COMPLY WITH IECC. WHERE SIMILAR OBJECTS ARE INSTALLED THAT PENETRATE THE AIR BARRIER, PROVISIONS SHALL BE MADE TO MAINTAIN THE INTEGRITY OF THE AIR BARRIER.*
5. *REFER TO BUILDING AIR SEALING NOTES ON SHEET A001 FOR MORE INFORMATION.*
6. *INSULATION MAY NOT BE SHOWN ON BUILDING SECTIONS - REFER TO ASSEMBLIES AND DETAILS.*

A18 LEGEND

OFFICE: 29 BLACK POINT ROAD
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#	DATE	DESCRIPTION
A	02.09.2026	50% PROGRESS SET
B	04.20.2026	REVISED 50% PROGRESS SET

DATE:	04.24.26
PROJECT #	050725
DRAWN BY:	Author
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SHEET TITLE

BUILDING SECTIONS

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A501

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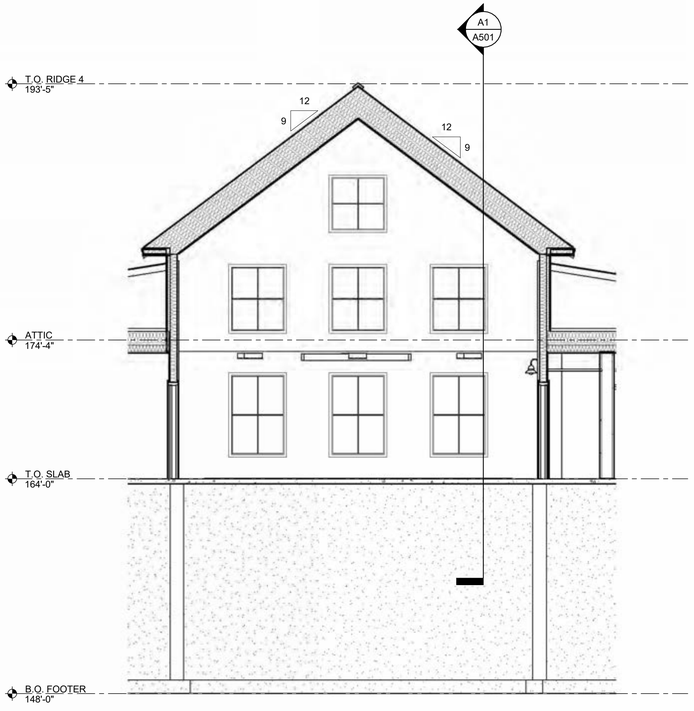
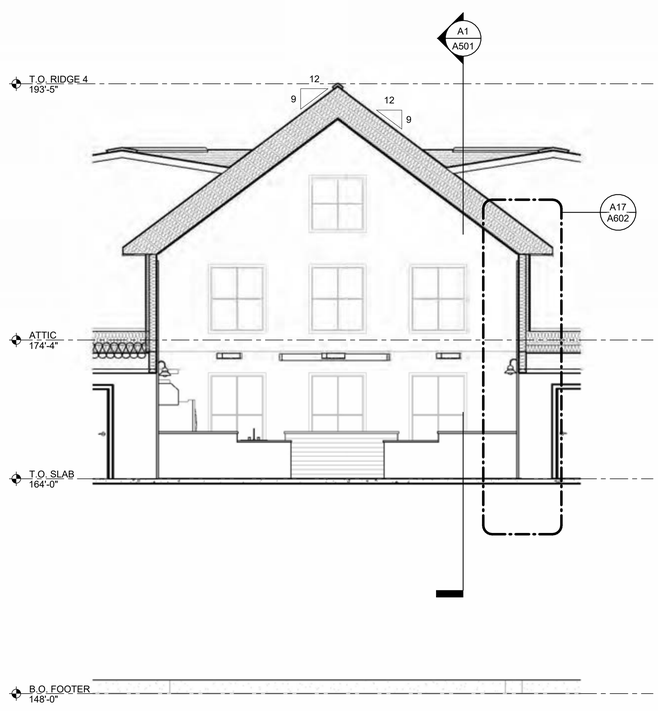


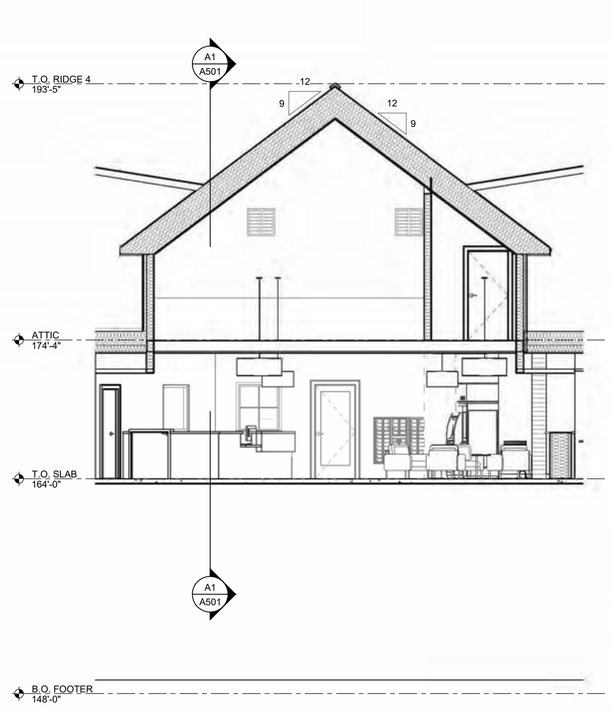
J1 BUILDING SECTION

3/16" = 1'-0"



J8 BUILDING SECTION

3/16" = 1'-0"



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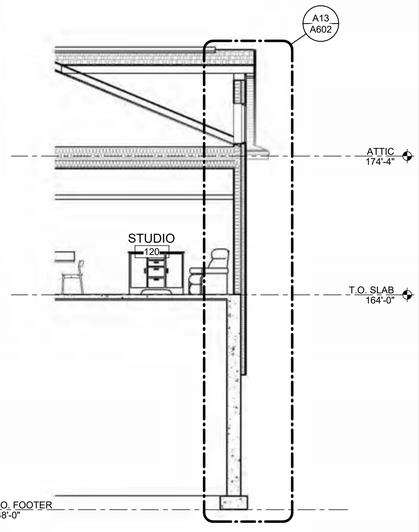
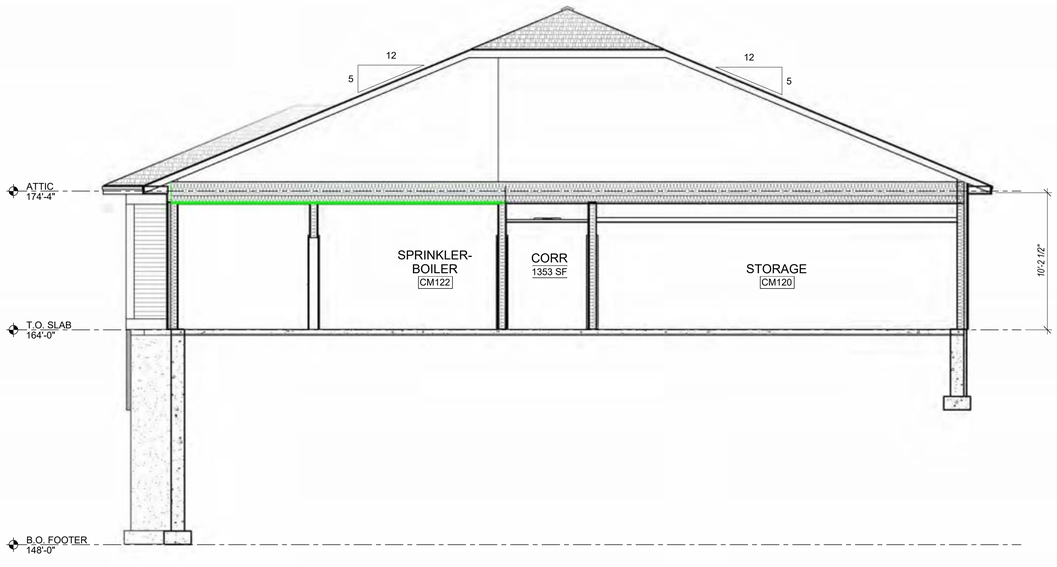
3/16" = 1'-0"



A1 BUILDING SECTION

3/16" = 1'-0"



A5 BUILDING SECTION

3/16" = 1'-0"

BUILDING SECTION LEGEND

-·-·-	*DELINIATES THERMAL BUILDING ENVELOPE (INTERIOR SIDE)*

NOTES:

1. *THE AIR BARRIER SHALL BE CONTINUOUS FOR ALL ASSEMBLIES THAT ARE THE THERMAL ENVELOPE OF THE BUILDING AND ACROSS THE JOINTS AND ASSEMBLIES.*
2. *AIR BARRIER JOINTS AND SEAMS SHALL BE SEALED, INCLUDING SEALING TRANSITIONS IN PLACES AND CHANGES IN MATERIALS. THE JOINTS AND SEALS SHALL BE SECURELY INSTALLED IN OR ON THE JOINT FOR ITS ENTIRE LENGTH SO AS NOT TO DISLODGE, LOOSEN, OR OTHERWISE IMPAIR ITS ABILITY TO RESIST POSITIVE AND NEGATIVE PRESSURE FROM WIND, STACK EFFECT, AND MECHANICAL VENTILATION.*
3. *PENETRATIONS OF THE AIR BARRIER SHALL BE CAULKED, GASKETED, OR OTHERWISE SEALED IN A MANNER COMPATIBILE WITH THE CONSTRUCTION MATERIALS AND LOCATION. JOINTS AND SEALS ASSOCIATED WITH PENETRATIONS SHALL BE SEALED IN THE SAME MANNER OR TAPED OR COVERED WITH MOISTURE VAPOR-PERMEABLE WRAPPING MATERIAL. SEALING MATERIALS SHALL BE APPROPRIATE TO THE CONSTRUCTION MATERIALS BEING SEALED AND SHALL BE SECURELY INSTALLED AROUND THE PENETRATION SO AS NOT TO DISLODGE, LOOSEN, OR OTHERWISE IMPAIR THE PENETRATIONS' ABILITY TO RESIST POSITIVE AND NEGATIVE PRESSURE FROM WIND, STACK EFFECT, AND MECHANICAL VENTILATION. SEALING OF CONCEALED FIRE SPRINKLERS, WHERE REQUIRED, SHALL BE IN A MANNER THAT IS RECOMMENDED BY THE MANUFACTURER. CAULKING OR OTHER ADHESIVE SEALANTS SHALL NOT BE USED TO FILL VOIDS BETWEEN FIRE SPRINKLER COVER PLATES AND WALLS OR CEILINGS.*
4. *RECESSED LIGHTING FIXTURES SHALL COMPLY WITH IECC. WHERE SIMILAR OBJECTS ARE INSTALLED THAT PENETRATE THE AIR BARRIER, PROVISIONS SHALL BE MADE TO MAINTAIN THE INTEGRITY OF THE AIR BARRIER.*
5. *REFER TO BUILDING AIR SEALING NOTES ON SHEET A001 FOR MORE INFORMATION.*
6. *INSULATION MAY NOT BE SHOWN ON BUILDING SECTIONS - REFER TO ASSEMBLIES AND DETAILS.*

A18 LEGEND

GAWRON TURGEON DILLON ARCHITECTS PC

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REVISIONS

#	DATE	DESCRIPTION
A	02.09.2026	50% PROGRESS SET
B	04.20.2026	REVISED 50% PROGRESS SET

DATE:	04.24.26
PROJECT #	050725
DRAWN BY:	Author
CHECKED BY:	Checker
DRAWING SCALE	As indicated

SHEET TITLE

BUILDING SECTIONS

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A502

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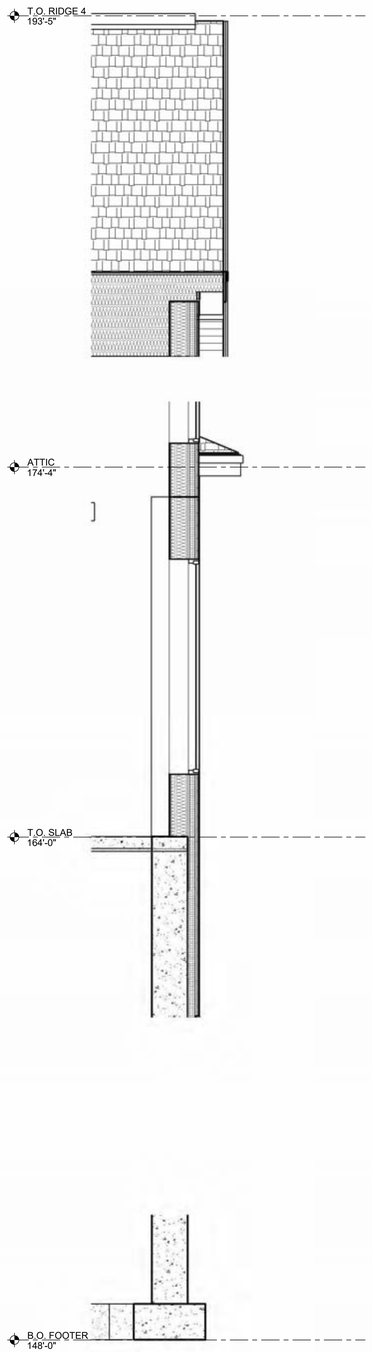
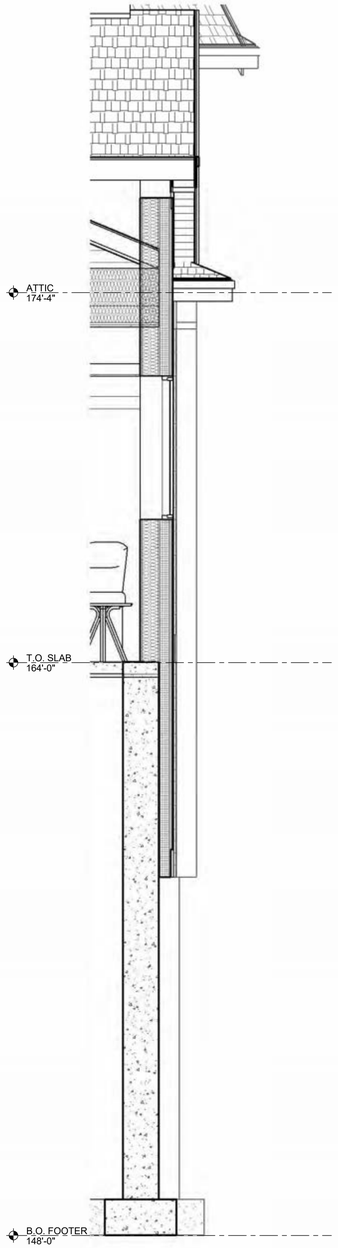


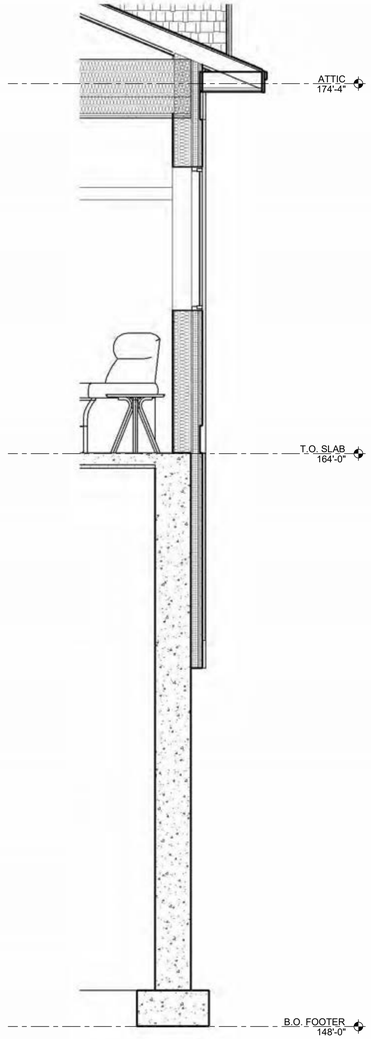
A1 WALL SECTION

1/2" = 1'-0"



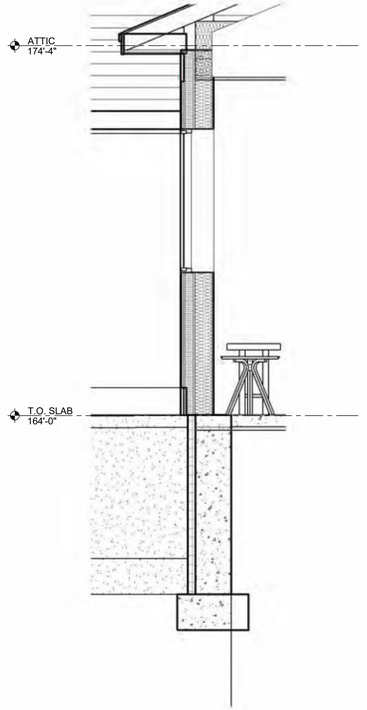
A5 WALL SECTION

1/2" = 1'-0"



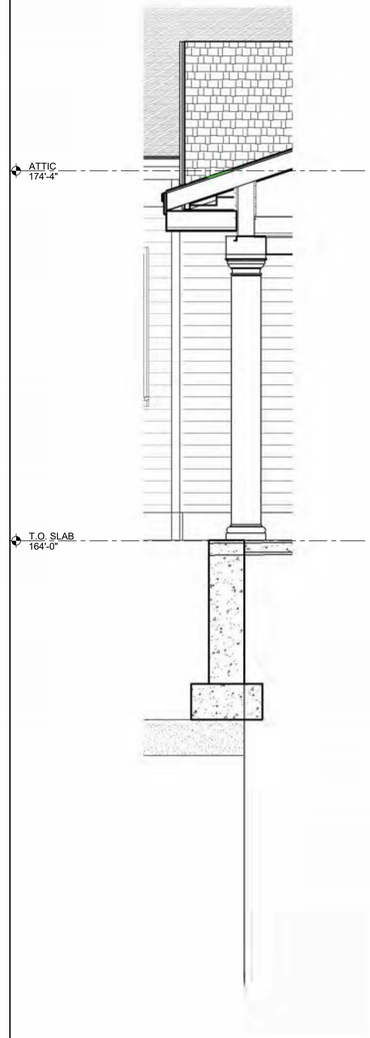
A9 WALL SECTION

1/2" = 1'-0"



A13 WALL SECTION

1/2" = 1'-0"



A17 WALL SECTION

1/2" = 1'-0"

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PROJECT #	050725
DRAWN BY:	Author
CHECKED BY:	Checker
DRAWING SCALE	1/2" = 1'-0"

SHEET TITLE

WALL SECTIONS

A601

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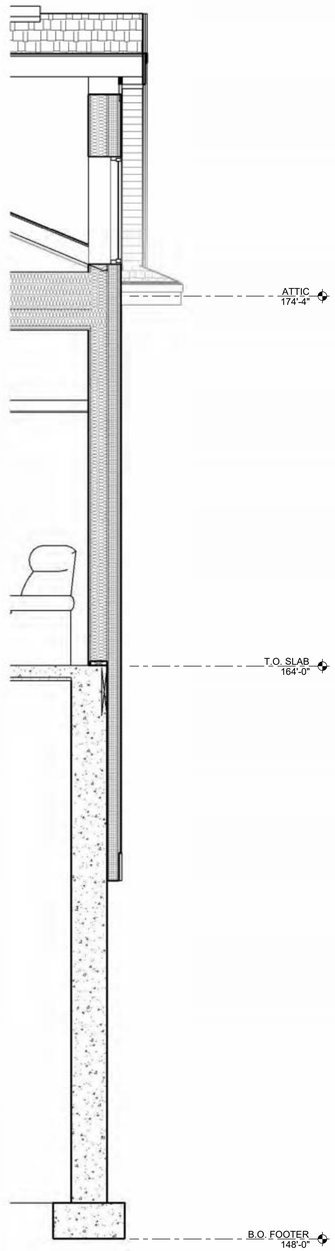
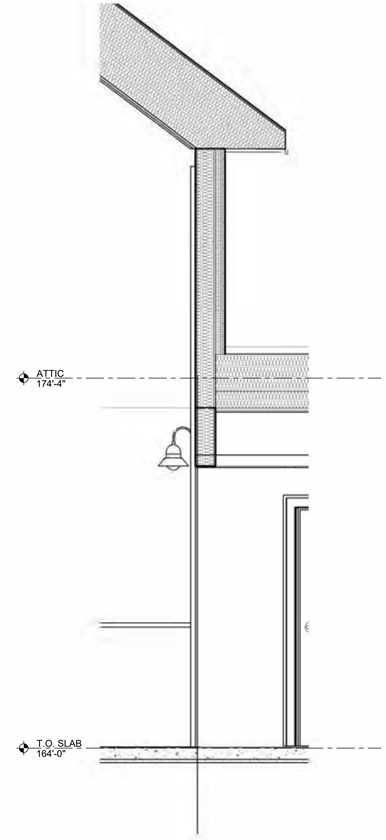
4/22/2026 10:30:32 AM Author



A13 WALL SECTION

1/2" = 1'-0"



A17 WALL SECTION

1/2" = 1'-0"

4/22/2026 10:30:41 AM Author

OFFICE: 29 BLACK POINT ROAD
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WWW.GTDARCHITECTS.COM

GAWRON TURGEON DILLON ARCHITECTS PC

BHDC YELLEN PINES

HOME FOR GOOD

205 CORPORATE DRIVE, BANGOR ME

REVISIONS

#	DATE	DESCRIPTION
A	02.09.2026	50% PROGRESS SET
B	04.20.2026	REVISED 50% PROGRESS SET

DATE:	04.24.26
PROJECT #	050725
DRAWN BY:	Author
CHECKED BY:	Checker
DRAWING SCALE	1/2" = 1'-0"

SHEET TITLE

WALL SECTION & DETAILS

A602

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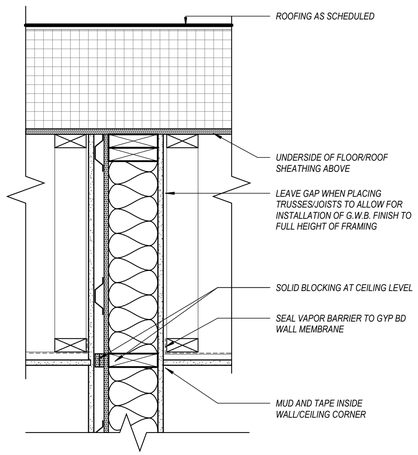
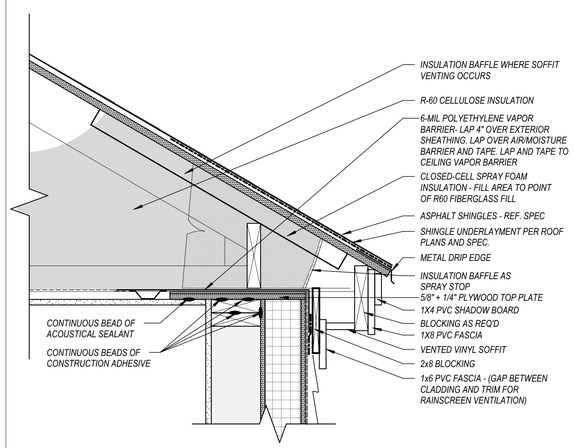


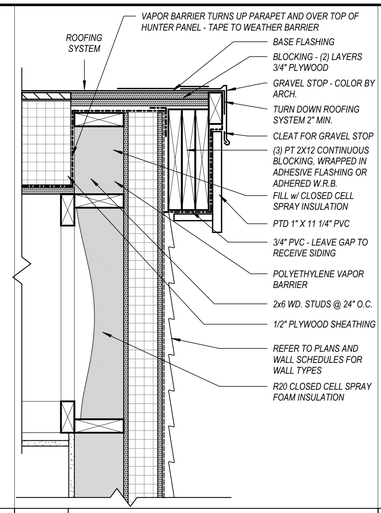
M1 T.O. DEMISING WALL PAR'L TO FRMNG

1 1/2" = 1'-0"



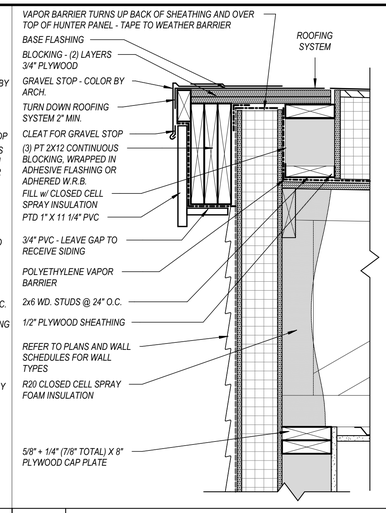
M9 EAVE DETAIL

1 1/2" = 1'-0"



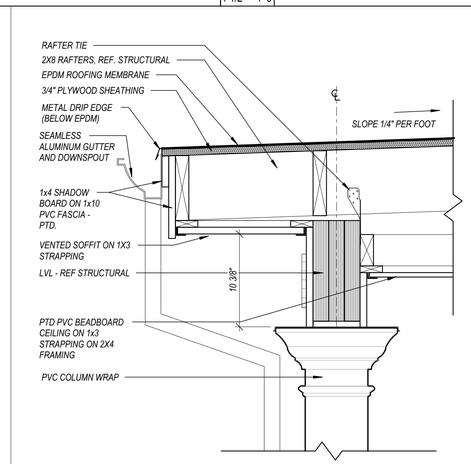
M14 T.O. EXT. WALL

1 1/2" = 1'-0"



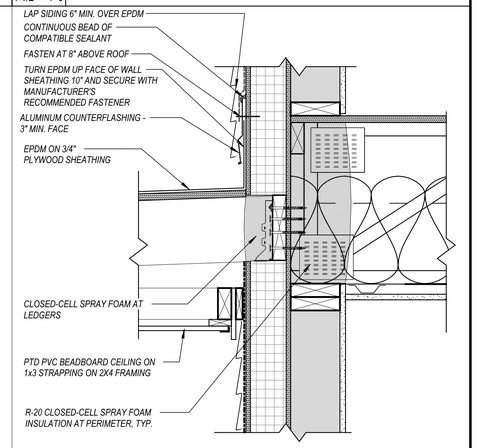
M17 TOP OF EXT. WALL

1 1/2" = 1'-0"



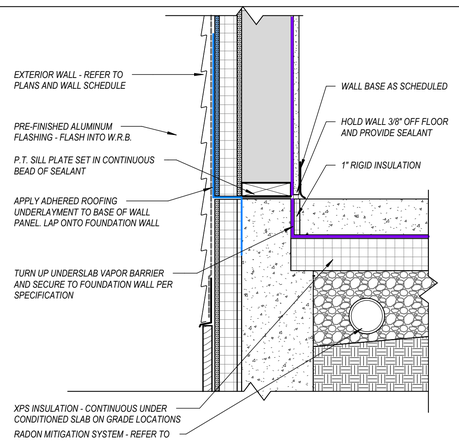
F12 PORCH EAVE DETAIL

1 1/2" = 1'-0"



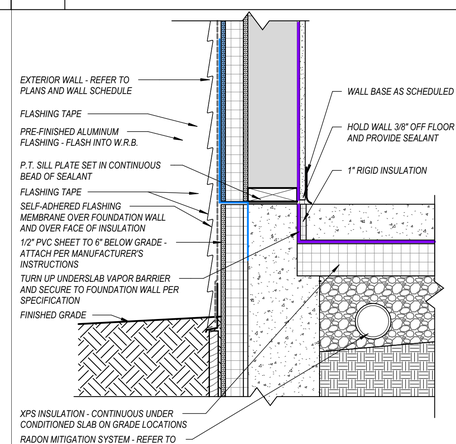
F17 PORCH HEADWALL DETAIL

1 1/2" = 1'-0"



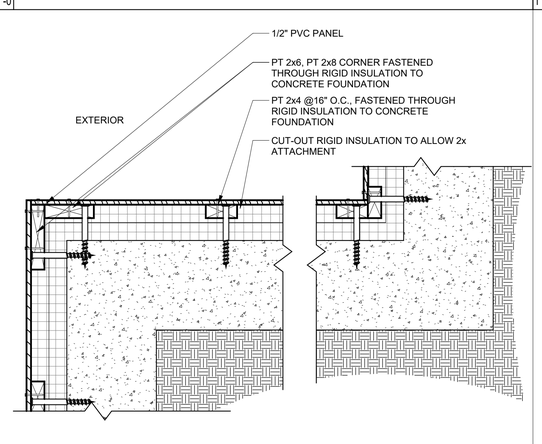
1 BASE OF EXT WALL AT GRADE Copy 1

1 1/2" = 1'-0"



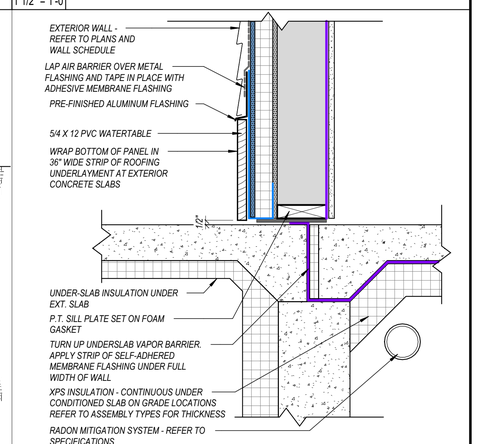
A8 BASE OF EXT WALL AT GRADE

1 1/2" = 1'-0"



A12 FOUNDATION INSUL. ATTACHMENT DET.

1 1/2" = 1'-0"



A17 BASE OF WALL DETAIL

1 1/2" = 1'-0"

GAWRON TURGEON DILLON ARCHITECTS PC
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BHDC YELLEN PINES
HOME FOR GOOD
205 CORPORATE DRIVE, BANGOR ME

REVISIONS

#	DATE	DESCRIPTION
B	04.20.2026	REVISED 50% PROGRESS SET

DATE:	04.24.26
PROJECT #	050725
DRAWN BY:	DEC
CHECKED BY:	RLD
DRAWING SCALE	1 1/2" = 1'-0"

SHEET TITLE

WALL DETAILS

A603

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4/22/2026 10:30:49 AM

R Q P O N M L K J H G F E D C B A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

DOOR SCHEDULE

DOOR SCHEDULE ABBREVATIONS							
ALUM	ALUMINUM	FBGL	FIBERGLASS	MTL	METAL	SCW	SOLID CORE WOOD
ANO	ANODIZED	HGT	HEIGHT	OHD	OVERHEAD DOOR	SL	SIDELITE
CL	CLOSET	HM	HOLLOW METAL	NO	NUMBER	TEMP	TEMPERED
CR	CARD READER	HCW	HOLLOW CORE WOOD	PKT	POCKET	THK	THICKNESS
EHO	ELECTRIC HOLD OPENER	IHM	INSULATED HOLLOW METAL	PP	PUSH PAD	WD	WOOD (SOLID)
EXT	EXTERIOR	INS	INSULATED	PTD	PAINTED	WG	WIRE GLASS
FA	FACTORY FINISH	KP	KEY PAD	S	STAIN		

DOOR								DOOR HARDWARE	FRAME						SILL CONDITIONS			RATING
											DETAILS				DETAILS			
NO	TYPE	WIDTH	HGT.	THK.	MAT.	FINISH	REMARKS		TYPE	MAT.	HEAD	JAMB	FINISH	REMARKS	MAT.	SILL	HEIGHT	
100A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
100B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
100C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
100D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
101A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
101B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
101C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
101D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
102A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
102B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
102C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
102D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
103A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
103B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
103C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
103D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
104A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
104B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
104C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
104D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
105A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
105B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
105C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
105D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
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106B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
106C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
106D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
110A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
110B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
110C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
110CCC	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
110D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
110EE	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
110EEEE	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
110S	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
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111B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
111C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
111D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
112A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
112B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
112C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
112D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
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113B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
113C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
113D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
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114B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
114C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
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115B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
115C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
115D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
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116B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
116C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
116D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
117A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
117B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
117C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
117D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
118A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
118A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
118B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
118B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
118C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
118C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
118D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
118D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					

DOOR								DOOR HARDWARE	FRAME						SILL CONDITIONS			RATING
											DETAILS				DETAILS			
NO	TYPE	WIDTH	HGT.	THK.	MAT.	FINISH	REMARKS		TYPE	MAT.	HEAD	JAMB	FINISH	REMARKS	MAT.	SILL	HEIGHT	
119A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
119B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
119C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
119D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
120A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
120B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
120C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
120D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
122A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
122B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
122C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
122D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
123A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
123B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
123C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
123D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
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124B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
124C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
125A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
125B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
125C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
125D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
126A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
126B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
126C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
126D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
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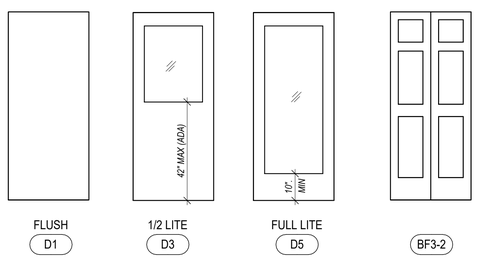
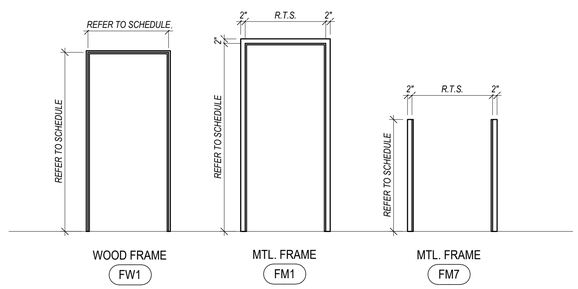
127B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
127C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
128A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
128B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
128C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
129A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
129B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
129C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
129D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
130A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
130B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
130C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
130D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
131A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
131B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
131C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
132A	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
132B	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
132C	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
132D	BF3-2	3'-0"	6'-8"	1 3/8"					FW1	WD			PTD					
CM100M	D5	3'-0"	7'-0"	1 3/4"					FM1	HM			PTD					
CM100N	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM100O	D5	3'-0"	7'-0"	1 3/4"					FM1	HM			PTD					
CM100Q	D3	3'-0"	7'-0"	1 3/4"					FM1	HM			PTD					
CM102	D1	3'-0"	3'-6"	1 3/4"					FM1	HM			PTD					
CM104	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM105	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM106	D3	3'-0"	7'-0"	1 3/4"					FM1	HM			PTD					
CM107	D3	3'-0"	7'-0"	1 3/4"					FM1	HM			PTD					
CM109	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM110	D3	3'-0"	7'-0"	1 3/4"					FM1	HM			PTD					
CM111A	D3	3'-0"	7'-0"	1 3/4"					FM1	HM			PTD					
CM111B	D3	3'-0"	7'-0"	1 3/4"					FM1	HM			PTD					
CM115	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM116	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM117	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM118	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM119	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM120	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM120	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM121	D3	3'-0"	7'-0"	1 3/4"					FM1	HM			PTD					
CM122	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM123	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					
CM123	D1	3'-0"	6'-8"	1 3/4"					FM1	HM			PTD					

E1 DOOR SCHEDULE





A1 DOOR TYPES & FRAMES

A16 DOOR NOTES

GENERAL DOOR NOTES:

1. GC TO COORDINATE ALL HARDWARE AND LOCKING FUNCTIONS WITH OWNER/ TENANT.
2. GLAZING IN RATED DOORS SHALL BE RATED PER CODE.
3. PROVIDE TEMPERED GLASS WHERE REQUIRED BY CODE.
4. REFER TO **A802** FOR ALL DOOR DETAILS.
5. ALL DOORS AND FRAMES WHICH ARE EXISTING TO REMAIN SHALL BE PAINTED PER FINISH SCHEDULE.
6. ALL EXTERIOR DOORS SHALL BE INSULATED DOOR WITH WEATHER GASKETS - GLASS SHALL BE TEMPERED & INSULATED.
7. ALL EXTERIOR DOORS & FRAMES SHALL BE GALVANIZED & PAINTED.
8. ALL INTERIOR DOORS & FRAMES TO BE PAINTED.
9. GC SHALL COORDINATE OHD DOOR TRACKS WITH ALL TRADES TO ENSURE OPEN DOORS. DO NOT INTERFERE OR BLOCK OVERHEAD LIGHT FIXTURES OR MECHANICAL EQUIPMENT.
10. TAPE ALL KNOCK-OUTS IN METAL STUDS AND OTHERWISE AIR SEAL R.O. AROUND DOOR WITH CAULK TO PREVENT AIR INFILTRATION FROM OTHER INTERIOR SPACES.
11. CAULK ALL DOOR FRAME EDGES. AT TILE LOCATIONS, OMIT GROUT AND FILL JOINT WITH SEALANT.

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DOOR SCHEDULE, TYPES, & FRAMES
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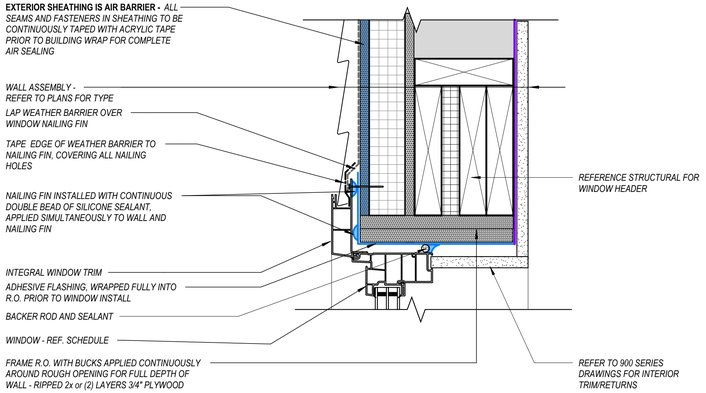
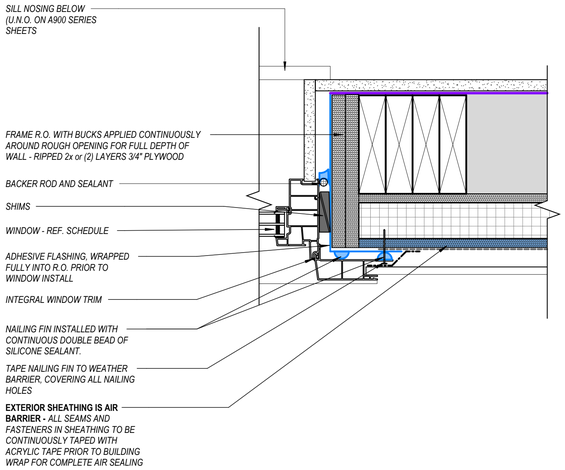


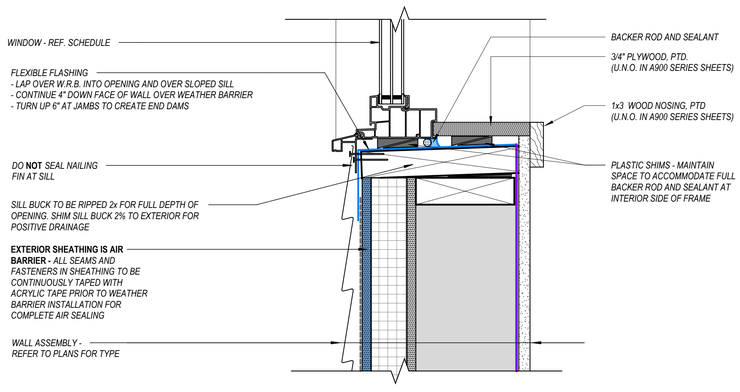
M1 FIXED WINDOW HEAD

3" = 1'-0"



F1 FIXED WINDOW JAMB

3" = 1'-0"



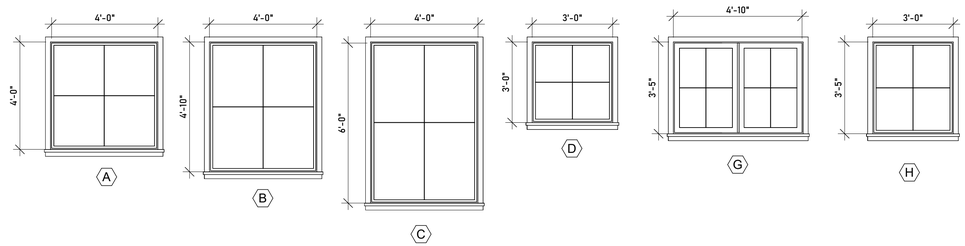
A1 FIXED WINDOW SILL

3" = 1'-0"

WINDOW SCHEDULE

WINDOW SCHEDULE ABBREVATIONS					
ALUM	ALUMINUM	MTL	METAL	TEMP	TEMPERED
ANO	ANODIZED	NO	NUMBER	THK	THICKNESS
FA	FACTORY FINISH	PTD	PAINTED	VNL	VINYL
HM	HOLLOW METAL	S	STAIN	WD	WOOD (SOLID)
INS	INSULATED	SS	SOLID SURFACE		

TYPE MARK	UNIT DIM. Width	Height	TYPE	COMMENTS
A	4'-0"	4'-0"	Window-Fixed	
B	4'-0"	4'-10"	Window-Fixed	
C	4'-0"	6'-0"	Window-Fixed	
D	3'-0"	3'-0"	Window-Fixed	
G	4'-10"	3'-5"	Window-Fixed-Double-Horizontal	
H	3'-0"	3'-5"	Window-Fixed	
O	2'-0"	2'-0"	Louver_Double_17897	



WINDOW NOTES:

1. *PROVIDE TEMPERED GLAZING IN WINDOWS WHERE REQUIRED BY CODE.*
2. *PROVIDE RATED GLAZING WHERE REQUIRED BY CODE.*
3. *ALL CAULKING AROUND WINDOWS SHALL BE NON-HARDENING TYPE SEALANT.*

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WINDOW SCHEDULES & DETAILS

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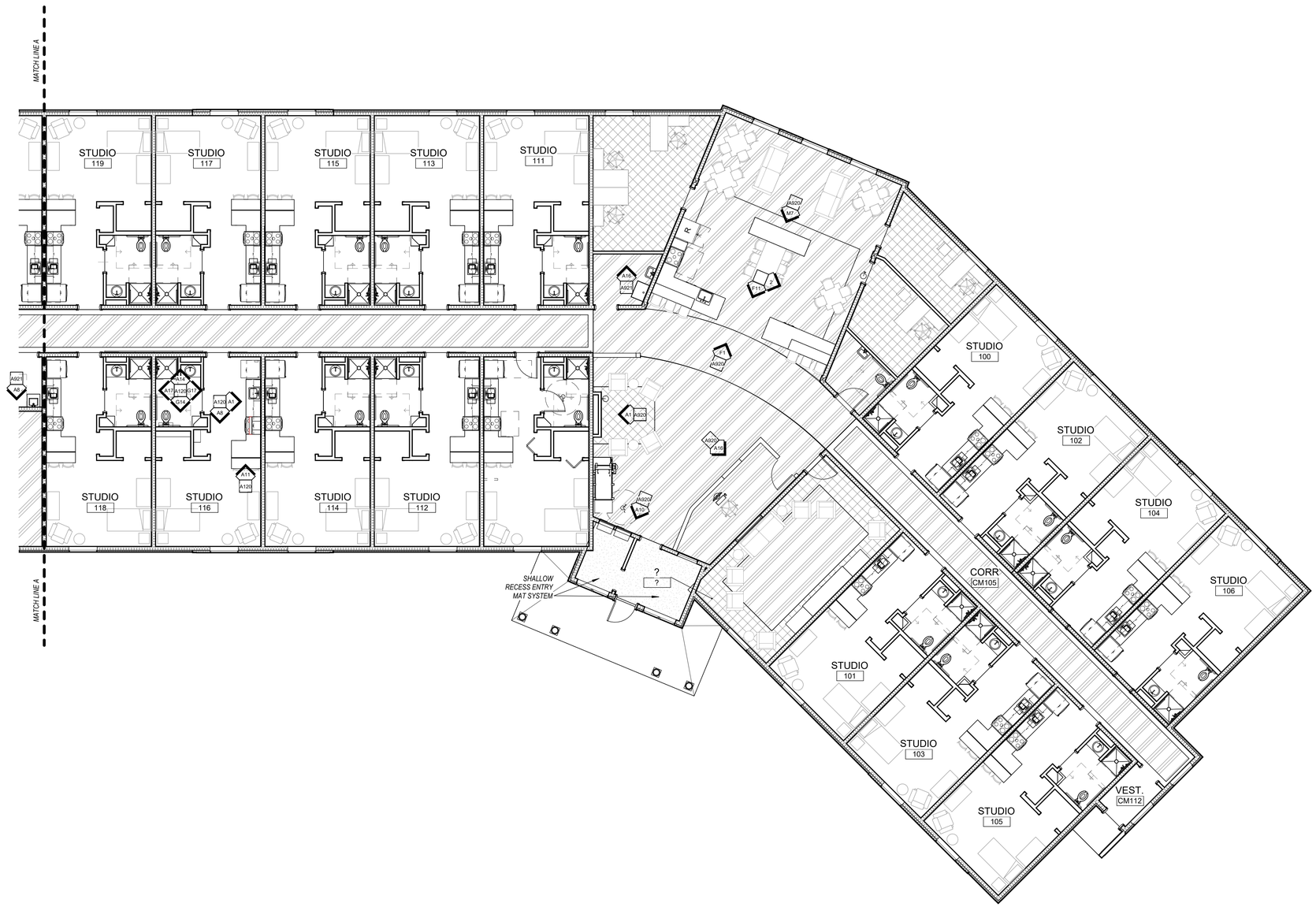

MATERIALS

- RUBBER PLANK FLOORING
- PORCELAIN FLOOR TILE
- WALK OFF MAT

A1 PARTIAL FIRST FLOOR FINISH PLAN - EASTT

1/8" = 1'-0"

NORTH

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SHEET TITLE

PARTIAL FIRST FLOOR FINISH PLAN - WEST

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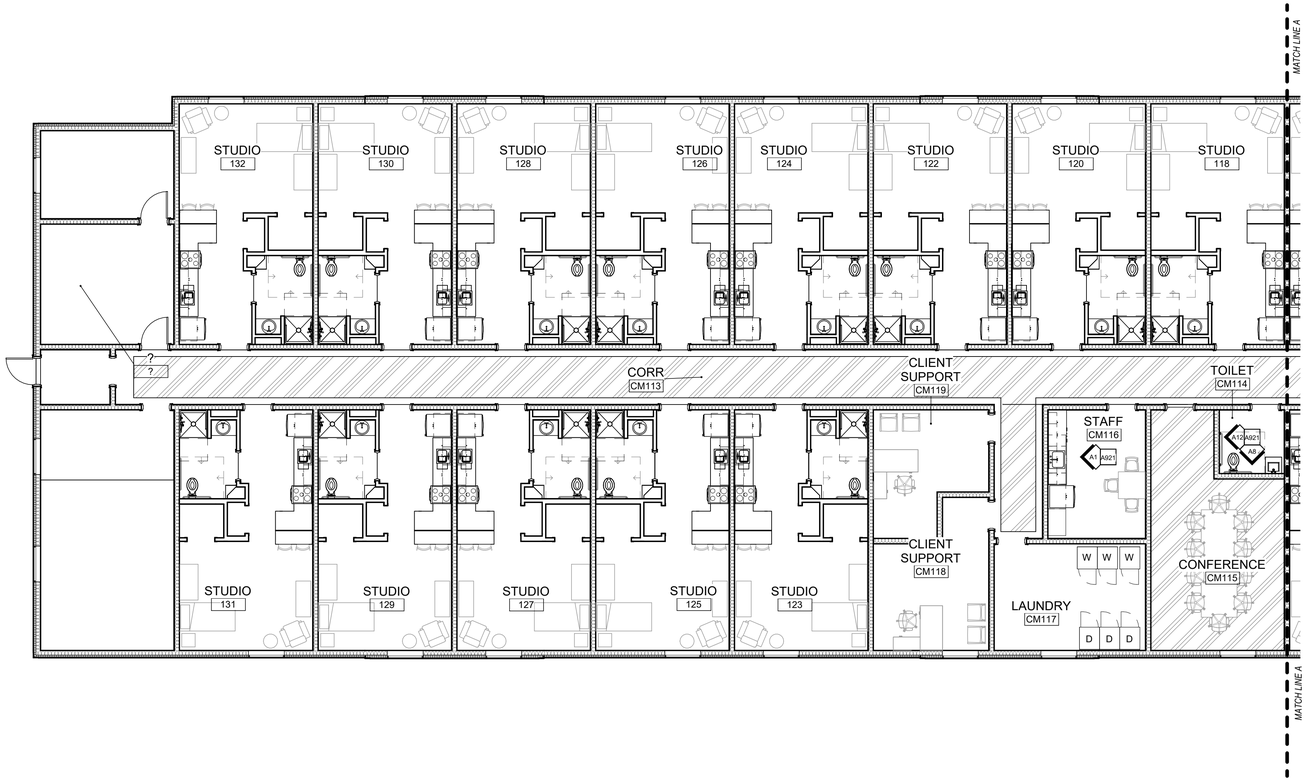

MATERIALS

- *RUBBER PLANK FLOORING*
- *PORCELAIN FLOOR TILE*
- *WALK OFF MAT*

H1 PARTIAL FIRST FLOOR FINISH PLAN - EAST

1/8" = 1'-0"

NORTH PLAN

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PARTIAL FIRST FLOOR FINISH PLAN - EAST

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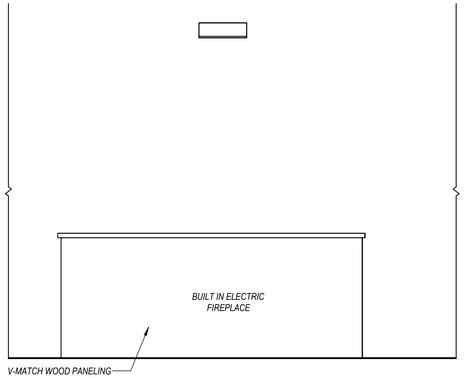
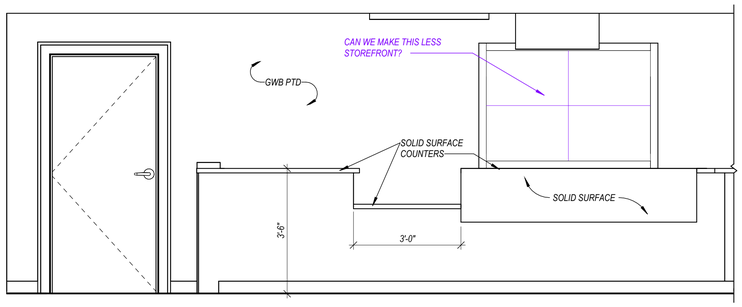


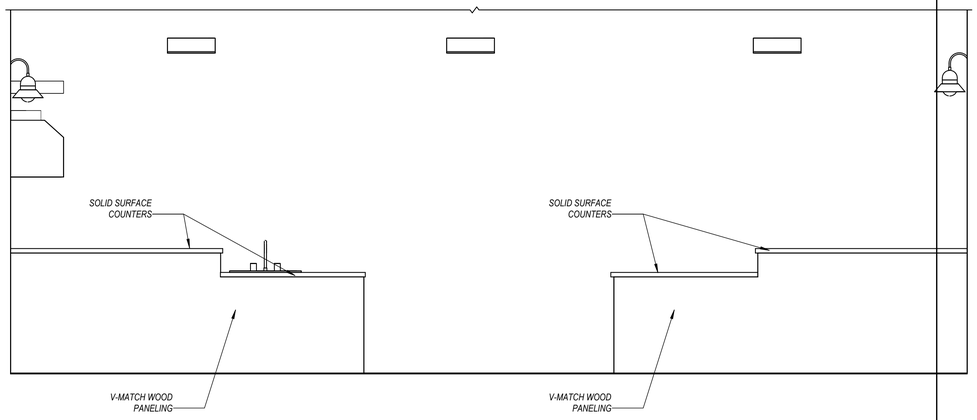
M7 COMMON AREA FIREPLACE

1/2" = 1'-0"



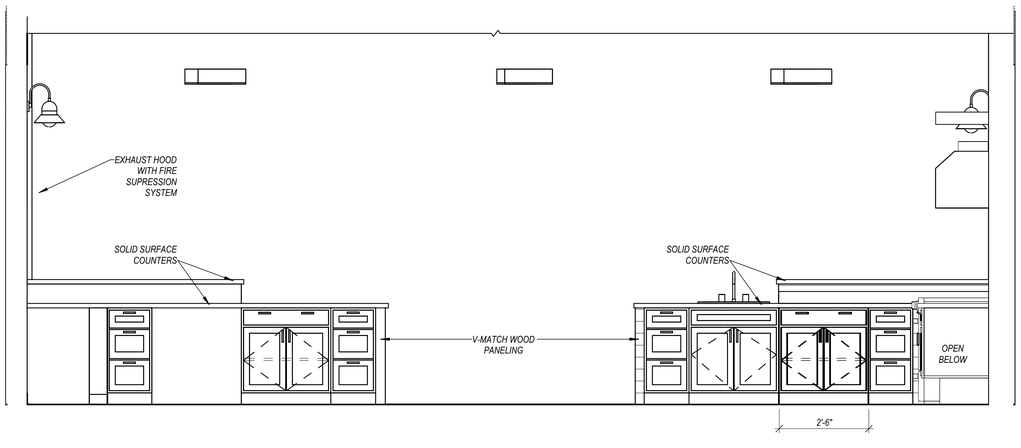
A16 RECEPTION FRONT

1/2" = 1'-0"



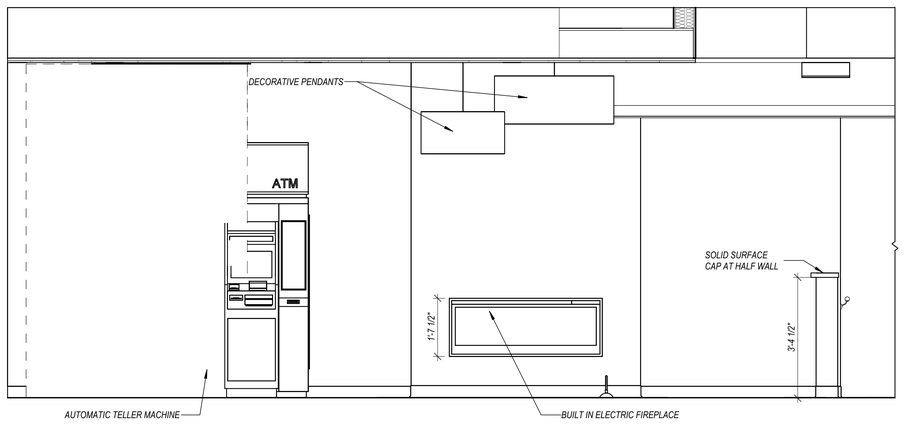
F1 COMMON KITCHEN ENTRY

1/2" = 1'-0"



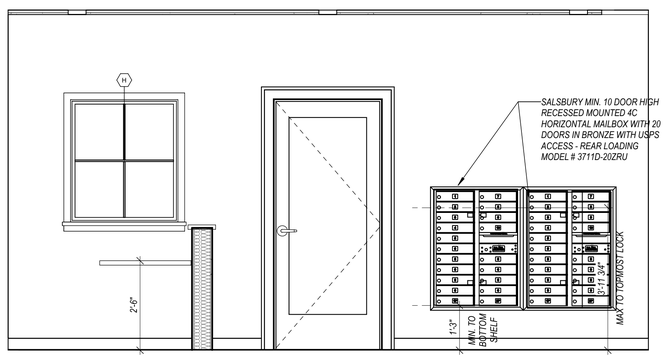
F11 COMMON KITCHEN - S

1/2" = 1'-0"



A1 ENTRY - SITTING AREA

1/2" = 1'-0"



A10 MAILBOXES

1/2" = 1'-0"

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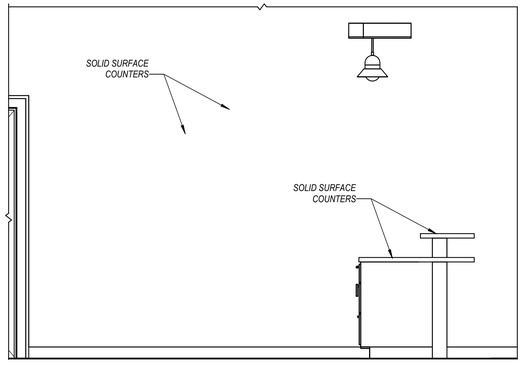
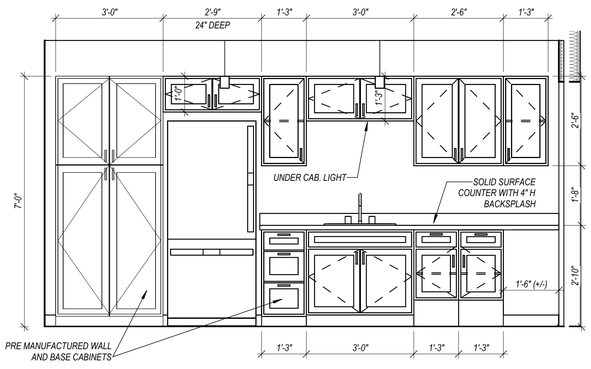


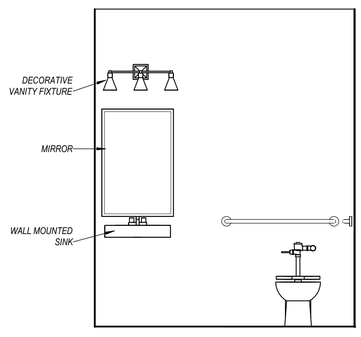
2 KITCHEN - WEST

1/2" = 1'-0"



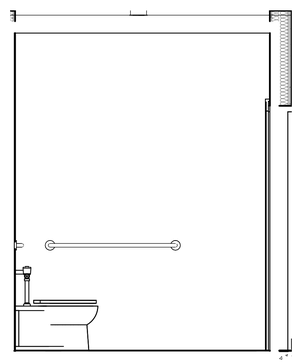
A1 STAFF BREAK

1/2" = 1'-0"



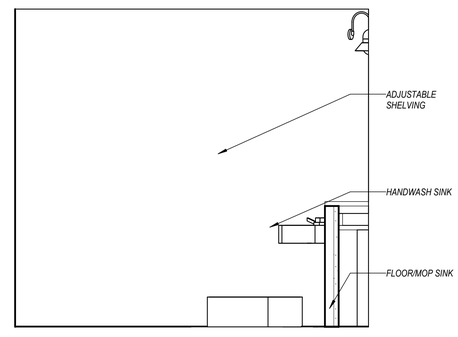
A8 TLT 114 - A

1/2" = 1'-0"



A12 TLT 114 - B

1/2" = 1'-0"



A16 CUSTODIAL - A

1/2" = 1'-0"

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INTERIOR FINISH LEGEND

CODE	MATERIAL	MANUFACTURER	PRODUCT STYLE & COLOR	REMARKS & NOTES
CAB1	CABINETS	MERILLAT CLASSICS	STYLE: MARLIN ON MAPLE - STAINED FINISH TBD	TYPICAL KITCHEN CABINETS IN RESIDENT UNITS
CAB2	CABINETS	MERILLAT CLASSICS	STYLE: MARLIN ON MAPLE - FINISH TBD	COMMON KITCHEN AREA CABINETS, STAFF BREAK CABINETS
EM	ENTRY MAT	MATTER SURFACES	"ULTRA ENTRY" SURFACE/SHALLOW RECESSED SYSTEM	
FRP1	FIBER REINFORCED PLASTIC	INPRO CORP	PALLADIUM RIGID SHEET WALL PROTECTION	LAUNDRY ROOM, CUSTODIAL
LVP1	LUXURY VINYL PLANK	TARKETT	EVEN PLANE WOOD	TYPICAL RESIDENT FLOORING
LVP2	LUXURY VINYL PLANK	TARKETT	EVEN PLANE STONE	TYPICAL RESIDENT BATHROOM FLOORING
P1	PAINT			
P2	PAINT			
P3	PAINT			
P4	PAINT			
P5	PAINT			
P6	PAINT			
P7	PAINT			
R1	RUBBER FLOOR	MANNINGTON	"OPEN RANGE" RUBBER PLANKS - COLOR TBD	CORRIDORS, COMMON AREAS
SS1	SOLID SURFACE	CORIAN		TYPICAL KITCHEN COUNTERS IN RESIDENT UNITS
SS2	SOLID SURFACE	CORIAN		TYPICAL BATHROOM COUNTERS IN RESIDENT UNITS (WITH INTEGRAL CORIAN SINK)
SS3	SOLID SURFACE	WILSONART		COMMON AREAS, RECEPTION DESK
T1	PORCELAIN TILE, FLOOR	CROSSVILLE	ACCESS POINT, 12" X 24" TILE	COMMON TOILET ROOMS
TB1	TILE WALL BASE	CROSSVILLE	ACCESS POINT TILE	W/ T1
VB1	VINYL BASE	JOHNSONITE	TRADITIONAL VINYL 4" HIGH W/ TOE, COLOR TBD	TYPICAL WALL BASE IN COMMON AREAS
VB2	VINYL BASE	JOHNSONITE	TRADITIONAL VINYL 4" HIGH W/ TOE, COLOR TBD	TYPICAL WALL BASE IN RESIDENT UNITS
WD	WOOD		V-MATCH SOLID WOOD PANELING - STAINED	COMMON AREA ACCENTS AND RECEPTION DESK
WP1	WALL PROTECTION	WOLF GORDON	RAMPART FLEXIBLE WALL PROTECTION, STYLE "ENNIS" COLOR TBD	CORRIDOR WALLS, PARTIAL HEIGHT

INTERIOR FINISH SCHEDULE (N)

ROOM INFORMATION		FLOOR		WALLS - CODE ORDER: ABOVE CHAIR RAIL / BELOW CHAIR RAIL					TRIM				COUNTERTOP / WORKSURFACE / CABINETS			
ROOM #	ROOM NAME	CODE ORDER: PRIMARY / SECONDARY OR ACCENT FLOOR	GROUT	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	CEILING	BASE	DECORATIVE TRIM	DOOR(S)	DOOR & WINDOW MOULDING	HORIZONTAL PLANE	VERTICAL PLANE	CURTAINS	REMARKS
T.O. SLAB																
100	STUDIO															
101	STUDIO															
102	STUDIO															
103	STUDIO															
104	STUDIO															
105	STUDIO															
106	STUDIO															
110	STUDIO															
111	STUDIO															
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126	STUDIO															
127	STUDIO															
128	STUDIO															
129	STUDIO															
130	STUDIO															
131	STUDIO															
132	STUDIO															
CM100	VESTIBULE															
CM101	MAIL															
CM102	RECEPTION															
CM103	LOBBY															
CM104	TV LOUNGE															
CM105	CORR															
CM106	TOILET															
CM107	OFFICE															
CM108	OFFICE															
CM109	KITCHEN															
CM110	CUSTODIAL															
CM111	OFFICE															
CM112	VEST.															
CM113	CORR															
CM114	TOILET															
CM115	CONFERENCE															
CM116	STAFF															
CM117	LAUNDRY															
CM118	CLIENT SUPPORT															
CM119	CLIENT SUPPORT															
CM120	STORAGE															
CM121	VEST															
CM122	SPRINKLER- BOILER															
CM123	ELEC./IT															
ATTIC																
CM200	MECH MEZZ															
CM201	TEL-COM															

INTERIOR FINISH ABBREVATIONS

ACT	ACOUSTICAL CEILING TILE
C	CARPET
CAB	CABINETS
EM	ENTRY MAT
FRP	FIBERGLASS-REINFORCED PANELS
G	GROUT
GWB	GYPSUM WALL BOARD
LVP	LUXURY VINYL PLANK
M	MARMOLEUM
N/A	NOT APPLICABLE
PC	PRIVACY CURTAIN
PLAM	PLASTIC LAMINATE
PTD	PAINTED
QT	QUARTZ TILE
R	RESILIENT/ RUBBER/ RUBBER TREAD
SC	SEALED CONCRETE
SF	SQUARE FEET
SS	SOLID SURFACE/ NATURAL STONE/ QUARTZ
ST	STAGE CURTAIN
SV	SHEET VINYL
SYD	SQUARE YARD(S)
T	TILE
TB	TILE BASE
TBS	TO BE SELECTED
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
WC	WALL COVERING
TB	TILE BASE
WD	WOOD
WP	WALL PROTECTION

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CHECKED BY:	Checker
DRAWING SCALE	12" = 1'-0"

SHEET TITLE

INTERIOR SCHEDULES

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A1 INTERIOR SCHEDULES

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TEL: (207) 947-4516 · FAX: (207) 947-5707
www.bangorwater.org

Chuck Harrison
General Manager

March 3, 2026

Anna Dedon, P.E.
Sevee & Maher Engineers, INC.
4 Blanchard Road
P.O. Box 85A
Cumberland, ME 04021

Subject: Maine Avenue, Bangor, Maine; Tax Map R25, Lot 001-A; Proposed 19,500SF, thirty (30) unit rehabilitation apartment building – Ability to Serve

To whom it may concern:

The Bangor Water District possesses the capacity to serve the estimated daily water usage of 3,708 gallons per day for the proposed thirty (30) unit rehabilitation apartment building ~ Tax Map R25-001-A on Maine Avenue in Bangor Maine. The scope of the project as we understand is the construction of a 19,500SF, thirty (30) unit rehabilitation apartment building with a staff of nine (9) employees and will be supplied with a domestic water service and a fire suppression service.

The project's water will be supplied from our 16" ductile iron pipe located along the easterly side of Corporate Drive past said property. The District's line pressure is approximately 55 psi static. All lines and structures used to supply water to your facility will be considered a service and will remain in private ownership. Installation of service lines will be required to comply with the construction standards established by the District.

Before any construction begins on new water lines or appurtenances, please submit a project application, updated flow information, and updated plans for Bangor Water District review. **Please note that this capacity-to-serve letter does not imply final project approval.**

If you have any questions, please call or email.

Kind regards,
Bangor Water District

Vaughan Littlefield
Project Manager

APPENDIX E

CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN

SME
SEVEE & MAHER
ENGINEERS

CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, MAINE

Prepared for

BANGOR HOUSING CORPORATION
Bangor, Maine

May 2026

4 Blanchard Road
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SME
SEVEE & MAHER
ENGINEERS

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CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN
BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, MAINE

1.0 INTRODUCTION

This Stormwater Pollution Prevention Plan (Plan) was prepared for the construction of the proposed Bangor Housing Development Corporation Yellen Pines located at 205 Corporate Drive in Bangor, Maine (Project) in accordance with the Maine Department of Environmental Protection (MEDEP) Erosion and Sediment Control BMP Manual, and Maine Construction General Permit (MCGP).

2.0 PROJECT DESCRIPTION

Bangor Housing Development Corporation (BHDC) proposes to develop a new 30-unit permanent supportive housing building called Yellen Pines on property currently at 205 Corporate Drive. The location of the project is shown in Figure 1, Site Location Map. The project is subject to a Land Development Permit from the City of Bangor Planning Board. This application provides detailed project information and outlines compliance with the applicable sections of the City Ordinance.

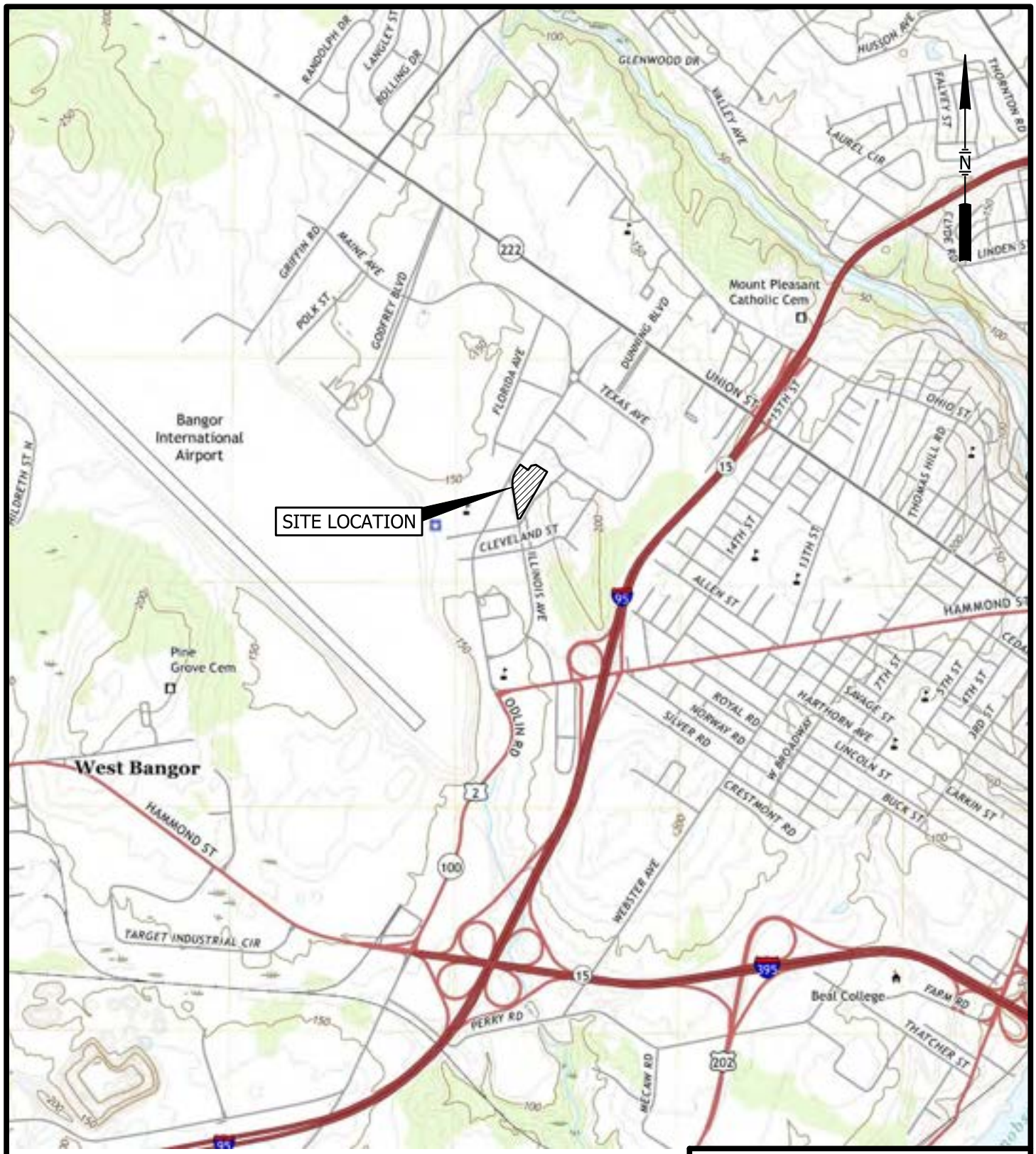
The project is located on the 5.05-acre parcel identified as Lot 001-A on City Tax Map R25 within the Government and Institutional Services District (G&ISD) and Technology and Service District (T&S) on the City's Official Zoning Map. The property is bounded by Maine Avenue to the west, Texas Avenue to the east, Corporate Drive to the south, and a developed University of Maine Office Building property to the north. The property is currently developed as a vegetated slope maintained as lawn with a row of trees, a concrete walkway, and a paved entrance off Maine Avenue. The property is within the Urban Impaired Stream of Birch Stream and is primarily developed land.

The permanent supportive housing project will include a single story 19,100-square-foot building that will include thirty (30) one-bed units with support offices and lounge area. The construction will include area for eleven (11) parking spaces with one (1) ADA accessible parking space. The project will have a new 24-foot paved access drive from Corporate Drive sized for access by City fire and emergency vehicles. Additional site improvements include a patio along the southern side of the building, public water and sewer, underground utilities, stormwater management, site lighting, and landscaping.

The housing project will result in approximately 84,740 square feet of developed area, all of which will be considered redevelopment given the nature of the existing site. This redeveloped area will include 41,156 square feet of new impervious area. The existing concrete walkway and paved turnaround on site will be demolished, resulting in a net increase of approximately 37,339 square feet of impervious area post-redevelopment.

The Bangor Housing property is regulated under an existing Maine Department of Environmental Protection (MEDEP) Site Location of Development Act (SLODA) permit, which is required to be amended for changes to the property including redevelopment.

As a result of the SLODA Amendment, the project is subject to the redevelopment standards of MEDEP Chapter 500 for treating stormwater runoff. Stormwater management for this project will be accomplished using a closed stormwater management system including catch basins, storm drains, roof dripline filters, and a grassed underdrained soil filter.



BASE MAP ADAPTED FROM 7.5 MIN USGS TOPO QUADS
BANGOR, ME - 2021

1000 0 2000 FEET

DWG: SITELOC LMN: NONE CTB: SME-STD REV: 5/1/2026

FIGURE 1
SITE LOCATION MAP
BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

SME
SEVEE & MAHER ENGINEERS

C:\Users\zander.foster\OneDrive - SME_SP\Civil-ME\Gawron Turgeon\Bangor Housing\Acad\Figures\SITELOC.dwg, A_FIG 1, 5/1/2026 9:08:56 AM, Zander.Foster

3.0 EROSION AND SEDIMENTATION CONTROL (MCGP APPENDIX A)

This section has been prepared to address Appendix A of the MCGP and provide further project details to demonstrate compliance with the requirements.

3.1 Pollution Prevention

The project has been designed to minimize disturbed areas and protect the natural downgradient buffers as much as practicable. The Contractor will provide the appropriate Erosion Control Best Management Practices (BMPs) to control the stormwater volume and velocity within the site to minimize soil erosion. This will include minimizing impacts to steep slopes, controlling stormwater discharges; including both peak flow rates and volume to minimize erosion at outlets. The discharge from the site will be controlled to: prevent erosion of any open drainage channels, swales, stream channels, or stream banks; and upland, coastal, or freshwater wetlands off the project site.

3.1.1 Buffers and Perimeter Controls

There will be no project disturbance within 50 feet of a protected natural resource other than what has been shown on the provided drawing set. BMP perimeter controls will be installed downslope from any exposed soil or disturbed areas within the project area. In areas of disturbance within 50 feet of a protected natural resource, perimeter controls will be doubled. All erosion and sedimentation control measures will be followed throughout this document and as shown within the approved drawing set.

3.2 Preserve Native Topsoil, Unless Infeasible

Suitable topsoil within the project disturbance limits will be stripped and stockpiled for reuse in reclaiming disturbed land areas. When project construction results in excess topsoil, the Contractor will make every effort to spread it within the project site or will take it off-site after completion of final site reclamation. Topsoil will be stockpiled in a manner such that natural drainage is not obstructed, and no off-site sedimentation will occur. Stockpiles will not be located within 100 feet of wetlands and will be at least 50 feet upgradient of any perimeter silt fence. Stockpiles not actively being used shall be seeded and mulched to help prevent erosion and pollution.

3.3 Minimize Soil Compaction

In areas of the site where vegetation will be established, vehicle and equipment use will be restricted, or the soils will be rehabilitated through tilling or ripping to a depth that will leave an uncompacted root zone. In areas where new topsoil will be installed, topsoil will be lightly compacted to ensure a uniform and firm seedbed (excessive compaction will increase runoff and prevent seed rooting). Seeding and mulching will be applied as soon as possible upon final grading or as a temporary cover if final grading will not occur before 14 days.

Topsoil Loam and Seed	
Description:	Topsoil provides a loose medium for root development, and a good quality-topsoil will contain decomposed organic matter which retains nutrients and water for plant growth. The topsoil should be friable, loamy, and should be free of debris, trash, stumps, rocks, roots, weeds, or any substance that is toxic to plant growth.
Maintenance and Compaction Requirements	• Topsoil should not be placed on frozen, muddy, or an extremely wet subgrade. • Prior to spreading the topsoil, the subgrade should be loosened or scarified to a depth of at least 2 inches to ensure bonding. • The topsoil should be 4 inches deep and uniform. Rototilling for a deeper rooting zone on poor subsoils (sloping wet sites or with sand and gravels) is recommended. • Lightly compact the topsoil to ensure a uniform and firm seedbed (excessive compaction will increase runoff and prevent seed rooting). • The sideslopes of the topsoil stockpile will not exceed 2:1. Topsoil stockpiles will be surrounded with siltation fencing and will be temporarily seeded with Aroostook rye, annual, or perennial ryegrass within seven days of formation, or temporarily mulched. • Inspected after a 1-inch rain event, replace loam and seed on bare soils
Design Specifications	• See Drawing C-300 and C-301

3.4 High Infiltration Capacity Soils

The proposed project will preserve the natural landscape and Hydrologic Soil Groups A and B as much as practicable, and to the extents shown on the plans. There will be no further disturbance to HSG A and B soils outside of the proposed project limits.

In areas where the project site will be worked on for longer than seven (7) days, temporary sediment traps and basins will be constructed over HSG A and B soils, where possible to promote infiltration of construction site runoff.

3.5 Sediment Barriers

Sediment barriers will be installed prior to any soil disturbance at the project site in accordance with the attached drawings. Sediment barriers (i.e., silt fence, erosion control berm, and silt socks) will be monitored on a regular basis. The contractor will ensure that structures are functioning properly and will perform necessary maintenance described in the Maine Construction General Permit and the MEDEP Erosion Control BMP Manual. The details and specifications for all temporary and permanent erosion controls to be installed at the site are provided in Drawing C-300, Erosion Control Notes and Details in the project plan set.

SPECIFIC PERIMETER CONTROLS

SILT FENCE	
Description:	Silt fence is a permeable geotextile fabric which intercepts overland runoff, reduces flow velocity, and promotes the settlement of sediments. The geotextile fabric will degrade due to sun exposure, and its life span is approximately one field season. Pre-manufactured silt fencing with attached posts is used in most situations.
Maintenance Requirements	The following actions are recommended after storm events: • Repair and replace damaged silt fence prior to next storm event; • Remove sediment build-up once sediment reaches half-way up the fence; and • Signs of undercutting at the center or edges of fencing, replace with stone check dam.
Design Specifications	See Drawing C-300 – Erosion and Sediment Control Notes

EROSION CONTROL MIX SEDIMENT BARRIER	
Description: Berms of erosion control mix (ECM) are effective on frozen ground, outcrops of bedrock, and heavily rooted forested areas, or when other temporary erosion and sediment control measures are not practicable	
Maintenance Requirements	• Sediment deposits should be removed when they reach approximately one-half the height of the barrier. • Replace sections of berm that decompose, become clogged with sediment, or otherwise become ineffective. The barrier should be reshaped as needed. • Erosion control mix barriers can be removed or spread into the landscape after construction. Any sediment deposits remaining in place after the barrier is no longer required should be spread to conform to existing grade, seeded, and mulched.
Design Specifications	See Drawing C-300 – Erosion and Sediment Control Notes

3.6 Stabilized Construction Entrance

Prior to construction, stabilized construction entrances will be installed wherever construction vehicles will access and egress from the site. The construction entrance will be stabilized to reduce the tracking of sediment off-site.

STABILIZED CONSTRUCTION ENTRANCE	
Description:	A pad of coarse aggregate at the construction entrance/exit will reduce the tracking of soil from construction traffic onto a public street. Sediments from the tire treads are knocked loose by the angular stones and are trapped in the voids between the stones.
Maintenance Requirements	• Maintain 6-inch thick of 2-inch crushed stone. • Sweep or shovel to paved road to remove sediment, complete within same day observed.
Design Specifications	See Drawing C-300 – Erosion and Sediment Control Notes

3.7 Temporary Sediment Basins

Where required, temporary sediment basins will be sized to store the 2-year/24-hour storm or provide 3,600 cubic feet of storage per acre draining to the basin. Erosion controls (i.e., sediment barriers, etc.) and velocity dissipation (i.e., riprap outlet protection, riprap overflows) will be used at the discharge of the sediment basin to dissipate velocity and prevent erosion.

Sediment basins, where required, will be equipped with an outlet control structure per the MEDEP Erosion Control BMP Manual, and will discharge to a stabilized riprap apron in a natural drainage channel, or

undisturbed area. Exceptions may include periods of extended cold weather, where alternate outlets are required during frozen periods. If the outlet control structure is infeasible for a portion of, or the entire construction period, the Contractor shall document the site conditions that prevent it from being a viable solution.

Accumulated sediment must be removed when needed to maintain at least half of the design capacity of the basin and respread on-site and stabilized with temporary seed.

3.8 Cationic Treatment Chemicals

The project does not anticipate the use of cationic treatment chemicals to control turbidity in the construction site stormwater. If polymers, flocculants, or other positively charged chemicals are required to reduce turbidity in stormwater, the Contractor will notify MEDEP in advance and obtain authorization for the use. The request for approval will include appropriate controls and implementation procedures to ensure the use will not lead to a violation of water quality standards. In addition, the request will include:

- The types of soil likely to be treated;
- The chemicals to be used;
- The method and quantity of the application;
- Manufacturer's recommendations for use; and
- Proof of training by personnel who will handle and apply the chemicals.

3.9 Temporary Stabilization

Disturbed areas not to be worked on within 14 days of disturbance will be temporarily stabilized within seven (7) days of the disturbance. Areas within 75 feet of a downgradient protected natural resources will be temporarily stabilized within 48 hours of disturbance or prior to any storm event, whichever comes first.

3.10 Removal of Temporary Measures

Removal of temporary erosion control measures shall remain in-place and be maintained by the Contractor until all related construction is complete, and the drainage area is stable. An area is considered stable if 90 percent of grass cover has been established or riprap or other permanent measures are in-place and functioning properly.

Silt barriers shall be removed and disposed of legally and properly off-site. Sediment trapped behind these controls shall be distributed to an area undergoing final grading and graded in an aesthetic manner to conform to the topography and fertilized, seeded, and mulched in accordance with the "PERMANENT

SEEDING" specifications included on the drawings provided and presented in Section 3.11 of this Plan. The sediment trapped by these devices shall not be regraded within the existing drainageways.

Once the trapped sediments have been removed from the temporary sedimentation devices, the disturbed areas must be loamed (if necessary), fertilized, seeded, and mulched.

3.11 Permanent Stabilization

If the project area will not be worked for more than one (1) year, or has been brought to final grade, the Contractor will permanently stabilize the area within seven (7) days by planting vegetation, seeding, sod, or through the use of permanent mulch, riprap, road subbase, or other final surface finishes. 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 as 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. 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. For seeded areas, permanent stabilization means a 90 percent cover of the disturbed area with mature, healthy plants with no evidence of washing or riling of the topsoil.
- 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.
- Permanent Mulch. For mulched areas, permanent mulching means total coverage of the exposed area with approved mulch material. Erosion Control Mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.
- 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.
- 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.
- Paved Areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed.
- 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 lining, 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 downcutting of the channel.

Permanent erosion control measures will be implemented during site construction. Materials and construction methods for permanent measures shall be as specified on Drawing C-300.

3.12 Winter Construction

The winter construction season is from November 1 through April 15 of each year, OR outside of the period if the ground is frozen or snow covered. If construction areas are not stabilized with temporary or permanent measures by November 15, then the site will be protected with additional stabilization measures as outlined below.

- Site Stabilization. For winter stabilization, hay mulch is applied at twice the standard temporary stabilization rate. At the end of each construction day, areas that have been brought to final grade must be stabilized. Mulch may not be spread on top of snow.
- Sediment Barriers. All areas within 75 feet of a protected natural resource must be protected with a double row of sediment barriers.
- Ditch. 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.
- Slopes. Mulch netting must be used to anchor mulch on all slopes greater than 8 percent unless erosion control blankets or erosion control mix is being used on these slopes.

Winter excavation and earthwork will be completed so as to minimize exposed areas while satisfactorily completing the project. Limit exposed areas to those areas in which work is to occur during the following 15 days and that can be mulched in one day. All areas will be considered denuded until the subbase gravel is installed in roadway areas, or the areas of future loam and seed have been loamed, seeded, and mulched.

3.13 Laydown and Staging Areas

Construction laydown areas will occur on existing impervious surfaces where possible, or if within the limits of disturbance of the project, will be:

- On an upland area outside of existing drainage patterns where possible;

- Outside of any wet areas hydraulically connected to downgradient protected natural resources and/or justified use of these areas based on site limitations. Temporary structures (e.g., swales, dikes) will be provided to intercept upgradient stormwater and divert it away; and
- Designed to provide stormwater quality treatment in compliance with the Application Chapter 500 standard for areas which will be used for more than 12 months.

The laydown areas within the project footprint that are not to remain as a finished surface after construction shall be removed, the soil below ripped or tilled, and the area loamed, seeded, and mulched.

3.14 Parking Area

During construction, the site will be accessed by pick-up trucks, delivery trucks, and vehicles daily to deliver and install equipment. Construction crews will park on the paved and gravel maneuvering areas installed for the Facility. After construction, permanent employee parking will be located on pavement and drain to the adjacent catch basin and drainage system, as shown in the included engineering drawings.

3.15 Roads

The proposed roads on-site have been designed with crowns and/or graded for stormwater to be directed to stabilized drainage measures immediately adjacent as shown on the drawings attached to this Plan.

3.16 Culverts

The project culverts have been designed for a 10-year/24-hour storm in accordance with the requirements of MEDEP Chapter 500 Section 4(F)(2)(b). The culverts will avoid unintended flooding of upstream areas or frequent overtopping of roadways. The required riprap inlet/outlet protection is detailed on the attached drawing set and designed to control the expected entrance velocity and to prevent scouring of the downstream drainage channels. Culvert inlet and outlet protection will be installed within 48 hours of culvert installation or prior to a storm event, whichever is sooner.

3.17 Stormwater Channels

All ditches, swales, and other open stormwater channels will be stabilized at the end of each workday and maintained on a daily basis.

The proposed ditches, swales, and other open stormwater channels have been designed, and will be constructed, and stabilized using measures that achieve long-term erosion control. Ditches, swales, and other open stormwater channels shown on the project drawings have been sized for the expected volume of runoff. The construction of each channel will be completed in sections so that each section's grading, shaping, and installation of the permanent lining can be completed the same day. If the channel's final

grading or permanent lining installation must be delayed, then diversion berms will be used to divert stormwater away from the channel, properly spaced check dams will be installed in the channel to slow the water velocity, and a temporary lining installed along the channel to prevent scouring.

The following describes specific stormwater facility maintenance requirements and minimum schedule of inspection and maintenance.

- Open swales and ditches need to be inspected in the spring and fall, or after a major rainfall event, to assure that debris or sediments do not reduce the effectiveness of the system. Debris needs to be removed at that time. Signs of erosion or blockage shall be immediately repaired to assure a vigorous growth of vegetation for the stability of the structure and proper functioning. Swales that show newly formed channels or gullies will be immediately repaired by reseeding/sodding of bare spots, removal of trash, leaves, and/or accumulated sediments, and the control of woody or other undesirable vegetation.
- Vegetated ditches should be mowed at least once during the growing season. Larger brush or trees must not be allowed to become established in the channel. Any areas where the vegetation fails will be subject to erosion and should be repaired and revegetated.
- If sediment in culverts or piped drainage systems exceeds 20 percent of the diameter of the pipe, it should be removed. This may be accomplished by hydraulic flushing or other mechanical means; however, care should be taken to not flush the sediments into the filter basins or retention/detention pond as it will reduce the pond's capacity and hasten the time when it must be cleaned. Storm pipes should be inspected on an annual basis.
- Outlet control structures shall be cleaned of debris and sediment at least annually to minimize clogging and transportation of sediment during rainfall events.

3.18 Utility Trench

All trenches will be backfilled and temporarily stabilized, including spoil and/or backfill piles, at the end of each workday.

3.19 Additional Requirements

There are no additional requirements identified for this specific site.

4.0 INSPECTION AND MAINTENANCE (MCGP APPENDIX B)

The following standards will be met during construction of this project.

4.1 Inspection

Inspections will be undertaken by the Contractor's resident environmental inspector certified by MEDEP for erosion control BMPs to assure that the controls are properly installed and correctly functioning, and that additional erosion control measures are installed if needed. A series of routine inspections shall be completed to allow for the early identification of potential problems, and to guide routine maintenance activities. Such inspections will occur weekly and within 24 hours after each rainfall event during construction until permanent stabilization measures have been properly installed. Inspections of specific measures will be carried out in accordance with the Schedule included in Appendix A of this Plan. Dates and observations shall be recorded for each inspection on an improved Inspection Log for the site specific BMPs.

4.2 Maintenance and Corrective Action

Routine maintenance activities are designed to ensure proper function of the erosion control measures and minimize pollutant transport from the site. During construction, inspections will be undertaken by the Contractor's Representative to assure that temporary or permanent erosion and sedimentation controls are property installed and functioning correctly and will be completed at the frequency outlined in the inspection checklist included in Appendix A. Corrective actions (supplemental maintenance activities or repairs) should be started within the following workday and should be completed within seven days of the inspection identifying the problem. Each maintenance activity will be recorded on the attached inspection report included in Appendix A.

If the same routine maintenance requirements are needed repeatedly, the Contractor will either complete work to fix any subsequent repeat occurrences of the same problem, or document in the inspection report why the specific reoccurrence should still be addressed as a routine maintenance item.

If BMPs need significant repair or if additional BMPs are necessary, implementation will be completed within seven calendar days and will be documented in the inspection log why it is infeasible to complete the repair or installation, and document the schedule for installing the BMP and making it operational.

The maintenance needs for most vegetative and stabilization measures may be found in the Maine Erosion and Sediment Control BMPs manual as published in 2016 (or latest version) and/or the Maine Stormwater Best Management Practices Manual.

4.3 Documentation

The Contractor will keep a log summarizing the inspections and corrective action taken in accordance with the log included in Appendix A.

The inspection log will be maintained on-site and made accessible to MEDEP staff upon request. The log shall be maintained for a minimum of three (3) years from the completion of permanent stabilization.

4.4 Perimeter Fence

Perimeter fences will be installed where shown on plans and will not limit access to the erosion control measures for inspection and maintenance. If installed before permanent stabilization, access points will be provided along the fence line for vehicles and equipment to maintain the BMP.

4.5 Additional Requirements

There are no additional requirements for this specific project.

5.0 HOUSEKEEPING (MCGP APPENDIX C)

The following details the anticipated requirements for Housekeeping during construction activity at the project site.

5.1 Spill Prevention

The following measures are proposed to prevent pollutants from construction and waste materials stored on-site from entering stormwater. It outlines the necessary controls, preventive measures, and response strategies to manage spills effectively.

- Identification of Potential Spill Sources;
  - Site Assessment: Conduct a thorough assessment to identify areas where spills are likely to occur, such as storage locations for construction materials and waste,
  - Inventory Management: Maintain an up-to-date inventory of all hazardous materials stored on-site, including their quantities and storage conditions;
- Preventive Measures;
  - Proper Storage:
    - Store materials in covered areas or containers to minimize exposure to stormwater; and
    - Use weather-resistant and leak-proof containers for hazardous materials.
  - Handling Procedures:
    - Implement safe handling procedures to reduce the risk of spills during transportation and use as specified by the manufacturer; and
    - Ensure that all containers are properly labeled and secured.
- Containment Strategies;
  - Physical Barriers:
    - Install barriers such as berms or dikes around storage areas to contain spills and prevent them from spreading.
  - Secondary Containment:
    - Use spill pallets, containment sumps, or other secondary containment systems to capture any leaks or spills.
- Response Procedures;
  - Immediate Actions:
    - Ensure that spill kits are readily available next to all chemicals on-site.

- Notification Protocols:
  - Notify the site supervisor or foreman of the spill immediately.
- Documentation:
  - Keep detailed records of spill incidents, including the cause, response actions taken, and any follow-up measures; and
  - Conduct post-incident reviews to identify areas for improvement.

- Training and Communication;
  - Training Programs:
    - Conduct regular training sessions for all personnel on spill prevention and response protocols; and
    - Include spill response drills to ensure readiness.
  - Communication Channels:
    - Maintain clear communication channels for reporting spills and coordinating response efforts; and
    - Emergency contact information and spill response procedures will be located around all chemicals.

- Implementation and Maintenance;
  - Regular Inspections:
    - Perform regular inspections of storage areas and containment systems to ensure they are in good condition and functioning properly; and
    - Address any deficiencies promptly.
  - Plan Updates:
    - Review and update the spill prevention plan periodically to incorporate new information, changes in site conditions, or lessons learned from previous spill incidents.
  - Emergency Drills:
    - Conduct emergency drills to test the effectiveness of the spill response procedures and ensure personnel are prepared to handle real spill events.

- Regulatory Compliance;
  - Adherence to Regulations:
    - Ensure compliance with relevant regulations, such as the Spill Prevention, Control, and Countermeasure (SPCC) rule; and

- Stay informed about any changes in regulations and update the plan accordingly.

By developing and implementing these spill prevention guidelines, operators can effectively manage and mitigate the risks associated with spills, ensuring environmental protection and compliance with regulations.

Any spill or release of toxic or hazardous substances must be reported to the Department.

- For oil spills, call 1-800-482-0777, which is available 24 hours a day.
- For spills of toxic or hazardous material, call 1-800-452-4664, which is available 24 hours a day.
- For more information, visit the Department's website at: http://www.maine.gov/dep/spills/emergspillresp/

5.2 Groundwater Protection

Liquid petroleum products and other hazardous materials with the potential to contaminate groundwater will not be handled or stored in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography, and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containments that prevent discharge to groundwater as described in Section 5.1 of this Plan will be provided to isolate portions of the site for the purposes of storage and handling of these materials.

5.3 Fugitive Sediment and Dust

Measures will be provided to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil will not be used for dust control. If off-site tracking occurs, the roadway will be swept immediately and no less than once a week prior to a significant stormwater event. Dust control methods shall entail:

- Stabilize all laydown areas and all unpaved surfaces with a base gravel or coarse gravel as soon as possible;
- Use traffic control to restrict speed and route;
- Water Application with frequent reapplication during warm sunny days will mitigate dust. The distribution of water should not cause turbid runoff; and
- Sweep and vacuum paved road surface when dry. Sweep from the centerline to the edge of the travel way. Do not sweep into a waterbody or wetland.

The public roadway may also require sweeping.

5.4 Debris and Other Materials

Construction waste will be contained in a dumpster and hauled off. Waste containers will be provided by the contractor on-site to collect the construction waste. Construction and demolition debris will be disposed of off-site by a commercial hauler. The construction debris will be hauled to a licensed landfill. Waste containers will prevent litter, construction debris, and chemicals exposed to stormwater from becoming a pollutant source.

5.5 Excavation Dewatering

Water collected through excavation dewatering will be spread through natural wooded buffers or routed to a sedimentation basin. The water will not be allowed to flow over disturbed areas of the site. Dewatering water will be collected from the ponded area and disposed of in accordance with notes on Drawing C-300 and the drawings attached to this Plan.

5.6 Vehicle and Equipment Washing

Equipment and vehicles will be washed outside of natural resources and out of the drainage patterns to the natural resource. The polluted water will be contained on-site in designated areas. No soaps, solvents, detergents, or other cleaning solutions will be used on-site.

When washing applicators and containers for concrete applications, wash wastewater will be directed into a leak-proof lined pit. The washout area will not be located adjacent to site drainage features, storm inlets, and receiving waters in accordance with the drawings provided with this Plan.

5.7 Authorized Non-Stormwater Discharges

Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified, and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

- Discharges from firefighting activity;
- Fire hydrant flushing;
- Vehicle wash water if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage, and transmission washing is prohibited);
- Dust control runoff in accordance with permit conditions and Section 5.3 of this Plan;
- Routine external building washdown, not including surface paint removal, that does not involve detergents;

- Pavement wash water (where spills/leaks of toxic or hazardous materials have not occurred unless all spilled material has been removed) if detergents are not used;
- Uncontaminated air conditioning or compressor condensate;
- Uncontaminated groundwater or spring water;
- Foundation or footer drain-water where flows are not contaminated;
- Uncontaminated excavation dewatering;
- Potable water sources including waterline flushing; and
- Landscape irrigation.

Allowable non-stormwater discharges cannot be authorized under this permit unless they are directly related to and originate from a construction site or dedicated support activity (e.g., a pressure washing company cannot broadly use this general permit for their business operations, because general vehicle washing is not associated with a construction site).

5.8 Unauthorized Non-Stormwater Discharges

The Department's approval under this Chapter does not authorize a discharge that is mixed with a source of non-stormwater, other than those discharges in compliance with Section 5.7 of this Plan. Specifically, the Department's approval does not authorize discharges of the following:

- Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds, or other construction materials;
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
- Soaps, solvents, or detergents used in vehicle and equipment washing.

5.9 Additional Requirements

There are no additional requirements specific to this project.

6.0 LARGE CONSTRUCTION ACTIVITIES (MCGP APPENDIX D)

This construction project will include approximately 2.03 acres of Total Disturbed Area; therefore this section does not apply.

Bk 8107 Pg215 #8632
03-08-2002 @ 12:54p

DEED

KNOW ALL MEN BY THESE PRESENTS, that the UNITED STATES OF AMERICA, acting by and through the Administrator of General Services, under and pursuant to the powers and authority contained in the provisions of the Federal Property and Administrative Services Act of 1949, 63 Stat. 377, as amended, (40 USC § 484 (k) (3)) and regulations and orders promulgated thereunder (the "Grantor"), having an address of General Services Administration, New England Region, Thomas P. O'Neill, Jr. Federal Building, 10 Causeway Street, Boston, Massachusetts 02222, for and in consideration of the reversionary provisions of a Quitclaim Deed from the City of Bangor to the United States of America, dated December 29, 1942 and recorded at the Penobscot Registry of Deeds in Volume 1205, Page 345, does hereby GRANT, GIVE, REMISE, AND RELEASE, without covenants, warranties or representations of any kind or nature, express or implied, unto the City of Bangor, a municipal corporation having an address of 73 Harlow Street, Bangor, Maine 04401 (the "Grantee"), its successors and assigns all such right, title and interest as Grantor has in and to that certain parcel of land, being a portion of the former Dow Air Force Base, and more particularly described in Exhibit 'A' of this Deed (the "Property").

The Property is conveyed subject to any and all existing reservations, easements, restrictions, covenants, and rights, recorded or unrecorded, including those for roads, highways, streets, railroads, power lines, telephone lines and equipment, pipelines, drainage, sewer and water mains and lines, public utilities and rights-of-way; any state of facts that would be disclosed by a physical examination of the Property; any state of facts that an accurate and adequate survey of the Property would disclose; and any and all other matters of record.

NOTICE REGARDING HAZARDOUS SUBSTANCE ACTIVITY. Pursuant to 40 CFR 373.2 and Section 120 (h) (3) (A) (i) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA) (42 USC 9620 (h) (3) (A) (i)), and based upon a complete search of agency files, the United States gives notice that no hazardous substances have been released or disposed of or stored for one year or more on the Property.

TO HAVE AND TO HOLD the Property with all privileges and appurtenances thereunto belonging to said Grantee.

IN WITNESS WHEREOF, the UNITED STATES OF AMERICA, acting by and through the Administrator of General Services has caused these presents to be duly executed for and in its name and behalf by Dennis R. Smith, Regional Administrator, New England Region, General Services Administration, who has this 7th day of March, 2002, hereunto set his hand and seal.

UNITED STATES OF AMERICA
Acting by and through the
Administrator of General Services

By _____
DENNIS R. SMITH
Regional Administrator
General Services Administration
New England Region, Boston, MA

Witnesses:

_____

_____

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)

County of Suffolk) ss.

In Boston, in said County and State, on this 7th day of March, 2002, before me personally appeared Dennis R. Smith, Regional Administrator, General Services Administration, Boston, Massachusetts, duly empowered and authorized, known by me to be the party executing the foregoing instrument and by him duly executed, to be his free act and deed in his capacity as Regional Administrator, General Services Administration, Boston, Massachusetts.

_____
Carol H. Chirico
Notary Public
My commission expires 5/31/2002

EXHIBIT A

Beginning at a point on the easterly side of Maine Avenue (formerly Illinois Avenue) at the southwest corner of a parcel of land described in a deed from the United States of America to the University of Maine dated April 7, 1973 and recorded in the Penobscot County Registry of Deeds in Volume 2214, Page 285; thence S 34° 21' 11" W, by and along the east side of Maine Avenue, one thousand three hundred eleven and eighty-seven one hundredths (1311.87) feet to a point; thence by and along a compound curve to the left with a radius of one thousand eight hundred sixty-nine and eighty-six one hundredths (1869.86) feet one hundred fourteen and forty-three one hundredths (114.43) feet to the beginning of a curve to the left with a radius of three hundred forty (340) feet; thence by and along said curve two hundred thirty-eight (238) feet to a point on the east side of Texas Avenue; thence S 9° 15' 39" E, by and along said Texas Avenue, six hundred fifty-seven and seventy-eight one hundredths (657.78) feet to an angle in said Texas Avenue; thence S 80° 20' 17" W, by and along the south side of Texas Avenue and its continuation across Maine Avenue eight hundred two and six one hundredths (802.06) feet to a point; thence S 9° 45' 53" E across Maine Avenue and by and along the east side of Maine Avenue, two thousand two hundred sixty-six and thirty-four one hundredths (2266.34) feet to a point on the north side of Hammond Street; thence N 81° 12' 12" E, by and along said Hammond Street, five hundred twelve and sixty-nine one hundredths (512.69) feet to a point; thence N 12° 04' 24" W one hundred ninety-nine and eighty-four one hundredths (199.84) feet to a point; thence N 81° 12' 12" E two hundred ninety-seven and five tenths (297.50) feet to a point; thence S 12° 47' 18" E two hundred (200) feet to the north side of said Hammond Street; thence N 81° 12' 12" E, by and along said Hammond Street, one hundred and twenty-five one hundredths (100.25) feet; thence N 12° 47' 18" W one hundred (100) feet to a point; thence N 77° 12' 18" E two hundred (200) feet to a point; thence N 12° 47' 18" W six hundred eighty-one and seventy-three one hundredths (681.73) feet to monument #52 as shown on a survey plan of the "South Campus" made by James W. Sewall Co. dated February 20, 1968, said monument #52 also marking the southwest corner of a parcel of land described in a deed from the United States of America to the University of Maine dated April 7, 1973 and recorded in the Penobscot County Registry of Deeds in Volume 2214, Page 285; thence N 12° 47' 18" W, by and along said University of Maine, seven hundred eighteen and nine tenths (718.90) feet to a point; thence northerly, by and along the said University of Maine and a curve to the right, three hundred eighty-three and two tenths (383.20) to a point; thence easterly, crossing Hersey Avenue, twenty

(20) feet to a point; thence southeasterly by and along the northeasterly line of Hersey Avenue one hundred forty-five and one tenth (145.10) feet to the west line of Roosevelt Street; thence N 33° 45' 10" E, by and along the west side of Roosevelt Street, one thousand three hundred ninety-two and nine tenths (1392.90) feet to an angle in said street; thence N 29° 30' 25" E, by and along said Roosevelt Street, three hundred seven (307) feet to an angle in said street; thence N 21° 33' 29" E two hundred eighty-nine and seventy-three one hundredths (289.73) feet to a point in the south line of a parcel of land described in a deed from the United States of America to the University of Maine dated April 7, 1973 and recorded in the Penobscot County Registry of Deeds in Volume 2214, Page 285; thence N 81° 03' 40" W two hundred twenty-two and seventy-eight one hundredths (222.78) feet to a point; thence N 37° 33' 39" W one hundred three and eight tenths (103.80) feet to a point; thence by and along a curve to the left with a chord of N 55° 48' 39" W three hundred two and eight tenths (302.80) feet to a point; thence N 37° 11' 39" W one hundred three and eight tenths (103.80) feet to a point; thence N 16° 31' 39" W four hundred twenty-three and eight tenths (423.80) feet to the point of beginning.

No Transfer Tax Paid

PENOBSCOT COUNTY, MAINE

Susan F. Bulay

Register of Deeds

Option to Purchase Real Property

This Option to Purchase Real Property (the "Agreement") is made by and between the **City of Bangor**, a body public and corporate with a mailing address and place of business at 73 Harlow Street, Bangor, Maine, ("Seller") and Bangor Housing Development Corporation, a Maine non-profit corporation having a place of business at 86 Davis Road, Bangor, Maine, its successors and assigns ("Buyer" and with Seller the "Party" or "Parties").

In consideration of the payment of $10.00 paid by Buyer to Seller, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. **Exclusive Option to Purchase.** Seller grants to Buyer the exclusive right and option to purchase the Premises, as that term is defined herein, on the terms and conditions set forth in this Agreement (the "Option"). The Option may be exercised by Buyer, if at all, during the Option Period, which is defined as 6 months from the Effective Date of this Agreement.

2. **Exercise of Option.** The Option may be exercised by Buyer by giving notice to Seller at any time prior to the expiration of the Option Period in the manner for giving notices as set forth in this Agreement.

3. **Desirability of Premises.** The Parties expressly understand and agree that Buyer's exercise of the Option hereunder is subject, among other things, to a determination by Buyer on the desirability of the Premises for a project as a result of the completion of an environmental review in accordance with 24 C.F.R. Part 50.

4. **Premises.** The real property that is subject to the Option and this Agreement is an approximately 5.064 acre portion of the real estate, together with any buildings and improvements located thereon, at about 55 Cleveland Street, Bangor, Maine, being a portion of the premises more particularly described in a Deed from the United States of America to the City of Bangor, dated March 7, 2002 and recorded in the Penobscot County Registry of Deeds at Book 8107, Page 215, together with all rights, easements, and appurtenances thereto, as depicted in the attached **Exhibit 1** (the "Premises").

5. **Purchase Price.** If Buyer exercises the Option, Buyer shall purchase from Seller and Seller shall sell to Buyer the Premises for the sum of $120,000.00, subject to any adjustments and prorations described below, payable as follows:

   a. The sum of $10.00 paid as consideration for the Option (the "Option Consideration"), which shall be credited toward the Purchase Price.

   b. The sum of $1,000.00 as a deposit (the "Deposit"), to be paid within 5 business days of the exercise of the Option and which shall be credited

toward the Purchase Price at closing.

c. The balance of the Purchase Price, $118,990.00 shall be paid by certified check, bank cashier's check, or by wire transfer in accordance with wiring instructions provided by Seller within a reasonable time prior to the time of closing.

6. **Title.** Seller shall convey the Premises at closing by quitclaim deed. Should Buyer identify any title defects, Seller may attempt to remedy, but if these defects are not remedied within thirty (30) days from the date of such notice, then the Option Consideration and Deposit shall be returned to Buyer and this Agreement and the Parties' respective obligations hereunder will terminate. Buyer may, at its option, elect to close notwithstanding such defects as may exist.

7. **Closing.** Closing shall take place within 3 months of the exercise of the Option at the offices of Buyer, 86 Davis Road, Bangor, Maine, or, if the Buyer and the Seller shall mutually agree in advance and in writing, at another time and place ("Closing"). At Closing, Seller shall execute and deliver to Buyer, against payment of the Purchase Price, a Quitclaim Deed to the Premises conveying the interest the Seller has in the Premises. Seller is conveying the interest Seller has in the Premises, and the Premises is being conveyed "as is," with no warranties or guarantees of title or status.
Seller further agrees to execute and deliver to Buyer at the closing documents reasonably required by Buyer for the transfer of the Premises, including the following: (i) a Certificate of Non-Foreign Status, as required by the Internal Revenue Service; (ii) the "Seller's Affidavit" regarding mechanics liens and persons-in-possession; and (iii) an affidavit regarding underground storage tanks, as required by Maine law.

8. **Risk of Loss, Damage, Insurance.** All risk of loss to the Premises prior to Closing shall be borne by Seller, except and unless the loss was caused by Buyer. In the event of any casualty loss, Buyer shall have the alternative of either terminating this Agreement by written notice, whereupon Buyer shall receive back the Deposit, or of accepting the insurance proceeds made available and close notwithstanding such loss.

9. **Due Diligence.** Buyer's obligation to purchase the Premises under this Agreement following exercise of the Option are contingent upon satisfactory results of its due diligence.

At any time while this Agreement is in effect, including before Buyer has exercised the Option, Buyer may conduct due diligence of whatever items, kind or nature that Buyer deems necessary, including but not limited to assessments, tests, surveys, studies and other investigations of the Premises; any permits, licenses, or approvals required by any governmental entity for Buyer's intended use; a Phase I environmental site assessment; an appraisal; a title search; and any other matters as Buyer or its counsel and advisors deem relevant and appropriate. ln the event the results of such due diligence are

unsatisfactory to Buyer, in Buyer's sole discretion, Buyer shall notify Seller of the unsatisfactory results in writing and Buyer may, at Buyer's option, (a) accept the Premises subject to the unsatisfactory results or (b) terminate this Agreement and receive back the Option Consideration and Deposit, whereupon all parties shall be released from their obligations under this Agreement (except those specifically provided as surviving closing or termination hereof).

Seller hereby grants to Buyer, its agents, employees, contractors, and subcontractors, a license to enter the Premises, at all reasonable times, to perform such due diligence. It is understood and agreed that the Premises shall not be damaged or left in a disorderly or unsightly condition from such entry, for breach of which Buyer shall be responsible for repairing and for removing the disorderly or unsightly condition.

As part of Buyer's due diligence under this Agreement, Buyer agrees to cause to be completed a boundary survey of the entirety of the property containing the Premises. Following the completion of the boundary survey, Buyer will apply to the Planning Board for the City of Bangor to divide this property into two parcels, one of which shall be the Premises containing the approximately 5.064-acre parcel to be sold by Buyer pursuant to this Agreement.

10. **Representations of Seller.** Seller represents to Buyer the following:

a. There is no litigation, administrative hearing, arbitration, or any other proceeding pending or, to Seller' knowledge, threatened against Seller with respect to the Premises, with respect to any violation of law, rule, or regulation.

b. Seller has received no notice from any governmental body or agency alleging a violation of any environmental, zoning, or land use law, regulation, or ordinance.

Buyer's obligation to close is contingent upon all representations and warranties of Seller being true as of the Closing Date and Seller shall remake these representations and warranties at closing.

11. **Conditions Precedent to Buyer's Obligation to Close.** In addition to any other conditions specified in this Agreement, the obligation of Buyer to close is subject to the satisfaction at or before Closing of all the following conditions:

a. As of the date hereof, and as of the date of Closing, all of Seller's representations and warranties shall be true and correct in all material respects.

b. As of Closing, there shall have been no material adverse change in

the Premises.

c. As of Closing, the Planning Board for the City of Bangor shall have approved the division of the property containing the Premises into two parcels, one of which shall be the Premises containing the approximately 5.064-acre parcel to be sold to Buyer pursuant to this Agreement. In the event the Planning Board does not approve the division of the parcel into the 5.064-acre parcel contemplated by this agreement, the Seller may also decline to close under this agreement, and the return of the Option Consideration and Deposit, if applicable, to the Buyer, are the Buyer's only remedy under this agreement.

d. Buyer shall have received authorization from its Board of Directors to purchase the Premises.

e. Buyer has determined that the Premises is desirable for a project following the completion of an environmental review in accordance with 24 C.F.R. Part 50.

If any condition is not satisfied, then Buyer shall have the option to notify Seller and this Agreement shall be terminated with the Option Consideration and Deposit returned to Buyer, in which event neither party shall have any further obligations hereunder.

12. **Adjustments, Prorations, and Closing Costs.** Real estate taxes, assessments, rentals, common area maintenance charges and utilities shall be prorated as of Closing.

a. Unless an exemption under 36 M.R.S. § 4641-C applies, Maine real estate transfer taxes shall be paid by Buyer in accordance with 36 M.R.S. § 4641-A. Seller is exempt from Maine real estate transfer taxes pursuant to 36 M.R.S. § 4641-C.

b. All reasonable legal fees including, without limitation, the preparation of documents, review of documents and attendance at Closing, incurred by either party in connection with the transfer of the property shall be paid by the respective Party at the Closing.

13. **Notice.** All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given or on the date of mailing. If mailed, all notices are to be sent by first class mail, postage prepaid, certified, return receipt requested, addressed as follows:

To Seller: City of Bangor
c/o Anne Krieg

73 Harlow Street
Bangor, Maine 04401

To Buyer: Bangor Housing Development Corporation
Attention: Michael Myatt
86 Davis Road
Bangor, Maine 04401

Either party may change its address for purposes of this paragraph by giving the other party notice of the new address in the manner described herein.

14. **Assignment**. Neither party hereto may assign this Agreement without the other party's consent. Should Buyer seek Seller' consent to assign this Agreement and its rights and obligations hereunder to an entity owned or controlled by Buyer, such consent shall not be unreasonably withheld.

15. **General Provisions.** This instrument may be executed in multiple originals and is to be construed under the laws of Maine. The use of the masculine gender shall include the feminine and neuter where appropriate. If two or more persons are named herein as Buyer, their obligations hereunder shall be joint and several. Time is of the essence of this Agreement. This Agreement is binding upon and inures to the benefit of the parties hereto, their respective heirs, successors and assigns, and may be canceled, modified, or amended only by a writing executed by the parties hereto or their legal representatives. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity and enforcement of the remaining provisions hereof. This Agreement sets forth the entire agreement between the parties and there are no other representations, agreements or understandings with respect to the subject matter of this Agreement.

16. **Signature.** The Parties agree that this Agreement may be electronically signed. The Parties Agree that the electronic signatures appearing on this Agreement are the same as handwritten signatures for purposes of validity, enforceability, and/or admissibility.

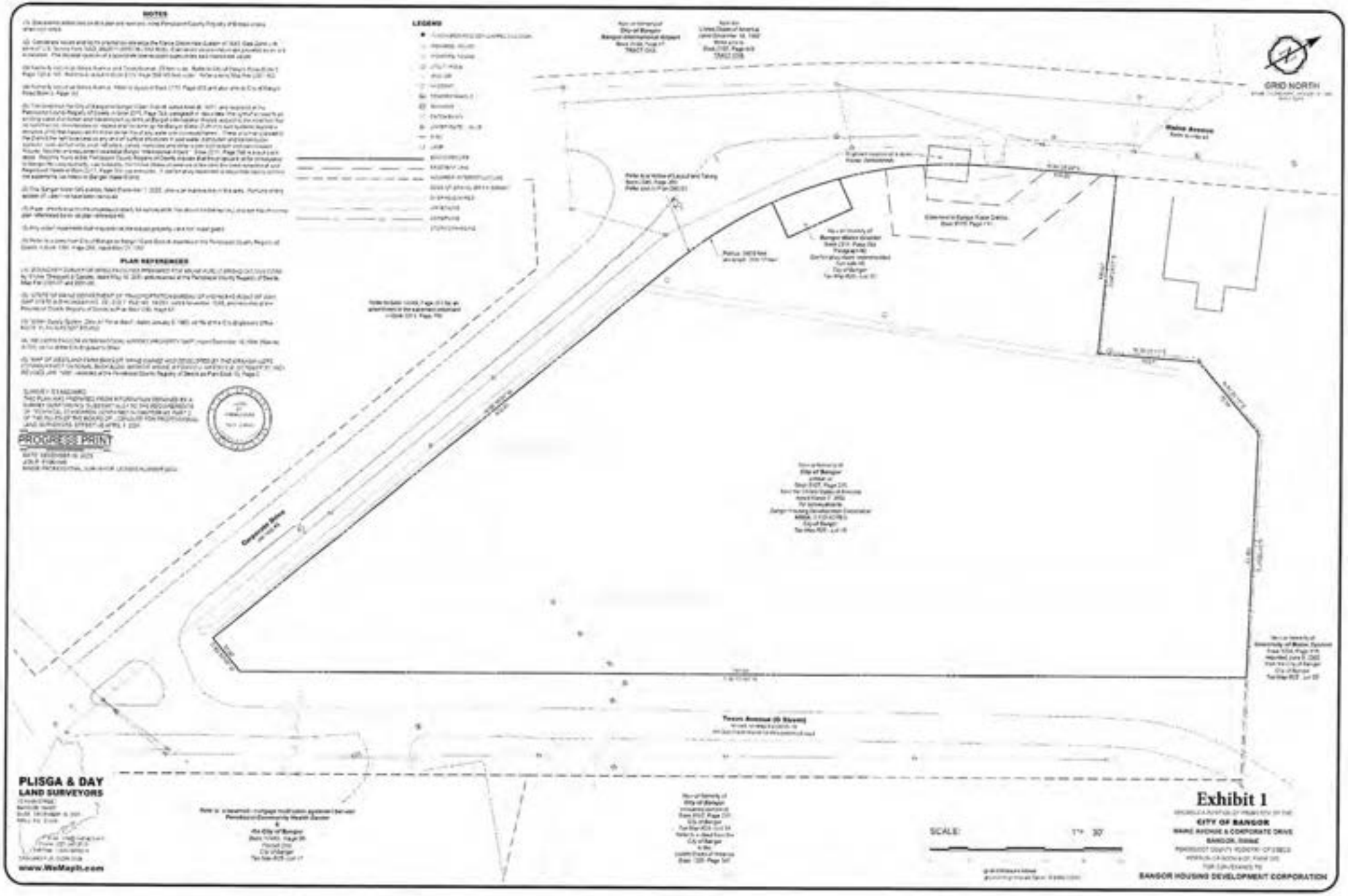
17. **Effective Date.** This Agreement will become effective when all the Parties have signed it. The date this Agreement is signed by the last Party to sign it, as indicated by the date stated under that Party's signature, will be deemed the Effective Date of this Agreement.

Bangor Housing Development Corporation

Michael Myatt
Its: Treasurer
Date: 12/22/2025

City of Bangor

Carollynn Lear
Its: City Manager
Date: 12/30/2025


NOTES
PLAN REFERENCES
LEGEND
GRID NORTH
Maine Avenue
Corporate Drive
Texas Avenue (0 Width)
PROGRESS PRINT
PLISGA & DAY
LAND SURVEYORS
www.WeMapIt.com
Exhibit 1
CITY OF BANGOR
MAINE AVENUE & CORPORATE DRIVE
BANGOR, MAINE
SCALE: 1" = 30'
BANGOR HOUSING DEVELOPMENT CORPORATION

MAINE
Department of the Secretary of State
Bureau of Corporations, Elections and Commissions

Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Tue Feb 03 2026 16:47:57. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
BANGOR HOUSING DEVELOPMENT CORPORATION	19880137ND	NON-PROFIT CORPORATION (UNDER TITLE 13-B)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
07/17/1987	N/A	MAINE

Other Names **(A=Assumed ; F=Former)**

NONE

Principal Home Office Address

Physical	Mailing
133 DAVIS ROAD BANGOR, ME 04401	133 DAVIS ROAD BANGOR, ME 04401

Clerk/Registered Agent

Physical	Mailing
MICHAEL MYATT 133 DAVIS ROAD BANGOR, ME 04401	MICHAEL MYATT 133 DAVIS ROAD BANGOR, ME 04401

New Search

Click on a link to obtain additional information.

List of Filings	View list of filings	
Obtain additional information:		
Certificate of Existence (Good Standing) (more info)	Short Form without amendments ($10.00)	Long Form with amendments ($10.00)

Certificate of Legal Existence (more info)	Short Form without amendments ($10.00)	Long Form with amendments ($10.00)

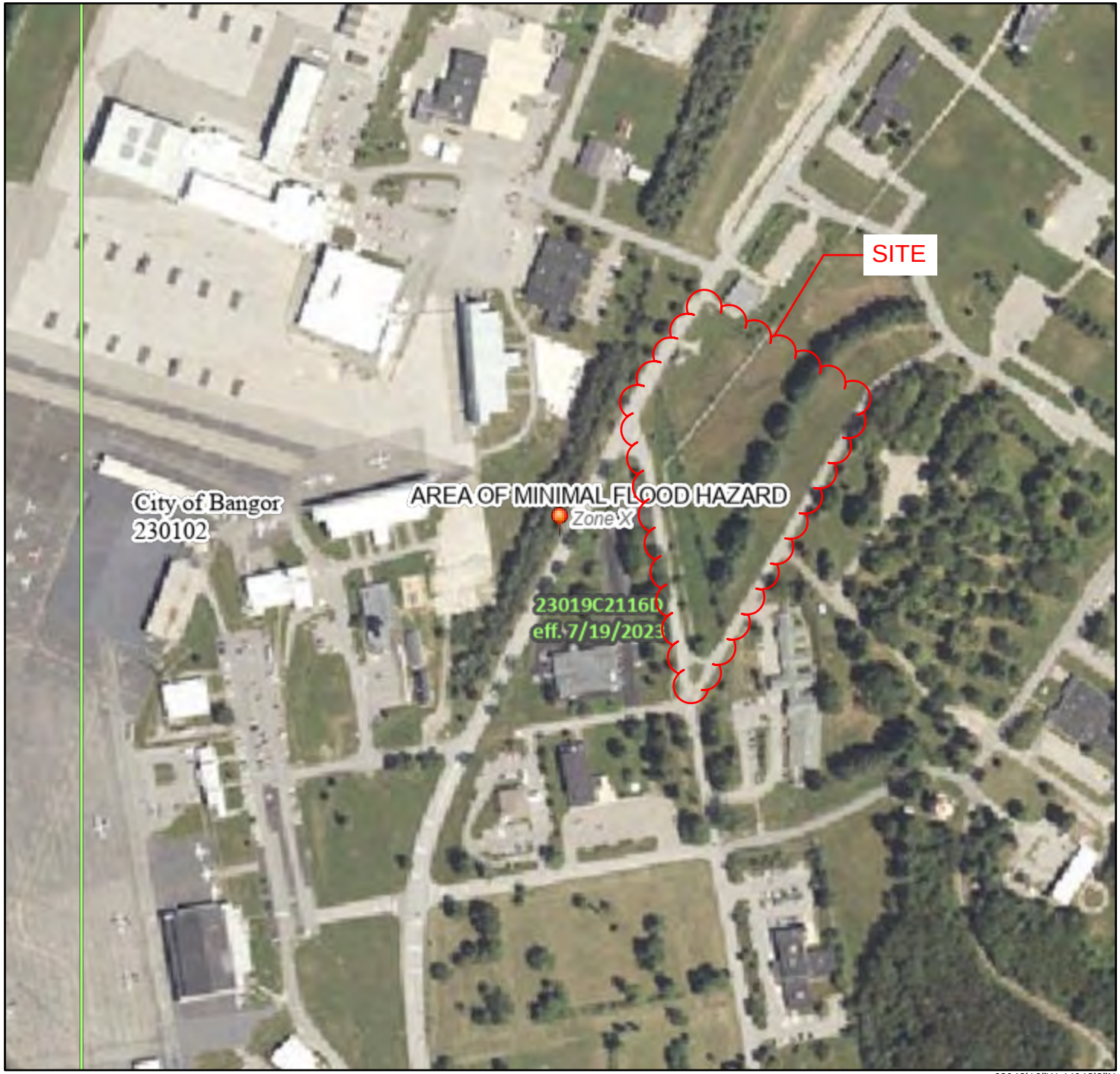
You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.
If you encounter problems, visit the troubleshooting page.

If you encounter technical difficulties while using these services, please contact the Webmaster. If you are unable to find the information you need through the resources provided on this web site, please contact the Division of Corporations, UCC & Commissions Reporting and Information Section at 207-624-7752 or e-mail.

© Department of the Secretary of State

National Flood Hazard Layer FIRMette

68°48'48"W 44°48'33"N



68°48'10"W 44°48'8"N

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

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *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 Cross Sections with 1% Annual Chance
- 17.5 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 1/27/2026 at 2:16 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

MaineHousing
MAINE STATE HOUSING AUTHORITY

April 18, 2025

Michael Myatt
Bangor Housing Development Corporation
133 Davis Road
Bangor, ME 04401

Dear Mike:

Congratulations! Your proposed Bangor Site-Based Housing First project has been selected as one of five first round projects in the State's *Home for Good* program to provide permanent supportive housing to individuals experiencing chronic homelessness.

This award is contingent upon MaineHousing approving the site, building plans, operating plans, and ultimately the underwriting of the project. This award is also contingent upon Preble Street successfully contracting with the State of Maine Department of Health and Human Services, Office of Behavioral Health, for the required on-site 24-hour services.

The next step in this process will be a meeting at 1:00 on May 12th at MaineHousing where your entire team will meet with MaineHousing, DHHS, and the other four selected teams for the first round. DHHS and MaineHousing are planning to develop this first round of projects in close collaboration with the selected teams to create the model that will be used for future projects.

We thank you for your interest and enthusiasm as shown in your proposal.

Sincerely,

Adam S. Krea
Sr. Director of Finance & Lending

JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
353 WATER STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

JUDITH CAMUSO
COMMISSIONER

February 19, 2026

Anna Dedon
Sevee & Maher Engineers
4 Blanchard Road
Cumberland, ME 04021

RE: Information Request - 236 Maine Avenue, Apartments, Bangor Project ID 9859-11461

Dear Anna:

Per your request received on **February 10, 2026**, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information sources for known locations of Endangered, Threatened, and Special Concern (Rare) species; designated Essential and Significant Wildlife Habitats; inland fisheries and aquatic habitats; and other protected natural resource concerns within the vicinity of the ***236 Maine Avenue, Apartments, Bangor*** project, pursuant to MDIFW's authority. Please note that as project details are lacking, our comments should be considered preliminary.

Our Department has not mapped any Essential or Significant Wildlife Habitats or inland fisheries habitats that would be directly affected by your project.

ENDANGERED, THREATENED, AND SPECIAL CONCERN SPECIES

Bat Species
Of the eight species of bats that occur in Maine, four species are afforded protection under the Maine Endangered Species Act (MESA, 12 M.R.S 12801 et. seq.): little brown bat (State Endangered), northern long-eared bat (State Endangered), eastern small-footed bat (State Threatened), and tri-colored bat (State Threatened). The four remaining bat species are designated as Species of Special Concern: big brown bat, red bat, hoary bat, and silver-haired bat. While a comprehensive statewide inventory for bats has not been completed, based on historical evidence it is likely that several of these species occur within the project area during spring/fall migration, the summer breeding season, and/or for overwintering. However, our Department does not anticipate significant impacts to any of the bat species as a result of project activities.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance, we recommend additional consultation with the municipality, and other state resource and regulatory agencies including the Maine Natural Areas Program and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance. For information on federally listed species, contact the U.S. Fish and Wildlife Service's Maine Field Office (207-469-7300, mainefieldoffice@fws.gov).

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

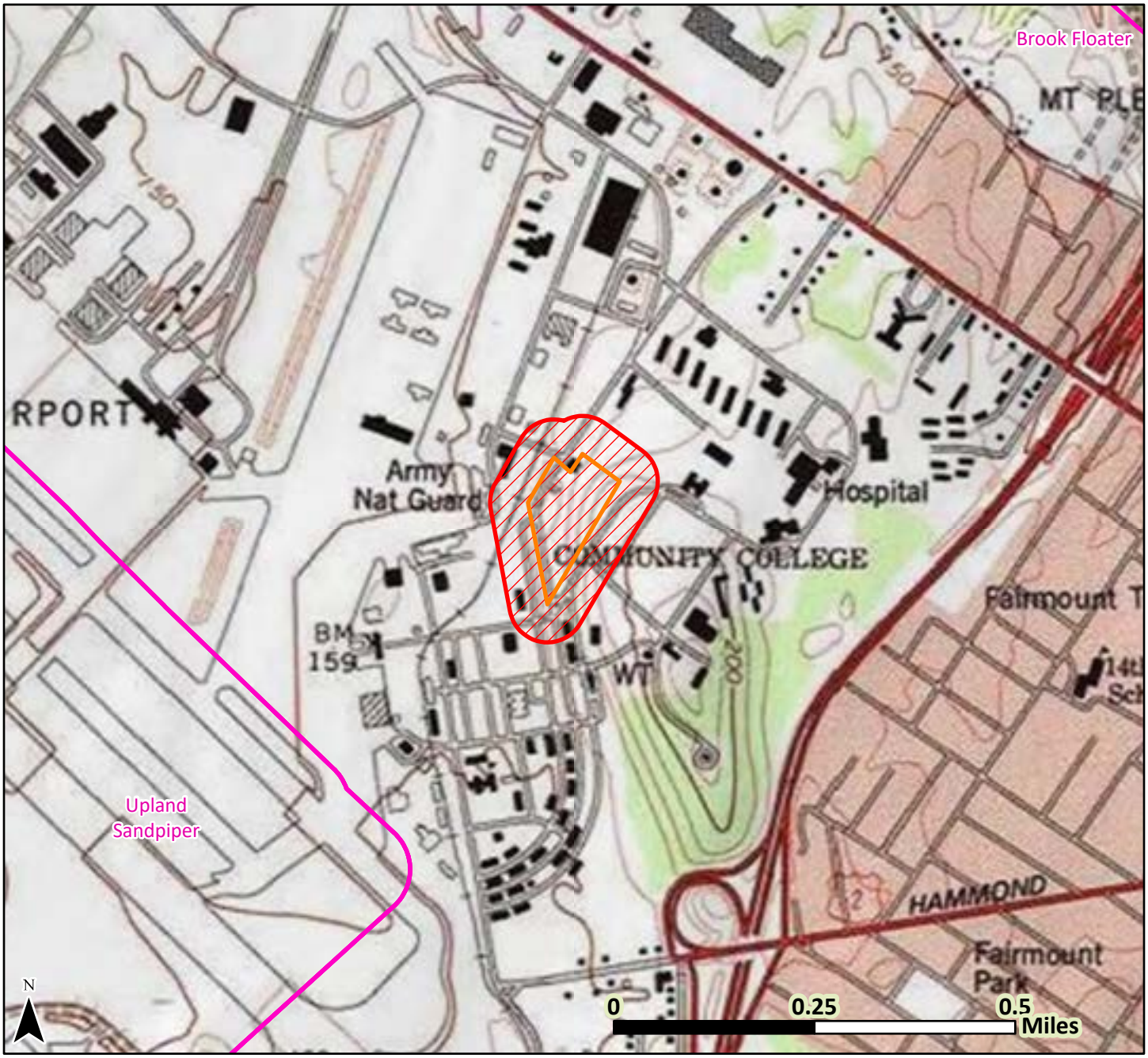
Best regards,

Laura Hatmaker
Natural Resource Biologist

Maine Department of Inland Fisheries and Wildlife
Project Area Review of Fish and Wildlife Observations and Priority Habitats

236 Maine Avenue, Apartments, Bangor

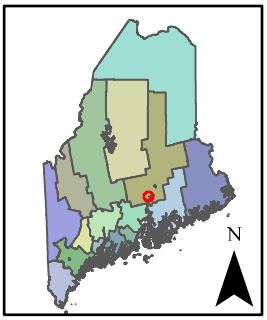
Project ID 9859, Version ID 11461



Legend only lists resources visible in the map; see response letter for all resources that were evaluated.

- County Boundary
- Township Boundary
- Project Footprint
- Search Area
- E, T, & SC Species

Date: 2/13/2026
UTM Zone 19N, NAD83



This map contains sensitive information - do not distribute it beyond the project applicant, consultant, or the permitting agency.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 4431
Phone: (207) 469-7300 Fax: (207) 902-1588

In Reply Refer To: 02/03/2026 18:48:34 UTC
Project Code: 2026-0044707
Project Name: Bangor Housinig

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 4431
(207) 469-7300

PROJECT SUMMARY

Project Code: 2026-0044707
Project Name: Bangor Housinig
Project Type: Residential Construction
Project Description: 19,000 SF of building with 13 parking spaces
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.8053205,-68.8065926121651,14z

Counties: Penobscot County, Maine

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

FISHES

NAME	STATUS
Atlantic Salmon *Salmo salar* Population: Gulf of Maine DPS There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2097	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Atlantic Salmon *Salmo salar* https://ecos.fws.gov/ecp/species/2097#crithab	Final

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts

activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

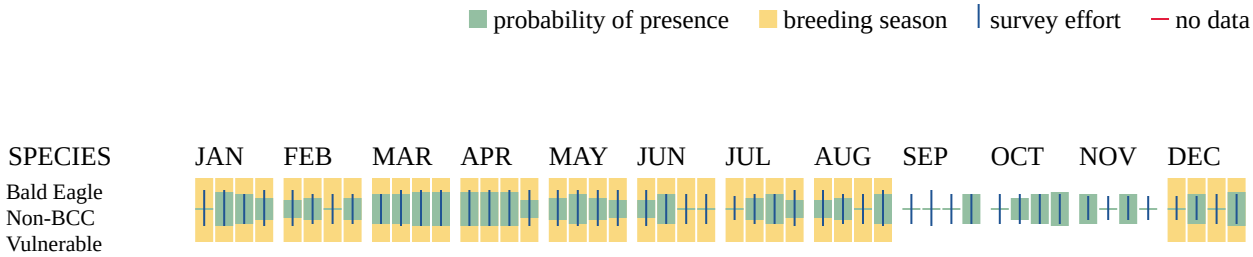
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Bay-breasted Warbler *Setophaga castanea* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9583	Breeds May 25 to Aug 1
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 to Jul 31
Canada Warbler *Cardellina canadensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9643	Breeds May 20 to Aug 10
Cape May Warbler *Setophaga tigrina* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/10571	Breeds Jun 1 to Jul 31

NAME	BREEDING SEASON
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20
Evening Grosbeak *Coccothraustes vespertinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9465	Breeds May 15 to Aug 10
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Prairie Warbler *Setophaga discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Rose-breasted Grosbeak *Pheucticus ludovicianus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11965	Breeds May 15 to Jul 31
Semipalmated Sandpiper *Calidris pusilla* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9603	Breeds elsewhere
Veery *Catharus fuscescens fuscescens* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11987	Breeds May 15 to Jul 15
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

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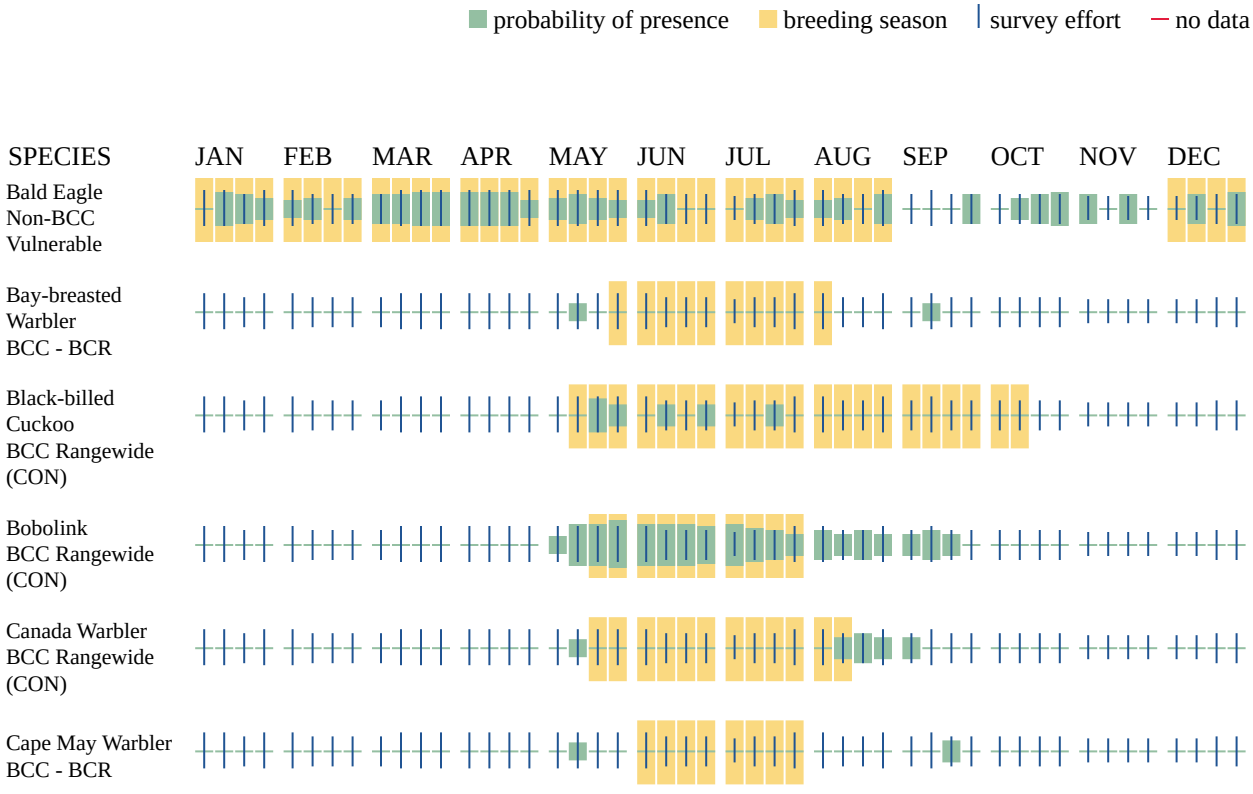

Additional information can be found using the following links:

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- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: Sevee . Maher Engineers
Name: Abigail Latulippe
Address: 4 Blanchard Road
City: Cumberland
State: ME
Zip: 04021
Email aml@smemaine.com
Phone: 2078295016

EROSION AND SEDIMENT CONTROL MEASURES AND ACTIVITY	INSPECTION FREQUENCY		
	Weekly	Before and After a Storm	After Construction
SEDIMENT BARRIERS			
Sediment barriers are installed prior to soil disturbances	X	X	
Silt fences are keyed in and tight	X	X	
Barriers are repaired and replaced as necessary	X	X	
Barriers are removed when the site is stabilized - Silt fence should be cut at the ground surface			X
TEMPORARY STABILIZATION			
Areas are stabilized if idle for 14 days or more	X	X	
Daily stabilization within 100 ft of a natural resource	X	X	
MULCH			
Seed and mulch within 7 days of final grading. Ground is not visible	X	X	
Erosion control mix is 4-6 inch thick	X	X	
Erosion control blankets or hay mulch are anchored	X	X	
VEGETATION			
Vegetation provides 90% soil cover	X		X
Loam or soil amendment were provided	X		X
New seeded areas are mulched and protected from vehicle, foot traffic and runoff	X	X	X
Areas that will remain unworked for more than 1 year are vegetated with grass	X		
SLOPES AND EMBANKMENTS			
Final graded slopes and embankments are stabilized	X	X	X
Diversions are provided for areas with rill erosion	X	X	X
Areas steeper than 2:1 are riprapped	X		
Stones are angular, durable and various in size	X		
Riprap is underlain with a gravel layer or filter fabric	X		
STORMWATER CHANNELS AND CULVERTS			
Ditches and swales are permanently stabilized–channels that will be riprapped have been over-excavated	X	X	X
Ditches are clear of obstructions, accumulated sediments or debris	X	X	X
Ditch lining/bottoms are free of erosion	X	X	X
Check dams are spaced correctly to slow flow velocity	X		
Underlying filter fabric or gravel is not visible	X	X	X
Culvert aprons and plunge pools are sized for expected flows volume and velocity	X		
Stones are angular, durable and various in size	X		
Culverts are sized to avoid upgradient flooding	X	X	
Culvert protection extends to the maximum flow elevation within the ditch	X	X	X
Culvert is embedded, not hanging	X	X	X

CATCH BASIN SYSTEMS			
Catch basins are built properly	X		
Accumulated sediments and debris are removed from sump, grate and collection area		X	X
Floating debris and floating oils are removed from trap			X
ROADWAYS AND PARKING SURFACES			
The gravel pad at the construction entrance is clear from sediments	X	X	
Roads are crowned		X	X
Cross drainage (culvert) is provided	X		
False ditches (from winter sand) are graded		X	X
BUFFERS			
Buffers are free of erosion or concentrated flows		X	X
The downgradient of spreaders and turnouts is stable		X	X
Level spreaders are on the contour			X
The number of spreaders and ditch turnouts is adequate for flow distribution		X	X
Any sediment accumulation is removed from within spreader or turnouts		X	X
STORMWATER BASINS AND TRAPS			
Embankments are free of settlement, slope erosion, internal piping, and downstream swamping		X	X
All flow control structure or orifices are operational and clear of debris or sediments		X	X
Any pre-treatment structure that collects sediment or hydrocarbons is clean or maintained		X	X
Vegetated filters and infiltration basins have adequate grass growth			X
Any impoundment or forebay is free of sediment		X	X
WINTER CONSTRUCTION (November 1st-April15th)			
Final graded areas are mulched daily at twice the normal rate with hay, and anchor (not on snow)	Daily		
A double row of sediment barrier is provided for all areas within 100 ft of a sensitive resource (use erosion control mix on frozen ground)	Daily		
Newly constructed ditches are riprapped	Daily		
Slopes greater than 8% are covered with an erosion control blanket or a 4-inch layer of erosion control mix	Daily		
HOUSEKEEPING PUNCH LIST			
All disturbed areas are permanently stabilized, and plantings are established (grass seeds have germinated with 90% vegetative cover)			X
All trash, sediments, debris or any solid waste have been removed from stormwater channels, catch basins, detention structures, discharge points, etc.			X
All ESC devices have been removed: (silt fence and posts, diversions and sediment structures, etc.)			X
All deliverables (certifications, survey information, as-built plans, reports, notice of termination (NOT), etc.) in accordance with all permit requirements have been submitted to town, Maine DEP, association, owner, etc.			X

CONSTRUCTION INSPECTION FORM FOR EROSION AND SEDIMENT CONTROL					
General Information:					
Site Name:	Date:		Inspected by:		
Owner:					
Retained 3PI:	Last Rain Date:			Amount:	
Reason for Inspection:	Weekly	Winter	Final	Rain Event	Complaint
Description of disturbed area:					
Photos:					

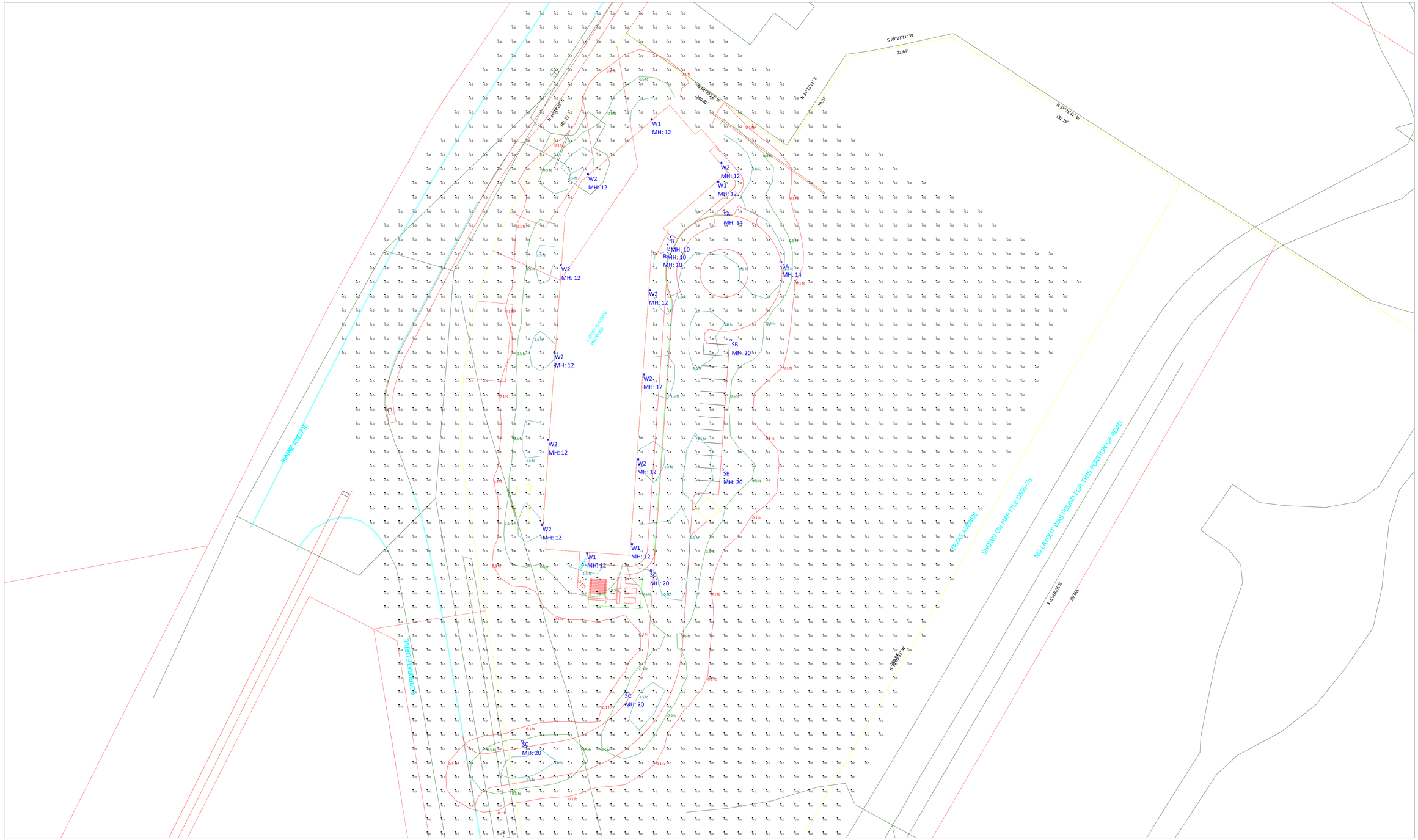
	YES/NO/NA	COMMENTS
1. Is an Erosion and Sediment Control Plan available?		
ESC plan on-site and followed		
Other:		
2. Are all erosion control practices installed properly, maintained and functioning?		
Disturbed areas stable		
Concentrated flow inlet/outlet protection		
All areas at final grade		
Disturbed dormant areas stabilized		
Access roads and parking		
Hillsides and stockpiles		
Other:		
3. Are all sedimentation control practices installed properly, maintained and functioning?		
Construction entrance		
Sedimentation basins/traps/diversions		
Perimeter controls		
Check dams		
Other:		
4. Is maintenance of ESC measures, construction activities and housekeeping kept-up?		
Sedimentation/erosion in ditches		
Tracked Sediment or dust at exits		
Hazardous material storage and spill control practices		
Waste management (concrete, hazardous material, etc.)		
Other:		
5. Violation, Corrective Actions, Recommendations		
Sediment discharged from site?		
Corrective action required?		
Site compliant with all permits?		
Notice of violation or stop work order issued?		
Comments/Corrective Actions (complete corrective actions before the next rain event and within 7 day)		

Calculation Summary					
Label	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**
site	0.3	7.9	0.0	N.A.	N.A.

Luminaire Schedule (note fixture catalogue numbers are not complete)

Type	Qty	Lum. Lumens	LLF	Lum. Watts	MANUFAC	Description	Mounting Height
B	3	1251	0.900	14.6	NICOR,INC.	REL6FR1120SRD9WH-2700K	10
SA	2	5534	0.900	63	LSI INDUSTRIES, INC.	MRS-LED-09L-SIL-4-30-70CRI-IL	14
SB	2	6017	0.900	39	LSI INDUSTRIES, INC.	MRS-LED-06L-SIL-3-30-70CRI	20
SC	3	4030	0.900	39	LSI INDUSTRIES, INC.	MRS-LED-06L-SIL-3-30-70CRI-IL	20
W1	4	2772	0.900	19	LSI INDUSTRIES, INC.	XWS-LED-03L-SIL-4-30-70CRI	12
W2	9	2884	0.900	19	LSI INDUSTRIES, INC.	XWS-LED-03L-SIL-3-30-70CRI	12

NOTES:
1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
2) CALCULATIONS MAY or MAY NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE OR IN THE SITE AREA.
3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES ON A FLAT SITE WITHOUT REFLECTIONS OR OBSTRUCTIONS UNLESS OTHERWISE INDICATED.
4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO EXPOSURE/ESS AND STANDARD ASSUMPTIONS OF THE SPACE AND/OR SITE.
5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
7) DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY APPEAR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.



PLAN VIEW

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TITLE
236 MAINE AVE - HOME FOR GOOD
BANGOR, ME
SITE LIGHTING LAYOUT

SITE LTG 4-27-26.AGI

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SCALE NOT TO SCALE

Page 1 of 1

Date:4/27/2026

EXPOSURE — LIGHTING — CONTROLS — ELECTRICAL

Catalog # : _____ Project : _____ Type : _____

Prepared By : _____ Date : _____

Mirada Small Silicone (XWS SIL)

Outdoor Wall Sconce

OVERVIEW	
Lumen Package (lm)	1,000 - 8,000
Wattage Range (W)	10 - 61
Efficacy Range (LPW)	124 - 162
Weight lbs (kg)	10 (4.5)
Control Options	IMSBT, ALB, ALS, PCI

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Extended housing available with 1/2" threaded hubs for surface conduit and rated wire.
- Standard luminaire shipping weight: TBD lbs in carton.
- Max luminaire shipping weight: 12 lbs in carton (20 lbs w/EH option)

Optical System

- State-of-the-Art one piece silicone optic provides industry leading optical control while also acting as an integrated gasket reducing system complexity and improving fixture reliability.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in distribution types 2, 3, 4, and FT.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- 5000K, 4000K, 3500K, 3000K, and 2700K color temperatures per ANSI C78.377. Also available in Phosphor Converted Amber with peak intensity at 610nm.
- 70 or 80CRI Minimum.

Electrical

- High-performance programmable driver features over-voltage, under-voltage, short circuit and over temperature protection. Custom lumen and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 VAC) Input 50/60 Hz or optional High Voltage (347-480 VAC).
- L80 Calculated Life: >100k Hours
- Total harmonic distortion (THD): <20%
- Operating temperature: -40°C to 40°C (-40°F to +104°F)
- Power factor (PF): >.90
- Input power stays constant over life.
- Optional 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed via hinged door.
- Optional integral emergency battery pack provides 90-minutes of constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance. The fixture delivers 1500 lumens during emergency mode.

Controls

- Integral passive infrared Bluetooth™ motion sensor options. Fixtures operate independently and can be commissioned via an iOS or Android configuration app. Updates and modifications to the control strategy are easily implemented via an intuitive app.
- AirLink™ Blue wireless control system with technology partner Silvair incorporates Luminaire Level Lighting Controls (LLLC) and high-end trim

Installation

- Universal wall mounting plate easily mounts directly to 4" octagonal or square junction box.
- 2 fasteners secure the hinged door underneath the housing and provide quick & easy access to the electrical compartment for installing/servicing.
- Optional terminal block accepts up to 12 ga wire.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- DarkSky approved with 3000K or warmer color temperature selection and fixed mounting.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet locations.
- IP65 rated luminaire per IEC 60598-1.
- 3G rated for ANSI C136.31 high vibration applications when pole mounted (using optional XPMA bracket) or wall mounted.
- IK10 rated luminiare per IEC 66262 mechanical impact code.
- DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

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Mirada Small Silicone (XWS SIL)

Type : _____

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ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: XWS LED 6L SIL FT UNV DIM 40 70CRI ALBMR1LR BLK CWBB

Prefix	Light Source	Lumen Package	Lens	Distribution	Voltage	Driver
XWS - Mirada Small Wall Sconce	**LED**	**1L** - 1,000 (10w) UNV Only **2L** - 2,000 (13w) **3L** - 3,000 (19w) **5L** - 5,000 (35w) **6L** - 6,000 (43w) **8L** - 8,000 (61w) **Custom Lumen Packages**[1]	**SIL** - Silicone	**2** - Type 2 **3** - Type 3 **4** - Type 4 **FT** - Forward Throw	**UNV** - Universal Voltage (120-277V) **HV** - High Voltage (347-480V)	**DIM** - 0-10v Dimming (0-10%)

Color Temperature	Color Rendering	Controls	Finish	Options
50 - 5,000 CCT **40** - 4,000 CCT **35** - 3,500 CCT (80 CRI only) DarkSky Approved CCT's **30** - 3,000 CCT **27**- 2,700 CCT (80 CRI only)	**70CRI** - 70 CRI **80CRI** - 80 CRI	**Blank** - None **Wireless Controls** **ALBMR1LR** - AirLink Blue Long Range Wireless Multi-Range Sensor Controller (8-15' MH)[2,3] **ALBMR2LR** - AirLink Blue Long Range Wireless Multi-Range Sensor Controller (16 - 40' mounting height)[2,3] **Standalone Controls** **EXT** - 0-10v Dimming leads extended to housing exterior **IMSBT1L** - Integral Bluetooth™ Motion Sensor 8-24' MH[2,3] **Button Type Photocells** **PCI120** - 120V **PCI208-277** - 208 -277V **PCI347** - 347V	**BLK** - Black **BRZ** - Dark Bronze **GMG** - Gun Metal Gray **GPT** - Graphite **MSV** - Metallic Silver **PLP** - Platinum Plus **SVG** - Satin Verde Green **WHT** - White	**Blank** - None **BB** - 10w Battery Back-up (0°C)[4] **CWBB** - 10w Cold Weather Battery Backup (-20°C)[4] **BB20** - 20W Battery Back-up (0°C)[4] **EH** - Extended Housing[5] **SP1** - 10kV Surge Protection Device

Need more information?
Click here for our glossary

Have additional questions?
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ACCESSORY ORDERING INFORMATION*

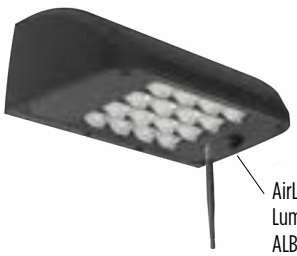
Part Number	Description
758274CLR	XWS Extended Housing/Surface Conduit Wiring Box
760159CLR	XWS Spacer Plate/Wiring Box

*Accessories are shipped separately and field installed.

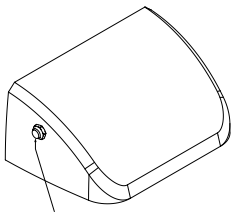
Battery Backup

- Emergency battery system provides 90-minutes of constant power to the LED system, ensuring code compliance.
- A test switch/indicator button is installed on the housing for ease of maintenance.
- 10w battery delivers ~1,500 lumens during emergency mode.
- 20w battery delivers ~3,000 lumens during emergency mode.

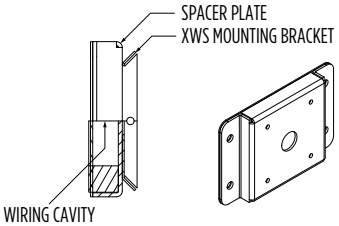
Luminaire shown with battery backup



AirLink Wireless Control Luminaire shown with ALBMR1LR



BUTTON PHOTOCELL
LUMINAIRE SHOWN WITH PCI



1 Custom lumen and wattage packages available, consult factory. Values are within industry standard tolerances but not DLC listed.
2 When high voltage (HV) is specified, IMSBT and ALBMRxLR control options are limited to 6L and 8L lumen packages.
3 Sensors are field configurable via a phone app that can be downloaded from your smartphone's native app store.
4 Universal Voltage Only (120-277V). 20W Battery Backup only available 1L - 6L.
5 For applications with surface conduit.

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Mirada Small Silicone (XWS SIL)

Type : _____

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PERFORMANCE

Back to Quick Links

Delivered Lumens[1]

Lumen Package	Distribution	CRI	3000K CCT (70 CRI)			4000K CCT (70 CRI)			5000K CCT (70 CRI)			Wattage
			Delivered Lumens	Efficacy	Bug Rating	Delivered Lumens	Efficacy	Bug Rating	Delivered Lumens	Efficacy	Bug Rating	
1L	2	70	1,429	143	B1-U0-G1	1,524	152	B1-U0-G1	1,526	153	B1-U0-G1	10
	3		1,491	149	B0-U0-G1	1,590	159	B0-U0-G1	1,592	159	B0-U0-G1	
	4		1,433	143	B0-U0-G1	1529	153	B0-U0-G1	1530	153	B0-U0-G1	
	FT		1,459	146	B0-U0-G1	1,556	156	B1-U0-G1	1,557	156	B1-U0-G1	
2L	2	70	1,851	142	B1-U0-G1	1,974	152	B1-U0-G1	1,976	152	B1-U0-G1	13
	3		1,930	148	B1-U0-G1	2,058	158	B1-U0-G1	2,060	158	B1-U0-G1	
	4		1884	145	B0-U0-G1	2010	152	B0-U0-G1	2012	155	B0-U0-G1	
	FT		1,889	145	B1-U0-G1	2,015	155	B1-U0-G1	2,017	155	B1-U0-G1	
3L	2	70	2,765	146	B1-U0-G1	2,950	155	B1-U0-G1	2,953	155	B1-U0-G1	19
	3		2,884	152	B1-U0-G1	3,077	162	B1-U0-G1	3,079	162	B1-U0-G1	
	4		2,772	146	B1-U0-G2	2957	156	B1-U0-G2	2959	156	B1-U0-G2	
	FT		2,822	149	B1-U0-G1	3,010	158	B1-U0-G1	3,012	159	B1-U0-G1	
5L	2	70	4,655	133	B2-U0-G1	4,965	142	B2-U0-G1	4,970	142	B2-U0-G1	35
	3		4,855	139	B1-U0-G1	5,179	148	B1-U0-G1	5,184	148	B1-U0-G1	
	4		4,666	133	B1-U0-G2	4978	142	B1-U0-G2	4983	142	B1-U0-G2	
	FT		4,750	136	B1-U0-G2	5,067	145	B1-U0-G2	5,072	145	B1-U0-G2	
6L	2	70	5,578	130	B2-U0-G1	5,950	138	B2-U0-G2	5,956	139	B2-U0-G2	43
	3		5,819	135	B1-U0-G2	6,207	144	B1-U0-G2	6,214	145	B1-U0-G2	
	4		5,298	123	B1-U0-G2	5966	139	B1-U0-G2	5972	139	B1-U0-G3	
	FT		5,693	132	B1-U0-G2	6,073	141	B1-U0-G2	6,079	141	B1-U0-G2	
8L	2	70	7,531	123	B2-U0-G2	8,034	132	B2-U0-G2	8,041	132	B2-U0-G2	61
	3		7,856	129	B2-U0-G2	8,380	137	B2-U0-G2	8,388	138	B2-U0-G2	
	4		7,552	124	B1-U0-G3	8055	132	B1-U0-G3	8063	132	B1-U0-G3	
	FT		7,687	126	B2-U0-G2	8,199	134	B2-U0-G2	8,207	135	B2-U0-G2	

LUMEN SCALING FACTOR

70CRI - 80CRI	3000K 70CRI - 3500K 80CRI	3000K 70CRI - 2700K 80CRI
0.93	1.00	0.86

Electrical Data - Current Draw AMPS[2]

Lumen Package	120V	208V	240V	277V	347V	480V
1L	0.08	0.05	0.04	0.04	0.03	0.02
2L	0.11	0.06	0.05	0.05	0.04	0.03
3L	0.16	0.09	0.08	0.07	0.05	0.04
5L	0.29	0.17	0.15	0.13	0.10	0.07
6L	0.36	0.21	0.18	0.16	0.12	0.09
8L	0.51	0.29	0.25	0.22	0.18	0.13

Recommended Lumen Maintenance - XWS[3]

Ambient Temperature C°	Initial[4]	25K hrs.[4]	50K hrs.[4]	75K hrs.[5]	100K hrs.[5]
25	100%	95%	90%	85%	80%
40	100%	91%	82%	73%	65%

1 1L not available in HV
2 1L not available with controls.
3 Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.
4 In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X)the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).
5 In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times NA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

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PHOTOMETRICS

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Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

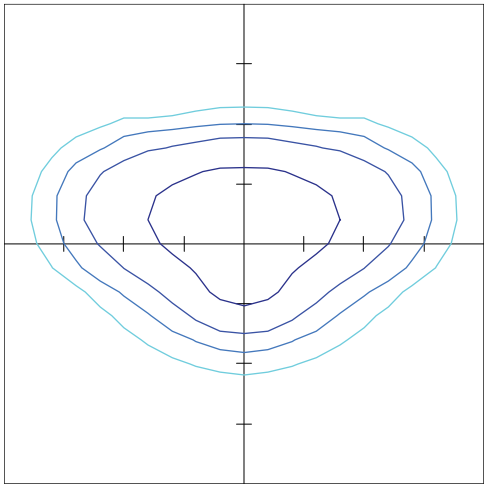
See the individual product page on https://www.lsicorp.com/ for detailed photometric data.

XWS-LED-6L-SIL-2-40-70CRI

Luminaire Data	
Type 2 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	5,951
Watts	42.5
Efficacy	138
IES Type	Type II - Short
BUG Rating	B1-U0-G1

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30°)	834	20%
Medium (30-60°)	3,379	50%
High (60-80°)	1,647	28%
Very High (80-90°)	91	1%
Uplight (90-180°)	0	0%
Total Flux	5,951	100%

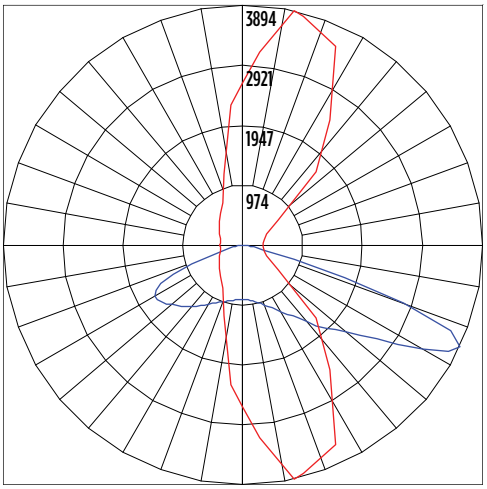
ISO Footcandle



10' Mounting Height / 10' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

Polar Curve



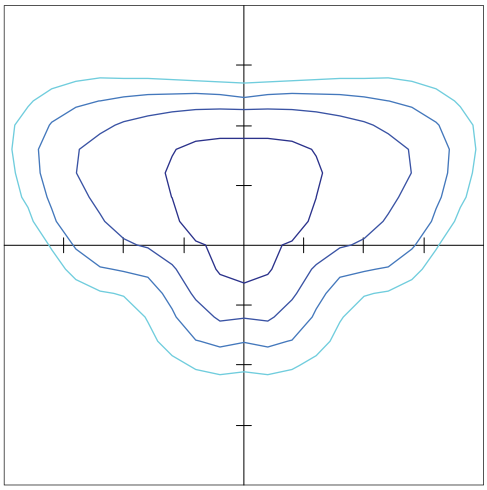
Vertical Plane Horizontal Cone

XWS-LED-6L-SIL-3-40-70CRI

Luminaire Data	
Type 3 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	6,208
Watts	42.5
Efficacy	146
IES Type	Type III - Medium
BUG Rating	B1-U0-G2

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30°)	582	9%
Medium (30-60°)	2,997	48%
High (60-80°)	2,506	40%
Very High (80-90°)	124	2%
Uplight (90-180°)	0	0%
Total Flux	6,208	100%

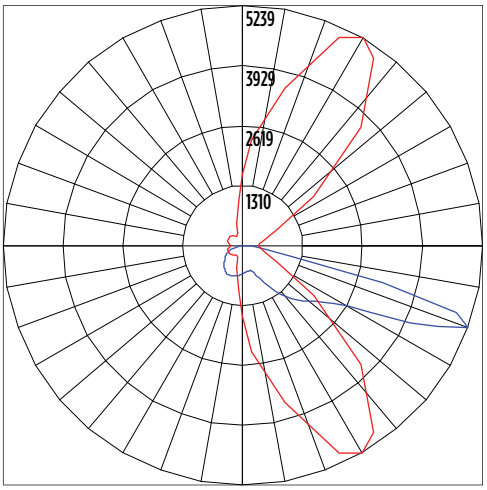
ISO Footcandle



10' Mounting Height / 10' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

Polar Curve



Vertical Plane Horizontal Cone

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Mirada Small Silicone (XWS SIL)

Type : _____

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PHOTOMETRICS

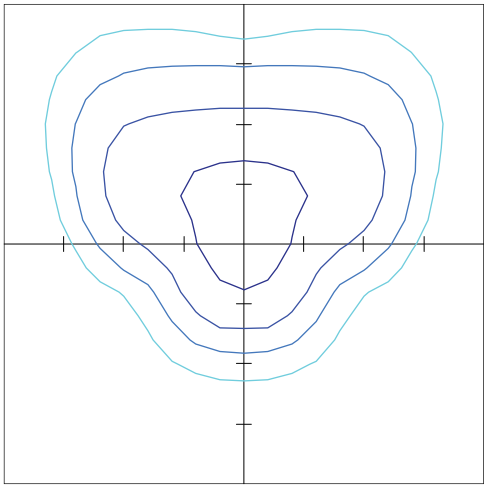
Back to Quick Links

XWS-LED-6L-SIL-FT-40-70CRI

Luminaire Data	
Type FT Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	6,073
Watts	42.5
Efficacy	143
IES Type	Type IV - Short
BUG Rating	B1-U0-G2

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30°)	708.3	12%
Medium (30-60°)	2,715.5	45%
High (60-80°)	2,475.4	41%
Very High (80-90°)	173.6	3%
Uplight (90-180°)	0	0%
Total Flux	6,073	100%

ISO Footcandle



10' Mounting Height / 10' Grid Spacing

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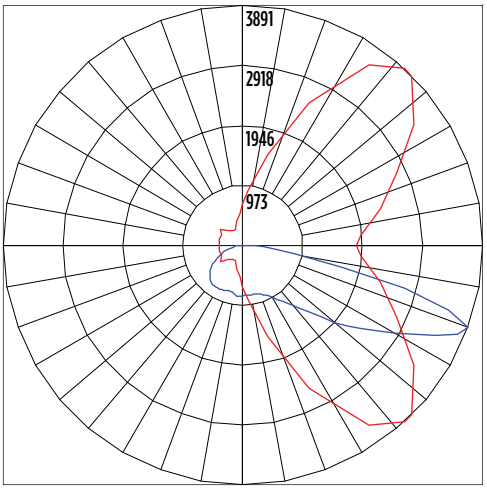
Polar Curve



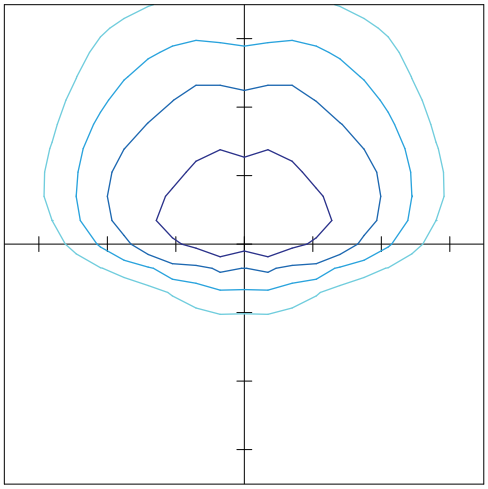
Vertical Plane Horizontal Cone

XWS-LED-6L-SIL-4-40-70CRI

Luminaire Data	
Type 4 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	5,966
Watts	42.5
Efficacy	139
IES Type	Type IV - Very Short
BUG Rating	B1-U0-G2

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30°)	544.6	9%
Medium (30-60°)	2,524.2	42%
High (60-80°)	2,624.8	44%
Very High (80-90°)	272.8	5%
Uplight (90-180°)	0	0%
Total Flux	5,966	100%

ISO Footcandle



10' Mounting Height / 10' Grid Spacing

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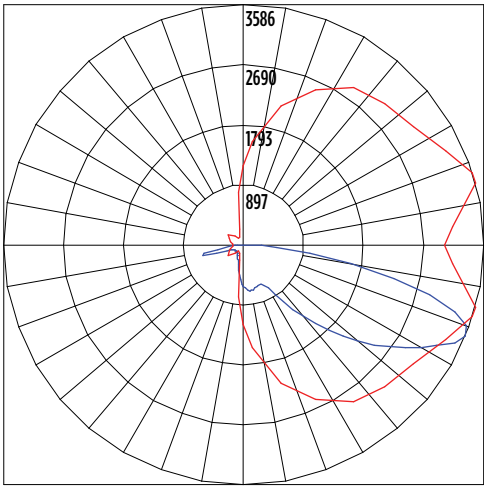
Polar Curve



Vertical Plane Horizontal Cone

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PRODUCT DIMENSIONS

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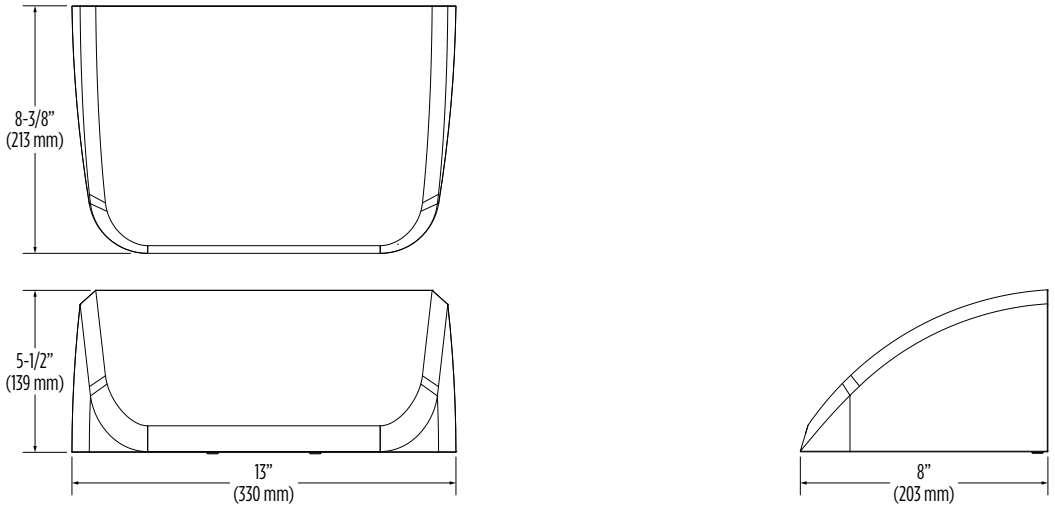
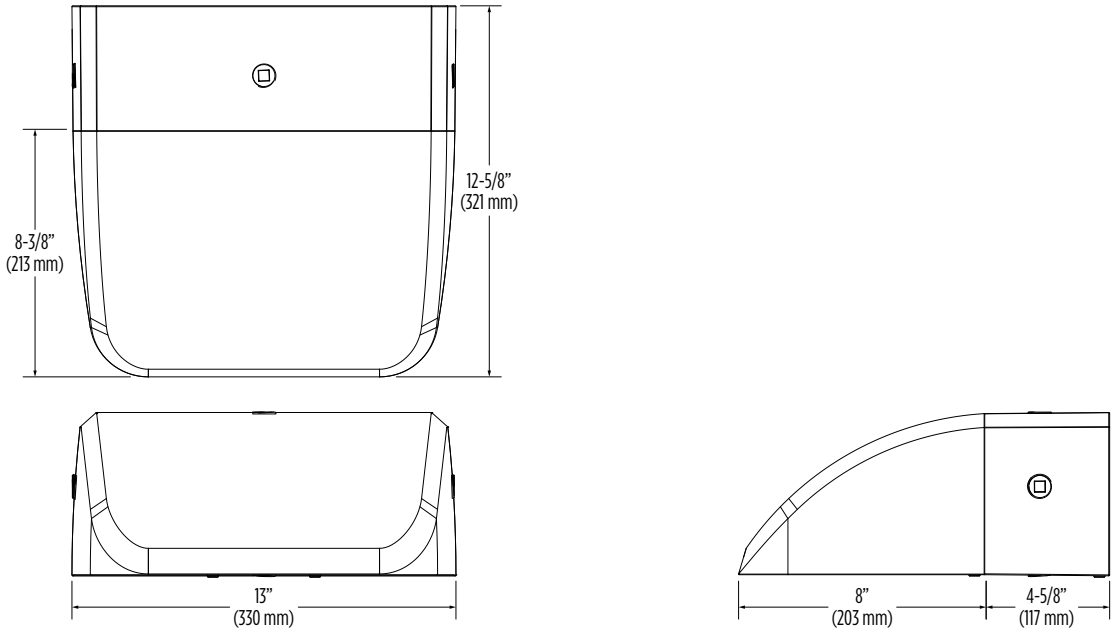
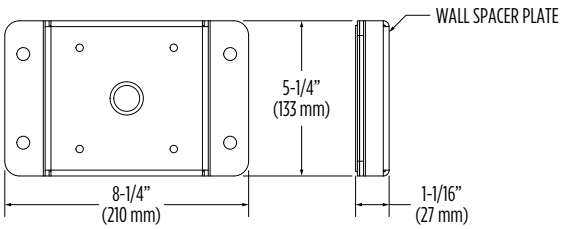
STANDARD HOUSING
(XWS)



SCWB EXTENDED HOUSING
(XWS 758274CLR)



XWS SPACER PLATE/WIRING BOX
(XWS 760159CLR)



NOTE: Wall spacer plate allows the luminaire to float off the wall and provides space for securing wires (8.25" X 5.25" X 1.07").

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CONTROLS

Back to Quick Links

Integral Bluetooth™ Motion and Photocell Sensor (IMSBTxL)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is IP66 rated for cold and wet locations (-40°F to 167°F). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

Click here to learn more details about IMSBT

LEVITON App Apple Android

AirLink Wireless Lighting Controller (ALSC, ALSCS)

The AirLink integrated controller is a California Title 24 compliant lighting controller that provides real-time light monitoring and control with utility-grade power monitoring. It includes a 24V sensor input and power supply to connect a sensor into the outdoor AirLink wireless lighting system. The wireless integrated controller is compatible with this fixture.

Click here to learn more details about AirLink

AirLink Blue (ALBMRxLR)

Wireless Bluetooth Mesh Lighting Control System that incorporates Luminaire Level Lighting Controls (LLLC) and high-end trim to provide energy savings code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App with technology partner Silvair. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/Site, Wall Mounted, Parking Garage and Canopy luminaires.

Click here to learn more details about AirLink Blue

AirLink Blue App Apple

Sensor Sequence of Operations

Standard Programming	On Event	Off Event	On Light Level	Dim Light Level	Daylight Harvesting	Delay To Off	Sensitivity
IMSBTxL	Motion	No Motion	100%	N/A	On; Auto Calibration	20 minutes	High

Operation	Description
On Event	Trigger that activates lights to turn on; either automatic via motion detected or manually activated via push of button.
Off Event	Trigger that activates lights to turn off; either automatic via no motion detected or manually activated via push of button.
On Light Level	The light level that the fixtures will turn on to when ON EVENT occurs.
Dim Light Level	The light level that the fixtures will dim down to when no motion is detected.
Delay to Dim	The amount of time after which no motion is detected that the fixtures will be triggered to dim down. This sequence is optional, and sensor can be programmed to only trigger the fixture to turn off by entering 100% in this field.
Delay to Off	The amount of time after which no motion is detected that the fixtures will be triggered to turn off. If delay to dim is part of the programmed functionality, this is the amount of time after which no motion is detected after the fixture have already dimmed down.
Sensitivity	The sensitivity can be set to high, medium, low, or auto where applicable. High will detect smaller, simple motions. Low will only detect larger more complex motions. Auto temperature calibration adjusts the PIR sensitivity as ambient temperature rises to increase detection of heat movement through the field of view.

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Catalog # : _____ Project : _____

Prepared By : _____ Date : _____

Mirada Small Area (MRS)

Outdoor LED Area Light

MANUFACTURED IN THE USA | TITLE 24 COMPLIANT | c UL us LISTED | DARKSKY APPROVED | DLC LISTED PREMIUM | RoHS COMPLIANT | IP66 | IK10

OVERVIEW	
Lumen Package	6,000 - 30,000
Wattage Range	39 - 209
Efficacy Range (LPW)	112 - 163
Weight lbs(kg)	20 (9.1)
Control Options	IMSBT, ALB, ALS, 7-Pin, PCI

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 27 lbs in carton.

Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated seal.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in distribution types 2, 3, 4, 5W, FT, and LC/RC.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93-95%.
- Zero uplight.
- Available in 5000K, 4000K, 3500K, 3000K and 2700K color temperatures per ANS C78.377.
- 70 or 80CRI Minimum.
- Integral louver (IL) and integral half louver (IH) options available for enhanced backlight control.

Electrical

- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 VAC) Input 50/60 Hz or optional High Voltage (347-480 VAC).
- L70 Calculated Life: >60k Hours
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 30L lumen packages rated to +40°C.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Driver is fully encased in potting material for moisture resistance and complies with FCC standards. Driver and key electronic components can easily be accessed.

Controls

- Optional integral passive infrared Bluetooth™ motion and photocell sensor. Fixtures operate independently and can be commissioned via iOS or Android configuration app.
- AirLink™ Blue wireless control system with technology partner Silvair incorporates Luminaire Level Lighting Controls (LLLC) and high-end trim

Installation

- Designed to mount to square or round poles.
- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes LSI's traditional B3 drill pattern.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- DarkSky approved with 3000K color temperature selection and fixed mounting.
- Title 24 Compliant; see local ordinance for qualification information.
- RoHS compliant.
- Suitable for wet locations.
- IP66 rated Luminaire per IEC 60598-1.
- 3G rated for ANSI C136.31 high vibration applications are qualified.
- IK10 rated luminiare per IEC 66262 mechanical impact code.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

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Mirada Small Area Light (MRS)

Type: _____

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ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: MRS LED 18L SIL FT UNV DIM 40 70CRI ALBMR1LR BLK IH

Prefix	Light Source	Lumen Package	Lens	Distribution	Orientation[2]	Voltage	Driver
MRS - Mirada Small Area Light	**LED**	**6L** - 6,000 lms, 39W **9L** - 9,000 lms, 63W **12L** - 12,000 lms, 86W **15L** - 15,000 lms, 111W **18L** - 18,000 lms, 135W **21L** - 21,000 lms, 165W **24L** - 24,000 lms, 196W **30L** - 30,000 lms, 209W[8] Custom Lumen Packages[1]	**SIL** - Silicone	**2** - Type 2 **3** - Type 3 **4** - Type 4 **5W** - Type 5 Wide **FT** - Forward Throw **LC** - Left Corner **RC** - Right Corner	**(blank)** - standard **L**- Optics rotated left 90° **R** - Optics rotated right 90°	**UNV** - Universal Voltage (120-277V) **HV** - High Voltage (347-480V)	**DIM** - 0-10V Dimming (0-10%)

Color Temp	Color Rendering	Controls (Choose One)	Finish	Options
50 - 5,000 CCT **40** - 4,000 CCT **35** - 3,500 CCT (80 CRI only) DarkSky Approved CCT's **30** - 3,000 CCT **27**- 2,700 CCT (80 CRI only)	**70CRI** - 70 CRI **80CRI** - 80 CRI	**(Blank)** - None **Wireless Controls System** **ALSC** - AirLink Synapse Control System **ALSCS2** - AirLink Synapse Control System with 12-20' MH Motion Sensor[8] **ALSCS4** - AirLink Synapse Control System with 20-40' MH Motion Sensor[8] **ALBMR1LR** - AirLink Blue Long Range Wireless Motion & Photo Sensor Controller (8-15' MH)[4,8] **ALBMR2LR** - AirLink Blue Long Range Wireless Motion & Photo Sensor Controller (16-40' MH)[4,8] **Stand-Alone Controls** **EXT** - 0-10v Dimming leads extended to housing exterior **CR7P** - 7 Pin Control Receptacle ANSI C136.41[3] **IMSBT1L** - Integral Bluetooth™ Motion and Photocell Sensor (8-24' MH)[4,8] **IMSBT2L** - Integral Bluetooth™ Motion and Photocell Sensor (25-40' MH)[4,8]	**BLK -** Black **BRZ -** Dark Bronze **GMG -** Gun Metal Gray **GPT -** Graphite **MSV -** Metallic Silver **PLP -** Platinum Plus **SVG -** Satin Verde Green **WHT -** White	**(Blank)** - None **IH -** Integral Half Louver (Moderate Spill Light Cutoff)[2] **IL -** Integral Louver (Sharp Spill Light Cutoff)[2]

Need more information?
Click here for our glossary

Have additional questions?
Call us at (800) 436-7800

Accessory Ordering Information[5]

CONTROLS ACCESSORIES	
Description	**Order Number**
Twist Lock Photocell (120V) for use with CR7P	**122514**
Twist Lock Photocell (208-277) for use with CR7P	**122515**
Twist Lock Photocell (347V) for use with CR7P	**122516**
Twist Lock Photocell (480V) for use with CR7P	**1225180**
AirLink 5 Pin Twist Lock Controller	**661409**
AirLink 7 Pin Twist Lock Controller	**661410**
Shorting Cap for use with CR7P	**149328**
Adjustable Output Module	**734263**

FUSING OPTIONS[7]	
Description	**Order Number**
Single Fusing (120V)	See Fusing Accessory Guide
Single Fusing (277V)	
Double Fusing (208V, 240V)	
Double Fusing (480V)	
Double Fusing (347V)	

EXTERNAL SHIELDING OPTIONS	
3" External Shield	See Shielding Guide
6" External Shield	

1. Custom lumen and wattage packages available, consult factory. Values are within industry standard tolerances but not DLC listed.
2. Not available on "Type 5W" distribution.
3. Control device or shorting cap must be ordered separately. See Accessory Ordering Information.
4. Motion sensors are field configurable via the LSI app that can be downloaded from your smartphone's native app store.
5. Accessories are shipped separately and field installed.
6. "CLR" denotes finish. See Finish options.
7. Fusing must be located in hand hole of pole. See Fusing Accessory Guide for compatability.
8. ALSC, ALB, and IMSBT not available with 30L HV.

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Mirada Small Area Light (MRS)

Type: _____

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ACCESSORIES

Back to Quick Links

MOUNTING ACCESSORIES

Side Arm

Universal Mounting Bracket
Mounts to ≥ 3" square or round (tapered/straight) poles with (2) mounting hole spaces between 3.5" to 5"

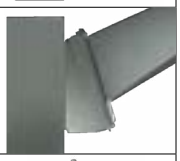
Part Number: BKA UMB CLR

Quick Mount Plate
True one person installation to existing/new contruction poles with hole spaces beteen 2.4 to 4.6"

Part Number: BKS PQMH B3B5 XX CLR

15° Tilt Quick Mount Plate
True one person installation to existing/new contruction poles with hole spaces beteen 2.4 to 4.6"

Part Number: BKS PQM15 B3B5 XX CLR



Tenon / Slipfitter

Adjustable Slipfitter
Mounts onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon and provides 180° of tilt (max 45° above horizontal)

Part Number: BKA ASF CLR

Square Tenon Top
Mounts onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon and allows for mounting up to 4 luminaires

Part Number: BKA XNM *

Square Internal Slipfitter
Mounts inside 4" or 5" square pole and allows for mounting up to 4 lumianires

Part Number: BKA X_ISF * CLR

Wall Mount/ Wood Pole

Wall Mount Bracket
Mounts onto vertical wall surface (hardware/anchors not included)

Part Number: BKS XBO WM CLR
Part Number: BKS B3 WM CLR (Includes surface conduit punchouts)

Wood Pole Bracket
Mounts onto wooden poles (6" minimum OD, hardware/anchors not included)

Part Number: BKS XBO WP CLR (Includes surface conduit punchouts)

SHIELDING, POLES & MISC. ACCESSORIES

Shielding

Integral Louver
Field Install Integral Louver provides maximum backlight control by shiedling each individual row of LEDS

Part Number: 763445

Integral Half Louver
Field Install Integral Half Louver provides great backlight control without impacting front side distribution.

Part Number: 763446

External Shield
External shield blocks view of light source from anyside of luminaire, additional shielding configurations available

Part Number: 783607BLK (3") / 776538BLK (6")

Poles

Square Poles
14 - 39' steel and aluminum poles in 4", 5" and 6" sizes for retrofit and new construction

Part Number: 4SQ/5SQ/6SQ

Round Poles
10 - 30' steel and aluminum poles in 4" and 5" sizes for retrofit and new construction

Part Number: 4RP/5RP

Tapered Poles
20' - 39' steel and aluminum poles for retrofit and new construction

Part Number: RTP

Misc.

Bird Spikes
10' linear bird spike (2' recommended per luminaire) silcone adhesive (covers approximately 25' linear fee of bird spike) and application tool

Spike Part Number: 751631
Adhesive Part Number: 751632
Caulk Gun Part Number: 751636

Replace CLR with paint finish description

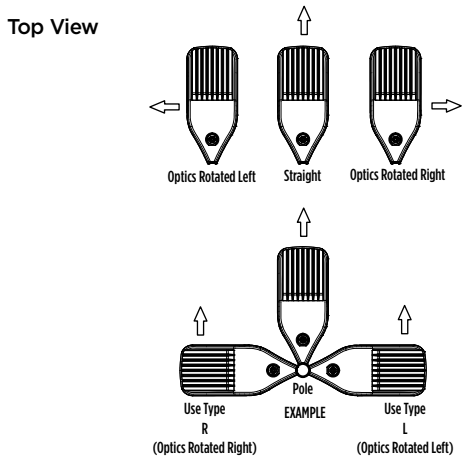
Replace X with: 2'

Replace XX with SQ for square pole or RD for round pole (≥3" OD)

Replace * with S (Single), D180 (Double @180°), D90 (Double @90°), T90 (Triple), Q90 (Quad)

Replace _ with 4 (4" square pole) or 5 (5" square pole)

OPTICS ROTATION



ACCESSORIES/OPTIONS

Integral Louver (IL) and House-Side Shield (IH)

Integral louver (IL) and half louver (IH) accessory shields available for improved backlight control without sacrificing street side performance. LSI's Integral Louver (IL) and Integral House-Side Shield (IH) options deliver backlight control that significantly reduces spill light behind the poles for applications with pole locations close to adjacent properties. The design maximizes forward reflected light while reducing glare, maintaining the optical distribution selected, and most importantly eliminating light trespass. Both options rotate with the optical distribution.

Luminaire Shown with Integral Louver (IL)

Luminaire Shown with IMSBT Option

7 Pin Photoelectric Control

7-pin ANSI C136.41-2013 control receptacle option available for twist lock photocontrols or wireless control modules. Control accessories sold separately. Dimming leads from the receptacle will be connected to the driver dimming leads (Consult factory for alternate wiring).

Luminaire Shown with CR7P

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Mirada Small Area Light (MRS)

Type: _____

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PERFORMANCE

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DELIVERED LUMENS*

Lumen Package	Distribution	CRI	3000K CCT			4000K CCT			5000K CCT			Wattage
			Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
6L	2	70	5918	149	B2-U0-G1	6136	155	B2-U0-G1	6122	155	B2-U0-G1	39
	3		6016	152	B1-U0-G2	6238	158	B1-U0-G2	6224	157	B1-U0-G2	
	4		5967	153	B1-U0-G2	6333	162	B1-U0-G3	6136	157	B1-U0-G2	
	5W		5690	144	B3-U0-G1	5899	149	B3-U0-G1	5886	149	B3-U0-G1	
	FT		5822	147	B1-U0-G1	6037	152	B1-U0-G1	6023	152	B1-U0-G1	
	LC		6003	154	B1-U0-G2	6371	163	B1-U0-G2	6173	158	B1-U0-G2	
	RC		5964	153	B1-U0-G2	6329	162	B1-U0-G2	6132	157	B1-U0-G2	
9L	2	70	9091	145	B2-U0-G2	9484	152	B2-U0-G2	9462	151	B2-U0-G2	63
	3		9241	148	B2-U0-G2	9641	154	B2-U0-G2	9619	154	B2-U0-G2	
	4		9214	146	B2-U0-G3	9778	155	B2-U0-G3	9474	150	B2-U0-G3	
	5W		8740	140	B3-U0-G2	9118	146	B3-U0-G2	9097	144	B3-U0-G2	
	FT		8943	143	B2-U0-G2	9330	149	B2-U0-G2	9308	149	B2-U0-G2	
	LC		9269	147	B2-U0-G3	9837	156	B2-U0-G3	9531	151	B2-U0-G3	
	RC		9208	146	B2-U0-G2	9772	155	B2-U0-G3	9468	150	B2-U0-G3	
12L	2	70	12132	141	B3-U0-G2	12685	148	B3-U0-G2	12514	146	B3-U0-G2	86
	3		12333	143	B2-U0-G2	12894	150	B2-U0-G2	12721	148	B2-U0-G2	
	4		12277	143	B2-U0-G3	13029	152	B2-U0-G3	12623	147	B2-U0-G3	
	5W		11664	136	B4-U0-G2	12195	142	B4-U0-G2	12031	140	B4-U0-G2	
	FT		11935	139	B2-U0-G2	12479	145	B2-U0-G2	12311	143	B2-U0-G2	
	LC		12351	144	B2-U0-G3	13108	152	B2-U0-G3	12700	148	B2-U0-G3	
	RC		12271	143	B2-U0-G3	13022	151	B2-U0-G3	12617	147	B2-U0-G3	
15L	2	70	14220	128	B3-U0-G2	15167	137	B3-U0-G2	14488	131	B3-U0-G2	111
	3		14938	135	B2-U0-G2	15933	144	B2-U0-G2	15219	137	B2-U0-G2	
	4		14792	133	B2-U0-G4	15698	141	B2-U0-G4	15209	137	B2-U0-G4	
	5W		14304	129	B4-U0-G2	15257	137	B4-U0-G2	14574	131	B4-U0-G2	
	FT		14342	129	B2-U0-G2	15297	138	B2-U0-G2	14612	132	B2-U0-G2	
	LC		14881	134	B2-U0-G3	15793	142	B2-U0-G3	15301	138	B2-U0-G3	
	RC		14784	133	B2-U0-G3	15689	141	B2-U0-G3	15201	137	B2-U0-G3	
18L	2	70	16438	122	B3-U0-G2	17532	130	B3-U0-G3	16747	124	B3-U0-G2	135
	3		17267	128	B3-U0-G3	18417	137	B3-U0-G3	17592	131	B3-U0-G3	
	4		17101	127	B3-U-G4	18149	134	B3-U-G4	17584	130	B3-U-G4	
	5W		16535	123	B4-U0-G2	17636	133	B5-U0-G2	16846	125	B4-U0-G2	
	FT		16578	123	B3-U0-G2	17682	131	B3-U0-G2	16890	125	B3-U0-G2	
	LC		17204	127	B3-U0-G3	18258	135	B3-U0-G3	17689	131	B3-U0-G3	
	RC		17091	127	B2-U0-G3	18138	134	B2-U0-G3	17574	130	B2-U0-G3	
21L	2	70	19488	118	B3-U0-G3	20786	126	B3-U0-G3	19885	120	B3-U0-G3	165
	3		20472	124	B3-U0-G3	21835	132	B3-U0-G3	20857	126	B3-U0-G3	
	4		20279	123	B3-U0-G4	21521	130	B3-U0-G5	20851	126	B3-U0-G5	
	5W		19604	119	B5-U0-G3	20909	126	B5-U0-G3	19973	121	B5-U0-G3	
	FT		19655	119	B3-U0-G3	20964	127	B3-U0-G3	20025	121	B3-U0-G3	
	LC		20401	124	B3-U0-G4	21651	131	B3-U0-G4	20977	127	B3-U0-G4	
	RC		20268	123	B3-U0-G3	21509	130	B3-U0-G4	20840	126	B3-U0-G3	

*LEDs are frequently updated therefore values are nominal.

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Mirada Small Area Light (MRS)

Type: _____

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PERFORMANCE

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DELIVERED LUMENS*

Lumen Package	Distribution	CRI	3000K CCT			4000K CCT			5000K CCT			Wattage
			Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
24L	2	70	21976	112	B3-U0-G3	23439	120	B3-U0-G3	22390	114	B3-U0-G3	196
	3		23085	118	B3-U0-G3	24622	126	B3-U0-G3	23519	120	B3-U0-G3	
	4		23190	117	B3-U0-G5	24758	124	B3-U0-G5	23888	120	B3-U0-G5	
	5W		22105	113	B5-U0-G3	23578	120	B5-U0-G3	22522	115	B5-U0-G3	
	FT		22164	113	B3-U0-G3	23640	121	B3-U0-G3	22581	115	B3-U0-G3	
	LC		23330	117	B3-U0-G4	24907	125	B3-U0-G4	24032	121	B3-U0-G4	
	RC		23117	117	B3-U0-G4	24744	124	B3-U0-G4	23874	120	B3-U0-G4	
30L	2	70	30078	144	B4-U0-G3	29485	143	B4-U0-G4	30697	147	B4-U0-G3	209
	3		31711	154	B3-U0-G3	31086	151	B3-U0-G3	32364	157	B3-U0-G3	
	4		30459	148	B4-U0-G5	29858	145	B4-U0-G5	31085	151	B4-U0-G5	
	5W		30588	149	B5-U0-G3	29985	146	B5-U0-G3	31218	152	B5-U0-G3	
	FT		31585	153	B3-U0-G4	30962	150	B3-U0-G4	32235	156	B4-U0-G4	
	LC		32303	155	B3-U0-G5	31666	152	B3-U0-G5	32968	158	B3-U0-G5	
	RC		31943	153	B3-U0-G4	31313	150	B3-U0-G4	32600	156	B3-U0-G5	

*LEDs are frequently updated therefore values are nominal.

LUMEN SCALING FACTOR

70CRI - 80CRI	3000K 70CRI - 3500K 80CRI	3000K 70CRI - 2700K 80CRI
0.93	1.00	0.86

ELECTRICAL DATA (AMPS)*

Lumens	120V	208V	240V	277V	347V	480V
6L	0.34	0.20	0.17	0.15	0.12	0.09
9L	0.52	0.30	0.26	0.23	0.18	0.13
12L	0.72	0.41	0.36	0.31	0.25	0.18
15L	0.93	0.53	0.46	0.40	0.32	0.23
18L	1.12	0.65	0.56	0.49	0.39	0.28
21L	1.38	0.80	0.69	0.60	0.48	0.34
24L	1.63	0.94	0.82	0.71	0.56	0.41
30L	1.74	1.00	0.87	0.75	0.60	0.43

*Electrical data at 25°C (77°F). Actual wattage may differ by +/-10%

RECOMMENDED LUMEN MAINTENANCE[1]

Ambient Temp	Lumen Multiplier				
C	0 hrs.[2]	25K hrs.[2]	50K hrs.[2]	75K hrs.[3]	100K hrs.[3]
0 C - 25 C	100%	95%	89%	84%	79%
40 C	100%	94%	87%	80%	74%

1. Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.
2. In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X)the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).
3. In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times NA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

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PHOTOMETRICS

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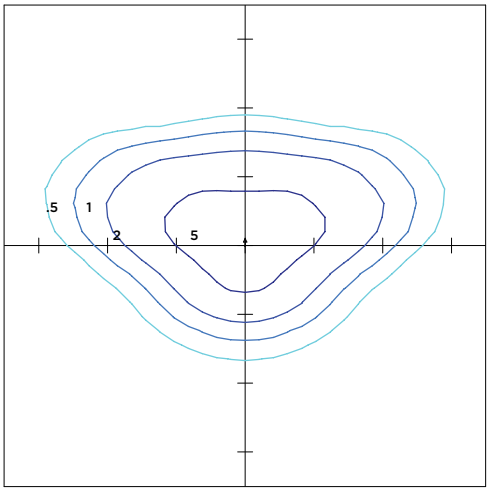
Luminaire photometry has been conducted by an accredited laboratory in accordance with IESNA LM-79. As specified by IESNA LM-79 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

MRS-LED-18L-SIL-2-40-70CRI

Luminaire Data	
Type 2 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	17,532
Watts	135
Efficacy	130
IES Type	Type II - Short
BUG Rating	B3-U0-G3

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30)°	2831	16%
Medium (30-60)°	10310	59%
High (60-80)°	4208	24%
Very High (80-90)°	184	1%
Uplight (90-180)°	0	0%
Total Flux	17532	100%

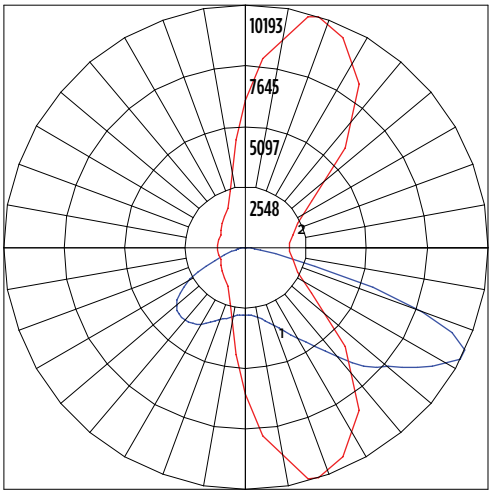
ISO Footcandle



20' Mounting Height / 20' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

Polar Curve



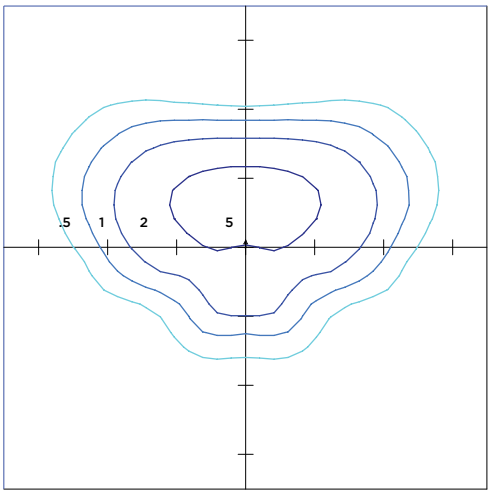
Vertical Plane Horizontal Cone

MRS-LED-18L-SIL-3-40-70CRI

Luminaire Data	
Type 3 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	18,417
Watts	135
Efficacy	137
IES Type	Type III - Short
BUG Rating	B3-U0-G3

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30)°	2329	13%
Medium (30-60)°	10634	61%
High (60-80)°	5246	30%
Very High (80-90)°	208	1%
Uplight (90-180)°	0	0%
Total Flux	18417	100%

ISO Footcandle



20' Mounting Height / 20' Grid Spacing

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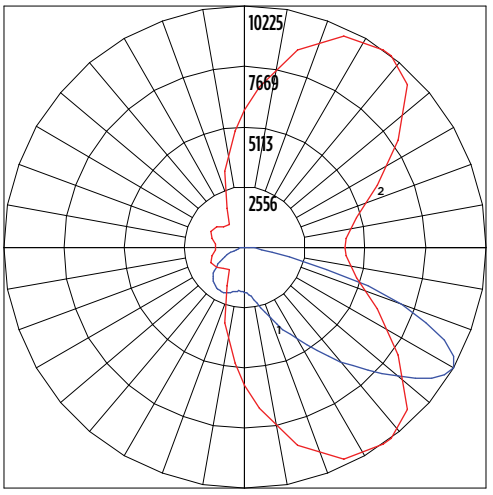
Polar Curve



Vertical Plane Horizontal Cone

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PHOTOMETRICS (CONT)

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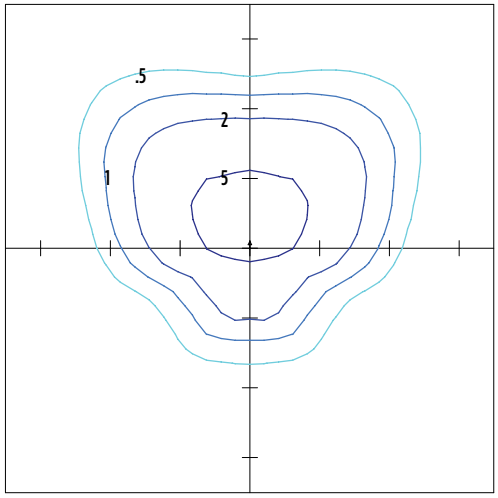
MRS-LED-18L-SIL-FT-40-70CRI

Luminaire Data	
Type FT Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	17,682
Watts	135
Efficacy	131
IES Type	Type III - Short
BUG Rating	B3-U0-G2

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30)°	2255	13%
Medium (30-60)°	9463	54%
High (60-80)°	5696	32%
Very High (80-90)°	268	2%
Uplight (90-180)°	0	0%
Total Flux	17682	100%

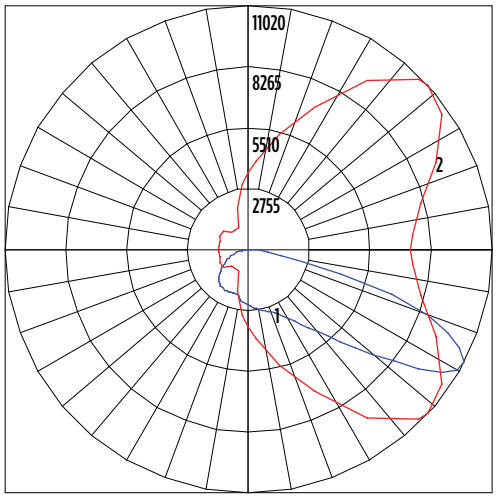
ISO Footcandle



20' Mounting Height / 20' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

Polar Curve



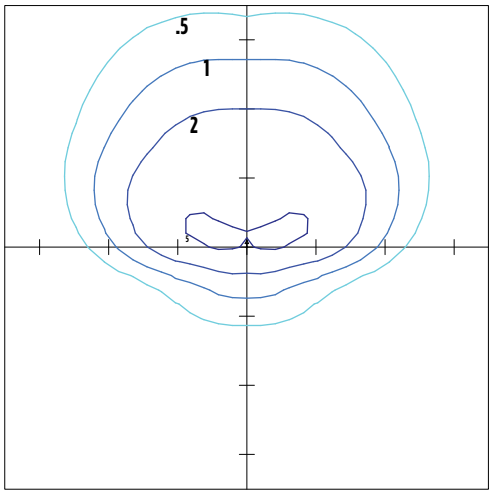
Vertical Plane Horizontal Cone

MRS-LED-18L-SIL-4-40-70CRI

Luminaire Data	
Type 4 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	18,149
Watts	135
Efficacy	134
IES Type	Type IV - Very Short
BUG Rating	B3-U0-G4

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30)°	1671	9%
Medium (30-60)°	7615	42%
High (60-80)°	8074	44%
Very High (80-90)°	790	4%
Uplight (90-180)°	0	0%
Total Flux	18149	100%

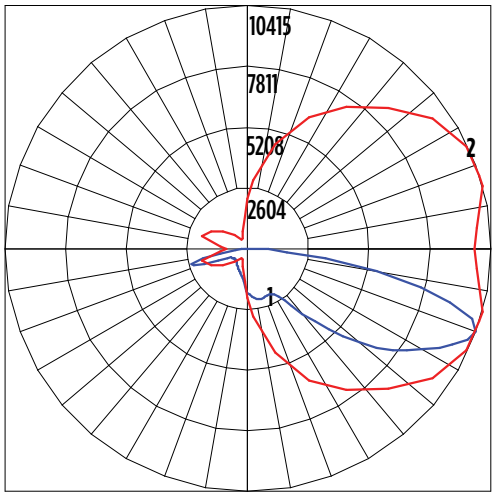
ISO Footcandle



20' Mounting Height / 20' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

Polar Curve



Vertical Plane Horizontal Cone

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PHOTOMETRICS (CONT)

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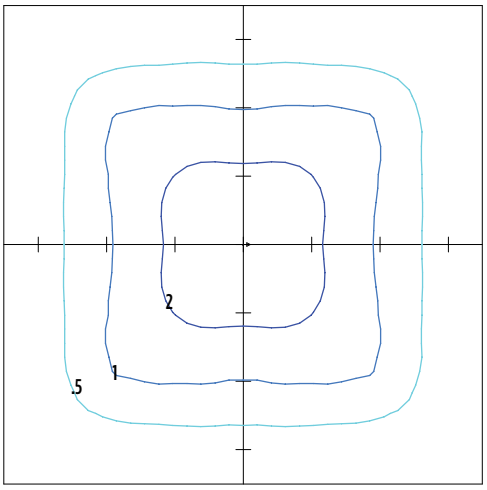
MRM-LED-30L-SIL-5W-40-70CRI

Luminaire Data	
Type 5W Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	17,636
Watts	135
Efficacy	131
IES Type	Type VS - Short
BUG Rating	B4-U0-G2

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30)°	1646	9%
Medium (30-60)°	7453	43%
High (60-80)°	8405	48%
Very High (80-90)°	132	1%
Uplight (90-180)°	0	0%
Total Flux	17636	100%

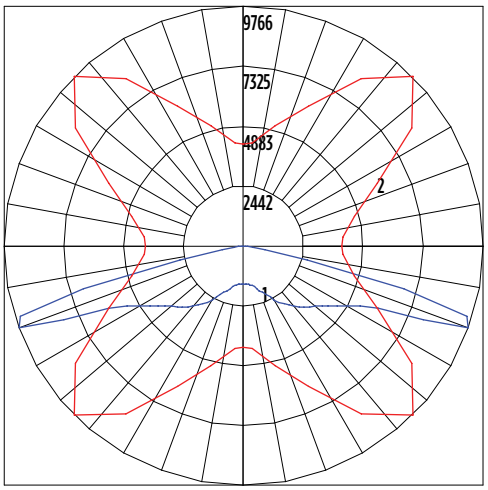
ISO Footcandle



20' Mounting Height / 20' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

Polar Curve



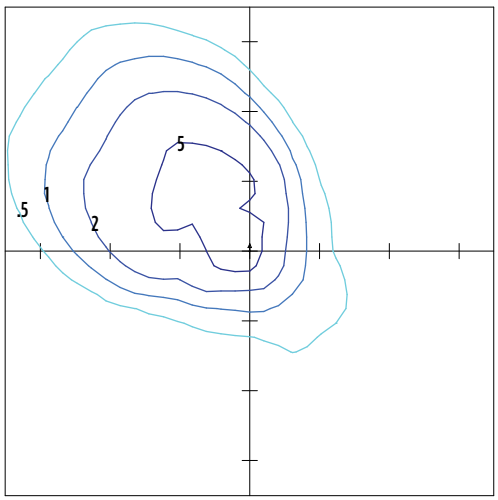
Vertical Plane Horizontal Cone

MRS-LED-18L-SIL-LC-40-70CRI

Luminaire Data	
Left Corner Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	18,258
Watts	135
Efficacy	135
IES Type	N/A
BUG Rating	B3-U0-G3

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30)°	2412	13%
Medium (30-60)°	7504	41%
High (60-80)°	7698	42%
Very High (80-90)°	644	4%
Uplight (90-180)°	0	0%
Total Flux	18258	100%

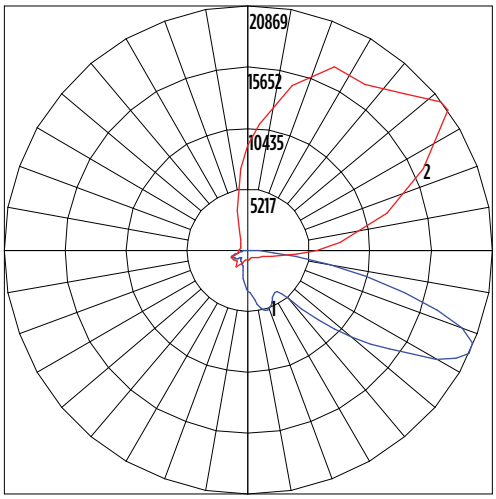
ISO Footcandle



20' Mounting Height / 20' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

Polar Curve



Vertical Plane Horizontal Cone

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PHOTOMETRICS (CONT)

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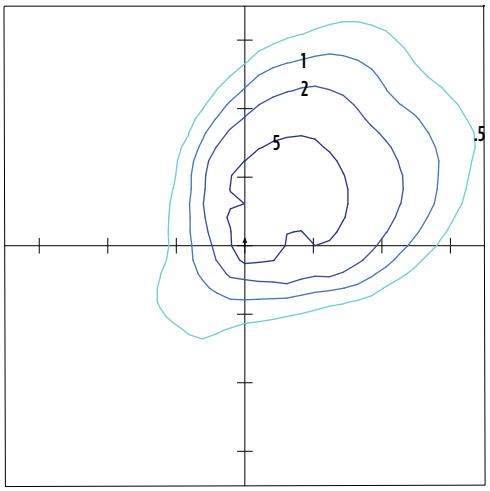
MRM-LED-30L-SIL-5W-40-70CRI

Luminaire Data	
Right Corner Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	18,138
Watts	135
Efficacy	134
IES Type	N/A
BUG Rating	B3-U0-G3

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30)°	2317	13%
Medium (30-60)°	8066	44%
High (60-80)°	7214	40%
Very High (80-90)°	541	3%
Uplight (90-180)°	0	0%
Total Flux	18138	100%

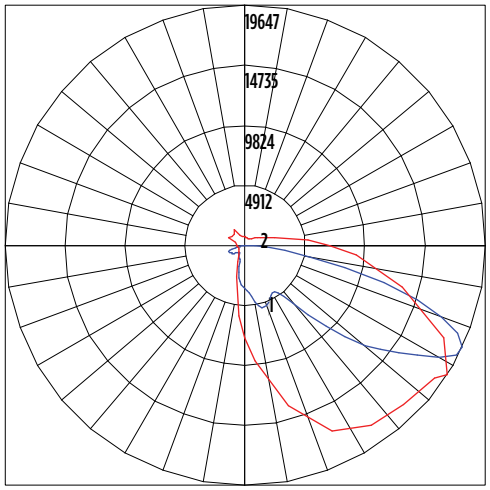
ISO Footcandle



20' Mounting Height / 20' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

Polar Curve



Vertical Plane Horizontal Cone

PRODUCT DIMENSIONS

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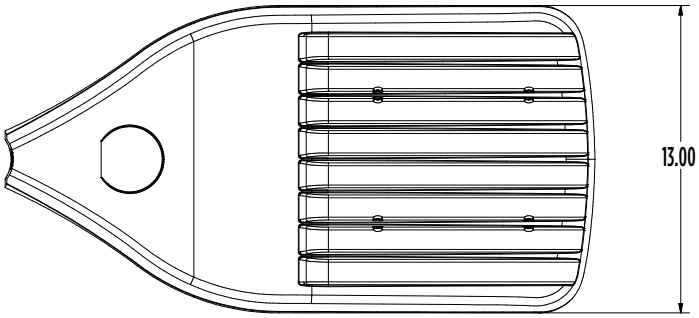

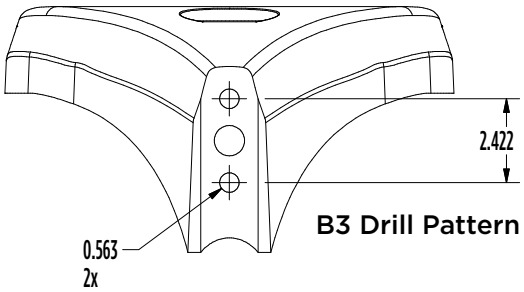

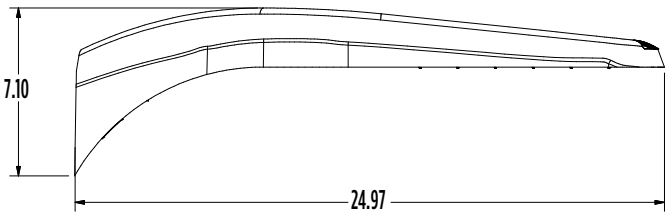

Luminaire EPA Chart					
Tilt Degree		**0°**	**15°**	**30°**	**45°**
	Single	0.4	0.7	1.1	1.5
	D180°	0.8	1.5	1.9	2.4
	D90°	0.9	1.5	1.9	2.4
	T90°	0.9	1.6	21	2.5
	TN120°	0.9	1.9	2.7	3.0
	Q90°	0.9	1.6	2.1	2.5

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CONTROLS

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Integral Bluetooth™ Motion and Photocell Sensor (IMSBTxL)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is IP66 rated for cold and wet locations (-40°F to 167°F). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

Click here to learn more details about IMSBT

LEVITON App Apple Android

AirLink Blue (ALBMRxLR, ALBCSx)

Wireless Bluetooth Mesh Lighting Control System that incorporates Luminaire Level Lighting Controls (LLLC) and high-end trim to provide energy savings code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App with technology partner Silvair. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/Site, Wall Mounted, Parking Garage and Canopy luminaires.

Click here to learn more details about AirLink Blue

AirLink Blue App Apple

Sensor Sequence of Operations

Standard Programming	On Event	Off Event	On Light Level	Dim Light Level	Daylight Harvesting	Delay To Off	Sensitivity
IMSBTxL	Motion	No Motion	100%	N/A	On; Auto Calibration	20 minutes	High

Operation	Description
On Event	Trigger that activates lights to turn on; either automatic via motion detected or manually activated via push of button.
Off Event	Trigger that activates lights to turn off; either automatic via no motion detected or manually activated via push of button.
On Light Level	The light level that the fixtures will turn on to when ON EVENT occurs.
Dim Light Level	The light level that the fixtures will dim down to when no motion is detected.
Delay to Dim	The amount of time after which no motion is detected that the fixtures will be triggered to dim down. This sequence is optional, and sensor can be programmed to only trigger the fixture to turn off by entering 100% in this field.
Delay to Off	The amount of time after which no motion is detected that the fixtures will be triggered to turn off. If delay to dim is part of the programmed functionality, this is the amount of time after which no motion is detected after the fixture have already dimmed down.
Sensitivity	The sensitivity can be set to high, medium, low, or auto where applicable. High will detect smaller, simple motions. Low will only detect larger more complex motions. Auto temperature calibration adjusts the PIR sensitivity as ambient temperature rises to increase detection of heat movement through the field of view.

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REL-FR

Fire Rated, Recessed LED Downlight

Project

Catalog

Type

Date

Product Description

The Fire Rated REL Recessed Downlight meets the latest codes for multi-family fire rating with a 2-hour certification per UL263. The edge-lit technology makes it a practical solution with high performance and five CCT selectability options (2700K, 3000K, 3500K, 4000K, and 5000K) for ultimate customization. Adjustable spring-loaded retention tabs allow a secure fit for easy installation in both new construction and remodel applications. The REL-FR is an ideal solution for apartment buildings, townhomes, condos, and commercial applications.

Construction
- Steel housing provides durability and fire resistance
- Edge-lit technology allows for extremely thin fixture depth
- Off-board driver minimizes installation height and maximizes fixture life through improved heat management

Optical System
- Precision engineered optical stack creates uniform light distribution that maximizes lumen output
- Offered with 5CCT selection of 2700K, 3000K, 3500K, 4000K, and 5000K
- Utilizes high performing LEDs with 90+ CRI and an R9 > 60

Electrical
- Input voltage of 120VAC, 60Hz
- Dimmable to 5% with compatible leading edge (TRIAC) or trailing edge (ELV) dimmers
- Operating temperature rating of -4°F to 104°F (-20°C to 40°C)

Finish
- White powder coat finish trim
- Red powder coat finish backside to denote fire resistance

Mounting and Installation
- Spring-loaded retention tabs allow for easy installation into ceilings up to 3/4" thick with no need for recessed housing.
- Remote driver/junction box includes four 1/2" KOs and three-port poke-in connectors
- Included paper cut-out template
- Accessory steel rough-in frames and templates available
- Accessory extension power cables (2' and 10) are available.
- For installations where power surges may be possible, NICOR recommends installing additional surge protection at the electrical distribution panel.

Listings
- UL 1598 listed for wet locations
- UL263 certified for 2hr fire resistance
- Energystar listed
- CA Title 24 compliant (JA8)
- Certified for direct contact with insulation (IC-rated)
- Meets Air Tight requirements per ASTM E283
- Compliant with NFPA® 70, NEC® Section 410.16 (A)(3) and 410.16 (C)(5) for closet use
- RoHS Compliant: Free from harmful and hazardous materials
- Meets FCC Part 15, Subpart B, Class B standards for conducted and radiated emissions
- LED lumen maintenance: L70(9k)>72,000 hrs
- LM-79, LM-80 testing performed in accordance with IESNA standards

Warranty
- 5-year limited system warranty standard
- Warranty does not cover product failure due to an overvoltage event (power surge)

REL-FR

4" & 6" Fire Rated Edgelit LED Downlight

900, 1200 lumen

Ordering

Ordering Information

Example : REL6FR1120SRD9WH

Series	Version	Voltage	CCT's	Trim Shape	CRI	Trim Color
☐ **REL4**	**FR1** (Fire Rated)	**120**	**S** (Selectable)	**RD** (Round)	**9** (90)	**WH** (White)
○ **REL6**						

Specifications and dimensions subject to change without notice

Accessories

accessories sold separately

2' Extension Cable	☐ EXTCABLE-SELECT-02
10' Extension Cable	☐ EXTCABLE-SELECT-10
3", 4", 6" Multi-Diameter Frame	☐ MULTIFRAME-346-1
4" Rough-in Frame with Lip	☐ DLE4-ROUGHIN-FRAME
6" Rough-in Frame with Lip	☐ DLE6-ROUGHIN-FRAME
3", 4", 6" Rough In Flat Template	☐ ROUGHIN-TEMPLATE-346
4" White Goof Ring	☐ REL4-1-GR-RD-WH

Performance Data and Dimming

Performance Data

Model Number	CCT	Lumens	Watts	Lumens/Watt
REL4FR1120SRD9WH	2700	914	10.9	83.9
	3000	957		87.8
	3500	1001		91.8
	4000	1007		92.4
	5000	958		87.9
REL6FR1120SRD9WH	2700	1251	14.6	85.7
	3000	1281		87.7
	3500	1327		90.9
	4000	1338		91.6
	5000	1279		87.6

Recommended Dimmers*

Lutron Skylark SELV-300P
Lutron Skylark SCL-153P
Lutron DIVA DVCL-153P
Lutron DIVA DVELV-300P
Lutron MAELV-600
Lutron PD-10NXD

**Not a complete list. Check compatibility before installation.*

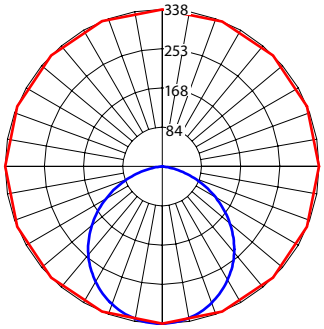
Photometric Data

REL4FR1 (2700K)

Input Voltage (VAC)	120
System Level Power (W)	10.9
Delivered Lumens (Lm)	914
System Efficacy (Lm/W)	83.9
Correlated Color Temp (K)	2745
Color Rendering Index (CRI)	95 R9=71
Beam Angle (°)	109
Spacing Criteria	1.25

CCT Data Multiplier

3000K	1.047
3500K	1.095
4000K	1.102
5000K	1.048



Intensity Summary (Candle Power)

Angle	Mean CP
0	338
5	336
15	323
25	298
35	263
45	217
55	163
65	104
75	46
85	5
90	0

Cone of Light Tabulation

Mounted height (Feet)	Footcandles Beam Center	Diameter (Feet)
4	21.1	11.3
6	9.4	17.0
8	5.3	22.7
10	3.4	28.4

Zonal Lumen Summary

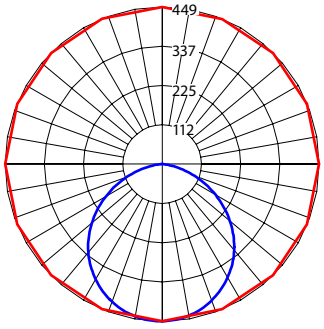
Zone	Lumens	% of Luminaire
0-30	262	28.6%
0-40	428	46.8%
0-60	747	81.7%
0-90	914	100%
90-180	0	0%
0-180	914	100%

Photometric Data

REL6FR1 (2700K)

Input Voltage (VAC)	120
System Level Power (W)	14.6
Delivered Lumens (Lm)	1251
System Efficacy (Lm/W)	85.7
Correlated Color Temp (K)	2739
Color Rendering Index (CRI)	93 R9=64
Beam Angle (°)	111
Spacing Criteria	1.27

CCT Data Multiplier	
3000K	1.024
3500K	1.061
4000K	1.070
5000K	1.022



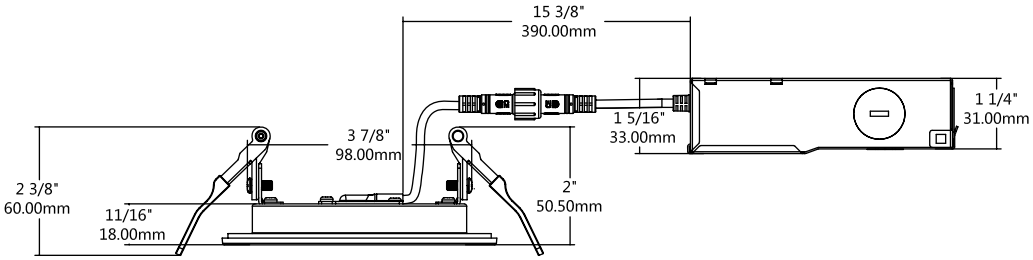
Intensity Summary (Candle Power)	
Angle	Mean CP
0	449
5	447
15	431
25	400
35	355
45	298
55	230
65	154
75	78
85	14
90	0

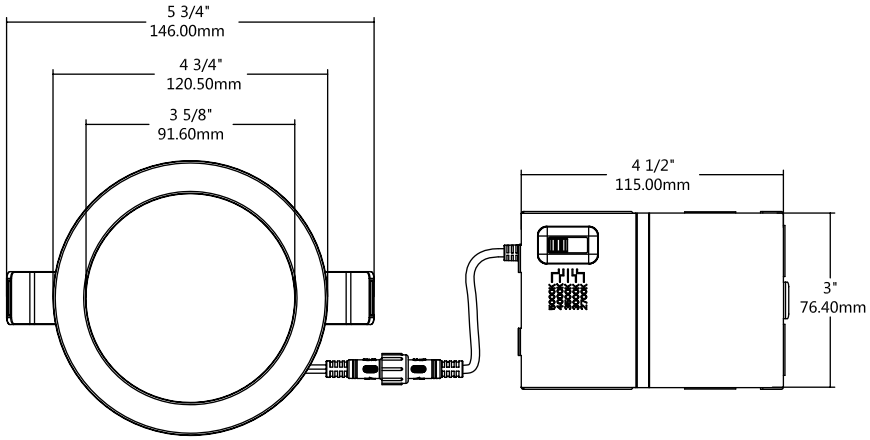
Cone of Light Tabulation		
Mounted height (Feet)	Footcandles Beam Center	Diameter (Feet)
4	28.1	11.6
6	12.5	17.4
8	7.0	23.2
10	4.5	29.0

Zonal Lumen Summary		
Zone	Lumens	% of Luminaire
0-30	348	27.8%
0-40	569	45.5%
0-60	1002	80.1%
0-90	1251	100%
90-180	0	0%
0-180	1251	100%

Dimensions

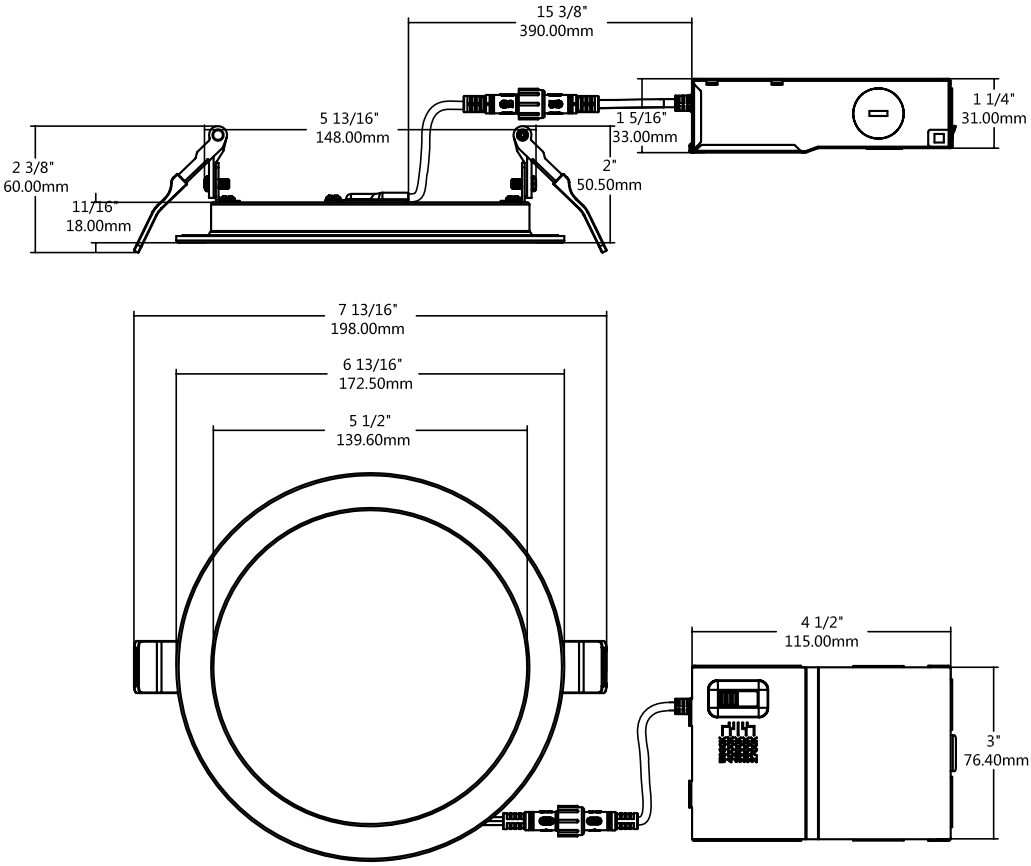
REL4FR1





Dimensions (continued)

REL6FR1



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

SME
SEVEE & MAHER
ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692
info@smemaine.com
smemaine.com

February 10, 2026

RECEIVED
FEB 11 2026
By 0237-26

Kirk F. Mohney, Director
Maine Historic Preservation Commission
55 Capitol Street
65 State House Station
Augusta, ME 04333-0065

Subject: Bangor Housing Development Corporation – Home for Good Bangor
236 Maine Avenue
Bangor, Maine

Dear Kirk:

Bangor Housing Development Corporation is seeking approval for construction of a thirty (30)-unit apartment building at 236 Maine Avenue in Bangor, Maine under the City of Bangor Land Development Permit Application.

PROJECT DESCRIPTION

Bangor Housing Development Corporation is proposing to construct a 19,500-square-foot apartment building with thirty (30) one-bedroom units and a fourteen (14) space parking lot. Additional site improvements include a 6-foot-wide paved walkway from the Maine Avenue Parking lot to the Corporate Drive building entrance, a patio along the eastern side of the building, public water and sewer, underground utilities, stormwater management, site lighting, and landscaping.

The 5-acre parcel is bound by Maine Avenue to the west, Texas Avenue to the east, Corporate Drive to the south, and a developed University of Maine Office Building property to the north. The project location is outlined in the attached Figure 1 - Site Location Map.

HISTORICAL FINDINGS

A search of the National Register of Historic Places online maps did not identify any historic places adjacent to the 5-acre parcel.

In addition to searching the National Register of Historic Places, records of neighboring properties were searched for any buildings over fifty (50) years old. There were four properties that are 50 years old or older. All properties with such buildings are listed below with photos attached and their location keyed to Figure 2.

- 50 Cleveland Street (1958)
- 1 University Drive (Unknown)

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ENGINEERS

- 97 Venture Way (1944)
- 120 Venture Way (1968)

Please feel free to contact me at 207.829.5016 or anna.dedon@smemaine.com if you have any questions or need additional information.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.

Anna Dedon
Civil Engineer

Attachments

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

Kirk F. Mohney — 3/2/26
State Historic Preservation Officer — Date
Maine Historic Preservation Commission

MHPC 0237-26

APPENDIX B

PRE-DEVELOPMENT HYDROCAD CALCULATIONS

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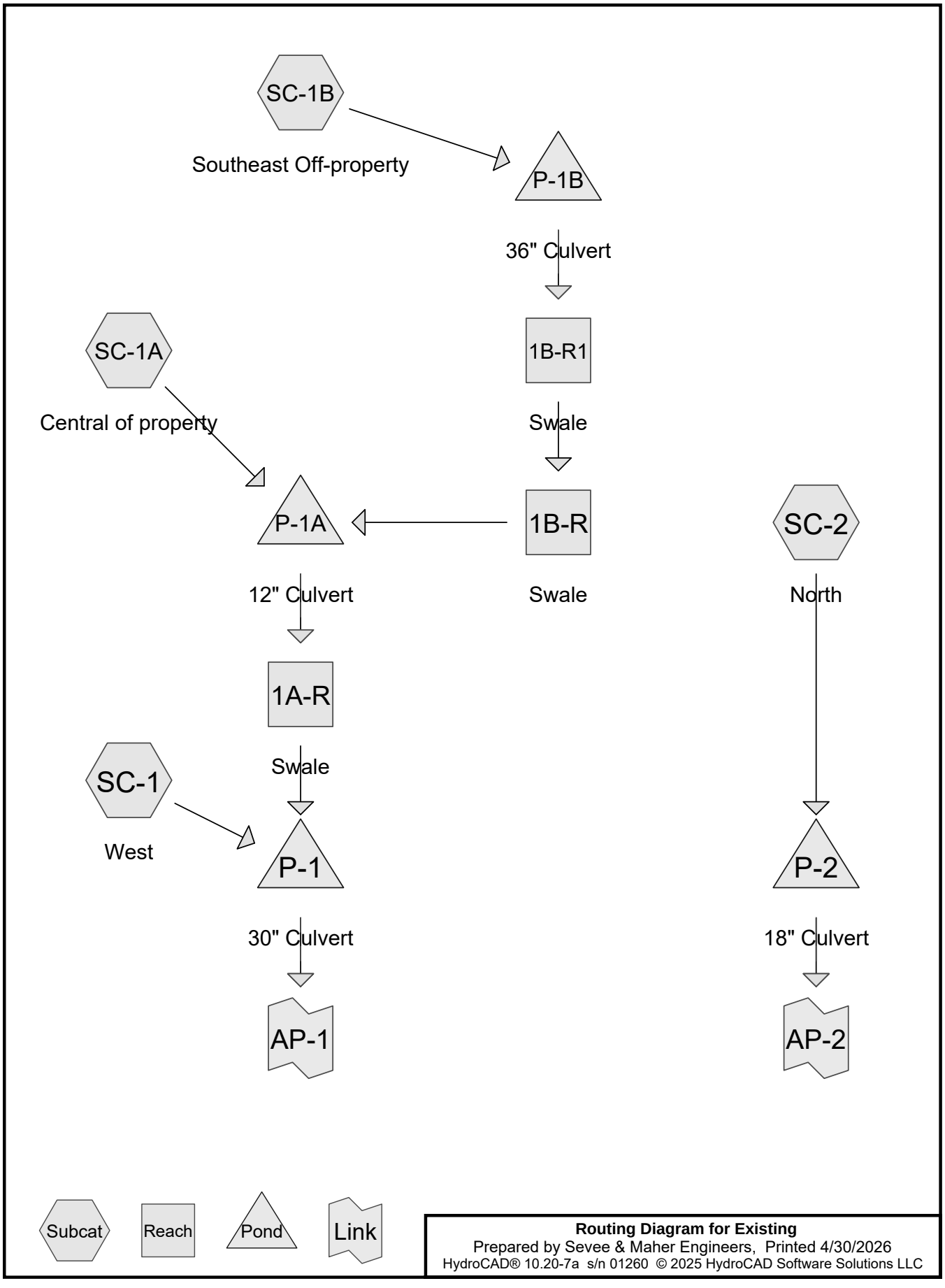


Routing Diagram for Existing

Prepared by Sevee & Maher Engineers, Printed 4/30/2026

HydroCAD® 10.20-7a s/n 01260 © 2025 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.555	96	Gravel surface (SC-1, SC-1B, SC-2)
0.261	74	Pasture/grassland/range, Good, HSG C (SC-1B)
8.994	80	Pasture/grassland/range, Good, HSG D (SC-1, SC-1A, SC-1B)
2.762	89	Pasture/grassland/range, Poor, HSG D (SC-2)
0.920	98	Paved parking (SC-1, SC-1B, SC-2)
0.621	98	Paved roads w/curbs & sewers (SC-1, SC-1A, SC-1B)
0.238	98	Roads (SC-2)
0.584	98	Roofs (SC-1B, SC-2)
1.718	79	Woods/grass comb., Good, HSG D (SC-1, SC-1A, SC-1B, SC-2)

Summary for Subcatchment SC-1: West

Runoff = 3.16 cfs @ 12.26 hrs, Volume= 0.325 af, Depth= 1.15"
Routed to Pond P-1 : 30" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	4,507	98	Paved parking
*	13,861	98	Paved roads w/curbs & sewers
*	1,421	96	Gravel surface
	125,331	80	Pasture/grassland/range, Good, HSG D
	3,140	79	Woods/grass comb., Good, HSG D
	148,260	82	Weighted Average
	129,892		87.61% Pervious Area
	18,368		12.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.2	100	0.0300	0.13		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.3	35	0.0721	1.88		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	23	0.0200	2.87		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
1.0	114	0.0772	1.94		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
0.3	31	0.1194	1.73		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
1.2	159	0.0975	2.19		**Shallow Concentrated Flow, F-G** Short Grass Pasture Kv= 7.0 fps
2.0	205	0.0602	1.72		**Shallow Concentrated Flow, G-H** Short Grass Pasture Kv= 7.0 fps
18.1	667	Total			

Summary for Subcatchment SC-1A: Central of property

Runoff = 2.61 cfs @ 12.17 hrs, Volume= 0.234 af, Depth= 1.03"
Routed to Pond P-1A : 12" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	1,968	98	Paved roads w/curbs & sewers
	96,225	80	Pasture/grassland/range, Good, HSG D
	20,374	79	Woods/grass comb., Good, HSG D
	118,567	80	Weighted Average
	116,599		98.34% Pervious Area
	1,968		1.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0800	0.19		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.1	6	0.0800	1.98		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	35	0.1143	1.69		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.7	311	0.0772	1.94		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
12.0	452	Total			

Summary for Subcatchment SC-1B: Southeast Off-property

Runoff = 6.68 cfs @ 12.28 hrs, Volume= 0.712 af, Depth= 1.27"
Routed to Pond P-1B : 36" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	20,275	98	Roofs
*	19,477	98	Paved parking
	11,200	98	Paved roads w/curbs & sewers
*	19,494	96	Gravel surface
	11,386	74	Pasture/grassland/range, Good, HSG C
	170,243	80	Pasture/grassland/range, Good, HSG D
	40,129	79	Woods/grass comb., Good, HSG D
	292,204	84	Weighted Average
	241,252		82.56% Pervious Area
	50,952		17.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8	100	0.0325	0.13		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.9	79	0.0443	1.47		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
1.5	147	0.1041	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.3	34	0.0882	2.08		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
3.6	219	0.0411	1.01		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.7	117	0.0342	2.77		**Shallow Concentrated Flow, F-G** Grassed Waterway Kv= 15.0 fps
0.2	79	0.0200	8.06	9.90	**Pipe Channel, G-H** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.1	28	0.0896	4.49		**Shallow Concentrated Flow, H-I** Grassed Waterway Kv= 15.0 fps
20.1	803	Total			

Summary for Subcatchment SC-2: North

Runoff = 5.71 cfs @ 12.21 hrs, Volume= 0.545 af, Depth= 1.71"
Routed to Pond P-2 : 18" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	5,185	98	Roofs
*	10,374	98	Roads
*	16,108	98	Paved parking
*	3,267	96	Gravel surface
	120,323	89	Pasture/grassland/range, Poor, HSG D
	11,205	79	Woods/grass comb., Good, HSG D
	166,462	90	Weighted Average
	134,795		80.98% Pervious Area
	31,667		19.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0600	0.17		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.0	4	0.0600	1.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.5	44	0.0909	1.51		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
3.0	320	0.0656	1.79		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.0	288	0.0249	2.37		**Shallow Concentrated Flow, E-F** Grassed Waterway Kv= 15.0 fps
15.5	756	Total			

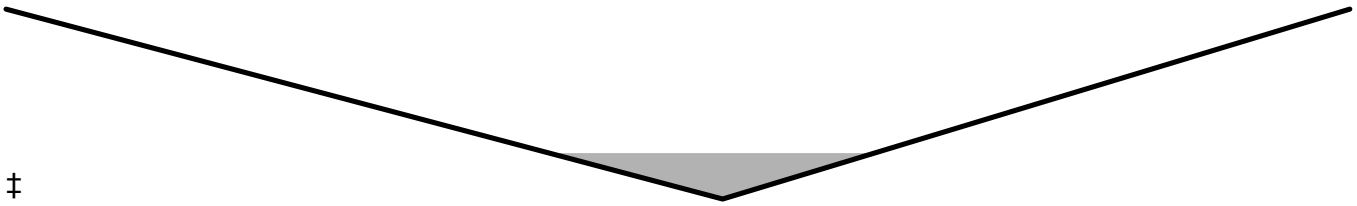
Summary for Reach 1A-R: Swale

Inflow Area = 9.430 ac, 12.88% Impervious, Inflow Depth = 1.20" for 2-Year event
Inflow = 8.54 cfs @ 12.28 hrs, Volume= 0.943 af
Outflow = 8.53 cfs @ 12.31 hrs, Volume= 0.943 af, Atten= 0%, Lag= 1.5 min
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Max. Velocity= 4.34 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.72 fps, Avg. Travel Time= 1.4 min

Peak Storage= 278 cf @ 12.31 hrs
Average Depth at Peak Storage= 0.72' , Surface Width= 5.43'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 377.41 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 141.2' Slope= 0.0167 '/'
Inlet Invert= 156.51', Outlet Invert= 154.15'



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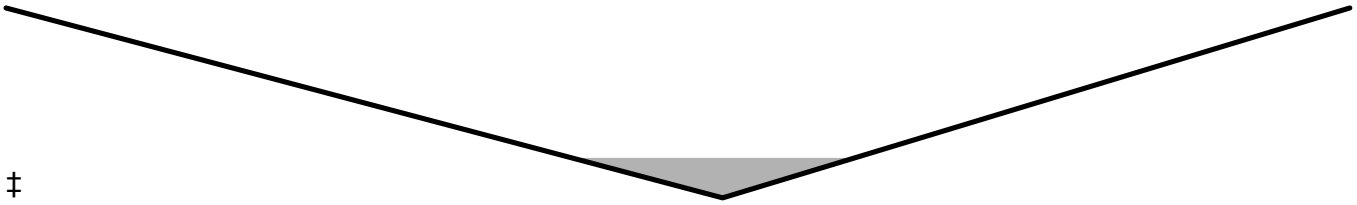
Summary for Reach 1B-R: Swale

Inflow Area = 6.708 ac, 17.44% Impervious, Inflow Depth = 1.27" for 2-Year event
Inflow = 6.64 cfs @ 12.32 hrs, Volume= 0.710 af
Outflow = 6.63 cfs @ 12.33 hrs, Volume= 0.710 af, Atten= 0%, Lag= 0.6 min
Routed to Pond P-1A : 12" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Max. Velocity= 4.43 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.78 fps, Avg. Travel Time= 2.0 min

Peak Storage= 320 cf @ 12.33 hrs
Average Depth at Peak Storage= 0.63' , Surface Width= 4.74'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 422.76 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 214.1' Slope= 0.0210 '/'
Inlet Invert= 161.00', Outlet Invert= 156.51'



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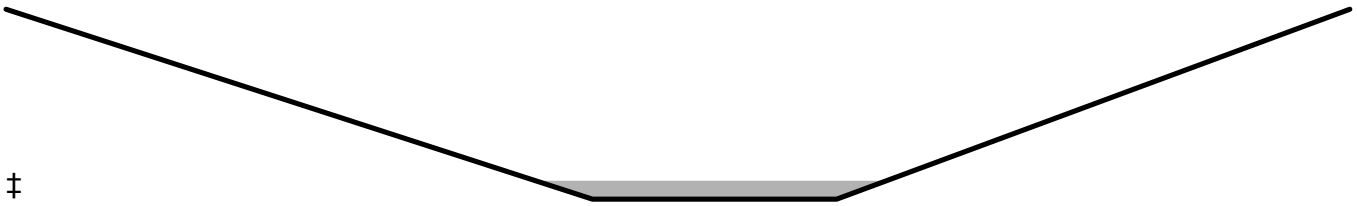
Summary for Reach 1B-R1: Swale

Inflow Area = 6.708 ac, 17.44% Impervious, Inflow Depth = 1.27" for 2-Year event
Inflow = 6.65 cfs @ 12.30 hrs, Volume= 0.710 af
Outflow = 6.64 cfs @ 12.32 hrs, Volume= 0.710 af, Atten= 0%, Lag= 0.7 min
Routed to Reach 1B-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Max. Velocity= 3.74 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 1.28 fps, Avg. Travel Time= 2.8 min

Peak Storage= 383 cf @ 12.32 hrs
Average Depth at Peak Storage= 0.29' , Surface Width= 7.18'
Bank-Full Depth= 3.00' Flow Area= 48.8 sf, Capacity= 670.12 cfs

5.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 27.50'
Length= 216.0' Slope= 0.0200 '/'
Inlet Invert= 165.33', Outlet Invert= 161.00'



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Summary for Pond P-1: 30" Culvert

Inflow Area = 12.834 ac, 12.75% Impervious, Inflow Depth = 1.19" for 2-Year event
Inflow = 11.62 cfs @ 12.29 hrs, Volume= 1.268 af
Outflow = 11.60 cfs @ 12.30 hrs, Volume= 1.268 af, Atten= 0%, Lag= 0.7 min
Primary = 11.60 cfs @ 12.30 hrs, Volume= 1.268 af
Routed to Link AP-1 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link AP-1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 155.78' @ 12.30 hrs Surf.Area= 453 sf Storage= 217 cf

Plug-Flow detention time= 0.1 min calculated for 1.267 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (858.2 - 858.0)

Volume	Invert	Avail.Storage	Storage Description
#1	154.15'	16,642 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
154.15	0	0	0
155.00	50	21	21
156.00	569	310	331
157.00	5,902	3,236	3,566
158.00	20,250	13,076	16,642

Device	Routing	Invert	Outlet Devices
#1	Primary	154.15'	**30.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 154.15' / 153.00' S= 0.0153 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf
#2	Secondary	157.50'	**30.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=11.60 cfs @ 12.30 hrs HW=155.78' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 11.60 cfs @ 3.43 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=154.15' TW=0.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond P-1A: 12" Culvert

Inflow Area = 9.430 ac, 12.88% Impervious, Inflow Depth = 1.20" for 2-Year event
Inflow = 8.54 cfs @ 12.30 hrs, Volume= 0.943 af
Outflow = 8.54 cfs @ 12.28 hrs, Volume= 0.943 af, Atten= 0%, Lag= 0.0 min
Primary = 0.19 cfs @ 12.31 hrs, Volume= 0.009 af
Routed to Reach 1A-R : Swale
Secondary = 8.35 cfs @ 12.28 hrs, Volume= 0.934 af
Routed to Reach 1A-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 157.25' @ 12.32 hrs Surf.Area= 179 sf Storage= 112 cf

Plug-Flow detention time= 0.9 min calculated for 0.942 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (857.9 - 857.3)

Volume	Invert	Avail.Storage	Storage Description
#1	156.00'	1,138 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.00	0	0	0
158.00	286	286	286
159.00	1,417	852	1,138

Device	Routing	Invert	Outlet Devices
#1	Primary	156.61'	**12.0" Round Culvert** L= 19.9' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 156.61' / 156.51' S= 0.0050 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	156.00'	**10.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.19 cfs @ 12.31 hrs HW=157.25' TW=157.23' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.19 cfs @ 0.51 fps)

Secondary OutFlow Max=7.52 cfs @ 12.28 hrs HW=157.25' TW=157.23' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 7.52 cfs @ 0.60 fps)

Summary for Pond P-1B: 36" Culvert

Inflow Area = 6.708 ac, 17.44% Impervious, Inflow Depth = 1.27" for 2-Year event
Inflow = 6.68 cfs @ 12.28 hrs, Volume= 0.712 af
Outflow = 6.65 cfs @ 12.30 hrs, Volume= 0.710 af, Atten= 0%, Lag= 1.2 min
Primary = 6.65 cfs @ 12.30 hrs, Volume= 0.710 af
Routed to Reach 1B-R1 : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1B-R1 : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 166.71' @ 12.30 hrs Surf.Area= 756 sf Storage= 648 cf

Plug-Flow detention time= 5.2 min calculated for 0.710 af (100% of inflow)
Center-of-Mass det. time= 3.3 min (854.0 - 850.7)

Volume	Invert	Avail.Storage	Storage Description
#1	165.00'	7,542 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
165.00	0	0	0
168.00	1,323	1,985	1,985
170.00	4,234	5,557	7,542

Device	Routing	Invert	Outlet Devices
#1	Primary	165.64'	**36.0" Round Culvert** L= 48.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 165.64' / 165.33' S= 0.0065 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf
#2	Secondary	169.00'	**20.0' long x 6.0' 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 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=6.64 cfs @ 12.30 hrs HW=166.71' TW=165.62' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 6.64 cfs @ 4.35 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=165.00' TW=165.33' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond P-2: 18" Culvert

Inflow Area = 3.821 ac, 19.02% Impervious, Inflow Depth = 1.71" for 2-Year event
Inflow = 5.71 cfs @ 12.21 hrs, Volume= 0.545 af
Outflow = 5.71 cfs @ 12.21 hrs, Volume= 0.545 af, Atten= 0%, Lag= 0.0 min
Primary = 3.72 cfs @ 12.21 hrs, Volume= 0.509 af
Routed to Link AP-2 :
Secondary = 1.99 cfs @ 12.21 hrs, Volume= 0.036 af
Routed to Link AP-2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 156.93' @ 12.21 hrs Surf.Area= 2 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.545 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (822.4 - 822.4)

Volume	Invert	Avail.Storage	Storage Description
#1	156.84'	944 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.84	0	0	0
157.00	4	0	0
158.00	187	96	96
159.00	1,509	848	944

Device	Routing	Invert	Outlet Devices
#1	Primary	155.84'	**18.0" Round Culvert** L= 135.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 155.84' / 153.80' S= 0.0151 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Secondary	156.84'	**32.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65

2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=3.72 cfs @ 12.21 hrs HW=156.93' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 3.72 cfs @ 3.78 fps)

Secondary OutFlow Max=1.98 cfs @ 12.21 hrs HW=156.93' TW=0.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 1.98 cfs @ 0.70 fps)

Summary for Link AP-1:

Inflow Area = 12.834 ac, 12.75% Impervious, Inflow Depth = 1.19" for 2-Year event
Inflow = 11.60 cfs @ 12.30 hrs, Volume= 1.268 af
Primary = 11.60 cfs @ 12.30 hrs, Volume= 1.268 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs

Summary for Link AP-2:

Inflow Area = 3.821 ac, 19.02% Impervious, Inflow Depth = 1.71" for 2-Year event
Inflow = 5.71 cfs @ 12.21 hrs, Volume= 0.545 af
Primary = 5.71 cfs @ 12.21 hrs, Volume= 0.545 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs

Summary for Subcatchment SC-1: West

Runoff = 6.42 cfs @ 12.25 hrs, Volume= 0.649 af, Depth= 2.29"
Routed to Pond P-1 : 30" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	4,507	98	Paved parking
*	13,861	98	Paved roads w/curbs & sewers
*	1,421	96	Gravel surface
	125,331	80	Pasture/grassland/range, Good, HSG D
	3,140	79	Woods/grass comb., Good, HSG D
	148,260	82	Weighted Average
	129,892		87.61% Pervious Area
	18,368		12.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.2	100	0.0300	0.13		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.3	35	0.0721	1.88		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	23	0.0200	2.87		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
1.0	114	0.0772	1.94		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
0.3	31	0.1194	1.73		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
1.2	159	0.0975	2.19		**Shallow Concentrated Flow, F-G** Short Grass Pasture Kv= 7.0 fps
2.0	205	0.0602	1.72		**Shallow Concentrated Flow, G-H** Short Grass Pasture Kv= 7.0 fps
18.1	667	Total			

Summary for Subcatchment SC-1A: Central of property

Runoff = 5.56 cfs @ 12.17 hrs, Volume= 0.482 af, Depth= 2.12"
Routed to Pond P-1A : 12" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	1,968	98	Paved roads w/curbs & sewers
	96,225	80	Pasture/grassland/range, Good, HSG D
	20,374	79	Woods/grass comb., Good, HSG D
	118,567	80	Weighted Average
	116,599		98.34% Pervious Area
	1,968		1.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0800	0.19		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.1	6	0.0800	1.98		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	35	0.1143	1.69		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.7	311	0.0772	1.94		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
12.0	452	Total			

Summary for Subcatchment SC-1B: Southeast Off-property

Runoff = 13.00 cfs @ 12.27 hrs, Volume= 1.375 af, Depth= 2.46"
Routed to Pond P-1B : 36" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	20,275	98	Roofs
*	19,477	98	Paved parking
	11,200	98	Paved roads w/curbs & sewers
*	19,494	96	Gravel surface
	11,386	74	Pasture/grassland/range, Good, HSG C
	170,243	80	Pasture/grassland/range, Good, HSG D
	40,129	79	Woods/grass comb., Good, HSG D
	292,204	84	Weighted Average
	241,252		82.56% Pervious Area
	50,952		17.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8	100	0.0325	0.13		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.9	79	0.0443	1.47		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
1.5	147	0.1041	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.3	34	0.0882	2.08		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
3.6	219	0.0411	1.01		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.7	117	0.0342	2.77		**Shallow Concentrated Flow, F-G** Grassed Waterway Kv= 15.0 fps
0.2	79	0.0200	8.06	9.90	**Pipe Channel, G-H** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.1	28	0.0896	4.49		**Shallow Concentrated Flow, H-I** Grassed Waterway Kv= 15.0 fps
20.1	803	Total			

Summary for Subcatchment SC-2: North

Runoff = 9.90 cfs @ 12.21 hrs, Volume= 0.960 af, Depth= 3.01"
Routed to Pond P-2 : 18" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	5,185	98	Roofs
*	10,374	98	Roads
*	16,108	98	Paved parking
*	3,267	96	Gravel surface
	120,323	89	Pasture/grassland/range, Poor, HSG D
	11,205	79	Woods/grass comb., Good, HSG D
	166,462	90	Weighted Average
	134,795		80.98% Pervious Area
	31,667		19.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0600	0.17		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.0	4	0.0600	1.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.5	44	0.0909	1.51		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
3.0	320	0.0656	1.79		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.0	288	0.0249	2.37		**Shallow Concentrated Flow, E-F** Grassed Waterway Kv= 15.0 fps
15.5	756	Total			

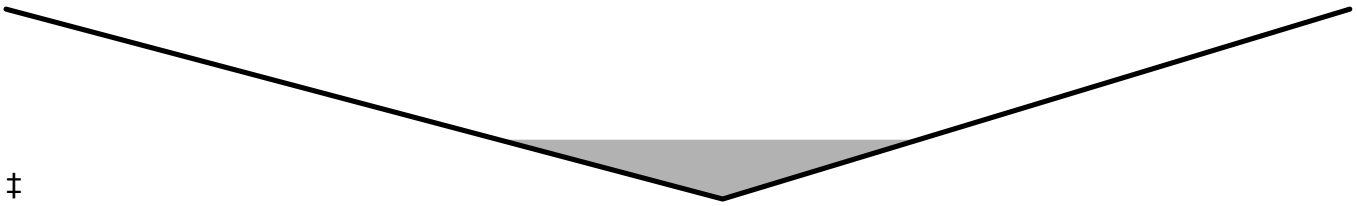
Summary for Reach 1A-R: Swale

Inflow Area = 9.430 ac, 12.88% Impervious, Inflow Depth = 2.36" for 10-Year event
Inflow = 16.95 cfs @ 12.28 hrs, Volume= 1.854 af
Outflow = 16.95 cfs @ 12.29 hrs, Volume= 1.854 af, Atten= 0%, Lag= 0.3 min
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Max. Velocity= 5.15 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.98 fps, Avg. Travel Time= 1.2 min

Peak Storage= 465 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.94' , Surface Width= 7.03'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 377.41 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 141.2' Slope= 0.0167 '/'
Inlet Invert= 156.51', Outlet Invert= 154.15'



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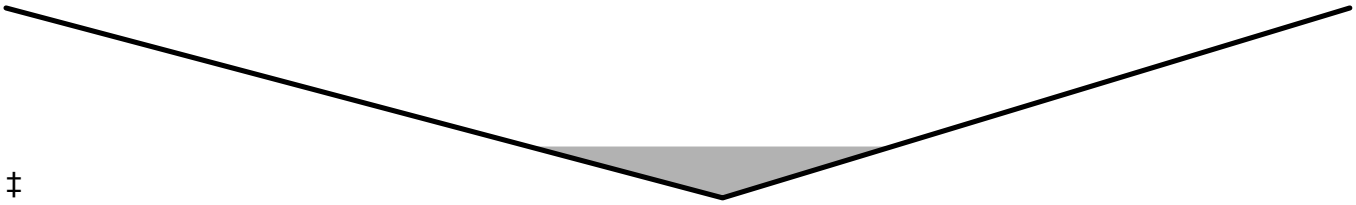
Summary for Reach 1B-R: Swale

Inflow Area = 6.708 ac, 17.44% Impervious, Inflow Depth = 2.46" for 10-Year event
Inflow = 12.92 cfs @ 12.30 hrs, Volume= 1.373 af
Outflow = 12.91 cfs @ 12.31 hrs, Volume= 1.373 af, Atten= 0%, Lag= 0.5 min
Routed to Pond P-1A : 12" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Max. Velocity= 5.24 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 2.03 fps, Avg. Travel Time= 1.8 min

Peak Storage= 528 cf @ 12.31 hrs
Average Depth at Peak Storage= 0.81' , Surface Width= 6.08'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 422.76 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 214.1' Slope= 0.0210 '/'
Inlet Invert= 161.00', Outlet Invert= 156.51'



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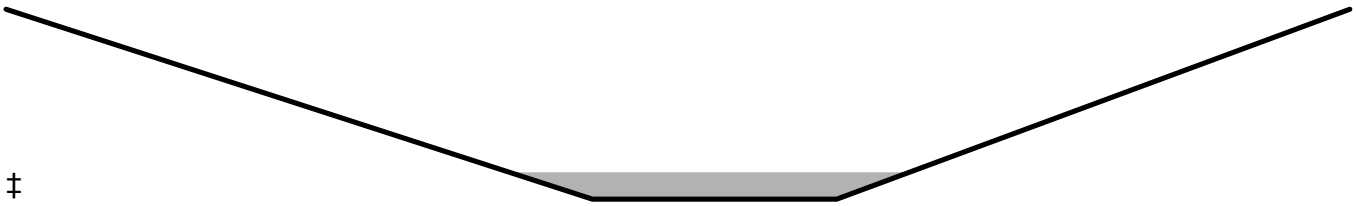
Summary for Reach 1B-R1: Swale

Inflow Area = 6.708 ac, 17.44% Impervious, Inflow Depth = 2.46" for 10-Year event
Inflow = 12.93 cfs @ 12.30 hrs, Volume= 1.373 af
Outflow = 12.92 cfs @ 12.30 hrs, Volume= 1.373 af, Atten= 0%, Lag= 0.6 min
Routed to Reach 1B-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Max. Velocity= 4.63 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.51 fps, Avg. Travel Time= 2.4 min

Peak Storage= 603 cf @ 12.30 hrs
Average Depth at Peak Storage= 0.42' , Surface Width= 8.18'
Bank-Full Depth= 3.00' Flow Area= 48.8 sf, Capacity= 670.12 cfs

5.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 27.50'
Length= 216.0' Slope= 0.0200 '/'
Inlet Invert= 165.33', Outlet Invert= 161.00'



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Summary for Pond P-1: 30" Culvert

Inflow Area = 12.834 ac, 12.75% Impervious, Inflow Depth = 2.34" for 10-Year event
Inflow = 23.27 cfs @ 12.27 hrs, Volume= 2.503 af
Outflow = 21.56 cfs @ 12.36 hrs, Volume= 2.503 af, Atten= 7%, Lag= 5.3 min
Primary = 21.56 cfs @ 12.36 hrs, Volume= 2.503 af
Routed to Link AP-1 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link AP-1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 156.74' @ 12.36 hrs Surf.Area= 4,489 sf Storage= 2,190 cf

Plug-Flow detention time= 0.5 min calculated for 2.502 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (837.9 - 837.5)

Volume	Invert	Avail.Storage	Storage Description
#1	154.15'	16,642 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
154.15	0	0	0
155.00	50	21	21
156.00	569	310	331
157.00	5,902	3,236	3,566
158.00	20,250	13,076	16,642

Device	Routing	Invert	Outlet Devices
#1	Primary	154.15'	**30.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 154.15' / 153.00' S= 0.0153 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf
#2	Secondary	157.50'	**30.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=21.56 cfs @ 12.36 hrs HW=156.73' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 21.56 cfs @ 4.39 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=154.15' TW=0.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond P-1A: 12" Culvert

Inflow Area = 9.430 ac, 12.88% Impervious, Inflow Depth = 2.36" for 10-Year event
Inflow = 16.96 cfs @ 12.28 hrs, Volume= 1.855 af
Outflow = 16.95 cfs @ 12.28 hrs, Volume= 1.854 af, Atten= 0%, Lag= 0.1 min
Primary = 0.56 cfs @ 12.28 hrs, Volume= 0.028 af
Routed to Reach 1A-R : Swale
Secondary = 16.39 cfs @ 12.28 hrs, Volume= 1.827 af
Routed to Reach 1A-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 157.51' @ 12.30 hrs Surf.Area= 215 sf Storage= 162 cf

Plug-Flow detention time= 0.7 min calculated for 1.854 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (837.2 - 836.8)

Volume	Invert	Avail.Storage	Storage Description
#1	156.00'	1,138 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.00	0	0	0
158.00	286	286	286
159.00	1,417	852	1,138

Device	Routing	Invert	Outlet Devices
#1	Primary	156.61'	**12.0" Round Culvert** L= 19.9' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 156.61' / 156.51' S= 0.0050 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	156.00'	**10.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.55 cfs @ 12.28 hrs HW=157.50' TW=157.45' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.55 cfs @ 0.99 fps)

Secondary OutFlow Max=16.14 cfs @ 12.28 hrs HW=157.50' TW=157.45' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 16.14 cfs @ 1.07 fps)

Summary for Pond P-1B: 36" Culvert

Inflow Area = 6.708 ac, 17.44% Impervious, Inflow Depth = 2.46" for 10-Year event
Inflow = 13.00 cfs @ 12.27 hrs, Volume= 1.375 af
Outflow = 12.93 cfs @ 12.30 hrs, Volume= 1.373 af, Atten= 0%, Lag= 1.3 min
Primary = 12.93 cfs @ 12.30 hrs, Volume= 1.373 af
Routed to Reach 1B-R1 : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1B-R1 : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 167.22' @ 12.30 hrs Surf.Area= 977 sf Storage= 1,082 cf

Plug-Flow detention time= 3.5 min calculated for 1.372 af (100% of inflow)
Center-of-Mass det. time= 2.6 min (834.4 - 831.7)

Volume	Invert	Avail.Storage	Storage Description
#1	165.00'	7,542 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
165.00	0	0	0
168.00	1,323	1,985	1,985
170.00	4,234	5,557	7,542

Device	Routing	Invert	Outlet Devices
#1	Primary	165.64'	**36.0" Round Culvert** L= 48.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 165.64' / 165.33' S= 0.0065 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf
#2	Secondary	169.00'	**20.0' long x 6.0' 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 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=12.92 cfs @ 12.30 hrs HW=167.21' TW=165.75' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 12.92 cfs @ 5.00 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=165.00' TW=165.33' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond P-2: 18" Culvert

Inflow Area = 3.821 ac, 19.02% Impervious, Inflow Depth = 3.01" for 10-Year event
Inflow = 9.90 cfs @ 12.21 hrs, Volume= 0.960 af
Outflow = 9.90 cfs @ 12.21 hrs, Volume= 0.960 af, Atten= 0%, Lag= 0.0 min
Primary = 4.22 cfs @ 12.21 hrs, Volume= 0.805 af
Routed to Link AP-2 :
Secondary = 5.68 cfs @ 12.21 hrs, Volume= 0.155 af
Routed to Link AP-2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 157.02' @ 12.21 hrs Surf.Area= 8 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.960 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (806.5 - 806.5)

Volume	Invert	Avail.Storage	Storage Description
#1	156.84'	944 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.84	0	0	0
157.00	4	0	0
158.00	187	96	96
159.00	1,509	848	944

Device	Routing	Invert	Outlet Devices
#1	Primary	155.84'	**18.0" Round Culvert** L= 135.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 155.84' / 153.80' S= 0.0151 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Secondary	156.84'	**32.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65

2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=4.22 cfs @ 12.21 hrs HW=157.02' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 4.22 cfs @ 3.89 fps)

Secondary OutFlow Max=5.66 cfs @ 12.21 hrs HW=157.02' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 5.66 cfs @ 0.99 fps)

Summary for Link AP-1:

Inflow Area = 12.834 ac, 12.75% Impervious, Inflow Depth = 2.34" for 10-Year event
Inflow = 21.56 cfs @ 12.36 hrs, Volume= 2.503 af
Primary = 21.56 cfs @ 12.36 hrs, Volume= 2.503 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs

Summary for Link AP-2:

Inflow Area = 3.821 ac, 19.02% Impervious, Inflow Depth = 3.01" for 10-Year event
Inflow = 9.90 cfs @ 12.21 hrs, Volume= 0.960 af
Primary = 9.90 cfs @ 12.21 hrs, Volume= 0.960 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs

Summary for Subcatchment SC-1: West

Runoff = 8.13 cfs @ 12.25 hrs, Volume= 0.823 af, Depth= 2.90"
Routed to Pond P-1 : 30" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	4,507	98	Paved parking
*	13,861	98	Paved roads w/curbs & sewers
*	1,421	96	Gravel surface
	125,331	80	Pasture/grassland/range, Good, HSG D
	3,140	79	Woods/grass comb., Good, HSG D
	148,260	82	Weighted Average
	129,892		87.61% Pervious Area
	18,368		12.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.2	100	0.0300	0.13		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.3	35	0.0721	1.88		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	23	0.0200	2.87		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
1.0	114	0.0772	1.94		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
0.3	31	0.1194	1.73		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
1.2	159	0.0975	2.19		**Shallow Concentrated Flow, F-G** Short Grass Pasture Kv= 7.0 fps
2.0	205	0.0602	1.72		**Shallow Concentrated Flow, G-H** Short Grass Pasture Kv= 7.0 fps
18.1	667	Total			

Summary for Subcatchment SC-1A: Central of property

Runoff = 7.12 cfs @ 12.17 hrs, Volume= 0.617 af, Depth= 2.72"
Routed to Pond P-1A : 12" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	1,968	98	Paved roads w/curbs & sewers
	96,225	80	Pasture/grassland/range, Good, HSG D
	20,374	79	Woods/grass comb., Good, HSG D
	118,567	80	Weighted Average
	116,599		98.34% Pervious Area
	1,968		1.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0800	0.19		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.1	6	0.0800	1.98		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	35	0.1143	1.69		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.7	311	0.0772	1.94		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
12.0	452	Total			

Summary for Subcatchment SC-1B: Southeast Off-property

Runoff = 16.29 cfs @ 12.27 hrs, Volume= 1.726 af, Depth= 3.09"
Routed to Pond P-1B : 36" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	20,275	98	Roofs
*	19,477	98	Paved parking
	11,200	98	Paved roads w/curbs & sewers
*	19,494	96	Gravel surface
	11,386	74	Pasture/grassland/range, Good, HSG C
	170,243	80	Pasture/grassland/range, Good, HSG D
	40,129	79	Woods/grass comb., Good, HSG D
	292,204	84	Weighted Average
	241,252		82.56% Pervious Area
	50,952		17.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8	100	0.0325	0.13		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.9	79	0.0443	1.47		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
1.5	147	0.1041	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.3	34	0.0882	2.08		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
3.6	219	0.0411	1.01		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.7	117	0.0342	2.77		**Shallow Concentrated Flow, F-G** Grassed Waterway Kv= 15.0 fps
0.2	79	0.0200	8.06	9.90	**Pipe Channel, G-H** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.1	28	0.0896	4.49		**Shallow Concentrated Flow, H-I** Grassed Waterway Kv= 15.0 fps
20.1	803	Total			

Summary for Subcatchment SC-2: North

Runoff = 11.99 cfs @ 12.21 hrs, Volume= 1.173 af, Depth= 3.68"
Routed to Pond P-2 : 18" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	5,185	98	Roofs
*	10,374	98	Roads
*	16,108	98	Paved parking
*	3,267	96	Gravel surface
	120,323	89	Pasture/grassland/range, Poor, HSG D
	11,205	79	Woods/grass comb., Good, HSG D
	166,462	90	Weighted Average
	134,795		80.98% Pervious Area
	31,667		19.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0600	0.17		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.0	4	0.0600	1.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.5	44	0.0909	1.51		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
3.0	320	0.0656	1.79		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
2.0	288	0.0249	2.37		**Shallow Concentrated Flow, E-F** Grassed Waterway Kv= 15.0 fps
15.5	756	Total			

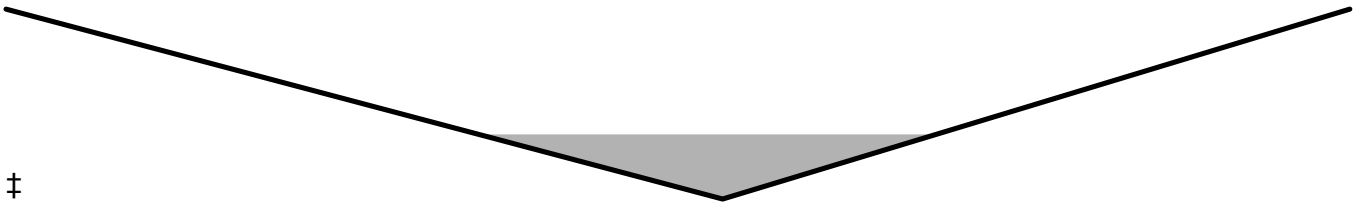
Summary for Reach 1A-R: Swale

Inflow Area = 9.430 ac, 12.88% Impervious, Inflow Depth = 2.98" for 25-Year event
Inflow = 21.35 cfs @ 12.27 hrs, Volume= 2.341 af
Outflow = 21.34 cfs @ 12.28 hrs, Volume= 2.341 af, Atten= 0%, Lag= 0.4 min
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Max. Velocity= 5.45 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.07 fps, Avg. Travel Time= 1.1 min

Peak Storage= 553 cf @ 12.28 hrs
Average Depth at Peak Storage= 1.02' , Surface Width= 7.66'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 377.41 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 141.2' Slope= 0.0167 '/'
Inlet Invert= 156.51', Outlet Invert= 154.15'



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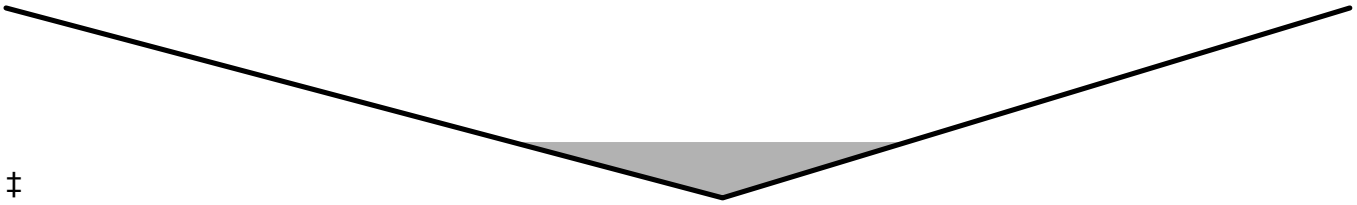
Summary for Reach 1B-R: Swale

Inflow Area = 6.708 ac, 17.44% Impervious, Inflow Depth = 3.08" for 25-Year event
Inflow = 16.17 cfs @ 12.30 hrs, Volume= 1.724 af
Outflow = 16.16 cfs @ 12.31 hrs, Volume= 1.724 af, Atten= 0%, Lag= 0.5 min
Routed to Pond P-1A : 12" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Max. Velocity= 5.54 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 2.12 fps, Avg. Travel Time= 1.7 min

Peak Storage= 625 cf @ 12.31 hrs
Average Depth at Peak Storage= 0.88' , Surface Width= 6.61'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 422.76 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 214.1' Slope= 0.0210 '/'
Inlet Invert= 161.00', Outlet Invert= 156.51'



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Summary for Reach 1B-R1: Swale

Inflow Area = 6.708 ac, 17.44% Impervious, Inflow Depth = 3.08" for 25-Year event
Inflow = 16.19 cfs @ 12.29 hrs, Volume= 1.724 af
Outflow = 16.17 cfs @ 12.30 hrs, Volume= 1.724 af, Atten= 0%, Lag= 0.5 min
Routed to Reach 1B-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Max. Velocity= 4.96 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.60 fps, Avg. Travel Time= 2.3 min

Peak Storage= 704 cf @ 12.30 hrs
Average Depth at Peak Storage= 0.48' , Surface Width= 8.60'
Bank-Full Depth= 3.00' Flow Area= 48.8 sf, Capacity= 670.12 cfs

5.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 27.50'
Length= 216.0' Slope= 0.0200 '/'
Inlet Invert= 165.33', Outlet Invert= 161.00'

‡

Summary for Pond P-1: 30" Culvert

Inflow Area = 12.834 ac, 12.75% Impervious, Inflow Depth = 2.96" for 25-Year event
Inflow = 29.38 cfs @ 12.27 hrs, Volume= 3.163 af
Outflow = 25.12 cfs @ 12.40 hrs, Volume= 3.163 af, Atten= 14%, Lag= 8.0 min
Primary = 25.12 cfs @ 12.40 hrs, Volume= 3.163 af
Routed to Link AP-1 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link AP-1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 157.21' @ 12.40 hrs Surf.Area= 8,956 sf Storage= 5,147 cf

Plug-Flow detention time= 0.9 min calculated for 3.161 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (831.4 - 830.5)

Volume	Invert	Avail.Storage	Storage Description
#1	154.15'	16,642 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
154.15	0	0	0
155.00	50	21	21
156.00	569	310	331
157.00	5,902	3,236	3,566
158.00	20,250	13,076	16,642

Device	Routing	Invert	Outlet Devices
#1	Primary	154.15'	**30.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 154.15' / 153.00' S= 0.0153 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf
#2	Secondary	157.50'	**30.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=25.12 cfs @ 12.40 hrs HW=157.21' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 25.12 cfs @ 5.12 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=154.15' TW=0.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond P-1A: 12" Culvert

Inflow Area = 9.430 ac, 12.88% Impervious, Inflow Depth = 2.98" for 25-Year event
Inflow = 21.36 cfs @ 12.27 hrs, Volume= 2.341 af
Outflow = 21.35 cfs @ 12.27 hrs, Volume= 2.341 af, Atten= 0%, Lag= 0.1 min
Primary = 0.78 cfs @ 12.28 hrs, Volume= 0.040 af
Routed to Reach 1A-R : Swale
Secondary = 20.56 cfs @ 12.27 hrs, Volume= 2.301 af
Routed to Reach 1A-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 157.62' @ 12.29 hrs Surf.Area= 231 sf Storage= 187 cf

Plug-Flow detention time= 0.5 min calculated for 2.339 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (830.3 - 829.9)

Volume	Invert	Avail.Storage	Storage Description
#1	156.00'	1,138 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.00	0	0	0
158.00	286	286	286
159.00	1,417	852	1,138

Device	Routing	Invert	Outlet Devices
#1	Primary	156.61'	**12.0" Round Culvert** L= 19.9' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 156.61' / 156.51' S= 0.0050 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	156.00'	**10.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.77 cfs @ 12.28 hrs HW=157.62' TW=157.53' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.77 cfs @ 1.21 fps)

Secondary OutFlow Max=20.32 cfs @ 12.27 hrs HW=157.62' TW=157.53' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 20.32 cfs @ 1.26 fps)

Summary for Pond P-1B: 36" Culvert

Inflow Area = 6.708 ac, 17.44% Impervious, Inflow Depth = 3.09" for 25-Year event
Inflow = 16.29 cfs @ 12.27 hrs, Volume= 1.726 af
Outflow = 16.19 cfs @ 12.29 hrs, Volume= 1.724 af, Atten= 1%, Lag= 1.4 min
Primary = 16.19 cfs @ 12.29 hrs, Volume= 1.724 af
Routed to Reach 1B-R1 : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1B-R1 : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 167.44' @ 12.29 hrs Surf.Area= 1,076 sf Storage= 1,312 cf

Plug-Flow detention time= 3.2 min calculated for 1.723 af (100% of inflow)
Center-of-Mass det. time= 2.4 min (827.7 - 825.2)

Volume	Invert	Avail.Storage	Storage Description
#1	165.00'	7,542 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
165.00	0	0	0
168.00	1,323	1,985	1,985
170.00	4,234	5,557	7,542

Device	Routing	Invert	Outlet Devices
#1	Primary	165.64'	**36.0" Round Culvert** L= 48.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 165.64' / 165.33' S= 0.0065 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf
#2	Secondary	169.00'	**20.0' long x 6.0' 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 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=16.17 cfs @ 12.29 hrs HW=167.44' TW=165.81' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 16.17 cfs @ 5.25 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=165.00' TW=165.33' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond P-2: 18" Culvert

Inflow Area = 3.821 ac, 19.02% Impervious, Inflow Depth = 3.68" for 25-Year event
Inflow = 11.99 cfs @ 12.21 hrs, Volume= 1.173 af
Outflow = 11.99 cfs @ 12.21 hrs, Volume= 1.173 af, Atten= 0%, Lag= 0.0 min
Primary = 4.42 cfs @ 12.21 hrs, Volume= 0.946 af
Routed to Link AP-2 :
Secondary = 7.57 cfs @ 12.21 hrs, Volume= 0.227 af
Routed to Link AP-2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs
Peak Elev= 157.06' @ 12.21 hrs Surf.Area= 14 sf Storage= 1 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (800.9 - 800.9)

Volume	Invert	Avail.Storage	Storage Description
#1	156.84'	944 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.84	0	0	0
157.00	4	0	0
158.00	187	96	96
159.00	1,509	848	944

Device	Routing	Invert	Outlet Devices
#1	Primary	155.84'	**18.0" Round Culvert** L= 135.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 155.84' / 153.80' S= 0.0151 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Secondary	156.84'	**32.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65

2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=4.42 cfs @ 12.21 hrs HW=157.06' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 4.42 cfs @ 3.93 fps)

Secondary OutFlow Max=7.55 cfs @ 12.21 hrs HW=157.06' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 7.55 cfs @ 1.09 fps)

Summary for Link AP-1:

Inflow Area = 12.834 ac, 12.75% Impervious, Inflow Depth = 2.96" for 25-Year event
Inflow = 25.12 cfs @ 12.40 hrs, Volume= 3.163 af
Primary = 25.12 cfs @ 12.40 hrs, Volume= 3.163 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs

Summary for Link AP-2:

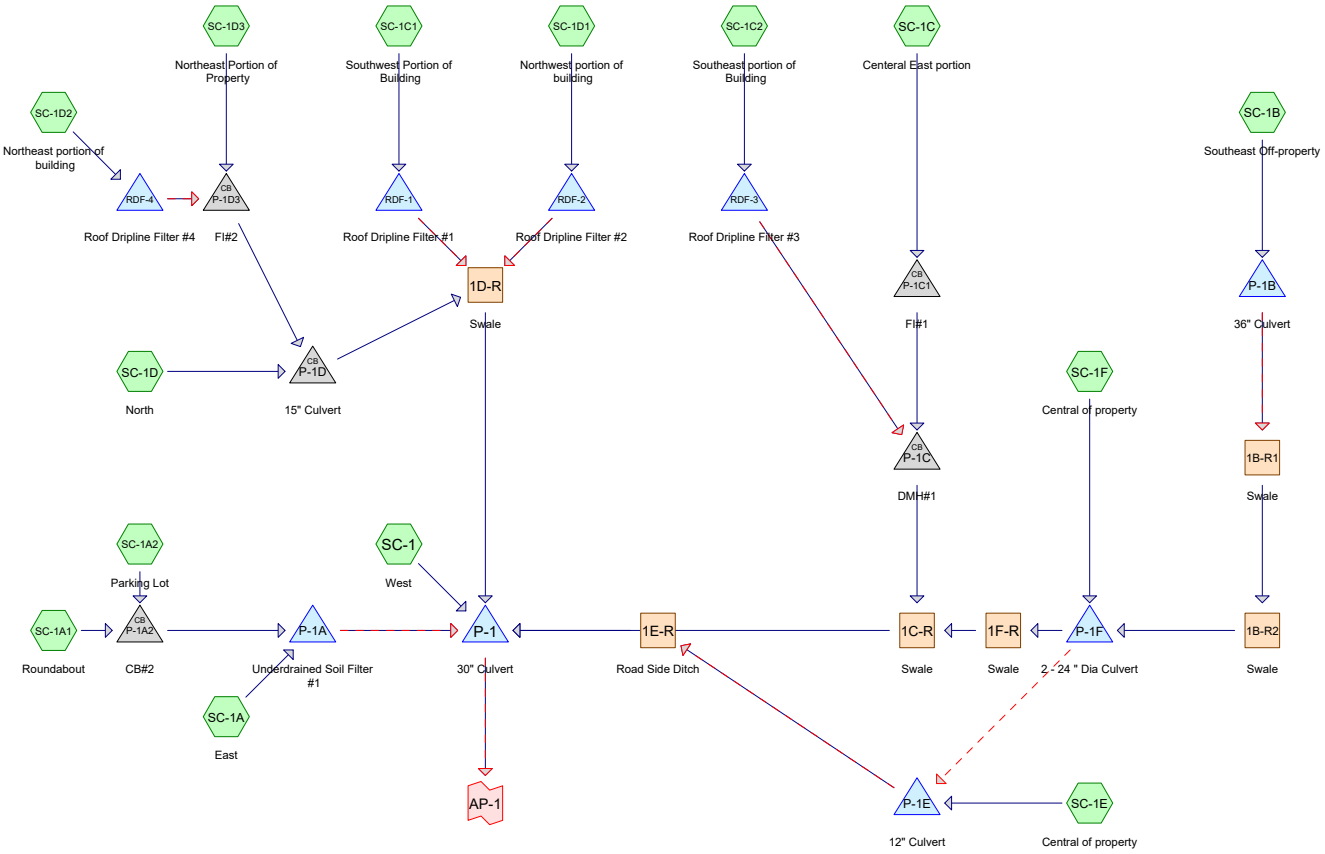
Inflow Area = 3.821 ac, 19.02% Impervious, Inflow Depth = 3.68" for 25-Year event
Inflow = 11.99 cfs @ 12.21 hrs, Volume= 1.173 af
Primary = 11.99 cfs @ 12.21 hrs, Volume= 1.173 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.02 hrs

APPENDIX C

POST-DEVELOPMENT HYDROCAD CALCULATIONS

SME
SEVEE & MAHER
ENGINEERS



Subcat Reach Pond Link

Routing Diagram for Proposed
Prepared by Sevee & Maher Engineers, Printed 5/27/2026
HydroCAD® 10.20-8a s/n 01260 © 2025 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.261	74	>75% Grass cover, Good, HSG C (SC-1B)
9.672	80	>75% Grass cover, Good, HSG D (SC-1A, SC-1A1, SC-1A2, SC-1B, SC-1C, SC-1D, SC-1D3, SC-1F)
0.448	96	Gravel surface (SC-1B)
1.310	80	Pasture/grassland/range, Good, HSG D (SC-1, SC-1E)
1.289	98	Paved parking (SC-1, SC-1A1, SC-1A2, SC-1B, SC-1D, SC-1E, SC-1F)
0.846	98	Paved roads w/curbs & sewers (SC-1, SC-1B, SC-1D, SC-1D3, SC-1E, SC-1F)
0.960	98	Roofs (SC-1B, SC-1C1, SC-1C2, SC-1D1, SC-1D2)
0.120	98	Roofs, (SC-1, SC-1D)
1.749	79	Woods/grass comb., Good, HSG D (SC-1, SC-1B, SC-1C, SC-1D, SC-1D3, SC-1E, SC-1F)
16.655	**84**	**TOTAL AREA**

Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 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 SC-1: West Runoff Area=49,436 sf 24.20% Impervious Runoff Depth=1.27"
Tc=5.0 min CN=84 Runoff=1.75 cfs 0.120 af

Subcatchment SC-1A: East Runoff Area=8,840 sf 0.00% Impervious Runoff Depth=1.03"
Tc=5.0 min CN=80 Runoff=0.25 cfs 0.017 af

Subcatchment SC-1A1: Roundabout Runoff Area=7,782 sf 70.79% Impervious Runoff Depth=1.97"
Tc=5.0 min CN=93 Runoff=0.42 cfs 0.029 af

Subcatchment SC-1A2: Parking Lot Runoff Area=11,875 sf 84.34% Impervious Runoff Depth=2.16"
Tc=5.0 min CN=95 Runoff=0.68 cfs 0.049 af

Subcatchment SC-1B: Southeast Runoff Area=292,074 sf 17.44% Impervious Runoff Depth=1.27"
Flow Length=803' Tc=20.1 min CN=84 Runoff=6.68 cfs 0.711 af

Subcatchment SC-1C: Centeral East portion Runoff Area=43,437 sf 0.00% Impervious Runoff Depth=1.03"
Flow Length=319' Tc=9.5 min CN=80 Runoff=1.04 cfs 0.086 af

Subcatchment SC-1C1: Southwest Portion Runoff Area=8,150 sf 100.00% Impervious Runoff Depth=2.47"
Tc=5.0 min CN=98 Runoff=0.51 cfs 0.039 af

Subcatchment SC-1C2: Southeast portion Runoff Area=7,751 sf 100.00% Impervious Runoff Depth=2.47"
Tc=5.0 min CN=98 Runoff=0.48 cfs 0.037 af

Subcatchment SC-1D: North Runoff Area=164,122 sf 19.24% Impervious Runoff Depth=1.21"
Flow Length=670' Tc=13.5 min CN=83 Runoff=4.16 cfs 0.380 af

Subcatchment SC-1D1: Northwest portion Runoff Area=3,005 sf 100.00% Impervious Runoff Depth=2.47"
Tc=5.0 min CN=98 Runoff=0.19 cfs 0.014 af

Subcatchment SC-1D2: Northeast portion Runoff Area=2,657 sf 100.00% Impervious Runoff Depth=2.47"
Tc=5.0 min CN=98 Runoff=0.16 cfs 0.013 af

Subcatchment SC-1D3: Northeast Portion of Runoff Area=51,502 sf 0.24% Impervious Runoff Depth=1.03"
Flow Length=450' Tc=12.6 min CN=80 Runoff=1.12 cfs 0.101 af

Subcatchment SC-1E: Central of property Runoff Area=30,712 sf 18.79% Impervious Runoff Depth=1.21"
Flow Length=351' Tc=10.5 min CN=83 Runoff=0.85 cfs 0.071 af

Subcatchment SC-1F: Central of property Runoff Area=44,150 sf 5.87% Impervious Runoff Depth=1.09"
Flow Length=317' Tc=11.1 min CN=81 Runoff=1.07 cfs 0.092 af

Reach 1B-R1: Swale Avg. Flow Depth=0.29' Max Vel=3.74 fps Inflow=6.65 cfs 0.709 af
n=0.022 L=216.0' S=0.0200 '/' Capacity=670.12 cfs Outflow=6.63 cfs 0.709 af

Reach 1B-R2: Swale Avg. Flow Depth=1.13' Max Vel=1.38 fps Inflow=6.63 cfs 0.709 af
n=0.022 L=214.1' S=0.0009 '/' Capacity=89.22 cfs Outflow=6.54 cfs 0.709 af

Reach 1C-R: Swale Avg. Flow Depth=0.76' Max Vel=4.68 fps Inflow=8.02 cfs 0.923 af
n=0.022 L=178.0' S=0.0188 '/' Capacity=316.53 cfs Outflow=8.02 cfs 0.923 af

Reach 1D-R: Swale Avg. Flow Depth=0.71' Max Vel=3.09 fps Inflow=5.78 cfs 0.546 af
n=0.022 L=154.0' S=0.0088 '/' Capacity=273.33 cfs Outflow=5.76 cfs 0.546 af

Reach 1E-R: Road Side Ditch Avg. Flow Depth=0.32' Max Vel=1.67 fps Inflow=0.80 cfs 0.071 af
n=0.030 L=317.0' S=0.0137 '/' Capacity=16.16 cfs Outflow=0.76 cfs 0.071 af

Reach 1F-R: Swale Avg. Flow Depth=0.80' Max Vel=3.77 fps Inflow=7.20 cfs 0.801 af
n=0.022 L=132.0' S=0.0114 '/' Capacity=245.96 cfs Outflow=7.20 cfs 0.801 af

Pond P-1: 30" Culvert Peak Elev=155.99' Storage=327 cf Inflow=14.17 cfs 1.757 af
Primary=14.15 cfs 1.757 af Secondary=0.00 cfs 0.000 af Outflow=14.15 cfs 1.757 af

Pond P-1A: Underdrained Soil Filter #1 Peak Elev=158.01' Storage=2,342 cf Inflow=1.35 cfs 0.096 af
Primary=0.04 cfs 0.092 af Secondary=0.04 cfs 0.004 af Outflow=0.08 cfs 0.096 af

Pond P-1A2: CB#2 Peak Elev=158.67' Inflow=1.10 cfs 0.078 af
15.0" Round Culvert n=0.013 L=211.0' S=0.0071 '/' Outflow=1.10 cfs 0.078 af

Pond P-1B: 36" Culvert Peak Elev=166.71' Storage=648 cf Inflow=6.68 cfs 0.711 af
Primary=6.65 cfs 0.709 af Secondary=0.00 cfs 0.000 af Outflow=6.65 cfs 0.709 af

Pond P-1C: DMH#1 Peak Elev=158.67' Inflow=1.29 cfs 0.122 af
12.0" Round Culvert n=0.013 L=94.0' S=0.0043 '/' Outflow=1.29 cfs 0.122 af

Pond P-1C1: FI#1 Peak Elev=159.17' Inflow=1.04 cfs 0.086 af
15.0" Round Culvert n=0.013 L=156.0' S=0.0038 '/' Outflow=1.04 cfs 0.086 af

Pond P-1D: 15" Culvert Peak Elev=159.08' Inflow=5.38 cfs 0.494 af
18.0" Round Culvert n=0.025 L=120.0' S=0.0183 '/' Outflow=5.38 cfs 0.494 af

Pond P-1D3: FI#2 Peak Elev=159.45' Inflow=1.24 cfs 0.114 af
12.0" Round Culvert n=0.013 L=151.0' S=0.0033 '/' Outflow=1.24 cfs 0.114 af

Pond P-1E: 12" Culvert Peak Elev=159.04' Storage=108 cf Inflow=0.85 cfs 0.071 af
Primary=0.80 cfs 0.071 af Secondary=0.00 cfs 0.000 af Outflow=0.80 cfs 0.071 af

Pond P-1F: 2 - 24 " Dia Culvert Peak Elev=160.91' Storage=11 cf Inflow=7.20 cfs 0.801 af
Primary=7.20 cfs 0.801 af Secondary=0.00 cfs 0.000 af Outflow=7.20 cfs 0.801 af

Pond RDF-1: Roof Dripline Filter #1 Peak Elev=157.19' Storage=168 cf Inflow=0.51 cfs 0.039 af
Primary=0.26 cfs 0.039 af Secondary=0.00 cfs 0.000 af Outflow=0.26 cfs 0.039 af

Pond RDF-2: Roof Dripline Filter #2 Peak Elev=156.81' Storage=0.000 af Inflow=0.19 cfs 0.014 af
Primary=0.16 cfs 0.014 af Secondary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.014 af

Pond RDF-3: Roof Dripline Filter #3 Peak Elev=161.64' Storage=0.003 af Inflow=0.48 cfs 0.037 af
Primary=0.26 cfs 0.037 af Secondary=0.00 cfs 0.000 af Outflow=0.26 cfs 0.037 af

Pond RDF-4: Roof Dripline Filter #4 Peak Elev=160.53' Storage=0.000 af Inflow=0.16 cfs 0.013 af
Primary=0.15 cfs 0.013 af Secondary=0.00 cfs 0.000 af Outflow=0.15 cfs 0.013 af

Link AP-1: Inflow=14.15 cfs 1.757 af
Primary=14.15 cfs 1.757 af

Total Runoff Area = 16.655 ac Runoff Volume = 1.759 af Average Runoff Depth = 1.27"
80.69% Pervious = 13.440 ac 19.31% Impervious = 3.215 ac

Summary for Subcatchment SC-1: West

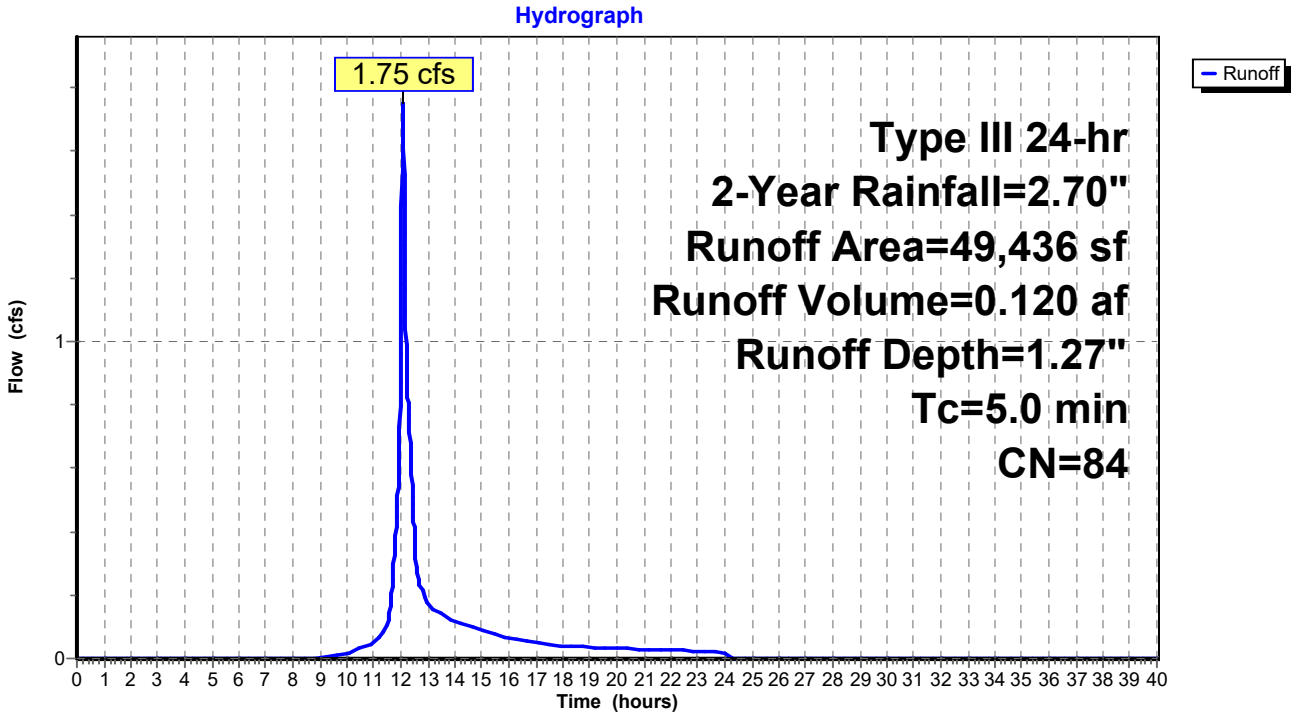
Runoff = 1.75 cfs @ 12.08 hrs, Volume= 0.120 af, Depth= 1.27"
Routed to Pond P-1 : 30" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	3,926	98	Paved parking
*	62	98	Roofs,
*	7,976	98	Paved roads w/curbs & sewers
	32,330	80	Pasture/grassland/range, Good, HSG D
	5,142	79	Woods/grass comb., Good, HSG D
	49,436	84	Weighted Average
	37,472		75.80% Pervious Area
	11,964		24.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1: West



Summary for Subcatchment SC-1A: East

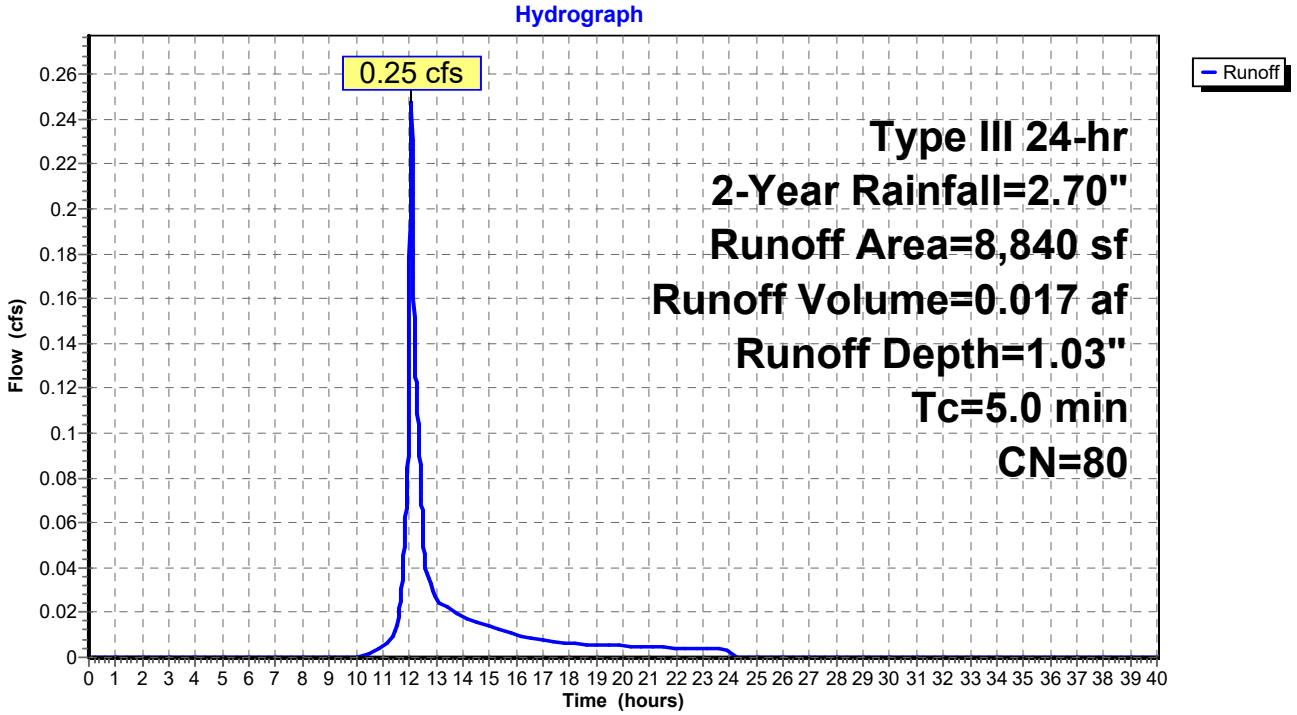
Runoff = 0.25 cfs @ 12.08 hrs, Volume= 0.017 af, Depth= 1.03"
Routed to Pond P-1A : Underdrained Soil Filter #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

Area (sf)	CN	Description
8,840	80	>75% Grass cover, Good, HSG D
8,840		100.00% Pervious Area

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

Subcatchment SC-1A: East



Summary for Subcatchment SC-1A1: Roundabout

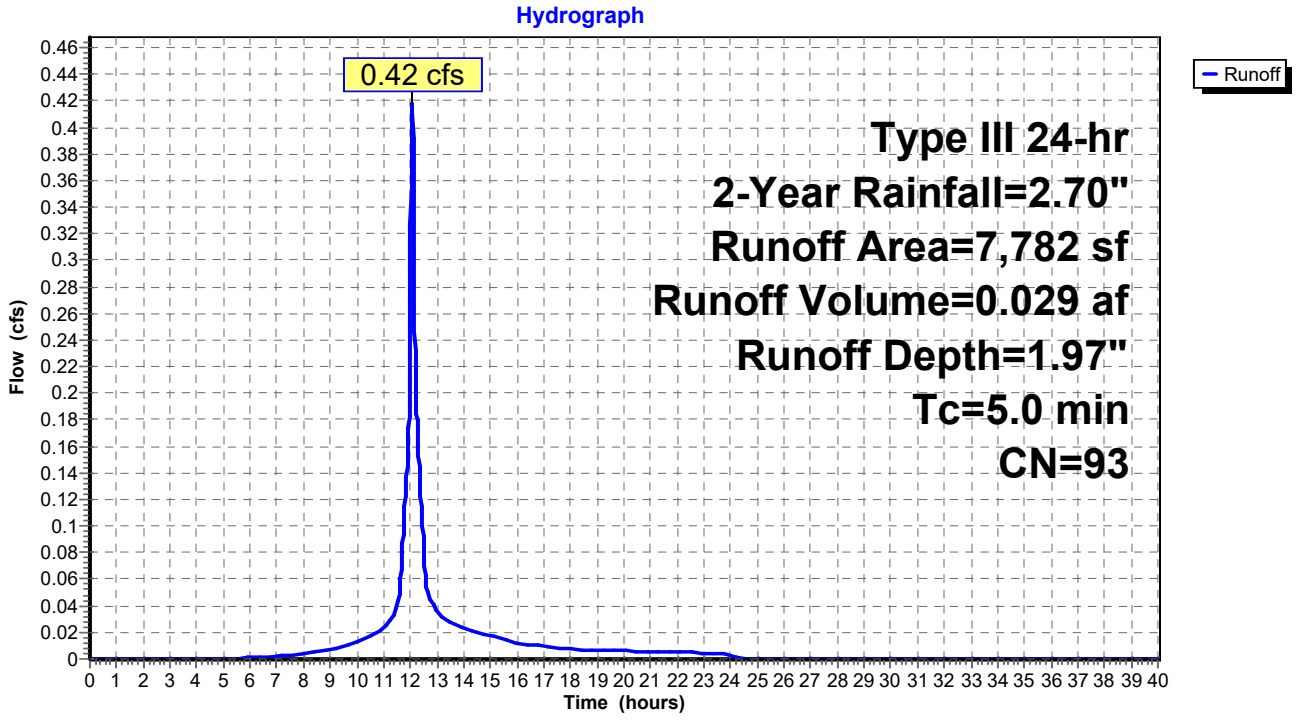
Runoff = 0.42 cfs @ 12.07 hrs, Volume= 0.029 af, Depth= 1.97"
Routed to Pond P-1A2 : CB#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	5,509	98	Paved parking
	2,273	80	>75% Grass cover, Good, HSG D
	7,782	93	Weighted Average
	2,273		29.21% Pervious Area
	5,509		70.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1A1: Roundabout



Summary for Subcatchment SC-1A2: Parking Lot

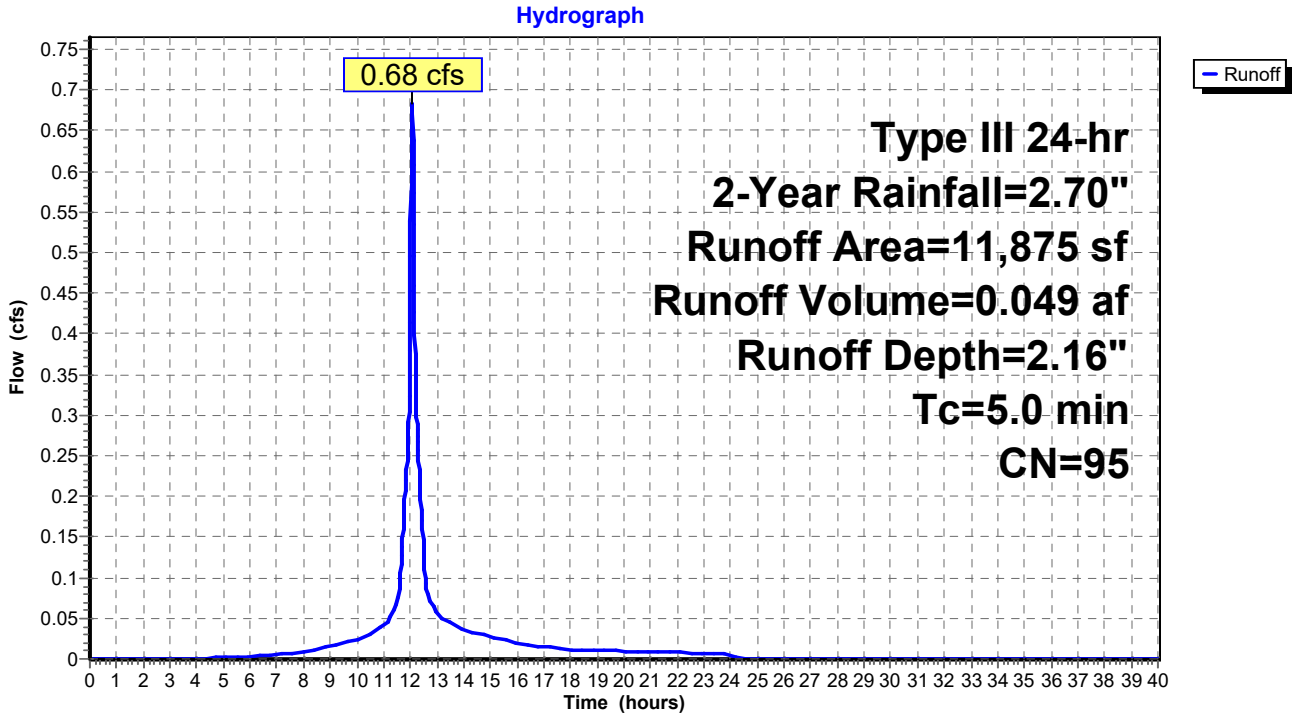
Runoff = 0.68 cfs @ 12.07 hrs, Volume= 0.049 af, Depth= 2.16"
Routed to Pond P-1A2 : CB#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	10,015	98	Paved parking
	1,860	80	>75% Grass cover, Good, HSG D
	11,875	95	Weighted Average
	1,860		15.66% Pervious Area
	10,015		84.34% Impervious Area

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

Subcatchment SC-1A2: Parking Lot



Summary for Subcatchment SC-1B: Southeast Off-property

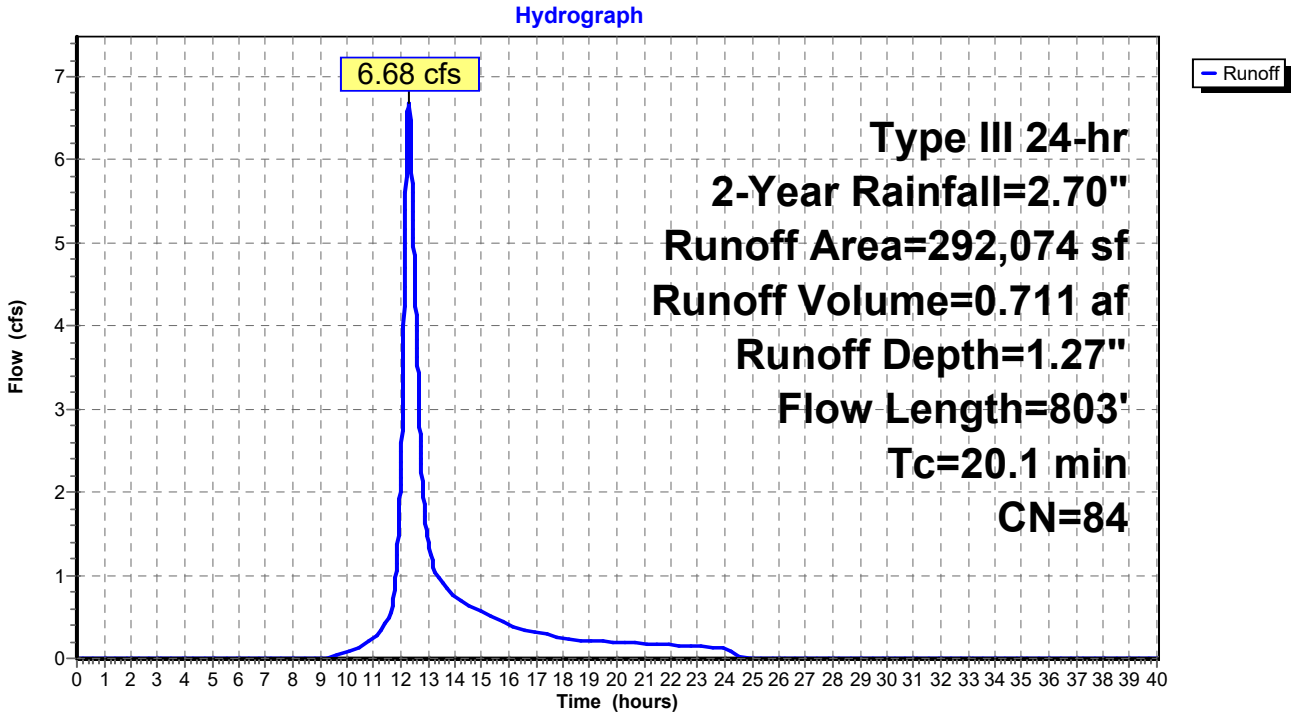
Runoff = 6.68 cfs @ 12.28 hrs, Volume= 0.711 af, Depth= 1.27"
Routed to Pond P-1B : 36" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	20,275	98	Roofs
	11,200	98	Paved roads w/curbs & sewers
*	19,477	98	Paved parking
*	19,494	96	Gravel surface
	11,386	74	>75% Grass cover, Good, HSG C
	170,113	80	>75% Grass cover, Good, HSG D
	40,129	79	Woods/grass comb., Good, HSG D
	292,074	84	Weighted Average
	241,122		82.56% Pervious Area
	50,952		17.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8	100	0.0325	0.13		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.9	79	0.0443	1.47		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
1.5	147	0.1041	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.3	34	0.0882	2.08		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
3.6	219	0.0411	1.01		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.7	117	0.0342	2.77		**Shallow Concentrated Flow, F-G** Grassed Waterway Kv= 15.0 fps
0.2	79	0.0200	8.06	9.90	**Pipe Channel, G-H** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.1	28	0.0896	4.49		**Shallow Concentrated Flow, H-I** Grassed Waterway Kv= 15.0 fps
20.1	803	Total			

Subcatchment SC-1B: Southeast Off-property



Summary for Subcatchment SC-1C: Centeral East portion

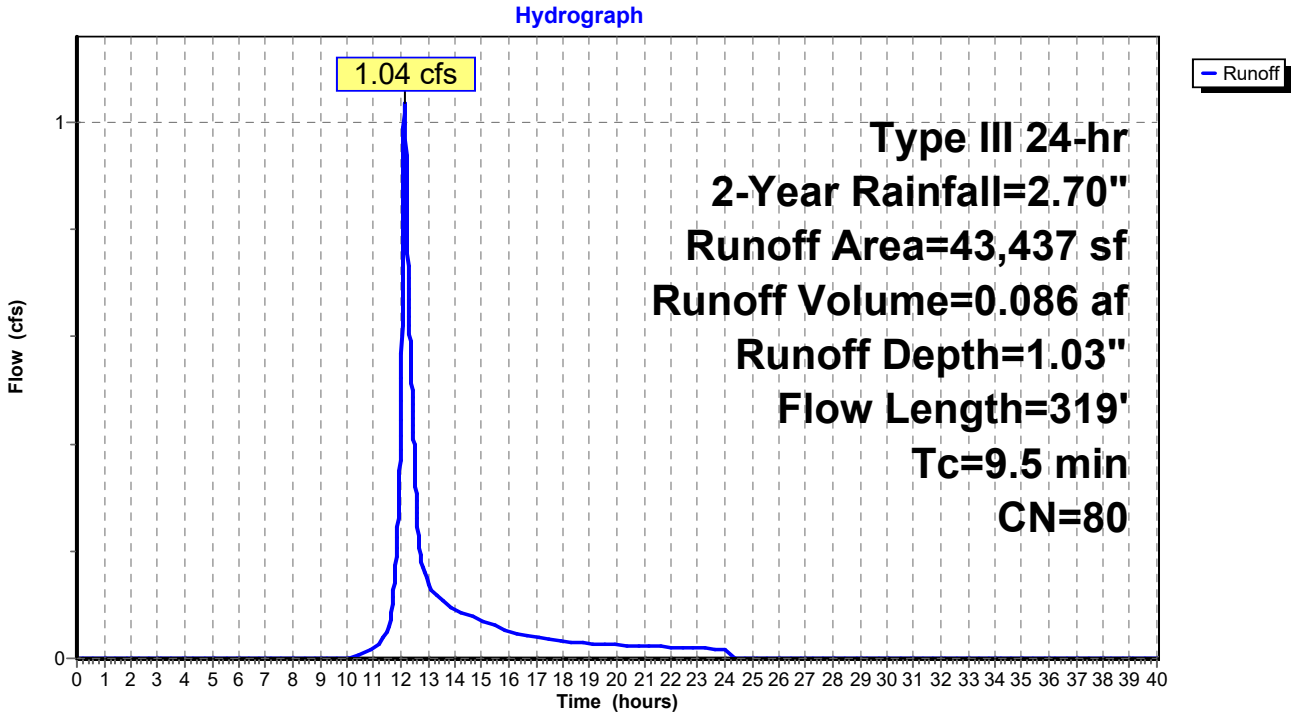
Runoff = 1.04 cfs @ 12.14 hrs, Volume= 0.086 af, Depth= 1.03"
Routed to Pond P-1C1 : FI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

Area (sf)	CN	Description
37,473	80	>75% Grass cover, Good, HSG D
5,964	79	Woods/grass comb., Good, HSG D
43,437	80	Weighted Average
43,437		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0800	0.27		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 2.70"
0.0	5	0.0800	1.98		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	35	0.1140	1.69		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.3	57	0.2110	3.22		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
0.1	35	0.3428	4.10		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
2.7	87	0.0057	0.53		**Shallow Concentrated Flow, F-G** Short Grass Pasture Kv= 7.0 fps
9.5	319	Total			

Subcatchment SC-1C: Centeral East portion



Summary for Subcatchment SC-1C1: Southwest Portion of Building

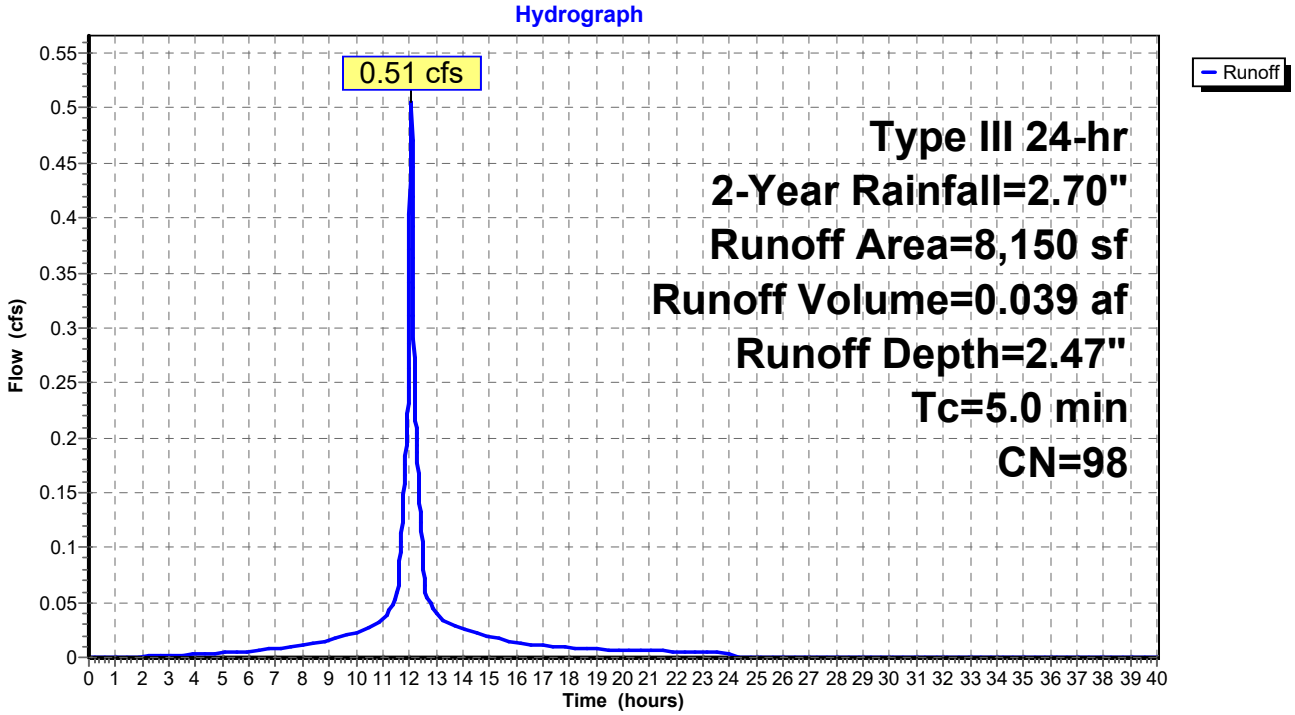
Runoff = 0.51 cfs @ 12.07 hrs, Volume= 0.039 af, Depth= 2.47"
Routed to Pond RDF-1 : Roof Dripline Filter #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	8,150	98	Roofs
	8,150		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1C1: Southwest Portion of Building



Summary for Subcatchment SC-1C2: Southeast portion of Building

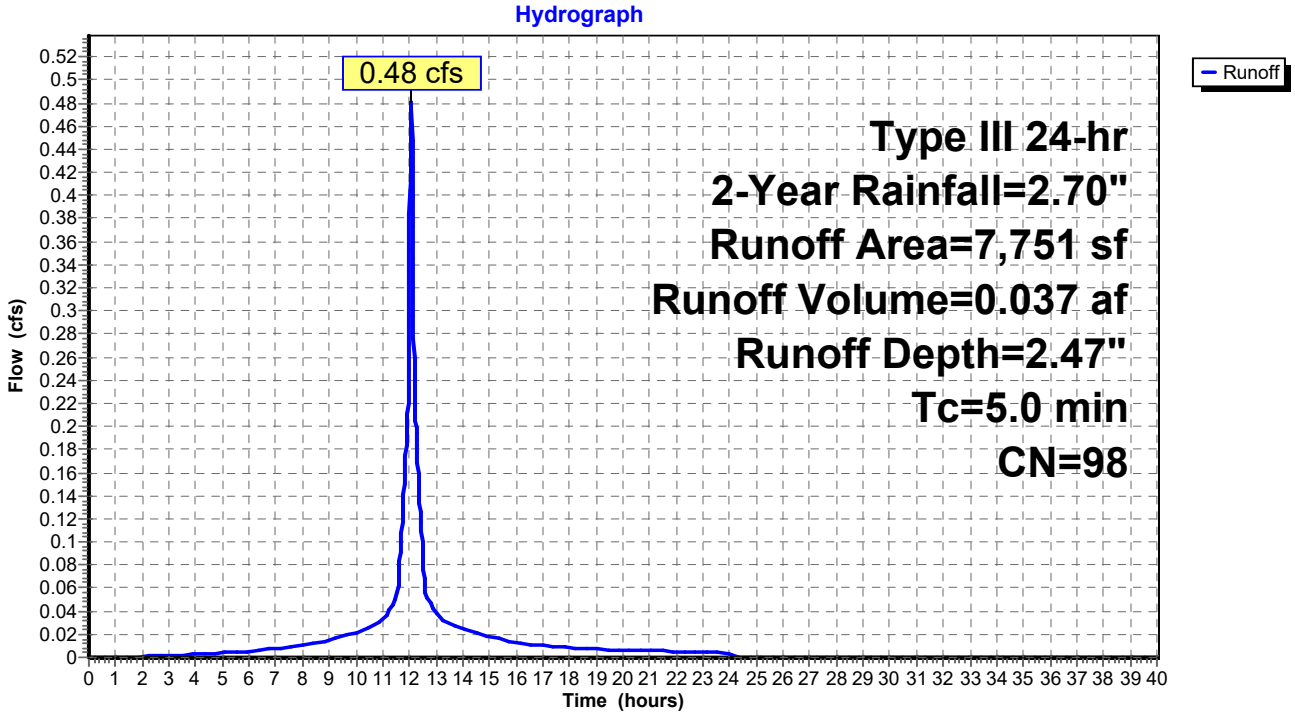
Runoff = 0.48 cfs @ 12.07 hrs, Volume= 0.037 af, Depth= 2.47"
Routed to Pond RDF-3 : Roof Dripline Filter #3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	7,751	98	Roofs
	7,751		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1C2: Southeast portion of Building



Summary for Subcatchment SC-1D: North

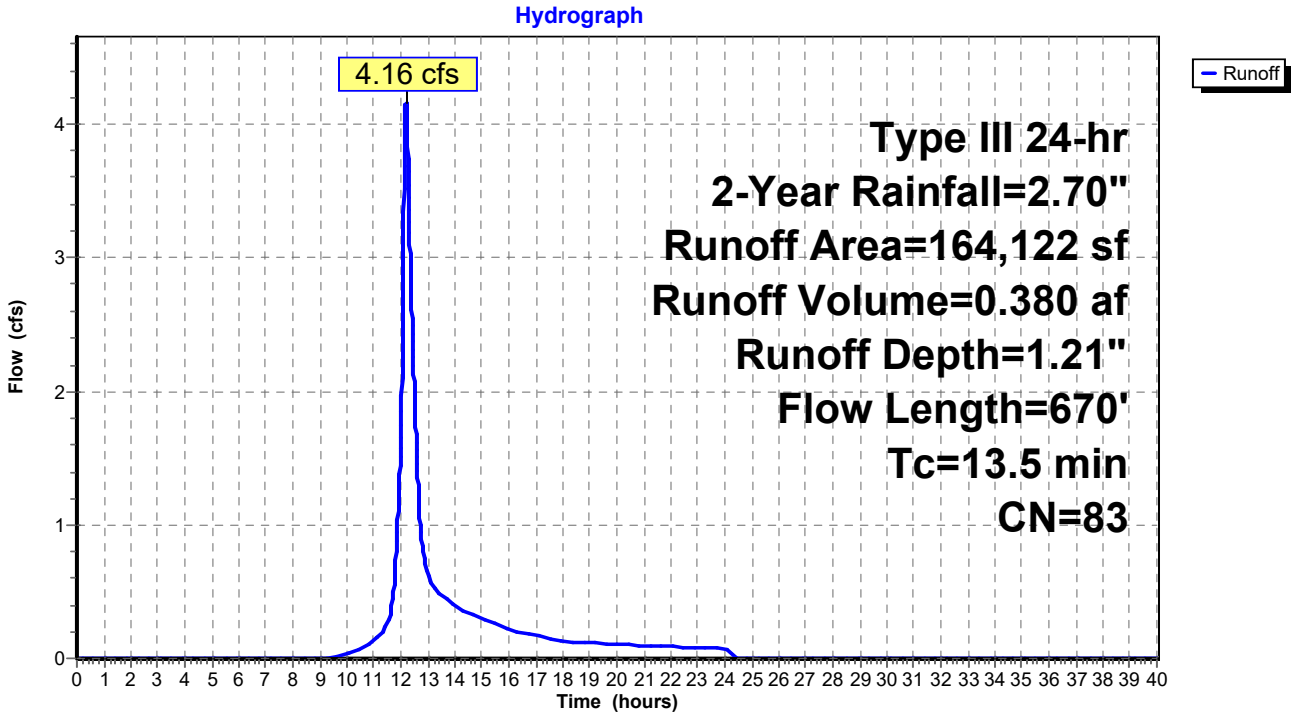
Runoff = 4.16 cfs @ 12.19 hrs, Volume= 0.380 af, Depth= 1.21"
Routed to Pond P-1D : 15" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	16,493	98	Paved parking
*	5,185	98	Roofs,
*	9,894	98	Paved roads w/curbs & sewers
	121,345	80	>75% Grass cover, Good, HSG D
	11,205	79	Woods/grass comb., Good, HSG D
	164,122	83	Weighted Average
	132,550		80.76% Pervious Area
	31,572		19.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0600	0.24		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 2.70"
0.0	4	0.0600	1.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.5	44	0.0910	1.51		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
3.0	320	0.0660	1.80		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
3.1	202	0.0240	1.08		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
13.5	670	Total			

Subcatchment SC-1D: North



Summary for Subcatchment SC-1D1: Northwest portion of building

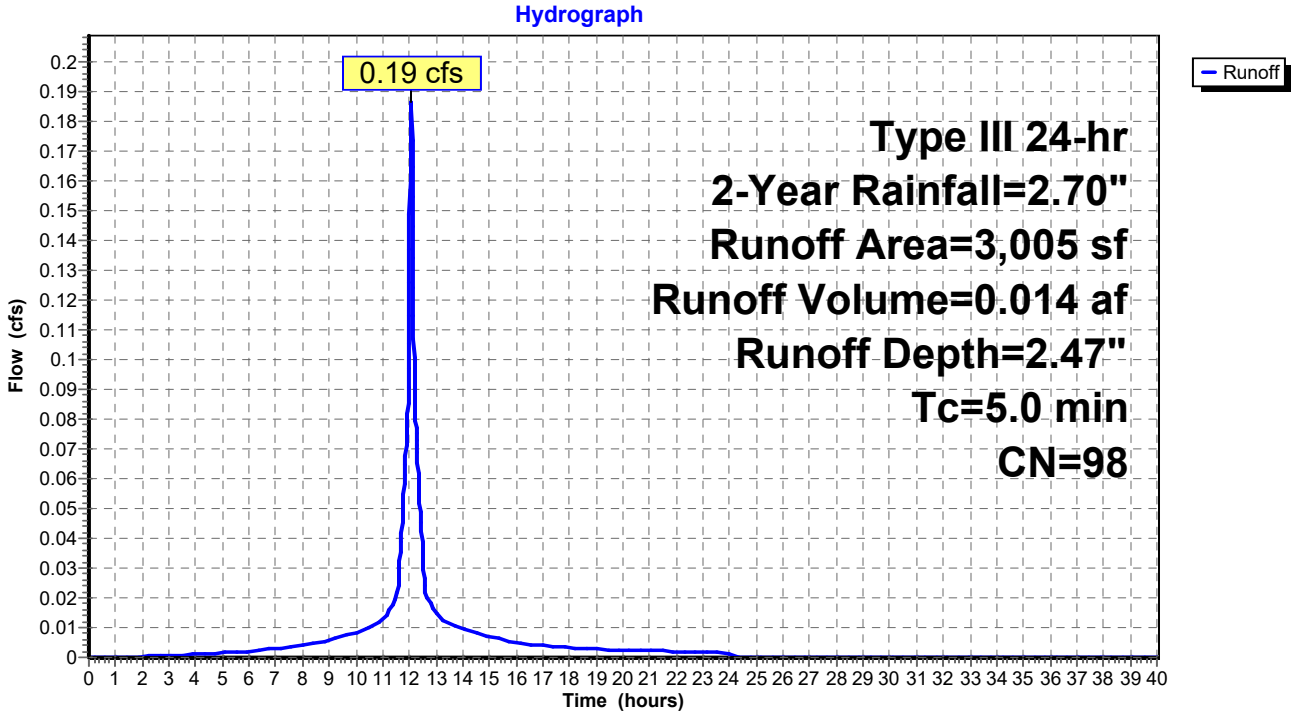
Runoff = 0.19 cfs @ 12.07 hrs, Volume= 0.014 af, Depth= 2.47"
Routed to Pond RDF-2 : Roof Dripline Filter #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	3,005	98	Roofs
	3,005		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1D1: Northwest portion of building



Summary for Subcatchment SC-1D2: Northeast portion of building

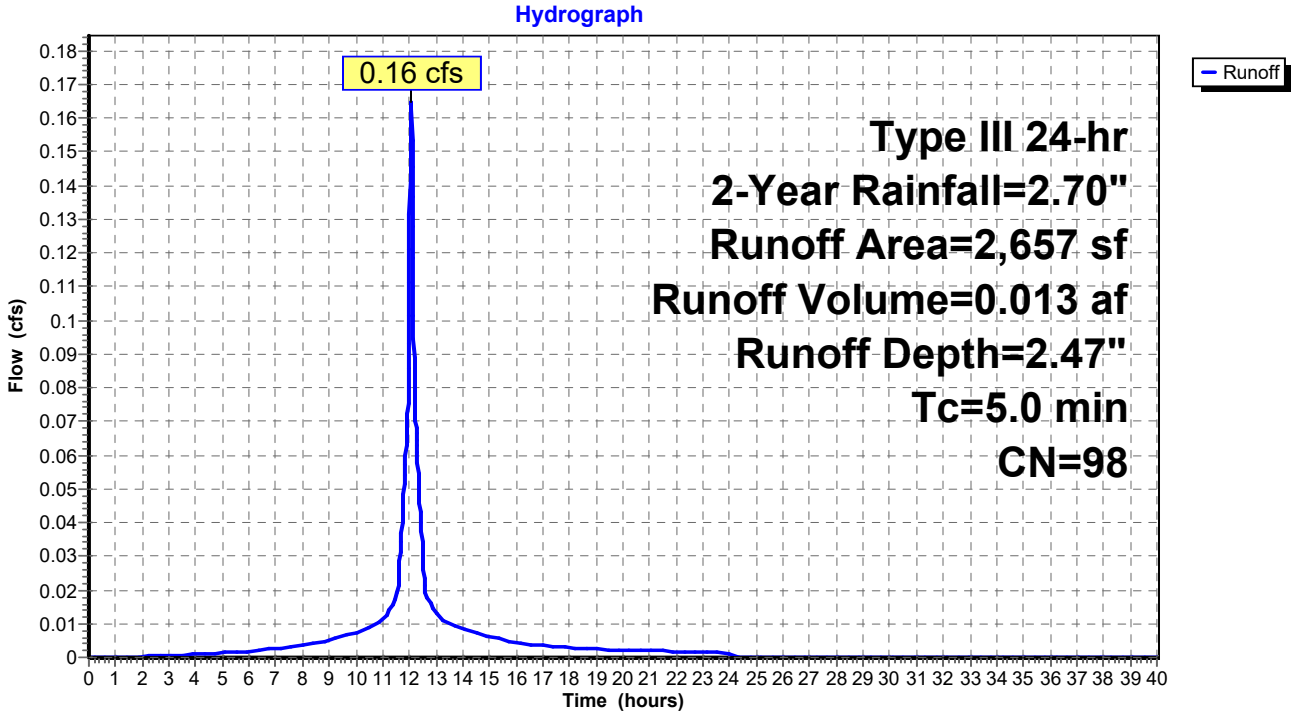
Runoff = 0.16 cfs @ 12.07 hrs, Volume= 0.013 af, Depth= 2.47"
Routed to Pond RDF-4 : Roof Dripline Filter #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	2,657	98	Roofs
	2,657		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1D2: Northeast portion of building



Summary for Subcatchment SC-1D3: Northeast Portion of Property

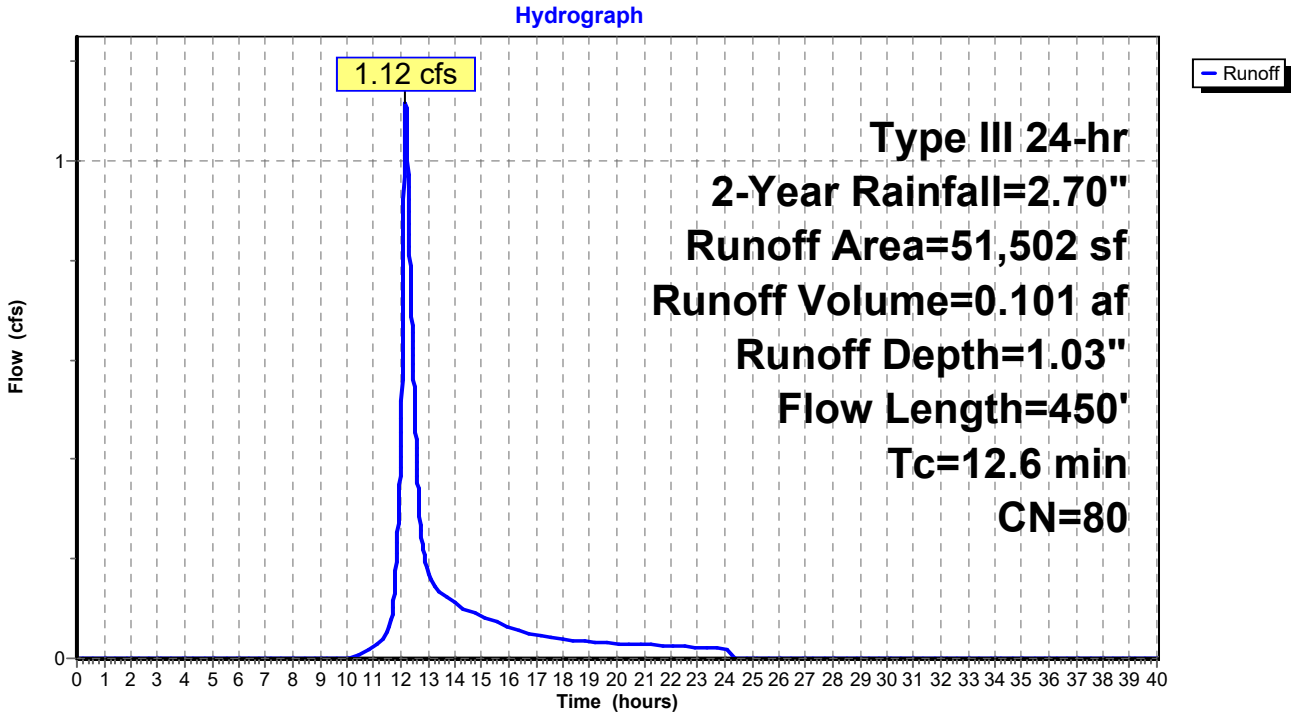
Runoff = 1.12 cfs @ 12.18 hrs, Volume= 0.101 af, Depth= 1.03"
Routed to Pond P-1D3 : FI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	122	98	Paved roads w/curbs & sewers
	48,321	80	>75% Grass cover, Good, HSG D
	3,059	79	Woods/grass comb., Good, HSG D
	51,502	80	Weighted Average
	51,380		99.76% Pervious Area
	122		0.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	100	0.0300	0.18		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 2.70"
0.3	35	0.0720	1.88		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	23	0.0200	2.87		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.9	100	0.0770	1.94		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
0.3	31	0.1190	1.72		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.6	109	0.1827	2.99		**Shallow Concentrated Flow, F-G** Short Grass Pasture Kv= 7.0 fps
1.3	52	0.0097	0.69		**Shallow Concentrated Flow, G-H** Short Grass Pasture Kv= 7.0 fps
12.6	450	Total			

Subcatchment SC-1D3: Northeast Portion of Property



Summary for Subcatchment SC-1E: Central of property

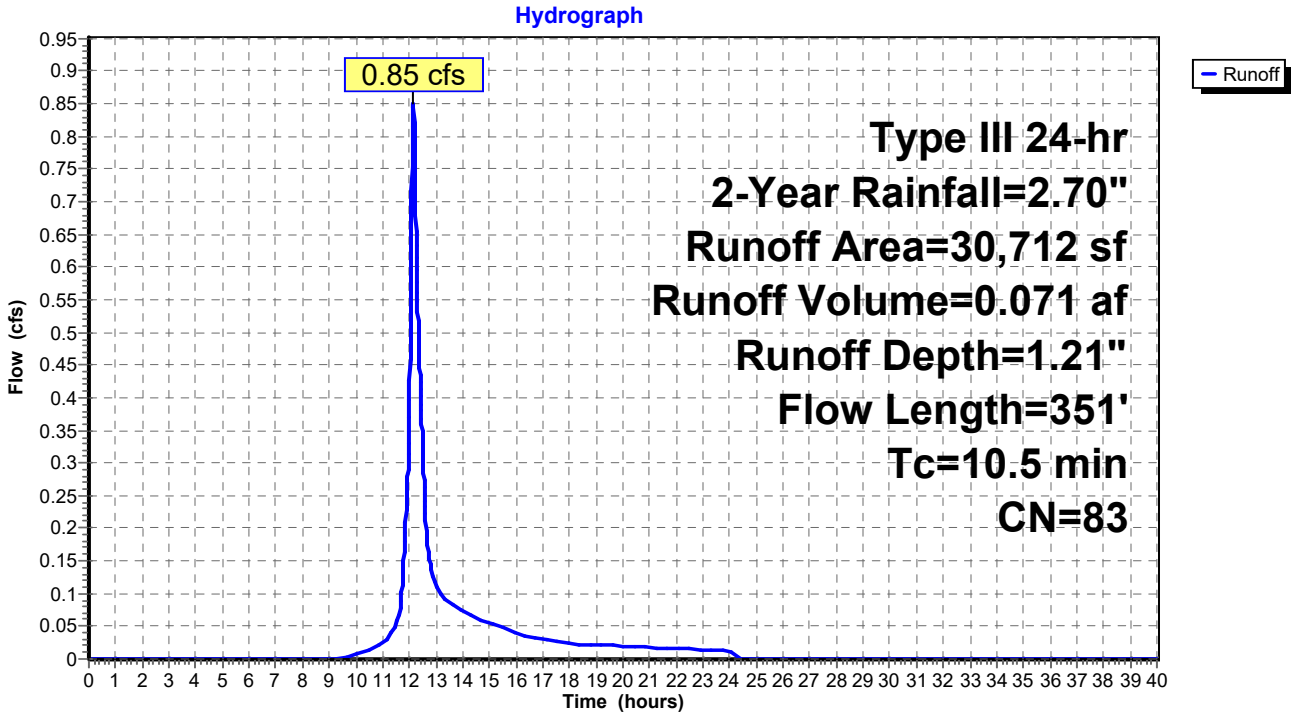
Runoff = 0.85 cfs @ 12.15 hrs, Volume= 0.071 af, Depth= 1.21"
Routed to Pond P-1E : 12" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	5,682	98	Paved roads w/curbs & sewers
*	89	98	Paved parking
	24,741	80	Pasture/grassland/range, Good, HSG D
	200	79	Woods/grass comb., Good, HSG D
	30,712	83	Weighted Average
	24,941		81.21% Pervious Area
	5,771		18.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	100	0.0750	0.18		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
1.3	251	0.0103	3.16	39.16	**Channel Flow, B-C** Area= 12.4 sf Perim= 24.9' r= 0.50' n= 0.030 Earth, grassed & winding
10.5	351	Total			

Subcatchment SC-1E: Central of property



Summary for Subcatchment SC-1F: Central of property

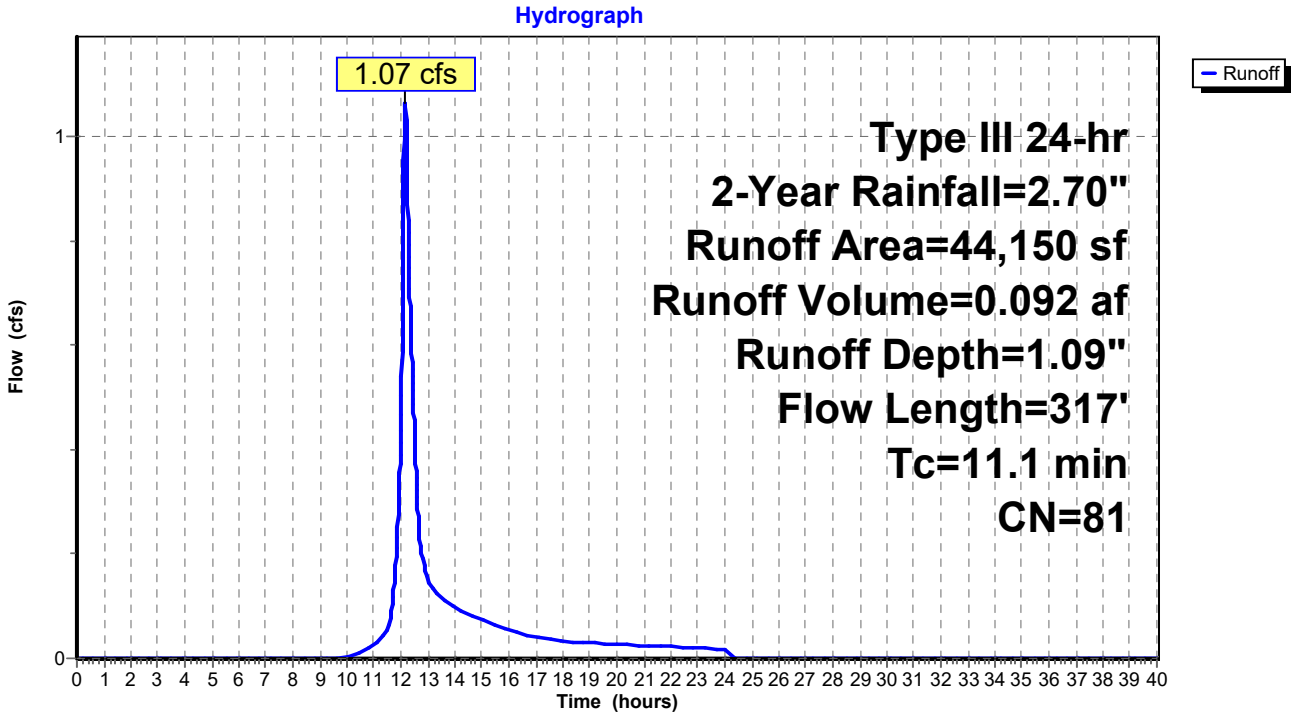
Runoff = 1.07 cfs @ 12.16 hrs, Volume= 0.092 af, Depth= 1.09"
Routed to Pond P-1F : 2 - 24 " Dia Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.70"

	Area (sf)	CN	Description
*	1,971	98	Paved roads w/curbs & sewers
*	620	98	Paved parking
	31,090	80	>75% Grass cover, Good, HSG D
	10,469	79	Woods/grass comb., Good, HSG D
	44,150	81	Weighted Average
	41,559		94.13% Pervious Area
	2,591		5.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0600	0.17		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
1.0	147	0.1292	2.52		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	70	0.0714	8.07	24.21	**Channel Flow, C-D** Area= 3.0 sf Perim= 6.3' r= 0.48' n= 0.030 Earth, grassed & winding
11.1	317	Total			

Subcatchment SC-1F: Central of property



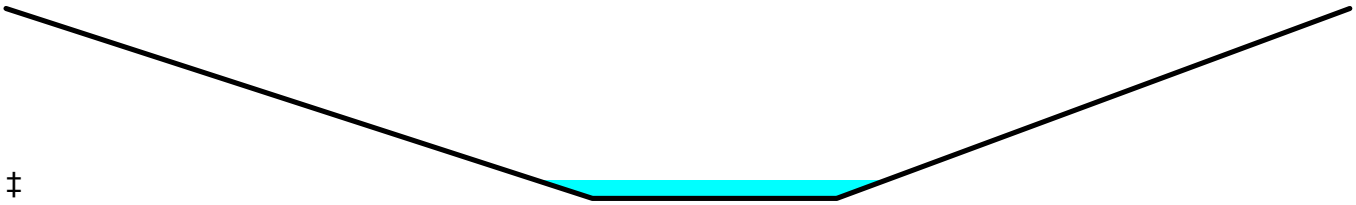
Summary for Reach 1B-R1: Swale

Inflow Area = 6.705 ac, 17.44% Impervious, Inflow Depth = 1.27" for 2-Year event
Inflow = 6.65 cfs @ 12.30 hrs, Volume= 0.709 af
Outflow = 6.63 cfs @ 12.32 hrs, Volume= 0.709 af, Atten= 0%, Lag= 0.6 min
Routed to Reach 1B-R2 : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.74 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 1.28 fps, Avg. Travel Time= 2.8 min

Peak Storage= 383 cf @ 12.32 hrs
Average Depth at Peak Storage= 0.29' , Surface Width= 7.18'
Bank-Full Depth= 3.00' Flow Area= 48.8 sf, Capacity= 670.12 cfs

5.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 27.50'
Length= 216.0' Slope= 0.0200 '/'
Inlet Invert= 165.33', Outlet Invert= 161.00'



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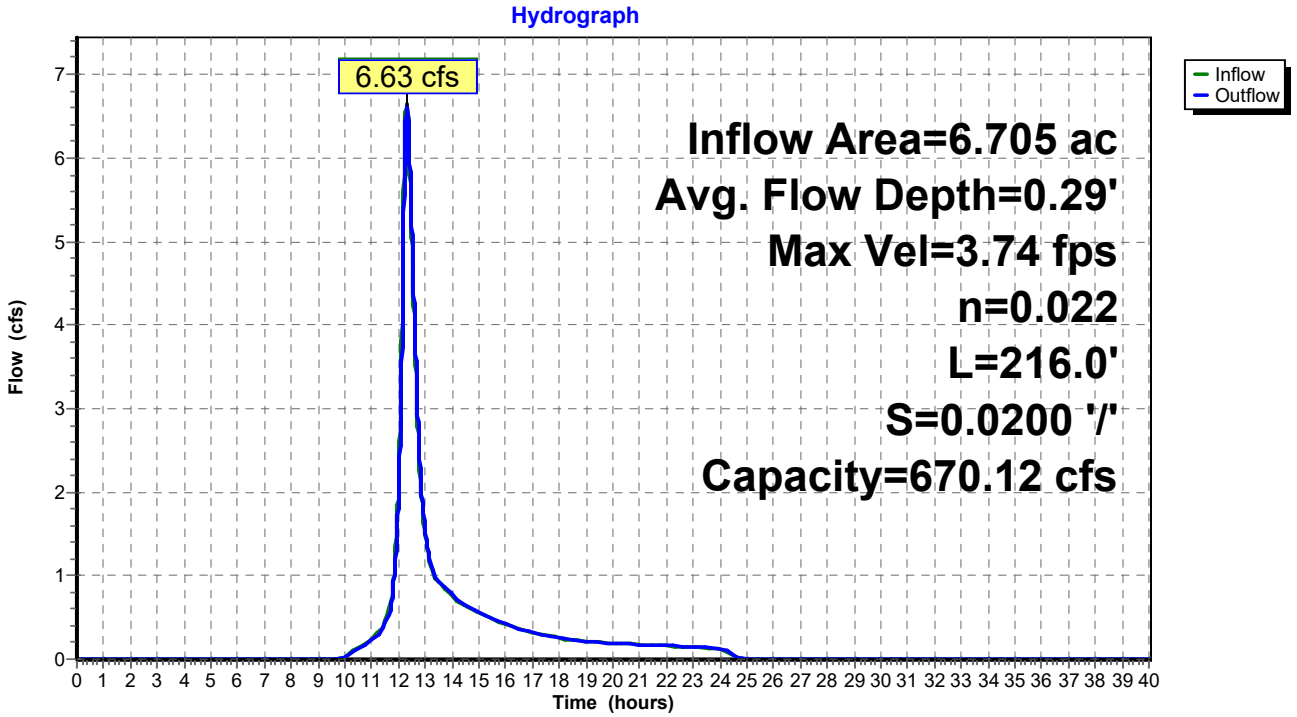
Reach 1B-R1: Swale



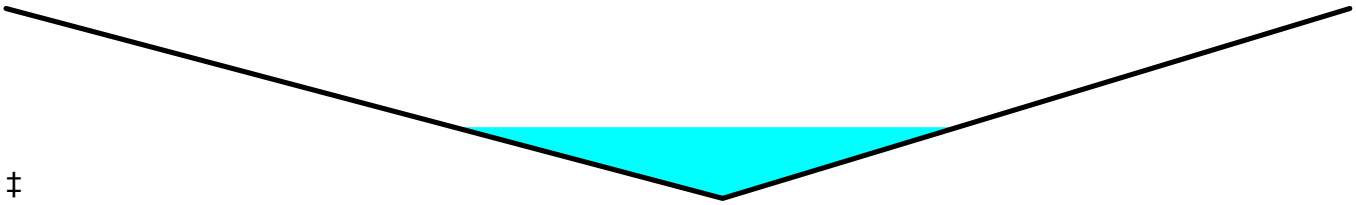
Summary for Reach 1B-R2: Swale

Inflow Area = 6.705 ac, 17.44% Impervious, Inflow Depth = 1.27" for 2-Year event
Inflow = 6.63 cfs @ 12.32 hrs, Volume= 0.709 af
Outflow = 6.54 cfs @ 12.35 hrs, Volume= 0.709 af, Atten= 2%, Lag= 2.1 min
Routed to Pond P-1F : 2 - 24 " Dia Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.38 fps, Min. Travel Time= 2.6 min
Avg. Velocity = 0.44 fps, Avg. Travel Time= 8.1 min

Peak Storage= 1,017 cf @ 12.35 hrs
Average Depth at Peak Storage= 1.13' , Surface Width= 8.44'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 89.22 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 214.1' Slope= 0.0009 '/'
Inlet Invert= 161.00', Outlet Invert= 160.80'



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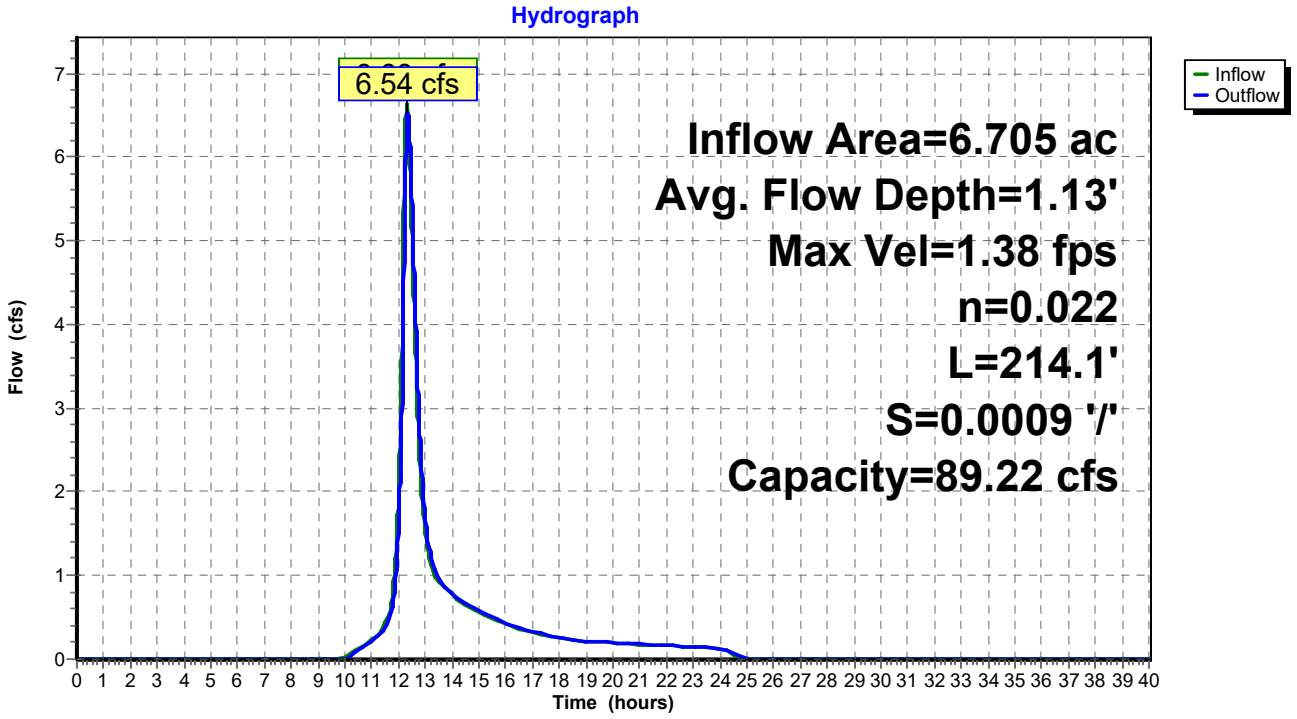


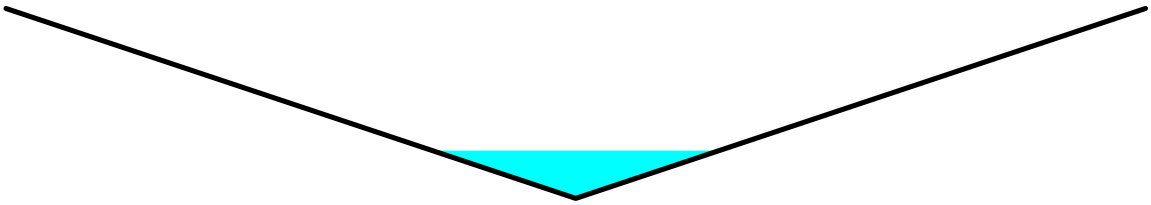
Summary for Reach 1C-R: Swale

Inflow Area = 8.894 ac, 15.82% Impervious, Inflow Depth = 1.25" for 2-Year event
Inflow = 8.02 cfs @ 12.34 hrs, Volume= 0.923 af
Outflow = 8.02 cfs @ 12.35 hrs, Volume= 0.923 af, Atten= 0%, Lag= 0.5 min
Routed to Pond P-1 : 30" Culvert

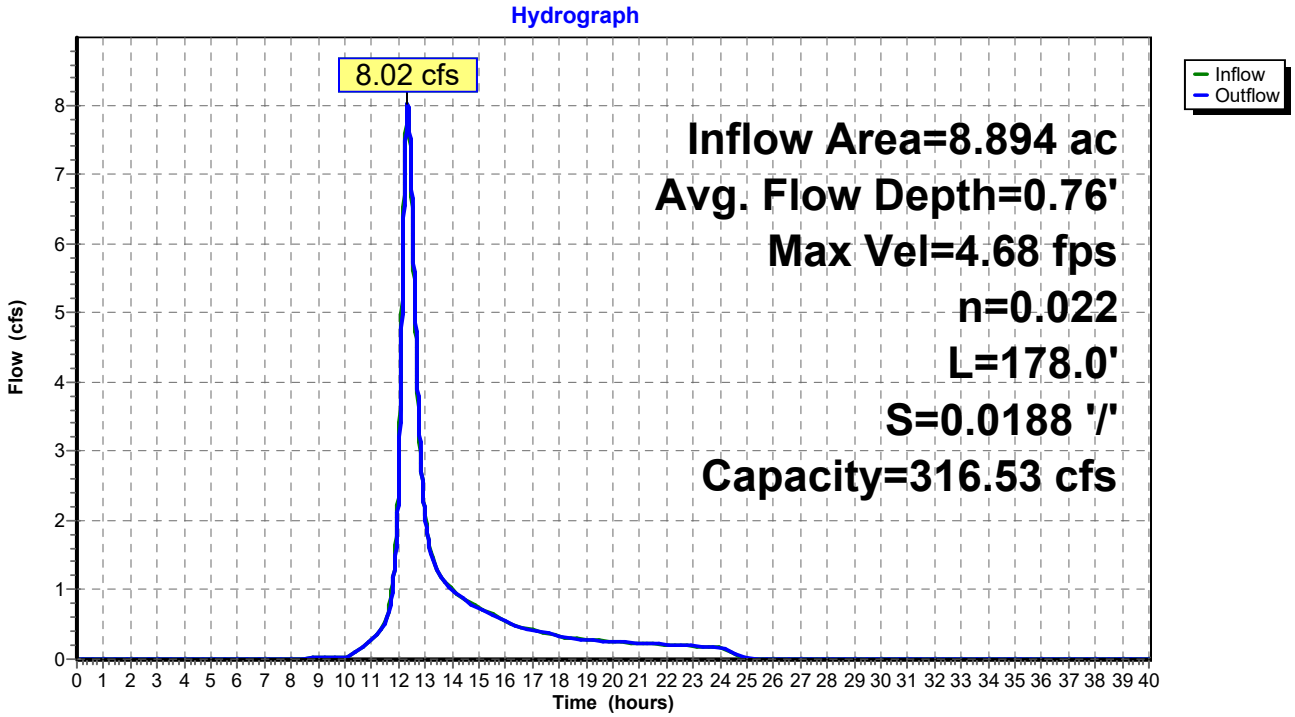
Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.68 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.53 fps, Avg. Travel Time= 1.9 min

Peak Storage= 305 cf @ 12.35 hrs
Average Depth at Peak Storage= 0.76' , Surface Width= 4.53'
Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 316.53 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 18.00'
Length= 178.0' Slope= 0.0188 '/'
Inlet Invert= 157.50', Outlet Invert= 154.15'



Reach 1C-R: Swale



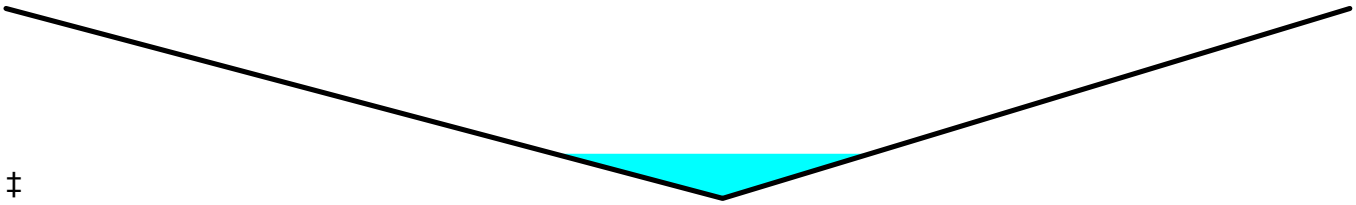
Summary for Reach 1D-R: Swale

Inflow Area = 5.267 ac, 19.83% Impervious, Inflow Depth = 1.24" for 2-Year event
Inflow = 5.78 cfs @ 12.18 hrs, Volume= 0.546 af
Outflow = 5.76 cfs @ 12.19 hrs, Volume= 0.546 af, Atten= 0%, Lag= 0.7 min
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.09 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.13 fps, Avg. Travel Time= 2.3 min

Peak Storage= 287 cf @ 12.19 hrs
Average Depth at Peak Storage= 0.71' , Surface Width= 5.29'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 273.33 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 154.0' Slope= 0.0088 '/'
Inlet Invert= 155.50', Outlet Invert= 154.15'



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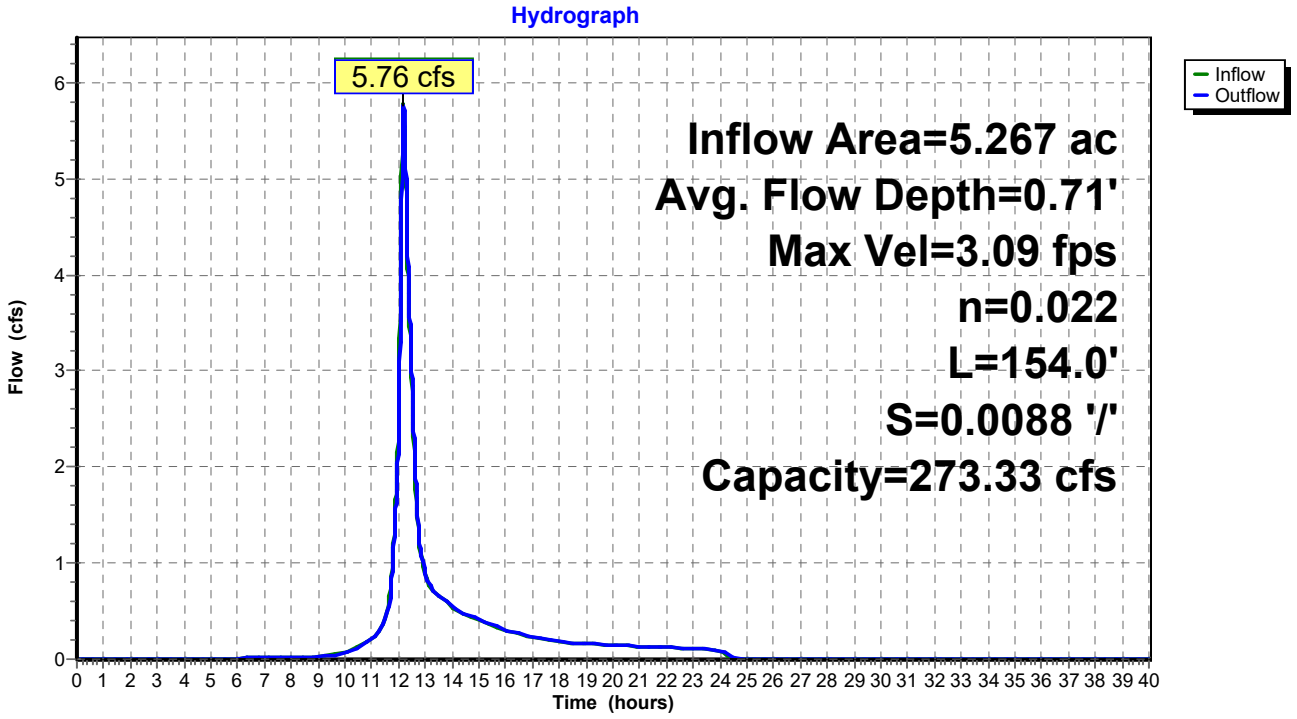
Reach 1D-R: Swale



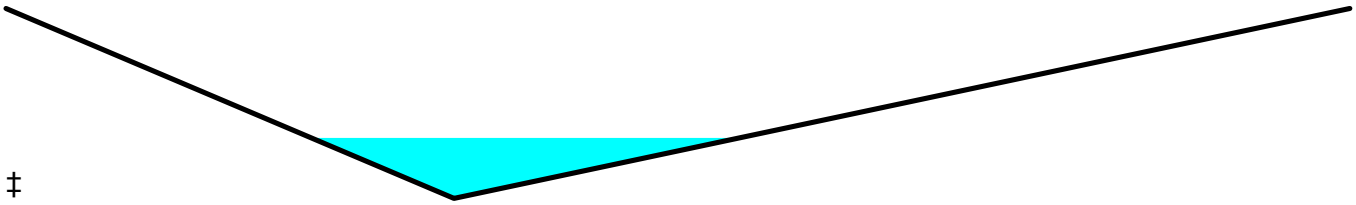
Summary for Reach 1E-R: Road Side Ditch

Inflow Area = 0.705 ac, 18.79% Impervious, Inflow Depth = 1.21" for 2-Year event
Inflow = 0.80 cfs @ 12.18 hrs, Volume= 0.071 af
Outflow = 0.76 cfs @ 12.22 hrs, Volume= 0.071 af, Atten= 5%, Lag= 2.5 min
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.67 fps, Min. Travel Time= 3.2 min
Avg. Velocity = 0.61 fps, Avg. Travel Time= 8.7 min

Peak Storage= 145 cf @ 12.22 hrs
Average Depth at Peak Storage= 0.32' , Surface Width= 2.87'
Bank-Full Depth= 1.00' Flow Area= 4.5 sf, Capacity= 16.16 cfs

0.00' x 1.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 3.0 6.0 '/' Top Width= 9.00'
Length= 317.0' Slope= 0.0137 '/'
Inlet Invert= 158.50', Outlet Invert= 154.15'



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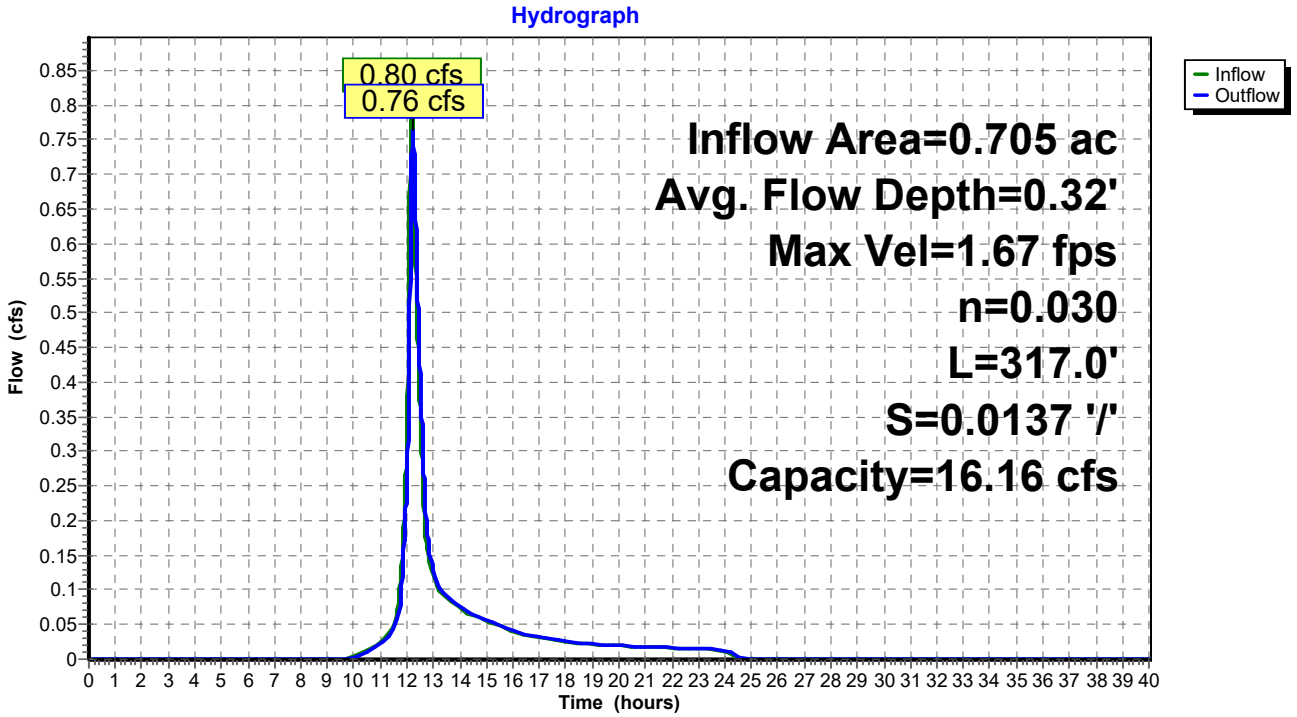
Reach 1E-R: Road Side Ditch



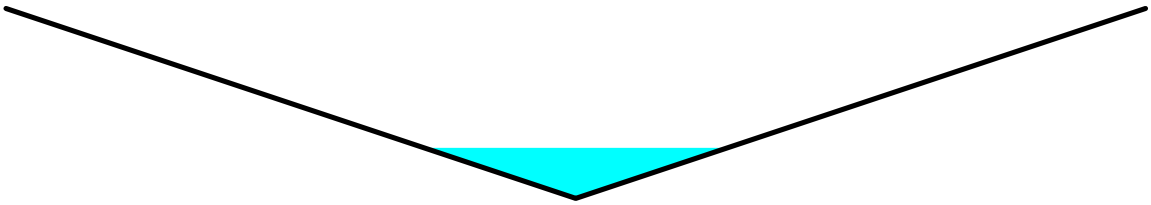
Summary for Reach 1F-R: Swale

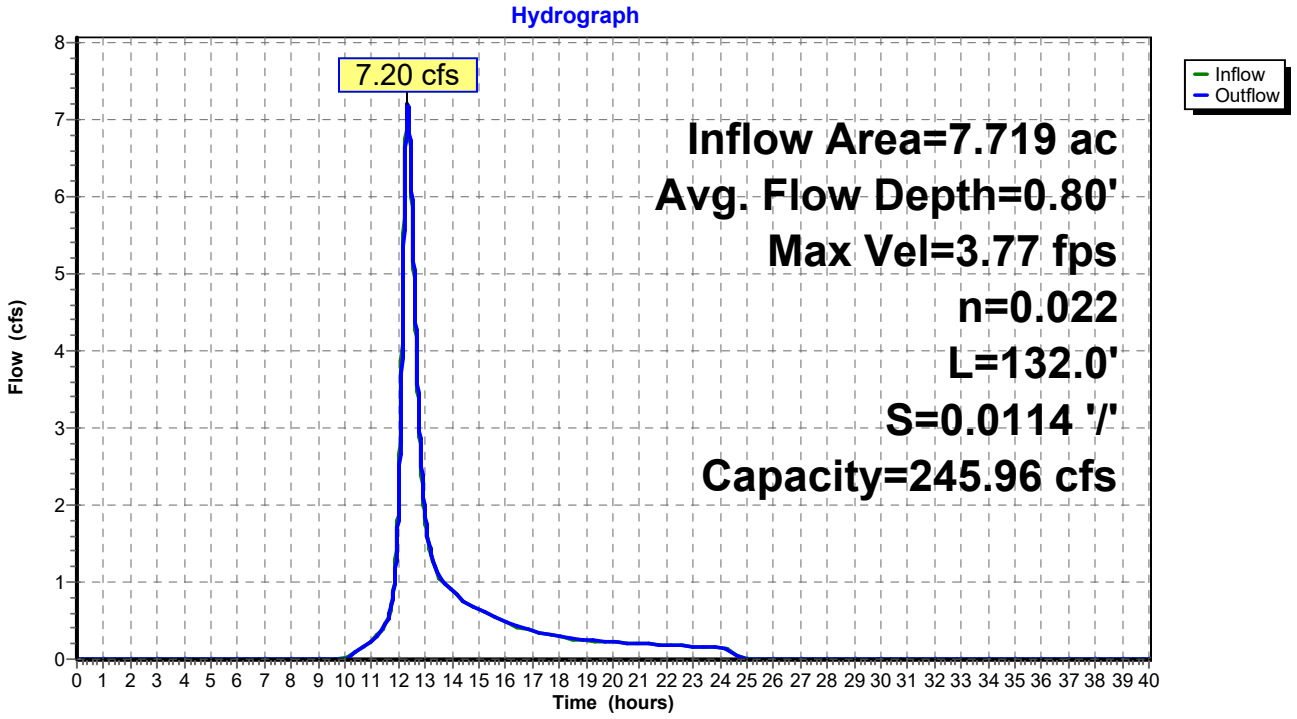
Inflow Area = 7.719 ac, 15.92% Impervious, Inflow Depth = 1.25" for 2-Year event
Inflow = 7.20 cfs @ 12.34 hrs, Volume= 0.801 af
Outflow = 7.20 cfs @ 12.35 hrs, Volume= 0.801 af, Atten= 0%, Lag= 0.4 min
Routed to Reach 1C-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.77 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.43 fps, Avg. Travel Time= 1.5 min

Peak Storage= 252 cf @ 12.35 hrs
Average Depth at Peak Storage= 0.80' , Surface Width= 4.79'
Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 245.96 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 18.00'
Length= 132.0' Slope= 0.0114 '/'
Inlet Invert= 159.00', Outlet Invert= 157.50'





Summary for Pond P-1: 30" Culvert

Inflow Area = 16.655 ac, 19.31% Impervious, Inflow Depth = 1.27" for 2-Year event
Inflow = 14.17 cfs @ 12.26 hrs, Volume= 1.757 af
Outflow = 14.15 cfs @ 12.27 hrs, Volume= 1.757 af, Atten= 0%, Lag= 0.8 min
Primary = 14.15 cfs @ 12.27 hrs, Volume= 1.757 af
Routed to Link AP-1 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link AP-1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 155.99' @ 12.27 hrs Surf.Area= 565 sf Storage= 327 cf

Plug-Flow detention time= 0.2 min calculated for 1.756 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (877.0 - 876.8)

Volume	Invert	Avail.Storage	Storage Description
#1	154.15'	16,642 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

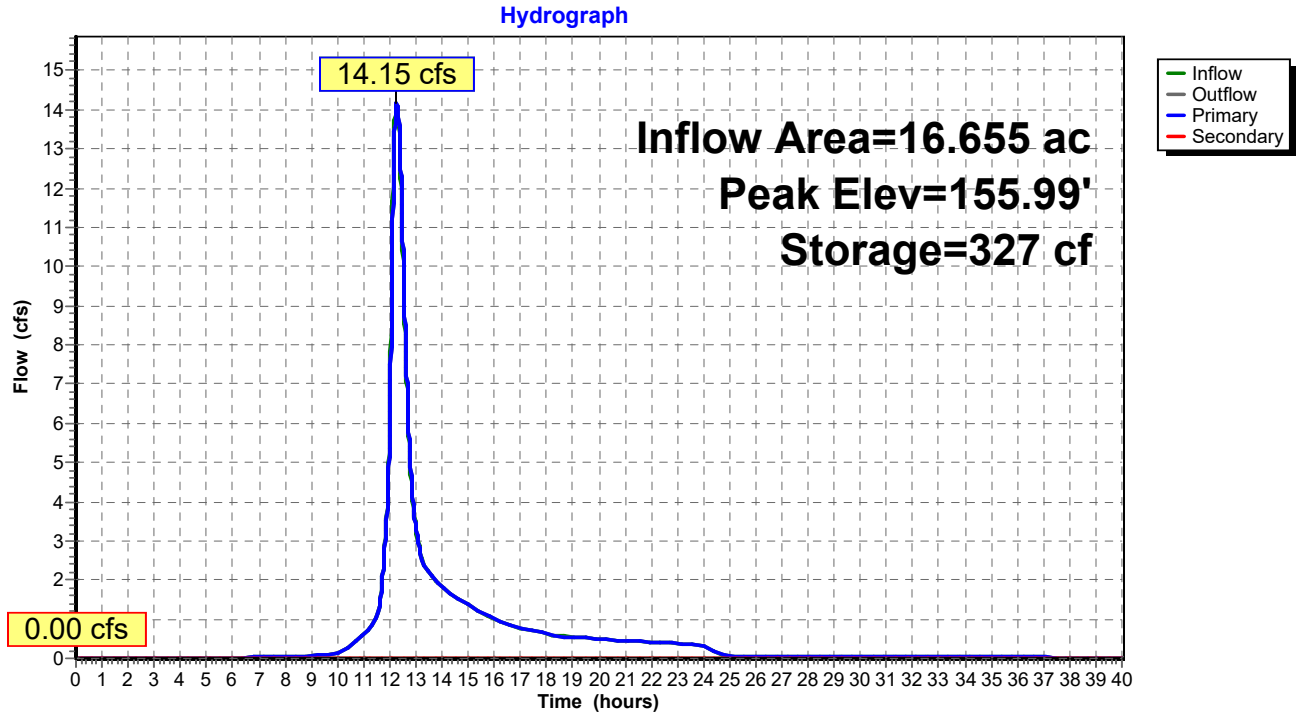
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
154.15	0	0	0
155.00	50	21	21
156.00	569	310	331
157.00	5,902	3,236	3,566
158.00	20,250	13,076	16,642

Device	Routing	Invert	Outlet Devices
#1	Primary	154.15'	**30.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 154.15' / 153.00' S= 0.0153 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf
#2	Secondary	157.50'	**30.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=14.15 cfs @ 12.27 hrs HW=155.99' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 14.15 cfs @ 3.65 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=154.15' TW=0.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P-1: 30" Culvert



Summary for Pond P-1A: Underdrained Soil Filter #1

Inflow Area = 0.654 ac, 54.48% Impervious, Inflow Depth = 1.76" for 2-Year event
Inflow = 1.35 cfs @ 12.07 hrs, Volume= 0.096 af
Outflow = 0.08 cfs @ 14.05 hrs, Volume= 0.096 af, Atten= 94%, Lag= 118.8 min
Primary = 0.04 cfs @ 18.25 hrs, Volume= 0.092 af
Routed to Pond P-1 : 30" Culvert
Secondary = 0.04 cfs @ 14.05 hrs, Volume= 0.004 af
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 158.01' @ 14.05 hrs Surf.Area= 1,935 sf Storage= 2,342 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 539.3 min (1,340.4 - 801.1)

Volume	Invert	Avail.Storage	Storage Description
#1	154.40'	3,384 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

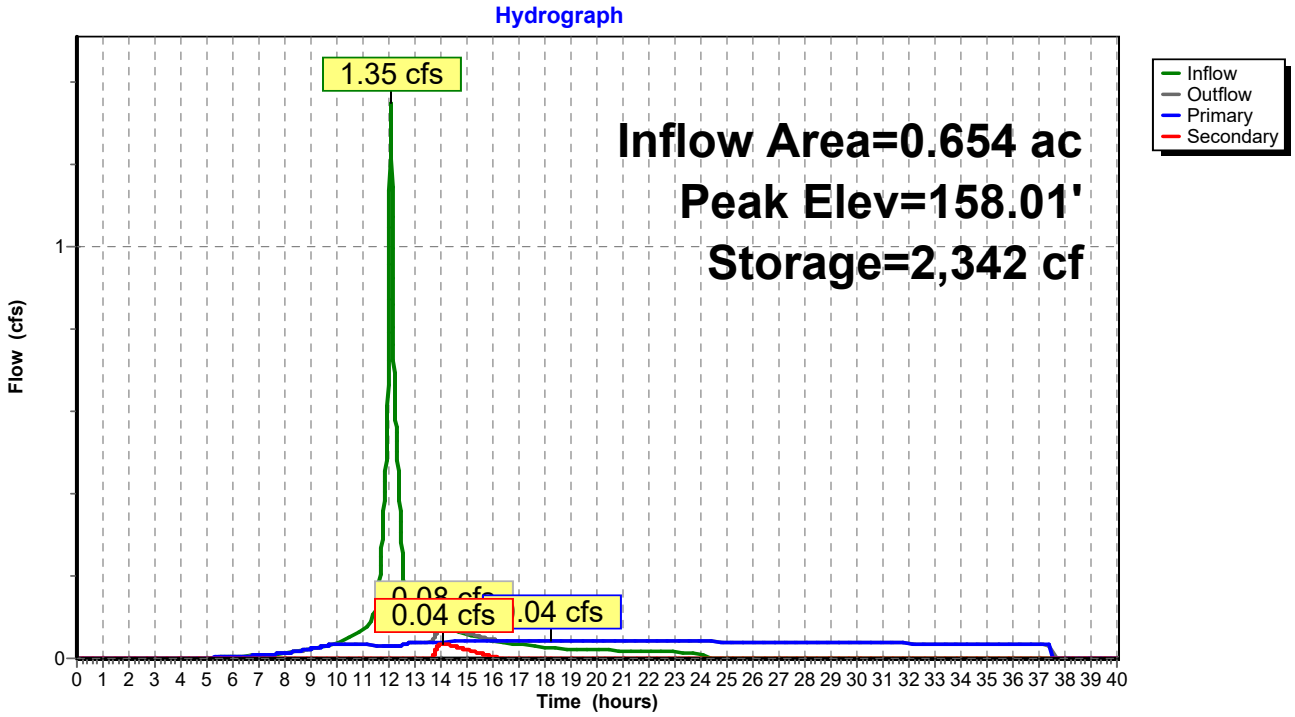
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
154.40	1,179	0.0	0	0
156.50	1,179	0.0	0	0
157.00	1,413	100.0	648	648
158.00	1,924	100.0	1,669	2,317
158.50	2,344	100.0	1,067	3,384

Device	Routing	Invert	Outlet Devices
#1	Primary	154.40'	**1.4" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 154.40' / 154.25' S= 0.0038 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.01 sf
#2	Secondary	158.00'	**10.0' long x 4.5' 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 5.00 5.50 Coef. (English) 2.36 2.52 2.70 2.68 2.67 2.67 2.65 2.66 2.66 2.67 2.70 2.70 2.72 2.75 2.81 2.93 3.10

Primary OutFlow Max=0.04 cfs @ 18.25 hrs HW=157.96' TW=154.48' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.04 cfs @ 3.88 fps)

Secondary OutFlow Max=0.04 cfs @ 14.05 hrs HW=158.01' TW=154.73' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 0.04 cfs @ 0.27 fps)

Pond P-1A: Underdrained Soil Filter #1



Summary for Pond P-1A2: CB#2

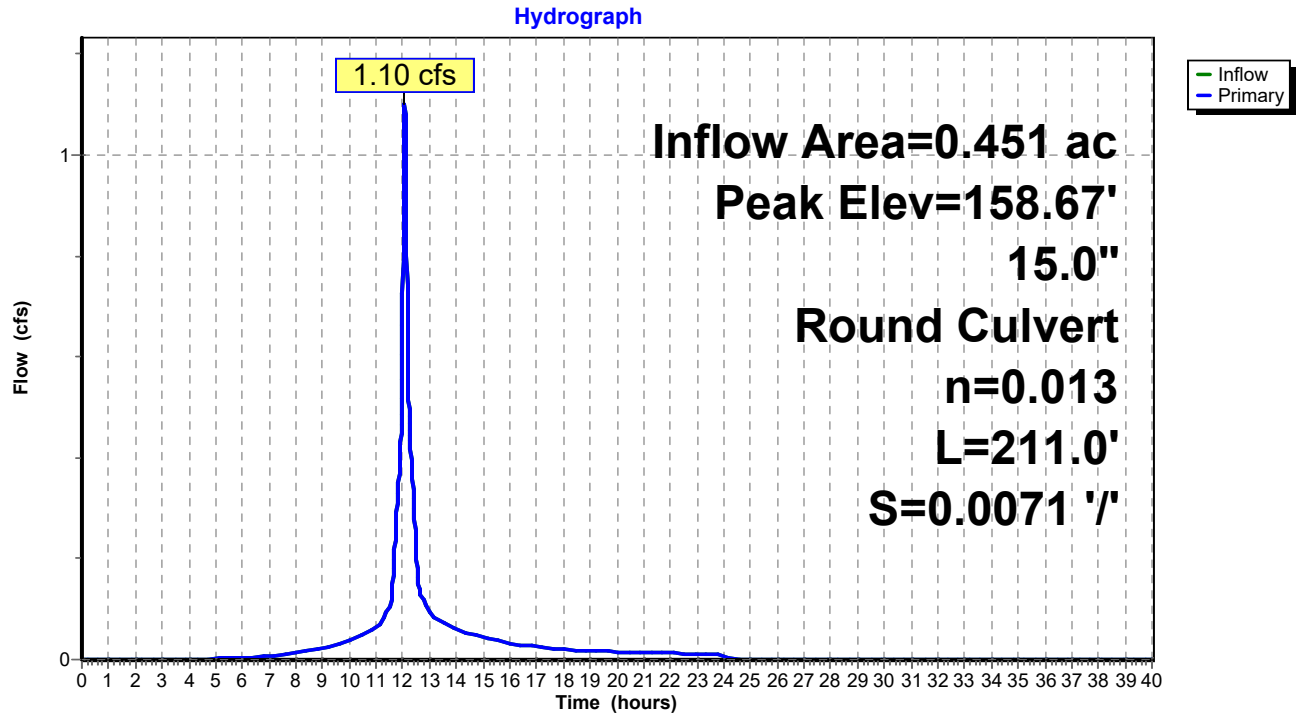
Inflow Area = 0.451 ac, 78.97% Impervious, Inflow Depth = 2.08" for 2-Year event
Inflow = 1.10 cfs @ 12.07 hrs, Volume= 0.078 af
Outflow = 1.10 cfs @ 12.07 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0 min
Primary = 1.10 cfs @ 12.07 hrs, Volume= 0.078 af
Routed to Pond P-1A : Underdrained Soil Filter #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 158.67' @ 12.07 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	158.10'	**15.0" Round Culvert** L= 211.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.10' / 156.60' S= 0.0071 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.10 cfs @ 12.07 hrs HW=158.67' TW=157.25' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.10 cfs @ 2.03 fps)

Pond P-1A2: CB#2



Summary for Pond P-1B: 36" Culvert

Inflow Area = 6.705 ac, 17.44% Impervious, Inflow Depth = 1.27" for 2-Year event
Inflow = 6.68 cfs @ 12.28 hrs, Volume= 0.711 af
Outflow = 6.65 cfs @ 12.30 hrs, Volume= 0.709 af, Atten= 0%, Lag= 1.3 min
Primary = 6.65 cfs @ 12.30 hrs, Volume= 0.709 af
Routed to Reach 1B-R1 : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1B-R1 : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 166.71' @ 12.30 hrs Surf.Area= 756 sf Storage= 648 cf

Plug-Flow detention time= 5.2 min calculated for 0.709 af (100% of inflow)
Center-of-Mass det. time= 3.4 min (854.1 - 850.7)

Volume	Invert	Avail.Storage	Storage Description
#1	165.00'	7,542 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

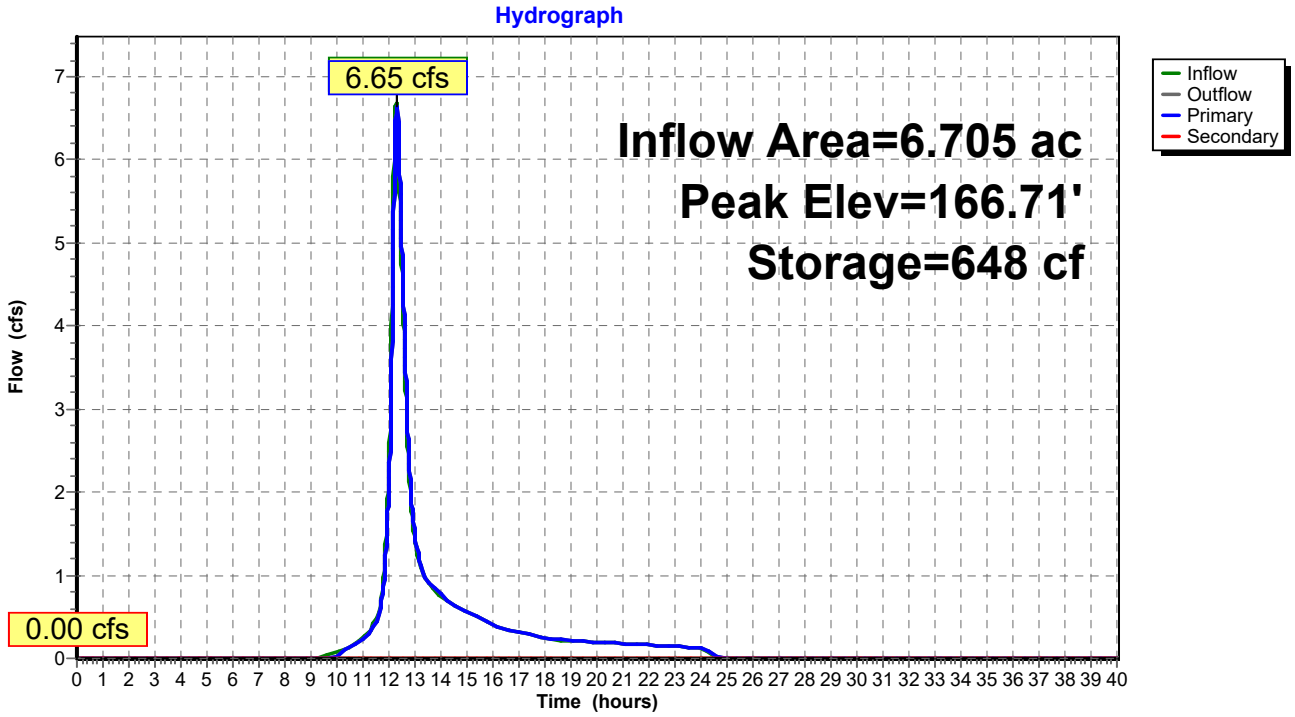
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
165.00	0	0	0
168.00	1,323	1,985	1,985
170.00	4,234	5,557	7,542

Device	Routing	Invert	Outlet Devices
#1	Primary	165.64'	**36.0" Round Culvert** L= 48.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 165.64' / 165.33' S= 0.0065 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf
#2	Secondary	169.00'	**20.0' long x 6.0' 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 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=6.64 cfs @ 12.30 hrs HW=166.71' TW=165.62' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 6.64 cfs @ 4.35 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=165.00' TW=165.33' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P-1B: 36" Culvert



Summary for Pond P-1C: DMH#1

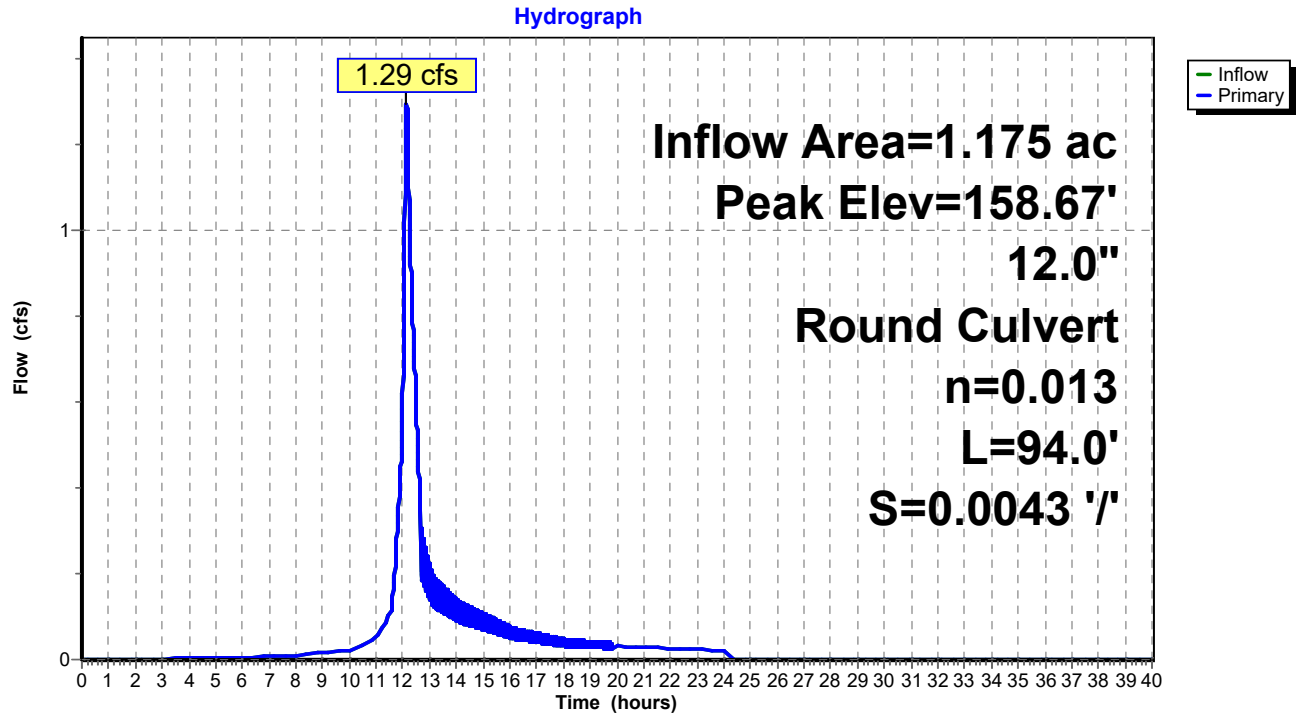
Inflow Area = 1.175 ac, 15.14% Impervious, Inflow Depth = 1.25" for 2-Year event
Inflow = 1.29 cfs @ 12.14 hrs, Volume= 0.122 af
Outflow = 1.29 cfs @ 12.14 hrs, Volume= 0.122 af, Atten= 0%, Lag= 0.0 min
Primary = 1.29 cfs @ 12.14 hrs, Volume= 0.122 af
Routed to Reach 1C-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 158.67' @ 12.15 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	157.90'	**12.0" Round Culvert** L= 94.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 157.90' / 157.50' S= 0.0043 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.28 cfs @ 12.14 hrs HW=158.67' TW=158.15' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.28 cfs @ 2.73 fps)

Pond P-1C: DMH#1



Summary for Pond P-1C1: FI#1

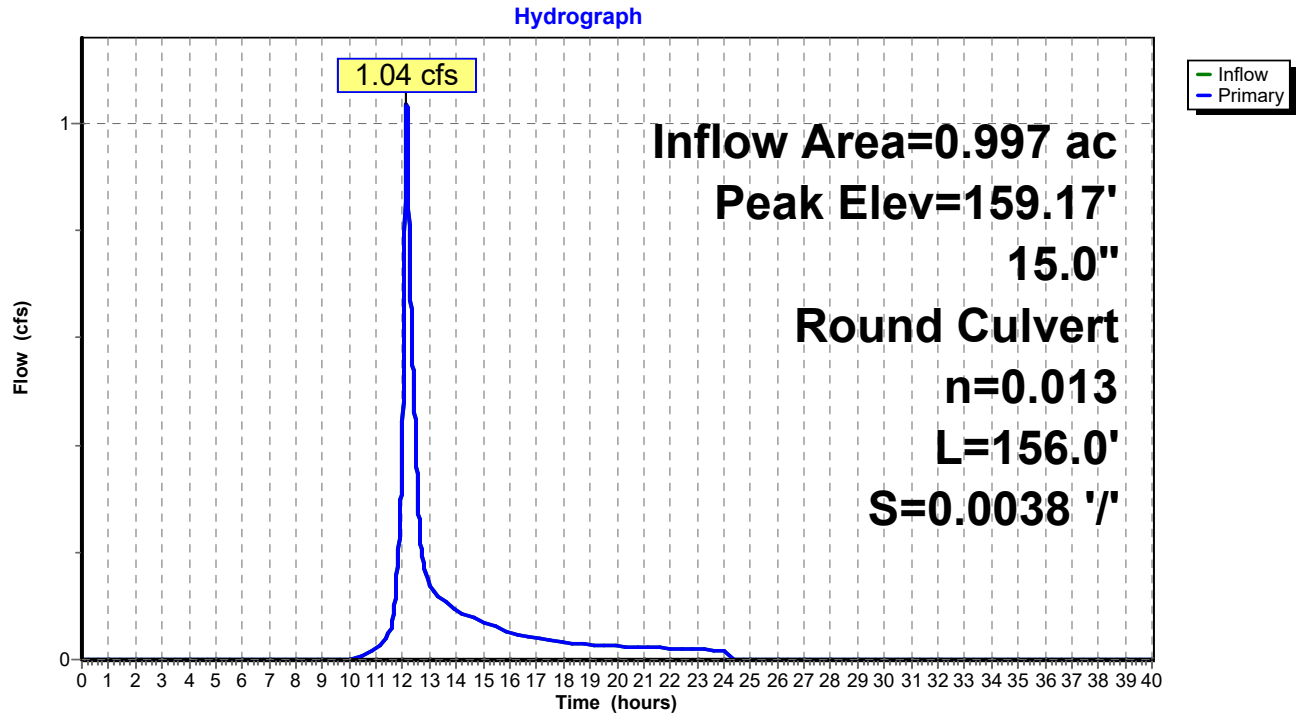
Inflow Area = 0.997 ac, 0.00% Impervious, Inflow Depth = 1.03" for 2-Year event
Inflow = 1.04 cfs @ 12.14 hrs, Volume= 0.086 af
Outflow = 1.04 cfs @ 12.14 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min
Primary = 1.04 cfs @ 12.14 hrs, Volume= 0.086 af
Routed to Pond P-1C : DMH#1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 159.17' @ 12.15 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	158.50'	**15.0" Round Culvert** L= 156.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.50' / 157.90' S= 0.0038 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.03 cfs @ 12.14 hrs HW=159.17' TW=158.67' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.03 cfs @ 2.25 fps)

Pond P-1C1: FI#1



Summary for Pond P-1D: 15" Culvert

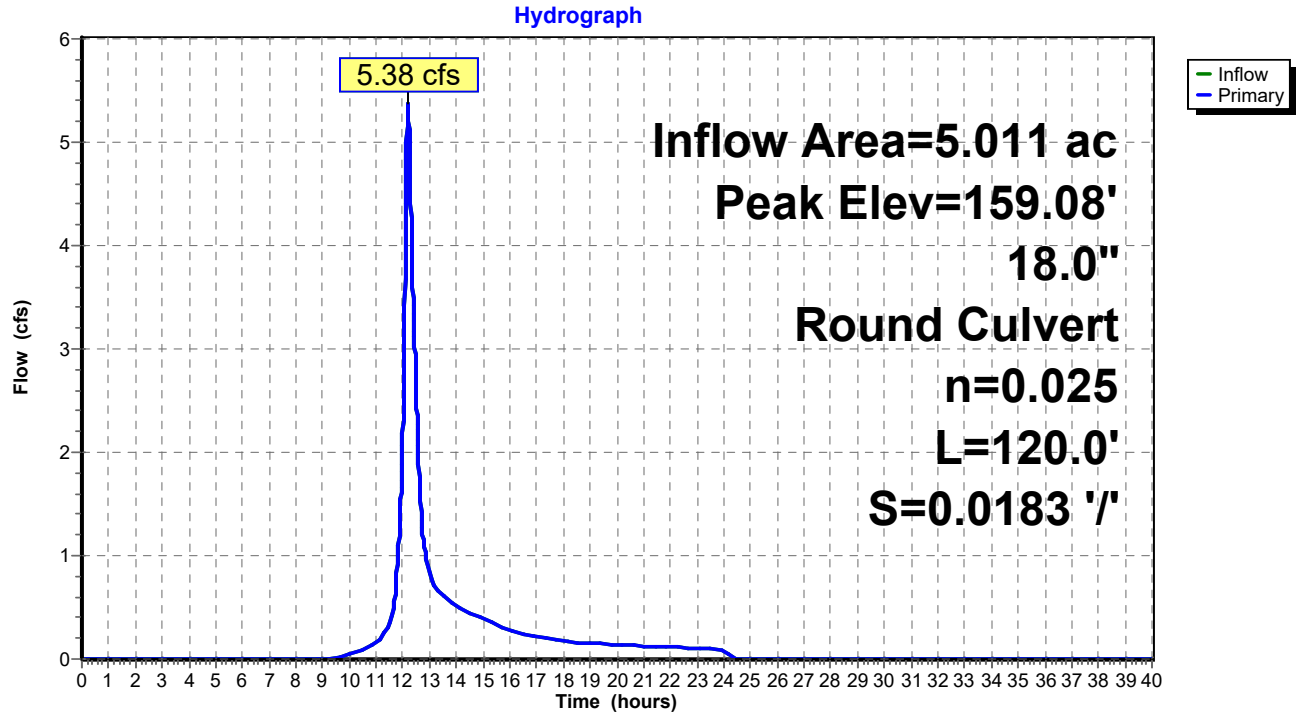
Inflow Area = 5.011 ac, 15.74% Impervious, Inflow Depth = 1.18" for 2-Year event
Inflow = 5.38 cfs @ 12.18 hrs, Volume= 0.494 af
Outflow = 5.38 cfs @ 12.18 hrs, Volume= 0.494 af, Atten= 0%, Lag= 0.0 min
Primary = 5.38 cfs @ 12.18 hrs, Volume= 0.494 af
Routed to Reach 1D-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 159.08' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	157.70'	**18.0" Round Culvert** L= 120.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 157.70' / 155.50' S= 0.0183 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=5.37 cfs @ 12.18 hrs HW=159.08' TW=156.20' (Dynamic Tailwater)
1=Culvert (Inlet Controls 5.37 cfs @ 3.16 fps)

Pond P-1D: 15" Culvert



Summary for Pond P-1D3: FI#2

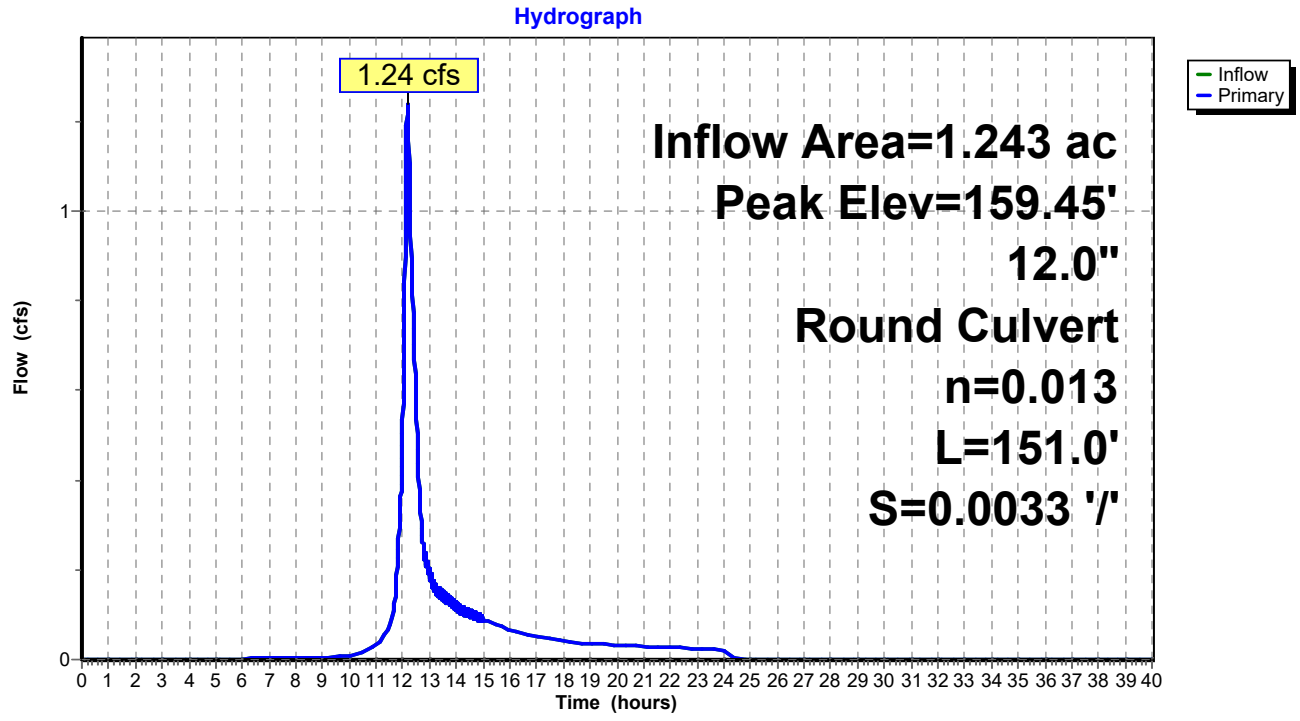
Inflow Area = 1.243 ac, 5.13% Impervious, Inflow Depth = 1.10" for 2-Year event
Inflow = 1.24 cfs @ 12.17 hrs, Volume= 0.114 af
Outflow = 1.24 cfs @ 12.17 hrs, Volume= 0.114 af, Atten= 0%, Lag= 0.0 min
Primary = 1.24 cfs @ 12.17 hrs, Volume= 0.114 af
Routed to Pond P-1D : 15" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 159.45' @ 12.18 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	158.50'	**12.0" Round Culvert** L= 151.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.50' / 158.00' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.22 cfs @ 12.17 hrs HW=159.44' TW=159.08' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.22 cfs @ 2.05 fps)

Pond P-1D3: FI#2



Summary for Pond P-1E: 12" Culvert

Inflow Area = 0.705 ac, 18.79% Impervious, Inflow Depth = 1.21" for 2-Year event
Inflow = 0.85 cfs @ 12.15 hrs, Volume= 0.071 af
Outflow = 0.80 cfs @ 12.18 hrs, Volume= 0.071 af, Atten= 6%, Lag= 1.8 min
Primary = 0.80 cfs @ 12.18 hrs, Volume= 0.071 af
Routed to Reach 1E-R : Road Side Ditch
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1E-R : Road Side Ditch

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 159.04' @ 12.19 hrs Surf.Area= 365 sf Storage= 108 cf

Plug-Flow detention time= 4.3 min calculated for 0.071 af (100% of inflow)
Center-of-Mass det. time= 3.8 min (849.3 - 845.4)

Volume	Invert	Avail.Storage	Storage Description
#1	158.40'	5,001 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

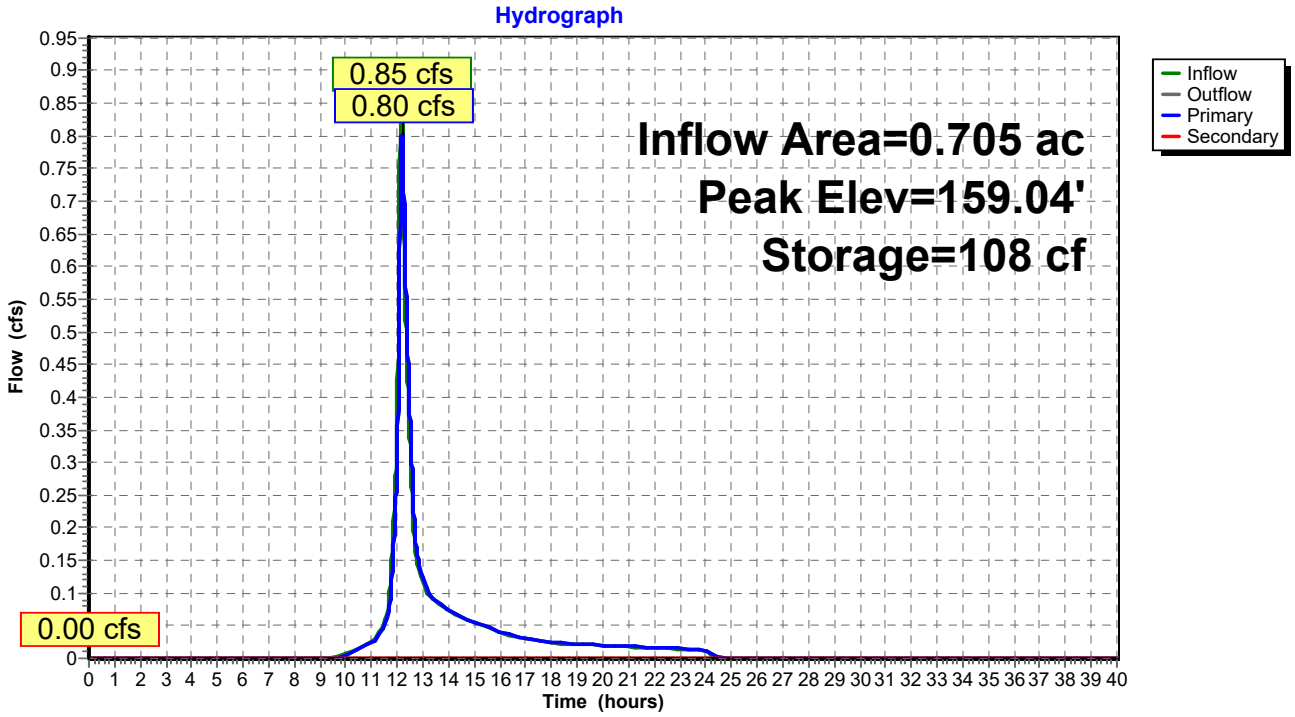
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
158.40	0	0	0
159.00	315	94	94
160.00	1,555	935	1,029
161.00	6,388	3,972	5,001

Device	Routing	Invert	Outlet Devices
#1	Primary	158.40'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.40' / 158.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	160.80'	**31.0' long x 11.0' 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) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64

Primary OutFlow Max=0.80 cfs @ 12.18 hrs HW=159.04' TW=158.81' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.80 cfs @ 2.14 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=158.40' TW=158.50' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P-1E: 12" Culvert



Summary for Pond P-1F: 2 - 24 " Dia Culvert

Inflow Area = 7.719 ac, 15.92% Impervious, Inflow Depth = 1.25" for 2-Year event
Inflow = 7.20 cfs @ 12.34 hrs, Volume= 0.801 af
Outflow = 7.20 cfs @ 12.34 hrs, Volume= 0.801 af, Atten= 0%, Lag= 0.0 min
Primary = 7.20 cfs @ 12.34 hrs, Volume= 0.801 af
Routed to Reach 1F-R : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P-1E : 12" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 160.91' @ 12.34 hrs Surf.Area= 24 sf Storage= 11 cf

Plug-Flow detention time= 0.0 min calculated for 0.801 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (859.3 - 859.3)

Volume	Invert	Avail.Storage	Storage Description
#1	160.00'	4,221 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

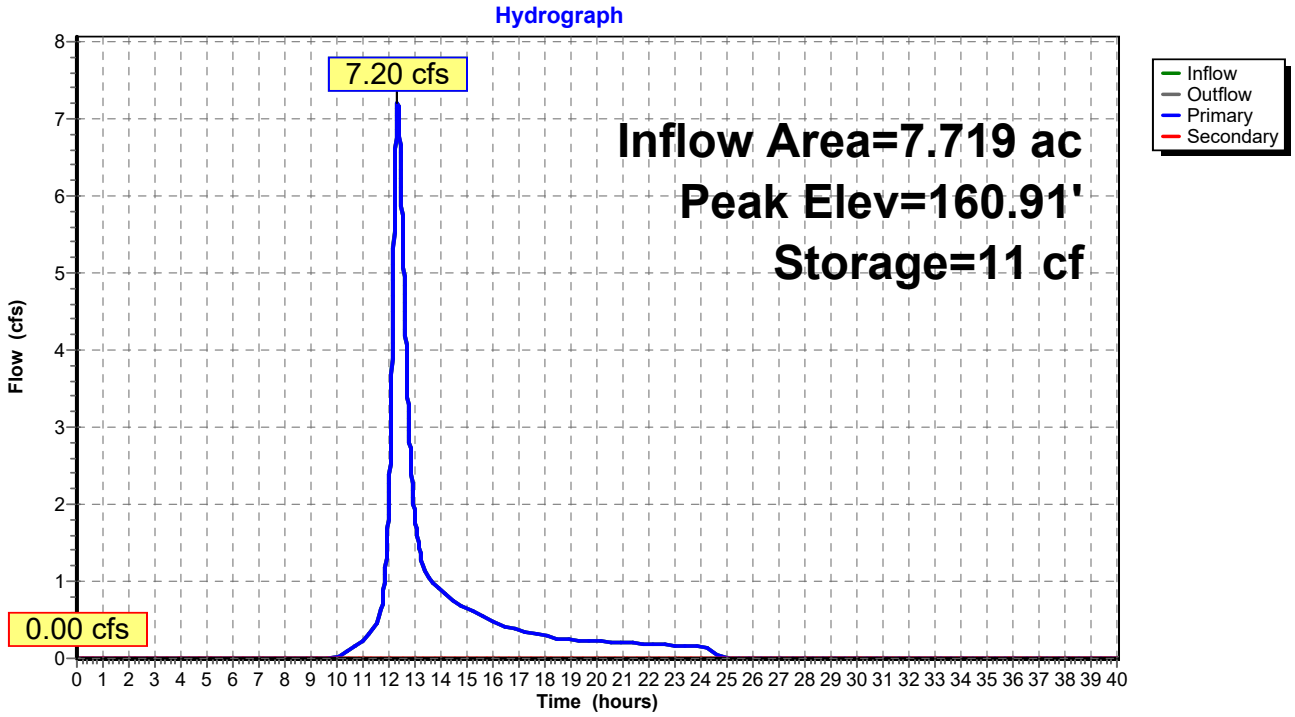
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
160.00	0	0	0
161.00	26	13	13
162.00	707	367	380
163.00	1,746	1,227	1,606
164.00	3,484	2,615	4,221

Device	Routing	Invert	Outlet Devices
#1	Primary	160.00'	**24.0" Round Culvert X 2.00** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 160.00' / 159.50' S= 0.0125 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Secondary	163.50'	**58.0' long x 11.0' 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) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64

Primary OutFlow Max=7.20 cfs @ 12.34 hrs HW=160.91' TW=159.80' (Dynamic Tailwater)
1=Culvert (Inlet Controls 7.20 cfs @ 2.57 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=160.00' TW=158.40' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P-1F: 2 - 24 " Dia Culvert



Summary for Pond RDF-1: Roof Dripline Filter #1

Inflow Area = 0.187 ac,100.00% Impervious, Inflow Depth = 2.47" for 2-Year event
Inflow = 0.51 cfs @ 12.07 hrs, Volume= 0.039 af
Outflow = 0.26 cfs @ 12.19 hrs, Volume= 0.039 af, Atten= 49%, Lag= 7.3 min
Primary = 0.26 cfs @ 12.19 hrs, Volume= 0.039 af
Routed to Reach 1D-R : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1D-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 157.19' @ 12.19 hrs Surf.Area= 952 sf Storage= 168 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 2.9 min (762.1 - 759.2)

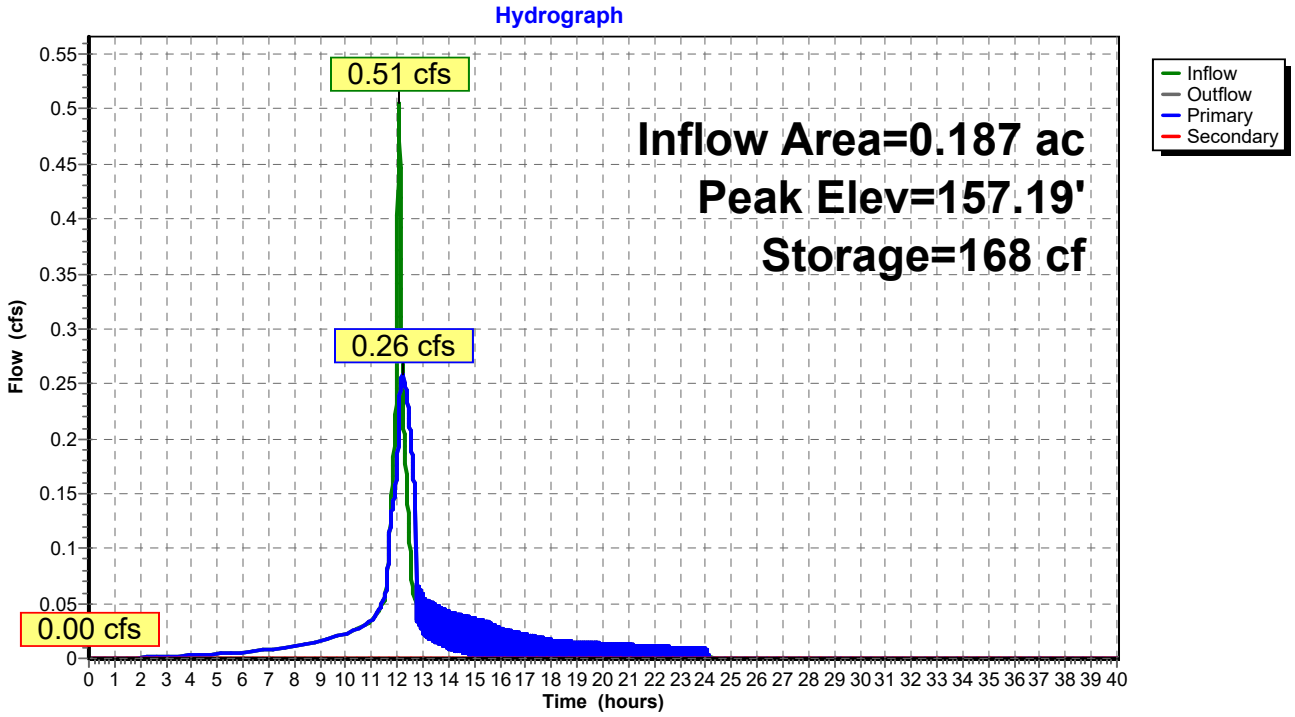
Volume	Invert	Avail.Storage	Storage Description
#1	156.75'	857 cf	**4.00'W x 238.00'L x 2.25'H Coarse Gravel** 2,142 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	156.42'	**4.0" Round Culvert** L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 156.42' / 155.50' S= 0.0256 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	159.00'	**193.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.26 cfs @ 12.19 hrs HW=157.19' TW=156.20' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.26 cfs @ 2.96 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=156.75' TW=155.50' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond RDF-1: Roof Dripline Filter #1



Summary for Pond RDF-2: Roof Dripline Filter #2

Inflow Area = 0.069 ac,100.00% Impervious, Inflow Depth = 2.47" for 2-Year event
Inflow = 0.19 cfs @ 12.07 hrs, Volume= 0.014 af
Outflow = 0.16 cfs @ 12.12 hrs, Volume= 0.014 af, Atten= 15%, Lag= 2.8 min
Primary = 0.16 cfs @ 12.12 hrs, Volume= 0.014 af
Routed to Reach 1D-R : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1D-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 156.81' @ 12.12 hrs Surf.Area= 0.008 ac Storage= 0.000 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.2 min (759.4 - 759.2)

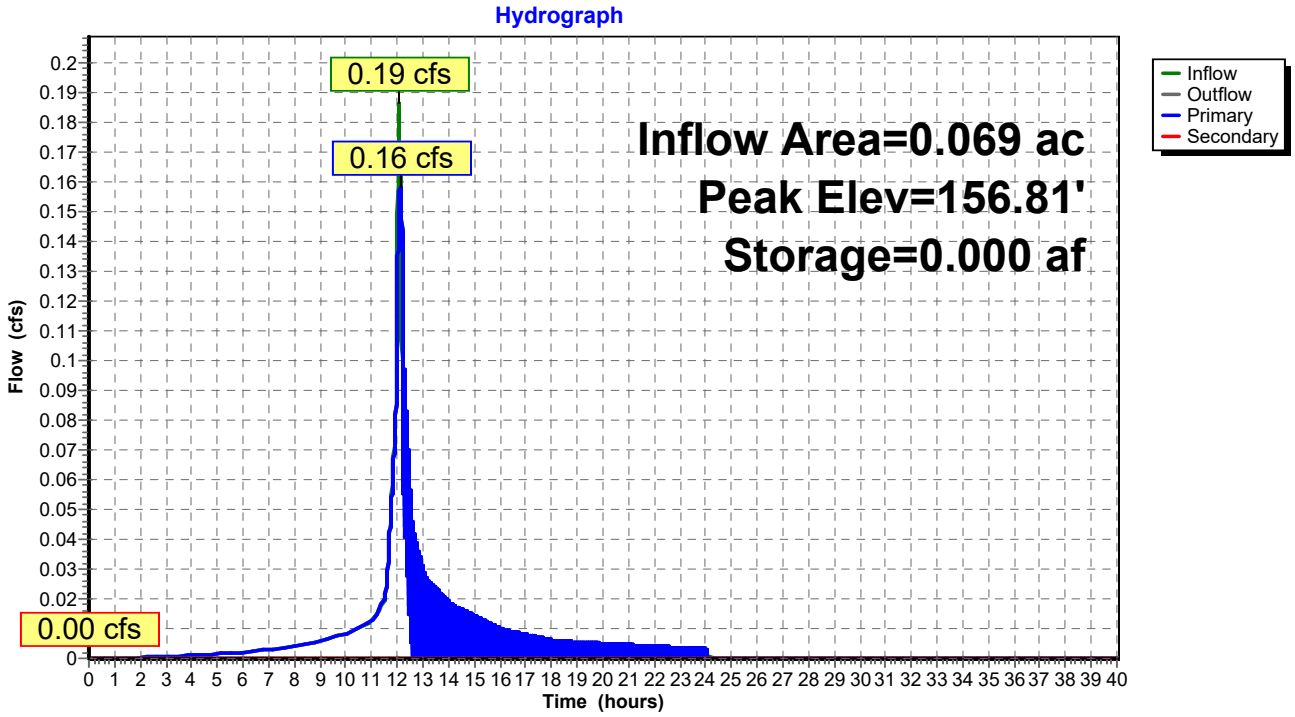
Volume	Invert	Avail.Storage	Storage Description
#1	156.75'	0.008 af	**4.00'W x 92.00'L x 2.25'H Coarse Gravel** 0.019 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	156.42'	**4.0" Round Culvert** L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 156.42' / 155.50' S= 0.0256 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	159.00'	**92.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.16 cfs @ 12.12 hrs HW=156.81' TW=156.15' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.16 cfs @ 1.81 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=156.75' TW=155.50' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond RDF-2: Roof Dripline Filter #2



Summary for Pond RDF-3: Roof Dripline Filter #3

Inflow Area = 0.178 ac,100.00% Impervious, Inflow Depth = 2.47" for 2-Year event
Inflow = 0.48 cfs @ 12.07 hrs, Volume= 0.037 af
Outflow = 0.26 cfs @ 12.18 hrs, Volume= 0.037 af, Atten= 46%, Lag= 6.7 min
Primary = 0.26 cfs @ 12.18 hrs, Volume= 0.037 af
Routed to Pond P-1C : DMH#1
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P-1C : DMH#1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 161.64' @ 12.18 hrs Surf.Area= 0.019 ac Storage= 0.003 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 2.5 min (761.6 - 759.2)

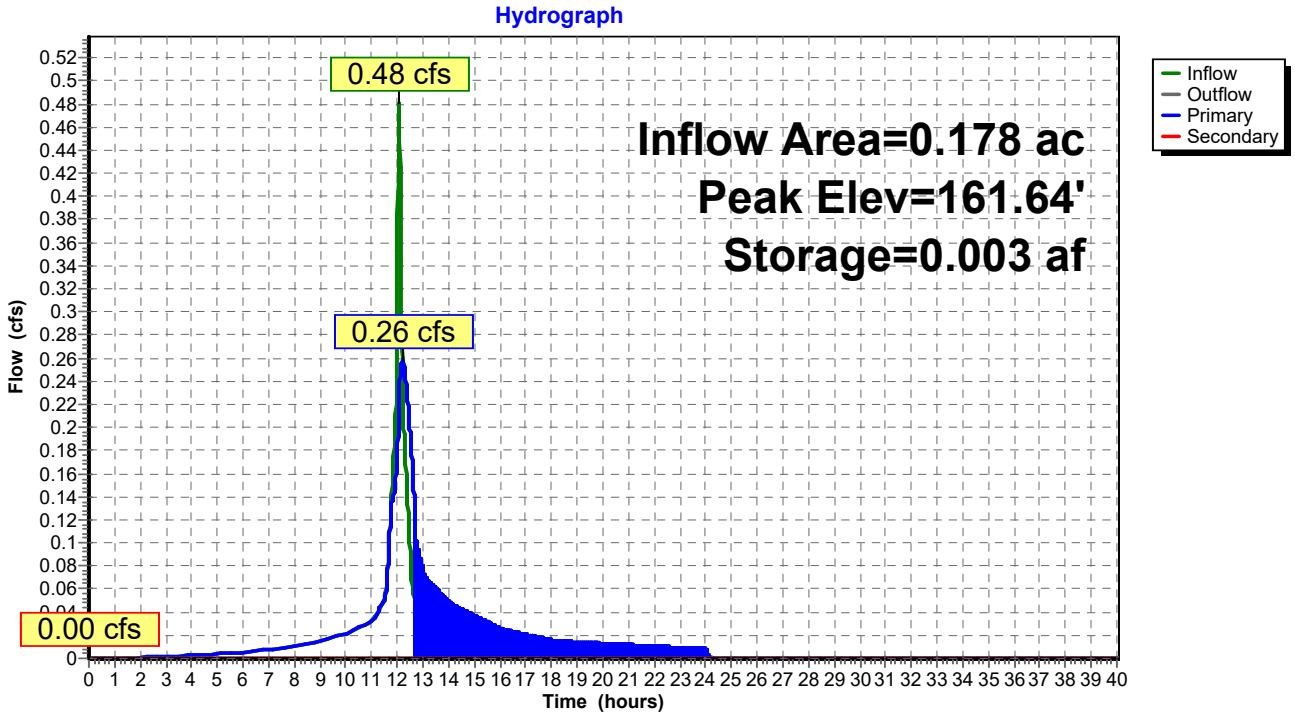
Volume	Invert	Avail.Storage	Storage Description
#1	161.20'	0.015 af	**4.00'W x 208.00'L x 2.00'H Coarse Gravel** 0.038 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	160.87'	**4.0" Round Culvert** L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 160.87' / 160.00' S= 0.0226 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	163.20'	**208.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.26 cfs @ 12.18 hrs HW=161.64' TW=158.66' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.26 cfs @ 2.96 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=161.20' TW=157.90' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond RDF-3: Roof Dripline Filter #3



Summary for Pond RDF-4: Roof Dripline Filter #4

Inflow Area = 0.061 ac,100.00% Impervious, Inflow Depth = 2.47" for 2-Year event
Inflow = 0.16 cfs @ 12.07 hrs, Volume= 0.013 af
Outflow = 0.15 cfs @ 12.11 hrs, Volume= 0.013 af, Atten= 11%, Lag= 2.3 min
Primary = 0.15 cfs @ 12.11 hrs, Volume= 0.013 af
Routed to Pond P-1D3 : FI#2
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P-1D3 : FI#2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 160.53' @ 12.11 hrs Surf.Area= 0.005 ac Storage= 0.000 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.2 min (759.4 - 759.2)

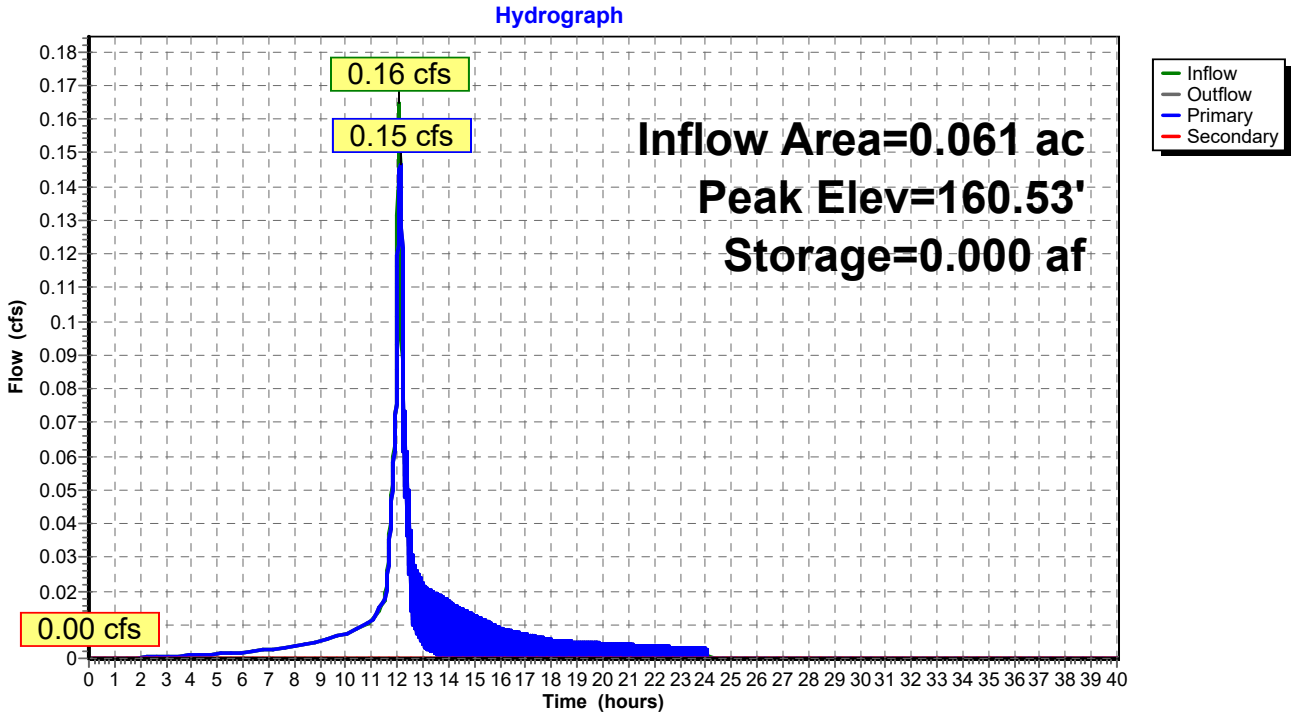
Volume	Invert	Avail.Storage	Storage Description
#1	160.45'	0.005 af	**4.00'W x 54.00'L x 2.75'H Coarse Gravel** 0.014 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	160.12'	**4.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 160.12' / 160.00' S= 0.0034 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	163.20'	**208.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.15 cfs @ 12.11 hrs HW=160.53' TW=159.29' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.15 cfs @ 1.76 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=160.45' TW=158.50' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond RDF-4: Roof Dripline Filter #4

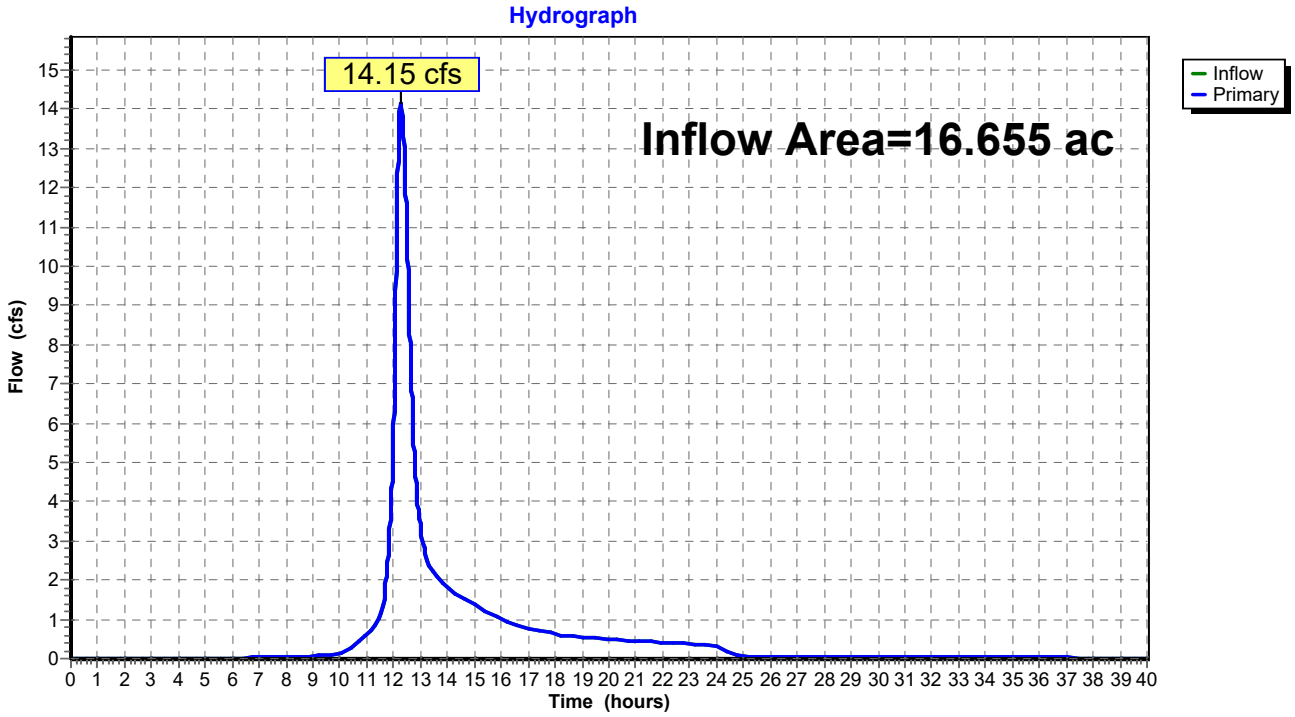


Summary for Link AP-1:

Inflow Area = 16.655 ac, 19.31% Impervious, Inflow Depth = 1.27" for 2-Year event
Inflow = 14.15 cfs @ 12.27 hrs, Volume= 1.757 af
Primary = 14.15 cfs @ 12.27 hrs, Volume= 1.757 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link AP-1:



Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 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 SC-1: West Runoff Area=49,436 sf 24.20% Impervious Runoff Depth=2.46"
Tc=5.0 min CN=84 Runoff=3.39 cfs 0.233 af

Subcatchment SC-1A: East Runoff Area=8,840 sf 0.00% Impervious Runoff Depth=2.12"
Tc=5.0 min CN=80 Runoff=0.52 cfs 0.036 af

Subcatchment SC-1A1: Roundabout Runoff Area=7,782 sf 70.79% Impervious Runoff Depth=3.32"
Tc=5.0 min CN=93 Runoff=0.69 cfs 0.049 af

Subcatchment SC-1A2: Parking Lot Runoff Area=11,875 sf 84.34% Impervious Runoff Depth=3.53"
Tc=5.0 min CN=95 Runoff=1.09 cfs 0.080 af

Subcatchment SC-1B: Southeast Runoff Area=292,074 sf 17.44% Impervious Runoff Depth=2.46"
Flow Length=803' Tc=20.1 min CN=84 Runoff=13.00 cfs 1.374 af

Subcatchment SC-1C: Centeral East portion Runoff Area=43,437 sf 0.00% Impervious Runoff Depth=2.12"
Flow Length=319' Tc=9.5 min CN=80 Runoff=2.20 cfs 0.177 af

Subcatchment SC-1C1: Southwest Portion Runoff Area=8,150 sf 100.00% Impervious Runoff Depth=3.86"
Tc=5.0 min CN=98 Runoff=0.78 cfs 0.060 af

Subcatchment SC-1C2: Southeast portion Runoff Area=7,751 sf 100.00% Impervious Runoff Depth=3.86"
Tc=5.0 min CN=98 Runoff=0.74 cfs 0.057 af

Subcatchment SC-1D: North Runoff Area=164,122 sf 19.24% Impervious Runoff Depth=2.37"
Flow Length=670' Tc=13.5 min CN=83 Runoff=8.26 cfs 0.745 af

Subcatchment SC-1D1: Northwest portion Runoff Area=3,005 sf 100.00% Impervious Runoff Depth=3.86"
Tc=5.0 min CN=98 Runoff=0.29 cfs 0.022 af

Subcatchment SC-1D2: Northeast portion Runoff Area=2,657 sf 100.00% Impervious Runoff Depth=3.86"
Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af

Subcatchment SC-1D3: Northeast Portion of Runoff Area=51,502 sf 0.24% Impervious Runoff Depth=2.12"
Flow Length=450' Tc=12.6 min CN=80 Runoff=2.38 cfs 0.209 af

Subcatchment SC-1E: Central of property Runoff Area=30,712 sf 18.79% Impervious Runoff Depth=2.37"
Flow Length=351' Tc=10.5 min CN=83 Runoff=1.69 cfs 0.139 af

Subcatchment SC-1F: Central of property Runoff Area=44,150 sf 5.87% Impervious Runoff Depth=2.21"
Flow Length=317' Tc=11.1 min CN=81 Runoff=2.21 cfs 0.186 af

Reach 1B-R1: Swale Avg. Flow Depth=0.42' Max Vel=4.63 fps Inflow=12.93 cfs 1.372 af
n=0.022 L=216.0' S=0.0200 '/' Capacity=670.12 cfs Outflow=12.92 cfs 1.372 af

Reach 1B-R2: Swale Avg. Flow Depth=1.45' Max Vel=1.63 fps Inflow=12.92 cfs 1.372 af
n=0.022 L=214.1' S=0.0009 '/' Capacity=89.22 cfs Outflow=12.78 cfs 1.372 af

Reach 1C-R: Swale Avg. Flow Depth=0.97' Max Vel=5.53 fps Inflow=15.69 cfs 1.792 af
n=0.022 L=178.0' S=0.0188 '/' Capacity=316.53 cfs Outflow=15.68 cfs 1.792 af

Reach 1D-R: Swale Avg. Flow Depth=0.90' Max Vel=3.64 fps Inflow=11.16 cfs 1.057 af
n=0.022 L=154.0' S=0.0088 '/' Capacity=273.33 cfs Outflow=11.14 cfs 1.057 af

Reach 1E-R: Road Side Ditch Avg. Flow Depth=0.41' Max Vel=1.98 fps Inflow=1.55 cfs 0.139 af
n=0.030 L=317.0' S=0.0137 '/' Capacity=16.16 cfs Outflow=1.51 cfs 0.139 af

Reach 1F-R: Swale Avg. Flow Depth=1.03' Max Vel=4.46 fps Inflow=14.14 cfs 1.558 af
n=0.022 L=132.0' S=0.0114 '/' Capacity=245.96 cfs Outflow=14.14 cfs 1.558 af

Pond P-1: 30" Culvert Peak Elev=157.24' Storage=5,365 cf Inflow=29.19 cfs 3.386 af
Primary=25.29 cfs 3.386 af Secondary=0.00 cfs 0.000 af Outflow=25.29 cfs 3.386 af

Pond P-1A: Underdrained Soil Filter #1 Peak Elev=158.14' Storage=2,594 cf Inflow=2.30 cfs 0.166 af
Primary=0.04 cfs 0.102 af Secondary=1.23 cfs 0.063 af Outflow=1.26 cfs 0.166 af

Pond P-1A2: CB#2 Peak Elev=158.90' Inflow=1.77 cfs 0.130 af
15.0" Round Culvert n=0.013 L=211.0' S=0.0071 '/' Outflow=1.77 cfs 0.130 af

Pond P-1B: 36" Culvert Peak Elev=167.21' Storage=1,082 cf Inflow=13.00 cfs 1.374 af
Primary=12.93 cfs 1.372 af Secondary=0.00 cfs 0.000 af Outflow=12.93 cfs 1.372 af

Pond P-1C: DMH#1 Peak Elev=159.29' Inflow=2.54 cfs 0.234 af
12.0" Round Culvert n=0.013 L=94.0' S=0.0043 '/' Outflow=2.54 cfs 0.234 af

Pond P-1C1: FI#1 Peak Elev=159.69' Inflow=2.20 cfs 0.177 af
15.0" Round Culvert n=0.013 L=156.0' S=0.0038 '/' Outflow=2.20 cfs 0.177 af

Pond P-1D: 15" Culvert Peak Elev=162.62' Inflow=10.62 cfs 0.974 af
18.0" Round Culvert n=0.025 L=120.0' S=0.0183 '/' Outflow=10.62 cfs 0.974 af

Pond P-1D3: FI#2 Peak Elev=163.55' Inflow=2.38 cfs 0.229 af
12.0" Round Culvert n=0.013 L=151.0' S=0.0033 '/' Outflow=2.38 cfs 0.229 af

Pond P-1E: 12" Culvert Peak Elev=159.27' Storage=227 cf Inflow=1.69 cfs 0.139 af
Primary=1.55 cfs 0.139 af Secondary=0.00 cfs 0.000 af Outflow=1.55 cfs 0.139 af

Pond P-1F: 2 - 24 " Dia Culvert Peak Elev=161.35' Storage=65 cf Inflow=14.15 cfs 1.558 af
Primary=14.14 cfs 1.558 af Secondary=0.00 cfs 0.000 af Outflow=14.14 cfs 1.558 af

Pond RDF-1: Roof Dripline Filter #1 Peak Elev=157.67' Storage=350 cf Inflow=0.78 cfs 0.060 af
Primary=0.34 cfs 0.060 af Secondary=0.00 cfs 0.000 af Outflow=0.34 cfs 0.060 af

Pond RDF-2: Roof Dripline Filter #2 Peak Elev=157.00' Storage=0.001 af Inflow=0.29 cfs 0.022 af
Primary=0.21 cfs 0.022 af Secondary=0.00 cfs 0.000 af Outflow=0.21 cfs 0.022 af

Pond RDF-3: Roof Dripline Filter #3 Peak Elev=162.13' Storage=0.007 af Inflow=0.74 cfs 0.057 af
Primary=0.35 cfs 0.057 af Secondary=0.00 cfs 0.000 af Outflow=0.35 cfs 0.057 af

Pond RDF-4: Roof Dripline Filter #4 Peak Elev=161.83' Storage=0.003 af Inflow=0.25 cfs 0.020 af
Primary=0.30 cfs 0.020 af Secondary=0.00 cfs 0.000 af Outflow=0.30 cfs 0.020 af

Link AP-1: Inflow=25.29 cfs 3.386 af
Primary=25.29 cfs 3.386 af

Total Runoff Area = 16.655 ac Runoff Volume = 3.389 af Average Runoff Depth = 2.44"
80.69% Pervious = 13.440 ac 19.31% Impervious = 3.215 ac

Summary for Subcatchment SC-1: West

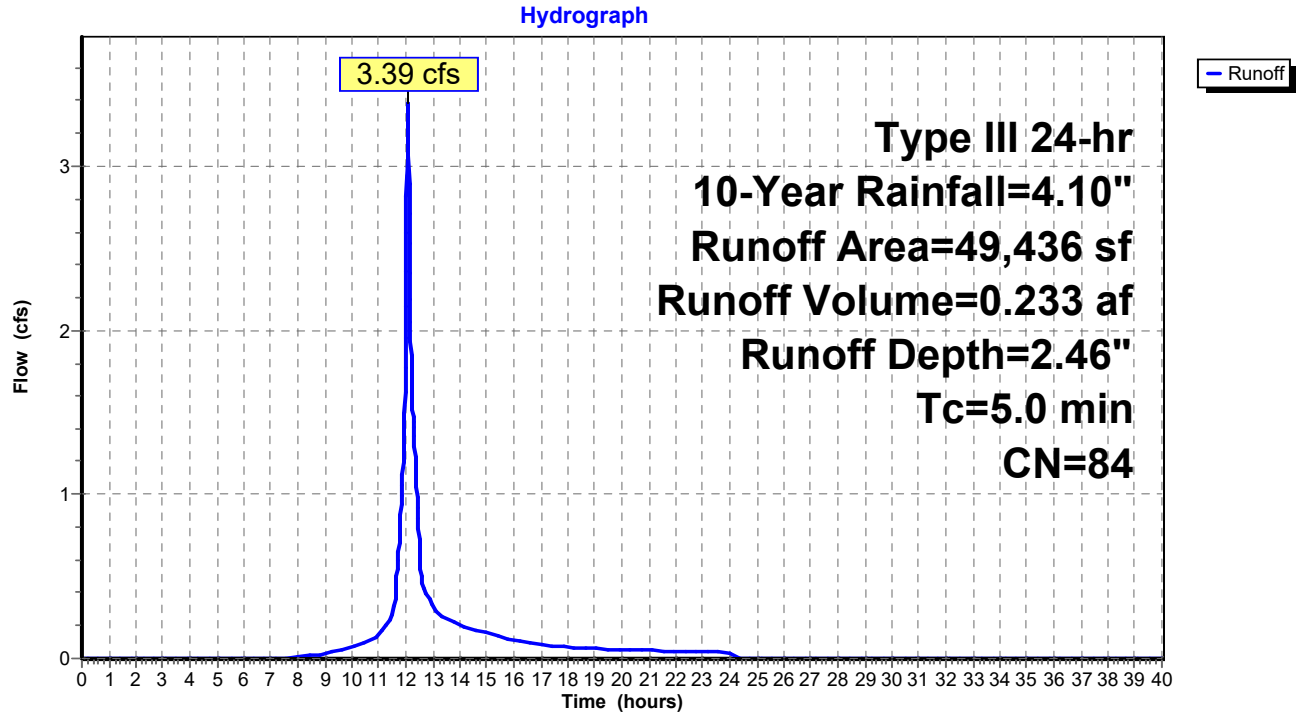
Runoff = 3.39 cfs @ 12.07 hrs, Volume= 0.233 af, Depth= 2.46"
Routed to Pond P-1 : 30" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	3,926	98	Paved parking
*	62	98	Roofs,
*	7,976	98	Paved roads w/curbs & sewers
	32,330	80	Pasture/grassland/range, Good, HSG D
	5,142	79	Woods/grass comb., Good, HSG D
	49,436	84	Weighted Average
	37,472		75.80% Pervious Area
	11,964		24.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1: West



Summary for Subcatchment SC-1A: East

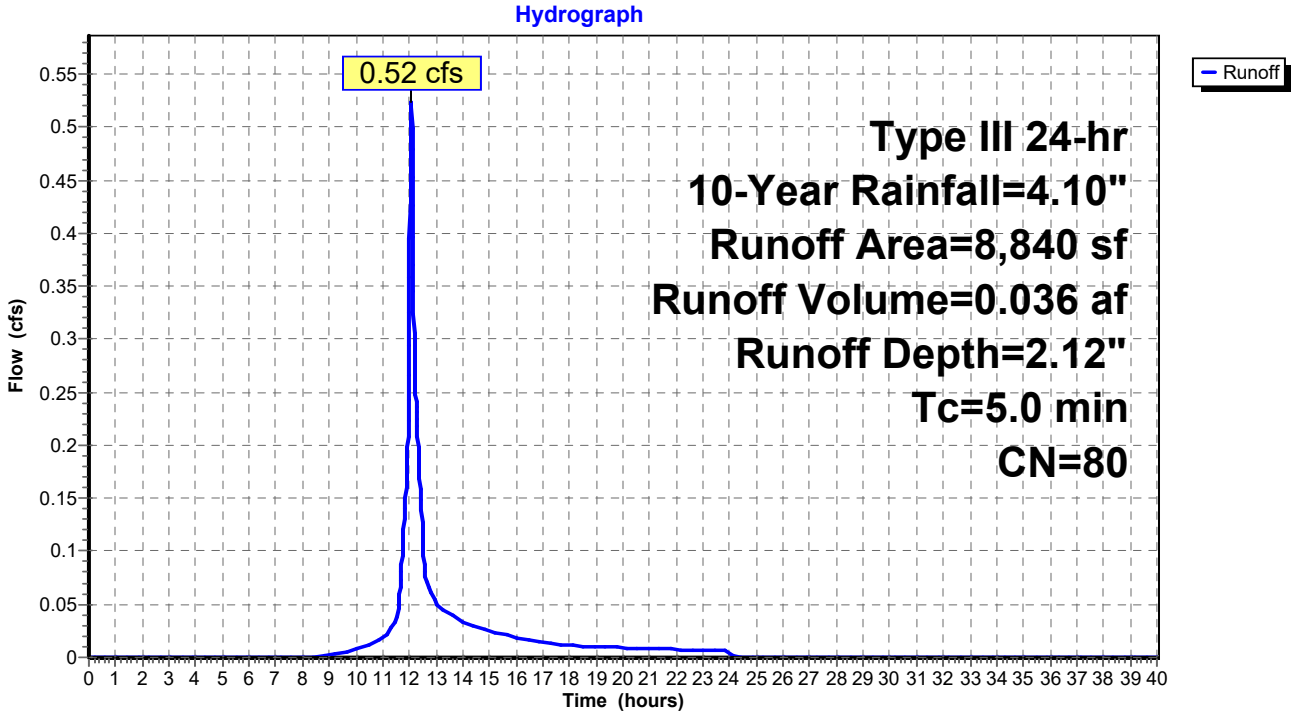
Runoff = 0.52 cfs @ 12.08 hrs, Volume= 0.036 af, Depth= 2.12"
Routed to Pond P-1A : Underdrained Soil Filter #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

Area (sf)	CN	Description
8,840	80	>75% Grass cover, Good, HSG D
8,840		100.00% Pervious Area

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

Subcatchment SC-1A: East



Summary for Subcatchment SC-1A1: Roundabout

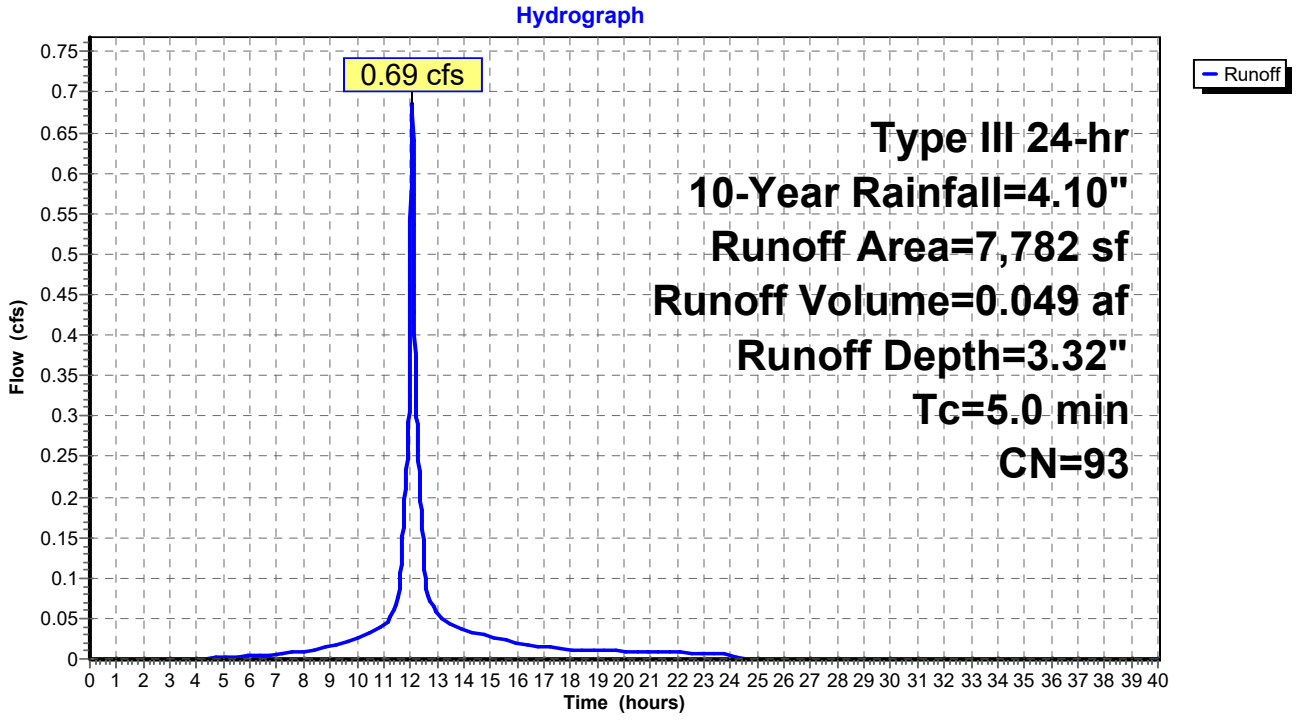
Runoff = 0.69 cfs @ 12.07 hrs, Volume= 0.049 af, Depth= 3.32"
Routed to Pond P-1A2 : CB#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	5,509	98	Paved parking
	2,273	80	>75% Grass cover, Good, HSG D
	7,782	93	Weighted Average
	2,273		29.21% Pervious Area
	5,509		70.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1A1: Roundabout



Summary for Subcatchment SC-1A2: Parking Lot

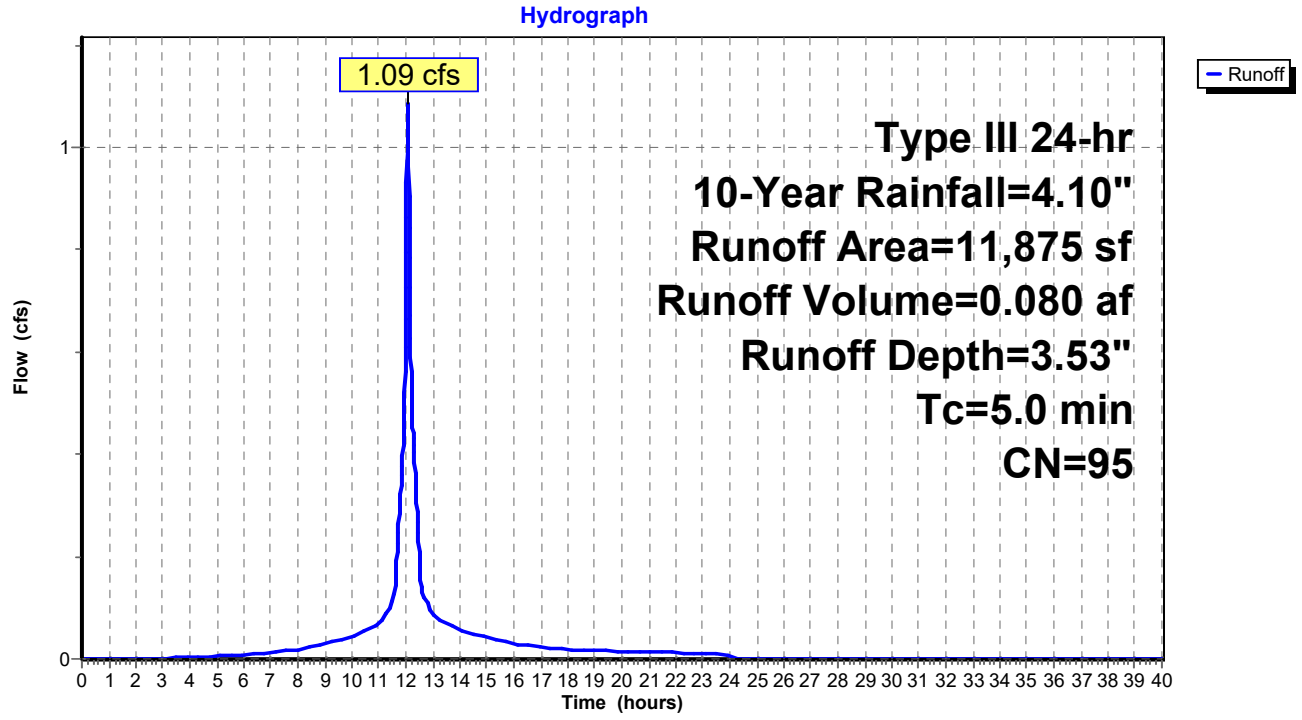
Runoff = 1.09 cfs @ 12.07 hrs, Volume= 0.080 af, Depth= 3.53"
Routed to Pond P-1A2 : CB#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	10,015	98	Paved parking
	1,860	80	>75% Grass cover, Good, HSG D
	11,875	95	Weighted Average
	1,860		15.66% Pervious Area
	10,015		84.34% Impervious Area

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

Subcatchment SC-1A2: Parking Lot



Summary for Subcatchment SC-1B: Southeast Off-property

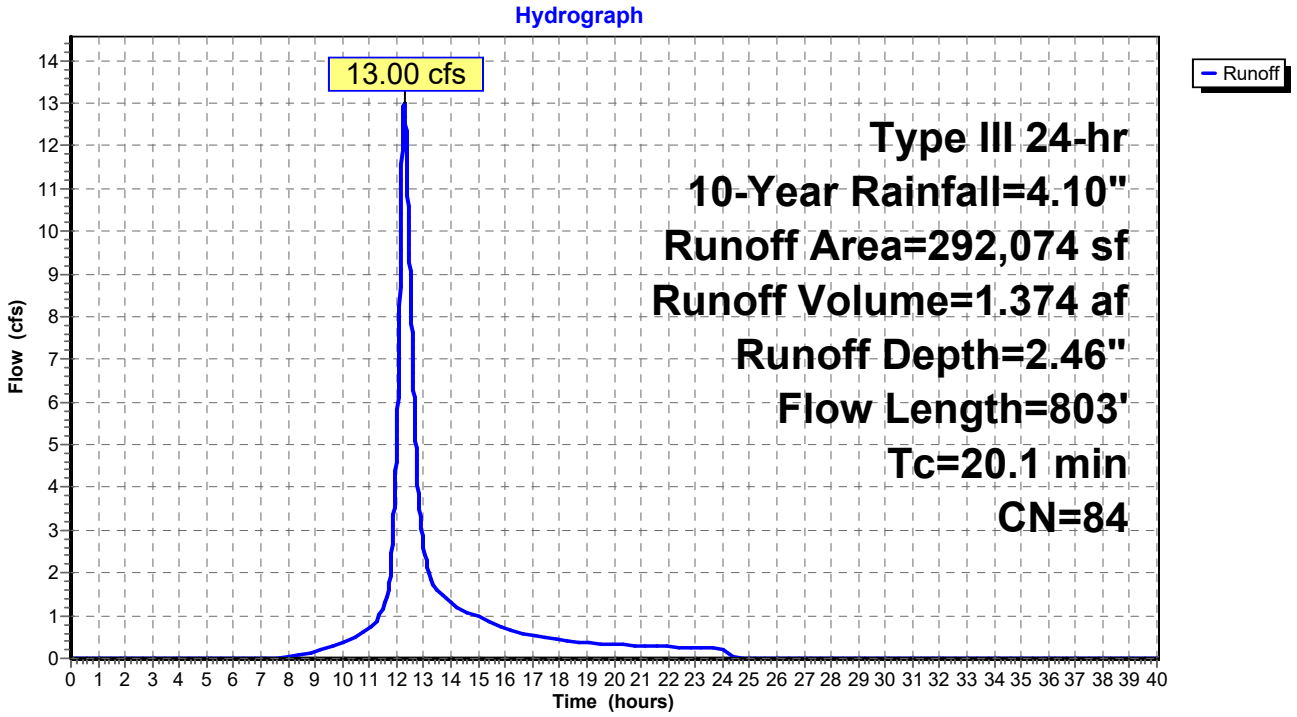
Runoff = 13.00 cfs @ 12.27 hrs, Volume= 1.374 af, Depth= 2.46"
Routed to Pond P-1B : 36" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	20,275	98	Roofs
	11,200	98	Paved roads w/curbs & sewers
*	19,477	98	Paved parking
*	19,494	96	Gravel surface
	11,386	74	>75% Grass cover, Good, HSG C
	170,113	80	>75% Grass cover, Good, HSG D
	40,129	79	Woods/grass comb., Good, HSG D
	292,074	84	Weighted Average
	241,122		82.56% Pervious Area
	50,952		17.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8	100	0.0325	0.13		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.9	79	0.0443	1.47		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
1.5	147	0.1041	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.3	34	0.0882	2.08		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
3.6	219	0.0411	1.01		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.7	117	0.0342	2.77		**Shallow Concentrated Flow, F-G** Grassed Waterway Kv= 15.0 fps
0.2	79	0.0200	8.06	9.90	**Pipe Channel, G-H** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.1	28	0.0896	4.49		**Shallow Concentrated Flow, H-I** Grassed Waterway Kv= 15.0 fps
20.1	803	Total			

Subcatchment SC-1B: Southeast Off-property



Summary for Subcatchment SC-1C: Centeral East portion

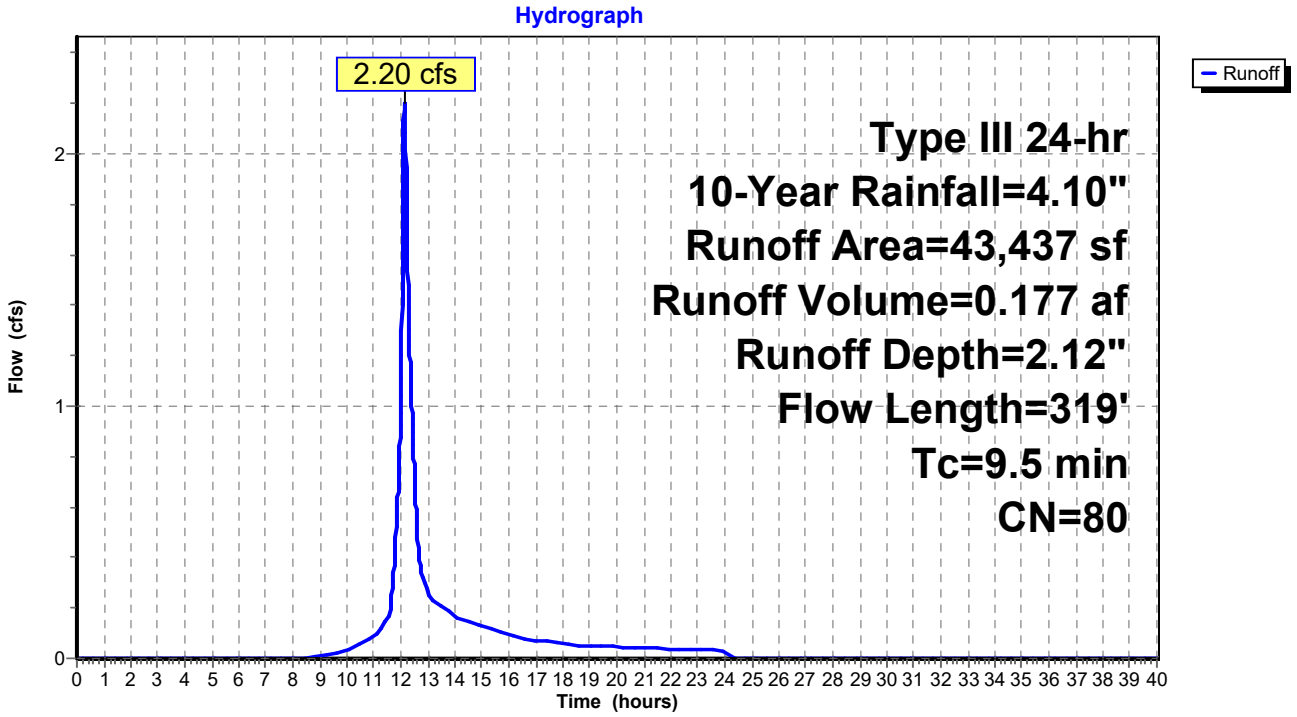
Runoff = 2.20 cfs @ 12.13 hrs, Volume= 0.177 af, Depth= 2.12"
Routed to Pond P-1C1 : FI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

Area (sf)	CN	Description
37,473	80	>75% Grass cover, Good, HSG D
5,964	79	Woods/grass comb., Good, HSG D
43,437	80	Weighted Average
43,437		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0800	0.27		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 2.70"
0.0	5	0.0800	1.98		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	35	0.1140	1.69		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.3	57	0.2110	3.22		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
0.1	35	0.3428	4.10		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
2.7	87	0.0057	0.53		**Shallow Concentrated Flow, F-G** Short Grass Pasture Kv= 7.0 fps
9.5	319	Total			

Subcatchment SC-1C: Centeral East portion



Summary for Subcatchment SC-1C1: Southwest Portion of Building

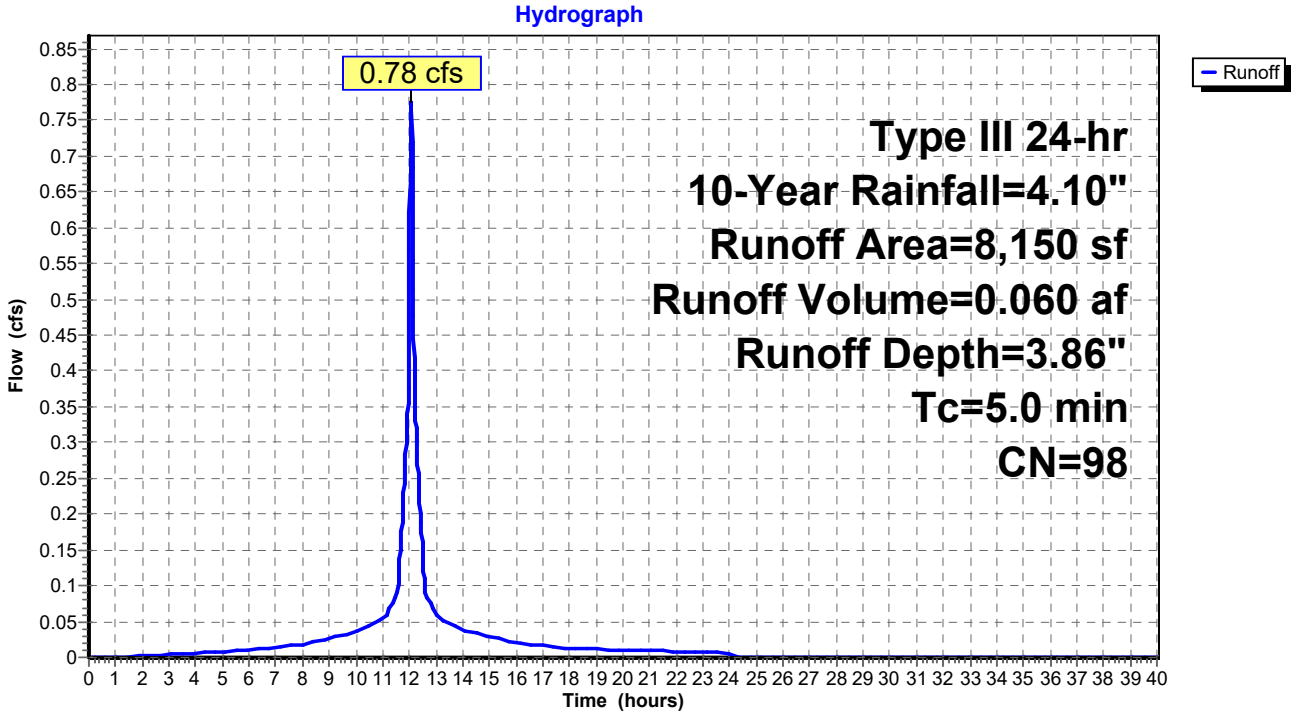
Runoff = 0.78 cfs @ 12.07 hrs, Volume= 0.060 af, Depth= 3.86"
Routed to Pond RDF-1 : Roof Dripline Filter #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	8,150	98	Roofs
	8,150		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1C1: Southwest Portion of Building



Summary for Subcatchment SC-1C2: Southeast portion of Building

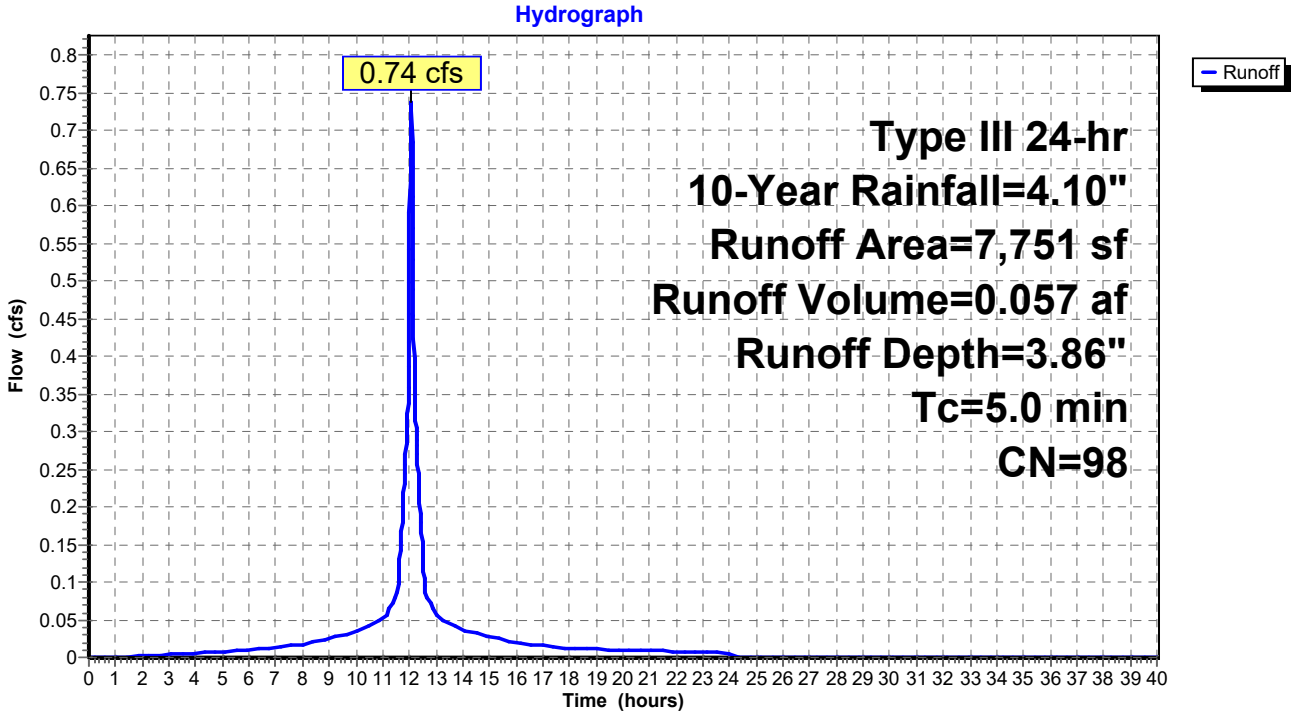
Runoff = 0.74 cfs @ 12.07 hrs, Volume= 0.057 af, Depth= 3.86"
Routed to Pond RDF-3 : Roof Dripline Filter #3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	7,751	98	Roofs
	7,751		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1C2: Southeast portion of Building



Summary for Subcatchment SC-1D: North

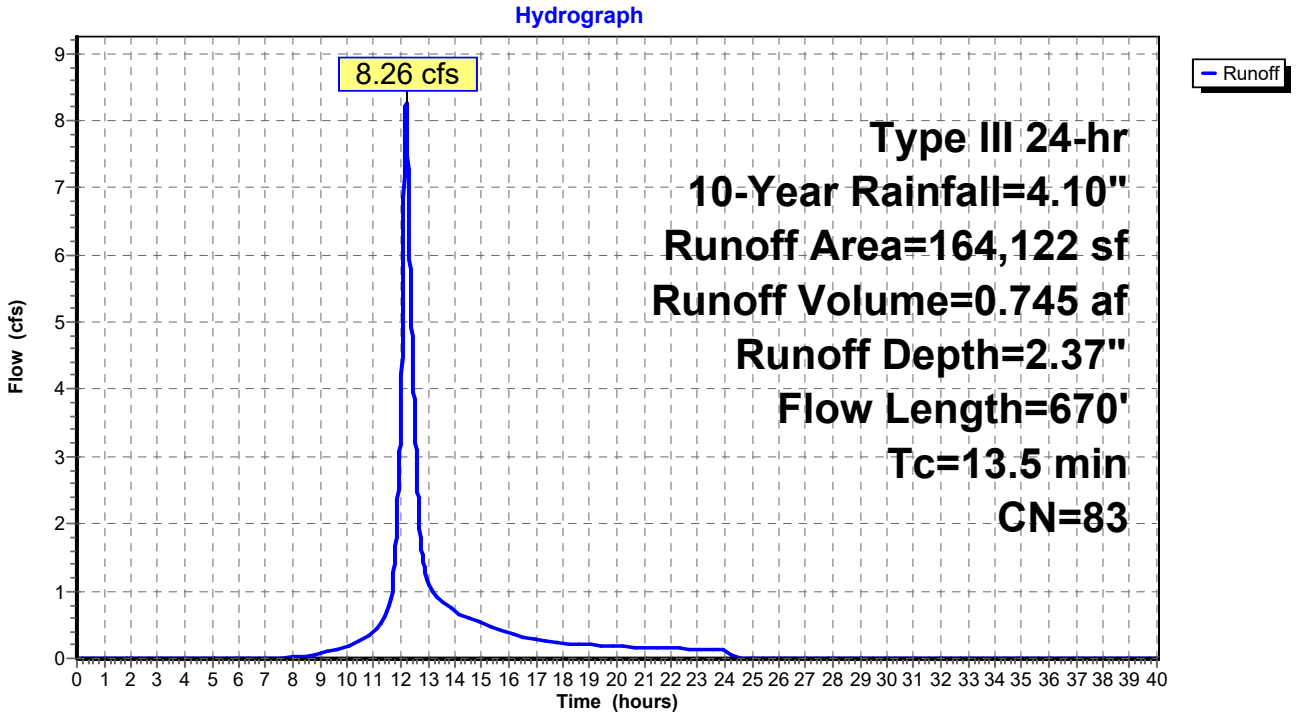
Runoff = 8.26 cfs @ 12.19 hrs, Volume= 0.745 af, Depth= 2.37"
Routed to Pond P-1D : 15" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	16,493	98	Paved parking
*	5,185	98	Roofs,
*	9,894	98	Paved roads w/curbs & sewers
	121,345	80	>75% Grass cover, Good, HSG D
	11,205	79	Woods/grass comb., Good, HSG D
	164,122	83	Weighted Average
	132,550		80.76% Pervious Area
	31,572		19.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0600	0.24		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 2.70"
0.0	4	0.0600	1.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.5	44	0.0910	1.51		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
3.0	320	0.0660	1.80		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
3.1	202	0.0240	1.08		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
13.5	670	Total			

Subcatchment SC-1D: North



Summary for Subcatchment SC-1D1: Northwest portion of building

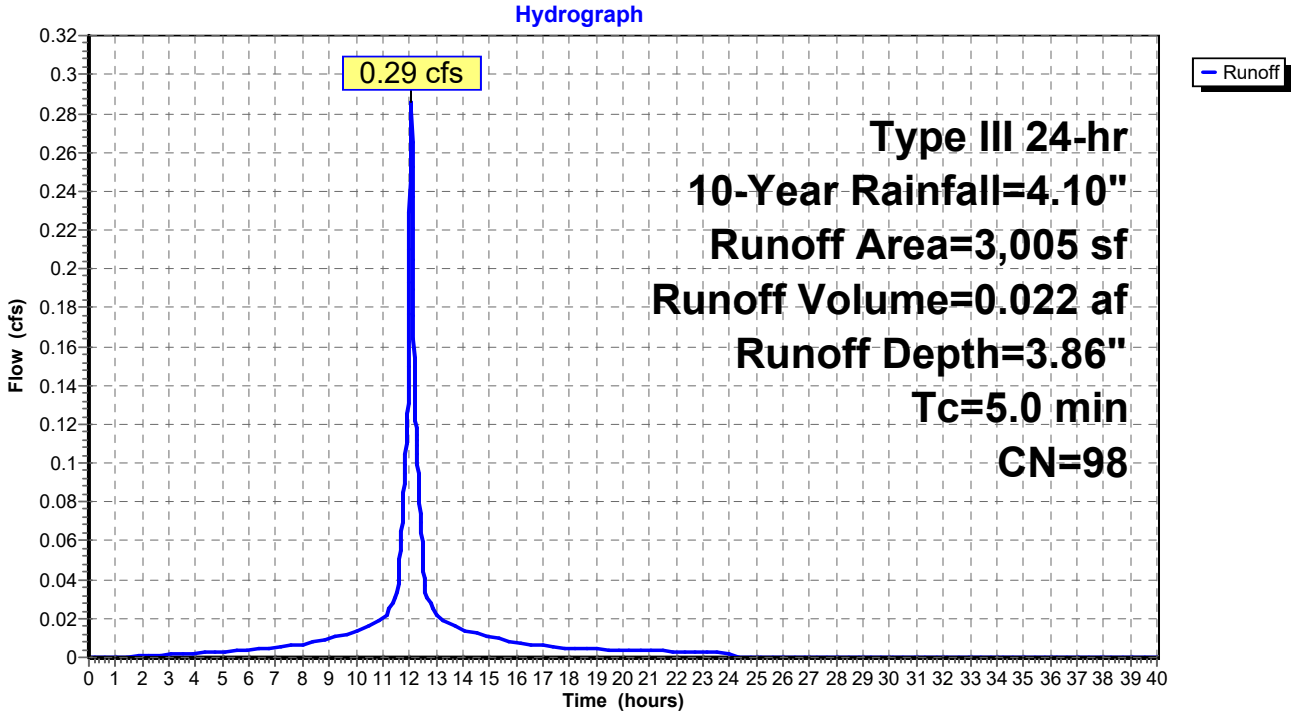
Runoff = 0.29 cfs @ 12.07 hrs, Volume= 0.022 af, Depth= 3.86"
Routed to Pond RDF-2 : Roof Dripline Filter #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	3,005	98	Roofs
	3,005		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1D1: Northwest portion of building



Summary for Subcatchment SC-1D2: Northeast portion of building

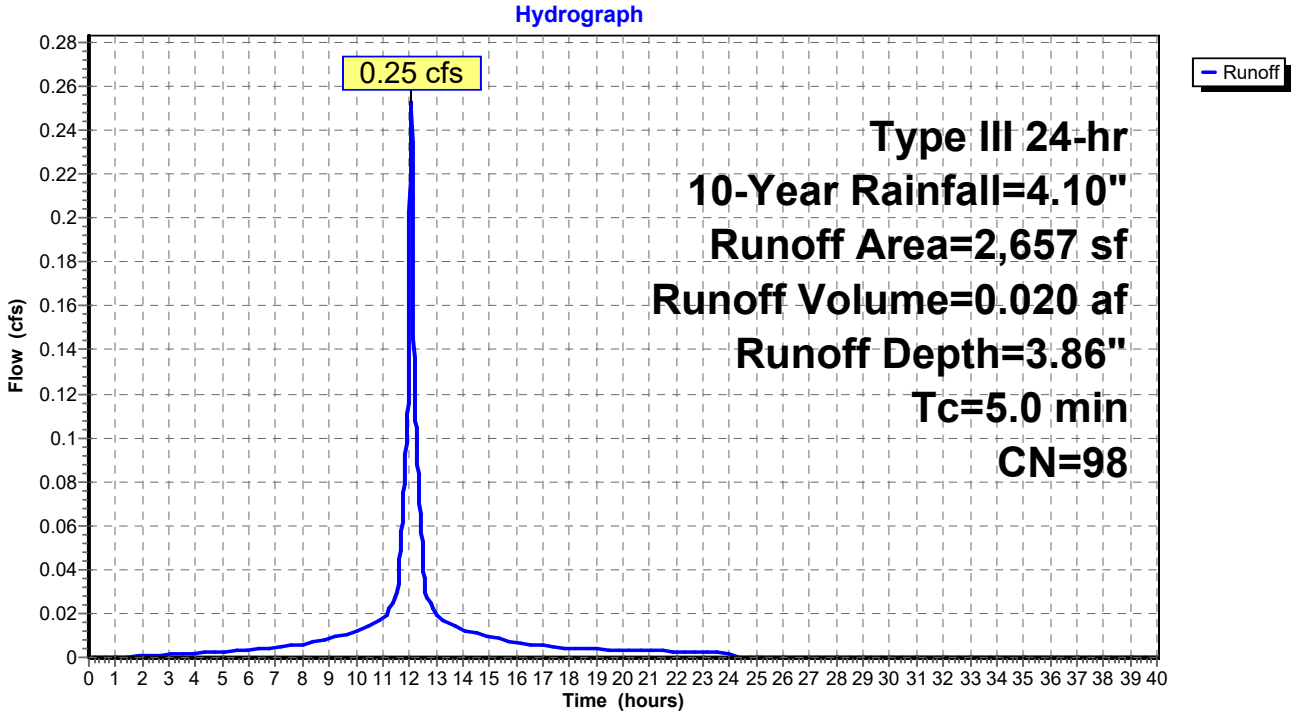
Runoff = 0.25 cfs @ 12.07 hrs, Volume= 0.020 af, Depth= 3.86"
Routed to Pond RDF-4 : Roof Dripline Filter #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	2,657	98	Roofs
	2,657		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1D2: Northeast portion of building



Summary for Subcatchment SC-1D3: Northeast Portion of Property

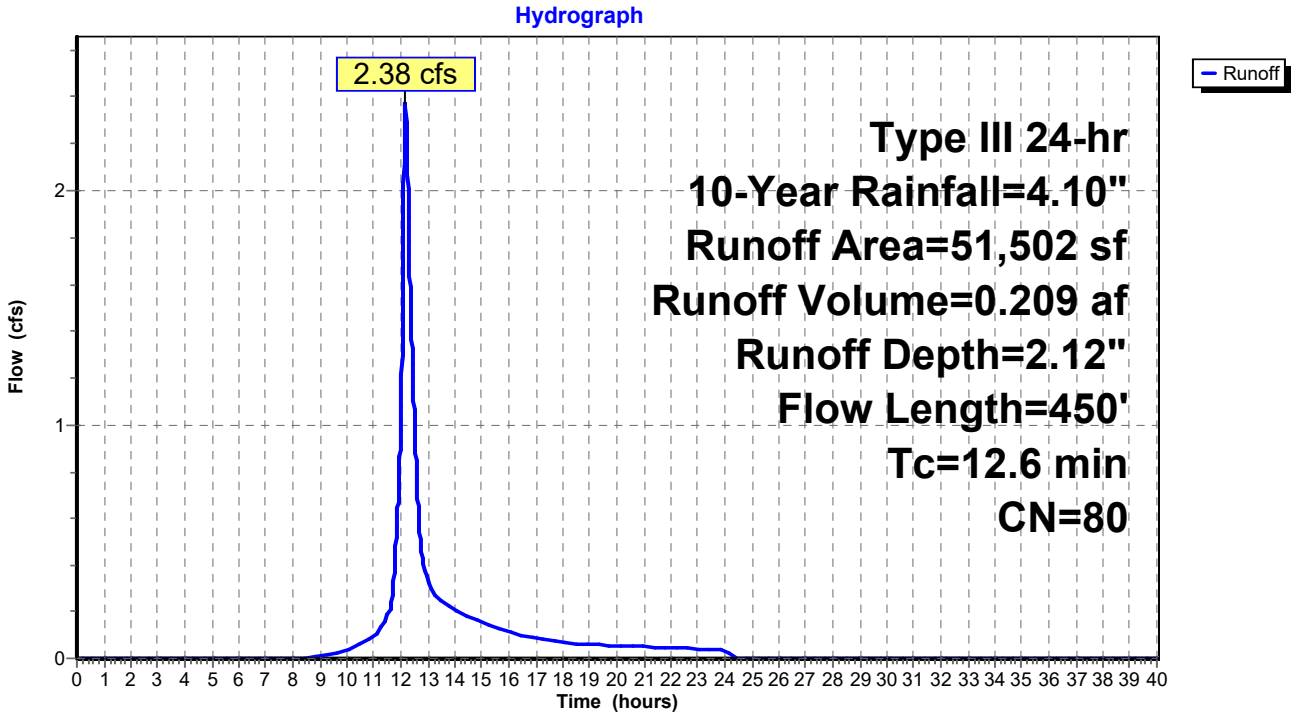
Runoff = 2.38 cfs @ 12.17 hrs, Volume= 0.209 af, Depth= 2.12"
Routed to Pond P-1D3 : FI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	122	98	Paved roads w/curbs & sewers
	48,321	80	>75% Grass cover, Good, HSG D
	3,059	79	Woods/grass comb., Good, HSG D
	51,502	80	Weighted Average
	51,380		99.76% Pervious Area
	122		0.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	100	0.0300	0.18		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 2.70"
0.3	35	0.0720	1.88		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	23	0.0200	2.87		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.9	100	0.0770	1.94		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
0.3	31	0.1190	1.72		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.6	109	0.1827	2.99		**Shallow Concentrated Flow, F-G** Short Grass Pasture Kv= 7.0 fps
1.3	52	0.0097	0.69		**Shallow Concentrated Flow, G-H** Short Grass Pasture Kv= 7.0 fps
12.6	450	Total			

Subcatchment SC-1D3: Northeast Portion of Property



Summary for Subcatchment SC-1E: Central of property

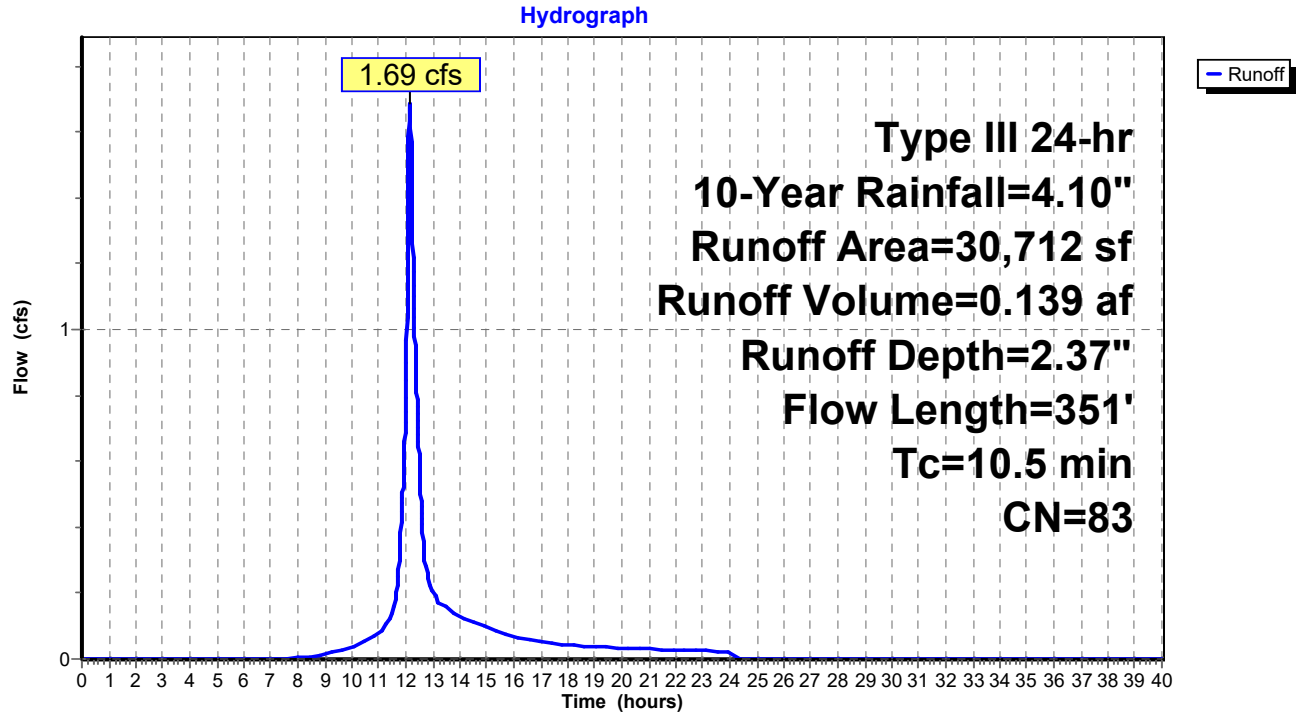
Runoff = 1.69 cfs @ 12.15 hrs, Volume= 0.139 af, Depth= 2.37"
Routed to Pond P-1E : 12" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	5,682	98	Paved roads w/curbs & sewers
*	89	98	Paved parking
	24,741	80	Pasture/grassland/range, Good, HSG D
	200	79	Woods/grass comb., Good, HSG D
	30,712	83	Weighted Average
	24,941		81.21% Pervious Area
	5,771		18.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	100	0.0750	0.18		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
1.3	251	0.0103	3.16	39.16	**Channel Flow, B-C** Area= 12.4 sf Perim= 24.9' r= 0.50' n= 0.030 Earth, grassed & winding
10.5	351	Total			

Subcatchment SC-1E: Central of property



Summary for Subcatchment SC-1F: Central of property

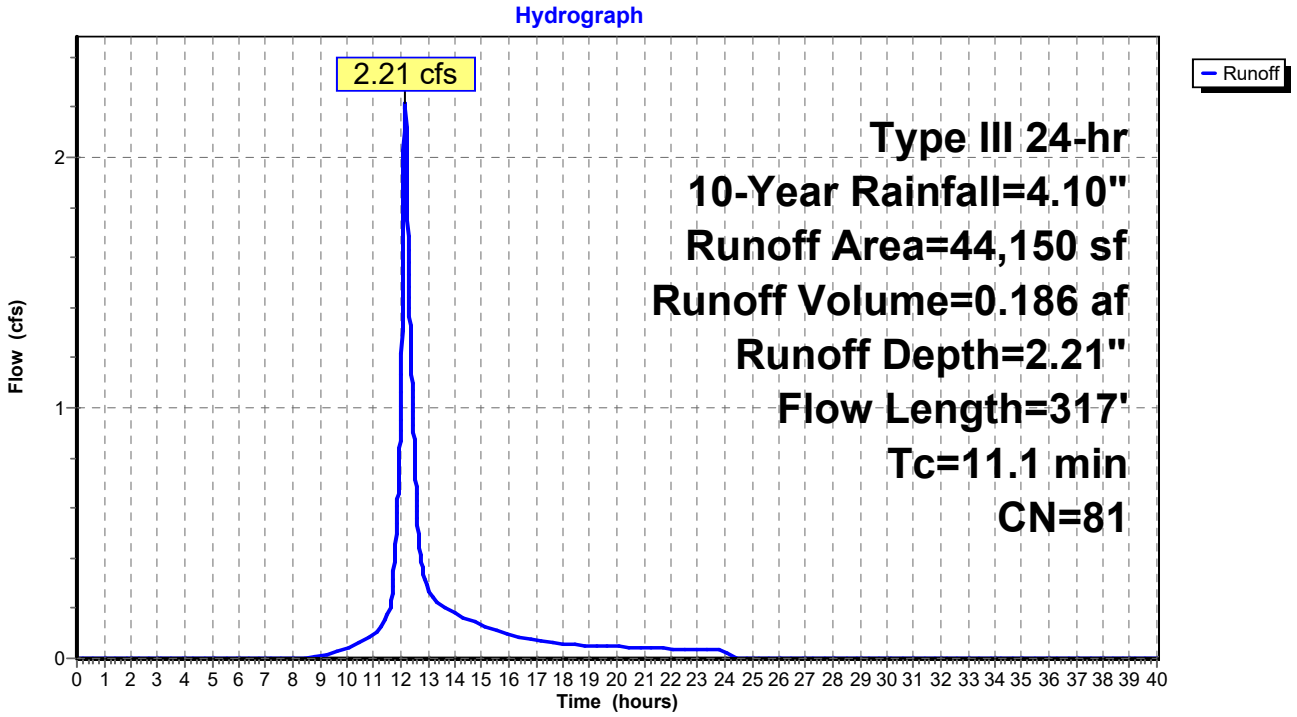
Runoff = 2.21 cfs @ 12.15 hrs, Volume= 0.186 af, Depth= 2.21"
Routed to Pond P-1F : 2 - 24 " Dia Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.10"

	Area (sf)	CN	Description
*	1,971	98	Paved roads w/curbs & sewers
*	620	98	Paved parking
	31,090	80	>75% Grass cover, Good, HSG D
	10,469	79	Woods/grass comb., Good, HSG D
	44,150	81	Weighted Average
	41,559		94.13% Pervious Area
	2,591		5.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0600	0.17		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
1.0	147	0.1292	2.52		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	70	0.0714	8.07	24.21	**Channel Flow, C-D** Area= 3.0 sf Perim= 6.3' r= 0.48' n= 0.030 Earth, grassed & winding
11.1	317	Total			

Subcatchment SC-1F: Central of property



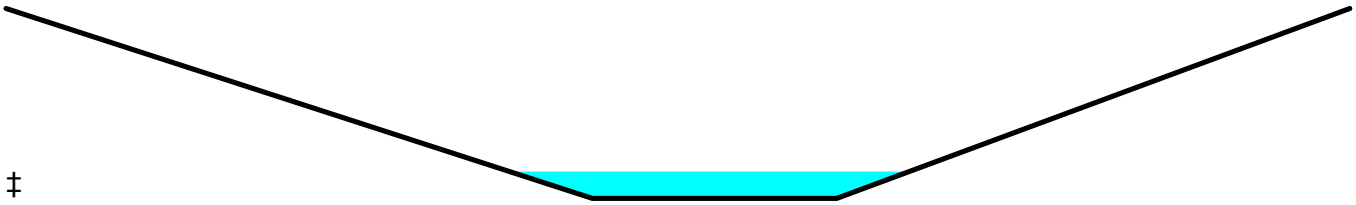
Summary for Reach 1B-R1: Swale

Inflow Area = 6.705 ac, 17.44% Impervious, Inflow Depth = 2.46" for 10-Year event
Inflow = 12.93 cfs @ 12.29 hrs, Volume= 1.372 af
Outflow = 12.92 cfs @ 12.30 hrs, Volume= 1.372 af, Atten= 0%, Lag= 0.6 min
Routed to Reach 1B-R2 : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.63 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.51 fps, Avg. Travel Time= 2.4 min

Peak Storage= 603 cf @ 12.30 hrs
Average Depth at Peak Storage= 0.42' , Surface Width= 8.18'
Bank-Full Depth= 3.00' Flow Area= 48.8 sf, Capacity= 670.12 cfs

5.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 27.50'
Length= 216.0' Slope= 0.0200 '/'
Inlet Invert= 165.33', Outlet Invert= 161.00'



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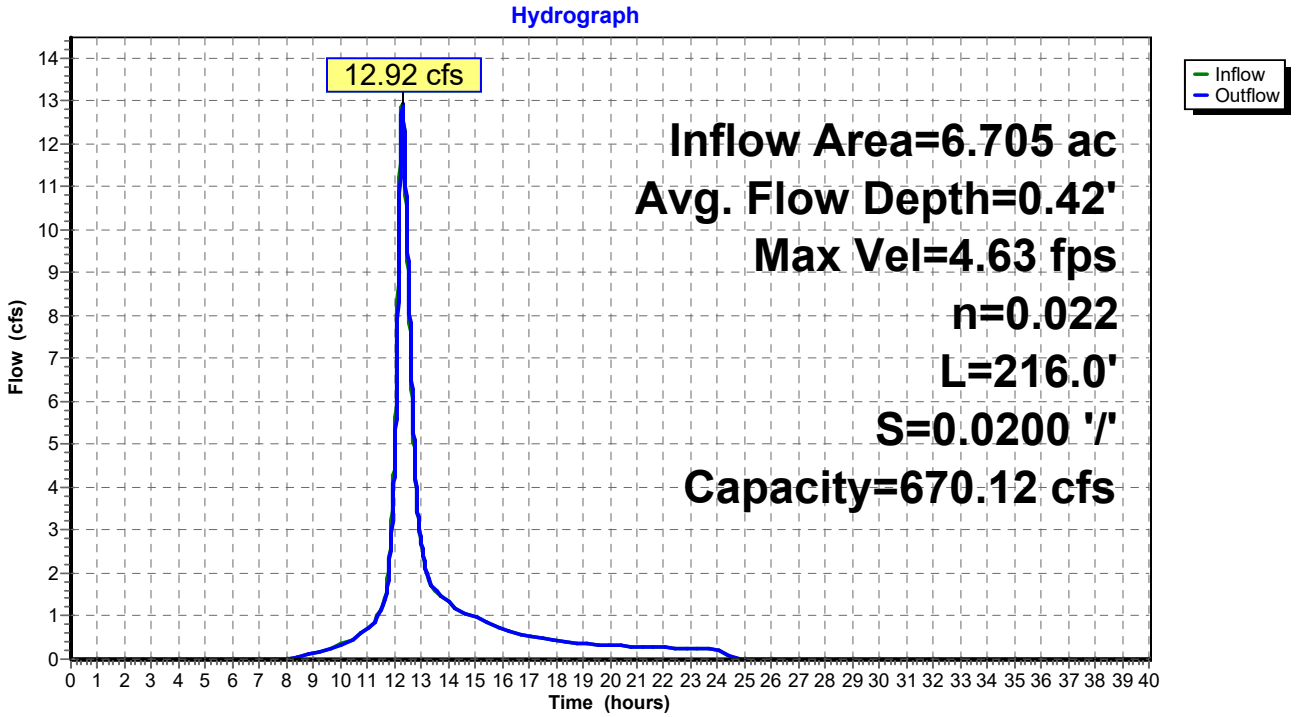
Reach 1B-R1: Swale



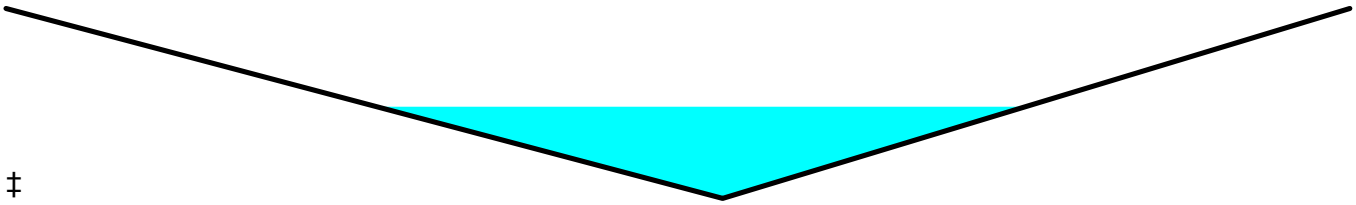
Summary for Reach 1B-R2: Swale

Inflow Area = 6.705 ac, 17.44% Impervious, Inflow Depth = 2.46" for 10-Year event
Inflow = 12.92 cfs @ 12.30 hrs, Volume= 1.372 af
Outflow = 12.78 cfs @ 12.33 hrs, Volume= 1.372 af, Atten= 1%, Lag= 1.7 min
Routed to Pond P-1F : 2 - 24 " Dia Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.63 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 0.51 fps, Avg. Travel Time= 7.0 min

Peak Storage= 1,682 cf @ 12.33 hrs
Average Depth at Peak Storage= 1.45' , Surface Width= 10.86'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 89.22 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 214.1' Slope= 0.0009 '/'
Inlet Invert= 161.00', Outlet Invert= 160.80'



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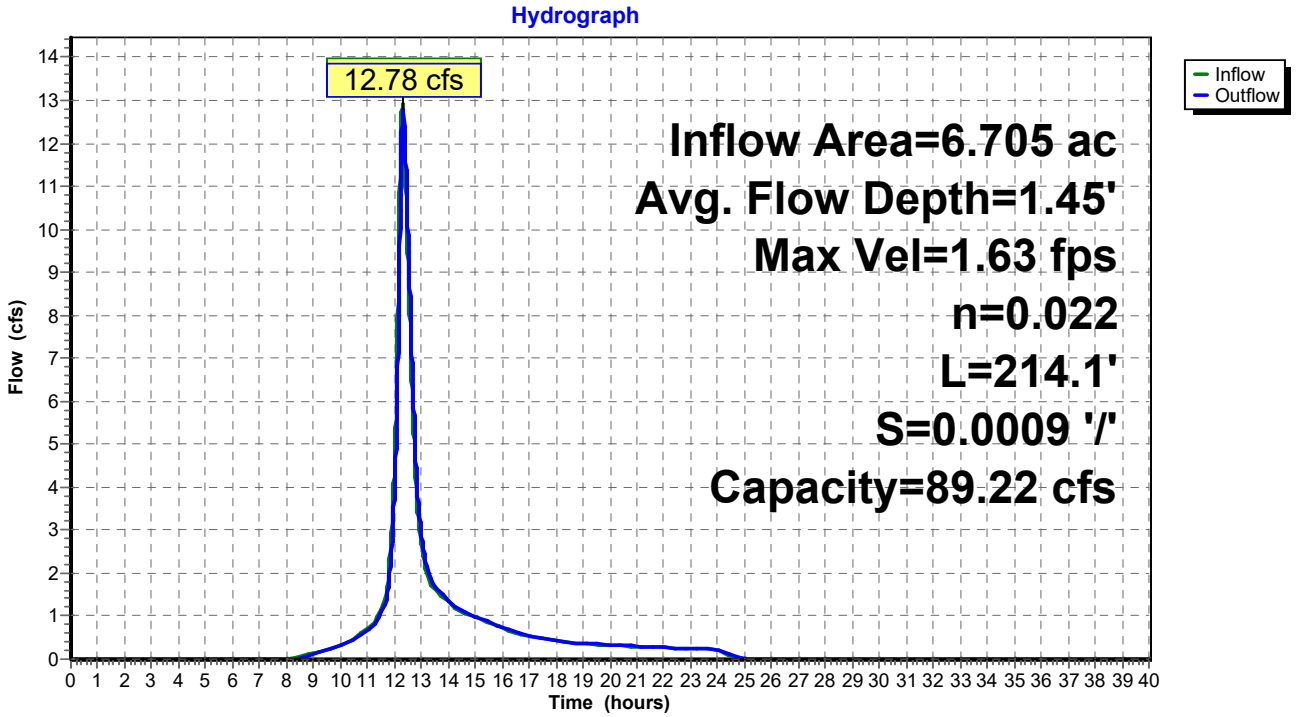
Reach 1B-R2: Swale



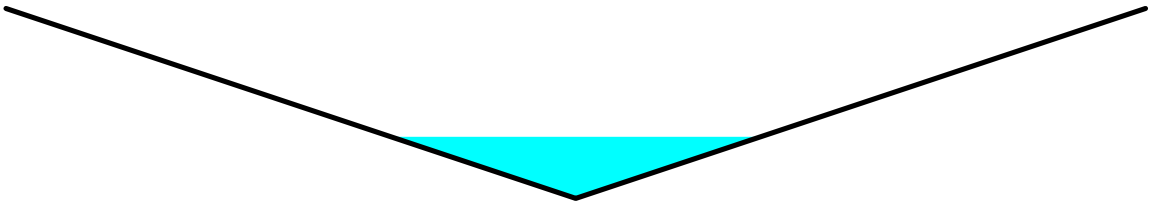
Summary for Reach 1C-R: Swale

Inflow Area = 8.894 ac, 15.82% Impervious, Inflow Depth = 2.42" for 10-Year event
Inflow = 15.69 cfs @ 12.32 hrs, Volume= 1.792 af
Outflow = 15.68 cfs @ 12.33 hrs, Volume= 1.792 af, Atten= 0%, Lag= 0.4 min
Routed to Pond P-1 : 30" Culvert

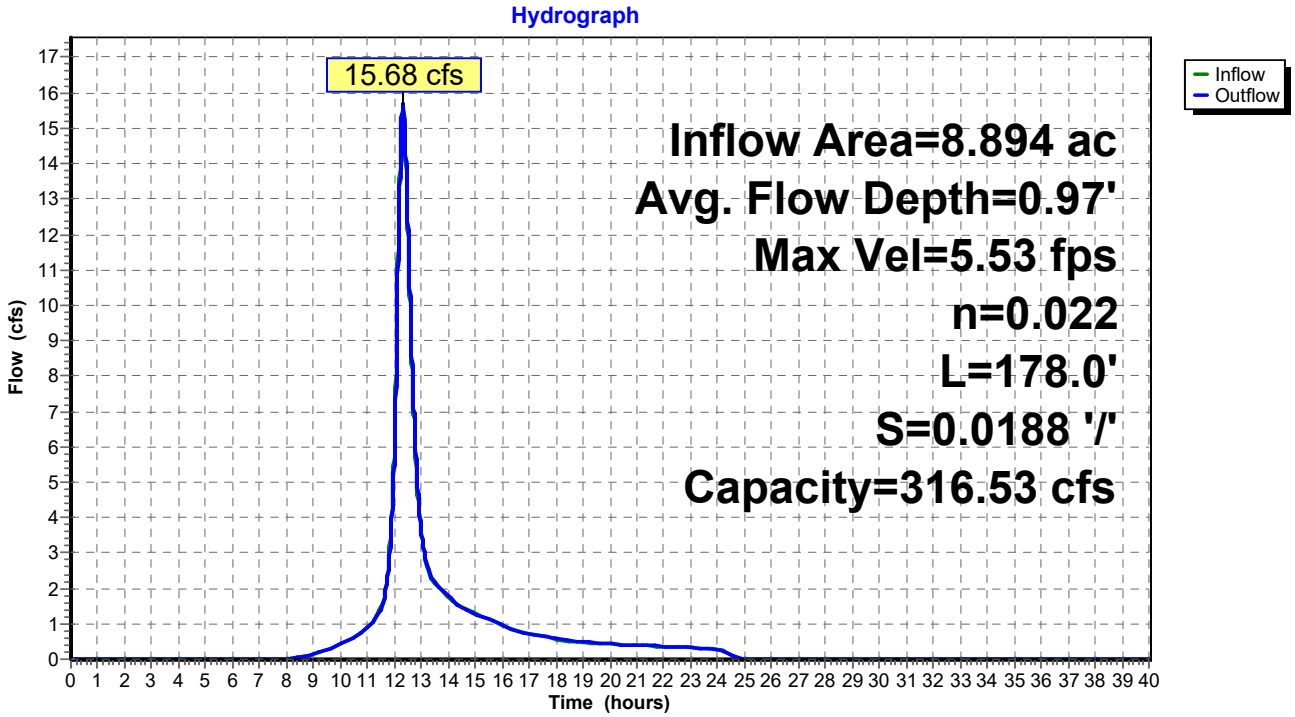
Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.53 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.79 fps, Avg. Travel Time= 1.7 min

Peak Storage= 505 cf @ 12.33 hrs
Average Depth at Peak Storage= 0.97' , Surface Width= 5.83'
Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 316.53 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 18.00'
Length= 178.0' Slope= 0.0188 '/'
Inlet Invert= 157.50', Outlet Invert= 154.15'



Reach 1C-R: Swale



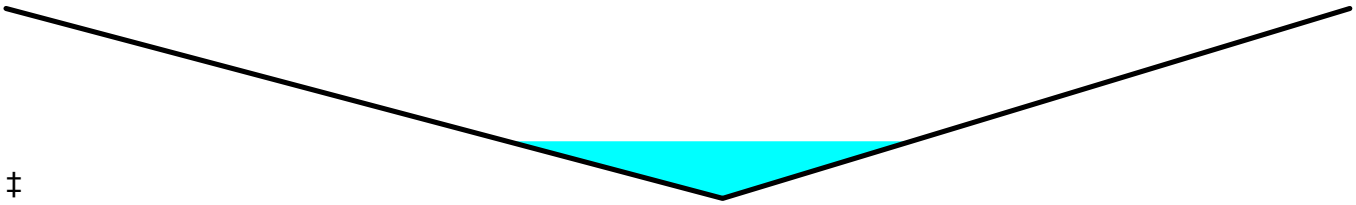
Summary for Reach 1D-R: Swale

Inflow Area = 5.267 ac, 19.83% Impervious, Inflow Depth = 2.41" for 10-Year event
Inflow = 11.16 cfs @ 12.18 hrs, Volume= 1.057 af
Outflow = 11.14 cfs @ 12.19 hrs, Volume= 1.057 af, Atten= 0%, Lag= 0.5 min
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.64 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.32 fps, Avg. Travel Time= 2.0 min

Peak Storage= 471 cf @ 12.19 hrs
Average Depth at Peak Storage= 0.90' , Surface Width= 6.78'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 273.33 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 154.0' Slope= 0.0088 '/'
Inlet Invert= 155.50', Outlet Invert= 154.15'



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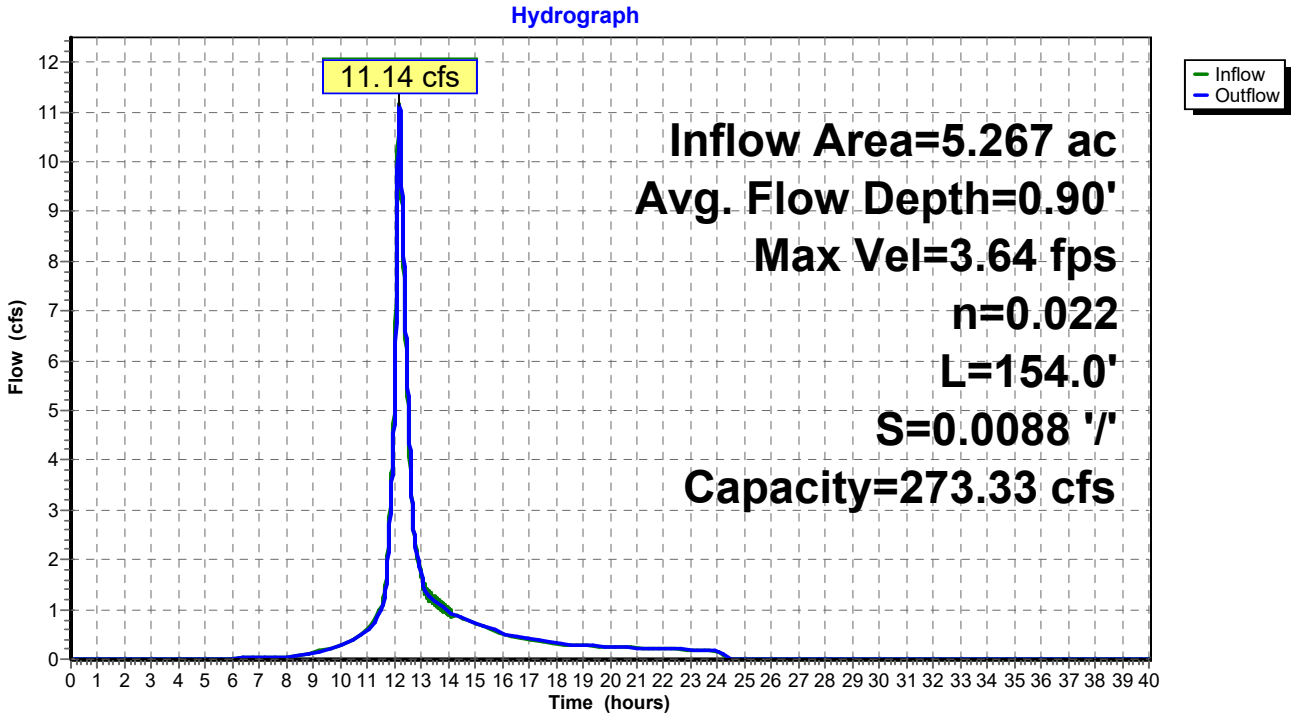
Reach 1D-R: Swale



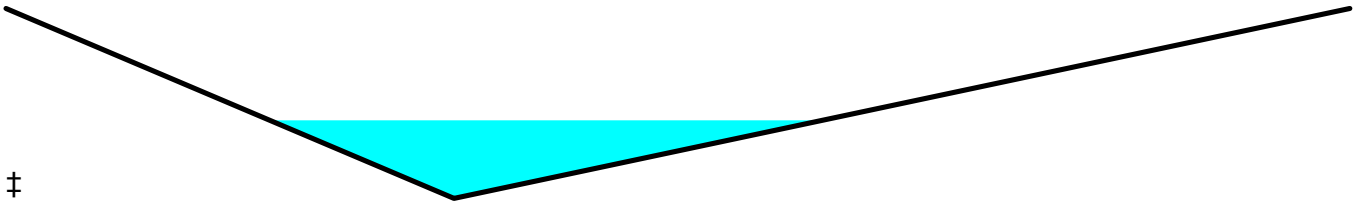
Summary for Reach 1E-R: Road Side Ditch

Inflow Area = 0.705 ac, 18.79% Impervious, Inflow Depth = 2.37" for 10-Year event
Inflow = 1.55 cfs @ 12.19 hrs, Volume= 0.139 af
Outflow = 1.51 cfs @ 12.22 hrs, Volume= 0.139 af, Atten= 3%, Lag= 2.1 min
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.98 fps, Min. Travel Time= 2.7 min
Avg. Velocity = 0.70 fps, Avg. Travel Time= 7.6 min

Peak Storage= 241 cf @ 12.22 hrs
Average Depth at Peak Storage= 0.41' , Surface Width= 3.70'
Bank-Full Depth= 1.00' Flow Area= 4.5 sf, Capacity= 16.16 cfs

0.00' x 1.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 3.0 6.0 '/' Top Width= 9.00'
Length= 317.0' Slope= 0.0137 '/'
Inlet Invert= 158.50', Outlet Invert= 154.15'



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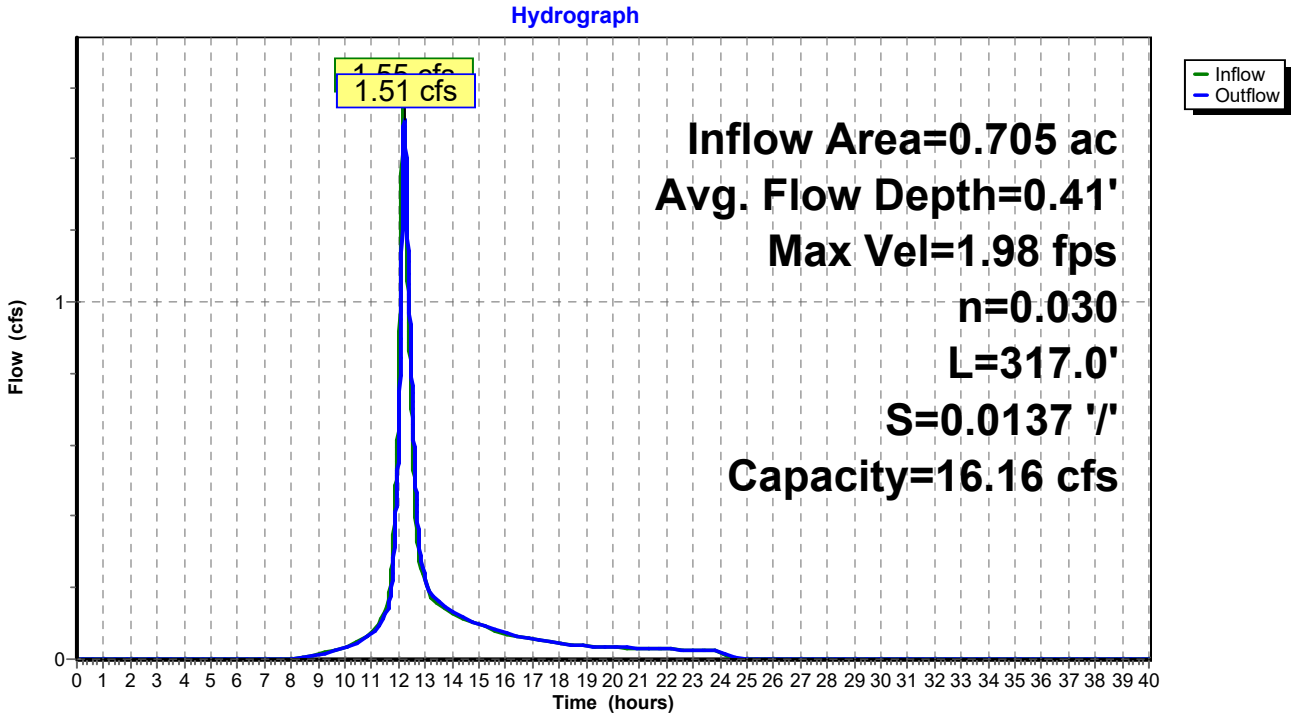
Reach 1E-R: Road Side Ditch



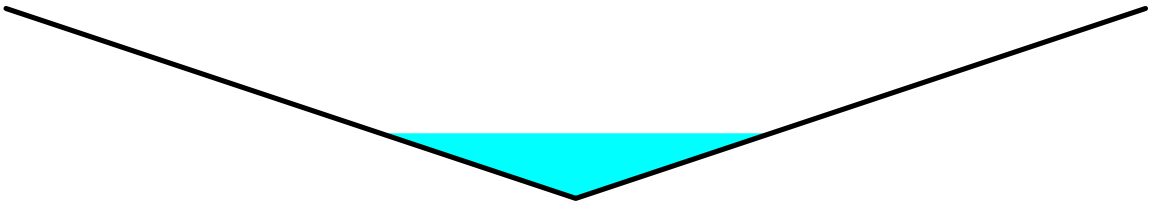
Summary for Reach 1F-R: Swale

Inflow Area = 7.719 ac, 15.92% Impervious, Inflow Depth = 2.42" for 10-Year event
Inflow = 14.14 cfs @ 12.33 hrs, Volume= 1.558 af
Outflow = 14.14 cfs @ 12.33 hrs, Volume= 1.558 af, Atten= 0%, Lag= 0.4 min
Routed to Reach 1C-R : Swale

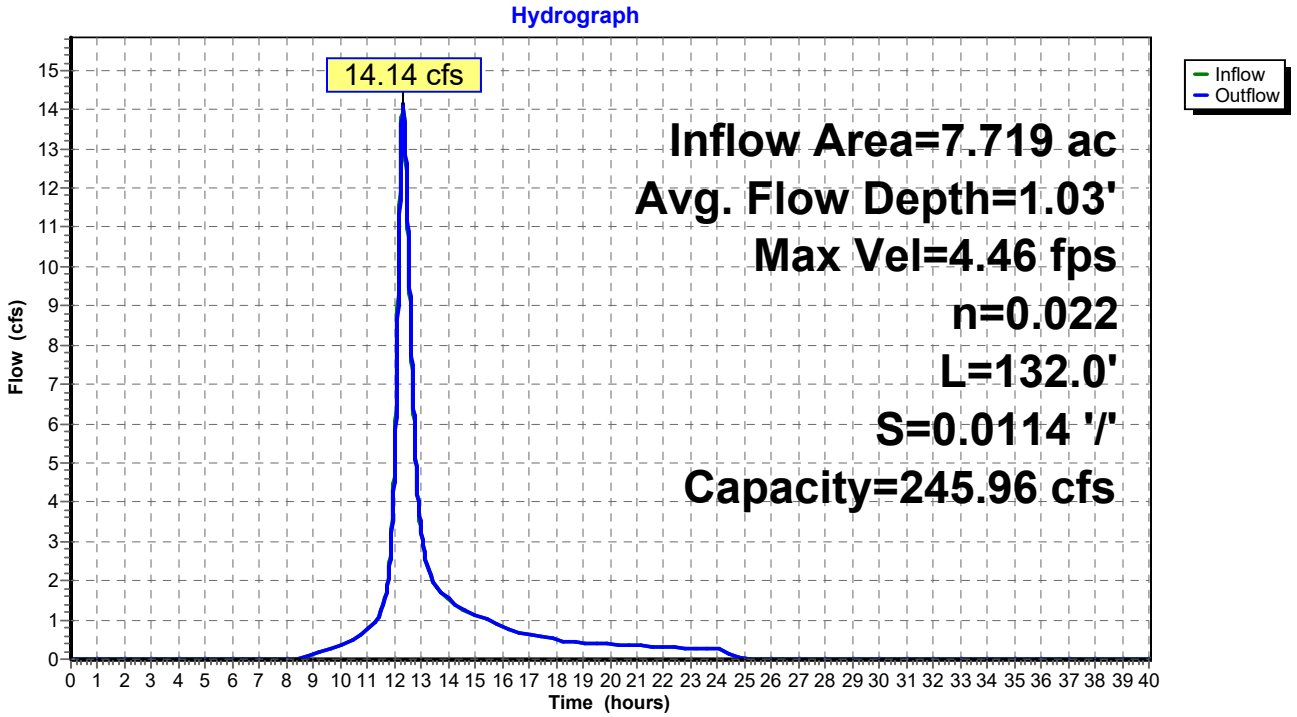
Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.46 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.64 fps, Avg. Travel Time= 1.3 min

Peak Storage= 418 cf @ 12.33 hrs
Average Depth at Peak Storage= 1.03' , Surface Width= 6.17'
Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 245.96 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 18.00'
Length= 132.0' Slope= 0.0114 '/'
Inlet Invert= 159.00', Outlet Invert= 157.50'



Reach 1F-R: Swale



Summary for Pond P-1: 30" Culvert

Inflow Area = 16.655 ac, 19.31% Impervious, Inflow Depth = 2.44" for 10-Year event
Inflow = 29.19 cfs @ 12.23 hrs, Volume= 3.386 af
Outflow = 25.29 cfs @ 12.39 hrs, Volume= 3.386 af, Atten= 13%, Lag= 9.7 min
Primary = 25.29 cfs @ 12.39 hrs, Volume= 3.386 af
Routed to Link AP-1 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link AP-1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 157.24' @ 12.39 hrs Surf.Area= 9,298 sf Storage= 5,365 cf

Plug-Flow detention time= 0.9 min calculated for 3.386 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (848.2 - 847.2)

Volume	Invert	Avail.Storage	Storage Description
#1	154.15'	16,642 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

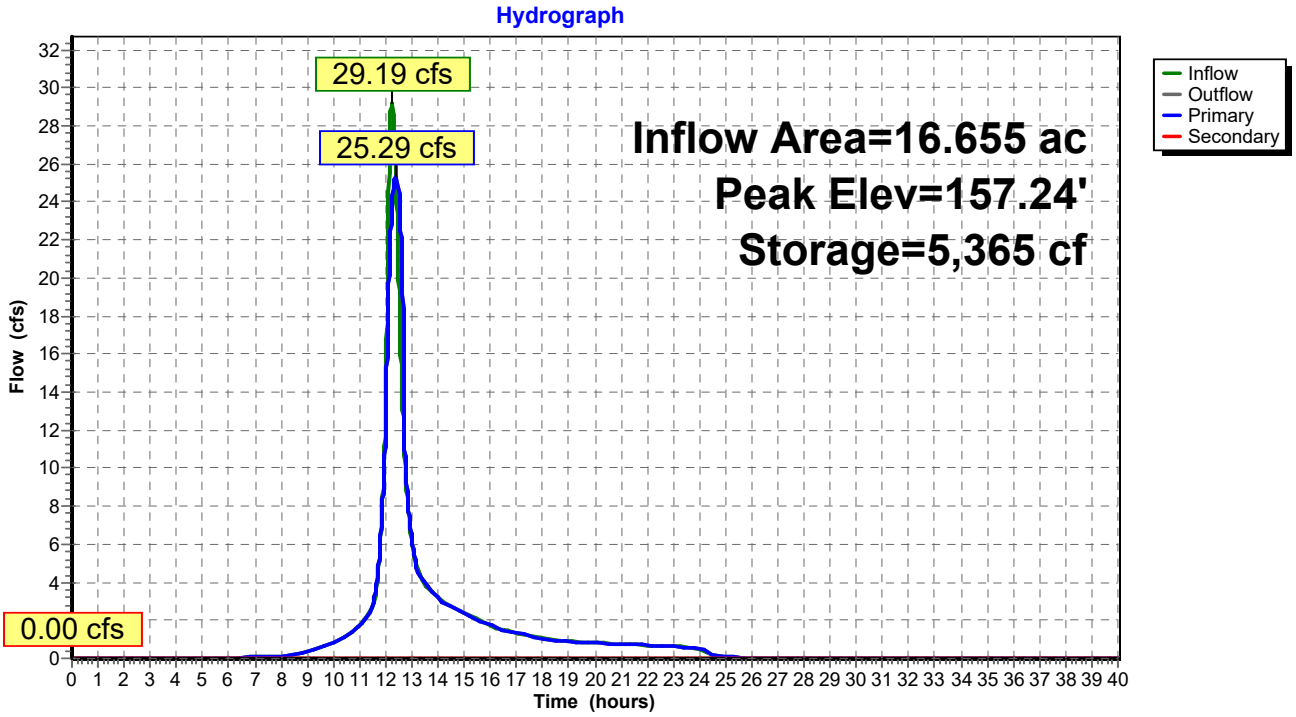
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
154.15	0	0	0
155.00	50	21	21
156.00	569	310	331
157.00	5,902	3,236	3,566
158.00	20,250	13,076	16,642

Device	Routing	Invert	Outlet Devices
#1	Primary	154.15'	**30.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 154.15' / 153.00' S= 0.0153 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf
#2	Secondary	157.50'	**30.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=25.29 cfs @ 12.39 hrs HW=157.24' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 25.29 cfs @ 5.15 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=154.15' TW=0.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P-1: 30" Culvert



Summary for Pond P-1A: Underdrained Soil Filter #1

Inflow Area = 0.654 ac, 54.48% Impervious, Inflow Depth = 3.04" for 10-Year event
Inflow = 2.30 cfs @ 12.07 hrs, Volume= 0.166 af
Outflow = 1.26 cfs @ 12.18 hrs, Volume= 0.166 af, Atten= 45%, Lag= 6.6 min
Primary = 0.04 cfs @ 24.35 hrs, Volume= 0.102 af
Routed to Pond P-1 : 30" Culvert
Secondary = 1.23 cfs @ 12.18 hrs, Volume= 0.063 af
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 158.14' @ 12.18 hrs Surf.Area= 2,041 sf Storage= 2,594 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 368.3 min (1,156.6 - 788.3)

Volume	Invert	Avail.Storage	Storage Description
#1	154.40'	3,384 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

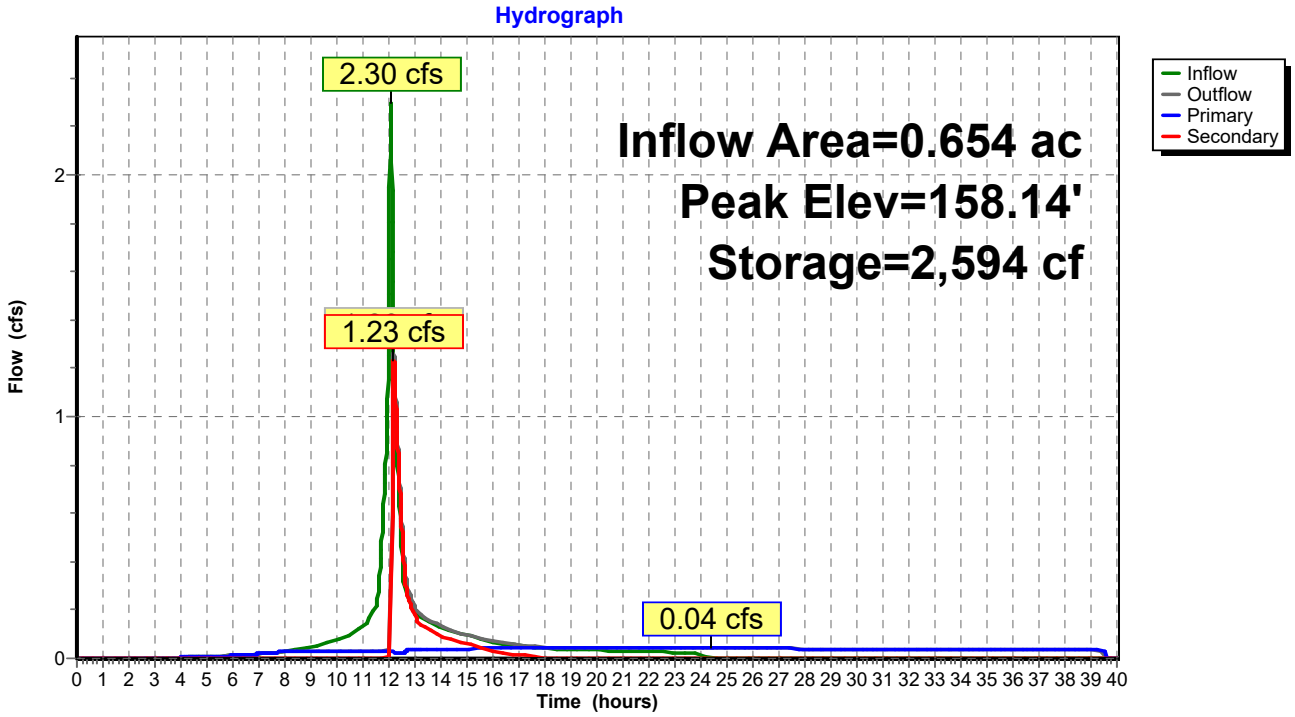
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
154.40	1,179	0.0	0	0
156.50	1,179	0.0	0	0
157.00	1,413	100.0	648	648
158.00	1,924	100.0	1,669	2,317
158.50	2,344	100.0	1,067	3,384

Device	Routing	Invert	Outlet Devices
#1	Primary	154.40'	**1.4" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 154.40' / 154.25' S= 0.0038 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.01 sf
#2	Secondary	158.00'	**10.0' long x 4.5' 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 5.00 5.50 Coef. (English) 2.36 2.52 2.70 2.68 2.67 2.67 2.65 2.66 2.66 2.67 2.70 2.70 2.72 2.75 2.81 2.93 3.10

Primary OutFlow Max=0.04 cfs @ 24.35 hrs HW=157.86' TW=154.36' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.04 cfs @ 3.88 fps)

Secondary OutFlow Max=1.23 cfs @ 12.18 hrs HW=158.14' TW=156.82' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 1.23 cfs @ 0.88 fps)

Pond P-1A: Underdrained Soil Filter #1



Summary for Pond P-1A2: CB#2

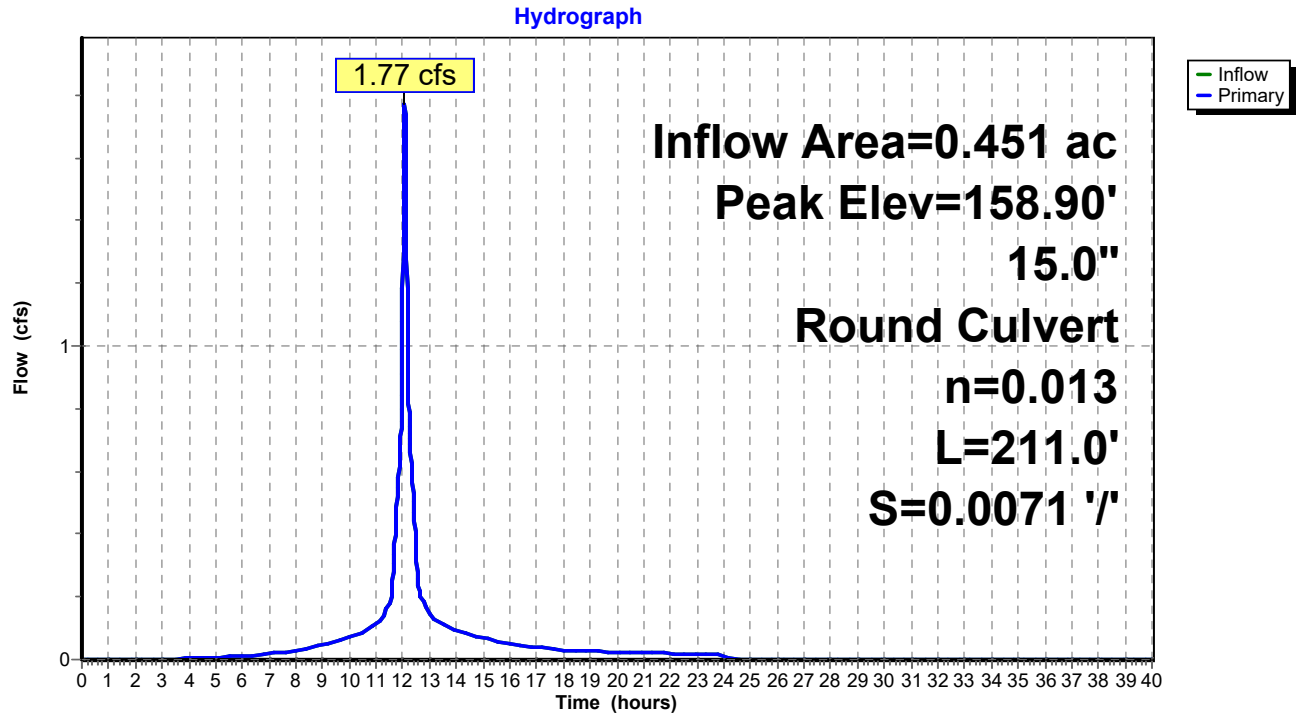
Inflow Area = 0.451 ac, 78.97% Impervious, Inflow Depth = 3.45" for 10-Year event
Inflow = 1.77 cfs @ 12.07 hrs, Volume= 0.130 af
Outflow = 1.77 cfs @ 12.07 hrs, Volume= 0.130 af, Atten= 0%, Lag= 0.0 min
Primary = 1.77 cfs @ 12.07 hrs, Volume= 0.130 af
Routed to Pond P-1A : Underdrained Soil Filter #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 158.90' @ 12.08 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	158.10'	**15.0" Round Culvert** L= 211.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.10' / 156.60' S= 0.0071 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.73 cfs @ 12.07 hrs HW=158.89' TW=157.90' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.73 cfs @ 3.01 fps)

Pond P-1A2: CB#2



Summary for Pond P-1B: 36" Culvert

Inflow Area = 6.705 ac, 17.44% Impervious, Inflow Depth = 2.46" for 10-Year event
Inflow = 13.00 cfs @ 12.27 hrs, Volume= 1.374 af
Outflow = 12.93 cfs @ 12.29 hrs, Volume= 1.372 af, Atten= 1%, Lag= 1.4 min
Primary = 12.93 cfs @ 12.29 hrs, Volume= 1.372 af
Routed to Reach 1B-R1 : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1B-R1 : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 167.21' @ 12.29 hrs Surf.Area= 977 sf Storage= 1,082 cf

Plug-Flow detention time= 3.6 min calculated for 1.372 af (100% of inflow)
Center-of-Mass det. time= 2.6 min (834.4 - 831.7)

Volume	Invert	Avail.Storage	Storage Description
#1	165.00'	7,542 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

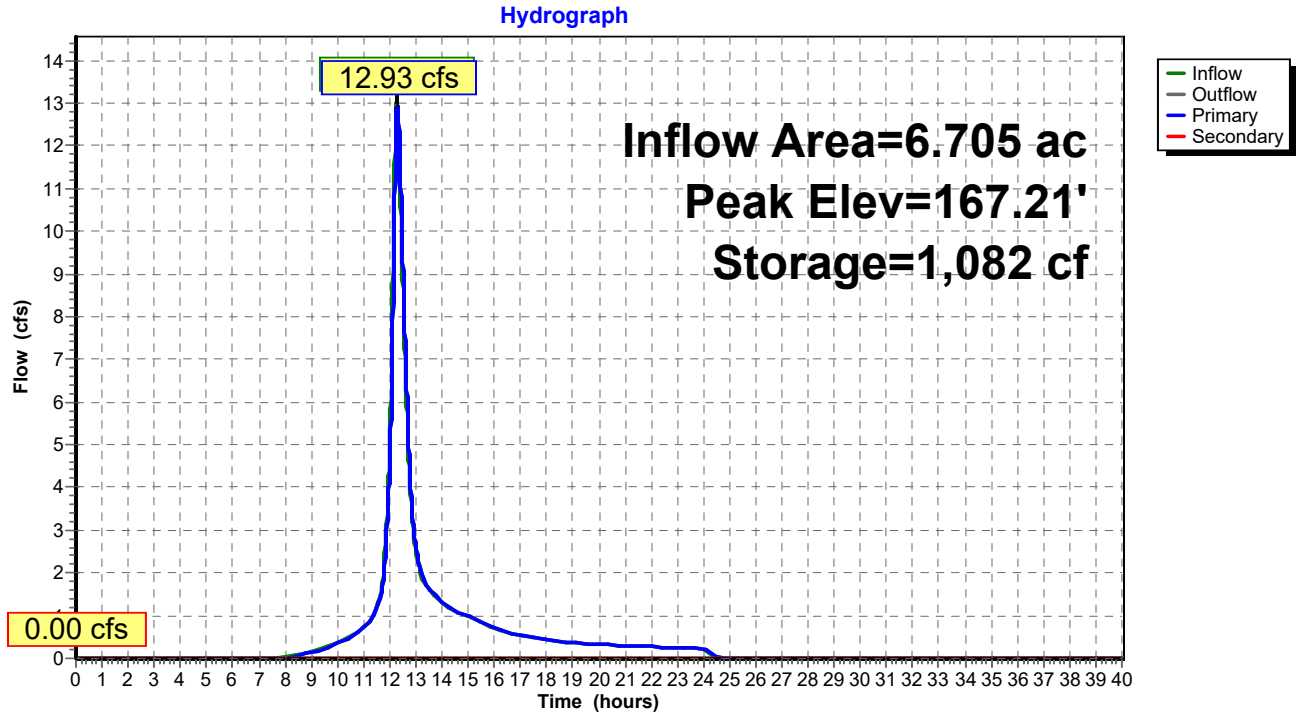
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
165.00	0	0	0
168.00	1,323	1,985	1,985
170.00	4,234	5,557	7,542

Device	Routing	Invert	Outlet Devices
#1	Primary	165.64'	**36.0" Round Culvert** L= 48.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 165.64' / 165.33' S= 0.0065 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf
#2	Secondary	169.00'	**20.0' long x 6.0' 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 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=12.92 cfs @ 12.29 hrs HW=167.21' TW=165.75' (Dynamic Tailwater)
1=Culvert (Barrel Controls 12.92 cfs @ 5.00 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=165.00' TW=165.33' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P-1B: 36" Culvert



Summary for Pond P-1C: DMH#1

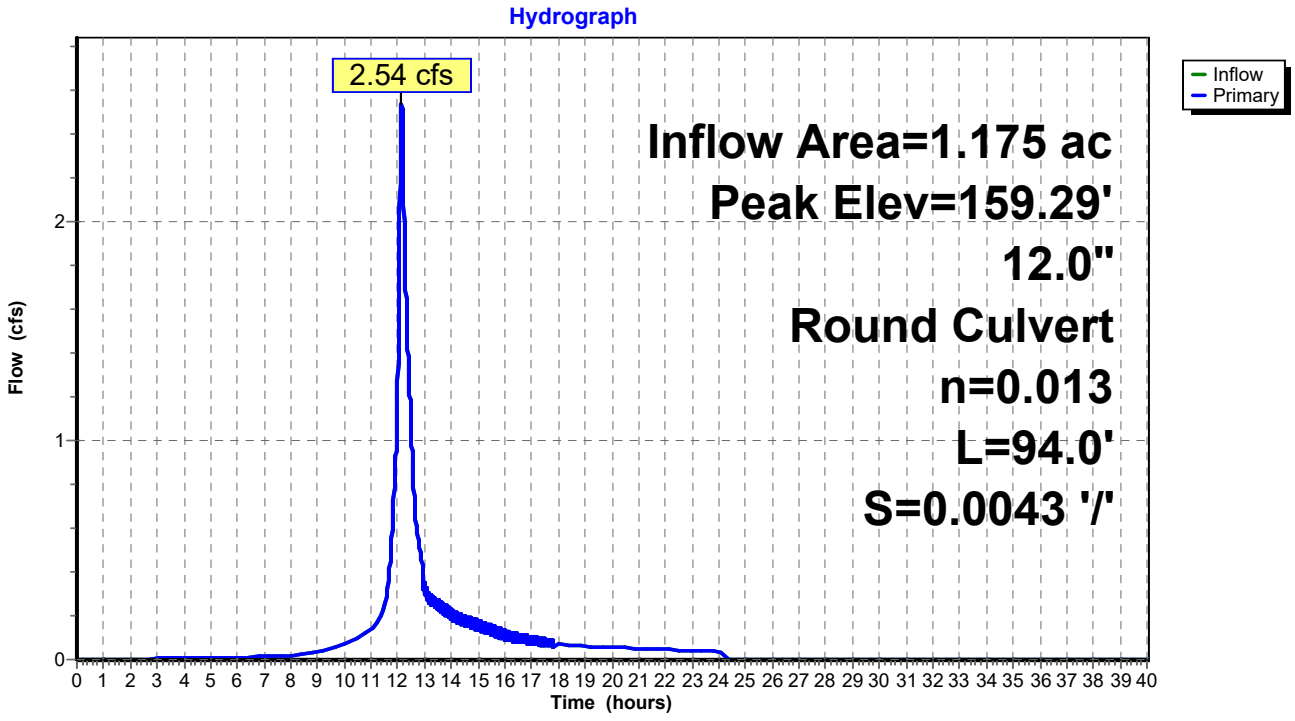
Inflow Area = 1.175 ac, 15.14% Impervious, Inflow Depth = 2.39" for 10-Year event
Inflow = 2.54 cfs @ 12.14 hrs, Volume= 0.234 af
Outflow = 2.54 cfs @ 12.14 hrs, Volume= 0.234 af, Atten= 0%, Lag= 0.0 min
Primary = 2.54 cfs @ 12.14 hrs, Volume= 0.234 af
Routed to Reach 1C-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 159.29' @ 12.14 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	157.90'	**12.0" Round Culvert** L= 94.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 157.90' / 157.50' S= 0.0043 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.53 cfs @ 12.14 hrs HW=159.28' TW=158.35' (Dynamic Tailwater)
1=Culvert (Barrel Controls 2.53 cfs @ 3.23 fps)

Pond P-1C: DMH#1



Summary for Pond P-1C1: FI#1

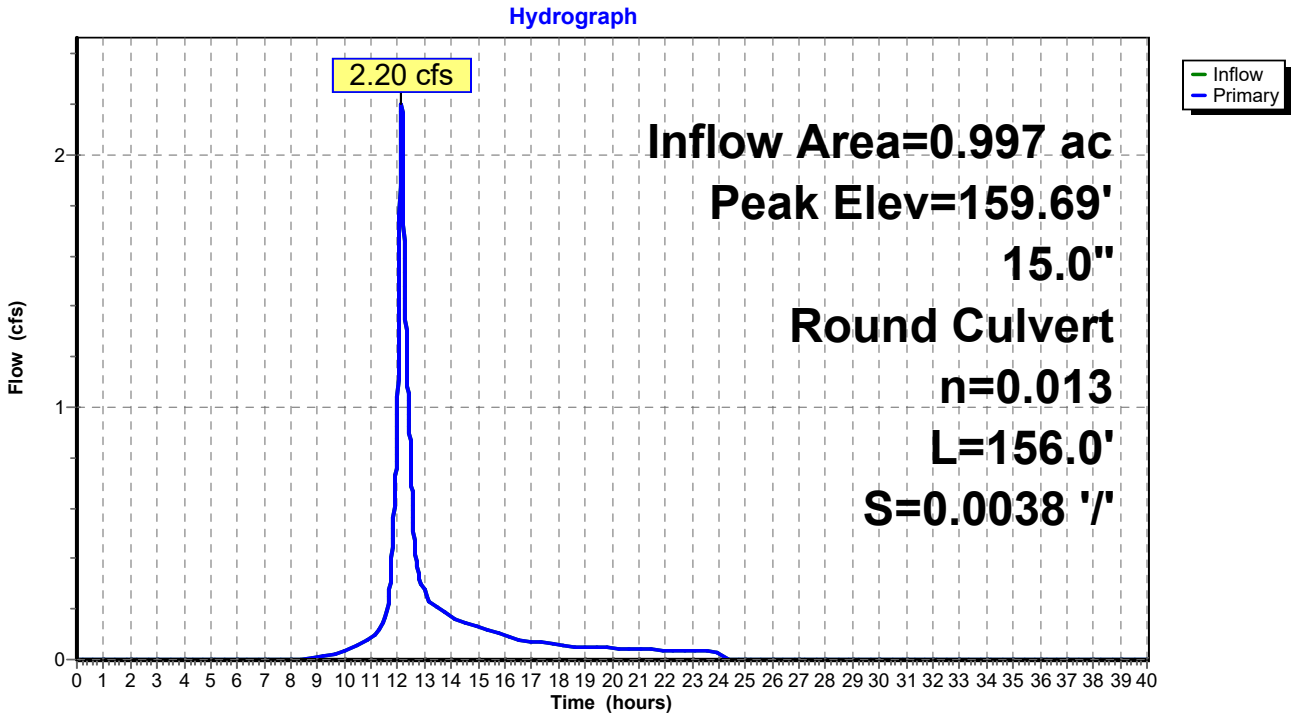
Inflow Area = 0.997 ac, 0.00% Impervious, Inflow Depth = 2.12" for 10-Year event
Inflow = 2.20 cfs @ 12.13 hrs, Volume= 0.177 af
Outflow = 2.20 cfs @ 12.13 hrs, Volume= 0.177 af, Atten= 0%, Lag= 0.0 min
Primary = 2.20 cfs @ 12.13 hrs, Volume= 0.177 af
Routed to Pond P-1C : DMH#1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 159.69' @ 12.14 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	158.50'	**15.0" Round Culvert** L= 156.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.50' / 157.90' S= 0.0038 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.17 cfs @ 12.13 hrs HW=159.69' TW=159.28' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.17 cfs @ 2.32 fps)

Pond P-1C1: FI#1



Summary for Pond P-1D: 15" Culvert

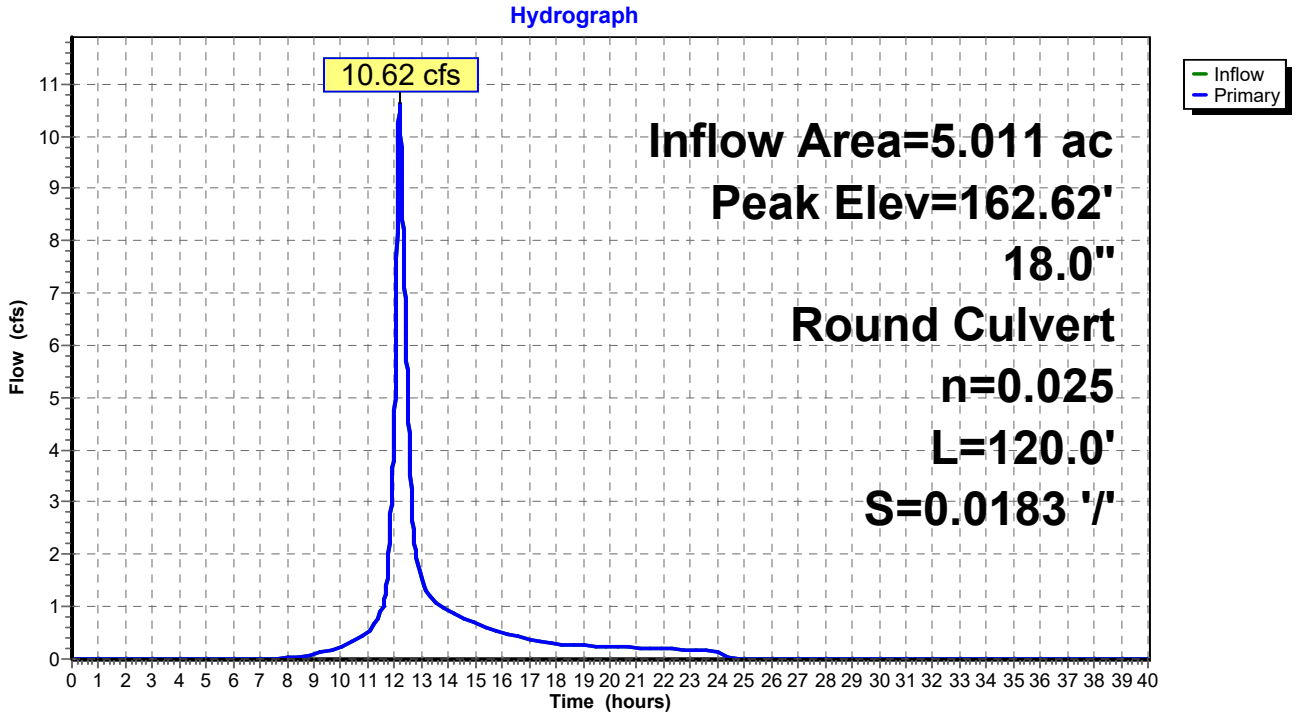
Inflow Area = 5.011 ac, 15.74% Impervious, Inflow Depth = 2.33" for 10-Year event
Inflow = 10.62 cfs @ 12.18 hrs, Volume= 0.974 af
Outflow = 10.62 cfs @ 12.18 hrs, Volume= 0.974 af, Atten= 0%, Lag= 0.0 min
Primary = 10.62 cfs @ 12.18 hrs, Volume= 0.974 af
Routed to Reach 1D-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 162.62' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	157.70'	**18.0" Round Culvert** L= 120.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 157.70' / 155.50' S= 0.0183 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=10.62 cfs @ 12.18 hrs HW=162.61' TW=156.40' (Dynamic Tailwater)
1=Culvert (Barrel Controls 10.62 cfs @ 6.01 fps)

Pond P-1D: 15" Culvert



Summary for Pond P-1D3: FI#2

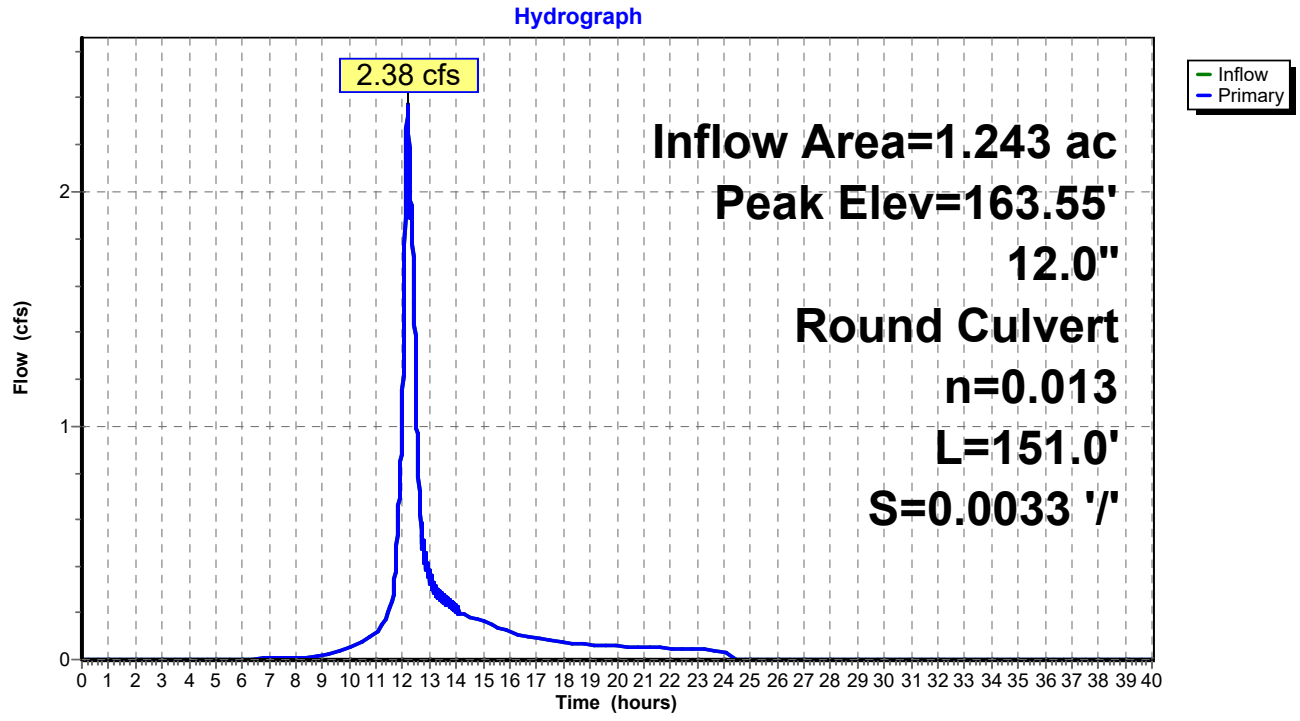
Inflow Area = 1.243 ac, 5.13% Impervious, Inflow Depth = 2.21" for 10-Year event
Inflow = 2.38 cfs @ 12.17 hrs, Volume= 0.229 af
Outflow = 2.38 cfs @ 12.17 hrs, Volume= 0.229 af, Atten= 0%, Lag= 0.0 min
Primary = 2.38 cfs @ 12.17 hrs, Volume= 0.229 af
Routed to Pond P-1D : 15" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 163.55' @ 12.19 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	158.50'	**12.0" Round Culvert** L= 151.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.50' / 158.00' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.25 cfs @ 12.17 hrs HW=163.43' TW=162.59' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.25 cfs @ 2.86 fps)

Pond P-1D3: FI#2



Summary for Pond P-1E: 12" Culvert

Inflow Area = 0.705 ac, 18.79% Impervious, Inflow Depth = 2.37" for 10-Year event
Inflow = 1.69 cfs @ 12.15 hrs, Volume= 0.139 af
Outflow = 1.55 cfs @ 12.19 hrs, Volume= 0.139 af, Atten= 8%, Lag= 2.4 min
Primary = 1.55 cfs @ 12.19 hrs, Volume= 0.139 af
Routed to Reach 1E-R : Road Side Ditch
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1E-R : Road Side Ditch

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 159.27' @ 12.19 hrs Surf.Area= 655 sf Storage= 227 cf

Plug-Flow detention time= 3.6 min calculated for 0.139 af (100% of inflow)
Center-of-Mass det. time= 3.3 min (829.2 - 825.9)

Volume	Invert	Avail.Storage	Storage Description
#1	158.40'	5,001 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

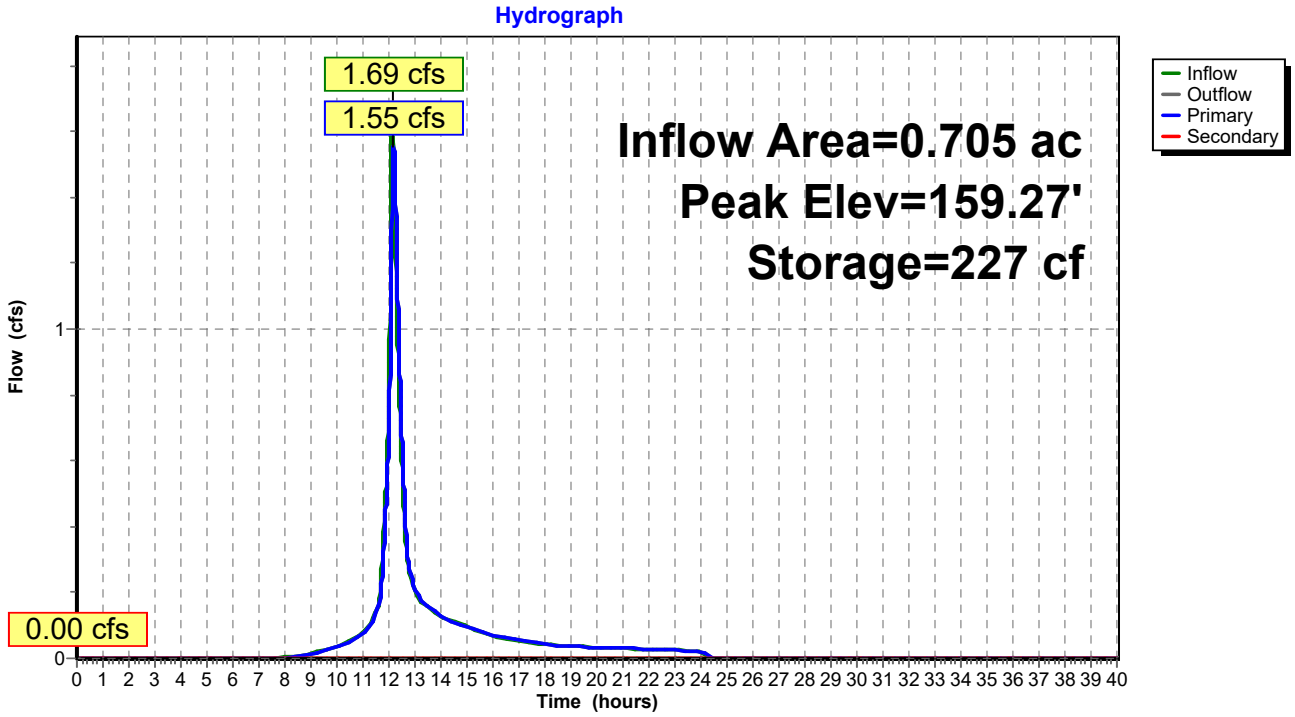
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
158.40	0	0	0
159.00	315	94	94
160.00	1,555	935	1,029
161.00	6,388	3,972	5,001

Device	Routing	Invert	Outlet Devices
#1	Primary	158.40'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.40' / 158.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	160.80'	**31.0' long x 11.0' 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) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64

Primary OutFlow Max=1.55 cfs @ 12.19 hrs HW=159.27' TW=158.91' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.55 cfs @ 2.84 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=158.40' TW=158.50' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P-1E: 12" Culvert



Summary for Pond P-1F: 2 - 24 " Dia Culvert

Inflow Area = 7.719 ac, 15.92% Impervious, Inflow Depth = 2.42" for 10-Year event
Inflow = 14.15 cfs @ 12.32 hrs, Volume= 1.558 af
Outflow = 14.14 cfs @ 12.33 hrs, Volume= 1.558 af, Atten= 0%, Lag= 0.3 min
Primary = 14.14 cfs @ 12.33 hrs, Volume= 1.558 af
Routed to Reach 1F-R : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P-1E : 12" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 161.35' @ 12.33 hrs Surf.Area= 266 sf Storage= 65 cf

Plug-Flow detention time= 0.0 min calculated for 1.558 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (838.7 - 838.6)

Volume	Invert	Avail.Storage	Storage Description
#1	160.00'	4,221 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

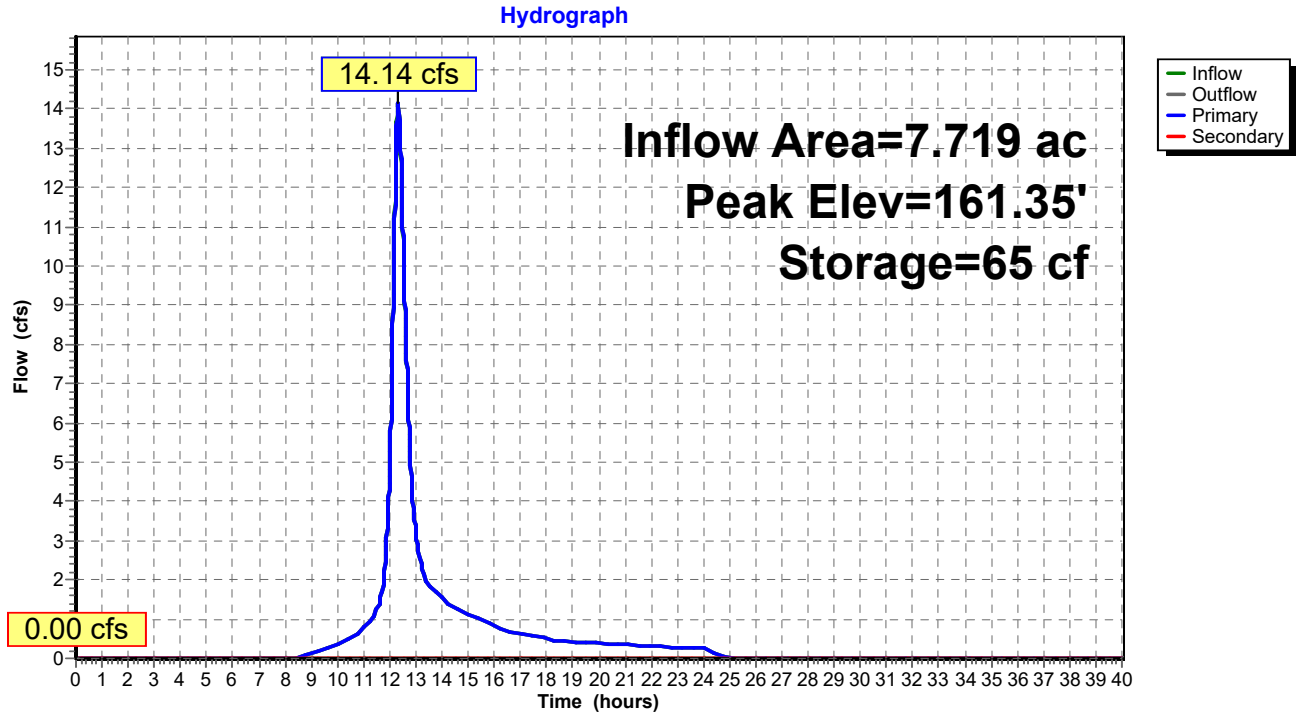
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
160.00	0	0	0
161.00	26	13	13
162.00	707	367	380
163.00	1,746	1,227	1,606
164.00	3,484	2,615	4,221

Device	Routing	Invert	Outlet Devices
#1	Primary	160.00'	**24.0" Round Culvert X 2.00** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 160.00' / 159.50' S= 0.0125 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Secondary	163.50'	**58.0' long x 11.0' 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) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64

Primary OutFlow Max=14.14 cfs @ 12.33 hrs HW=161.35' TW=160.03' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 14.14 cfs @ 3.13 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=160.00' TW=158.40' (Dynamic Tailwater)
↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P-1F: 2 - 24 " Dia Culvert



Summary for Pond RDF-1: Roof Dripline Filter #1

Inflow Area = 0.187 ac,100.00% Impervious, Inflow Depth = 3.86" for 10-Year event
Inflow = 0.78 cfs @ 12.07 hrs, Volume= 0.060 af
Outflow = 0.34 cfs @ 12.28 hrs, Volume= 0.060 af, Atten= 56%, Lag= 12.6 min
Primary = 0.34 cfs @ 12.28 hrs, Volume= 0.060 af
Routed to Reach 1D-R : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1D-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 157.67' @ 12.23 hrs Surf.Area= 952 sf Storage= 350 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 5.1 min (755.7 - 750.6)

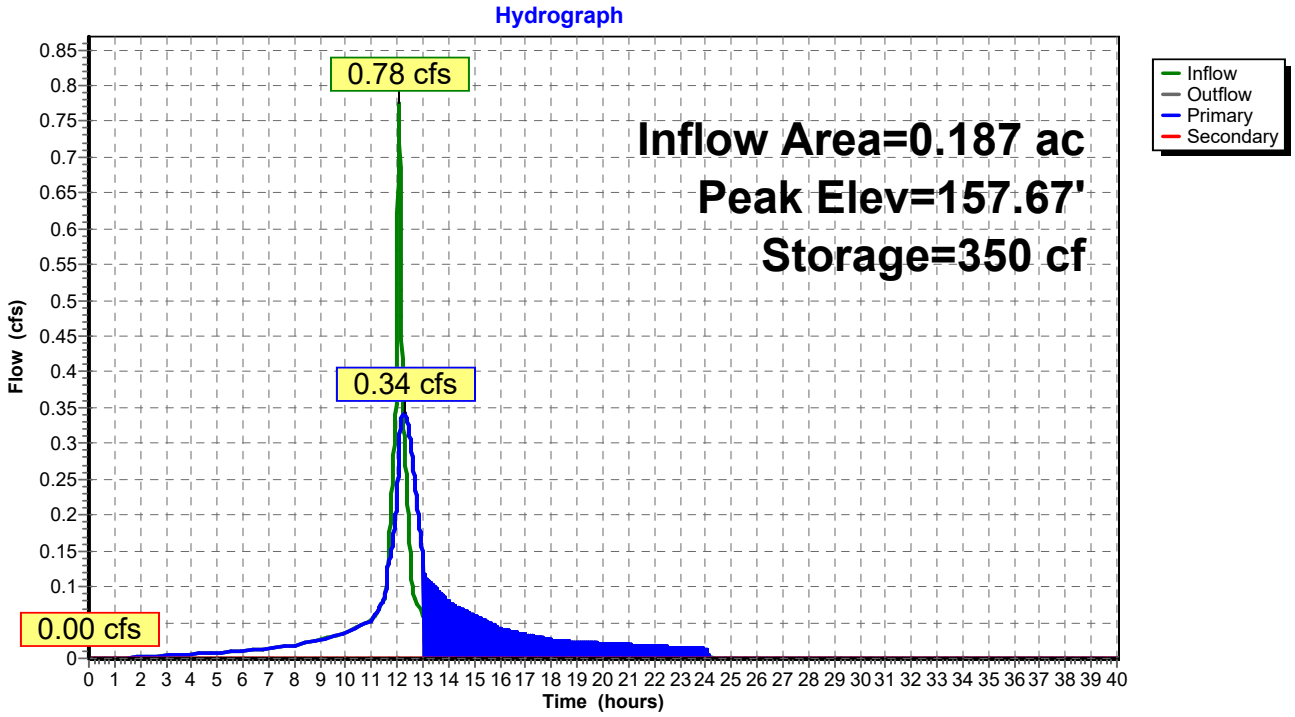
Volume	Invert	Avail.Storage	Storage Description
#1	156.75'	857 cf	**4.00'W x 238.00'L x 2.25'H Coarse Gravel** 2,142 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	156.42'	**4.0" Round Culvert** L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 156.42' / 155.50' S= 0.0256 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	159.00'	**193.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.34 cfs @ 12.28 hrs HW=157.66' TW=156.35' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.34 cfs @ 3.93 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=156.75' TW=155.50' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond RDF-1: Roof Dripline Filter #1



Summary for Pond RDF-2: Roof Dripline Filter #2

Inflow Area = 0.069 ac,100.00% Impervious, Inflow Depth = 3.86" for 10-Year event
Inflow = 0.29 cfs @ 12.07 hrs, Volume= 0.022 af
Outflow = 0.21 cfs @ 12.13 hrs, Volume= 0.022 af, Atten= 25%, Lag= 3.9 min
Primary = 0.21 cfs @ 12.13 hrs, Volume= 0.022 af
Routed to Reach 1D-R : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1D-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 157.00' @ 12.13 hrs Surf.Area= 0.008 ac Storage= 0.001 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.5 min (751.1 - 750.6)

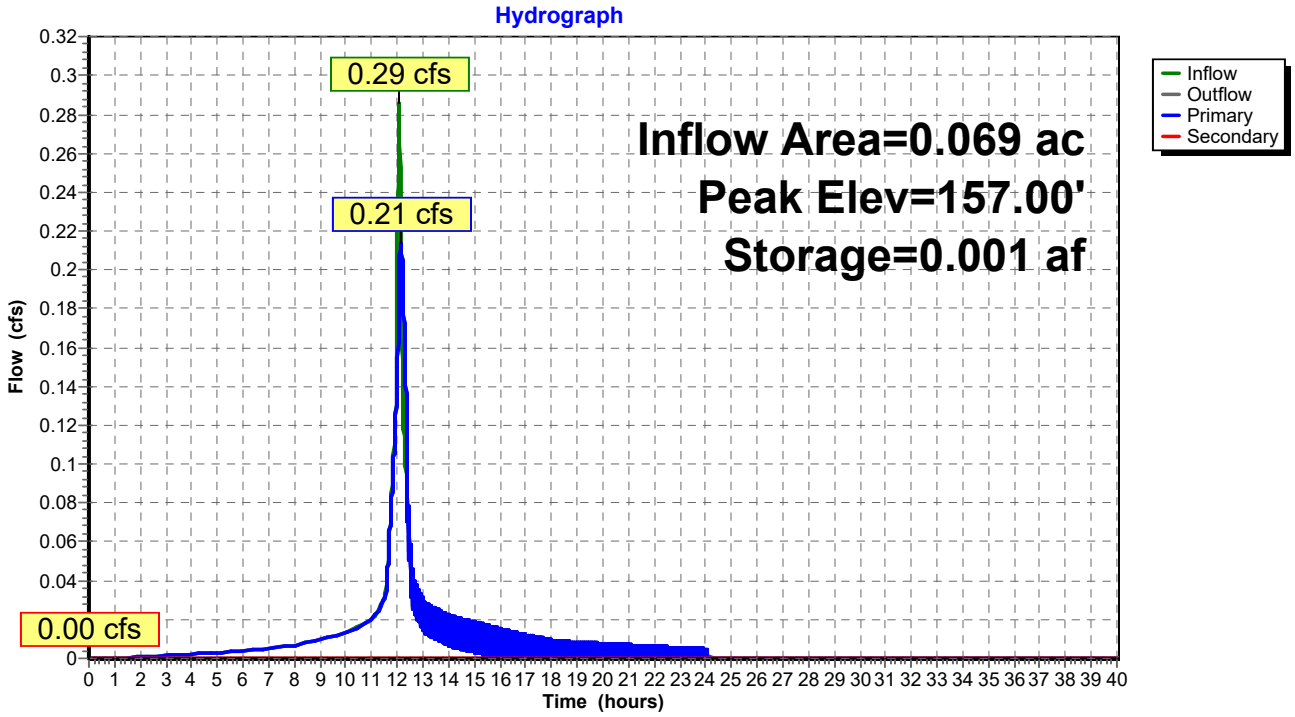
Volume	Invert	Avail.Storage	Storage Description
#1	156.75'	0.008 af	**4.00'W x 92.00'L x 2.25'H Coarse Gravel** 0.019 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	156.42'	**4.0" Round Culvert** L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 156.42' / 155.50' S= 0.0256 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	159.00'	**92.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.21 cfs @ 12.13 hrs HW=157.00' TW=156.37' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.21 cfs @ 2.45 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=156.75' TW=155.50' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond RDF-2: Roof Dripline Filter #2



Summary for Pond RDF-3: Roof Dripline Filter #3

Inflow Area = 0.178 ac,100.00% Impervious, Inflow Depth = 3.86" for 10-Year event
Inflow = 0.74 cfs @ 12.07 hrs, Volume= 0.057 af
Outflow = 0.35 cfs @ 12.21 hrs, Volume= 0.057 af, Atten= 53%, Lag= 8.4 min
Primary = 0.35 cfs @ 12.21 hrs, Volume= 0.057 af
Routed to Pond P-1C : DMH#1
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P-1C : DMH#1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 162.13' @ 12.21 hrs Surf.Area= 0.019 ac Storage= 0.007 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 4.4 min (755.0 - 750.6)

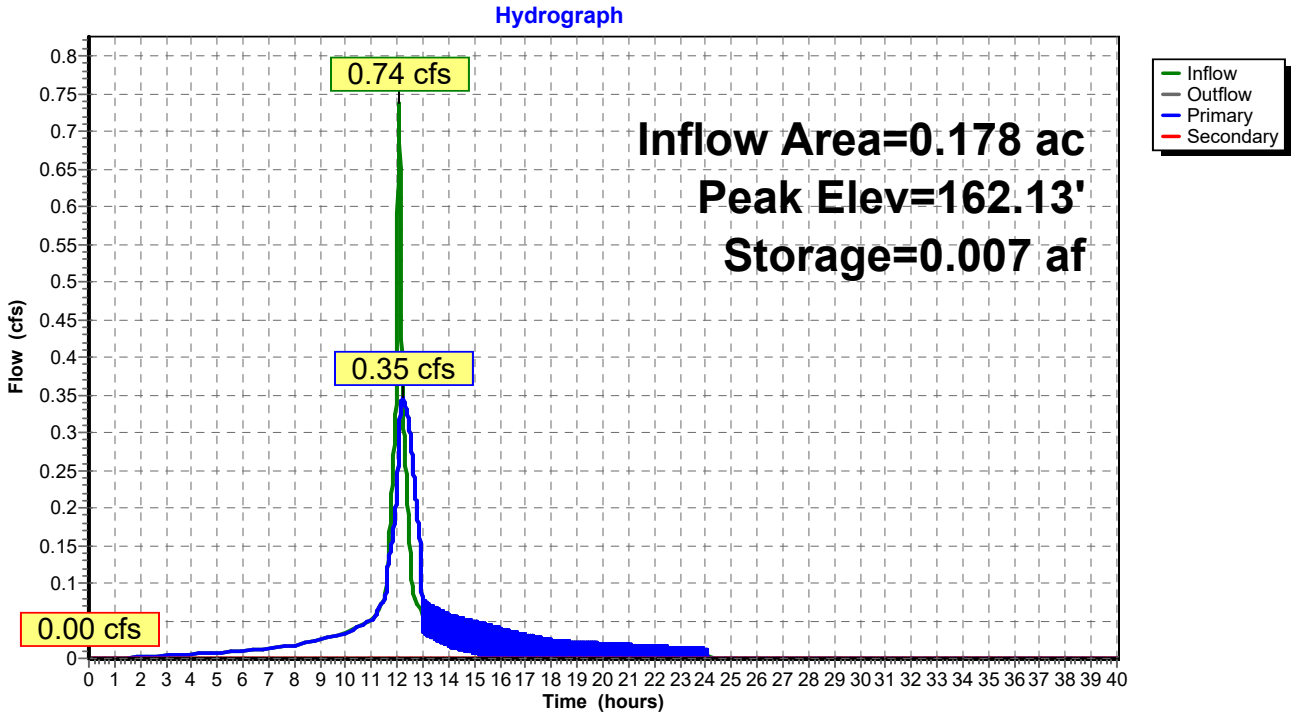
Volume	Invert	Avail.Storage	Storage Description
#1	161.20'	0.015 af	**4.00'W x 208.00'L x 2.00'H Coarse Gravel** 0.038 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	160.87'	**4.0" Round Culvert** L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 160.87' / 160.00' S= 0.0226 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	163.20'	**208.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.35 cfs @ 12.21 hrs HW=162.13' TW=159.02' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.35 cfs @ 3.97 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=161.20' TW=157.90' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond RDF-3: Roof Dripline Filter #3



Summary for Pond RDF-4: Roof Dripline Filter #4

Inflow Area = 0.061 ac,100.00% Impervious, Inflow Depth = 3.86" for 10-Year event
Inflow = 0.25 cfs @ 12.07 hrs, Volume= 0.020 af
Outflow = 0.30 cfs @ 12.37 hrs, Volume= 0.020 af, Atten= 0%, Lag= 17.9 min
Primary = 0.30 cfs @ 12.37 hrs, Volume= 0.020 af
Routed to Pond P-1D3 : FI#2
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P-1D3 : FI#2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 161.83' @ 12.29 hrs Surf.Area= 0.005 ac Storage= 0.003 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 2.2 min (752.7 - 750.6)

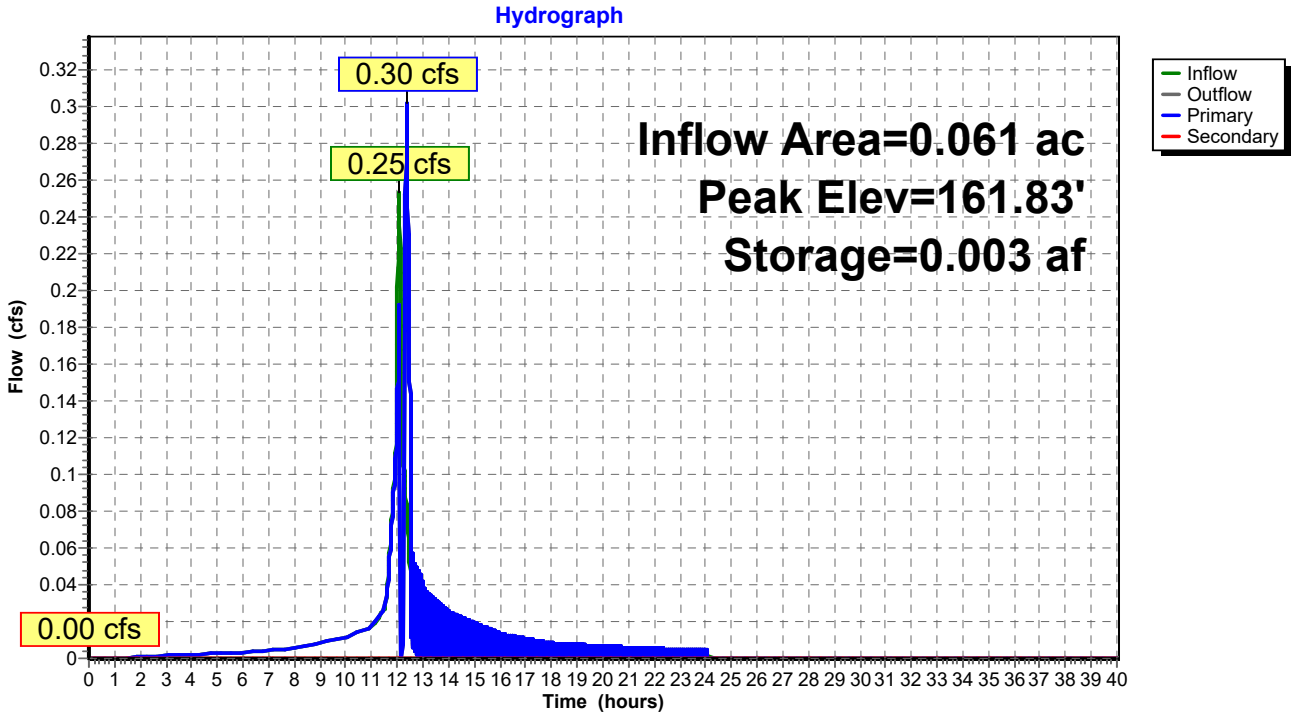
Volume	Invert	Avail.Storage	Storage Description
#1	160.45'	0.005 af	**4.00'W x 54.00'L x 2.75'H Coarse Gravel** 0.014 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	160.12'	**4.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 160.12' / 160.00' S= 0.0034 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	163.20'	**208.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.30 cfs @ 12.37 hrs HW=161.33' TW=160.18' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.30 cfs @ 3.49 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=160.45' TW=158.50' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond RDF-4: Roof Dripline Filter #4

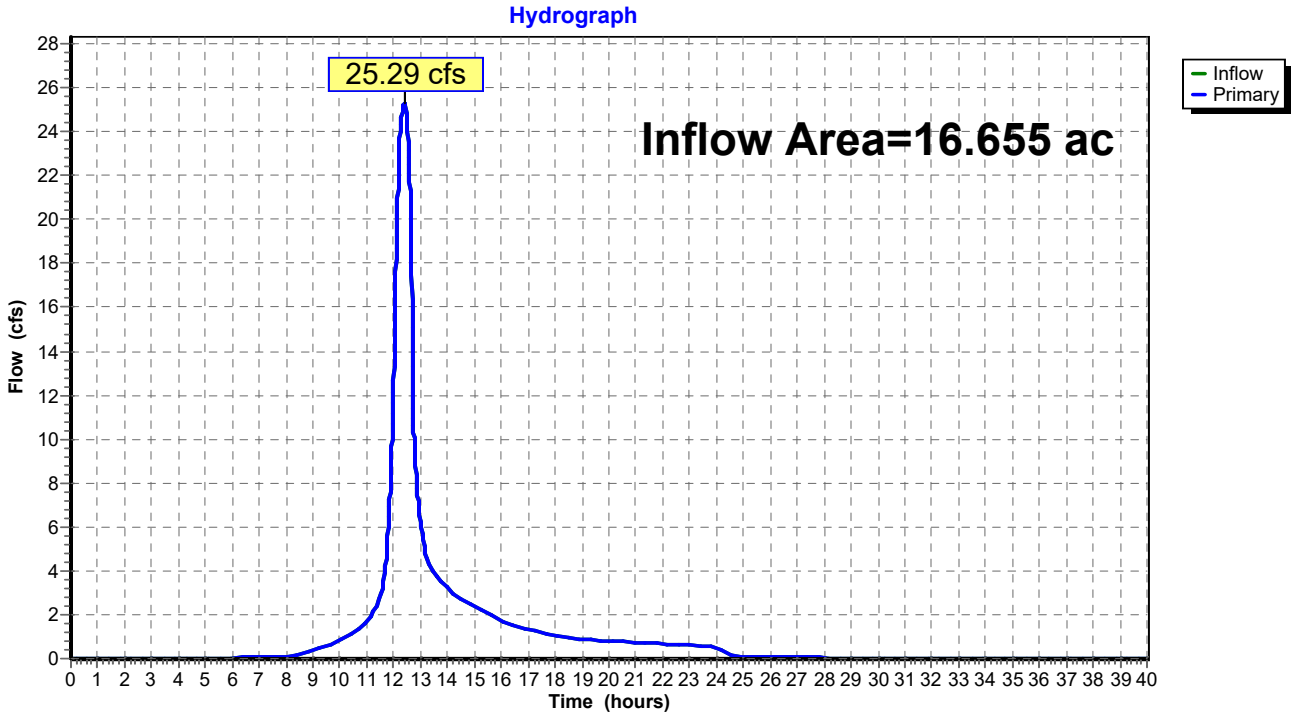


Summary for Link AP-1:

Inflow Area = 16.655 ac, 19.31% Impervious, Inflow Depth = 2.44" for 10-Year event
Inflow = 25.29 cfs @ 12.39 hrs, Volume= 3.386 af
Primary = 25.29 cfs @ 12.39 hrs, Volume= 3.386 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link AP-1:



Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 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 SC-1: West Runoff Area=49,436 sf 24.20% Impervious Runoff Depth=3.09"
Tc=5.0 min CN=84 Runoff=4.24 cfs 0.292 af

Subcatchment SC-1A: East Runoff Area=8,840 sf 0.00% Impervious Runoff Depth=2.72"
Tc=5.0 min CN=80 Runoff=0.67 cfs 0.046 af

Subcatchment SC-1A1: Roundabout Runoff Area=7,782 sf 70.79% Impervious Runoff Depth=4.00"
Tc=5.0 min CN=93 Runoff=0.82 cfs 0.060 af

Subcatchment SC-1A2: Parking Lot Runoff Area=11,875 sf 84.34% Impervious Runoff Depth=4.22"
Tc=5.0 min CN=95 Runoff=1.29 cfs 0.096 af

Subcatchment SC-1B: Southeast Runoff Area=292,074 sf 17.44% Impervious Runoff Depth=3.09"
Flow Length=803' Tc=20.1 min CN=84 Runoff=16.28 cfs 1.725 af

Subcatchment SC-1C: Centeral East portion Runoff Area=43,437 sf 0.00% Impervious Runoff Depth=2.72"
Flow Length=319' Tc=9.5 min CN=80 Runoff=2.82 cfs 0.226 af

Subcatchment SC-1C1: Southwest Portion Runoff Area=8,150 sf 100.00% Impervious Runoff Depth=4.56"
Tc=5.0 min CN=98 Runoff=0.91 cfs 0.071 af

Subcatchment SC-1C2: Southeast portion Runoff Area=7,751 sf 100.00% Impervious Runoff Depth=4.56"
Tc=5.0 min CN=98 Runoff=0.87 cfs 0.068 af

Subcatchment SC-1D: North Runoff Area=164,122 sf 19.24% Impervious Runoff Depth=2.99"
Flow Length=670' Tc=13.5 min CN=83 Runoff=10.39 cfs 0.940 af

Subcatchment SC-1D1: Northwest portion Runoff Area=3,005 sf 100.00% Impervious Runoff Depth=4.56"
Tc=5.0 min CN=98 Runoff=0.34 cfs 0.026 af

Subcatchment SC-1D2: Northeast portion Runoff Area=2,657 sf 100.00% Impervious Runoff Depth=4.56"
Tc=5.0 min CN=98 Runoff=0.30 cfs 0.023 af

Subcatchment SC-1D3: Northeast Portion of Runoff Area=51,502 sf 0.24% Impervious Runoff Depth=2.72"
Flow Length=450' Tc=12.6 min CN=80 Runoff=3.05 cfs 0.268 af

Subcatchment SC-1E: Central of property Runoff Area=30,712 sf 18.79% Impervious Runoff Depth=2.99"
Flow Length=351' Tc=10.5 min CN=83 Runoff=2.12 cfs 0.176 af

Subcatchment SC-1F: Central of property Runoff Area=44,150 sf 5.87% Impervious Runoff Depth=2.81"
Flow Length=317' Tc=11.1 min CN=81 Runoff=2.82 cfs 0.237 af

Reach 1B-R1: Swale Avg. Flow Depth=0.48' Max Vel=4.96 fps Inflow=16.18 cfs 1.723 af
n=0.022 L=216.0' S=0.0200 '/' Capacity=670.12 cfs Outflow=16.17 cfs 1.723 af

Reach 1B-R2: Swale Avg. Flow Depth=1.58' Max Vel=1.72 fps Inflow=16.17 cfs 1.723 af
n=0.022 L=214.1' S=0.0009 '/' Capacity=89.22 cfs Outflow=16.01 cfs 1.723 af

Reach 1C-R: Swale Avg. Flow Depth=1.06' Max Vel=5.85 fps Inflow=19.65 cfs 2.254 af
n=0.022 L=178.0' S=0.0188 '/' Capacity=316.53 cfs Outflow=19.65 cfs 2.254 af

Reach 1D-R: Swale Avg. Flow Depth=0.98' Max Vel=3.85 fps Inflow=14.02 cfs 1.328 af
n=0.022 L=154.0' S=0.0088 '/' Capacity=273.33 cfs Outflow=13.99 cfs 1.328 af

Reach 1E-R: Road Side Ditch Avg. Flow Depth=0.45' Max Vel=2.10 fps Inflow=1.93 cfs 0.176 af
n=0.030 L=317.0' S=0.0137 '/' Capacity=16.16 cfs Outflow=1.88 cfs 0.176 af

Reach 1F-R: Swale Avg. Flow Depth=1.12' Max Vel=4.72 fps Inflow=17.74 cfs 1.961 af
n=0.022 L=132.0' S=0.0114 '/' Capacity=245.96 cfs Outflow=17.74 cfs 1.961 af

Pond P-1: 30" Culvert Peak Elev=157.64' Storage=10,252 cf Inflow=36.77 cfs 4.251 af
Primary=27.91 cfs 4.200 af Secondary=3.60 cfs 0.051 af Outflow=31.51 cfs 4.251 af

Pond P-1A: Underdrained Soil Filter #1 Peak Elev=158.21' Storage=2,738 cf Inflow=2.78 cfs 0.201 af
Primary=0.04 cfs 0.105 af Secondary=2.27 cfs 0.095 af Outflow=2.29 cfs 0.201 af

Pond P-1A2: CB#2 Peak Elev=159.03' Inflow=2.11 cfs 0.155 af
15.0" Round Culvert n=0.013 L=211.0' S=0.0071 '/' Outflow=2.11 cfs 0.155 af

Pond P-1B: 36" Culvert Peak Elev=167.44' Storage=1,311 cf Inflow=16.28 cfs 1.725 af
Primary=16.18 cfs 1.723 af Secondary=0.00 cfs 0.000 af Outflow=16.18 cfs 1.723 af

Pond P-1C: DMH#1 Peak Elev=159.75' Inflow=3.20 cfs 0.294 af
12.0" Round Culvert n=0.013 L=94.0' S=0.0043 '/' Outflow=3.20 cfs 0.294 af

Pond P-1C1: FI#1 Peak Elev=160.20' Inflow=2.82 cfs 0.226 af
15.0" Round Culvert n=0.013 L=156.0' S=0.0038 '/' Outflow=2.82 cfs 0.226 af

Pond P-1D: 15" Culvert Peak Elev=165.98' Inflow=13.43 cfs 1.231 af
18.0" Round Culvert n=0.025 L=120.0' S=0.0183 '/' Outflow=13.43 cfs 1.231 af

Pond P-1D3: FI#2 Peak Elev=167.50' Inflow=3.05 cfs 0.291 af
12.0" Round Culvert n=0.013 L=151.0' S=0.0033 '/' Outflow=3.05 cfs 0.291 af

Pond P-1E: 12" Culvert Peak Elev=159.38' Storage=303 cf Inflow=2.12 cfs 0.176 af
Primary=1.93 cfs 0.176 af Secondary=0.00 cfs 0.000 af Outflow=1.93 cfs 0.176 af

Pond P-1F: 2 - 24 " Dia Culvert Peak Elev=161.57' Storage=137 cf Inflow=17.75 cfs 1.961 af
Primary=17.74 cfs 1.961 af Secondary=0.00 cfs 0.000 af Outflow=17.74 cfs 1.961 af

Pond RDF-1: Roof Dripline Filter #1 Peak Elev=157.95' Storage=456 cf Inflow=0.91 cfs 0.071 af
Primary=0.37 cfs 0.071 af Secondary=0.00 cfs 0.000 af Outflow=0.37 cfs 0.071 af

Pond RDF-2: Roof Dripline Filter #2 Peak Elev=157.11' Storage=0.001 af Inflow=0.34 cfs 0.026 af
Primary=0.24 cfs 0.026 af Secondary=0.00 cfs 0.000 af Outflow=0.24 cfs 0.026 af

Pond RDF-3: Roof Dripline Filter #3 Peak Elev=162.39' Storage=0.009 af Inflow=0.87 cfs 0.068 af
Primary=0.39 cfs 0.068 af Secondary=0.00 cfs 0.000 af Outflow=0.39 cfs 0.068 af

Pond RDF-4: Roof Dripline Filter #4 Peak Elev=162.71' Storage=0.004 af Inflow=0.30 cfs 0.023 af
Primary=0.35 cfs 0.023 af Secondary=0.00 cfs 0.000 af Outflow=0.35 cfs 0.023 af

Link AP-1: Inflow=31.51 cfs 4.251 af
Primary=31.51 cfs 4.251 af

Total Runoff Area = 16.655 ac Runoff Volume = 4.254 af Average Runoff Depth = 3.07"
80.69% Pervious = 13.440 ac 19.31% Impervious = 3.215 ac

Summary for Subcatchment SC-1: West

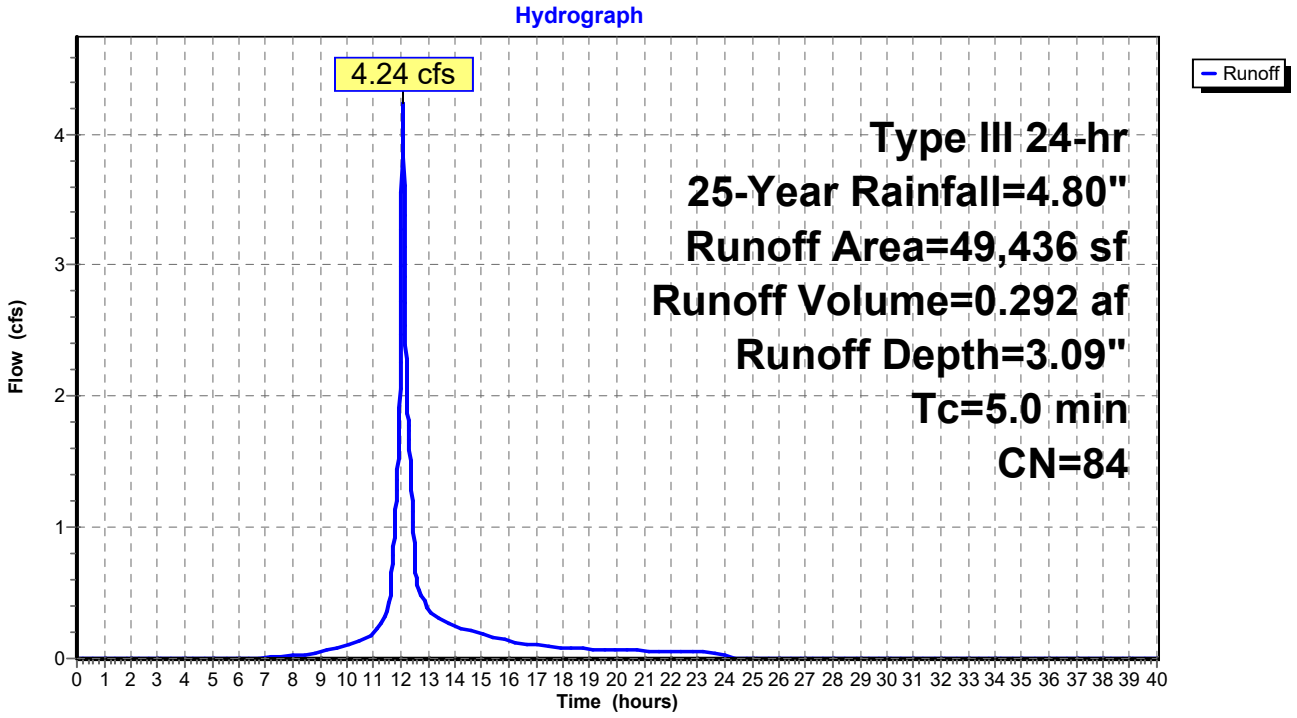
Runoff = 4.24 cfs @ 12.07 hrs, Volume= 0.292 af, Depth= 3.09"
Routed to Pond P-1 : 30" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	3,926	98	Paved parking
*	62	98	Roofs,
*	7,976	98	Paved roads w/curbs & sewers
	32,330	80	Pasture/grassland/range, Good, HSG D
	5,142	79	Woods/grass comb., Good, HSG D
	49,436	84	Weighted Average
	37,472		75.80% Pervious Area
	11,964		24.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1: West



Summary for Subcatchment SC-1A: East

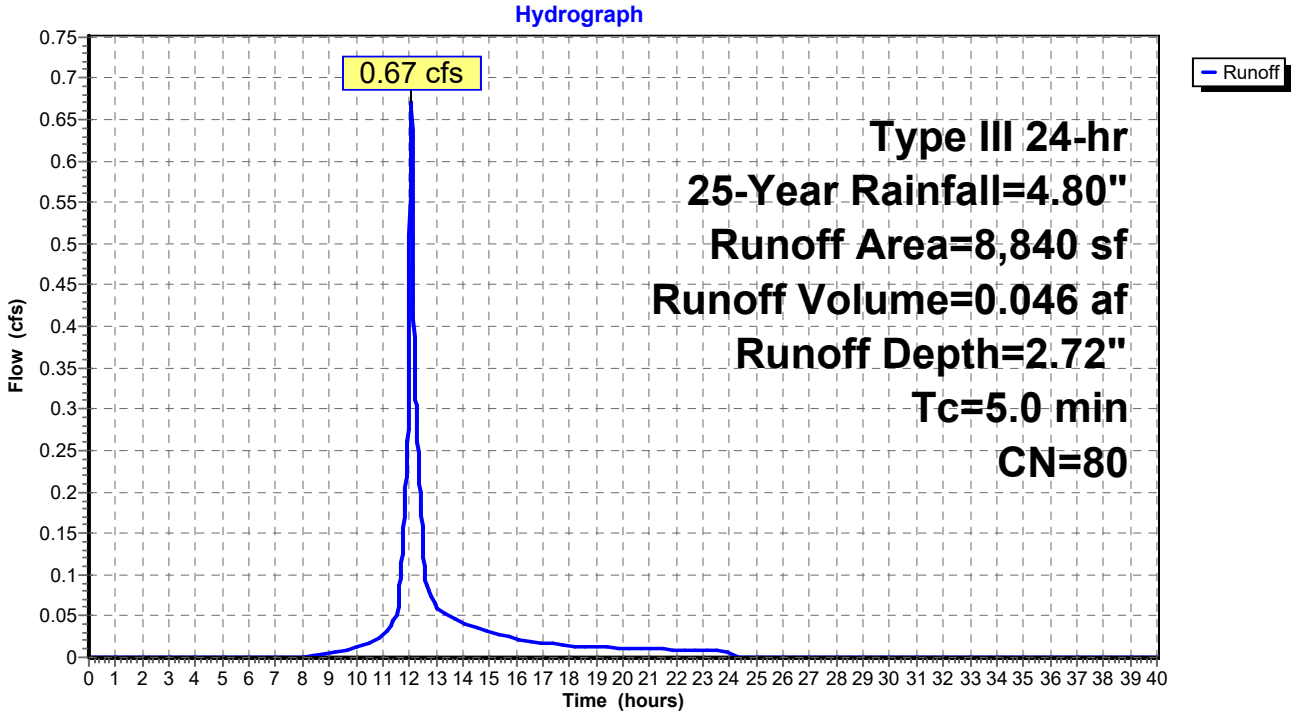
Runoff = 0.67 cfs @ 12.07 hrs, Volume= 0.046 af, Depth= 2.72"
Routed to Pond P-1A : Underdrained Soil Filter #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

Area (sf)	CN	Description
8,840	80	>75% Grass cover, Good, HSG D
8,840		100.00% Pervious Area

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

Subcatchment SC-1A: East



Summary for Subcatchment SC-1A1: Roundabout

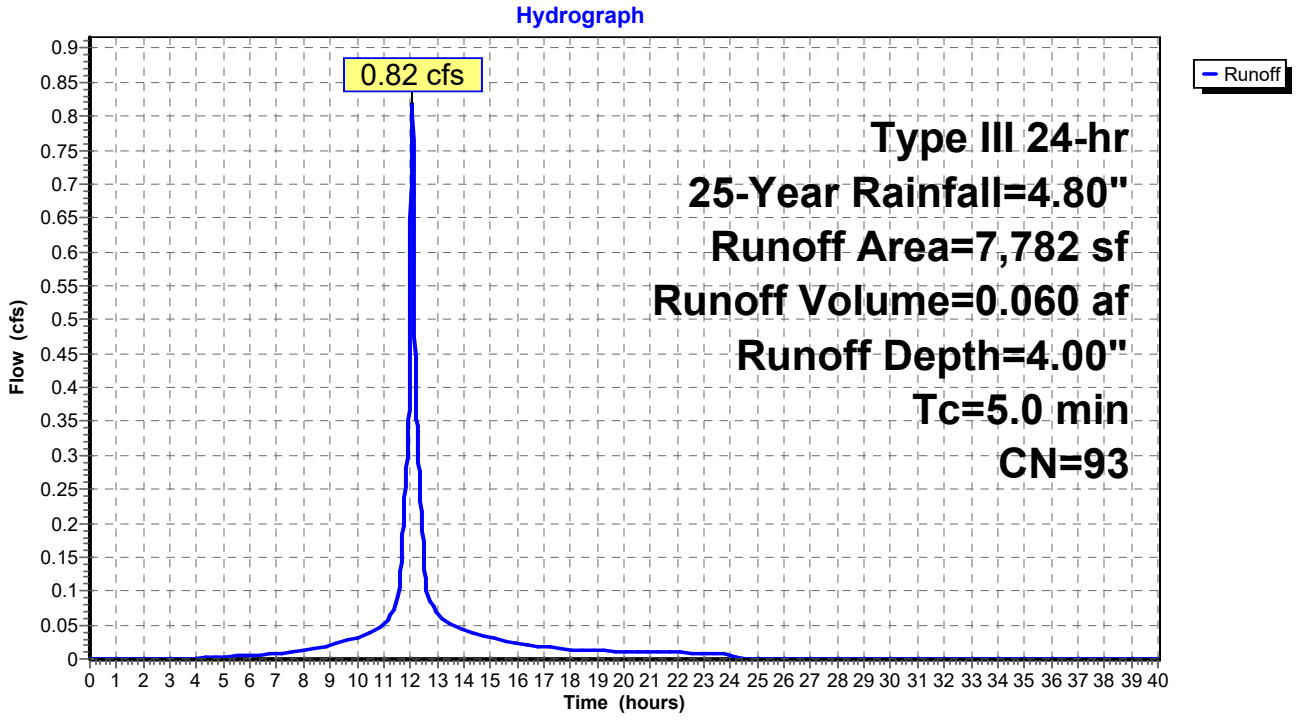
Runoff = 0.82 cfs @ 12.07 hrs, Volume= 0.060 af, Depth= 4.00"
Routed to Pond P-1A2 : CB#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	5,509	98	Paved parking
	2,273	80	>75% Grass cover, Good, HSG D
	7,782	93	Weighted Average
	2,273		29.21% Pervious Area
	5,509		70.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1A1: Roundabout



Summary for Subcatchment SC-1A2: Parking Lot

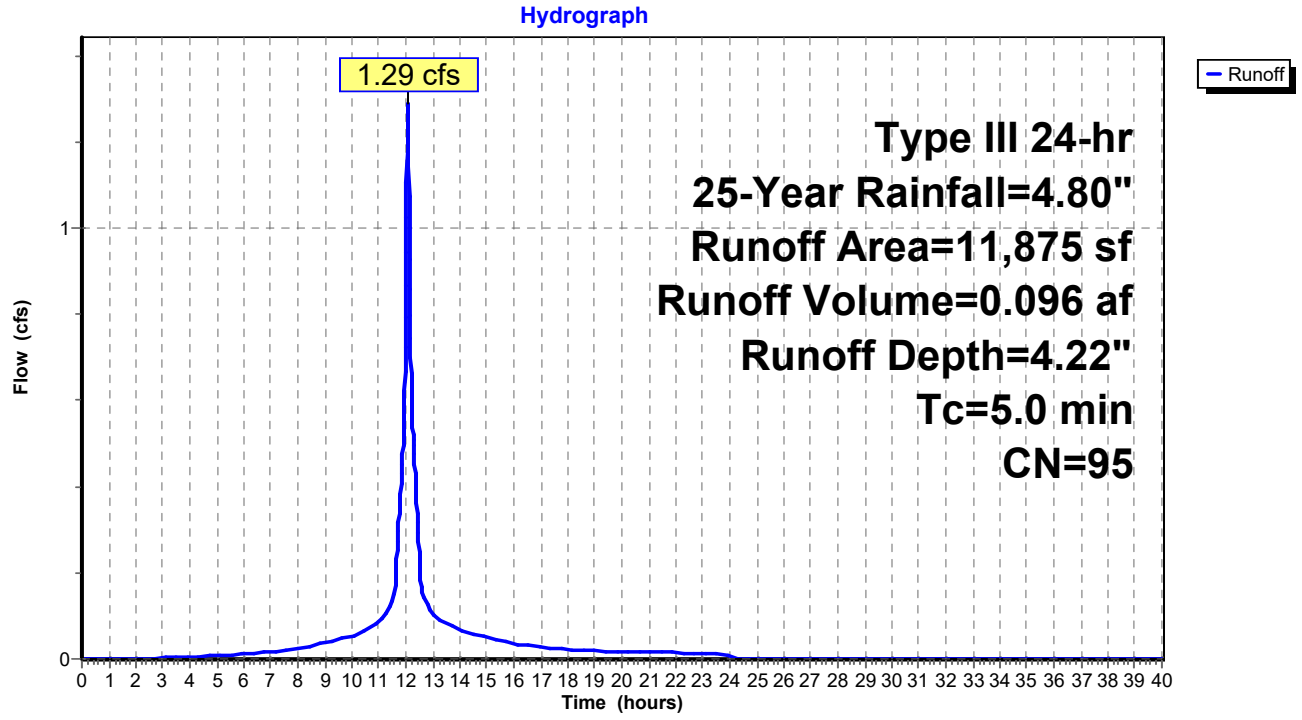
Runoff = 1.29 cfs @ 12.07 hrs, Volume= 0.096 af, Depth= 4.22"
Routed to Pond P-1A2 : CB#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	10,015	98	Paved parking
	1,860	80	>75% Grass cover, Good, HSG D
	11,875	95	Weighted Average
	1,860		15.66% Pervious Area
	10,015		84.34% Impervious Area

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

Subcatchment SC-1A2: Parking Lot



Summary for Subcatchment SC-1B: Southeast Off-property

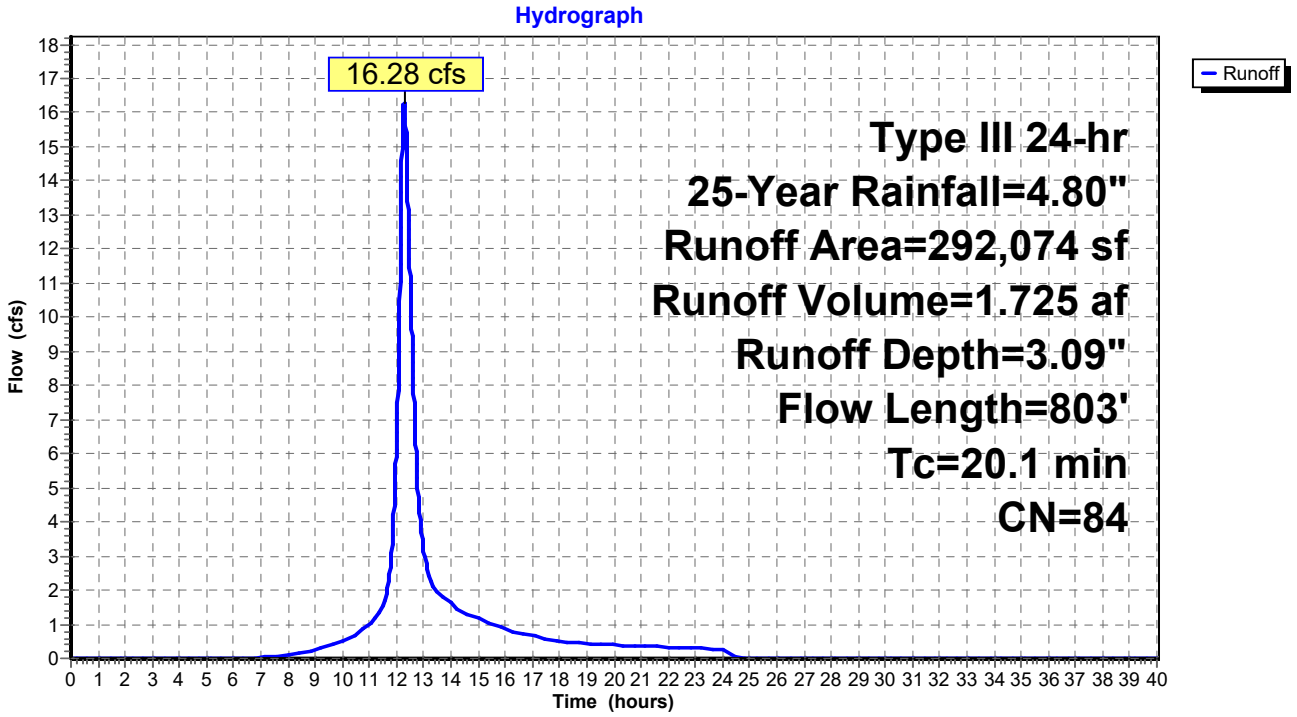
Runoff = 16.28 cfs @ 12.27 hrs, Volume= 1.725 af, Depth= 3.09"
Routed to Pond P-1B : 36" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	20,275	98	Roofs
	11,200	98	Paved roads w/curbs & sewers
*	19,477	98	Paved parking
*	19,494	96	Gravel surface
	11,386	74	>75% Grass cover, Good, HSG C
	170,113	80	>75% Grass cover, Good, HSG D
	40,129	79	Woods/grass comb., Good, HSG D
	292,074	84	Weighted Average
	241,122		82.56% Pervious Area
	50,952		17.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8	100	0.0325	0.13		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
0.9	79	0.0443	1.47		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
1.5	147	0.1041	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.3	34	0.0882	2.08		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
3.6	219	0.0411	1.01		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.7	117	0.0342	2.77		**Shallow Concentrated Flow, F-G** Grassed Waterway Kv= 15.0 fps
0.2	79	0.0200	8.06	9.90	**Pipe Channel, G-H** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.1	28	0.0896	4.49		**Shallow Concentrated Flow, H-I** Grassed Waterway Kv= 15.0 fps
20.1	803	Total			

Subcatchment SC-1B: Southeast Off-property



Summary for Subcatchment SC-1C: Centeral East portion

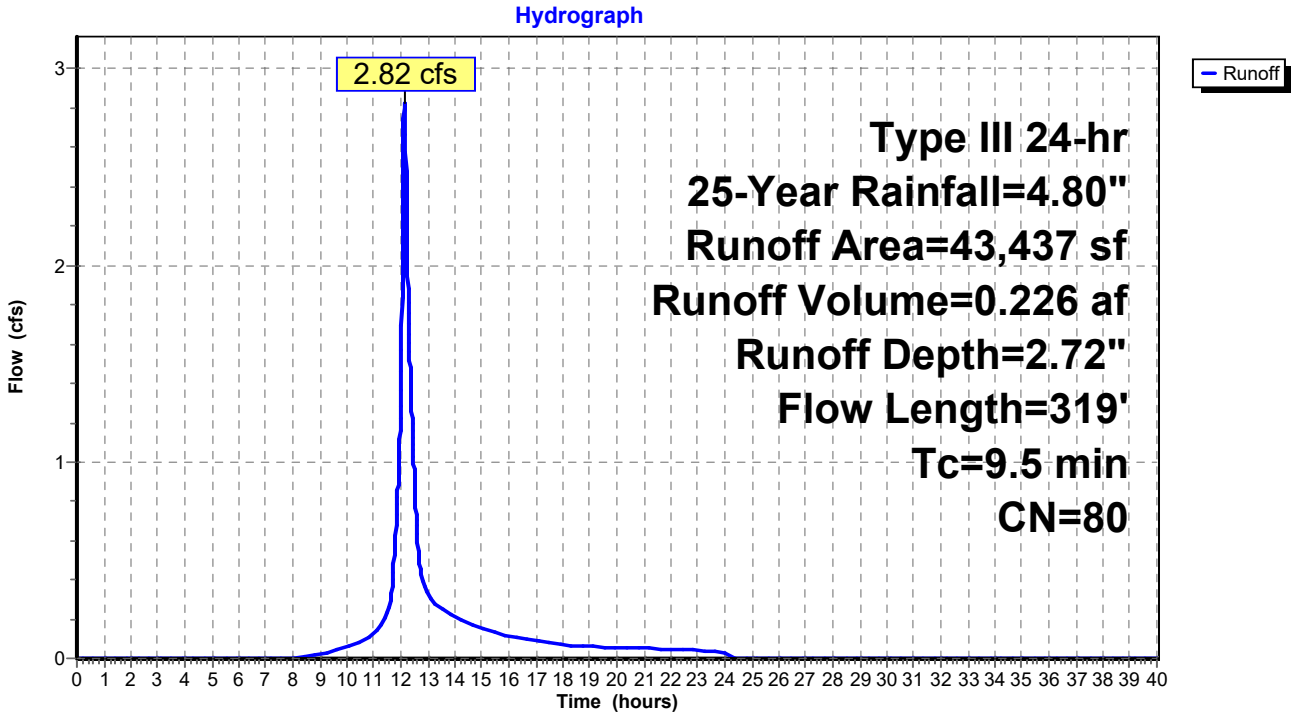
Runoff = 2.82 cfs @ 12.13 hrs, Volume= 0.226 af, Depth= 2.72"
Routed to Pond P-1C1 : FI#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

Area (sf)	CN	Description
37,473	80	>75% Grass cover, Good, HSG D
5,964	79	Woods/grass comb., Good, HSG D
43,437	80	Weighted Average
43,437		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0800	0.27		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 2.70"
0.0	5	0.0800	1.98		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.3	35	0.1140	1.69		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
0.3	57	0.2110	3.22		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
0.1	35	0.3428	4.10		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
2.7	87	0.0057	0.53		**Shallow Concentrated Flow, F-G** Short Grass Pasture Kv= 7.0 fps
9.5	319	Total			

Subcatchment SC-1C: Centeral East portion



Summary for Subcatchment SC-1C1: Southwest Portion of Building

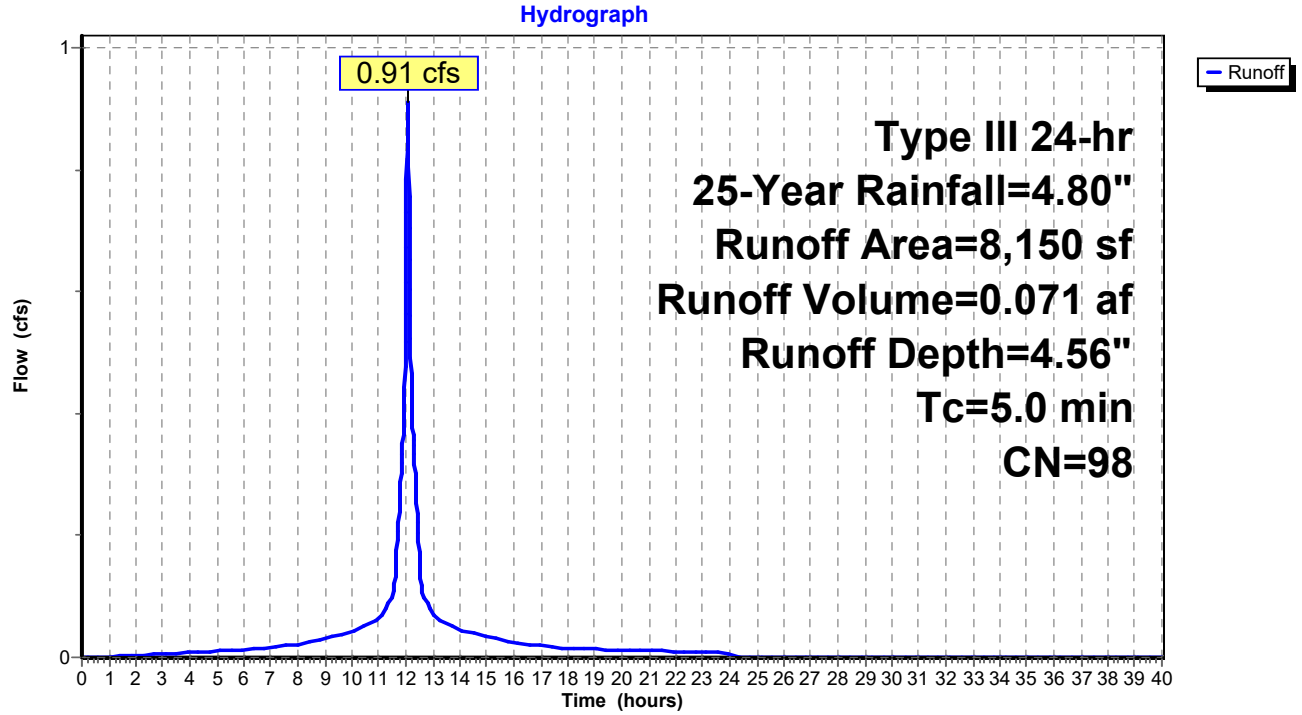
Runoff = 0.91 cfs @ 12.07 hrs, Volume= 0.071 af, Depth= 4.56"
Routed to Pond RDF-1 : Roof Dripline Filter #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	8,150	98	Roofs
	8,150		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1C1: Southwest Portion of Building



Summary for Subcatchment SC-1C2: Southeast portion of Building

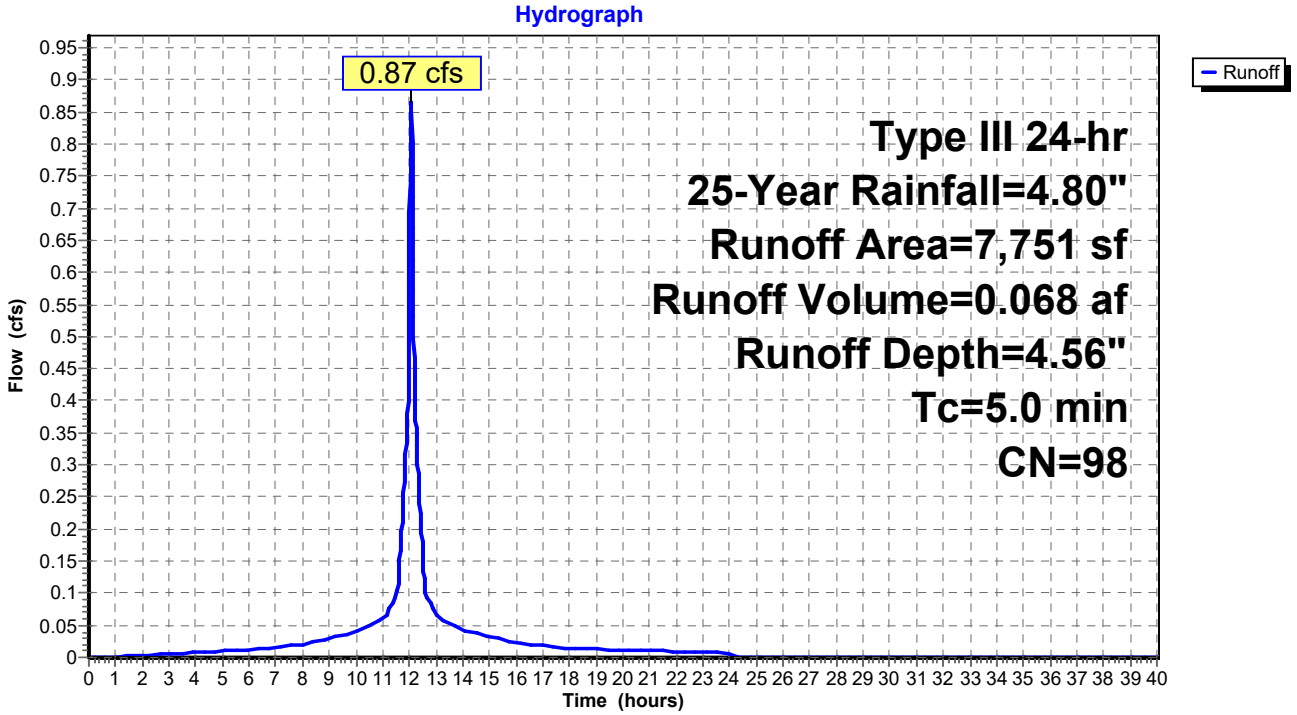
Runoff = 0.87 cfs @ 12.07 hrs, Volume= 0.068 af, Depth= 4.56"
Routed to Pond RDF-3 : Roof Dripline Filter #3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	7,751	98	Roofs
	7,751		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1C2: Southeast portion of Building



Summary for Subcatchment SC-1D: North

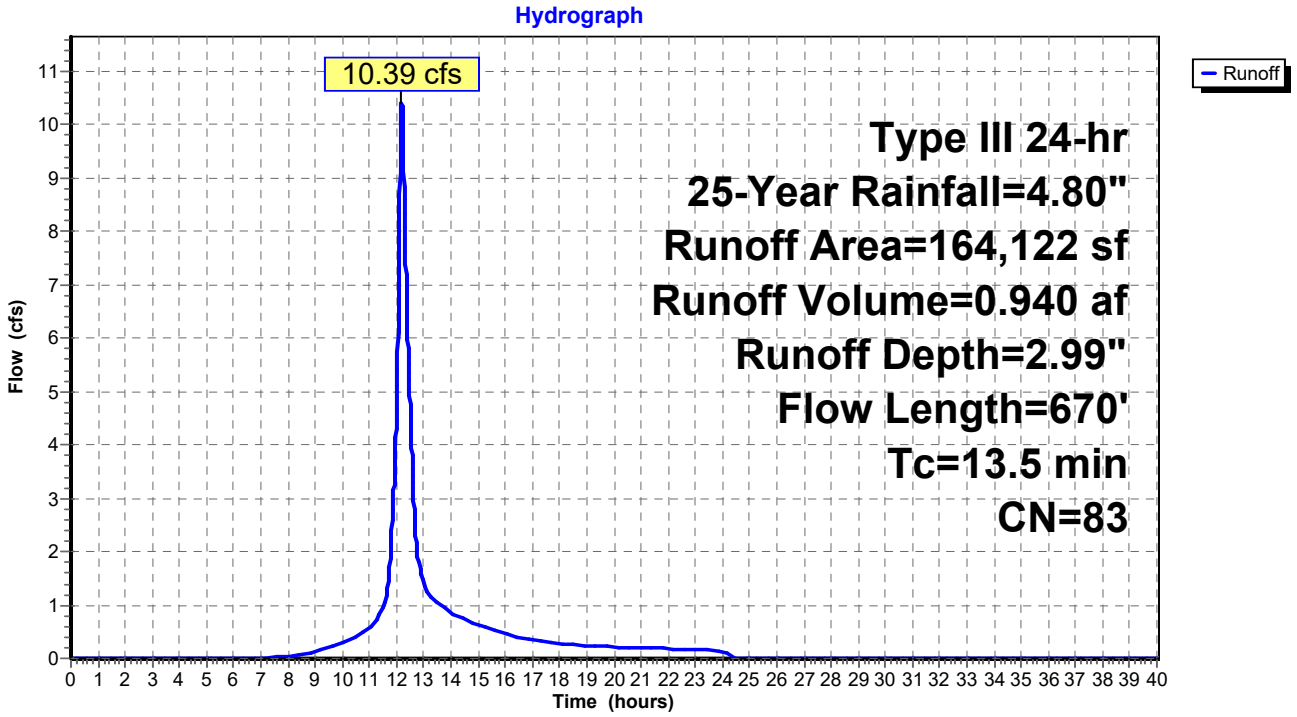
Runoff = 10.39 cfs @ 12.19 hrs, Volume= 0.940 af, Depth= 2.99"
Routed to Pond P-1D : 15" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	16,493	98	Paved parking
*	5,185	98	Roofs,
*	9,894	98	Paved roads w/curbs & sewers
	121,345	80	>75% Grass cover, Good, HSG D
	11,205	79	Woods/grass comb., Good, HSG D
	164,122	83	Weighted Average
	132,550		80.76% Pervious Area
	31,572		19.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0600	0.24		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 2.70"
0.0	4	0.0600	1.71		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.5	44	0.0910	1.51		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
3.0	320	0.0660	1.80		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
3.1	202	0.0240	1.08		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
13.5	670	Total			

Subcatchment SC-1D: North



Summary for Subcatchment SC-1D1: Northwest portion of building

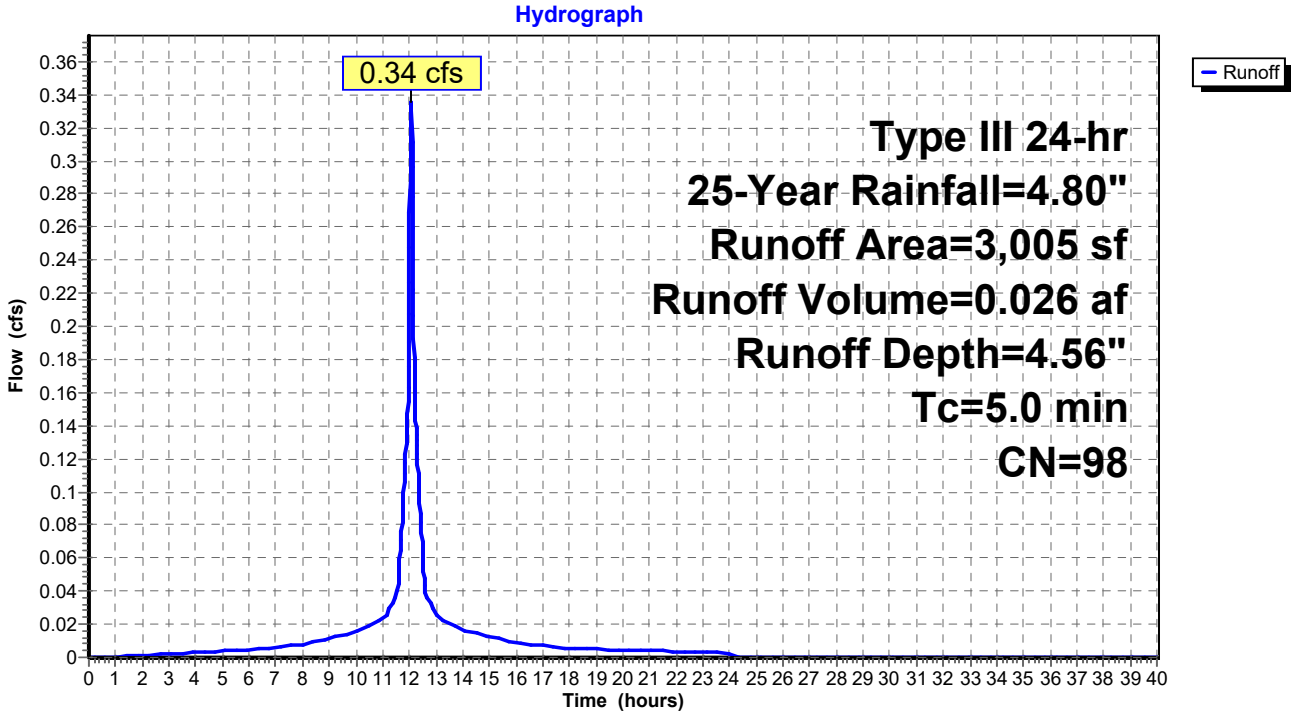
Runoff = 0.34 cfs @ 12.07 hrs, Volume= 0.026 af, Depth= 4.56"
Routed to Pond RDF-2 : Roof Dripline Filter #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	3,005	98	Roofs
	3,005		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1D1: Northwest portion of building



Summary for Subcatchment SC-1D2: Northeast portion of building

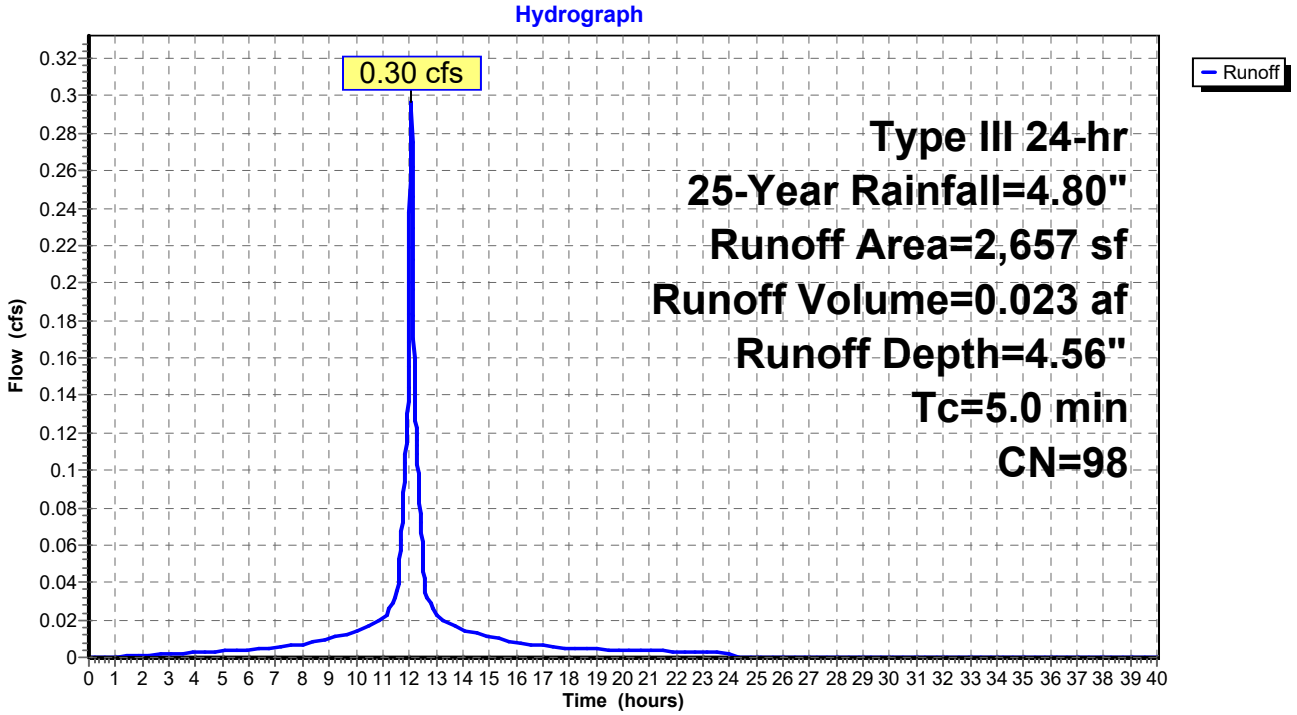
Runoff = 0.30 cfs @ 12.07 hrs, Volume= 0.023 af, Depth= 4.56"
Routed to Pond RDF-4 : Roof Dripline Filter #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	2,657	98	Roofs
	2,657		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 Minutes Minimum**

Subcatchment SC-1D2: Northeast portion of building



Summary for Subcatchment SC-1D3: Northeast Portion of Property

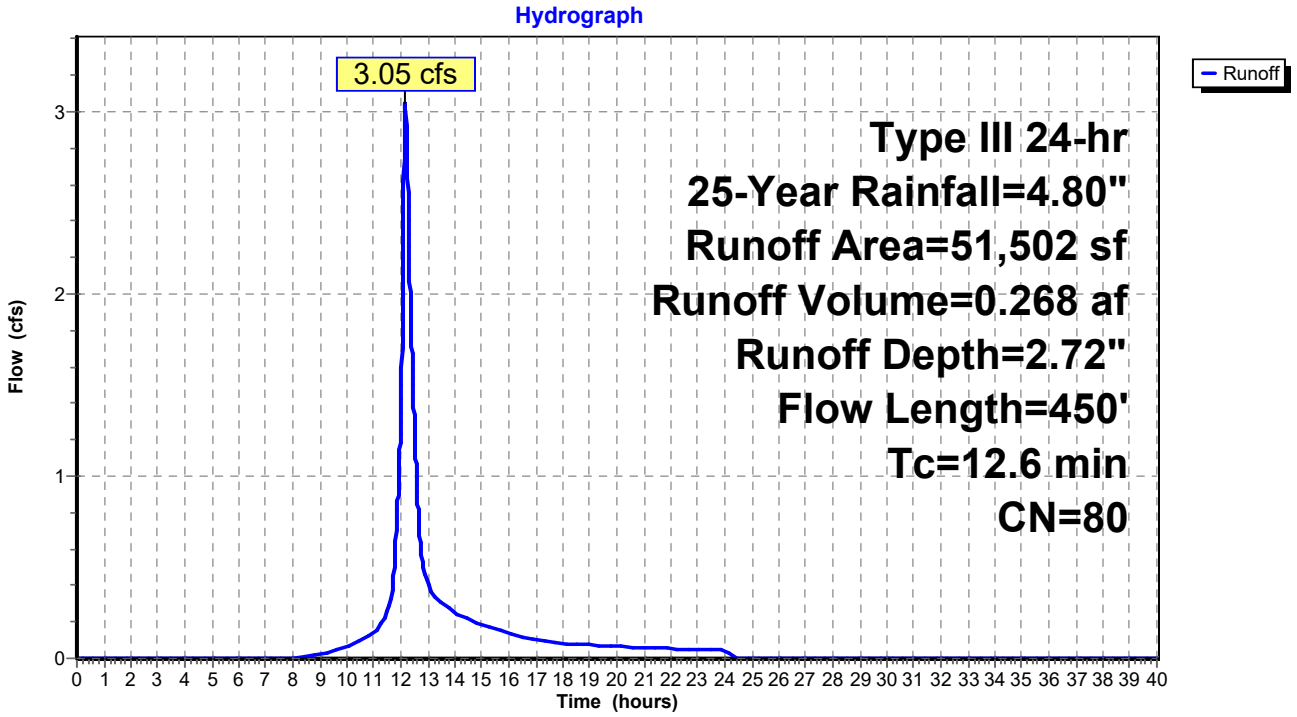
Runoff = 3.05 cfs @ 12.17 hrs, Volume= 0.268 af, Depth= 2.72"
Routed to Pond P-1D3 : FI#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	122	98	Paved roads w/curbs & sewers
	48,321	80	>75% Grass cover, Good, HSG D
	3,059	79	Woods/grass comb., Good, HSG D
	51,502	80	Weighted Average
	51,380		99.76% Pervious Area
	122		0.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	100	0.0300	0.18		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 2.70"
0.3	35	0.0720	1.88		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	23	0.0200	2.87		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
0.9	100	0.0770	1.94		**Shallow Concentrated Flow, D-E** Short Grass Pasture Kv= 7.0 fps
0.3	31	0.1190	1.72		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
0.6	109	0.1827	2.99		**Shallow Concentrated Flow, F-G** Short Grass Pasture Kv= 7.0 fps
1.3	52	0.0097	0.69		**Shallow Concentrated Flow, G-H** Short Grass Pasture Kv= 7.0 fps
12.6	450	Total			

Subcatchment SC-1D3: Northeast Portion of Property



Summary for Subcatchment SC-1E: Central of property

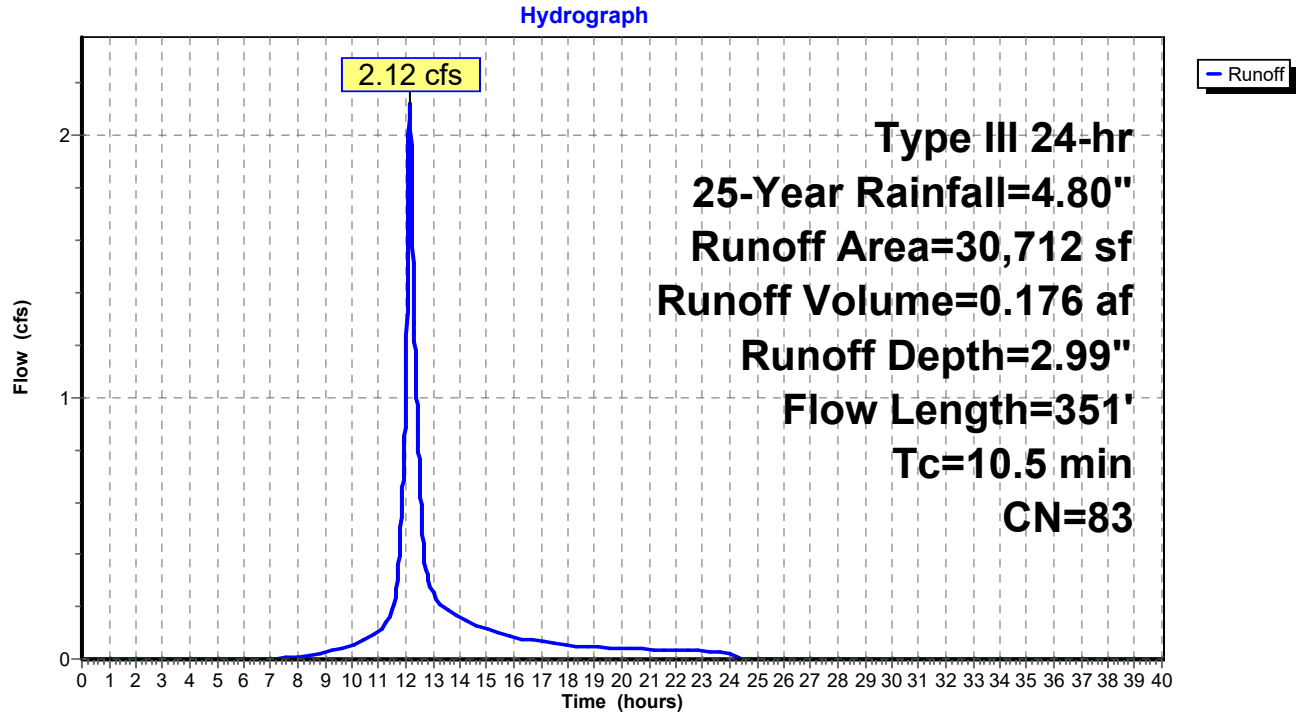
Runoff = 2.12 cfs @ 12.14 hrs, Volume= 0.176 af, Depth= 2.99"
Routed to Pond P-1E : 12" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	5,682	98	Paved roads w/curbs & sewers
*	89	98	Paved parking
	24,741	80	Pasture/grassland/range, Good, HSG D
	200	79	Woods/grass comb., Good, HSG D
	30,712	83	Weighted Average
	24,941		81.21% Pervious Area
	5,771		18.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	100	0.0750	0.18		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
1.3	251	0.0103	3.16	39.16	**Channel Flow, B-C** Area= 12.4 sf Perim= 24.9' r= 0.50' n= 0.030 Earth, grassed & winding
10.5	351	Total			

Subcatchment SC-1E: Central of property



Summary for Subcatchment SC-1F: Central of property

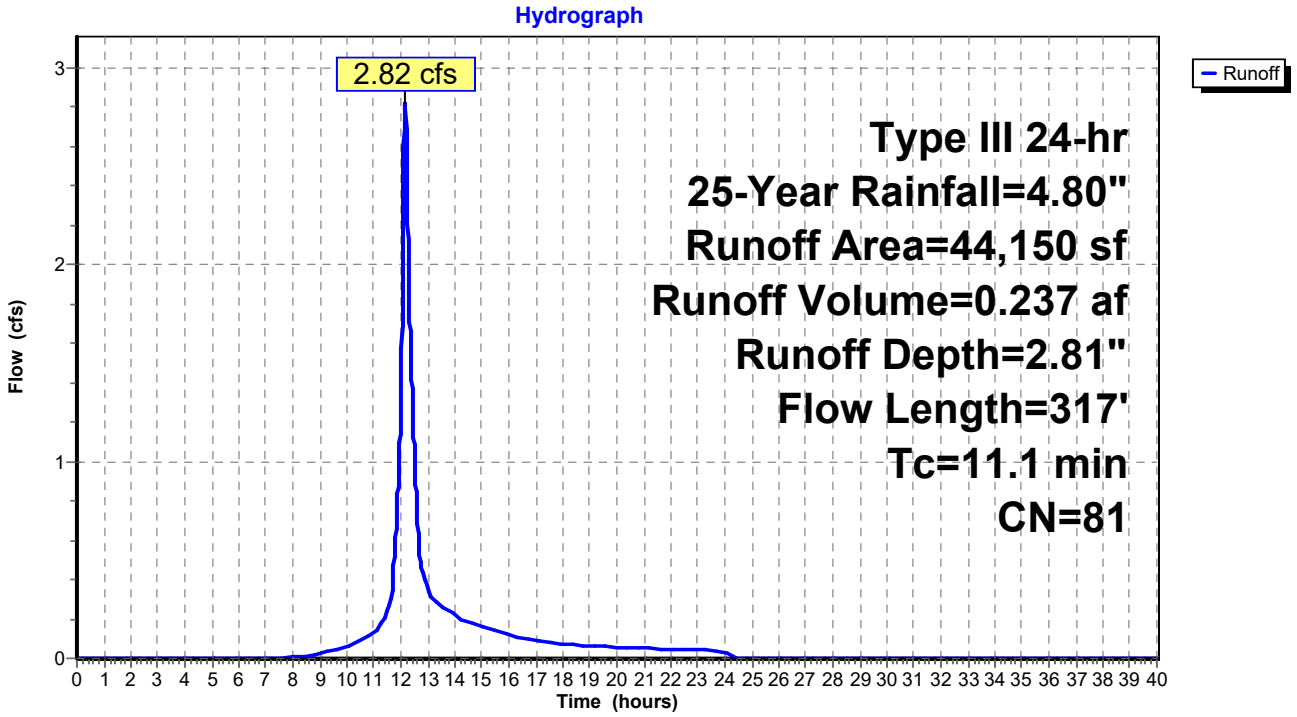
Runoff = 2.82 cfs @ 12.15 hrs, Volume= 0.237 af, Depth= 2.81"
Routed to Pond P-1F : 2 - 24 " Dia Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	1,971	98	Paved roads w/curbs & sewers
*	620	98	Paved parking
	31,090	80	>75% Grass cover, Good, HSG D
	10,469	79	Woods/grass comb., Good, HSG D
	44,150	81	Weighted Average
	41,559		94.13% Pervious Area
	2,591		5.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0600	0.17		**Sheet Flow, A-B** Grass: Dense n= 0.240 P2= 2.70"
1.0	147	0.1292	2.52		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	70	0.0714	8.07	24.21	**Channel Flow, C-D** Area= 3.0 sf Perim= 6.3' r= 0.48' n= 0.030 Earth, grassed & winding
11.1	317	Total			

Subcatchment SC-1F: Central of property



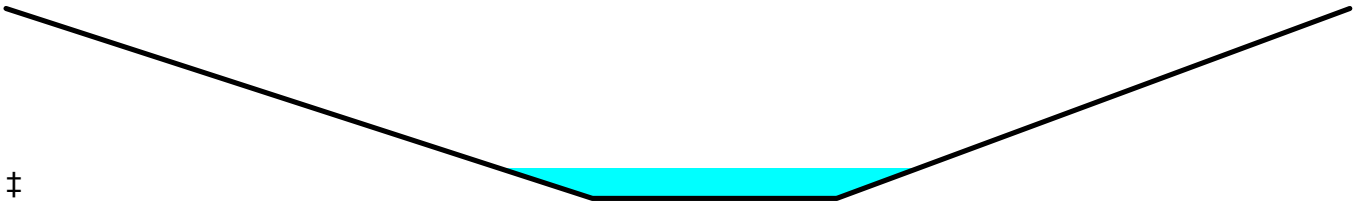
Summary for Reach 1B-R1: Swale

Inflow Area = 6.705 ac, 17.44% Impervious, Inflow Depth = 3.08" for 25-Year event
Inflow = 16.18 cfs @ 12.29 hrs, Volume= 1.723 af
Outflow = 16.17 cfs @ 12.30 hrs, Volume= 1.723 af, Atten= 0%, Lag= 0.5 min
Routed to Reach 1B-R2 : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.96 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.59 fps, Avg. Travel Time= 2.3 min

Peak Storage= 704 cf @ 12.30 hrs
Average Depth at Peak Storage= 0.48' , Surface Width= 8.60'
Bank-Full Depth= 3.00' Flow Area= 48.8 sf, Capacity= 670.12 cfs

5.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 27.50'
Length= 216.0' Slope= 0.0200 '/'
Inlet Invert= 165.33', Outlet Invert= 161.00'



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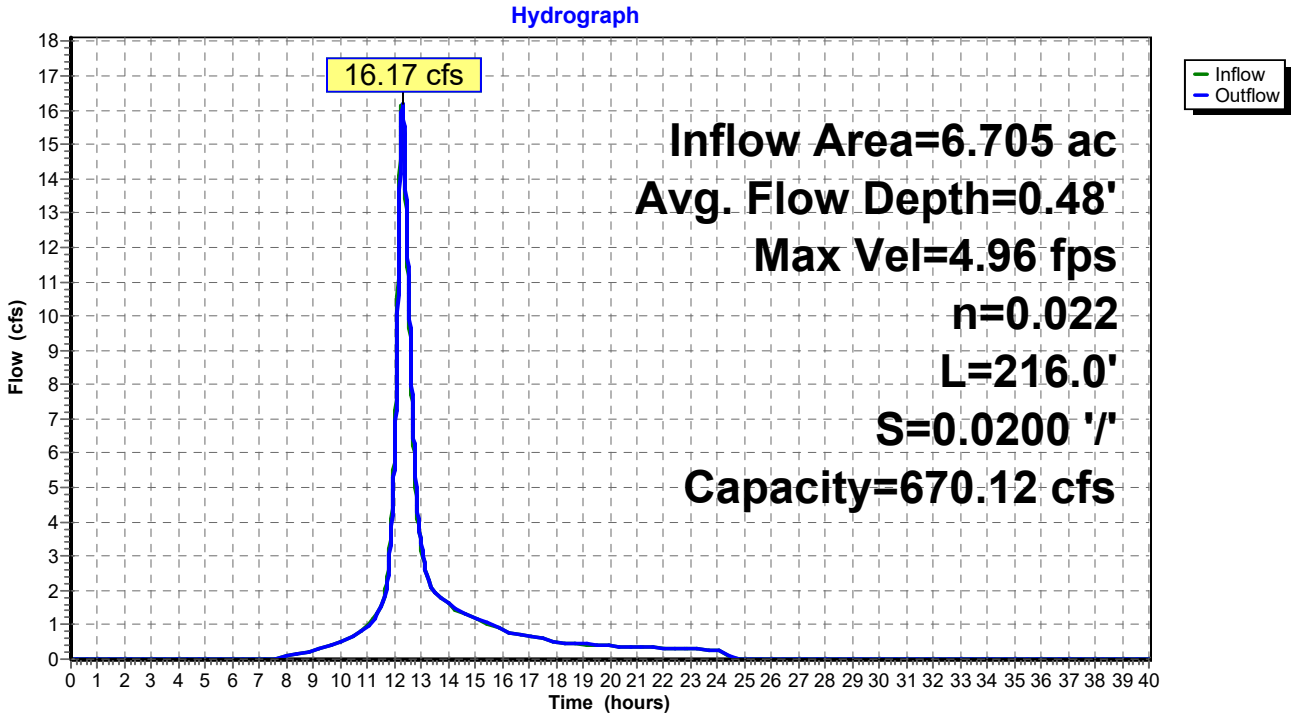
Reach 1B-R1: Swale



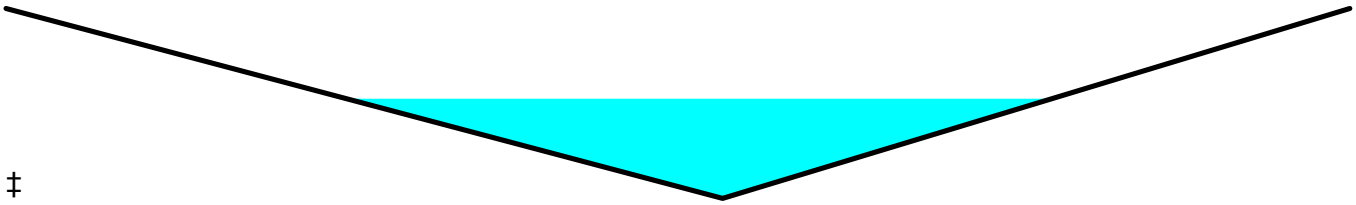
Summary for Reach 1B-R2: Swale

Inflow Area = 6.705 ac, 17.44% Impervious, Inflow Depth = 3.08" for 25-Year event
Inflow = 16.17 cfs @ 12.30 hrs, Volume= 1.723 af
Outflow = 16.01 cfs @ 12.33 hrs, Volume= 1.723 af, Atten= 1%, Lag= 1.6 min
Routed to Pond P-1F : 2 - 24 " Dia Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.72 fps, Min. Travel Time= 2.1 min
Avg. Velocity = 0.53 fps, Avg. Travel Time= 6.7 min

Peak Storage= 1,992 cf @ 12.33 hrs
Average Depth at Peak Storage= 1.58' , Surface Width= 11.81'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 89.22 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 214.1' Slope= 0.0009 '/'
Inlet Invert= 161.00', Outlet Invert= 160.80'



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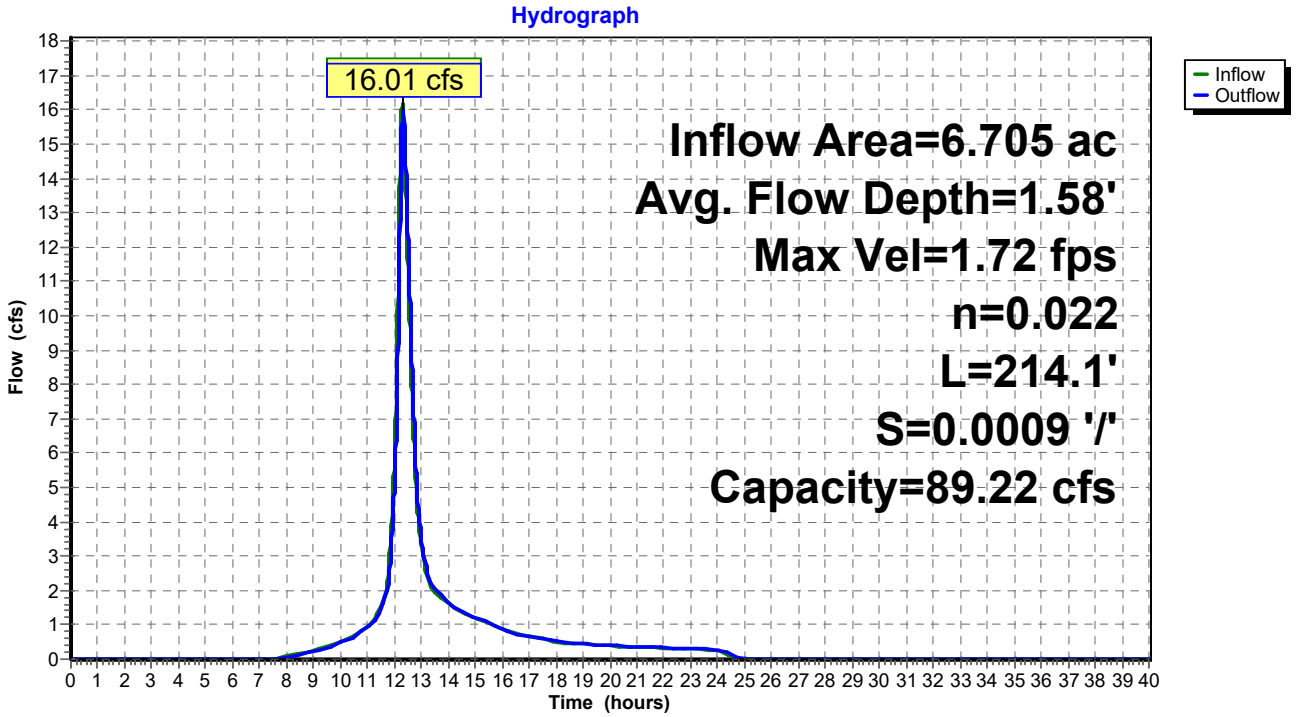
Reach 1B-R2: Swale



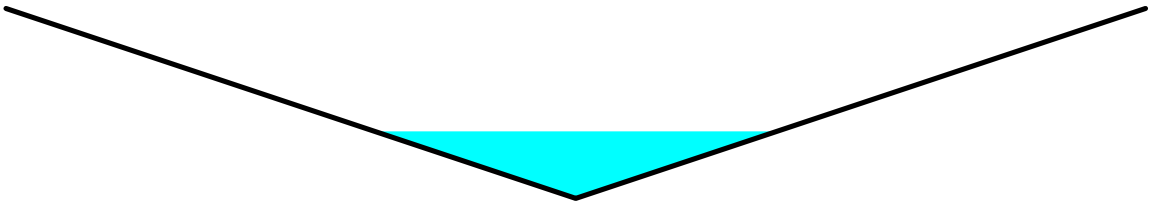
Summary for Reach 1C-R: Swale

Inflow Area = 8.894 ac, 15.82% Impervious, Inflow Depth = 3.04" for 25-Year event
Inflow = 19.65 cfs @ 12.32 hrs, Volume= 2.254 af
Outflow = 19.65 cfs @ 12.33 hrs, Volume= 2.254 af, Atten= 0%, Lag= 0.4 min
Routed to Pond P-1 : 30" Culvert

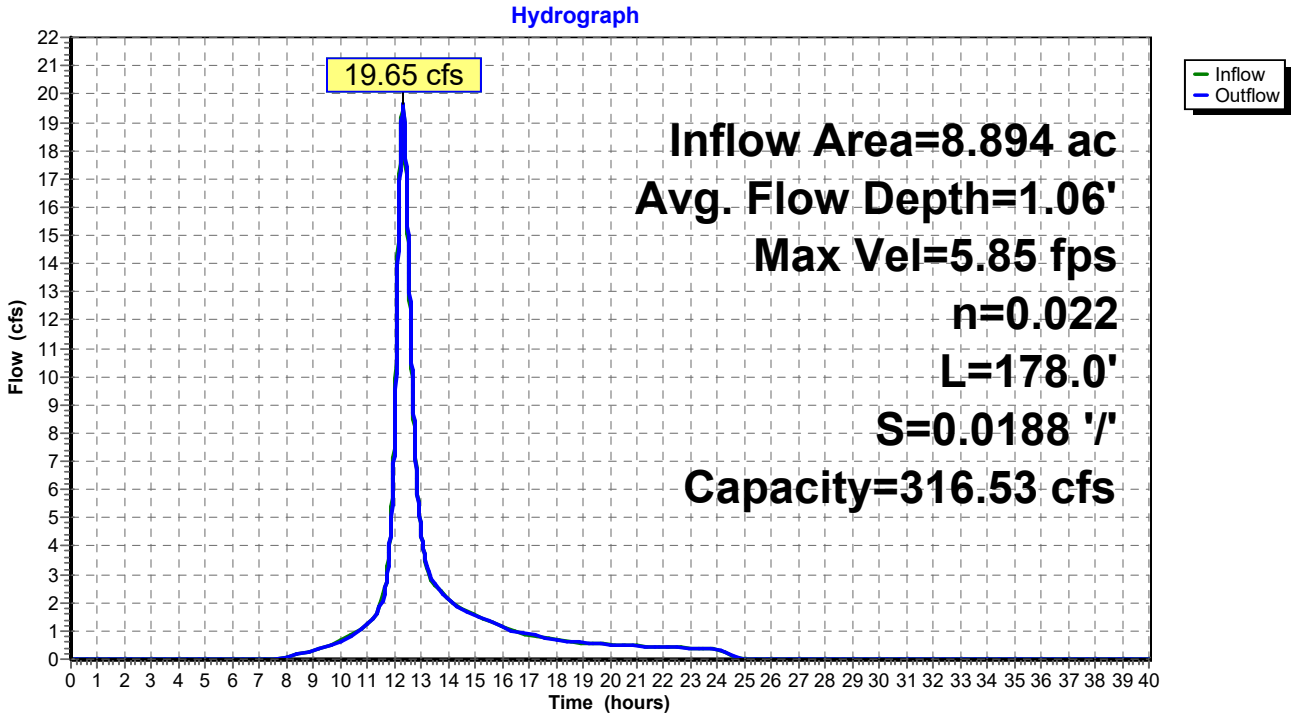
Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.85 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.89 fps, Avg. Travel Time= 1.6 min

Peak Storage= 598 cf @ 12.33 hrs
Average Depth at Peak Storage= 1.06' , Surface Width= 6.35'
Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 316.53 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 18.00'
Length= 178.0' Slope= 0.0188 '/'
Inlet Invert= 157.50', Outlet Invert= 154.15'



Reach 1C-R: Swale



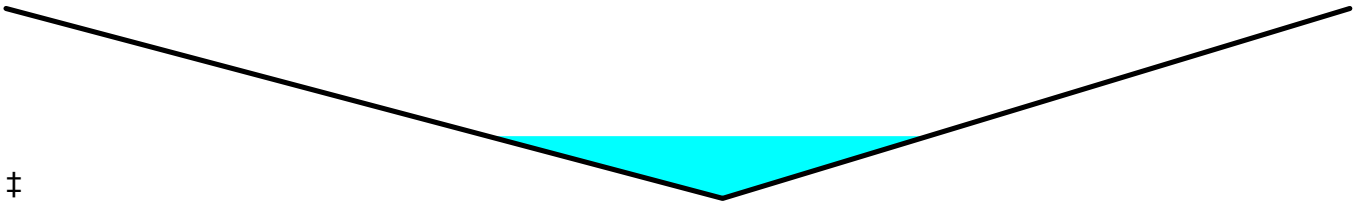
Summary for Reach 1D-R: Swale

Inflow Area = 5.267 ac, 19.83% Impervious, Inflow Depth = 3.03" for 25-Year event
Inflow = 14.02 cfs @ 12.18 hrs, Volume= 1.328 af
Outflow = 13.99 cfs @ 12.19 hrs, Volume= 1.328 af, Atten= 0%, Lag= 0.5 min
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.85 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.39 fps, Avg. Travel Time= 1.8 min

Peak Storage= 559 cf @ 12.19 hrs
Average Depth at Peak Storage= 0.98' , Surface Width= 7.38'
Bank-Full Depth= 3.00' Flow Area= 33.8 sf, Capacity= 273.33 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 4.0 3.5 '/' Top Width= 22.50'
Length= 154.0' Slope= 0.0088 '/'
Inlet Invert= 155.50', Outlet Invert= 154.15'



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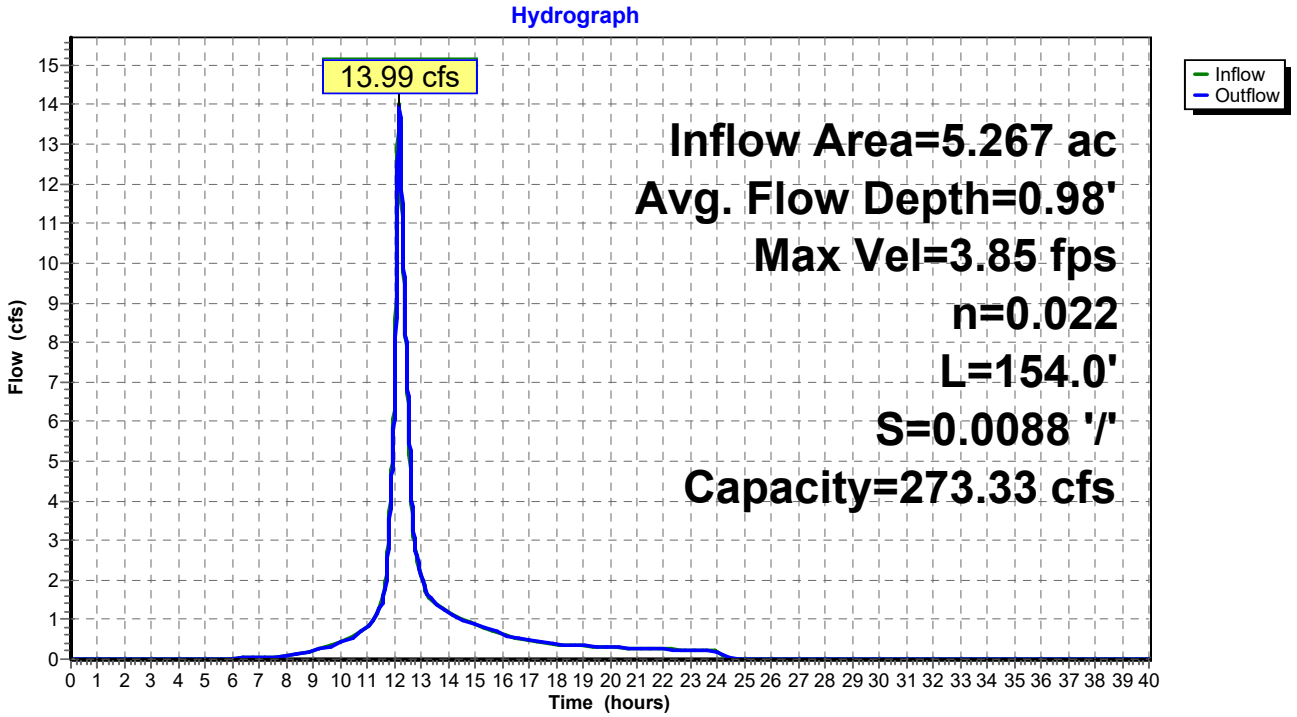
Reach 1D-R: Swale



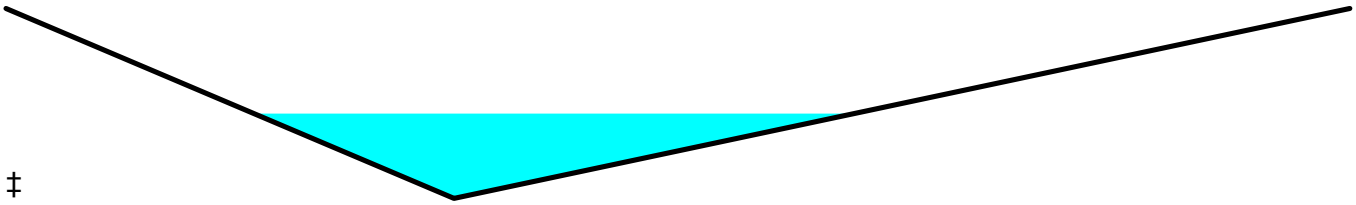
Summary for Reach 1E-R: Road Side Ditch

Inflow Area = 0.705 ac, 18.79% Impervious, Inflow Depth = 2.99" for 25-Year event
Inflow = 1.93 cfs @ 12.19 hrs, Volume= 0.176 af
Outflow = 1.88 cfs @ 12.22 hrs, Volume= 0.176 af, Atten= 3%, Lag= 2.0 min
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.10 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 0.73 fps, Avg. Travel Time= 7.2 min

Peak Storage= 285 cf @ 12.22 hrs
Average Depth at Peak Storage= 0.45' , Surface Width= 4.02'
Bank-Full Depth= 1.00' Flow Area= 4.5 sf, Capacity= 16.16 cfs

0.00' x 1.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 3.0 6.0 '/' Top Width= 9.00'
Length= 317.0' Slope= 0.0137 '/'
Inlet Invert= 158.50', Outlet Invert= 154.15'



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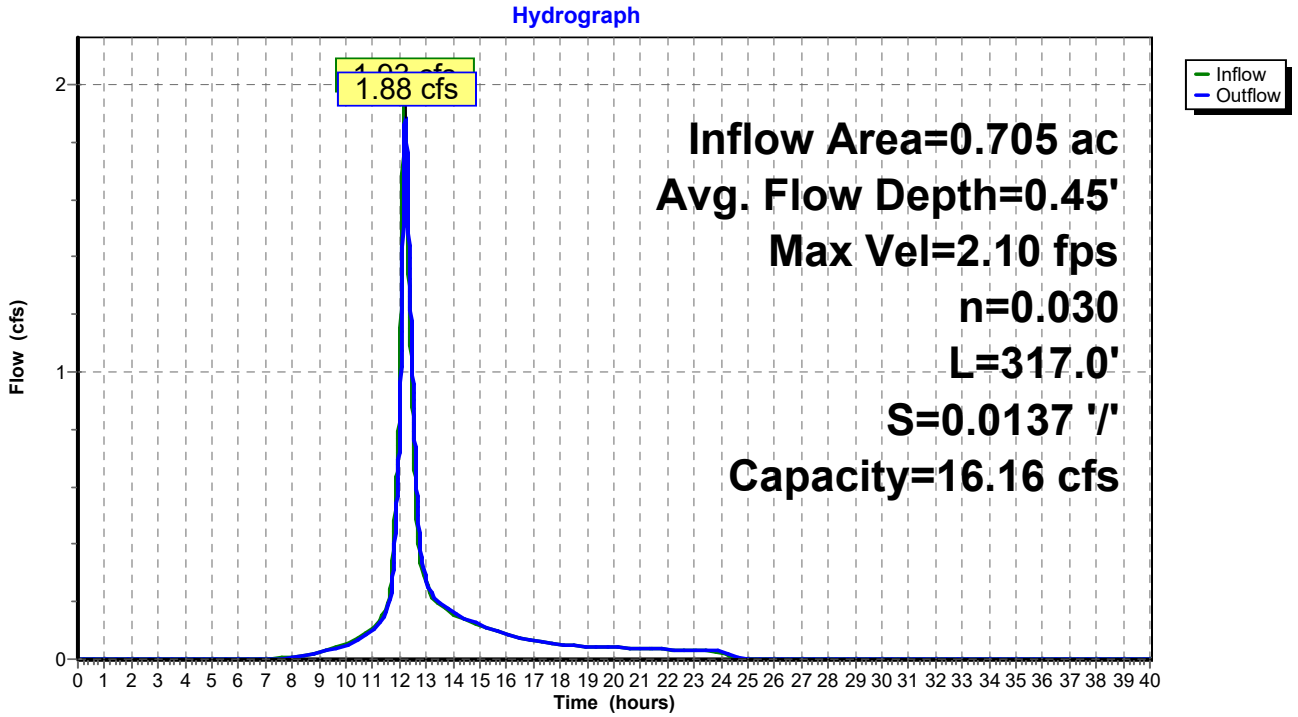
Reach 1E-R: Road Side Ditch



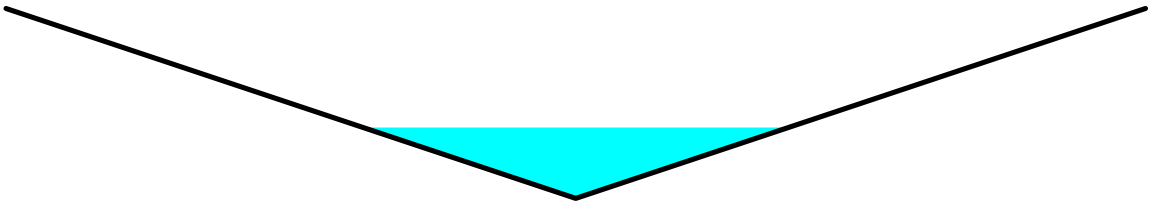
Summary for Reach 1F-R: Swale

Inflow Area = 7.719 ac, 15.92% Impervious, Inflow Depth = 3.05" for 25-Year event
Inflow = 17.74 cfs @ 12.32 hrs, Volume= 1.961 af
Outflow = 17.74 cfs @ 12.33 hrs, Volume= 1.961 af, Atten= 0%, Lag= 0.3 min
Routed to Reach 1C-R : Swale

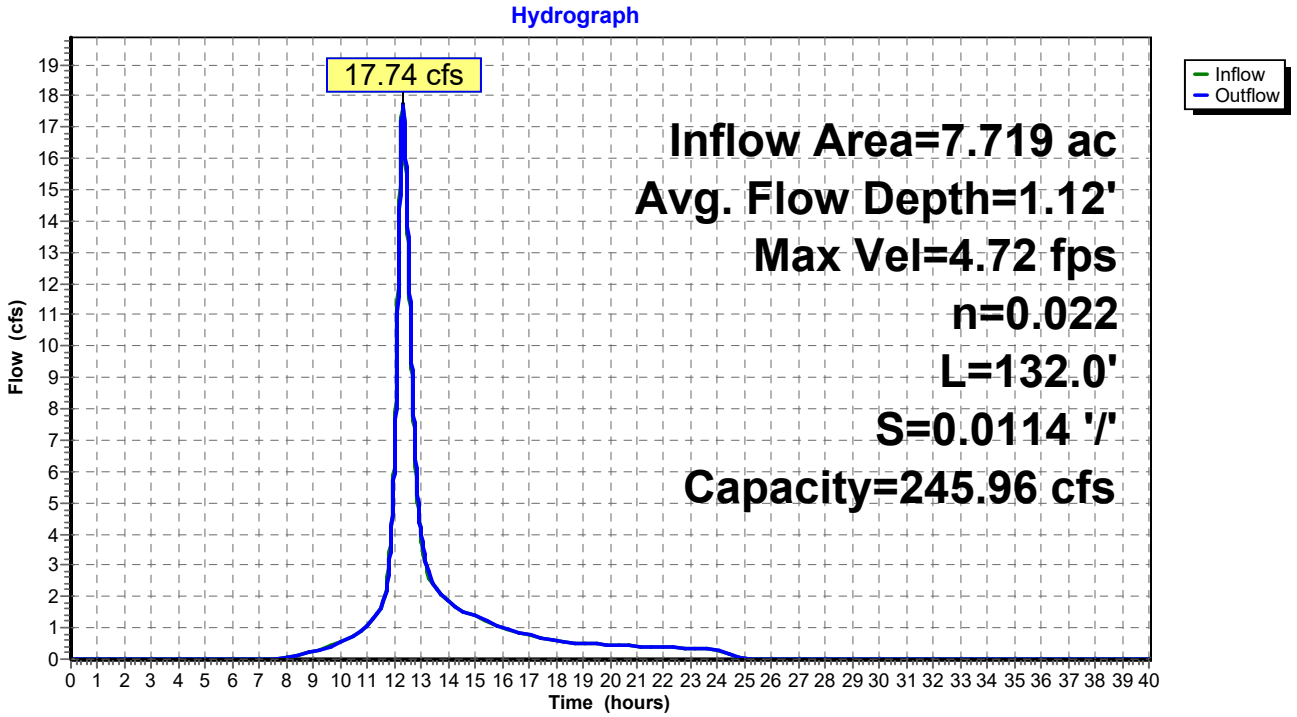
Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.72 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.72 fps, Avg. Travel Time= 1.3 min

Peak Storage= 496 cf @ 12.33 hrs
Average Depth at Peak Storage= 1.12' , Surface Width= 6.71'
Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 245.96 cfs

0.00' x 3.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 18.00'
Length= 132.0' Slope= 0.0114 '/'
Inlet Invert= 159.00', Outlet Invert= 157.50'



Reach 1F-R: Swale



Summary for Pond P-1: 30" Culvert

Inflow Area = 16.655 ac, 19.31% Impervious, Inflow Depth > 3.06" for 25-Year event
Inflow = 36.77 cfs @ 12.22 hrs, Volume= 4.251 af
Outflow = 31.51 cfs @ 12.39 hrs, Volume= 4.251 af, Atten= 14%, Lag= 10.2 min
Primary = 27.91 cfs @ 12.39 hrs, Volume= 4.200 af
Routed to Link AP-1 :
Secondary = 3.60 cfs @ 12.39 hrs, Volume= 0.051 af
Routed to Link AP-1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 157.64' @ 12.39 hrs Surf.Area= 15,056 sf Storage= 10,252 cf

Plug-Flow detention time= 1.7 min calculated for 4.251 af (100% of inflow)
Center-of-Mass det. time= 1.7 min (839.5 - 837.8)

Volume	Invert	Avail.Storage	Storage Description
#1	154.15'	16,642 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

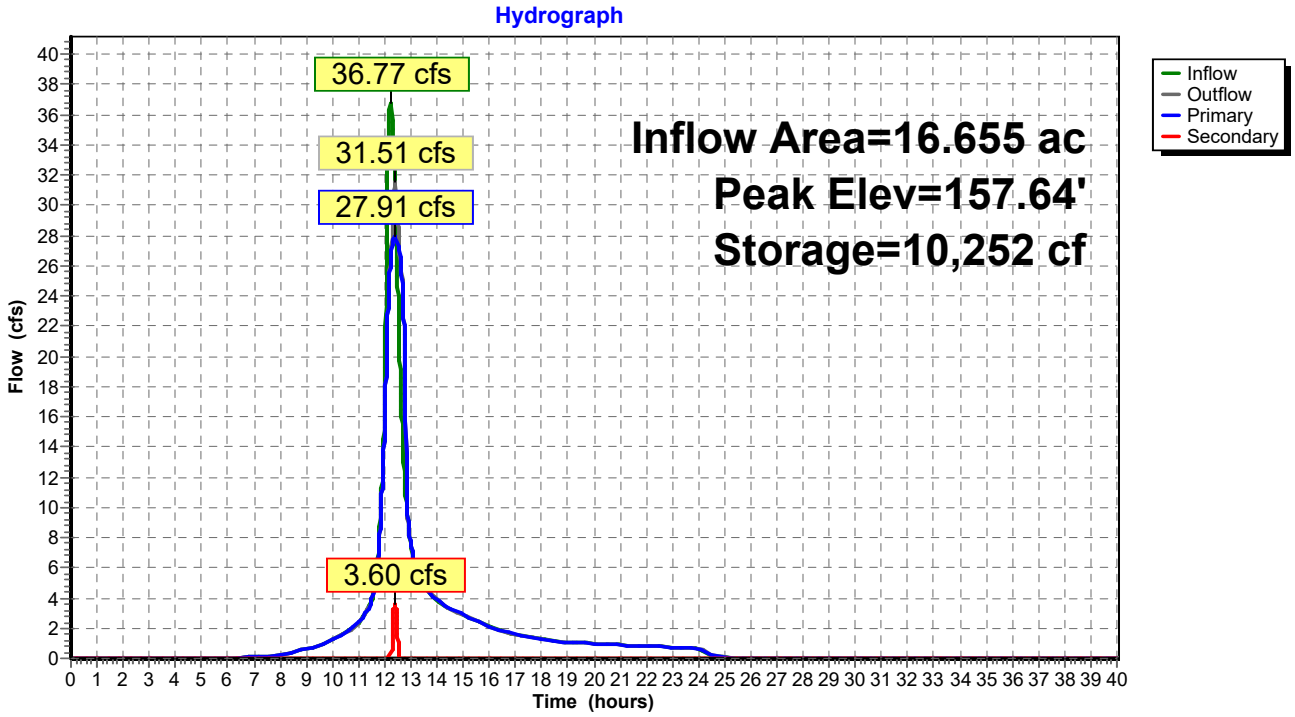
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
154.15	0	0	0
155.00	50	21	21
156.00	569	310	331
157.00	5,902	3,236	3,566
158.00	20,250	13,076	16,642

Device	Routing	Invert	Outlet Devices
#1	Primary	154.15'	**30.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 154.15' / 153.00' S= 0.0153 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf
#2	Secondary	157.50'	**30.0' long x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=27.91 cfs @ 12.39 hrs HW=157.64' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 27.91 cfs @ 5.69 fps)

Secondary OutFlow Max=3.60 cfs @ 12.39 hrs HW=157.64' TW=0.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 3.60 cfs @ 0.87 fps)

Pond P-1: 30" Culvert



Summary for Pond P-1A: Underdrained Soil Filter #1

Inflow Area = 0.654 ac, 54.48% Impervious, Inflow Depth = 3.70" for 25-Year event
Inflow = 2.78 cfs @ 12.07 hrs, Volume= 0.201 af
Outflow = 2.29 cfs @ 12.12 hrs, Volume= 0.201 af, Atten= 17%, Lag= 3.1 min
Primary = 0.04 cfs @ 24.40 hrs, Volume= 0.105 af
Routed to Pond P-1 : 30" Culvert
Secondary = 2.27 cfs @ 12.12 hrs, Volume= 0.095 af
Routed to Pond P-1 : 30" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 158.21' @ 12.12 hrs Surf.Area= 2,100 sf Storage= 2,738 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 314.9 min (1,098.7 - 783.8)

Volume	Invert	Avail.Storage	Storage Description
#1	154.40'	3,384 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

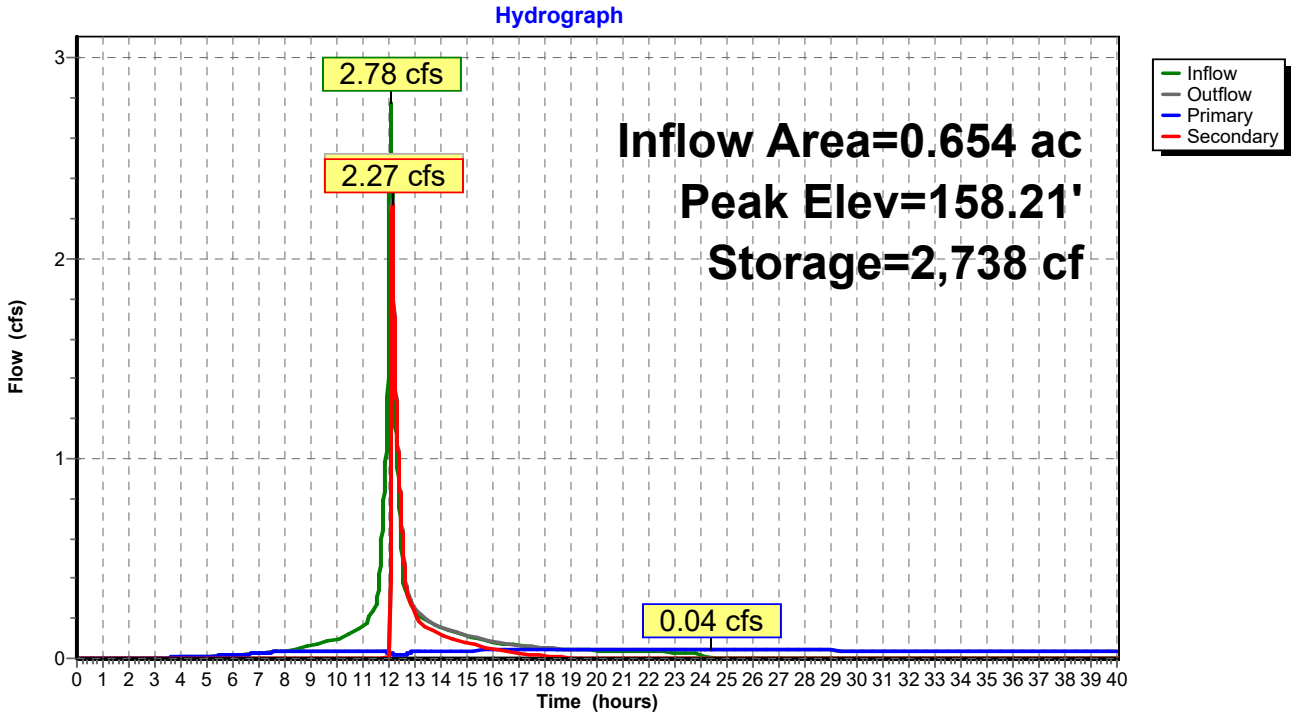
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
154.40	1,179	0.0	0	0
156.50	1,179	0.0	0	0
157.00	1,413	100.0	648	648
158.00	1,924	100.0	1,669	2,317
158.50	2,344	100.0	1,067	3,384

Device	Routing	Invert	Outlet Devices
#1	Primary	154.40'	**1.4" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 154.40' / 154.25' S= 0.0038 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.01 sf
#2	Secondary	158.00'	**10.0' long x 4.5' 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 5.00 5.50 Coef. (English) 2.36 2.52 2.70 2.68 2.67 2.67 2.65 2.66 2.66 2.67 2.70 2.70 2.72 2.75 2.81 2.93 3.10

Primary OutFlow Max=0.04 cfs @ 24.40 hrs HW=157.91' TW=154.36' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.04 cfs @ 3.91 fps)

Secondary OutFlow Max=2.26 cfs @ 12.12 hrs HW=158.21' TW=156.90' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 2.26 cfs @ 1.08 fps)

Pond P-1A: Underdrained Soil Filter #1



Summary for Pond P-1A2: CB#2

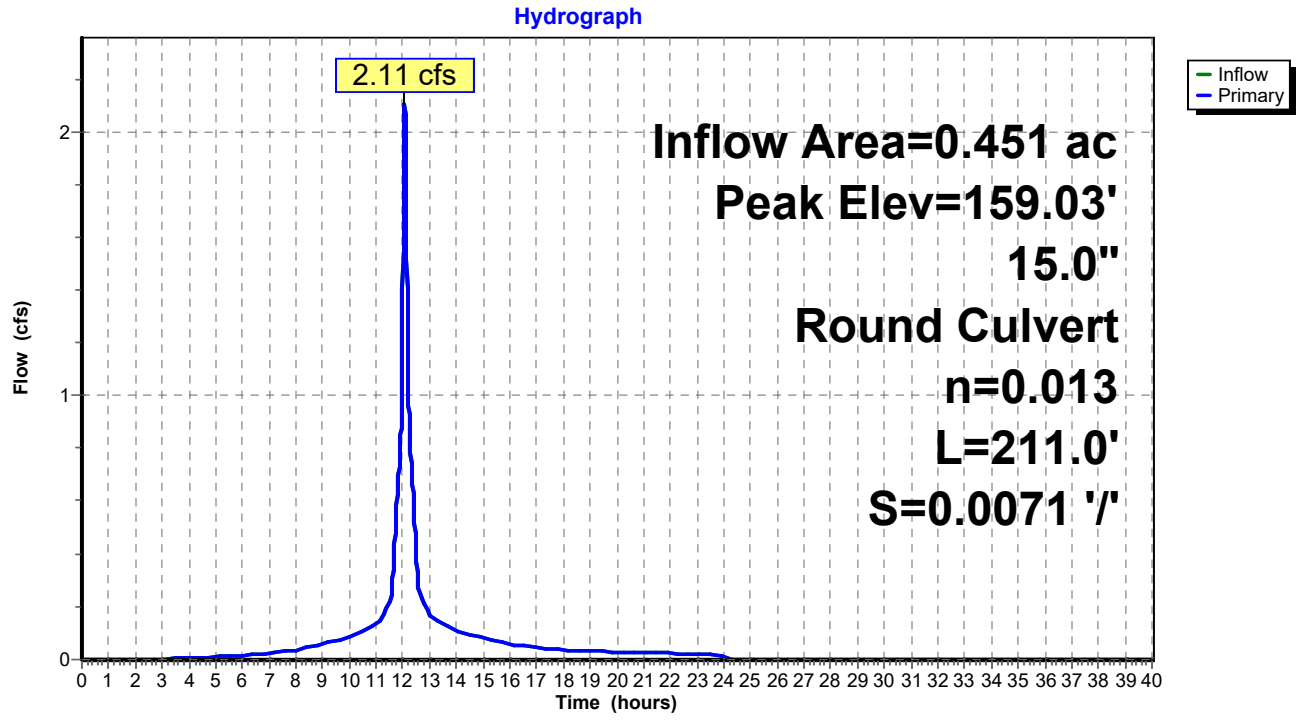
Inflow Area = 0.451 ac, 78.97% Impervious, Inflow Depth = 4.13" for 25-Year event
Inflow = 2.11 cfs @ 12.07 hrs, Volume= 0.155 af
Outflow = 2.11 cfs @ 12.07 hrs, Volume= 0.155 af, Atten= 0%, Lag= 0.0 min
Primary = 2.11 cfs @ 12.07 hrs, Volume= 0.155 af
Routed to Pond P-1A : Underdrained Soil Filter #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 159.03' @ 12.08 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	158.10'	**15.0" Round Culvert** L= 211.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.10' / 156.60' S= 0.0071 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.08 cfs @ 12.07 hrs HW=159.03' TW=158.16' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.08 cfs @ 2.95 fps)

Pond P-1A2: CB#2



Summary for Pond P-1B: 36" Culvert

Inflow Area = 6.705 ac, 17.44% Impervious, Inflow Depth = 3.09" for 25-Year event
Inflow = 16.28 cfs @ 12.27 hrs, Volume= 1.725 af
Outflow = 16.18 cfs @ 12.29 hrs, Volume= 1.723 af, Atten= 1%, Lag= 1.5 min
Primary = 16.18 cfs @ 12.29 hrs, Volume= 1.723 af
Routed to Reach 1B-R1 : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1B-R1 : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 167.44' @ 12.29 hrs Surf.Area= 1,075 sf Storage= 1,311 cf

Plug-Flow detention time= 3.3 min calculated for 1.723 af (100% of inflow)
Center-of-Mass det. time= 2.4 min (827.7 - 825.2)

Volume	Invert	Avail.Storage	Storage Description
#1	165.00'	7,542 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

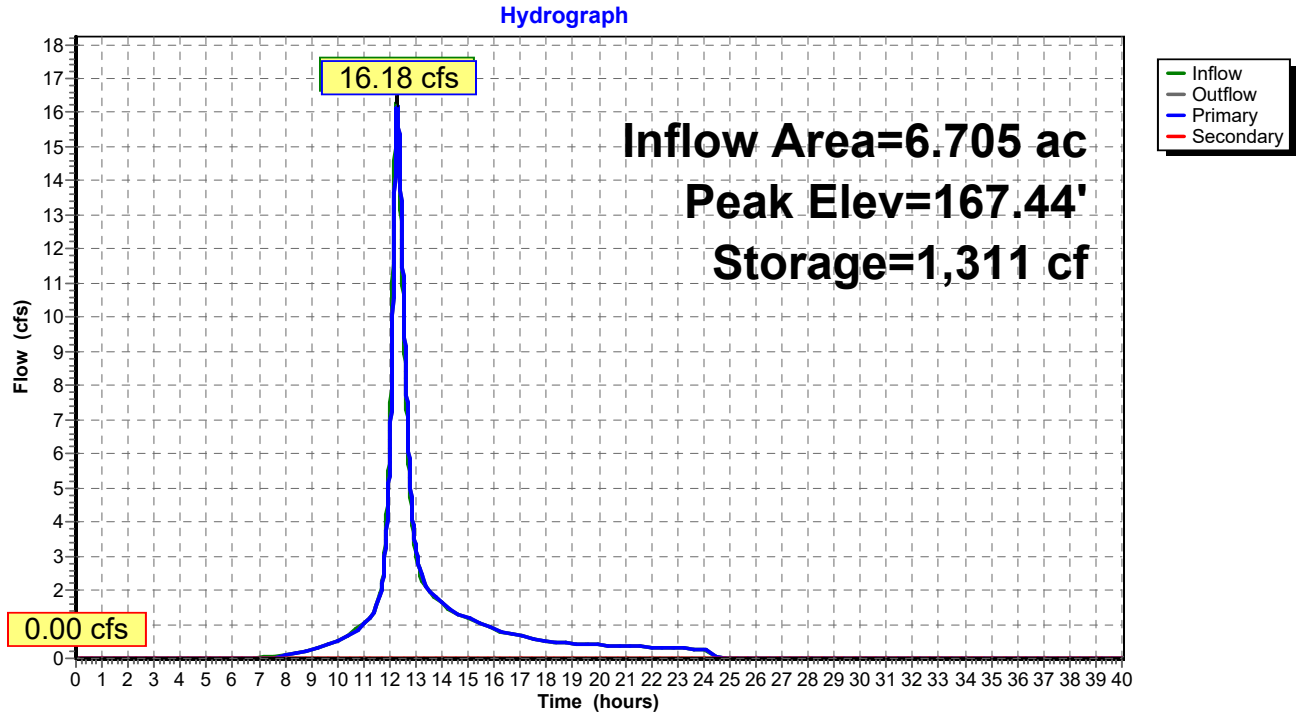
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
165.00	0	0	0
168.00	1,323	1,985	1,985
170.00	4,234	5,557	7,542

Device	Routing	Invert	Outlet Devices
#1	Primary	165.64'	**36.0" Round Culvert** L= 48.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 165.64' / 165.33' S= 0.0065 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf
#2	Secondary	169.00'	**20.0' long x 6.0' 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 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=16.18 cfs @ 12.29 hrs HW=167.44' TW=165.81' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 16.18 cfs @ 5.25 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=165.00' TW=165.33' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P-1B: 36" Culvert



Summary for Pond P-1C: DMH#1

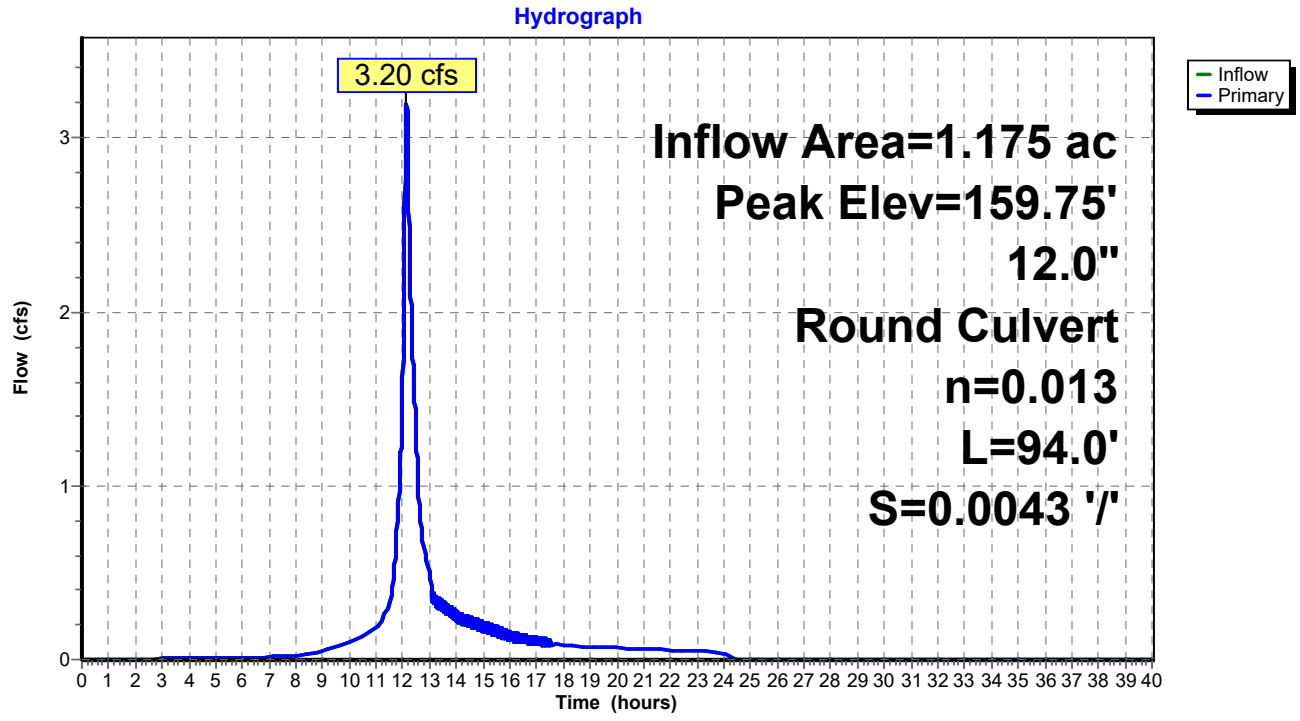
Inflow Area = 1.175 ac, 15.14% Impervious, Inflow Depth = 3.00" for 25-Year event
Inflow = 3.20 cfs @ 12.13 hrs, Volume= 0.294 af
Outflow = 3.20 cfs @ 12.13 hrs, Volume= 0.294 af, Atten= 0%, Lag= 0.0 min
Primary = 3.20 cfs @ 12.13 hrs, Volume= 0.294 af
Routed to Reach 1C-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 159.75' @ 12.13 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	157.90'	**12.0" Round Culvert** L= 94.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 157.90' / 157.50' S= 0.0043 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.19 cfs @ 12.13 hrs HW=159.74' TW=158.44' (Dynamic Tailwater)
1=Culvert (Barrel Controls 3.19 cfs @ 4.06 fps)

Pond P-1C: DMH#1



Summary for Pond P-1C1: FI#1

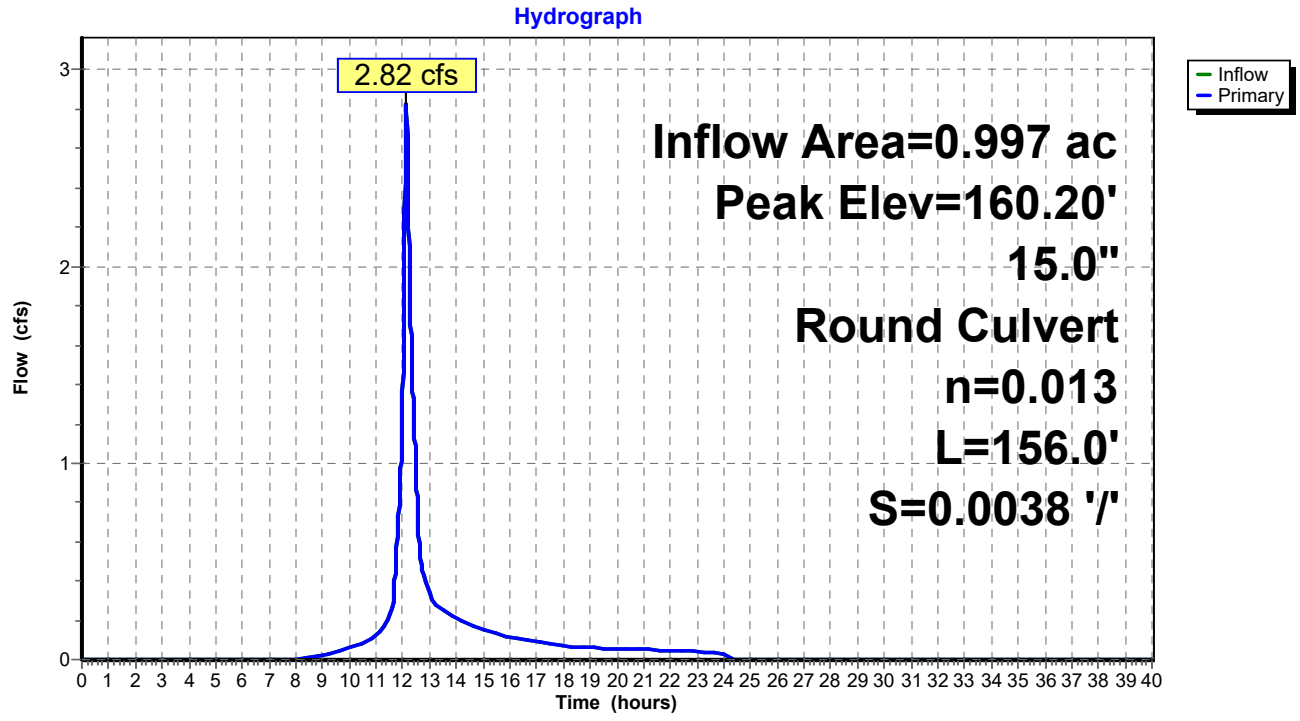
Inflow Area = 0.997 ac, 0.00% Impervious, Inflow Depth = 2.72" for 25-Year event
Inflow = 2.82 cfs @ 12.13 hrs, Volume= 0.226 af
Outflow = 2.82 cfs @ 12.13 hrs, Volume= 0.226 af, Atten= 0%, Lag= 0.0 min
Primary = 2.82 cfs @ 12.13 hrs, Volume= 0.226 af
Routed to Pond P-1C : DMH#1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 160.20' @ 12.14 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	158.50'	**15.0" Round Culvert** L= 156.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.50' / 157.90' S= 0.0038 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.74 cfs @ 12.13 hrs HW=160.17' TW=159.74' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.74 cfs @ 2.23 fps)

Pond P-1C1: FI#1



Summary for Pond P-1D: 15" Culvert

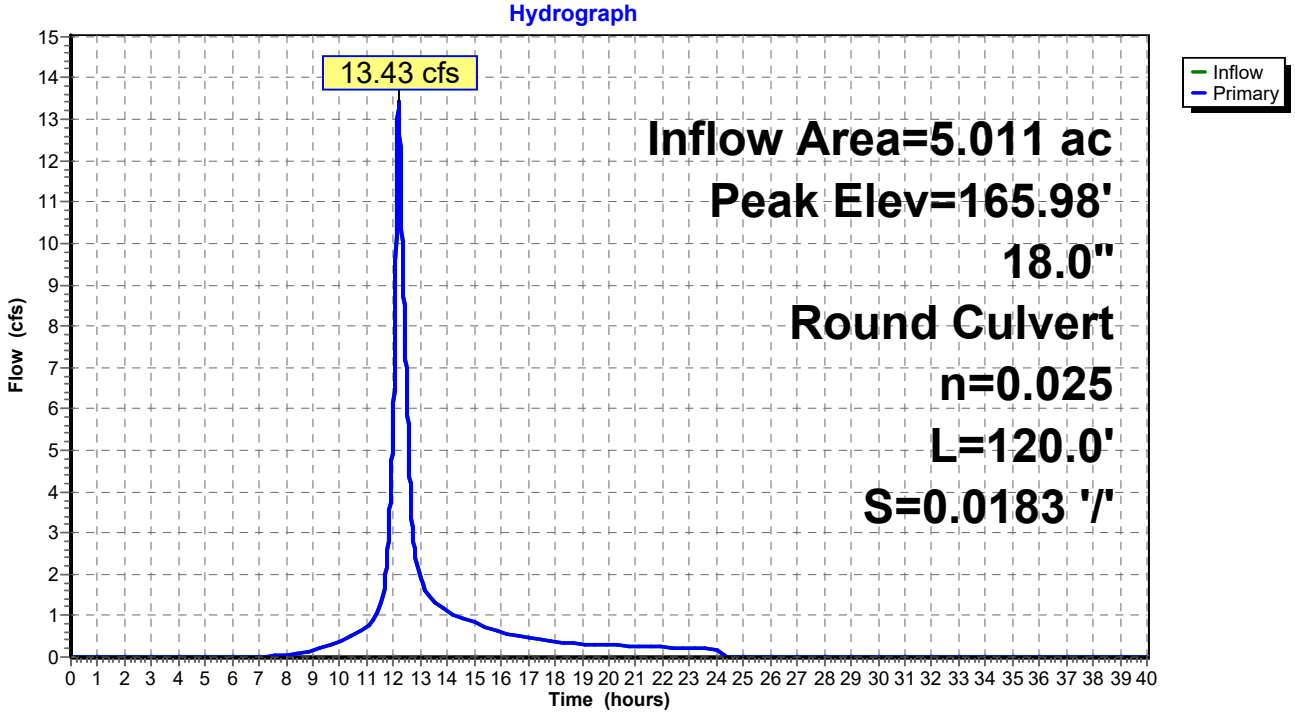
Inflow Area = 5.011 ac, 15.74% Impervious, Inflow Depth = 2.95" for 25-Year event
Inflow = 13.43 cfs @ 12.18 hrs, Volume= 1.231 af
Outflow = 13.43 cfs @ 12.18 hrs, Volume= 1.231 af, Atten= 0%, Lag= 0.0 min
Primary = 13.43 cfs @ 12.18 hrs, Volume= 1.231 af
Routed to Reach 1D-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 165.98' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	157.70'	**18.0" Round Culvert** L= 120.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 157.70' / 155.50' S= 0.0183 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=13.42 cfs @ 12.18 hrs HW=165.97' TW=156.48' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 13.42 cfs @ 7.59 fps)

Pond P-1D: 15" Culvert



Summary for Pond P-1D3: FI#2

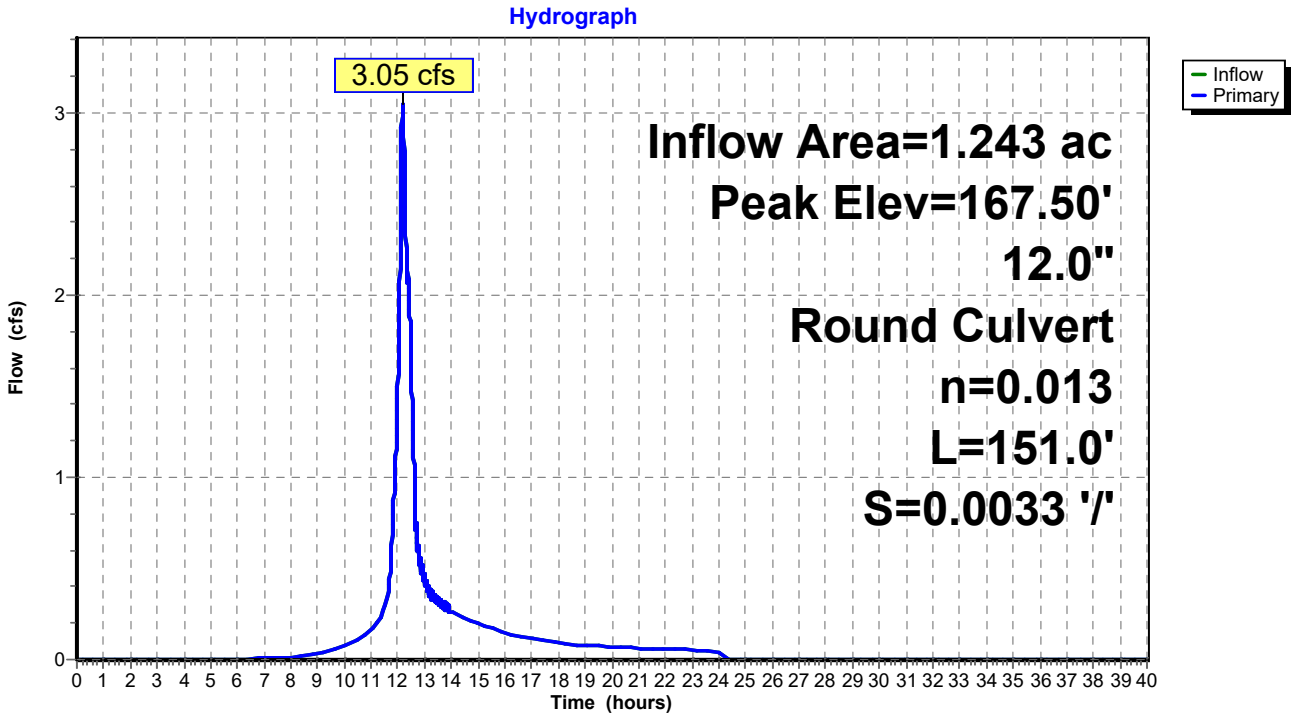
Inflow Area = 1.243 ac, 5.13% Impervious, Inflow Depth = 2.81" for 25-Year event
Inflow = 3.05 cfs @ 12.17 hrs, Volume= 0.291 af
Outflow = 3.05 cfs @ 12.17 hrs, Volume= 0.291 af, Atten= 0%, Lag= 0.0 min
Primary = 3.05 cfs @ 12.17 hrs, Volume= 0.291 af
Routed to Pond P-1D : 15" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 167.50' @ 12.19 hrs
Flood Elev= 170.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	158.50'	**12.0" Round Culvert** L= 151.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.50' / 158.00' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.89 cfs @ 12.17 hrs HW=167.33' TW=165.94' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.89 cfs @ 3.68 fps)

Pond P-1D3: FI#2



Summary for Pond P-1E: 12" Culvert

Inflow Area = 0.705 ac, 18.79% Impervious, Inflow Depth = 2.99" for 25-Year event
Inflow = 2.12 cfs @ 12.14 hrs, Volume= 0.176 af
Outflow = 1.93 cfs @ 12.19 hrs, Volume= 0.176 af, Atten= 9%, Lag= 2.6 min
Primary = 1.93 cfs @ 12.19 hrs, Volume= 0.176 af
Routed to Reach 1E-R : Road Side Ditch
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1E-R : Road Side Ditch

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 159.38' @ 12.20 hrs Surf.Area= 784 sf Storage= 303 cf

Plug-Flow detention time= 3.4 min calculated for 0.176 af (100% of inflow)
Center-of-Mass det. time= 3.2 min (822.5 - 819.3)

Volume	Invert	Avail.Storage	Storage Description
#1	158.40'	5,001 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

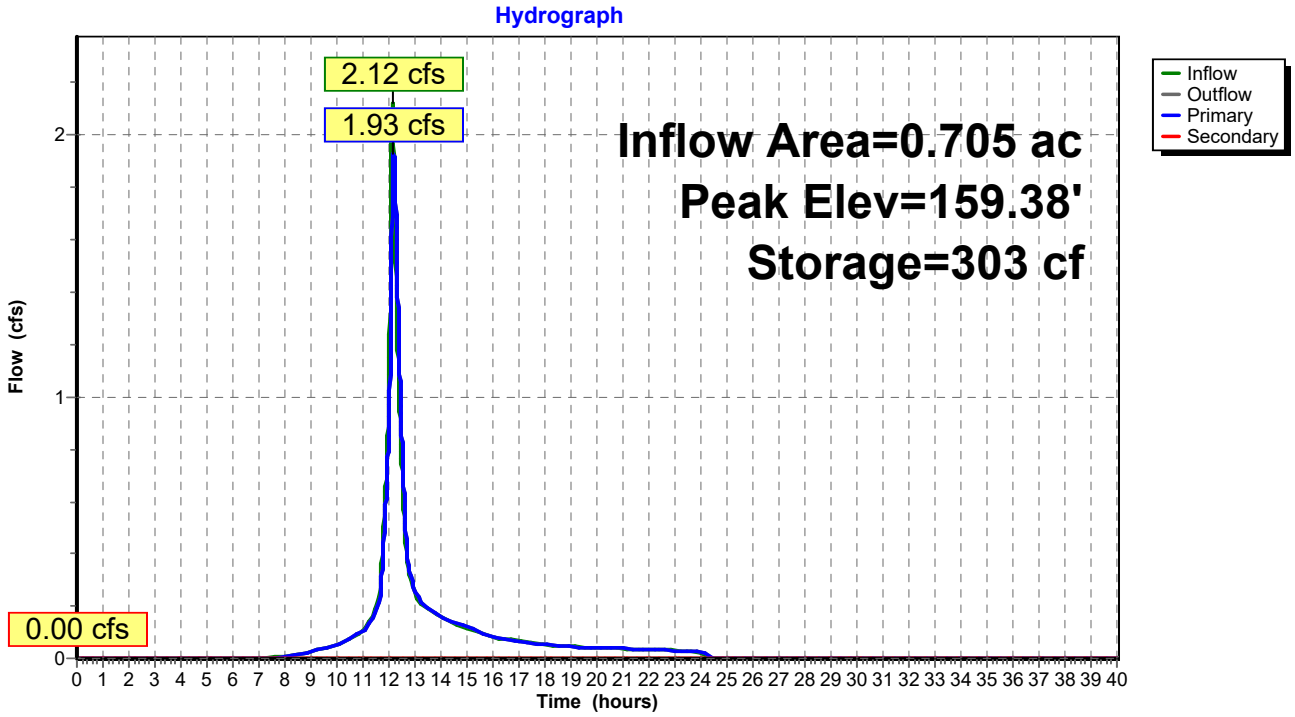
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
158.40	0	0	0
159.00	315	94	94
160.00	1,555	935	1,029
161.00	6,388	3,972	5,001

Device	Routing	Invert	Outlet Devices
#1	Primary	158.40'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 158.40' / 158.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	160.80'	**31.0' long x 11.0' 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) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64

Primary OutFlow Max=1.92 cfs @ 12.19 hrs HW=159.38' TW=158.94' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.92 cfs @ 3.12 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=158.40' TW=158.50' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P-1E: 12" Culvert



Summary for Pond P-1F: 2 - 24 " Dia Culvert

Inflow Area = 7.719 ac, 15.92% Impervious, Inflow Depth = 3.05" for 25-Year event
Inflow = 17.75 cfs @ 12.32 hrs, Volume= 1.961 af
Outflow = 17.74 cfs @ 12.32 hrs, Volume= 1.961 af, Atten= 0%, Lag= 0.4 min
Primary = 17.74 cfs @ 12.32 hrs, Volume= 1.961 af
Routed to Reach 1F-R : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P-1E : 12" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 161.57' @ 12.32 hrs Surf.Area= 411 sf Storage= 137 cf

Plug-Flow detention time= 0.0 min calculated for 1.960 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (831.7 - 831.7)

Volume	Invert	Avail.Storage	Storage Description
#1	160.00'	4,221 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

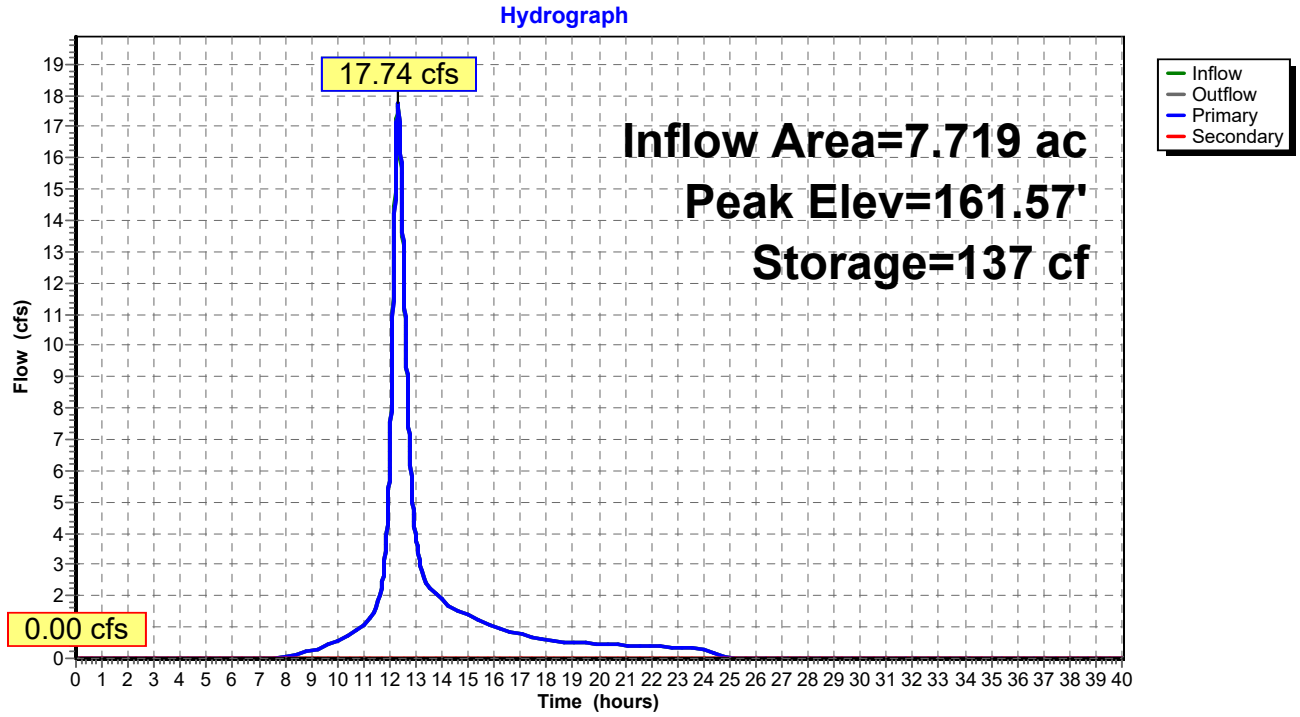
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
160.00	0	0	0
161.00	26	13	13
162.00	707	367	380
163.00	1,746	1,227	1,606
164.00	3,484	2,615	4,221

Device	Routing	Invert	Outlet Devices
#1	Primary	160.00'	**24.0" Round Culvert X 2.00** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 160.00' / 159.50' S= 0.0125 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Secondary	163.50'	**58.0' long x 11.0' 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) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64

Primary OutFlow Max=17.74 cfs @ 12.32 hrs HW=161.57' TW=160.12' (Dynamic Tailwater)
1=Culvert (Inlet Controls 17.74 cfs @ 3.36 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=160.00' TW=158.40' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P-1F: 2 - 24 " Dia Culvert



Summary for Pond RDF-1: Roof Dripline Filter #1

Inflow Area = 0.187 ac,100.00% Impervious, Inflow Depth = 4.56" for 25-Year event
Inflow = 0.91 cfs @ 12.07 hrs, Volume= 0.071 af
Outflow = 0.37 cfs @ 12.34 hrs, Volume= 0.071 af, Atten= 59%, Lag= 16.4 min
Primary = 0.37 cfs @ 12.34 hrs, Volume= 0.071 af
Routed to Reach 1D-R : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1D-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 157.95' @ 12.26 hrs Surf.Area= 952 sf Storage= 456 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 6.2 min (754.0 - 747.8)

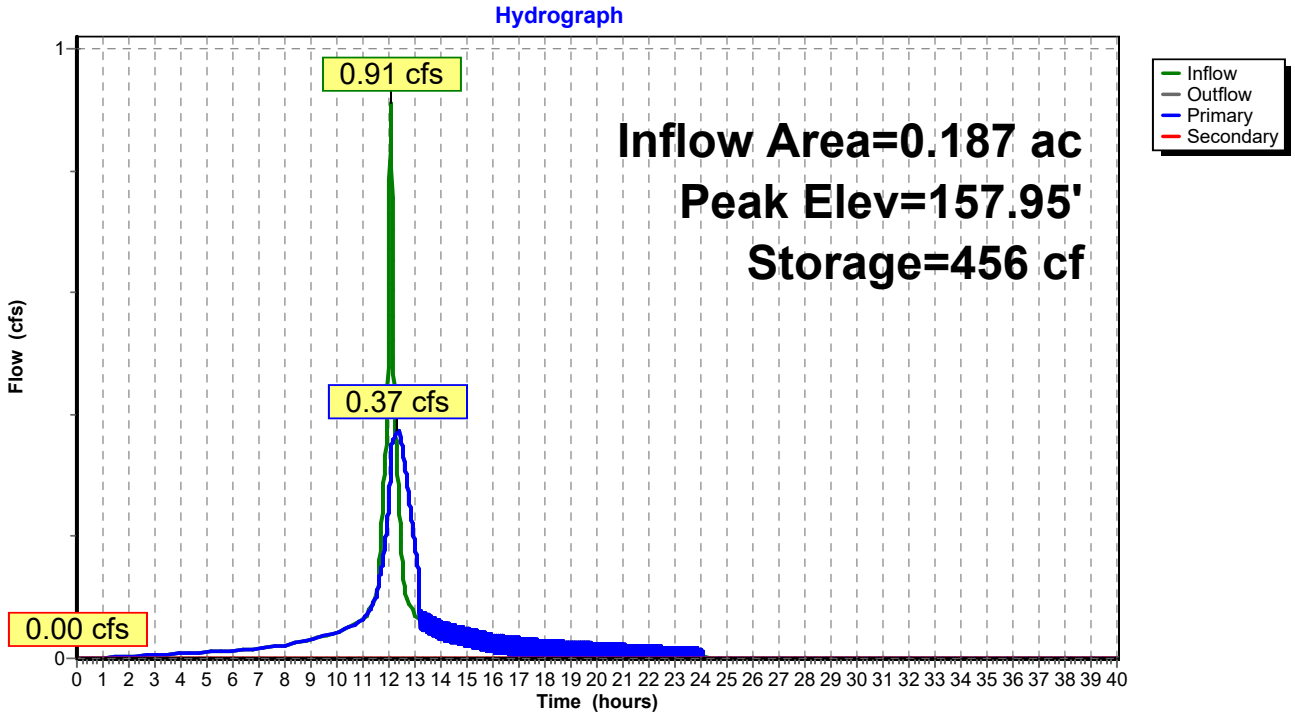
Volume	Invert	Avail.Storage	Storage Description
#1	156.75'	857 cf	**4.00'W x 238.00'L x 2.25'H Coarse Gravel** 2,142 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	156.42'	**4.0" Round Culvert** L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 156.42' / 155.50' S= 0.0256 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	159.00'	**193.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.37 cfs @ 12.34 hrs HW=157.91' TW=156.37' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.37 cfs @ 4.29 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=156.75' TW=155.50' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond RDF-1: Roof Dripline Filter #1



Summary for Pond RDF-2: Roof Dripline Filter #2

Inflow Area = 0.069 ac,100.00% Impervious, Inflow Depth = 4.56" for 25-Year event
Inflow = 0.34 cfs @ 12.07 hrs, Volume= 0.026 af
Outflow = 0.24 cfs @ 12.14 hrs, Volume= 0.026 af, Atten= 28%, Lag= 4.2 min
Primary = 0.24 cfs @ 12.14 hrs, Volume= 0.026 af
Routed to Reach 1D-R : Swale
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 1D-R : Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 157.11' @ 12.14 hrs Surf.Area= 0.008 ac Storage= 0.001 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.7 min (748.5 - 747.8)

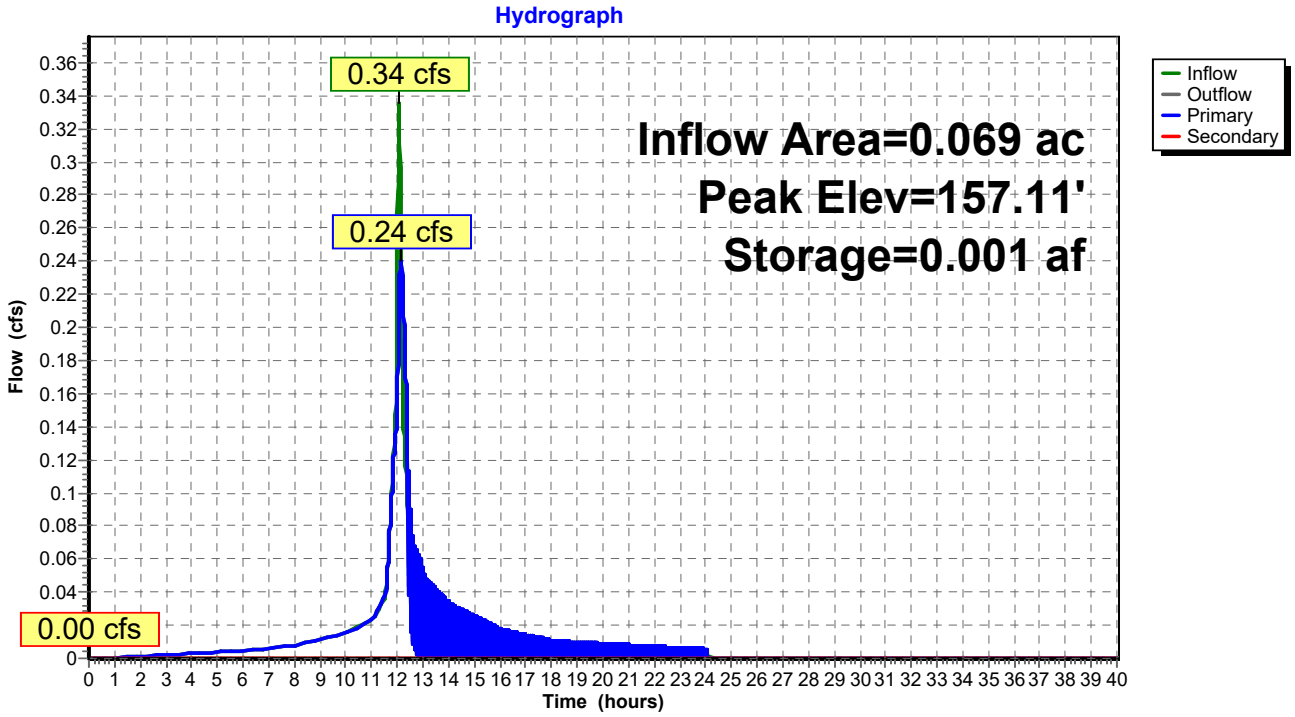
Volume	Invert	Avail.Storage	Storage Description
#1	156.75'	0.008 af	**4.00'W x 92.00'L x 2.25'H Coarse Gravel** 0.019 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	156.42'	**4.0" Round Culvert** L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 156.42' / 155.50' S= 0.0256 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	159.00'	**92.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.24 cfs @ 12.14 hrs HW=157.11' TW=156.46' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.24 cfs @ 2.75 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=156.75' TW=155.50' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond RDF-2: Roof Dripline Filter #2



Summary for Pond RDF-3: Roof Dripline Filter #3

Inflow Area = 0.178 ac,100.00% Impervious, Inflow Depth = 4.56" for 25-Year event
Inflow = 0.87 cfs @ 12.07 hrs, Volume= 0.068 af
Outflow = 0.39 cfs @ 12.22 hrs, Volume= 0.068 af, Atten= 55%, Lag= 9.3 min
Primary = 0.39 cfs @ 12.22 hrs, Volume= 0.068 af
Routed to Pond P-1C : DMH#1
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P-1C : DMH#1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 162.39' @ 12.22 hrs Surf.Area= 0.019 ac Storage= 0.009 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 5.3 min (753.1 - 747.8)

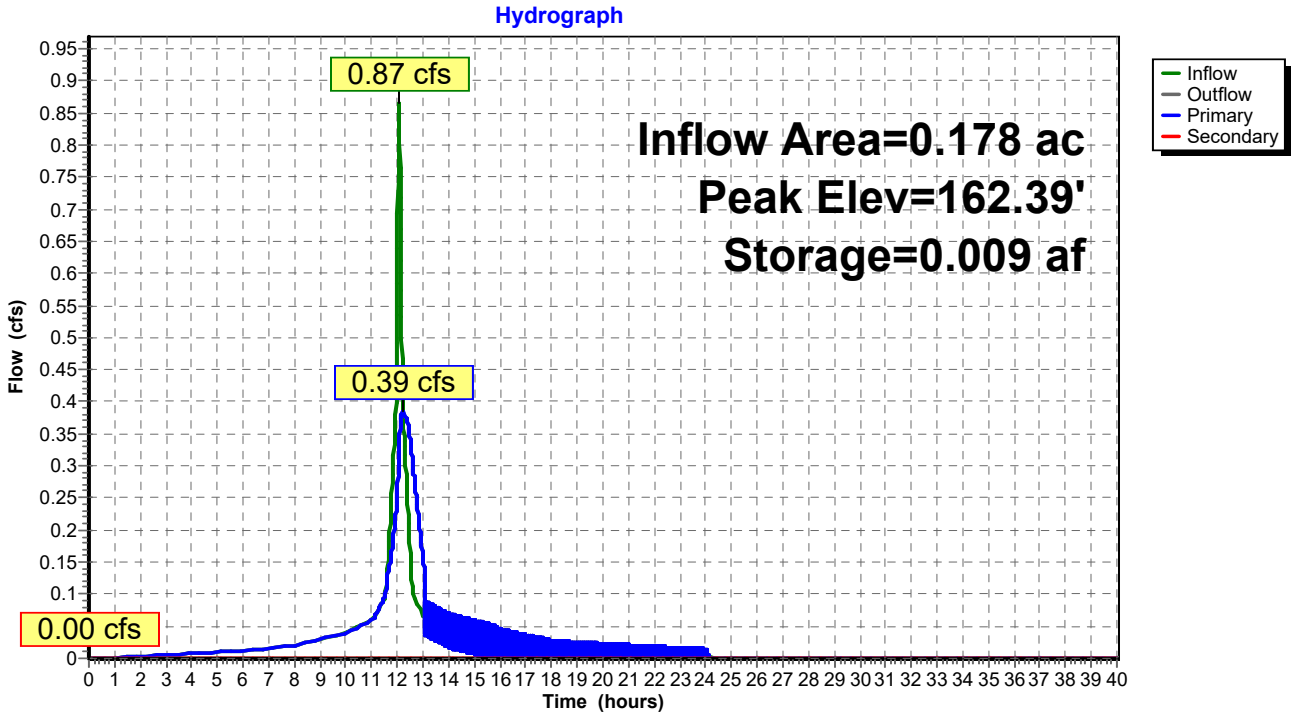
Volume	Invert	Avail.Storage	Storage Description
#1	161.20'	0.015 af	**4.00'W x 208.00'L x 2.00'H Coarse Gravel** 0.038 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	160.87'	**4.0" Round Culvert** L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 160.87' / 160.00' S= 0.0226 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	163.20'	**208.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.39 cfs @ 12.22 hrs HW=162.39' TW=159.30' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.39 cfs @ 4.42 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=161.20' TW=157.90' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond RDF-3: Roof Dripline Filter #3



Summary for Pond RDF-4: Roof Dripline Filter #4

Inflow Area = 0.061 ac,100.00% Impervious, Inflow Depth = 4.56" for 25-Year event
Inflow = 0.30 cfs @ 12.07 hrs, Volume= 0.023 af
Outflow = 0.35 cfs @ 12.45 hrs, Volume= 0.023 af, Atten= 0%, Lag= 23.0 min
Primary = 0.35 cfs @ 12.45 hrs, Volume= 0.023 af
Routed to Pond P-1D3 : FI#2
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P-1D3 : FI#2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 162.71' @ 12.34 hrs Surf.Area= 0.005 ac Storage= 0.004 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 3.9 min (751.6 - 747.8)

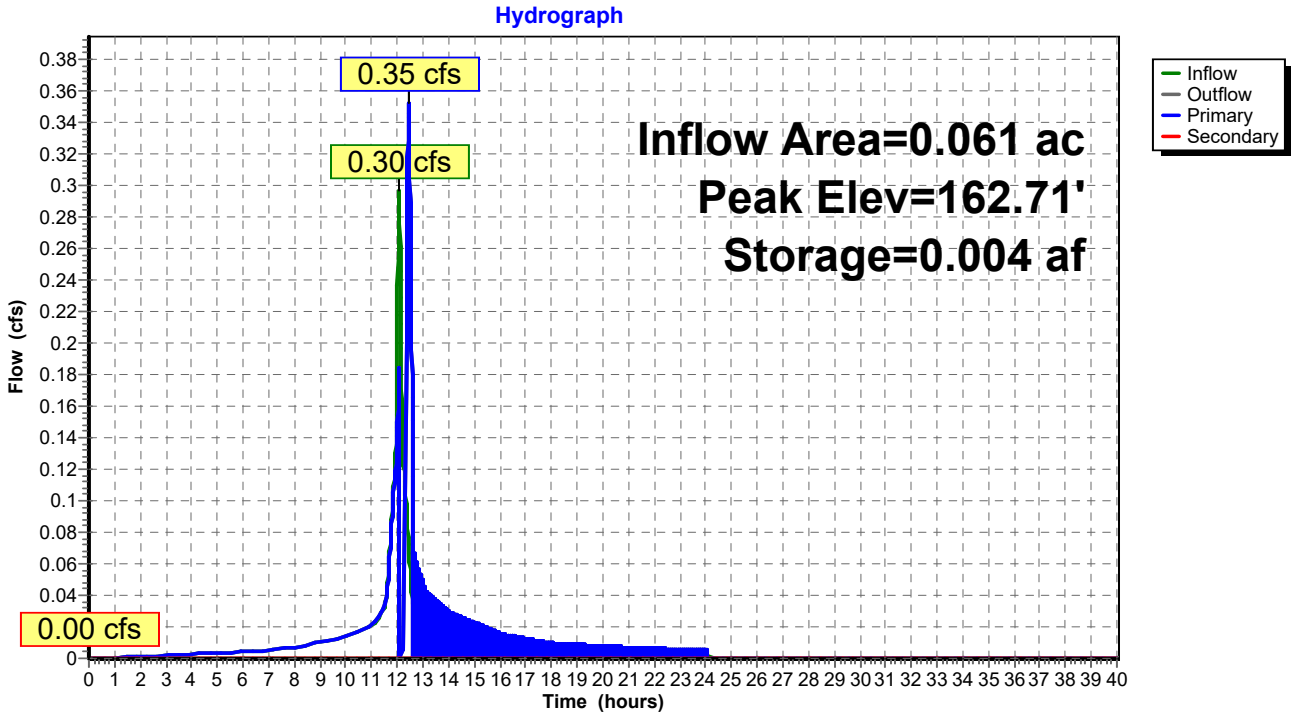
Volume	Invert	Avail.Storage	Storage Description
#1	160.45'	0.005 af	**4.00'W x 54.00'L x 2.75'H Coarse Gravel** 0.014 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	160.12'	**4.0" Round Culvert** L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 160.12' / 160.00' S= 0.0034 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	163.20'	**208.0' long x 4.0' 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 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.36 cfs @ 12.45 hrs HW=161.74' TW=160.20' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.36 cfs @ 4.14 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=160.45' TW=158.50' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond RDF-4: Roof Dripline Filter #4

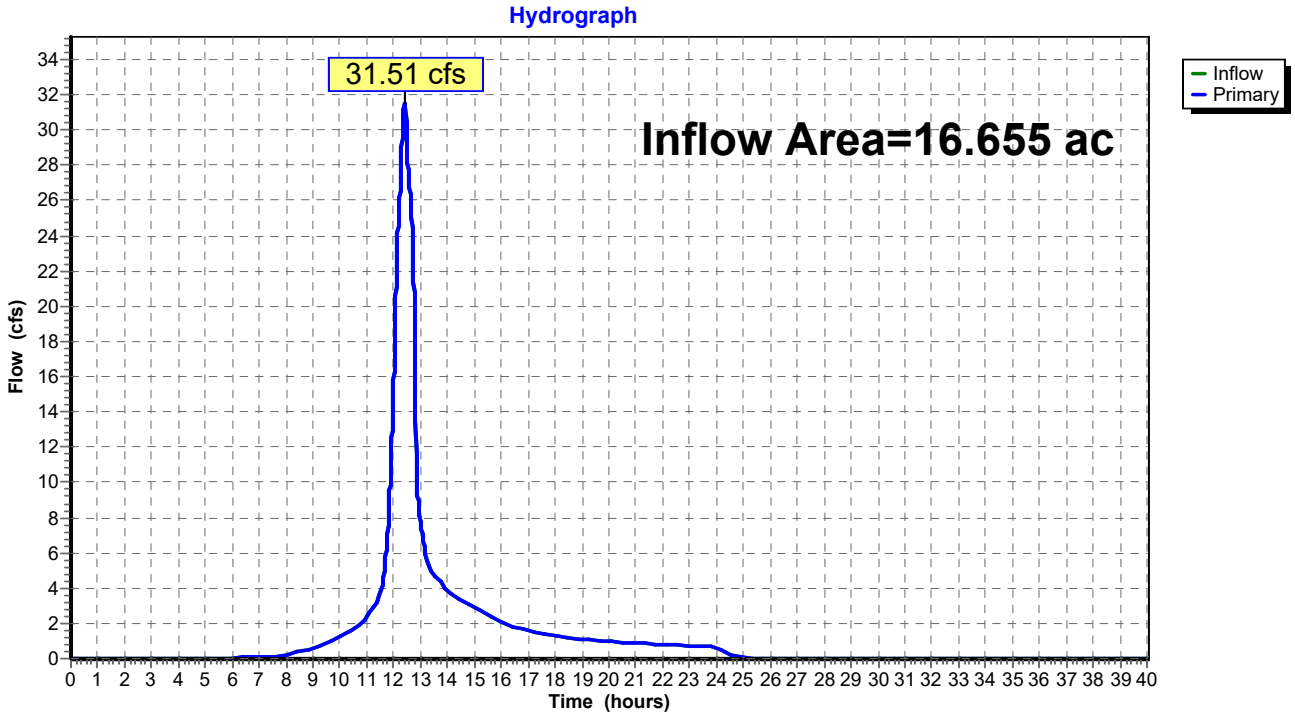


Summary for Link AP-1:

Inflow Area = 16.655 ac, 19.31% Impervious, Inflow Depth > 3.06" for 25-Year event
Inflow = 31.51 cfs @ 12.39 hrs, Volume= 4.251 af
Primary = 31.51 cfs @ 12.39 hrs, Volume= 4.251 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link AP-1:



APPENDIX D

REDEVELOPMENT AND STORMWATER SUMMARY AND BMP TREATMENT SIZING

SME
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ENGINEERS

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SEVEE & MAHER ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 / Fax: 207.829.5692
smemaine.com

REDEVELOPMENT TREATMENT LEVEL CALCULATIONS

Project Name: Bangor Housing Development Corporation -Yellen Pines
Project Location: 236 Maine Ave, Bangor, ME
Project No: 251269.01
By: AML
Date: 4/30/2026
Checked By: AJD
Date: 5/27/2026

LISTING OF AREAS - EXISTING

Area	Pollutant Ranking						Notes
	0	1	2	3	4	5	
Pavement/Concrete			1,972				Walkway
Landscaped/Trees		3,992					
Gravel				1,110			Driveway
Lawn			76,339				Lawn
Total	**0**	**3,992**	**78,311**	**1,110**	**0**	**0**	**83,412 TOTAL**

LISTING OF AREAS - PROPOSED

Area	Pollutant Ranking						Notes
	0	1	2	3	4	5	
Corporate Drive Parking Lot Pavement				16,858			Parking lot area
Walkways and Patio Areas			2,818				Parking lot area
Building			21,686				
Concrete Pads				425			
Landscaping/Trees		7,881					
Lawn			32,566				
Stormwater Areas		1,179					
Total	**0**	**9,059**	**57,070**	**17,283**	**0**	**0**	**83,412 TOTAL**

EXISTING POLLUTANT RANKING CALCULATIONS

Land Use Type (from MEDEP Chapter 500)	Area to be Redeveloped	Area to be Redeveloped	Pollutant Ranking	Total Score
High Use Parking Lots	0	0.00	5	0.00
Other Roads/Medium Use Parking Lots	0	0.00	4	0.00
Other Parking Lots/Driveways	1,110	0.03	3	0.08
Other Rooftop/Walking Paths/Lawn/Landscaped Area	78,311	1.80	2	3.60
Non-Grass Landscaped/ Stormwater Treatment System	3,992	0.09	1	0.09
Forest; Meadow mowed no more than twice per year	0	0.00	0	0.00
Total	**83412**	**1.91**	**EIR**	**3.76**

PROPOSED POLLUTANT RANKING CALCULATIONS

Land Use Type (from MEDEP Chapter 500)	Area to be Redeveloped	Area to be Redeveloped	Pollutant Ranking	Total Score
High Use Parking Lots	0	0.00	5	0.00
Other Roads/Medium Use Parking Lots	0	0.00	4	0.00
Other Parking Lots/Driveways	17,283	0.40	3	1.19
Other Rooftop/Walking Paths/Lawn/Landscaped Area	57,070	1.31	2	2.62
Non-Grass Landscaped/ Stormwater Treatment System	9,059	0.21	1	0.21
Forest; Meadow mowed no more than twice per year	0	0.00	0	0.00
Total	**83,412**	**1.91**	**PIR**	**4.02**

EIR / Redeveloped Acres =	**2.0**
PIR / Redeveloped Acres =	**2.1**
Ranked Impact Change Due to Redevelopment =	**0.1**

60% treatment is required per Table 3 of Chapter 500 = 50,047 sq ft (1.17 acres)

Total Redeveloped Area (from above table) =	83,412
Developed Area Treated =	**50,061**

Treatment Percentage Provided =	**60.0%**	See Stormwater Master Plan Calculations

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STORMWATER BMP TREATMENT SUMMARY

Project Name: Bangor Housing Development Corporation - Yellen Pines
Project Location: 236 Maine Ave, Bangor, ME
Project No: 251269.01
By: AML
Date: 4/30/2026
Checked By: AJD
Date: 5/27/2026

STORMWATER BMP TREATMENT SUMMARY

	Treated Impervious Area (sf)	Treated Landscaped Area (sf)	Treated Developed Area (sf)	Subcatchment ID
Roof Dripline Filter 1	8,150	0	8,150	SC-1C1
Roof Dripline Filter 2	3,005	0	3,005	SC-1D1
Roof Dripline Filter 3	7,751	0	7,751	SC-1C2
Roof Dripline Filter 4	2,657	0	2,657	SC-1D2
Underdrained Soil filter	15,525	12,973	28,498	SC-1A, SC-1A1 & SC-1A2
Proposed Treatment Area (sf)	**37,088**	**12,973**	**50,061**	
Proposed Treatment Area (ac)	**0.85**	**0.30**	**1.15**	

Total Impervious Area Treated	**88.8%**
Total Developed Area Treated	**60.02%**

TREATMENT SUMMARY FOR REDEVELOPMENT

	Total Project Redevelopment Areas	Required Treatment Area (60%)	Total Area Treated (SF)
Impervious Area (SF)	41,787		50,061
Landscaped Area (SF)	41,625		
Redeveloped Area (SF)	83,412	**50,047**	
Percent of Total Redeveloped Area Treated			**60.0%**

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STORMWATER TREATMENT SIZING CALCULATIONS

Project Name: Bangor Housing Development Corporation - Yellen Pines
Project Location: 236 Maine Ave, Bangor, ME
Project No: 251269.01
By: AML
Date: 4/30/2026
Checked By: AJD
Date: 5/27/2026

Stormwater Treatment: Underdrained Soil Filter #1 Parking Area and Landscaped area

				DEVELOPED AREA	=	28,498	sf	
				IMPERVIOUS AREAS CAPTURED	=	15525	sf	
				NON-IMPERVIOUS AREAS CAPTURED	=	12,973	sf	
				TOTAL AREA CAPTURED	=	28,498	sf	
				REQUIRED TREATMENT VOLUME				
(1"/12")	14,928	+	(0.4"/12")	12,973	=	1,676	cf	2,317 cf provided
				CHANNEL PROTECTION VOLUME (DEPTH)	=	1.5	ft	1.5 ft provided
				REQUIRED FILTER SURFACE AREA				
(0.05)	14,928	+	(0.2)	12,973	=	1,006	sf	1,179 sf provided
				SEDIMENT TRAP VOLUME				
(10.00)	0.356	(500 lbs per acre-storm) : (90 lb /ft^3)			=	20	cf	
				CUMULATIVE STORAGE	=	3,384	cf	
				FLOW AT UNDERDRAIN OUTLET	=	0.04	cfs	
				DRAIN TIME				
3384	cf	/	0.04	/ 3,600	=	24	hours	

Stormwater Treatment: Roof Dripline Filter #1 Southwest Side of Building

ROOF AREAS CAPTURED	=	8,150	sf
GRASS AREAS CAPTURED	=	N/A	
MINIMUM STORAGE VOLUME			
1 inch x Impervious Area	=	679	cf
PROPOSED FILTER SIZE	=	4 feet wide by 2.25 feet deep by 238 feet long (with 40% voids in stone)	
Storage Volume Provided	=	857	cf

Stormwater Treatment: Roof Dripline Filter #2 Northwest Side of Building

ROOF AREAS CAPTURED	=	3,005	sf
GRASS AREAS CAPTURED	=	N/A	
MINIMUM STORAGE VOLUME			
1 inch x Impervious Area	=	250	cf
PROPOSED FILTER SIZE	=	4 feet wide by 2.25 feet deep by 92 feet long (with 40% voids in stone)	

ACTUAL VOLUME PROPOSED	=	331 cf

Stormwater Treatment: Roof Dripline Filter #3 Southeast Side of Building

ROOF AREAS CAPTURED	=	7,751 sf
GRASS AREAS CAPTURED	=	N/A
MINIMUM STORAGE VOLUME		
1 inch x Impervious Area	=	646 cf
PROPOSED FILTER SIZE	=	4 feet wide by 2 feet deep by 208 feet long (with 40% voids in stone)
ACTUAL VOLUME PROPOSED	=	665.6 cf

Stormwater Treatment: Roof Dripline Filter #4 Northeast Side of Building

ROOF AREAS CAPTURED	=	2,657 sf
GRASS AREAS CAPTURED	=	N/A
MINIMUM STORAGE VOLUME		
1 inch x Impervious Area	=	221 cf
PROPOSED FILTER SIZE	=	4 feet wide by 2.75 feet deep by 54 feet long (with 40% voids in stone)
Storage Volume Provided	=	237.6 cf

APPENDIX D

REDEVELOPMENT AND STORMWATER SUMMARY AND BMP TREATMENT SIZING

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REDEVELOPMENT TREATMENT LEVEL CALCULATIONS

Project Name: Bangor Housing Development Corporation -Yellen Pines
Project Location: 236 Maine Ave, Bangor, ME
Project No: 251269.01
By: AML
Date: 4/30/2026
Checked By: AJD
Date: 5/27/2026

LISTING OF AREAS - EXISTING							
Area	Pollutant Ranking						Notes
	0	1	2	3	4	5	
Pavement/Concrete			1,972				Walkway
Landscaped/Trees		3,992					
Gravel				1,110			Driveway
Lawn			76,339				Lawn
Total	**0**	**3,992**	**78,311**	**1,110**	**0**	**0**	**83,412 TOTAL**

LISTING OF AREAS - PROPOSED							
Area	Pollutant Ranking						Notes
	0	1	2	3	4	5	
Corporate Drive Parking Lot Pavement				16,858			Parking lot area
Walkways and Patio Areas			2,818				Parking lot area
Building			21,686				
Concrete Pads				425			
Landscaping/Trees		7,881					
Lawn			32,566				
Stormwater Areas		1,179					
Total	**0**	**9,059**	**57,070**	**17,283**	**0**	**0**	**83,412 TOTAL**

EXISTING POLLUTANT RANKING CALCULATIONS				
Land Use Type (from MEDEP Chapter 500)	**Area to be Redeveloped**	**Area to be Redeveloped**	**Pollutant Ranking**	**Total Score**
High Use Parking Lots	0	0.00	5	0.00
Other Roads/Medium Use Parking Lots	0	0.00	4	0.00
Other Parking Lots/Driveways	1,110	0.03	3	0.08
Other Rooftop/Walking Paths/Lawn/Landscaped Area	78,311	1.80	2	3.60
Non-Grass Landscaped/ Stormwater Treatment System	3,992	0.09	1	0.09
Forest; Meadow mowed no more than twice per year	0	0.00	0	0.00
Total	**83412**	**1.91**	**EIR**	**3.76**

PROPOSED POLLUTANT RANKING CALCULATIONS				
Land Use Type (from MEDEP Chapter 500)	**Area to be Redeveloped**	**Area to be Redeveloped**	**Pollutant Ranking**	**Total Score**
High Use Parking Lots	0	0.00	5	0.00
Other Roads/Medium Use Parking Lots	0	0.00	4	0.00
Other Parking Lots/Driveways	17,283	0.40	3	1.19
Other Rooftop/Walking Paths/Lawn/Landscaped Area	57,070	1.31	2	2.62
Non-Grass Landscaped/ Stormwater Treatment System	9,059	0.21	1	0.21
Forest; Meadow mowed no more than twice per year	0	0.00	0	0.00
Total	**83,412**	**1.91**	**PIR**	**4.02**

EIR / Redeveloped Acres =	**2.0**
PIR / Redeveloped Acres =	**2.1**
Ranked Impact Change Due to Redevelopment =	**0.1**

60% treatment is required per Table 3 of Chapter 500 = 50,047 sq ft (1.17 acres)

Total Redeveloped Area (from above table) =	83,412
Developed Area Treated =	**50,061**

Treatment Percentage Provided =	**60.0%**	See Stormwater Master Plan Calculations

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STORMWATER BMP TREATMENT SUMMARY

Project Name: Bangor Housing Development Corporation - Yellen Pines
Project Location: 236 Maine Ave, Bangor, ME
Project No: 251269.01
By: AML
Date: 4/30/2026
Checked By: AJD
Date: 5/27/2026

STORMWATER BMP TREATMENT SUMMARY

	Treated Impervious Area (sf)	Treated Landscaped Area (sf)	Treated Developed Area (sf)	Subcatchment ID
Roof Dripline Filter 1	8,150	0	8,150	SC-1C1
Roof Dripline Filter 2	3,005	0	3,005	SC-1D1
Roof Dripline Filter 3	7,751	0	7,751	SC-1C2
Roof Dripline Filter 4	2,657	0	2,657	SC-1D2
Underdrained Soil filter	15,525	12,973	28,498	SC-1A, SC-1A1 & SC-1A2
Proposed Treatment Area (sf)	**37,088**	**12,973**	**50,061**	
Proposed Treatment Area (ac)	**0.85**	**0.30**	**1.15**	

Total Impervious Area Treated	**88.8%**
Total Developed Area Treated	**60.02%**

TREATMENT SUMMARY FOR REDEVELOPMENT

	Total Project Redevelopment Areas	Required Treatment Area (60%)	Total Area Treated (SF)
Impervious Area (SF)	41,787		50,061
Landscaped Area (SF)	41,625		
Redeveloped Area (SF)	83,412	**50,047**	
Percent of Total Redeveloped Area Treated			**60.0%**

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STORMWATER TREATMENT SIZING CALCULATIONS

Project Name: Bangor Housing Development Corporation - Yellen Pines
Project Location: 236 Maine Ave, Bangor, ME
Project No: 251269.01
By: AML
Date: 4/30/2026
Checked By: AJD
Date: 5/27/2026

Stormwater Treatment: Underdrained Soil Filter #1 Parking Area and Landscaped area

				DEVELOPED AREA	=	28,498	sf	
				IMPERVIOUS AREAS CAPTURED	=	15525	sf	
				NON-IMPERVIOUS AREAS CAPTURED	=	12,973	sf	
				TOTAL AREA CAPTURED	=	28,498	sf	
				REQUIRED TREATMENT VOLUME				
(1"/12")	14,928	+	(0.4"/12")	12,973	=	1,676	cf	2,317 cf provided
				CHANNEL PROTECTION VOLUME (DEPTH)	=	1.5	ft	1.5 ft provided
				REQUIRED FILTER SURFACE AREA				
(0.05)	14,928	+	(0.2)	12,973	=	1,006	sf	1,179 sf provided
				SEDIMENT TRAP VOLUME				
(10.00)	0.356	(500 lbs per acre-storm) : (90 lb /ft^3)			=	20	cf	
				CUMULATIVE STORAGE	=	3,384	cf	
				FLOW AT UNDERDRAIN OUTLET	=	0.04	cfs	
				DRAIN TIME				
3384	cf	/	0.04	/ 3,600	=	24	hours	

Stormwater Treatment: Roof Dripline Filter #1 Southwest Side of Building

ROOF AREAS CAPTURED	=	8,150	sf
GRASS AREAS CAPTURED	=	N/A	
MINIMUM STORAGE VOLUME			
1 inch x Impervious Area	=	679	cf
PROPOSED FILTER SIZE	=	4 feet wide by 2.25 feet deep by 238 feet long (with 40% voids in stone)	
Storage Volume Provided	=	857	cf

Stormwater Treatment: Roof Dripline Filter #2 Northwest Side of Building

ROOF AREAS CAPTURED	=	3,005	sf
GRASS AREAS CAPTURED	=	N/A	
MINIMUM STORAGE VOLUME			
1 inch x Impervious Area	=	250	cf
PROPOSED FILTER SIZE	=	4 feet wide by 2.25 feet deep by 92 feet long (with 40% voids in stone)	

ACTUAL VOLUME PROPOSED	=	331 cf

Stormwater Treatment: Roof Dripline Filter #3		Southeast Side of Building
ROOF AREAS CAPTURED	=	7,751 sf
GRASS AREAS CAPTURED	=	N/A
MINIMUM STORAGE VOLUME		
1 inch x Impervious Area	=	646 cf
PROPOSED FILTER SIZE	=	4 feet wide by 2 feet deep by 208 feet long (with 40% voids in stone)
ACTUAL VOLUME PROPOSED	=	665.6 cf

Stormwater Treatment: Roof Dripline Filter #4		Northeast Side of Building
ROOF AREAS CAPTURED	=	2,657 sf
GRASS AREAS CAPTURED	=	N/A
MINIMUM STORAGE VOLUME		
1 inch x Impervious Area	=	221 cf
PROPOSED FILTER SIZE	=	4 feet wide by 2.75 feet deep by 54 feet long (with 40% voids in stone)
Storage Volume Provided	=	237.6 cf

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February 10, 2026

Jefferson Davis
City of Bangor Engineering Department – Sewer
73 Harlow Street
Bangor, ME 04401

Subject: Bangor Housing Development Corporation
Home for Good Bangor
236 Maine Avenue, Bangor, Maine

Dear Jefferson:

On behalf of Bangor Housing Development Corporation (BHDC), Sevee & Maher Engineers, Inc. (SME) is requesting a letter from the Bangor Engineering Department (BED) to outline sewer capacity to serve the thirty (30)-unit rehabilitation apartment building at 236 Maine Avenue in Bangor, Maine.

BHDC is proposing to build a new 19,500-square-foot, thirty (30)-unit rehabilitation apartment building to be served by the new 6-inch public sewer service in Maine Avenue. The building is anticipated to have a maximum of thirty (30) single-bedroom units and nine (9) employees. We anticipate the daily sewer demand to be approximately 3,708 gallons per day.

Please contact me at 207.829.5016 or Anna.Dedon@smemaine.com if you have any questions or need additional information regarding this project. Thank you in advance for your attention to this matter.

Very truly yours,

SEVEE & MAHER ENGINEERS, INC.

Anna Dedon, P.E.
Civil Engineer

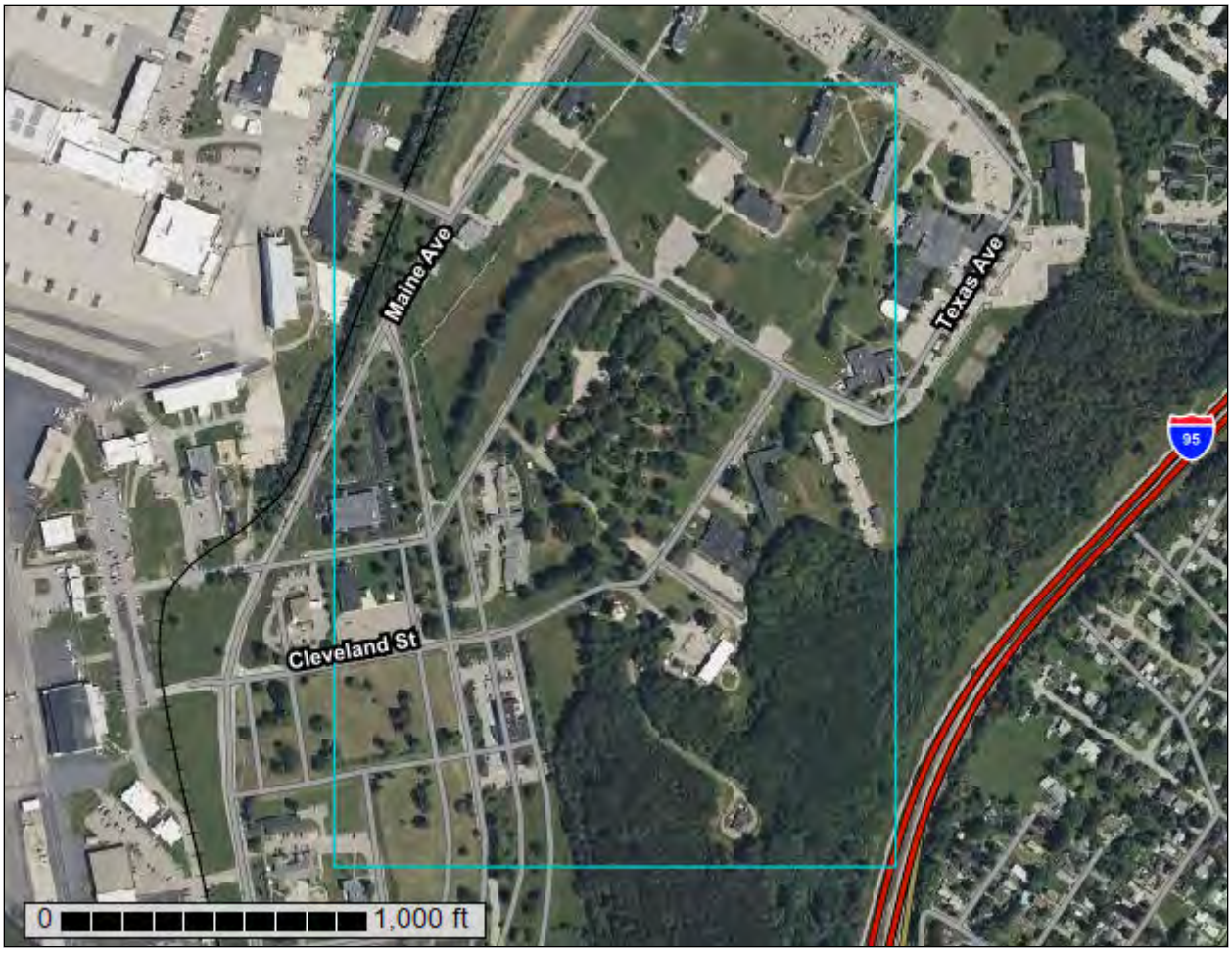
United States Department of Agriculture

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 Penobscot County, Maine, Southern Part



January 21, 2026

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: 1:4,560 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

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 INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Penobscot County, Maine, Southern Part
Survey Area Data: Version 11, Aug 29, 2025

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

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

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CTB	Telos-Chesuncook complex, 0 to 8 percent slopes, very stony	22.0	20.3%
CuB	Chesuncook-Telos-Urban land association, 0 to 8 percent slopes	0.4	0.3%
ElB	Elliottsville-Chesuncook association, 3 to 8 percent slopes, very stony	11.5	10.6%
PuB	Pushaw-Swanville-Urban land association, 0 to 8 percent slopes	49.4	45.6%
SvA	Swanville silt loam, 0 to 3 percent slopes	2.2	2.0%
TcC	Chesuncook-Telos complex, 8 to 15 percent slopes, very stony	22.2	20.5%
UrB	Urban land-Anthroportic Udorthents complex, 0 to 8 percent slopes	0.7	0.6%
Totals for Area of Interest		**108.4**	**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.

Penobscot County, Maine, Southern Part

CTB—Telos-Chesuncook complex, 0 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 1ls99
Elevation: 50 to 750 feet
Mean annual precipitation: 39 to 45 inches
Mean annual air temperature: 42 to 45 degrees F
Frost-free period: 115 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Telos and similar soils: 45 percent
Chesuncook and similar soils: 40 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Telos

Setting

Landform: Ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loamy lodgment till

Typical profile

Oa - 0 to 3 inches: highly decomposed plant material
E - 3 to 5 inches: silt loam
Bs - 5 to 11 inches: silt loam
BC - 11 to 16 inches: gravelly loam
Cd - 16 to 65 inches: gravelly loam

Properties and qualities

Slope: 0 to 6 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 14 to 23 inches to densic material
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 6 to 20 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods), F144BY503ME - Loamy Flat
Hydric soil rating: No

Description of Chesuncook

Setting

Landform: Ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
E - 2 to 5 inches: silt loam
Bs - 5 to 18 inches: gravelly silt loam
BC - 18 to 24 inches: cobbly silt loam
Cd - 24 to 65 inches: cobbly loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 21 to 31 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 16 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)
Hydric soil rating: No

Minor Components

Monarda

Percent of map unit: 6 percent
Landform: Ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

CuB—Chesuncook-Telos-Urban land association, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2lfb7
Elevation: 50 to 750 feet
Mean annual precipitation: 39 to 45 inches
Mean annual air temperature: 42 to 45 degrees F
Frost-free period: 115 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Chesuncook and similar soils: 45 percent
Telos and similar soils: 25 percent
Urban land: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chesuncook

Setting

Landform: Ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till

Typical profile

Ap - 0 to 10 inches: silt loam
Bs - 10 to 17 inches: silt loam
BC - 17 to 24 inches: gravelly silt loam
Cd - 24 to 65 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 29 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 16 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)

Hydric soil rating: No

Description of Telos

Setting

Landform: Ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loamy lodgment till

Typical profile

Ap - 0 to 7 inches: silt loam
Bs - 7 to 11 inches: silt loam
BC - 11 to 15 inches: silt loam
Cd - 15 to 65 inches: loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: 13 to 19 inches to densic material
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 6 to 20 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods), F144BY503ME - Loamy Flat
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

ElB—Elliottsville-Chesuncook association, 3 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2p9q8
Elevation: 50 to 750 feet
Mean annual precipitation: 39 to 45 inches
Mean annual air temperature: 42 to 45 degrees F
Frost-free period: 115 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Elliottsville and similar soils: 45 percent
Chesuncook and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elliottsville

Setting

Landform: Ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy subglacial till

Typical profile

Oa - 0 to 2 inches: highly decomposed plant material
E - 2 to 5 inches: silt loam
Bs - 5 to 14 inches: silt loam
BC - 14 to 23 inches: silt loam
C - 23 to 30 inches: gravelly silt loam
R - 30 to 79 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 21 to 43 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to low (0.00 to 0.01 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods), F144BY702ME - Shallow and Moderately-deep Till
Hydric soil rating: No

Description of Chesuncook

Setting

Landform: Ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
E - 2 to 5 inches: silt loam
Bs - 5 to 18 inches: gravelly silt loam
BC - 18 to 24 inches: cobbly silt loam
Cd - 24 to 65 inches: cobbly loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 21 to 31 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 16 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)
Hydric soil rating: No

PuB—Pushaw-Swanville-Urban land association, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 1ls77
Elevation: 20 to 300 feet

Mean annual precipitation: 39 to 45 inches
Mean annual air temperature: 42 to 45 degrees F
Frost-free period: 115 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Pushaw and similar soils: 35 percent
Swanville and similar soils: 30 percent
Urban land: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pushaw

Setting

Landform: River valleys, marine terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, side slope, rise
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Fine-silty glaciomarine deposits

Typical profile

Ap - 0 to 7 inches: silt loam
Bw - 7 to 15 inches: silt loam
BCg - 15 to 18 inches: silt loam
C - 18 to 65 inches: silty clay loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 6 to 17 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F144BY401ME - Clay Flat
Hydric soil rating: No

Description of Swanville

Setting

Landform: River valleys, marine terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine-silty glaciomarine deposits

Typical profile

Ap - 0 to 6 inches: silt loam
Bg - 6 to 18 inches: silt loam
BCg - 18 to 24 inches: silt loam
C - 24 to 65 inches: silty clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F144BY001ME - Marine Terrace Flat, F144BY304ME - Wet Clay Flat, F144BY401ME - Clay Flat
Hydric soil rating: Yes

Description of Urban Land

Setting

Landform: — error in exists on —
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

SvA—Swanville silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: svyb
Elevation: 20 to 300 feet
Mean annual precipitation: 39 to 45 inches
Mean annual air temperature: 42 to 45 degrees F
Frost-free period: 115 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Swanville and similar soils: 80 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Swanville

Setting

Landform: Marine terraces, lakebeds (relict)
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine-silty glaciomarine deposits

Typical profile

Ap - 0 to 6 inches: silt loam
Bg - 6 to 18 inches: silt loam
BCg - 18 to 24 inches: silt loam
C - 24 to 65 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F144BY001ME - Marine Terrace Flat, F144BY304ME - Wet Clay Flat, F144BY305ME - Wet Loamy Flat
Hydric soil rating: Yes

Minor Components

Biddeford

Percent of map unit: 5 percent
Landform: Lakebeds (relict), marine terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F144BY002ME - Marine Terrace Depression
Hydric soil rating: Yes

TcC—Chesuncook-Telos complex, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 1ls4z
Elevation: 50 to 900 feet
Mean annual precipitation: 39 to 45 inches
Mean annual air temperature: 42 to 45 degrees F
Frost-free period: 115 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Chesuncook and similar soils: 45 percent
Telos and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chesuncook

Setting

Landform: Drumlinoid ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
E - 2 to 5 inches: silt loam
Bs - 5 to 18 inches: gravelly silt loam
BC - 18 to 24 inches: cobbly silt loam
Cd - 24 to 65 inches: cobbly loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 21 to 31 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 16 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)

Hydric soil rating: No

Description of Telos

Setting

Landform: Drumlinoid ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loamy lodgment till

Typical profile

Oa - 0 to 3 inches: highly decomposed plant material
E - 3 to 5 inches: silt loam
Bs - 5 to 11 inches: silt loam
BC - 11 to 16 inches: gravelly loam
Cd - 16 to 65 inches: gravelly loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 14 to 23 inches to densic material
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 6 to 20 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods), F144BY502ME - Loamy Till Toeslope
Hydric soil rating: No

UrB—Urban land-Anthroportic Udorthents complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: sw80
Elevation: 20 to 1,200 feet
Mean annual precipitation: 39 to 45 inches
Mean annual air temperature: 42 to 45 degrees F
Frost-free period: 115 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 70 percent
Anthroportic udorthents and similar soils: 15 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Marine terraces, ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Description of Anthroportic Udorthents

Setting

Landform: Marine terraces, ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy till

Typical profile

^A - 0 to 30 inches: silt loam
C - 30 to 65 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.01 to 99.90 in/hr)
Depth to water table: About 24 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydrologic Soil Group: C
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)
Hydric soil rating: No

Minor Components

Swanville

Percent of map unit: 3 percent

Landform: Marine terraces, river valleys
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F144BY001ME - Marine Terrace Flat
Hydric soil rating: Yes

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STORMWATER MANAGEMENT REPORT
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, MAINE

Prepared for

BANGOR HOUSING DEVELOPMENT CORPORATION

Bangor, Maine

May 2026

4 Blanchard Road
P.O. Box 85A
Cumberland, Maine 04021

Tel: 207.829.5016 sme-engineers.com

SME
SEVEE & MAHER
ENGINEERS

TABLE OF CONTENTS

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2.0	**PROJECT DESCRIPTION**	**1**
3.0	**SITE WATERSHED**	**3**
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6.0	**SUMMARY**	**7**

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APPENDIX B	PRE-DEVELOPMENT HYDROCAD CALCULATIONS
APPENDIX C	POST-DEVELOPMENT HYDROCAD CALCULATIONS
APPENDIX D	REDEVELOPMENT AND STORMWATER SUMMARY AND BMP TREATMENT SIZING
APPENDIX E	CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN
APPENDIX F	POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN

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STORMWATER MANAGEMENT REPORT
BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
BANGOR, MAINE

1.0 INTRODUCTION

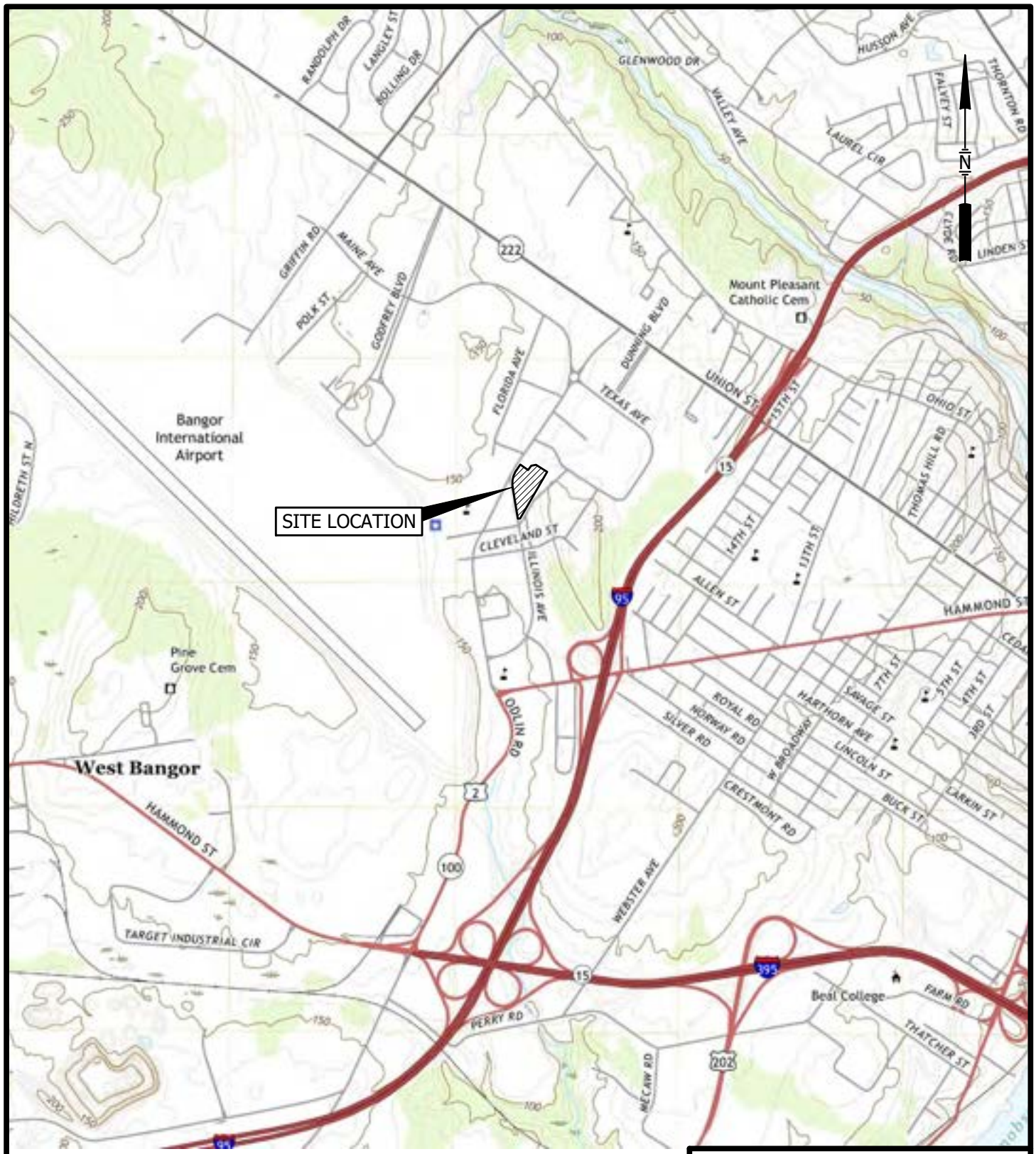
The following outlines the Stormwater Management Design for the Bangor Housing Development Corporation (BHDC) Yellen Pines project at 205 Corporate Drive in Bangor, Maine. The stormwater design prepared by Sevee & Maher Engineers, Inc. (SME) is based on the water quality and quantity objectives identified by the City of Bangor (City) Land Use Ordinance and Maine Department of Environmental Protection (MEDEP) Chapter 500 Standards.

2.0 PROJECT DESCRIPTION

BHDC proposes to develop a new 30-unit permanent supportive housing building called Yellen Pines on property currently at 205 Corporate Drive. The location of the project is shown in Figure 1, Site Location Map. The project is subject to a Land Development Permit from the City of Bangor Planning Board. This application provides detailed project information and outlines compliance with the applicable sections of the City Ordinance.

The project is located on the 5.05-acre parcel identified as Lot 001-A on City Tax Map R25 within the Government and Institutional Services District (G&ISD) and Technology and Service District (T&S) on the City's Official Zoning Map. The property is bounded by Maine Avenue to the west, Texas Avenue to the east, Corporate Drive to the south, and a developed University of Maine Office Building property to the north. The property is currently developed as a vegetated slope maintained as lawn with a row of trees, a concrete walkway, and a paved entrance off of Maine Avenue. The property is within the Urban Impaired Stream of Birch Stream and is primarily developed land.

The project will include a single story 19,100-square-foot building that will include thirty (30) one-bed units with support offices and lounge area. The construction will include area for eleven (11) parking spaces with one (1) ADA accessible parking space. The project will have a new 24-foot paved access drive from Corporate Drive sized for access by City fire and emergency vehicles. Additional site improvements include a patio along the southern side of the building, public water and sewer, underground utilities, stormwater management, site lighting, and landscaping.



BASE MAP ADAPTED FROM 7.5 MIN USGS TOPO QUADS
BANGOR, ME - 2021

1000 0 2000 FEET

DWG: SITELOC LMN: NONE CTB: SME-STD REV: 5/1/2026

FIGURE 1
SITE LOCATION MAP
BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

SME
SEVEE & MAHER ENGINEERS

C:\Users\zander.foster\OneDrive - SME_SP\Civil-ME\Gawron Turgeon\Bangor Housing\Acad\Figures\SITELOC.dwg, A_FIG 1, 5/1/2026 9:08:56 AM, Zander.Foster

The housing project will result in approximately 84,740 square feet of developed area, all of which will be considered redevelopment given the nature of the existing site. This redeveloped area will include 41,156 square feet of new impervious area. The existing concrete walkway and paved turnaround on-site will be demolished, resulting in a net increase of approximately 37,339 square feet of impervious area post-redevelopment.

The Bangor Housing property is regulated under an
existing Maine Department of Environmental Protection (MEDEP) Site Location of Development Act (SLODA) permit, which is required to be amended for changes to the property including redevelopment.

As a result of the SLODA Amendment, the project is subject to the redevelopment standards of MEDEP Chapter 500 for treating stormwater runoff. Stormwater management for this project will be accomplished using a closed stormwater management system including catch basins, storm drains, roof dripline filters, and a grassed underdrained soil filter.

3.0 SITE WATERSHED

On-site soils were identified using the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil information for Penobscot County, Maine, Southern Part. A copy of the custom Soil Resource Report is included in Appendix A. The soil in the area of work consists of Chesuncook-Telos complex (TcC), Telos-Chesnucook complex (CTB), Elliottsville-Chesuncook association (ElB), and Pushaw-Swanville-Urban land association (PuB). The soil natural drainage classifications are "Moderately well drained," "well drained," and "somewhat poorly drained." The hydrologic soil groups are Type C/D, D, C, and C/D, respectively.

The property is currently developed as a vegetated slope maintained as lawn with a row of trees, a concrete walkway, and a paved entrance off of Maine Avenue. There is a vegetated swale along the western edge of the property which conveys runoff to Maine Avenue. The ground surface generally slopes from east to west at grades ranging from 2 to 10 percent.

The central portion of the site drains to a 30-inch culvert under Maine Avenue. The southern portion of the site drains west into a vegetated swale which passes through a 12-inch culvert before connecting to the 30-inch culvert under Maine Avenue. The off-site areas east of Texas Avenue drain to a roadside swale that outlets through a 24-inch culvert beneath Texas Avenue into the vegetated swale. These areas are all modeled as draining to the culvert under Maine Avenue, which serves as Analysis Point 1 (AP-1) in this report.

The northeast off-site and northeast portion of the site drain east to west to a roadside swale and an 18-inch culvert under Maine Avenue. This 18-inch culvert has been identified as the second Analysis Point (AP-2) for this report.

In developed conditions, stormwater runoff drainage patterns will be similar to existing conditions. The proposed roof is pitched to directly flow to roof dripline filters, and the driveway, parking lot, and sidewalk flow to a series of catch basins which connect to an underdrained soil filter (UDSF). The filters are located to optimize the collection of runoff from the new buildings, parking lots and roadways, and discharge to existing drainage features to the greatest extent possible. The 18-inch culvert under Maine Avenue will be plugged or removed by the City prior to project completion. The flow from the northeast off-site and northeast portion of the site will be routed to the 30-inch culvert under Maine Avenue.

Stormwater management plans identify the on-site drainage patterns before and after site redevelopment (see Drawings D-100 and D-101). Appendix B and Appendix C provide pre- and post-development stormwater calculations, respectively, using TR-20 methodologies prepared with the HydroCAD Version 10.20-2f computer stormwater modeling system by Applied Microcomputer Systems of Chocorua, New Hampshire.

4.0 STORMWATER QUALITY ANALYSIS

The project is required to meet the redevelopment portions of the General Standards since the site is developed as a grassed hill with a walkway in existing conditions. The areas considered as redevelopment on the site are shown on Figure 2 and Figure 3, and total approximately 84,740 square feet (1.95 acres). The Redevelopment Treatment Level Calculations are included in Appendix D of this report and show the project must provide treatment for 60 percent of the redeveloped area or approximately 50,843 square feet (1.17 acres).

Proposed stormwater best management practices (BMPs) will treat approximately 50,854 square feet of redevelopment, which accounts for 60 percent of redeveloped area. This treatment will be provided through construction of three roof dripline filters surrounding the building and a grassed underdrained soil filter.

The roof dripline filters have been designed to capture runoff from the roof of the building. Roof dripline filters will treat a total of 21,843 square feet of impervious area and 0 square feet of landscaped area, for a total of 21,843 square feet of treatment.

The underdrained soil filter has been designed to capture runoff from the driveway, the turnaround, and various landscaped areas around the building. The soil filter will treat 15,100 square feet of impervious area and 13,933 square feet of landscaped area, for a total of 29,033 square feet of treatment.

The sizing calculations for the Stormwater BMPs and overall Treatment Summary are included in Appendix D of this report.

EXISTING IMPERVIOUS AREA		
OTHER PARKING LOTS/DRIVEWAYS	3	1,110
OTHER ROOFTOP/WALKING PATHS/LAWN/LANDSCAPED AREAS	2	79,638
NON-GRASS LANDSCAPED/STORMWATER TREATMENT SYSTEM	1	3,992
	TOTAL	84,740

30 0 60 FEET

FIGURE 2
REDEVELOPMENT EXISTING CONDITIONS
BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

SME
SEVEE & MAHER ENGINEERS

DWG: BASE LMN: REDEV-E CTB: SME-STD.CTB JOB#: 251269 REV: 5/1/2026

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MAINE AVENUE

CORPORATE DRIVE

N/F
CITY OF BANGOR
PORTION OF
BOOK 8107, PAGE 215
FOR CONVEYANCE TO BANGOR
HOUSING AUTHORITY
AREA: 5.064 ACRES
CITY OF BANGOR
TAX MAP #25 - LOT 1A

PROPOSED REDEVELOPMENT AREAS		
OTHER PARKING LOTS/DRIVEWAYS	3	16,199
OTHER ROOFTOP/WALKING PATHS/LAWN/LANDSCAPED AREAS	2	59,482
NON-GRASS LANDSCAPED/STORMWATER TREATMENT SYSTEM	1	9,059
	TOTAL	87,739

30 0 60 FEET

FIGURE 3
PROPOSED REDEVELOPMENT
BANGOR HOUSING DEVELOPMENT CORPORATION
YELLEN PINES
205 CORPORATE DRIVE
BANGOR, ME

SME
SEVEE & MAHER
ENGINEERS

DWG: BASE LMN: REDEV-P CTB: SME-STD.CTB JOB#: 251269 REV: 5/1/2026

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5.0 STORMWATER QUANTITY ANALYSIS

Stormwater quantity is managed to the maximum extent practicable by minimizing the amount of impervious area required for site redevelopment.

Stormwater peak flow rates were modeled for the 2-, 10-, and 25-year/24-hour storm events with Type III Soil Conservation Service rainfall distribution using the HydroCAD computer modeling system by Applied Microcomputer Systems of Chocorua, New Hampshire. The peak flow rates at the Analysis Point are summarized in Table 1. Copies of the calculations for the pre-development and post-development models are provided in Appendices B and C.

TABLE 1

STORMWATER QUANTITY SUMMARY

AP	2-yr Storm		10-yr Storm		25-yr Storm	
	Pre- (cfs)	Post- (cfs)	Pre- (cfs)	Post- (cfs)	Pre- (cfs)	Post- (cfs)
1	11.60	14.15	21.56	25.29	25.12	31.51
2	5.71	0	9.90	0	11.99	0

Site drainage from the proposed redevelopment will generally follow the pre-development conditions. As outlined in Table 1, our model indicates an increase in peak flow rates at AP-1 for the post-development conditions and a decrease to 0 at AP-2. As noted above, the 18-inch culvert under Maine Avenue identified as AP-2 will be capped by the City and will no longer be useable. All runoff previously routed to AP-2 will now be routed to AP-1. The flow rates at AP-1 in post-development conditions will be less than the combined flows of AP-1 and AP-2 in pre-development conditions, indicating that the total flow from the site will be reduced in post-development conditions.

6.0 SUMMARY

The stormwater management for this project was designed in accordance with the water quality and quantity objectives identified by the City of Bangor Land Use Ordinance and MEDEP Chapter 500 requirements for development projects. There will be no adverse impact to adjacent properties or downstream structures as a result of this project.

WATERSHED RESOURCE CONSULTANTS, LLC
NATURAL RESOURCE AND SOIL SCIENCE CONSULTING

WRC 25132
November 3, 2025

Sevee & Maher Engineers
Attention: Daniel P. Diffin, P.E., Vice President/Senior Civil Engineer
4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Via email: *dpd@smemaine.com*

Subject: Summary Report of Protected Natural Resources
Bangor Housing Development Corporation
Maine Ave, Bangor, Maine

Dear Daniel,

This Summary Report of Protected Natural Resources Services presents a summary of the findings of protected natural resource field-delineation services conducted by Watershed Resource Consultants, LLC (WRC) within an approximately 1-acre area of the 20+/-acre property (R25-001-A) at the corner of Maine Avenue and Corporate Drive in Bangor, Maine (i.e., the "site"). The purpose of the services was to identify and delineate field-observable protected natural resources on the site. A sketch showing the approximate site is attached at the end of this Report.

The property is located on the toe slope of a shallow hill and hillside, with evidence of previous use, filling and grading. Maine Avenue is along the northwestern boundary, Corporate Drive is along the western boundary, and a commercial development is along the northern boundary. The site is mostly mowed lawn or field with an apparently man-made drainage swale parallelling Corporate Drive on the western side of the site. There is a paved walking path cutting through the site from northeast to southwest, which turns to parallel Corporate Drive.

Methodology

Watershed Resource Consultants, LLC (WRC) visited the site on October 23, 2025, to identify and delineate field-observable protected natural resources. Protected Natural Resources were identified as defined by the Maine Department of Environmental Protection[1] (MDEP) and U.S. Army Corps of Engineers[2] (Corps). Wetland delineation was conducted using the 1987 Corps Wetland Delineation Manual[3] and Northeast

[1] State of Maine, Department of Environmental Protection, Natural Resources Protection Act Statute, 38 M.R.S.A. §480-A to 480-HH, DEPLW284-W2010, Revised August 12, 2011.
[2] United States Department of the Army, General Permit, State of Maine, Effective: October 15, 2025 to October 15, 2030.
[3] Environmental Laboratory. 1987. "Corps of Engineers Wetland Delineation Manual", Technical Report Y-87-1, U.S. Army Engineers Waterways Experiment Station, Vicksburg, Miss.

Regional Supplement[4]. Stream identification was conducted using the MDEP Natural Resources Protection Act Statute and the Corps General Permit. Potential vernal pool identification was conducted using MDEP Chapter 335[5], the 2014 Maine Association of Wetlands Scientist (MAWS) Vernal Pool Survey Protocol, and the Corps General Permit. WRC surveyed the site for wetlands, streams and potential vernal pools, and also surveyed for streams within 75-feet of the site and potential vernal pools within 250-feet of the site, where on the larger property.

Findings

WRC did not identify field-observable Protected Natural Resources on the site. A constructed stormwater drainage feature is located along the southwestern portion of the property adjacent to Corporate Drive. The feature conveys flow under Maine Avenue through a culvert. Along Maine Avenue, ditches are present to divert stormwater from the roadway. The lawn in this area is maintained, and no hydrophytic vegetation was observed. Evidence of previous fill was noted within the site.

To identify if non-field observable Protected Natural Resources are mapped on the site by resource agencies, WRC reviewed published mapping for the site including USGS Topographic, USDA NRCS Soil Survey, USFWS National Wetlands Inventory, MDIFW Beginning with Habitat and Environmental Mapping Tool, and USFWS Information for Planning and Consultation (IPaC).

No Rare, Threatened, Endangered, Significant, Essential or S1/S2 species, habitats or communities are mapped by MDIFW or MNAP on or adjacent to the site based on publicly available databases.

USFWS IPaC indicates that three federally listed species should be considered as part of an effect analysis for a project on this site: the Proposed Endangered tricolored bat, the Endangered Atlantic salmon, and the Proposed Endangered monarch butterfly. Because the project site does not contain trees (bats), does not contain and is not adjacent to streams (Atlantic salmon), and is mowed regularly (milkweed), it is unlikely that any of these species are of concern to USFWS on this site. If the project will require a federal permit or will use federal funding, the federal action agency will determine if there are concerns regarding the project affecting these mapped habitats.

WRC's services included delineation of field-observable MDEP and Corps defined Protected Natural Resources only. Services did not include resource agency contact regarding mapped T&E, Significant, Essential, or S1/S2 species/habitats, regulations review, permitting assistance, wildlife or botanical assessments, or a full report.

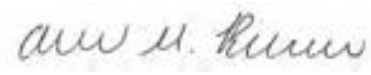
[4] U.S. Army Corps of Engineers. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual:Northcentral and Northeast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz.ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
[5] State of Maine, Department of Environmental Protection, Chapter 335 Significant Wildlife Habitat, amended January 7, 2014.

Closing

WRC appreciates the opportunity to assist you during this phase of the project. If you have any questions, please contact us.

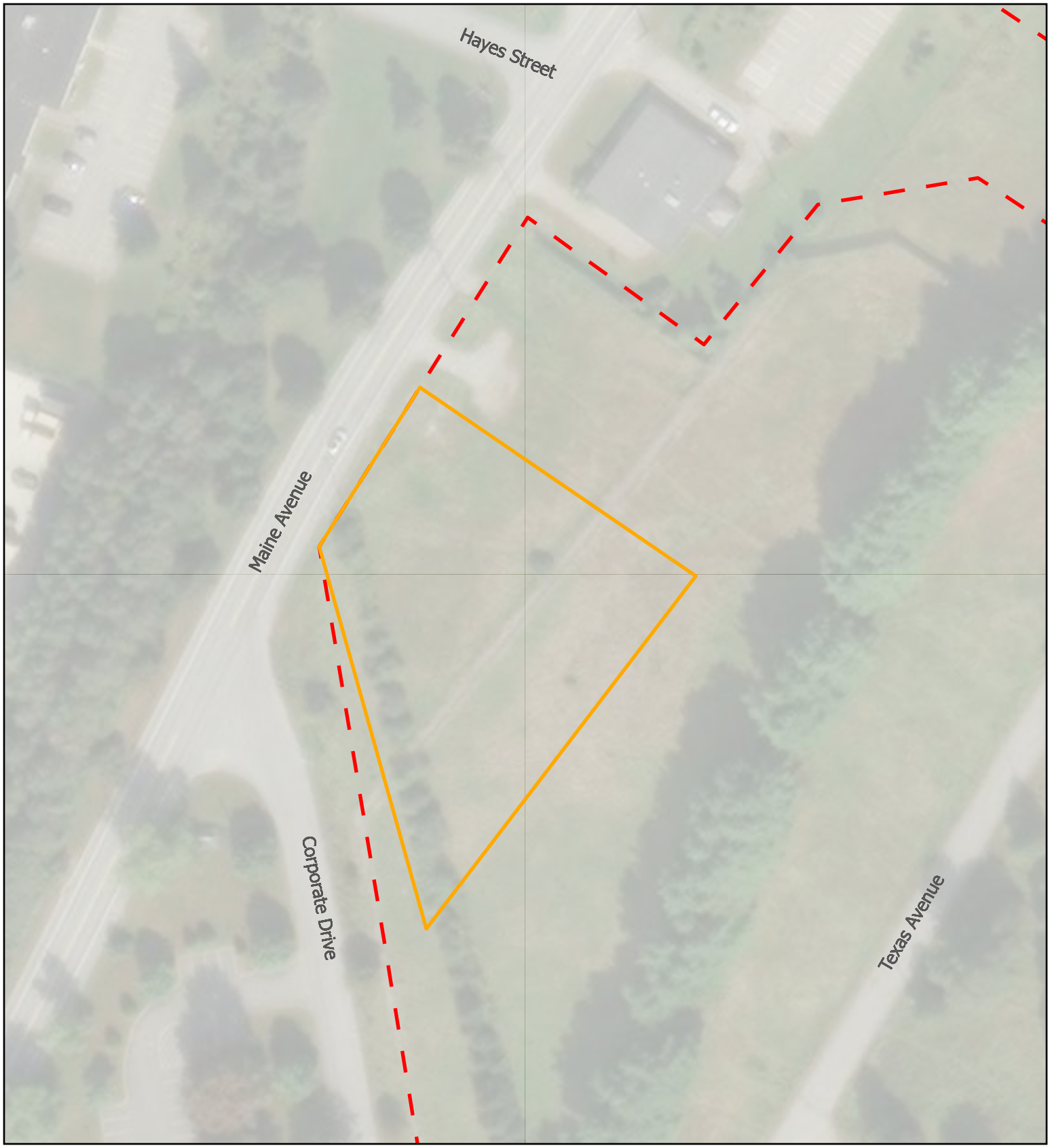
Sincerely,

Abigail A. Lewis
Wetland and Soil Scientist | Watershed Resource Consultants, LLC



Aleita M. Burman, L.S.S., L.S.E., NH CWS
Principal and Member | *Watershed Resource Consultants, LLC*

cc: Cindy Witas, Bangor Housing Development Corporation



WRC

2025-11-03
WWW.WRCMAINE.COM
NOT A LEGAL SURVEY

N

Legend

PNR Delineation Limit of Service

Project Patcel (MEGIS)

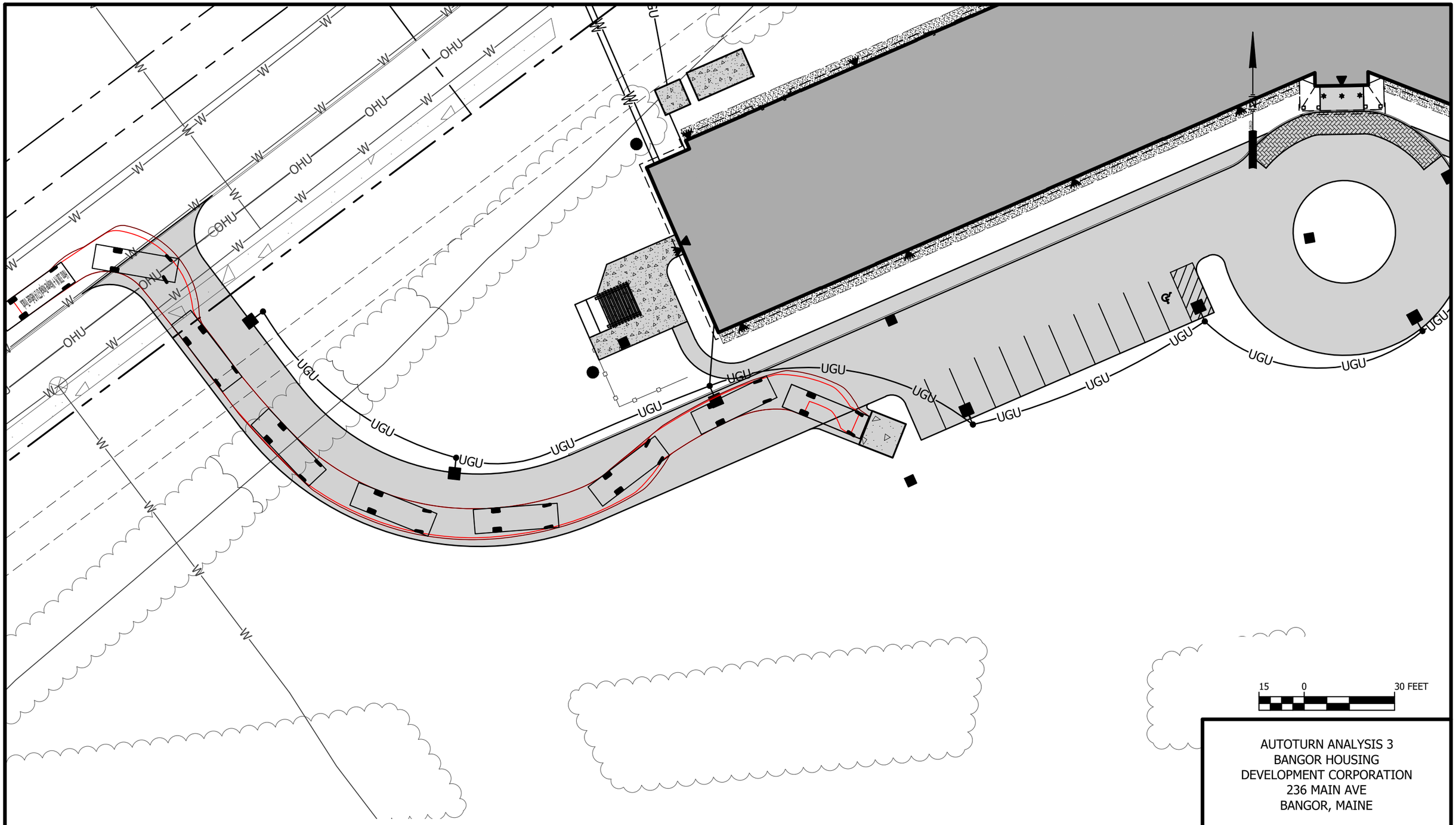
0 20 40 80 120 160
Feet

68.8067447°W 44.8064694°N
SITE LOCATION MAP
PROPOSED DEVELOPMENT
MAINE AVENUE
BANGOR, MAINE

ATTACHMENT 5

AUTOTURN FIGURE

SME
SEVEE & MAHER
ENGINEERS



15 0 30 FEET

AUTOTURN ANALYSIS 3
BANGOR HOUSING
DEVELOPMENT CORPORATION
236 MAIN AVE
BANGOR, MAINE

SME
SEVEE & MAHER
ENGINEERS

NOTE:
ANALYSIS DEPICTS 100' AERIAL LADDER DRIVING FORWARD TO THE END OF THE LOT AND BACKING OUT, TURNING AROUND IN THE DROP-OFF AREA.

DWG: BASE | LMN: ATURN 2 | CTB: SME-STD.CTB | JOB#: JOB# | REV: 5/21/2026

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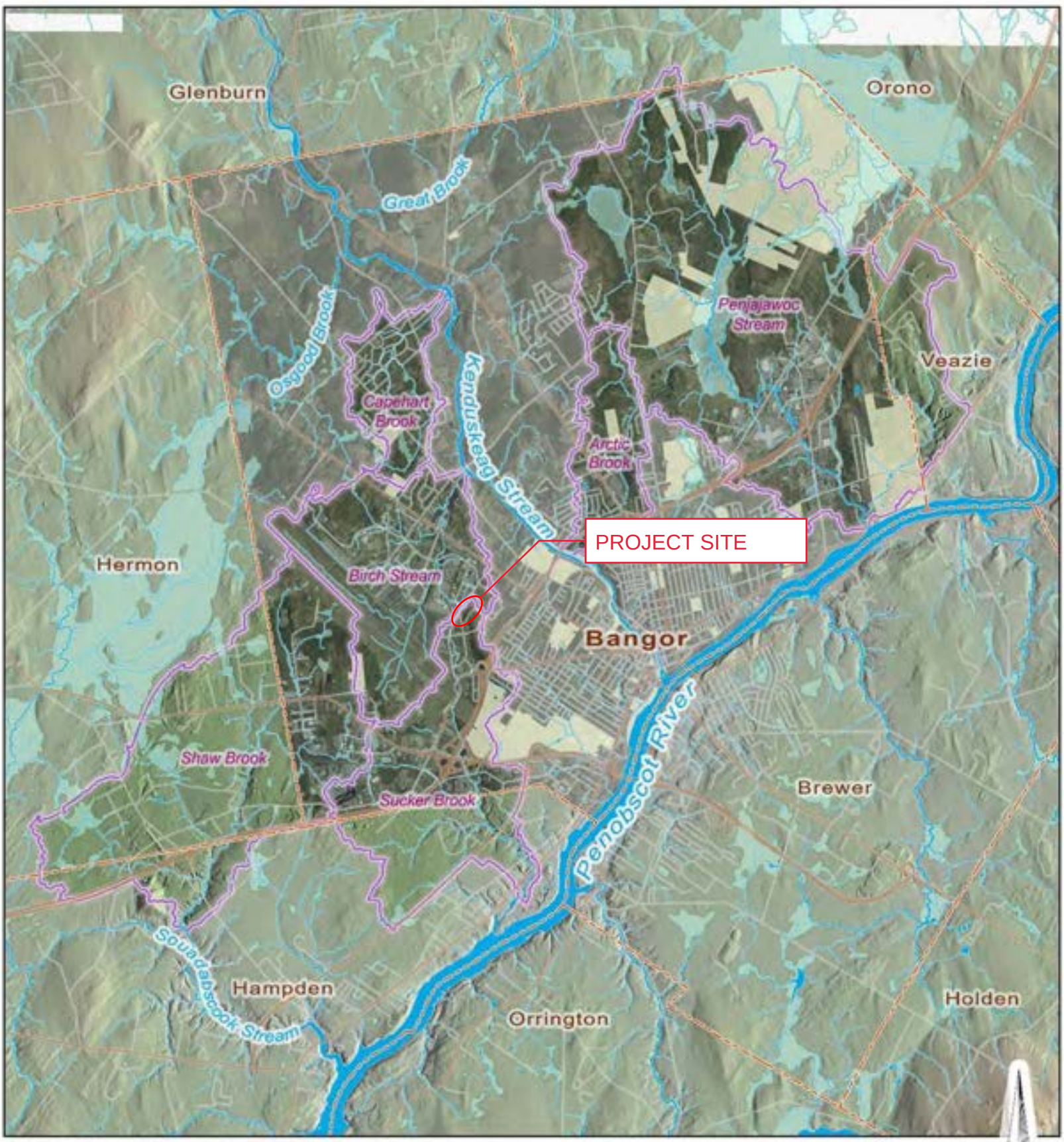
ATTACHMENT 4

URBAN IMPAIRED STREAM WATERSHED MAPS

SME
SEVEE & MAHER
ENGINEERS

Urban Impaired Streams in Bangor, Maine



Data: City of Bangor; Maine State Geolibrary; Maine DEP; USGS NHD Plus; USGS StreamStats; USFWS NWI.
Author: City of Bangor, Department of Engineering - GIS.
Last Edited: Friday, June 2, 2023

Urban Impaired Streams

Sucker Brook Watershed

Data: City of Bangor; Maine State Geolibrary; Maine DEP; USGS NHD Plus; USGS StreamStats; USFWS NWI.
Author: City of Bangor, Department of Engineering - GIS.
Last Edited: Friday, June 2, 2023

0 — ¼ — ½ — 1 Miles

Legend

- Roads
- Town Boundary
- Streams
- Water Areas
- Wetlands
- Protected Areas
- Watershed Boundary

Watershed Extent

CITY OF BANGOR

Planning Division
Checklist for Land Development Applications

Pre-application Meeting Date: 01.12.26

Date submitted: 05.01.26

Date Reviewed: 05.05.26

Initials: MRA, ABC

Project: Yellen Pines

Project Location: 205 Corporate Dr

Applicant: Bangor Housing

Applicant Representative: Cindy Witas

Phone Number or Email: cwitas@bangorhousing.org

Project Zoning District: G&ISD

Conditional Use: Permanent supportive housing

Yes	No	Not applicable / Other	Site Plan Element
X			Scale
X			North Arrow
X			Building/Lot dimensions
X			Building locations/uses
		See Comments	Parking/access/loading locations
		X	Signage
x			Lighting
		See Comments	Screening and Buffer
X			Erosion and sedimentation
X			Stormwater
X			Manholes/catch basins

CITY OF BANGOR

Planning Division
Checklist for Land Development Applications

Yes	No	Not applicable / Other	Site Plan Element
	X		Sewer
X			Water
X			Fire Hydrants / fire pond
X			Electric/Communication
X			Curbs and gutters
X			Paved/un-vegetated/vegetated areas
X			Trash
		X	Outdoor display/storage
X			Existing trees
X			Deed or other instrument allowing pursuit of permits
X			Topo
X			Adjacent buildings and features
		See Comments	Traffic
X			Location sketch
			Post Construction Stormwater Maintenance Plan
			Fire Comments
		X	Shoreland delineation/zoning compliance
		X	Floodplain location
		X	Effects on scenic, etc
x			Table showing compliance with dimensional Requirements
		See comments	Table showing compliance with Parking Requirements
	x	See Comments	**Additional Conditional Use General Requirements** Traffic Study
	X		**Additional Conditional Use Specific Requirements for Use or District**

		x	**Additional Subdivision Requirements** Lot lines Existing street connections Open space reservation Abutters Onsite wastewater Easements Soils Wetlands
		x	**Additional Solar applications** Height Yard Buffers Glare Decommissioning plan Utility Connections Confirmation of use

Staff Comments

Please provide a pedestrian access point to Maine Ave. § 165-114B requires safe and adequate pedestrian connection. Two pedestrian access points would be best (Engineering will be sending comments related to this).

The table showing parking says 14 spaces provided, but the plan shows 11 spaces. Also, this needs a minimum of 12 parking spots.

The proposed tree line on C-102 does not match L101.

Need to show documentation for technical capacity.

Will the circular island at the building entrance be landscaped? The architectural drawings show it being completely concrete, but the site drawings indicate that it will be pervious. If proposed to be fully concrete, we would suggest making it landscaped, which may reduce costs due to less concrete being needed, and would also reduce impervious area.

Where red maple is proposed next to the driveway, we would suggest a more salt tolerant species, such as one of the oaks that are proposed to be used, or an alternative species such as hackberry, Kentucky coffee tree, black gum/tupelo, sassafrass, or honeylocust.

Conditional use narrative – for standard §165-9A(4), there needs to be a comparison between the proposed building and buildings within 500' of the site.

The project narrative states that the project isn't subject to 38 M.R.S.A. §§ 481 through 488, which is for SLODA, which the project is subject to since it's modifying the airport SLODA. Please modify this statement.

*Engineering checking sewer capacity; sending other comments

***Please do not submit hard copies until we have notified you that the plans are good to go for a Planning Board agenda.**

Possible Planning Board agenda: 6/16/2026

Deadline to advertise: 6/5/2026 to post, 6/2/2026 to send to BDN

Deadline to post to abutters: 6/5/2026

Deadline for edits or amendments: 5/28/2026

Outlook

Re: 205 Corporate Dr

From Vaughan Littlefield <vaughan@bangorwater.org>
Date Wed 5/13/2026 3:10 PM
To Collette, Anja <anja.collette@bangormaine.gov>; Altiero, Matthew <Matthew.Altiero@bangormaine.gov>; Davis, Jefferson <jefferson.davis@bangormaine.gov>; May, Richard <richard.may@bangormaine.gov>; Vachon, Adam <adam.vachon@bangormaine.gov>

WARNING: EXTERNAL EMAIL - DOUBLE CHECK THE SENDER'S ADDRESS BEFORE OPENING LINKS OR ATTACHMENTS.

No comments from Bangor Water District.

Regards,
Vaughan Littlefield
Project Manager
Bangor Water District

PO Box 1129
Bangor, ME 04402-1129
TEL (207)947-4516 EXT. 208
FAX (207)947-5707
CELL (207)299-6309
EMAIL: vaughan@bangorwater.org

From: Collette, Anja <anja.collette@bangormaine.gov>
Sent: Wednesday, May 13, 2026 2:55 PM
To: Altiero, Matthew <Matthew.Altiero@bangormaine.gov>; Davis, Jefferson <jefferson.davis@bangormaine.gov>; May, Richard <richard.may@bangormaine.gov>; Vachon, Adam <adam.vachon@bangormaine.gov>; Vaughan Littlefield <vaughan@bangorwater.org>
Subject: Re: 205 Corporate Dr

Hi all, just following up on this. We need to get them all comments as soon as possible.

CITY OF BANGOR

Anja Collette, AICP
Planning Officer
Community & Economic Development
Planning Division

Outlook

Fw: 205 Corporate Dr

From Collette, Anja <anja.collette@bangormaine.gov>
Date Wed 5/13/2026 3:26 PM
To Altiero, Matthew <Matthew.Altiero@bangormaine.gov>

CITY OF BANGOR

Anja Collette, AICP
Planning Officer
Community & Economic Development
Planning Division

73 Harlow Street
Bangor, ME 04401
anja.collette@bangormaine.gov
Phone: 207.992.4280

From: Vachon, Adam <adam.vachon@bangormaine.gov>
Sent: Wednesday, May 13, 2026 3:01 PM
To: Collette, Anja <anja.collette@bangormaine.gov>
Subject: Re: 205 Corporate Dr

Hey Anja, I just have the comments from our in-person meeting. The turn around they are showing is large enough basically to handle the wheels on the truck but doesn't show that it can accommodate the nose of the truck which hangs out beyond the wheels. I will forward you the email I sent to Anna on it from their design team. I have not heard back from her yet.
Thank you!
Adam

CITY OF BANGOR

Outlook

Fw: Site Plan for Home For Good

From Collette, Anja <anja.collette@bangormaine.gov>
Date Wed 5/13/2026 3:27 PM
To Altiero, Matthew <Matthew.Altiero@bangormaine.gov>

CITY OF BANGOR

Anja Collette, AICP
Planning Officer
Community & Economic Development
Planning Division

73 Harlow Street
Bangor, ME 04401
anja.collette@bangormaine.gov
Phone: 207.992.4280

From: Vachon, Adam <adam.vachon@bangormaine.gov>
Sent: Wednesday, May 13, 2026 3:02 PM
To: Collette, Anja <anja.collette@bangormaine.gov>
Subject: Fw: Site Plan for Home For Good

Please see below.
Thank you!
Adam

CITY OF BANGOR

Adam Vachon
Fire Inspector, CFI-1

Fire Prevention Division
Phone: 207-992-4180
Fax: 207-942-8213

http://www.bangormaine.gov

adam.vachon@bangormaine.gov

From: Vachon, Adam <adam.vachon@bangormaine.gov>
Sent: Wednesday, April 29, 2026 9:06 AM
To: Anna Dedon <Anna.Dedon@smemaine.com>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: Re: Site Plan for Home For Good

Good morning, Anna, this would work as long as there is an area outside the curb-to-curb radius to accommodate the additional footage needed for the chassis overhang. This area can be over a curb or walking surface as long as those areas are low enough to avoid contact the front of the truck and are kept clear of snow and other things. Light pole placement may need to be reconsidered as the "wall to wall" distance needed for the chassis overhang is 95'10" minimum. The flush paver area out front of the entrance canopy would still need to be capable of holding the 84,000 pounds required for access roads.

Thank you!
Adam

CITY OF BANGOR

Adam Vachon
Fire Inspector, CFI-1
Fire Prevention Division
Phone: 207-992-4180
Fax: 207-942-8213

http://www.bangormaine.gov

adam.vachon@bangormaine.gov

From: Anna Dedon <Anna.Dedon@smemaine.com>
Sent: Monday, April 27, 2026 2:12 PM
To: Vachon, Adam <adam.vachon@bangormaine.gov>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: RE: Site Plan for Home For Good

WARNING: EXTERNAL EMAIL - DOUBLE CHECK THE SENDER'S ADDRESS BEFORE OPENING LINKS OR ATTACHMENTS.

Hi Adam,

We resized the turnaround to provide an 82’ curb to curb width. See attached for a site plan. Is this acceptable to you guys?

Thanks,
Anna

Anna Dedon, PE
Civil Engineer

SME
SEVEE & MAHER ENGINEERS

Sevee & Maher Engineers, Inc.
4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Office: 207.829.5016
Cell: 207.831.4072

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From: Vachon, Adam <adam.vachon@bangormaine.gov>
Sent: Wednesday, April 22, 2026 8:07 AM
To: Anna Dedon <Anna.Dedon@smemaine.com>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: Re: Site Plan for Home For Good

Good morning, Anna, for this layout we would need the curb-to-curb dimension of 81'4" or more to approve. The removal of the island to allow us to drive across the middle would not work for us.

Thank you!
Adam

CITY OF BANGOR

Adam Vachon
Fire Inspector, CFI-1
Fire Prevention Division
Phone: 207-992-4180
Fax: 207-942-8213

http://www.bangormaine.gov

adam.vachon@bangormaine.gov

From: Anna Dedon <Anna.Dedon@smemaine.com>
Sent: Thursday, April 16, 2026 9:57 AM
To: Vachon, Adam <adam.vachon@bangormaine.gov>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: RE: Site Plan for Home For Good

WARNING: EXTERNAL EMAIL - DOUBLE CHECK THE SENDER'S ADDRESS BEFORE OPENING LINKS OR ATTACHMENTS.

Thanks Adam. We updated the turning radius of our model fire truck based on those specs. Increasing the whole turnaround to meet that radius would make it pretty huge, and it would require us to cut into the hill further. Instead, if you were able to drive across the center island and back up across the turnaround, would that work? We ran it on our end and it seems doable. Please see attached.

Thanks,
Anna

Anna Dedon, PE
Civil Engineer

SME
SEVEE & MAHER ENGINEERS

Sevee & Maher Engineers, Inc.
4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Office: 207.829.5016
Cell: 207.831.4072

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From: Vachon, Adam <adam.vachon@bangormaine.gov>
Sent: Wednesday, April 15, 2026 11:29 AM
To: Anna Dedon <Anna.Dedon@smemaine.com>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: Re: Site Plan for Home For Good

Hey Anna, where this is different from the previous design and ends at the turn around, we would hold this to the specs laid out by Pierce of a wall to wall radius of 47'11" (95'10" diameter), a curb to curb radius of 40'8" (81'4" diameter). The middle island area could not exceed the inside turning radius needs.

Adam

CITY OF BANGOR
Adam Vachon
Fire Inspector, CFI-1
Fire Prevention Division
Phone: 207-992-4180
Fax: 207-942-8213

http://www.bangormaine.gov

adam.vachon@bangormaine.gov

From: Anna Dedon <Anna.Dedon@smemaine.com>
Sent: Monday, April 13, 2026 11:01 AM
To: Vachon, Adam <adam.vachon@bangormaine.gov>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: RE: Site Plan for Home For Good

WARNING: EXTERNAL EMAIL - DOUBLE CHECK THE SENDER'S ADDRESS BEFORE OPENING LINKS OR ATTACHMENTS.

Hi Adam,

The site plan for the proposed Home for Good project has changed. The building was moved closer to Corporate Drive and the driveway and parking area were redesigned to follow the new shape of the building. We ran a vehicle path with a firetruck to see if the turnaround would work, and it looks like we'll have enough space. Can you review this with the fire chief to confirm?

Let me know if you have any questions.

Thanks,
Anna

Anna Dedon, PE
Civil Engineer

Sevee & Maher Engineers, Inc.
4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Office: 207.829.5016
Cell: 207.831.4072

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From: Anna Dedon
Sent: Wednesday, February 4, 2026 10:10 AM
To: Vachon, Adam <adam.vachon@bangormaine.gov>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: RE: Site Plan for Home For Good

Great, thanks very much Adam. We will update our plans to show this.

Anna Dedon, PE
Civil Engineer

Sevee & Maher Engineers, Inc.
4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Office: 207.829.5016
Cell: 207.831.4072

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From: Vachon, Adam <adam.vachon@bangormaine.gov>
Sent: Tuesday, February 3, 2026 2:17 PM
To: Anna Dedon <Anna.Dedon@smemaine.com>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: Re: Site Plan for Home For Good

Good afternoon Anna, if you can give us the bump out you added to this plan, and remove the island in the middle, we can make that work.
Thank you!
Adam

CITY OF BANGOR
Adam Vachon

Fire Inspector, CFI-1

Fire Prevention Division

Phone: 207-992-4180

Fax: 207-945-4449

http://www.bangormaine.gov
adam.vachon@bangormaine.gov

From: Anna Dedon <Anna.Dedon@smemaine.com>
Sent: Monday, February 2, 2026 1:10 PM
To: Vachon, Adam <adam.vachon@bangormaine.gov>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: RE: Site Plan for Home For Good

WARNING: EXTERNAL EMAIL - DOUBLE CHECK THE SENDER'S ADDRESS BEFORE OPENING LINKS OR ATTACHMENTS.

Hi Adam,

Just wanted to follow up on this. Have you had a chance to take a look at the expanded radius option with the chief?

Thanks,
Anna

Anna Dedon, PE
Civil Engineer

SME
SEVEE & MAHER ENGINEERS

Sevee & Maher Engineers, Inc.
4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Office: 207.829.5016
Cell: 207.831.4072

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From: Anna Dedon
Sent: Wednesday, January 21, 2026 5:07 PM
To: 'Vachon, Adam' <adam.vachon@bangormaine.gov>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: RE: Site Plan for Home For Good

Hi Adam,

Attached is a mock up that shows the additional 5' radius in red.

The bump out/T turnaround isn't ideal because the site is on a hill, and the steepest part of the hill is just behind the roundabout. We're trying to avoid cutting into it and possibly needing a retaining wall. I made the contours visible in this version so hopefully it's a little easier to visualize.

Thanks,
Anna

Anna Dedon, PE
Civil Engineer

SME
SEVEE & MAHER
ENGINEERS

Sevee & Maher Engineers, Inc.
4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Office: 207.829.5016
Cell: 207.831.4072

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From: Vachon, Adam <adam.vachon@bangormaine.gov>
Sent: Tuesday, January 20, 2026 2:37 PM
To: Anna Dedon <Anna.Dedon@smemaine.com>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: Re: Site Plan for Home For Good

Good afternoon Anna, I showed the provided mock ups to the Deputy Chief and we have a few questions:
Can you show us the mockup with the additional 5 feet on the outside radius?
Is there a reason why you couldn't put in the additional bump out we suggested to meet the turnaround need for our ladder? Or make the roundabout smaller but still create a "T" turn around in that area?

Thank you!
Adam

CITY OF BANGOR
Adam Vachon

Fire Inspector, CFI-1

Fire Prevention Division

Phone: 207-992-4180

Fax: 207-945-4449

http://www.bangormaine.gov
adam.vachon@bangormaine.gov

From: Anna Dedon <Anna.Dedon@smemaine.com>
Sent: Thursday, January 15, 2026 4:14 PM
To: Vachon, Adam <adam.vachon@bangormaine.gov>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: RE: Site Plan for Home For Good

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Thanks Adam. We ran an Autoturn analysis with the fire truck specs you provided, one turning around and backing in, and one driving in and backing out. Please see attached.

We would like to avoid the additional pavement off the roundabout if possible, and we can pave the center of the roundabout so you can drive across it. Do you think it's doable as shown? The tires are able to stay within the pavement and only the back of the truck goes beyond it. We can also bump out the outside radius another 5 feet to give a little more maneuverability.

Let me know if you'd like to jump on a teams call to go over the driving paths shown in the pdfs.

Thanks,
Anna

Anna Dedon, PE
Civil Engineer

SME
SEVEE & MAHER ENGINEERS
Sevee & Maher Engineers, Inc.

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Office: 207.829.5016
Cell: 207.831.4072

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From: Vachon, Adam <adam.vachon@bangormaine.gov>
Sent: Tuesday, January 13, 2026 12:21 PM
To: Anna Dedon <Anna.Dedon@smemaine.com>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: Re: Site Plan for Home For Good

Hey Anna, after meeting with the Deputy Chief, some sort of turn around would be needed for the main entrance. See attached for my markups. I have also included specs for our ladder truck. My thought is it may be able to go is off the drop-off circle. This wouldn't interfere with the existing tree buffer.
Thank you!
Adam

CITY OF BANGOR

Adam Vachon

Fire Inspector, CFI-1

Fire Prevention Division

Phone: 207-992-4180

Fax: 207-945-4449

http://www.bangormaine.gov
adam.vachon@bangormaine.gov

From: Vachon, Adam <adam.vachon@bangormaine.gov>
Sent: Tuesday, January 13, 2026 8:08 AM
To: Anna Dedon <Anna.Dedon@smemaine.com>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: Re: Site Plan for Home For Good

Thank you Anna, we will review this and get back to you soon.

Adam

CITY OF BANGOR

Adam Vachon

Fire Inspector, CFI-1

Fire Prevention Division

Phone: 207-992-4180

Fax: 207-945-4449

http://www.bangormaine.gov
adam.vachon@bangormaine.gov

From: Anna Dedon <Anna.Dedon@smemaine.com>
Sent: Monday, January 12, 2026 5:18 PM
To: Vachon, Adam <adam.vachon@bangormaine.gov>
Cc: Daniel Diffin <dpd@smemaine.com>
Subject: Site Plan for Home For Good

WARNING: EXTERNAL EMAIL - DOUBLE CHECK THE SENDER'S ADDRESS BEFORE OPENING LINKS OR ATTACHMENTS.

Hi Adam,

It was nice meeting you today. Please see attached for a pdf of our current site plan for you to pass along to the Chief. Please let me know if you need anything else from us.

Thanks,
Anna

Anna Dedon, PE
Civil Engineer

SME
SEVEE & MAHER ENGINEERS

Sevee & Maher Engineers, Inc.
4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Office: 207.829.5016
Cell: 207.831.4072

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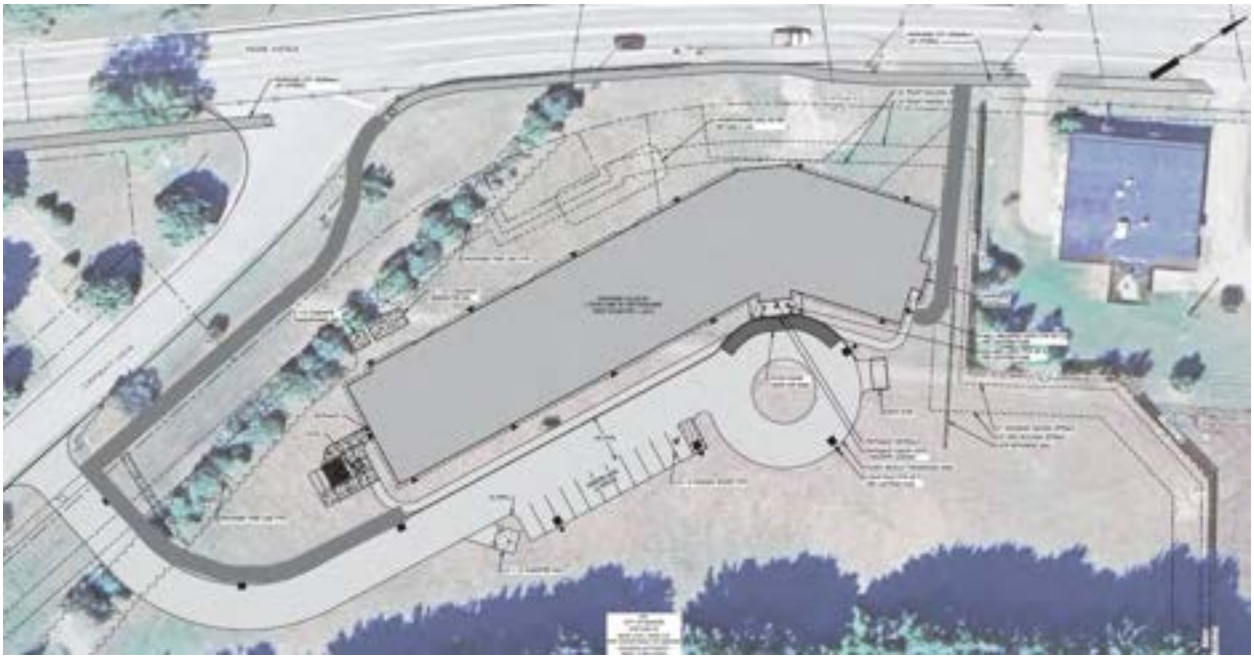
Engineering Comments

205 Corporate Drive

BHDC SDP

1. On page 5 of the LDP, in section 13, the narrative states that the proposed development is in the watershed of Sucker Brook. The proposed project is in the watershed of Birch Stream, which is also an Urban Impaired Stream. Please correct all instances of this throughout the application.
2. Please provide a Post-Construction Stormwater Maintenance Plan.
3. Show outlet locations for Dripline filters 1 and 2.
4. Consider adding underdrain to ditch line or gravel sub grade in cut area above parking and turnaround.
5. Add one or more walkway connections such as these:



6. Sewer service appears to be proposed running through a ditch in a location near the intersection of three storm drains. It will be relatively shallow, depending on slope, and could potentially be damaged easily during future stormwater maintenance activities. Can alternate stormdrain configurations be considered here to place the sewer under storm drain pipes rather than open ditch areas that may need sediment removal in the future? If the sewer will be deep enough not to be a concern through this area, please specify inverts at connection point to the City sewer to clarify the depth of the proposed sewer service.
7. Consider modifying the dumpster pad area to provide enough pavement for a truck to stay on a hard surface during loading. It looks like a truck would not be able to "square up" with the pad without using the entire roadway.
8. Please review grading and drainage plan. Multiple constructability issues and grading issues.
   Pipe from CB1-CB2 will be going through foundation.
   Cover issues with 12" driveway culvert (only a foot of cover)
   DMH 2 cannot be built with the proposed inverts. Pipe only has 6" over cover.
   ADA parking is not graded at 2% with spot grade labeled at 164'

Check grade at main building entrance. Spot grade labeled has the front entrance slab graded at 12%. Is a tip down being proposed?
Review sidewalk grading in front of building, showing granite curb but grades do not represent curbing.

9. Please submit ITE trip generation calculations for backup to the traffic statement provided in application.

Outlook

RE: 205 Corporate Dr

From Davis, Jefferson <jefferson.davis@bangormaine.gov>
Date Thu 5/14/2026 12:12 PM
To Collette, Anja <anja.collette@bangormaine.gov>; Holmquist, Jim <jim.holmquist@bangormaine.gov>
Cc Altiero, Matthew <Matthew.Altiero@bangormaine.gov>

Hi Anja,

Jim did a capacity study for that subsection and there is enough capacity to serve this development.

Jefferson Davis, PLA
Director of Engineering
Maine Licensed Landscape Architect
City of Bangor
73 Harlow Street
Bangor, Maine 04401
207-992-4244
jefferson.davis@bangormaine.gov

From: Collette, Anja <anja.collette@bangormaine.gov>
Sent: Tuesday, May 12, 2026 8:46 AM
To: Davis, Jefferson <jefferson.davis@bangormaine.gov>; Holmquist, Jim <jim.holmquist@bangormaine.gov>
Cc: Altiero, Matthew <Matthew.Altiero@bangormaine.gov>
Subject: Fw: 205 Corporate Dr

Hi, I think Jeff said you guys were checking the sewer capacity here; is there any update on that?

CITY OF BANGOR

Anja Collette, AICP
Planning Officer
Community & Economic Development
Planning Division

73 Harlow Street

Outlook

RE: 205 Corporate Dr Staff Comments

From Cindy Witas <cwitas@bangorhousing.org>
Date Fri 5/15/2026 2:41 PM
To Collette, Anja <anja.collette@bangormaine.gov>; Altiero, Matthew <Matthew.Altiero@bangormaine.gov>

WARNING: EXTERNAL EMAIL - DOUBLE CHECK THE SENDER'S ADDRESS BEFORE OPENING LINKS OR ATTACHMENTS.

Anja,

Moving the trees should not be a problem. Thank you for allowing us to remove shrubs in the swale. I will forward the comments to SME, the civil engineer, and we will submit a revised plan when all comments are incorporated. Can we expect more staff comments?

Thanks!

Cindy Witas| Development Director
Housing Authority of the City of Bangor
86 Davis Rd. Bangor, Maine 04401
Cell: 207-357-1280

Bangor Housing

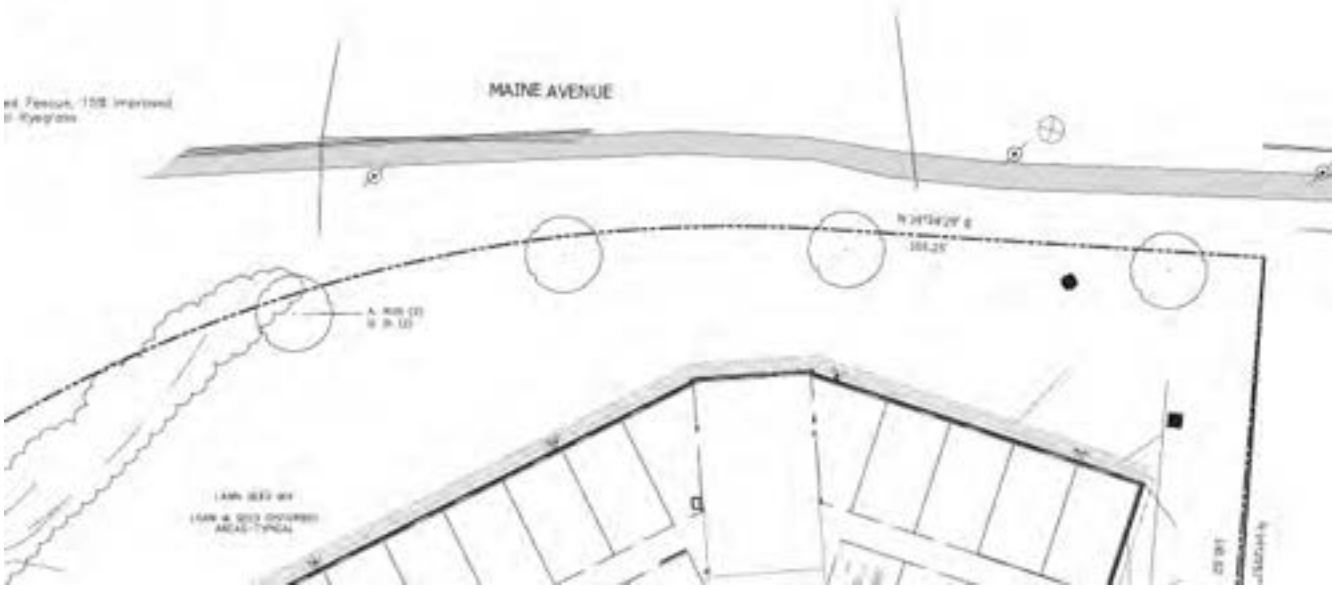
BANGOR HOUSING DEVELOPMENT CORP.

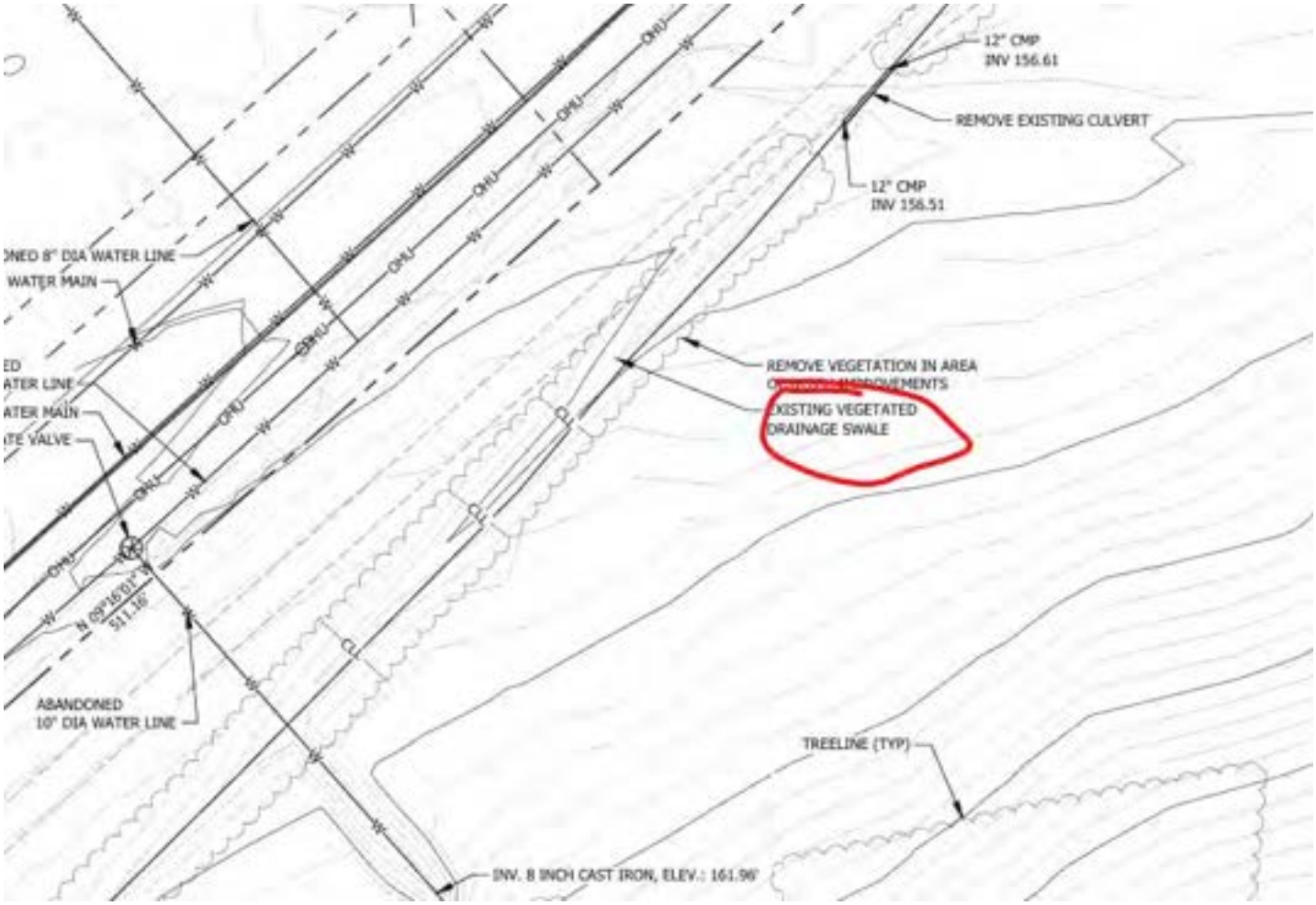
Bangor Housing Development Corporation is an affiliate of the Housing Authority of the City of Bangor.

From: Collette, Anja <anja.collette@bangormaine.gov>
Sent: Friday, May 15, 2026 2:27 PM
To: Cindy Witas <cwitas@bangorhousing.org>; Altiero, Matthew <Matthew.Altiero@bangormaine.gov>
Subject: Re: 205 Corporate Dr Staff Comments

Hi Cindy, our Forestry Division had some requests/comments on the proposed landscaping:

- Could the 4 proposed trees shown below be moved further back? They're concerned about proximity to the utility lines and appropriate clearance, as well as leaving enough space for the City to also plant some trees along the right-of-way.
- They've indicated that most of the shrubs in the swale below (2nd picture) are invasive, so if you did want to remove them, it wouldn't be frowned upon.





CITY OF BANGOR

SME
SEVEE & MAHER ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692
info@sme-engineers.com
sme-engineers.com

May 28, 2026

VIA EMAIL
Matthew Altiero
Planning Analyst, City of Bangor

Email: Matthew.Altiero@bangormaine.gov

Subject: Yellen Pines
205 Corporate Drive, Bangor, Maine
Response to City Comments

Dear Matthew,

On behalf of Bangor Housing Development Corporation (BHDC), Sevee & Maher Engineers, Inc. (SME) has prepared the following response to the review comments by the City of Bangor for the Yellen Pines Housing Project at 205 Corporate Drive in Bangor.

Review comments by City Planning Staff are outlined in bold and SME responses are listed below:

STAFF COMMENTS

1. **Please provide a pedestrian access point to Maine Ave. § 165-114B requires safe and adequate pedestrian connection. Two pedestrian access points would be best (Engineering will be sending comments related to this).**

   SME Response: The 5-foot sidewalk that wraps around the east side of the building has been extended to connect to the proposed sidewalk along Maine Avenue. Please see the revised plan set attached at the end of this document for details.

2. **The table showing parking says 14 spaces provided, but the plan shows 11 spaces. Also, this needs a minimum of 12 parking spots.**

   SME Response: Eleven spaces have been provided. The table on C-100 has been updated to reflect this. Ordinance § 165-72D states that a group home, halfway house, community living facility or emergency shelter is required to provide one space for each six clients to be housed plus one space for each staff person to be on the premises during the peak shift. The proposed project will service 30 clients at one time with four staff on premises during the peak shift. Therefore, the project will require five parking spaces for the number of clients and four parking spaces for staff, totaling nine spaces. Eleven spaces have been provided.

3. **The proposed tree line on C-102 does not match L101.**

   SME Response: The proposed tree lines on C-102 through C-105 have been corrected to match L-101. Vegetation in the swale will only be removed and replaced where the alignment of the swale is being changed or where the proposed driveway passes over the swale.

4. **Need to show documentation for technical capacity.**

   SME Response: Documentation for technical capacity is provided in Section 4 of Appendix B, the SLODA Amendment.

5. **Will the circular island at the building entrance be landscaped? The architectural drawings show it being completely concrete, but the site drawings indicate that it will be pervious. If proposed to be fully concrete, we would suggest making it landscaped, which may reduce costs due to less concrete being needed, and would also reduce impervious area.**

   SME Response: The island at the center of the turnaround will be landscaped. This will reduce cost and reduce the amount of stormwater treatment needed.

6. **Where red maple is proposed next to the driveway, we would suggest a more salt tolerant species, such as one of the oaks that are proposed to be used, or an alternative species such as hackberry, Kentucky coffee tree, black gum/tupelo, sassafrass, or honeylocust.**

   SME Response: The red maples have been changed to red oak.

7. **Conditional use narrative – for standard §165-9A(4), there needs to be a comparison between the proposed building and buildings within 500' of the site.**

   SME Response: A comparison between the proposed building and buildings within 500 feet of the site was provided in the Architectural Narrative in Appendix D. It discusses the architectural styles of the surrounding buildings as they compare to the proposed building.

8. **The project narrative states that the project isn't subject to 38 M.R.S.A. §§ 481 through 488, which is for SLODA, which the project is subject to since it's modifying the airport SLODA. Please modify this statement.**

   SME Response: Section J of the application narrative has been revised below to state that the project is subject to 38 M.R.S.A. §§ 481 through 488. The project will amend the existing SLODA permit for the airport per the application materials provided. Please see Attachment 1.

FIRE DEPARTMENT COMMENTS

1. **The turn around they are showing is large enough basically to handle the wheels on the truck but doesn't show that it can accommodate the nose of the truck which hangs out beyond the wheels.**

   SME Response: The awning overhang above the entrance slab has been reduced to provide the necessary clearance, and the light poles have been relocated to be outside of the truck's wall-to-wall radius. The location of the turnaround has also been relocated slightly further away from the building to provide more room for the awning. Please see the updated Plan Set.

ENGINEERING COMMENTS

1. **On page 5 of the LDP, in section 13, the narrative states that the proposed development is in the watershed of Sucker Brook. The proposed project is in the watershed of Birch Stream, which is also an Urban Impaired Stream. Please correct all instances of this throughout the application.**

SME Response: All instances of Sucker Brook have been changed to Birch Stream in the Narrative, the SLODA Amendment, and the Stormwater Report. Please see Attachments 1, 2, and 3. However, the development appears to be in the watershed of Sucker Brook per the maps provided on the City of Bangor's Urban Impaired Streams website. Please see Attachment 4 for the maps with the project's location circled.

2. **Please provide a Post-Construction Stormwater Maintenance Plan.**

   SME Response: A Post-Construction Stormwater Maintenance Plan has been included in the revised Post-Construction Stormwater Management Report in Attachment 3. The Stormwater Management Report has been revised to incorporate changes made per the City's review comments.

3. **Show outlet locations for Dripline filters 1 and 2.**

   SME Response: Roof dripline filters #1 and #2 drain toward the middle of the north side of the building and outlet through a storm drain pipe to the ditch along Maine Avenue.

4. **Consider adding underdrain to ditch line or gravel sub grade in cut area above parking and turnaround.**

   SME Response: An underdrain or gravel sub grade is not needed in this area. The drainage swale has been graded to flow toward the catch basins at either end and has been sized to handle the uphill runoff from the area south of the project.

5. **Add one or more walkway connections such as these:**

   SME Response: Please see response #1 in the Staff Comments section above.

6. **Sewer service appears to be proposed running through a ditch in a location near the intersection of three storm drains. It will be relatively shallow, depending on slope, and could potentially be damaged easily during future stormwater maintenance activities. Can alternate stormdrain configurations be considered here to place the sewer under storm drain pipes rather than open ditch areas that may need sediment removal in the future? If the sewer will be deep enough not to be a concern through this area, please specify inverts at connection point to the City sewer to clarify the depth of the proposed sewer service.**

   SME Response: The sewer configuration was chosen to avoid crossing through the neighboring property before connecting to the city sewer. The invert elevations have been revised to make the sewer line deeper, connecting at the elevation of the existing City sewer. This will avoid any potential conflict from maintenance activities to the storm system. Please see the revised Drawing C-103.

7. **Consider modifying the dumpster pad area to provide enough pavement for a truck to stay on a hard surface during loading. It looks like a truck would not be able to "square up" with the pad without using the entire roadway.**

   SME Response: The dumpster pad is angled to allow a garbage truck to pull in as it comes up the driveway. The truck is able to stay on pavement during loading and there is an 8-foot gap behind it that will allow a car to pass through. After loading, the truck can then pull back slightly, straighten out, and continue on to the turnaround. This is expected to be a low-traffic site and

the garbage truck would only impede traffic for a few minutes at a time. Please see the Autoturn figure provided in Attachment 5 for reference.

8. **Please review grading and drainage plan. Multiple constructability issues and grading issues.**

   a. **Pipe from CB1-CB2 will be going through foundation.**

      SME Response: The pipe crosses under the dripline filter but does not intersect with the building foundation. The dashed line around the building represents the roof edge, not the foundation.

   b. **Cover issues with 12" driveway culvert (only a foot of cover)**

      SME Response: The culvert has been lowered one foot and shifted up the road gradient slightly to maximize cover over the pipe to approximately two feet. The grading in the roadside swale has been adjusted to accommodate this. The driveway is already sloped at 6 percent in the area over the culvert and cannot be raised higher.

   c. **DMH 2 cannot be built with the proposed inverts. Pipe only has 6" over cover.**

      SME Response: The rim of the manhole has been raised to 159.8 and the inverts lowered to 157.3. The outlet of the pipe to the soil filter has been lowered to 156.6 to maintain a 0.5 percent slope. This will give 1.5 feet of cover over the pipes. The manhole type has also been changed to a flat-top manhole for constructability.

   d. **ADA parking is not graded at 2% with spot grade labeled at 164'**

      SME Response: The spot grade has been reduced to 163.8 to give a slope of two percent across the ADA spot.

   e. **Check grade at main building entrance. Spot grade labeled has the front entrance slab graded at 12%. Is a tip down being proposed?**

      SME Response: The spot grade has been revised to 163.8 to give a slope of two percent across the entrance slab.

   f. **Review sidewalk grading in front of building, showing granite curb but grades do not represent curbing.**

      SME Response: There will be a curb along the sidewalk. Top of curb and bottom of curb elevations have been added to make this clearer, and the proposed contour lines have been updated. Please see Drawing C-104 in the revised plan set.

9. **Please submit ITE trip generation calculations for backup to the traffic statement provided in application.**

   SME Response: The ITE Trip Generation Manual, 11th Edition, Volume 3 was used for these calculations. The project falls under the definition of both "Congregate Care Facility" and "Assisted Living." The Assisted Living data was used, as it gives a more conservative answer. Calculations are shown below.

AM Peak Hour: 0.22 Trips per Bed x 30 beds = 6.6 trips -> **7 trips**
PM Peak Hour: 0.33 Trips per Bed x 30 beds = 9.9 trips -> **10 trips**

LANDSCAPING COMMENTS

1. **Could the 4 proposed trees shown below be moved further back? They're concerned about proximity to the utility lines and appropriate clearance, as well as leaving enough space for the City to also plant some trees along the right-of-way.**

   SME Response: The trees have been shifted further into the site to provide more clearance.

2. **They've indicated that most of the shrubs in the swale below (2nd picture) are invasive, so if you did want to remove them, it wouldn't be frowned upon.**

   SME Response: Invasive plant material shall be removed from the swale in the area where the alignment of the swale is being changed.

SME has provided this comment response to the City's Review Comments and requests that the project be scheduled for the next available Planning Board meeting. If you have any questions or comments, please do not hesitate to contact me at 207.829.5016.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.

Daniel P. Diffin, P.E., LEED AP BD+C
Vice President/Senior Civil Engineer

Attachments:
1 – Revised Application Narrative
2 – Revised SLODA Amendment Narrative
3 – Revised Stormwater Management Report
4 – Urban Impaired Stream Watershed Maps
5 – Autoturn Figure
6 – Revised Plan Set

Outlook

Re: Response to City Comments - 205 Corporate Drive

From Hanscom Bilotta, Brenda <Brenda.hanscombilotta@bangormaine.gov>
Date Fri 5/29/2026 8:31 AM
To Altiero, Matthew <Matthew.Altiero@bangormaine.gov>

All set

Best Regards,

CITY OF BANGOR

Brenda Hanscom Bilotta
Deputy Director of Code Enforcement
Code Enforcement Office
Phone: 207-992-4224
Fax: 207-992-4196
http://www.bangormaine.gov

From: Altiero, Matthew <Matthew.Altiero@bangormaine.gov>
Sent: Thursday, May 28, 2026 3:18 PM
To: Davis, Jefferson <jefferson.davis@bangormaine.gov>; May, Richard <richard.may@bangormaine.gov>; LaBree, Jeff <jeff.labree@bangormaine.gov>; Hanscom Bilotta, Brenda <Brenda.hanscombilotta@bangormaine.gov>; Vachon, Adam <adam.vachon@bangormaine.gov>; Vaughan Littlefield <vaughan@bangorwater.org>; Holmquist, Jim <jim.holmquist@bangormaine.gov>; Peasley, Hannah <Hannah.Peasley@bangormaine.gov>
Cc: Collette, Anja <anja.collette@bangormaine.gov>; Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>; Mooney, Amelia <amelia.mooney@bangormaine.gov>
Subject: Fw: Response to City Comments - 205 Corporate Drive

Hi all,
Attached are the responses for the application on 205 Corporate Dr. If you have no further comments, please send a sign off. Thanks in advance!
Best,

Outlook

Re: Response to City Comments - 205 Corporate Drive

From Vachon, Adam <adam.vachon@bangormaine.gov>
Date Fri 5/29/2026 11:22 AM
To Altiero, Matthew <Matthew.Altiero@bangormaine.gov>

Fire is good with this one.
Adam

CITY OF BANGOR

Adam Vachon
Fire Inspector, CFI-1
Fire Prevention Division
Phone: 207-992-4180
Fax: 207-942-8213

http://www.bangormaine.gov

adam.vachon@bangormaine.gov

From: Altiero, Matthew <Matthew.Altiero@bangormaine.gov>
Sent: Thursday, May 28, 2026 3:18 PM
To: Davis, Jefferson <jefferson.davis@bangormaine.gov>; May, Richard <richard.may@bangormaine.gov>; LaBree, Jeff <jeff.labree@bangormaine.gov>; Hanscom Bilotta, Brenda <Brenda.hanscombilotta@bangormaine.gov>; Vachon, Adam <adam.vachon@bangormaine.gov>; Vaughan Littlefield <vaughan@bangorwater.org>; Holmquist, Jim <jim.holmquist@bangormaine.gov>; Peasley, Hannah <Hannah.Peasley@bangormaine.gov>
Cc: Collette, Anja <anja.collette@bangormaine.gov>; Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>; Mooney, Amelia <amelia.mooney@bangormaine.gov>
Subject: Fw: Response to City Comments - 205 Corporate Drive

Hi all,
Attached are the responses for the application on 205 Corporate Dr. If you have no further comments, please send a sign off. Thanks in advance!

Outlook

Re: Response to City Comments - 205 Corporate Drive

From Altiero, Matthew <Matthew.Altiero@bangormaine.gov>
Date Thu 6/4/2026 8:08 AM
To Anna Dedon <Anna.Dedon@smemaine.com>
Cc Cindy Witas <cwitas@bangorhousing.org>; Bob Rhodes <brhodes@bangorhousing.org>; Daniel Diffin <dpd@smemaine.com>; Collette, Anja <anja.collette@bangormaine.gov>; Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>

Good morning,
Copied below are comments from staff regarding the revisions.

- The 205 Corporate Drive project must meet the Urban Impaired Stream Standard. They may deduct the impervious area that is being replaced from their calculations, which is not very much on this particular site. If they choose to pay the compensation fee, the City of Bangor can collect the fee and add it to the Birch Stream Compensation Fee Fund.
- Red maple still shown next to driveway.
- On the landscape plan, it doesn't look like the trees have been pulled back like Public Works requested.

Best,

CITY OF BANGOR
Matthew Altiero, Planning Analyst
Community & Economic Development Department
matthew.altiero@bangormaine.gov

Some people have received emails or letters from an unknown source pretending to be the municipality, stating that additional, exorbitant fees are required to finish processing applications. Please know that our fee schedule is available on the City's website, and we always require fees up front before reviewing an application, not after it's been put on a Planning Board agenda.

Please also call our office at 207-992-4280 or email us at planning@bangormaine.gov if you're unsure or if you have any questions.

From: Anna Dedon <Anna.Dedon@smemaine.com>
Sent: Thursday, May 28, 2026 3:08 PM
To: Altiero, Matthew <Matthew.Altiero@bangormaine.gov>
Cc: Cindy Witas <cwitas@bangorhousing.org>; Bob Rhodes <brhodes@bangorhousing.org>; Daniel Diffin

Outlook

FW: 205 Corporate Drive

From Davis, Jefferson <jefferson.davis@bangormaine.gov>
Date Wed 6/3/2026 4:41 PM
To Collette, Anja <anja.collette@bangormaine.gov>; Altiero, Matthew <Matthew.Altiero@bangormaine.gov>
Cc May, Richard <richard.may@bangormaine.gov>; Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>; Mooney, Amelia <amelia.mooney@bangormaine.gov>

Engineering has reviewed the applicants revised plans and responses. The only comment we have is that the applicant must meet the Urban Impaired Stream Standard. See a statement from Rich below. Thank you.

Jefferson Davis, PLA
Director of Engineering
Maine Licensed Landscape Architect
City of Bangor
73 Harlow Street
Bangor, Maine 04401
207-992-4244
jefferson.davis@bangormaine.gov

From: May, Richard <richard.may@bangormaine.gov>
Sent: Wednesday, June 3, 2026 4:01 PM
To: Davis, Jefferson <jefferson.davis@bangormaine.gov>
Subject: 205 Corporate Drive

The 205 Corporate Drive project must meet the Urban Impaired Stream Standard. They may deduct the impervious area that is being replaced from their calculations, which is not very much on this particular site. If they choose to pay the compensation fee, the City of Bangor can collect the fee and add it to the Birch Stream Compensation Fee Fund.

Rich

Outlook

RE: Response to City Comments - 205 Corporate Drive

From May, Richard <richard.may@bangormaine.gov>
Date Wed 6/10/2026 10:49 AM
To Collette, Anja <anja.collette@bangormaine.gov>; Altiero, Matthew <Matthew.Altiero@bangormaine.gov>; Davis, Jefferson <jefferson.davis@bangormaine.gov>
Cc Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>

Sorry, forgot to send a response. The applicant's response is acceptable. Thanks.

Rich

From: Collette, Anja <anja.collette@bangormaine.gov>
Sent: Wednesday, June 10, 2026 10:48 AM
To: Altiero, Matthew <Matthew.Altiero@bangormaine.gov>; Davis, Jefferson <jefferson.davis@bangormaine.gov>; May, Richard <richard.may@bangormaine.gov>
Cc: Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>
Subject: Re: Response to City Comments - 205 Corporate Drive

Hi all, just following up on this. The ad is due to be posted for this tomorrow.

CITY OF BANGOR

Anja Collette, AICP

Planning Officer

Community & Economic Development

Planning Division

73 Harlow Street

Bangor, ME 04401

anja.collette@bangormaine.gov

Phone: 207.992.4280

From: Altiero, Matthew <Matthew.Altiero@bangormaine.gov>
Sent: Monday, June 8, 2026 9:41 AM
To: Davis, Jefferson <jefferson.davis@bangormaine.gov>; May, Richard <richard.may@bangormaine.gov>
Cc: Collette, Anja <anja.collette@bangormaine.gov>; Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>
Subject: Fw: Response to City Comments - 205 Corporate Drive

Hi all,
Attached is the response to the Urban Impaired Stream Standard comment. If this satisfies that comment, can you send over your sign-off?
Thank you,

CITY OF BANGOR
Matthew Altiero, Planning Analyst
Community & Economic Development Department
matthew.altiero@bangormaine.gov

Some people have received emails or letters from an unknown source pretending to be the municipality, stating that additional, exorbitant fees are required to finish processing applications. Please know that our fee schedule is available on the City's website, and we always require fees up front before reviewing an application, not after it's been put on a Planning Board agenda.

Please also call our office at 207-992-4280 or email us at planning@bangormaine.gov if you're unsure or if you have any questions.

From: Anna Dedon <Anna.Dedon@smemaine.com>
Sent: Monday, June 8, 2026 9:27 AM
To: Altiero, Matthew <Matthew.Altiero@bangormaine.gov>
Cc: Cindy Witas <cwitas@bangorhousing.org>; Bob Rhodes <brhodes@bangorhousing.org>; Daniel Diffin <dpd@smemaine.com>; Collette, Anja <anja.collette@bangormaine.gov>; Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>
Subject: RE: Response to City Comments - 205 Corporate Drive

WARNING: EXTERNAL EMAIL - DOUBLE CHECK THE SENDER'S ADDRESS BEFORE OPENING LINKS OR ATTACHMENTS.

Hi Matthew,

Following up on the final outstanding comment from the city – We will opt to pay the compensation fee to meet the Urban Impaired Stream Standard. We have calculated the anticipated fee below based

on proposed and existing impervious area at the site. I spoke with Rich May at the stormwater department who confirmed we do not need to include our lawn areas in this calculation, as the site is already maintained as lawn.

Compensation	SF	AC	
Non-roof Impervious	16,543	0.38	$ 4,747.31
Roof	21,720	0.50	$ 2,493.09
Landscaped	462	0.01	$ 26.52
Total	38,725	0.89	**$ 7,266.92**

Please reach out with any questions.

Best,

Anna

Anna Dedon, PE

Civil Engineer

SME
SEVEE & MAHER ENGINEERS

Sevee & Maher Engineers, Inc.

4 Blanchard Road, P.O. Box 85A

Cumberland, ME 04021

Office: 207.829.5016

Cell: 207.831.4072

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From: Anna Dedon
Sent: Thursday, June 4, 2026 2:03 PM
To: 'Altiero, Matthew' <Matthew.Altiero@bangormaine.gov>
Cc: Cindy Witas <cwitas@bangorhousing.org>; Bob Rhodes <brhodes@bangorhousing.org>; Daniel Diffin <dpd@smemaine.com>; Collette, Anja <anja.collette@bangormaine.gov>; Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>
Subject: RE: Response to City Comments - 205 Corporate Drive

Great! Thanks very much for reaching out to them. We look forward to attending the planning board meeting on the 16th. I will follow up with any questions.

Best,

Anna

Anna Dedon, PE

Civil Engineer

Sevee & Maher Engineers, Inc.

4 Blanchard Road, P.O. Box 85A

Cumberland, ME 04021

Office: 207.829.5016

Cell: 207.831.4072

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the recipient(s) named. If you are not an intended recipient, be aware that any review, disclosure, copying, distribution, or use of this transmission or its contents is prohibited. If you have received this transmission in error, please notify SME immediately at postmaster@smemaine.com.

From: Altiero, Matthew <Matthew.Altiero@bangormaine.gov>
Sent: Thursday, June 4, 2026 1:59 PM
To: Anna Dedon <Anna.Dedon@smemaine.com>
Cc: Cindy Witas <cwitas@bangorhousing.org>; Bob Rhodes <brhodes@bangorhousing.org>; Daniel Diffin <dpd@smemaine.com>; Collette, Anja <anja.collette@bangormaine.gov>; Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>
Subject: Re: Response to City Comments - 205 Corporate Drive

Hi Anna,

I will circulate that to staff now.

Regarding the meeting date, I just heard back from BDN. They will be able to run the ad on Saturday, so we can get this on the 6/16 Planning Board agenda as long as we receive the revisions within the next couple of days. In the meantime, if you have any questions, please feel free to reach out.

Best,

CITY OF BANGOR

Matthew Altiero, Planning Analyst

Community & Economic Development Department

matthew.altiero@bangormaine.gov

Some people have received emails or letters from an unknown source pretending to be the municipality, stating that additional, exorbitant fees are required to finish processing applications. Please know that our fee schedule is available on the City's website, and we always require fees up front before reviewing an application, not after it's been put on a Planning Board agenda.

Please also call our office at 207-992-4280 or email us at planning@bangormaine.gov if you're unsure or if you have any questions.

Owner	Owner 2
BANGOR NURSING & REHABILITATION CENTER	
OHI	
EASTERN MAINE MEDICAL CENTER	
BANGOR CITY OF	
UNIVERSITY COLLEGE OF BANGOR	
BANGOR FEDERAL CREDIT UNION	
UNIVERSITY OF MAINE SYSTEMS	
PENOBSCOT COMMUNITY HEALTH CENTER (PARTY IN POSSESSION)	
PENQUIS DEVELOPMENT, INC	
BANGOR WATER DISTRICT	
STATE OF MAINE DEPT OF DEFENSE & VETERANS SERVICES BUREAU	
BANGOR CITY OF	

Owner Address 1	Owner Address 2
103 TEXAS AVENUE	BANGOR ME 04401
203 MAINE AVENUE	BANGOR ME 04401
c/o AP DEPT. INFOR CONTRACT #4030 43 WHITING HILL ROAD, SUITE 350	BREWER ME 04412
ATTN CITY HALL FINANCE DEPT 73 HARLOW ST	BANGOR ME 04401
C/O UNIVERSITY OF MAINE SYSTEMS 46 UNIVERSITY DRIVE	AUGUSTA ME 04330
PO BOX 1161	BANGOR ME 04402-1161
46 UNIVERSITY DRIVE	AUGUSTA ME 04330
P O BOX 2100	BANGOR ME 04402-2100
262 HARLOW STREET	BANGOR ME 04401
614 STATE STREET	BANGOR ME 04401
ATTN: DFE ACCOUNTING 194 WINTHROP STREET	AUGUSTA ME 04330
ATTN: BANGOR INTERNATIONAL AIRPORT 287 GODFREY BLVD	BANGOR ME 04401

CITY OF BANGOR
PLANNING DIVISION

COMMUNITY & ECONOMIC DEVELOPMENT

June 4, 2026

Dear Property Owner,

Please be advised that the Planning Board of the City of Bangor will hold a public hearing on Tuesday, June 16th, 2026, beginning at 7 PM in the Council Chambers on the 1st floor of City Hall (73 Harlow Street) and will consider the following application:

Land Development Permit Application – Major Site Development, Conditional Use, and Major SLODA Modification for the construction of a 30-unit permanent supportive housing building with a total floor area of 19,100 square feet at property located at 205 Corporate Drive, Map-Lot R25-001-A, in the Government & Institutional Service District (G&ISD). Applicant: Bangor Housing Development Corporation. Owner: City of Bangor.

A full copy of the application can be emailed or mailed to any interested party by emailing a request to planning@bangormaine.gov or calling the office at 207.992.4257. Copies of the application can also be picked up at City Hall. To submit comments in writing, please email comments to planning@bangormaine.gov or mail to 73 Harlow Street before 4 PM, June 15th, 2026. Interested parties can also make an appointment by email or phone to meet with Planning Division staff in person or on Zoom.

The public is welcome to attend the meeting in person or via Zoom. Public comments are allowed over Zoom; however, you must register before 9 AM, June 16th at https://bangormaine.gov/504/Meeting-Participation. Zoom details can be found at the city's website under www.bangormaine.gov/calendar. The Planning Board meeting may be streamed live via the City of Bangor's YouTube page; however, comments are not enabled during streaming. Please call our office if you have questions about the process or participation in the hearing process.

Anja Collette
Planning Officer
207-992-4280
planning@bangormaine.gov

BLUEPRINT BANGOR
LAND DEVELOPMENT CODE UPDATE

Bangor is rewriting its Land Development Code! For more details and to sign up for updates, visit www.blueprintbangor.com

Outlook

RE: 205 Abutters and Public Notice

From Ryan, Walter <walter.ryan@bangormaine.gov>
Date Fri 6/5/2026 8:47 AM
To Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>

Mailed

CITY OF BANGOR
Walter E. Ryan
Print Shop Foreman
Central Services Division
73 Harlow Street
Bangor, ME 04401
Phone: 207-992-4181
Fax: 207-945-4449
www.bangormaine.gov

FY26 NOTE: LAST DAY OF PRINTING FOR FY26 IS JUNE 19TH !!!!!

********PLEASE NOTE: CENTRAL SERVICES WILL BE CLOSED STARTING JUNE 24TH. WE WILL RESUME NORMAL OPERATIONS ON JULY 6TH. ********

From: Rienas, Kayleigh <Kayleigh.Rienas@bangormaine.gov>
Sent: Thursday, June 4, 2026 4:15 PM
To: Ryan, Walter <walter.ryan@bangormaine.gov>
Cc: Altiero, Matthew <Matthew.Altiero@bangormaine.gov>; Ryan, Walter <walter.ryan@bangormaine.gov>
Subject: 205 Abutters and Public Notice

Hi Walter,

Attached are the abutters and public notice for 205 Corporate Dr. If you have a chance, would you be able to work on this tomorrow? If not, no worries — we can complete it internally.

Thank you for all of your help!

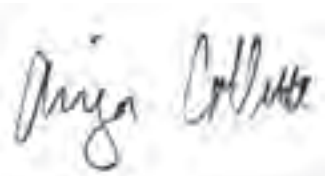
Kayleigh

CITY OF BANGOR

Please be advised that the Planning Board of the City of Bangor will hold a public hearing on Tuesday, June 16th, 2026, beginning at 7 p.m. in the Council Chambers on the 1st floor of City Hall (73 Harlow Street) and will consider the following application:

Land Development Permit Application – Major Site Development, Conditional Use, and Major SLODA Modification for the construction of a 30-unit permanent supportive housing building with a total floor area of 19,100 square feet at property located at 205 Corporate Drive, Map-Lot R25-001-A, in the Government & Institutional Service District (G&ISD). Applicant: Bangor Housing Development Corporation. Owner: City of Bangor.

To receive a copy of the proposed amendments or to submit comments, please call 207.992.4257 or email: planning@bangormaine.gov. Please submit any comments by 4 p.m. on June 15th, 2026. Interested parties can also make an appointment by email or phone to meet with Planning Division staff. The public is welcome to attend the meeting in person or viz Zoom. Public comments are allowed over Zoon; however, you must register before 9 a.m., June 16 at:
https://bangormaine.gov/504/Meeting-Participation.
Zoom details can be found at the city's website under: bangormaine.gov/calendar. The meeting may also be streamed live via the City of Bangor's YouTube page; however, comments are not enabled on this page. Please call our office if you have questions about the process or participation in the hearing process.



Anja Collette
Planning Officer

June 6, 2026

CITY COUNCIL ACTION

Council Meeting Date: June 8, 2026

Item No: 26-

Responsible Dept: Planning

Action Requested: Ordinance Map/Lot: n/a

Title, Ordinance

Amending the Land Development Code, §165-30, to Add a New Accessory Use for Farmstands and to Exempt Agricultural and Outdoor Recreational Uses from Paving Requirements

Summary

This amendment would add a farmstand section to the Accessory Use and Structures section of the Land Development Code to allow for small-scale retail sales of food or non-food crops grown on a site (excluding cannabis). The amendments would require this use to be 200 square feet or less in area and would exempt it from land development permitting. This use would be allowed in the Rural Residence and Agricultural (RR&A), Neighborhood Service District (NSD), and Urban Service District (USD). The amendments would also remove the requirement to pave the driveway and parking areas of agricultural and outdoor recreational uses. These changes align with guidance in the 2022 Comprehensive Plan to revise zoning to provide flexibility for agricultural uses and the sale of agricultural products, including in urban areas.

Committee Action

Committee: Planning Board Meeting Date: 06/16/2026

Action: For: Against:

Staff Comments & Approvals

City Manager City Solicitor Finance Director

Introduced for: First Reading

CITY COUNCIL ORDINANCE

Date: June 8, 2026

Assigned to Councilor:

ORDINANCE, Amending the Land Development Code, to Add a New Accessory Use for Farmstands and to Exempt Agricultural and Outdoor Recreational Uses from Paving Requirements.

WHEREAS, the Land Development Code currently contains barriers for agricultural uses to sell farm products, such as requiring a Land Development Permit for farmstands in certain zones and requiring paving of driveways and parking areas in most districts; and

WHEREAS, this limits opportunities for farmers who may be looking to sell farm products on the same property where they grow crops; and

WHEREAS, the proposed amendments allow additional flexibility for agriculture operations to expand in the City and would align with recommendations in the 2022 Comprehensive Plan;

Be it Ordered by the City Council of the City of Bangor that,

The Land Development Code shall be amended as shown below:

…

§ 165-30. Farmstand.

1. A farmstand that is less than 200 square feet in area and that is for the sale of food or non-food crops, excluding cannabis, grown or produced only on the premises, is exempt from land development permitting.
2. A farmstand may be located in a required front setback, but must be set back a minimum of 10 feet from a street right-of-way.
3. Farmstands shall only be permitted in the following districts: Rural Residence and Agricultural (RR&A), Neighborhood Service District (NSD), and Urban Service District (USD).
4. All other local and State laws must be followed, including, but not limited to, building permit requirements, zoning restrictions on animal agriculture, licensing for State-regulated agricultural products, and local food sovereignty licensing.

…

§ 165-74. Design, construction and maintenance.

…

C. Paving. Parking lot paving will be required in accordance with the following schedule, except that parking lots associated with agricultural and outdoor recreational uses are not required to be paved:

District	Extent of Paving Required	
URD-2, M & SD, NSD, USD, DDD, WDD, G & ISD, LDR, HDR, T & S and S & PS	All parking, loading, display and maneuvering surfaces[1]	
ADD, UID, GC & S and I & S	All front yard display, maneuvering and	

	parking area surfaces[1]	

CITY COUNCIL ACTION

Council Meeting Date: June 8, 2026

Item No: 26-

Responsible Dept: Planning

Action Requested: Ordinance Map/Lot: n/a

Title, Ordinance

Amending the Land Development Code, §165-26, to Add a New Seasonal Storage Use and to Add Flexibility for Temporary Storage Uses.

Summary

This amendment would add a new seasonal storage use to accommodate temporary storage uses that may not be present in a location year-round, but may require the flexibility to be placed on a lot for more than 2 years (since the current ordinance on temporary storage limits this use to being placed for a maximum of 2 years). Additionally, for temporary storage uses, the requirement to receive approval from Board of Appeals is unusual for a use in the Land Development Code and onerous for applicants. Some of the limitations on temporary storage are also either redundant or subjective (and therefore difficult to enforce). Therefore, these amendments propose to amend the approval process and remove some limitations on this use that have been determined to be unnecessary or unenforceable.

Committee Action

Committee: Planning Board Meeting Date: 6/16/2026

Action: For: Against:

Staff Comments & Approvals

City Manager
Director

City Solicitor

Finance

Introduced for: First Reading

CITY COUNCIL ORDINANCE

Date: June 8, 2026

Assigned to Councilor:

ORDINANCE, Amending the Land Development Code, §165-26, to Add a New Seasonal Storage Use and to Add Flexibility for Temporary Storage Uses.

WHEREAS, a need has been expressed to accommodate temporary storage uses that would be placed in a location for more than 2 years, but are only present on a lot seasonally; and

WHEREAS, a need has also been expressed to change the approval process for temporary storage uses and to amend certain limitations that are redundant or subjective;

Be it Ordered by the City Council of the City of Bangor that,

The Land Development Code shall be amended as shown below:

§ 165-26 Temporary and seasonal storage.

A. Temporary Storage.

~~Portable or mobile trailers, vans and similar vehicles~~ Shipping containers or temporary ~~buildings~~ structures may be used for storage ~~or display only upon approval of the Board of Appeals and only~~ for a temporary period not to exceed one year, with the following provisions:~~.~~

~~A.~~(1) ~~Such a~~Approval for this use may be granted through the process for a certificate of occupancy ~~by the Board of Appeals~~, and may be extended for one additional period of one year only, if it is found that ~~the Board finds~~ that:

~~(1)~~(a) The use, in combination with the primary use and accessory uses on the same lot, does not exceed maximum lot coverage requirements as set forth in this chapter for the district in which it is to be located.

~~(2) There is a valid temporary need which cannot be met within the principal structure and that an adequate operational hardship can be shown if the request is not granted.~~

~~(3) The initial approval, or any renewal, of the use will not in any way be detrimental to the neighboring properties, including aesthetic impact.~~

~~(4)~~(b) The use is not intended as a permanent or long-term use.

~~(5) The use is not intended to circumvent building area limitations for that district.~~

~~(6) The use will be adequately screened from neighborhood properties and the street.~~

~~(7)~~(c) The use will not be used as or intended for advertising for on- or off-premises purposes.

~~(8)~~(d) The use is not intended for retail sales.

(e) The storage unit or structure shall be located no closer than ten (10) feet to any adjacent property line.

~~B.~~(2) ~~Exceptions to the requirements of Subsection A(1)(a-h) above may be permitted by the Code Enforcement Officer for a single period not to exceed 30 days in any one calendar year, provided that such use is for temporary retail sales only.~~

~~C.~~(2) The above provisions do not prohibit the use of such temporary facilities as construction or job site office or equipment storage facilities during construction, provided that no advertising other

than the contractor's name shall be on the vehicle or facility and that such signs meet the requirements of Chapter 260, Signs.

B. Seasonal Storage.

Shipping containers or temporary structures may be used for seasonal storage, subject to the following conditions:

(1) The proposed use must comply with the requirements of Subsection A(1)(a) and (c-d) above. The requirement set forth in Subsections A(1)(b) shall not apply, as seasonal storage can be applied for biannually.

(2) Such use shall be permitted for a period not to exceed one hundred eighty (180) days within any calendar year.

(3) Seasonal storage uses shall not be permitted in any residential zoning district.

(4) The storage unit or structure shall be located no closer than ten (10) feet to any adjacent property line.

(5) The storage unit or structure shall not be located within a designated floodplain or flood hazard area.

(6) Approval shall be granted through the process for a certificate of occupancy, and these certificates of occupancy must be applied for biannually for approval from the Code Enforcement Division.

CITY OF BANGOR

Please be advised that the Planning Board of the City of Bangor will hold a public hearing on Tuesday, June 16th, 2026, beginning at 7 p.m. in the Council Chambers on the 1st floor of City Hall (73 Harlow Street) and will consider the following amendments to the Land Development Code:

To amend the Land Development Code, §165-26, to Add a New Seasonal Storage Use and to Add Flexibility for Temporary Storage Uses.

To amend the Land Development Code, §165-30, to Add a New Accessory Use for Farmstands and to Exempt Agricultural and Outdoor Recreational Uses from Paving Requirements.

To receive a copy of the proposed amendments or to submit comments, please call 207.992.4257 or email: planning@bangormaine.gov. Please submit any comments by 4 p.m. on June 15th, 2026. Interested parties can also make an appointment by email or phone to meet with Planning Division staff. Bangor City Hall is open to attend the meeting in person. Interested parties may also attend the meeting on Zoom. Public comments are allowed over Zoom; however, you must register before 9 a.m. on June 16th at: https://bangormaine.gov/504/Meeting-Participation. Zoom details can be found at the city's website under www.bangormaine.gov/calendar. The meeting may also be streamed live via the City of Bangor's YouTube page; however, comments are not enabled on this page. Please call our office if you have questions about the process or participation in the hearing process.

Anja Collette, AICP
Planning Officer

June 4, 9, 2026

CITY OF BANGOR
ANNE M. KRIEG AICP
DIRECTOR

COMMUNITY & ECONOMIC DEVELOPMENT

Memorandum

To: Business & Economic Development Committee
From: Anja Collette, Planning Officer
Date: June 4, 2026
Regarding: Proposed changes to manufactured home park ordinance

The purpose of this memo is to discuss proposed changes to regulations on manufactured home parks in the Land Development Code.

Currently, the more flexible alternative development standards listed in the manufactured home park chapter of the Land Development Code only apply to parks existing before September 13, 1971. This poses issues for parks that were developed in the decades that followed 1971 since they have to follow the standards for new parks. In some cases, this is preventing the placement of homes on vacant lots, which affects the supply of affordable housing. Staff have drafted language, which is in your packets, that would apply the alternative development standards to all parks existing as of June 1, 2026.

73 HARLOW STREET, BANGOR, ME 04401
TELEPHONE: (207) 992-4280 FAX: (207) 945-4447
WWW.BANGORMAINE.GOV

Item No Date

CITY COUNCIL ACTION

Council Meeting Date: 6/22/2026

Item No:

Responsible Dept: Planning

Action Requested: Ordinance Map/Lot: N/A

Title, Ordinance

Amending Chapter 165, Land Development Code by Adding Flexibility for Manufactured Home Parks Existing as of January 1, 2026

Summary

This ordinance amendment would amend the Land Development Code by allowing manufactured home parks existing as of January 1, 2026 to use more flexible development standards. Currently, the alternative development standards listed in this chapter only apply to parks existing before September 13, 1971. This poses issues for parks that were developed in the decades that followed 1971 since they have to follow the standards for new parks and in some cases, this is preventing the placement of homes on vacant lots, which affects the supply of affordable housing.

Committee Action

Committee: Planning Board Meeting Date: 7/7/2026

Action: For: Against:

Staff Comments & Approvals

City Manager City Solicitor Finance Director

Introduced for: First Reading and Referral

Item No Date

CITY COUNCIL ORDINANCE

Date: 6/22/2026

Assigned to Councilor:

ORDINANCE, Amending Chapter 165, Land Development Code by Adding Flexibility for Manufactured Home Parks Existing as of January 1, 2026;

WHEREAS, at present, the current ordinance for manufactured home parks limits the more flexible, alternative development standards to parks existing before September 13, 1971;

WHEREAS, at present, this poses issues for parks that were developed in the decades that followed 1971 that have to meet the standards for new parks;

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BANGOR AS FOLLOWS, THAT

Chapter 165 of the Code of the City of Bangor is amended as follows:

§ 165-121 Existing mobile home parks.

…

B. Any mobile home park in existence prior to January 1, 2026 ~~the effective date of this chapter, but after September 13, 1971~~ must meet the development requirements of §165-121D below. ~~§165-120~~.

~~C. Any application for the reconstruction of an mobile home park under this chapter shall comply with the provisions of Article XVI and this article, are permitted to use the alternative development requirements outlined in Subsection E below.~~

D. Any existing mobile home park developed prior to January 1, 2026 ~~September 13, 1971~~, may be reconstructed in its entirety in accordance with the provisions of this subsection.

…

Additions are underlined, deletions ~~struck through~~.