GRANITE ENGINEERING, LLC
civil engineering ● land planning ● municipal services

April 23, 2026

Upper Merrimack River Local Advisory Committee
PO Box 3019
Penacook, NH 03303

RE: **UMRLAC Transmittal – Amoskeag Beverages**
Tax Map 16, Block 1, Lots 65 & 67 (Bow)
Tax Map 88, Block Z, Lot 3 (Concord)
510 Hall Street
Bow, NH 03304
GE Project No. 26-0218-5

Dear Chair Tremblay,

Amoskeag Beverages, Inc. presently holds NHDES AoT Permit No. AoT-2464 for modifications made at its facility located at 510 Hall Street. The applicant now proposes to add a new 2,375-sf covered storage area to its main building located on Tax Map 16 Block 1 Lots 65 & 67 in the Town of Bow. The proposed project is designed to improve needed storage to the business. The applicant is in the process of amending the permit.

A new area drain will be used to collect the drainage from the closed storage area roof and from around the new storage area. This area drain is proposed to be connected into the permitted and recently constructed closed drainage system. The drainage from this area-drain will ultimately drain to the permitted wet stormwater pond for treatment.

This project proposes no work within the 250' protected shoreland buffer to the Merrimack River. The subject property is located on the west side of Hall Street with the river located on the east side. All proposed work will be constructed in accordance with local and state regulations.

We trust you will find the NHDES AoT Permit Amendment Application and its attachments complete and ready for the Commission's consideration. Should you have any questions or require further information, please do not hesitate to contact me directly.

Best Regards,

Jonathan Christie
Project Manager

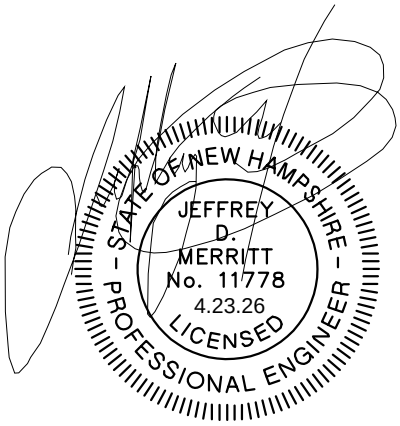
ALTERATION OF TERRAIN PERMIT AoT-2464 AMENDMENT REQUEST

GRANITE ENGINEERING

civil engineering ● land planning ● municipal services

AMOSKEAG BEVERAGES

Map 88 Lot Block Z Lot 3 (Concord)
Map 16 Block 1 Lot 65 & 67 (Bow)
510 Hall Street
Bow, New Hampshire
April 23, 2026



PREPARED FOR:
AMOSKEAG REALTY, LLC
510 HALL STREET
BOW, NH 03304

PREPARED BY:
GRANITE ENGINEERING, LLC
150 DOW ST, TOWER 2, STE 421
MANCHESTER, NH 03101
603.518.8030

GE Project No. 26-0218-5

TABLE OF CONTENTS

1. AOT PERMIT AMENDMENT REQUEST

ALTERATION OF TERRAIN PERMIT AMENDMENT REQUEST

Water Division / Land Resources Management Program /
Alteration of Terrain Bureau

Check the status of your application.

RSA/Rule: RSA 485-A:17 / Env-Wq 1500

Administrative Use Only	Administrative Use Only	Administrative Use Only	Permit Number:
			Check No.
			Amount:
			Initials:

1. TYPE OF AMENDMENT REQUESTED. *Select one or more and applicable fee.*	
☐ Permit transfer *[complete Part A]*	☐ $0
☐ Time extension *[complete Part B]*	☐ $0
☐ Modify approved project *[complete Part C]*	☐ $500
2. CURRENT PERMIT INFORMATION. *Please note that expired permits cannot be extended.*	
Permit number:	Current expiration date:
Current permit holder name:	Contact name:
Project name:	
Project town or city:	
Name of NHDES signatory:	
3. REQUESTOR'S INFORMATION. *Check box if the requestor is the permittee* ☐ *or the permittee's agent* ☐	
Requestor's name and title:	
Name of company, if applicable:	
Requestor's email:	Requestor's daytime phone:
PART A - COMPLETE THIS SECTION TO REQUEST A PERMIT TRANSFER	
A1. Transferee information	
Name *(desired permit holder, which may be an individual or an entity such as a business or trust:*	
If the desired permit holder is an entity (such as a business or trust), contact name:	
Mailing address:	
Daytime telephone number:	Email:

aot@des.nh.gov or (603) 271-2147
PO Box 95, Concord, NH 03302-0095
des.nh.gov

Is the applicant also the owner of the property on which the project will occur? ☐ Yes ☐ No

If the applicant is not also the owner, attach proof that the applicant will have a legal right to undertake the project on the property if a permit is issued to the applicant.

A2. Transferee signature and certification

By signing below, I certify that:

- I have received a copy of the permit and all approved plans and specifications.
- I agree to comply with RSA 485-A:17, Env-Wq 1500, the permit, and all conditions contained in the permit, including the requirement for on-going inspection and maintenance of the stormwater management system(s).
- The information contained in or otherwise submitted with this request is true, complete, and not misleading to the best of my knowledge and belief.
- I understand that the submission of false, incomplete, or misleading information constitutes grounds for the department to deny the request, revoke any permit amendment that is granted based on the information, and/or refer the matter to the board of professional engineers established by RSA 310-A:3 if I am a professional engineer.

Transferee signature:	**Print name legibly:**	**Date:**

A3. Transferor signature and certification

By signing below, I certify that:

- I have provided a copy of the permit and all approved plans and specifications to the transferee.
- I am relinquishing all rights to the permit as originally issued.
- The information contained in or otherwise submitted with this request is true, complete, and not misleading to the best of my knowledge and belief.
- I understand that the submission of false, incomplete, or misleading information constitutes grounds for the department to deny the request, revoke any permit amendment that is granted based on the information, and/or refer the matter to the board of professional engineers established by RSA 310-A:3 if I am a professional engineer.

Transferor signature:	**Print name legibly:**	**Date:**

ATTACHMENT - REMINDER

☐ If the applicant is not also the owner, attach proof that the applicant will have a legal right to undertake the project on the property if a permit is issued to the applicant.

PART B - COMPLETE THIS SECTION TO REQUEST A TIME EXTENSION

B1. Timing of request. *Any request submitted more than 90 days prior to the permit expiration date will be denied.*

Is this request being submitted not more than 90 days prior to the permit expiration date?	☐ Yes ☐ No

B2. Activity to date

Has any terrain alteration occurred to date? *If so, attach the inspection report required by Env-Wq 1503.27(a)*	☐ Yes ☐ No

B3. Other changes

Have any deviations from the approved project occurred or are any anticipated? If yes, please indicate whether the deviations are "insignificant" per Env-Wq 1503.21(b), "minor" per Env-Wq 1503.21(c), or "significant" per Env-Wq 1503.21(d). • Insignificant deviations must be identified upon completion of construction. • Minor deviations require submission of a permit amendment request (see Part C of this application). • Significant deviations require a new permit prior to implementation.	☐ No changes ☐ Yes, insignificant changes ☐ Yes, minor changes ☐ Yes, significant changes

B4. Basis for request *Why is an extension being requested?*

B5. Permit holder signature

By signing below, I certify that:

- The information contained in or otherwise submitted with this request is true, complete, and not misleading to the best of my knowledge and belief; and
- I understand that the submission of false, incomplete, or misleading information constitutes grounds for the department to deny the request, revoke any permit amendment that is granted based on the information, and/or refer the matter to the board of professional engineers established by RSA 310-A:3 if I am a professional engineer;

☐ Permit holder ☐ Permit holder's agent

Signature:	**Date:**
Name (print or type):	**Title:**

ATTACHMENT - REMINDER

☐ *If any terrain alteration occurred to date, attach the inspection report.*

PART C - COMPLETE THIS SECTION TO REQUEST A CHANGE TO THE APPROVED PLAN OR PROJECT

C1. Type and extent of proposed changes

Are the proposed deviations "minor" per Env-Wq 1503.22(c)? If not, the changes do not qualify for an amendment.
☐ Yes ☐ No

Area of disturbance associated with proposed changes, in square feet:

Revised total area of disturbance for the project, in square feet:

Are revised calculations needed? *If so, attach the revised calculations.* ☐ Yes ☐ No

Is the area proposed to be disturbed outside the area allowed to be disturbed under the original permit? *If so, attach a DataCheck Tool report for the area proposed to be disturbed.* ☐ Yes ☐ No

C2. Revisions to plan sheets. *Attach the identified revised plan sheets with changes highlighted.*

Identify which plan sheets reflect the proposed changes:

Briefly summarize the plan changes (*do not* attach a separate page):

C3. Submission requirements. *(Attach proof of delivery.)*

Specify the date documents were submitted to the municipality, per Env-Wq 1503.23(a)(3): April 23, 2026

If the project is within one-quarter mile of a designated river corridor, specify the date documents were submitted to the local river management advisory committee (LAC), per Env-Wq 1503.23(a)(2): April 23, 2026

C4. Permit holder signature

By signing below, I certify that:

- The information contained in or otherwise submitted with this application is true, complete, and not misleading to the best of my knowledge and belief.
- I understand that the submission of false, incomplete, or misleading information constitutes grounds for the department to deny the application, revoke any permit that is granted based on the information, and/or refer the matter to the board of professional engineers established by RSA 310-A:3 if I am a professional engineer.

☐ Permit holder ☐ Permit holder's agent

Signature:	**Date:**
Name (print or type):	**Title:**

ATTACHMENT - REMINDER

☒ NA If the revised area of disturbance is outside the area allowed to be disturbed under the original permit, attach a DataCheck Tool report for the area proposed to be disturbed.

☐ Proof that a copy of the application has been submitted to the municipality.

☐ If the project is within one-quarter mile of a designated river, attach proof that a copy of the application has been submitted to the LAC.

☐ Attach revised plans with changes highlighted.

☐ Attach revised calculations, if applicable.

2. COPY OF PERMIT AMENDMENT REQUEST CHECK

3. MUNICIPAL SUBMISSION PROOF

LETTER OF TRANSMITTAL

GRANITE ENGINEERING, LLC
150 Dow Street
Suite 421
Manchester, NH 03101

Date: April 23, 2026

Subject: 510 Hall Street

To: Town of Bow
10 Grandview Road
Bow, NH 03304

Attention: Planning Board

We are transmitting the following items:

Included:	Quantity:	Description:
☐		Response Letter
☒		Site Plan Application
☐		Subdivision Application
☐		Final Site Plan
☐		Subdivision Plan
☐		Variance Plans
☐		Special Provisions
☐		Stormwater Report
☐		Red/Yellow Calculations
☐		State Applications: ☐ AOT ☐ Wetlands ☐ Sewer ☐ Driveway ☐ Shoreland
☒		Other: NHDES AoT Permit Amendment

Transmitted as checked below:

☐ For review ☐ For approval ☒ For your use ☐ As requested

☐ ZBA Submittal ☐ PB Submittal ☐ BOA Submittal ☐ Conservation Commission

Physical copy of full-size site plan set – application and plans submitted online via CouldPermit

Copy to: _____ Signed: _____

LETTER OF TRANSMITTAL

GRANITE ENGINEERING, LLC
150 Dow Street
Suite 421
Manchester, NH 03101

Date: April 23, 2026

Subject: Amoskeag Beverages

To: City of Concord
Planning Board
41 Green Street, 3rd Floor
Concord, New Hampshire 03301

Attention: Chairman Woodfin

We are transmitting the following items:

Included:	Quantity:	Description:
☐		Response Letter
☐		Application
☐		Application Fee
☐		Signed Final Plans
☐		Architectural Plans
☐		Subdivision Application
☐		Conceptual Subdivision Plan
☐		Stormwater Report
☐		Traffic Report
☐		State Applications: ☒ AOT ☐ Wetlands ☐ Sewer ☐ Driveway ☐ Shoreland
☐		CD
☒	1	Other: NHDES AoT Permit Amendment

Transmitted as checked below:

☒ For review ☐ For approval ☐ For your use ☐ As requested

☐ ZBA Submittal ☐ PB Submittal ☐ BOA Submittal ☐ Conservation Commission

Copy to: _____ Signed: _____

4. LOCAL RIVER MANAGEMENT ADVISORY COMMITTEE (LAC) SUBMISSION PROOF

GRANITE ENGINEERING, LLC
civil engineering ● land planning ● municipal services

April 23, 2026

Upper Merrimack River Local Advisory Committee
PO Box 3019
Penacook, NH 03303

RE: **UMRLAC Transmittal – Amoskeag Beverages**
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510 Hall Street
Bow, NH 03304
GE Project No. 26-0218-5

Dear Chair Tremblay,

Amoskeag Beverages, Inc. presently holds NHDES AoT Permit No. AoT-2464 for modifications made at its facility located at 510 Hall Street. The applicant now proposes to add a new 2,375-sf covered storage area to its main building located on Tax Map 16 Block 1 Lots 65 & 67 in the Town of Bow. The proposed project is designed to improve needed storage to the business. The applicant is in the process of amending the permit.

A new area drain will be used to collect the drainage from the closed storage area roof and from around the new storage area. This area drain is proposed to be connected into the permitted and recently constructed closed drainage system. The drainage from this area-drain will ultimately drain to the permitted wet stormwater pond for treatment.

This project proposes no work within the 250' protected shoreland buffer to the Merrimack River. The subject property is located on the west side of Hall Street with the river located on the east side. All proposed work will be constructed in accordance with local and state regulations.

We trust you will find the NHDES AoT Permit Amendment Application and its attachments complete and ready for the Commission's consideration. Should you have any questions or require further information, please do not hesitate to contact me directly.

Best Regards,

Jonathan Christie
Project Manager

5. PROJECT NARRATIVE

I. INTRODUCTION

A. Project Description

Amoskeag Beverages, Inc. presently holds NHDES AoT Permit No. AoT2464 for modifications made at its facility located at 510 Hall Street. It currently proposes adding a new covered storage area to its main building located on Tax Map 16 Block 1 Lots 65 & 67 located in the Town of Bow and wishes to amend that permit.

The proposed project is designed to improve needed storage to the business. The Applicant proposes the construction of a 2,375-sf covered storage.

A new area drain will be used to collect the drainage from the closed storage area roof and from around the new storage area. This area drain is proposed to be connected into the permitted and recently constructed closed drainage system. The drainage from this area-drain will drain ultimately to the permitted wet stormwater pond.

In addition to local site plan approval from the Town of Bow, this project requires NHDES approval for an amendment to NHDES Permit Number AoT-2464.

II. STORM DRAINAGE ANALYSIS & DESIGN

A. Pre-Development Drainage Conditions

The Pre-development Drainage Analysis remains the same as was approved under Permit number AoT-2464.

B. Post-Development Drainage Conditions:

The same POA's (A&B) from the Pre-Development scenario were used in the revised Post-Development analysis. Flows to POA A have only changed.

The only modifications made to the Post-Development modeling included the addition of the Covered Storage (increase in imperviousness), three (3) new area-drains (AD#1-1, AD#1-2, and AD#1-3), and a slightly modified OS#1/Outlet Structure for Wet Pond#1. As part of this, a new Subcatchment 6-4S was created, which is merely made up of parts of previously modeled Subcatchments 4S and 6S and the proposed Covered Storage. Subcatchments 4S and 6S were modified accordingly. This only affected the Wet Stormwater Pond (WP1) Node and POA A. See attached revised HydroCAD Post-Development HydroCAD Analysis.

As presented below, it has been verified that, with a slightly OS#1/Outlet Structure for Wet Pond#1, the wet pond is still sized/designed properly according to the requirements of Env-Wq 1508.03, including a permanent pool plus extended storage providing a minimum volume of WQV of 37,893 CF. It has also been verified that the sediment forebay for the system (pretreatment) still provides the required amount of volume.

Per Env-Wq 1508.03 wet extended detention ponds shall comply with the following (Note: items that were modified for the proposed Covered Storage addressed only):

(a) Pretreatment as described in Env-Wq 1508.12 through Env-Wq 1508.16 shall be provided if stormwater, other than roof runoff, will be discharged to the practice;

The same permitted forebay is being utilized for pre-treatment and remains unchanged. The volume of the permitted forebay is large enough to accommodate 10% of the revised WQV. See attached revised Stormwater Pond Design Criteria NHDES Worksheet.

(b) Stormwater ponds shall have a permanent pool, or combination of permanent pool and extended detention, greater than or equal to the WQV;

The wet (extended detention) pond itself has not been modified. The permanent pool and extended detention provide the required WQV. The OS#1/Outlet Structure for Wet Pond#1 has been slightly modified. The modifications to the OS#1/Outlet Structure include shrinking the extended detention orifice from 3.5-inches to 2-inches to achieve a minimum extended detention draw down time of 24-hours and adding a flow control orifice to maintain the required peak runoff rates at POA A. See attached revised Stormwater Pond Design Criteria NHDES Worksheet.

(c) If extended detention is provided, then;
(1) The extended detention volume shall:
a. Not comprise more than 50% of the WQV; and

WQV Required = 37,893 CF
Permanent Pool Volume = 36,399 CF

Extended Detention Volume = 1,494 CF (4% of WQV) ok
See attached revised Stormwater Pond Design Criteria NHDES Worksheet.

b. Have a minimum 24-hour drawdown; and

Drawdown time of Extended Detention Volume provided for WQV = 27.67 hours > 24-hours. See attached revised Stormwater Pond Design Criteria NHDES Worksheet.

(2) The outlet shall discharge at a maximum flow rate of twice the average flow rate, where the average flow rate is calculated as the extended detention volume divided by 24 hours

2Qavg = 0.03 cfs

Qmax = 0.03 cfs <=2Qavg ok

See attached revised Stormwater Pond Design Criteria NHDES Worksheet.

In addition, the peak stormwater runoff rate and total storm volume for the specific storm frequencies are presented the Section II.C below, for point of analysis A (changed) and B (unchanged) in Table 1 & 2.

C. Summary:

With the proposed new Covered Storage, the subject site complies with the City of Concord and Town of Bow Stormwater Regulations and NHDES Regulations Env-Wq 1500 regarding stormwater treatment and groundwater recharge volume. Proposed stormwater best management practices (BMP) are designed in accordance with the New Hampshire Stormwater Manual Volume 2: Post-Construction Best Management Practices Selection and Design and BMP worksheets provided by the New Hampshire Department of Environmental Services. The results of the revised HydroCAD model conclude that the development of this property will not generate post-development peak rates of stormwater discharge exceeding pre-development rates.

The updated results are reported below in Table 1 and 2.

CHANNEL PROTECTION REQUIREMENTS (ENV-WQ 1507.05)

Per Env-Wq 1507.05, the Channel Protection Requirements below are met:

The combined flow to a channel, downstream receiving water, or wetland from the project site meets the following criteria (just one required to be met):

- The 2-year, 24-hour post-development peak flow rate generated from the proposed disturbance shall be equal to or less than the 2year, 24-hour pre-development peak flow rate and the 2 year, 24hour post-development storm volume, directed to a channel, downstream receiving water, or wetland has not increased over the pre-development volume by more than 0.1 acre-feet

  POA A QPRE = 2.67cfs

  PAO A QPOST = 1.25cfs OK

  POA A VolPRE = 1.512 acre-feet

  POA A VolPOST = 0.931 acre-feet OK

- The 2-year, 24-hour post-development peak flow rate shall be less than or equal to 50% of the 2-year, 24-hour pre-development peak flow rate

  POA A QPRE = 2.67cfs

  POA A 50%QPRE = 1.34 cfs

  PAO A QPOST = 1.25cfs < POA A 50%QPRE OK

TABLE 1: PEAK Storm Volumes

Site Pre Development vs. Post Development (Storm Volume in acre-feet)				
Description	**2-Year**		**10-Year**	
24-hr Rainfall	2.82”		4.16”	
	Pre	Post	Pre	Post
A	**1.512**	0.931	**2.634**	2.071
B	**0.107**	0.106	**0.214**	0.213
Total	**1.619**	1.037	**2.848**	2.284

TABLE 2: PEAK RUNOFF (ENV-WQ 1507.06)

Site Pre Development vs. Post Development (Peak Discharge Rate in cfs)										
Description	**2-Year**		**10-Year**		**25-Year**		**50-Year**		**100-Year**	
24-hr Rainfall	2.82”		4.16”		5.20”		6.15”		7.29”	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
A	**2.67**	1.25	**6.84**	6.47	**12.96**	9.03	**23.14**	17.54	**34.72**	34.54
B	**1.42**	1.42	**2.95**	2.93	**4.24**	4.20	**5.44**	5.38	**6.91**	6.83

III. MINOR PLAN/DESIGN DEVIATION (Env-Wq 1503.22(c)) VERIFICATION

(1) The project as modified will comply with Env-Wq 1507.02 relative to permanent methods of protecting water quality;

Required items that were effected in Env-Wq 1507.02(a) are addressed below. Env-Wq 1507.02 (b) through (g) remain unchanged as originally permitted under Permit No. AoT-2464)

(a) Permanent methods for protecting water quality, including all stormwater management practices, shall be designed to:

(1) Minimize the discharge of pollutants in accordance with EnvWq 1507.03;

The outlet structure of the Wet Pond was modified slightly to accommodate the added pollutant loading from the addition of the proposed Covered Storage is addressed in Section II.B above.

(2) Recharge groundwater in accordance with Env-Wq 1507.04;

Groundwater recharge is still satisfied. See attached revised NHDES Groundwater Recharge Volume (GRV) Calculation worksheet.

(3) Protect channels in accordance with Env-Wq 1507.05;

Channel Protection is still achieved. See Section II.C above for explanation.

(4) Control peak runoff rates in accordance with Env-Wq 1507.06; and

Control of peak runoff rates is still achieved. See Section II.C above for explanation.

(5) Implement long term maintenance practices in accordance with Env-Wq 1507.07.

No new maintenance beyond what is already addressed in the Stormwater Management Operation and Maintenance (O&M) Manual as originally permitted under Permit No. AoT-2464.

(2) The modifications have not and will not result in any changes to wetlands or protected shoreland impacts and will not decrease any buffers required by law or established by a permit or other approval, unless a permit that specifically allows the impacts has been obtained pursuant to RSA 482-A or RSA 483-B, respectively;

Any proposed modifications have not and will not result in any changes to wetlands or protected shoreland impacts and will not decrease any buffers required by law or established by a permit or other approval.

(3) The proposed disturbance, exclusive of any disturbance associated with (6) through (9), below, is not more than 40,000 square feet outside the area of disturbance originally approved;

There is no proposed disturbance outside the originally approved area of disturbance permitted under NHDES AoT Permit No. AoT-2464.

(4) The total impervious area has not increased from the project as originally approved by more than the smaller of 10% or 10,000 squarefeet;

Approved total final impervious area per NHDES AoT Permit No. AoT-2464 = 483,037 square feet x 10% = 48,303 square-feet

Proposed new impervious area for Amended Permit Request = 2,375 square-feet < 10,000 square-feet < 48,303 square-feet **OK**

(5) A change is made to a stormwater management system but:

a. The change does not add more than one stormwater treatment practice, stormwater conveyance, or groundwater recharge practice; and

No new stormwater treatment practice, stormwater conveyance, or groundwater recharge practice is being added to the site.

b. The peak inflow rate to any component of the existing stormwater management system has not increased from that as originally approved by more than 1 cubic foot per second during the 2-year 24-hour storm;

The peak inflow rate to any component of the existing stormwater management system has not increased from that as originally approved by more than 1 cubic foot per second during the 2-year 24-hour storm.

(6) If the roadway centerline has been relocated, it is no more than 100 feet from the center line of the roadway as originally approved;

Not Applicable

(7) If the center point of a parking area has been relocated, it is no more than 100 feet from the center point of the parking area as originally approved;

Not Applicable

(8) If the center point of a structure has been relocated, it is no more than 100 feet from the center point of the structure location as originally approved; and

Not Applicable

(9) For excavation, grading, and reclamation plans, the footprint originally approved is not expanded more than 50 feet in any direction.

Not Applicable

6. REVISED GRV CALCULATION

GROUNDWATER RECHARGE VOLULME (GRV) CALCULATION (Env-Wq 1507.04)

0.95	ac	Area of HSG A soil that was replaced by impervious cover	0.40"
1.42	ac	Area of HSG B soil that was replaced by impervious cover	0.25"
0.16	ac	Area of HSG C soil that was replaced by impervious cover	0.10"
-	ac	Area of HSG D soil or impervious cover that was replaced by impervious cover	0.0"
0.30	inches	Rd = Weighted groundwater recharge depth	
0.7501	ac-in	GRV = AI * Rd	
2,723	cf	GRV conversion (ac-in x 43,560 sf/ac x 1ft/12”)	

Provide calculations below showing that the project meets the groundwater recharge requirements (Env-Wq 1507.04):

UIP#1 provides 3,244 CF of recharge. 3,244 CF>2,723 CF, therefore GRV requirements are met.

7. REVISED BMP WORKSHEET

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

STORMWATER POND DESIGN CRITERIA

Env-Wq 1508.03

Type/Node Name: **Wet Pond #1 - WP**

Enter the type of stormwater pond (e.g., Wet Pond) and the node name in the drainage analysis, if applicable.

14.47	ac	A = Area draining to the practice	
10.80	ac	A_I = Impervious area draining to the practice	
0.75	decimal	I = Percent impervious area draining to the practice, in decimal form	
0.72	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)	
10.44	ac-in	WQV= 1" x Rv x A	
37,893	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")	
3,789	cf	10% x WQV (check calc for sediment forebay and micropool volume)	
18,947	cf	50% x WQV (check calc for extended detention volume)	
7,893	cf	V_{SED} = Sediment forebay volume	**≥ 10%WQV**
36,399	cf	V_{PP} = Permanent pool volume (volume below the lowest invert of the outlet structure) Attach stage-storage table.	
yes	cf	Extended Detention?[1]	**≤ 50% WQV**
1,494		V_{ED} = Volume of extended detention (if "yes" is given in box above)	
224.77		E_{ED} = Elevation of WQV if "yes" is given in box above[2]	
0.03	cfs	$2Q_{avg}$ = 2* V_{ED} / 24 hrs * (1hr / 3600 sec) (used to check against Q_{EDmax} below)	
0.03	cfs	Q_{EDmax} = Discharge at the E_{ED} (attach stage-discharge table)	**< $2Q_{avg}$**
27.67	hours	T_{ED} = Drawdown time of extended detention = $2V_{ED}/Q_{EDmax}$	**≥ 24-hrs**
3.00	:1	Pond side slopes	**≥3:1**
225.74	ft	Elevation of seasonal high water table	
224.60	ft	Elevation of lowest pond outlet	
220.74	ft	Max floor = Maximum elevation of pond bottom (ft)	
216.60	ft	Minimum floor (to maintain depth at less than 8')	**≤ 8 ft**
216.60	ft	Elevation of pond floor[3]	**≤ Max floor and > Min floor**
211.00	ft	Length of the flow path between the inlet and outlet at mid-depth	
69.00	ft	Average width ([average of the top width + average bottom width]/2)	
3.06	:1	Length to average width ratio	**≥ 3:1**
Yes	Yes/No	Is the perimeter curvilinear.	**← Yes**
Yes	Yes/No	Are the inlet and outlet located as far apart as possible.	**← Yes**
No	Yes/No	Is there a manually-controlled drain to dewater the pond over a 24hr period?	
If no state why:		Adjacent wetland for discharge is too high for the bottom of the pond to drain. Pump instead.	
Trash Rack		What mechanism is proposed to prevent the outlet structure from clogging (applicable for orifices/weirs with a dimension of <6")?	
229.30	ft	Peak elevation of the 50-year storm event	
230.00	ft	Berm elevation of the pond	
YES		50 peak elevation ≤ the berm elevation?	**←yes**

1. If the entire WQV is stored in the perm. pool, there is no extended det., and the following five lines do not apply.

2. This is the elevation of WQV **if** the hydrologic analysis is set up to include the permanent pool storage in the node description.

3. If the pond floor elevation is above the max floor elev., a hydrologic budget must be submitted to demonstrate that a minimum depth of 3 feet can be maintained. (First check whether a revised "lowest pond outlet" elev. will resolve the issue.)

Designer's Notes:

Includes treated stormwater from infiltration practice. We considered the treated stormwater as pervious, not impervious.

Stage-Area-Storage for Pond WP1: PROP. WET POND #1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
216.60	1,719	0
216.62	1,729	34
216.64	1,740	69
216.66	1,750	104
216.68	1,761	139
216.70	1,772	175
216.72	1,782	210
216.74	1,793	246
216.76	1,803	282
216.78	1,814	318
216.80	1,825	354
216.82	1,836	391
216.84	1,846	428
216.86	1,857	465
216.88	1,868	502
216.90	1,879	540
216.92	1,890	577
216.94	1,901	615
216.96	1,912	653
216.98	1,923	692
217.00	1,934	730
217.02	1,945	769
217.04	1,956	808
217.06	1,967	847
217.08	1,979	887
217.10	1,990	926
217.12	2,001	966
217.14	2,012	1,006
217.16	2,024	1,047
217.18	2,035	1,087
217.20	2,046	1,128
217.22	2,058	1,169
217.24	2,069	1,210
217.26	2,081	1,252
217.28	2,092	1,294
217.30	2,104	1,336
217.32	2,115	1,378
217.34	2,127	1,420
217.36	2,138	1,463
217.38	2,150	1,506
217.40	2,162	1,549
217.42	2,173	1,592
217.44	2,185	1,636
217.46	2,197	1,680
217.48	2,209	1,724
217.50	2,221	1,768
217.52	2,232	1,813
217.54	2,244	1,857
217.56	2,256	1,902
217.58	2,268	1,948
217.60	2,280	1,993
217.62	2,292	2,039
217.64	2,304	2,085
217.66	2,317	2,131
217.68	2,329	2,177
217.70	2,341	2,224
217.72	2,353	2,271
217.74	2,365	2,318
217.76	2,377	2,366
217.78	2,390	2,413
217.80	2,402	2,461
217.82	2,414	2,509
217.84	2,427	2,558
217.86	2,439	2,606
217.88	2,452	2,655
217.90	2,464	2,705
217.92	2,477	2,754
217.94	2,489	2,804
217.96	2,502	2,854
217.98	2,514	2,904
218.00	2,527	2,954
218.02	2,539	3,005
218.04	2,552	3,056
218.06	2,564	3,107
218.08	2,577	3,158
218.10	2,589	3,210
218.12	2,602	3,262
218.14	2,614	3,314
218.16	2,627	3,366
218.18	2,640	3,419
218.20	2,652	3,472
218.22	2,665	3,525
218.24	2,678	3,579
218.26	2,691	3,632
218.28	2,703	3,686
218.30	2,716	3,740
218.32	2,729	3,795
218.34	2,742	3,850
218.36	2,755	3,905
218.38	2,768	3,960
218.40	2,781	4,015
218.42	2,794	4,071
218.44	2,807	4,127
218.46	2,820	4,183
218.48	2,833	4,240
218.50	2,846	4,297
218.52	2,859	4,354
218.54	2,872	4,411
218.56	2,886	4,469
218.58	2,899	4,526
218.60	2,912	4,584
218.62	2,925	4,643
218.64	2,939	4,701
218.66	2,952	4,760

Stage-Area-Storage for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
218.68	2,966	4,820
218.70	2,979	4,879
218.72	2,992	4,939
218.74	3,006	4,999
218.76	3,019	5,059
218.78	3,033	5,120
218.80	3,047	5,180
218.82	3,060	5,241
218.84	3,074	5,303
218.86	3,088	5,364
218.88	3,101	5,426
218.90	3,115	5,488
218.92	3,129	5,551
218.94	3,143	5,614
218.96	3,156	5,677
218.98	3,170	5,740
219.00	3,184	5,803
219.02	3,198	5,867
219.04	3,212	5,931
219.06	3,226	5,996
219.08	3,240	6,060
219.10	3,254	6,125
219.12	3,268	6,190
219.14	3,282	6,256
219.16	3,296	6,322
219.18	3,310	6,388
219.20	3,325	6,454
219.22	3,339	6,521
219.24	3,353	6,588
219.26	3,367	6,655
219.28	3,382	6,722
219.30	3,396	6,790
219.32	3,410	6,858
219.34	3,425	6,927
219.36	3,439	6,995
219.38	3,454	7,064
219.40	3,468	7,133
219.42	3,483	7,203
219.44	3,497	7,273
219.46	3,512	7,343
219.48	3,526	7,413
219.50	3,541	7,484
219.52	3,556	7,555
219.54	3,570	7,626
219.56	3,585	7,698
219.58	3,600	7,769
219.60	3,615	7,842
219.62	3,630	7,914
219.64	3,644	7,987
219.66	3,659	8,060
219.68	3,674	8,133
219.70	3,689	8,207
219.72	3,704	8,281
219.74	3,719	8,355
219.76	3,734	8,429
219.78	3,749	8,504
219.80	3,764	8,579
219.82	3,779	8,655
219.84	3,795	8,731
219.86	3,810	8,807
219.88	3,825	8,883
219.90	3,840	8,960
219.92	3,856	9,037
219.94	3,871	9,114
219.96	3,886	9,191
219.98	3,902	9,269
220.00	3,917	9,348
220.02	3,932	9,426
220.04	3,947	9,505
220.06	3,963	9,584
220.08	3,978	9,663
220.10	3,993	9,743
220.12	4,008	9,823
220.14	4,024	9,903
220.16	4,039	9,984
220.18	4,054	10,065
220.20	4,070	10,146
220.22	4,085	10,228
220.24	4,101	10,310
220.26	4,116	10,392
220.28	4,132	10,474
220.30	4,147	10,557
220.32	4,163	10,640
220.34	4,179	10,724
220.36	4,194	10,807
220.38	4,210	10,891
220.40	4,226	10,976
220.42	4,241	11,060
220.44	4,257	11,145
220.46	4,273	11,231
220.48	4,289	11,316
220.50	4,305	11,402
220.52	4,320	11,488
220.54	4,336	11,575
220.56	4,352	11,662
220.58	4,368	11,749
220.60	4,384	11,837
220.62	4,400	11,924
220.64	4,416	12,013
220.66	4,432	12,101
220.68	4,449	12,190
220.70	4,465	12,279
220.72	4,481	12,369
220.74	4,497	12,458

Stage-Area-Storage for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
220.76	4,513	12,548
220.78	4,530	12,639
220.80	4,546	12,730
220.82	4,562	12,821
220.84	4,579	12,912
220.86	4,595	13,004
220.88	4,611	13,096
220.90	4,628	13,188
220.92	4,644	13,281
220.94	4,661	13,374
220.96	4,677	13,467
220.98	4,694	13,561
221.00	4,710	13,655
221.02	4,727	13,750
221.04	4,744	13,844
221.06	4,760	13,939
221.08	4,777	14,035
221.10	4,794	14,130
221.12	4,811	14,226
221.14	4,827	14,323
221.16	4,844	14,419
221.18	4,861	14,517
221.20	4,878	14,614
221.22	4,895	14,712
221.24	4,912	14,810
221.26	4,929	14,908
221.28	4,946	15,007
221.30	4,963	15,106
221.32	4,980	15,205
221.34	4,997	15,305
221.36	5,014	15,405
221.38	5,031	15,506
221.40	5,048	15,607
221.42	5,065	15,708
221.44	5,083	15,809
221.46	5,100	15,911
221.48	5,117	16,013
221.50	5,135	16,116
221.52	5,152	16,219
221.54	5,169	16,322
221.56	5,187	16,425
221.58	5,204	16,529
221.60	5,222	16,633
221.62	5,239	16,738
221.64	5,257	16,843
221.66	5,274	16,948
221.68	5,292	17,054
221.70	5,309	17,160
221.72	5,327	17,266
221.74	5,345	17,373
221.76	5,362	17,480
221.78	5,380	17,588
221.80	5,398	17,695
221.82	5,416	17,803
221.84	5,433	17,912
221.86	5,451	18,021
221.88	5,469	18,130
221.90	5,487	18,240
221.92	5,505	18,350
221.94	5,523	18,460
221.96	5,541	18,570
221.98	5,559	18,681
222.00	5,577	18,793
222.02	5,594	18,904
222.04	5,612	19,017
222.06	5,629	19,129
222.08	5,646	19,242
222.10	5,664	19,355
222.12	5,681	19,468
222.14	5,699	19,582
222.16	5,716	19,696
222.18	5,734	19,811
222.20	5,751	19,926
222.22	5,769	20,041
222.24	5,786	20,156
222.26	5,804	20,272
222.28	5,822	20,388
222.30	5,839	20,505
222.32	5,857	20,622
222.34	5,875	20,739
222.36	5,893	20,857
222.38	5,910	20,975
222.40	5,928	21,093
222.42	5,946	21,212
222.44	5,964	21,331
222.46	5,982	21,451
222.48	6,000	21,571
222.50	6,018	21,691
222.52	6,036	21,811
222.54	6,054	21,932
222.56	6,072	22,053
222.58	6,090	22,175
222.60	6,108	22,297
222.62	6,126	22,419
222.64	6,144	22,542
222.66	6,162	22,665
222.68	6,180	22,789
222.70	6,199	22,912
222.72	6,217	23,036
222.74	6,235	23,161
222.76	6,253	23,286
222.78	6,272	23,411
222.80	6,290	23,537
222.82	6,308	23,663

Stage-Area-Storage for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
222.84	6,327	23,789
222.86	6,345	23,916
222.88	6,364	24,043
222.90	6,382	24,170
222.92	6,401	24,298
222.94	6,419	24,426
222.96	6,438	24,555
222.98	6,456	24,684
223.00	6,475	24,813
223.02	6,494	24,943
223.04	6,512	25,073
223.06	6,531	25,203
223.08	6,550	25,334
223.10	6,568	25,465
223.12	6,587	25,597
223.14	6,606	25,729
223.16	6,625	25,861
223.18	6,644	25,994
223.20	6,663	26,127
223.22	6,682	26,260
223.24	6,700	26,394
223.26	6,719	26,528
223.28	6,738	26,663
223.30	6,757	26,798
223.32	6,777	26,933
223.34	6,796	27,069
223.36	6,815	27,205
223.38	6,834	27,342
223.40	6,853	27,478
223.42	6,872	27,616
223.44	6,891	27,753
223.46	6,911	27,891
223.48	6,930	28,030
223.50	6,949	28,169
223.52	6,968	28,308
223.54	6,988	28,447
223.56	7,007	28,587
223.58	7,027	28,728
223.60	7,046	28,868
223.62	7,065	29,009
223.64	7,085	29,151
223.66	7,104	29,293
223.68	7,124	29,435
223.70	7,143	29,578
223.72	7,163	29,721
223.74	7,183	29,864
223.76	7,202	30,008
223.78	7,222	30,152
223.80	7,242	30,297
223.82	7,261	30,442
223.84	7,281	30,587
223.86	7,301	30,733
223.88	7,321	30,879
223.90	7,340	31,026
223.92	7,360	31,173
223.94	7,380	31,321
223.96	7,400	31,468
223.98	7,420	31,617
224.00	7,440	31,765
224.02	7,459	31,914
224.04	7,477	32,063
224.06	7,496	32,213
224.08	7,515	32,363
224.10	7,533	32,514
224.12	7,552	32,665
224.14	7,571	32,816
224.16	7,590	32,967
224.18	7,608	33,119
224.20	7,627	33,272
224.22	7,646	33,425
224.24	7,665	33,578
224.26	7,684	33,731
224.28	7,703	33,885
224.30	7,722	34,039
224.32	7,741	34,194
224.34	7,760	34,349
224.36	7,779	34,504
224.38	7,798	34,660
224.40	7,817	34,816
224.42	7,836	34,973
224.44	7,855	35,130
224.46	7,874	35,287
224.48	7,894	35,445
224.50	7,913	35,603
224.52	7,932	35,761
224.54	7,951	35,920
224.56	7,970	36,079
224.58	7,990	36,239
224.60	8,009	36,399
224.62	8,233	36,561
224.64	8,460	36,728
224.66	8,690	36,900
224.68	8,923	37,076
224.70	9,159	37,257
224.72	9,398	37,442
224.74	9,641	37,632
224.76	9,886	37,828
224.78	10,135	38,028
224.80	10,386	38,233
224.82	10,641	38,443
224.84	10,899	38,659
224.86	11,160	38,879
224.88	11,424	39,105
224.90	11,691	39,336

Permanent Pool Top Elevation 224.60

WQV/Extended Detention Elevation 224.77

Stage-Area-Storage for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
224.92	11,961	39,573
224.94	12,234	39,815
224.96	12,511	40,062
224.98	12,790	40,315
225.00	13,072	40,574
225.02	13,358	40,838
225.04	13,647	41,108
225.06	13,938	41,384
225.08	14,233	41,666
225.10	14,531	41,953
225.12	14,832	42,247
225.14	15,136	42,547
225.16	15,443	42,853
225.18	15,754	43,165
225.20	16,067	43,483
225.22	16,383	43,807
225.24	16,703	44,138
225.26	17,026	44,475
225.28	17,351	44,819
225.30	17,680	45,169
225.32	18,012	45,526
225.34	18,347	45,890
225.36	18,685	46,260
225.38	19,026	46,637
225.40	19,370	47,021
225.42	19,717	47,412
225.44	20,068	47,810
225.46	20,421	48,215
225.48	20,778	48,627
225.50	21,137	49,046
225.52	21,500	49,472
225.54	21,866	49,906
225.56	22,235	50,347
225.58	22,607	50,795
225.60	22,982	51,251
225.62	23,360	51,715
225.64	23,741	52,186
225.66	24,126	52,664
225.68	24,513	53,151
225.70	24,903	53,645
225.72	25,297	54,147
225.74	25,694	54,657
225.76	26,093	55,175
225.78	26,496	55,701
225.80	26,902	56,235
225.82	27,311	56,777
225.84	27,723	57,327
225.86	28,138	57,886
225.88	28,557	58,453
225.90	28,978	59,028
225.92	29,402	59,612
225.94	29,830	60,204
225.96	30,261	60,805
225.98	30,694	61,415
226.00	31,131	62,033
226.02	31,177	62,656
226.04	31,222	63,280
226.06	31,268	63,905
226.08	31,313	64,531
226.10	31,359	65,157
226.12	31,405	65,785
226.14	31,450	66,413
226.16	31,496	67,043
226.18	31,542	67,673
226.20	31,588	68,305
226.22	31,634	68,937
226.24	31,679	69,570
226.26	31,725	70,204
226.28	31,771	70,839
226.30	31,817	71,475
226.32	31,863	72,112
226.34	31,909	72,749
226.36	31,956	73,388
226.38	32,002	74,028
226.40	32,048	74,668
226.42	32,094	75,310
226.44	32,140	75,952
226.46	32,186	76,595
226.48	32,233	77,239
226.50	32,279	77,884
226.52	32,325	78,531
226.54	32,372	79,177
226.56	32,418	79,825
226.58	32,465	80,474
226.60	32,511	81,124
226.62	32,558	81,775
226.64	32,604	82,426
226.66	32,651	83,079
226.68	32,697	83,732
226.70	32,744	84,387
226.72	32,791	85,042
226.74	32,838	85,698
226.76	32,884	86,356
226.78	32,931	87,014
226.80	32,978	87,673
226.82	33,025	88,333
226.84	33,072	88,994
226.86	33,119	89,656
226.88	33,166	90,319
226.90	33,212	90,982
226.92	33,260	91,647
226.94	33,307	92,313
226.96	33,354	92,979
226.98	33,401	93,647

Stage-Area-Storage for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
227.00	33,448	94,315
227.02	33,495	94,985
227.04	33,542	95,655
227.06	33,590	96,326
227.08	33,637	96,999
227.10	33,684	97,672
227.12	33,732	98,346
227.14	33,779	99,021
227.16	33,826	99,697
227.18	33,874	100,374
227.20	33,921	101,052
227.22	33,969	101,731
227.24	34,016	102,411
227.26	34,064	103,092
227.28	34,112	103,774
227.30	34,159	104,456
227.32	34,207	105,140
227.34	34,255	105,825
227.36	34,302	106,510
227.38	34,350	107,197
227.40	34,398	107,884
227.42	34,446	108,573
227.44	34,494	109,262
227.46	34,542	109,952
227.48	34,590	110,644
227.50	34,638	111,336
227.52	34,686	112,029
227.54	34,734	112,723
227.56	34,782	113,418
227.58	34,830	114,115
227.60	34,878	114,812
227.62	34,926	115,510
227.64	34,974	116,209
227.66	35,023	116,909
227.68	35,071	117,610
227.70	35,119	118,311
227.72	35,168	119,014
227.74	35,216	119,718
227.76	35,264	120,423
227.78	35,313	121,129
227.80	35,361	121,836
227.82	35,410	122,543
227.84	35,458	123,252
227.86	35,507	123,962
227.88	35,556	124,672
227.90	35,604	125,384
227.92	35,653	126,096
227.94	35,702	126,810
227.96	35,750	127,524
227.98	35,799	128,240
228.00	35,848	128,956
228.02	35,892	129,674
228.04	35,937	130,392
228.06	35,981	131,111
228.08	36,025	131,831
228.10	36,070	132,552
228.12	36,114	133,274
228.14	36,159	133,997
228.16	36,203	134,720
228.18	36,248	135,445
228.20	36,292	136,170
228.22	36,337	136,897
228.24	36,382	137,624
228.26	36,426	138,352
228.28	36,471	139,081
228.30	36,516	139,811
228.32	36,560	140,542
228.34	36,605	141,273
228.36	36,650	142,006
228.38	36,695	142,739
228.40	36,740	143,474
228.42	36,784	144,209
228.44	36,829	144,945
228.46	36,874	145,682
228.48	36,919	146,420
228.50	36,964	147,159
228.52	37,009	147,898
228.54	37,054	148,639
228.56	37,099	149,381
228.58	37,144	150,123
228.60	37,189	150,866
228.62	37,234	151,611
228.64	37,280	152,356
228.66	37,325	153,102
228.68	37,370	153,849
228.70	37,415	154,597
228.72	37,461	155,345
228.74	37,506	156,095
228.76	37,551	156,846
228.78	37,597	157,597
228.80	37,642	158,349
228.82	37,687	159,103
228.84	37,733	159,857
228.86	37,778	160,612
228.88	37,824	161,368
228.90	37,869	162,125
228.92	37,915	162,883
228.94	37,960	163,642
228.96	38,006	164,401
228.98	38,052	165,162
229.00	38,097	165,923
229.02	38,143	166,686
229.04	38,189	167,449
229.06	38,234	168,213

Stage-Area-Storage for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
229.08	38,280	168,978
229.10	38,326	169,744
229.12	38,372	170,511
229.14	38,418	171,279
229.16	38,464	172,048
229.18	38,509	172,818
229.20	38,555	173,589
229.22	38,601	174,360
229.24	38,647	175,133
229.26	38,693	175,906
229.28	38,739	176,680
229.30	38,785	177,456
229.32	38,832	178,232
229.34	38,878	179,009
229.36	38,924	179,787
229.38	38,970	180,566
229.40	39,016	181,346
229.42	39,062	182,126
229.44	39,109	182,908
229.46	39,155	183,691
229.48	39,201	184,474
229.50	39,248	185,259
229.52	39,294	186,044
229.54	39,340	186,831
229.56	39,387	187,618
229.58	39,433	188,406
229.60	39,480	189,195
229.62	39,526	189,985
229.64	39,573	190,776
229.66	39,619	191,568
229.68	39,666	192,361
229.70	39,712	193,155
229.72	39,759	193,950
229.74	39,806	194,745
229.76	39,853	195,542
229.78	39,899	196,339
229.80	39,946	197,138
229.82	39,993	197,937
229.84	40,040	198,737
229.86	40,086	199,539
229.88	40,133	200,341
229.90	40,180	201,144
229.92	40,227	201,948
229.94	40,274	202,753
229.96	40,321	203,559
229.98	40,368	204,366
230.00	**40,415**	**205,174**

Stage-Discharge for Pond WP1: PROP. WET POND #1

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
216.60	0.00	0.00	0.00
216.62	0.00	0.00	0.00
216.64	0.00	0.00	0.00
216.66	0.00	0.00	0.00
216.68	0.00	0.00	0.00
216.70	0.00	0.00	0.00
216.72	0.00	0.00	0.00
216.74	0.00	0.00	0.00
216.76	0.00	0.00	0.00
216.78	0.00	0.00	0.00
216.80	0.00	0.00	0.00
216.82	0.00	0.00	0.00
216.84	0.00	0.00	0.00
216.86	0.00	0.00	0.00
216.88	0.00	0.00	0.00
216.90	0.00	0.00	0.00
216.92	0.00	0.00	0.00
216.94	0.00	0.00	0.00
216.96	0.00	0.00	0.00
216.98	0.00	0.00	0.00
217.00	0.00	0.00	0.00
217.02	0.00	0.00	0.00
217.04	0.00	0.00	0.00
217.06	0.00	0.00	0.00
217.08	0.00	0.00	0.00
217.10	0.00	0.00	0.00
217.12	0.00	0.00	0.00
217.14	0.00	0.00	0.00
217.16	0.00	0.00	0.00
217.18	0.00	0.00	0.00
217.20	0.00	0.00	0.00
217.22	0.00	0.00	0.00
217.24	0.00	0.00	0.00
217.26	0.00	0.00	0.00
217.28	0.00	0.00	0.00
217.30	0.00	0.00	0.00
217.32	0.00	0.00	0.00
217.34	0.00	0.00	0.00
217.36	0.00	0.00	0.00
217.38	0.00	0.00	0.00
217.40	0.00	0.00	0.00
217.42	0.00	0.00	0.00
217.44	0.00	0.00	0.00
217.46	0.00	0.00	0.00
217.48	0.00	0.00	0.00
217.50	0.00	0.00	0.00
217.52	0.00	0.00	0.00
217.54	0.00	0.00	0.00
217.56	0.00	0.00	0.00
217.58	0.00	0.00	0.00
217.60	0.00	0.00	0.00
217.62	0.00	0.00	0.00
217.64	0.00	0.00	0.00
217.66	0.00	0.00	0.00
217.68	0.00	0.00	0.00
217.70	0.00	0.00	0.00
217.72	0.00	0.00	0.00
217.74	0.00	0.00	0.00
217.76	0.00	0.00	0.00
217.78	0.00	0.00	0.00
217.80	0.00	0.00	0.00
217.82	0.00	0.00	0.00
217.84	0.00	0.00	0.00
217.86	0.00	0.00	0.00
217.88	0.00	0.00	0.00
217.90	0.00	0.00	0.00
217.92	0.00	0.00	0.00
217.94	0.00	0.00	0.00
217.96	0.00	0.00	0.00
217.98	0.00	0.00	0.00
218.00	0.00	0.00	0.00
218.02	0.00	0.00	0.00
218.04	0.00	0.00	0.00
218.06	0.00	0.00	0.00
218.08	0.00	0.00	0.00
218.10	0.00	0.00	0.00
218.12	0.00	0.00	0.00
218.14	0.00	0.00	0.00
218.16	0.00	0.00	0.00
218.18	0.00	0.00	0.00
218.20	0.00	0.00	0.00
218.22	0.00	0.00	0.00
218.24	0.00	0.00	0.00
218.26	0.00	0.00	0.00
218.28	0.00	0.00	0.00
218.30	0.00	0.00	0.00
218.32	0.00	0.00	0.00
218.34	0.00	0.00	0.00
218.36	0.00	0.00	0.00
218.38	0.00	0.00	0.00
218.40	0.00	0.00	0.00
218.42	0.00	0.00	0.00
218.44	0.00	0.00	0.00
218.46	0.00	0.00	0.00
218.48	0.00	0.00	0.00
218.50	0.00	0.00	0.00
218.52	0.00	0.00	0.00
218.54	0.00	0.00	0.00
218.56	0.00	0.00	0.00
218.58	0.00	0.00	0.00
218.60	0.00	0.00	0.00
218.62	0.00	0.00	0.00
218.64	0.00	0.00	0.00
218.66	0.00	0.00	0.00

Stage-Discharge for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
218.68	0.00	0.00	0.00
218.70	0.00	0.00	0.00
218.72	0.00	0.00	0.00
218.74	0.00	0.00	0.00
218.76	0.00	0.00	0.00
218.78	0.00	0.00	0.00
218.80	0.00	0.00	0.00
218.82	0.00	0.00	0.00
218.84	0.00	0.00	0.00
218.86	0.00	0.00	0.00
218.88	0.00	0.00	0.00
218.90	0.00	0.00	0.00
218.92	0.00	0.00	0.00
218.94	0.00	0.00	0.00
218.96	0.00	0.00	0.00
218.98	0.00	0.00	0.00
219.00	0.00	0.00	0.00
219.02	0.00	0.00	0.00
219.04	0.00	0.00	0.00
219.06	0.00	0.00	0.00
219.08	0.00	0.00	0.00
219.10	0.00	0.00	0.00
219.12	0.00	0.00	0.00
219.14	0.00	0.00	0.00
219.16	0.00	0.00	0.00
219.18	0.00	0.00	0.00
219.20	0.00	0.00	0.00
219.22	0.00	0.00	0.00
219.24	0.00	0.00	0.00
219.26	0.00	0.00	0.00
219.28	0.00	0.00	0.00
219.30	0.00	0.00	0.00
219.32	0.00	0.00	0.00
219.34	0.00	0.00	0.00
219.36	0.00	0.00	0.00
219.38	0.00	0.00	0.00
219.40	0.00	0.00	0.00
219.42	0.00	0.00	0.00
219.44	0.00	0.00	0.00
219.46	0.00	0.00	0.00
219.48	0.00	0.00	0.00
219.50	0.00	0.00	0.00
219.52	0.00	0.00	0.00
219.54	0.00	0.00	0.00
219.56	0.00	0.00	0.00
219.58	0.00	0.00	0.00
219.60	0.00	0.00	0.00
219.62	0.00	0.00	0.00
219.64	0.00	0.00	0.00
219.66	0.00	0.00	0.00
219.68	0.00	0.00	0.00
219.70	0.00	0.00	0.00
219.72	0.00	0.00	0.00
219.74	0.00	0.00	0.00
219.76	0.00	0.00	0.00
219.78	0.00	0.00	0.00
219.80	0.00	0.00	0.00
219.82	0.00	0.00	0.00
219.84	0.00	0.00	0.00
219.86	0.00	0.00	0.00
219.88	0.00	0.00	0.00
219.90	0.00	0.00	0.00
219.92	0.00	0.00	0.00
219.94	0.00	0.00	0.00
219.96	0.00	0.00	0.00
219.98	0.00	0.00	0.00
220.00	0.00	0.00	0.00
220.02	0.00	0.00	0.00
220.04	0.00	0.00	0.00
220.06	0.00	0.00	0.00
220.08	0.00	0.00	0.00
220.10	0.00	0.00	0.00
220.12	0.00	0.00	0.00
220.14	0.00	0.00	0.00
220.16	0.00	0.00	0.00
220.18	0.00	0.00	0.00
220.20	0.00	0.00	0.00
220.22	0.00	0.00	0.00
220.24	0.00	0.00	0.00
220.26	0.00	0.00	0.00
220.28	0.00	0.00	0.00
220.30	0.00	0.00	0.00
220.32	0.00	0.00	0.00
220.34	0.00	0.00	0.00
220.36	0.00	0.00	0.00
220.38	0.00	0.00	0.00
220.40	0.00	0.00	0.00
220.42	0.00	0.00	0.00
220.44	0.00	0.00	0.00
220.46	0.00	0.00	0.00
220.48	0.00	0.00	0.00
220.50	0.00	0.00	0.00
220.52	0.00	0.00	0.00
220.54	0.00	0.00	0.00
220.56	0.00	0.00	0.00
220.58	0.00	0.00	0.00
220.60	0.00	0.00	0.00
220.62	0.00	0.00	0.00
220.64	0.00	0.00	0.00
220.66	0.00	0.00	0.00
220.68	0.00	0.00	0.00
220.70	0.00	0.00	0.00
220.72	0.00	0.00	0.00
220.74	0.00	0.00	0.00

Stage-Discharge for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
220.76	0.00	0.00	0.00
220.78	0.00	0.00	0.00
220.80	0.00	0.00	0.00
220.82	0.00	0.00	0.00
220.84	0.00	0.00	0.00
220.86	0.00	0.00	0.00
220.88	0.00	0.00	0.00
220.90	0.00	0.00	0.00
220.92	0.00	0.00	0.00
220.94	0.00	0.00	0.00
220.96	0.00	0.00	0.00
220.98	0.00	0.00	0.00
221.00	0.00	0.00	0.00
221.02	0.00	0.00	0.00
221.04	0.00	0.00	0.00
221.06	0.00	0.00	0.00
221.08	0.00	0.00	0.00
221.10	0.00	0.00	0.00
221.12	0.00	0.00	0.00
221.14	0.00	0.00	0.00
221.16	0.00	0.00	0.00
221.18	0.00	0.00	0.00
221.20	0.00	0.00	0.00
221.22	0.00	0.00	0.00
221.24	0.00	0.00	0.00
221.26	0.00	0.00	0.00
221.28	0.00	0.00	0.00
221.30	0.00	0.00	0.00
221.32	0.00	0.00	0.00
221.34	0.00	0.00	0.00
221.36	0.00	0.00	0.00
221.38	0.00	0.00	0.00
221.40	0.00	0.00	0.00
221.42	0.00	0.00	0.00
221.44	0.00	0.00	0.00
221.46	0.00	0.00	0.00
221.48	0.00	0.00	0.00
221.50	0.00	0.00	0.00
221.52	0.00	0.00	0.00
221.54	0.00	0.00	0.00
221.56	0.00	0.00	0.00
221.58	0.00	0.00	0.00
221.60	0.00	0.00	0.00
221.62	0.00	0.00	0.00
221.64	0.00	0.00	0.00
221.66	0.00	0.00	0.00
221.68	0.00	0.00	0.00
221.70	0.00	0.00	0.00
221.72	0.00	0.00	0.00
221.74	0.00	0.00	0.00
221.76	0.00	0.00	0.00
221.78	0.00	0.00	0.00
221.80	0.00	0.00	0.00
221.82	0.00	0.00	0.00
221.84	0.00	0.00	0.00
221.86	0.00	0.00	0.00
221.88	0.00	0.00	0.00
221.90	0.00	0.00	0.00
221.92	0.00	0.00	0.00
221.94	0.00	0.00	0.00
221.96	0.00	0.00	0.00
221.98	0.00	0.00	0.00
222.00	0.00	0.00	0.00
222.02	0.00	0.00	0.00
222.04	0.00	0.00	0.00
222.06	0.00	0.00	0.00
222.08	0.00	0.00	0.00
222.10	0.00	0.00	0.00
222.12	0.00	0.00	0.00
222.14	0.00	0.00	0.00
222.16	0.00	0.00	0.00
222.18	0.00	0.00	0.00
222.20	0.00	0.00	0.00
222.22	0.00	0.00	0.00
222.24	0.00	0.00	0.00
222.26	0.00	0.00	0.00
222.28	0.00	0.00	0.00
222.30	0.00	0.00	0.00
222.32	0.00	0.00	0.00
222.34	0.00	0.00	0.00
222.36	0.00	0.00	0.00
222.38	0.00	0.00	0.00
222.40	0.00	0.00	0.00
222.42	0.00	0.00	0.00
222.44	0.00	0.00	0.00
222.46	0.00	0.00	0.00
222.48	0.00	0.00	0.00
222.50	0.00	0.00	0.00
222.52	0.00	0.00	0.00
222.54	0.00	0.00	0.00
222.56	0.00	0.00	0.00
222.58	0.00	0.00	0.00
222.60	0.00	0.00	0.00
222.62	0.00	0.00	0.00
222.64	0.00	0.00	0.00
222.66	0.00	0.00	0.00
222.68	0.00	0.00	0.00
222.70	0.00	0.00	0.00
222.72	0.00	0.00	0.00
222.74	0.00	0.00	0.00
222.76	0.00	0.00	0.00
222.78	0.00	0.00	0.00
222.80	0.00	0.00	0.00
222.82	0.00	0.00	0.00

Stage-Discharge for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
222.84	0.00	0.00	0.00
222.86	0.00	0.00	0.00
222.88	0.00	0.00	0.00
222.90	0.00	0.00	0.00
222.92	0.00	0.00	0.00
222.94	0.00	0.00	0.00
222.96	0.00	0.00	0.00
222.98	0.00	0.00	0.00
223.00	0.00	0.00	0.00
223.02	0.00	0.00	0.00
223.04	0.00	0.00	0.00
223.06	0.00	0.00	0.00
223.08	0.00	0.00	0.00
223.10	0.00	0.00	0.00
223.12	0.00	0.00	0.00
223.14	0.00	0.00	0.00
223.16	0.00	0.00	0.00
223.18	0.00	0.00	0.00
223.20	0.00	0.00	0.00
223.22	0.00	0.00	0.00
223.24	0.00	0.00	0.00
223.26	0.00	0.00	0.00
223.28	0.00	0.00	0.00
223.30	0.00	0.00	0.00
223.32	0.00	0.00	0.00
223.34	0.00	0.00	0.00
223.36	0.00	0.00	0.00
223.38	0.00	0.00	0.00
223.40	0.00	0.00	0.00
223.42	0.00	0.00	0.00
223.44	0.00	0.00	0.00
223.46	0.00	0.00	0.00
223.48	0.00	0.00	0.00
223.50	0.00	0.00	0.00
223.52	0.00	0.00	0.00
223.54	0.00	0.00	0.00
223.56	0.00	0.00	0.00
223.58	0.00	0.00	0.00
223.60	0.00	0.00	0.00
223.62	0.00	0.00	0.00
223.64	0.00	0.00	0.00
223.66	0.00	0.00	0.00
223.68	0.00	0.00	0.00
223.70	0.00	0.00	0.00
223.72	0.00	0.00	0.00
223.74	0.00	0.00	0.00
223.76	0.00	0.00	0.00
223.78	0.00	0.00	0.00
223.80	0.00	0.00	0.00
223.82	0.00	0.00	0.00
223.84	0.00	0.00	0.00
223.86	0.00	0.00	0.00
223.88	0.00	0.00	0.00
223.90	0.00	0.00	0.00
223.92	0.00	0.00	0.00
223.94	0.00	0.00	0.00
223.96	0.00	0.00	0.00
223.98	0.00	0.00	0.00
224.00	0.00	0.00	0.00
224.02	0.00	0.00	0.00
224.04	0.00	0.00	0.00
224.06	0.00	0.00	0.00
224.08	0.00	0.00	0.00
224.10	0.00	0.00	0.00
224.12	0.00	0.00	0.00
224.14	0.00	0.00	0.00
224.16	0.00	0.00	0.00
224.18	0.00	0.00	0.00
224.20	0.00	0.00	0.00
224.22	0.00	0.00	0.00
224.24	0.00	0.00	0.00
224.26	0.00	0.00	0.00
224.28	0.00	0.00	0.00
224.30	0.00	0.00	0.00
224.32	0.00	0.00	0.00
224.34	0.00	0.00	0.00
224.36	0.00	0.00	0.00
224.38	0.00	0.00	0.00
224.40	0.00	0.00	0.00
224.42	0.00	0.00	0.00
224.44	0.00	0.00	0.00
224.46	0.00	0.00	0.00
224.48	0.00	0.00	0.00
224.50	0.00	0.00	0.00
224.52	0.00	0.00	0.00
224.54	0.00	0.00	0.00
224.56	0.00	0.00	0.00
224.58	0.00	0.00	0.00
224.60	0.00	0.00	0.00
224.62	0.00	0.00	0.00
224.64	0.00	0.00	0.00
224.66	0.01	0.01	0.00
224.68	0.01	0.01	0.00
224.70	0.01	0.01	0.00
224.72	0.02	0.02	0.00
224.74	0.02	0.02	0.00
224.76	0.03	0.03	0.00
224.78	0.03	0.03	0.00
224.80	0.04	0.04	0.00
224.82	0.04	0.04	0.00
224.84	0.04	0.04	0.00
224.86	0.04	0.04	0.00
224.88	0.05	0.05	0.00
224.90	0.05	0.05	0.00

WQV/Extended Detention Elevation 224.77, Q=0.03cfs

Stage-Discharge for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
224.92	0.05	0.05	0.00
224.94	0.05	0.05	0.00
224.96	0.06	0.06	0.00
224.98	0.06	0.06	0.00
225.00	0.06	0.06	0.00
225.02	0.06	0.06	0.00
225.04	0.06	0.06	0.00
225.06	0.06	0.06	0.00
225.08	0.07	0.07	0.00
225.10	0.07	0.07	0.00
225.12	0.07	0.07	0.00
225.14	0.07	0.07	0.00
225.16	0.07	0.07	0.00
225.18	0.07	0.07	0.00
225.20	0.08	0.08	0.00
225.22	0.08	0.08	0.00
225.24	0.08	0.08	0.00
225.26	0.08	0.08	0.00
225.28	0.08	0.08	0.00
225.30	0.08	0.08	0.00
225.32	0.08	0.08	0.00
225.34	0.09	0.09	0.00
225.36	0.09	0.09	0.00
225.38	0.09	0.09	0.00
225.40	0.09	0.09	0.00
225.42	0.09	0.09	0.00
225.44	0.09	0.09	0.00
225.46	0.09	0.09	0.00
225.48	0.09	0.09	0.00
225.50	0.09	0.09	0.00
225.52	0.10	0.10	0.00
225.54	0.10	0.10	0.00
225.56	0.10	0.10	0.00
225.58	0.10	0.10	0.00
225.60	0.10	0.10	0.00
225.62	0.10	0.10	0.00
225.64	0.11	0.11	0.00
225.66	0.11	0.11	0.00
225.68	0.12	0.12	0.00
225.70	0.13	0.13	0.00
225.72	0.14	0.14	0.00
225.74	0.16	0.16	0.00
225.76	0.17	0.17	0.00
225.78	0.19	0.19	0.00
225.80	0.20	0.20	0.00
225.82	0.22	0.22	0.00
225.84	0.24	0.24	0.00
225.86	0.26	0.26	0.00
225.88	0.27	0.27	0.00
225.90	0.29	0.29	0.00
225.92	0.31	0.31	0.00
225.94	0.33	0.33	0.00
225.96	0.34	0.34	0.00
225.98	0.35	0.35	0.00
226.00	0.37	0.37	0.00
226.02	0.38	0.38	0.00
226.04	0.39	0.39	0.00
226.06	0.40	0.40	0.00
226.08	0.41	0.41	0.00
226.10	0.42	0.42	0.00
226.12	0.43	0.43	0.00
226.14	0.44	0.44	0.00
226.16	0.45	0.45	0.00
226.18	0.46	0.46	0.00
226.20	0.47	0.47	0.00
226.22	0.48	0.48	0.00
226.24	0.49	0.49	0.00
226.26	0.50	0.50	0.00
226.28	0.51	0.51	0.00
226.30	0.51	0.51	0.00
226.32	0.52	0.52	0.00
226.34	0.53	0.53	0.00
226.36	0.54	0.54	0.00
226.38	0.55	0.55	0.00
226.40	0.55	0.55	0.00
226.42	0.56	0.56	0.00
226.44	0.57	0.57	0.00
226.46	0.58	0.58	0.00
226.48	0.58	0.58	0.00
226.50	0.59	0.59	0.00
226.52	0.60	0.60	0.00
226.54	0.60	0.60	0.00
226.56	0.61	0.61	0.00
226.58	0.62	0.62	0.00
226.60	0.62	0.62	0.00
226.62	0.63	0.63	0.00
226.64	0.64	0.64	0.00
226.66	0.64	0.64	0.00
226.68	0.65	0.65	0.00
226.70	0.66	0.66	0.00
226.72	0.66	0.66	0.00
226.74	0.67	0.67	0.00
226.76	0.68	0.68	0.00
226.78	0.68	0.68	0.00
226.80	0.69	0.69	0.00
226.82	0.69	0.69	0.00
226.84	0.70	0.70	0.00
226.86	0.71	0.71	0.00
226.88	0.71	0.71	0.00
226.90	0.72	0.72	0.00
226.92	0.72	0.72	0.00
226.94	0.73	0.73	0.00
226.96	0.73	0.73	0.00
226.98	0.74	0.74	0.00

Stage-Discharge for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
227.00	0.75	0.75	0.00
227.02	0.75	0.75	0.00
227.04	0.76	0.76	0.00
227.06	0.76	0.76	0.00
227.08	0.77	0.77	0.00
227.10	0.77	0.77	0.00
227.12	0.78	0.78	0.00
227.14	0.78	0.78	0.00
227.16	0.79	0.79	0.00
227.18	0.79	0.79	0.00
227.20	0.80	0.80	0.00
227.22	0.80	0.80	0.00
227.24	0.81	0.81	0.00
227.26	0.81	0.81	0.00
227.28	0.82	0.82	0.00
227.30	0.82	0.82	0.00
227.32	0.83	0.83	0.00
227.34	0.83	0.83	0.00
227.36	0.84	0.84	0.00
227.38	0.84	0.84	0.00
227.40	0.85	0.85	0.00
227.42	0.85	0.85	0.00
227.44	0.86	0.86	0.00
227.46	0.86	0.86	0.00
227.48	0.87	0.87	0.00
227.50	0.87	0.87	0.00
227.52	0.88	0.88	0.00
227.54	0.88	0.88	0.00
227.56	0.89	0.89	0.00
227.58	0.89	0.89	0.00
227.60	0.90	0.90	0.00
227.62	0.90	0.90	0.00
227.64	0.90	0.90	0.00
227.66	0.91	0.91	0.00
227.68	0.91	0.91	0.00
227.70	0.92	0.92	0.00
227.72	0.92	0.92	0.00
227.74	0.93	0.93	0.00
227.76	0.93	0.93	0.00
227.78	0.94	0.94	0.00
227.80	0.94	0.94	0.00
227.82	1.09	1.09	0.00
227.84	1.37	1.37	0.00
227.86	1.72	1.72	0.00
227.88	2.14	2.14	0.00
227.90	2.62	2.62	0.00
227.92	3.14	3.14	0.00
227.94	3.71	3.71	0.00
227.96	4.32	4.32	0.00
227.98	4.97	4.97	0.00
228.00	5.57	5.57	0.00
228.02	5.59	5.59	0.00
228.04	5.61	5.61	0.00
228.06	5.63	5.63	0.00
228.08	5.65	5.65	0.00
228.10	5.67	5.67	0.00
228.12	5.69	5.69	0.00
228.14	5.71	5.71	0.00
228.16	5.73	5.73	0.00
228.18	5.75	5.75	0.00
228.20	5.77	5.77	0.00
228.22	5.79	5.79	0.00
228.24	5.81	5.81	0.00
228.26	5.83	5.83	0.00
228.28	5.85	5.85	0.00
228.30	5.87	5.87	0.00
228.32	5.89	5.89	0.00
228.34	5.91	5.91	0.00
228.36	5.93	5.93	0.00
228.38	5.95	5.95	0.00
228.40	5.97	5.97	0.00
228.42	5.99	5.99	0.00
228.44	6.01	6.01	0.00
228.46	6.03	6.03	0.00
228.48	6.05	6.05	0.00
228.50	6.07	6.07	0.00
228.52	6.09	6.09	0.00
228.54	6.11	6.11	0.00
228.56	6.13	6.13	0.00
228.58	6.15	6.15	0.00
228.60	6.17	6.17	0.00
228.62	6.19	6.19	0.00
228.64	6.21	6.21	0.00
228.66	6.22	6.22	0.00
228.68	6.24	6.24	0.00
228.70	6.26	6.26	0.00
228.72	6.28	6.28	0.00
228.74	6.30	6.30	0.00
228.76	6.32	6.32	0.00
228.78	6.34	6.34	0.00
228.80	6.35	6.35	0.00
228.82	6.37	6.37	0.00
228.84	6.39	6.39	0.00
228.86	6.41	6.41	0.00
228.88	6.43	6.43	0.00
228.90	6.45	6.45	0.00
228.92	6.54	6.46	0.07
228.94	6.68	6.48	0.20
228.96	6.87	6.50	0.37
228.98	7.08	6.52	0.56
229.00	7.32	6.54	0.79
229.02	7.59	6.55	1.04
229.04	7.88	6.57	1.30
229.06	8.18	6.59	1.59

Stage-Discharge for Pond WP1: PROP. WET POND #1 (continued)

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
229.08	8.51	6.61	1.90
229.10	8.85	6.63	2.23
229.12	9.22	6.64	2.58
229.14	9.61	6.66	2.94
229.16	10.01	6.68	3.33
229.18	10.43	6.70	3.73
229.20	10.86	6.71	4.15
229.22	11.32	6.73	4.58
229.24	11.78	6.75	5.03
229.26	12.27	6.77	5.50
229.28	12.76	6.78	5.98
229.30	13.28	6.80	6.48
229.32	13.82	6.82	7.01
229.34	14.39	6.84	7.55
229.36	14.97	6.85	8.12
229.38	15.57	6.87	8.70
229.40	16.19	6.89	9.30
229.42	16.82	6.90	9.91
229.44	17.47	6.92	10.55
229.46	18.14	6.94	11.20
229.48	18.82	6.95	11.86
229.50	19.52	6.97	12.55
229.52	20.16	6.99	13.18
229.54	20.82	7.01	13.81
229.56	21.48	7.02	14.46
229.58	22.16	7.04	15.12
229.60	22.84	7.06	15.78
229.62	23.53	7.07	16.46
229.64	24.23	7.09	17.14
229.66	24.94	7.10	17.84
229.68	25.66	7.12	18.54
229.70	26.39	7.14	19.25
229.72	27.12	7.15	19.97
229.74	27.86	7.17	20.69
229.76	28.62	7.19	21.43
229.78	29.38	7.20	22.17
229.80	30.14	7.22	22.92
229.82	30.92	7.24	23.68
229.84	31.70	7.25	24.45
229.86	32.50	7.27	25.23
229.88	33.29	7.28	26.01
229.90	34.10	7.30	26.80
229.92	34.93	7.32	27.62
229.94	35.78	7.33	28.45
229.96	36.63	7.35	29.28
229.98	37.49	7.36	30.12
230.00	**38.36**	**7.38**	**30.98**

Summary for Pond WP1: PROP. WET POND #1

[80] Warning: Exceeded Pond 105 by 2.83' @ 20.60 hrs (25.15 cfs 3.567 af)

Inflow Area = 14.471 ac, 74.60% Impervious, Inflow Depth > 4.76" for 50-YR event
Inflow = 65.38 cfs @ 12.11 hrs, Volume= 5.744 af
Outflow = 11.78 cfs @ 12.62 hrs, Volume= 3.798 af, Atten= 82%, Lag= 30.5 min
Primary = 5.29 cfs @ 12.81 hrs, Volume= 3.295 af
Routed to Pond EX : PROP. DMH
Secondary = 6.53 cfs @ 12.61 hrs, Volume= 0.503 af
Routed to Link A : POA

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Starting Elev= 224.60' Surf.Area= 8,009 sf Storage= 36,399 cf
Peak Elev= 229.30' @ 12.61 hrs Surf.Area= 38,790 sf Storage= 177,535 cf (141,136 cf above start)
Flood Elev= 230.00' Surf.Area= 40,415 sf Storage= 205,174 cf (168,775 cf above start)

WQV/Extended Detention Max Water Elevation = 229.30

Plug-Flow detention time= 337.8 min calculated for 2.956 af (51% of inflow)
Center-of-Mass det. time= 158.8 min (931.7 - 772.9)

Volume	Invert	Avail.Storage	Storage Description
#1	216.60'	205,174 cf	**Wet Pond (Irregular)** Listed below (Recalc)

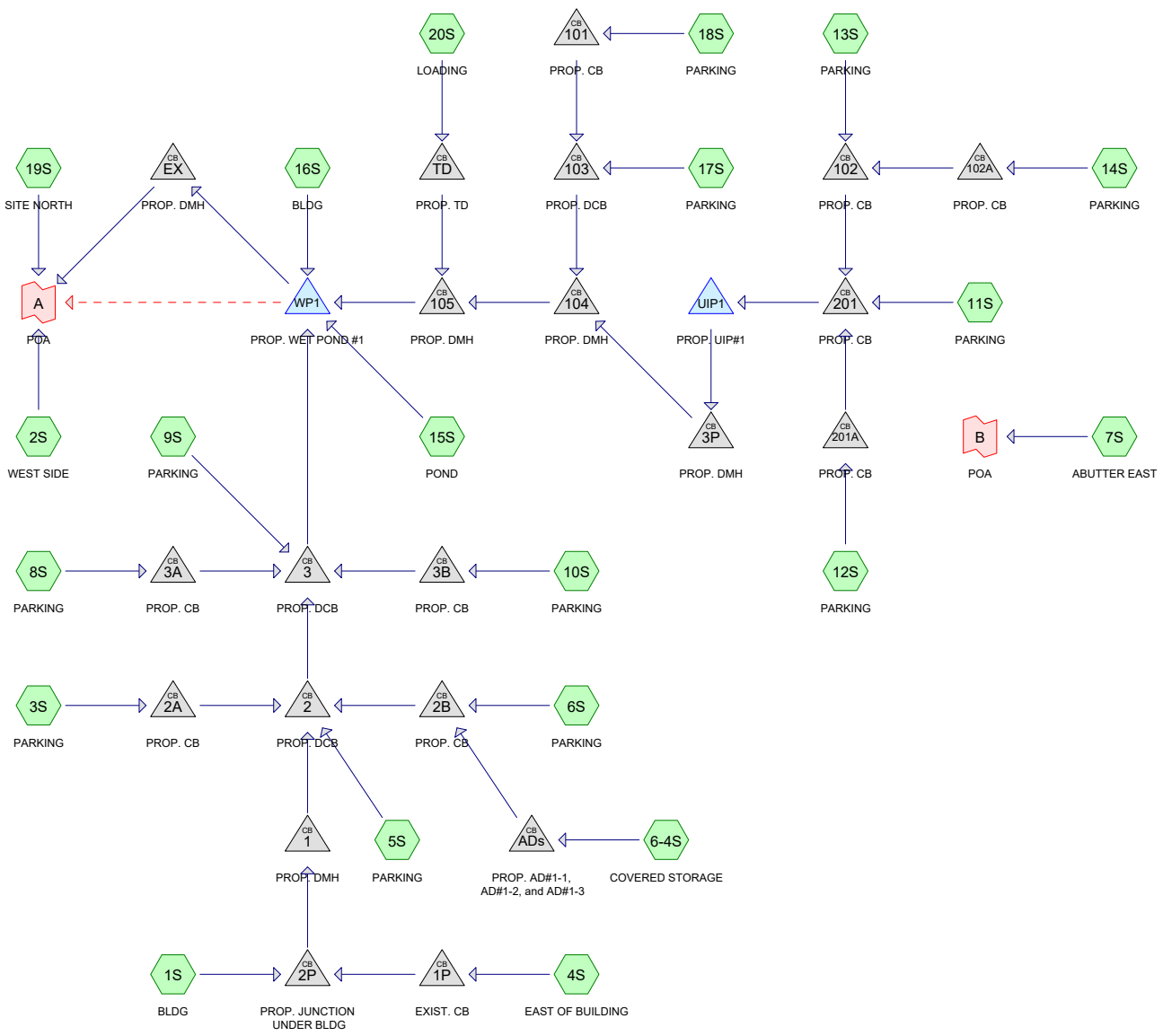
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
216.60	1,719	168.0	0	0	1,719
218.00	2,527	200.0	2,954	2,954	2,691
220.00	3,917	246.0	6,393	9,348	4,383
222.00	5,577	291.7	9,445	18,793	6,411
224.00	7,440	329.4	12,972	31,765	8,375
224.60	8,009	340.0	4,634	36,399	8,975
226.00	31,131	738.0	25,634	62,033	43,125
228.00	35,848	751.0	66,924	128,956	45,268
230.00	40,415	788.0	76,217	205,174	50,053

Device	Routing	Invert	Outlet Devices
#1	Primary	224.60'	**12.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 224.60' / 224.36' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	224.60'	**2.0" Vert. Extended Detetnion Drain Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	225.60'	**4.5" Vert. Flow Control Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	227.80'	**48.0" x 48.0" Horiz. Riser Top Opening** C= 0.600 Limited to weir flow at low heads
#5	Secondary	228.90'	**10.0' long x 10.0' breadth Overflow Emergency Spillway Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=5.30 cfs @ 12.81 hrs HW=229.27' TW=226.88' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 5.30 cfs @ 6.74 fps)
  ├─**2=Extended Detetnion Drain Orifice**(Passes < 0.16 cfs potential flow)
  ├─**3=Flow Control Orifice** (Passes < 0.82 cfs potential flow)
  └─**4=Riser Top Opening** (Passes < 92.90 cfs potential flow)

Secondary OutFlow Max=6.50 cfs @ 12.61 hrs HW=229.30' TW=0.00' (Dynamic Tailwater)
└─**5=Overflow Emergency Spillway Weir**(Weir Controls 6.50 cfs @ 1.62 fps)

8. REVISED POST-DEVELOPMENT HYDROCAD DRAINAGE ANALYSIS



Subcat Reach Pond Link

Routing Diagram for 26-04-17 POST-DEVELOPMENT REV - Permit Amendment AoT Model

Prepared by Granite Engineering, LLC, Printed 4/17/2026

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-YR	Type III 24-hr		Default	24.00	1	2.82	2
2	10-YR	Type III 24-hr		Default	24.00	1	4.16	2
3	25-YR	Type III 24-hr		Default	24.00	1	5.20	2
4	50-YR	Type III 24-hr		Default	24.00	1	6.15	2
5	100-YR	Type III 24-hr		Default	24.00	1	7.29	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.739	39	>75% Grass cover, Good, HSG A (6-4S, 6S, 7S, 9S, 10S, 11S, 12S, 13S, 14S, 15S, 17S, 18S)
5.115	61	>75% Grass cover, Good, HSG B (2S, 3S, 5S, 7S, 8S, 9S, 10S, 11S, 12S, 13S, 15S, 17S, 18S, 19S)
1.844	74	>75% Grass cover, Good, HSG C (4S, 6-4S, 6S, 7S, 12S, 19S)
11.144	98	Paved parking and roofs (1S, 3S, 4S, 5S, 6-4S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S, 14S, 16S, 17S, 18S, 20S)
0.184	98	Water Surface, 0% imp, HSG B (15S)
0.007	98	Water Surface, HSG A (2S)
0.304	30	Woods, Good, HSG A (6S, 7S, 10S, 12S, 14S)
1.023	55	Woods, Good, HSG B (2S, 19S)
0.484	70	Woods, Good, HSG C (4S, 7S, 12S, 19S)
20.843	**81**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
1.049	HSG A	2S, 6-4S, 6S, 7S, 9S, 10S, 11S, 12S, 13S, 14S, 15S, 17S, 18S
6.322	HSG B	2S, 3S, 5S, 7S, 8S, 9S, 10S, 11S, 12S, 13S, 15S, 17S, 18S, 19S
2.328	HSG C	4S, 6-4S, 6S, 7S, 12S, 19S
0.000	HSG D	
11.144	Other	1S, 3S, 4S, 5S, 6-4S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S, 14S, 16S, 17S, 18S, 20S
20.843		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.739	5.115	1.844	0.000	0.000	7.697	>75% Grass cover, Good	2S, 3S, 4S, 5S, 6-4S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S, 14S, 15S, 17S, 18S, 19S
0.000	0.000	0.000	0.000	11.144	11.144	Paved parking and roofs	1S, 3S, 4S, 5S, 6-4S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S, 14S, 16S, 17S, 18S, 20S
0.007	0.000	0.000	0.000	0.000	0.007	Water Surface	2S
0.000	0.184	0.000	0.000	0.000	0.184	Water Surface, 0% imp	15S
0.304	1.023	0.484	0.000	0.000	1.811	Woods, Good	2S, 4S, 6S, 7S, 10S, 12S, 14S, 19S
1.049	**6.322**	**2.328**	**0.000**	**11.144**	**20.843**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: BLDG Runoff Area=228,051 sf 100.00% Impervious Runoff Depth>2.59"
Tc=10.0 min CN=98 Runoff=12.36 cfs 1.128 af

Subcatchment2S: WEST SIDE Runoff Area=21,186 sf 1.45% Impervious Runoff Depth>0.27"
Tc=6.0 min CN=60 Runoff=0.06 cfs 0.011 af

Subcatchment3S: PARKING Runoff Area=22,821 sf 87.27% Impervious Runoff Depth>2.11"
Tc=6.0 min CN=93 Runoff=1.23 cfs 0.092 af

Subcatchment4S: EAST OF BUILDING Runoff Area=31,416 sf 11.24% Impervious Runoff Depth>0.90"
Tc=6.0 min CN=76 Runoff=0.71 cfs 0.054 af

Subcatchment5S: PARKING Runoff Area=41,525 sf 95.47% Impervious Runoff Depth>2.41"
Tc=6.0 min CN=96 Runoff=2.45 cfs 0.191 af

Subcatchment6-4S: COVERED STORAGE Runoff Area=12,257 sf 19.38% Impervious Runoff Depth>0.75"
Tc=6.0 min CN=73 Runoff=0.22 cfs 0.017 af

Subcatchment6S: PARKING Runoff Area=36,983 sf 50.15% Impervious Runoff Depth>0.98"
Tc=6.0 min CN=78 Runoff=0.93 cfs 0.070 af

Subcatchment7S: ABUTTER EAST Runoff Area=54,828 sf 27.72% Impervious Runoff Depth>1.01"
Tc=6.0 min CN=78 Runoff=1.42 cfs 0.106 af

Subcatchment8S: PARKING Runoff Area=19,107 sf 96.62% Impervious Runoff Depth>2.45"
Tc=6.0 min CN=97 Runoff=1.14 cfs 0.090 af

Subcatchment9S: PARKING Runoff Area=39,033 sf 89.01% Impervious Runoff Depth>2.13"
Tc=6.0 min CN=94 Runoff=2.12 cfs 0.159 af

Subcatchment10S: PARKING Runoff Area=29,571 sf 75.03% Impervious Runoff Depth>1.36"
Tc=6.0 min CN=84 Runoff=1.06 cfs 0.077 af

Subcatchment11S: PARKING Runoff Area=7,440 sf 90.98% Impervious Runoff Depth>2.19"
Tc=6.0 min CN=94 Runoff=0.41 cfs 0.031 af

Subcatchment12S: PARKING Runoff Area=18,717 sf 40.47% Impervious Runoff Depth>0.42"
Tc=6.0 min CN=65 Runoff=0.14 cfs 0.015 af

Subcatchment13S: PARKING Runoff Area=7,102 sf 92.37% Impervious Runoff Depth>2.15"
Tc=6.0 min CN=94 Runoff=0.39 cfs 0.029 af

Subcatchment14S: PARKING Runoff Area=15,428 sf 45.12% Impervious Runoff Depth>0.38"
Tc=6.0 min CN=64 Runoff=0.09 cfs 0.011 af

Subcatchment15S: POND Runoff Area=51,091 sf 0.00% Impervious Runoff Depth>0.46"
Tc=6.0 min CN=66 Runoff=0.44 cfs 0.045 af

Subcatchment16S: BLDG Runoff Area=5,001 sf 100.00% Impervious Runoff Depth>2.59"
Tc=6.0 min CN=98 Runoff=0.31 cfs 0.025 af

Subcatchment17S: PARKING Runoff Area=40,036 sf 77.04% Impervious Runoff Depth>1.63"
Tc=6.0 min CN=88 Runoff=1.73 cfs 0.125 af

Subcatchment18S: PARKING Runoff Area=24,120 sf 76.35% Impervious Runoff Depth>1.55"
Tc=6.0 min CN=87 Runoff=0.99 cfs 0.071 af

Subcatchment19S: SITE NORTH Runoff Area=201,577 sf 0.00% Impervious Runoff Depth>0.29"
Flow Length=703' Tc=30.7 min CN=61 Runoff=0.50 cfs 0.111 af

Subcatchment20S: LOADING Runoff Area=648 sf 100.00% Impervious Runoff Depth>2.59"
Tc=6.0 min CN=98 Runoff=0.04 cfs 0.003 af

Pond 1: PROP. DMH Peak Elev=228.71' Inflow=12.99 cfs 1.182 af
36.0" Round Culvert n=0.013 L=139.2' S=0.0040 '/' Outflow=12.99 cfs 1.182 af

Pond 1P: EXIST. CB Peak Elev=234.11' Inflow=0.71 cfs 0.054 af
18.0" Round Culvert n=0.025 L=225.0' S=0.0070 '/' Outflow=0.71 cfs 0.054 af

Pond 2: PROP. DCB Peak Elev=228.14' Inflow=17.52 cfs 1.552 af
42.0" Round Culvert n=0.013 L=237.4' S=0.0040 '/' Outflow=17.52 cfs 1.552 af

Pond 2A: PROP. CB Peak Elev=228.73' Inflow=1.23 cfs 0.092 af
18.0" Round Culvert n=0.013 L=171.0' S=0.0099 '/' Outflow=1.23 cfs 0.092 af

Pond 2B: PROP. CB Peak Elev=228.63' Inflow=1.14 cfs 0.087 af
18.0" Round Culvert n=0.013 L=178.0' S=0.0054 '/' Outflow=1.14 cfs 0.087 af

Pond 2P: PROP. JUNCTION UNDER BLDG Peak Elev=229.26' Inflow=12.99 cfs 1.182 af
36.0" Round Culvert n=0.013 L=46.6' S=0.0099 '/' Outflow=12.99 cfs 1.182 af

Pond 3: PROP. DCB Peak Elev=227.28' Inflow=21.70 cfs 1.878 af
42.0" Round Culvert n=0.013 L=133.8' S=0.0040 '/' Outflow=21.70 cfs 1.878 af

Pond 3A: PROP. CB Peak Elev=228.14' Inflow=1.14 cfs 0.090 af
15.0" Round Culvert n=0.013 L=171.0' S=0.0099 '/' Outflow=1.14 cfs 0.090 af

Pond 3B: PROP. CB Peak Elev=228.35' Inflow=1.06 cfs 0.077 af
15.0" Round Culvert n=0.013 L=163.0' S=0.0100 '/' Outflow=1.06 cfs 0.077 af

Pond 3P: PROP. DMH Peak Elev=227.31' Inflow=0.00 cfs 0.000 af
15.0" Round Culvert n=0.013 L=73.4' S=0.0099 '/' Outflow=0.00 cfs 0.000 af

Pond 101: PROP. CB Peak Elev=227.88' Inflow=0.99 cfs 0.071 af
15.0" Round Culvert n=0.013 L=141.6' S=0.0050 '/' Outflow=0.99 cfs 0.071 af

Pond 102: PROP. CB Peak Elev=229.53' Inflow=0.48 cfs 0.041 af
15.0" Round Culvert n=0.013 L=129.6' S=0.0040 '/' Outflow=0.48 cfs 0.041 af

Pond 102A: PROP. CB Peak Elev=229.74' Inflow=0.09 cfs 0.011 af
12.0" Round Culvert n=0.013 L=39.9' S=0.0050 '/' Outflow=0.09 cfs 0.011 af

Pond 103: PROP. DCB Peak Elev=227.28' Inflow=2.71 cfs 0.197 af
24.0" Round Culvert n=0.013 L=150.0' S=0.0050 '/' Outflow=2.71 cfs 0.197 af

Pond 104: PROP. DMH Peak Elev=227.28' Inflow=2.71 cfs 0.197 af
30.0" Round Culvert n=0.013 L=56.0' S=0.0041 '/' Outflow=2.71 cfs 0.196 af

Pond 105: PROP. DMH Peak Elev=227.28' Inflow=2.75 cfs 0.199 af
30.0" Round Culvert n=0.013 L=103.0' S=0.0040 '/' Outflow=2.75 cfs 0.199 af

Pond 201: PROP. CB Peak Elev=229.12' Inflow=1.03 cfs 0.087 af
15.0" Round Culvert n=0.013 L=37.0' S=0.0041 '/' Outflow=1.03 cfs 0.087 af

Pond 201A: PROP. CB Peak Elev=230.00' Inflow=0.14 cfs 0.015 af
15.0" Round Culvert n=0.013 L=40.0' S=0.0310 '/' Outflow=0.14 cfs 0.015 af

Pond ADs: PROP. AD#1-1, AD#1-2, and AD#1-3 Peak Elev=230.18' Inflow=0.22 cfs 0.017 af
8.0" Round Culvert n=0.013 L=39.0' S=0.0285 '/' Outflow=0.22 cfs 0.017 af

Pond EX: PROP. DMH Peak Elev=224.93' Inflow=0.81 cfs 0.809 af
12.0" Round Culvert n=0.013 L=14.0' S=0.0100 '/' Outflow=0.81 cfs 0.809 af

Pond TD: PROP. TD Peak Elev=230.13' Inflow=0.04 cfs 0.003 af
6.0" Round Culvert n=0.013 L=58.0' S=0.0086 '/' Outflow=0.04 cfs 0.003 af

Pond UIP1: PROP. UIP#1 Peak Elev=229.12' Storage=2,777 cf Inflow=1.03 cfs 0.087 af
Discarded=0.02 cfs 0.023 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.023 af

Pond WP1: PROP. WET POND #1 Peak Elev=227.28' Storage=103,618 cf Inflow=25.14 cfs 2.147 af
Primary=0.81 cfs 0.809 af Secondary=0.00 cfs 0.000 af Outflow=0.81 cfs 0.809 af

Link A: POA Inflow=1.25 cfs 0.931 af
Primary=1.25 cfs 0.931 af

Link B: POA Inflow=1.42 cfs 0.106 af
Primary=1.42 cfs 0.106 af

Total Runoff Area = 20.843 ac Runoff Volume = 2.463 af Average Runoff Depth = 1.42"
46.50% Pervious = 9.692 ac 53.50% Impervious = 11.151 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: BLDG Runoff Area=228,051 sf 100.00% Impervious Runoff Depth>3.92"
Tc=10.0 min CN=98 Runoff=18.39 cfs 1.710 af

Subcatchment2S: WEST SIDE Runoff Area=21,186 sf 1.45% Impervious Runoff Depth>0.83"
Tc=6.0 min CN=60 Runoff=0.38 cfs 0.034 af

Subcatchment3S: PARKING Runoff Area=22,821 sf 87.27% Impervious Runoff Depth>3.40"
Tc=6.0 min CN=93 Runoff=1.94 cfs 0.149 af

Subcatchment4S: EAST OF BUILDING Runoff Area=31,416 sf 11.24% Impervious Runoff Depth>1.86"
Tc=6.0 min CN=76 Runoff=1.54 cfs 0.112 af

Subcatchment5S: PARKING Runoff Area=41,525 sf 95.47% Impervious Runoff Depth>3.73"
Tc=6.0 min CN=96 Runoff=3.71 cfs 0.296 af

Subcatchment6-4S: COVERED STORAGE Runoff Area=12,257 sf 19.38% Impervious Runoff Depth>1.64"
Tc=6.0 min CN=73 Runoff=0.52 cfs 0.038 af

Subcatchment6S: PARKING Runoff Area=36,983 sf 50.15% Impervious Runoff Depth>1.99"
Tc=6.0 min CN=78 Runoff=1.94 cfs 0.141 af

Subcatchment7S: ABUTTER EAST Runoff Area=54,828 sf 27.72% Impervious Runoff Depth>2.03"
Tc=6.0 min CN=78 Runoff=2.93 cfs 0.213 af

Subcatchment8S: PARKING Runoff Area=19,107 sf 96.62% Impervious Runoff Depth>3.78"
Tc=6.0 min CN=97 Runoff=1.72 cfs 0.138 af

Subcatchment9S: PARKING Runoff Area=39,033 sf 89.01% Impervious Runoff Depth>3.43"
Tc=6.0 min CN=94 Runoff=3.33 cfs 0.256 af

Subcatchment10S: PARKING Runoff Area=29,571 sf 75.03% Impervious Runoff Depth>2.50"
Tc=6.0 min CN=84 Runoff=1.95 cfs 0.141 af

Subcatchment11S: PARKING Runoff Area=7,440 sf 90.98% Impervious Runoff Depth>3.50"
Tc=6.0 min CN=94 Runoff=0.64 cfs 0.050 af

Subcatchment12S: PARKING Runoff Area=18,717 sf 40.47% Impervious Runoff Depth>1.12"
Tc=6.0 min CN=65 Runoff=0.50 cfs 0.040 af

Subcatchment13S: PARKING Runoff Area=7,102 sf 92.37% Impervious Runoff Depth>3.46"
Tc=6.0 min CN=94 Runoff=0.61 cfs 0.047 af

Subcatchment14S: PARKING Runoff Area=15,428 sf 45.12% Impervious Runoff Depth>1.04"
Tc=6.0 min CN=64 Runoff=0.38 cfs 0.031 af

Subcatchment15S: POND Runoff Area=51,091 sf 0.00% Impervious Runoff Depth>1.17"
Tc=6.0 min CN=66 Runoff=1.46 cfs 0.115 af

Subcatchment16S: BLDG Runoff Area=5,001 sf 100.00% Impervious Runoff Depth>3.92"
Tc=6.0 min CN=98 Runoff=0.46 cfs 0.038 af

Subcatchment17S: PARKING Runoff Area=40,036 sf 77.04% Impervious Runoff Depth>2.85"
Tc=6.0 min CN=88 Runoff=2.97 cfs 0.218 af

Subcatchment18S: PARKING Runoff Area=24,120 sf 76.35% Impervious Runoff Depth>2.74"
Tc=6.0 min CN=87 Runoff=1.73 cfs 0.127 af

Subcatchment19S: SITE NORTH Runoff Area=201,577 sf 0.00% Impervious Runoff Depth>0.87"
Flow Length=703' Tc=30.7 min CN=61 Runoff=2.24 cfs 0.337 af

Subcatchment20S: LOADING Runoff Area=648 sf 100.00% Impervious Runoff Depth>3.92"
Tc=6.0 min CN=98 Runoff=0.06 cfs 0.005 af

Pond 1: PROP. DMH Peak Elev=229.43' Inflow=19.75 cfs 1.822 af
36.0" Round Culvert n=0.013 L=139.2' S=0.0040 '/' Outflow=19.75 cfs 1.822 af

Pond 1P: EXIST. CB Peak Elev=234.37' Inflow=1.54 cfs 0.112 af
18.0" Round Culvert n=0.025 L=225.0' S=0.0070 '/' Outflow=1.54 cfs 0.112 af

Pond 2: PROP. DCB Peak Elev=228.87' Inflow=27.41 cfs 2.447 af
42.0" Round Culvert n=0.013 L=237.4' S=0.0040 '/' Outflow=27.41 cfs 2.447 af

Pond 2A: PROP. CB Peak Elev=229.11' Inflow=1.94 cfs 0.149 af
18.0" Round Culvert n=0.013 L=171.0' S=0.0099 '/' Outflow=1.94 cfs 0.149 af

Pond 2B: PROP. CB Peak Elev=229.15' Inflow=2.46 cfs 0.179 af
18.0" Round Culvert n=0.013 L=178.0' S=0.0054 '/' Outflow=2.46 cfs 0.179 af

Pond 2P: PROP. JUNCTION UNDER BLDG Peak Elev=229.94' Inflow=19.75 cfs 1.822 af
36.0" Round Culvert n=0.013 L=46.6' S=0.0099 '/' Outflow=19.75 cfs 1.822 af

Pond 3: PROP. DCB Peak Elev=228.04' Inflow=34.19 cfs 2.982 af
42.0" Round Culvert n=0.013 L=133.8' S=0.0040 '/' Outflow=34.19 cfs 2.982 af

Pond 3A: PROP. CB Peak Elev=228.44' Inflow=1.72 cfs 0.138 af
15.0" Round Culvert n=0.013 L=171.0' S=0.0099 '/' Outflow=1.72 cfs 0.138 af

Pond 3B: PROP. CB Peak Elev=228.67' Inflow=1.95 cfs 0.141 af
15.0" Round Culvert n=0.013 L=163.0' S=0.0100 '/' Outflow=1.95 cfs 0.141 af

Pond 3P: PROP. DMH Peak Elev=228.00' Inflow=0.20 cfs 0.052 af
15.0" Round Culvert n=0.013 L=73.4' S=0.0099 '/' Outflow=0.20 cfs 0.052 af

Pond 101: PROP. CB Peak Elev=228.13' Inflow=1.73 cfs 0.127 af
15.0" Round Culvert n=0.013 L=141.6' S=0.0050 '/' Outflow=1.73 cfs 0.127 af

Pond 102: PROP. CB Peak Elev=229.83' Inflow=0.99 cfs 0.078 af
15.0" Round Culvert n=0.013 L=129.6' S=0.0040 '/' Outflow=0.99 cfs 0.078 af

Pond 102A: PROP. CB Peak Elev=229.96' Inflow=0.38 cfs 0.031 af
12.0" Round Culvert n=0.013 L=39.9' S=0.0050 '/' Outflow=0.38 cfs 0.031 af

Pond 103: PROP. DCB Peak Elev=227.99' Inflow=4.70 cfs 0.345 af
24.0" Round Culvert n=0.013 L=150.0' S=0.0050 '/' Outflow=4.70 cfs 0.344 af

Pond 104: PROP. DMH Peak Elev=227.99' Inflow=4.70 cfs 0.397 af
30.0" Round Culvert n=0.013 L=56.0' S=0.0041 '/' Outflow=4.70 cfs 0.396 af

Pond 105: PROP. DMH Peak Elev=227.99' Inflow=4.76 cfs 0.401 af
30.0" Round Culvert n=0.013 L=103.0' S=0.0040 '/' Outflow=4.76 cfs 0.400 af

Pond 201: PROP. CB Peak Elev=229.83' Inflow=2.13 cfs 0.168 af
15.0" Round Culvert n=0.013 L=37.0' S=0.0041 '/' Outflow=2.13 cfs 0.168 af

Pond 201A: PROP. CB Peak Elev=230.16' Inflow=0.50 cfs 0.040 af
15.0" Round Culvert n=0.013 L=40.0' S=0.0310 '/' Outflow=0.50 cfs 0.040 af

Pond ADs: PROP. AD#1-1, AD#1-2, and AD#1-3 Peak Elev=230.34' Inflow=0.52 cfs 0.038 af
8.0" Round Culvert n=0.013 L=39.0' S=0.0285 '/' Outflow=0.52 cfs 0.038 af

Pond EX: PROP. DMH Peak Elev=226.30' Inflow=4.44 cfs 1.700 af
12.0" Round Culvert n=0.013 L=14.0' S=0.0100 '/' Outflow=4.44 cfs 1.700 af

Pond TD: PROP. TD Peak Elev=230.15' Inflow=0.06 cfs 0.005 af
6.0" Round Culvert n=0.013 L=58.0' S=0.0086 '/' Outflow=0.06 cfs 0.005 af

Pond UIP1: PROP. UIP#1 Peak Elev=229.83' Storage=3,977 cf Inflow=2.13 cfs 0.168 af
Discarded=0.02 cfs 0.026 af Primary=0.20 cfs 0.052 af Outflow=0.21 cfs 0.078 af

Pond WP1: PROP. WET POND #1 Peak Elev=227.99' Storage=128,582 cf Inflow=40.78 cfs 3.534 af
Primary=4.44 cfs 1.700 af Secondary=0.00 cfs 0.000 af Outflow=4.44 cfs 1.700 af

Link A: POA Inflow=6.47 cfs 2.071 af
Primary=6.47 cfs 2.071 af

Link B: POA Inflow=2.93 cfs 0.213 af
Primary=2.93 cfs 0.213 af

Total Runoff Area = 20.843 ac Runoff Volume = 4.235 af Average Runoff Depth = 2.44"
46.50% Pervious = 9.692 ac 53.50% Impervious = 11.151 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: BLDG Runoff Area=228,051 sf 100.00% Impervious Runoff Depth>4.96"
Tc=10.0 min CN=98 Runoff=23.06 cfs 2.163 af

Subcatchment2S: WEST SIDE Runoff Area=21,186 sf 1.45% Impervious Runoff Depth>1.41"
Tc=6.0 min CN=60 Runoff=0.72 cfs 0.057 af

Subcatchment3S: PARKING Runoff Area=22,821 sf 87.27% Impervious Runoff Depth>4.42"
Tc=6.0 min CN=93 Runoff=2.48 cfs 0.193 af

Subcatchment4S: EAST OF BUILDING Runoff Area=31,416 sf 11.24% Impervious Runoff Depth>2.70"
Tc=6.0 min CN=76 Runoff=2.24 cfs 0.163 af

Subcatchment5S: PARKING Runoff Area=41,525 sf 95.47% Impervious Runoff Depth>4.77"
Tc=6.0 min CN=96 Runoff=4.68 cfs 0.379 af

Subcatchment6-4S: COVERED STORAGE Runoff Area=12,257 sf 19.38% Impervious Runoff Depth>2.43"
Tc=6.0 min CN=73 Runoff=0.78 cfs 0.057 af

Subcatchment6S: PARKING Runoff Area=36,983 sf 50.15% Impervious Runoff Depth>2.85"
Tc=6.0 min CN=78 Runoff=2.78 cfs 0.202 af

Subcatchment7S: ABUTTER EAST Runoff Area=54,828 sf 27.72% Impervious Runoff Depth>2.90"
Tc=6.0 min CN=78 Runoff=4.20 cfs 0.304 af

Subcatchment8S: PARKING Runoff Area=19,107 sf 96.62% Impervious Runoff Depth>4.81"
Tc=6.0 min CN=97 Runoff=2.16 cfs 0.176 af

Subcatchment9S: PARKING Runoff Area=39,033 sf 89.01% Impervious Runoff Depth>4.45"
Tc=6.0 min CN=94 Runoff=4.26 cfs 0.332 af

Subcatchment10S: PARKING Runoff Area=29,571 sf 75.03% Impervious Runoff Depth>3.44"
Tc=6.0 min CN=84 Runoff=2.66 cfs 0.195 af

Subcatchment11S: PARKING Runoff Area=7,440 sf 90.98% Impervious Runoff Depth>4.52"
Tc=6.0 min CN=94 Runoff=0.82 cfs 0.064 af

Subcatchment12S: PARKING Runoff Area=18,717 sf 40.47% Impervious Runoff Depth>1.78"
Tc=6.0 min CN=65 Runoff=0.85 cfs 0.064 af

Subcatchment13S: PARKING Runoff Area=7,102 sf 92.37% Impervious Runoff Depth>4.48"
Tc=6.0 min CN=94 Runoff=0.78 cfs 0.061 af

Subcatchment14S: PARKING Runoff Area=15,428 sf 45.12% Impervious Runoff Depth>1.69"
Tc=6.0 min CN=64 Runoff=0.65 cfs 0.050 af

Subcatchment15S: POND Runoff Area=51,091 sf 0.00% Impervious Runoff Depth>1.85"
Tc=6.0 min CN=66 Runoff=2.42 cfs 0.181 af

Subcatchment16S: BLDG Runoff Area=5,001 sf 100.00% Impervious Runoff Depth>4.96"
Tc=6.0 min CN=98 Runoff=0.57 cfs 0.047 af

Subcatchment17S: PARKING Runoff Area=40,036 sf 77.04% Impervious Runoff Depth>3.82"
Tc=6.0 min CN=88 Runoff=3.94 cfs 0.293 af

Subcatchment18S: PARKING Runoff Area=24,120 sf 76.35% Impervious Runoff Depth>3.71"
Tc=6.0 min CN=87 Runoff=2.31 cfs 0.171 af

Subcatchment19S: SITE NORTH Runoff Area=201,577 sf 0.00% Impervious Runoff Depth>1.46"
Flow Length=703' Tc=30.7 min CN=61 Runoff=4.10 cfs 0.563 af

Subcatchment20S: LOADING Runoff Area=648 sf 100.00% Impervious Runoff Depth>4.96"
Tc=6.0 min CN=98 Runoff=0.07 cfs 0.006 af

Pond 1: PROP. DMH Peak Elev=230.03' Inflow=25.03 cfs 2.325 af
36.0" Round Culvert n=0.013 L=139.2' S=0.0040 '/' Outflow=25.03 cfs 2.325 af

Pond 1P: EXIST. CB Peak Elev=234.55' Inflow=2.24 cfs 0.163 af
18.0" Round Culvert n=0.025 L=225.0' S=0.0070 '/' Outflow=2.24 cfs 0.163 af

Pond 2: PROP. DCB Peak Elev=229.45' Inflow=35.19 cfs 3.156 af
42.0" Round Culvert n=0.013 L=237.4' S=0.0040 '/' Outflow=35.19 cfs 3.156 af

Pond 2A: PROP. CB Peak Elev=229.58' Inflow=2.48 cfs 0.193 af
18.0" Round Culvert n=0.013 L=171.0' S=0.0099 '/' Outflow=2.48 cfs 0.193 af

Pond 2B: PROP. CB Peak Elev=229.67' Inflow=3.57 cfs 0.259 af
18.0" Round Culvert n=0.013 L=178.0' S=0.0054 '/' Outflow=3.57 cfs 0.259 af

Pond 2P: PROP. JUNCTION UNDER BLDG Peak Elev=230.53' Inflow=25.03 cfs 2.325 af
36.0" Round Culvert n=0.013 L=46.6' S=0.0099 '/' Outflow=25.03 cfs 2.325 af

Pond 3: PROP. DCB Peak Elev=228.79' Inflow=44.02 cfs 3.858 af
42.0" Round Culvert n=0.013 L=133.8' S=0.0040 '/' Outflow=44.02 cfs 3.858 af

Pond 3A: PROP. CB Peak Elev=228.81' Inflow=2.16 cfs 0.176 af
15.0" Round Culvert n=0.013 L=171.0' S=0.0099 '/' Outflow=2.16 cfs 0.176 af

Pond 3B: PROP. CB Peak Elev=229.02' Inflow=2.66 cfs 0.195 af
15.0" Round Culvert n=0.013 L=163.0' S=0.0100 '/' Outflow=2.66 cfs 0.195 af

Pond 3P: PROP. DMH Peak Elev=228.78' Inflow=1.41 cfs 0.122 af
15.0" Round Culvert n=0.013 L=73.4' S=0.0099 '/' Outflow=1.41 cfs 0.122 af

Pond 101: PROP. CB Peak Elev=228.78' Inflow=2.31 cfs 0.171 af
15.0" Round Culvert n=0.013 L=141.6' S=0.0050 '/' Outflow=2.31 cfs 0.171 af

Pond 102: PROP. CB Peak Elev=230.04' Inflow=1.43 cfs 0.111 af
15.0" Round Culvert n=0.013 L=129.6' S=0.0040 '/' Outflow=1.43 cfs 0.111 af

Pond 102A: PROP. CB Peak Elev=230.13' Inflow=0.65 cfs 0.050 af
12.0" Round Culvert n=0.013 L=39.9' S=0.0050 '/' Outflow=0.65 cfs 0.050 af

Pond 103: PROP. DCB Peak Elev=228.78' Inflow=6.25 cfs 0.464 af
24.0" Round Culvert n=0.013 L=150.0' S=0.0050 '/' Outflow=6.25 cfs 0.464 af

Pond 104: PROP. DMH Peak Elev=228.78' Inflow=6.25 cfs 0.586 af
30.0" Round Culvert n=0.013 L=56.0' S=0.0041 '/' Outflow=6.25 cfs 0.586 af

Pond 105: PROP. DMH Peak Elev=228.78' Inflow=6.33 cfs 0.592 af
30.0" Round Culvert n=0.013 L=103.0' S=0.0040 '/' Outflow=6.33 cfs 0.592 af

Pond 201: PROP. CB Peak Elev=230.01' Inflow=3.09 cfs 0.239 af
15.0" Round Culvert n=0.013 L=37.0' S=0.0041 '/' Outflow=3.09 cfs 0.239 af

Pond 201A: PROP. CB Peak Elev=230.26' Inflow=0.85 cfs 0.064 af
15.0" Round Culvert n=0.013 L=40.0' S=0.0310 '/' Outflow=0.85 cfs 0.064 af

Pond ADs: PROP. AD#1-1, AD#1-2, and AD#1-3 Peak Elev=230.47' Inflow=0.78 cfs 0.057 af
8.0" Round Culvert n=0.013 L=39.0' S=0.0285 '/' Outflow=0.78 cfs 0.057 af

Pond EX: PROP. DMH Peak Elev=226.66' Inflow=4.99 cfs 2.771 af
12.0" Round Culvert n=0.013 L=14.0' S=0.0100 '/' Outflow=4.99 cfs 2.771 af

Pond TD: PROP. TD Peak Elev=230.17' Inflow=0.07 cfs 0.006 af
6.0" Round Culvert n=0.013 L=58.0' S=0.0086 '/' Outflow=0.07 cfs 0.006 af

Pond UIP1: PROP. UIP#1 Peak Elev=229.95' Storage=4,170 cf Inflow=3.09 cfs 0.239 af
Discarded=0.02 cfs 0.027 af Primary=1.41 cfs 0.122 af Outflow=1.43 cfs 0.149 af

Pond WP1: PROP. WET POND #1 Peak Elev=228.78' Storage=157,561 cf Inflow=53.22 cfs 4.679 af
Primary=4.99 cfs 2.771 af Secondary=0.00 cfs 0.000 af Outflow=4.99 cfs 2.771 af

Link A: POA Inflow=9.03 cfs 3.391 af
Primary=9.03 cfs 3.391 af

Link B: POA Inflow=4.20 cfs 0.304 af
Primary=4.20 cfs 0.304 af

Total Runoff Area = 20.843 ac Runoff Volume = 5.721 af Average Runoff Depth = 3.29"
46.50% Pervious = 9.692 ac 53.50% Impervious = 11.151 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: BLDG Runoff Area=228,051 sf 100.00% Impervious Runoff Depth>5.90"
Tc=10.0 min CN=98 Runoff=27.32 cfs 2.576 af

Subcatchment2S: WEST SIDE Runoff Area=21,186 sf 1.45% Impervious Runoff Depth>2.01"
Tc=6.0 min CN=60 Runoff=1.07 cfs 0.081 af

Subcatchment3S: PARKING Runoff Area=22,821 sf 87.27% Impervious Runoff Depth>5.36"
Tc=6.0 min CN=93 Runoff=2.97 cfs 0.234 af

Subcatchment4S: EAST OF BUILDING Runoff Area=31,416 sf 11.24% Impervious Runoff Depth>3.51"
Tc=6.0 min CN=76 Runoff=2.91 cfs 0.211 af

Subcatchment5S: PARKING Runoff Area=41,525 sf 95.47% Impervious Runoff Depth>5.71"
Tc=6.0 min CN=96 Runoff=5.56 cfs 0.454 af

Subcatchment6-4S: COVERED STORAGE Runoff Area=12,257 sf 19.38% Impervious Runoff Depth>3.21"
Tc=6.0 min CN=73 Runoff=1.04 cfs 0.075 af

Subcatchment6S: PARKING Runoff Area=36,983 sf 50.15% Impervious Runoff Depth>3.68"
Tc=6.0 min CN=78 Runoff=3.58 cfs 0.260 af

Subcatchment7S: ABUTTER EAST Runoff Area=54,828 sf 27.72% Impervious Runoff Depth>3.73"
Tc=6.0 min CN=78 Runoff=5.38 cfs 0.391 af

Subcatchment8S: PARKING Runoff Area=19,107 sf 96.62% Impervious Runoff Depth>5.76"
Tc=6.0 min CN=97 Runoff=2.57 cfs 0.211 af

Subcatchment9S: PARKING Runoff Area=39,033 sf 89.01% Impervious Runoff Depth>5.39"
Tc=6.0 min CN=94 Runoff=5.10 cfs 0.402 af

Subcatchment10S: PARKING Runoff Area=29,571 sf 75.03% Impervious Runoff Depth>4.32"
Tc=6.0 min CN=84 Runoff=3.31 cfs 0.244 af

Subcatchment11S: PARKING Runoff Area=7,440 sf 90.98% Impervious Runoff Depth>5.46"
Tc=6.0 min CN=94 Runoff=0.98 cfs 0.078 af

Subcatchment12S: PARKING Runoff Area=18,717 sf 40.47% Impervious Runoff Depth>2.46"
Tc=6.0 min CN=65 Runoff=1.19 cfs 0.088 af

Subcatchment13S: PARKING Runoff Area=7,102 sf 92.37% Impervious Runoff Depth>5.42"
Tc=6.0 min CN=94 Runoff=0.93 cfs 0.074 af

Subcatchment14S: PARKING Runoff Area=15,428 sf 45.12% Impervious Runoff Depth>2.34"
Tc=6.0 min CN=64 Runoff=0.93 cfs 0.069 af

Subcatchment15S: POND Runoff Area=51,091 sf 0.00% Impervious Runoff Depth>2.54"
Tc=6.0 min CN=66 Runoff=3.38 cfs 0.248 af

Subcatchment16S: BLDG Runoff Area=5,001 sf 100.00% Impervious Runoff Depth>5.91"
Tc=6.0 min CN=98 Runoff=0.68 cfs 0.057 af

Subcatchment17S: PARKING Runoff Area=40,036 sf 77.04% Impervious Runoff Depth>4.73"
Tc=6.0 min CN=88 Runoff=4.82 cfs 0.363 af

Subcatchment18S: PARKING Runoff Area=24,120 sf 76.35% Impervious Runoff Depth>4.61"
Tc=6.0 min CN=87 Runoff=2.85 cfs 0.213 af

Subcatchment19S: SITE NORTH Runoff Area=201,577 sf 0.00% Impervious Runoff Depth>2.07"
Flow Length=703' Tc=30.7 min CN=61 Runoff=6.03 cfs 0.798 af

Subcatchment20S: LOADING Runoff Area=648 sf 100.00% Impervious Runoff Depth>5.91"
Tc=6.0 min CN=98 Runoff=0.09 cfs 0.007 af

Pond 1: PROP. DMH Peak Elev=230.91' Inflow=29.86 cfs 2.787 af
36.0" Round Culvert n=0.013 L=139.2' S=0.0040 '/' Outflow=29.86 cfs 2.787 af

Pond 1P: EXIST. CB Peak Elev=234.72' Inflow=2.91 cfs 0.211 af
18.0" Round Culvert n=0.025 L=225.0' S=0.0070 '/' Outflow=2.91 cfs 0.211 af

Pond 2: PROP. DCB Peak Elev=230.08' Inflow=42.35 cfs 3.810 af
42.0" Round Culvert n=0.013 L=237.4' S=0.0040 '/' Outflow=42.35 cfs 3.810 af

Pond 2A: PROP. CB Peak Elev=230.29' Inflow=2.97 cfs 0.234 af
18.0" Round Culvert n=0.013 L=171.0' S=0.0099 '/' Outflow=2.97 cfs 0.234 af

Pond 2B: PROP. CB Peak Elev=230.50' Inflow=4.62 cfs 0.335 af
18.0" Round Culvert n=0.013 L=178.0' S=0.0054 '/' Outflow=4.62 cfs 0.335 af

Pond 2P: PROP. JUNCTION UNDER BLDG Peak Elev=231.52' Inflow=29.86 cfs 2.787 af
36.0" Round Culvert n=0.013 L=46.6' S=0.0099 '/' Outflow=29.86 cfs 2.787 af

Pond 3: PROP. DCB Peak Elev=229.44' Inflow=53.03 cfs 4.668 af
42.0" Round Culvert n=0.013 L=133.8' S=0.0040 '/' Outflow=53.03 cfs 4.668 af

Pond 3A: PROP. CB Peak Elev=229.46' Inflow=2.57 cfs 0.211 af
15.0" Round Culvert n=0.013 L=171.0' S=0.0099 '/' Outflow=2.57 cfs 0.211 af

Pond 3B: PROP. CB Peak Elev=229.67' Inflow=3.31 cfs 0.244 af
15.0" Round Culvert n=0.013 L=163.0' S=0.0100 '/' Outflow=3.31 cfs 0.244 af

Pond 3P: PROP. DMH Peak Elev=229.33' Inflow=3.46 cfs 0.190 af
15.0" Round Culvert n=0.013 L=73.4' S=0.0099 '/' Outflow=3.46 cfs 0.190 af

Pond 101: PROP. CB Peak Elev=229.32' Inflow=2.85 cfs 0.213 af
15.0" Round Culvert n=0.013 L=141.6' S=0.0050 '/' Outflow=2.85 cfs 0.213 af

Pond 102: PROP. CB Peak Elev=230.34' Inflow=1.86 cfs 0.143 af
15.0" Round Culvert n=0.013 L=129.6' S=0.0040 '/' Outflow=1.86 cfs 0.143 af

Pond 102A: PROP. CB Peak Elev=230.53' Inflow=0.93 cfs 0.069 af
12.0" Round Culvert n=0.013 L=39.9' S=0.0050 '/' Outflow=0.93 cfs 0.069 af

Pond 103: PROP. DCB Peak Elev=229.32' Inflow=7.67 cfs 0.575 af
24.0" Round Culvert n=0.013 L=150.0' S=0.0050 '/' Outflow=7.67 cfs 0.575 af

Pond 104: PROP. DMH Peak Elev=229.31' Inflow=9.31 cfs 0.766 af
30.0" Round Culvert n=0.013 L=56.0' S=0.0041 '/' Outflow=9.31 cfs 0.765 af

Pond 105: PROP. DMH Peak Elev=229.31' Inflow=9.38 cfs 0.773 af
30.0" Round Culvert n=0.013 L=103.0' S=0.0040 '/' Outflow=9.38 cfs 0.772 af

Pond 201: PROP. CB Peak Elev=230.39' Inflow=4.03 cfs 0.308 af
15.0" Round Culvert n=0.013 L=37.0' S=0.0041 '/' Outflow=4.03 cfs 0.308 af

Pond 201A: PROP. CB Peak Elev=230.43' Inflow=1.19 cfs 0.088 af
15.0" Round Culvert n=0.013 L=40.0' S=0.0310 '/' Outflow=1.19 cfs 0.088 af

Pond ADs: PROP. AD#1-1, AD#1-2, and AD#1-3 Peak Elev=230.69' Inflow=1.04 cfs 0.075 af
8.0" Round Culvert n=0.013 L=39.0' S=0.0285 '/' Outflow=1.04 cfs 0.075 af

Pond EX: PROP. DMH Peak Elev=226.88' Inflow=5.29 cfs 3.295 af
12.0" Round Culvert n=0.013 L=14.0' S=0.0100 '/' Outflow=5.29 cfs 3.295 af

Pond TD: PROP. TD Peak Elev=230.19' Inflow=0.09 cfs 0.007 af
6.0" Round Culvert n=0.013 L=58.0' S=0.0086 '/' Outflow=0.09 cfs 0.007 af

Pond UIP1: PROP. UIP#1 Peak Elev=230.10' Storage=4,377 cf Inflow=4.03 cfs 0.308 af
Discarded=0.02 cfs 0.028 af Primary=3.46 cfs 0.190 af Outflow=3.48 cfs 0.218 af

Pond WP1: PROP. WET POND #1 Peak Elev=229.30' Storage=177,535 cf Inflow=65.38 cfs 5.744 af
Primary=5.29 cfs 3.295 af Secondary=6.53 cfs 0.503 af Outflow=11.78 cfs 3.798 af

Link A: POA Inflow=17.54 cfs 4.677 af
Primary=17.54 cfs 4.677 af

Link B: POA Inflow=5.38 cfs 0.391 af
Primary=5.38 cfs 0.391 af

Total Runoff Area = 20.843 ac Runoff Volume = 7.134 af Average Runoff Depth = 4.11"
46.50% Pervious = 9.692 ac 53.50% Impervious = 11.151 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: BLDG Runoff Area=228,051 sf 100.00% Impervious Runoff Depth>7.04"
Tc=10.0 min CN=98 Runoff=32.42 cfs 3.073 af

Subcatchment2S: WEST SIDE Runoff Area=21,186 sf 1.45% Impervious Runoff Depth>2.80"
Tc=6.0 min CN=60 Runoff=1.53 cfs 0.113 af

Subcatchment3S: PARKING Runoff Area=22,821 sf 87.27% Impervious Runoff Depth>6.49"
Tc=6.0 min CN=93 Runoff=3.56 cfs 0.283 af

Subcatchment4S: EAST OF BUILDING Runoff Area=31,416 sf 11.24% Impervious Runoff Depth>4.52"
Tc=6.0 min CN=76 Runoff=3.73 cfs 0.272 af

Subcatchment5S: PARKING Runoff Area=41,525 sf 95.47% Impervious Runoff Depth>6.85"
Tc=6.0 min CN=96 Runoff=6.62 cfs 0.544 af

Subcatchment6-4S: COVERED STORAGE Runoff Area=12,257 sf 19.38% Impervious Runoff Depth>4.18"
Tc=6.0 min CN=73 Runoff=1.35 cfs 0.098 af

Subcatchment6S: PARKING Runoff Area=36,983 sf 50.15% Impervious Runoff Depth>4.70"
Tc=6.0 min CN=78 Runoff=4.56 cfs 0.332 af

Subcatchment7S: ABUTTER EAST Runoff Area=54,828 sf 27.72% Impervious Runoff Depth>4.76"
Tc=6.0 min CN=78 Runoff=6.83 cfs 0.499 af

Subcatchment8S: PARKING Runoff Area=19,107 sf 96.62% Impervious Runoff Depth>6.90"
Tc=6.0 min CN=97 Runoff=3.05 cfs 0.252 af

Subcatchment9S: PARKING Runoff Area=39,033 sf 89.01% Impervious Runoff Depth>6.52"
Tc=6.0 min CN=94 Runoff=6.10 cfs 0.487 af

Subcatchment10S: PARKING Runoff Area=29,571 sf 75.03% Impervious Runoff Depth>5.40"
Tc=6.0 min CN=84 Runoff=4.10 cfs 0.305 af

Subcatchment11S: PARKING Runoff Area=7,440 sf 90.98% Impervious Runoff Depth>6.60"
Tc=6.0 min CN=94 Runoff=1.17 cfs 0.094 af

Subcatchment12S: PARKING Runoff Area=18,717 sf 40.47% Impervious Runoff Depth>3.32"
Tc=6.0 min CN=65 Runoff=1.63 cfs 0.119 af

Subcatchment13S: PARKING Runoff Area=7,102 sf 92.37% Impervious Runoff Depth>6.55"
Tc=6.0 min CN=94 Runoff=1.11 cfs 0.089 af

Subcatchment14S: PARKING Runoff Area=15,428 sf 45.12% Impervious Runoff Depth>3.19"
Tc=6.0 min CN=64 Runoff=1.29 cfs 0.094 af

Subcatchment15S: POND Runoff Area=51,091 sf 0.00% Impervious Runoff Depth>3.42"
Tc=6.0 min CN=66 Runoff=4.59 cfs 0.334 af

Subcatchment16S: BLDG Runoff Area=5,001 sf 100.00% Impervious Runoff Depth>7.05"
Tc=6.0 min CN=98 Runoff=0.80 cfs 0.067 af

Subcatchment17S: PARKING Runoff Area=40,036 sf 77.04% Impervious Runoff Depth>5.84"
Tc=6.0 min CN=88 Runoff=5.88 cfs 0.447 af

Subcatchment18S: PARKING Runoff Area=24,120 sf 76.35% Impervious Runoff Depth>5.71"
Tc=6.0 min CN=87 Runoff=3.49 cfs 0.263 af

Subcatchment19S: SITE NORTH Runoff Area=201,577 sf 0.00% Impervious Runoff Depth>2.87"
Flow Length=703' Tc=30.7 min CN=61 Runoff=8.55 cfs 1.106 af

Subcatchment20S: LOADING Runoff Area=648 sf 100.00% Impervious Runoff Depth>7.05"
Tc=6.0 min CN=98 Runoff=0.10 cfs 0.009 af

Pond 1: PROP. DMH Peak Elev=232.73' Inflow=35.67 cfs 3.344 af
36.0" Round Culvert n=0.013 L=139.2' S=0.0040 '/' Outflow=35.67 cfs 3.344 af

Pond 1P: EXIST. CB Peak Elev=234.91' Inflow=3.73 cfs 0.272 af
18.0" Round Culvert n=0.025 L=225.0' S=0.0070 '/' Outflow=3.73 cfs 0.272 af

Pond 2: PROP. DCB Peak Elev=231.55' Inflow=50.97 cfs 4.602 af
42.0" Round Culvert n=0.013 L=237.4' S=0.0040 '/' Outflow=50.97 cfs 4.602 af

Pond 2A: PROP. CB Peak Elev=231.85' Inflow=3.56 cfs 0.283 af
18.0" Round Culvert n=0.013 L=171.0' S=0.0099 '/' Outflow=3.56 cfs 0.283 af

Pond 2B: PROP. CB Peak Elev=232.20' Inflow=5.91 cfs 0.430 af
18.0" Round Culvert n=0.013 L=178.0' S=0.0054 '/' Outflow=5.91 cfs 0.430 af

Pond 2P: PROP. JUNCTION UNDER BLDG Peak Elev=233.60' Inflow=35.67 cfs 3.344 af
36.0" Round Culvert n=0.013 L=46.6' S=0.0099 '/' Outflow=35.67 cfs 3.344 af

Pond 3: PROP. DCB Peak Elev=230.61' Inflow=63.87 cfs 5.646 af
42.0" Round Culvert n=0.013 L=133.8' S=0.0040 '/' Outflow=63.87 cfs 5.646 af

Pond 3A: PROP. CB Peak Elev=230.77' Inflow=3.05 cfs 0.252 af
15.0" Round Culvert n=0.013 L=171.0' S=0.0099 '/' Outflow=3.05 cfs 0.252 af

Pond 3B: PROP. CB Peak Elev=231.14' Inflow=4.10 cfs 0.305 af
15.0" Round Culvert n=0.013 L=163.0' S=0.0100 '/' Outflow=4.10 cfs 0.305 af

Pond 3P: PROP. DMH Peak Elev=229.96' Inflow=5.17 cfs 0.277 af
15.0" Round Culvert n=0.013 L=73.4' S=0.0099 '/' Outflow=5.17 cfs 0.277 af

Pond 101: PROP. CB Peak Elev=229.82' Inflow=3.49 cfs 0.263 af
15.0" Round Culvert n=0.013 L=141.6' S=0.0050 '/' Outflow=3.49 cfs 0.263 af

Pond 102: PROP. CB Peak Elev=231.13' Inflow=2.40 cfs 0.183 af
15.0" Round Culvert n=0.013 L=129.6' S=0.0040 '/' Outflow=2.40 cfs 0.183 af

Pond 102A: PROP. CB Peak Elev=231.23' Inflow=1.29 cfs 0.094 af
12.0" Round Culvert n=0.013 L=39.9' S=0.0050 '/' Outflow=1.29 cfs 0.094 af

Pond 103: PROP. DCB Peak Elev=229.81' Inflow=9.36 cfs 0.710 af
24.0" Round Culvert n=0.013 L=150.0' S=0.0050 '/' Outflow=9.36 cfs 0.710 af

Pond 104: PROP. DMH Peak Elev=229.77' Inflow=14.36 cfs 0.987 af
30.0" Round Culvert n=0.013 L=56.0' S=0.0041 '/' Outflow=14.36 cfs 0.987 af

Pond 105: PROP. DMH Peak Elev=229.75' Inflow=14.46 cfs 0.996 af
30.0" Round Culvert n=0.013 L=103.0' S=0.0040 '/' Outflow=14.46 cfs 0.996 af

Pond 201: PROP. CB Peak Elev=230.96' Inflow=5.20 cfs 0.396 af
15.0" Round Culvert n=0.013 L=37.0' S=0.0041 '/' Outflow=5.20 cfs 0.396 af

Pond 201A: PROP. CB Peak Elev=230.97' Inflow=1.63 cfs 0.119 af
15.0" Round Culvert n=0.013 L=40.0' S=0.0310 '/' Outflow=1.63 cfs 0.119 af

Pond ADs: PROP. AD#1-1, AD#1-2, and AD#1-3 Peak Elev=232.52' Inflow=1.35 cfs 0.098 af
8.0" Round Culvert n=0.013 L=39.0' S=0.0285 '/' Outflow=1.35 cfs 0.098 af

Pond EX: PROP. DMH Peak Elev=227.05' Inflow=5.51 cfs 3.653 af
12.0" Round Culvert n=0.013 L=14.0' S=0.0100 '/' Outflow=5.51 cfs 3.653 af

Pond TD: PROP. TD Peak Elev=230.21' Inflow=0.10 cfs 0.009 af
6.0" Round Culvert n=0.013 L=58.0' S=0.0086 '/' Outflow=0.10 cfs 0.009 af

Pond UIP1: PROP. UIP#1 Peak Elev=230.20' Storage=4,496 cf Inflow=5.20 cfs 0.396 af
Discarded=0.02 cfs 0.029 af Primary=5.17 cfs 0.277 af Outflow=5.19 cfs 0.306 af

Pond WP1: PROP. WET POND #1 Peak Elev=229.72' Storage=194,045 cf Inflow=83.66 cfs 7.043 af
Primary=5.51 cfs 3.653 af Secondary=20.05 cfs 1.423 af Outflow=25.51 cfs 5.075 af

Link A: POA Inflow=34.54 cfs 6.294 af
Primary=34.54 cfs 6.294 af

Link B: POA Inflow=6.83 cfs 0.499 af
Primary=6.83 cfs 0.499 af

Total Runoff Area = 20.843 ac Runoff Volume = 8.880 af Average Runoff Depth = 5.11"
46.50% Pervious = 9.692 ac 53.50% Impervious = 11.151 ac

Summary for Subcatchment 1S: BLDG

Runoff = 18.39 cfs @ 12.14 hrs, Volume= 1.710 af, Depth> 3.92"
Routed to Pond 2P : PROP. JUNCTION UNDER BLDG

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	228,051	98	Paved parking and roofs
	228,051		100.00% Impervious Area

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

Summary for Subcatchment 2S: WEST SIDE

Runoff = 0.38 cfs @ 12.11 hrs, Volume= 0.034 af, Depth> 0.83"
Routed to Link A : POA

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

Area (sf)	CN	Description
15,016	61	>75% Grass cover, Good, HSG B
5,862	55	Woods, Good, HSG B
308	98	Water Surface, HSG A
21,186	60	Weighted Average
20,878		98.55% Pervious Area
308		1.45% Impervious Area

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

Summary for Subcatchment 3S: PARKING

Runoff = 1.94 cfs @ 12.09 hrs, Volume= 0.149 af, Depth> 3.40"
Routed to Pond 2A : PROP. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	19,916	98	Paved parking and roofs
	2,905	61	>75% Grass cover, Good, HSG B
	22,821	93	Weighted Average
	2,905		12.73% Pervious Area
	19,916		87.27% Impervious Area

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

Summary for Subcatchment 4S: EAST OF BUILDING

Runoff = 1.54 cfs @ 12.10 hrs, Volume= 0.112 af, Depth> 1.86"
Routed to Pond 1P : EXIST. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
	22,923	74	>75% Grass cover, Good, HSG C
	4,963	70	Woods, Good, HSG C
*	3,530	98	Paved parking and roofs
	31,416	76	Weighted Average
	27,886		88.76% Pervious Area
	3,530		11.24% Impervious Area

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

Summary for Subcatchment 5S: PARKING

Runoff = 3.71 cfs @ 12.09 hrs, Volume= 0.296 af, Depth> 3.73"
Routed to Pond 2 : PROP. DCB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	39,645	98	Paved parking and roofs
	1,880	61	>75% Grass cover, Good, HSG B
	41,525	96	Weighted Average
	1,880		4.53% Pervious Area
	39,645		95.47% Impervious Area

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

Summary for Subcatchment 6-4S: COVERED STORAGE

Runoff = 0.52 cfs @ 12.10 hrs, Volume= 0.038 af, Depth> 1.64"
Routed to Pond ADs : PROP. AD#1-1, AD#1-2, and AD#1-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	2,375	98	Paved parking and roofs
	7,884	74	>75% Grass cover, Good, HSG C
	1,998	39	>75% Grass cover, Good, HSG A
	12,257	73	Weighted Average
	9,882		80.62% Pervious Area
	2,375		19.38% Impervious Area

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

Summary for Subcatchment 6S: PARKING

Runoff = 1.94 cfs @ 12.09 hrs, Volume= 0.141 af, Depth> 1.99"
Routed to Pond 2B : PROP. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	18,546	98	Paved parking and roofs
	827	30	Woods, Good, HSG A
	7,793	39	>75% Grass cover, Good, HSG A
	9,817	74	>75% Grass cover, Good, HSG C
	36,983	78	Weighted Average
	18,437		49.85% Pervious Area
	18,546		50.15% Impervious Area

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

Summary for Subcatchment 7S: ABUTTER EAST

Runoff = 2.93 cfs @ 12.09 hrs, Volume= 0.213 af, Depth> 2.03"
Routed to Link B : POA

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
	1,259	39	>75% Grass cover, Good, HSG A
	748	61	>75% Grass cover, Good, HSG B
	30,115	74	>75% Grass cover, Good, HSG C
	1,264	30	Woods, Good, HSG A
	6,244	70	Woods, Good, HSG C
*	15,198	98	Paved parking and roofs
	54,828	78	Weighted Average
	39,630		72.28% Pervious Area
	15,198		27.72% Impervious Area

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

Summary for Subcatchment 8S: PARKING

Runoff = 1.72 cfs @ 12.09 hrs, Volume= 0.138 af, Depth> 3.78"
Routed to Pond 3A : PROP. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	18,462	98	Paved parking and roofs
	645	61	>75% Grass cover, Good, HSG B
	19,107	97	Weighted Average
	645		3.38% Pervious Area
	18,462		96.62% Impervious Area

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

Summary for Subcatchment 9S: PARKING

Runoff = 3.33 cfs @ 12.09 hrs, Volume= 0.256 af, Depth> 3.43"
Routed to Pond 3 : PROP. DCB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	34,745	98	Paved parking and roofs
	736	39	>75% Grass cover, Good, HSG A
	3,552	61	>75% Grass cover, Good, HSG B
	39,033	94	Weighted Average
	4,288		10.99% Pervious Area
	34,745		89.01% Impervious Area

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

Summary for Subcatchment 10S: PARKING

Runoff = 1.95 cfs @ 12.09 hrs, Volume= 0.141 af, Depth> 2.50"
Routed to Pond 3B : PROP. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	22,186	98	Paved parking and roofs
	1,797	61	>75% Grass cover, Good, HSG B
	3,220	39	>75% Grass cover, Good, HSG A
	2,368	30	Woods, Good, HSG A
	29,571	84	Weighted Average
	7,385		24.97% Pervious Area
	22,186		75.03% Impervious Area

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

Summary for Subcatchment 11S: PARKING

Runoff = 0.64 cfs @ 12.09 hrs, Volume= 0.050 af, Depth> 3.50"
Routed to Pond 201 : PROP. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	6,769	98	Paved parking and roofs
	514	61	>75% Grass cover, Good, HSG B
	157	39	>75% Grass cover, Good, HSG A
	7,440	94	Weighted Average
	671		9.02% Pervious Area
	6,769		90.98% Impervious Area

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

Summary for Subcatchment 12S: PARKING

Runoff = 0.50 cfs @ 12.10 hrs, Volume= 0.040 af, Depth> 1.12"
Routed to Pond 201A : PROP. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	7,575	98	Paved parking and roofs
	3,000	39	>75% Grass cover, Good, HSG A
	5,474	30	Woods, Good, HSG A
	303	61	>75% Grass cover, Good, HSG B
	2,146	74	>75% Grass cover, Good, HSG C
	219	70	Woods, Good, HSG C
	18,717	65	Weighted Average
	11,142		59.53% Pervious Area
	7,575		40.47% Impervious Area

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

Summary for Subcatchment 13S: PARKING

Runoff = 0.61 cfs @ 12.09 hrs, Volume= 0.047 af, Depth> 3.46"
Routed to Pond 102 : PROP. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	6,560	98	Paved parking and roofs
	95	61	>75% Grass cover, Good, HSG B
	0	30	Woods, Good, HSG A
	447	39	>75% Grass cover, Good, HSG A
	7,102	94	Weighted Average
	542		7.63% Pervious Area
	6,560		92.37% Impervious Area

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

Summary for Subcatchment 14S: PARKING

Runoff = 0.38 cfs @ 12.10 hrs, Volume= 0.031 af, Depth> 1.04"
Routed to Pond 102A : PROP. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	6,961	98	Paved parking and roofs
	5,177	39	>75% Grass cover, Good, HSG A
	3,290	30	Woods, Good, HSG A
	15,428	64	Weighted Average
	8,467		54.88% Pervious Area
	6,961		45.12% Impervious Area

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

Summary for Subcatchment 15S: POND

Runoff = 1.46 cfs @ 12.10 hrs, Volume= 0.115 af, Depth> 1.17"
Routed to Pond WP1 : PROP. WET POND #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

Area (sf)	CN	Description
40,922	61	>75% Grass cover, Good, HSG B
2,160	39	>75% Grass cover, Good, HSG A
0	55	Woods, Good, HSG B
0	70	Woods, Good, HSG C
8,009	98	Water Surface, 0% imp, HSG B
51,091	66	Weighted Average
51,091		100.00% Pervious Area

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

Summary for Subcatchment 16S: BLDG

Runoff = 0.46 cfs @ 12.09 hrs, Volume= 0.038 af, Depth> 3.92"
Routed to Pond WP1 : PROP. WET POND #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	5,001	98	Paved parking and roofs
	5,001		100.00% Impervious Area

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

Summary for Subcatchment 17S: PARKING

Runoff = 2.97 cfs @ 12.09 hrs, Volume= 0.218 af, Depth> 2.85"
Routed to Pond 103 : PROP. DCB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	30,842	98	Paved parking and roofs
	5,900	61	>75% Grass cover, Good, HSG B
	3,294	39	>75% Grass cover, Good, HSG A
	40,036	88	Weighted Average
	9,194		22.96% Pervious Area
	30,842		77.04% Impervious Area

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

Summary for Subcatchment 18S: PARKING

Runoff = 1.73 cfs @ 12.09 hrs, Volume= 0.127 af, Depth> 2.74"
Routed to Pond 101 : PROP. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	18,415	98	Paved parking and roofs
	2,765	61	>75% Grass cover, Good, HSG B
	2,940	39	>75% Grass cover, Good, HSG A
	24,120	87	Weighted Average
	5,705		23.65% Pervious Area
	18,415		76.35% Impervious Area

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

Summary for Subcatchment 19S: SITE NORTH

Runoff = 2.24 cfs @ 12.51 hrs, Volume= 0.337 af, Depth> 0.87"
Routed to Link A : POA

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

Area (sf)	CN	Description
145,762	61	>75% Grass cover, Good, HSG B
7,420	74	>75% Grass cover, Good, HSG C
9,674	70	Woods, Good, HSG C
38,721	55	Woods, Good, HSG B
201,577	61	Weighted Average
201,577		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	50	0.0080	0.10		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.82"
6.1	182	0.0050	0.49		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.7	146	0.0090	0.66		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
12.2	325	0.0040	0.44		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
30.7	703	Total			

Summary for Subcatchment 20S: LOADING

Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 3.92"
Routed to Pond TD : PROP. TD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.16"

	Area (sf)	CN	Description
*	648	98	Paved parking and roofs
	0	39	>75% Grass cover, Good, HSG A
	648	98	Weighted Average
	648		100.00% Impervious Area

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

Summary for Pond 1: PROP. DMH

Inflow Area = 5.957 ac, 89.25% Impervious, Inflow Depth > 3.67" for 10-YR event
Inflow = 19.75 cfs @ 12.13 hrs, Volume= 1.822 af
Outflow = 19.75 cfs @ 12.13 hrs, Volume= 1.822 af, Atten= 0%, Lag= 0.0 min
Primary = 19.75 cfs @ 12.13 hrs, Volume= 1.822 af
Routed to Pond 2 : PROP. DCB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 229.43' @ 12.14 hrs
Flood Elev= 233.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	226.79'	**36.0" Round Culvert** L= 139.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 226.79' / 226.23' S= 0.0040 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

Primary OutFlow Max=19.32 cfs @ 12.13 hrs HW=229.39' TW=228.82' (Dynamic Tailwater)
1=Culvert (Outlet Controls 19.32 cfs @ 3.97 fps)

Summary for Pond 1P: EXIST. CB

Inflow Area = 0.721 ac, 11.24% Impervious, Inflow Depth > 1.86" for 10-YR event
Inflow = 1.54 cfs @ 12.10 hrs, Volume= 0.112 af
Outflow = 1.54 cfs @ 12.10 hrs, Volume= 0.112 af, Atten= 0%, Lag= 0.0 min
Primary = 1.54 cfs @ 12.10 hrs, Volume= 0.112 af
Routed to Pond 2P : PROP. JUNCTION UNDER BLDG

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 234.37' @ 12.10 hrs
Flood Elev= 236.65'

Device	Routing	Invert	Outlet Devices
#1	Primary	233.58'	**18.0" Round Culvert** L= 225.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 233.58' / 232.00' S= 0.0070 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=1.52 cfs @ 12.10 hrs HW=234.36' TW=229.76' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.52 cfs @ 2.36 fps)

Summary for Pond 2: PROP. DCB

Inflow Area = 8.564 ac, 83.65% Impervious, Inflow Depth > 3.43" for 10-YR event
Inflow = 27.41 cfs @ 12.12 hrs, Volume= 2.447 af
Outflow = 27.41 cfs @ 12.12 hrs, Volume= 2.447 af, Atten= 0%, Lag= 0.0 min
Primary = 27.41 cfs @ 12.12 hrs, Volume= 2.447 af
Routed to Pond 3 : PROP. DCB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 228.87' @ 12.12 hrs
Flood Elev= 231.52'

Device	Routing	Invert	Outlet Devices
#1	Primary	226.13'	**42.0" Round Culvert** L= 237.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 226.13' / 225.18' S= 0.0040 '/' Cc= 0.900 n= 0.013, Flow Area= 9.62 sf

Primary OutFlow Max=25.22 cfs @ 12.12 hrs HW=228.83' TW=228.01' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 25.22 cfs @ 4.37 fps)

Summary for Pond 2A: PROP. CB

Inflow Area = 0.524 ac, 87.27% Impervious, Inflow Depth > 3.40" for 10-YR event
Inflow = 1.94 cfs @ 12.09 hrs, Volume= 0.149 af
Outflow = 1.94 cfs @ 12.09 hrs, Volume= 0.149 af, Atten= 0%, Lag= 0.0 min
Primary = 1.94 cfs @ 12.09 hrs, Volume= 0.149 af
Routed to Pond 2 : PROP. DCB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 229.11' @ 12.12 hrs
Flood Elev= 231.69'

Device	Routing	Invert	Outlet Devices
#1	Primary	228.10'	**18.0" Round Culvert** L= 171.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 228.10' / 226.40' S= 0.0099 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=1.66 cfs @ 12.09 hrs HW=229.06' TW=228.77' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 1.66 cfs @ 1.99 fps)

Summary for Pond 2B: PROP. CB

Inflow Area = 1.130 ac, 42.49% Impervious, Inflow Depth > 1.90" for 10-YR event
Inflow = 2.46 cfs @ 12.10 hrs, Volume= 0.179 af
Outflow = 2.46 cfs @ 12.10 hrs, Volume= 0.179 af, Atten= 0%, Lag= 0.0 min
Primary = 2.46 cfs @ 12.10 hrs, Volume= 0.179 af
Routed to Pond 2 : PROP. DCB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 229.15' @ 12.12 hrs
Flood Elev= 231.48'

Device	Routing	Invert	Outlet Devices
#1	Primary	227.98'	**18.0" Round Culvert** L= 178.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 227.98' / 227.02' S= 0.0054 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=2.14 cfs @ 12.10 hrs HW=229.11' TW=228.81' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.14 cfs @ 2.08 fps)

Summary for Pond 2P: PROP. JUNCTION UNDER BLDG

Inflow Area = 5.957 ac, 89.25% Impervious, Inflow Depth > 3.67" for 10-YR event
Inflow = 19.75 cfs @ 12.13 hrs, Volume= 1.822 af
Outflow = 19.75 cfs @ 12.13 hrs, Volume= 1.822 af, Atten= 0%, Lag= 0.0 min
Primary = 19.75 cfs @ 12.13 hrs, Volume= 1.822 af
Routed to Pond 1 : PROP. DMH

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 229.94' @ 12.15 hrs
Flood Elev= 237.61'

Device	Routing	Invert	Outlet Devices
#1	Primary	227.50'	**36.0" Round Culvert** L= 46.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 227.50' / 227.04' S= 0.0099 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

Primary OutFlow Max=18.45 cfs @ 12.13 hrs HW=229.88' TW=229.39' (Dynamic Tailwater)
1=Culvert (Outlet Controls 18.45 cfs @ 4.20 fps)

Summary for Pond 3: PROP. DCB

Inflow Area = 10.578 ac, 84.09% Impervious, Inflow Depth > 3.38" for 10-YR event
Inflow = 34.19 cfs @ 12.11 hrs, Volume= 2.982 af
Outflow = 34.19 cfs @ 12.11 hrs, Volume= 2.982 af, Atten= 0%, Lag= 0.0 min
Primary = 34.19 cfs @ 12.11 hrs, Volume= 2.982 af
Routed to Pond WP1 : PROP. WET POND #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 228.04' @ 12.14 hrs
Flood Elev= 231.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	225.14'	**42.0" Round Culvert** L= 133.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 225.14' / 224.60' S= 0.0040 '/' Cc= 0.900 n= 0.013, Flow Area= 9.62 sf

Primary OutFlow Max=33.66 cfs @ 12.11 hrs HW=228.01' TW=227.01' (Dynamic Tailwater)
1=Culvert (Outlet Controls 33.66 cfs @ 5.43 fps)

Summary for Pond 3A: PROP. CB

Inflow Area = 0.439 ac, 96.62% Impervious, Inflow Depth > 3.78" for 10-YR event
Inflow = 1.72 cfs @ 12.09 hrs, Volume= 0.138 af
Outflow = 1.72 cfs @ 12.09 hrs, Volume= 0.138 af, Atten= 0%, Lag= 0.0 min
Primary = 1.72 cfs @ 12.09 hrs, Volume= 0.138 af
Routed to Pond 3 : PROP. DCB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 228.44' @ 12.10 hrs
Flood Elev= 231.79'

Device	Routing	Invert	Outlet Devices
#1	Primary	227.55'	**15.0" Round Culvert** L= 171.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 227.55' / 225.85' S= 0.0099 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=1.54 cfs @ 12.09 hrs HW=228.41' TW=227.93' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.54 cfs @ 2.40 fps)

Summary for Pond 3B: PROP. CB

Inflow Area = 0.679 ac, 75.03% Impervious, Inflow Depth > 2.50" for 10-YR event
Inflow = 1.95 cfs @ 12.09 hrs, Volume= 0.141 af
Outflow = 1.95 cfs @ 12.09 hrs, Volume= 0.141 af, Atten= 0%, Lag= 0.0 min
Primary = 1.95 cfs @ 12.09 hrs, Volume= 0.141 af
Routed to Pond 3 : PROP. DCB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 228.67' @ 12.10 hrs
Flood Elev= 232.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	227.82'	**15.0" Round Culvert** L= 163.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 227.82' / 226.19' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=1.79 cfs @ 12.09 hrs HW=228.66' TW=227.96' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.79 cfs @ 2.91 fps)

Summary for Pond 3P: PROP. DMH

Inflow Area = 1.118 ac, 57.23% Impervious, Inflow Depth > 0.56" for 10-YR event
Inflow = 0.20 cfs @ 13.12 hrs, Volume= 0.052 af
Outflow = 0.20 cfs @ 13.12 hrs, Volume= 0.052 af, Atten= 0%, Lag= 0.0 min
Primary = 0.20 cfs @ 13.12 hrs, Volume= 0.052 af
Routed to Pond 104 : PROP. DMH

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 228.00' @ 13.06 hrs
Flood Elev= 232.74'

Device	Routing	Invert	Outlet Devices
#1	Primary	227.31'	**15.0" Round Culvert** L= 73.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 227.31' / 226.58' S= 0.0099 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=0.19 cfs @ 13.12 hrs HW=228.00' TW=227.99' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.19 cfs @ 0.41 fps)

Summary for Pond 101: PROP. CB

Inflow Area = 0.554 ac, 76.35% Impervious, Inflow Depth > 2.74" for 10-YR event
Inflow = 1.73 cfs @ 12.09 hrs, Volume= 0.127 af
Outflow = 1.73 cfs @ 12.09 hrs, Volume= 0.127 af, Atten= 0%, Lag= 0.0 min
Primary = 1.73 cfs @ 12.09 hrs, Volume= 0.127 af
Routed to Pond 103 : PROP. DCB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 228.13' @ 12.10 hrs
Flood Elev= 230.92'

Device	Routing	Invert	Outlet Devices
#1	Primary	227.34'	**15.0" Round Culvert** L= 141.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 227.34' / 226.63' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=1.62 cfs @ 12.09 hrs HW=228.12' TW=227.46' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.62 cfs @ 2.90 fps)

Summary for Pond 102: PROP. CB

Inflow Area = 0.517 ac, 60.01% Impervious, Inflow Depth > 1.81" for 10-YR event
Inflow = 0.99 cfs @ 12.09 hrs, Volume= 0.078 af
Outflow = 0.99 cfs @ 12.09 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0 min
Primary = 0.99 cfs @ 12.09 hrs, Volume= 0.078 af
Routed to Pond 201 : PROP. CB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 229.83' @ 13.16 hrs
Flood Elev= 232.76'

Device	Routing	Invert	Outlet Devices
#1	Primary	229.11'	**15.0" Round Culvert** L= 129.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 229.11' / 228.59' S= 0.0040 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=0.97 cfs @ 12.09 hrs HW=229.76' TW=229.37' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.97 cfs @ 2.19 fps)

Summary for Pond 102A: PROP. CB

Inflow Area = 0.354 ac, 45.12% Impervious, Inflow Depth > 1.04" for 10-YR event
Inflow = 0.38 cfs @ 12.10 hrs, Volume= 0.031 af
Outflow = 0.38 cfs @ 12.10 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min
Primary = 0.38 cfs @ 12.10 hrs, Volume= 0.031 af
Routed to Pond 102 : PROP. CB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 229.96' @ 12.11 hrs
Flood Elev= 232.78'

Device	Routing	Invert	Outlet Devices
#1	Primary	229.56'	**12.0" Round Culvert** L= 39.9' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 229.56' / 229.36' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=0.36 cfs @ 12.10 hrs HW=229.95' TW=229.76' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.36 cfs @ 1.86 fps)

Summary for Pond 103: PROP. DCB

[80] Warning: Exceeded Pond 101 by 0.06' @ 21.35 hrs (0.16 cfs 0.016 af)

Inflow Area = 1.473 ac, 76.78% Impervious, Inflow Depth > 2.81" for 10-YR event
Inflow = 4.70 cfs @ 12.09 hrs, Volume= 0.345 af
Outflow = 4.70 cfs @ 12.09 hrs, Volume= 0.344 af, Atten= 0%, Lag= 0.0 min
Primary = 4.70 cfs @ 12.09 hrs, Volume= 0.344 af
Routed to Pond 104 : PROP. DMH

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 227.99' @ 13.01 hrs
Flood Elev= 232.16'

Device	Routing	Invert	Outlet Devices
#1	Primary	226.18'	**24.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 226.18' / 225.43' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=4.51 cfs @ 12.09 hrs HW=227.46' TW=226.96' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 4.51 cfs @ 3.04 fps)

Summary for Pond 104: PROP. DMH

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=56)
[80] Warning: Exceeded Pond 3P by 0.40' @ 19.75 hrs (0.70 cfs 0.044 af)
[80] Warning: Exceeded Pond 103 by 1.48' @ 19.75 hrs (9.67 cfs 0.385 af)

Inflow Area = 2.591 ac, 68.34% Impervious, Inflow Depth > 1.84" for 10-YR event
Inflow = 4.70 cfs @ 12.09 hrs, Volume= 0.397 af
Outflow = 4.70 cfs @ 12.09 hrs, Volume= 0.396 af, Atten= 0%, Lag= 0.0 min
Primary = 4.70 cfs @ 12.09 hrs, Volume= 0.396 af
Routed to Pond 105 : PROP. DMH

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 227.99' @ 13.02 hrs
Flood Elev= 234.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	225.33'	**30.0" Round Culvert** L= 56.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 225.33' / 225.10' S= 0.0041 '/' Cc= 0.900 n= 0.013, Flow Area= 4.91 sf

Primary OutFlow Max=0.00 cfs @ 12.09 hrs HW=226.96' TW=227.02' (Dynamic Tailwater)
↑—**1=Culvert** (Controls 0.00 cfs)

Summary for Pond 105: PROP. DMH

[80] Warning: Exceeded Pond 104 by 0.14' @ 12.20 hrs (6.77 cfs 1.164 af)

Inflow Area = 2.605 ac, 68.53% Impervious, Inflow Depth > 1.84" for 10-YR event
Inflow = 4.76 cfs @ 12.09 hrs, Volume= 0.401 af
Outflow = 4.76 cfs @ 12.09 hrs, Volume= 0.400 af, Atten= 0%, Lag= 0.0 min
Primary = 4.76 cfs @ 12.09 hrs, Volume= 0.400 af
Routed to Pond WP1 : PROP. WET POND #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 227.99' @ 12.97 hrs
Flood Elev= 235.37'

Device	Routing	Invert	Outlet Devices
#1	Primary	225.00'	**30.0" Round Culvert** L= 103.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 225.00' / 224.59' S= 0.0040 '/' Cc= 0.900 n= 0.013, Flow Area= 4.91 sf

Primary OutFlow Max=4.66 cfs @ 12.09 hrs HW=227.02' TW=226.94' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 4.66 cfs @ 1.50 fps)

Summary for Pond 201: PROP. CB

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=5)
[80] Warning: Exceeded Pond 102 by 0.02' @ 12.85 hrs (0.24 cfs 0.007 af)

Inflow Area = 1.118 ac, 57.23% Impervious, Inflow Depth > 1.80" for 10-YR event
Inflow = 2.13 cfs @ 12.09 hrs, Volume= 0.168 af
Outflow = 2.13 cfs @ 12.09 hrs, Volume= 0.168 af, Atten= 0%, Lag= 0.0 min
Primary = 2.13 cfs @ 12.09 hrs, Volume= 0.168 af
Routed to Pond UIP1 : PROP. UIP#1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 229.83' @ 13.11 hrs
Flood Elev= 233.17'

Device	Routing	Invert	Outlet Devices
#1	Primary	228.49'	**15.0" Round Culvert** L= 37.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 228.49' / 228.34' S= 0.0041 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=2.10 cfs @ 12.09 hrs HW=229.37' TW=228.64' (Dynamic Tailwater)
1=Culvert (Barrel Controls 2.10 cfs @ 3.20 fps)

Summary for Pond 201A: PROP. CB

Inflow Area = 0.430 ac, 40.47% Impervious, Inflow Depth > 1.12" for 10-YR event
Inflow = 0.50 cfs @ 12.10 hrs, Volume= 0.040 af
Outflow = 0.50 cfs @ 12.10 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min
Primary = 0.50 cfs @ 12.10 hrs, Volume= 0.040 af
Routed to Pond 201 : PROP. CB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 230.16' @ 12.10 hrs
Flood Elev= 233.39'

Device	Routing	Invert	Outlet Devices
#1	Primary	229.83'	**15.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 229.83' / 228.59' S= 0.0310 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=0.50 cfs @ 12.10 hrs HW=230.16' TW=229.37' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.50 cfs @ 1.95 fps)

Summary for Pond ADs: PROP. AD#1-1, AD#1-2, and AD#1-3

Inflow Area = 0.281 ac, 19.38% Impervious, Inflow Depth > 1.64" for 10-YR event
Inflow = 0.52 cfs @ 12.10 hrs, Volume= 0.038 af
Outflow = 0.52 cfs @ 12.10 hrs, Volume= 0.038 af, Atten= 0%, Lag= 0.0 min
Primary = 0.52 cfs @ 12.10 hrs, Volume= 0.038 af
Routed to Pond 2B : PROP. CB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 230.34' @ 12.10 hrs
Flood Elev= 231.48'

Device	Routing	Invert	Outlet Devices
#1	Primary	229.92'	**8.0" Round Culvert** L= 39.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 229.92' / 228.81' S= 0.0285 '/' Cc= 0.900 n= 0.013, Flow Area= 0.35 sf

Primary OutFlow Max=0.52 cfs @ 12.10 hrs HW=230.34' TW=229.12' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.52 cfs @ 2.21 fps)

Summary for Pond EX: PROP. DMH

Inflow Area = 14.471 ac, 74.60% Impervious, Inflow Depth > 1.41" for 10-YR event
Inflow = 4.44 cfs @ 13.11 hrs, Volume= 1.700 af
Outflow = 4.44 cfs @ 13.11 hrs, Volume= 1.700 af, Atten= 0%, Lag= 0.0 min
Primary = 4.44 cfs @ 13.11 hrs, Volume= 1.700 af
Routed to Link A : POA

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 226.30' @ 13.11 hrs
Flood Elev= 231.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	224.42'	**12.0" Round Culvert** L= 14.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 224.42' / 224.28' S= 0.0100 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 0.79 sf

Primary OutFlow Max=4.44 cfs @ 13.11 hrs HW=226.30' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 4.44 cfs @ 5.66 fps)

Summary for Pond TD: PROP. TD

Inflow Area = 0.015 ac,100.00% Impervious, Inflow Depth > 3.92" for 10-YR event
Inflow = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af
Outflow = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min
Primary = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af
Routed to Pond 105 : PROP. DMH

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 230.15' @ 12.09 hrs
Flood Elev= 232.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	230.00'	**6.0" Round Culvert** L= 58.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 230.00' / 229.50' S= 0.0086 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf

Primary OutFlow Max=0.06 cfs @ 12.09 hrs HW=230.15' TW=227.00' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.06 cfs @ 1.71 fps)

Summary for Pond UIP1: PROP. UIP#1

Inflow Area = 1.118 ac, 57.23% Impervious, Inflow Depth > 1.80" for 10-YR event
Inflow = 2.13 cfs @ 12.09 hrs, Volume= 0.168 af
Outflow = 0.21 cfs @ 13.12 hrs, Volume= 0.078 af, Atten= 90%, Lag= 61.4 min
Discarded = 0.02 cfs @ 8.80 hrs, Volume= 0.026 af
Primary = 0.20 cfs @ 13.12 hrs, Volume= 0.052 af
Routed to Pond 3P : PROP. DMH

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 229.83' @ 13.12 hrs Surf.Area= 2,458 sf Storage= 3,977 cf
Flood Elev= 231.00' Surf.Area= 2,458 sf Storage= 5,261 cf

Plug-Flow detention time= 252.5 min calculated for 0.078 af (46% of inflow)
Center-of-Mass det. time= 120.8 min (939.8 - 819.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	227.45'	2,229 cf	**30.00'W x 81.94'L x 3.50'H Field A** 8,603 cf Overall - 3,032 cf Embedded = 5,571 cf x 40.0% Voids
#2A	227.95'	3,032 cf	**ADS_StormTech SC-740 +Cap** x 66 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 66 Chambers in 6 Rows
		5,261 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	227.68'	**15.0" Round Culvert** L= 27.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 227.68' / 227.41' S= 0.0099 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	229.78'	**6.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Discarded	227.45'	**0.300 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.02 cfs @ 8.80 hrs HW=227.49' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.19 cfs @ 13.12 hrs HW=229.83' TW=228.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.19 cfs of 7.27 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.19 cfs @ 0.70 fps)

Summary for Pond WP1: PROP. WET POND #1

[80] Warning: Exceeded Pond 105 by 2.79' @ 19.70 hrs (24.78 cfs 1.249 af)

Inflow Area = 14.471 ac, 74.60% Impervious, Inflow Depth > 2.93" for 10-YR event
Inflow = 40.78 cfs @ 12.11 hrs, Volume= 3.534 af
Outflow = 4.44 cfs @ 13.11 hrs, Volume= 1.700 af, Atten= 89%, Lag= 60.4 min
Primary = 4.44 cfs @ 13.11 hrs, Volume= 1.700 af
Routed to Pond EX : PROP. DMH
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link A : POA

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Starting Elev= 224.60' Surf.Area= 8,009 sf Storage= 36,399 cf
Peak Elev= 227.99' @ 12.97 hrs Surf.Area= 35,822 sf Storage= 128,582 cf (92,183 cf above start)
Flood Elev= 230.00' Surf.Area= 40,415 sf Storage= 205,174 cf (168,775 cf above start)

Plug-Flow detention time= 543.2 min calculated for 0.863 af (24% of inflow)
Center-of-Mass det. time= 182.2 min (961.8 - 779.6)

Volume	Invert	Avail.Storage	Storage Description
#1	216.60'	205,174 cf	**Wet Pond (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
216.60	1,719	168.0	0	0	1,719
218.00	2,527	200.0	2,954	2,954	2,691
220.00	3,917	246.0	6,393	9,348	4,383
222.00	5,577	291.7	9,445	18,793	6,411
224.00	7,440	329.4	12,972	31,765	8,375
224.60	8,009	340.0	4,634	36,399	8,975
226.00	31,131	738.0	25,634	62,033	43,125
228.00	35,848	751.0	66,924	128,956	45,268
230.00	40,415	788.0	76,217	205,174	50,053

Device	Routing	Invert	Outlet Devices
#1	Primary	224.60'	**12.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 224.60' / 224.36' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	224.60'	**2.0" Vert. Extended Detetnion Drain Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	225.60'	**4.5" Vert. Flow Control Orifice** C= 0.600

			Limited to weir flow at low heads
#4	Device 1	227.80'	**48.0" x 48.0" Horiz. Riser Top Opening** C= 0.600
			Limited to weir flow at low heads
#5	Secondary	228.90'	**10.0' long x 10.0' breadth Overflow Emergency Spillway Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=4.45 cfs @ 13.11 hrs HW=227.99' TW=226.30' (Dynamic Tailwater)
- **1=Culvert** (Outlet Controls 4.45 cfs @ 5.66 fps)
  - **2=Extended Detetnion Drain Orifice**(Passes < 0.14 cfs potential flow)
  - **3=Flow Control Orifice** (Passes < 0.69 cfs potential flow)
  - **4=Riser Top Opening** (Passes < 4.18 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=224.60' TW=0.00' (Dynamic Tailwater)
- **5=Overflow Emergency Spillway Weir**(Controls 0.00 cfs)

Summary for Link A: POA

Inflow Area = 19.585 ac, 55.16% Impervious, Inflow Depth > 1.27" for 10-YR event
Inflow = 6.47 cfs @ 12.66 hrs, Volume= 2.071 af
Primary = 6.47 cfs @ 12.66 hrs, Volume= 2.071 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link B: POA

Inflow Area = 1.259 ac, 27.72% Impervious, Inflow Depth > 2.03" for 10-YR event
Inflow = 2.93 cfs @ 12.09 hrs, Volume= 0.213 af
Primary = 2.93 cfs @ 12.09 hrs, Volume= 0.213 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

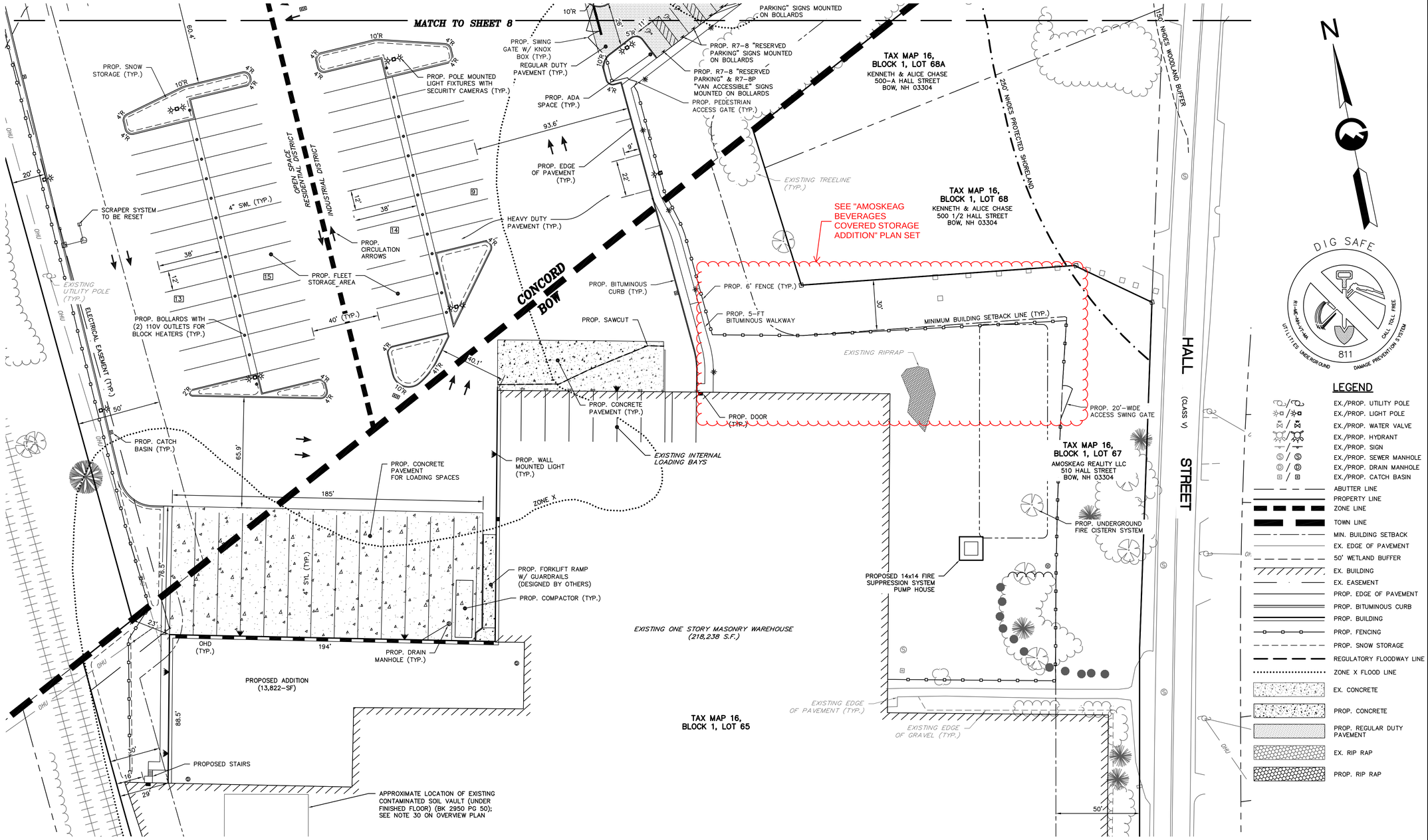
9. PLANS

A. BUBBLED APPROVED AoT SITE PLAN SHEETS (22” X 34”)

B. COVERED STORAGE SITE PLAN SHEETS (22” X 34”)

C. REVISED POST-DEVELOPMENT DRAINAGE AREAS PLAN (22” X 34”)

D. REVISED POST-DEVELOPMENT DRAINAGE AREAS PLAN (22” X 34” – COLOR)



NEW HAMPSHIRE FISH AND GAME AOT PERMIT CONDITIONS:

1. BLANDING'S TURTLE (STATE ENDANGERED) AND SPOTTED TURTLE (STATE THREATENED) OCCUR WITHIN THE VICINITY OF THE PROJECT AREA. ALL OPERATORS AND PERSONNEL WORKING ON OR ENTERING THE SITE SHALL BE MADE AWARE OF THE POTENTIAL PRESENCE OF THESE SPECIES AND SHALL BE PROVIDED FLYERS THAT HELP TO IDENTIFY THESE SPECIES, ALONG WITH NHFG CONTACT INFORMATION.
2. RARE SPECIES INFORMATION (E.G. IDENTIFICATION, OBSERVATION AND REPORTING OF OBSERVATIONS, WHEN TO CONTACT NHFG IMMEDIATELY AND NHFG CONTACT INFORMATION) SHALL BE COMMUNICATED DURING MORNING TAILGATE MEETINGS PRIOR TO WORK COMMENCEMENT DURING THE CONSTRUCTION PHASE OF THE PROJECT. SEE PLAN SHEET 29.
3. A PAYMENT OF NO LESS THAN $86,357.56 SHALL BE MADE TO THE AQUATIC RESOURCES MITIGATION (ARM) FUND.
4. TURTLES AND SNAKES MAY BE ATTRACTED TO DISTURBED GROUND DURING NESTING SEASON. TURTLE NESTING SEASON OCCURS APPROXIMATELY MAY 15TH –JUNE 30TH. ALL TURTLE SPECIES NESTS AND NORTHERN BLACK RACER NESTS ARE PROTECTED BY NH LAWS. IF A NEST IS OBSERVED OR SUSPECTED, OPERATORS SHALL CONTACT MELISSA WINTERS (603-479-1129) AND JOSH MEGYESY (978-578-0802) AT NHFG IMMEDIATELY FOR FURTHER CONSULTATION. THE NEST OR SUSPECTED NEST SHALL BE MARKED (SURROUNDING ROPED OFF OR CONE BUFFER DEPLOYED) AND AVOIDED; THIS SHALL BE COMMUNICATED TO ALL PERSONNEL ONSITE. SITE ACTIVITIES SHALL NOT OCCUR IN THE AREA SURROUNDING THE NEST OR SUSPECTED NEST UNTIL FURTHER GUIDANCE IS PROVIDED BY NHFG.
5. CATCH BASINS SHALL HAVE GRATES WITH OPENINGS NO LARGER THAN 2.25"X 2.25". SEE PLAN SHEET 25.
6. OUTLET CONTROL STRUCTURES SHALL NOT CONTAIN SUMPS, SHALL RISE AT LEAST 12" ABOVE GRADE, AND BE SET BACK AT LEAST 3'FROM ADJACENT SLOPES. SEE PLAN SHEET 24.
7. FIRE POND DEWATERING/FILLING:
   - IF POND DRAWDOWN SHALL OCCUR BETWEEN MAY 1ST AND OCTOBER 1ST.
   - DRAWDOWN SHALL OCCUR GRADUALLY AND NO MORE THAN SIX INCHES PER DAY.
   - NHFG SHALL BE INFORMED NO LESS THAN 2 WEEKS IN ADVANCE OF THE DATE OF WHEN FIRE POND DEWATERING AND FILLING WILL OCCUR AND SHALL BE INFORMED WHEN ACTIVITIES ARE COMPLETED.
   - THE FIRE POND SHALL BE DRAINED USING A PUMP WITH A FULLY SCREENED INTAKE CAGE AT THE END OF THE HOSE. THE INTAKE SCREEN SHALL BE MONITORED AT ALL TIMES FOR OBSTRUCTIONS. DRAWDOWN RATE SHALL CONSIDER EFFORT REQUIRED TO PROPERLY IDENTIFY AND RELOCATE WILDLIFE (E.G. RATE OF DRAWDOWN RESULTS IN TURBIDITY THAT PREVENTS PROPER IDENTIFICATION OF WILDLIFE SPECIES OR MAY RESULT IN HARM TO WILDLIFE SPECIES).
   - JIM FOUGERE OF PONDVIEW WETLAND CONSULTANTS, LLC (603) 269-4264 SHALL BE THE ON-SITE ENVIRONMENTAL MONITOR TO HELP FACILITATE THE PROPER REMOVAL AND DOCUMENTATION OF WILDLIFE (INCLUDING ANY FISH) WITHIN THE POND.
   - UPON COMPLETION OF THESE ACTIVITIES, A FIRE POND WILDLIFE OBSERVATION REPORT SHALL BE PROVIDED TO NHFG BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER, THE PROJECT NAME, AND THE TERM FIRE POND WILDLIFE OBSERVATION REPORT. THE REPORT SHALL INCLUDE REPRESENTATIVE PHOTOGRAPHS OF DEWATERING ACTIVITIES/PROGRESSION, ALL NATIVE WILDLIFE SPECIES ENCOUNTERED (DATE/TIME/NUMBER OF INDIVIDUALS AND RELOCATION SITE. REPRESENTATIVE PHOTOGRAPHS OF NATIVE WILDLIFE SPECIES ENCOUNTERED AND RELOCATED SHALLBE PROVIDED. PHOTOGRAPHS SHALL BE INCLUDED OF ALL STATE-LISTED SPECIES ENCOUNTERED.
   - ALL NATIVE WILDLIFE SPECIES ENCOUNTERED DURING THESE ACTIVITIES, TO THE EXTENT PRACTICABLE AND UNDER THE DIRECT SUPERVISION OF THE ON-SITE ENVIRONMENTAL MONITOR, SHALL BE RELOCATED TO THE FUNCTIONAL WETLANDS IN THE IMMEDIATE AREA THAT OFFER SUITABLE HABITAT.
   - IF SPOTTED TURTLES OR BLANDING'S TURTLES ARE ENCOUNTERED DURING THESE ACTIVITIES, SITE OPERATORS SHALL CONTACT MELISSA WINTERS (603-479-1129) AND JOSH MEGYESY (603) 271-1125 IMMEDIATELY. PHOTOGRAPHS OF THE INDIVIDUALS AND LAT/LONG OF THEIR RELEASE LOCATION SHALL BE PROVIDED.
8. ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, WITH THE EXCEPTION OF TURF REINFORCEMENT MATS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN PLASTIC, OR MULTIFILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES.
9. ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED IMMEDIATELY TO THE NHFG NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER, THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION.
10. PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION, AS FEASIBLE.
11. IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG. O SITE OPERATORS SHALL BE ALLOWED TO RELOCATE WILDLIFE ENCOUNTERED IF DISCOVERED WITHIN THE ACTIVE WORK
   - SITE OPERATORS SHALL BE ALLOWED TO RELOCATE WILDLIFE ENCOUNTERED IF DISCOVERED WITHIN THE ACTIVE WORK ZONE IF IN DIRECT HARM FROM PROJECT ACTIVITIES. WILDLIFE SHALL BE RELOCATED IN CLOSE PROXIMITY TO THE CAPTURE LOCATION BUT OUTSIDE OF THE WORK ZONE AND IN THE DIRECTION THE INDIVIDUAL WAS HEADING. NHFG SHALL BE CONTACTED IMMEDIATELY IF THIS ACTION OCCURS.
12. THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.
13. WOOD TURTLE (STATE SPECIES OF SPECIAL CONCERN) OCCUR WITHIN THE VICINITY OF THE PROJECT AREA. ALL OPERATORS AND PERSONNEL WORKING ON OR ENTERING THE SITE SHALL BE MADE AWARE OF THE POTENTIAL PRESENCE OF THESE SPECIES AND SHALL BE PROVIDED FLYERS THAT HELP TO IDENTIFY THESE SPECIES, ALONG WITH NHFG CONTACT INFORMATION.

APPROVED

UNDER THE PROVISIONS OF R.S.A. 674:35 & R.S.A. 674:36

CITY PLANNING BOARD

CITY OF CONCORD, NEW HAMPSHIRE

In accordance with vote of the board dated:

Approval of this plan is limited to the lots as shown

Chair Clerk

SEE SHEET 1 FOR REFERENCE PLANS AND NOTES

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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REVISIONS

No.	DATE	COMMENTS	BY
1	01/18/2023	PROJECT SUBMITTAL	JSW
2	02/27/2023	REVISED PER CITY COMMENTS	JSW
3	04/11/2023	REVISED PER F&G COMMENTS	JSW
4	07/24/2023	REVISED PER CONDITIONS OF APPROVAL	JSW

OWNER OF LOT 4 & APPLICANT:
AMOSKEAG BEVERAGES, LLC
510 HALL STREET
BOW, NH 03304

OWNER OF LOTS 3, 65 & 67:
AMOSKEAG REALTY, LLC
510 HALL STREET
BOW, NH 03304

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150 Dow Street, Tower 2, Suite 421
Manchester,
New Hampshire 03101
603.518.8030
www.GraniteEng.com

STAMP:
STATE OF NEW HAMPSHIRE
JEFFREY D. MERRITT
No. 11778
LICENSED PROFESSIONAL ENGINEER
07/24/2023

LOCATION:
TAX MAP 16 BLOCK 1 LOT 65 & 67(BOW)
TAX MAP 88Z LOTS 3 & 4 (CONCORD)
510 HALL STREET
BOW & CONCORD, NEW HAMPSHIRE
MERRIMACK COUNTY

PROJECT:
AMOSKEAG BEVERAGES

TITLE:
SITE PLAN

PROJECT No.	DATE:	SCALE:
13-1202-2	MARCH 24, 2022	HORIZ. 1"=30'
SHEET:	7 OF 29	

MATCH TO SHEET 10

PROP. CB#3A
RIM=231.80

15" HDPE

NEENAH FOUNDRY
R-3405-A TYPE
"A" GRATE

42" RCP

CONCORD
BOW

PROP. CB#2B
RIM=231.48

18" RCP

NEENAH FOUNDRY
R-3405-A TYPE
"A" GRATE

PROP. CB#2A
RIM=231.70

PROP. DCB#2 (6' I.D.)
RIM=231.52

36" HDPE

PROP. DMH#1 (5' I.D.)
RIM=233.50

PROP. DMH#B1 (6' I.D.)
RIM=237.61

PROPOSED ADDITION
(13,822-SF)
FFE=237.61

15" HDPE

PROP. DMH#B2
CONNECT EXISTING 6" PIPE INTO DMH
(EXACT LOCATION OF THE EXISTING 6"
PIPE IS UNKNOWN, FIELD VERIFY INVERTS
PRIOR TO CONSTRUCTION OR ORDERING
STRUCTURES; SEE NOTE 11 ON SHEET 9

EXISTING FFE=237.61

TAX MAP 16,
BLOCK 1, LOT 65

APPROXIMATE LOCATION OF EXISTING
CONTAMINATED SOIL VAULT (UNDER
FINISHED FLOOR) (BK 2950 PG 50);
SEE NOTE 30 ON OVERVIEW PLAN

TAX MAP 16,
BLOCK 1, LOT 68A

150' NHDES WOODLAND BUFFER

250' NHDES PROTECTED SHORELAND

EXISTING TREELINE
(TYP.)

TAX MAP 16,
BLOCK 1, LOT 68

SEE "AMOSKEAG
BEVERAGES
COVERED STORAGE
ADDITION" PLAN SET

EXISTING FFE=236.45

TAX MAP 16,
BLOCK 1, LOT 67

HALL STREET (CLASS V)

PROP. UNDERGROUND
FIRE CISTERN SYSTEM

PROPOSED 14x14 FIRE
SUPPRESSION SYSTEM
PUMP HOUSE

EX. SMH
RIM=252.71

EX. SMH
RIM=237.28

EX. SMH
RIM=251.98

EX. SMH
RIM=246.19

N

CONSTRUCTION NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED GRADING AND DRAINAGE SYSTEMS FOR THIS PROJECT.
2. ALL WORK ON THE SUBJECT PROPERTY AND WITHIN THE CITY OF CONCORD RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF CONCORD'S CONSTRUCTION STANDARDS AND DETAILS, LATEST EDITION. IN THE ABSENCE OF A SPECIFIC TOWN SPECIFICATION, CONTRACTOR SHALL FOLLOW THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2020.
3. ALL MANHOLES SHALL BE 4' DIAMETER CONCRETE STRUCTURES, UNLESS NOTED OTHERWISE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
5. ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
6. ALL DISTURBED AREAS ARE TO BE LOAMED AND SEEDED.
7. SEE THE EROSION CONTROL PLAN FOR THE LOCATION OF THE TEMPORARY EROSION CONTROL DEVICES.
8. SEE DETAILS FOR DRAINAGE SPECIFICATIONS.
9. MATERIAL STOCKPILES SHALL BE ON LEVEL SITES WITH SILT FENCE INSTALLED AROUND THE PILE. STOCKPILES MUST BE SEEDED AND MULCHED IF STORED MORE THAN 14 DAYS.
10. THIS PROJECT DISTURBS MORE THAN 1-ACRE OF LAND, THEREFORE, IT WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA).
11. THE EXACT LOCATION OF THE EXISTING 6" ROOF DRAIN AT THE BUILDING IS UNKNOWN. AS SUCH, PRIOR TO CONSTRUCTION AND PRIOR TO ORDERING THE DRAINAGE STRUCTURES, THE CONTRACTOR SHALL DETERMINE THE EXACT ELEVATION OF THE ROOF DRAIN TO VERIFY COMPATIBILITY WITH THE PROPOSED DESIGN. THE INVERT ELEVATION SHALL BE REPORTED TO THE DESIGN ENGINEER. PROPER TECHNIQUES SHOULD BE TAKEN TO ENSURE THE BUILDING FOUNDATION IS NOT UNDERMINED IN ANY WAY. THE ENVIRONMENTAL REPRESENTATIVE ON-SITE HAS THE RIGHT TO HALT CONSTRUCTION IF THEY FEEL THE INTEGRITY OF THE BUILDING'S FOOTING IS IN JEOPARDY.
12. ALL STORMWATER IMPROVEMENTS WILL BE MAINTAINED BY THE PROPERTY OWNER IN PERPETUITY IN ACCORDANCE WITH:
    - LOCAL, STATE, AND FEDERAL REGULATIONS
    - NHDES STORMWATER MANUAL RECOMMENDATIONS
    - STORMWATER MAINTENANCE AND OPERARTION PLANS
    - ANY MANUFACTURER SPECIFICATIONS

CITY OF CONCORD SUBSEQUENT CONDITIONS:

1. THE AMOUNT AND FORM OF FINANCIAL GUARANTEE SHALL BE PROPOSED BY THE APPLICANT AND APPROVED BY THE CLERK OF THE BOARD AND CITY ENGINEER. THE GUARANTEE SHALL BE PROVIDED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
2. PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY OR FINAL CONSTRUCTION SIGN-OFF, AS-BUILT DRAWINGS SHALL BE PROVIDED TO THE CITY ENGINEER IN ACCORDANCE WITH SECTION 12.09 OF THE SITE PLAN REGULATIONS. THE AS-BUILT DRAWINGS SHALL BE SURVEYED ON NH STATE PLANE COORDINATES AND NAVD 88 DATUM.
3. THE APPLICANT OR THEIR SUCCESSORS SHALL BE RESPONSIBLE FOR THE REGULAR MAINTENANCE OF ALL PLANTINGS AND OTHER LANDSCAPE FEATURES. PLANT MATERIALS SHALL BE MAINTAINED ALIVE, HEALTHY AND FREE FROM PESTS AND DISEASE.

LEGEND

- EX./PROP. UTILITY POLE
- EX./PROP. LIGHT POLE
- EX./PROP. WATER VALVE
- EX./PROP. HYDRANT
- EX./PROP. SIGN
- EX./PROP. SEWER MANHOLE
- EX./PROP. DRAIN MANHOLE
- EX./PROP. CATCH BASIN
- ABUTTER LINE
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- EX. BUILDING
- PROP. EDGE OF PAVEMENT
- PROP. BITUMINOUS CURB
- PROP. BUILDING
- PROP. FENCING
- DRAINAGE LINE
- PROP. DRAINAGE
- PROP. RIP RAP
- EX. RIP RAP
- EX. CONCRETE
- PROP. CONCRETE
- TEST PIT LOCATION
- PROP. GRADE BREAK

DIG SAFE
811
CALL TOLL FREE
DAMAGE PREVENTION SYSTEM
UTILITIES UNDERGROUND

LOAM & SEED ALL
DISTURBED AREAS

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

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510 HALL STREET
BOW, NH 03304

OWNER OF LOTS 3, 65 & 67:
AMOSKEAG REALTY, LLC
510 HALL STREET
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Manchester,
New Hampshire 03101
603.518.8030
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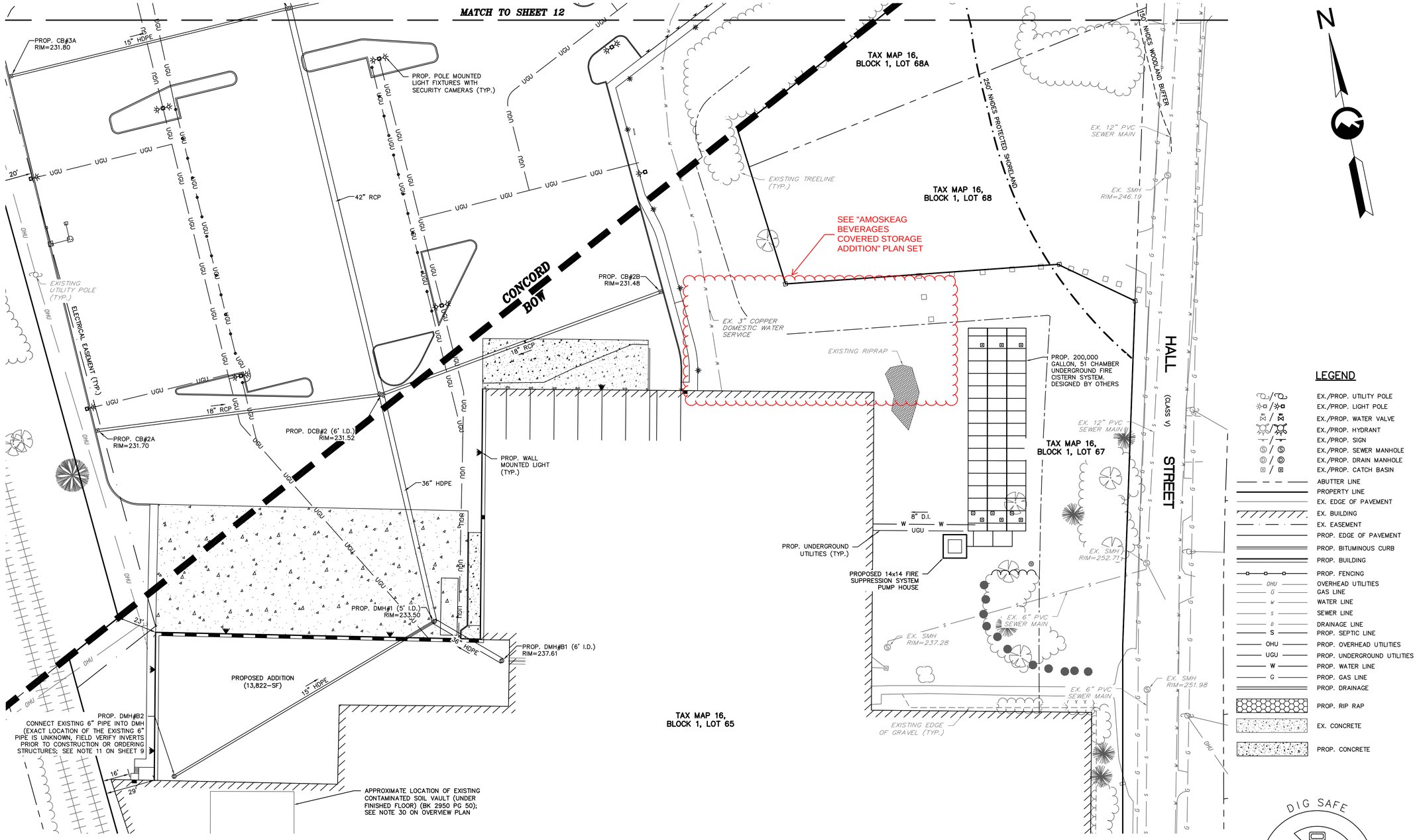
STAMP:
STATE OF NEW HAMPSHIRE
JOSEPH S. WERREY
MERRITT
No. 11778
LICENSED
PROFESSIONAL ENGINEER
07/24/2023

LOCATION:
TAX MAP 16 BLOCK 1 LOT 65 & 67(BOW)
TAX MAP 88Z LOTS 3 & 4
(CONCORD)
510 HALL STREET
BOW & CONCORD, NEW HAMPSHIRE
MERRIMACK COUNTY

PROJECT:
AMOSKEAG BEVERAGES

TITLE:
GRADING AND DRAINAGE PLAN

PROJECT No.	DATE:	SCALE:
13-1202-2	MARCH 24, 2022	HORIZ. 1"=30'
SHEET: 9 OF 29		



CONSTRUCTION NOTES:

1. THIS PLAN ILLUSTRATES THE CONSTRUCTION OF AN UNDERGROUND WATER CISTERN FOR FIRE PROTECTION. THIS SYSTEM SHALL BE FILLED BY TANKER TRUCKS UTILIZING WATER SOURCED OFF SITE.
2. ALL WORK SHALL CONFORM TO THE CITY OF CONCORD STANDARD SPECIFICATIONS FOR ROAD, DRAIN & SEWER CONSTRUCTION, APPROVED AND ADOPTED JANUARY 2019. IN THE ABSENCE OF A SPECIFIC CITY SPECIFICATION, CONTRACTOR SHALL FOLLOW THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2016.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
4. ALL WORKMANSHIP AND MATERIALS INCORPORATED INTO THE CONSTRUCTION OF THE WATER LINES SHALL CONFORM TO ALL THE LOCAL PRECINCT'S STANDARDS, SPECIFICATIONS, RULES, AND REGULATIONS.
5. ALL WORKMANSHIP AND MATERIALS INCORPORATED INTO THE CONSTRUCTION OF THE ELECTRIC AND TELEPHONE LINES SHALL CONFORM WITH THE STANDARDS OF THE LOCAL PROVIDER.
6. CONTRACTOR SHALL COORDINATE WITH LOCAL PROVIDER RELATIVE TO FINAL LAYOUT OF UNDERGROUND UTILITIES.
7. ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
8. CONTRACTOR TO VERIFY SIZE OF WATER SERVICE LINES WITH ARCHITECT PRIOR TO THE START OF CONSTRUCTION.
9. FINAL LAYOUT OF UNDERGROUND UTILITIES TO BE APPROVED BY LOCAL PROVIDER PRIOR TO CONSTRUCTION.
10. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH SECTION 25.02(1) OF THE CITY OF CONCORD SITE PLAN REGULATIONS.

WATER CONSTRUCTION NOTES:

1. ALL DISTRIBUTION MATERIALS, INCLUDING MAINS, FITTINGS AND VALVES, TO MEET APPLICABLE AMERICAN WATER WORKS ASSOCIATION (AWWA) AND NEW HAMPSHIRE DES-DRINKING WATER GROUNDWATER BUREAU STANDARDS, AS APPLICABLE.
2. ALL INSTALLATION AND TESTING OF MATERIALS TO CONFORM TO AWWA STANDARDS FOR POTABLE WATER SYSTEMS.

CITY OF CONCORD CONSTRUCTION REQUIREMENTS:

1. SHOP DRAWINGS/SUBMITTALS SHALL BE SUBMITTED TO ENGINEERING FOR THE PROPOSED WATER, SEWER, AND DRAINAGE IMPROVEMENTS, AS APPLICABLE.
2. PER SITE PLAN REGULATION 12.09, PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY (CO), THE CONTRACTOR SHALL SUBMIT DIGITAL AS-BUILT DRAWINGS THAT ARE TO THE SATISFACTION OF ENGINEERING AND CONFORMING TO THE ENGINEERING AS-BUILT CHECKLIST. A COPY OF THE AS-BUILT DRAWING REQUIREMENTS IS AVAILABLE ON THE ENGINEERING SERVICES DIVISION SECTION OF THE CITY OF CONCORD WEBSITE.
3. RETAINING WALL DESIGN DRAWINGS (STAMPED STRUCTURAL ENGINEER LICENSED IN THE STATE OF NH) SHALL BE SUBMITTED TO ENGINEERING FOR PROPOSED RETAINING WALLS THAT ARE GREATER THAN 4 FEET HIGH. IN ADDITION, WALLS GREATER THAN 48 INCHES REQUIRE A BUILDING PERMIT FROM THE CODE ADMINISTRATIONS OFFICE.

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New Hampshire 03101
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www.GraniteEng.com

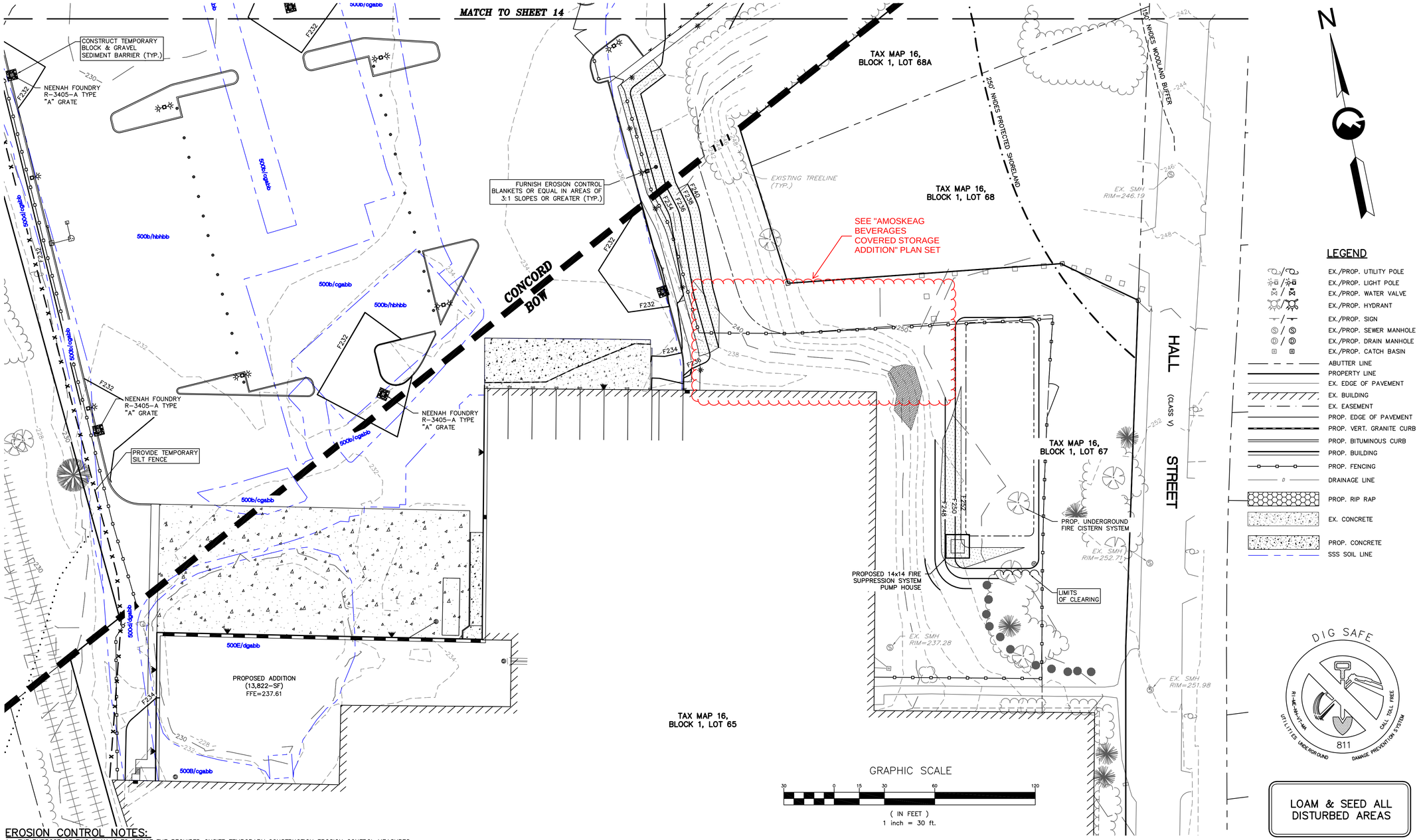
STAMP:
I HEREBY CERTIFY THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW HAMPSHIRE
JEFFREY S. MERRITT No. 11778 LICENSED PROFESSIONAL ENGINEER
07/24/2023

LOCATION:
TAX MAP 16 BLOCK 1 LOT 65 & 67(BOW)
TAX MAP 88Z LOTS 3 & 4 (CONCORD)
510 HALL STREET
BOW & CONCORD, NEW HAMPSHIRE
MERRIMACK COUNTY

PROJECT:
AMOSKEAG BEVERAGES

TITLE:
UTILITY PLAN

PROJECT No.	DATE:	SCALE:
13-1202-2	MARCH 24, 2022	HORIZ. 1"=30'
SHEET:	11 OF 29	



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

LEGEND

- EX./PROP. UTILITY POLE
- EX./PROP. LIGHT POLE
- EX./PROP. WATER VALVE
- EX./PROP. HYDRANT
- EX./PROP. SIGN
- EX./PROP. SEWER MANHOLE
- EX./PROP. DRAIN MANHOLE
- EX./PROP. CATCH BASIN
- ABUTTER LINE
- PROPERTY LINE
- EX. EDGE OF PAVEMENT
- EX. BUILDING
- EX. EASEMENT
- PROP. EDGE OF PAVEMENT
- PROP. VERT. GRANITE CURB
- PROP. BITUMINOUS CURB
- PROP. BUILDING
- PROP. FENCING
- DRAINAGE LINE
- PROP. RIP RAP
- EX. CONCRETE
- PROP. CONCRETE
- SSS SOIL LINE

LOAM & SEED ALL DISTURBED AREAS

EROSION CONTROL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE REQUIRED ONSITE TEMPORARY CONSTRUCTION EROSION CONTROL MEASURES.
2. ALL MEASURES IN THE PLAN SHALL MEET AS A MINIMUM THE BEST MANAGEMENT PRACTICES SET FORTH IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" AS PUBLISHED AND AMENDED BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES.
3. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED OR SUPPLEMENTED. THE STRIPPING OF VEGETATION SHALL BE DONE IN A MANNER THAT MINIMIZES SOIL EROSION.
4. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.
5. THE AREA OF DISTURBANCE SHALL BE KEPT TO A MINIMUM. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 30 DAYS SHALL BE STABILIZED.
6. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA USING APPROVED MEASURES.
7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL SITE STABILIZATION IS ACCOMPLISHED.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED PROMPTLY AFTER FINAL SITE STABILIZATION OR OTHERWISE NO LONGER REQUIRED. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS UNLESS CONDITIONS DICTATE OTHERWISE.
9. THE CITY OF CONCORD SHALL RESERVE THE RIGHT TO REQUIRE FURTHER EROSION CONTROL PRACTICES DURING CONSTRUCTION SHOULD THEY FIND IT NECESSARY.
10. THE RESPONSIBLE PARTY SHALL INSTALL, INSPECT, REPORT, OPERATE, AND MAINTAIN ALL STORMWATER MANAGEMENT AND EROSION CONTROL MEASURES REQUIRED BY THESE PLANS.
11. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PROJECT PLANS. IN ADDITION, SIMILAR MEASURES SHALL BE INSTALLED WHERE AND WHEN THE FIELD CONDITION, OR FIELD OPERATION OF THE INDIVIDUAL SITE CONTRACTOR, MAY WARRANT.
12. ALL DISTURBED AREAS DESIGNATED TO BE TURF, SHALL RECEIVE A MINIMUM APPLICATION OF 4 INCHES OF LOAM (COMPACTED THICKNESS), PRIOR TO FINAL SEEDING AND MULCHING.
13. IN THE EVENT THAT, DURING CONSTRUCTION OF ANY PORTION OF THIS PROJECT, A WINTER SHUTDOWN IS NECESSARY, THE CONTRACTOR SHALL STABILIZE ALL INCOMPLETE WORK AND PROVIDE FOR SUITABLE METHODS OF DIVERTING RUNOFF IN ORDER TO ELIMINATE SHEET FLOW ACROSS FROZEN SURFACES.
14. DUST SHALL BE CONTROLLED BY THE USE OF WATER AS NECESSARY THROUGHOUT THE CONSTRUCTION PERIOD, IN ACCORDANCE WITH ENV-A 1000.
15. IN NO WAY ARE THOSE TEMPORARY EROSION CONTROL MEASURES INDICATED ON THESE PLANS TO BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL USE JUDGEMENT IN INSTALLING SUPPLEMENTARY EROSION CONTROL MEASURES WHERE AND WHEN SPECIFIC SITE CONDITIONS AND/OR CONSTRUCTION METHODOLOGIES MAY WARRANT.
16. GRADED AREAS SHALL BE VEGETATED TO INSURE EROSION CONTROL BY SEEDING, MULCHING, AND FERTILIZING. DISTURBED AREAS SHALL BE PLANTED WITH SUITABLE PLANT MATERIALS.
17. GRADING SHALL NOT EXCEED A RATIO OF 3 HORIZONTAL TO 1 VERTICAL WITHOUT SPECIAL EROSION CONTROL MEASURES. NETTING OR SIMILAR MATERIAL SHALL BE PROVIDED ON SLOPES WITH A RATION GREATER THAN 3:1 WHILE GROUND COVER IS BEING ESTABLISHED.
18. USE NONWOVEN COIR FABRIC WHEN A SURFACE FABRIC TREATMENT IS REQUIRED FOR EROSION CONTROL AND STABILIZATION, SUCH AS 100% BIODEGRADABLE COCONUT FIBER MAT OR EQUAL AS REVIEWED AND APPROVED BY THE PROJECT DESIGN ENGINEER.
19. USE WOVEN COIR FABRIC WHEN SITE CONDITIONS WARRANT. THE OUTER LAYER OF WOVEN COIR FABRIC SHOULD BE A HIGH STRENGTH, CONTINUOUSLY WOVEN MAT (I.E., WITHOUT SEAMS) AND MADE OF 100% COCONUT FIBER.
20. THERE SHALL BE NO PLASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE GREATER THAN 1/8" MATERIAL UTILIZED (N/A TO TURF REINFORCEMENT MATS).
21. TURF REINFORCEMENT MATS SHALL BE COVERED WITH SOIL TO PREVENT EXPOSURE OF THE MATS TO THE SURFACE.

STATE OF NEW HAMPSHIRE THOMAS E. SOKOLOSKI No. 063 11/21/2022 CERTIFIED SOIL SCIENTIST

EROSION & SEDIMENT CONTROL LEGEND

- TEMPORARY DANDY BAGS
- TEMPORARY BLOCK & GRAVEL SEDIMENT BARRIER
- TEMPORARY STONE CHECK DAM
- SILT FENCE
- STABILIZED CONSTRUCTION EXIT
- EROSION BLANKET
- OUTLET PROTECTION
- LIMITS OF CLEARING

SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS
5B	RIPPOWAM FINE SANDY LOAM	0-8%	POORLY
400B/abaaa	UDORTHENTS, SAND	0-8%	EXCESSIVELY
400C/abaaa	UDORTHENTS, SAND	8-15%	EXCESSIVELY
400D/abaaa	UDORTHENTS, SAND	15-25%	EXCESSIVELY
500B/cgabb	UDORTHENTS, SAND	0-8%	WELL
500D/cgabb	UDORTHENTS, SAND	15-25%	WELL
500B/dgabb	UDORTHENTS, SAND	0-8%	MODERATELY WELL
500D/dgabb	UDORTHENTS, SAND	15-25%	MODERATELY WELL
500B/hbhbb	UDORTHENTS, SAND	0-8%	UNDETERMINABLE*

*ASSUMED TO BE WELL DRAINED BASE ON ADJACENT SOILS

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOILS SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, PRODUCED BY A CERTIFIED SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A NARRATIVE REPORT THAT ACCOMPANIES THIS MAP AND MAP KEY.

DIG SAFE — CALL TOLL FREE 811 — DAMAGE PREVENTION SYSTEM — UTILITIES UNDERGROUND

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2	02/27/2023	REVISED PER CITY COMMENTS	JSW
3	04/11/2023	REVISED PER F&G COMMENTS	JSW
4	07/24/2023	REVISED PER CONDITIONS OF APPROVAL	JSW

OWNER OF LOT 4 & APPLICANT:
AMOSKEAG BEVERAGES, LLC
510 HALL STREET
BOW, NH 03304

OWNER OF LOTS 3, 65 & 67:
AMOSKEAG REALTY, LLC
510 HALL STREET
BOW, NH 03304

GRANITE ENGINEERING
civil engineering • land planning • municipal services
130 Dow Street, Tower 2, Suite 421
Manchester, New Hampshire 03101
603.518.8030
www.GraniteEng.com

STAMP: STATE OF NEW HAMPSHIRE JEFFREY D. MERRITT No. 11778 LICENSED PROFESSIONAL ENGINEER
07/24/2023

LOCATION:
TAX MAP 16 BLOCK 1 LOT 65 & 67(BOW)
TAX MAP 88Z LOTS 3 & 4
(CONCORD)
510 HALL STREET
BOW & CONCORD, NEW HAMPSHIRE
MERRIMACK COUNTY

PROJECT:
AMOSKEAG BEVERAGES

TITLE:
EROSION CONTROL PLAN

PROJECT No.	DATE:	SCALE:
13-1202-2	MARCH 24, 2022	HORIZ. 1"=30'
SHEET: 13 OF 29		

TRENCH CONSTRUCTION NOTES:

1. PIPE TRENCH BEDDING MATERIAL FOR EXCAVATION BELOW GRADE SHALL BE SCREENED GRAVEL OR CRUSHED STONE MEETING THE ASTM C33/C33M STONE SIZE NO. 67 STANDARD IN EFFECT WHEN THE STONE IS USED.
2. SUBJECT TO (2.1), BELOW, THE PIPE SAND BLANKET MATERIAL SHALL BE GRADED SAND FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 100 PERCENT PASSES A ½–INCH SIEVE AND A MAXIMUM OF 15 PERCENT PASSES A #200 SIEVE.
   2.1. IN LIEU OF THE SAND BLANKET SPECIFIED IN (2), ABOVE, A STONE ENVELOPE 6 INCHES THICK COMPLETELY AROUND THE PIPE USING ¾–INCH STONE MAY BE USED.
3. PIPE BEDDING MATERIAL SHALL EXTEND FROM A HORIZONTAL PLANE THROUGH THE PIPE AXIS TO 6 INCHES BELOW THE BOTTOM OF THE OUTSIDE SURFACE OF THE PIPE.
4. PIPE SAND BLANKET MATERIAL SHALL COVER THE PIPE A MINIMUM OF 12 INCHES ABOVE THE CROWN OF THE OUTSIDE SURFACE.
5. COMPACTION SHALL BE IN 12–INCH LAYERS FOR BEDDING AND BLANKET MATERIALS.
6. BACKFILL MATERIAL SHALL BE COMPACTED IN NO MORE THAN 3–FOOT THICK LAYERS TO THE GROUND SURFACE EXCEPT FOR ROAD CONSTRUCTION WHERE THE FINAL 3 FEET SHALL BE COMPACTED IN NO MORE THAN 12–INCH THICK LAYERS TO THE ROAD BASE SURFACE.
7. TRENCH BACKFILL MATERIAL IN ROADWAY LOCATIONS SHALL BE NATURAL MATERIALS EXCAVATED FROM THE TRENCH DURING CONSTRUCTION, EXCLUDING: DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; WET OR SOFT MUCK; PEAT OR CLAY; EXCAVATED LEDGE MATERIAL; ROCKS OVER 6 INCHES IN THE LARGEST DIMENSION; AND ANY MATERIAL NOT APPROVED BY THE ENGINEER.
8. TRENCH BACKFILL AT CROSS–COUNTRY LOCATIONS SHALL BE AS DESCRIBED IN (7), ABOVE, EXCEPT THAT TOP SOIL, LOAM, MUCK OR PEAT MAY BE USED PROVIDED THE COMPLETED CONSTRUCTION WILL BE STABLE, AND PROVIDED THAT ACCESS TO THE SEWER FOR MAINTENANCE AND RECONSTRUCTION IS PRESERVED.
9. BACKFILL SHALL BE MOUNDED 6 INCHES ABOVE ORIGINAL GROUND AT CROSS COUNTRY LOCATIONS.
10. BASE COURSE FOR TRENCH REPAIR SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE 'STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION' OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.
11. WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID–DIAMETER, THE SHEETING SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE AND AT LEAST 3 FEET BELOW FINISHED GRADE.
12. TRENCHES FOR SEWER PIPES WITH SLOPES OVER 0.08 FEET PER FOOT, TRENCHES FOR SEWER PIPES BELOW SEASONAL HIGH GROUND WATER LEVEL, AND TRENCHES FOR SEWER PIPES DOWNSTREAM OF AND WITHIN THE HYDRAULIC INFLUENCE OF WATERWAYS OR WETLANDS SHALL HAVE IMPERVIOUS TRENCH DAMS CONSTRUCTED EVERY 300 FEET TO PREVENT POTENTIAL DISTURBANCE TO PIPE BEDDING AND BLANKET MATERIALS.
13. PRECAUTIONS SHALL BE TAKEN TO AVOID GROUNDWATER POOLING AT THE SURFACE BY PROVIDING DRAINAGE TO A SUITABLE OUTLET AT CATCH BASINS OR RUN–OFF SWALES.
14. FOR TRENCHES FOR SEWER PIPES IN LEDGE, EXCAVATION SHALL EXTEND TO AT LEAST 12 INCHES BELOW THE BOTTOM OF THE SEWER PIPE.
15. ALL SEWERS SHALL BE MARKED USING METAL–IMPREGNATED MARKING TAPE OR TRACER WIRE THAT CAN BE LOCATED USING METAL DETECTION EQUIPMENT.

SEWER TRENCH NOTES

NOT TO SCALE

GRAVITY SEWER CONSTRUCTION MATERIAL NOTES:

1. THE APPROVED GRAVITY SEWER PIPE AND MATERIALS TO BE USED ON THE PROJECT ARE AS FOLLOWS:
   1.1. DUCTILE IRON PIPE AND FITTINGS SHALL BE CERTIFIED BY THE MANUFACTURER(S) AS CONFORMING TO THE FOLLOWING STANDARDS OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA) IN EFFECT AT THE TIME THAT THE PIPES OR FITTINGS ARE MANUFACTURED:
      1.1.1. AWWA C151/A21.51 FOR DUCTILE IRON PIPE, CENTRIFUGALLY CAST IN METAL– OR SAND–LINED MOLDS, FOR WATER, WASTEWATER, AND RECLAIMED WATER SYSTEMS; AND
      1.1.2. AWWA C150/A21.50 FOR THICKNESS DESIGN OF DUCTILE IRON PIPE AND WITH ASTM A536 FOR DUCTILE IRON CASTINGS;
   1.2. JOINTS SHALL BE MECHANICAL TYPE, PUSH–ON TYPE, OR BALL–AND–SOCKET TYPE AS APPROPRIATE FOR THE SPECIFIC APPLICATION;
   1.3. PLASTIC GRAVITY SEWER PIPE AND FITTINGS SHALL BE CERTIFIED BY THE MANUFACTURER AS COMPLYING WITH THE STANDARDS LISTED IN THE TABLE BELOW, AS IN EFFECT WHEN THE PIPES WERE MANUFACTURED:

ASTM STANDARD	GENERIC PIPE MATERIAL	SIZES APPROVED
D3034	POLYVINYL CHLORIDE (PVC), SOLID WALL	8–INCH THROUGH 15–INCH (SDR 35)
F679	PVC, SOLID WALL	18–INCH THROUGH 60–INCH (T–1 & T–2)
F794	PVC, PROFILE, DUAL–WALLED CORRUGATED	4–INCH THROUGH 48–INCH
F1760	PVC, RECYCLED, NON–PRESSURE	ALL DIAMETERS

   1.4. PLASTIC SEWER PIPE SHALL HAVE A PIPE STIFFNESS RATING OF AT LEAST 46 POUNDS PER SQUARE INCH AT 5 PERCENT PIPE DIAMETER DEFLECTION, AS MEASURED BY THE MANUFACTURER IN ACCORDANCE WITH THE ASTM D2412 STANDARD IN EFFECT WHEN PIPE WAS MANUFACTURED;
   1.5. JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL AND CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE ASTM D3212 STANDARD IN EFFECT WHEN THE JOINT SEALS WERE MANUFACTURED, AND SHALL BE PUSH–ON, BELL–AND–SPIGOT TYPE;
   1.6. CONCRETE PIPE SHALL BE CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE AWWA C302 STANDARD IN EFFECT WHEN THE PIPE WAS MANUFACTURED;
   1.7. PRE–STRESSED CONCRETE CYLINDER PIPE AND FITTINGS SHALL BE CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE AWWA C301 STANDARD IN EFFECT WHEN PIPE WAS MANUFACTURED; AND
   1.8. JOINTS FOR CONCRETE CYLINDER PIPE SHALL BE MADE OF OIL RESISTANT ELASTOMERIC MATERIAL AND CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE AWWA C301 STANDARD IN EFFECT WHEN PIPE WAS MANUFACTURED.

GRAVITY SEWER CONSTRUCTION NOTES

NOT TO SCALE

SEWER MANHOLE TESTING NOTES:

1. MANHOLES SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST IN ACCORDANCE WITH THE ASTM C1244 STANDARD IN EFFECT WHEN THE TESTING IS PERFORMED. A MANHOLE MAY BE BACKFILLED PRIOR TO PERFORMING A VACUUM TEST, BUT IF THE MANHOLE FAILS THE VACUUM TEST, BACKFILL SHALL BE REMOVED SO REPAIRS TO THE MANHOLE CAN BE MADE FROM THE OUTSIDE OF THE MANHOLE PRIOR TO RETESTING.
2. THE MANHOLE VACUUM TEST SHALL CONFORM TO THE FOLLOWING:
   2.1. THE INITIAL VACUUM GAUGE TEST PRESSURE SHALL BE 10 INCHES HG; AND
   2.2. THE MINIMUM ACCEPTABLE TEST HOLD TIME FOR A 1–INCH HG PRESSURE DROP TO 9 INCHES HG SHALL BE:
      2.2.1. NOT LESS THAN 2 MINUTES FOR MANHOLES LESS THAN 10 FEET DEEP IN DEPTH;
      2.2.2. NOT LESS THAN 2.5 MINUTES FOR MANHOLES 10 TO 15 FEET DEEP; AND
      2.2.3. NOT LESS THAN 3 MINUTES FOR MANHOLES MORE THAN 15 FEET DEEP;
3. THE MANHOLE SHALL BE REPAIRED AND RETESTED IF THE TEST HOLD TIMES FAIL TO ACHIEVE THE ACCEPTANCE LIMITS SPECIFIED IN (2), ABOVE.
4. INVERTS AND SHELVES SHALL NOT BE INSTALLED UNTIL AFTER SUCCESSFUL TESTING IS COMPLETED.
5. IMMEDIATELY FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE PLACED ON THE TOP OF THE MANHOLE OR SOME OTHER MEANS USED TO PREVENT ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN, OR ANIMALS, UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENT TO GRADE.

GRAVITY SEWER PIPE TESTING NOTES:

1. ALL NEW GRAVITY SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY THE USE OF LOW–PRESSURE AIR TESTS.
2. LOW–PRESSURE AIR TESTING SHALL BE IN CONFORMANCE WITH THE FOLLOWING TESTING STANDARDS IN EFFECT AT THE TIME THE TEST IS CONDUCTED:
   2.1. ASTM F1417 'STANDARD TEST METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW–PRESSURE AIR', AVAILABLE AS NOTED IN APPENDIX D; OR
   2.2. UNI–BELL PVC PIPE ASSOCIATION 'UNI–B–6, 'LOW–PRESSURE AIR TESTING OF INSTALLED SEWER PIPE'.
3. ALL NEW GRAVITY SEWERS SHALL BE:
   3.1. CLEANED AND VISUALLY INSPECTED USING A LAMP TEST AND BY INTRODUCING WATER TO DETERMINE THAT THERE IS NO STANDING WATER IN THE SEWER; AND
   3.2. TELEVISED AND GRADE FOLLOWING INSTALLATION AND PRIOR TO USE.
4. ALL PLASTIC SEWER PIPE SHALL BE VISUALLY INSPECTED AND DEFLECTION TESTED NOT LESS THAN 30 DAYS NOR MORE THAN 90 DAYS FOLLOWING INSTALLATION.
5. THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 5% PERCENT OF AVERAGE INSIDE DIAMETER. A ROUND BALL OR MANDREL WITH A DIAMETER OF AT LEAST 95% OF THE AVERAGE INSIDE PIPE DIAMETER SHALL BE USED FOR TESTING PIPE DEFLECTION. THE DEFLECTION TEST SHALL BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES.

SEWER TESTING NOTES

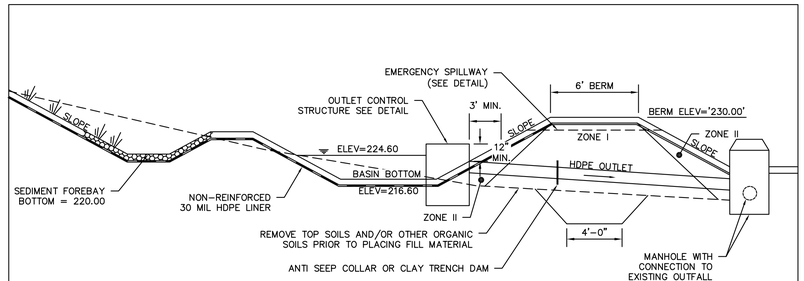
NOT TO SCALE

PROTECTION OF WATER SUPPLY NOTES:

1. THERE SHALL BE NO PHYSICAL CONNECTION BETWEEN A PUBLIC OR PRIVATE POTABLE WATER SUPPLY SYSTEM AND ANY SEWERAGE SUCH THAT SEWAGE OR POLLUTED WATER COULD PASS INTO THE POTABLE SUPPLY. NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF ANY SEWER OR SEWER MANHOLE.
2. NO SEWER SHALL BE LOCATED WITHIN THE APPLICABLE WELL PROTECTIVE RADII ESTABLISHED IN ENV–DW 300 FOR ANY PUBLIC WATER SUPPLY WELL OR WITHIN 75 FEET OF ANY PRIVATE WATER SUPPLY WELL.
3. SEWERS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN.
4. A DEVIATION FROM THE SEPARATION REQUIREMENTS OF (2) OR (3), ABOVE, SHALL BE ALLOWED WHERE NECESSARY TO AVOID CONFLICT WITH SUBSURFACE STRUCTURES, UTILITY CHAMBERS, AND BUILDING FOUNDATIONS, PROVIDED THAT THE SEWER IS CONSTRUCTED WITH FORCE MAIN CONSTRUCTION MATERIALS THAT MEET THE REQUIREMENTS IN ENV–WQ 704.08.
5. WHENEVER SEWERS MUST CROSS WATER MAINS, THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS:
   5.1. VERTICAL SEPARATION OF THE SEWER AND WATER MAIN SHALL BE NOT LESS THAN 18 INCHES, WITH WATER ABOVE SEWER; AND
   5.2. SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATER MAIN.

PROTECTION OF WATER SUPPLY NOTES

NOT TO SCALE



NOTES:

1. CONTRACTOR TO NOTIFY DIG–SAFE 72 HOURS PRIOR TO START OF CONSTRUCTION
2. CLEAR AND CUT THE AREA TO THE NECESSARY EXTENT. CONTRACTOR TO PROPERLY DISPOSE OF ALL DEBRIS.
3. ALL SILTATION AND TEMPORARY EROSION CONTROLS MEASURES SHALL BE INSTALLED AS CALLED FOR ON PROJECT PLANS PRIOR TO GRUBBING OF CLEARED AREAS.
4. CONTRACTOR TO COMPLETE GRUBBING AND PROPERLY DISPOSE OF ALL DEBRIS. STOCKPILE ORGANIC MATERIAL SUITABLE FOR USE AS TOPSOIL IN UPLAND AREAS. ALL STOCKPILES TO BE SEEDED AND, IF NECESSARY, SURROUNDED WITH HAY BALES TO PREVENT LOSSES DUE TO EROSION.
5. CONSTRUCT TEMPORARY CULVERTS AS NECESSARY FOR CONSTRUCTION ACTIVITIES. ALL CROSSINGS TO BE PROTECTED BY HAY BALE BARRIERS TO PREVENT EROSION.
6. CONSTRUCT CUT–OFF TRENCH (PART OF ZONE I).
7. CONSTRUCT OUTLET AND OVERFLOW STRUCTURE, CULVERT, ANTI SEEP COLLARS, HEADWALL, AND RIP RAP OUTLET PROTECTION AS SHOWN ON PLANS AND DETAILS.
8. CONSTRUCT ZONE I PORTION OF EARTH EMBANKMENT.
9. CONSTRUCT ZONE II PORTION OF EARTH EMBANKMENT.
10. APPLY TOPSOIL TO SLOPES AND OTHER AREAS OF DISTURBANCE BY CONSTRUCTION. TOPSOIL MAY BE NATIVE ORGANIC MATERIAL SCREENED SO AS TO BE FREE OF ALL DELETERIOUS MATERIAL. TOPSOIL SHALL BE A MINIMUM OF 4–INCHES OF COMPACTED THICKNESS. UPON PLACEMENT ON TOPSOIL, FINISHED AREAS ARE TO BE LIMED, SEEDED AND MULCHED. CONSTRUCTION PERSONNEL SHALL INSPECT COMPLETED SECTIONS OF WORK ON A REGULAR BASIS AND REMEDY ALL PROBLEM AREAS UNTIL GRASS HAS BECOME ESTABLISHED.
11. MAINTAIN, REPAIR AND REPLACE TEMPORARY EROSION CONTROL MEASURES AS NECESSARY UNTIL THE WHOLE CONSTRUCTION ARE HAS BEEN STABILIZED (MINIMUM ONE WINTER).
12. REMOVE AND SUITABLY DISPOSE OF TEMPORARY EROSION CONTROL MEASURES AFTER STABILIZATION.
13. MONITOR CONSTRUCTION ACTIVITIES TO INSURE THEY ARE PERFORMED IN SUCH WAYS AS TO NOT ENDANGER THE INTEGRITY OF EARTH EMBANKMENTS, STORMWATER CONTROL, STRUCTURE, CULVERT AND RIP RAP OUTLET PROTECTION.

MATERIAL TYPE/SPECIFICATIONS

ZONE I:
WELL GRADED MIXTURE OF GRAVEL, SAND, SILT OR CLAY WITH MAX. 6–INCH SIZE STONES AND GRADATION AS INDICATED BELOW. PLACE IN MAX. 12–INCH THICK LIFTS TO 95% OF MAX. DRY DENSITY IN ACCORDANCE WITH ASTM D1557. SCARIFY SURFACE PRIOR TO PLACING SUBSEQUENT LIFT. IN ADDITION REMOVE ORGANIC SOILS.

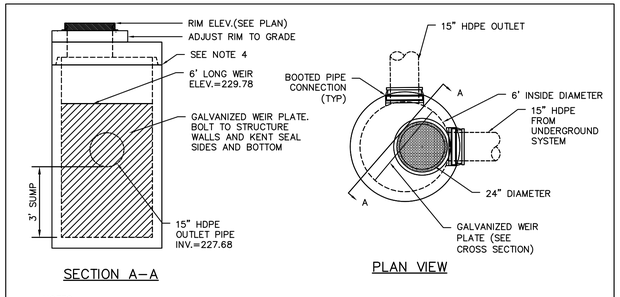
SIEVE SIZE	% BY WEIGHT PASSING
6–INCH	100
NO. 4	50–100
NO. 40	30–70
NO. 200	20–40

ZONE II:
DRAINAGE LAYER: PLACE IN MAX. 12–INCH THICK LIFTS TO 95% OF MAX DRY DENSITY IN ACCORDANCE WITH ASTM D1557

SIEVE SIZE	% BY WEIGHT PASSING
1–INCH	100
NO. 4	70–100
NO. 200	0–12 (IN SAND PORTION ONLY)

WET POND DETAIL

NOT TO SCALE



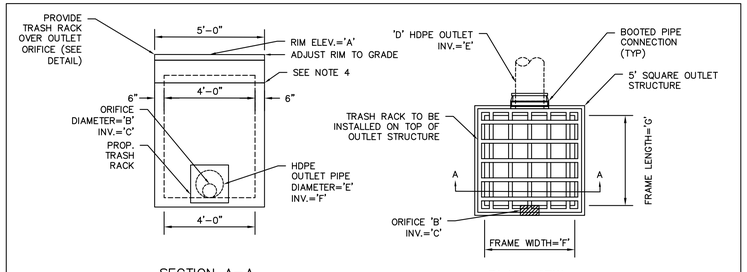
NOTES:

1. CONCRETE: fc=4,000 PSI @ 28 DAYS MINIMUM, TYPE III CEMENT.
2. REINFORCING STEEL: ASTM–A615 GRADE #60, ASTM A–185 WWF.
3. DESIGN LOADING: AASHTO–HS20–44, ASTM C–478 PRECAST REINFORCED CONCRETE MANHOLE SECTIONS
4. BUTYL RUBBER JOINT SEALANT CONFORMS TO LATEST ASTM C–990 SPECS
5. WEIR PLAN FASTENED WITH SS HARDWARE.
6. WEIR SHALL BE ¼" GALVANIZED STEEL. KENT SEAL SIDES AND BOTTOM OF WEIR PLATE TO STRUCTURE.
7. ONE POUR MONOLITHIC BASE SECTION.

OS#203/OUTLET STRUCTURE DETAIL FOR UIP#1

NOT TO SCALE

RISER MODIFIED. "AMOSKEAG BEVERAGES COVERED STORAGE ADDITION" PLAN SET FOR UPDATED DESIGN



A	B	C	D	E	F	G
227.80	3.5"	224.60	12"	224.60	42"	42"

NOTES:

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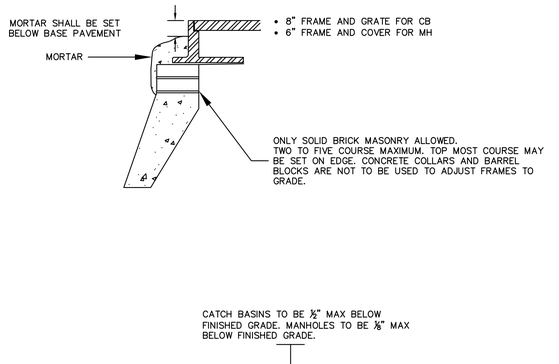
5. ONE POUR MONOLITHIC BASE SECTION.

OS#1/OUTLET STRUCTURE DETAIL FOR WET POND#1

NOT TO SCALE



REINFORCED CONCRETE DROP INLET TOP WITH VERTICAL CURB

STORM DRAIN/SEWER ADJUSTING FRAMES TO GRADE DETAILS- CONCORD

NOT TO SCALE

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land planning
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REVISIONS

No.	DATE	COMMENTS	BY
1	01/18/2023	PROJECT SUBMITTAL	JSW
2	02/27/2023	REVISED PER CITY COMMENTS	JSW
3	04/11/2023	REVISED PER F&G COMMENTS	JSW
4	07/24/2023	REVISED PER CONDITIONS OF APPROVAL	JSW

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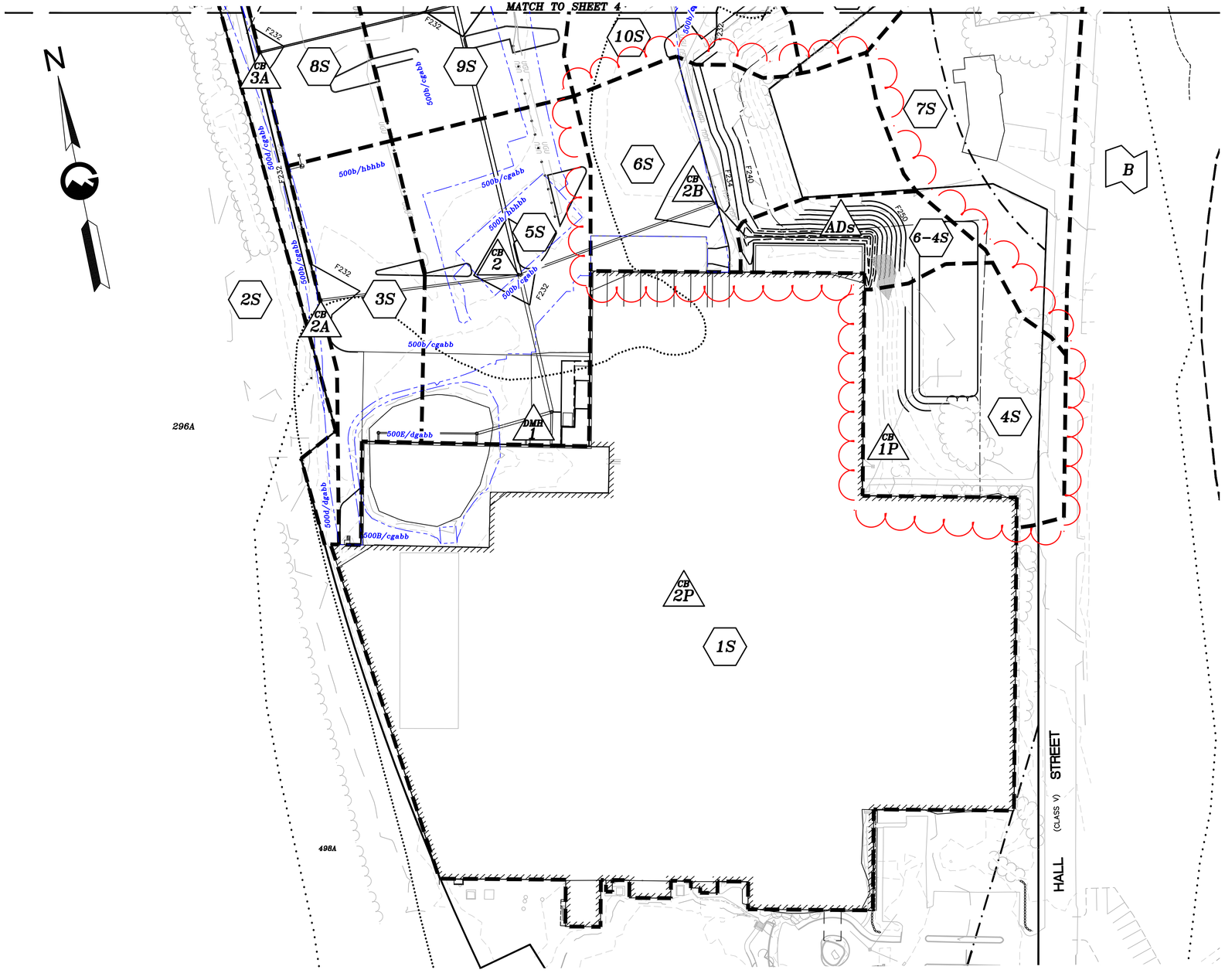
STAMP:
STATE OF NEW HAMPSHIRE
JEFFREY P. MERRITT
No. 11778
LICENSED PROFESSIONAL ENGINEER
07/24/2023

LOCATION:
TAX MAP 16 BLOCK 1 LOT 65 & 67(BOW)
TAX MAP 88Z LOTS 3 & 4
(CONCORD)
510 HALL STREET
BOW & CONCORD, NEW HAMPSHIRE
MERRIMACK COUNTY

PROJECT:
AMOSKEAG BEVERAGES

TITLE:
DETAILS

PROJECT No.	DATE:	SCALE:
13–1202–2	MARCH 24, 2022	AS SHOWN
SHEET:	24 OF 29	



NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE VARIOUS STORMWATER SUBCATCHMENT AREAS, CORRESPONDING TIMES OF CONCENTRATION, PONDS, AND REACHES ASSOCIATED WITH THE SUBJECT PARCEL AFTER DEVELOPMENT.

DRAINAGE LEGEND:

THE LEGEND BELOW REFLECTS THE HYDROCAD MODEL USED FOR DRAINAGE CALCULATIONS.

- SCS SOIL LINES
- SITE-SPECIFIC SOIL LINE
- *140B* — DENOTES SOIL TYPE (FROM SSSS)
- *140B* — DENOTES SOIL TYPE (FROM NRCS)
- P — DENOTES POND
- S — DENOTES SUBCATCHMENT AREA
- R — DENOTES REACH
- L — DENOTES POINT OF INTEREST
- LIMIT OF SUBCATCHMENT AREA
- TIME OF CONCENTRATION
- REACH PATH

SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS
5B	RIPPOWAM FINE SANDY LOAM	0–8%	POORLY
400B/abaaa	UDORTHENTS, SAND	0–8%	EXCESSIVELY
400C/abaaa	UDORTHENTS, SAND	8–15%	EXCESSIVELY
400D/abaaa	UDORTHENTS, SAND	15–25%	EXCESSIVELY
500B/cgabb	UDORTHENTS, SAND	0–8%	WELL
500D/cgabb	UDORTHENTS, SAND	15–25%	WELL
500B/dgabb	UDORTHENTS, SAND	0–8%	MODERATELY WELL
500D/dgabb	UDORTHENTS, SAND	15–25%	MODERATELY WELL
500B/hbhbb	UDORTHENTS, SAND	0–8%	UNDETERMINABLE*

*ASSUMED TO BE WELL DRAINED BASE ON ADJACENT SOILS

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOILS SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, PRODUCED BY A CERTIFIED SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A NARRATIVE REPORT THAT ACCOMPANIES THIS MAP AND MAP KEY.

SCS LEGEND

296A	FREETOWN MUCKY PEAT, 0–2% SLOPES
498A	URBAN–LAND POOTATUCK COMPLEX, 0–3% SLOPES

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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municipal services

REVISIONS

No.	DATE	COMMENTS	BY
1	04/17/26	ADDED NEW COVERED STORAGE & ADs	JDM

OWNER OF LOT 4 & APPLICANT:
AMOSKEAG BEVERAGES, LLC
510 HALL STREET
BOW, NH 03304

OWNER OF LOTS 3, 65 & 67:
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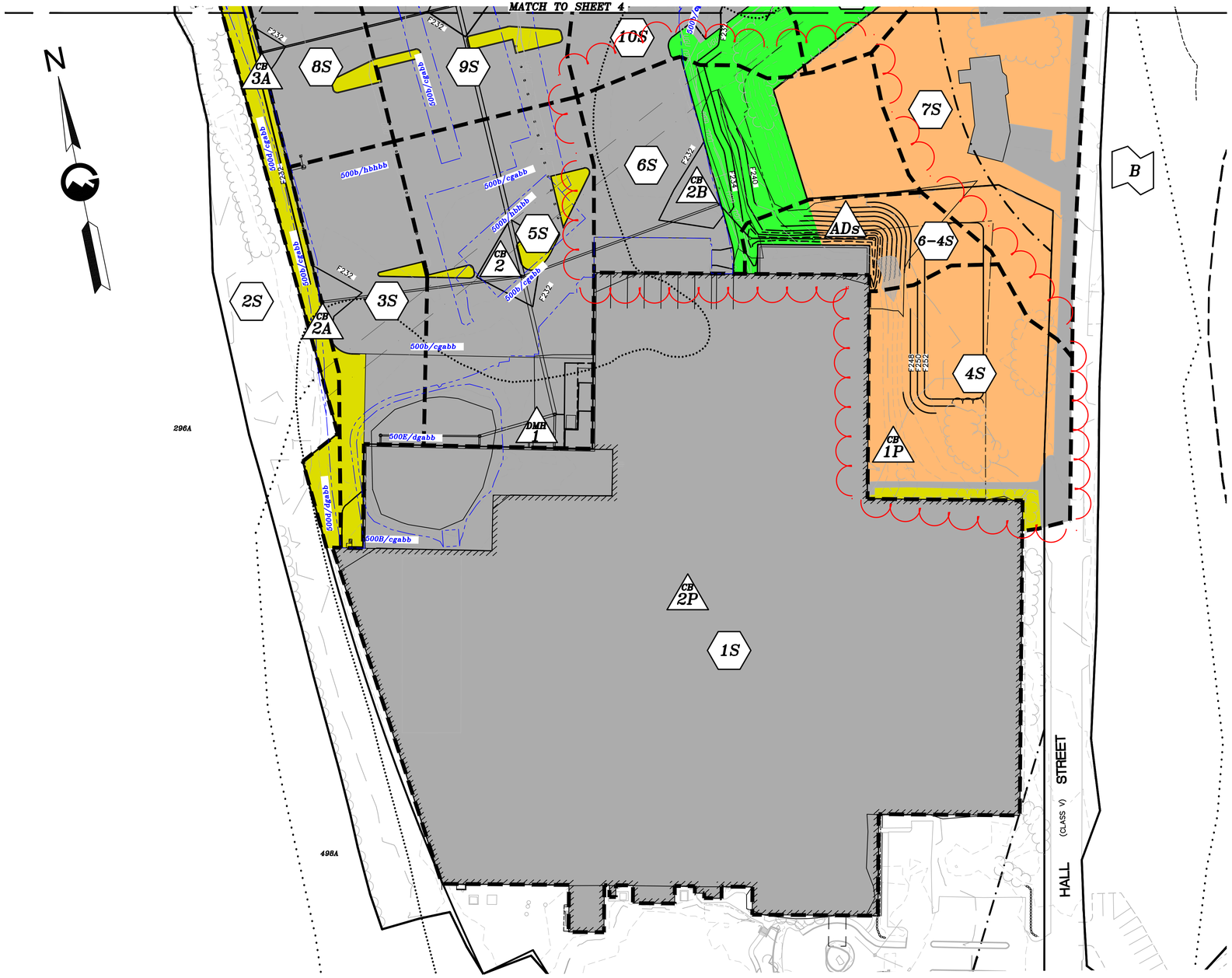
(CONCORD)
510 HALL STREET
BOW & CONCORD, NEW HAMPSHIRE
MERRIMACK COUNTY

PROJECT:
AMOSKEAG BEVERAGES

TITLE:
POST-DRAINAGE AREA PLAN

PROJECT No.	DATE:	SCALE:
13-1202-2	NOVEMBER 18, 2025	HORIZ. 1"=50'
SHEET: 5 OF 6		



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400C/abaaa	UDORTHENTS, SAND	8–15%	EXCESSIVELY
400D/abaaa	UDORTHENTS, SAND	15–25%	EXCESSIVELY
500B/cgabb	UDORTHENTS, SAND	0–8%	WELL
500D/cgabb	UDORTHENTS, SAND	15–25%	WELL
500B/dgabb	UDORTHENTS, SAND	0–8%	MODERATELY WELL
500D/dgabb	UDORTHENTS, SAND	15–25%	MODERATELY WELL
500B/hbhbb	UDORTHENTS, SAND	0–8%	UNDETERMINABLE*

*ASSUMED TO BE WELL DRAINED BASE ON ADJACENT SOILS

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOILS SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, PRODUCED BY A CERTIFIED SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A NARRATIVE REPORT THAT ACCOMPANIES THIS MAP AND MAP KEY.

SCS LEGEND

- *296A* FREETOWN MUCKY PEAT, 0–2% SLOPES
- *498A* URBAN–LAND POOTATUCK COMPLEX, 0–3% SLOPES

COLOR LEGEND:

- A SOILS
- B SOILS
- C SOILS
- D SOILS
- IMPERVIOUS AREA
- OPEN WATER

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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REVISIONS

No.	DATE	COMMENTS	BY
1	04/17/26	ADDED NEW COVERED STORAGE & ADs	JDM

OWNER OF LOT 4 & APPLICANT:
AMOSKEAG BEVERAGES, LLC
510 HALL STREET
BOW, NH 03304

OWNER OF LOTS 3, 65 & 67:
AMOSKEAG REALTY, LLC
510 HALL STREET
BOW, NH 03304

GRANITE ENGINEERING
civil engineering ● land planning ● municipal services
150 Dow Street, Tower 2, Suite 421
Manchester,
New Hampshire 03101
603.518.8030
www.GraniteEng.com

STAMP:

LOCATION:
TAX MAP 16 BLOCK 1 LOT 65 & 67(BOW)
TAX MAP 88Z LOTS 3 & 4
(CONCORD)
510 HALL STREET
BOW & CONCORD, NEW HAMPSHIRE
MERRIMACK COUNTY

PROJECT:
AMOSKEAG BEVERAGES

TITLE:
POST-DRAINAGE AREA PLAN

PROJECT No.	DATE:	SCALE:
13-1202-2	NOVEMBER 18, 2025	HORIZ. 1"=50'
SHEET:	5 OF 6	