JONES ASSOCIATES
Foresters, Surveyors and Environmental Consultants

BH2M
Berry, Huff, McDonald, Milligan Inc.

The Cote Corporation
Crane & Rigging Since 1966

Development Review Application

The Cote Corporation
2890 Hotel Road
Auburn, Maine 04210

May 2021
JA Job #17-033AU

JONES
ASSOCIATES
Foresters, Surveyors and
Environmental Consultants

May 2021

Office of Economic and Community Development
City of Auburn
60 Court Street
Auburn, Maine 04210

RE: Cote LLC Expansion Project

Dear City of Auburn,

On behalf of the Cote LLC, Jones Associates, Inc. is pleased to submit a Development Review Application for their proposed project located at 2890 Hotel Road in Auburn, Maine. The Maine Department of Environmental Protection (MDEP) has allowed the City of Auburn to review this application under delegated review for a Site Location of Development Application.

In addition to the municipal Development Review Application, this project will also require permitting through the MDEP and Army Corps. of Engineers in the form of a Tier I Natural Resources Protection Act (NRPA) Application.

Cote, LLC has hired BH2M, a multidisciplinary engineering firm, to provide engineering and design for the project. Jones Associates Inc. has been hired to provide land surveying, natural resource expertise, and technical assistance in pursuing necessary federal, state and local environmental permits. These firms make a collaborative project team in guaranteeing the success of the project.

Sincerely,

Rick Jones

City of Auburn, Maine
Economic & Community Development
Michael Chammings, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Application

PROJECT NAME: Site Plan Modification 2 The Cote Corporation

PROPOSED DEVELOPMENT ADDRESS: 2898 Hotel Road, Auburn, Maine 04210

PARCEL ID #: Proposed Development: Tax Map 120 / Lot 21, Tax Map 120 / Lot 22
Existing Development: Tax Map 107 / Lot 21, Tax Map 120 / Lot 24

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

PROJECT DESCRIPTION: Cote, LLC, is proposing to expand their storage site located at 2890 Hotel Road by creating approximately 2.4 acres of grassy lay down area for material storage north of their existing site. In addition to the grassy lay down area, Cote, LLC, is also proposing to construct a .53 acre 30' wide gravel access road in order to access the new storage area and the necessary storm water infrastructure to treat the proposed development.

CONTACT INFORMATION:

Applicant
Name: Cote, LLC
Address: 2890 Hotel Road
City / State Auburn, Maine
Zip Code 04210
Work #: 207-783-0561
Cell #:
Fax #:
Home #:
Email: dpcote@cotecrane.com

Property Owner
Name: Cote, LLC
Address: 2890 Hotel Road
City / State Auburn, Maine
Zip Code 04210
Work #: 207-783-0561
Cell #:
Fax #:
Home #:
Email: dpcote@cotecrane.com

Project Representative
Name: Jones Associates, Inc.
Address: 280 Poland Spring Road
City / State Auburn, Maine
Zip Code 04210
Work #: 207-241-0235
Cell #:
Fax #:
Home #:
Email: rjones@jonesai.com ; ejones@jonesai.com ; jray@jonesai.com

Other professional representatives for the project (surveyors, engineers, etc.),
Name: BH2M
Address: 380B Main Street
City / State Gorham, Maine
Zip Code 04038
Work #: 207-839-2771
Cell #:
Fax #:
Home #:
Email: amorrell@bh2m.com

PROJECT DATA

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

IMPERVIOUS SURFACE AREA/RATIO

Existing Total Impervious Area	341,735	sq. ft.
Proposed Total Paved Area	- (7,155 pavmnent to be removed)	sq. ft.
Proposed Total Impervious Area	388,020	sq. ft.
Proposed Impervious Net Change	46,285 (-6,242 in buildings removed since 2006)	sq. ft.
Impervious surface ratio existing	53	% of lot area
Impervious surface ratio proposed	44	% of lot area

BUILDING AREA/LOT COVERAGE

Existing Building Footprint	67,383	sq. ft.
Proposed Building Footprint	67,383	sq. ft.
Proposed Building Footprint Net change	0	sq. ft.
Existing Total Building Floor Area	56,900	sq. ft.
Proposed Total Building Floor Area	56,900	sq. ft.
Proposed Building Floor Area Net Change	0	sq. ft
New Building	No	(yes or no)
Building Area/Lot coverage existing	10	% of lot area
Building Area/Lot coverage proposed	7.7	% of lot area

ZONING

Existing: Industrial on existing development parcels, general business on proposed development parcels

Proposed, if applicable: N/A

LAND USE

Existing: commerical business on existing development parcels, residential rental properties of proposed development parcels

Proposed: commerical business on the proposed development parcels

RESIDENTIAL, IF APPLICABLE

Existing Number of Residential Units	2
Proposed Number of Residential Units	0 (N/A)
Subdivision, Proposed Number of Lots	0 (N/A)

PARKING SPACES

Existing Number of Parking Spaces	40
Proposed Number of Parking Spaces	0
Number of Handicapped Parking Spaces	2 (existing)
Proposed Total Parking Spaces	0

ESTIMATED COST OF PROJECT: $119,550.00

DELEGATED REVIEW AUTHORITY CHECKLIST

SITE LOCATION OF DEVELOPMENT AND STORMWATER MANAGEMENT

Existing Impervious Area	341,735	sq. ft.
Proposed Disturbed Area	149,200	sq. ft.
Proposed Impervious Area	388,020	sq. ft.

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

TRAFFIC ESTIMATE

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

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

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

Zoning Summary

1. Property is located in the Existing development: Industrial / Proposed development: General Business zoning district.
2. Parcel Area: 20.2 +/-(total) acres / _____ square feet(sf).

Regulations	Required/Allowed	Provided
Min Lot Area	.23 ac	20.2 +/-(total)
Street Frontage	100	195
Min Front Yard	25'	30' (to existing House)
Min Rear Yard	25'	N/A
Min Side Yard	25'	N/A
Max. Building Height	45'	N/A
Use Designation	Non processing Storage	
Parking Requirement	1 space/ per _____ square feet of floor area	
Total Parking:	N/A	40 Existing
Overlay zoning districts (if any):	None	
Urban impaired stream watershed?	YES/NO If yes, watershed name NO	

DEVELOPMENT REVIEW APPLICATION SUBMISSION

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

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

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

To view the City of Auburn Zoning Ordinance, go to:
www.auburnmaine.gov under City Departments / Planning, Permitting & Code / Subdivisions / Land Use /Zoning Ordinance

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

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

Signature of Applicant:	**Date:**
Richard D. Jones (agent)	5/3/2021

City of Auburn, Maine
Economic & Community Development
Michael Chammings, Director
60 Court Street | Auburn, Maine 04210
www.auburnmaine.gov | 207.333.6601

Development Review Checklist

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

PROJECT NAME: Site Plan Modification 2 The Cote Corporation
PROPOSED DEVELOPMENT ADDRESS: 2898 Hotel Road Auburn, Maine 04210
PARCEL #: Proposed Development: Tax Map 120 / Lot 21, Tax Map 120 / Lot 22 Existing Development: Tax Map 107 / Lot 21, Tax Map 120 / Lot 24

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

Required Information		*Check when Submitted*		*Applicable Ordinance*
Landscape Plan		***Applicant***	***Staff***	
	Greenspace Requirements			
	Setbacks to Parking			
	Buffer Requirements			
	Street Tree Requirements			
	Screened Dumpsters			
	Additional Design Guidelines			
	Planting Schedule			

Stormwater & Erosion Control Plan		***Applicant***	***Staff***	
	Compliance w/ chapter 500	X		
	Show Existing Surface Drainage	X		
	Direction of Flow	X		
	Location of Catch Basins, etc.	X		
	Drainage Calculations	X		
	Erosion Control Measures	X		
	Maine Construction General Permit	X		
	Bonding and Inspection Fees			
	Post-Construction Stormwater Plan	X		
	Inspection/monitoring requirements	X		
Lighting Plan		***Applicant***	***Staff***	
	Full cut-off fixtures	X		
	Meets Parking Lot Requirements	N/A		
Traffic Information		***Applicant***	***Staff***	
	Access Management	N/A		
	Signage	N/A		
	PCE - Trips in Peak Hour	N/A		

Required Information		*Check when Submitted*		*Applicable Ordinance*
	Vehicular Movements	N/A		
	Safety Concerns	N/A		
	Pedestrian Circulation	N/A		
	Police Traffic	N/A		
	Engineering Traffic	N/A		
Utility Plan		***Applicant***	***Staff***	
	Water	N/A		
	Adequacy of Water Supply	N/A		
	Water main extension agreement	N/A		
	Sewer	N/A		
	Available city capacity	N/A		
	Electric	N/A		
	Natural Gas	N/A		
	Cable/Phone	N/A		
Natural Resources		***Applicant***	***Staff***	
Not located within a shoreland zone	Shoreland Zone	N/A		
Not located within a floodplain	Flood Plain	N/A		
Wetland impacts proposed	Wetlands or Streams	X		
No urban impaired stream present	Urban Impaired Stream	N/A		
	Phosphorus Check			
	Aquifer/Groundwater Protection			
	Applicable State Permits			
	Lake Auburn Watershed			
	Taylor Pond Watershed			
Right, Title or Interest		***Applicant***	***Staff***	
	Verify	X		
	Document Existing Easements, Covenants, etc.	X		

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

AGENT AUTHORIZATION

JONES ASSOCIATES
Foresters, Surveyors and Environmental Consultants

March 12, 2021

AGENT AUTHORIZATION LETTER

Subject: The Cote Corporation – Storage Expansion Project
2980 Hotel Road, Auburn, Maine 04210

To whom it may concern,

Jones Associates, Inc., located at 280 Poland Spring Road in Auburn, Maine, is authorized to act as an agent for Cote, LLC. for the purposes of permitting for their proposed project located at 2980 Hotel Road.

Sincerely,

x _____

Daniel Cote

Section 1: Project Description

A. Project History Overview

The original facility of Cote, LLC, was constructed in 1985. The original facility was constructed on a 10.72-acre property. At the time, no stormwater management infrastructure was included in the original application as it was not required at the time.

In 1995, Cote, LLC, received approval from the City of Auburn Planning Board for Site Law and Site Plan approval. The proposed design plan (which included the original 1985 development plan) included the original 10.72-acre property, an additional 7.1-acres of land which was planned to be all be impervious area, and 3.62-acres of land which was planned as lawn area. The project was only partially completed, as the 100' x 400' building was not constructed.

In 2003, Cote, LLC, the site plan was modified to include a 4.1-acre site that abutting the original parcel with the intention of creating a looped gravel access road and grassy lay down area. This modification included a change in the stormwater calculations for an additional 0.48-acres of gravel road and 2.37-acres of >75% grass covered areas. This designed resulted in an increase of runoff area so the treatment pond was increased in size to handle the excess runoff.

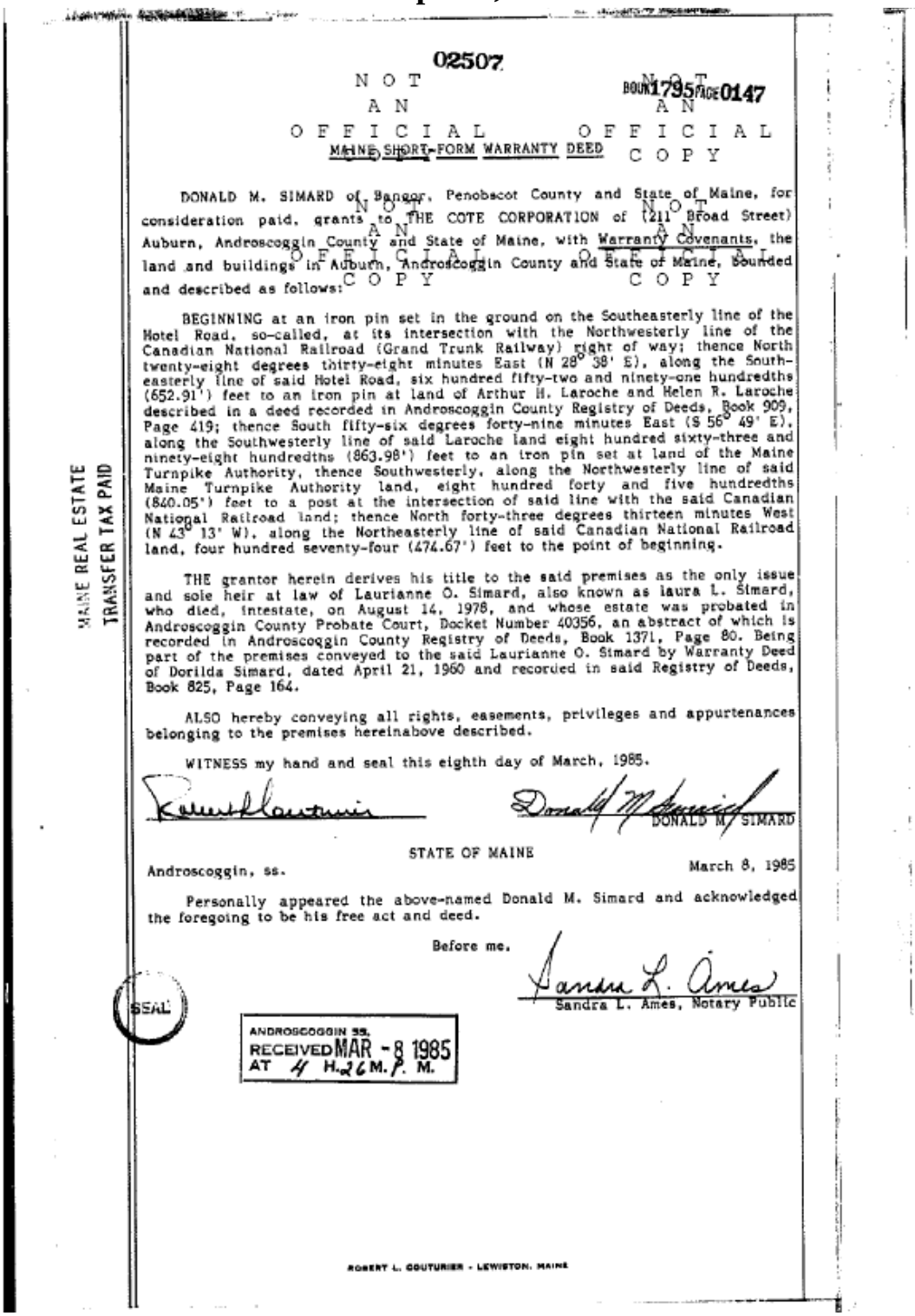
B. Proposed Project Overview

The applicant, Cote, LLC, is now interested in expanding their storage site located at 2890 Hotel Road by creating approximately 2.4 acres of grassy lay down area for material storage north of their existing site. In addition to the grassy lay down area, Cote, LLC, is also proposing to construct a .53 acre 30' wide gravel access road in order to access the new storage area and the necessary storm water infrastructure to treat the proposed development.

The scope of work include tree clearing/grubbings, stump/boulder removal, construction of the gravel access road, installation of a storm drain system with vegetated swales, and the construction of grassed underdrained soil filters. More specific information can be found in the Stormwater Management Report prepared by BH2M.

Section 2: Title, right or interest (Existing Development)

Tax Map 107, Lot 21



02507

BOOK 1795 PAGE 0147

MAINE SHORT-FORM WARRANTY DEED

DONALD M. SIMARD of Bangor, Penobscot County and State of Maine, for consideration paid, grants to THE COTE CORPORATION of (211 Broad Street) Auburn, Androscoggin County and State of Maine, with Warranty Covenants, the land and buildings in Auburn, Androscoggin County and State of Maine, bounded and described as follows:

BEGINNING at an iron pin set in the ground on the Southeasterly line of the Hotel Road, so-called, at its intersection with the Northwesterly line of the Canadian National Railroad (Grand Trunk Railway) right of way; thence North twenty-eight degrees thirty-eight minutes East (N 28° 38' E), along the Southeasterly line of said Hotel Road, six hundred fifty-two and ninety-one hundredths (652.91') feet to an iron pin at land of Arthur H. Laroche and Helen R. Laroche described in a deed recorded in Androscoggin County Registry of Deeds, Book 909, Page 419; thence South fifty-six degrees forty-nine minutes East (S 56° 49' E), along the Southwesterly line of said Laroche land eight hundred sixty-three and ninety-eight hundredths (863.98') feet to an iron pin set at land of the Maine Turnpike Authority, thence Southwesterly, along the Northwesterly line of said Maine Turnpike Authority land, eight hundred forty and five hundredths (840.05') feet to a post at the intersection of said line with the said Canadian National Railroad land; thence North forty-three degrees thirteen minutes West (N 43° 13' W), along the Northeasterly line of said Canadian National Railroad land, four hundred seventy-four (474.67') feet to the point of beginning.

THE grantor herein derives his title to the said premises as the only issue and sole heir at law of Laurianne O. Simard, also known as laura L. Simard, who died, intestate, on August 14, 1978, and whose estate was probated in Androscoggin County Probate Court, Docket Number 40356, an abstract of which is recorded in Androscoggin County Registry of Deeds, Book 1371, Page 80. Being part of the premises conveyed to the said Laurianne O. Simard by Warranty Deed of Dorilda Simard, dated April 21, 1960 and recorded in said Registry of Deeds, Book 825, Page 164.

ALSO hereby conveying all rights, easements, privileges and appurtenances belonging to the premises hereinabove described.

WITNESS my hand and seal this eighth day of March, 1985.

DONALD M. SIMARD

STATE OF MAINE

Androscoggin, ss. March 8, 1985

Personally appeared the above-named Donald M. Simard and acknowledged the foregoing to be his free act and deed.

Before me,

Sandra L. Ames, Notary Public

SEAL

ANDROSCOGGIN SS.
RECEIVED MAR - 8 1985
AT 4 H. 26 M. P. M.

MAINE REAL ESTATE TRANSFER TAX PAID

ROBERT L. COUTURIER - LEWISTON, MAINE

Tax Map 120, Lot 24

Bk4625 Pg298 #6674
04-06-2001 @ 01:29p

MAINE SHORT FORM WARRANTY DEED

NOT A COPY

I, **DAVID R. FERGER**, of Auburn, Androscoggin County, Maine, for consideration paid, hereby grant to **COTE, LLC**, of Post Office Box 1418, Auburn, Maine 04211-1418, with **WARRANTY COVENANTS**, a certain lot or parcel of land situated in **Auburn**, Androscoggin County, Maine, being more particularly described on the attached Exhibit A.

NOT A COPY

ALSO HEREBY conveying all rights, easements and privileges pertaining thereto.

NOT A COPY

Being the same premises described in the deed of Helen M. Laroche to David Ferger and Cindy Ferger dated May 27, 1993, and recorded in the Androscoggin County Registry of Deeds in Book 3047, Page 174. See also the deed from Cindy Ferger to David Ferger dated August 7, 2000, and recorded in the Androscoggin County Registry of Deeds in Book 4489, Page 247.

MAINE REAL ESTATE TRANSFER TAX PAID

IN WITNESS whereof, the said David R. Ferger has caused this instrument to be signed and sealed this 5th day of April, 2001.

Witness

David R. Ferger

STATE OF MAINE
COUNTY OF ANDROSCOGGIN, SS.

Personally appeared before me this 5th day of April, 2001, the above-named David R. Ferger acknowledged the foregoing instrument to be his free act and deed.

Notary Public/Attorney-at-Law

TODD M. ABBOTONI
Notary Public, Maine
My Commission Expires October 20, 2007

Type or Print Name

My commission expires:

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SEAL

EXHIBIT A

A certain lot or parcel of land, together with the buildings thereon, situated in the City of Auburn, County of Androscoggin, State of Maine, and being located on the southeasterly sideline of Hotel Road and being the same premises conveyed to David R. Ferger and Cindy S. Ferger by deed dated May 27, 1993 and recorded in the Androscoggin County Registry of Deeds in Book 3047, Page 174, being bounded and described as follows:

Beginning at a 5/8" rebar found driven into the ground, said rebar being located at the northerly corner of land, conveyed to The Cote Corporation from Donald M. Simard by deed dated March 8, 1985 and recorded in said Registry of deeds in Book 1795, Page 147, said rebar also being located North 28° 37' 32" East along Hotel Road a distance of 652.72 feet from a 5/8" rebar found driven into the ground located at the southwesterly corner of The Cote Corporation parcel;

Thence North 28° 37' 32" East along said Hotel Road a distance of 120.16 feet to a point, said point also being located at the southwesterly corner of land, now or formerly of one Robert N. St. Hilaire and Michelle A. St. Hilaire (See Book 3445, Page 102);

Thence South 56° 52' 34" East along land of said St. Hilaire a distance of 868.05 feet to a REBAR SET into the ground, said rebar being located on the westerly sideline of a strip of land, now or formerly, of one Central Maine Power Company (formerly the Portland & Lewiston Interurban Railroad);

Thence South 14° 32' 47" West along land of said Central Maine Power Company a distance of 82.68 feet to a REBAR SET into the ground, said rebar being located on a curve to the left, of which the radius point lies South 27° 39' 14" East, a radial distance of 5879.58 feet and said rebar being located on the westerly sideline of land, now or formerly, of the Maine Turnpike Authority (See Book 709, Page 446);

Thence generally southwesterly along an arc of land of the said Maine Turnpike Authority, through a central angle of 0° 27' 41", a distance of 47.35 feet to a 5/8" rebar with a plastic cap stamped PLS 1344 found driven into the ground, said rebar also being located at the easterly corner of said Cote parcel;

Thence North 56° 52' 34" West along land of said Cote a distance of 862.02 feet to the POINT OF BEGINNING; said described parcel containing 2.41 acres more or less.

The bearings above referred to are based on True North along the survey baseline, June 1954, Maine Turnpike Plan, recorded in the Androscoggin County Registry of Deeds, Volume 3, Book 11, Page 572.

All "REBAR SET" are 5/8" rebar topped with a plastic cap stamped "PLS 1344."

H:\DOCS\DENCH\COTECORP\Exhibit A.wpd

ANDROSCOGGIN COUNTY
Jeannine D. Bergeron
REGISTER OF DEEDS

Title, right or interest (Proposed Development)

Tax Map 120, Lot 21

Bk 9225 Ps155 #17167
09-17-2015 @ 11:15a

MAINE SHORT FORM WARRANTY DEED

I, **JAMIE L. BEAUDOIN (also known as Jamie Beaudoin)**, of Auburn, Androscoggin County, Maine, for consideration paid, grant to **COTE, LLC**, a Maine limited liability company with a mailing address of P.O. Box 1418, Auburn, Maine, 04210, with **WARRANTY COVENANTS**, a certain lot or parcel of land, with any buildings thereon, situated in Auburn, County of Androscoggin, and State of Maine, being further described in the attached Exhibit A.

MAINE REAL ESTATE TRANSFER TAX PAID

The premises are conveyed subject to any easements and restrictions of record, and this deed includes all rights, easements, privileges and appurtenances belonging to the premises hereinabove described.

WITNESS my hand this 17th day of September, 2015.

Witness

Jamie L. Beaudoin

STATE OF MAINE
COUNTY OF ANDROSCOGGIN, SS

Then personally appeared the above named Jamie L. Beaudoin known to me, this 17th day of September, 2015 and acknowledged before me the foregoing instrument to be her free act and deed.

Notary Public
Name: _____
My commission expires: _____

N:\Androtc\WPDOCS\DIANET\- 2015\0800\15-0886 - DEED.doc

BARTON M. KELSEA
NOTARY PUBLIC, MAINE
MY COMMISSION EXPIRES
AUGUST 28, 2016

NOT AN OFFICIAL COPY

EXHIBIT A

NOT AN OFFICIAL COPY

A certain lot or parcel of land with the buildings thereon situated in Auburn, County of Androscoggin and State of Maine, bounded and described as follows:

Bounded southerly by land conveyed by me to Alfred E. Pease and Angie M. Pease, husband and wife, by deed dated April 20, 1943; Westerly by the Hotel Road, so-called, for a distance of one hundred thirty-five (135) feet on said road; Northerly by a line running Easterly from said Hotel Road parallel with the Northerly line of said land belonging to Alfred E. Pease and Angie M. Pease, and extending to the right of way formerly occupied by the Portland-Lewiston Interurban Electric Railroad Company, which right of way forms the easterly boundary of the lot hereby conveyed.

Meaning and intending to convey by this deed a lot of land one hundred thirty-five (135) feet on said Hotel Road and extending back easterly therefrom, of uniform width, to the right of way formerly occupied by the said Portland-Lewiston Interurban Electric Railroad Company.

Being the same premises as conveyed to Jamie L. Beaudoin (a/k/a Jamie Beaudoin) and Kris R. Beaudoin by deed from Norman P. Smith and David S. Smith, Personal Representatives of the Estate of William A. Smith, Jr. dated November 27, 2006, recorded in the Androscoggin County Registry of Deeds in Book 6983, Page 276. Further reference is made to an Abstract of Divorce Decree between Kris R. Beaudoin and Jamie Beaudoin dated September 5, 2012, recorded in Book 8487, Page 336, in which Decree the subject property was awarded to Jamie Beaudoin as her sole and exclusive property.

N:\Androtc\WPDOCS\DIANET\- 2015\0800\15-0886 - EXHIBIT A.doc

Tax Map 120, Lot 22

Bk 8159 Pg280 #7198
05-13-2011 @ 12:32p

DEED OF SALE BY PERSONAL REPRESENTATIVE

(Testate)

KNOW ALL MEN BY THESE PRESENTS, That I, TIMOTHY P. HILTZ, with a mailing address at 6 Flintlock Lane, Falmouth, Maine 04105 duly appointed and acting Personal Representative of the Estate of Frank V. Hiltz, III, deceased, whose Will was duly admitted to probate in the Probate Court for the County of Androscoggin, Maine, Docket No. 2011-103, and not having given notice to each person succeeding to an interest in the real property described below at least ten (10) days prior to the sale, such notice not being required under the terms of the Decedent's Will, by the power conferred by the Probate Code, and every other power, grants to COTE LLC, a limited liability company with a mailing address at P.O. Box 1418, 2980 Hotel Road, Auburn, Maine 04211-1418, the real property with the buildings thereon situated in Auburn, County of Androscoggin, State of Maine, bounded and described as follows, to wit:

> A certain lot or parcel of land with any buildings thereon situated in the City of Auburn, County of Androscoggin and State of Maine, bounded and described as follows:
>
> Bounded Southerly by the line of land owned and occupied by John A. Dennison, Jr., and by the line of said Dennison extended easterly in the same course to the right of way formerly occupied by the Portland-Lewiston Interurban Electric Railroad Company; bounded Westerly by the Hotel Road for a distance of One Hundred Sixty (160) Feet on said road; bounded Northerly by a line parallel with the Southerly line of the granted land as herein described, and One Hundred Sixty (160) Feet distant Northerly therefrom, said Northerly line extending from said Hotel Road to said Portland-Lewiston Interurban Railroad Company right of way; and bounded Easterly by said right of way. Meaning hereby to convey a strip of land One Hundred Sixty (160) Feet in width on said Hotel Road and extending back therefrom of uniform width to said Portland-Lewiston Interurban Railroad Company right of way.
>
> Being the same premises conveyed to Frank V. Hiltz, III and Mary L. Haile, as joint tenants, by the Warranty Deed of Angie M. Pease, dated December 24, 1986, and recorded in the Androscoggin County Registry of Deeds in Book 2034, Page 259.

Mary L. Haile died on February 21, 2004, leaving Frank V. Hiltz as the sole surviving joint tenant. Her Estate has not been probated. Frank V. Hiltz, III died on February 26, 2011. His Will has been duly admitted to probate; see Androscoggin County Probate Court Docket #2011-103.

WITNESS my hand and seal in said capacity this thirteenth day of May, 2011.

TIMOTHY P. HILTZ
Personal Representative of the
Estate of Frank V. Hiltz, III

STATE OF MAINE
ANDROSCOGGIN, SS. MAY 13, 2011

Then personally appeared TIMOTHY P. HILTZ in his capacity as Personal Representative of the Estate of Frank V. Hiltz, III and acknowledged the foregoing instrument to be his voluntary act and deed.

Before me,

~~Notary Public~~ Attorney-At-Law
Print Name: PHILIP M. ISAACSON
Commission Expires: N/A

drc P:\SANDIE\CLIENT\Hiltz III\Sale of Real Estate\Deed to Cote final.docx

ANDROSCOGGIN COUNTY
TINA M CHOUINARD
REGISTER OF DEEDS

Section 3: Natural Resources

Wetland Delineation Report

JONES ASSOCIATES
Foresters, Surveyors and Environmental Consultants

Wetland Report

Cote, LLC

2898 Hotel Road

Auburn, Maine

Prepared for:
Cote, LLC
2898 Hotel Road
Auburn, Maine 04210

Prepared by:
Jones Associates, Inc.
280 Poland Spring Road
Auburn Maine, 04210
(207) 241-1872

JA Job # 17-033AU
May 2017

INTRODUCTION

Jones Associates Inc. was contracted to provide wetland delineation services for Cote, LLC. on a property located off Hotel Road in Auburn, Maine. This includes the identification of potential vernal pools and streams. The following report summarizes site conditions observed during site visits in May of 2017.

Wetland boundaries were identified and delineated according to *U.S. Army Corps of Engineers (ACOE) standard techniques as outlined in the Wetlands Delineation Manual (Environmental Laboratory 1987)* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, January 2012.*

Wetlands were identified based on the presence of hydric soil, hydrology, and a predominance of hydrophytic species. Periodic soil samples were taken, and any evidence of hydrology was noted prior to making field determinations regarding wetland/upland boundaries. Each stratum of vegetation was assessed for its percentage of hydrophytic species. If all three factors were evident, the study plot was considered wetland habitat. Transitions between upland and wetland were clearly marked with blue sub-zero flagging, and labeled with alphanumeric codes to identify individual systems (A1, A2, A3…).

GENERAL EXISTING CONDITIONS

The subject site is located in Auburn, Maine to the west of 2898 Hotel Road and to the north of the Cote Corporation. The area of investigation is bounded to the north by a private parcel and to the south by a parcel currently owned by Cote, LLC. Hotel Road borders the parcel to the west and a private parcel which boundary follows along an old railroad bed borders the east. The microtopography at the site consists of pit and mound. The eastern section of the parcel is disturbed, which is most likely due to past excavation when building the old railroad bed. The old railroad bed acts like a barrier to water which funnels drainage and creates wetland. Overall, the drainage on the property is to the south, southwest. There was also disturbance to the west by former residential development.

The entire area of investigation is forested with little canopy openings. Upland vegetation consists of eastern hemlock *(Tsuga canadensis)*, eastern white pine *(Pinus strobus)*, and red maple *(Acer rubrum)*. Understory vegetation is relatively sparse but includes balsam fir *(Abies balsamea)*, hobblebush *(Viburnum lantanoides)*, Canada mayflower *(Maianthemum canadense)*, poison ivy *(Toxicodendron radicans)*, ostrich fern *(Matteuccia struthiopteris)*, and starflower *(Trientalis borealis)*.

SOILS

According to U.S. Department of Agriculture, Natural Resources Conservation Service, the soils series typed on the parcel include Adams loamy sand and Ninigret fine sandy loam. Characteristics of each series are described below according to: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture, Official Soil Series Descriptions, http://soils.usda.gov/technical/classification/osd/index.html

ADAMS SERIES

The Adams series consists of deep, excessively and somewhat excessively drained soils formed in glacial-fluvial or glacio-lacustrine sand. This series can be found on outwash plains, deltas, lake plains, moraines, terraces, and eskers. Saturated hydraulic conductivity is high or very high. Slope ranges from 0 through 70 percent. Mean annual temperature is 6 degrees C. and mean annual precipitation is 970 millimeters. They can be found on almost level to very steep sand plains, kames, moraines, benches, eskers, deltas, and terraces. The slopes can range from 0 to 70 percent. Runoff of these soils trends to be slow to medium. Areas with a great amounts are idle and support aspen, birch, and pine seedlings or sweet fern, spirea, and brambles. Uncleared areas support maple, beech, spruce, and pine. Farmed areas are used commonly for hay or pasture with limited acreages of corn and small grain.

NINIGRET SERIES

The Ninigret series consists of deep, moderately well drained soils formed in loamy over sandy and gravelly glacial outwash. They range from nearly level to strongly sloping soils on glaciofluvial landforms, typically in slight depressions and broad drainage ways. The slope ranges from 0 through 15 percent. Saturated hydraulic conductivity is moderately high or high in the solum and high or very high in the substratum. The mean annual temperature is about 49 degrees Fahrenheit and mean annual precipitation is around 48 inches. Much of the acreage is used for cultivated crops, hay, or pasture. Common crops that are grown are silage corn, vegetables, tobacco, and nursery stock. Some areas are idle, wooded, or used for community development. Common trees are red, white and black oak, red maple, sugar maple, white pine, gray birch, white ash, and hemlock.

WETLAND CHARACTERISTICS

The term "wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

--Corps of Engineers Wetlands Delineation Manual (U.S. Army Corps of Engineers 1987)

The wetlands on-site are palustrine forested wetlands with unconsolidated bottoms found more commonly to the east of the area of investigation. There are some stream channels present on site, but currently do not hold water.

A larger forested wetland beginning off site is found to the south on the adjacent Cote, LLC parcel and is connected to the wetland found in the area of investigation. The forested wetland is dominated by pit topography which allows for the integration of upland plant species with wetland plant species. Facultative plant species found include balsam fir *(Abies balsamea)*, red maple *(Acer rubrum)*, and poison ivy *(Toxicodendron radicans)*. Upland plants finding refuge on the higher hummocks include American beech *(Fagus grandifolia)*, northern red oak *(Quercus rubra)*, eastern white pine *(Pinus strobus)*, red spruce *(Picea rubens)*, and Canada mayflower *(Maianthemum canadense)*. This site has a dense canopy which does not allow for much undergrowth. Although sapling and herbs were present their absolute percent cover was minimal.

The more wetland tolerant species at the site included red maple *(Acer rubrum)* and ostrich fern *(Matteuccia struthiopteris)*. Wetland vegetation at the site was minimal due to the thick canopy cover and pit topography. The upland plants dominated the majority of the canopy resulting in suppressed growth of wetland species.

More than likely this wetland was created and/or exacerbated from the disturbance caused from the previous excavation for the old railroad bed that borders the area of investigation to the east. Excavation of soil near the old railroad leads to depressions in the topography, these depressions pool with water and create wetlands. Additionally, the old railroad bed acts as a barrier to water movement which reduces drainage which can also create wetlands. Within the wetland boundary the topography is relatively flat to concave.

VERNAL POOLS

As defined by Maine's Department of Environmental Protection (MDEP): A vernal pool, also referred to as a seasonal forest pool, is a natural, temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), and fairy shrimp (*Eubranchipus spp*.), as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition.

As of September 1, 2007, "Significant Vernal Pools" are defined by MDEP as "Significant Wildlife Habitat." As read in MDEP's Chapter 335 -- Significant Wildlife Habitat Rules, "Whether a vernal pool is a significant vernal pool is determined by the number and type of pool-breeding amphibian egg masses in a pool, or the presence of fairy shrimp, or use by threatened or endangered species as specified in Section 9(B). Significant vernal pool habitat consists of a vernal pool depression and a portion of the critical terrestrial habitat within a 250 foot radius of the spring or fall high water mark of the depression. An activity that takes place in, on, over, or adjacent to a significant vernal pool habitat must meet the standards of this chapter."

Species and abundance criteria required for Significant Vernal Pools.

Species	Abundance Criteria
Fairy shrimp	Presence in any life stage.
Blue spotted salamanders	Presence of 10 or more egg masses.
Spotted salamanders	Presence of 20 or more egg masses.
Wood frogs	Presence of 40 or more egg masses.

No potential vernal pools were identified during field work. It is recommended by JAI that a full vernal pool survey be conducted during the amphibian breeding season to determine the presence and significance of vernal pools within the area of investigation.

RARE OR UNUSUAL FEATURES

During our investigations of the above site, Jones Associates, Inc. did not observe any rare or unusual plant or animal species within the mapped wetland area. Portions of the area described in this report had been previously altered by excavation activities from the development of the old railroad bed. The wetlands on this property were dominated by plant communities typical of this region of Maine. There were no vernal pools found within the area of investigation.

NORTHERN LONG-EARED BAT

The United States Fish and Wildlife Service listed the Northern Long-Eared Bat (NLEB) (*Myotis septentrionalis*) as threatened with Interim 4(d) Rule. This listing affects development occurring within the range of the NLEB (www.fws.gov/midwest/endangered/mammals/nleb/nlebRangeMap.html) and within the White Nose Syndrome Buffer Zone (http://www.fws.gov/midwest/nleb/WNSBuffer.pdf) that could cause purposeful or incidental take (harm, kill or otherwise harass). This includes the clearing of trees where NLEB could be living. If your project requires such action a permit may be necessary.

JONES ASSOCIATES
Foresters And Environmental Consultants

WETLAND DELINEATION CHECKLIST

Job #:	17-033AU
Client:	Cote, LLC
Site Address:	2898 Hotel Road Auburn Maine

Wetland Scientist:	Jason Tome
Date of Office Review:	5/31/17
Date(s) of Field Delineation:	May 2017

Wetlands of Special Significance

Yes	No	
	X	Does the on-site or immediately adjacent wetland contain a mapped and numbered DWA?
	X	Does the on-site or immediately adjacent wetland contain an Inland Waterfowl Wading Bird Habitat?
	X	Does the on-site or immediately adjacent wetland contain a potential significant vernal pool?
	X	Does the recent aerial photos of the on-site or immediately adjacent wetland show or are there any open water or emergent wetlands with areas greater than 20,000 sq. ft.?
	X	Does the on-site or immediately adjacent wetland contain a 100 year flood plain?
	X	Does the on-site or immediately adjacent wetland contain a S1 or S2 community?
	X	Does the on-site or immediately adjacent wetland contain a significant wildlife habitat?
	X	Is the on-site wetland within 250' of a coastal wetland?
	X	Is the on-site wetland within 250' of a great pond?
	X	Does the site contain peatlands?

Stormwater Qualifications

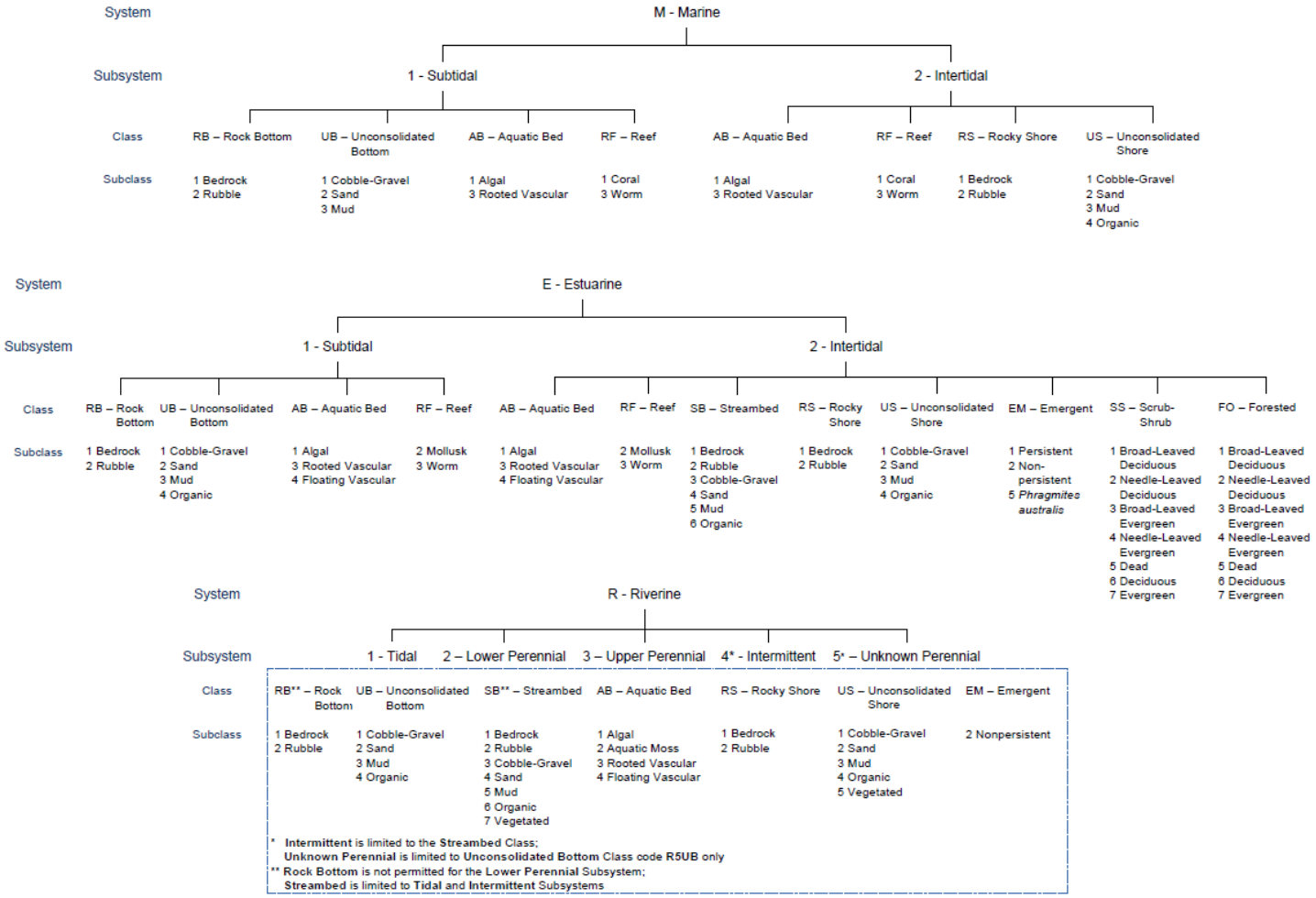
	X	Is the site in the watershed of a Great Pond or Impaired stream?
	X	Is the site in a lake watershed?
	X	Is the site in a watershed most at risk?

FEMA flood zone FIRM: Panel 23001C0316E

Watershed:

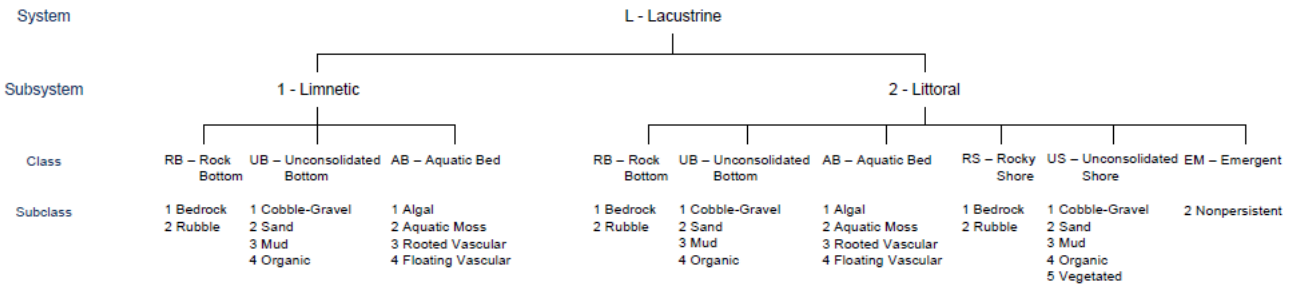
HUC_8: 01060001 Presumpscot
HUC_10: 0106000102 Royal River
HUC 12: 010600010206 Sabbathday Pond-Upper Royal River

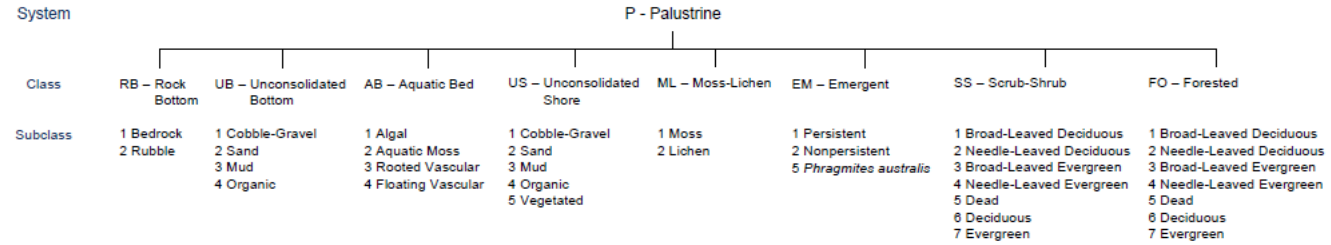
WETLANDS AND DEEPWATER HABITATS CLASSIFICATION



Classification of Wetlands and Deepwater Habitats of the United States, Cowardin *et al.* 1979

WETLANDS AND DEEPWATER HABITATS CLASSIFICATION





MODIFIERS

In order to more adequately describe the wetland and deepwater habitats, one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

Water Regime			Special Modifiers	Water Chemistry			Soil
Nontidal	**Saltwater Tidal**	**Freshwater Tidal**		**Coastal Halinity**	**Inland Salinity**	**pH Modifiers for all Fresh Water**	
A Temporarily Flooded	L Subtidal	S Temporarily Flooded-Tidal	b Beaver	1 Hyperhaline	7 Hypersaline	a Acid	g Organic
B Saturated	M Irregularly Exposed	R Seasonally Flooded-Tidal	d Partly Drained/Ditched	2 Euhaline	8 Eusaline	t Circumneutral	n Mineral
C Seasonally Flooded	N Regularly Flooded	T Semipermanently Flooded-Tidal	f Farmed	3 Mixohaline (Brackish)	9 Mixosaline	i Alkaline	
E Seasonally Flooded/ Saturated	P Irregularly Flooded	V Permanently Flooded-Tidal	h Diked/Impounded	4 Polyhaline	0 Fresh		
F Semipermanently Flooded			r Artificial	5 Mesohaline			
G Intermittently Exposed			s Spoil	6 Oligohaline			
H Permanently Flooded			x Excavated	0 Fresh			
J Intermittently Flooded							
K Artificially Flooded							

WETLANDS OF SPECIAL SIGNIFICANCE

Maine's Department of Environmental Protection considers some wetlands to be of higher significance than others. These wetlands are referred to as Wetlands of Special Significance (WSS). In order to be considered a WSS they must have one or more of the following characteristics:

(1) Critically imperiled or imperiled community. The freshwater wetland contains a natural community that is critically imperiled (S1) or imperiled (S2) as defined by the Natural Areas Program.

(2) Significant wildlife habitat. The freshwater wetland contains significant wildlife habitat as defined by 38 M.R.S.A. § 480-B (10).

(3) Location near coastal wetland. The freshwater wetland area is located within 250 feet of a coastal wetland.

(4) Location near GPA great pond. The freshwater wetland area is located within 250 feet of the normal high water line, and within the same watershed, of any lake or pond classified as GPA under 38 M.R.S.A. § 465-A.

(5) Aquatic vegetation, emergent marsh vegetation or open water. The freshwater wetland contains, under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, unless the 20,000 or more square foot area is the result of an artificial pond or impoundment.

(6) Wetlands subject to flooding. The freshwater wetland area is inundated with floodwater during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Management Agency or other site-specific information.

(7) Peatlands. The freshwater wetland is or contains peatlands, except that the department may determine that a previously mined peatland, or portion thereof, is not a wetland of special significance.

(8) River, stream or brook. The freshwater wetland area is located within 25 feet of a river, stream or brook.

STREAM CHANNELS

According to Maine's Natural Resource Protection Act, Title 38, Article 5-A, Protection of Natural Resources, §480-B Definitions:

"River, stream or brook" means a channel between defined banks. A channel is created by the action of surface water and has two or more of the following characteristics:

(1) It is depicted as a solid or broken blue line on the most recent edition of the U.S. Geological Survey 7.5-minute series topographic map or, if that is not available, a 15-minute series topographic map.

(2) It contains or is known to contain flowing water continuously for a period of at least 6 months of the year in most years.

(3) The channel bed is primarily composed of mineral material such as sand and gravel, parent material or bedrock that has been deposited or scoured by water.

(4) The channel contains aquatic animals such as fish, aquatic insects or mollusks in the water or, if no surface water is present, within the stream bed.

(5) The channel contains aquatic vegetation and is essentially devoid of upland vegetation.

"River, stream or brook" does not mean a ditch or other drainage way constructed, or constructed and maintained, solely for the purpose of draining storm water or a grassy swale.

VERNAL POOLS

MDEP habitat management standards for significant vernal pools: To the greatest extent practicable, the following management practices must be followed within significant vernal pool habitat.

(1) No disturbance within the vernal pool depression;

(2) Maintain a minimum of 75% of the critical terrestrial habitat as unfragmented forest with at least a partly-closed canopy of overstory trees to provide shade, deep litter and woody debris.

(3) Maintain or restore forest corridors connecting wetlands and significant vernal pools;

(4) Minimize forest floor disturbance; and

(5) Maintain native understory vegetation and downed woody debris.

If more than 25% of the critical terrestrial habitat has been previously developed, restoring a portion of that area through supplemental planting or regrowth of native forest species may be considered toward meeting these standards, or towards standards for avoidance, minimization, or compensation. For purposes of Chapter 355, developed area includes disturbed areas excluding areas that are returned to a condition with the same drainage patterns and the same or improved cover type that existed prior to the disturbance;

Currently, Army Corps of Engineers (ACOE) regulate vernal pools but do not have specific characteristics that define a vernal pool, or a definition of which vernal pools require protection or buffering. They review each site on a case by case basis. ACOE's jurisdiction does not begin until the waters of the United States are impacted.

NATURAL RESOURCE PROTECTION ACT

Jones Associates, Inc. has many years of experience working with and interpreting Maine's environmental laws; however MDEP has several unwritten policies that may change without public notice, therefore, certain project specific questions may need review by MDEP staff.

The Natural Resources Protection Act (NRPA) became effective on August 4, 1988. The law is focused on "protected natural resources". A permit is required when an "activity" will be:

(1) Located in, on or over any protected natural resource, or

(2) Located adjacent to (A) a coastal wetland, great pond, river, stream or brook or significant wildlife habitat contained within a freshwater wetland, or (B) certain freshwater wetlands.

An "activity" is (A) dredging, bulldozing, removing or displacing soil, sand, vegetation or other materials; (B) draining or otherwise dewatering; (C) filling, including adding sand or other material to a sand dune; or (D) any construction, repair or alteration of any permanent structure.

The Maine Department of Environmental Protection (MDEP) does not have to be contacted for projects involving minor wetland impacts. Single, complete activities that impact less than 4,300 square feet of freshwater wetland and <u>do NOT occur within</u>: another type of protected natural

resource; 25 feet of another protected natural resource and erosion controls are used; a municipal shoreland zone; a wetland normally containing at least 20,000 sq. ft. of open water, aquatic or emergent marsh vegetation; or a peatland are exempt under the Natural Resources Protection Act, 38 M.R.S.A. Section 480-Q(17).

NRPA - PERMIT BY RULE

A "permit by rule" or "PBR", when approved by MDEP, is an approval for an activity that requires a permit under the Natural Resources Protection Act (NRPA). Only those activities described in Chapter 305 may proceed under the PBR process. A PBR activity will not significantly affect the environment if carried out in accordance with this chapter, and generally has less of an impact on the environment than an activity requiring an individual permit. A PBR satisfies the NRPA permit requirement and Water Quality Certification requirement. The following projects may be eligible as PBR activities:

Section (2) Activity Adjacent to Protected Natural Resource

> (An activity adjacent to (any land area within 75 feet, measured horizontally, of the normal high water line), but not in: a coastal wetland, great pond, river, stream or brook or significant wildlife habitat contained within a freshwater wetland; or freshwater wetlands consisting of or containing: under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, except for artificial ponds or impoundments; or peatlands dominated by shrubs, sedges and sphagnum moss.

Section (3) Placement of permanent intake pipes and water monitoring devices (including drilled wells)

Section (4) Replacement of Structures

Section (6) Movement of Rocks or Vegetation

Section (7) Placement of outfall pipes (including ditches and drain tiles)

Section (8) Shoreline stabilization using vegetation or riprap

Section (9) Construction of crossings (utility lines, pipes and cables)

Section (10) Construction of stream crossings (bridges, culverts and fords)

Section (11) State Transportation Facilities

Section (12) Restoration of natural areas (i.e., "undoing" human alteration)

Section (13) Fisheries & wildlife habitat creation or enhancement and water quality improvement projects

Section (15) Public Boat Ramps

Section (16) Selected activities in coastal sand dunes

Section (17) Transfers and Permit Extensions

Section (18) One-time renewals of maintenance dredging permits

Section (19) Activities in/on/over significant vernal pool habitat

Section (20) Activities located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird nesting, feeding & roosting areas

NRPA - TIER REVIEW PROCESS

NRPA's Tier Review process constitutes a joint application to both the Maine Department of Environmental Protection (MDEP) and the U.S. Army Corps of Engineers (USACOE) for a proposed alteration to a freshwater wetland that qualifies for Tier 1, 2 or 3 review. The square footage of impact is based on the alteration or impact of the whole activity in the wetland. If any part of the overall activity requires a higher tier review, then the whole activity will be reviewed under that higher tier.

The Tier Review process is required for impacts larger than 4,300 square feet, and for requesting a permit for activities in, on, or over a protected natural resource. It is also used for activities adjacent to certain protected natural resources (38 MRSA 480-C(1)). The Tier Review process is required when the activity is not eligible for a PBR.

According to 38 M.R.S.A. Section 480-X(2), an application for a permit to undertake activities altering freshwater wetlands must be reviewed in accordance with the following:

(1) A Tier 1 review process applies to any activity that involves a freshwater wetland alteration up to 15,000 square feet and does not involve the alteration of freshwater wetlands listed in 38 M.R.S.A. Section 480-X(4);

(2) A Tier 2 review process applies to any activity that involves a freshwater wetland alteration of 15,000 square feet up to one acre and does not involve the alteration of freshwater wetlands listed in 38 M.R.S.A. Section 480-X (4 or 5);

(3) A Tier 3 review process applies to any activity that does involve a freshwater wetland alteration greater than one acre, or an alteration of a freshwater wetland listed in 38 M.R.S.A. Section 480-X (4 or 5).

According to 38 M.R.S.A. Section 480-X(4), the following activities are not eligible for Tier 1 or Tier 2 review unless MDEP determines that the activity will not negatively affect the freshwater wetlands and other protected natural resources present.

(1) Activities located within 250 feet of a coastal wetland;

(2) Activities located within 250 feet of the normal high-water line, and within the same watershed, of any lake or pond classified as GPA under section 465-A;

(3) Activities occurring in freshwater wetlands, other than artificial ponds or impoundments, containing under normal circumstances at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water;

(4) Activities occurring in freshwater wetlands that are inundated with floodwater during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Management Agency or other site-specific information;

(5) Activities occurring in freshwater wetlands containing significant wildlife habitat that has been mapped, identified or defined, as required pursuant to section 480-B(10), at the time of the filing by the applicant;

(6) Activities occurring in peatlands dominated by shrubs, sedges and sphagnum moss, except that applications proposing work in previously mined peatlands may be considered by the department for Tier 1 or Tier 2 review, as applicable;

(7) Activities occurring within 25 feet of a river, stream or brook.

According to 38 M.R.S.A. Section 480-X(5), an activity in freshwater wetlands containing a natural community that is imperiled (S2) or critically imperiled (S1), as defined by the Natural Areas Program pursuant to Title 12, Section 544 is not eligible for Tier 2 review unless the department determines that the activity will not negatively affect the freshwater wetlands and other protected natural resources present.

NRPA General Requirements for both the Tier 1 and Tier 2 review process require that the proposed freshwater wetland alteration must be avoided, if feasible, after considering cost, logistics, technology and the overall purpose of the project. However, if unavoidable, the alteration must be limited to the minimum amount necessary to complete the project. The project must utilize both temporary and permanent erosion control measures to prevent sedimentation of any protected natural resource. In addition, the alteration site must maintain an undisturbed 25 foot buffer strip between the activity and any river, stream or brook and must not violate any state water quality law, including those governing the classification of the State's waters.

REFERENCES

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Lellinger, David B. 1985. *A field manual of the ferns & fern-allies of the United States & Canada*. Washington, D.C.: Smithsonian Institution Press.

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USDA Natural Resources Conservation Service. 2010. *Field indicators of hydric soils in the United States, Version 7.0*. ed. L. M. Vasilas, G.W. Hurt and C.V. Noble. Washington, DC: USDA NRCS in cooperation wit the National Technical Committee for Hydric Soils.

Websites:

Maine Department of Environmental Protection: www.maine.gov/dep/land/nrpa/index.html

United States Fish and Wildlife Service, National Wetlands inventory: www.fws.gov/wetlands/

United States Army Corps of Engineers, New England District: www.nae.usace.army.mil/Missions/Regulatory.aspx

United States Natural Resources Conservation Service, United States Department of Agriculture, Official Soil Series Descriptions: soils.usda.gov/technical/classification/osd/index.html.

FEMA Flood Map Service Center: https://msc.fema.gov/portal/

Maine Office of GIS: http://www.maine.gov/megis/

Natural Resources Protection Act (NRPA) Application – Tier I
Submitted May 6, 2021

Department of Environmental Protection
Bureau of Land & Water Quality
17 State House Station
Augusta, Maine 04333
Telephone: 207-287-7688

FOR DEP USE
ATS #_____
L-_____
Total Fees: _____
Date: Received _____

APPLICATION FOR A NATURAL RESOURCES PROTECTION ACT PERMIT

➔PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

1. Name of Applicant:	Cote, LLC	5.Name of Agent:	Jones Associates, Inc.
2. Applicant's Mailing Address:	2980 Hotel Road Auburn, Maine 04210	6. Agent's Mailing Address:	280 Poland Spring Road Auburn, Maine 04210
3. Applicant's Daytime Phone #:	207-783-0561	7. Agent's Daytime Phone #:	207-241-0235
4. Applicant's Email Address (Required from *either* applicant or agent):	dpcote@cotecrane.com	8. Agent's Email Address:	rjones@jonesai.com ejones@heatekenergy.com jray@jonesai.com

9. Location of Activity: (Nearest Road, Street, Rt.#)	Hotel Road	10. Town:	Auburn	11. County:	Androscoggin

12. Type of Resource: (Check all that apply)	☐ River, stream or brook ☐ Great Pond ☐ Coastal Wetland ☒ Freshwater Wetland ☐ Wetland Special Significance ☐ Significant Wildlife Habitat ☐ Fragile Mountain	13. Name of Resource:	Unnamed freshwater wetlands
		14. Amount of Impact: (Sq.Ft.)	Fill: ~4,794 sq. ft. Dredging/Veg Removal/Other:

15. Type of Wetland: (Check all that apply)	☒ Forested ☐ Scrub Shrub ☐ Emergent ☐ Wet Meadow ☐ Peatland ☐ Open Water ☐ Other_____	FOR FRESHWATER WETLANDS		
		Tier 1	*Tier 2*	*Tier 3*
		☒ 0 - 4,999 sq ft. ☐ 5,000-9,999 sq ft ☐ 10,000-14,999 sq ft	☐ 15,000 – 43,560 sq. ft.	☐ > 43,560 sq. ft. or ☐ smaller than 43,560 sq. ft., not eligible for Tier 1

16. Brief Activity Description:	Cote, LLC, is proposing to expand their storage capacity on their property in the form of a grassy laydown area, similar to what they've done for expansions in the past. A gravel access road is also being proposed over the grassy laydown area to allow Cote, LLC the ability to access this storage area.

17. Size of Lot or Parcel & UTM Locations:	☐ _____square feet, or ☒ +/-6 acres	UTM Northing: 4876642	UTM Easting: 397365

18. Title, Right or Interest:	☒ own	☐ lease	☐ purchase option	☐ written agreement			
19. Deed Reference Numbers:	Book#: 9225 8159	Page: 155 280	20. Map and Lot Numbers:	Map #: 120 120	Lot #: 21 22		
21. DEP Staff Previously Contacted:	N/A		22. Part of a larger project:	☒ Yes ☐ No	After-the-Fact:	☒ Yes ☐ No	
23. Resubmission of Application?:	☐ Yes➔ ☒ No	If yes, previous application #	N/A	Previous project manager:	N/A		
24. Written Notice of Violation?:	☐ Yes ➔ ☒ No	If yes, name of DEP enforcement staff involved:	N/A	25. Previous Wetland Alteration:	☒ Yes ☐ No		

26. Detailed Directions to the Project Site:	From Augusta, take I-95S for 33.8 miles. Take Exit 75 towards US-202. After 0.6 miles, turn right onto ME-100 and after 0.3 miles, turn right onto Kittyhawk Avenue. After 0.8 miles, turn left onto Hotel Road. After approximately 0.4 miles, the Cote Corporation will be on the left, right before Foster Road.

27. TIER 1	TIER 2/3 AND INDIVIDUAL PERMITS	
☒ Title, right or interest documentation	☐ Title, right or interest documentation	☐ Erosion Control/Construction Plan
☒ Topographic Map	☐ Topographic Map	☐ Functional Assessment (Attachment 3), if required
☒ Narrative Project Description	☐ Copy of Public Notice/Public Information Meeting Documentation	☐ Compensation Plan (Attachment 4), if required
☒ Plan or Drawing (8 1/2" x 11")	☐ Wetlands Delineation Report (Attachment 1) that contains the Information listed under Site Conditions	☐ Appendix A and others, if required
☒ Photos of Area	☐ Alternatives Analysis (Attachment 2) including description of how wetland impacts were Avoided/Minimized	☐ Statement/Copy of cover letter to MHPC
☒ Statement of Avoidance & Minimization		☐ Description of Previously Mined Peatland, if required
☒ Statement/Copy of cover letter to MHPC		

28. FEES Amount Enclosed:	$35 processing fee for freshwwater wetland impacts <4,999 sq. ft.

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following :

DEP SIGNATORY REQUIREMENT

PRIVACY ACT STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor a permit be issued.

CORPS SIGNATORY REQUIREMENT

USC Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry shall be fines not more than $10,000 or imprisoned not more than five years or both. I authorize the Corps to enter the property that is subject to this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

DEP SIGNATORY REQUIREMENT

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the address located on the front page of this application (see #4 for the applicant and #8 for the agent)."

SIGNATURE OF AGENT/APPLICANT

Date: 4/30/2021

***NOTE:** Any changes in activity plans must be submitted to the DEP and the Corps in writing and must be approved by both agencies prior to implementation. Failure to do so may result in enforcement action and/or the removal of the unapproved changes to the activity.*

Maine Construction General Permit – Notice of Intent to Comply
Submitted May 6, 2021

DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF INTENT TO COMPLY
MAINE CONSTRUCTIN GENERAL PERMIT

APPLICANT INFORMATION (Owner)		AGENT INFORMATION (If Applying on Behalf of Owner)	
Name:	Cote, LLC	Name:	Jones Associates, Inc.
Mailing Address:	2980 Hotel Road	Mailing Address:	280 Poland Spring Road
Mailing Address:		Mailing Address:	
Town/State/Zip:	Auburn, ME 04210	Town/State/Zip:	Auburn, ME 04210
Daytime Phone #:	207-783-0561 Ext:	Daytime Phone #:	207-241-0235 Ext:
Email Address:	dpcote@cotecrane.com	Email Address:	rjones@jonesai.com

PROJECT INFORMATION

Project Town:	Auburn	UTM Northing & Easting (if known):	4876642 N 397365 E	Tax Map and Lot Number:	120-21 and 120-22		
Size of disturbed area proposed:	~149,200 sq. ft.	Part of a larger project?	☒ Yes ☐ No	Creating a common plan of development or sale?	☐ Yes ☒ No	After the Fact?	☒ Yes ☐ No
Name of waterbody(ies) to which disturbed area would drain (or municipality if area drains to MS4):	proposed stormwater treatment filter to unnamed freshwater wetlands	Does the site drain to an Impaired Waterbody? If so, provide name:	N/A				
Brief Project Description:	Cote, LLC, is proposing to expand their storage capacity on their property in the form of a grassy laydown area, similar to what they've done for expansions in the past. A gravel access road is also being proposed over the grassy laydown area to allow Cote, LLC the ability to access this storage area.						
Project Location & Brief Directions to Site:	From Augusta, take I-95S for 33.8 miles. Take Exit 75 towards US-202. After 0.6 miles, turn right onto ME-100 and after 0.3 miles, turn right onto Kittyhawk Avenue. After 0.8 miles, turn left onto Hotel Road. After approximately 0.4 miles, the Cote Corporation will be on the left, right before Foster Road.						

NOTICE OF INTENT (NOI) FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS AND FEE

I am filing notice of my intent to carry out work that meets the requirements of the Constructin General Permit (effective July 21, 2006). I have a copy of the Construction General Permit and have read and will comply with all of the standards. I have attached all the required submittals.

☒ ***Attach*** a U.S.G.S. topo map or Maine Atlas & Gazetteer map with the project site clealy marked.

☒ ***Attach*** a drawing or site plan of the proposed activity.

☒ ***Attach*** an erosion and sedimentation control (ESC) plan.

☒ ***Attach*** photos of the project site that show existing character and topography of the area proposed for development.

☒ ***Attach*** if this form is not being signed by the property owner or lessee, documentation showing authorization to sign.

n/a ☐ ***Attach*** if any construction activity will occur in essential habitat, written approval from the Dept. of Inland Fisheries & Wildlife.

☒ ***Attach*** if the applicant is a corporation, LLC, or other legal entity, proof of legal name. Provide a copy of Secretary of State's *registration information* (available at http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x). Individuals and municipalities are not required to provide any proof of identity.

FEE: Pay by credit card at the Payment Portal. The MCGP fee may be found here https://www.maine.gov/dep/feeschedule.pdf.

☒ ***Attach*** payment confirmation from the Payment Portal when filing this notification form.

Signature & Certification:

- I authorize staff of the Departments of Environmental Protection to access the project site for the purpose of determining compliance with the Construction General Permit.
- I understand coverage under the Construction General Permit becomes effective 14 calendar days after receipt by the Department of this completed form, the required submissions, and fee, *unless the Department approves or denies the NOI prior to that date.*

By signing this Notice of Intent, I represent that the project meets all the requirements for coverage under the Construction General Permit and that the project will be completed in compliance with the Construction General Permit. I also represent that the applicant has sufficient title, right, or interest in the property where the construction activity will place.

Signature of Applicant or Agent (may be typed):	Richard P. Jones (agent)	Date:	5/6/2021

Keep a copy as a record of permit. Email this completed form with attachments to DEP at: DEP.PBRNotification@maine.gov. This email account is used to receive PBRs and NOIs. No further authorization will be issued by DEP after receipt this notice.
Work carried out in violation of the Construction General Permit is subject to enforcement.

Section 4: Technical and Financial Capacity

Financial Capacity

A. Estimated project costs

A Division of Maine Community Bank
MECHANICS SAVINGS

March 19, 2021

City of Auburn
Attn: Mr. Eric Cousens Tom Nason
60 Court Street
Auburn, ME 04210

RE: The Cote Corporation

Dear Mr. Cousens:

Please be advised that Daniel A. Cote and Daniel P. Cote and their company, The Cote Corporation, are valued clients of Mechanics Savings a Division of Maine Community Bank. They have been both loan and deposit customers for many years.

It is my understanding that they are involved in completing work as part of a contract with St. Laurent & Sons Construction with a value of approximately $300,000.

Please be advised as the relationship manager for the Cote Corporation's relationship with the bank, it is the banks opinion that they have the financial capacity to complete the proposed project. They consistently maintain a significant deposit relationship that is properly managed and maintains average balances in the high 6 figures. Their loan relationship is also very strong and all accounts are handled as agreed.

Again, The Cote Corporation is a valued customer of the bank. Please let me know if you have any questions as I can be reached at 207 333-4553.

Sincerely,

Jeffrey R. Gosselin
Senior Vice President

B. Financial capacity of the applicant

St. Laurent and Son, Inc.
20 Highland Spring Road
Lewiston, Maine 04240
Office: (207) 784 7944
Fax: (207)784 6592

To: Daniel Cote Cote Crane dpcote@cotecrane.com
Date: 10/14/2020
Re: Site work for new Rubb Building
From: Joe Perryman

SCOPE OF WORK

St. Laurent & Son proposes to do the following:

Base Bid
Supply Dig Safe and City of Auburn Excavation Permit
Excavate for installation of 2" Rigid, 12" of ¾" crushed stone & 9" concrete slab
Concrete slab will be 4,000 PSI, pumped in place, will have a 3 ½'x18" haunch
Slab will receive #4 rebar 12" OCEW along with 4 bars top and bottom in the haunch
Anchor bolts to be set by building erector by drilling and epoxying them in
Backfill 4' from slab with structural gravel, all other areas will be backfilled with existing material
Grade area for positive drainage away from building and towards front and back areas
Material from cut will be kept on site and used to level the new storage area
Box cut area in front of proposed building to the existing Rubb building for new gravel
Install a woven geotextile fabric below 15" of 4" minus gravel and 3" of 2" minus gravel
Gravel will be compacted in place with large compactor
Install 5 ½" of asphalt, installed in 3 separate lifts (heavy duty pavement spec)
New pavement will but up against existing asphalt matching grades for proper drainage
Seed both sides of building for erosion control.
*Layout of building corners to be established by Cote Crane and St. Laurent & Son
*Testing if required by Owner
*All other permits by Owner

Total for work described above: $299,823.00
PAYMENT DUE: NET 30 DAYS

Alternate Bid
Supply Dig Safe and City of Auburn Excavation Permit
Supply and install 300' of silt fence on low side of lot
Grade and flatten new storage area to drain towards woods by turnpike
Excavated material from Rubb building site will be used to grade lot
Lot will be higher than the existing storage area, with sloped roads to access both
Supply and install a 12" ADS culvert in existing swale area (along fence line)
Grade a 10' wide path around perimeter of lot for fence installation
Install new gravel roads approximately 22,000 sqft in graded area
Install 12" of 4" gravel on woven geotextile fabric compacted in place
Have all other areas hydroseeded
*All other permits and fencing by owner

Total for work described above: $119,550.00
PAYMENT DUE: NET 30 DAYS

TERMS AND CONDITIONS

1. LIMITED WARRANTY AND LIMITATION OF LIABILITY – St. Laurent & Son, Inc. (St. Laurent & Son) shall furnish all of the labor, materials, equipment, and services as are necessary for the proper performance of its work in accordance with the specifications set forth in the Contract. St. Laurent & Son, Inc. hereby warrants that the materials and services offered shall conform to the specifications set forth in the Contract. If such material and services fail to conform to such specifications solely as a result of any labor, work and/or installation by St. Laurent & Son, St. Laurent & Son shall repair or replace the nonconforming materials or services. St. Laurent & Son must be given written notice of nonconformity by the Customer within seven (7) days of delivery of installation. If the Customer does not provide St. Laurent & Son with written notice of the nonconformity within seven (7) days of delivery of installation then St. Laurent & Son shall have no obligation to repair or replace any alleged nonconforming materials and/or services. This warranty excludes remedy for damages or defect caused by abuse, modifications not executed by St. Laurent & Son., improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. St. Laurent & Son shall not be liable for any costs, expenses or damages to its work or the materials caused by acts of God, third parties not in control of St. Laurent & Son, or by matters otherwise beyond St. Laurent & Son's control. THERE EXISTS NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PATICULAR PURPOSE. In no event, shall St. Laurent & Son be liable for any consequential, special, punitive, multiple, liquidated, or other similar damages. Customer agrees that any damages and/or liability by St. Laurent & Son, arising from this Contract are limited to either repair or replacement of the materials and/or work set forth in the Contract and the option to repair or replace is exclusively St. Laurent & Son's. St. Laurent & Son shall not be liable for any costs, expenses, attorneys' fees or damages caused by acts of God or by matters otherwise beyond St. Laurent & Son's control. In no event shall Customer withhold or offset any amounts claimed against St. Laurent & Son from amounts due St. Laurent & Son under this Contract. This limited

warranty and the limits of liability shall be for the benefit of and shall limit any claim made by any guarantor or other surety of the Customer. Customer further agrees that he/she/it has relied on no representations, oral or written, other than as contained on the face of this Contract.

2. Payment for all work performed and materials supplied hereunder shall be made in accordance with the payment terms set forth in the quote from St. Laurent & Son to Customer. If payment is not received interest at the highest legal rate allowable under the laws of the jurisdiction in which this Contract is executed of 1-1/2% per month, whichever is less, shall be charged and paid on all unpaid balances from the due date to the date payment is received including any collection costs, lien fees, and attorneys' fees. Any payments made shall be first applied against accrued interest. If Customer fails to pay any amount when due, Customer shall be liable for St. Laurent & Son's reasonable attorney's fees and costs of collection. Within 10 days of the acceptance of this Contract by St. Laurent & Son and in any event upon request prior to the completion of the Contract, Customer shall provide St. Laurent & Son with the complete name of the owner of the property and such other information reasonable necessary for St. Laurent & Son to give Notice of Contract and all other notices sufficient to effect a lien on the property. In addition, if there exists a bond for some or all the work covered by the Contract, Customer shall immediately provide St. Laurent & Son with a copy of such bond. In the event that the Customer does not make payment in full for all work performed and materials supplied under the terms of this Contract, the customer is hereby given notice that St. Laurent & Son shall exercise all of its rights, including, but not limited to, filing a claim under any bond available and/or filing a mechanics lien to attach the property that is the subject of this Contract, pursuant to applicable laws. St. Laurent & Son may immediately terminate its obligations under this or any other Proposal/Contract upon failure of Customer to comply with the terms of this Contract including, but not limited to, Customer's failure to make any payment when due under this Contract.

3. In addition to other sums due under the Contract and provided elsewhere herein, Customer agrees to pay all costs and expenses (including without limitation reasonable attorneys' fees and costs) incurred by St. Laurent & Son in collection, enforcement or interpretation of this Contract.

4. It is understood and agreed that the Customer will indemnify and save St. Laurent & Son harmless to the fullest extent permitted by law from any and all loss, damage, costs, expenses and attorney's fees suffered or incurred, in whole or in part, whether direct or indirect, on account of Customer's breach of the obligations and covenants in this Contract.

5. St. Laurent & Son shall not become obligated to perform the work called for under this Contract until the Customer's credit has been approved by St. Laurent & Son's credit department. If, in the reasonable opinion of St. Laurent & Son the Customer's credit becomes unsatisfactory at any time prior to the completion of the work, the Customer shall promptly furnish adequate security to St. Laurent & Son upon request.

6. Any deviation from the specifications, any modifications of the terms of the Contract and any extra or incidental work or reductions, shall be negotiated and the Contract price adjusted accordingly. Any change to this Contract shall be in writing, shall be signed by the parties to this Contract, and shall become a part of and in conformance with this original Contract. All work shall be performed under the same terms and conditions as specified in this Contract unless otherwise stipulated to in writing by the parties. Change order(s) shall detail all changes to the original contract. The last previous Contract prices shall be stated, and the revised price shall be stated.

7. Unless a time for the performance of the work under this Contract is specified, it shall be performed in the normal course of St. Laurent & Son's operating schedules. The Customer will provide St. Laurent & Son with a two-week prior written notice as to when the surface is fully prepared before commencing work. St. Laurent & Son shall not be liable for any delay or failure to undertake or complete the work for causes beyond its control, including by not limited to a fire, flood, weather or other casualty; labor disputes or other disagreements; and accidents or other mishaps, whether affecting this work or other operations in which St. Laurent & Son's is involved directly or indirectly. If per order of the Customer St. Laurent & Son commences work and is interrupted or delayed by site conditions or act of omission by the Customer or anyone under its control, St. Laurent & Son will be reimbursed for all costs incurred by such delays.

8. St. Laurent & Son shall not be responsible for, and the Customer agrees to indemnify and hold St. Laurent & Son harmless to the fullest extent permitted by law, from any claims or liability resulting in whole or in part from damages to utilities or other facilities or objects buried beneath the work area, or to sidewalks, driveways of other improvements located within the work area or designated areas of access. It is further agreed that St. Laurent & Son shall not be responsible for any damage to or the deteriorations of any of the Customer's work, whether completed or in process, resulting from any cause beyond St. Laurent & Son's reasonable control, including but not limited to failure of subgrade, hazardous materials, failure or inadequacy of any labor or materials not furnished and installed by St. Laurent & Son whether or not such failure or inadequacy was or could have been known at the time St. Laurent & Son's work was undertaken.

9. During adverse weather conditions, St. Laurent & Son may review the project and reserves the option to refrain from performance. St. Laurent & Son at its sole discretion shall determine whether such adverse weather conditions exist and shall notify the Customer upon determining if such conditions exist. This Contract will be extended to such time as St. Laurent & Son determines that proper weather and site conditions do exist, without any liability for such delay. If Customer elects to have St. Laurent & Son perform the work during adverse conditions, such work will be performed at Customer's sole risk and St. Laurent & Son will not provide a guarantee or warranty on any of the work performed and Customer hereby waives any claim for damages and/or warranty claims for any work performed in accordance with this paragraph.

10. These terms and conditions together with the executed proposal constitutes the entire agreement of the parties with respect to the subject matter hereof and supersedes all prior agreements and understandings, both written and oral, amount the parties with respect to the subject matter hereof, and, is not intended to confer upon any other persons any rights or remedies hereunder. All modification or amendments shall be accepted in writing by the parties or shall otherwise by without force or effect.

11. The laws of the State of Maine shall govern this Contract.

12. In case a provision of this Contract is held to be invalid, illegal, or unenforceable, the remaining provisions of this Contract shall remain in full force and effect and shall be considered valid and enforceable to the fullest extent possible.

13. The rights and remedies available to St. Laurent & Son hereunder shall be in addition to and not a limitation of any rights and remedies otherwise available to St. Laurent & Son by law or in equity.

St Laurent & Son authorized Signature: Joe Perryman

Acceptance of proposal- The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work specified. Payment will be made as outlined above.

Signature:_____ Date:_____

PLEASE SIGN AND RETURN ONE COPY TO HAVE WORK SCHEDULED. THANK YOU.

Technical Capacity

The Cote Corporation

The Cote Corporation was founded in 1966 by Armand E. and Carmen Cote to provide crane services to local contractors. Since then, the company has expanded to become a full-service company experienced in meeting the challenging requirements of pulp-paper, power, chemical, medical, industrial, and general construction industries throughout Maine.

The Cote Corporation is a seasoned organization dedicated to providing the best of services. Thoroughness, attention to detail and an in-depth comprehension of all aspects of the heavy lift and hauling industry have gone into the development of both their equipment and personal capabilities. It is the emphasis on these important qualifications that has led them to a position of statewide leadership in our field.

BH2M

Berry Huff McDonald Milligan Inc. (BH2M) is a locally owned civil engineering, planning, and surveying firm, founded in 1978. BH2M is headquartered in Gorham, Maine. BH2M's multifaceted staff of 12 includes engineers, planners, project managers, and surveyors. Over the past 40 years, BH2M has provided a broad spectrum of services for municipalities, including engineering (municipal engineering, erosion control, site planning etc.) and surveying (boundary, topographic, as-built, etc.).

BH2M is a small firm mostly comprised of staff members that have been with the firm for 20 years or more. Their size, ability to offer a variety of services in-house, and experience working with one another enables us to provide efficient and cost effective solutions to municipal infrastructure projects.

Jones Associates, Inc.

Jones Associates, Inc. (JAI), is an environmental consulting and forestry firm founded in 1988 by Rick Jones in Poland Spring, Maine. The success of the firm is strengthened by over 30 years of experience Rick has in dealing with environmental permitting, forestry, and land-use issues. The firm's approach in resolving environmental issues is designed to identify potential environmental impacts and then devise balanced solutions, which are both environmentally sound and economically efficient.

The firm has been involved with a myriad of project types ranging from preparing land surveys, forest management plans, prescriptions and harvesting, environmental assessments, wildlife studies, wetland delineation and mitigation design and various GPS and GIS projects. The firm has experience in serving and working with both private sectors (including commercial, industrial, and individual landowners) and governmental sectors (federal, state, and municipal). JAI is made up of highly qualified individuals who are capable of explaining their findings before various forums.

Rick Jones is a Wetland Scientist, Maine Licensed Professional Forester and a Certified Forester with over twenty-five years of experience in forestry, environmental sciences, project management and project coordination. He received a degree in forest utilization, forest management and wood technology from the University of Maine. He has extensive experience with shepherding projects through the local, state, and federal 404 permitting processes. He is regularly involved in initial

investigations of potential development sites for both residential and commercial projects. His involvement in hundreds of wetland and resource evaluations has given him invaluable experience in dealing with many different project objectives. His pertinent qualifications include over thirty years of experience in wetland delineations, functional assessments, vegetation surveys, and watershed protection forest management consultation, timber harvesting specializing in low impact logging, and construction impact assessments.

Section 5: Stormwater Management

See attached Stormwater Management Report, Erosion and Sedimentation Control Plan, Inspection and Maintenance Plan, Erosion Control Details, Post and Pre Development Watershed plans, and Soil Filter Plan.

STORMWATER MANAGEMENT REPORT

COTE CRANE EXPANSION
Auburn, Maine

Submitted for:

Cote, LLC
P.O. Box 1418
Auburn, Maine 04210

Prepared by:

BH2M
Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors

Date:
May 2021

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

Cote, LLC is looking to expand their site in Auburn, Maine by creating an approximately 3 acre grassed lay down yard for material storage north of their existing site. This proposed expansion will include the construction of a gravel access road, newly developed grass areas, and stormwater infrastructure for treatment of the proposed development (see Site Plan by Jones Associates for more information).

Since the grassed areas associated with this project will be used for storage, these areas must be considered 30% impervious for sizing stormwater treatment infrastructure (City of Auburn requirement). Based on this requirement, the proposed development will consist of approximately 59,682 sf of impervious area (22,935 sf gravel access and 36,747 sf allocated for storage area) and 96,954 sf of landscaped (grass) area.

This project will require permitting from the City of Auburn, the Maine DEP and the Army Corps of Engineers. The City of Auburn has delegated authority for the Site Location of Development permitting required for this project.

The scope of work includes but is not limited to:

- Tree clearing and grubbing
- Stump and boulder removal
- Construction of a 30' wide gravel access road
- Installation of storm drain system including vegetated swales
- Construction a grassed underdrained soil filters

The Stormwater Management Plan has been prepared to satisfy the requirements of the Maine Department of Environmental Protections "Stormwater Management Rules" Chapters 500, 501 and 502 as well as the most recent version of the "Maine Stormwater Best Management Practices Manual".

1.1 OVERVIEW OF MODELING METHODOGY AND SOURCE INFORMATION

Hydrologic Analysis: The pre and post development conditions have been modeled using modeling software (Hydrocad Version 10) which is based upon the methodology contained within the USDA Soil Conservation Service Technical Release 55. Type III 24-hour storm distributions for Androscoggin County were used for the analysis. The following return periods and 24-hour rainfall depths were used for the analysis:

Return Period	24-Hour Rainfall Depth
2-Year Storm	3.00 inches
10-Year Storm	4.30 inches
25-Year Storm	5.40 inches

Soils: The soils used for the stormwater analysis were digitized from the Natural Resource Conservation Service (NRCS), web soil survey website. The source of the data is the Androscoggin County Soil Survey (Class D). Refer to the following for additional documentation regarding the soils used for modelling:

- Appendix B of this Report
- Pre and Post Development Watershed Plans (Sheets A and B)

The soils include:

Soil Name	Hydrologic Soil Group
Ad- Adams	A
Ng- Ninigret	C

Topography: LIDAR data from NOAA Data Access Viewer

Natural Resources: Wetland delineations performed by Jones Associates Inc.

1.2 DESCRIPTION OF POINTS OF ANALYSIS

The watershed model analyzes the discharge of runoff at one Analysis Point as described below:

Analysis Point #1
Description: Culmination of flow to southeast property corner.
Pre Development Tributary Drainage Areas: 11.19 acres
Post Development Tributary Drainage Areas: 11.19 acres

1.3 PRE DEVELOPMENT CONDITIONS

The Existing Conditions are shown on Sheet A of the accompanying plans. The parcel to be developed encompasses an area of approximately 5.97 acres and is located off Hotel Road in Auburn. The parcel lies within the watershed of Moose Brook.

The watershed that was analyzed for this project is approximately 11.19 acres. The analysis points are described in Section 1.2 of this report. The watershed generally flows from north to south to Analysis Point 1.

For this analysis the lower eastern portion of the property that will not be developed consisting of all type C soils has been considered a separate subcatchment from the portion of the site that will be developed (subcatchments consists largely of type A soils) to avoid inaccurate modelling of the watershed. Subcatchment 1 uses consistent modelling parameters (Tc route) in the pre and post development models to avoid discrepancies in the predicted runoff totals for the site. The analysis has been performed in this way because of the constraints of the HydroCAD software.

The upper portion of the watershed (including a large portion of offsite area) consists of a large percentage of type A soils and while the lower portion of the watershed consists of type C soils in the pre development condition. In the post development condition, a large area of Type A soils is diverted to the proposed Grassed Underdrained Soil Filter while the type C soils at the bottom of the watershed stay relatively consistent. If we did not separate these areas into two separate subcatchments, then the runoff totals from the subcatchment with significantly reduced runoff area (with a similar time of concentration) would produce much higher predicted runoff totals due to the weighted curve number that the modelling uses. By separating these areas, we remove the effect of the weighted curve number that skews the results.

The Pre-Development Watershed Map is included as Sheet A of the accompanying plans and the Calculations are attached as Appendix C.

The Pre-Development Watershed Map is included as Sheet A of the accompanying plans and the Calculations are attached as Appendix C.

The Pre-Development Watershed Model predicts the following peak flow rates:

Pre-Development Peak Flows (cu. ft./sec)			
Analysis Point	**2-Year**	**10-Year**	**25-Year**
AP-1	0.84	2.00	3.13

1.4 POST DEVELOPMENT CONDITIONS

The proposed project will include construction of a gravel access road, grass laydown area and associated stormwater treatment infrastructure. Below is a summary of the proposed developed area associated with construction of these lots:

Proposed Impervious Area	=	22,935 sf
Allocated Impervious Area	=	36,747 sf
Proposed Landscaped Area	=	96,954 sf
Proposed Developed Area	=	156,636 sf

In order to accurately size all stormwater BMP's for post development stormwater modeling, 30% of the proposed grass laydown areas have been considered impervious based on criteria set by the City of Auburn.

The proposed project will include a grassed underdrained soil filter to provide water quality treatment and attenuation of peak flows.

The Post Development Watershed Map is included as Sheet B of the accompanying plan set and the Calculations are attached as Appendix D.

The Post-Development Watershed Model predicts the following peak flow rates:

Post Development Peak Flows (cu. Ft./sec)			
Analysis Point	**2-Year**	**10-Year**	**25-Year**
AP-1	0.84	2.02	3.53

1.5 BASIC STANDARDS

The proposed project is required to meet the Basic Standards. To meet the Basic Standards the project design must demonstrate that the erosion and sedimentation control, inspection and maintenance, and housekeeping standards specified in

Appendices A, B, and C of 06-096 Chapter 500 are met, and that the grading or other construction activity will not impede or otherwise alter drainageways so as to have an unreasonable adverse impact on a wetland or waterbody, or an adjacent downslope parcel.

The proposed project will provide temporary (during construction) BMP's and post-construction BMP's. Refer to sheets 1 & 2 (by BH2M) of the Project Plans for erosion and sedimentation control narratives and details. The project requirements for inspection and maintenance during construction and post-construction are described in the Erosion and Sedimentation Control - Inspection and Maintenance Plan found in Appendix E of this Report. The housekeeping standards can also be found in the Inspection and Maintenance Plan.

1.6 GENERAL STANDARDS

The proposed project is required to meet the General Standards. To meet the general standards, the project design must demonstrate that the stormwater management system includes treatment measures that will provide pollutant removal or treatment and mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms and potential temperature impacts. This must be achieved by providing treatment of no less than 95% of the impervious area and no less than 80% of the developed area.

The stormwater management system includes a grassed underdrained soil filter. The proposed grassed underdrained soil filter has been designed in accordance with the design requirements outlined in the Maine Stormwater Best Management Practices Manual, Volume III, Chapter 7.1.

Below is a summary of the treatment areas associated with the existing and proposed infrastructure. Refer to Appendix F for detailed calculations.

Stormwater Treatment Summary	
Total Proposed/ Allocated Impervious Area	59,682 sf
Total Proposed/Allocated Developed Area	156,636 sf
Total Treated Impervious Area	59,682 sf
Total Treated Developed Area	154,003 sf
Linear Impervious Area Treatment %	**100% (95% required)**
Linear Developed Area Treatment %	**98.32% (80% required)**

As shown in the Table above, the stormwater management system has been designed to meet the General Standard requirements. Detailed treatment calculations can be found in Appendix F.

1.7 PHOSPHORUS STANDARD

The proposed project is in the watershed of Moose Brook. The proposed project is not located within the direct watershed of a lake or lake most-at-risk listed in 06-096 Chapter 502. The Phosphorus Standard does not apply to this project.

1.8 URBAN IMPAIRED STREAM STANDARD

The proposed project is located in the watershed of Moose Brook. The Urban Impaired Stream Standard does not apply to this project.

1.9 FLOODING STANDARD

The proposed project is required to meet the Flooding Standards. To meet the Flooding Standard, the project design must demonstrate that the stormwater management systems will accomplish the following:

a) The system must detain, retain, or result in the infiltration of stormwater from 24-hour storms of the 2-year, 10-year, and 25-year frequencies such that the peak flows of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project.

b) The design of piped or open channel systems must be based on a 10-year, 24-hour storm without overloading or flooding beyond channel limits.

c) The areas expected to be flooded by runoff from a 10-year or 25-year, 24-hour storm must be defined, and no buildings or other similar facilities may be planned within such areas.
d) Runoff from the project may not flood the primary access road to the project and any public roads bordering the project as a result of a 25-year, 24-hour storm.

The following Table compares the Pre and Post Development peak flow rates for the 2-year, 10-year, and 25-year return periods. Refer to Appendix C for the Pre-Development model and Appendix D for Post Development model.

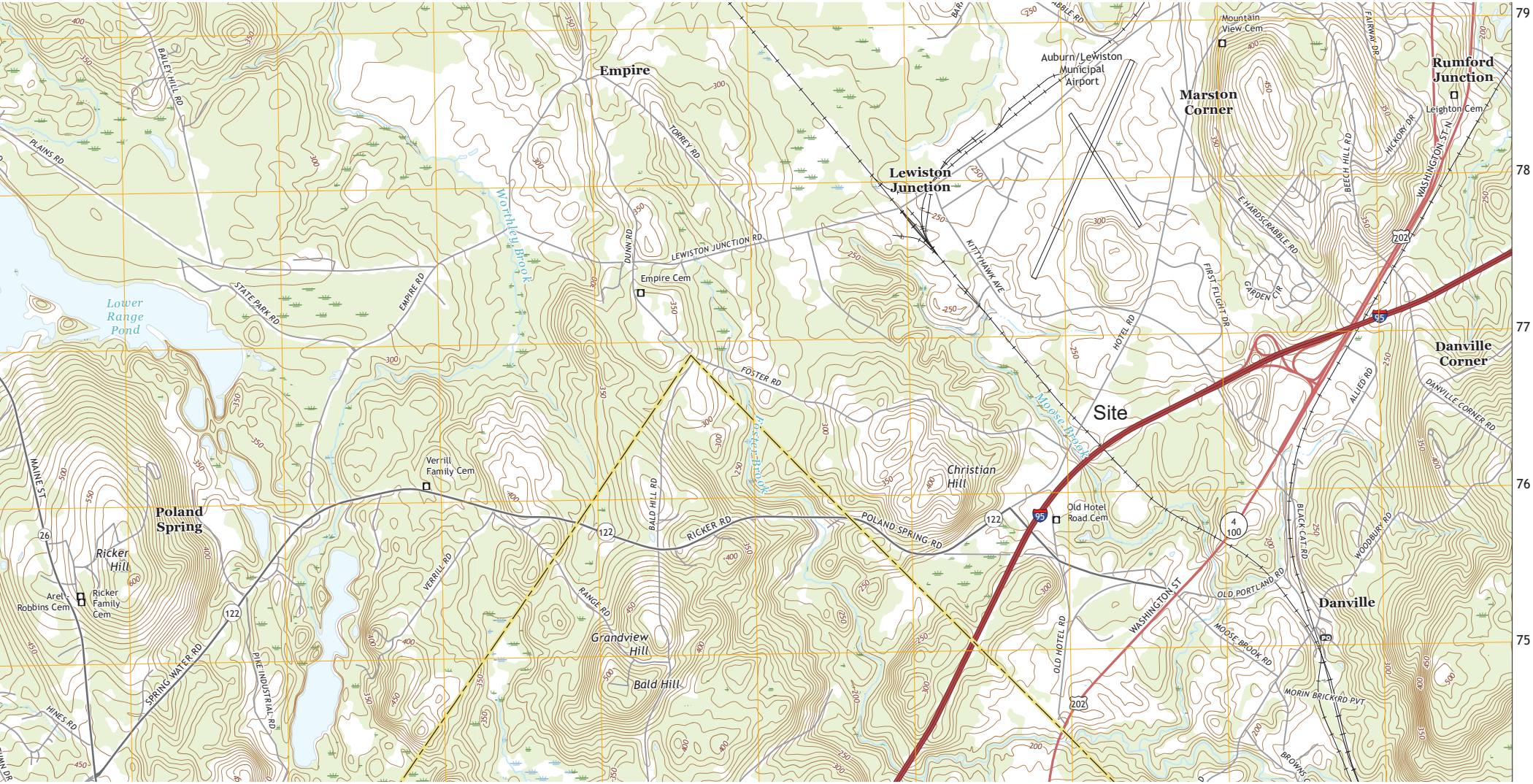
Peak Flow Comparison (cu. ft./sec)						
Analysis Point	**2-Year**		**10-Year**		**25-Year**	
	Pre	**Post**	**Pre**	**Post**	**Pre**	**Post**
AP-1	0.84	0.84	2.00	2.02	3.13	3.53

As illustrated in the table above, development of the proposed project will create a condition where peak rates of runoff from the project site exceed the peak rates of runoff prior to the undertaking of the project at Analysis Point 1 in the 10, and 25-Year storm events. The predicted minor increase at Analysis Point 1 will not create adverse impacts to the downstream wetlands.

1.10 CLOSURE

The proposed stormwater management facilities have been designed to mitigate stormwater impacts associated with development of the proposed project. The proposed stormwater management facilities have been designed to meet the Basic, General and Flooding Standards required by Chapter 500.

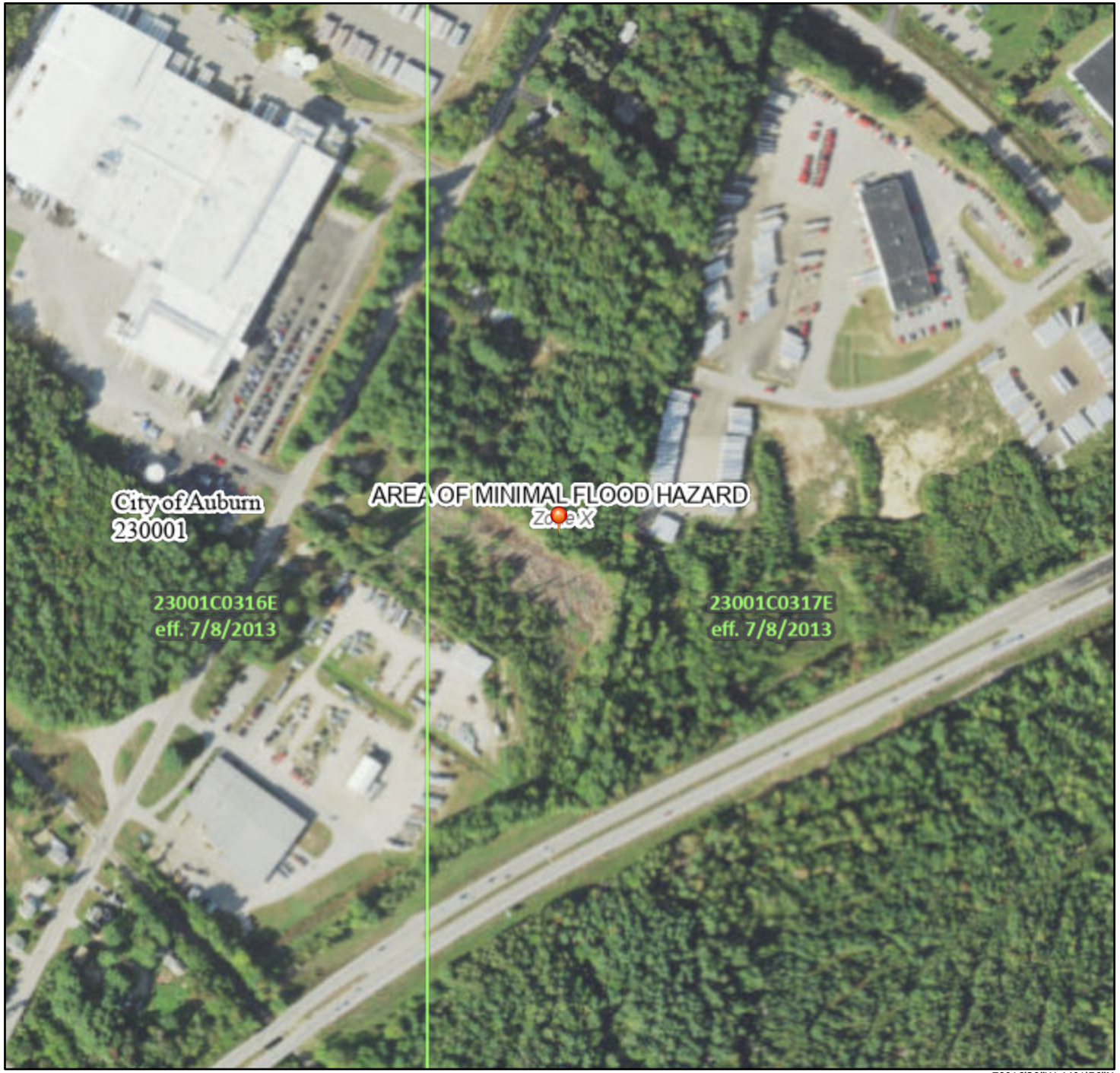
Appendix A
Figures


Empire
Lewiston Junction
Auburn/Lewiston Municipal Airport
Marston Corner
Rumford Junction
Mountain View Cem
Leighton Cem
Lower Range Pond
Worthley Brook
Empire Cem
Verrill Family Cem
Poland Spring
Ricker Hill
Aret-Robbins Cem
Ricker Family Cem
Grandview Hill
Bald Hill
Christian Hill
Old Hotel Road Cem
Site
Danville Corner
Danville
PLAINS RD
BAILEY HILL RD
TORREY RD
DUNN RD
LEWISTON JUNCTION RD
STATE PARK RD
EMPIRE RD
FOSTER RD
MAINE ST
RICKER RD
POLAND SPRING RD
VERRILL RD
BALD HILL RD
RANGE RD
SPRING WATER RD
PIKE INDUSTRIAL RD
HINES RD
KITTYHAWK AVE
HOTEL RD
OLD HOTEL RD
E HARDSCRABBLE RD
FIRST FLIGHT DR
GIRDEN CIR
BEECH HILL RD
HICKORY DR
FAIRWAY DR
WASHINGTON ST N
ALLIED RD
DANVILLE CORNER RD
BLACK CAT RD
WOODBURY RD
OLD PORTLAND RD
WASHINGTON ST
MOOSE BROOK RD
MORIN BRICK RD PVT
BROWNS
26
122
95
202
4
100
79
78
77
76
75

National Flood Hazard Layer FIRMette

FEMA

70°17'7"W 44°2'22"N



70°16'29"W 44°1'56"N

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

1:6,000

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

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

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

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

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

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

N

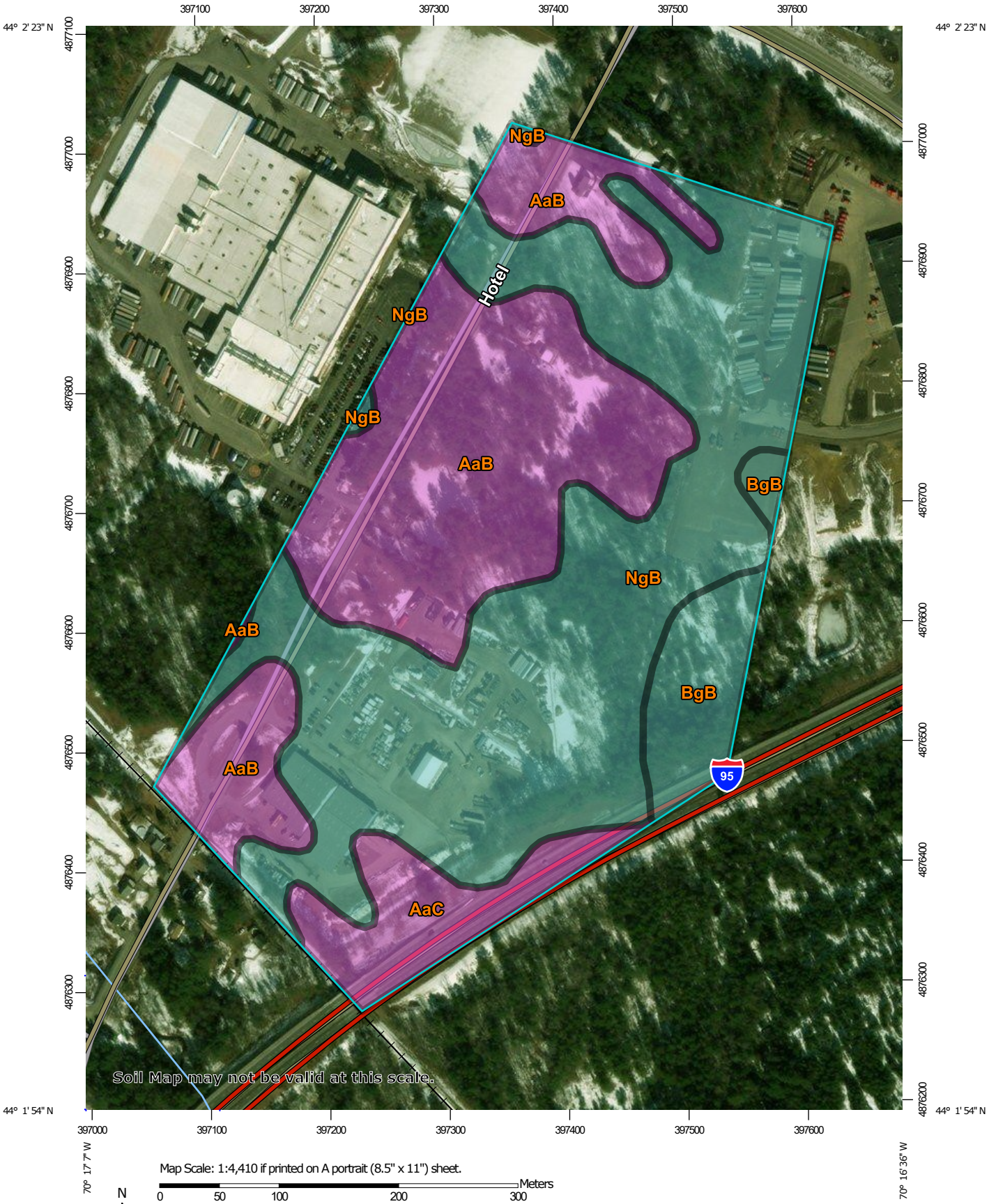
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/27/2021 at 9:29 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

Appendix B
Soils Report


70° 17' 7" W
70° 16' 36" W
44° 2' 23" N
44° 1' 54" N
397100
397200
397300
397400
397500
397600
397000
4877100
4877000
4876900
4876800
4876700
4876600
4876500
4876400
4876300
4876200
NgB
AaB
Hotel
NgB
NgB
AaB
BgB
NgB
AaB
BgB
AaB
AaC
95
Soil Map may not be valid at this scale.
Map Scale: 1:4,410 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 50 100 200 300
Feet
0 200 400 800 1200
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Androscoggin and Sagadahoc Counties, Maine
Survey Area Data: Version 21, Jun 1, 2020

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

Date(s) aerial images were photographed: Dec 31, 2009—Oct 13, 2016

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AaB	Adams loamy sand, 0 to 8 percent slopes	A	21.7	36.1%
AaC	Adams loamy sand, 8 to 15 percent slopes	A	4.2	7.0%
BgB	Nicholville very fine sandy loam, 0 to 8 percent slopes	C	3.8	6.3%
NgB	Ninigret fine sandy loam, 0 to 8 percent slopes	C	30.5	50.6%
Totals for Area of Interest			**60.2**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

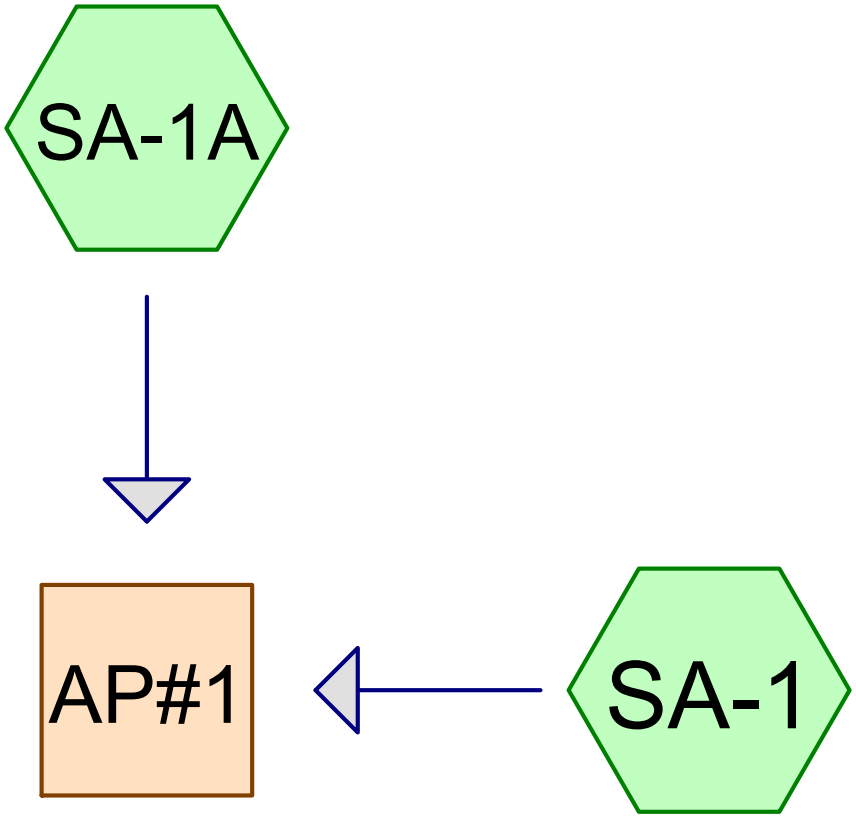
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix C
Pre-Development Calculations



Subcat Reach Pond Link

Routing Diagram for Pre Development - Cote Crane
Prepared by BH2M, Printed 4/27/2021

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.513	98	Offsite Impervious (SA-1A)
6.410	30	Woods, Good, HSG A (SA-1A)
4.266	70	Woods, Good, HSG C (SA-1, SA-1A)
11.189	**48**	**TOTAL AREA**

Summary for Subcatchment SA-1:

Runoff = 0.84 cfs @ 12.12 hrs, Volume= 0.065 af, Depth> 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

Area (sf)	CN	Description
53,259	70	Woods, Good, HSG C
53,259		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	150	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
5.3	344	0.0470	1.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
7.3	494	Total			

Summary for Subcatchment SA-1A:

Runoff = 0.04 cfs @ 16.57 hrs, Volume= 0.016 af, Depth> 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (sf)	CN	Description
*	22,350	98	Offsite Impervious
	279,227	30	Woods, Good, HSG A
	132,559	70	Woods, Good, HSG C
	434,136	46	Weighted Average
	411,786		94.85% Pervious Area
	22,350		5.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.5	150	0.0067	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
12.9	671	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
60.4	821	Total			

Summary for Reach AP#1:

Inflow Area = 11.189 ac, 4.59% Impervious, Inflow Depth > 0.09" for 2 Year event
Inflow = 0.84 cfs @ 12.12 hrs, Volume= 0.081 af
Outflow = 0.84 cfs @ 12.12 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0.0 min

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

Summary for Subcatchment SA-1:

Runoff = 2.00 cfs @ 12.11 hrs, Volume= 0.143 af, Depth> 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

Area (sf)	CN	Description
53,259	70	Woods, Good, HSG C
53,259		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	150	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
5.3	344	0.0470	1.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
7.3	494	Total			

Summary for Subcatchment SA-1A:

Runoff = 0.52 cfs @ 13.29 hrs, Volume= 0.181 af, Depth> 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

	Area (sf)	CN	Description
*	22,350	98	Offsite Impervious
	279,227	30	Woods, Good, HSG A
	132,559	70	Woods, Good, HSG C
	434,136	46	Weighted Average
	411,786		94.85% Pervious Area
	22,350		5.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.5	150	0.0067	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
12.9	671	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
60.4	821	Total			

Summary for Reach AP#1:

Inflow Area = 11.189 ac, 4.59% Impervious, Inflow Depth > 0.35" for 10 Year event
Inflow = 2.00 cfs @ 12.11 hrs, Volume= 0.324 af
Outflow = 2.00 cfs @ 12.11 hrs, Volume= 0.324 af, Atten= 0%, Lag= 0.0 min

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

Summary for Subcatchment SA-1:

Runoff = 3.13 cfs @ 12.11 hrs, Volume= 0.220 af, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

Area (sf)	CN	Description
53,259	70	Woods, Good, HSG C
53,259		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	150	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
5.3	344	0.0470	1.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
7.3	494	Total			

Summary for Subcatchment SA-1A:

Runoff = 1.79 cfs @ 13.07 hrs, Volume= 0.434 af, Depth> 0.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

	Area (sf)	CN	Description
*	22,350	98	Offsite Impervious
	279,227	30	Woods, Good, HSG A
	132,559	70	Woods, Good, HSG C
	434,136	46	Weighted Average
	411,786		94.85% Pervious Area
	22,350		5.15% Impervious Area

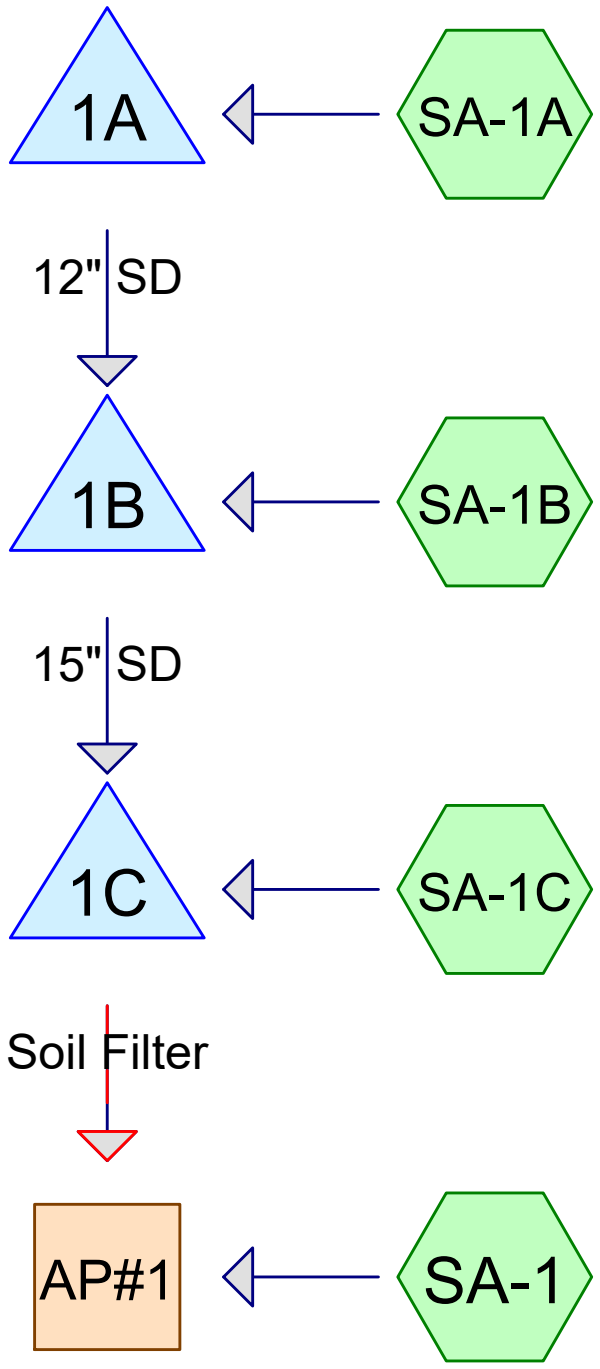
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.5	150	0.0067	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
12.9	671	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
60.4	821	Total			

Summary for Reach AP#1:

Inflow Area = 11.189 ac, 4.59% Impervious, Inflow Depth > 0.70" for 25 Year event
Inflow = 3.13 cfs @ 12.11 hrs, Volume= 0.654 af
Outflow = 3.13 cfs @ 12.11 hrs, Volume= 0.654 af, Atten= 0%, Lag= 0.0 min

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

Appendix D
Post Development Calculations



Subcat Reach Pond Link

Routing Diagram for Post Development - Cote Crane
Prepared by BH2M, Printed 4/27/2021

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.837	39	>75% Grass cover, Good, HSG A (SA-1A, SA-1B, SA-1C)
1.328	74	>75% Grass cover, Good, HSG C (SA-1B, SA-1C)
0.309	98	Existing Impervious (SA-1C)
0.204	98	Existing Impervious Area (SA-1B)
0.060	74	Proposed Grass (C) (SA-1)
1.370	98	Proposed/Allocated Impervious (SA-1A, SA-1B, SA-1C)
4.977	30	Woods, Good, HSG A (SA-1A, SA-1B, SA-1C)
2.102	70	Woods, Good, HSG C (SA-1, SA-1C)
11.189	**55**	**TOTAL AREA**

Summary for Subcatchment SA-1:

Runoff = 0.84 cfs @ 12.12 hrs, Volume= 0.065 af, Depth> 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (sf)	CN	Description
*	2,633	74	Proposed Grass (C)
	50,626	70	Woods, Good, HSG C
	53,259	70	Weighted Average
	53,259		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	150	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
5.3	344	0.0470	1.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
7.3	494	Total			

Summary for Subcatchment SA-1A:

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (sf)	CN	Description
*	1,324	98	Proposed/Allocated Impervious
	1,953	39	>75% Grass cover, Good, HSG A
	9,928	30	Woods, Good, HSG A
	13,205	38	Weighted Average
	11,881		89.97% Pervious Area
	1,324		10.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.6	125	0.0240	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
3.1	25	0.0240	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	23	0.1300	2.52		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
27.9	173	Total			

Summary for Subcatchment SA-1B:

Runoff = 0.03 cfs @ 16.02 hrs, Volume= 0.012 af, Depth> 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (sf)	CN	Description
*	33,361	98	Proposed/Allocated Impervious
*	8,870	98	Existing Impervious Area
	26,894	39	>75% Grass cover, Good, HSG A
	13,523	74	>75% Grass cover, Good, HSG C
	139,563	30	Woods, Good, HSG A
	222,211	47	Weighted Average
	179,980		81.00% Pervious Area
	42,231		19.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.4	150	0.0130	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
12.3	437	0.0140	0.59		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
7.0	295	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	73	0.0400	3.22		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.7	55	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.6	196	0.0130	5.85	102.34	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=2.50' Z= 2.0 '/' Top.W=12.00' n= 0.035
57.4	1,206	Total			

Summary for Subcatchment SA-1C:

Runoff = 0.56 cfs @ 13.02 hrs, Volume= 0.127 af, Depth> 0.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Rainfall=3.00"

	Area (sf)	CN	Description
*	24,997	98	Proposed/Allocated Impervious
*	13,480	98	Existing Impervious
	7,619	39	>75% Grass cover, Good, HSG A
	44,332	74	>75% Grass cover, Good, HSG C
	67,325	30	Woods, Good, HSG A
	40,958	70	Woods, Good, HSG C
	198,711	62	Weighted Average
	160,234		80.64% Pervious Area
	38,477		19.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.5	150	0.0067	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
11.0	466	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.4	119	0.0420	1.43		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	76	0.0400	9.20	202.30	**Trap/Vee/Rect Channel Flow,** Bot.W=3.00' D=2.00' Z= 3.0 & 5.0 '/' Top.W=19.00' n= 0.035
60.0	811	Total			

Summary for Reach AP#1:

Inflow Area = 11.189 ac, 16.83% Impervious, Inflow Depth > 0.14" for 2 Year event
Inflow = 0.84 cfs @ 12.12 hrs, Volume= 0.127 af
Outflow = 0.84 cfs @ 12.12 hrs, Volume= 0.127 af, Atten= 0%, Lag= 0.0 min

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

Summary for Pond 1A: 12" SD

Inflow Area = 0.303 ac, 10.03% Impervious, Inflow Depth = 0.00" for 2 Year event
Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 244.00' @ 5.00 hrs Surf.Area= 25 sf Storage= 0 cf
Flood Elev= 246.50' Surf.Area= 242 sf Storage= 306 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	244.00'	306 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
244.00	25	0	0
245.00	93	59	59
246.00	186	140	199
246.50	242	107	306

Device	Routing	Invert	Outlet Devices
#1	Primary	244.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 244.00' / 243.75' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=244.00' (Free Discharge)
↑—**1=Culvert** (Controls 0.00 cfs)

Summary for Pond 1B: 15" SD

Inflow Area = 5.404 ac, 18.50% Impervious, Inflow Depth > 0.03" for 2 Year event
Inflow = 0.03 cfs @ 16.02 hrs, Volume= 0.012 af
Outflow = 0.03 cfs @ 16.13 hrs, Volume= 0.012 af, Atten= 0%, Lag= 6.3 min
Primary = 0.03 cfs @ 16.13 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 241.10' @ 16.13 hrs Surf.Area= 124 sf Storage= 10 cf
Flood Elev= 243.50' Surf.Area= 1,646 sf Storage= 2,011 cf

Plug-Flow detention time= 5.9 min calculated for 0.012 af (98% of inflow)
Center-of-Mass det. time= 3.2 min (1,024.4 - 1,021.2)

Volume	Invert	Avail.Storage	Storage Description
#1	241.00'	2,011 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
241.00	72	0	0
242.00	596	334	334
243.00	1,290	943	1,277
243.50	1,646	734	2,011

Device	Routing	Invert	Outlet Devices
#1	Primary	241.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 241.00' / 240.75' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.03 cfs @ 16.13 hrs HW=241.10' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.03 cfs @ 1.12 fps)

Summary for Pond 1C: Soil Filter

Inflow Area = 9.966 ac, 18.90% Impervious, Inflow Depth > 0.17" for 2 Year event
Inflow = 0.56 cfs @ 13.02 hrs, Volume= 0.139 af
Outflow = 0.10 cfs @ 19.40 hrs, Volume= 0.061 af, Atten= 82%, Lag= 383.0 min
Primary = 0.10 cfs @ 19.40 hrs, Volume= 0.061 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 237.54' @ 19.40 hrs Surf.Area= 6,494 sf Storage= 3,385 cf
Flood Elev= 239.00' Surf.Area= 7,617 sf Storage= 13,695 cf

Plug-Flow detention time= 180.4 min calculated for 0.061 af (44% of inflow)
Center-of-Mass det. time= 69.7 min (977.1 - 907.4)

Volume	Invert	Avail.Storage	Storage Description
#1	237.00'	13,695 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
237.00	6,090	0	0
238.00	6,841	6,466	6,466
239.00	7,617	7,229	13,695

Device	Routing	Invert	Outlet Devices
#1	Primary	234.67'	**6.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 234.67' / 234.50' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#2	Device 1	234.50'	**1.5" Vert. Orifice/Grate** C= 0.600
#3	Secondary	238.50'	**20.0' long x 6.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.67 2.68 2.71 2.75 2.81

Primary OutFlow Max=0.10 cfs @ 19.40 hrs HW=237.54' (Free Discharge)
└**1=Culvert** (Passes 0.10 cfs of 1.29 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.10 cfs @ 8.15 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=237.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment SA-1:

Runoff = 2.00 cfs @ 12.11 hrs, Volume= 0.143 af, Depth> 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

	Area (sf)	CN	Description
*	2,633	74	Proposed Grass (C)
	50,626	70	Woods, Good, HSG C
	53,259	70	Weighted Average
	53,259		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	150	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
5.3	344	0.0470	1.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
7.3	494	Total			

Summary for Subcatchment SA-1A:

Runoff = 0.00 cfs @ 15.65 hrs, Volume= 0.001 af, Depth> 0.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

	Area (sf)	CN	Description
*	1,324	98	Proposed/Allocated Impervious
	1,953	39	>75% Grass cover, Good, HSG A
	9,928	30	Woods, Good, HSG A
	13,205	38	Weighted Average
	11,881		89.97% Pervious Area
	1,324		10.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.6	125	0.0240	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
3.1	25	0.0240	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	23	0.1300	2.52		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
27.9	173	Total			

Summary for Subcatchment SA-1B:

Runoff = 0.34 cfs @ 13.18 hrs, Volume= 0.106 af, Depth> 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

	Area (sf)	CN	Description
*	33,361	98	Proposed/Allocated Impervious
*	8,870	98	Existing Impervious Area
	26,894	39	>75% Grass cover, Good, HSG A
	13,523	74	>75% Grass cover, Good, HSG C
	139,563	30	Woods, Good, HSG A
	222,211	47	Weighted Average
	179,980		81.00% Pervious Area
	42,231		19.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.4	150	0.0130	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
12.3	437	0.0140	0.59		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
7.0	295	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	73	0.0400	3.22		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.7	55	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.6	196	0.0130	5.85	102.34	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=2.50' Z= 2.0 '/' Top.W=12.00' n= 0.035
57.4	1,206	Total			

Summary for Subcatchment SA-1C:

Runoff = 1.87 cfs @ 12.91 hrs, Volume= 0.341 af, Depth> 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Rainfall=4.30"

	Area (sf)	CN	Description
*	24,997	98	Proposed/Allocated Impervious
*	13,480	98	Existing Impervious
	7,619	39	>75% Grass cover, Good, HSG A
	44,332	74	>75% Grass cover, Good, HSG C
	67,325	30	Woods, Good, HSG A
	40,958	70	Woods, Good, HSG C
	198,711	62	Weighted Average
	160,234		80.64% Pervious Area
	38,477		19.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.5	150	0.0067	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
11.0	466	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.4	119	0.0420	1.43		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	76	0.0400	9.20	202.30	**Trap/Vee/Rect Channel Flow,** Bot.W=3.00' D=2.00' Z= 3.0 & 5.0 '/' Top.W=19.00' n= 0.035
60.0	811	Total			

Summary for Reach AP#1:

Inflow Area = 11.189 ac, 16.83% Impervious, Inflow Depth > 0.38" for 10 Year event
Inflow = 2.02 cfs @ 12.11 hrs, Volume= 0.359 af
Outflow = 2.02 cfs @ 12.11 hrs, Volume= 0.359 af, Atten= 0%, Lag= 0.0 min

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

Summary for Pond 1A: 12" SD

Inflow Area = 0.303 ac, 10.03% Impervious, Inflow Depth > 0.04" for 10 Year event
Inflow = 0.00 cfs @ 15.65 hrs, Volume= 0.001 af
Outflow = 0.00 cfs @ 15.68 hrs, Volume= 0.001 af, Atten= 0%, Lag= 2.1 min
Primary = 0.00 cfs @ 15.68 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 244.03' @ 15.68 hrs Surf.Area= 27 sf Storage= 1 cf
Flood Elev= 246.50' Surf.Area= 242 sf Storage= 306 cf

Plug-Flow detention time= 5.8 min calculated for 0.001 af (98% of inflow)
Center-of-Mass det. time= 3.0 min (1,013.7 - 1,010.8)

Volume	Invert	Avail.Storage	Storage Description
#1	244.00'	306 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
244.00	25	0	0
245.00	93	59	59
246.00	186	140	199
246.50	242	107	306

Device	Routing	Invert	Outlet Devices
#1	Primary	244.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 244.00' / 243.75' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 15.68 hrs HW=244.03' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.00 cfs @ 0.51 fps)

Summary for Pond 1B: 15" SD

Inflow Area = 5.404 ac, 18.50% Impervious, Inflow Depth > 0.24" for 10 Year event
Inflow = 0.34 cfs @ 13.18 hrs, Volume= 0.107 af
Outflow = 0.34 cfs @ 13.22 hrs, Volume= 0.107 af, Atten= 0%, Lag= 2.0 min
Primary = 0.34 cfs @ 13.22 hrs, Volume= 0.107 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 241.34' @ 13.22 hrs Surf.Area= 249 sf Storage= 54 cf
Flood Elev= 243.50' Surf.Area= 1,646 sf Storage= 2,011 cf

Plug-Flow detention time= 3.0 min calculated for 0.107 af (100% of inflow)
Center-of-Mass det. time= 1.9 min (927.0 - 925.1)

Volume	Invert	Avail.Storage	Storage Description
#1	241.00'	2,011 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
241.00	72	0	0
242.00	596	334	334
243.00	1,290	943	1,277
243.50	1,646	734	2,011

Device	Routing	Invert	Outlet Devices
#1	Primary	241.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 241.00' / 240.75' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.34 cfs @ 13.22 hrs HW=241.34' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.34 cfs @ 2.17 fps)

Summary for Pond 1C: Soil Filter

Inflow Area = 9.966 ac, 18.90% Impervious, Inflow Depth > 0.54" for 10 Year event
Inflow = 2.15 cfs @ 12.96 hrs, Volume= 0.448 af
Outflow = 0.71 cfs @ 14.87 hrs, Volume= 0.216 af, Atten= 67%, Lag= 114.3 min
Primary = 0.12 cfs @ 14.87 hrs, Volume= 0.073 af
Secondary = 0.59 cfs @ 14.87 hrs, Volume= 0.142 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 238.55' @ 14.87 hrs Surf.Area= 7,270 sf Storage= 10,370 cf
Flood Elev= 239.00' Surf.Area= 7,617 sf Storage= 13,695 cf

Plug-Flow detention time= 197.0 min calculated for 0.215 af (48% of inflow)
Center-of-Mass det. time= 99.6 min (984.4 - 884.8)

Volume	Invert	Avail.Storage	Storage Description
#1	237.00'	13,695 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
237.00	6,090	0	0
238.00	6,841	6,466	6,466
239.00	7,617	7,229	13,695

Device	Routing	Invert	Outlet Devices
#1	Primary	234.67'	**6.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 234.67' / 234.50' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#2	Device 1	234.50'	**1.5" Vert. Orifice/Grate** C= 0.600
#3	Secondary	238.50'	**20.0' long x 6.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.67 2.68 2.71 2.75 2.81

Primary OutFlow Max=0.12 cfs @ 14.87 hrs HW=238.55' (Free Discharge)
└**1=Culvert** (Passes 0.12 cfs of 1.53 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.12 cfs @ 9.49 fps)

Secondary OutFlow Max=0.59 cfs @ 14.87 hrs HW=238.55' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.59 cfs @ 0.55 fps)

Summary for Subcatchment SA-1:

Runoff = 3.13 cfs @ 12.11 hrs, Volume= 0.220 af, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

	Area (sf)	CN	Description
*	2,633	74	Proposed Grass (C)
	50,626	70	Woods, Good, HSG C
	53,259	70	Weighted Average
	53,259		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	150	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
5.3	344	0.0470	1.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
7.3	494	Total			

Summary for Subcatchment SA-1A:

Runoff = 0.01 cfs @ 12.86 hrs, Volume= 0.005 af, Depth> 0.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

	Area (sf)	CN	Description
*	1,324	98	Proposed/Allocated Impervious
	1,953	39	>75% Grass cover, Good, HSG A
	9,928	30	Woods, Good, HSG A
	13,205	38	Weighted Average
	11,881		89.97% Pervious Area
	1,324		10.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.6	125	0.0240	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
3.1	25	0.0240	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	23	0.1300	2.52		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
27.9	173	Total			

Summary for Subcatchment SA-1B:

Runoff = 1.08 cfs @ 13.00 hrs, Volume= 0.244 af, Depth> 0.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

	Area (sf)	CN	Description
*	33,361	98	Proposed/Allocated Impervious
*	8,870	98	Existing Impervious Area
	26,894	39	>75% Grass cover, Good, HSG A
	13,523	74	>75% Grass cover, Good, HSG C
	139,563	30	Woods, Good, HSG A
	222,211	47	Weighted Average
	179,980		81.00% Pervious Area
	42,231		19.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.4	150	0.0130	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
12.3	437	0.0140	0.59		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
7.0	295	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	73	0.0400	3.22		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.7	55	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.6	196	0.0130	5.85	102.34	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=2.50' Z= 2.0 '/' Top.W=12.00' n= 0.035
57.4	1,206	Total			

Summary for Subcatchment SA-1C:

Runoff = 3.31 cfs @ 12.87 hrs, Volume= 0.570 af, Depth> 1.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year Rainfall=5.40"

	Area (sf)	CN	Description
*	24,997	98	Proposed/Allocated Impervious
*	13,480	98	Existing Impervious
	7,619	39	>75% Grass cover, Good, HSG A
	44,332	74	>75% Grass cover, Good, HSG C
	67,325	30	Woods, Good, HSG A
	40,958	70	Woods, Good, HSG C
	198,711	62	Weighted Average
	160,234		80.64% Pervious Area
	38,477		19.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.5	150	0.0067	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
11.0	466	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.4	119	0.0420	1.43		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	76	0.0400	9.20	202.30	**Trap/Vee/Rect Channel Flow,** Bot.W=3.00' D=2.00' Z= 3.0 & 5.0 '/' Top.W=19.00' n= 0.035
60.0	811	Total			

Summary for Reach AP#1:

Inflow Area = 11.189 ac, 16.83% Impervious, Inflow Depth > 0.86" for 25 Year event
Inflow = 3.53 cfs @ 13.34 hrs, Volume= 0.804 af
Outflow = 3.53 cfs @ 13.34 hrs, Volume= 0.804 af, Atten= 0%, Lag= 0.0 min

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

Summary for Pond 1A: 12" SD

Inflow Area = 0.303 ac, 10.03% Impervious, Inflow Depth > 0.19" for 25 Year event
Inflow = 0.01 cfs @ 12.86 hrs, Volume= 0.005 af
Outflow = 0.01 cfs @ 12.89 hrs, Volume= 0.005 af, Atten= 0%, Lag= 1.5 min
Primary = 0.01 cfs @ 12.89 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 244.06' @ 12.89 hrs Surf.Area= 29 sf Storage= 2 cf
Flood Elev= 246.50' Surf.Area= 242 sf Storage= 306 cf

Plug-Flow detention time= 2.9 min calculated for 0.005 af (99% of inflow)
Center-of-Mass det. time= 1.6 min (934.6 - 933.0)

Volume	Invert	Avail.Storage	Storage Description
#1	244.00'	306 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
244.00	25	0	0
245.00	93	59	59
246.00	186	140	199
246.50	242	107	306

Device	Routing	Invert	Outlet Devices
#1	Primary	244.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 244.00' / 243.75' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.01 cfs @ 12.89 hrs HW=244.06' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.01 cfs @ 0.86 fps)

Summary for Pond 1B: 15" SD

Inflow Area = 5.404 ac, 18.50% Impervious, Inflow Depth > 0.55" for 25 Year event
Inflow = 1.09 cfs @ 13.00 hrs, Volume= 0.249 af
Outflow = 1.09 cfs @ 13.04 hrs, Volume= 0.248 af, Atten= 0%, Lag= 2.6 min
Primary = 1.09 cfs @ 13.04 hrs, Volume= 0.248 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 241.65' @ 13.04 hrs Surf.Area= 413 sf Storage= 158 cf
Flood Elev= 243.50' Surf.Area= 1,646 sf Storage= 2,011 cf

Plug-Flow detention time= 2.6 min calculated for 0.248 af (99% of inflow)
Center-of-Mass det. time= 1.8 min (899.3 - 897.5)

Volume	Invert	Avail.Storage	Storage Description
#1	241.00'	2,011 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
241.00	72	0	0
242.00	596	334	334
243.00	1,290	943	1,277
243.50	1,646	734	2,011

Device	Routing	Invert	Outlet Devices
#1	Primary	241.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 241.00' / 240.75' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.09 cfs @ 13.04 hrs HW=241.65' (Free Discharge)
↑**1=Culvert** (Barrel Controls 1.09 cfs @ 2.85 fps)

Summary for Pond 1C: Soil Filter

Inflow Area = 9.966 ac, 18.90% Impervious, Inflow Depth > 0.99" for 25 Year event
Inflow = 4.34 cfs @ 12.92 hrs, Volume= 0.819 af
Outflow = 3.23 cfs @ 13.35 hrs, Volume= 0.585 af, Atten= 26%, Lag= 25.7 min
Primary = 0.12 cfs @ 13.35 hrs, Volume= 0.077 af
Secondary = 3.11 cfs @ 13.35 hrs, Volume= 0.507 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 238.66' @ 13.35 hrs Surf.Area= 7,355 sf Storage= 11,166 cf
Flood Elev= 239.00' Surf.Area= 7,617 sf Storage= 13,695 cf

Plug-Flow detention time= 112.0 min calculated for 0.583 af (71% of inflow)
Center-of-Mass det. time= 47.4 min (919.7 - 872.3)

Volume	Invert	Avail.Storage	Storage Description
#1	237.00'	13,695 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
237.00	6,090	0	0
238.00	6,841	6,466	6,466
239.00	7,617	7,229	13,695

Device	Routing	Invert	Outlet Devices
#1	Primary	234.67'	**6.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 234.67' / 234.50' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#2	Device 1	234.50'	**1.5" Vert. Orifice/Grate** C= 0.600
#3	Secondary	238.50'	**20.0' long x 6.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.67 2.68 2.71 2.75 2.81

Primary OutFlow Max=0.12 cfs @ 13.35 hrs HW=238.66' (Free Discharge)
└**1=Culvert** (Passes 0.12 cfs of 1.55 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.12 cfs @ 9.62 fps)

Secondary OutFlow Max=3.11 cfs @ 13.35 hrs HW=238.66' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 3.11 cfs @ 0.96 fps)

Appendix E
Inspection and Maintenance Manual

EROSION AND SEDIMENTATION CONTROL

INSPECTION AND MAINTENANCE PLAN

COTE CRANE EXPANSION
Auburn, Maine

Submitted for:

Cote, LLC
P.O. Box 1418
Auburn, Maine 04210

Prepared by:

BH2M
Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors

Date:
May 2021

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LIST OF APPENDICES

1.0 INTRODUCTION

The intent of this plan is to establish inspection and maintenance procedures to be implemented for erosion and sediment control best management practices (BMP's) during construction, as well as for post-construction stormwater BMP's, for the Cote Crane Expansion Project. This plan has been prepared in conformance with the requirements set forth in 06-096 Chapter 500 – Stormwater Management, the City of Auburn Post-Construction Stormwater Management Ordinance, and the Maine Construction General Permit.

1.1 PROJECT DESCRIPTION

Cote LLC. is proposing to construct a new grassed laydown area for material storage on a lot north of their existing site. The project is required to obtain an individual Stormwater Management Permit to be compliant with Chapter 500 Rules and will require an amended Site Location Permit from the City of Auburn.

The scope of work includes but is not limited to:

- Tree clearing and grubbing
- Stump and boulder removal
- Construction of a 30' wide paved access road
- Installation of storm drain system including vegetated swales
- Construction a grassed underdrained soil filters

1.2 REQUIRED PERMITS

The following is a list of Municipal, State, and Federal permits that are required for the Project:

Municipal
City of Auburn Site Plan Permit
Stormwater Management Law Permit - Individual
Amended Site Location Permit – Delegated Authority

State of Maine

Federal
ACOE Maine General Permit – Wetland Fill

1.3 REFERENCES

This plan has been developed in accordance with the following:

- Stormwater Management Law 38 M.R.S. §420-C and §420-D
  http://legislature.maine.gov/statutes/38/title38sec420-C.html
  http://legislature.maine.gov/statutes/38/title38sec420-D.html

- 06-096 Chapter 500 – Stormwater Management
  http://www.maine.gov/sos/cec/rules/06/096/096c500.docx

- General Permit – Construction Activity
  Maine Pollutant Discharge Elimination System (MPDES)
  https://www.maine.gov/dep/land/stormwater/construction.html

- Maine Erosion and Sediment Control Best Management Practices (BMPs)
  Manual for Designers and Engineers
  https://www.maine.gov/dep/land/erosion/escbmps/esc_bmp_engineers.pdf

- Maine Erosion and Sediment Control Practices Field Guide for Contractors
  https://www.maine.gov/dep/land/erosion/escbmps/esc_bmp_field.pdf

- Maine DOT Best Management Practices for Erosion and Sedimentation Control
  https://www.maine.gov/mdot/env/documents/bmp/BMP2008full.pdf

1.4 RESPONSIBLE PARTIES

Preparer/Design Engineer:	Andrew S. Morrell, PE BH2M 28 State Street Gorham, Me. 04038 (207) 839-2771
Developer/Applicant:	Cote LLC. P.O. Box 1418 Auburn, Maine 04210
Site Contractor:	_____ _____ _____ _____
Owner:	Cote LLC.
Post Construction Stormwater Inspector*:	_____ _____ _____ _____

During construction the Developer/Applicant or their representatives will be responsible for implementing the erosion and sediment control BMP's as well routine inspections and maintenance of the BMP's.

Post-construction stormwater BMP inspection, maintenance, reporting, and required recertifications will be the responsibility of the Owner or their representatives.

1.5 INSPECTION AND MAINTENANCE – DURING CONSTRUCTION

Anyone who conducts or directs an activity that involves exposing, filling or displacing soil or other earthen materials should take appropriate measures to prevent erosion and the loss of sediment beyond the project site or into a sensitive resource. Erosion and sediment control measures should be in place before the activity begins and should remain functional until the site is permanently stabilized. All measures should remain effective until all areas are permanently stabilized. Any disturbed area should be regularly inspected until the site is fully stabilized with either 90% grass cover or a permanent impervious surface such as pavement. A person who has the knowledge of erosion and sediment control measures and of stormwater management practices should inspect the site at a minimum once a week, and before and after a storm event. Any failing measure should be repaired or modified to adequately stabilize the site prior to the next storm event or no later than 7 calendar days. The inspection frequency table found in Appendix D shall be used as a guide for inspecting each specific BMP. The inspection form found in Appendix B shall be used to record the inspection, its outcome, and the required maintenance.

Refer to the Plans found in Appendix A for additional erosion and sediment control details and narratives.

General Inspection, Maintenance, and Documentation Requirements

1. Inspection and corrective action: Inspect disturbed and impervious areas, erosion control measures, and material storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and within 24 hours after a storm event, and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections.

2. Maintenance: If BMP's need to be repaired, the repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If additional BMPs or significant repair of BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event. All measures must be maintained in effective operating condition until areas are permanently stabilized.

3. Documentation: Maintain a binder with construction inspection forms summarizing the inspections and any corrective action taken. The forms must include the name and qualifications of the person making the inspections, the date of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicle access points to the

parcel. Refer to Appendix B for the construction inspection form. Major observations must include BMP's that need maintenance, BMP's that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the inspection form what corrective action taken and when it was taken. The Owner shall retain a copy of the inspection forms for a period of at least five years from the completion of permanent stabilization.

Site-Specific BMP's

Refer to Appendix D for inspection and maintenance requirements and frequencies of site-specific BMP's. Refer to the Plans found in Appendix A for narratives and details of the site-specific BMP's. The following is a list of the site-specific BMP's that will require routine inspection and maintenance:

- Sedimentation Barriers (Silt Fence or Erosions Control Mix Berm)
- Stabilized Construction Entrance
- Construction Limit Barrier Fence
- Concrete Washout Structure
- Stone Check Dam
- Temporary Sediment Trap
- Pipe Inlet/Outlet Protection
- Temporary Grass/Stone Lined Swale
- Snow storage areas
- Storm drains and culverts
- Grassed Underdrained Soil Filters

Winter Construction

Winter construction is construction activity performed during the period from November 1 through April 15. If disturbed areas are not stabilized with permanent measures by November 1 or new soil disturbance occurs after November 1, but before April 15, then these areas must be protected and runoff from them must be controlled by additional measures and restrictions.

1. Site Stabilization: For winter stabilization, hay mulch is applied at twice the standard temporary stabilization rate. At the end of each construction day, areas that have been brought to final grade must be stabilized. Mulch may not be spread on top of snow.

2. Sediment Barriers: All areas within 75 feet of a protected natural resource must be protected with a double row of sediment barriers.

3. Ditches: All vegetated ditch lines that have not been stabilized by November 1, or will be worked during the winter construction period, must be stabilized with an appropriate stone lining backed by an appropriate gravel bed or geotextile unless specifically released from this standard by Maine DEP.

4. Slopes: Mulch netting must be used to anchor mulch on all slopes greater than 8% unless erosion control blankets or erosion control mix is being used on these slopes.

Refer to the Plans contained in Appendix A for additional winter construction erosion and sediment control requirements.

1.6 INSPECTION AND MAINTENANCE – POST-CONSTRUCTION

The long-term operation and maintenance of a stormwater management system is as critical to its performance as its design and construction. Proper operation and maintenance practices ensure that stormwater BMP's continue to improve water quality by removing pollutants effectively over the long-term and decreasing the risk of re-suspending sediment. Without proper maintenance, BMPs are likely to fail and will no longer provide treatment of stormwater. The following includes a summary of the inspection, maintenance, and documentation requirements for post-construction stormwater BMP's.

Refer to the Plans contained in Appendix A for details and locations of site-specific post-construction BMP's.

General Inspection, Maintenance, and Documentation Requirements

1. Inspection and maintenance: All measures must be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections. The following areas, facilities, and measures must be inspected and identified deficiencies must be corrected. Areas, facilities, and measures other than those listed below may also require inspection on a specific site.

    a) Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after significant rainfall events (1 inch or more in a 24-hour period) to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

    b) Inspect ditches, swales and other open stormwater channels in the spring, in late fall, and after significant rainfall events (1 inch or more in a 24-hour

period) to remove any obstructions to flow, remove accumulated sediments and debris, to control vegetated growth that could obstruct flow, and to repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or side slopes.

c) Inspect culverts in the spring, in late fall, and after heavy rains to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the culvert's inlet and outlet.

d) Inspect at least once per year, each underdrained soil filter, including the filter embankments, vegetation, underdrain piping, and overflow spillway. Remove and dispose of accumulated sediments in the filter. If needed, rehabilitate any clogged surface linings, and flush underdrain piping.

2. Regular maintenance

a) Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. Grading of gravel roads or grading of the gravel shoulders of gravel or paved roads, must be routinely performed to ensure that stormwater drains immediately off the road surface to adjacent buffer areas or stable ditches, and is not impeded by accumulations of graded material on the road shoulder or by excavation of false ditches in the shoulder. If water bars or open-top culverts are used to divert runoff from road surfaces, clean-out any sediments within or at the outlet of these structures to restore their function.

3. Documentation: Maintain a binder of inspection forms summarizing inspection, maintenance, and any corrective actions taken. The inspection forms must include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. Refer to Appendix C for inspection forms. If a maintenance task requires the clean-out of any sediments or debris,

indicate where the sediment and debris were disposed of after removal. The log must be made accessible to Department staff and a copy provided to the Department upon request. The Owner shall retain a copy of the logs for a period of at least five years from the completion of permanent stabilization.

4. The site-specific post-construction BMP's for the Cote Crane Expansion include the following:

   - Underdrained Soil Filter
   - Vegetated swales
   - Roadways
   - Storm Drain System (including culverts, storm drains, and vegetated and reinforced ditches/swales)
   - Snow storage areas
   - Rip rap inlet and outlet aprons
   - Sediment forebay

1.7 RECERTIFICATION OF STORMWATER MANAGEMENT SYSTEMS

All projects permitted under Stormwater Management Law since 2005 require reporting every 5 years. Certification must be sent to the Department of Environmental Protection within three months of the expiration of each five-year interval from the date of issuance of the permit stating that the stormwater management system has been inspected, maintained, and repaired (if needed). The standard form for "Five-Year Recertification for Long-Term Maintenance of Stormwater Management Systems" is contained in Appendix E. The general inspection and maintenance requirements include but are not limited to the following:

1. Identification and repair of erosion problems: All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

2. Inspection and repair of stormwater control system: All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the system, or portions of the system.

3. Maintenance: The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the Department, and the maintenance log is being maintained.

Note: Municipalities with separate storm sewer systems regulated under the Maine Pollutant Discharge Elimination System (MPDES) Program may report on all regulated systems under their control as part of their required annual reporting in lieu of separate certification of each system. Municipalities not regulated by the MPDES Program, but that are responsible for maintenance of permitted stormwater systems, may report on multiple stormwater systems in one report.

1.8 SITE-SPECIFIC BMP MAINTENANCE AND ANNUAL REPORTING REQUIREMENTS

Below is a site-specific list of BMP's implemented for the Project as well as their ID, discharge location, and inspection and certification requirements.

Table 1 - Post-Construction BMP Designation Table

Post-Const. BMP ID	Type of Post-Const. BMP	Discharge Location	MS4 (YES/NO)	Inspection Frequency	Post-Const. Certification Requirement	Post-Const. Responsibility
BMP-A	Roadway	Onsite Swale	No	Biannual	Annual Certification	Owner
BMP-B	Storm Drain Systems	GUSF	No	Annual	Annual Certification	Owner
BMP-C	Vegetated Ditches	GUSF	No	Annual	Annual Certification	Owner
BMP-D	Vegetated Areas	N/A	N/A	N/A	N/A	Owner
BMP-E	GUSF	Vegetated Area	No	Biannual	Annual Certification	Owner

The post-construction BMP's require annual inspections and periodic maintenance. The Owner must retain a qualified post-construction stormwater inspector to inspect and certify the post-construction BMP's.

1.9 HOUSEKEEPING

The following performance standards shall apply:

1. Spill prevention: Controls must be used to prevent pollutants from construction and waste materials stored on site to enter stormwater, which includes storage practices to minimize exposure of the materials to stormwater. The site contractor or operator must develop and implement as necessary appropriate spill prevention, containment, and response planning measures.

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

2. Groundwater protection: During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials. Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area in order to prevent the accumulation of fines, reduction in infiltration rate, and consequent flooding and destabilization.

   See 06-096 Chapter 500 - Appendix D for license by rule standards for infiltration of stormwater.

NOTE: Lack of appropriate pollutant removal best management practices (BMPs) may result in violations of the groundwater quality standard established by 38 M.R.S.A. §465-C(1).

3. Fugitive sediment and dust: Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control, but other water additives may be considered as needed. A stabilized construction entrance (SCE) should be included to minimize tracking of mud and sediment. If off-site tracking occurs, public roads

   should be swept immediately, no less than once a week, and prior to significant storm events. Operations during dry months that experience fugitive dust problems, should wet down unpaved access roads once a week or more frequently as needed with a water additive to suppress fugitive sediment and dust.

NOTE: Take care in sourcing water. Dewatering a stream without a permit from the Department may violate state water quality standards and the *Natural Resources Protection Act*.

4. Debris and other materials: Minimize the exposure of construction debris, building and landscaping materials, trash, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials to precipitation and stormwater runoff. These materials must be prevented from becoming a pollutant source.

NOTE: To prevent these materials from becoming a source of pollutants, construction and post- construction activities related to a project may be required to comply with applicable provision of rules related to solid, universal, and hazardous waste, including, but not limited to, the Maine solid waste and hazardous waste management rules; Maine hazardous waste management rules; Maine oil conveyance and storage rules; and Maine pesticide requirements.

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

NOTE: Dewatering controls are discussed in the "Maine Erosion and Sediment Control BMPs, Maine Department of Environmental Protection."

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

   a) Discharges from firefighting activity;
   b) Fire hydrant flushings;
   c) Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);
   d) Dust control runoff in accordance with permit conditions;
   e) Routine external building washdown, not including surface paint removal, that does not involve detergents;
   f) Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;
   g) Uncontaminated air conditioning or compressor condensate;

h) Uncontaminated groundwater or spring water;
i) Foundation or footer drain-water where flows are not contaminated;
j) Uncontaminated excavation dewatering;
k) Potable water sources including waterline flushings; and
l) Landscape irrigation.

7. Unauthorized non-stormwater discharges: The Department's approval under this Chapter does not authorize a discharge that is mixed with a source of non-stormwater, other than those discharges in compliance with 06-096 Chapter 500 - Appendix C (6). Specifically, the Department's approval does not authorize discharges of the following:

    a) Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;
    b) Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;
    c) Soaps, solvents, or detergents used in vehicle and equipment washing; and
    d) Toxic or hazardous substances from a spill or other release.

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

Appendix A
Plans

Appendix B
Construction Inspection Forms

CONSTRUCTION INSPECTION FORM FOR EROSION AND SEDIMENT CONTROL					
General Information:					
Site Name:	Date:		Inspected by:		
Owner:					
Retained 3PI:	Last Rain Date:			Amount:	
Reason for Inspection:	Weekly	Winter	Final	Rain Event	Complaint
Description of disturbed area:					
Photos:					

	YES/NO/NA	COMMENTS
1. Is an Erosion and Sediment Control Plan available?		
ESC plan on-site and followed		
Other:		
2. Are all erosion control practices installed properly, maintained and functioning?		
Disturbed areas stable		
Concentrated flow inlet/outlet protection		
All areas at final grade		
Disturbed dormant areas stabilized		
Access roads and parking		
Hillsides and stockpiles		
Other:		
3. Are all sedimentation control practices installed properly, maintained and functioning?		
Construction entrance		
Sedimentation basins/traps/diversions		
Perimeter controls		
Check dams		
Other:		
4. Is maintenance of ESC measures, construction activities and housekeeping kept-up?		
Sedimentation/erosion in ditches		
Tracked Sediment or dust at exits		
Hazardous material storage and spill control practices		
Waste management (concrete, hazardous material, etc.)		
Other:		
5. Violation, Corrective Actions, Recommendations		
Sediment discharged from site?		
Corrective action required?		
Site compliant with all permits?		
Notice of violation or stop work order issued?		
Comments/Corrective Actions (complete corrective actions before the next rain event and within 7 day)		

Appendix C
Post-Construction Inspection Forms

Cote Crane Expansion
Post-Construction Inspection Form (Ditches, Swales and Open Stormwater Channels)

Project name:	Date:		Inspected by:		
Owner name:					
Last rain date:	Amount:				
Reason for inspection:	Rain Event	Monthly	Annually	Maint. Performed	Other (Specify)
General description of BMP condition/recent maintenance performed:					
Photos: (Attach)					

Inspection Details	**Comments**	**Maintenance Required**
Obstructions, sediment or debris noticeable in ditch line?		
Mowing required?		
Woody vegetation apparent in ditches?		
Side slopes stable? Signs of slumping?		
Rip rap stable? Underlying filter fabric visible?		

Additional Comments:

Cote Crane Expansion
Post-Construction Inspection Form (Roadway and Parking Areas)

Project name:	Date:		Inspected by:		
Owner name:					
Last rain date:	Amount:				
Reason for inspection:	Rain Event	Monthly	Annually	Maint. Performed	Other (Specify)
General description of BMP condition/recent maintenance performed:					
Photos: (Attach)					

Inspection Details	**Comments**	**Maintenance Required**
Winter sand accumulation apparent?		
Pavement Sweeping required?		
Gravel shoulders graded appropriately?		
Gravel road grading required?		
Low spots causing puddling?		

Additional Comments:

Cote Crane Expansion
Post-Construction Inspection Form (Storm Drain System including catch basins and culverts)

Project name:	Date:		Inspected by:		
Owner name:					
Last rain date:	Amount:				
Reason for inspection:	Rain Event	Monthly	Annually	Maint. Performed	Other (Specify)
General description of BMP condition/recent maintenance performed:					
Photos: (Attach)					

Inspection Details	**Comments**	**Maintenance Required**
Accumulated debris or sediment at inlet, outlet, or within culvert/storm drain?		
Flow obstructions present?		
Erosion apparent at culvert inlet/outlet?		
Accumulated debris around catch basin grate?		
Accumulated debris in catch basin sump?		
Floating debris or oils found in catch basins?		

Additional Comments:

Cote Crane Expansion
Post-Construction Inspection Form (Underdrain Filter)

Project name:	Date:		Inspected by:		
Owner name:					
Last rain date:	Amount:				
Reason for inspection:	Rain Event	Monthly	Annually	Maint. Performed	Other (Specify)
General description of BMP condition/recent maintenance performed:					
Photos: (Attach)					

Inspection Details	**Comments**	**Maintenance Required**
Debris apparent in basin bottom?		
Vegetation established in basin bottom?		
Basin draining within 72 hours?		
Inlet forebay rip rap stable and free of debris?		
Embankment and side slopes stable? Sloughs or unvegetated areas apparent?		
Outlet free of debris? Rip rap stable?		
Valve in operating condition?		
Outlet control structure operational free of debris?		
Orifice free of debris and operational?		

Additional Comments:

Cote Crane Expansion
Post-Construction Inspection Form (Vegetated Area)

Project name:	Date:		Inspected by:		
Owner name:					
Last rain date:	Amount:				
Reason for inspection:	Rain Event	Monthly	Annually	Maint. Performed	Other (Specify)
General description of BMP condition/recent maintenance performed:					
Photos: (Attach)					

Inspection Details	**Comments**	**Maintenance Required**
All slopes and embankments well vegetated? Signs of sparse growth?		
Rill erosion apparent in vegetated areas?		
Downs slope of level spreaders/ditch turnouts stable?		
Mowing of vegetated areas appropriate?		

Additional Comments:

Appendix D

Inspection Frequency Checklist and Long-Term Inspection & Maintenance Plan

EROSION AND SEDIMENT CONTROL MEASURES AND ACTIVITY	INSPECTION FREQUENCY		
	Weekly	Before and After a Storm	After Construction
SEDIMENT BARRIERS			
Sediment barriers are installed prior to soil disturbances	X	X	
Silt fences are keyed in and tight	X	X	
Barriers are repaired and replaced as necessary	X	X	
Barriers are removed when the site is stabilized - Silt fence should be cut at the ground surface			X
TEMPORARY STABILIZATION			
Areas are stabilized if idle for 14 days or more	X	X	
Daily stabilization within 100 ft of a natural resource	X	X	
MULCH			
Seed and mulch within 7 days of final grading. Ground is not visible	X	X	
Erosion control mix is 4-6 inch thick	X	X	
Erosion control blankets or hay mulch are anchored	X	X	
VEGETATION			
Vegetation provides 90% soil cover	X		X
Loam or soil amendment were provided	X		X
New seeded areas are mulched and protected from vehicle, foot traffic and runoff	X	X	X
Areas that will remain unworked for more than 1 year are vegetated with grass	X		
SLOPES AND EMBANKMENTS			
Final graded slopes and embankments are stabilized	X	X	X
Diversions are provided for areas with rill erosion	X	X	X
Areas steeper than 2:1 are riprapped	X		
Stones are angular, durable and various in size	X		
Riprap is underlain with a gravel layer or filter fabric	X		
STORMWATER CHANNELS AND CULVERTS			
Ditches and swales are permanently stabilized–channels that will be riprapped have been over-excavated	X	X	X
Ditches are clear of obstructions, accumulated sediments or debris	X	X	X
Ditch lining/bottoms are free of erosion	X	X	X
Check dams are spaced correctly to slow flow velocity	X		
Underlying filter fabric or gravel is not visible	X	X	X
Culvert aprons and plunge pools are sized for expected flows volume and velocity	X		
Stones are angular, durable and various in size	X		
Culverts are sized to avoid upgradient flooding	X	X	
Culvert protection extends to the maximum flow elevation within the ditch	X	X	X
Culvert is embedded, not hanging	X	X	X

CATCH BASIN SYSTEMS			
Catch basins are built properly	X		
Accumulated sediments and debris are removed from sump, grate and collection area		X	X
Floating debris and floating oils are removed from trap			X
ROADWAYS AND PARKING SURFACES			
The gravel pad at the construction entrance is clear from sediments	X	X	
Roads are crowned		X	X
Cross drainage (culvert) is provided	X		
False ditches (from winter sand) are graded		X	X
BUFFERS			
Buffers are free of erosion or concentrated flows		X	X
The downgradient of spreaders and turnouts is stable		X	X
Level spreaders are on the contour			X
The number of spreaders and ditch turnouts is adequate for flow distribution		X	X
Any sediment accumulation is removed from within spreader or turnouts		X	X
STORMWATER BASINS AND TRAPS			
Embankments are free of settlement, slope erosion, internal piping, and downstream swamping		X	X
All flow control structure or orifices are operational and clear of debris or sediments		X	X
Any pre-treatment structure that collects sediment or hydrocarbons is clean or maintained		X	X
Vegetated filters and infiltration basins have adequate grass growth			X
Any impoundment or forebay is free of sediment		X	X
WINTER CONSTRUCTION (November 1st-April15th)			
Final graded areas are mulched daily at twice the normal rate with hay, and anchor (not on snow)	Daily		
A double row of sediment barrier is provided for all areas within 100 ft of a sensitive resource (use erosion control mix on frozen ground)	Daily		
Newly constructed ditches are riprapped	Daily		
Slopes greater than 8% are covered with an erosion control blanket or a 4-inch layer of erosion control mix	Daily		
HOUSEKEEPING PUNCH LIST			
All disturbed areas are permanently stabilized, and plantings are established (grass seeds have germinated with 90% vegetative cover)			X
All trash, sediments, debris or any solid waste have been removed from stormwater channels, catch basins, detention structures, discharge points, etc.			X
All ESC devices have been removed: (silt fence and posts, diversions and sediment structures, etc.)			X
All deliverables (certifications, survey information, as-built plans, reports, notice of termination (NOT), etc.) in accordance with all permit requirements have been submitted to town, Maine DEP, association, owner, etc.			X

INSPECTION AND MAINTENANCE PLAN FOR STORMWATER MANAGEMENT STRUCTURES (BMPS)

	INSPECTION SCHEDULE	CORRECTIVE ACTIONS
VEGETATED AREAS	Annually early spring and after heavy rains	Inspect all slopes and embankments and replant areas of bare soil or with sparse growth
		Armor rill erosion areas with riprap or divert the runoff to a stable area
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
		Mow vegetation as specified for the area
DITCHES, SWALES AND OPEN STORMWATER CHANNELS	Annually spring and late fall and after heavy rains	Remove obstructions, sediments or debris from ditches, swales and other open channels
		Repair any erosion of the ditch lining
		Mow vegetated ditches
		Remove woody vegetation growing through riprap
		Repair any slumping side slopes
		Repair riprap where underlying filter fabric or gravel is showing or if stones have dislodge
CULVERTS	Spring and late fall and after heavy rains	Remove accumulated sediments and debris at the inlet, outlet, or within the conduit
		Remove any obstruction to flow
		Repair any erosion damage at the culvert's inlet and outlet
CATCH BASINS	Annually in the spring	Remove sediments and debris from the bottom of the basin and inlet grates
		Remove floating debris and oils (using oil absorptive pads) from any trap
ROADWAYS AND PARKING AREAS	Annually in the spring or as needed	Clear and remove accumulated winter sand in parking lots and along roadways
		Sweep pavement to remove sediment
		Grade road shoulders and remove accumulated winter sand
		Grade gravel roads and gravel shoulders
		Clean out the sediment within water bars or open-top culverts
		Ensure that stormwater runoff is not impeded by false ditches of sediment in the shoulder
RESOURCE AND TREATMENT BUFFERS	Annually in the spring	Inspect buffers for evidence of erosion, concentrated flow, or encroachment by development
		Manage the buffer's vegetation with the requirements in any deed restrictions
		Repair any sign of erosion within a buffer
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
		Install more level spreaders, or ditch turn-outs if needed for a better distribution of flow
		Clean out any accumulation of sediment within the spreader bays or turnout pools
		Mow non-wooded buffers no shorter than six inches and less than three times per year
WETPONDS AND DETENTION BASINS	Annually in fall and after heavy rains	Inspect the embankments for settlement, slope erosion, piping, and slumping
		Mow the embankment to control woody vegetation
		Inspect the outlet structure for broken seals, obstructed orifices, and plugged trash racks
		Remove and dispose of sediments and debris within the control structure
		Repair any damage to trash racks or debris guards
		Replace any dislodged stone in riprap spillways
		Remove and dispose of accumulated sediments within the impoundment and forebay
FILTRATION AND INFILTRATION BASINS	Annually in the spring and late fall	Clean the basin of debris, sediment and hydrocarbons
		Provide for the removal and disposal of accumulated sediments within the basin
		Renew the basin media if it fails to drain within 72 hours after a one inch rainfall event
		Till, seed and mulch the basin if vegetation is sparse
		Repair riprap where underlying filter fabric or gravel is showing or where stones have dislodged
PROPRIETARY DEVICES	As specified by manufacturer	Contract with a third-party for inspection and maintenance
		Follow the manufacturer's plan for cleaning of devices
OTHER PRACTICES	As specified for devices	Contact the department for appropriate inspection and maintenance requirements for other drainage control and runoff treatment measures.

Appendix E

Five-Year Recertification for Long-Term Maintenance of Stormwater Management Systems

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Land Resources
17 State House Station
Augusta, Maine 04333

FIVE-YEAR RECERTIFICATION FOR LONG-TERM MAINTENANCE OF STORMWATER MANAGEMENT SYSTEMS

For Site Location & Stormwater Projects

This form complies with the condition that requires reporting every 5 years on the long-term maintenance of stormwater management structures of projects permitted under the Stormwater Management Law since 2005. Complete the following sections, include inspection photos, and use additional paper if needed. A copy of the report if the inspection was performed by a professional experienced in BMP maintenance should be included. Electronic copy of this form and information about the five-year recertication are available on the Maine DEP website at: http://www.maine.gov/dep/land/stormwater/stormwaterbmps/

Please type or print in black ink only

Owner/Licensee		**3rd Party Inspection Company** (if applicable)	
Name of Representative:		**Name of Inspector or preparer of report:**	
Company:		**Company:**	
Mailing Address:		**Mailing Address:**	
Daytime Phone #:		**Daytime Phone #:**	
E-mail Address:		**E-mail Address:**	

LOCATION OF DEVELOPMENT			
Name of Project:			
Address and Town:			
DEP Permit Number:		**Year of Permit:**	

PROJECT SPECIFICS	
If the project is unfinished, please describe its current status and your plans for the future. The filing of this report of on-site long-term maintenance activities is still required.	
If the project is within a MPDES Regulated Town, the maintenance report prepared for the town should be submitted with this form.	
If the project is a subdivision with a Homeowner's association, identify the responsible party.	
Confirm that the required recording of deed restrictions for the protection of buffers or conservation land has been done, and that the buffers are maintained according to the restrictions.	
Identify the contractor for the required renewal of a 5-year maintenance contract for the inspection, cleaning and maintenance of manufactured proprietary structures.	
Is a maintenance log available for review?	

LONG-TERM MAINTENANCE (please comment on the following):
All areas of the development have been inspected for erosion, and appropriate steps have been taken to permanently stabilize these areas.
All stormwater control structures have been inspected for damage, wear, malfunction, and appropriate steps have been taken to repair or replace the failing systems.
The erosion control and stormwater maintenance plan for the site is being implemented as written, and a maintenance log has been created and is being maintained.

CERTIFICATIONS/SIGNATURES
By signing below. the owner (or authorized agent) certifies that all stormwater management structures at the project described above are stable and operational as designed.
Signed:_____ **Title**_____**Date:**_____
This completed form and all supporting documents summarized above shall be sent to the following address. An emailed report is appropriate and should be sent to Recert-DEP@maine.gov Five-year Recertification Bureau of Land Resources 17 State House Station Augusta, ME 04333 Tel: (207) 287-2624 or (207) 287-2602

Appendix F
Permit Orders

Appendix F
Water Quality Calculations

BH2M
380B Main Street
Gorham, Maine 04038

WATER QUALITY CALCULATIONS
Cote Crane Expansion

Subcatchment ID	Proposed/Allocated Impervious Area (sf)	Proposed Landscaped Area (sf)	Proposed Developed Area (sf)	Existing Impervious Area (sf)	Existing Vegetated Area (sf)	Treated Offsite Impervious Area (sf)	Treated Offsite Vegetated Area (sf)	Treated Proposed Impervious Area (sf)	Treated Proposed Developed Area (sf)	BMP ID
1	0	2,633	2,633	0	50,626	0	0	0	0	None
1A	1,324	1,953	3,277	0	9,928	0	9,928	1,324	3,277	Soil Filter
1B	33,361	40,417	73,778	8,870	139,563	8,870	139,563	33,361	73,778	Soil Filter
1C	24,997	51,951	76,948	13,480	108,283	13,480	108,283	24,997	76,948	Soil Filter
Total	**59,682**	**96,954**	**156,636**	**22,350**	**308,400**	**22,350**	**257,774**	**59,682**	**154,003**	

The existing and proposed laydown areas have been considered 30% Impervious as required by the City of Auburn

Treatment Summary	
Total Proposed/Allocated Impervious Area (ac) =	59,682
Total Proposed Developed Area (ac) =	156,636
Total Treated Impervious Area (ac) =	59,682
Total Treated Developed Area (ac) =	154,003
Impervious Area Treatment % =	**100.00%**
Developed Area Treatment % =	**98.32%**

Grassed Underdrained Soil Filter Calculations

Subcatchment ID	Impervious Area (sf)	WQ Impervious Area Runoff Depth (inches)	WQ Impervious Volume Required (ft3)	Landscaped Area (sf)	WQ Landscape Area Runoff Depth (inches)	WQ Landscape Volume Required (ft^3)	Total WQ Volume Required (ft^3)
1A	1,324	1.00	110	1,953	0.40	65	175
1B	42,231	1.00	3,519	40,417	0.40	1,347	4,866
1C	38,477	1.00	3,206	51,951	0.40	1,732	4,938
Total	**82,032**		**6,836**	**94,321**		**3,144**	**9,980**

Summary of Underdrain Filter Sizing	
Total WQ Volume Required (ft^3)	9,980
WQ Volume Provided (ft^3)	**9,983**
Filter Surface Elevation	237.00
WQ Surface Elevation	238.50
Invert of Underdrain	234.67
5% of Tributary Impervious Area (sf)	4,102
2% of Tributary Landscaped (sf)	1,886
Filter Surface Area Required (sf)	5,988
Filter Surface Area Provided (sf)	**6,090**

Underdrain Filter Volume				
Elevation	Surface Area (sf)	Average Stage Area (sf)	Stage Volume (sf)	Cumulative Volume (sf)
237	6,090	0	0	0
238	6,841	6,466	6,466	6,466
238.5	7,229	7,035	3,518	9,983
239	7,617	7,423	3,712	13,695
Water Quality Volume Provided (at Elevation 100.5) =				**9,983**

Orifice Sizing	
Discharge Coefficient	0.62
Orifice Size (inches)	1.5
Orifice Size (feet)	0.13
Orifice Area (sf)	0.012
Orifice Centerline Elevation	234.92

Orifice Eqn: $C*A*(2gH)^{1/2}$

Q (cfs)	Stage Elevation	Total Drawdown at Stage	Pond Area	Drawdown Time (hrs)
0.0880	**237**	**0.00**	**6,090**	**0.00**
0.1071	**238**	**1.00**	**6,841**	**17.75**
0.1154	**238.5**	**0.50**	**7,229**	**8.70**
			Total Drawdown Time =	**26.44**

Required Sediment Storage		
Area to be Sanded	0.5	acres
Sand Used per Storm	500	lbs/acre-storm
Weight of Sand	90	lbs/cf
# of Storms per Year	10	storms/year
Sediment Storage Required	**29.25**	**cf/year**

Provided Storage Volume		
Total # of CB's	0	
Sump Depth	2	ft
CB Diameter	4	ft
CB Sediment Storage Volume	0.00	cf
Forebay Volume	297	cf
Total Volume	**297.00**	**cf**

Appendix G
Additional Analysis of BMP's

Summary for Pond 1C: Soil Filter

Inflow Area = 9.966 ac, 18.90% Impervious, Inflow Depth > 2.13" for 100 Year event
Inflow = 9.92 cfs @ 12.89 hrs, Volume= 1.770 af
Outflow = 9.86 cfs @ 12.95 hrs, Volume= 1.533 af, Atten= 1%, Lag= 3.6 min
Primary = 0.12 cfs @ 12.95 hrs, Volume= 0.087 af
Secondary = 9.74 cfs @ 12.95 hrs, Volume= 1.445 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 238.84' @ 12.95 hrs Surf.Area= 7,491 sf Storage= 12,472 cf
Flood Elev= 239.00' Surf.Area= 7,617 sf Storage= 13,695 cf

Plug-Flow detention time= 58.3 min calculated for 1.533 af (87% of inflow)
Center-of-Mass det. time= 21.5 min (878.5 - 857.0)

Volume	Invert	Avail.Storage	Storage Description
#1	237.00'	13,695 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
237.00	6,090	0	0
238.00	6,841	6,466	6,466
239.00	7,617	7,229	13,695

Device	Routing	Invert	Outlet Devices
#1	Primary	234.67'	**6.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 234.67' / 234.50' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#2	Device 1	234.50'	**1.5" Vert. Orifice/Grate** C= 0.600
#3	Secondary	238.50'	**20.0' long x 6.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.67 2.68 2.71 2.75 2.81

Primary OutFlow Max=0.12 cfs @ 12.95 hrs HW=238.84' (Free Discharge)
└**1=Culvert** (Passes 0.12 cfs of 1.59 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.12 cfs @ 9.83 fps)

Secondary OutFlow Max=9.74 cfs @ 12.95 hrs HW=238.84' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 9.74 cfs @ 1.44 fps)

UNDERDRAINED FILTER BASINS

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

COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED BY SATURATION ONLY.

CONSTRUCTION OVERSIGHT: INSPECTION BY A PROFESSIONAL ENGINEER WILL OCCUR AT A MINIMUM:

* AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED,
* AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA,
* AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDED.
* AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS, AND
* ALL THE MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY TO SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.

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

* SELECT SAMPLES FOR SAMPLING OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE COMPOSITE OF THREE DIFFERENT LOCATION (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
* PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COURSE AGGREGATES 1996A) ON EACH TYPE OF THE SAMPLE MATERIAL. THE RESULTING SOIL FILTER MEDIA MIXTURE MUST HAVE 8% TO 12% BY WEIGHT PASSING THE #200 SIEVE, A CLAY CONTENT OF LESS THAN 2% (DETERMINED HYDROMETER GRAIN SIZE ANALYSIS) AND HAVE 10% DRY WEIGHT OF ORGANIC MATTER.
* PERFORM A PERMEABILITY TEST ON THE SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698.

CONSTRUCTION OVERSIGHT

THE APPLICANT WILL RETAIN THE SERVICES OF A STORMWATER INSPECTOR WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS OF THE PERMIT TO INSPECT THE CONSTRUCTION AND STABILIZATION OF ALL STORMWATER MANAGEMENT STRUCTURES. IF NECESSARY, THE INSPECTOR WILL WILL INTERPRET THE STORMWATER FACILITIES CONSTRUCTION PLAN FOR THE CONTRACTOR. ONCE ALL STORMWATER MANAGEMENT STRUCTURES ARE CONSTRUCTED AND STABILIZED, THE INSPECTOR WILL NOTIFY THE DEPARTMENT IN WRITING WITHIN 30 DAYS TO STATE THAT THE STORMWATER FACILITY HAS BEEN COMPLETED. ACCOMPANYING THE INSPECTORS NOTIFICATION MUST BE A LOG OF INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, THE ITEMS INSPECTED ON EACH VISIT, AND INCLUDE ANY TESTING DATA OR SIEVE ANALYSIS DATA OF EVERY MINERAL SOIL AND SOIL MEDIA SPECIFIED IN THE PLANS AND USED ONSITE. CONSTRUCTION INSPECTIONS SHALL TAKE PLACE ONCE A WEEK AS WELL AS BEFORE AND WITHIN 24 HOURS AFTER A STORM EVENT, AND BEFORE PERMANENT STABILIZATION MEASURES ARE INSTALLED.

LOT GRADING AND DRIVEWAY LOCATION

INSPECTIONS BY A PROFESSIONAL ENGINEER WILL CONSIST OF A VISIT TO THE SITE PRIOR TO CONSTRUCTION TO CONSULT WITH THE EARTHWORK CONTRACTOR AND A POST CONSTRUCTION MEETING TO CONFIRM GRADING ON LOTS AND FOR ALL DRIVEWAYS TO ENSURE RUNOFF IS DIRECTED ACCORDING TO PLANS AND TO OVERSEE THE RE-STABILIZATION OF THE LOT INTO A VEGETATED COVER.

STONE BERMED LEVEL LIP SPREADER

INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT EACH LEVEL SPREADERS CONSTRUCTION, STONE BERM MATERIAL AND PLACEMENT, SETTLING BASIN FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE LEVER SPREADER.

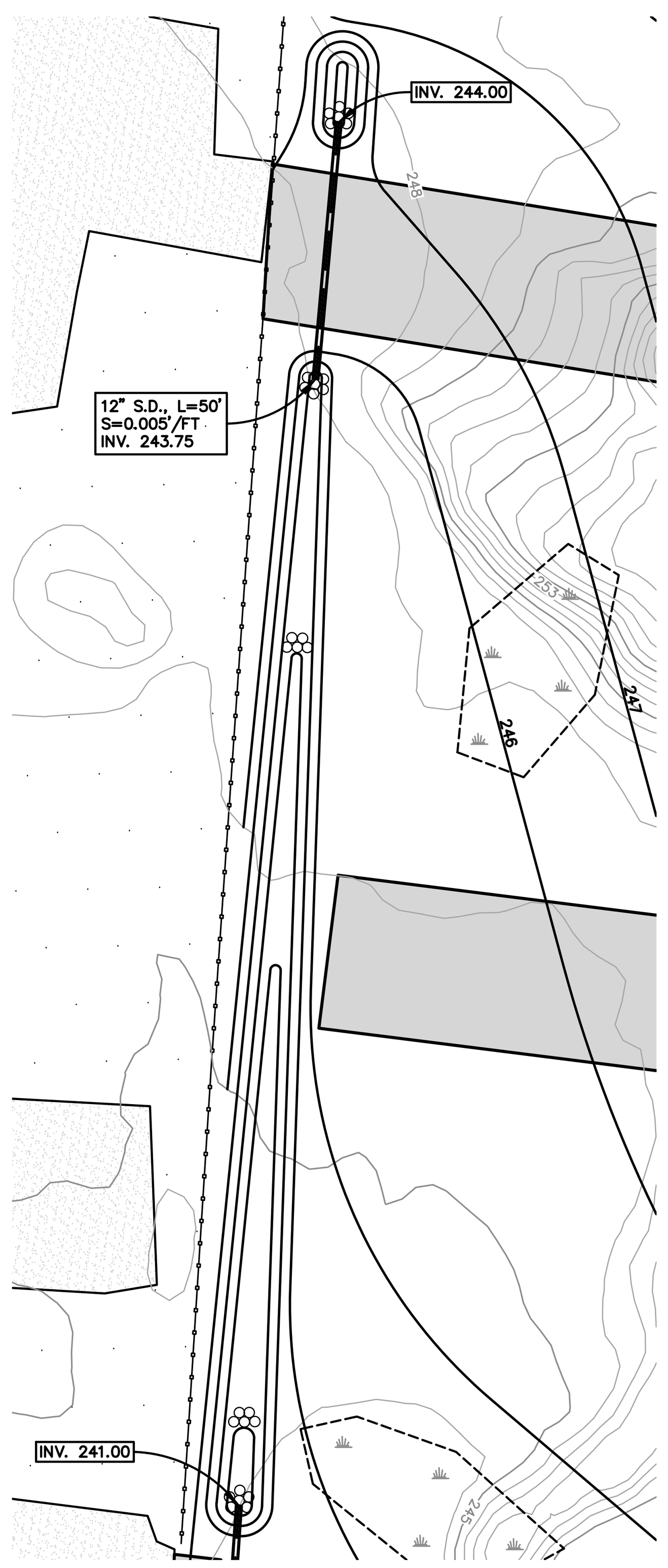
BASIC STANDARDS - EROSION CONTROL MEASURES

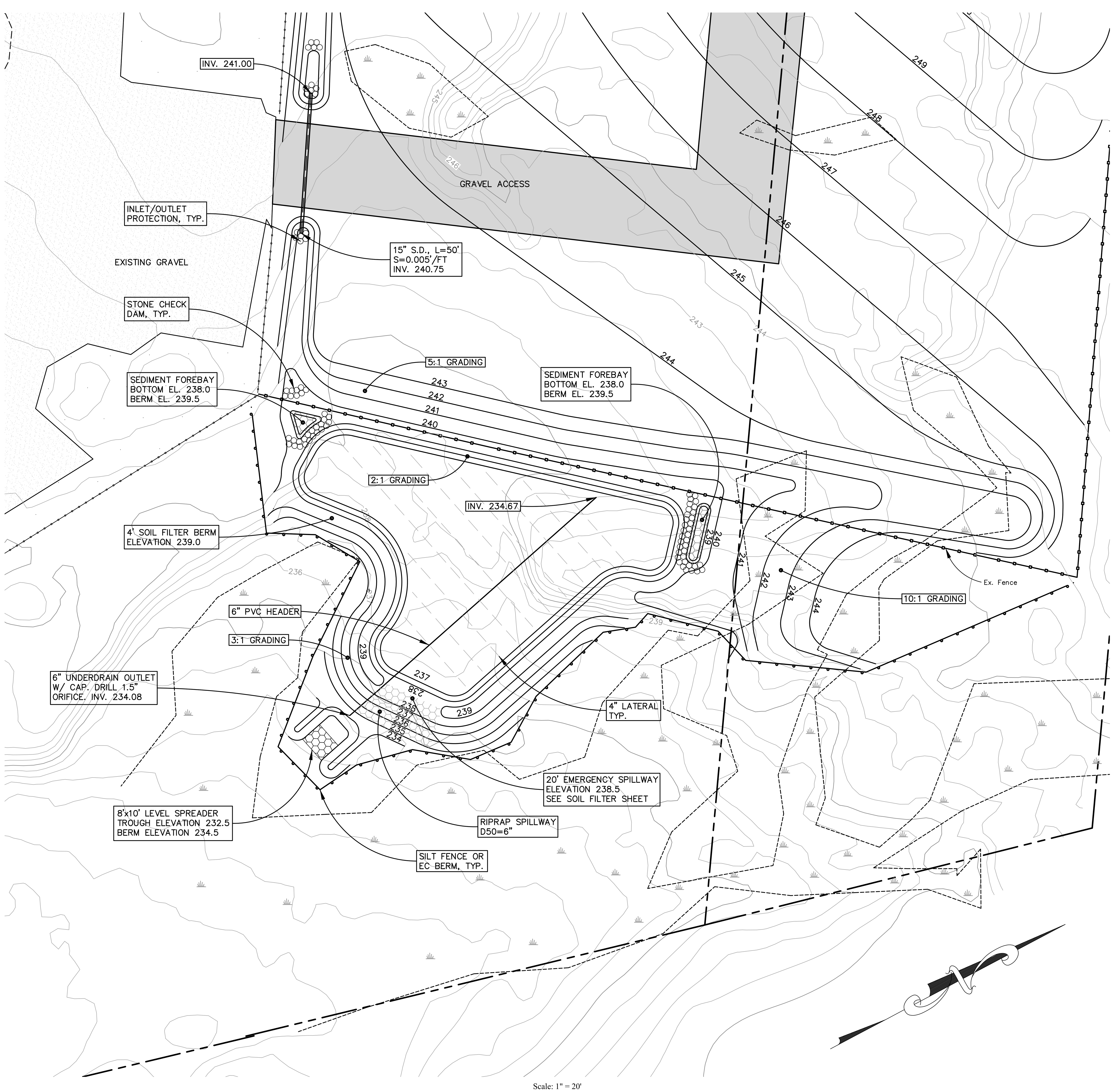
MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE APPLICANT WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. ALL MAINTENANCE ISSUES IDENTIFIED BY THE STORMWATER INSPECTOR NEED TO BE COMPLETED NO LATER THAN THE END OF THE NEXT WORK DAY. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE.

GRASSED UNDERDRAINED SOIL FILTERS:

INSPECTION OF THE FILTER BASIN MUST BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY THE DESIGN ENGINEER WITH REQUIRED REPORTING TO THE DEP. ALL MATERIAL INTENDED FOR THE FILTER BASIN MUST BE APPROVED BY THE DESIGN ENGINEER AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THE MATERIAL CONFORMS TO ALL DEP SPECIFICATIONS. AT A MINIMUM, INSPECTIONS WILL OCCUR:

- AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED (NOT BACKFILLED);
- AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE SOIL FILTER MEDIA;
- AFTER THE SOIL FILTER MEDIA HAS BEEN INSTALLED, SEEDED AND MULCHED; AND
- AFTER ONE YEAR, TO INSPECT VEGETATION AND MAKE CORRECTIONS.

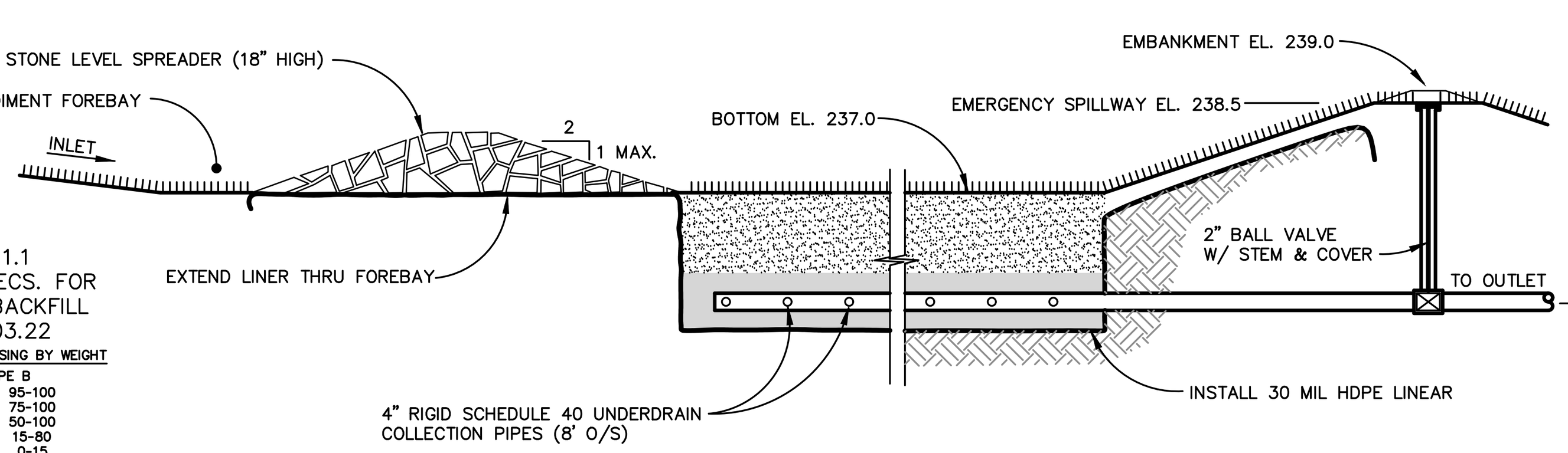




Scale: 1" = 20'

20' 0 10' 20' 40'

NOTE: FOR INFORMATION ON WETLAND IMPACTS SEE SITE PLANS BY JONES ASSOCIATES.



PROFILE

TABLE 7.1.1
MAINE DOT SPECS. FOR UNDERDRAIN BACKFILL
MEDOT #703.22

SIEVE SIZE	% PASSING BY WEIGHT
UNDERDRAIN TYPE B	
1"	95-100
1/2"	75-100
#4	50-100
#20	15-80
#50	0-15
#200	0-5

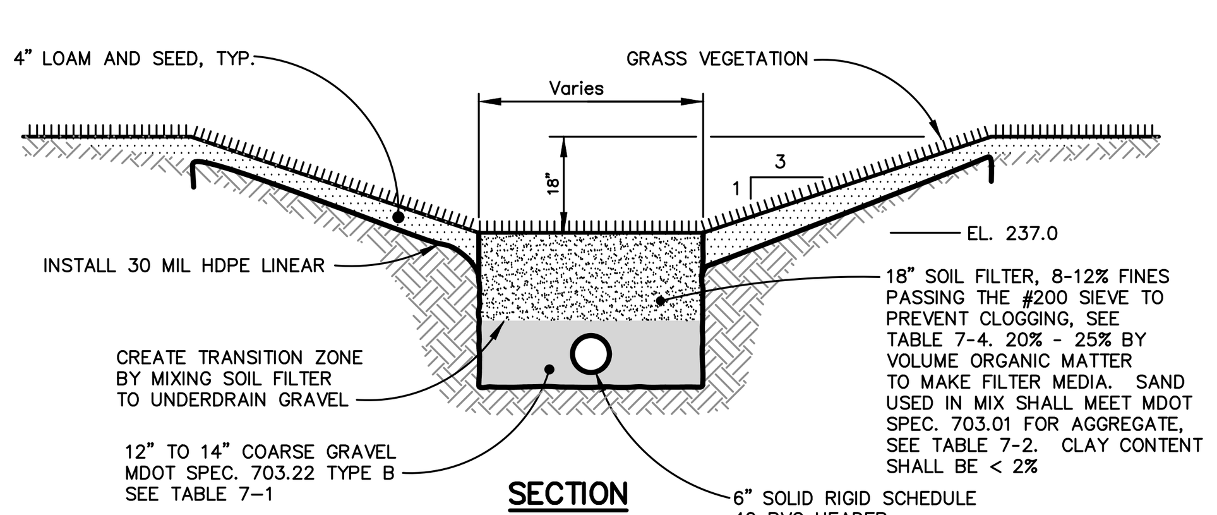
SIEVE SIZE	% PASSING BY WEIGHT
UNDERDRAIN TYPE C	
1"	100
3/4"	90-100
3/8"	0-75
#4	0-25
#10	0-5

TABLE 7.1.2
SANDY LOAM TO FINE SANDY LOAM SPECIFICATION

SIEVE #	% PASSING BY WEIGHT
4	75-95
10	60-90
40	35-85
200	20-70
200 (CLAY SIZE)	< 2.0

TABLE 7.1.3
LOAMY COARSE SAND SPECIFICATION

SIEVE #	% PASSING BY WEIGHT
10	85-100
20	70-100
60	15-40
200	8-15
200	< 2.0



SECTION

GRASSED UNDERDRAIN SOIL FILTER

NTS

LEGEND

SYMBOL	DESCRIPTION
— — —	PROPERTY LINE
- - - -	WETLAND LINE
———	EXISTING CONTOUR
———	PROPOSED CONTOUR
•—•—•	SILT FENCE/EC BERM

NO.	DATE	REVISION DESCRIPTION
1	4/28/21	Draft to Client For Review

STATE OF MAINE
ANDREW S. MORRELL
No. 13285
LICENSED PROFESSIONAL ENGINEER

BH2M
Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors
380B Main Street
Gorham, Maine 04038
Tel. (207) 839-2771
www.bh2m.com

FOR
Jones Associates Inc.
280 Poland Spring Road
Auburn, Maine

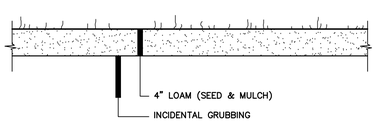
VEGETATED SOIL FILTER PLAN

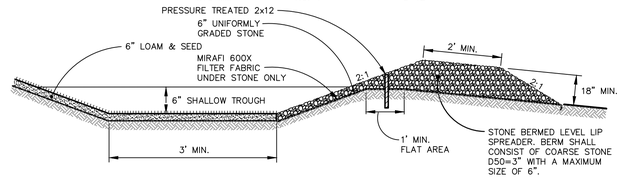
COTE CRANE EXPANSION

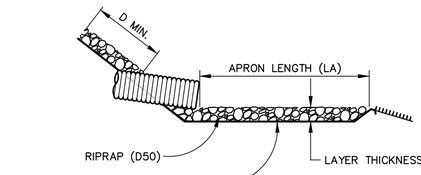
2898 HOTEL ROAD
AUBURN, MAINE

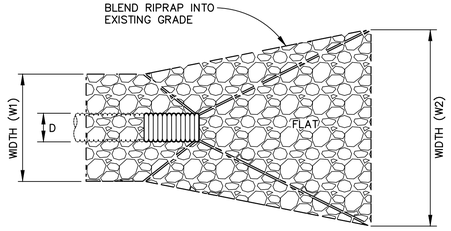
DESIGNED	DATE
A. Fagan	April 2021
DRAWN	SCALE
A. Fagan	As Noted
CHECKED	JOB. NO.
A. Morrell	21022

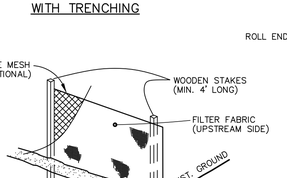
SHEET
1

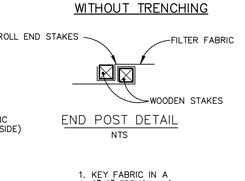












EROSION AND SEDIMENT CONTROL PLAN

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN DEVELOPING AREAS AS CONTAINED IN THE LATEST REVISION OF TO THE 2016 MAINE EROSION AND SEDIMENT CONTROL BMP'S MANUAL FOR DESIGNERS AND ENGINEERS, AND THE LATEST REVISION TO THE 2014 MAINE EROSION AND SEDIMENT CONTROL FIELD GUIDE FOR CONTRACTORS. SEE MANUALS FOR ADDITIONAL INFORMATION AND DETAILS.

DURING CONSTRUCTION THE DEVELOPER/APPLICANT OR THEIR REPRESENTATIVES WILL BE RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL BMP'S AS WELL ROUTINE INSPECTIONS AND MAINTENANCE OF THE BMP'S.

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES ARE SHOWN ON THE SITE PLAN.

1. ALL CONSTRUCTION INSPECTIONS SHALL BE CONDUCTED BY SOMEONE WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING STANDARDS AND PERMIT CONDITIONS. CONSTRUCTION INSPECTIONS SHALL BE PERFORMED AT LEAST ONCE A WEEK, AND PRIOR TO AND 24 HOURS AFTER A WET WEATHER EVENT (1 INCH OR MORE IN A 24 HOUR PERIOD). CONSTRUCTION INSPECTION AND CORRECTIVE ACTION DOCUMENTATION RECORDS SHALL BE MAINTAINED FOR A MINIMUM OF 5 YEARS.
2. THE SCOPE OF CONSTRUCTION INSPECTIONS INCLUDE THE EROSION AND SEDIMENTATION CONTROL MEASURES AS WELL AS DISTURBED AREAS, MATERIAL STORAGE AREAS, AND LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE.
3. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL BMP'S", DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST REVISION.
4. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 7 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 75 FEET OF A WETLAND OR WATERBODY, THE AREA SHALL BE STABILIZED WITHIN 2 DAYS OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.
5. EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRES OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
6. EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY.
7. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO MORE THAN ONE ACRE OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION.
8. SEDIMENT BARRIERS (EROSION CONTROL MIX, STONE CHECK DAMS, STABILIZED CONSTRUCTION ENTRANCE, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. THE CONTRACTOR SHALL MAINTAIN THE STABILIZED CONSTRUCTION ENTRANCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.
9. INSTALL EROSION CONTROL MIX AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE E.C. MIX DETAIL FOR PROPER INSTALLATION. EROSION CONTROL MIX WILL REMAIN IN PLACE PER NOTE #7. THE USE OF AN EROSION CONTROL MIX BERM IS PROHIBITED AT THE BASE OF SLOPES STEEPER THAN 8% OR WHERE THERE IS FLOWING WATER.
10. ALL ERSOION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED, AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY BEFORE AND FOLLOWING ANY SIGNIFICANT RAINFALL (0.5 INCH OR MORE IN A 24-HOUR PERIOD) OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSURE. IF AN INSPECTION DETERMINES THAT A CORRECTIVE ACTION IS REQUIRED, THE ACTION OR REPAIR SHALL BE STARTED BY THE END OF THE NEXT WORKDAY AND COMPLETED WITHIN SEVEN DAYS OR BEFORE THE NEXT STORM EVENT. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF. EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS OF PERMANENT STABILIZATION. PERMANENT STABILIZATION IS 90% GRASS CATCH IN VEGETATED AREAS.
11. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN ONE AND ONE HALF TO ONE (1.5 TO 1).
12. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
13. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED BY AUG. 15 OR 45 DAYS PRIOR TO THE FIRST KILLING FROST (OCT. 1) TO PROTECT FROM SPRING RUNOFF PROBLEMS.
14. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
15. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
    - a. FOUR INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
    - b. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1,000 SQUARE FEET USING 10-20-20 (N-P205-K20) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SQ. FT.).
    - c. FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS: SEEDING RATE IS 1.03 LBS PER 1000 SQ. FT. LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED. SEED MIX SHALL CONTAIN 10% ANNUAL RYE GRASS.
    - d. HAY MULCH AT THE RATE OF 70-90 LBS PER 1000 SQUARE FEET FOR OVER 75% COVERAGE. FOR UNPROTECTED OR WINDY AREAS, ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD./BLOCK). HYDRAULIC MULCHES MAY ALSO BE USED, APPLIED AT A RATE OF 5 LBS PER 1000 SQUARE FEET FOR PAPER MULCH OR 40 LBS PER 1000 SQUARE FEET OR AS DIRECTED BY THE MANUFACTURER. ON SLOPES GREATER THAN 3:1 EROSION CONTROL MIX MAY BE USED, SEE EROSION CONTROL MIX NOTES BELOW.
    - e. FOR DISTURBED AREAS TO BE MAINTAINED IN POST-CONSTRUCTION AS A MEADOW BUFFER, APPLY NEW ENGLAND CONSERVATION WILDLIFE MIX BY NEW ENGLAND WETLAND PLANTS, INC., OF AMHERST, MASSACHUSETTS OR APPROVED EQUAL.

14. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS ONCE THE SITE IS STABILIZED WITH 90% GRASS CATCH IN VEGETATED AREAS. TEMPORARY EROSION AND SEDIMENT CONTROL BLANKET SHALL BE USED IN ALL DITCHES AND SWALES AS SHOWN IN DETAILS.
15. WETLANDS WILL BE PROTECTED WITH EROSION CONTROL MIX OR SILT FENCE INSTALLED AT THE EDGE FOR THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE. ALL AREAS WITHIN 75 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIERS DURING WINTER CONSTRUCTION.
16. ALL STORMWATER WILL BE PREVENTED FROM RUNNING ONTO STOCKPILES. SEDIMENT BARRIERS WILL BE INSTALLED DOWNGRADIENT OF ALL STOCKPILES.
17. PERMANENT POST-CONSTRUCTION BMP'S (VEGETATED SWALES, WET PONDS, ETC.) WILL NOT BE USED TO MANAGE FLOWS DURING CONSTRUCTION WITHOUT SPECIAL PROTECTION AND/OR RESTORATION.

ADDITIONAL TEMPORARY SEED MIXTURE (FOR PERIODS LESS THAN 12 MONTHS):

SEASON	SEED	RATE
SUMMER (5/15 – 8/15)	SUDANGRASS	40 LBS/ACRE
	OATS	80 LBS/ACRE
LATE SUMMER/EARLY FALL (8/15 – 9/15)	PERENNIAL RYEGRASS	40 LBS/ACRE
FALL (9/15 – 11/1)	WINTER RYE	112 LBS/ACRE
WINTER (11/1 – 4/1)	MULCH W/ DORMANT SEED	80 LBS/ACRE**
SPRING (4/1 – 7/1)	OATS	80 LBS/ACRE
	ANNUAL RYEGRASS	40 LBS/ACRE

**SEED RATE ONLY

EROSION CONTROL MIX

EROSION CONTROL MIX (ECM) SHALL MEET THE REQUIREMENTS PROVIDED IN THE LATEST REVISION OF MAINE DEP'S EROSION AND SEDIMENTATION CONTROL BMP MANUAL. ECM IS ACCEPTABLE FOR USE ON SLOPES OF GREATER THAN 3:1 BUT LESS THAN 2:1. ECM SHALL CONSIST OF WELL-GRADED ORGANIC COMPONENT 50 – 100% OF DRY WEIGHT, AND COMPRISED OF FIBROUS AND ELONGATED FRAGMENTS. ECM SHALL BE FREE FROM REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR CONSTRUCTION DEBRIS. ECM SHALL BE EVENLY DISTRIBUTED AND APPLIED AT A THICKNESS OF 2" ON 3:1 SLOPES, WITH AN ADDITIONAL 1/2" PER 20' OF SLOPE FOR A MAXIMUM OF 100' IN LENGTH. SLOPES GREATER THAN 3:1, ECM SHALL BE APPLIED AT THICKNESS OF 4" OR 5" FOR SLOPES GREATER THAN 60' IN LENGTH.

NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN ONE AND ONE HALF TO ONE (1.5:1). EROSION CONTROL MIX IS AN ACCEPTABLE STABILIZATION MEASURE FOR SLOPES UP TO 3:1, WITH LIMITS THAT ARE COVERED BY NOTES ON THIS SHEET. SLOPES BETWEEN 3:1 AND 2:1 SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS, AND ALL SLOPES GREATER THAN 2:1 SHALL BE STABILIZED WITH RIPRAP. SEE SLOPE STABILIZATION DETAIL FOR ADDITIONAL INFORMATION.

TYPICAL LOAM DETAIL

N.T.S.

EROSION CONTROL DURING CONSTRUCTION

WINTER CONSTRUCTION

1. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15
2. OVERWINTER STABILIZATION OF DITCHES AND CHANNELS:
   ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL GRASS LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A DITCH OR CHANNEL IS NOT GRASS-LINED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.
    - A. INSTALL A SOD LINING IN THE DITCH:
      A DITCH MUST BE LINED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES: PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING SOD AT THE BASE OF THE DITCH WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD FROM SLOUGHING DURING FLOW CONDITIONS. SEE THE PERMANENT VEGETATION BMP SECTION.
    - B. INSTALL A STONE LINING IN THE DITCH:
      A DITCH MUST BE LINED WITH STONE RIPRAP BY NOVEMBER 15. A REGISTERED PROFESSIONAL ENGINEER MUST BE HIRED TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE CONTRACTOR WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.
3. OVERWINTER STABILIZATION OF DISTURBED SLOPES:
   ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 1. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS. BY OCTOBER 1 THE DISTURBED SLOPE MUST BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP AS DESCRIBED IN THE FOLLOWING STANDARDS.
    - A. STABILIZE THE SOIL WITH SOD:
      THE DISTURBED SLOPE MUST BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
    - B. STABILIZE THE SOIL WITH EROSION CONTROL MIX:
      EROSION CONTROL MIX MUST BE PROPERLY INSTALLED BY NOVEMBER 15. THE CONTRACTOR WILL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE. SEE THE EROSION CONTROL MIX NOTES FOR ADDITIONAL CRITERIA.
    - C. STABILIZE THE SOIL WITH STONE RIPRAP:
      PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE DEVELOPMENT'S OWNER WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.
4. OVERWINTER STABILIZATION OF DISTURBED SOILS:
   BY SEPTEMBER 15, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% MUST BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.
    - A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION:
      BY OCTOBER 1, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 90% OF THE DISTURBED SOIL BEFORE NOVEMBER 1, THEN MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED BELOW.
    - B. STABILIZE THE SOIL WITH SOD:
      STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLINIG THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
    - C. STABILIZE THE SOIL WITH MULCH:
      BY NOVEMBER 15, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL. PROVIDE NETTING ON ALL SLOPES GREATER THAN 8%.
5. MAINTENANCE:
   IF AN INSPECTION DETERMINES THAT A CORRECTIVE ACTION IS REQUIRED, THE ACTION OR REPAIR SHALL BE STARTED BY THE END OF THE NEXT WORKDAY AND COMPLETED WITHIN SEVEN DAYS OR BEFORE THE NEXT STORM EVENT. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. ONCE A WEEK AND BEFORE AND AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGES AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85 TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

   STABILIZATION SCHEDULE BEFORE WINTER:

SEPTEMBER 15	ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED. ALL SLOPES MUST BE STABILIZED, SEEDED AND MULCHED. ALL GRASS LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR AN EROSION CONTROL BLANKET
OCTOBER 1	IF THE SLOPE IS STABILIZED WITH AN EROSION CONTROL BLANKET AND SEEDED. ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND MULCHED.
NOVEMBER 15	ALL STONE LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED. SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THAT DATE.

6. DURING WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.
7. AREAS WITHIN 75 FEET OF STREAMS, WETLANDS, AND OTHER PROTECTED NATURAL RESOURCES THAT ARE NOT STABILIZED WITH VEGETATION BY DEC. 1 SHALL BE MULCHED AND ANCHORED WITH NETTING. IF WORK CONTINUES IN THIS AREA DURING THE WINTER, A DOUBLE LINE OF SEDIMENT BARRIERS MUST BE USED.

HOUSEKEEPING

1. SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS 1. ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.
2. GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY, AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.
3. FUGITIVE SEDIMENT AND DUST: ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MY NOT BE USED FOR DUST CONTROL. ANY OFFSITE TRACKING OF MUD OR SEDIMENT SHALL BE VACUUMED IMMEDIATELY AND PRIOR TO THE NEXT SIGNIFICANT STORM EVENT.
4. DEBRIS AND OTHER MATERIALS: LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
5. TRENCH OR FOUNDATION DE-WATERING: TRENCH DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER MUST BE REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, AND MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.
6. NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:
    - DISCHARGES FROM FIREFIGHTING ACTIVITY;
    - FIRE HYDRANT FLUSHINGS;
    - VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
    - DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3) OF MAINE DEP 06-096 CHAPTER 500;
    - ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
    - PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
    - UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
    - UNCONTAMINATED GROUNDWATER OR SPRING WATER;
    - FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
    - UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX C(5) MAINE DEP 06-096 CHAPTER 500);
    - POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
    - LANDSCAPE IRRIGATION.
7. UNAUTHORIZED NON-STORMWATER DISCHARGES: THE DEPARTMENT'S APPROVAL UNDER THIS CHAPTER DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH APPENDIX C(6) MAINE DEP 06-096 CHAPTER 500. SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:
    - WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
    - FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
    - SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
    - TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.
8. ADDITIONAL REQUIREMENTS: ADDITIONAL REQUIREMENTS MAY BE APPLIED ON A SITE-SPECIFIC BASIS.

BERM STONE SIZE

SIEVE DISIGNATION METRIC	SIEVE DISIGNATION US CUSTOMARY	% BY WEIGHT PASSING SQUARE MESH SIEVES
300 MM	12"	100
150 MM	6"	84–100
75 MM	3"	68–83
25.4 MM	1"	42–55
4.75 MM	NO. 4	8–12

SECTION

CONSTRUCTION SPECIFICATIONS:

1. SPREADERS SHALL BE INSTALLED WITH A LEVEL INSTRUMENT. CONSTRUCT LEVEL LIP TO 0% GRADE TO ENSURE UNIFORM SHEET FLOWLEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL, NOT FILL.
2. SELECTED GEOTEXTILE FABRIC BASED ON UNDISTURBED SOILS (SANDS, SILTS, CLAYS, ETC.).
3. PLACE UNIFORMLY GRADED STONE (SEE TABLE 5-3).
4. THE INLET DITCH SHALL NOT EXCEED A 1% GRADE FOR AT LEAST 20 FEET BEFORE ENTERING THE SPREADER.
5. STORM RUN-OFF CONVERTED TO SHEET FLOW ACROSS OUTLET APRON SHALL FLOW ONTO STABILIZED AREAS. AREAS. RUNOFF SHALL NOT BE RECONCENTRATED IMMEDIATELY BELOW THE POINT OF DISCHARGE.
6. PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PROVIDED.
7. CONSTRUCTION OF LEVEL LIP SPREADER SHALL BE FROM UPHILL SIDE ONLY. LEVEL LIP AND AREA BELOW SPREADER SHALL BE AT EXISTING GRADES AND UNDISTURBED BY EARTHWORK OR EQUIPMENT EXCEPT AS NOTED ON PLAN.
8. CONSTRUCT SPREADER WITH LIP AT EXISTING ELEVATION AS SPECIFIED.
9. DOWN GRADIANT AND RECEIVING AREA MUST BE NATURALLY WELL VEGETATED.
10. DISCHARGE NOT PERMITTED WITHIN 25' OF A STREAM OR WETLAND, CONSULT DEP IF STRUCTURE MUST BE WITHIN 75' OF SSTREAM OR WATER BODY.

LEVEL LIP SPREADER

NTS

WITH TRENCHING

WITHOUT TRENCHING

END POST DETAIL

NTS

1. KEY FABRIC IN A 6"X6" TRENCH W/ BACKFILL.
2. SILT FENCE SHALL BE A 3' FENCE OF 120LB/M (W/ REINF. BACK OF 6" WIRE MESH, POSTS 6' O.C. MAX) OR 200LB/M (W/ NO REINF. POSTS 6' O.C. MAX)

SILT FENCE DETAIL

N.T.S.

PLACE BARRIER ALONG RELATIVELY LEVEL CONTOUR.
ECM BERM PROHIBITED AT THE BASE OF SLOPES > 8% OR WHERE THERE IS FLOWING WATER.
SEE MAINE EROSION AND SEDIMENT CONTROL FIELD GUIDE FOR CONTRACTORS FOR INSTALLATION INSTRUCTIONS.

EROSION CONTROL MIX SHOULD CONTAIN A WELL GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. ECM SHOULD BE FREE OF REFUSE, PHYSICAL CONTAMINATES, AND MATERIAL TOXIC TO PLANT GROWTH.

- -ORGANIC MATTER > 80% DRY WEIGHT
- -PARTICLE SIZE BY WEIGHT: 100% PASSING 6" SCREEN
  75-85% PASSING 0.75" SCREEN
- -ORGANIC PORTION TO BE FIBROUS & ELONGATED
- -SOLUBLE SALT CONTENT < 4.0 MMOHS/CM.
- -pH TO BE BETWEEN 5.0 & 8.0

EROSION CONTROL MIX BERM

NTS

SECTION

PLAN

APRON SCHEDULE

CULV. DIA. (D)	D50 (IN.)	T (IN.)	LA (FT.)	W1 (FT.)	W2 (FT.)
12" OR LESS	6"	15"	10'	3'	13'
15"	6"	15"	10'	3.75'	14'
18"	6"	15"	12'	4.5'	17'
24"	6"	15"	14'	6'	20'
30"	6"	15"	18'	7.5'	26'
36"	6"	18"	24'	9'	33'
42"	12"	24"	30'	10.5'	41'
48"	12"	24"	34'	12'	46'
60"	18"	32"	38'	15'	53'

PIPE OUTLET PROTECTION

NTS

VEGETATED DITCH DETAIL

NTS

NOTE:
KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" (0.5m) TO PREVENT FLOW AROUND DAM.

ELEVATION

CROSS SECTION

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

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

SPACING

STONE CHECK DAM DETAIL

NTS

NO.	DATE	REVISION DESCRIPTION
1	4/28/21	Draft to Client For Review

ANDREW S. MORRELL
No. 13285

BH2M
Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors
380B Main Street
Gorham, Maine 04038
Tel. (207) 839-2771
www.bh2m.com

FOR
Jones Associates Inc.
280 Poland Spring Road
Auburn, Maine

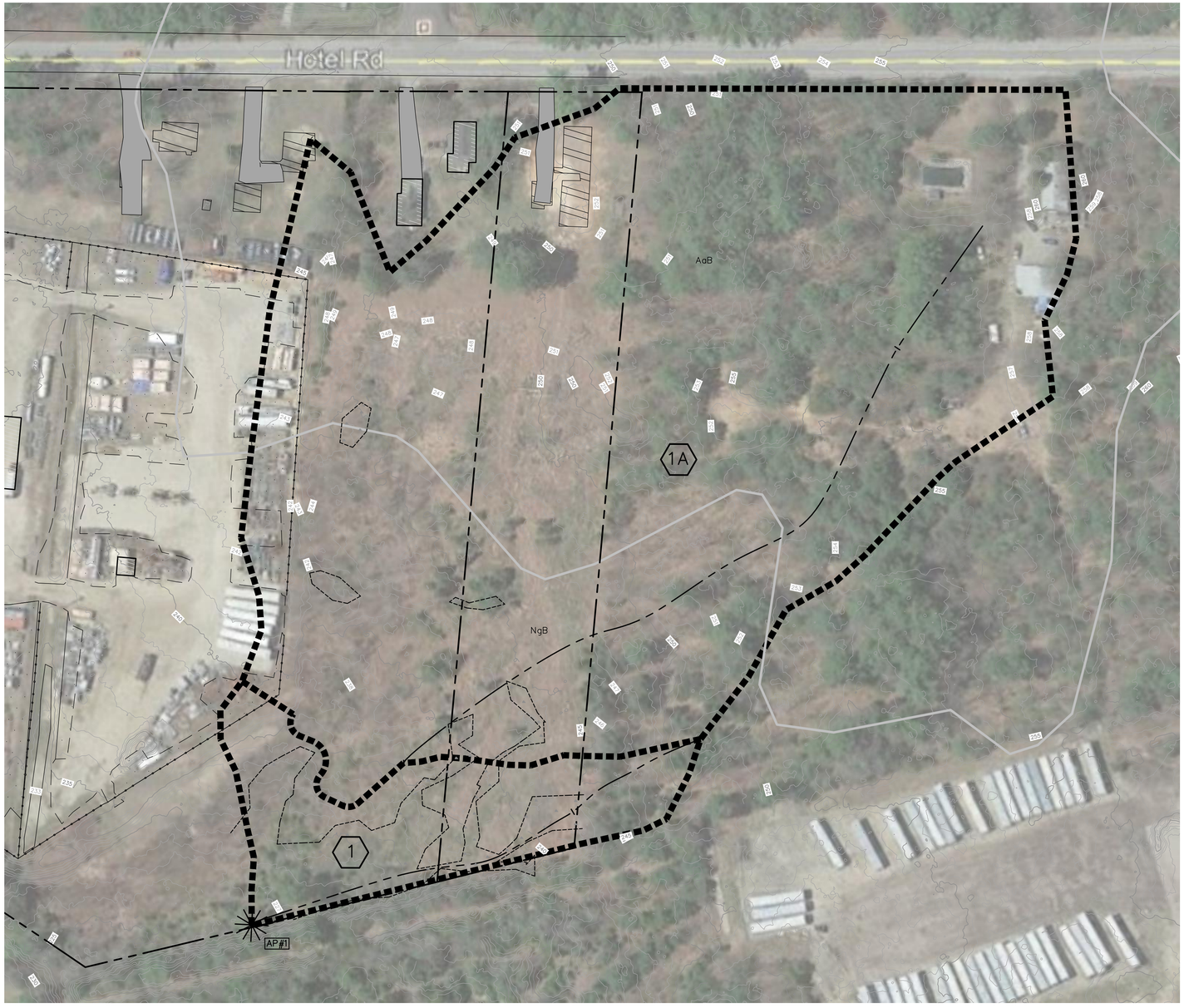
EROSION CONTROL DETAILS

COTE CRANE EXPANSION

2898 HOTEL ROAD
AUBURN, MAINE

DESIGNED	DATE
A. Fagan	April 2021
DRAWN	SCALE
A. Fagan	1" = 60'
CHECKED	JOB. NO.
A. Morrell	21022

SHEET
2



NOTES:

1. OWNER: COTE, LLC.
P.O. BOX 1418
AUBURN, MAINE 04210

2. APPLICANT: COTE, LLC.
P.O. BOX 1418
AUBURN, MAINE 04210

3. SURVEYOR/: WETLANDS JONES ASSOCIATES, INC.
280 POLAND SPRING ROAD
AUBURN, MAINE 04210

4. SOILS PER ANDROSCOGGIN COUNTY MEDIUM INTENSITY SOILS

5. SEE STORMWATER MANAGEMENT REPORT FOR ADDITIONAL INFORMATION

6. LIDAR TOPOGRAPHY FROM NOAA ONLINE DATABASE

7. OFFSITE GROUND COVERS APPROXIMATED USING AERIAL IMAGERY

8. FOR THIS ANALYSIS THE LOWER EASTERN PORTION OF THE PROPERTY THAT WILL NOT BE DEVELOPED CONSISTING OF ALL TYPE C SOILS HAS BEEN CONSIDERED A SEPARATE SUBCATCHMENT FROM THE PORTION OF THE SITE THAT WILL BE DEVELOPED (SUBCATCHMENTS CONSISTS LARGELY OF TYPE A SOILS) TO AVOID INACCURATE MODELLING OF THE WATERSHED. SUBCATCHMENT 1 USES CONSISTENT MODELLING PARAMETERS (TC ROUTE) IN THE PRE AND POST DEVELOPMENT MODELS TO AVOID DISCREPANCIES IN THE PREDICTED RUNOFF TOTALS FOR THE SITE. THE ANALYSIS HAS BEEN PERFORMED IN THIS WAY BECAUSE OF THE CONSTRAINTS OF THE HYDROCAD SOFTWARE.

THE UPPER PORTION OF THE WATERSHED (INCLUDING A LARGE PORTION OF OFFSITE AREA) CONSISTS OF A LARGE PERCENTAGE OF TYPE A SOILS AND WHILE THE LOWER PORTION OF THE WATERSHED CONSISTS OF TYPE C SOILS IN THE PRE DEVELOPMENT CONDITION. IN THE POST DEVELOPMENT CONDITION, A LARGE AREA OF TYPE A SOILS IS DIVERTED TO THE PROPOSED GRASSED UNDERDRAINED SOIL FILTER WHILE THE TYPE C SOILS AT THE BOTTOM OF THE WATERSHED STAY RELATIVELY CONSISTENT. IF WE DID NOT SEPARATE THESE AREAS INTO TWO SEPARATE SUBCATCHMENTS, THEN THE RUNOFF TOTALS FROM THE SUBCATCHMENT WITH SIGNIFICANTLY REDUCED RUNOFF AREA (WITH A SIMILAR TIME OF CONCENTRATION) WOULD PRODUCE MUCH HIGHER PREDICTED RUNOFF TOTALS DUE TO THE WEIGHTED CURVE NUMBER THAT THE MODELLING USES. BY SEPARATING THESE AREAS, WE REMOVE THE EFFECT OF THE WEIGHTED CURVE NUMBER THAT SKEWS THE RESULTS.

PRE DEVELOPMENT FLOWS

ANALYSIS POINT	2 YR. STORM	10 YR. STORM	25 YR. STORM
AP-1	0.84 CFS	2.00 CFS	3.13 CFS

Tc SUMMARY
(FOR THOSE NOT LABELED ON THE PLAN)

SUBCATCHMENT	Tc ROUTE
SA-1	150' SHEET, 344' SHALLOW
SA-1A	150' SHEET, 671' SHALLOW

LEGEND

SYMBOL	DESCRIPTION
12	POND
12	DRAINAGE SUB AREA
R12	REACH
	DRAINAGE AREA BOUNDARY
	TIME OF CONCENTRATION ROUTE
	LIMIT OF WETLANDS
64	EXISTING CONTOUR
64	PROPOSED CONTOUR

SOILS LEGEND

SYMBOL	DESCRIPTION
	SOIL BOUNDARY LINES
	LIMIT OF WETLANDS

SLOPE DESIGNATION
A = 0 – 3%
B = 3– 8%
C = 8 – 20%
D = 20%+

HYDROLOGIC SOIL GROUP

SOIL	GROUP
ADAMS (Aa)	A
NINIGRET (Ng)	C

Scale: 1" = 60'
60' 0 60' 120'

NO.	DATE	REVISION DESCRIPTION
1	4/28/21	Draft to Client For Review

STATE OF MAINE ANDREW S. MORRELL No. 12585 REGISTERED PROFESSIONAL ENGINEER

BH2M
Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors
380B Main Street
Gorham, Maine 04038
Tel. (207) 839-2771
www.bh2m.com

FOR
Jones Associates Inc.
280 Poland Spring Road
Auburn, Maine

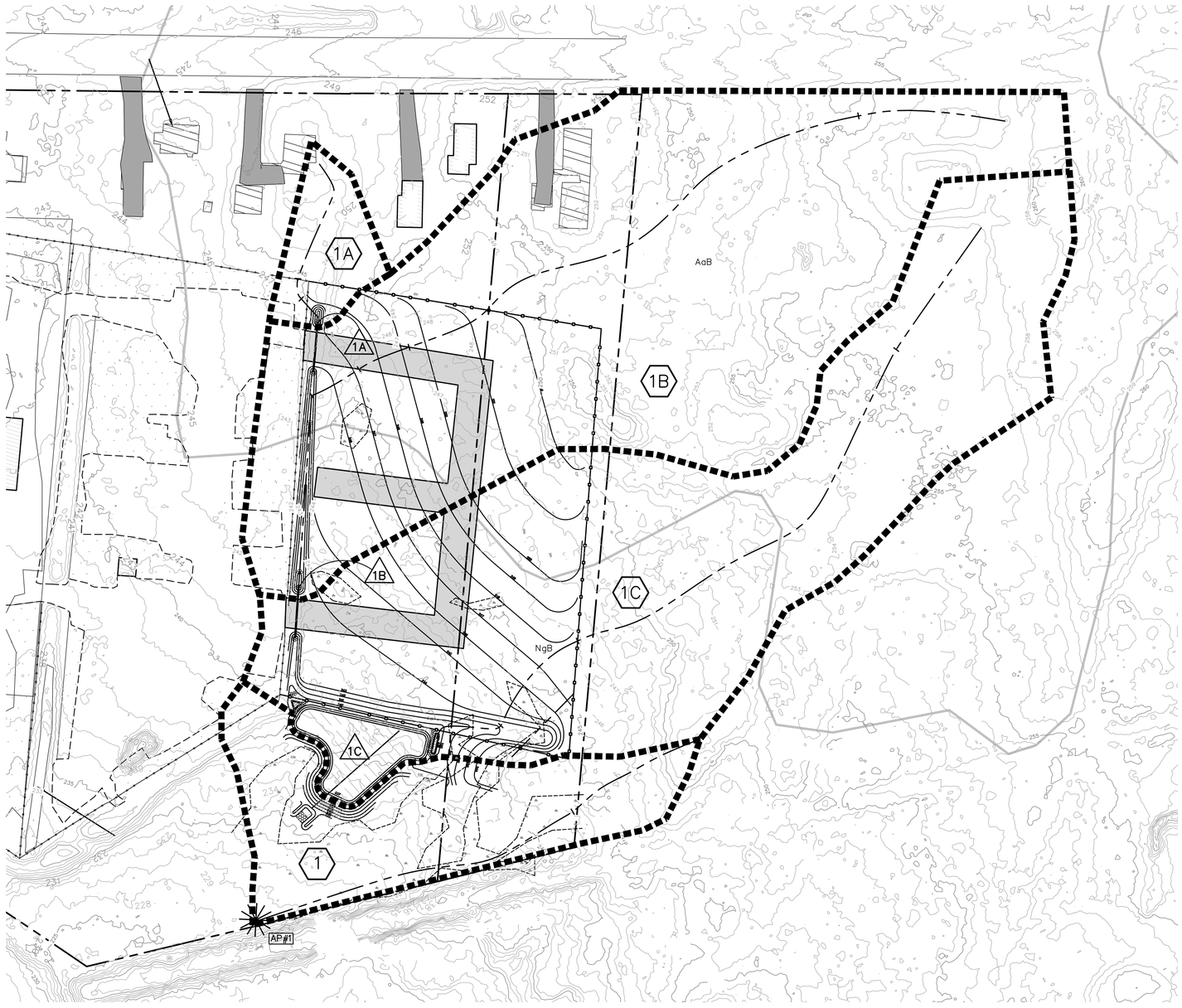
PRE DEVELOPMENT WATERSHED

COTE CRANE EXPANSION

2898 HOTEL ROAD
AUBURN, MAINE

DESIGNED	DATE
A. Fagan	March 2021
DRAWN	SCALE
A. Fagan	1" = 60'
CHECKED	JOB. NO.
A. Morrell	21022

SHEET
A



NOTES:

1. OWNER: COTE, LLC.
P.O. BOX 1418
AUBURN, MAINE 04210

2. APPLICANT: COTE, LLC.
P.O. BOX 1418
AUBURN, MAINE 04210

3. SURVEYOR/: WETLANDS JONES ASSOCIATES, INC.
280 POLAND SPRING ROAD
AUBURN, MAINE 04210

4. SOILS PER ANDROSCOGGIN COUNTY MEDIUM INTENSITY SOILS

5. SEE STORMWATER MANAGEMENT REPORT FOR ADDITIONAL INFORMATION

6. LIDAR TOPOGRAPHY FROM NOAA ONLINE DATABASE

7. OFFSITE GROUND COVERS APPROXIMATED USING AERIAL IMAGERY

8. FOR THIS ANALYSIS THE LOWER EASTERN PORTION OF THE PROPERTY THAT WILL NOT BE DEVELOPED CONSISTING OF ALL TYPE C SOILS HAS BEEN CONSIDERED A SEPARATE SUBCATCHMENT FROM THE PORTION OF THE SITE THAT WILL BE DEVELOPED (SUBCATCHMENTS CONSISTS LARGELY OF TYPE A SOILS) TO AVOID INACCURATE MODELLING OF THE WATERSHED. SUBCATCHMENT 1 USES CONSISTENT MODELLING PARAMETERS (TC ROUTE) IN THE PRE AND POST DEVELOPMENT MODELS TO AVOID DISCREPANCIES IN THE PREDICTED RUNOFF TOTALS FOR THE SITE. THE ANALYSIS HAS BEEN PERFORMED IN THIS WAY BECAUSE OF THE CONSTRAINTS OF THE HYDROCAD SOFTWARE.

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POST DEVELOPMENT FLOWS

FLOW RATE = POST (PRE)

ANALYSIS POINT	2 YR. STORM	10 YR. STORM	25 YR. STORM
AP-1	0.84 (0.84) CFS	2.02 (2.00) CFS	3.53 (3.13) CFS

AS ILLUSTRATED IN THE TABLE ABOVE, DEVELOPMENT OF THE PROPOSED PROJECT WILL CREATE A CONDITION WHERE PEAK RATES OF RUNOFF FROM THE PROJECT SITE EXCEED THE PEAK RATES OF RUNOFF PRIOR TO THE UNDERTAKING OF THE PROJECT AT ANALYSIS POINT 1 IN THE 10, AND 25-YEAR STORM EVENTS. THE PREDICTED INCREASE AT ANALYSIS POINT 1 WILL NOT CREATE ADVERSE IMPACTS TO THE DOWNSTREAM WETLANDS.

Tc SUMMARY

(FOR THOSE NOT LABELED ON THE PLAN)

SUBCATCHMENT	Tc ROUTE
SA-1	150' SHEET, 344' SHALLOW
SA-1A	125' SHEET, 25' SHEET, 23' SHALLOW
SA-1B	150' SHEET, 437' SHALLOW, 295' SHALLOW, 73' SHALLOW, 55' SHALLOW, 196' CHANNEL
SA-1C	150' SHEET, 466' SHALLOW, 119' SHALLOW, 76' CHANNEL

TREATMENT SUMMARY

Subcatchment ID	Proposed/Allocated Impervious Area (sf)	Proposed Landscaped Area (sf)	Proposed Developed Area (sf)	Existing Impervious Area (sf)	Existing Vegetated Area (sf)	Treated Offsite Impervious Area (sf)	Treated Offsite Vegetated Area (sf)	Treated Proposed Impervious Area (sf)	Treated Proposed Developed Area (sf)	BMP ID
1	0	2,633	2,633	0	50,626	0	0	0	0	None
1A	1,324	1,953	3,277	0	9,928	0	9,928	1,324	3,277	Soil Filter
1B	33,361	40,417	73,778	8,870	139,563	8,870	139,563	33,361	73,778	Soil Filter
1C	24,997	51,951	76,948	13,480	108,283	13,480	108,283	24,997	76,948	Soil Filter
Total	**59,682**	**96,954**	**156,636**	**22,350**	**308,400**	**22,350**	**257,774**	**59,682**	**154,003**	

The existing and proposed laydown areas have been considered 30% Impervious as required by the City of Auburn

Treatment Summary	
Total Proposed/Allocated Impervious Area (ac) =	59,682
Total Proposed Developed Area (ac) =	156,636
Total Treated Impervious Area (ac) =	59,682
Total Treated Developed Area (ac) =	154,003
Impervious Area Treatment % =	**100.00%**
Developed Area Treatment % =	**98.32%**

LEGEND

SYMBOL	DESCRIPTION
△12	POND
⬡12	DRAINAGE SUB AREA
R12	REACH
▬ ▬ ▬ ▬	DRAINAGE AREA BOUNDARY
—— – – ——	TIME OF CONCENTRATION ROUTE
- - - - - -	LIMIT OF WETLANDS
——64——	EXISTING CONTOUR
——64——	PROPOSED CONTOUR

SOILS LEGEND

SYMBOL	DESCRIPTION
━━━	SOIL BOUNDARY LINES
—— —— —— -	LIMIT OF WETLANDS

SLOPE DESIGNATION

A = 0 – 3%
B = 3– 8%
C = 8 – 20%
D = 20%+

HYDROLOGIC SOIL GROUP

SOIL	GROUP
ADAMS (Aa)	A
NINIGRET (Ng)	C

Scale: 1" = 60'

60' 0 60' 120'

NO.	DATE	REVISION DESCRIPTION
1	4/28/21	Draft to Client For Review

ANDREW S. MORRELL No. 13285

BH2M
Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors
380B Main Street
Gorham, Maine 04038
Tel. (207) 839-2771
www.bh2m.com

FOR
Jones Associates Inc.
280 Poland Spring Road
Auburn, Maine

POST DEVELOPMENT WATERSHED

COTE CRANE EXPANSION

2898 HOTEL ROAD
AUBURN, MAINE

DESIGNED	DATE
A. Fagan	April 2021
DRAWN	**SCALE**
A. Fagan	1" = 60'
CHECKED	**JOB. NO.**
A. Morrell	21022

SHEET
B

Section 6: Landscape Plan

The expansion is occurring directly adjacent to the existing Cote Crane facility and access to the site with be through the existing facility. The closest point of the expansion to the public road is 190'. Other that the existing abandoned paved driveways that will be demolished and revegetated with grass as shown on the Site Plan, the front of the property abutting Hotel road will remain as in its current state. All other property lines abut wooded areas or the existing facility. Therefor no landscape plan is submitted as an addition to the Site Plan. The existing house at the north end of the property on Hotel road is Owned by Cote, LLC and will remain in place.

Section 7: Lighting

Two full cut off light fixtures are planed for the expansion area as shown on the site plan. These fixtures are for minimal security lighting only. Placement as shown on Site plan is as far from property lines as practical.

NOTES:

1. RECORD OWNER: COTE, LLC

2. PARCEL TAX MAP REFERENCE: EXISTING: CITY OF AUBURN, MAP 107/ LOT 21, MAP 120/ LOT 24
PROPOSED: CITY OF AUBURN, MAP 120/ LOT 21, MAP 120/ LOT 22

3. DEED REFERENCE:

ALL BOOK AND PAGE REFERENCES REFER TO THE ANDROSCOGGIN COUNTY REGISTRY OF DEEDS.

EXISTING: BOOK 1795 PAGE 0147, BOOK 4625 PAGE 298

PROPOSED: BOOK 9225 PAGE 155, BOOK 8159 PAGE 280

4. AREA OF PARCEL EXISTING: 14.8± ACRES.
PROPOSED: 5.4± ACRES

5. ZONING EXISTING: INDUSTRIAL
PROPOSED: GENERAL BUSINESS
REAR SETBACK: 35'
SIDE SETBACK: 25'
FRONT SETBACK: 25'

6. WETLAND BOUNDARIES WERE IDENTIFIED AND DELINEATED BY JONES ASSOCIATES INC IN APRIL 2017 ACCORDING TO U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987) AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION.

4. WETLAND FLAGS WERE LOCATED USING TRIMBLE GLOBAL POSITIONING SYSTEM (GPS) TECHNOLOGY WITH EXPECTED AVERAGE ACCURACY OF SUB-METER. THIS METHOD IS RECOGNIZED BY BOTH STATE AND FEDERAL AGENCIES. HOWEVER, JONES ASSOCIATES, INC RECOMMENDS THAT THE WETLAND BOUNDARY BE SURVEYED USING A MORE PRECISE METHOD OF LOCATION IF ANY FILL OR REGULATED ACTIVITIES ARE TO BE PERFORMED WITHIN 20 FEET OF THE GPS LOCATED WETLAND.

8. THE LOCATION, SIZE, AND DEPTH OF UNDERGROUND UTILITY LINES, TANKS, AND OR STRUCTURES NOT DETERMINED BY THIS SURVEY.

5. PLAN REFERENCES:

A.) PLAN OF THE LAND OF COTE,LLC, AUBURN, MAINE PREPARED FOR COTE, LLC, PREPARED BY JONES ASSOCIATES INC,. DATED MAY 17, 2017, REVISED 5/30/2017.

B.) SITE PLAN MODIFICATION, THE COTE CORPORATION PREPARED FOR THE COTE CORPORATION, LLC PREPARED BY BH2M DATED MAY 2003, REVISED 5/27/2003 NOT RECORDED.

C.) POST DEVELOPMENT WATERSHED, COTE CRANE EXPANSION, PREPARED BY BH2M INC, DATED APRIL 2021

6. WATER SERVICE: EXISTING

7. SEWER SERVICE: EXISTING

CURRENT DEVELOPMENT

TOTAL DEVELOPED AREA: 13.6 ACRES

IMPERVIOUS AREA: 7.85 ACRES

GRASS LAY DOWN AREA: 1.75 ACRES

LAWN AREA: 3.0 ACRES

PROPOSED EXPANSION

NEW GRAVEL ACCESS ROAD: .53 ACRES

NEW GRASS LAY DOWN AREA: 2.4 ACRES

BOUNDARYS ARE BASED ON PLAN REFERENCE A, "PLAN OF THE LAND OF COTE, LLC", PREPARED FOR COTE, LLC, SURVEYOR: MICHAEL A. HARTMAN PLS#2433. AND PLAN REFERENCE B, "SITE PLAN MODIFICATION THE COTE CORPORATION" PREPARED FOR THE COTE CORPORATION, LLC, SURVEYOR: JAMES KACHNOVICH, PLS#1134, MAP 120-22 WHICH IS BOUNDED BOTH ON ITS NORTHERN AND SOUTHERN EXTENTS BY LAND OWNED BY COTE, LLC.IS PARTIALLY SURVEYED ON SAID PLANS.

LEGEND

	SUBJECT BOUNDARY LINE
	ABUTTER OR RIGHT OF WAY LINE
	STONE WALL
	TREELINE
	WETLANDS
N/F	NOW OR FORMERLY
000/000	DEED BOOK PAGE REFERENCE
000-000	TAX MAP AND LOT NUMBER
	DECIDUOUS / CONIFEROUS TREE
⊡ MF	GRANITE MONUMENT FOUND
● IPF/IRF/RBF	IRON PIPE/ROD/REBAR FOUND
◉ DHF	DRILL HOLE FOUND
○ CRBS	5/8" REBAR W/ CAP TO BE SET
	UTILITY POLE
Ⓢ	SEWER MANHOLE
Ⓓ	DRAIN MANHOLE
⊠ ⊗	CATCH BASINS
WSO	WATER SHUTOFF
WV ⋈	WATER VALVE
Ⓦ	WELL
GV ⋈	GAS VALVE
HYD	HYDRANT
✡	LIGHT POST
x x x	FENCE – BARBED WIRE
o o	FENCE – CHAIN LINK
244	PROPOSED CONTOURS
240	EXISTING CONTOURS
	SETBACK
OC OC	OVERHEAD CABLE
OT OT	OVERHEAD TELEPHONE
OU OU	OVERHEAD UTILITIES
OW OW	OVERHEAD WIRES
UC UC	UNDERGROUND CABLE
UE-UC	UNDERGROUND CABLE/ELECTRIC
UT UT	UNDERGROUND TELEPHONE
W W	WATERLINE
SD SD	STORMDRAIN
S S	SEWER LINE
G G	GAS LINE

APPROVAL

APPROVED BY THE TOWN OF AUBURN PLANNING BOARD

CHAIRMAN DATE

Registrar
Androscoggin, ss. Registry of Deeds
Received ____________________at ___ h. __ m. __ M
Recorded in Plan Book __________ Page __________
Attest ____

REVISIONS

NO.	DATE	DESCRIPTION	BY

SITE PLAN MODIFICATION 2
THE COTE CORPORATION
2898 HOTEL ROAD
AUBURN,MAINE

PREPARED FOR:
COTE, LLC
P.O. BOX 1418
AUBURN, ME 04210

PREPARED BY:
JONES
ASSOCIATES INC.
Foresters, Surveyors And
Environmental Consultants
280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

RECORD OWNERS:
COTE,LLC
P.O. BOX 1418
AUBURN, ME 04210

PLAN DATE:
5/5/2020

SCALE: 1"=60'

PROJ. #: 17-033AU

PLAN:
S-1