

### TOWN OF EXETER, NEW HAMPSHIRE

10 FRONT STREET • EXETER, NH • 03833-3792 • (603) 778-0591 •FAX 772-4709 www.exeternh.gov

### PUBLIC NOTICE EXETER CONSERVATION COMMISSION

### Site Walk

The Exeter Conservation Commission will be conducting a site walk on **Tuesday**, **August 9<sup>th</sup>**, **2016 at 5:30 P.M.** The purpose of the walk is to review the Standard Dredge and Fill and Conditional Use Permit application for Tax Map 48-3

### **Monthly Meeting**

The Exeter Conservation Commission will meet in the Nowak Room of the Town Office Building, Exeter on **Tuesday**, **August 9<sup>th</sup>**, **2016 at 7:00 P.M.** 

#### Call to Order:

- 1. Introduction of Members Present
- 2. Public Comment

#### **Action Items**

- 1. Rockingham Planning Commission C-Rise presentation (Julie LaBranche, RPC)
- 2. Proposed Acquisition Map 49/Lot 12 4.7 acres Depart. of Public Works (Kevin Smart, DPW)
- 3. Standard Dredge and Fill and Conditional Use Permit applications for Tax Map 48-3 (*Brendan Quigley, Gove Environmental Services*)
- 4. Committee Reports
  - a. Property Management
    - i. Henderson Swasey Timber Harvest
  - b. Trails
    - i. Trail Committee Meeting Date
  - c. Outreach
    - i. Raynes Farm Fall Festival
  - d. Annual Planning Calendar & Focus Area Overview
- 5. Quarterly Treasurers Report
- 6. Approval of Minutes: July 12, 2016
- 7. Correspondence
- 8. Natural Resource Planners Report
- 9. Other Business
- 10. Next Meeting: Date (9/13/16), Submission Deadline (9/2/16)

Bill Campbell, Vice Chair Exeter Conservation Commission August 3<sup>rd</sup>, 2016 Exeter Town Office, Exeter Public Library, and Town Departments.

#### TOWN OF EXETER PLANNING DEPARTMENT MEMORANDUM

Date:	August 2 <sup>nd</sup> , 2016
To:	Conservation Commission Board Members
From:	Kristen Murphy, Natural Resource Planner
Subject:	August 9 <sup>th</sup> Conservation Commission Meeting

#### Site Walk: 5:30 Before Regular Meeting

The Dredge and Fill Application that will be before you this night includes a parcel of land where the trail for Henderson Swasey passes through private land from the Commerce Drive cul-de-sac. To help with review of the application I suggested and Carlos agreed that a site walk before the meeting may help in your review/recommendations. We will meet at the cul-de-sac and walk the property with the applicant and Gove rep.

#### **C-Rise Presentation**

Julie LaBranche of the Rockingham Planning Commission will be presenting their efforts in the C-Rise (Climate Risk in the Seacoast). See Brochure in packet.

#### Acquisition of Tax Map 49/12

The Department of Public Works is proposing the purchase of 4.7 acres of land adjacent to their facility. In accordance with NH RSA 41:14 a II (c), one step requires a recommendation of the Conservation Commission. This property lies adjacent to a conservation parcel managed by the Commission referred to as the Wilfred Moreau Nursery. In years past the Wilfred Moreau site was used to grow and store trees for replacement of street trees and shrubs for restoration. The appraisal is available for your review in the Planning Department.



### **CLIMATE RISK IN THE SEACOAST**

Assessing Vulnerability of Municipal Assets and Resources to Climate Change

Rollinsford • Dover • Madbury • Durham • Newmarket • Newfields • Exeter • Stratham • Greenland • Newington

Climate Risk in the Seacoast (C-RiSe): Assessing Vulnerability of Municipal Assets and Resources to Climate Change is a project that will provide Great Bay municipalities with maps and assessments of flood impacts to key assets and natural resources associated with projected increases in storm surge, sea level and precipitation. Estimated completion Spring 2017.

### PARTNER ORGANIZATIONS

New Hampshire Department of Environmental Services Coastal Program

#### NH GRANIT

Rockingham Planning Commission

Strafford Regional Planning Commission

**UNH Stormwater Center** 

### CONTACT

For more information about the C-RiSe Project, contact:

Steve Couture NH Coastal Program <u>steven.couture@des.nh.gov</u> (603) 559-0027

The C-RiSe project is funded by the National Oceanic and Atmospheric Administration under the Coastal Zone Management Act (CZMA) Enhancement Program Projects of Special Merit for FY 2015, authorized under Section 309 of the CZMA (16 U.S.C. § 1456b).



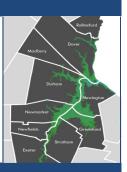


### PROJECT COMPONENTS

#### SEA-LEVEL RISE AND STORM SURGE INUNDATION MAPPING

Water levels for sea-level rise (SLR) and sea-level rise combined with storm surge (SS) scenarios will be mapped for each municipality.

	Sce	enarios	
SLR	1.7 feet	4.0 feet	6.3 feet
SS	1.7 feet + SS	4.0 feet + SS	6.3 feet + SS



### CULVERT ANALYSIS



Modeling will be developed to assess culvert hydrology, hydraulic capacity, and aquatic organism passage at various flows under projected climatic conditions. Modeling results will enable municipalities to identify and categorize culverts for replacement that have inadequate flow capacity and/or present barriers to passage of aquatic organisms.

### **VULNERABILITY ASSESSMENTS**

A vulnerability assessment that quantifies and maps impacts to transportation systems, critical facilities and infrastructure, and natural resources will be conducted for each municipality in order to provide a broad overview of the potential risk and vulnerability of municipal assets and resources resulting from projected increases in storm surge, sea level and precipitation.



### HAZARD MITIGATION PLANNING



Outreach and technical assistance will be provided to each municipality in order to inform municipal leaders about future flood risks and incorporate vulnerability assessment results and adaptation strategies into local planning efforts. Municipal vulnerability assessment reports will be prepared for potential inclusion in local hazard mitigation plans.









# Memo

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To:	Exeter Conservation Commission, Exeter Planning Board
Thru:	Exeter Board of Selectmen
From:	Kevin Smart, Maintenance Superintendent
Date:	29 July 2016
Re:	Carr Property Acquisition
Cc:	Town Manager Russ Dean, Public Works Director Jennifer Perry

Pursuant to NH RSA 41:14-c, a review and recommendation from the Town's Conservation Commission and Planning Board are being requested in conjunction with the Town's purchase of 4.7 acres of land abutting the Exeter Public Works complex on Newfields Road.

The parcel is owned by the Jaye L. Carr Trust 2000, 17 Newfields Road, Exeter, N.H. and identified as Tax Assessor's Map 49, Parcel 12. The parcel has no road frontage and is considered back land, and as such is landlocked by Public Works activities.

The Title Search was conducted by Title Pro., and an appraisal was completed in August 2015 by Craft Appraisals. The Purchase and Sale Agreement, and Deed were generated by Mitchell Municipal Group, P.A. and signed on July 11, 2016 for a purchase price of \$24,000.00.

The intended use is the property is for General Government. A September 2016 purchase completion is desired.

I have attached the following for your review:

- Real Estate Appraisal Report prepared by Crafts Appraisal Associates
- Buffer Map of property
- Executed Purchase and Sale Agreement
- Copy of Warranty Deed

I would like to request that this matter be placed on the Conservation Commission 8/9/2016 meeting, and on the 8/11/2016 Planning Board's meeting agendas for consideration. If you should have any questions, please do not hesitate to contact me.

#### WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS That JAYE L. CARR, Trustee of the Jaye L. Carr Trust 2000, having a mailing address of 17 Newfields Road, Exeter, NH 03833 for consideration paid, grants to THE TOWN OF EXETER, a municipal corporation organized under the laws of the State of New Hampshire and having a mailing address of 10 Front Street, Exeter, NH 03833 with WARRANTY COVENANTS, the following described premises:

A certain tract or parcel of land in Exeter, County of Rockingham and State of New Hampshire, lying easterly of the Newmarket Road, now known as the Newfields Road and/or Route 85, but not adjacent thereto, said parcel of land being on the easterly side of land now or formerly of the Boston & Maine Corp., bounded and described as follows:

Beginning at a point on the easterly boundary of land of Boston & Maine Corp. at the southwesterly corner of the within described premises and at a stone wall at land now or formerly of Exeter Industrial Development Corp. and thence running N 46° E along land of said Boston & Maine Corp. 116 feet, more or less, to a point; thence continuing N 35° 30' E along land of said Boston & Maine Corp. 437 feet, more or less, to appoint at a wall at land now or formerly of Paul E. and Anne S. Molloy; thence turning and running S 75° 30' E along said wall and along land of said Molloys 440 feet, more or less, to a point at land of the Town of Exeter; thence turning and running S 39° 00' W along land of the Town of Exeter 428 feet, more or less, to a point; thence continuing S 69° 30' W along land of the Town of Exeter 252 feet, more or less, to a point at land now or formerly of Exeter Industrial Development Corp.; thence turning and running N 71° W along land of said Exeter Industrial Development Corp. 266 feet, more or less, to the point of beginning.

Together with and including such rights of way as may exist over and across the above mentioned land of Boston & Maine Corp. See that parcel containing 4.7 acres, more or less, on Plan entitled "Sketch Plan of Land, Exeter, N.H., Isaac L. Williams to Charles H. Bickford" dated Sept. 1972 by John W. Durgin Civil Engineers, and recorded in the Rockingham County Registry of Deeds as Plan D-3321 and deed of Isaac L. Williams to Charles H. Bickford et al dated November 20, 1972 and recorded in said Registry at Book 2186, Page 0262.

### STATE OF NEW HAMPSHIRE COUNTY OF ROCKINGHAM

Personally appeared the above-named Jaye L. Carr, Trustee of the Jaye L. Carr Trust 2000, known to me or satisfactorily proven to be the within named, and acknowledged the foregoing instrument for the purposes herein contained as her free act and deed on behalf of said Trust.

Before me,

Notary Public My Commission Expires:

> TRISHA K. ALLEN, Notary Public My Commission Expires February 20, 2018

#### PURCHASE AND SALE AGREEMENT

AGREEMENT made this <u>//</u> day of <u>////</u>, 2016 by and between Jaye L. Carr, Trustee of the Jaye L. Carr Trust/2000, with a mailing address of 17 Newfields Road, Exeter, New Hampshire 03833, (SELLER), and the Town of Exeter, a municipal corporation duly organized under the laws of the State of New Hampshire with a principal place of business and mailing address of 10 Front Street, Exeter, New Hampshire 03833 (BUYER).

### WITNESSETH

1. <u>Premises</u>: SELLER agrees to sell and convey and BUYER agrees to buy land and buildings known as Lot 12, Newfields Road conveyed to the SELLER by deed of Mary Greene, Trustee of the Mary Greene Revocable Living Trust, by deed dated September 26, 2014 recorded in the Rockingham County Registry of Deeds at Book 5563, Page 1625. A copy of said the proposed deed to the BUYER is attached hereto as Appendix A and made a part hereof.

2. Purchase Price:

Purchase Price is \$ 24,000

3. <u>Deed</u>: The property shall be conveyed by a good and sufficient warranty deed conveying good, clear record and marketable title and shall be free and clear of all encumbrances except the Current Use Taxation lien pursuant to RSA 79-A and usual public utilities servicing the property and any matters set forth in Appendix A. The deed shall include a 25' setback along the railroad track side of the property.

4. <u>Transfer of Title</u>: Transfer of title shall take place on or before September 15, 2016 at the offices of BUYER, or such other place and time as may be mutually agreed upon. In the event of a written petition of 50 registered voters presented to the selectmen, prior to the selectmen's vote pursuant to RSA 41:14-a, the transfer of title shall take place no later than April 15, 2017.

5. <u>Possession</u>: Possession of the premises shall be free of all tenants, personal property, and encumbrances except as herein stated and is to be given on or before transfer of title.

6. <u>Agent or Broker</u>: The parties hereto agree that no agent or broker brought about this sale on behalf of either party.

7. <u>Examination of Title</u>: If BUYER desires an examination of title, it shall pay the cost thereof. If, upon examination of title by counsel for the BUYER, the title is unmarketable, the BUYER shall notify SELLER no later than July 1, 2016 of the title defects which cause the title to be unmarketable. In such event, the SELLER shall have the option to use reasonable efforts to remove any such defect in title or to

Agreement is entered into by each party after opportunity for investigation, neither party relying on any statements or representations not embodied in this Agreement, made by the other or on his behalf.

14. <u>Construction of Agreement</u>: This Agreement, executed in duplicate, shall be construed as a New Hampshire contract.

15. <u>Waiver</u>: The waiver by any party of any breach of any provision of this Agreement shall not operate as, or be construed as a waiver of any subsequent breach thereof.

16. <u>Severability</u>: Should any provision of this Agreement or any portion of any provision of this Agreement be held invalid or unenforceable according to law, the remaining portions hereof shall not be effected thereby but shall continue in full force and effect.

WITNESS our hands this \_\_//\_\_\_ day of \_\_\_\_ . 2016. SELL'ER:

JAYE L. CARR, TRUSTEE OF THE JAYE L. CARR TRUST 2000

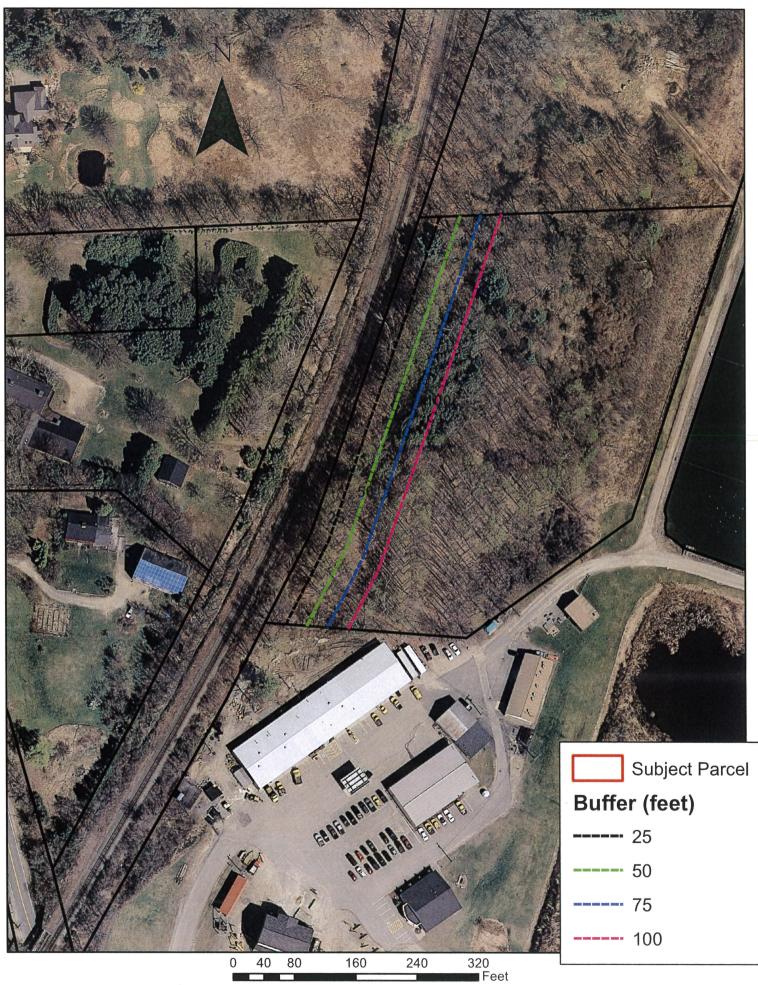
By: e L. Carr, Trustee Instee

BUYER:

TOWN OF EXETER By:

Russell Dean, Town Manager Duly Authorized

### Map 49 Lot 12





# NH DES WETLANDS BUREAU DREDGE & FILL APPLICATION

### For

## C3i, INC.

8 Commerce Way

Exeter, NH

August 3, 2016

Prepared By

Gove Environmental Services, Inc. 8 Continental Dr Bldg 2 Unit H, Exeter, NH 03833-7526 Ph (603) 778 0644 / Fax (603) 778 0654 <u>info@gesinc.biz</u> / www.gesinc.biz

### **Table of Contents**

NH D	ES Drec	lge and Fill Application Form	. i
1.0	Introdu	action	1
2.0	Wetlar	nd Resources	1
	2.1	Wetland Function and Value	2
3.0	Project	t Description and Impacts	2
	3.1	Impacts on Functions and Values	3
	3.2	Wt 302.01 Statement of Purpose	3
	3.3	Wt 302.03 Avoidance & Minimization	3

### List of Figures (located before the Appendicies)

USGS Locus Map USGS Locus Map Reduced Wetland Impact Plan

### List of Appendices

Appendix A	Impact Area Photos
Appendix B	Abutter Information
Appendix C	New Hampshire Natural Heritage Inventory Inquiry
Appendix D	State Historic Preservation Office Inquiry
Appendix E	ACOE Supplemental Information Form
	IPaC Report
Appendix F	Function and Values Assessment Forms
Appendix G	Site Plans (under separate cover)

### NH DES Dredge & Fill Application Form

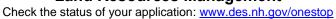


NHDES-W-06-012



### WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau Land Resources Management





RSA/Rule: <u>RSA 482-A</u>/ <u>Env-Wt 100-900</u>

								File	e No.				
Administrative	A				Administrative Use Only			Ch	neck N	No.:			
Use Only		Use Only						An	nount				
								Init	tials:				
1. REVIEW TIME: Indicate your Revi	ew Time belo	ow. To de	termine r	eview ti	me, refer	to Guida	ince Docum	ent A	<u>A</u> for	instruc	tions.		
🛛 Standard Review (Minimum	, Minor or Ma	ijor Impac	rt)		<b></b>	Expedited	d Review (M	linim	um l	mpact (	only)		
2. MITIGATION REQUIREMENT: If mitigation is required a Mitigation-Pre Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if Mitigation is Required, please refer to the <u>Determine if Mitigation is Required Frequently Asked Question</u> .													
Mitigation Pre-Application Mee		onth:	Day:	Year	:								
3. PROJECT LOCATION:													
Separate wetland permit applications	must be subi	nitted for	each mu	nicipalit	y that we	tland imp							
ADDRESS: 8 Comerce Way							TOWN			eter			
TAX MAP: <b>48</b>	BLOCK:				lot: <b>3</b>			U	JNIT:				
USGS TOPO MAP WATERBODY NAME:	Norris Bro	ok			🗆 NA	STREAM	/ WATERSH	ED S	IZE:	51 ac.			🗆 NA
LOCATION COORDINATES (If known):	N181667 E1	172432							Latitu	ide/Long	itude		UTM
Provide a brief description of the proje of vour project. DO NOT reply "See A The project includes a two story loading areas, and stormwater wetland impact and 108 linear f	<u>ttached" in th</u> y, 12,000 SI manageme	ne space i F office a nt featur	<u>provided</u> and ligh res. The	below. It mani projec	ufacturi t propo	ng facili oses a te	ity, assoc	ateo	d ac	cess r	oad,	par	king,
5. SHORELINE FRONTAGE:													
NA This does not have shoreline	frontage.		SHC	RELINE	E FRONT	AGE:							
Shoreline frontage is calculated by de straight line drawn between the prope								e sho	orelin	e fronta	age a	and a	1
6. RELATED NHDES LAND RESOL Please indicate if any of the following To determine if other Land Resources	permit applic	ations are	e required	l and, if	required,	, the state	us of the ap	olica	tion.				
Permit Type		Permit R	equired	Fi	e Numb	er F	Permit App	icati	ion S	status			
Alteration of Terrain Permit Per RSA 4 Individual Sewerage Disposal per RS Subdivision Approval Per RSA 485-A Shoreland Permit Per RSA 483-B	100 / 1.17	🗌 YES					APPRO	/ED /ED		PENDI PENDI PENDI PENDI	NG [ NG [		ENIED ENIED ENIED ENIED
7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS: See the Instructions & Required Attachments document for instructions to complete a & b below.													
<ul> <li>a. Natural Heritage Bureau File ID:</li> <li>b. <u>Designated River</u> the project in date a copy of the application N/A</li> </ul>	s in ¼ miles o			nageme	ent Adviso	; and ory Comr		:h:	_ D	)ay:	Yea	ar: _	

8. APPLICANT INFORMATION (Desired permit holder	.)					
LAST NAME, FIRST NAME, M.I.: C/O Michael Curry						
TRUST / COMPANY NAME: <b>C3i, Inc</b>	ANY NAME: C3i, Inc MAILING ADDRESS: 4 Merrill Industrial Dr. suite #108					Dr. suite #108
TOWN/CITY: Hampton				STATE: <b>NH</b>		ZIP CODE: <b>03842</b>
EMAIL or FAX: mcurry@c3i-usa.com		PHONE	: 60392999	989		
ELECTRONIC COMMUNICATION: By initialing here: electronically	, I hereby author	ize NHDES	to communic	ate all matters r	relative	to this application
9. PROPERTY OWNER INFORMATION (If different th	an applicant)					
LAST NAME, FIRST NAME, M.I.: C/O John Shaftmaster						
TRUST / COMPANY NAME: JSS and Associates	N	IAILING AD	DRESS: 15	8 Shattuck V	Nay	
TOWN/CITY: Newington				STATE: <b>NH</b>		ZIP CODE: 03801
EMAIL or FAX:			PHONE:			
ELECTRONIC COMMUNICATION: By initialing here, electronically	I hereby authori	ze NHDES	to communic	ate all matters re	elative	to this application
10. AUTHORIZED AGENT INFORMATION						
LAST NAME, FIRST NAME, M.I.: Brendan Quigley			COMPANY N Inc.	NAME:Gove E	Invirc	onmental Services,
MAILING ADDRESS: 8 Continental Drive Bldg 2 Unit	н					
TOWN/CITY: Exeter				STATE: <b>NH</b>		ZIP CODE: <b>03833</b>
EMAIL or FAX: bquigley@gesinc.biz	F	PHONE: 6	037780644			
ELECTRONIC COMMUNICATION: By initialing here, electronically	I hereby authori	ze NHDES	to communic	ate all matters re	elative	to this application
11. PROPERTY OWNER SIGNATURE:						
See the Instructions & Required Attachments document for	or clarification	of the belo	w statement	ts		
<ul> <li>By signing the application, I am certifying that: <ol> <li>I authorize the application, I am certifying that:</li> <li>I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.</li> <li>I have reviewed and submitted information &amp; attachments outlined in the Instructions and Required Attachment document.</li> <li>All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.</li> <li>I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.</li> <li>I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.</li> <li>Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.</li> <li>I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for NHPA 106 compliance.</li> <li>I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project.</li> <li>I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.</li> <li>I understand that the willful submission of falsified or misrepresented information.</li> <li>I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.</li> </ol> </li> <li>The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not</li> </ul>						
					/	/
Property Owner Signature	Print name leg	ibly		Da	ate	

shoreland@des.nh.gov</u> or (603) 271-2147 NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095 www.des.nh.gov

### MUNICIPAL SIGNATURES

12. (	CONSERVATION	COMMISSION	SIGNATURE
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The signature below certifies that the municipal conservation commission has reviewed this application, and:

- 1. Waives its right to intervene per RSA 482-A:11;
- 2. Believes that the application and submitted plans accurately represent the proposed project; and
- 3. Has no objection to permitting the proposed work.

 $\Box$ 

Print name legibly

Date

#### DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.

2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.

3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will reviewed in the standard review time frame.

#### 13. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

⇔			
Town/City Clerk Signature	Print name legibly	Town/City	Date

#### DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

- 1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
- 2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
- 3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
- IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
- 5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

#### DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

14. IMPACT AREA:				
For each jurisdictional area that will <u>Permanent</u> : impacts that will remain	be/has been impacted, provide square to after the project is complete.	feet and, if appl	licable, linear feet of impact	
-	premain (and will be restored to pre-con	struction condi	tions) after the project is complete.	
JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.		TEMPORARY Sq. Ft. / Lin. Ft.	
Forested wetland	5183	ATF		🗌 ATF
Scrub-shrub wetland		🗌 ATF		🗌 ATF
Emergent wetland		ATF		ATF
Wet meadow		🗌 ATF		🗌 ATF
Intermittent stream		🗌 ATF		🗌 ATF
Perennial Stream / River	/ 108	ATF	1	🗌 ATF
Lake / Pond	/	ATF	/	🗌 ATF
Bank - Intermittent stream	/	ATF	/	🗌 ATF
Bank - Perennial stream / River	/	🗌 ATF	/	🗌 ATF
Bank - Lake / Pond	/	🗌 ATF	/	🗌 ATF
Tidal water	/	ATF	/	🗌 ATF
Salt marsh		ATF		🗌 ATF
Sand dune		🗌 ATF		🗌 ATF
Prime wetland		ATF		🗌 ATF
Prime wetland buffer		ATF		🗌 ATF
Undeveloped Tidal Buffer Zone (TBZ)		ATF		🗌 ATF
Previously-developed upland in TBZ		ATF		ATF
Docking - Lake / Pond		ATF		🗌 ATF
Docking - River		ATF		🗌 ATF
Docking - Tidal Water		ATF		🗌 ATF
TOTAL	/ 5183		/	
15. APPLICATION FEE: See the I	nstructions & Required Attachments doc	ument for furth	er instruction	
Minimum Impact Fee: Flat fee	of \$ 200			
	Iculate using the below table below			
Permaner	nt and Temporary (non-docking)	<b>5183</b> sq. ft.	X \$0.20 = <b>\$1,036.60</b>	
Tempora	ry (seasonal) docking structure:	sq. ft.	X \$1.00 = <u>\$</u>	
	Permanent docking structure:	sq. ft.	X \$2.00 = <u></u>	
Proje	ects proposing shoreline structures (i	ncluding dock	s) add \$200 = <u></u> \$	<u> </u>
			Total = <b>\$ 1,036.60</b>	
The Applica	ation Fee is the above calculated Total o	r \$200, whiche	ver is greater = <b>\$ 1,036.60</b>	

shoreland@des.nh.gov</u> or (603) 271-2147 NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095 www.des.nh.gov



### WETLANDS PERMIT APPLICATION – ATTACHMENT A MINOR AND MAJOR - 20 QUESTIONS

Water Division/ Wetlands Bureau/ Land Resources Management Check the Status of your application: www.des.nh.gov/onestop



RSA/ Rule: RSA 482-A, Env-Wt 100-900

<u>Env-Wt 302.04 Requirements for Application Evaluation</u> - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:

1. The need for the proposed impact.

The purpose of the proposed project is to construct an office and light manufacturing facility which will allow a growing New Hampshire business to relocate within the state, nearby to their existing operation. The business for which the facility is proposed must relocate due to their lease expiring at the end of the year and must gain approvals to begin construction this coming winter

2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.

The facility has been located in the middle of the large contiguous upland area on the site and outside of the riparian buffer to Norris Brook (150' Exeter Shoreland Protection District). Impacts at the stream crossing are necessary in order to access this buildable upland with no other non-impact option being available. The crossing is located at the narrowest point and also makes use of an existing trail crossing located at the very beginning of the Norris Brook channel. Other impacts have been have limited to the disturbed wetland directly adjacent to Commerce Way and a small point of a wetland finger extending up into the interior of the site. Additional stream impacts or impacts to the large wetland complex to the north and east have been avoided. The proposed alternative is therefore the least impacting alternative.

3.	The type and	classification of the	wetlands involved.
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The dominant wetland is a large beaver impoundment, existing mostly off-site, and containing a complex of
different wetland types. The most relevant wetlands in vicinity of the project are scrub shrub and emergent
wetland (PSS1Hb & PEM5Hb). This large wetland forms the headwaters of Norris Brook which originates at its
southern. The stream begins with a poorly defined channel through a small forested wetland area before the
existing trail crossing where it becomes well-defined channel amongst a steep section of boulders, characteristic
of this area. The stream is depicted on the USGS Map (Exeter quadrangle) as perennial (R5RB2) though has been
observed dry on nearly all occassions.

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

The wetlands are associated with Norris Brook

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

The wetalnds asccoaied with this project are not uncommon in this area or in NH.

6. The surface area of the wetlands that will be impacted.

The project proposes a total of 5,183 square feet of direct wetland impact and 108 linear feet (36.1' x3) of impact to a perennial stream.

7.	The impact on plants,	fish and wildlife including, but not limited to:
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- a. Rare, special concern species;
- b. State and federally listed threatened and endangered species;
- c. Species at the extremities of their ranges;
- d. Migratory fish and wildlife;
- e. Exemplary natural communities identified by the DRED-NHB; and

f. Vernal pools.

The New Hampshire Natural Heritage Bureau (NHB16-2067) has indicated there is a single rare plant species and rare animal located in the vicinity of the project site. The attached correspondence with Amy Lamb indicates that that there are no concerns with the plant species since the project will n ot impact its habitat. A response from Fish and Game regarding the rare animal occurance was pending at the time of this application. An update will be provided when available.

Additionally, the USFWS was contacted via the IPaC project review portal. This review indicated the project was within the range of the threatened Northern Long Eared Bat. Though forested, the project will commence this winter with all tree removal being conducted outside the time of year restriction specified in the 4d rule for this species.

8. The impact of the proposed project on public commerce, navigation and recreation.

The project will have net positive impact on public commerce through job creation, tax base, and the sales of the goods that facility will create. The property is entirely private and offers no right of public recreation. The project will however allow the for continued access to the abutting town forest trails. The property does not have any connectivity for waterway navigation.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

The site of the proposed project is an existing development lot within an existing induistrial park. The proposed deevelopment is entierly consistent with the existing uses and zoning and should have no impact on the aesthetic intersts of the public .

0. The extent to which a project interferes with or obstructs public rights of passage or ad	ccess. For example, where the
applicant proposes to construct a dock in a narrow channel, the applicant shall be rec	uired to document the extent to
which the dock would block or interfere with the passage through this area.	

This site is private property with no current right of public passage. The informal but well used access trail to the adjacent town forest trail system will, however, be re-routed by the applicant and continued access will be allowed
11. The impact upon abutting owners pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.
Proposed impacts are completely contained on the site and will not affect chutters in any way. The open better
Proposed impacts are completely contained on the site and will not affect abutters in any way. The open bottom arch crossing exceeds stream crossing standrads and will not alter the flow of Norris Brook. Drainage from the proposed development will be handled on-site by a series of gravel wetlands and bio-retentio basins, therefore ensuring there will be no impact to abutting properties upstream or downstream from the site.
12. The benefit of a project to the health, safety, and well being of the general public.
The project invoves the construction of a facility that will serve as office space and light manufacturing space, consistent with the other uses in this industrial zoned area of Exeter. The project will have no effect on public health or well being

shoreland@des.nh.gov NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095 www.des.nh.gov

13. The impact of a proposed project on quantity or quality of surface and ground water. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.
The comprehensive stormwater management proposed for the development will ensure that there is no chang to the quantity or quality of stormwater post development.
14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.
These interests will be protected during the construction term through best management practices as specified in the plans. Post development the stormwater management system will ensure that erosion and sedimentation do not occur.
15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.
The proposed project does not involve ellements of wave action or current.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.

The size of the wetlands on site is very small in relation to the overall size of the wetland complex which lies primarly off site. The proposed impacts are an even smaller portion of the this wetland and involve a crossing of a minimal size. If similar impacts were allowed to other owners net effects would be commensuratly small.

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

The wetland associated with the project site does likely provide a number of functions and values by virtue of its association with a large wetland complex and existing town forest. Principle among these are likely wildlife habitat, water quality, and public recreation/aesthetic value. The majority of these functions and values, however, are derived from the main body of the wetland which lies mostly off-site on town forest land. The small area of wetland directly adjacent to Commerce Way, has clearly been extensively disturbed and is closely bordered by development. It is and separated from Norris Brook and other resources areas by a largely buried culvert and small dirt road. The Functions and values of the finger like projection on the interior of the site is limited by its loose association with Norris Brook and the large wetland to the north. These area has comparatively limited value likely only that of water quality as it appears to receive runoff from the developed areas nearby. Impacts to these two areas will have negligible effects on the overall functions and values of the wetland areas. The potential impact of the proposed crossing of Norris Brook will be minimized by the use of an open bottom arch structure, arch structure which will maintain stream channel continuity for hydraulic and wildlife purposes

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural
Landmarks, or sites eligible for such publication.

No such areas have been identified

19. The impact upon the value of areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

No such areas have been identified

20. The degree to which a project redirects water from one watershed to another.

The project does not redirect water

PLEASE SEE THE ATTACHED TEXT AND ATTACHMENTS FOR ADDITONAL INFORMATION.

### **1.0 Introduction**

This Minor Impact Dredge and Fill Application is being submitted by 8 Commerce Way in Exeter, NH. The project site, identified on assessor Map 48 as Lot 3, totals 6.2 acres located near the end of Commerce Way. The site is a planned industrial lot currently vacant and entirely wooded. The proposed project involves the construction of an office and light manufacturing facility, associated access, parking, access, and stormwater management. This facility is being proposed for a NH business currently located in Hampton and faced with relocation due to an expiring lease. In order to complete and be able to occupy the new facility prior to their lease expiring, construction must commence this winter. The Town of Exeter, in conjunction with the applicant, will be requesting expedited review of this application through Standard Operating Procedure 201. The following sections and appendices provide details on the proposed project, the proposed impacts, and the requirements outlined in Env-Wt 300.

### 2.0 Wetland Resources

The wetlands on the site were delineated by Gove Environmental Services in the fall of 2014 utilizing the standards of the Corps of Engineers *Wetlands Delineation Manual*<sup>1</sup> and the NH DES Wetlands Bureau *Code of Administrative Rules*<sup>2</sup>. Dominant hydric soil conditions within the wetlands were identified using the criteria in *Field Indicators for Identifying Hydric Soils in New England*<sup>3</sup>. Wetland flags were located by Doucet Survey, Inc. with portions resurveyed in 2016 by MSC/TFM. Wetlands were classified by GES utilizing the *Classification of Wetlands and Deepwater Habitats of the United States*<sup>4</sup>.

The dominant wetland is a large beaver impoundment, existing mostly off-site, and containing a complex of different wetland types. The most relevant wetlands in vicinity of the project are scrub shrub and emergent wetland (PSS1Hb & PEM5Hb). This large wetland forms the headwaters of Norris Brook which originates at its southern end. The stream begins with a poorly defined channel through a small forested wetland area before it reaches an existing trail crossing where it becomes well-defined channel amongst a steep section of boulders that are characteristic of this area. The bank full width of the stream ranges from 4 feet at the existing trail to about 8 feet just below the proposed crossing location. The stream is depicted on the USGS Map (Exeter quadrangle) as

Washington, D.C.: U.S. Department of the Interior, Fish and Wildlife Service.



<sup>&</sup>lt;sup>1</sup> Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station: NTIS No. AD A176 912. <sup>2</sup> NH Code Admin, R. [Wt] Ch. 100-800.

<sup>&</sup>lt;sup>3</sup> New England Hydric Soils Technical Committee. 2004. 3rd ed., Field Indicators for Identifying Hydric Soils in New England. Lowell, MA: New England Interstate Water Pollution Control Commission.
<sup>4</sup> Cowardin, L. M., 1979. Classification of Wetlands and Deepwater Habitats in the United States.
Wetlands, D. M. 2019. Classification of Wetlands and Deepwater Habitats in the United States.

perennial (R5RB2) though it has been observed dry on numerous occasions during investigations on this site since 2014. The contributing watershed of this stream the proposed crossing is only 51 acres as calculated using the USGS Stream Stats web application. The proposed crossing has therefore been classified as a Tier I crossing. Several other areas of red maple forested wetland (PFO1) exist at the edges of the site.

### 2.1 Wetland Function and Value

A functional assessment of the wetlands on and associated with the project site was conducted by GES during wetland delineation and subsequent field visits using the US Army Corps of Engineers' Highway Methodology Workbook Supplement (NAEEP-360-1-30a, September 1999). Functions and values are identified as "principal" if they are determined to be a significant physical feature of the wetland system, as compared to other functions and values. According to the USACE, the function/value qualifier as "principal" does not mean that the function or value identified is exceptional, but that the particular function/value is demonstrated more than any other function or value in the Highway Methodology Workbook. Forms used in this evaluation are attached to this application

The large wetland complex associated with the project site does likely provide a number of functions and values by virtue of its association with Norris Brook and the existing town forest. Principle among these are likely wildlife habitat, water quality, and public recreation/aesthetic value. The majority of these functions and values, however, are derived from the main body of the wetland which lies mostly off-site on town forest land. The Norris Brook Stream corridor likely serves as a habitat connection between these headwater wetlands and other wetland and upland habitats downstream of the site.

The small area of wetland directly adjacent to Commerce Way, has clearly been extensively disturbed dating back to the construction of Commerce way or perhaps by past uses of the land. It is closely bordered by development and separated from Norris Brook and other resources areas by a culvert under a small dirt road. The value of this area may be limited to modest water quality function as it appears to receive runoff from the surrounding developed areas. The finger like projection where a small impact is proposed in the interior of the site is quite far removed from both Norris Brook and is not associated with the large wetland to the north.

### 3.0 Project Description and Impacts

The proposed project is to construct a two story, 12,000 SF office and light manufacturing facility, associated access road, parking, loading areas, and stormwater management features. The lot is currently vacant woodland except for a few informal recreation trails which access the adjacent Town Forest. Though on private property these trails are well used and the applicant has committed to providing continued access and



several gravel parking spaces in the site for this propose. Stormwater management includes innovative elements such as several gravel wetland areas and a bio-retention ponds.

The project proposes a total of 5,183 square feet of direct wetland impact and 108 linear feet  $(36.1'x \ 3)$  of impact to a perennial stream. The stream crossing will utilize an open bottom arch structure which will span 58" of the channel, slightly more than 1.2X the bank full with of the channel at the exiting trail crossing. The crossing structure is detailed on the attached plans as are the impact areas.

### **3.1 Impacts on Functions and Values**

Development of this site will be consistent with the other adjacent property. Public access to the town forest will be maintained by the applicant, therefore maintaining the important public aesthetic and recreation interests of the wetlands in this area. The potential impacts of the proposed crossing of Norris Brook on wildlife and water quality will be minimized by the use of an open bottom structure which exceeds the stream crossing requirements for a Tier 1 crossing. The large open bottom arch structure will maintain stream channel continuity for hydraulic and wildlife purposes. The other two proposed impact are located within the disturbed wetland directly adjacent to Commerce Way and a small point of a wetland finger extending up into the interior of the site. These areas are not closely associated with Norris Brook or the larger more valuable wetlands near the site. The small proposed impacts to these areas will therefore have negligible effects on the overall functions and values of the wetland complex.

### 3.2 Wt 302.01 Statement of Purpose

The purpose of the proposed project is to construct an office and light manufacturing facility which will allow a growing New Hampshire business to relocate within the state, nearby to their existing operation. The business for which the facility is proposed must relocate due to their lease expiring at the end of the year and must gain approvals to begin construction this coming winter.

### 3.3 Wt 302.03 Avoidance & Minimization

The facility has been located in the middle of the large contiguous upland area on the site and outside of the riparian buffer to Norris Brook (150' Exeter Shoreland Protection District). Impacts at the stream crossing are necessary in order to access this buildable upland. The are no other alternatives will with less impacts. The crossing is located at the narrowest point and also makes use of an existing trail crossing located at the very beginning of the Norris Brook channel and makes use of an oversize, open bottom structure. Additional stream impacts or impacts to the large wetland complex to the north

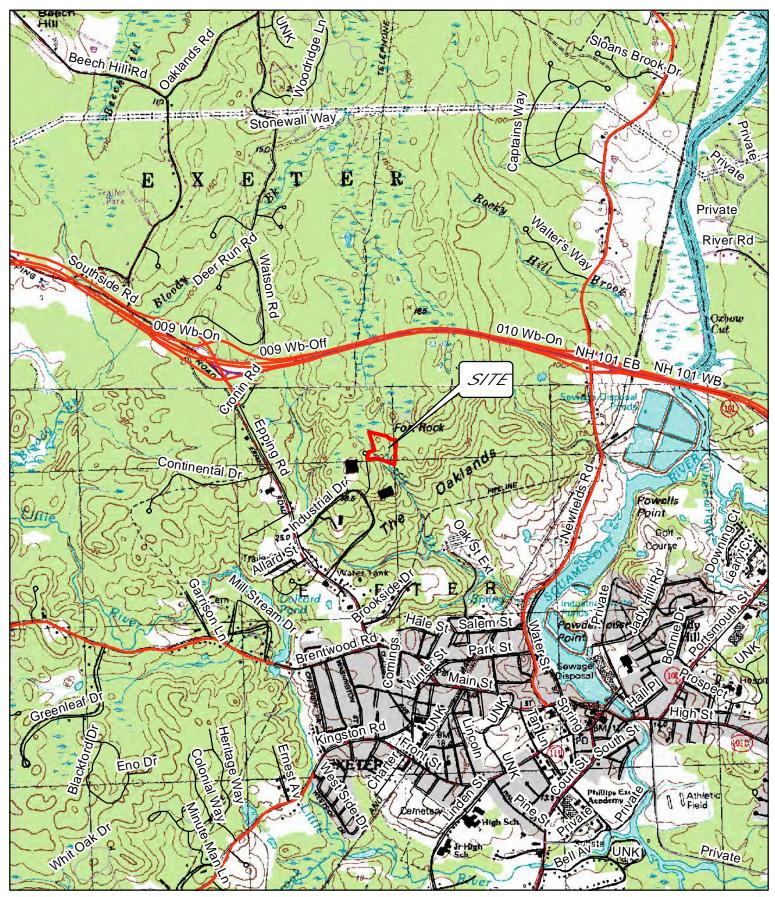


and east have been avoided. The proposed alternative is therefore the least impacting alternative.



Figures



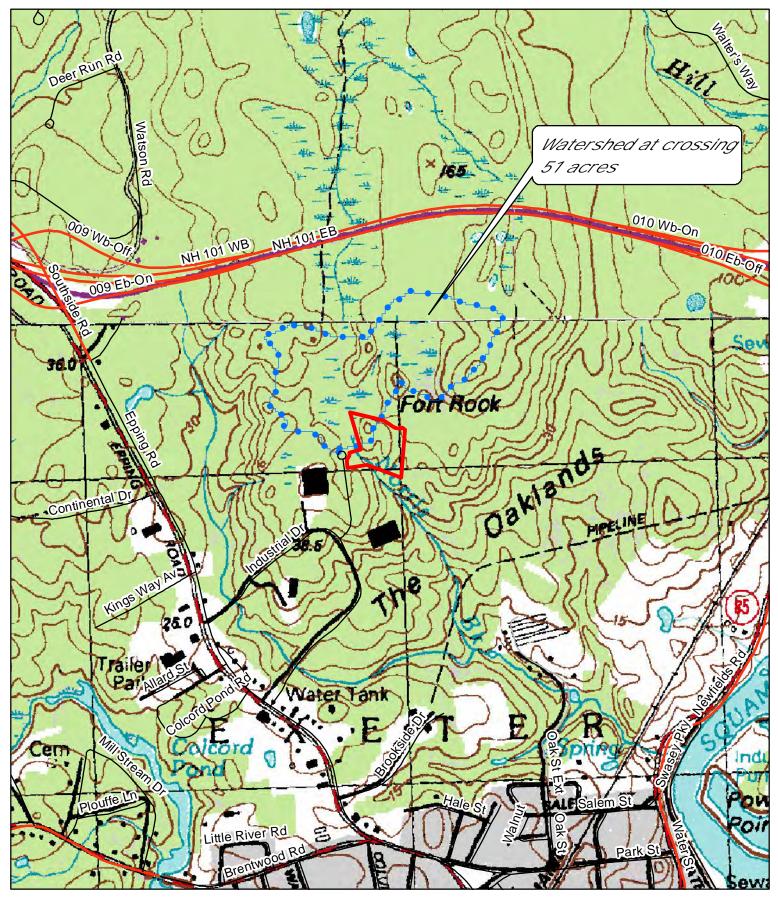


### **(**) 1 inch = 2,000 feet

### Locus Map

Map48 Lot 3 Commerce Way Exeter, NH

GCS Gove Environmental Services, Inc. 8 Continental Drive, Bldg 2 Unit H. Exeter NH 03833 603.778.0614

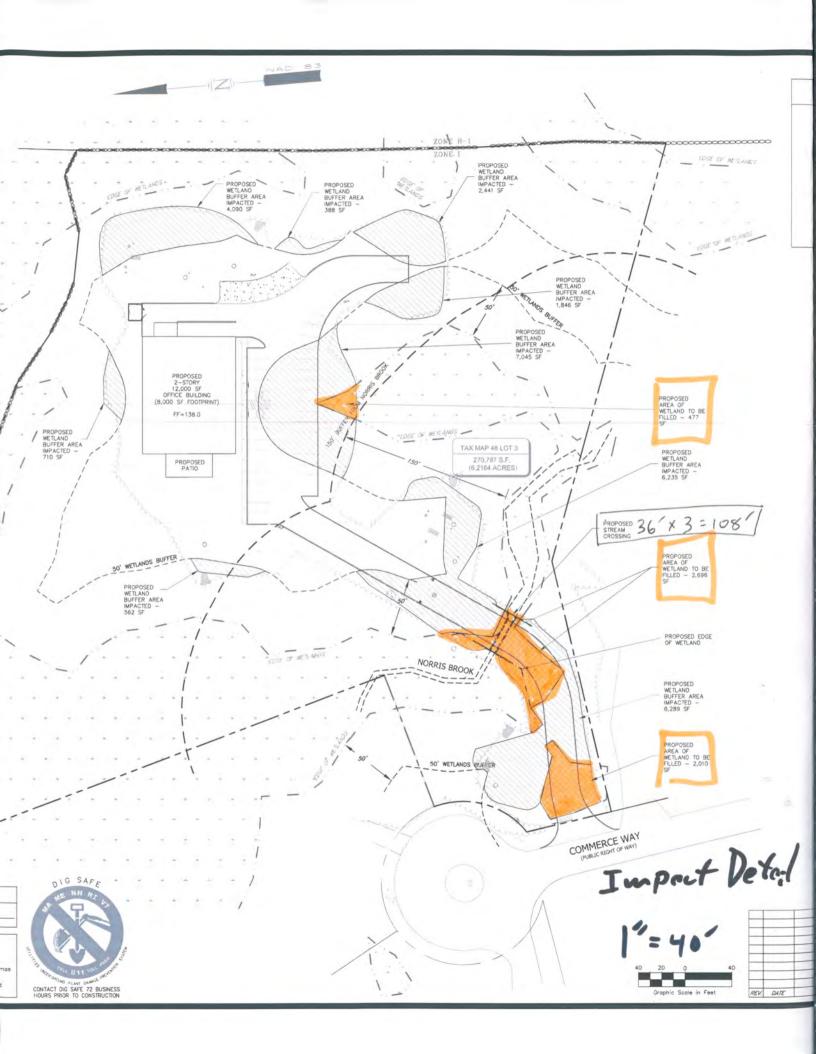




### Watershed Map

Map48 Lot 3 Commerce Way Exeter, NH

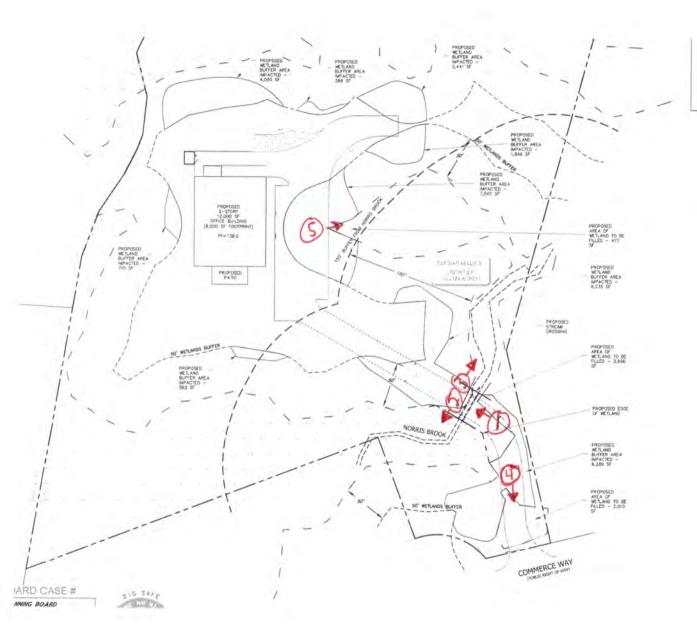
GCS Gove Environmental Services, Inc. 8 Continental Drive, Bldg 2 Dull H. Eveter N.H. 03833 608.578.0644



Appendix A

**Impact Area Photos** 





> TOTAL AREA OF TOTAL AREA OF

> > NOTE: LOCAL, AND S

Import Area Photo Locations

Impact Area Photos C3i, Inc. 8 Commerce Way Exeter, NH



Photo 1: A stone ford and plank trail crossing currently in place in location of proposed crossing



Photo 2: looking up-stream from proposed crossing, poorly defined channel

Impact Area Photos C3i, Inc. 8 Commerce Way Exeter, NH



Photo 3: Downstream form the crossing the stream develops a well-defined channel amongst boulders



Photo 4: Impact area right off of Commerce Way

Impact Area Photos C3i, Inc. 8 Commerce Way Exeter, NH

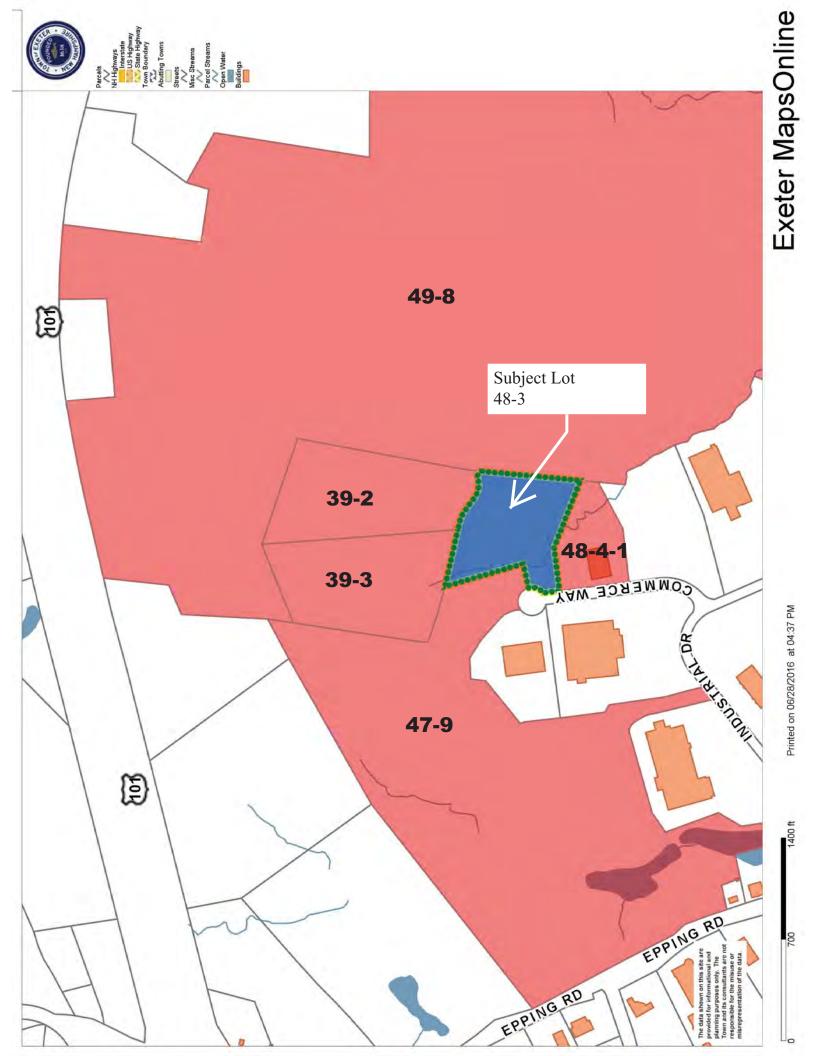


Photo 5: Impact Area to point of wetland on the interior of the site

Appendix B

**Abutter Information** 





### **SUBJECT PARCEL**

TAX MAP 48-LOT 3 JSS & Associates 158 Shattuck Way Newington, NH 03801

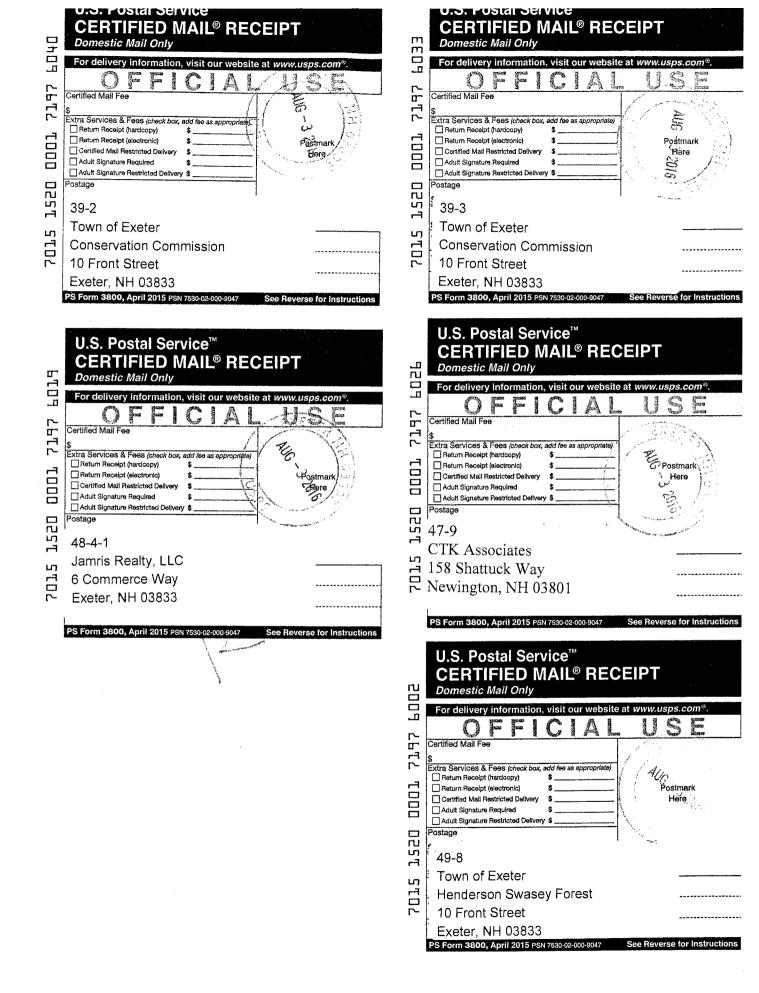
### **ABUTTERS:**

39-2 Town of Exeter Conservation Commission 10 Front Street Exeter, NH 03833

39-3 Town of Exeter Conservation Commission 10 Front Street Exeter, NH 03833

47-9 CTK Associates 158 Shattuck Way Newington, NH 03801 48-4-1 Jamris Realty, LLC 6 Commerce Way Exeter, NH 03833

49-8 Town of Exeter Henderson Swasey Forest 10 Front Street Exeter, NH 03833



August 3, 2016

«Name» «Street» «TownStateZip»

Re: 8 Commerce Way Map 48 Lot 3 Exeter, NH

Dear Abutter:

The purpose of this letter is to inform you C3i, Inc. has submitted a Dredge and Fill Application to the NH Department of Environmental Services for a development project located at 8 Commerce Way in Exeter, NH, Tax Map 48 Lot 3. DES requires this notice for work within a wetland area. After filing, a copy of the final Application, including plans, will be made available for your review at the Exeter Town Hall and at the NH Department of Environmental Services Wetlands Bureau, 29 Hazen Drive, in Concord.

If you have any questions that we might be able to answer, please feel free to contact our office.

Sincerely,

Brenden Ching

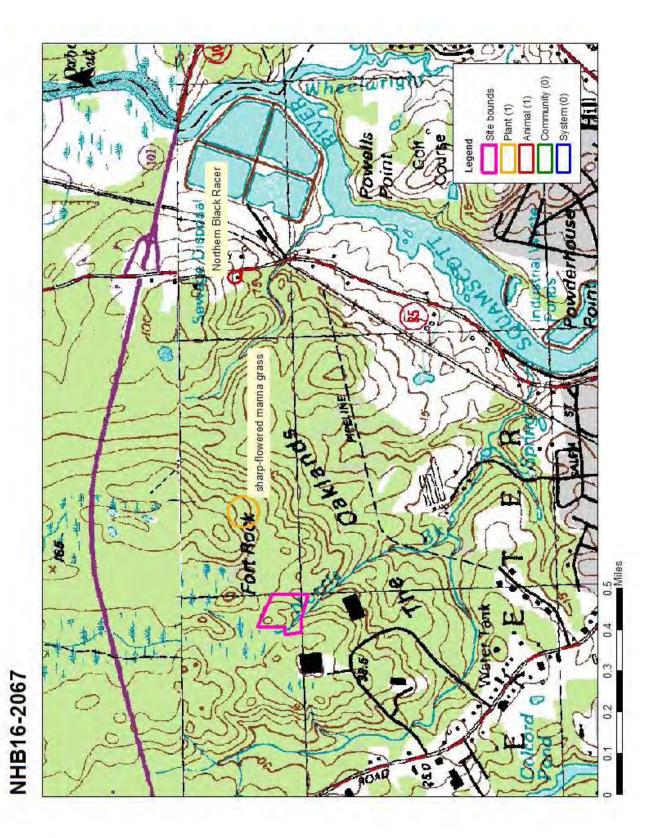
Brendan Quigley, CWS Gove Environmental Services, Inc.

Appendix C

New Hampshire Natural Heritage Inquiry



Memo		NH NATURAL HERITAGE BUREAU NHB DATACHECK RESULTS LETTER
To:	Luke Hurley, Gove Environmental Services, Inc. 8 continental Drive Exeter, NH 03833	
From: Date: Re: C:	Amy Lamb, NH Natural Heritage Bureau 7/1/2016 (valid for one year from this date) Review by NH Natural Heritage Bureau NHB File ID: NHB16-2067 Town: Ex Description: The proposed project involves the devel industrial park development. Kim Tuttle	eau date) au Town: Exeter Location: Tax Maps: map 48 lot 3 involves the development of the lot to include a light manufacturing facility, consistent with its setting in a pment.
As requeste	d, I have searched our database for records of rare specie:	As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.
Comments describes t surveys for	Comments: The project area was mapped on a perennial strean describes this area as being within an industrial park developmer surveys for sharp-flowered manna grass since it occurs in wetlan	Comments: The project area was mapped on a perennial stream and wetlands; please confirm mapped location is correct, since project description describes this area as being within an industrial park development. Please describe the type and extent of wetlands impacts. NHB may recommend surveys for sharp-flowered manna grass since it occurs in wetlands close to the project area.
Plant species	State <sup>1</sup>	Federal Notes
sharp-flowe	sharp-flowered manna grass ( <i>Glyceria acutiflora</i> ) E -	- Primarily vulnerable to changes to the hydrology of its habitat, especially alterations that change water levels. It may also be susceptible to increased pollutants and nutrients carried in stormwater runoff.
Vertebrate species	State <sup>1</sup>	Federal Notes
Northern B constrictor)	lack Racer (Coluber constrictor	- Contact the NH Fish & Game Dept (see below).
<sup>1</sup> Codes: "E" been added t	<sup>1</sup> Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "" = an exemplary natural community, or a rare species track been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.	<sup>1</sup> Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.
Contact for	Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.	4.
A negative information species. At	A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can on information gathered by qualified biologists and reported to our office. However, many areas have never been sur species. An on-site survey would provide better information on what species and communities are indeed present.	A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.
Department of R Division of Fore (603) 271-2214	Department of Resources and Economic Development Division of Forests and Lands (603) 271-2214 fax: 271-6488	DRED/NHB 172 Pembroke Rd. Concord, NH 03301



### **Brendan Quigley**

From: Sent: To: Subject: Lamb, Amy <Amy.Lamb@dred.nh.gov> Friday, July 29, 2016 2:16 PM Brendan Quigley RE: NHB review: NHB16-2067

Hi Brendan,

Thank you for sending photos of the proposed wetland crossing. Since the habitat at the crossing site is part forested wetland and part dry, rocky streambed, it would not provide the open, sunny, wet habitat preferred by sharp-flowered manna grass (*Glyceria acutiflora*). This plant is found nearby in a seasonally-flooded basin swamp, and would be more likely to occur in the beaver pond found north and west of the project site. Since there will be no impacts to the beaver pond, I do not anticipate impacts to *Glyceria acutiflora* as a result of this project.

Best, Amy

Amy Lamb Ecological Information Specialist (603) 271-2215 ext. 323

NH Natural Heritage Bureau DRED - Forests & Lands 172 Pembroke Rd Concord, NH 03301

From: Brendan Quigley [mailto:bquigley@gesinc.biz] Sent: Thursday, July 28, 2016 11:16 AM To: Lamb, Amy Subject: RE: NHB review: NHB16-2067

Amy, Getting back to this one...I have attached a few photos of the impact area at the crossing. It consists of an existing trail crossing and some additional area of mucky soil (currently dry) which is essentially a forested swamp. This is the only area even close to what you ask about and I don't think it fits the habitat description.

Brendan Quigley Wetland Scientist/GIS Specialist

#### **GOVE ENVIRONMENTAL SERVICES, INC.**

8 Continental Dr, Bldg 2, Unit H, Exeter, NH 03833-7507 *Ph* (603) 778-0644 / Cell (603) 686-0086 / *Fax* (603) 778-0654 *bquigley@gesinc.biz* 

From: Lamb, Amy [mailto:Amy.Lamb@dred.nh.gov]
Sent: Friday, July 15, 2016 8:07 AM

#### **To:** Brendan Quigley <<u>bquigley@gesinc.biz</u>> **Subject:** RE: NHB review: NHB16-2067

HI Brendan,

Thanks for sending the plan and aerial photo map, as well as the background information. Just to clarify and confirm, there are no areas of open wetland and/or saturated, peaty areas that will be impacted by the project, specifically the crossing?

Thank you, Amy

Amy Lamb Ecological Information Specialist (603) 271-2215 ext. 323

NH Natural Heritage Bureau DRED - Forests & Lands 172 Pembroke Rd Concord, NH 03301

From: Brendan Quigley [mailto:bquigley@gesinc.biz]
Sent: Friday, July 08, 2016 3:17 PM
To: Lamb, Amy
Cc: Tuttle, Kim
Subject: RE: NHB review: NHB16-2067

Amy and Kim,

I have attached a preliminary plan and aerial photo for this site. For reference the wetlands are the same on both plans. The building envelope is dry oak forest. The habitat for G. acutiflora I believe would be limited to the large beaver impoundment evident on the photo. This area will not be impacted and local buffers will be largely maintained. The stream over which a crossing is proposed is rocky and step with little to no water. Despite being depicted as perennial on the USGS this stream is in fact dry in the summer (having crossing it many times on my bike). Kim, please let me know if there are any concerns with Black racer considering the attached proposed plan or if you need additional information.

Thank You,

Brendan Quigley Wetland Scientist/GIS Specialist

### **GOVE ENVIRONMENTAL SERVICES, INC.**

8 Continental Dr, Bldg 2, Unit H, Exeter, NH 03833-7507 *Ph* (603) 778-0644 / Cell (603) 686-0086 / *Fax* (603) 778-0654 *bquigley@gesinc.biz* 

From: Lamb, Amy [mailto:Amy.Lamb@dred.nh.gov] Sent: Friday, July 01, 2016 3:01 PM To: Info Mail <<u>InfoMail@GOVEEnvironmental.onmicrosoft.com</u>> Cc: Tuttle, Kim <<u>Kim.Tuttle@wildlife.nh.gov</u>> Subject: NHB review: NHB16-2067

Attached, please find the review we have completed. If your review memo includes potential impacts to plants or natural communities please contact me for further information. If your project had potential impacts to wildlife, please contact NH Fish and Game at the phone number listed on the review.

Best,

Amy

Amy Lamb Ecological Information Specialist

NH Natural Heritage Bureau DRED - Forest & Lands 172 Pembroke Rd Concord, NH 03301 603-271-2215 ext. 323

Appendix D

**State Historic Preservation Office Inquiry** 



Please mail the completed form and required material to:	DHR Use Only				
New Hampshire Division of Historical Resources         State Historic Preservation Office         Attention: Review & Compliance         19 Pillsbury Street, Concord, NH 03301-3570         Response Date/					
Sent Date/ Request for Project Review by the New Hampshire Division of Historical Resources					
⊠ This is a new submittal □ This is additional information relating to DHR Review & Compliance (R&C) #:					
GENERAL PROJECT INFORMATION					
Project Title C3I Proposed Office Building					
Project Location 8 Commerce Way					
City/Town Exeter Tax Map 48 Lot # 3					
NH State Plane - Feet Geographic Coordinates:Easting 1172432Northing 181667(See RPR Instructions and R&C FAQs for guidance.)					
Lead Federal Agency and Contact <i>(if applicable)</i> ACOE <i>(Agency providing funds, licenses, or permits)</i> Permit Type and Permit or Job Reference # Pending					
State Agency and Contact <i>(if applicable)</i> NHDES					
Permit Type and Permit or Job Reference # Pending					
APPLICANT INFORMATION					
Applicant Name C3I					
Mailing Address 4 Merrill Industrial Dr. #108 Phone Number	er (603)929-9989				
City Hampton State NH Zip 03842 Email mcurry@c3i-	usa.com				
CONTACT PERSON TO RECEIVE RESPONSE					
Name/Company Brendan Quigley					
Mailing Address 8 Continental Dr. Phone Number -603					
City Exeter State NH Zip 03833 Email bquigley@gesi	inc.biz				

This form is updated periodically. Please download the current form at www.nh.gov/nhdhr/review. Please refer to the Request for Project Review Instructions for direction on completing this form. Submit one copy of this project review form for each project for which review is requested. Include a self-addressed stamped envelope to expedite review response. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: www.nh.gov/nhdhr/review or contact the R&C Specialist at christina.st.louis@dcr.nh.gov or 603.271.3558.

Project Boundaries and Description
<ul> <li>Attach the relevant portion of a 7.5' USGS Map (photocopied or computer-generated) <i>indicating the defined project</i></li> <li>Attach a detailed narrative description of the proposed project.</li> <li>Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.</li> <li>Attach photos of the project area (overview of project location and area adjacent to project location, and specific at A DHR file review must be conducted to identify properties within or adjacent to the project area.</li> <li>Provide file review results in Table 1. (Blank table forms are available on the DHR website.)</li> <li>File review conducted on 07/11/2016.</li> </ul>
Architecture
Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project are If no, skip to Archaeology section. If yes, submit all of the following information:
Approximate age(s): 1980's
<ul> <li>Photographs of <i>each</i> resource or streetscape located within the project area, with captions, along with a mapped p</li> <li>If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, prov</li> </ul>
Archaeology
Does the proposed undertaking involve ground-disturbing activity? 🛛 Yes 🗌 No If yes, submit all of the following information:
<ul> <li>Description of current and previous land use and disturbances.</li> <li>Available information concerning known or suspected archaeological resources within the project area (such as concerning known).</li> </ul>
Please note that for many project
DHR Comment/Finding Recommendation This Space for Division of Historical Resources Use Only
Insufficient information to initiate review. Additional information is needed in order to complete review.
🗌 No Potential to cause Effects 🔹 No Historic Properties Affected 🔄 No Adverse Effect 🔄 Adverse Effect
Comments:
If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources
Authorized Signature: Date:

Appendix E

**ACOE Supplemental Information Form** 

**IPaC Report** 





US Army Corps of Engineers ® New England District

#### New Hampshire Programmatic General Permit (PGP) Appendix B - Corps Secondary Impacts Checklist (for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination. 2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc. 3. See PGP, GC 5, regarding single and complete projects. 4. Contact the Corps at (978) 318-8832 with any questions. 1. Impaired Waters Yes No 1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired\_waters.htm to determine if there is an impaired water in the vicinity of your work area.\* 2. Wetlands No 2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work? 2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, www.nhnaturalheritage.org, specifically the book Natural Community Systems of New Hampshire. 2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage? 2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin χ lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.) Only of crossing 2.5 The overall project site is more than 40 acres. 2.6 What is the size of the existing impervious surface area? 0 2.7 What is the size of the proposed impervious surface area? ~37.700 2.8 What is the % of the impervious area (new and existing) to the overall project site? 13:9% Yes 3. Wildlife No 3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of Ď the proposed project? (All projects require a NHB determination.) 3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife Plan/highest ranking habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.

	$\left \right\rangle$
X	-
Yes	No
-	X
u .	
ed	
	Yes d

\*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement. \*\* If project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law..



Project name: C3i

### **Official Species List**

### **Provided by:**

New England Ecological Services Field Office 70 COMMERCIAL STREET, SUITE 300 CONCORD, NH 03301 (603) 223-2541\_ http://www.fws.gov/newengland

**Consultation Code:** 05E1NE00-2016-SLI-1975 **Event Code:** 05E1NE00-2016-E-02771

Project Type: DEVELOPMENT

### Project Name: C3i

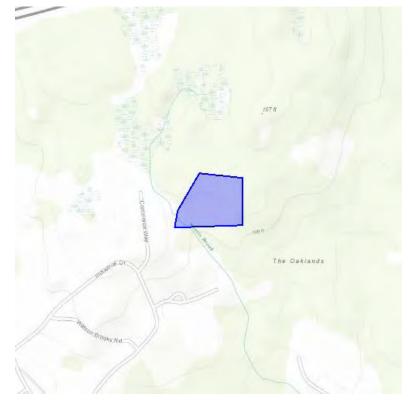
**Project Description:** The proposed project is to construct a two story, 12,000 SF office and light manufacturing facility, associated access road, parking, loading areas, and stormwater management features at 8 Commerce Way in Exeter, NH. The project involves 5,183 square feet of wetland impact and a crossing of a stream utilizing an open bottom arch structure. The work is expected to commence late fall 2016 and continue through the winter

**Please Note:** The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



Project name: C3i

### **Project Location Map:**



**Project Coordinates:** MULTIPOLYGON (((-70.96039295196533 42.99667509444197, -70.96039295196533 42.99526261846702, -70.96318244934082 42.99519984100346, -70.9630537033081 42.99570205891611, -70.9621524810791 42.996832034212886, -70.96039295196533 42.99667509444197)))

Project Counties: Rockingham, NH



Project name: C3i

### **Endangered Species Act Species List**

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Northern long-eared Bat (Myotis	Threatened		
septentrionalis)			



Project name: C3i

### Critical habitats that lie within your project area

There are no critical habitats within your project area.

http://ecos.fws.gov/ipac, 08/01/2016 02:43 PM

Appendix F

**Function and Value Assessment Forms** 



Refer to backup list of numbered considerations.	* Refer to ba				Notes:
	L				Other
called Possiliale Palespecies	State agency has indicated Possible			- )	ES Endangered Species Habitat
				~	Visual Quality/Aesthetics
			8, 12, 13, 19,	N	🖈 Uniqueness/Heritage
			1, 3, 5, 6, 9, 10,	Y	Educational/Scientific Value
		-	1,4,5,6,7,5	Y	<b>A</b> Recreation
or do with put	Stream is corrido	$\times$	5, 6, 7, 8, 11, 19, 20,	$\prec$	Wildlife Habitat
			2, 3, 5, 6, 9, 14,	Y	Sediment/Shoreline Stabilization
		×.	2, 8, 10, 11, 12, 12	$\checkmark$	Production Export
		÷.	3,45,6,7,9,14	4	Nutrient Removal
tralowly	Ase doove RX 15 Ku		3, 4, 5, 10, 11, 12,	Y	Sediment/Toxicant Retention
Stream	intermiller 5		F1, 2, 4, 8, 14, 17	2	Fish and Shellfish Habitat
		$\times$	5,7,8,9,13,15,16	X	- Floodflow Alteration
		$\times$	4,7,15,16	$\prec$	Groundwater Recharge/Discharge
Comments	(s)/Value(s)	Function	(Reference #)*	$\frac{Y / N}{Y / N}$	Function/Value
Corps manual wetland delineation completed? Y V N	ווכב (אבב מוומרוובת וואר)	Deinoir	Dotionalo uversu		
Office V Field V	nne (cae attached list)	/ahun/a	Wildlife & veretation diversity		How many tributaries contribute to the wetland?
Evaluation based on:	inage basin? hiph	n the dra	If not, where does the wetland lie in the drainage basin?	lf r	Is the wetland a separate hydraulic system?
Wetland Impact: Type_C.VOSSi uy_Area_36LF	Contiguous undeveloped buffer zone present $N_0$ but signature.	oed buffe	Contiguous undevelop		Dominant wetland systems present
Prepared by: 1370 Date 8-1-16	Distance to nearest roadway or other development $\frac{150}{150}$	dway or	Distance to nearest roa		Adjacent land use Forrest
Wetland I.D. VOVVS Krowt	or a "habitat island"?	7	Is wetland part of a wildlife corridor?		Total area of wetland Stiedum Human made? No
	Evaluation Form	alue	Wetland Function-Value Evaluatio		

Notes:

	* Refer to backup list of numbered considerations.				Notes:
					Other
	ident trad	None io		N	ES Endangered Species Habitat
				N	Visual Quality/Aesthetics
	common distribed methand	very coe		N	🖈 Uniqueness/Heritage
				N	Educational/Scientific Value
				$\mathcal{S}$	<b>≭</b> Recreation
+1cml	eveloped cuess directly obut w	Rel. + de		N	Wildlife Habitat
	societid with Wolloway	Not ~sso		N	Sediment/Shoreline Stabilization
	inited food sources	Surell, In		N	✦ Production Export
	outly cut off from sphesica	& Sources, Mostly	2	1	Nutrient Removal
	Lusa by virtue of	É	2	4	Sediment/Toxicant Retention
,	ly associated with sterm	Not dosely		2	Fish and Shellfish Habitat
	end small size connection to	Linited by	19,13	7-	Floodflow Alteration
			9	$\checkmark$	Groundwater Recharge/Discharge
	Comments	Principal Function(s)/Value(s)	y Rationale (Reference #)*	Suitability Y / N	Function/Value
	Corps manual wetland de	ty/abundance (see attached list)	_Wildlife & vegetation diversity/abundance (see attached	0	How many tributaries contribute to the wetland?
	tion based $\checkmark$	in the drainage basin? $//$	If not, where does the wetland lie in the drainage basin?	/ If n	Is the wetland a separate hydraulic system? $\Lambda$
Π	$\frac{O}{Type} = \frac{Wetland Impact:}{F} \frac{1}{\sqrt{Area}} \frac{1}{\sqrt{D}} \frac{10}{\sqrt{5}} F$	Contiguous undeveloped buffer zone present $\bigwedge$	Contiguous undevelc	1	Dominant wetland systems present $PSS$
r S	Iby: BJQ	Distance to nearest roadway or other development	Distance to nearest ro	•	Adjacent land use Industrial / Rd
breck	Ing NO Wetland I.D. Licet Ady Commerce has Latitude Longitude	$\mathcal{MO}$ or a "habitat islar	Hereform is welled a wildlife corridor? $\mathcal{MO}$ or a "habitat island"? $\mathcal{MO}$		Total area of wetland $2350$ fuman made? $\frac{7}{10}$ of
é		alue Evaluation	Wetland Function-Value Evaluation Form	Wet	

Notes

Appendix G

**Site Plans** 

(under separate cover)



### GENERAL INFORMATION

### OWNER

MAP 48 LOT 3 JSS AND ASSOCIATES 158 SHATTUCK WAY NEWINGTON, NH 03801

### APPLICANT

C3I, INC 4 MERRILL INDUSTRIAL DRIVE SUITE 108 HAMPTON, NH 03842

### **RESOURCE LIST**

PLANNING/ ZONING DEPARTMENT 10 FRONT STREET EXETER, NH 03833 (603) 773–6112 DAVE SHARPLES, TOWN PLANNER

BUILDING DEPARTMENT 10 FRONT STREET EXETER, NH 03833 (603) 773-6112 DOUGLAS EASTMAN, INSPECTOR

PUBLIC WORKS 13 NEWFIELDS ROAD EXETER, NH 03833 (603) 773-6157 JENNIFER R. PERRY, PE, DIRECTOR

POLICE DEPARTMENT 20 COURT STREET EXETER, NH 03833 (603) 778-772-1212 CHIEF WILLIAM SHUPE

FIRE DEPARTMENT 20 COURT STREET EXETER, NH 03833 (603) 773-6131 CHIEF BRIAN COMEAU

### **ASSOCIATED WITH**

ENVIRONMENTAL SERVICES GOVE ENVIRONMENTAL SERCIES, INC. 8 CONTINENTAL DRIVE, BUILDING 2, UNIT H EXETER, NH 03833-7507 (603) 778–0644



CHAIRMAN

### PLANNING BOARD CASE #

TOWN OF EXETER PLANNING BOARD

DATE

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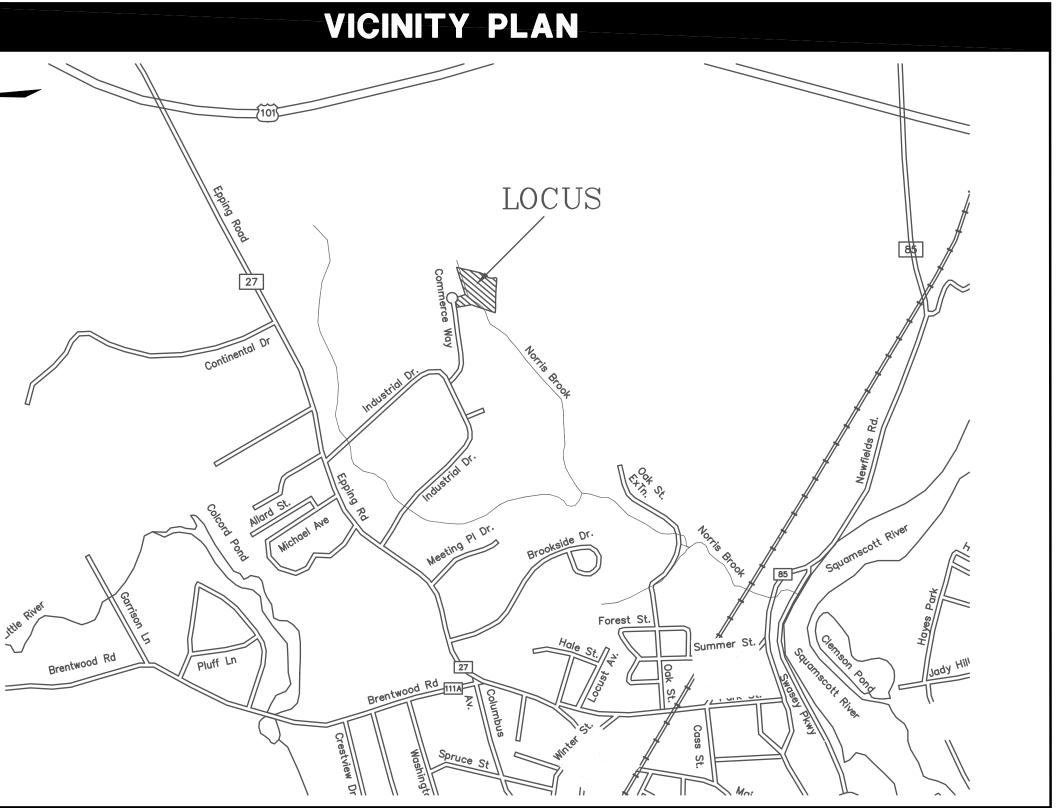
This plan is not effective unless signed by a duly authorized officer of Thomas F. Moran, Inc.



# C3I, INC.

# **8 COMMERCE WAY** EXETER, NEW HAMPSHIRE

# AUGUST 3, 2016







| 170 Commerce Way, Suite 102 Portsmouth, NH 03801 Phone (603) 431-2222 Fax (603) 431-0910 www.mscengineers.com

REV.	DATE	DESCRIPTION

### INDEX OF SHEETS

SHEET	SHEET TITLE
C-0	COVER SHEET
C-1	EXISTING CONDITIONS PLAN
C-2	SITE PLAN
C-3	LAYOUT PLAN
C-4	GRADING & EROSION CONTROL PLAN
C-5	DRAINAGE PLAN
C-6	UTILITY PLAN
C-7	LIGHTING PLAN
C-8	LANDSCAPE PLAN
C-9	WETLAND IMPACT PLAN
C-10	EROSION CONTROL NOTES AND DETAILS
C-11 TO C-14	DETAILS

### PERMITS / APPROVALS

TOWN SITE PLAN NHDES WETLANDS NUMBER NO

DATE

APPROVED EXPIRES DATE

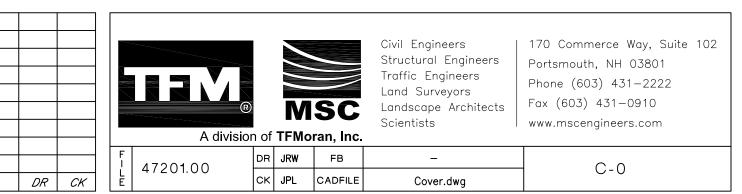
THESE PLANS ARE PERMIT DRAWINGS ONLY AND NOT INTENDED FOR CONSTRUCTION OR BIDDING

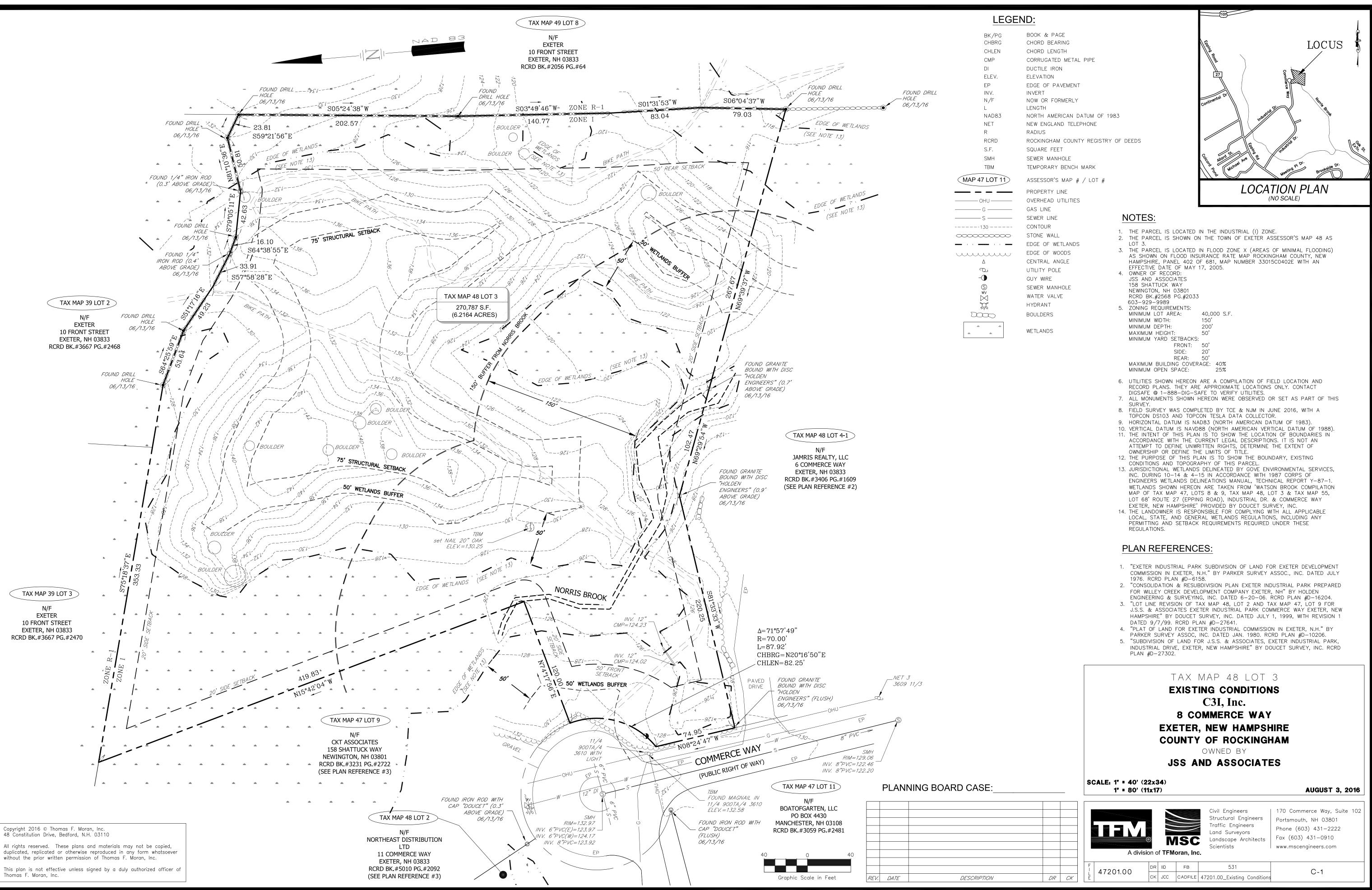
## SITE DEVELOPMENT PLANS

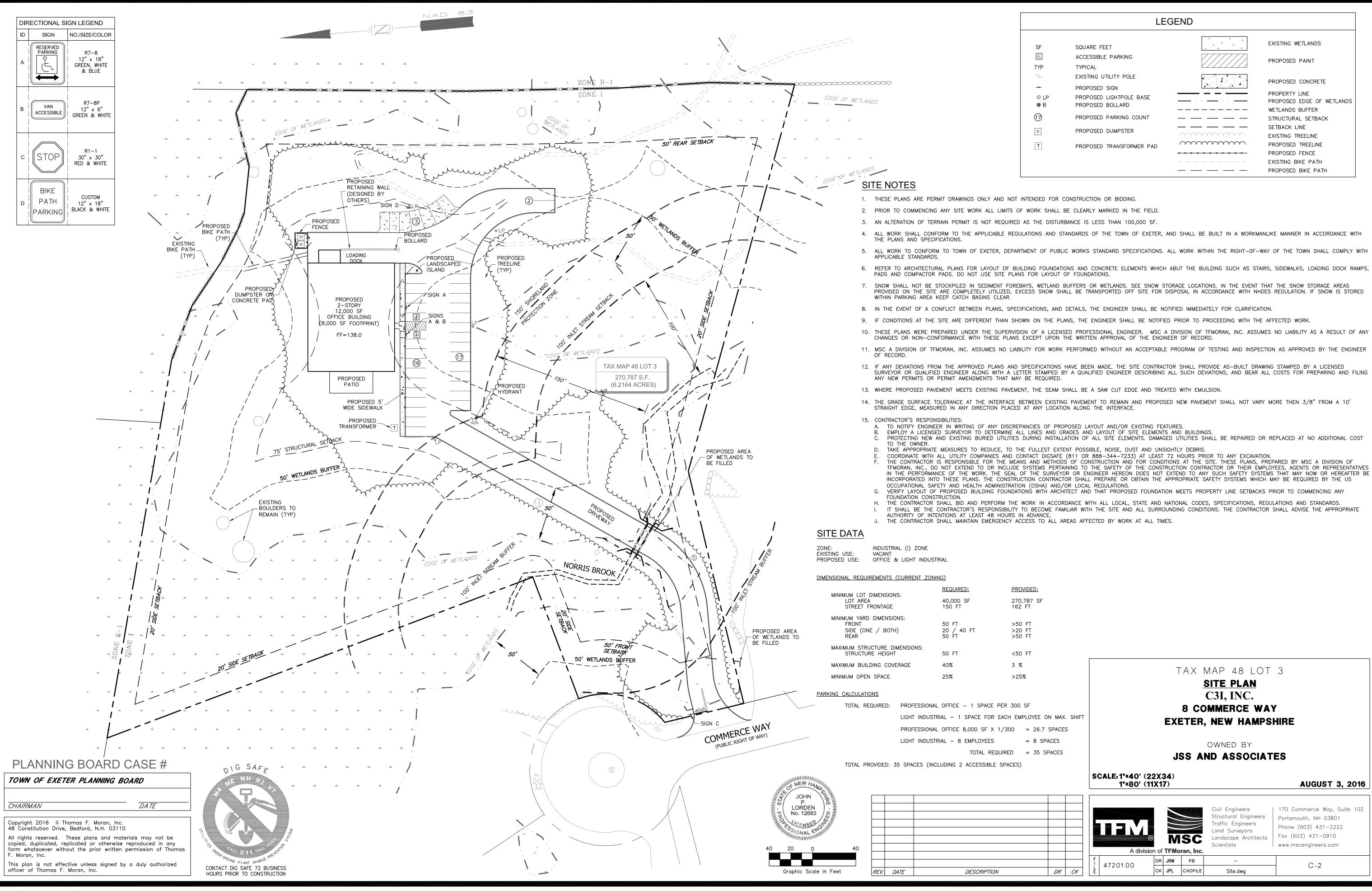
TAX MAP 48 LOT 3 COVER SHEET C3I, INC. 8 COMMERCE WAY EXETER, NEW HAMPSHIRE

OWNED BY **JSS AND ASSOCIATES** 

**AUGUST 3, 2016** 



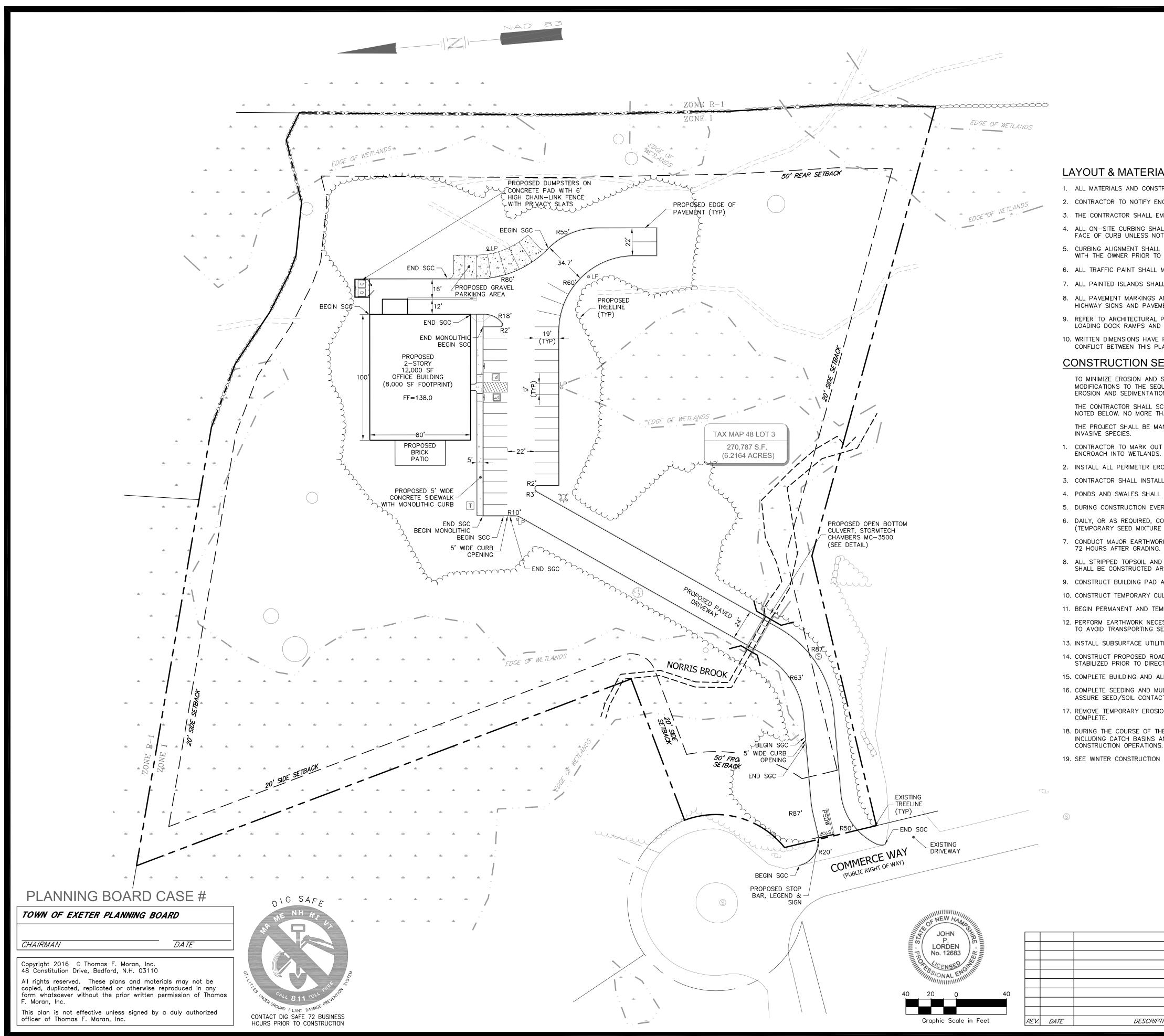




LEGEND
--------

<u>D:</u>	
SF	

	TAX M	AP 48 LOT	3		
	SI	TE PLAN			
		<b>3I, INC.</b>			
		MERCE WAY	1		
E ON MAX. SHIFT	EXETER, NEW HAMPSHIRE				
6.7 SPACES	EAETER, I				
SPACES		WNED BY			
5 SPACES	JSS AND ASSOCIATES				
	JSS AND ASSUCIATES				
	SCALE: 1"=40' (22X34) 1"=80' (11X17)		AUGUST 3, 2016		
		Civil Engineers Structural Engineers Traffic Engineers Land Surveyors Landscape Architects Scientists	170 Commerce Way, Suite 102 Portsmouth, NH 03801 Phone (603) 431-2222 Fax (603) 431-0910 www.mscengineers.com		
	F DD DW DD				



### LAYOUT & MATERIAL NOTES

- FACE OF CURB UNLESS NOTED OTHERWISE.
- 6. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F".

### CONSTRUCTION SEQUENCE

- EROSION AND SEDIMENTATION CONTROL MEASURES.
- INVASIVE SPECIES.

- 4. PONDS AND SWALES SHALL BE INSTALLED AS REQUIRED.

- 72 HOURS AFTER GRADING.
- 9. CONSTRUCT BUILDING PAD AND COMMENCE NEW BUILDING CONSTRUCTION.
- 10. CONSTRUCT TEMPORARY CULVERTS AND DIVERSIONS AS REQUIRED.

- 14. CONSTRUCT PROPOSED ROADWAY, GRAVEL WETLANDS AND DRAINAGE SWALES. ALL DITCHES, SWALES, AND GRAVEL WETLANDS SHALL BE FULLY
- STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
- 15. COMPLETE BUILDING AND ALL OFF-SITE IMPROVEMENTS. ASSURE SEED/SOIL CONTACT.
- CONSTRUCTION OPERATIONS.
- 19. SEE WINTER CONSTRUCTION SEQUENCE FOR WORK CONDUCTED AFTER OCTOBER 15TH.

DESCRIPTION

### LEGEND

PSDW	PROPOSED
R	RADIUS
TYP	TYPICAL
SGC	SLOPED GR
<u>ل</u> ح	PROPOSED
O LP	PROPOSED
	PROPERTY
	PROPOSED

SOLID DOUBLE WHITE LINE RANITE CURB ACCESSIBLE PARKING LIGHT POLE BASE LINE CONCRETE

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY, STATE, AND FEDERAL CODES.

2. CONTRACTOR TO NOTIFY ENGINEER IN WRITING OF ANY DISCREPANCIES OF PROPOSED LAYOUT AND EXISTING FEATURES.

3. THE CONTRACTOR SHALL EMPLOY A LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.

4. ALL ON-SITE CURBING SHALL BE SLOPED GRANITE CURBING, EXCEPT ALONG SIDEWALK WHERE CURBINB SHALL BE MONOLITHIC. ALL DIMENSIONS ARE TO THE

5. CURBING ALIGNMENT SHALL BE MODIFIED TO AVOID CONFLICTS WITH ALL UTILITY MANHOLES OR POLES AND OTHER CASTINGS. ALL CONFLICTS SHALL BE REVIEWED WITH THE OWNER PRIOR TO PLACEMENT OF CURB FOR APPROVAL OF MODIFIED ALIGNMENT.

7. ALL PAINTED ISLANDS SHALL BE 4" WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY 4" WIDE LINES.

8. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO THE LATEST EDITIONS OF "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS.

9. REFER TO ARCHITECTURAL PLANS FOR LAYOUT OF BUILDING FOUNDATIONS AND CONCRETE ELEMENTS WHICH ABUT THE BUILDING SUCH AS STAIRS, SIDEWALKS, LOADING DOCK RAMPS AND PADS. DO NOT USE SITE PLANS FOR LAYOUT OF FOUNDATIONS.

10. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.

TO MINIMIZE EROSION AND SEDIMENTATION DUE TO CONSTRUCTION, CONSTRUCTION SHALL FOLLOW THIS GENERAL CONSTRUCTION SEQUENCE. MODIFICATIONS TO THE SEQUENCE NECESSARY DUE TO THE CONTRACTOR'S SCHEDULE SHALL INCLUDE APPROPRIATE TEMPORARY AND PERMANENT

THE CONTRACTOR SHALL SCHEDULE WORK SUCH THAT ANY CONSTRUCTION AREA IS STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE EXCEPT AS NOTED BELOW. NO MORE THAN 5 ACRES OF DISTURBED LAND SHALL BE UNSTABILIZED AT ANY ONE TIME.

THE PROJECT SHALL BE MANAGED SO THAT IT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER ARG 3800 RELATIVE TO

1. CONTRACTOR TO MARK OUT LIMITS OF WETLAND DISTURBANCE PRIOR TO COMMENCEMENT OF WORK. SPECIAL CARE SHALL BE TAKEN TO NOT FURTHER

2. INSTALL ALL PERIMETER EROSION PROTECTION MEASURES AS INDICATED ON THE PLANS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

3. CONTRACTOR SHALL INSTALL A TEMPORARY BROOK CROSSING THAT SPANS THE ENTIRE BROOK TO ALLOW CONSTRUCTION VEHICLES ACCESS TO SITE.

5. DURING CONSTRUCTION EVERY EFFORT SHALL BE MADE TO MANAGE SURFACE RUNOFF QUALITY.

6. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT BARRIERS, SEDIMENT TRAPS, ETC.. MULCH AND SEED AS REQUIRED (TEMPORARY SEED MIXTURE OF WINTER RYE APPLIED AT A RATE OF 2.5 LBS/1000 SF SHALL BE USED).

7. CONDUCT MAJOR EARTHWORK, INCLUDING CLEARING AND GRUBBING, WITHIN THE LIMITS OF WORK. ALL CUT AND FILL SLOPES SHALL BE SEEDED WITHIN

8. ALL STRIPPED TOPSOIL AND OTHER EARTH MATERIALS SHALL BE STOCKPILED OUTSIDE THE IMMEDIATE WORK AND WETLAND AREAS. A SILT FENCE SHALL BE CONSTRUCTED AROUND THESE PILES IN A MANNER TO PROVIDE ACCESS AND AVOID SEDIMENT OUTSIDE OF THE WORK AREA.

11. BEGIN PERMANENT AND TEMPORARY INSTALLATION OF SEED AND MULCH.

12. PERFORM EARTHWORK NECESSARY TO ESTABLISH ROUGH GRADING AROUND PARKING FIELDS AND ACCESS DRIVES. MANAGE EXPOSED SOIL SURFACES TO AVOID TRANSPORTING SEDIMENTS INTO WETLANDS. PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

13. INSTALL SUBSURFACE UTILITIES (WATER, SEWER, GAS, ELECTRIC, COMMUNICATIONS, DRAINAGE, DRAINAGE FACILITIES, ETC.).

16. COMPLETE SEEDING AND MULCHING. SEED TO BE APPLIED WITH BROADCAST SPREADER OR BY HYDRO-SEEDING, THEN ROLLED, RAKED OR DRAGGED TO

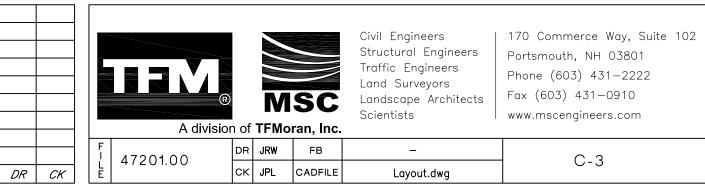
17. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDED AREAS HAVE BECOME FIRMLY ESTABLISHED AND SITE IMPROVEMENTS ARE

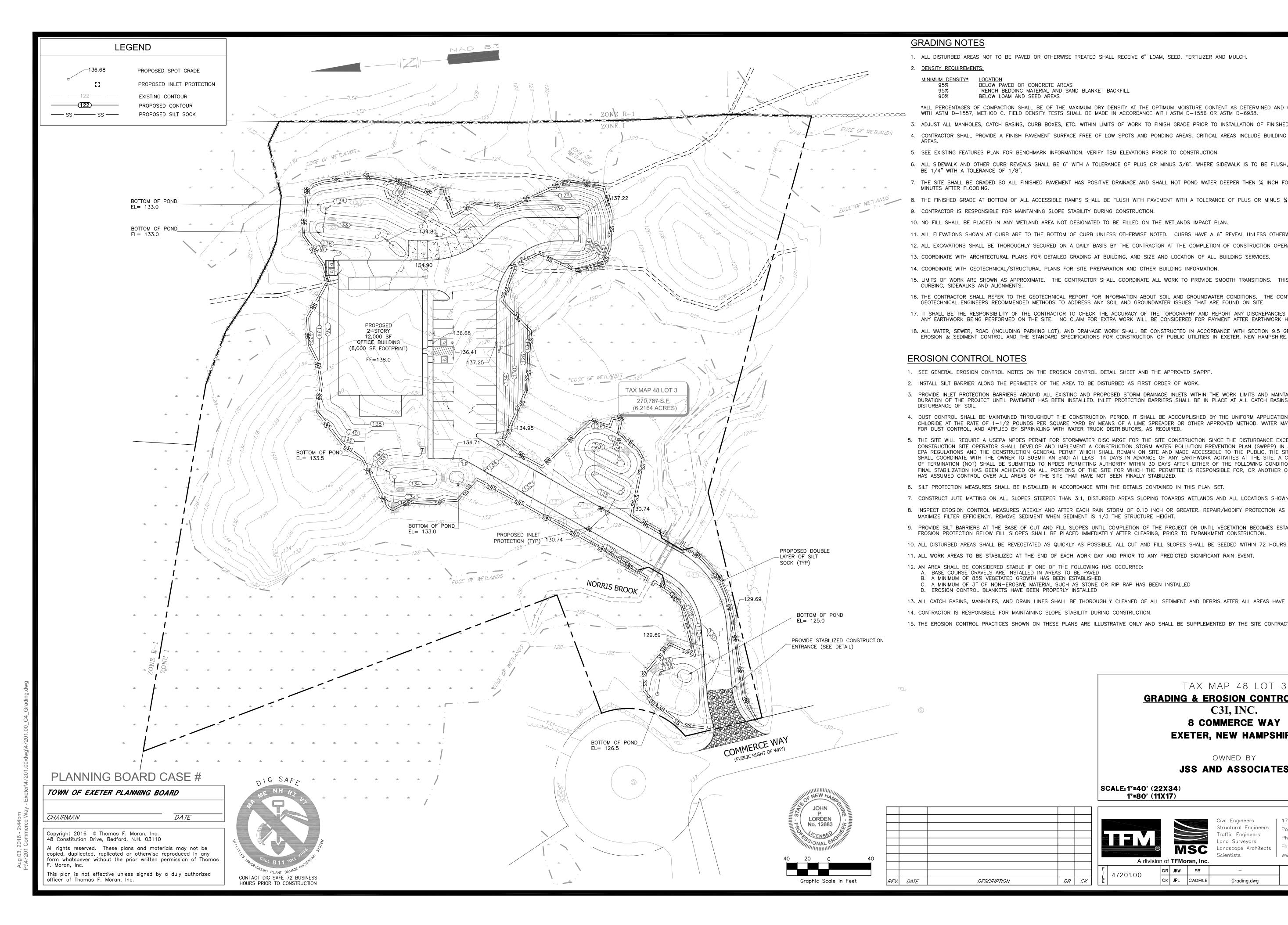
18. DURING THE COURSE OF THE WORK AND UPON COMPLETION, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT DEPOSITS, EITHER ON OR OFF SITE, INCLUDING CATCH BASINS AND SUMPS, DRAIN PIPES AND DITCHES, CURB LINES, ALONG SILT BARRIERS, ETC. RESULTING FROM SOIL AND/OR

### TAX MAP 48 LOT 3 LAYOUT PLAN C3I, INC. **8 COMMERCE WAY** EXETER, NEW HAMPSHIRE OWNED BY JSS AND ASSOCIATES

SCALE: 1"=40' (22X34) 1"=80' (11X17)

**AUGUST 3, 2016** 





1. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.

TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL

\*ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C. FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM D-6938. 3. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE PRIOR TO INSTALLATION OF FINISHED PAVEMENT.

4. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE, RAMPS AND LOADING

6. ALL SIDEWALK AND OTHER CURB REVEALS SHALL BE 6" WITH A TOLERANCE OF PLUS OR MINUS 3/8". WHERE SIDEWALK IS TO BE FLUSH, THE PAVEMENT REVEAL SHALL

7. THE SITE SHALL BE GRADED SO ALL FINISHED PAVEMENT HAS POSITIVE DRAINAGE AND SHALL NOT POND WATER DEEPER THEN 1/4 INCH FOR A PERIOD OF MORE THEN 15

8. THE FINISHED GRADE AT BOTTOM OF ALL ACCESSIBLE RAMPS SHALL BE FLUSH WITH PAVEMENT WITH A TOLERANCE OF PLUS OR MINUS 1/4".

10. NO FILL SHALL BE PLACED IN ANY WETLAND AREA NOT DESIGNATED TO BE FILLED ON THE WETLANDS IMPACT PLAN.

11. ALL ELEVATIONS SHOWN AT CURB ARE TO THE BOTTOM OF CURB UNLESS OTHERWISE NOTED. CURBS HAVE A 6" REVEAL UNLESS OTHERWISE NOTED.

12. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA. 13. COORDINATE WITH ARCHITECTURAL PLANS FOR DETAILED GRADING AT BUILDING, AND SIZE AND LOCATION OF ALL BUILDING SERVICES.

14. COORDINATE WITH GEOTECHNICAL/STRUCTURAL PLANS FOR SITE PREPARATION AND OTHER BUILDING INFORMATION.

15. LIMITS OF WORK ARE SHOWN AS APPROXIMATE. THE CONTRACTOR SHALL COORDINATE ALL WORK TO PROVIDE SMOOTH TRANSITIONS. THIS INCLUDES GRADING, PAVEMENT,

16. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR INFORMATION ABOUT SOIL AND GROUNDWATER CONDITIONS. THE CONTRACTOR SHALL FOLLOW THE GEOTECHNICAL ENGINEERS RECOMMENDED METHODS TO ADDRESS ANY SOIL AND GROUNDWATER ISSUES THAT ARE FOUND ON SITE. 17. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE ACCURACY OF THE TOPOGRAPHY AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO ANY EARTHWORK BEING PERFORMED ON THE SITE. NO CLAIM FOR EXTRA WORK WILL BE CONSIDERED FOR PAYMENT AFTER EARTHWORK HAS COMMENCED. 18. ALL WATER, SEWER, ROAD (INCLUDING PARKING LOT), AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 9.5 GRADING, DRAINAGE, AND

1. SEE GENERAL EROSION CONTROL NOTES ON THE EROSION CONTROL DETAIL SHEET AND THE APPROVED SWPPP.

2. INSTALL SILT BARRIER ALONG THE PERIMETER OF THE AREA TO BE DISTURBED AS FIRST ORDER OF WORK.

3. PROVIDE INLET PROTECTION BARRIERS AROUND ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS WITHIN THE WORK LIMITS AND MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED. INLET PROTECTION BARRIERS SHALL BE IN PLACE AT ALL CATCH BASINS PRIOR TO THE

4. DUST CONTROL SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. IT SHALL BE ACCOMPLISHED BY THE UNIFORM APPLICATION OF CALCIUM CHLORIDE AT THE RATE OF 1-1/2 POUNDS PER SQUARE YARD BY MEANS OF A LIME SPREADER OR OTHER APPROVED METHOD. WATER MAY ALSO BE USED FOR DUST CONTROL, AND APPLIÉD BY SPRINKLING WITH WATER TRUCK DISTRIBUTORS, AS REQUIRED.

5. THE SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE CONSTRUCTION SINCE THE DISTURBANCE EXCEEDS ONE ACRE. THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH EPA REGULATIONS AND THE CONSTRUCTION GENERAL PERMIT WHICH SHALL REMAIN ON SITE AND MADE ACCESSIBLE TO THE PUBLIC. THE SITE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO SUBMIT AN eNOI AT LEAST 14 DAYS IN ADVANCE OF ANY EARTHWORK ACTIVITIES AT THE SITE. A COMPLETED NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO NPDES PERMITTING AUTHORITY WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET: FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE FOR, OR ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.

6. SILT PROTECTION MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS CONTAINED IN THIS PLAN SET.

7. CONSTRUCT JUTE MATTING ON ALL SLOPES STEEPER THAN 3:1, DISTURBED AREAS SLOPING TOWARDS WETLANDS AND ALL LOCATIONS SHOWN ON PLAN.

8. INSPECT EROSION CONTROL MEASURES WEEKLY AND AFTER EACH RAIN STORM OF 0.10 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE FILTER EFFICIENCY. REMOVE SEDIMENT WHEN SEDIMENT IS 1/3 THE STRUCTURE HEIGHT.

9. PROVIDE SILT BARRIERS AT THE BASE OF CUT AND FILL SLOPES UNTIL COMPLETION OF THE PROJECT OR UNTIL VEGETATION BECOMES ESTABLISHED ON SLOPES. EROSION PROTECTION BELOW FILL SLOPES SHALL BE PLACED IMMEDIATELY AFTER CLEARING, PRIOR TO EMBANKMENT CONSTRUCTION.

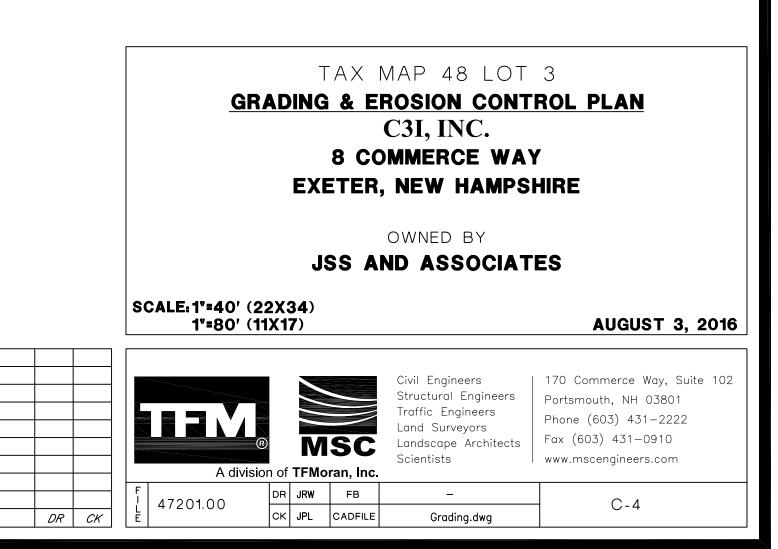
10. ALL DISTURBED AREAS SHALL BE REVEGETATED AS QUICKLY AS POSSIBLE. ALL CUT AND FILL SLOPES SHALL BE SEEDED WITHIN 72 HOURS AFTER GRADING.

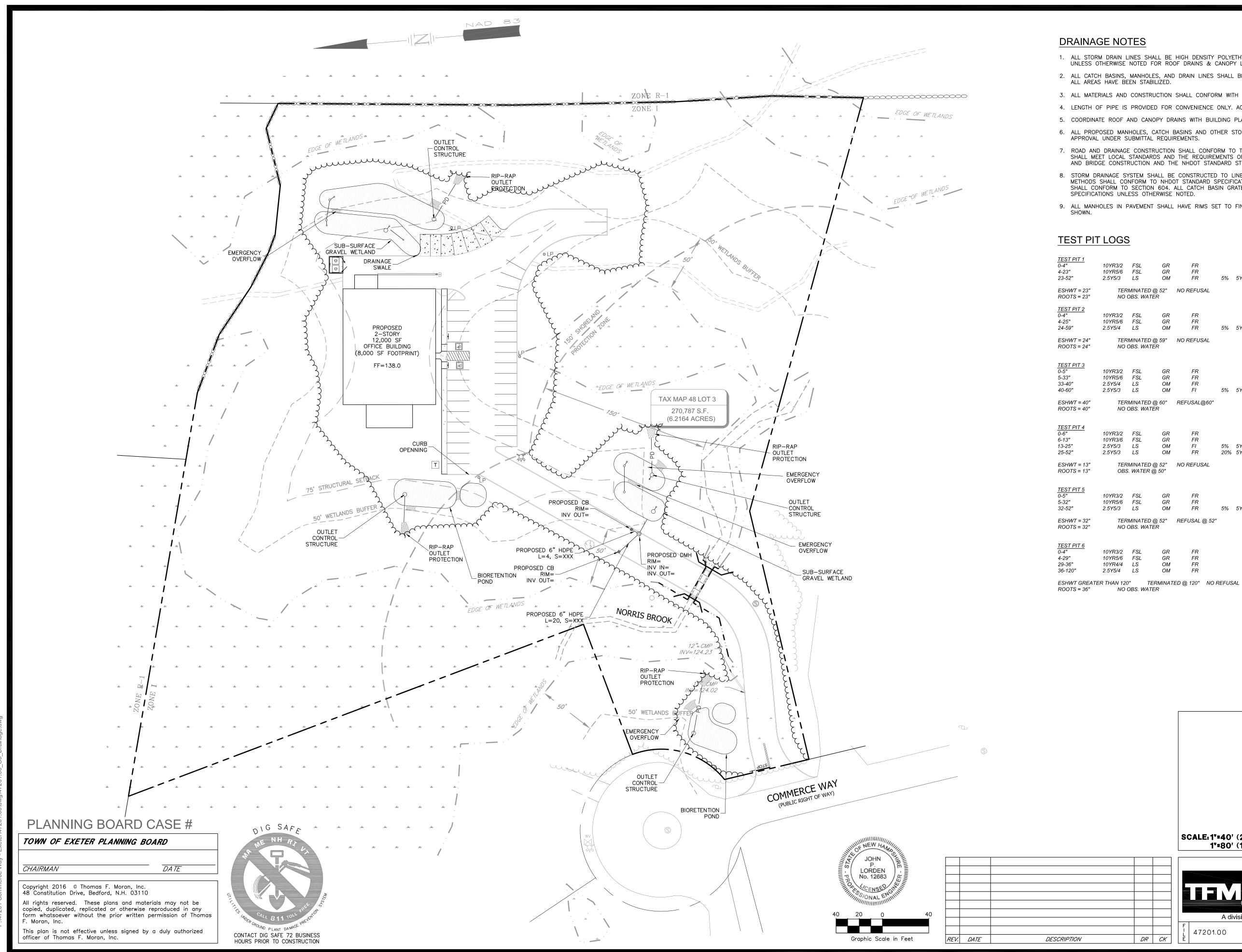
11. ALL WORK AREAS TO BE STABILIZED AT THE END OF EACH WORK DAY AND PRIOR TO ANY PREDICTED SIGNIFICANT RAIN EVENT.

C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED

13. ALL CATCH BASINS, MANHOLES, AND DRAIN LINES SHALL BE THOROUGHLY CLEANED OF ALL SEDIMENT AND DEBRIS AFTER ALL AREAS HAVE BEEN STABILIZED.

15. THE EROSION CONTROL PRACTICES SHOWN ON THESE PLANS ARE ILLUSTRATIVE ONLY AND SHALL BE SUPPLEMENTED BY THE SITE CONTRACTOR AS NEEDED.





1. ALL STORM DRAIN LINES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR "HIQ", ADS "N-12", OR APPROVED EQUAL) UNLESS OTHERWISE NOTED FOR ROOF DRAINS & CANOPY LEADERS.

2. ALL CATCH BASINS, MANHOLES, AND DRAIN LINES SHALL BE THOROUGHLY CLEANED OF ALL SEDIMENT AND DEBRIS AFTER ALL AREAS HAVE BEEN STABILIZED.

3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE CITY/TOWN, COUNTY, AND STATE CODES. 4. LENGTH OF PIPE IS PROVIDED FOR CONVENIENCE ONLY. ACTUAL PIPE LENGTH SHALL BE DETERMINED IN THE FIELD. 5. COORDINATE ROOF AND CANOPY DRAINS WITH BUILDING PLANS.

6. ALL PROPOSED MANHOLES, CATCH BASINS AND OTHER STORMWATER STRUCTURES SHALL BE SUBJECT TO REVIEW AND APPROVAL UNDER SUBMITTAL REQUIREMENTS.

7. ROAD AND DRAINAGE CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS, AND SHALL MEET LOCAL STANDARDS AND THE REQUIREMENTS OF THE LATEST NHDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGE CONSTRUCTION AND THE NHDOT STANDARD STRUCTURE DRAWINGS UNLESS OTHERWISE NOTED. 8. STORM DRAINAGE SYSTEM SHALL BE CONSTRUCTED TO LINE AND GRADE AS SHOWN ON THE PLANS. CONSTRUCTION

METHODS SHALL CONFORM TO NHDOT STANDARD SPECIFICATIONS, SECTION 603. CATCH BASINS AND DRAIN MANHOLES SHALL CONFORM TO SECTION 604. ALL CATCH BASIN GRATES SHALL BE TYPE B AND CONFORM TO NHDOT STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.

9. ALL MANHOLES IN PAVEMENT SHALL HAVE RIMS SET TO FINISH GRADE REGARDLESS OF ANY ELEVATIONS OTHERWISE

2.5Y5/4

LS

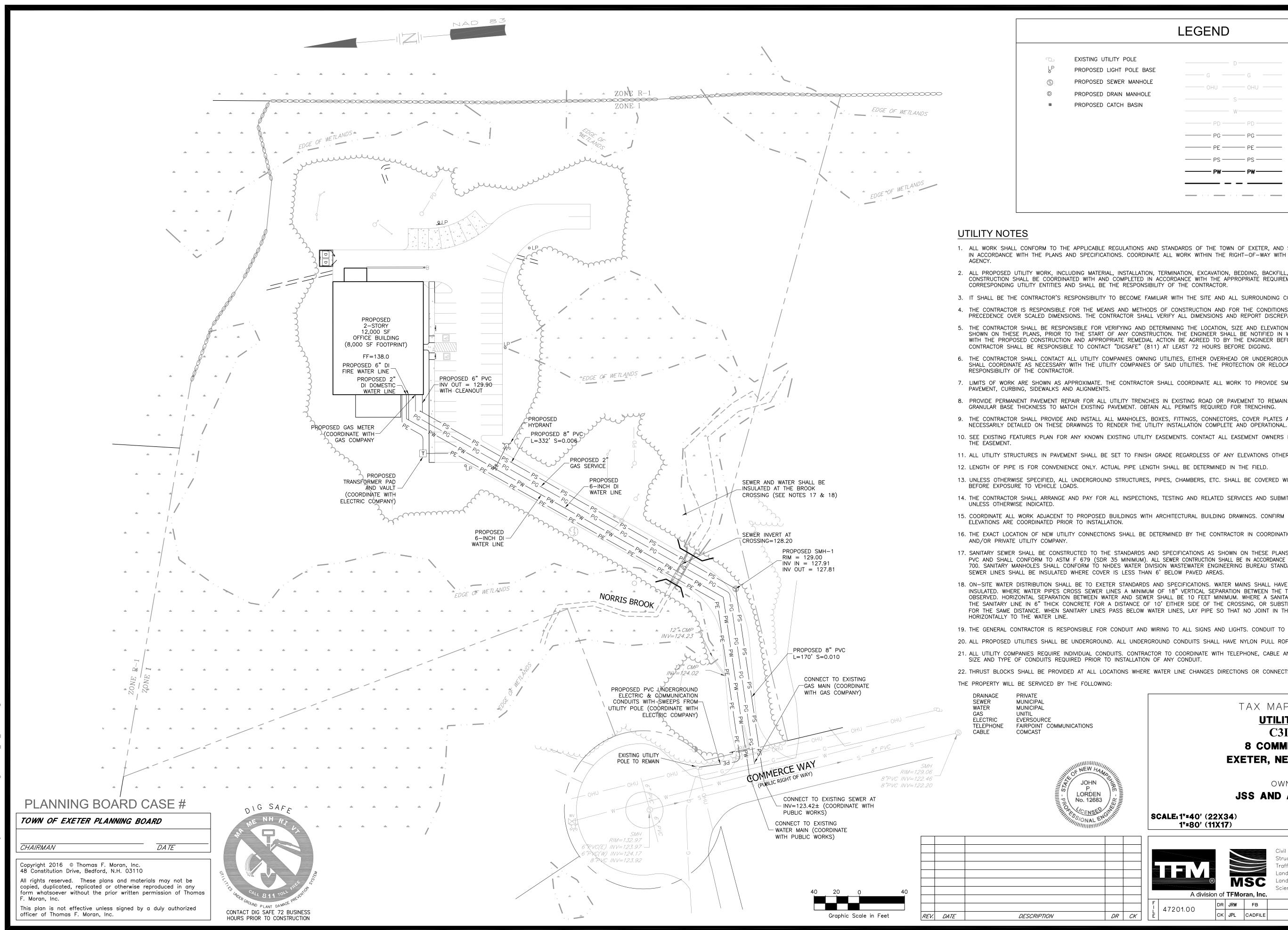
NO OBS. WATER

ОМ

FR

10YR3/2 10YR5/6 2.5Y5/3	FSL FSL LS	GR GR OM	FR FR FR	5%	5YR5/6	
	MINATED @ OBS. WATER		NO REFUSAL			
10YR3/2 10YR5/6 2.5Y5/4	FSL FSL LS	GR GR OM	FR FR FR	5%	5YR5/6	
	MINATED @ OBS. WATER		NO REFUSAL			
10YR3/2 10YR5/6 2.5Y5/4 2.5Y5/3	FSL FSL LS LS	GR GR OM OM	FR FR FI	5%	5YR5/6	
	MINATED @ OBS. WATER		REFUSAL@60"			
10YR3/2 10YR3/6 2.5Y5/3 2.5Y5/3	FSL FSL LS LS	GR GR OM OM	FR FR FI FR	5% 20%	5YR5/6 5YR5/6	
	MINATED @ . WATER @ :		NO REFUSAL			
10YR3/2 10YR5/6 2.5Y5/3	FSL FSL LS	GR GR OM	FR FR FR	5%	5YR5/6	
	MINATED @ OBS. WATER		REFUSAL @ 52"			
10YR3/2 10YR5/6 10YR4/4 2 5Y5/4	FSL FSL LS	GR GR OM	FR FR FR FR			





### LEGEND

ITY POLE	D		EXISTING DRAIN LINE
GHT POLE BASE	G	G	EXISTING GAS LINE
EWER MANHOLE	OHU		
RAIN MANHOLE	S		
ATCH BASIN	0		
	W	·	EXISTING WATER LINE
	PD	PD	PROPOSED DRAIN LINE
	PG	PG	PROPOSED GAS LINE
	PE	PE	PROPOSED ELECTRIC
	PS	PS	PROPOSED SEWER LINE
	PW	PW	PROPOSED WATER LINE
			PROPERTY LINE
			EDGE OF WETLANDS

1. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF EXETER, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. COORDINATE ALL WORK WITHIN THE RIGHT-OF-WAY WITH APPROPRIATE TOWN, COUNTY AND/OR STATE

2. ALL PROPOSED UTILITY WORK, INCLUDING MATERIAL, INSTALLATION, TERMINATION, EXCAVATION, BEDDING, BACKFILL, COMPACTION, TESTING, CONNECTIONS, AND CONSTRUCTION SHALL BE COORDINATED WITH AND COMPLETED IN ACCORDANCE WITH THE APPROPRIATE REQUIREMENTS, CODES AND STANDARDS OF ALL CORRESPONDING UTILITY ENTITIES AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE SITE AND ALL SURROUNDING CONDITIONS.

4. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR THE CONDITIONS AT THE SITE. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT DISCREPANCIES TO THE ENGINEER.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE DIGGING.

6. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE

7. LIMITS OF WORK ARE SHOWN AS APPROXIMATE. THE CONTRACTOR SHALL COORDINATE ALL WORK TO PROVIDE SMOOTH TRANSITIONS. THIS INCLUDES GRADING,

8. PROVIDE PERMANENT PAVEMENT REPAIR FOR ALL UTILITY TRENCHES IN EXISTING ROAD OR PAVEMENT TO REMAIN. SAW CUT TRENCH, PAVEMENT AND

9. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT

10. SEE EXISTING FEATURES PLAN FOR ANY KNOWN EXISTING UTILITY EASEMENTS. CONTACT ALL EASEMENT OWNERS PRIOR TO COMMENCING ANY WORK WITHIN

11. ALL UTILITY STRUCTURES IN PAVEMENT SHALL BE SET TO FINISH GRADE REGARDLESS OF ANY ELEVATIONS OTHERWISE SHOWN.

12. LENGTH OF PIPE IS FOR CONVENIENCE ONLY. ACTUAL PIPE LENGTH SHALL BE DETERMINED IN THE FIELD.

13. UNLESS OTHERWISE SPECIFIED, ALL UNDERGROUND STRUCTURES, PIPES, CHAMBERS, ETC. SHALL BE COVERED WITH A MINIMUM OF 18" OF COMPACTED SOIL

14. THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL INSPECTIONS, TESTING AND RELATED SERVICES AND SUBMIT COPIES OF ACCEPTANCE TO THE OWNER,

15. COORDINATE ALL WORK ADJACENT TO PROPOSED BUILDINGS WITH ARCHITECTURAL BUILDING DRAWINGS. CONFIRM UTILITY PENETRATIONS AND INVERT

16. THE EXACT LOCATION OF NEW UTILITY CONNECTIONS SHALL BE DETERMINED BY THE CONTRACTOR IN COORDINATION WITH UTILITY COMPANY, COUNTY AGENCY

17. SANITARY SEWER SHALL BE CONSTRUCTED TO THE STANDARDS AND SPECIFICATIONS AS SHOWN ON THESE PLANS. ALL SEWER MAINS AND FITTINGS SHALL BE PVC AND SHALL CONFORM TO ASTM F 679 (SDR 35 MINIMUM). ALL SEWER CONTRUCTION SHALL BE IN ACCORDANCE WITH NH CODE OF ADMINISTRATIVE RULES ENV-WQ 700. SANITARY MANHOLES SHALL CONFORM TO NHDES WATER DIVISION WASTEWATER ENGINEERING BUREAU STANDARDS AND SPECIFICATIONS SHOWN HEREON. SEWER LINES SHALL BE INSULATED WHERE COVER IS LESS THAN 6' BELOW PAVED AREAS.

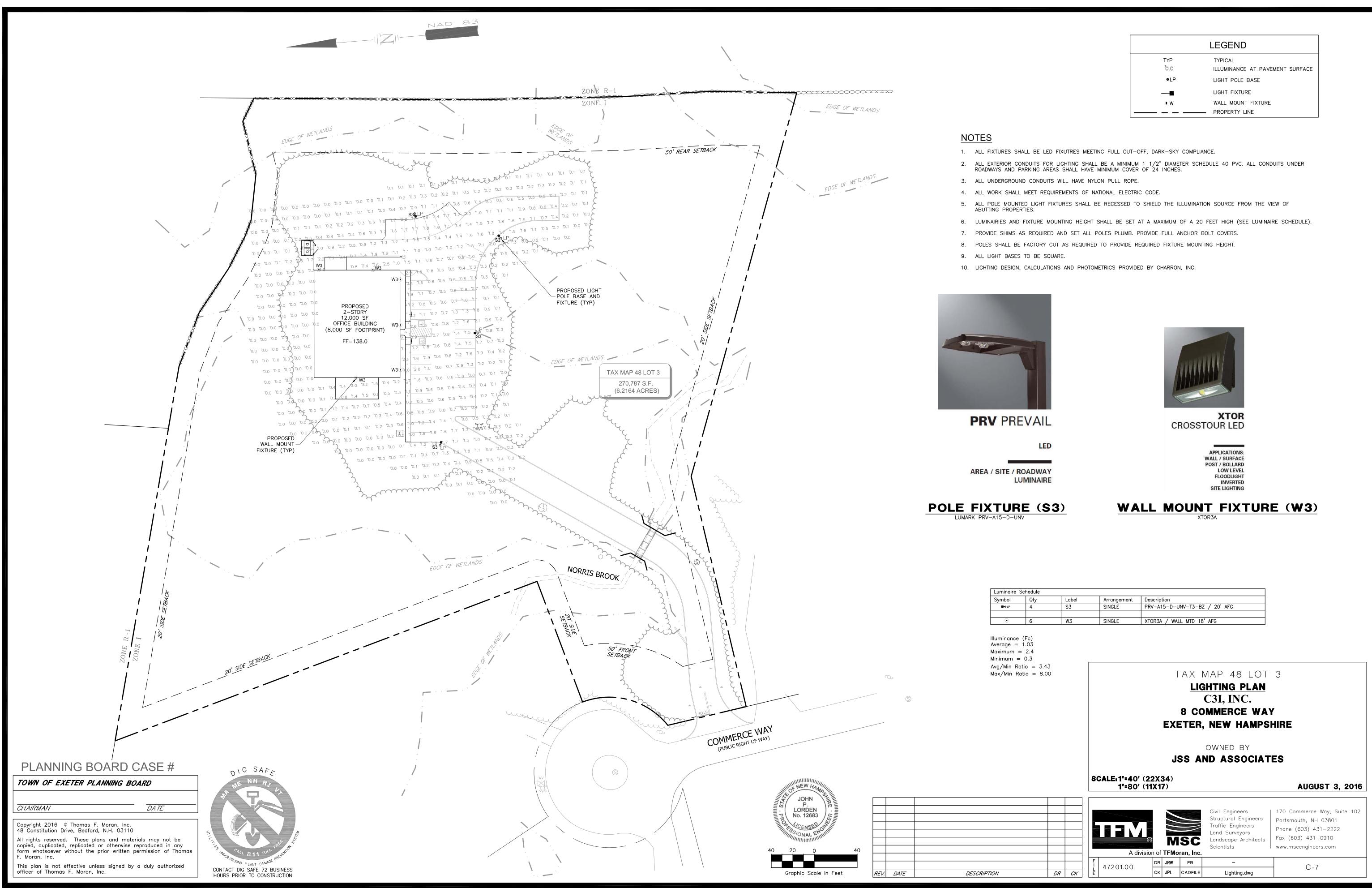
18. ON-SITE WATER DISTRIBUTION SHALL BE TO EXETER STANDARDS AND SPECIFICATIONS. WATER MAINS SHALL HAVE A MINIMUM OF 5.5 FEET COVER OR BE INSULATED. WHERE WATER PIPES CROSS SEWER LINES A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN THE TWO OUTSIDE PIPE WALLS SHALL BE OBSERVED. HORIZONTAL SEPARATION BETWEEN WATER AND SEWER SHALL BE 10 FEET MINIMUM. WHERE A SANITARY LINE CROSSES A WATER LINE, ENCASE THE SANITARY LINE IN 6" THICK CONCRETE FOR A DISTANCE OF 10' EITHER SIDE OF THE CROSSING, OR SUBSTITUTE RUBBER-GASKETED PRESSURE PIPE FOR THE SAME DISTANCE. WHEN SANITARY LINES PASS BELOW WATER LINES, LAY PIPE SO THAT NO JOINT IN THE SANITARY LINE WILL BE CLOSER THAN 3'

19. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT AND WIRING TO ALL SIGNS AND LIGHTS. CONDUIT TO BE A MINIMUM OF 24" BELOW FINISH GRADE. 20. ALL PROPOSED UTILITIES SHALL BE UNDERGROUND. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES.

21. ALL UTILITY COMPANIES REQUIRE INDIVIDUAL CONDUITS. CONTRACTOR TO COORDINATE WITH TELEPHONE, CABLE AND ELECTRIC COMPANIES REGARDING NUMBER,

22. THRUST BLOCKS SHALL BE PROVIDED AT ALL LOCATIONS WHERE WATER LINE CHANGES DIRECTIONS OR CONNECTS TO ANOTHER WATER LINE.

					Ţ	AXN	MAP 48 LOT	3
NS						<u>U1</u>	TILITY PLAN	
12							C3I, INC.	
							MMÉRCE WA	Y
					FXF	TFR.	NEW HAMPS	HIRF
W HANA						,		
HN ST							OWNED BY	
DEN			JSS AND ASSOCIATES					
EXETER, NEW HAMPSHIRE OWNED BY JSS AND ASSOCIATES SCALE: 1"=40' (22X34) 1"=80' (11X17) AUGUST 3, 2								
SCALE: 1"=40' (22X34)								
mining			1"=80' (1	1X1	7)			AUGUST 3, 2016
							Civil Engineers Structural Engineers	170 Commerce Way, Suite 102
							Traffic Engineers	Portsmouth, NH 03801 Phone (603) 431-2222
Land Surveyors					Fax (603) 431-0910			
				~			Scientists	www.mscengineers.com
		F	A divisio			ran, Inc.		
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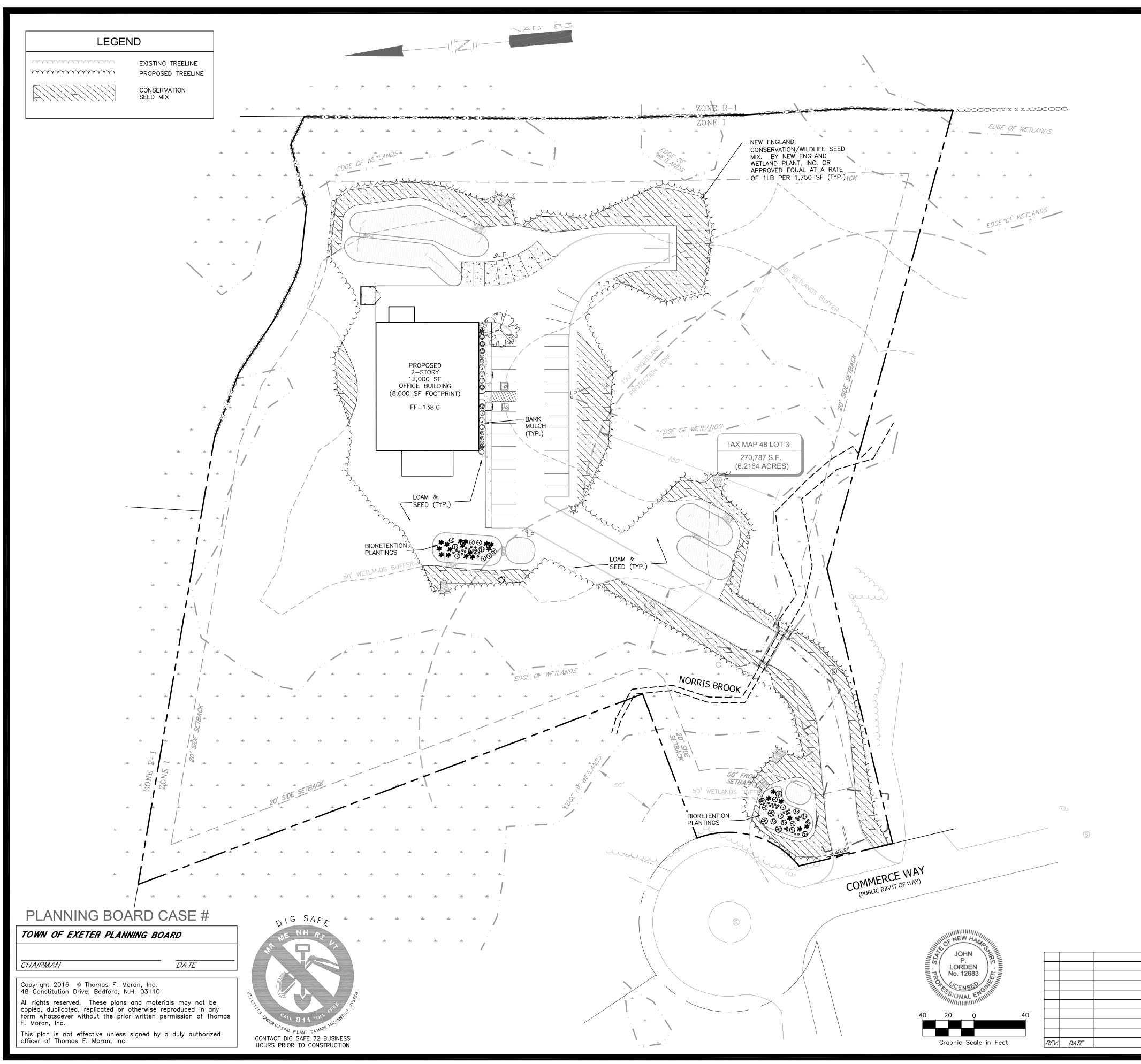
LEGEND				
TYP ⁺0.0	TYPICAL ILLUMINANCE AT PAVEMENT SURFACE			
●LP	LIGHT POLE BASE			
	LIGHT FIXTURE			
• W	WALL MOUNT FIXTURE PROPERTY LINE			







dule			
Qty	Label	Arrangement	Description
4	S3	SINGLE	PRV-A15-D-UNV-T3-BZ / 20' AFG
6	W3	SINGLE	XTOR3A / WALL MTD 18' AFG



SYMBOL	QTY	BOTANICAL NAME COMMON NAME	SIZE	REMARKS
	1	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2 1/2" TO 3" CAL.	B&B
G	5	CLETHRA ALNIFOLIA 'SIXTEEN CANDLES' SIXTEEN CANDLES SUMMERSWEET	#3	CONT.
O	6	RHODODENDRON 'POHJOLAS DAUGHTER' POHJOLAS DAUGHTER RHODODENDRON	18"-24"	B&B
Ø	5	SPIRAEA X B. 'ANTHONY WATERER' ANTHONY WATERER SPIREA	#3	CONT.
٢	2	RHODODENDRON 'PJM' PJM RHODODENDRON	18"-24"	CONT.
*	4	FESTUCA GLAUCA 'ELIJAH BLUE' ELIJAH BLUE FESCUE GRASS	1 GAL.	CONT.

٥	38	AQUILEGIA CANADENSIS RED COLUMBINE	#2	CONT.
Ø	12	CLETHRA ALNIFOLIA 'COMPACTA' COMPACT SUMMERSWEET	#3	CONT.
Ð	8	VIBURNUM DENTATUM ARROWWOOD VIBURNUM	#3	CONT.
&	5	ILEX VERTICILLATA WINTERBERRY	#3	CONT.
*	21	PANICUM VIRGATUM 'HEAVY METAL' HEAVY METAL SWITCHGRASS	#2	CONT.

### LANDSCAPE NOTES

- <u>GENERAL</u> CONSTRUCTION.

- FALL PLANTING.

- <u>GUARANTEE</u>

DESCRIPTION

### LANDSCAPE LEGEND

### **BIORETENTION LEGEND**

# (SEE DETAILS FOR ADDITIONAL NOTES)

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE RULES, REGULATIONS, LAWS, AND ORDINANCES HAVING JURISDICTION OVER THIS PROJECT SITE.

2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND NOTIFY OWNER'S REPRESENTATIVE OF CONFLICTS.

3. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON PLANS BEFORE PRICING THE WORK. ANY DIFFERENCE IN QUANTITIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION. LANDSCAPE QUANTITIES SHOWN ON THE PLAN SHALL SUPERCEDE QUANTITIES LISTED IN LANDSCAPE LEGEND.

4. THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT PRIOR TO STARTING WORK AND VERIFY THAT THE PLANS IN THE CONTRACTOR'S POSSESSION ARE THE MOST CURRENT PLANS AVAILABLE AND ARE THE APPROVED PLAN SET FOR USE IN

5. ALL PLANT MATERIALS INSTALLED SHALL MEET OR EXCEED THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

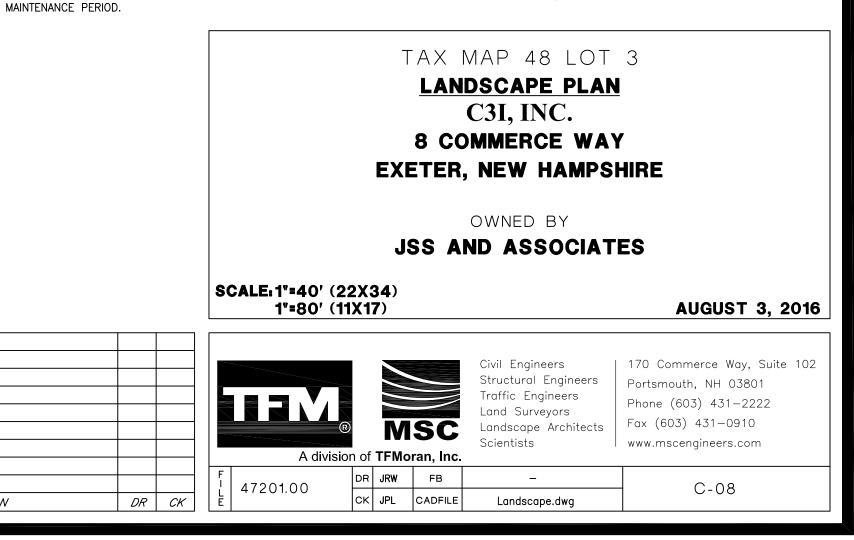
6. ALL PLANTS SHALL BE FIRST CLASS AND SHALL BE REPRESENTATIVE OF THEIR NORMAL SPECIES AND/OR VARIETIES. ALL PLANTS MUST HAVE GOOD, HEALTHY, WELL-FORMED UPPER GROWTH AND A LARGE, FIBEROUS, COMPACT ROOT SYSTEM. 7. ALL PLANTS SHALL BE FREE FROM DISEASE AND INSECT PESTS AND SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL LAWS PERTAINING TO PLANT DISEASES AND INFESTATIONS.

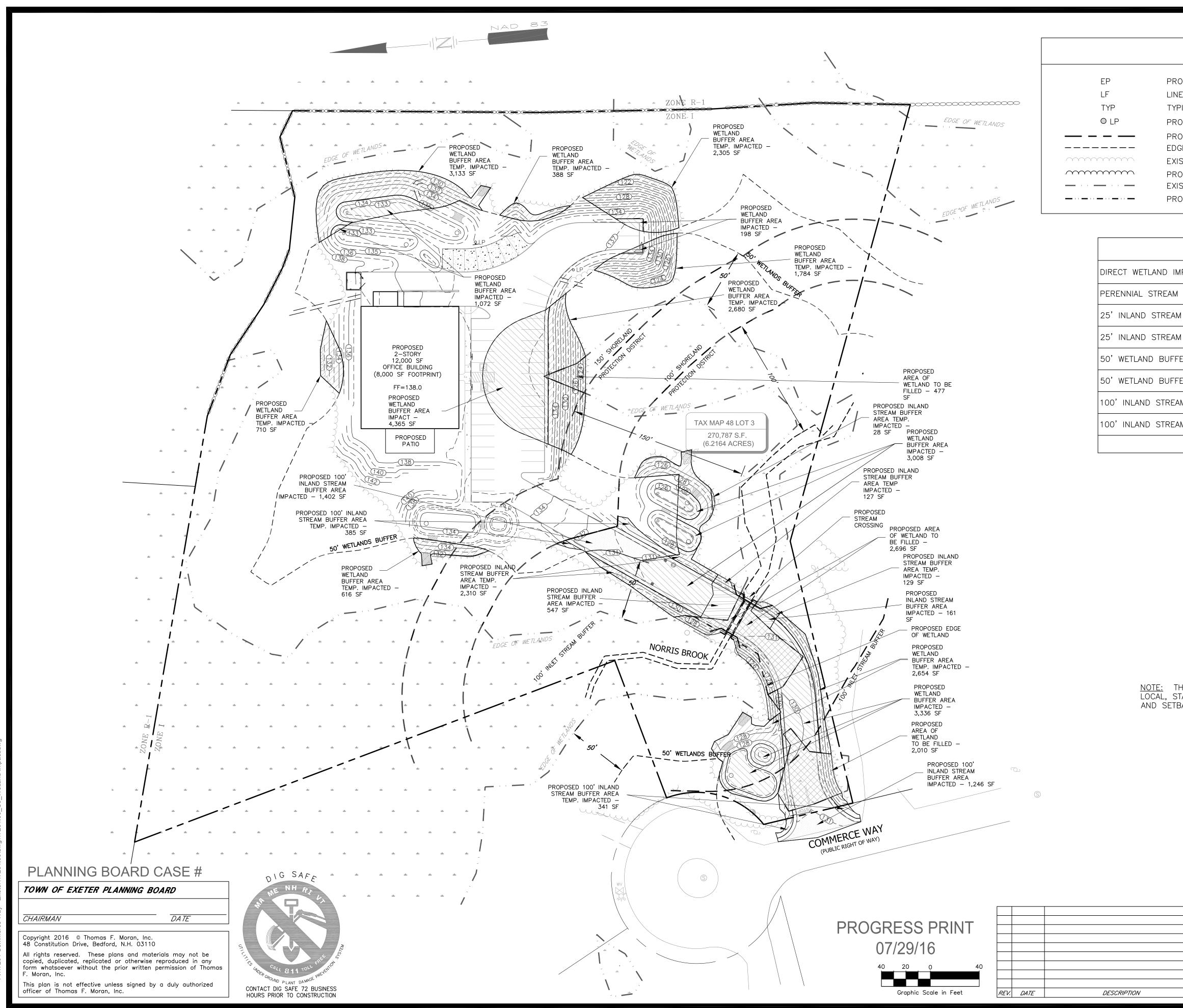
8. ALL TREES SHALL BE BALLED AND BURLAPPED (B & B) UNLESS OTHERWISE NOTED OR APPROVED BY LANDSCAPE ARCHITECT. 9. ALL LANDSCAPED AREAS INCLUDING LAWNS SHALL BE PROVIDED WITH UNDERGROUND IRRIGATION. SEE IRRIGATION NOTES. 10. IF APPLICABLE, THE CONTRACTOR SHALL HAVE ALL FALL TRANSPLANTING HAZARD PLANTS DUG IN THE SPRING AND STORED FOR

11. ALL INVASIVE PLANT SPECIES FROM THE "NEW HAMPSHIRE PROHIBITED INVASIVE PLANT SPECIES LIST", TO BE REMOVED SHALL BE DONE SO IN ACCORDANCE WITH THE "INVASIVE SPECIES ACT, HB 1258-FN." 12. RHODODENDRON'S PLANT 1:5 PEAT MOSS TO PLANTING SOIL.

13. EXISTING TREES SHOWN ON THE PLAN ARE TO REMAIN UNDISTURBED. ALL EXISTING TREES SHOWN TO REMAIN ARE TO BE PROTECTED WITH A 4-FOOT SNOW FENCE PLACED AT THE DRIP LINE OF THE BRANCHES OR AT 8 FEET MINIMUM FROM THE TREE TRUNK.

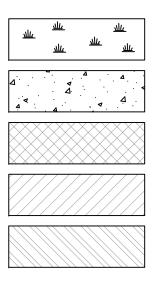
THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE WORK FOR A PERIOD OF ONE YEAR, BEGINNING AT THE START OF THE





### LEGEND

PROPOSED EDGE OF PAVEMENT LINEAR FEET TYPICAL PROPOSED LIGHTPOLE BASE PROPERTY LINE EDGE OF WETLANDS BUFFER EXISTING TREELINE PROPOSED TREELINE EXISTING EDGE OF WETLANDS PROPOSED EDGE OF WETLANDS



EXISTING WETLANDS

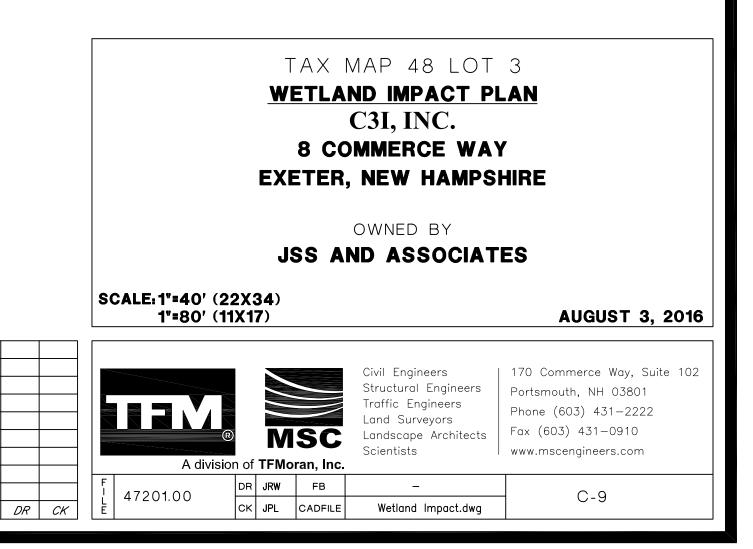
PROPOSED CONCRETE

PROPOSED WETLAND IMPACT

PROPOSED WETLAND BUFFER IMPACT PROPOSED INLET STREAM BUFFER IMPACT

WETLAND IMPACT SUMMARY	
IMPACT:	5.183 SF
AM IMPACT (36 LF X 3):	108 LF
EAM BUFFER IMPACT, PERMANENT:	708 SF
EAM BUFFER IMPACT, TEMPORARY:	284 SF
JFFER IMPACT, PERMANENT:	11,979 SF
JFFER IMPACT, TEMPORARY:	16,580 SF
REAM BUFFER IMPACT, PERMANENT:	2,468 SF
REAM BUFFER IMPACT, TEMPORARY:	726 SF

<u>NOTE:</u> THE LANDOWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL WETLANDS REGULATIONS, INCLUDING ANY PERMITTING AND SETBACK REQUIREMENTS REQUIRED UNDER THESE REGULATIONS.



|--|

THE SOIL IN THE VICINITY OF THE SITE CONSIST OF CHATFIELD-HOLLIS-CANTON COMPLEX AND SWANSEA MUCKY PEAT, THE MAJORITY OF THE SOIL IS HSG TYPE B AND B/D. DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 65,000 SQUARE FEET. CONSTRUCTION SHALL BE PHASED TO LIMIT DISTURBED AREAS TO LESS THAN 5 ACRES.

#### CRITICAL NOTE: THIS DRAWING IS PROVIDED FOR GENERAL GUIDANCE. ALL SPECIAL EROSION CONTROL MEASURES MUST BE EXECUTED IN ACCORDANCE WITH CURRENT STATE AND LOCAL REGULATIONS, APPROVED SWPPP AND PERMIT REQUIREMENTS.

SEQUENCE OF MAJOR ACTIVITIES

- 1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND TEMPORARY EROSION CONTROL MEASURES PER APPROVED SWPPP
- IF REQUIRED. DEMOLISH EXISTING SITE WORK DESIGNATED FOR REMOVAL.
- COMPLETE MAJOR GRADING OF SITE. CONSTRUCT BUILDING PAD, STORMWATER SYSTEM, AND SITE UTILITIES.
- CONSTRUCT PARKING LOT. 6. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND SITE IS STABILIZED, REMOVE ALL INLET PROTECTION, SILT
- BARRIERS AND SEDIMENT THAT HAS BEEN TRAPPED BY THESE DEVICES. 7. CONSULT APPROVED SWPPP FOR CONDITIONS RELATED TO NOTICE OF TERMINATION, IF REQUIRED.

EROSION AND SEDIMENT CONTROLS AND STABILIZATION PRACTICES

STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES AND DISTURBED AREAS WHERE CONSTRUCTION ACTIVITY WILL NOT OCCUR FOR MORE THAN TWENTY ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

- BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED; 2. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
- 3. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR 4. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT BARRIERS. ALL STORM DRAIN INLETS SHALL BE PROVIDED WITH BARRIER FILTERS. STONE RIPRAP SHALL BE PROVIDED AT THE OUTLETS OF DRAINAGE PIPES WHERE EROSIVE VELOCITIES ARE ENCOUNTERED.

### OFF SITE VEHICLE TRACKING

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED.

INSTALLATION, MAINTENANCE AND INSPECTION OF EROSION AND SEDIMENT CONTROLS

### . <u>general</u>

- THESE ARE THE GENERAL INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO IMPLEMENT THE PLAN. 1. STABILIZATION OF ALL SWALES, DITCHES AND PONDS IS REQUIRED PRIOR TO DIRECTING FLOW TO THEM.
- 2. THE SMALLEST PRACTICAL PORTION OF THE SITE WILL BE DENUDED AT ONE TIME. (5 AC MAX)
- 3. ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 0.10 INCHES OR GREATER.
- 4. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT. 5. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT BARRIER WHEN IT HAS REACHED ONE THIRD THE HEIGHT OF THE
- BARRIER. 6. ALL DIVERSION DIKES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
- 7. TEMPORARY SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND UNHEALTHY GROWTH
- 8. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION.
- 9. THE CONTRACTOR'S SITE SUPERINTENDENT WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
- A. B. <u>FILTERS / BARRIERS</u>
- 1. SILT SOCKS
- A. KNOTTED MESH NETTING MATERIAL SHALL BE DELIVERED TO SITE IN A 5 MIL CONTINUOUS, TUBULAR, HDPE 🖥 MATERIAL, FILLED WITH COMPOST CONFORMING TO THE FOLLOWING REQUIREMENTS:

PHYSICAL PROPERTYTESTREQUIREMENPHTMECC 04.11-A5.0 TO 8.0 <u>REQUIREMENTS</u>

PARTICLE SIZE TMECC 02.02-B 2" SIEVE AND MIN. 60% GREATER THAN THE 🔐 SIEVE

MOISTURE CONTENT STND TESTING < 60%

MATERIAL SHALL BE RELATIVELY FREE OF INERT OR FOREIGN MAN-MADE MATERIALS

MATERIAL SHALL BE WEED FREE AND DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER, FREE FROM ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH.

- B. SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK SHALL BE REMOVED ONCE IT HAS REACHED 3 OF THE EXPOSED HEIGHT OF THE SILT SOCK.
- C. SILT BARRIER SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREAS HAS BEEN PERMANENTLY STABILIZED.
- . SEQUENCE OF INSTALLATION SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.

PLANNING BOARD CASE #	
TOWN OF EXETER PLANNING BOARD	

DATE

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HOURS PRIOR TO CONSTRUCTION

- 3. MAINTENANCE

- SHALL BE DRESSED TO CONFIRM WITH THE EXISTING GRADE, PREPARED AND SEEDED

### C. <u>MULCHING</u>

TIMING

- TWO (2) TYPES OF STANDARDS WHICH SHALL BE USED TO ASSURE THIS: A. APPLY MULCH PRIOR TO ANY STORM EVENT.
- ADEQUATE WARNING OF SIGNIFICANT STORMS.
- TIME RESTRICTION.
- 2. GUIDELINES FOR WINTER MULCH APPLICATION.
- IMMEDIATELY APPLIED.
- D. VEGETATIVE PRACTICE

3. MAINTENANCE

- LOAM SHALL BE RAKED SMOOTH AND EVEN.
- GRADES AND SMOOTH, EVEN SURFACES WITHOUT IRREGULARITIES TO LOW POINTS.
- PERIOD AND REGRADE, LOAM AND RESEED ANY DAMAGED AREAS.
- OR MULCH SHALL BE LOAMED AND SEEDED.
- TO PROVIDE A PH VALUE OF 5.5 TO 6.5.
- 7. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION
- 8. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY
- WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH.
- EROSION AND SEDIMENT CONTROL HANDBOOK.
- BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED.
- SPECIFIED HEREIN AFTER UNDER MAINTENANCE AND PROTECTION.

B. FERTILIZER SHALL BE SPREAD AND WORKED INTO THE SURFACE AT A RATE OF 300 POUNDS PER ACRE. MULCHING AND SEEDING SHALL BE APPLIED AT THE FOLLOWING RATES: WINTER RYE (FALL SEEDING) 2.5 LBS/1.000 SF OATS (SPRING SEEDING) 2.0 LBS/1,000 SF MULCH 1.5 TONS/ACRE

	STANDARD
	TYPICAL RECTANGULAR INLET FILTER
NO	TES:
1. 2. 3. 4.	INSTALL PER MANUFACTURER'S SPECIFICATION INSPECTION SHOULD OCCUR FOLLOWING ANY EMPTY THE SEDIMENT BAG PER MANUFACTUR REMOVED CAKED ON SILT FROM SEDIMENT BA MEDIUM SPRAY WITH OPTIMAL FILTRATION.

REPLACE BAG IF TORN OR PUNCTURED TO  $> \frac{1}{2}$  DIAMETER ON LOWER HALF OF BAG.

CHAIRMAN

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#### A. SILT BARRIERS SHALL BE INSPECTED WEEKLY AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THEY SHALL BE REPAIRED IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM.

B. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

C. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE THIRD (1/3) THE HEIGHT OF THE BARRIER.

D. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT BARRIER IS NO LONGER REQUIRED

IN ORDER FOR MULCH TO BE EFFECTIVE, IT MUST BE IN PLACE PRIOR TO MAJOR STORM EVENTS. THERE ARE

THIS IS APPLICABLE WHEN WORKING WITHIN 100 FEET OF WETLANDS. IT WILL BE NECESSARY TO CLOSELY MONITOR WEATHER PREDICTIONS, USUALLY BY CONTACTING THE NATIONAL WEATHER SERVICE, TO HAVE

B. REQUIRED MULCHING WITHIN A SPECIFIED TIME PERIOD.

THE TIME PERIOD CAN RANGE FROM 14 TO 21 DAYS OF INACTIVITY ON AN AREA, WHERE THE LENGTH OF TIME VARIES WITH SITE CONDITIONS. PROFESSIONAL JUDGMENT SHALL BE USED TO EVALUATE THE INTERACTION OF SITE CONDITIONS (SOIL ERODIBILITY, SEASON OF YEAR, EXTENT OF DISTURBANCE, PROXIMITY TO SENSITIVE RESOURCES, ETC.) AND THE POTENTIAL IMPACT OF EROSION ON ADJACENT AREAS TO CHOOSE AN APPROPRIATE

WHEN MULCH IS APPLIED TO PROVIDE PROTECTION OVER WINTER (PAST THE GROWING SEASON) IT SHALL BE AT A RATE OF 6,000 POUNDS OF HAY OR STRAW PER ACRE. A TACKIFIER MAY BE ADDED TO THE MULCH.

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE

1. AFTER ROUGH GRADING OF THE SUBGRADE HAS BEEN COMPLETED AND APPROVED, THE SUB GRADE SURFACE SHALL BE SCARIFIED TO A DEPTH OF FOUR INCHES. THEN, FURNISH AND INSTALL A LAYER OF LOAM PROVIDING A ROLLED THICKNESS AS SPECIFIED IN THESE PLANS. ANY DEPRESSIONS WHICH MAY OCCUR DURING ROLLING SHALL BE FILLED WITH ADDITIONAL LOAM, REGRADED AND REROLLED UNTIL THE SURFACE IS TRUE TO THE FINISHED LINES AND GRADES. ALL LOAM NECESSARY TO COMPLETE THE WORK UNDER THIS SECTION SHALL BE SUPPLIED BY THE SITE SUBCONTRACTOR.

2. ALL LARGE STIFF CLODS, LUMPS, BRUSH, ROOTS, DEBRIS, GLASS, STUMPS, LITTER AND OTHER FOREIGN MATERIAL, AS WELL AS STONES OVER ONE INCH IN DIAMETER, SHALL BE REMOVED FROM THE LOAM AND DISPOSED OF OFF SITE. THE

3. THE LOAM SHALL BE PREPARED TO RECEIVE SEED BY REMOVING STONES, FOREIGN OBJECTS AND GRADING TO ELIMINATE WATER POCKETS AND IRREGULARITIES PRIOR TO PLACING SEED. FINISH GRADING SHALL RESULT IN STRAIGHT UNIFORM

4. SHAPE THE AREAS TO THE LINES AND GRADES REQUIRED. THE SITE SUBCONTRACTOR'S ATTENTION IS DIRECTED TO THE SCHEDULING OF LOAMING AND SEEDING OF GRADED AREAS TO PERMIT SUFFICIENT TIME FOR THE STABILIZATION OF THESE AREAS. IT SHALL BE THE SITE SUBCONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE AREAS DURING THE CONSTRUCTION

5. ALL AREAS DISTURBED BY CONSTRUCTION WITHIN THE PROPERTY LINES AND NOT COVERED BY STRUCTURES, PAVEMENT,

6. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF 2 TONS PER ACRE IN ORDER

RATE SHALL BE 500 POUNDS PER ACRE OF 10-20-20 FERTILIZER.

WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4 1/2 POUNDS AND 5 1/2 POUNDS PER INCH OF WIDTH.

9. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH INCH AND ROLLED

10. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AT A RATE OF 1.5 TO 2 TONS PER ACRE. MULCH THAT BLOWS OR WASHES AWAY SHALL BE REPLACED IMMEDIATELY AND ANCHORED USING APPROPRIATE TECHNIQUES FROM THE

11. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL

12. THE SITE SUBCONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED, INCLUDING CUTTING, AS

13. UNLESS OTHERWISE APPROVED, SEEDING SHALL BE DONE DURING THE APPROXIMATE PERIODS OF EARLY SPRING TO SEPTEMBER 30. WHEN SOIL CONDITIONS AND WEATHER ARE SUITABLE FOR SUCH WORK. IN NO CASE SHALL THE WEED CONTENT EXCEED 1 PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. FOR TEMPORARY PLANTINGS AFTER SEPTEMBER TO EARLY SPRING AND FOR TEMPORARY PROTECTION OF DISTURBED AREAS:

A. FOLLOW ABOVE SLOPE, LOAM DEPTH AND GRADING REQUIREMENTS.

N AREA

FLEXSTORM CATCH-IT FILTERS

RAIN EVENT > 1/3" RER'S SPECIFICATIONS. AG AND FLUSH WITH

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC. A DIVISION OF ADS, INC. WWW.INLETFILTERS.COM

**INLET PROTECTION** NOT TO SCALE

- E. CATCH BASIN INLET PROTECTION
- 1. INLET BASKET STRUCTURE
- A. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY PRIOR TO DISTURBING PAVEMENT AND SHALL REMAIN IN PLACE AND MAINTAINED UNTIL PAVEMENT BINDER COURSE IS COMPLETE.
- B. MOLD 6X6, 42 LB. WIRE SUPPORT AROUND INLET FRAME AND GRATE AND EXTEND 6" BEYOND SIDES. SECURE FILTER FABRIC TO WIRE SUPPORT.
- C. THE FILTER FABRIC SHALL BE A GEOTEXTILE FABRIC; POLYESTER, POLYPROPYLENE, STABILIZED NYLON, POLYETHYLENE OR POLYVINYLIDENE CHLORIDE MEETING THE FOLLOWING SPECIFICATIONS:

GRAB STRENGTH: 45 LB. MINIMUM IN ANY PRINCIPAL DIRECTION (ASTM D1682) MULLEN BURST STRENGTH: MIN. 60PSI (ASTM D774)

- D. THE FABRIC SHALL HAVE AN OPENING NO GREATER THAN A NUMBER 20 U.S. STANDARD SIEVE AND A MINIMUM PERMEABILITY OF 120 GPM.
- E. THE INLET PROTECTION SHALL BE INSPECTED WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING EXTENDED PERIODS OF PRECIPITATION. REPAIRS SHALL BE MADE IMMEDIATELY, AS NECESSARY, TO PREVENT PARTICLES FROM REACHING THE DRAINAGE SYSTEM AND/OR CAUSING SURFACE FLOODING.
- F. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT, OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED.
- F. WINTER CONSTRUCTION SEQUENCE
- 1. ALL PROPOSED POST-DEVELOPMENT LANDSCAPED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1 AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND.
- 2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- 3. AFTER NOVEMBER 15TH, ALL TRAVEL SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3-INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOWFALL AFTER EACH STORM EVENT.

### TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, SILT BARRIERS SHALL BE INSTALLED PRIOR TO COMMENCING ANY CLEARING OR GRADING OF THE SITE. STRUCTURAL CONTROLS SHALL BE INSTALLED CONCURRENTLY WITH THE APPLICABLE ACTIVITY. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN TWENTY ONE (21 DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN FOURTEEN (14) DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, SILT BARRIERS AND ANY EARTH/DIKES WILL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.

WASTE DISPOSAL

- 1. WASTE MATERIALS ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN A DUMPSTER. NO CONSTRUCTION WASTE MATERIAL WILL BE BURIED ON SITE. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WAST DISPOSAL BY THE SUPERINTENDENT.
- 2. HAZARDOUS WASTE ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOC. OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES E THE SUPERINTENDENT.
- 3. SANITARY WASTE ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

### SPILL PREVENTION

1. <u>MATERIAL MANAGEMENT PRACTICES</u> THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:

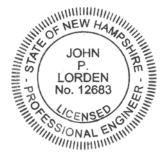
GOOD HOUSEKEEPING THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ON SITE DURING THE CONSTRUCTION

- A. AN EFFORT WILL BE MADE TO STORE ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB
- B. ALL MATERIALS STORED ON SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE
- C. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
- D. THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.
- E. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
- F. WHENEVER POSSIBLE ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.

HAZARDOUS PRODUCTS THE FOLLOWING PRACTICES WILL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:

- A. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
- B. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION.
- C. SURPLUS PRODUCT THAT MUST BE DISPOSED OF WILL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
- 2. PRODUCT SPECIFICATION PRACTICES THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON SITE:
- PETROLEUM PRODUCTS ALL ON SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS. ONCE APPLIED FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. STORAGE WILL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
- ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

<u>CONCRETE TRUCKS:</u> CONCRETE TRUCKS WILL DISCHARGE AND WASH OUT SURPLUS CONCRETE OR DRUM WASH WATER IN A CONTAINED AREA DESIGNATED ON SITE.



REV.	DATE	DESCRIPTION

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### SPILL CONTROL PRACTICES

IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

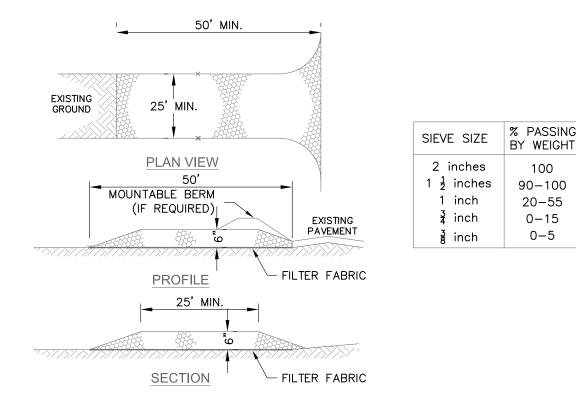
- A. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
- MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
- D. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

CLEANUP MEASURES WILL BE INCLUDED.

- E. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- F. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL
- GOVERNMENT AGENCY, REGARDLESS OF THE SIZE. G. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM RECURRING AND HOW TO CLEANUP THE SPILL IF IT RECURS. A DESCRIPTION OF THE SPILL, ITS CAUSE, AND THE
- H. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.

### DUST CONTROL

THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL METHODS SHALL INCLUDE, BUT NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS.



CONSTRUCTION SPECIFICATIONS

STONE SIZE - NHDOT STANDARD STONE SIZE #4 - SECTION 703 OF NHDOT STANDARD SPECIFICATIONS. (SEE GRADATION TABLE)

LENGTH - 50 FOOT MINIMUM

THICKNESS - SIX (6) INCHES MINIMUM

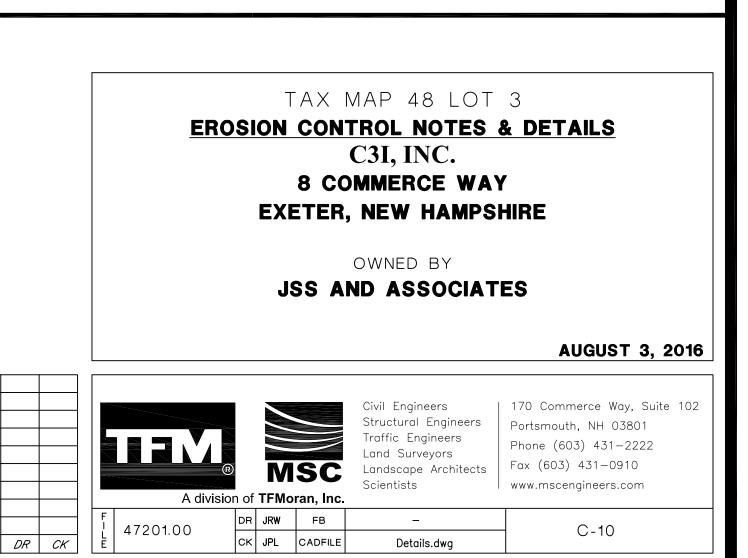
WIDTH - 25' MINIMUM OR WIDTH OF DRIVEWAY

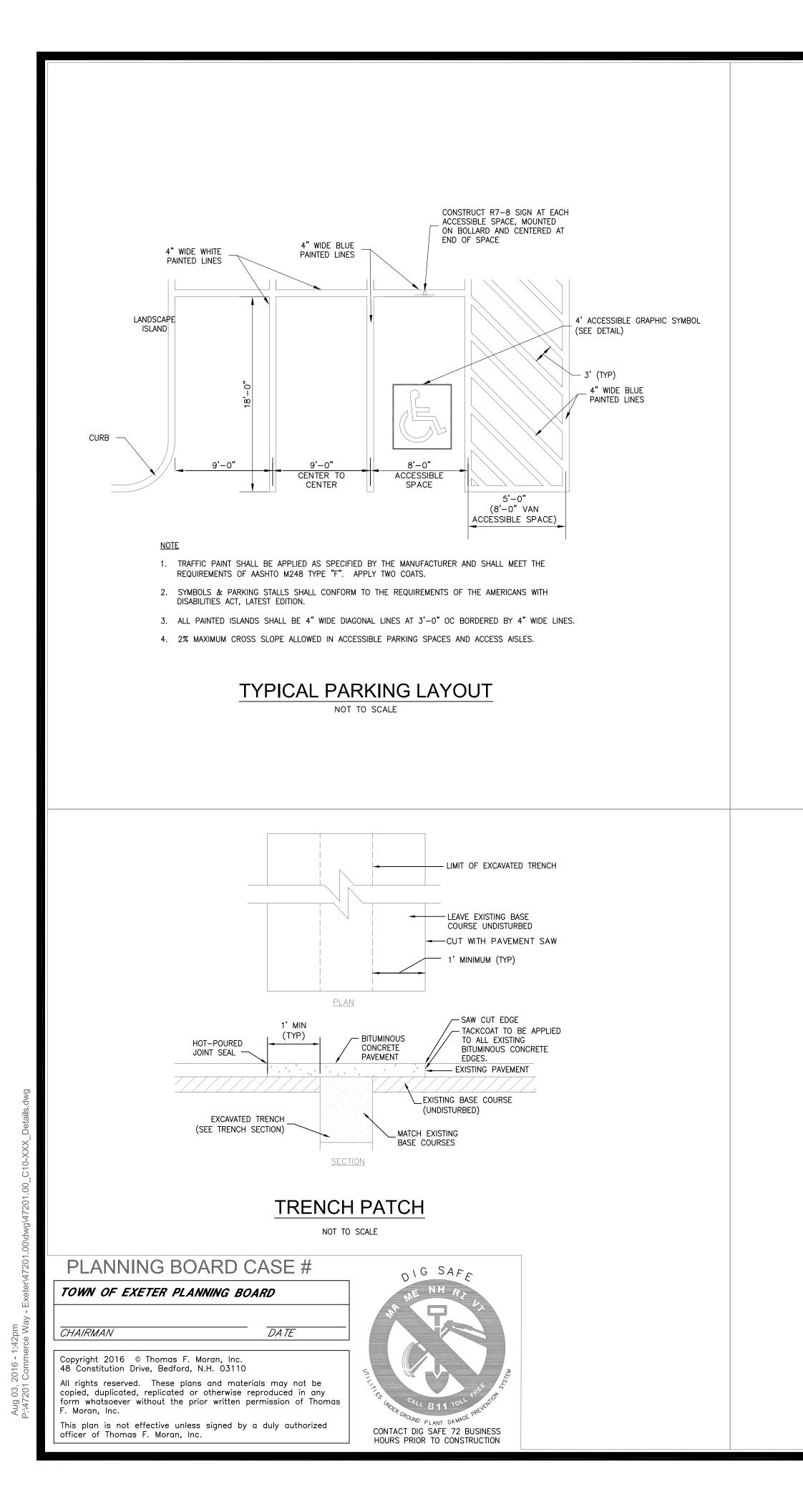
FILTER FABRIC - MIRAFI 600X OR APPROVED EQUAL SHALL BE PLACED OVER THE ENTIRE AREA TO BE COVERED WITH AGGREGATE

INSTALLATION - THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. A ROAD STABILIZATION FILTER CLOTH CAN BE PLACED ON THE SUBGRADE PRIOR TO THE GRAVEL PLACEMENT TO PREVENT PUMPING. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS.

MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES OR WATERWAYS. PIPING OF SURFACE WATER UNDER ENTRANCE SHALL BE PROVIDED AS REQUIRED.

### STABILIZED CONSTRUCTION ENTRANCE NOT TO SCALE

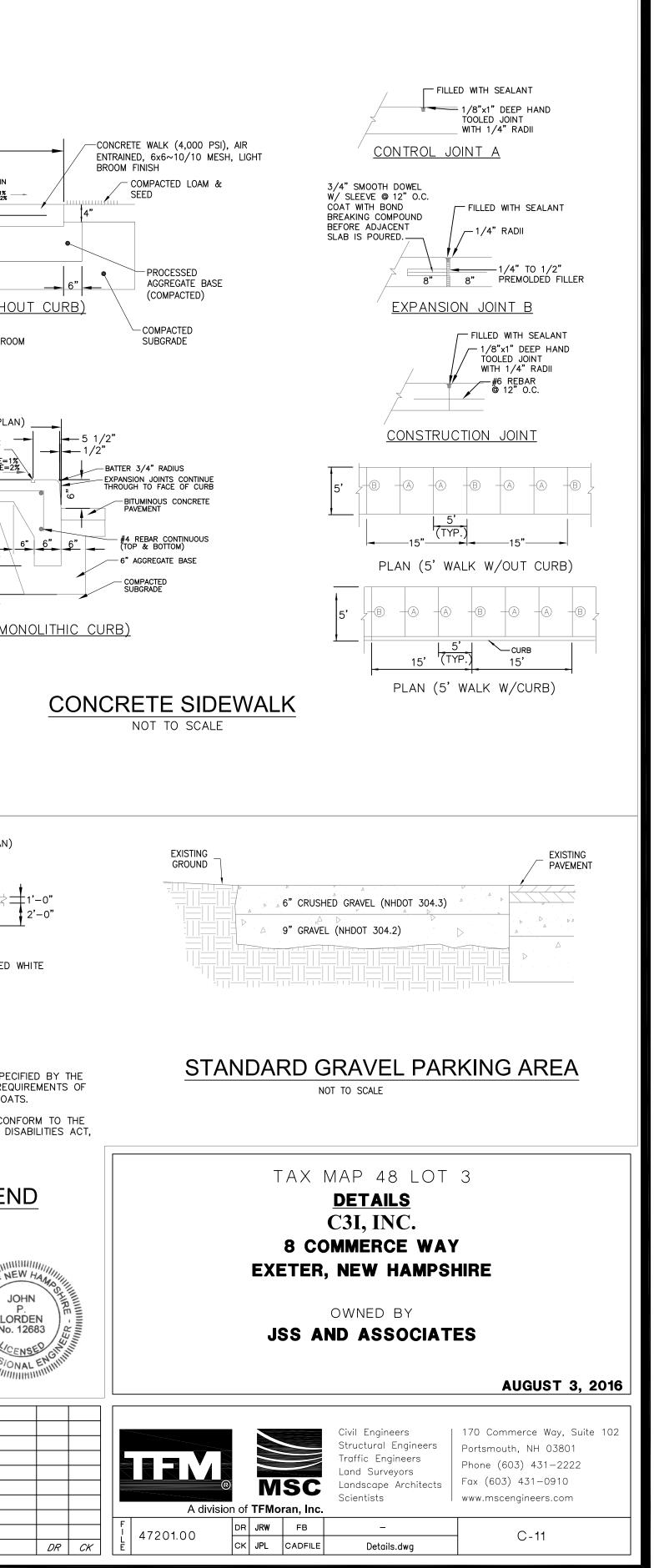


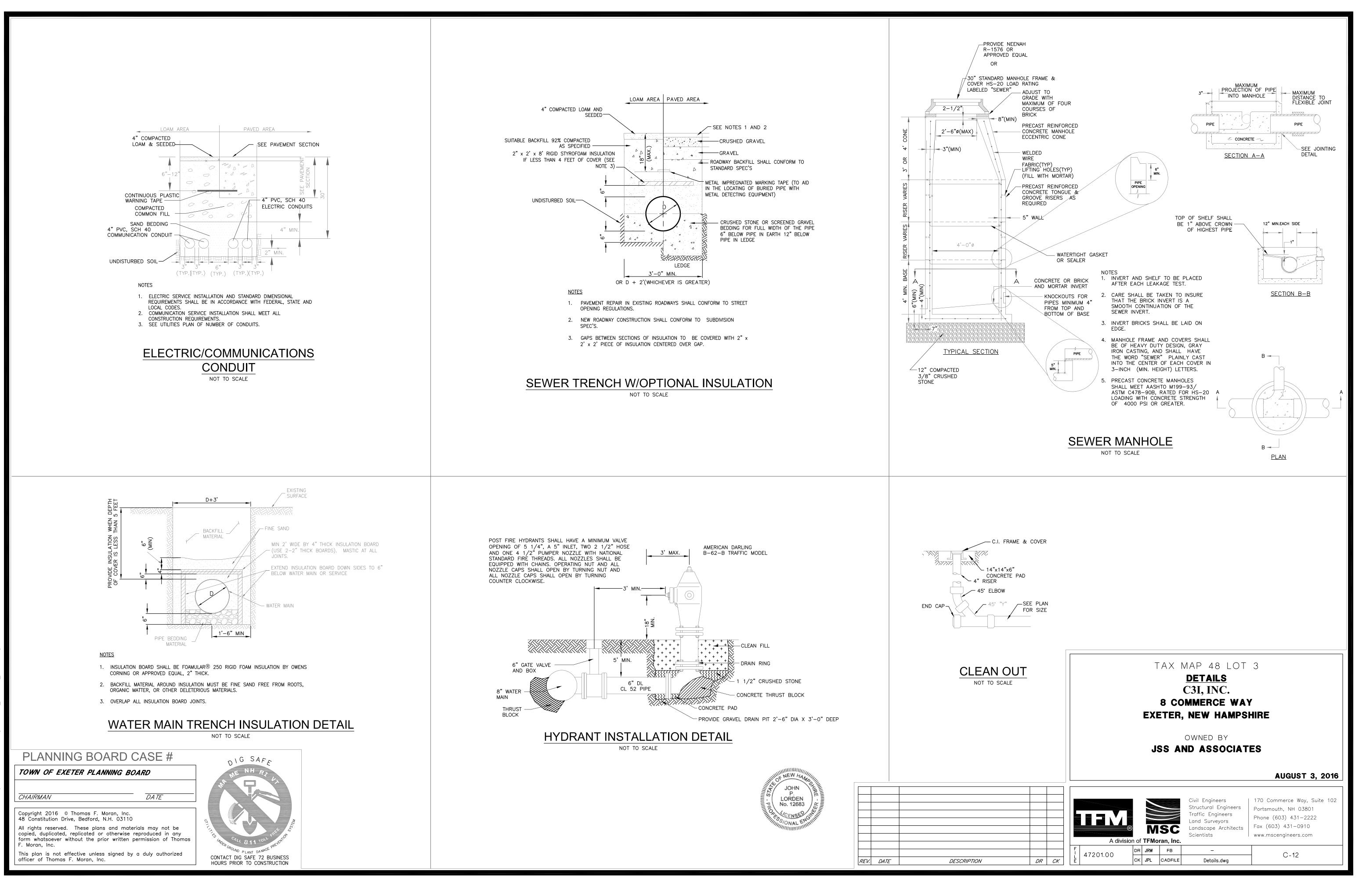


<image/> <section-header><text><list-item><list-item><list-item><section-header><section-header></section-header></section-header></list-item></list-item></list-item></text></section-header>	5' PITCH TO DRAIN 
1.25" BITUMINOUS CONCRETE (NHDOT 1/2 INCH SURFACE COURSE) 2.25" BITUMINOUS CONCRETE (NHDOT 3/4 INCH BINDER COURSE) 6" CRUSHED GRAVEL 12" GRAVEL (NHDOT 304.3) (NHDOT 304.2) (NHDOT	LENGTH AS REQUIRED (SEE SITE PLAN) WHITE PAINTED STOP BAR
<ol> <li>NOTES</li> <li>SEE GRADING &amp; EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.</li> <li>PROVIDE CLEAN BUTT TO EXISTING PAVEMENT- USE TACK COAT. A TACK COAT SHALL ALSO BE PLACED BETWEEN GRAVEL COURSE AND SUCCESSIVE LAYERS OF BITUMINOUS CONCRETE. SPECIFICALLY, A TACK COAT SHALL BE PLACED ATOP THE BINDER COURSE PAVEMENT PRIOR TO PLACING THE WEARING COURSE.</li> <li>REMOVE ALL LOAM AND/OR YIELDING MATERIAL BELOW PAVEMENT.</li> <li>BITUMINOUS MATERIALS SHALL CONFORM TO NHDOT SPECIFICATION SECTION 401.</li> <li>BITUMINOUS CONCRETE SHALL BE COMPACTED TO AT LEAST 92.5% OF THEORETICAL MAXIMUM DENSITY AS DETERMINED BY ASTM D2041 OR AASHTO T209. PLACEMENT TEMPERATURES OF BITUMINOUS CONCRETE MIXES, IN GENERAL, RANGE BETWEEN 270 AND 310 DEGREES FAHRENHEIT.</li> <li>PAVEMENT BASE COURSE AGGREGATE SHALL CONFORM TO NHDOT SPECIFICATION SECTION 304, ITEM 304.3 AND COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY.</li> <li>PAVEMENT SUBBASE COURSE AGGREGATE AND AGGREGATE FOR SUBGRADE REPAIR AREAS SHALL BE SUITABLE FOR USE AS STRUCTURAL FILL AND BE PROOF ROLLED AND COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY.</li> <li>THE EXPOSED SOIL SUBGRADE SHOULD BE PROOF ROLLED PRIOR TO THE PLACEMENT OF SUBBASE GRAVEL, AND SOFT AREAS SHOULD BE REPAIRED AND REPLACED.</li> <li>ALL PARKING SPACES SHALL BE STANDARD DUTY. ALL OTHER LOCATIONS SHALL BE HEAVY DUTY.</li> </ol>	LATEST EDITION. STOP BAR & LEGEN NOT TO SCALE
PAVEMENT SECTIONS NOT TO SCALE	

REV. DATE

DESCRIPTION





<u>SITE AND SOIL PREPARATION</u> WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR LEDGE, NOTIFY LANDSCAPE ARCHITECT/ENGINEER BEFORE PLANTING. ALL DISTURBED AREAS & PLANTING AREAS, INCLUDING AREAS TO BE SODDED, SHALL RECEIVE THE FOLLOWING SOIL PREPARATION PRIOR TO PLANTING: A MINIMUM OF 6 INCHES OF LIGHTLY COMPACTED TOPSOIL SHALL BE INSTALLED OVER THE SUBSOIL IF TOPSOIL HAS BEEN REMOVED OR IS NOT PRESENT LOAM SHALL CONSIST OF LOOSE FRIABLE TOPSOIL WITH NO ADMIXTURE OF REFUSE OR MATERIAL TOXIC TO PLANT GROWTH. LOAM SHALL BE FREE FROM STONES, LUMPS, STUMPS, OR SIMILAR OBJECTS LARGER THAN TWO INCHES (2") IN GREATEST DIAMETER, SUBSOIL, ROOTS, AND WEEDS. THE MINIMUM AND MAXIMUM PH VALUE SHALL BE FROM 5.5 TO 7.0. LOAM SHALL CONTAIN A MINIMUM OF TWO PERCENT (2%) AND A MAXIMUM OF FIVE PERCENT (5%) ORGANIC MATTER AS DETERMINED BY LOSS BY IGNITION. SOIL TEXTURE SHALL BE SANDY CLAY LOAM OR SANDY LOAM WITH CLAY CONTENT BETWEEN 15 AND 25%, AND A COMBINED CLAY/SILT CONTENT OF NO MORE THAN 55%. NOT MORE THAN SIXTY-FIVE PERCENT (65%) SHALL PASS A NO. 200 SIEVE AS DETERMINED BY THE WASH TEST IN ACCORDANCE WITH ASTM D1140. IN NO INSTANCE SHALL MORE THAN 20% OF THAT MATERIAL PASSING THE #4 SIEVE CONSIST OF CLAY SIZE PARTICLES. NATURAL TOPSOIL NOT CONFORMING TO THE PARAGRAPH ABOVE OR CONTAINING EXCESSIVE AMOUNTS OF CLAY OR SAND SHALL BE TREATED BY THE CONTRACTOR TO MEET THOSE REQUIREMENTS. STAKE SUBMIT TEST RESULTS OBTAINED FROM SOURCE TO ENGINEER/LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL, PRIOR TO SPREADING ON 5' OPERATIONS. LINEAL SPACING APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT TO USE THE TOPSOIL WILL DEPEND UPON THE RESULTS OF THE SOIL TESTS. THE BURDEN OF PROOF OF SOIL AMENDMENT INSTALLATION RESTS WITH THE CONTRACTOR. SOIL TESTS MAY BE REQUIRED AT THE CONTRACTOR'S EXPENSE IN ORDER TO CONFIRM AMENDMENT INSTALLATION. SEEDING ROUGH GRADING SHALL BE COMPLETED PRIOR TO THE START OF PLANTING IN ANY GIVEN AREA OF THE PROJECT SITE. SEEDING SHALL BE DONE BETWEEN APRIL 1 TO JUNE 15 OR AUGUST 15 TO OCTOBER 15, EXCEPT FOR RESEDING OF BARE SPOTS AND MAINTENANCE. ALL DISTURBED AREAS NOT COVERED BY BUILDINGS, PAVING OR AREAS THAT HAVE NOT BEEN OTHERWISE DEVELOPED SHALL BE SEEDED OR SODDED. SLOPES GREATER THAN 3:1 SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET. AFTER OCTOBER 15 DISTURBED SOILS SHALL BE PROTECTED IN ACCORDANCE WITH THE WINTER CONSTRUCTION NOTES. ACCEPTABLE SEED MIXES ARE AS FOLLOWS: Filtrexx™ FilterSoxx PARK SEED MIX (NHDOT TYPE 44) MIN. 135 LBS/ACRE: 33% CREEPING RED FESCUE (MIN. 45 LBS/ACRE) 42% PERENNIAL RYEGRASS (MIN. 55 LBS/ACRE) 21% KENTUCKY BLUEGRASS (MIN. 30 LBS/ACRE) 4% REDTOP (MIN. 5 LBS/ACRE) TEMPORARY LAWN MIX: (MIN. 47 LBS/ACRE) 100% ANNUAL RYE SLOPE SEED (WF) (NHDOT TYPE 45) MIX 3:1 OR GREATER SLOPES (MIN. 105 LBS/ACRE): 38% CREEPING RED FESCUE (MIN. 40 LBS/ACRE) 32% PERENNIAL RYEGRASS (MIN. 35 LBS/ACRE) 5% REDTOP (MIN. 5 LBS/ACRE) 5% ALSIKE CLOVER (MIN. 5 LBS/ACRE) 5% BIRDSFOOT TREFOIL (MIN. 5 LBS/ACRE) 3% LANCE-LEAF COREOPSIS (MIN. 3 LBS/ACRE) 3% OXEYE DAISY (MIN. 3 LBS/ACRE) 3% BUTTERFLY WEED (MIN. 3 LBS/ACRE) 3% BLACKEYED SUSAN (MIN. 3 LBS/ACRE) 3% WILD LUPINE (MIN. 3 LBS/ACRE) SLOPE SEED (NHDOT TYPE 44) MIX 3:1 OR GREATER SLOPES (MIN. 90 LBS/ACRE): 44% CREEPING RED FESCUE (MIN. 40 LBS/ACRE) (MIN. 35 LBS/ACRE) 38% PERENNIAL RYEGRASS 6% REDTOP (MIN. 5 LBS/ACRE) 6% ALSIKE CLOVER (MIN. 5 LBS/ACRE) 6% BIRDSFOOT TREFOIL (MIN. 5 LBS/ACRE) <u>PLANTING</u> EXCAVATE PITS, PLANTERS, BEDS AND TRENCHES WITH VERTICAL SIDES AND WITH BOTTOM OF EXCAVATION SLIGHTLY RAISED AT CENTER TO PROVIDE PROPER DRAINAGE. LOOSEN HARD SUBSOIL IN BOTTOM OF EXCAVATION. ANY LEDGE OR RUBBLE MATERIAL SHALL BE FRACTURED TO A DEPTH OF 3 FEET AND EXCAVATED TO A DEPTH OF 30 INCHES FOR TREE POCKETS AND 18 INCHES FOR SHRUB BEDS. THIS PROCEDURE SHALL BE HANDLED BY THE SITE CONTRACTOR. SITE TOPSOIL SHALL BE DEPOSITED IN ALL EXCAVATED POCKETS. DISPOSE OF SUBSOIL REMOVED FROM PLANTING EXCAVATIONS. DO NOT MIX WITH PLANTING SOIL OR USE AS BACKFILL. FILL EXCAVATIONS FOR TREES AND SHRUBS WITH WATER AND ALLOW TO PERCOLATE OUT BEFORE PLANTING. DISH TOP OF BACKFILL TO ALLOW FOR MULCH - PLANT SAUCERS SHALL BE AS SHOWN ON DETAIL SHEETS; 6' DIAMETER FOR ALL DECIDUOUS TREES, AND FOR EVERGREEN TREES A RADIUS 2' BEYOND THE OUTER MOST BRANCHES. MULCH TREES, SHRUBS, PLANTERS AND BEDS. PROVIDE NOT LESS THAN 3" THICKNESS OF BARK MULCH, 3/8"-2" OF WIDTH, AND WORK INTO TOP OF BACKFILL. FINISH LEVEL WITH ADJACENT FINISH GRADES AS DIRECTED IN THE FIELD. STAKE AND GUY TREES IMMEDIATELY AFTER PLANTING (TREE SUPPORT STAKES SHALL BE 2" X 3" X 8', WOOD STAKES. GUYING WIRE SHALL BE NO. 12 GAUGE GALVANIZED SOFT STEEL WIRE. HOSE FOR COVERING WIRE SHALL BE NEW OR USED TWO PLY RUBBER HOSE NOT LESS THAN 1/2 WATER THOROUGHLY TWICE WITHIN INCH INSIDE DIAMETER. (PLASTIC "CINCH-TIES" OR EQUIVALENT FASTENING DEVICE MAY BE AN ACCEPTABLE GUY WIRE AND HOSE PROTECTOR THE FIRST 48 HOURS. SUBSTITUTE.) TREEGATOR WATERING SYSTEM OR APPROVED EQUAL SHALL BE INSTALLED FOR ALL DECIDUOUS TREES AT TIME OF PLANTING AND REMOVED BEFORE FROST. WATERING RATE TO BE APPLIED PER MANUFACTURER'S SPECIFICATIONS. ALL PLANT MATERIALS SHALL HAVE DEAD OR DAMAGED BRANCHES REMOVED AT TIME OF PLANTING. ALL TAGS AND RIBBONS SHALL BE REMOVED AT THIS TIME. 10. TREES TO REMAIN STAKED FOR 1 FULL GROWING SEASON. THE CONTRACTOR SHALL REQUEST A FINAL OBSERVATION BY THE OWNER'S REPRESENTATIVE UPON COMPLETION OF INSTALLATION. R 90 a) WATER THOROUGHLY TWICE WITHIN 15 0 THE FIRST 48 HOURS. THE SITE WHEN EVER POSSIBLE. ----0/ TREE WRAP R R - 3" SHREDDED BARK MULCH SURVEY FLAGGING Æ R REMOVE CONTAINER OR -AS\_ T D -RS - FILTER FABRIC FOR WEED REMOVE ALL TWINE, ROPE, WIRE, 00 BURLAP FROM TOP 1/3 AND BURLAP FROM TOP HALF OF **D** CONTROL (KEEP OUT OF OF ROOTBALL ROOT BALL. IF PLANT IS SHIPPED DEPRESSION) WITH A WIRE BASKET AROUND THE ROOT BALL, CUT THE WIRE BASKET 3 INCH HIGH EARTH SAUCER BEYOND IN FOUR PLACES AND FOLD DOWN EDGE OF ROOT BALL. 8 IN. INTO PLANTING HOLE. -SET TOP OF ROOT BALL FLUSH TO GRADE OR BACKFILL WITH PLANTING MIX -(1-2 IN.) HIGHER IN SLOWLY DRAINING SOILS. BACKFILL WITH PLANTING -DIACE POOT BALL ON LINEXCAVATED PLANNING BOARD CASE # NIG SAFE TOWN OF EXETER PLANNING BOARD DATE CHAIRMAN SCALE Copyright 2016 © Thomas F. Moran, Inc. 48 Constitution Drive, Bedford, N.H. 03110 All rights reserved. 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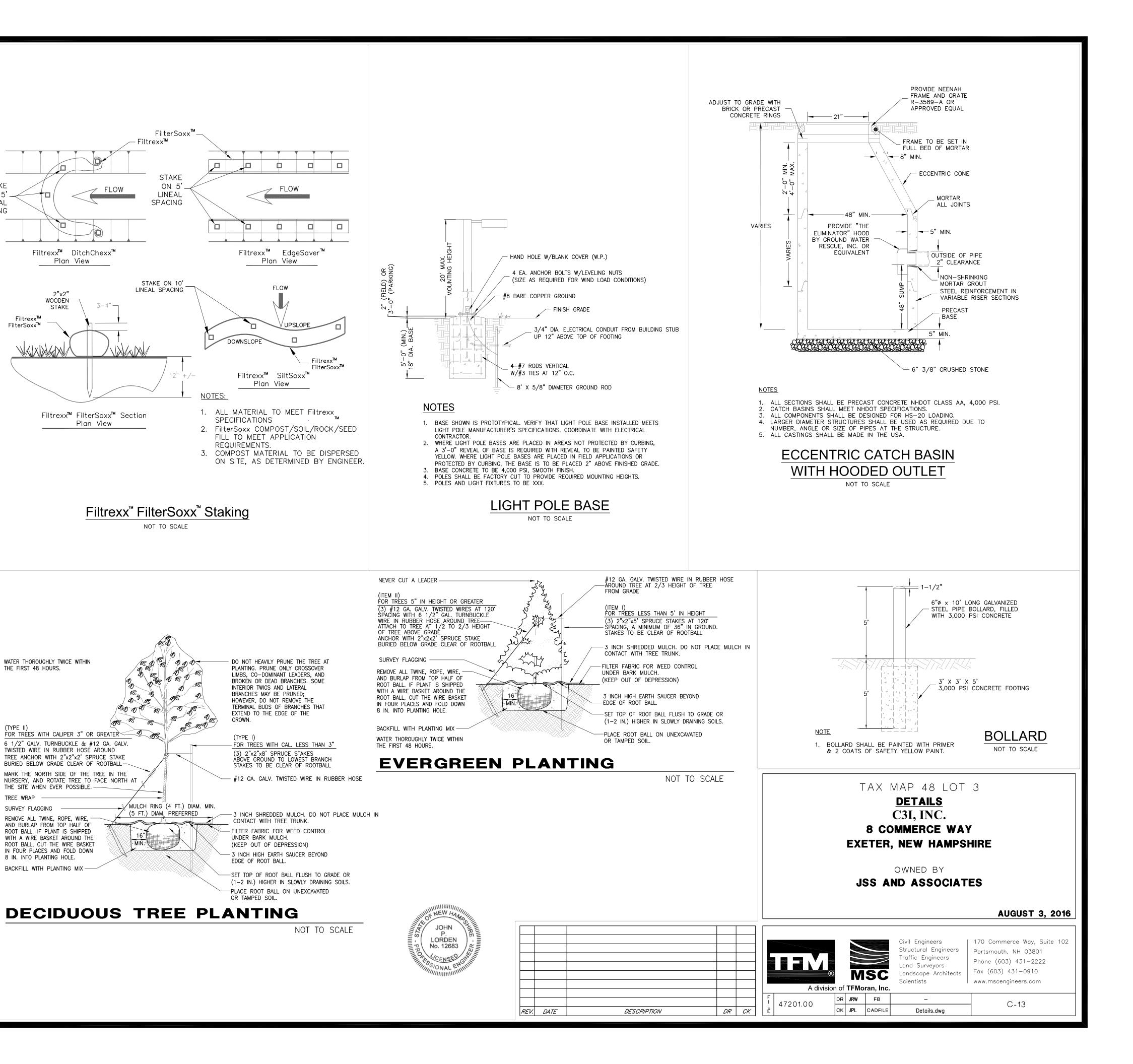
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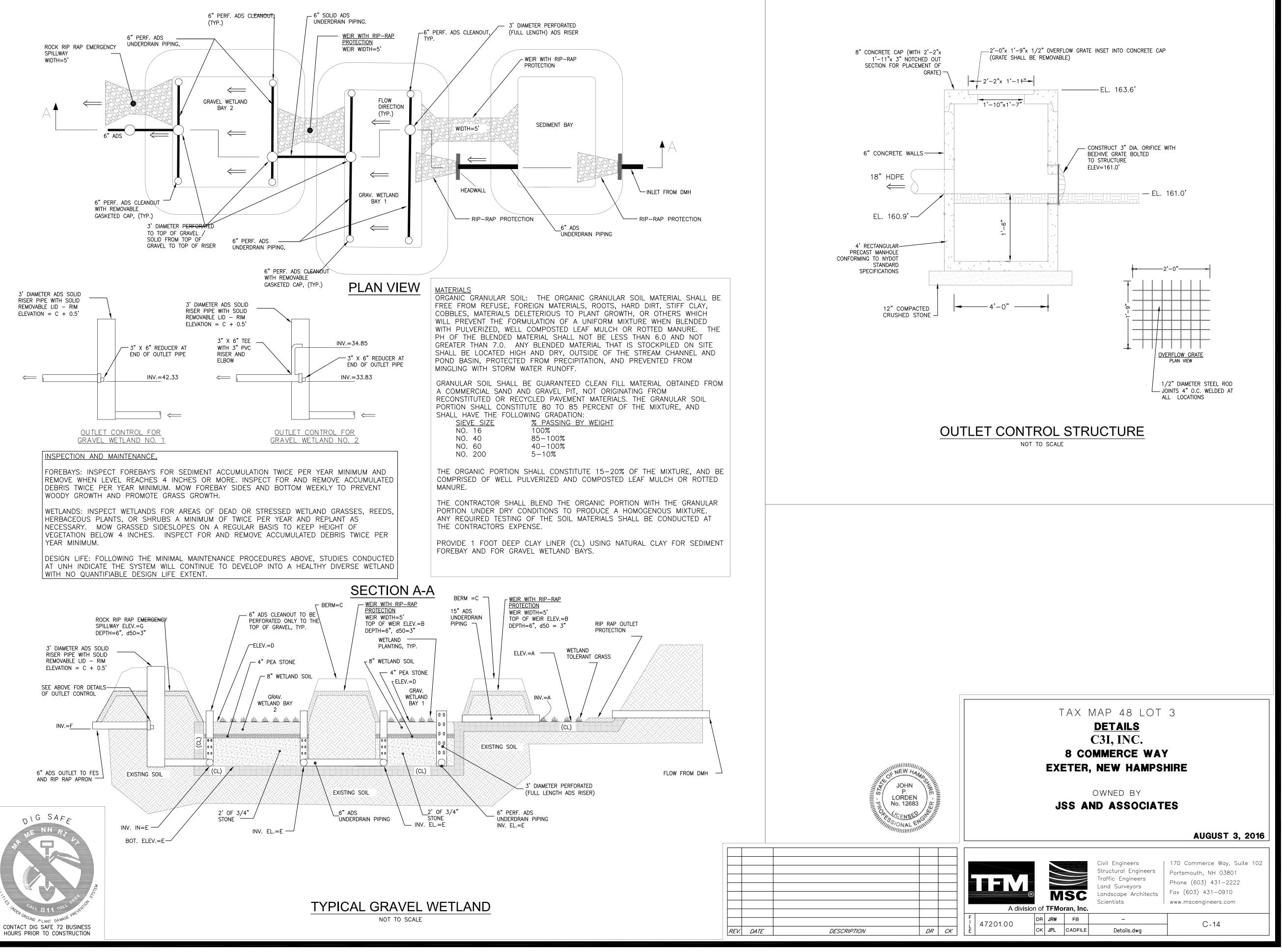
CONTACT DIG SAFE 72 BUSINESS

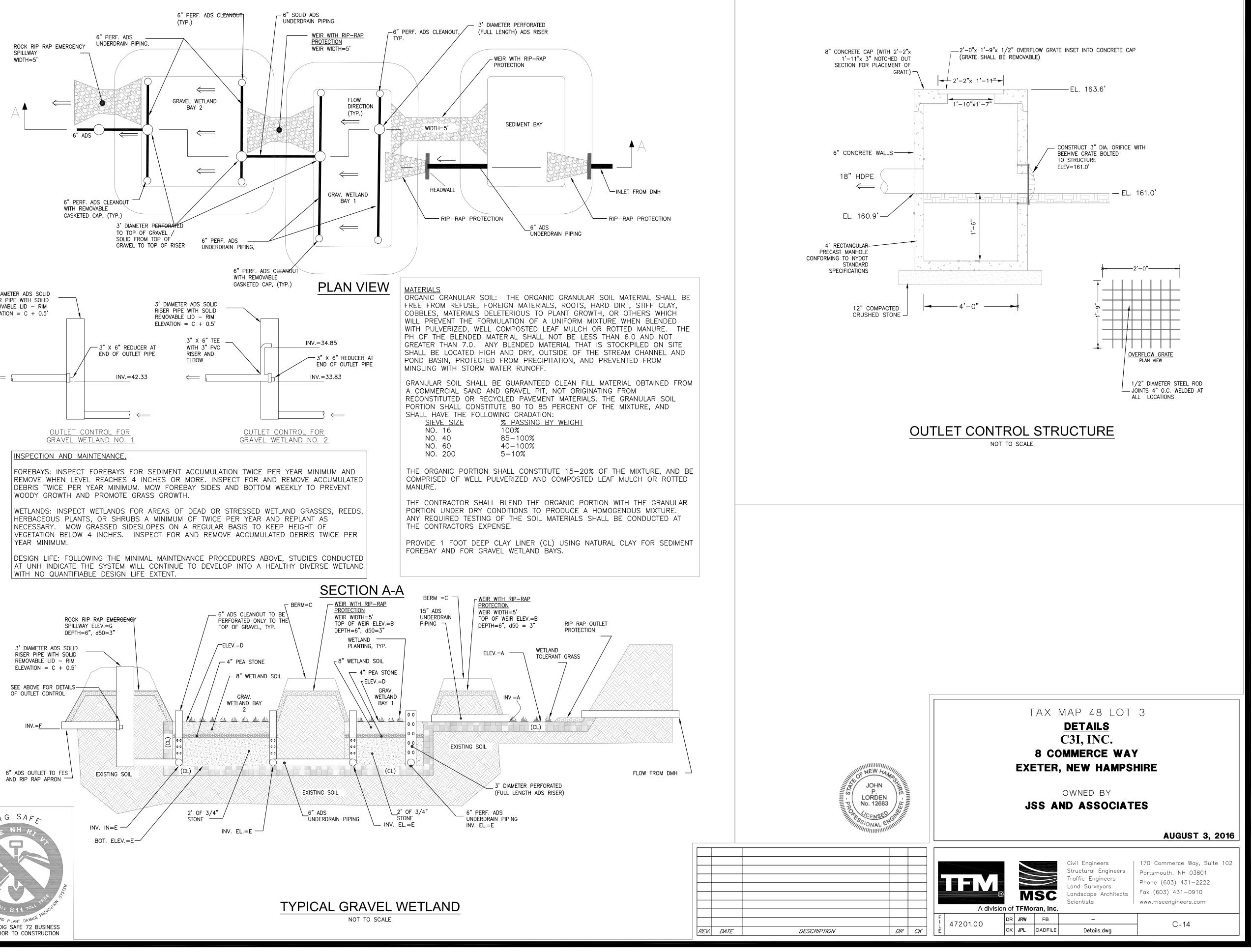
HOURS PRIOR TO CONSTRUCTION

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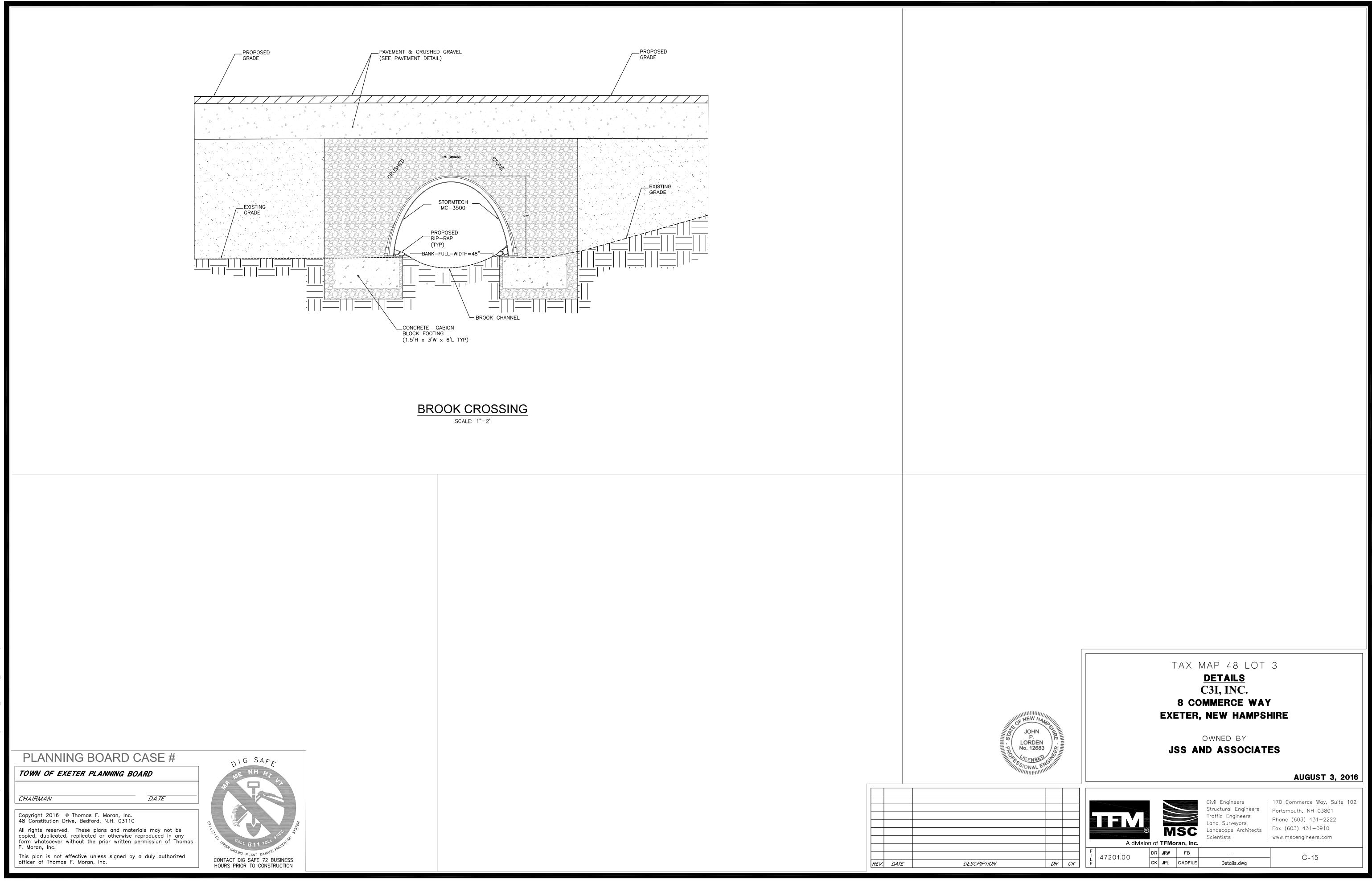
PLANNING BOARD CASE # TOWN OF EXETER PLANNING BOARD

DATE

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CHAIRMAN



### **Potential Focus Areas – Areas of Interest**

#### Rivers/Watershed

- VRAP
- Vernal Pools
- Wetlands
- Beaver Activity

### Conservation Land Management

- Timber Harvest
- Invasives
- Raynes Farm Stewardship Committee
- Future Conservation Acquisitions
- Boundary Location
- Property Inspection

### Trail Management

- Trail Marking and Maintenance
- Establishment and Closures

### Outreach Planning

•

### Project Reviews

- Technical Review Committee
- Zoning Amendments
- Regional and Local Planning

Other

•

### **EXETER CONSERVATION LANDS October 2009 Final**

Area	Parcel #, (E = Easement)	Steward Lead
Fresh River – Beech Hill	9, 15, 29, 39, 43, 52, 8E 13E, 25E	
Oaklands	11, 12, 13, 21, 38, 45, 48, 2E 2, 34, 53, 3E, 4E	
Henderson-Swasey	1 <sup>^ (4 parcels)</sup> , 44, 11E, 16E	
Little River	5, 6, 8, 22, 33, 37*, 46, 47, 6E, 7E 14E, 15E, 19E, 20E	
Jolly Rand	7, 36, 10E	
Juniper Road	24, 27, 49, 26, 23E	
Linden Street	14, 16, 23, 25, 51, 9E, 12E, 18E, 50 22E, 26E	
Exeter Country Club	17 <sup>^</sup> , 18 <sup>^</sup> , 20 <sup>#</sup> , 35, 1E <sup>^</sup> , 28 42, 17E, 21E	
Enwright	10, 5E	
Smith-Page	3 <sup>#</sup> , 30	
Raynes Farm	4, 19, 31, 32, 40 <sup>@</sup> , 41	
*Parcel 37 is not labeled on maps # - Requires annual reporting for Land Wa	ater Conservation Fund (LWCF)	

<sup>#</sup> - Requires annual reporting for Land Water Conservation Fund (LWCF)
 ^- Requires annual reporting for Land Conservation Investment Program (LCIP)
 <sup>@</sup> - Requires annual reporting for Land Conservation Historic Preservation (LCHIP)

Information Resources:

2008 Planning map, <u>www.mapsonline.net</u>, <u>www.nhdeeds.com</u> Conservation Land File Tracking spreadsheet, Property files, Parcels organized by 1<sup>st</sup> Trail Plan meeting w/ Town Planner, ConCom Chair and plan contractor

### **EXETER CONSERVATION LANDS**

			12E	Waleryszack Land
Fresh	River – Bee	ech Hill	18E	Hanson Easement
	9	Tomlinson & Kenick Land	50	White Land
	15	Tomlinson & Kenick Land	22E	(New) White Land
	29	Chapman Woods	26E	Linden Commons
	39	Morgan Ryan Land		
	43	Birch Road Trust	Exeter Country C	Club
	52	Beech Hill Estates	17	Irvine Conservation Area
	8E	Bunker Property McDonnell	18	Irvine-Hayes Marsh
	13E	Chapman Woods	20	Allen Street Woodland Park
	25E	Exeter High School	35	Starry Brook Land
	_		1E	Exeter Country Club
Oakla			28	Prospect Park Marsh
	11	Neal Land	42	Windmere Land
	12	Pease	17E	Exeter Hospital Land
	13	Deene Land	21E	Route 88 Connector
	21	Richard Parker Land		
	38	Oaklands (Forest Ridge)	E. C.L.	
	45	Tax Deeded Parcels (adj to OTF)	Enwright	Europicht Lond
	48	Connor Land	10 5E	Enwright Land Pine Meadow Condos
	2E 2	Captains Meadow	ЭE	Pine Meadow Condos
	2 34	Oaklands South Carlisle Land	Smith Dago	
	34 3E	Chamberlin Easement	Smith-Page 3	Smith Page Conservation Land
	3E 4E	Chamberlin Easement	3 30	Katz Land
	4E 53	Elliott (NRCS has easement)	50	Katz Lallu
	55	Emoti (IVICES has easement)	<b>Raynes Farm</b>	
Hand	erson-Swase	TF	Kaynes Farm 4	Malloy Land
iitiiu	1	Henderson Swasey Town Forest	19	Wilfred Moreau Nursery
	44	Tax Deeded Parcels (adj to HSTF)	31	Renewable Resources Land
	11E	Vaughn-Cusick Land	32	Lee/Diller Land
	16E	Mobil Land	40	Raynes Land
	TOL		41	Thomas Land
Little	River			Lind Lind
	5	PEA		
	6	Houk/Kanzanjian Land		
	8	Colcord Pond		
	22	Dudley Land		
	33	REDC		
	37	FGS Land		
	46	Tax Deeded Parcels (Brentw Rd T/L)		
	47	Tax Deeded Parcels (Brentw /Ex T/L)		
	6E	Dollof Land		
	7E	Dollof Land		
	14E	Atwood Property		
	15E	Edmunds Easement		
	19E	Amundsen Easement		
	20E	Field Easement		
Jolly	Rand	~		
	7	Cheney Land		
	36	Christina Estates		
	10E	Joseph & Nellie Swasey		
T	er Road			
əump	24	Juniper Ridge		
	24	Clemson Fabrics Land		
	49	Stone Land		

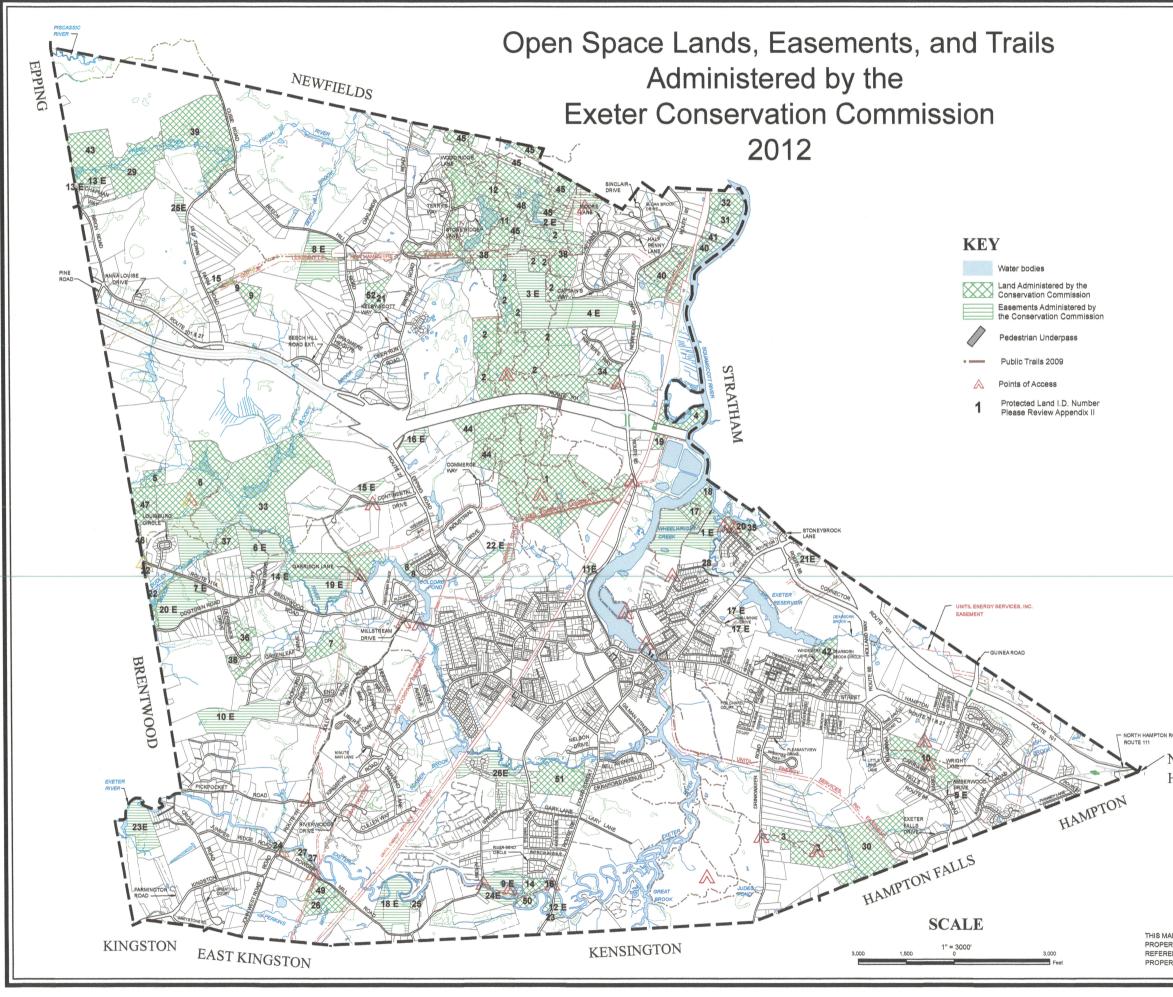
### 26 23 E

#### Linden Street

- Tara Development & Co Riverbend Cr Perry Land Perry Land Ext. Shaw Land 14

- 16 23 25 51 9E Linden Commons
- McDonnell Property

Leighton Land Jones Land



	APPENDI				
	LANDS AND EASEMENTS ADMINISTE THE EXETER CONSERVATION COMMI	RED BY SSION			W
Map #	Lands	Acreage		Year Acquired	Tax Map-Lot
1,	Henderson-Swasey Town Forest	178.0		1973	49-8
	Mary Williams Land	7.0		1919	
	Arthur Plouffe Land Ruth Churchill Land	13.0		1976	S
	Industrial Park Land	16.0		1967	0
	Rowell Land	4.0 221.0	Total	1992	
2.	The Oaklands Town Forest	141.5		1991	35-2
	Deene Land Chamberlin Land	4.0		1991 1991	20-3
	stockbridge Land	5.0		1991	
	Jensen Land Phillips Exeter Academy Land	16.8			35-2
	Dawson/Dagostino Land	27.0 231.8	Tetel	1984	25-1
з,	Smith Page Conservation Land		10001		
	Smith Cove (Drinkwater Road) Page Land (Drinkwater Road)	46.8		1979 1978	107-3 93-11
		55.3	Total		
4.	Molloy Land (Great Roundabout) Herman Smith Land (Great Throw)	11.7 8.0 74.3		1976	38-9
5,	P.E.A. Land (Brentwood Road)	8.0		1981	44-5
6,	Road)			1987	44~1
7.	Cheney Land (Greenleaf Drive)	16.5 3.8 10.3		1983	75-21
8.	Colcord Pond (several parcels) Tomilson/Kenick Land (Old Town	3.8		1984 1978	55-16,55-36 28-14,28-15
	Farm Road)				
10. 11.	Enwright Land (Hampton Falls Rd.) Neal Land (part of Dawson Land) Pease Land (part of Dawson Land)	30.4		1986 1984 1984	86-12 20-6
12.	Pease Land (part of Dawson Land)	4.0			20-6 10-8
13.	Deene Land (Watson Road) Tara Development Company &	21.0 6.7		1991 1986	10-8 104-23
15.	Riverbend Cr. Tomilson & Kenick Land (Old Town	2.5		1998	28-13
	Farm Road)				
16.	Perry Land Irvine Conservation Area	4.0 13.4		1993 1989	104-4
	(Powell's Point)				
18.	Irvine-Hayes Marsh Wilfred Moreau Nursery	3.3 4.6		1989 1967	50-2
20,	Allen Street Woodland Fark	9,0		1990	38-13 52-97 26-8
21. 22,	Richard Parker Land Dudley Land (Brentwood Road)	3.0 7.0			26-8 58-6,58-1
23.	Perry Land Ext.	0.2		2001	111-7
24. 25.	Juniper Ridge Shaw Land	2.0			101-49
26.	Leighton Land	16.0		1979 1969	102~5
27.	Clemson Fabrics Land Prospect Park Marsh	4.0		1981 1995 1998 1998	102=3 52=8
29.	Chapman Moode	13 2		1998	15~3
30. 31.	Katz Land - Exeter Falls Estates I Renewable Resources Land (Squamsco	FF1 11.8		1998	91-35.1 22-8
32.	Lee/Diller Labd (Squamscott River)	13.2		1995	2. A. C.
33. 34.	R.E.D.C. Land Carlisle Land (Walters Way)	212.0 9.6		1999	56-2 35-3
35.	Starry Brook Land	3.5		1998 1995 1995 1999 1999 1998 2002	22-02 52-3 52-3 60-10, 76-18 57-4 19-16 13-2 24-30, 23-1,2
36. 37.	Starry Brook Land Christina Estates FGS Land Caklands (Forest Ridge) LLC Morgan Ryah Land Realty (proposed) Raynes Land (Miggins Farm) Therme Land	17.1		2002	60-10, 76-18 57-4
38,	Oaklands (Forest Ridge) LLC	151.5		2005	19-16
39. 40.	Morgan Ryan Land Realty (proposed) Raynes Land (Wiggins Farm)	88.0 48.6		2000 2002 2002	13-2 24-30, 23-1,2
41.	THOUGH HANG	3+1			22-14
42.		8.6 45.0		2000 2002	70-21 15-5
44.	Birch Road Trust Tax-Deeded Parcels (adj. to HSTF) Tax-Deeded Parcels (adj. to OTF) Tax-Deeded Land (Brentwood Road/	28,6		2001	40-13,39-2,3
45.	Tax+Deeded Parcels (ad), to OTF) Tax+Deeded Land (Brentwood Road/	71.6		2001	40-13,39-2,3 10-various,20-various 58-8
	TOMU TTUE!				
47.	Tax-Deeded Land (Brentwood/Exeter Line)	19,1		2002	44-2,3
48.	Connor Land Stone Land	19.0 10.7		2004 2005	20=5
50.	White Land	5.8		2005	20-5 102-6 104-3 82-15
51.	Morrissette Property	36.0 14.66		2010 2011	82-15 27-12
				2004 L	
TOTAL	LANDS ADMINISTERED BY THE CONSERVAT	1712,46	SION: ACRE	g	
	1 t			Year	
Map # 1 E.	Lands Exeter Country Club	Acreage 55.4		Acquired 1989 1991	52-1
2 E,	. Captain's Meadow Chamberlin Easement	26.2		1991	24-3,21-1 24-1
4 E.	. Chamberlin Easement . Pine Meadows Condominium (Amberwo	51.5 30.0 2.5		2002	24-30
5 E. 6 E.	<ul> <li>Pine Meadows Condominium (Amberwo Dollof Land</li> </ul>	od) 2.5 82.7		1995 1996	87-18 57-3
7 E.	. Dollof Land	2.3		1998	60-21
8 E. 9 E.		36.7		1995 1998	18+3 104-77
10 E	. Joseph & Nellie Swasey Land	40.0		1995	79-10
11 E 12 E		ad) 1.7 4.0		1994 1998	53-2 111-1
13 E	. Chapman Woods	2.2		1998	15-3.01-3.05
14 E 15 E		3.3	3	1998 1998 2000 2001 2000 2001 2004	61-25.1, 60-25 47-4,4.1
16 E	, Mobil Land (Epping Road)	7.9	9	2000	40-11
17 E 18 E	. Exeter Hospital Land	3.2 34.3	3	2001	68-129 112-9, 113-2
19 E	. Amundsen Easement	22.2		2005	61+27
20 E		41.6 5.6		2005	60-16 51-13
21 E 22 E	. Felder Kuehl Properties	8.6	5	2008	55-75.1
21 E	<ul> <li>Felder Kuehl Properties</li> <li>Jones Easement</li> </ul>		5	2008 2003 2006	55-75.1 99-13 103-1

DAD

### NORTH HAMPTON

----- RAILROAD ----- ROAD ----- PRIVATE ROA ----- TRAIL

TOTAL EASEMENTS ADMINISTERED BY THE CONS

- - RIGHT OF WA

TOWN LINE

### LEGEND

TION COMMISSIO

PROPERTY LINE
 COMMON OWNERSHIP
 IN CONTENTION
 LEASE
 WATER, property line
 WATER, not property line
 WETLAND

### NOTES

THIS MAP IS BASED ON THE TOWN OF EXETER PROPERTY MAPS. IT IS INTENDED FOR REFERENCE AND PLANNING PURPOSES ONLY. PROPERTY LINES CURRENT TO APRIL 1, 2012 ARTOGRAPHIC ASSOCIATES

PROFESSIONAL GIS CONSULTANTS MURCEPAL MAPPRIG - GIS - PUBLIC WORKS INFORMATION MANAGEMEN 11 PLEASANT ST. LITTLETON, INH 03561