



AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

5 January 2023

Wetland Inspector
New Hampshire Department of Environmental Services
Wetlands Bureau
29 Hazen Drive / P.O. Box 95
Concord, New Hampshire 03302

Re: NHDES Minor Impact Wetland Permit Application
Tax Map 207 Lot 5
393 New Castle Avenue
Portsmouth, New Hampshire

Dear Wetland Inspector:

This letter transmits a New Hampshire Department of Environmental Services (NHDES) Minor Impact Wetland Permit Application request to permit 2,450 sq. ft. of permanent impact and 1,085 sq. ft. of temporary construction impact to the previously developed 100' Tidal Buffer Zone for residential site improvements including installation of porous pavement for the existing and proposed driveway expansion, installation of an underground electric/communication line and replacement of the existing sewer line between the existing home and New Castle Avenue.

Attached to this application you will find a "NH DES Permit Plan-C2" which depicts the existing lot, jurisdictional areas, abutting parcels, existing structures, proposed work, temporary and permanent impact areas.

Per Env-Wt 306.05, Certified Wetland Scientist Steve Riker from Ambit Engineering, Inc. classified all jurisdictional areas and identified the predominant functions off all relevant resources. The Highest Observable Tide Line marks the reference line for the 100' TBZ, as well as the beginning of Tidal Wetland on the attached plan set.

The construction sequence for the proposed project is as follows:

- Mobilization of equipment and materials to the site via New Castle Avenue.
- Installation of erosion and sediment control devices.
- Remove existing portion of paved driveway, existing gravel driveway, and portion of porous paver driveway.
- Construct and prep new porous pavement driveway base.
- Excavate for underground electric/communications line and new sewer line.
- Install underground electric/communications line and new sewer line.

- Backfill underground electric/communications line, new sewer line and return to previous existing grade.
- Install porous pavement area.
- Remove sediment and erosion controls once disturbed areas are stabilized.

The project does not propose the removal of any vegetation within the 50' Waterfront Buffer to achieve construction goals. Under existing conditions the property does not any unaltered areas between the 50' Waterfront Buffer and the 150' Natural Woodland.

The project represents the alternative with the least adverse impacts to areas and environments while allowing reasonable use of the property.

Per Env-Wt 603.02(b), attached to this application you will find a plan set which depicts the existing lot, jurisdictional areas, all natural resources in the area, abutting parcels, existing structures, proposed structures, and temporary impact areas. Also included in this application are maps created in accordance with Env-Wt 603.03 and Env-Wt 603.05.

In order to complete the application package for this project, the DES Wetlands Bureau rules in Chapter Env-Wt 306.05 (a)(2) has been evaluated and addressed below.

(2) a. Contains any documented occurrences of protected species or habitat for such species, using the NHB DataCheck tool;

Attached to this application are the results of the NHB review and it was determined that there are rare species in the vicinity of the project site. Ambit Engineering will coordinate with NHB and provide DES with comment once available.

(2) b. Is a bog;

Utilizing the NH DES WPPT, the subject property is not a bog, nor does it contain any portion of a bog.

(2) c. Is a floodplain wetland contiguous to a tier 3 or higher watercourse;

Utilizing the NH DES WPPT, the subject property does contain a floodplain wetland contiguous to a tier 3 or higher watercourse.

(2) d. Does the property contain a designated prime wetlands or a duly established 100-foot buffer; or

The property does not contain a prime wetland or duly established 100 foot buffer.

(2) e. Does the property contain a sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone;

The property does not contain a sand dune or undeveloped tidal buffer zone. The property does contain a tidal wetland and tidal waters.

The DES Wetlands Bureau rules in Chapter Env-Wt 306.05 (a)(4) and (a)(7) has been evaluated and addressed below.

(4) a. Is the subject property within LAC jurisdiction;

The property does not fall within an area of LAC jurisdiction.

(4) b. Does the subject property fall within or contain any areas that are subject to time of year restrictions under Env-Wt 307;

The property does not fall within or contain any areas that are subject to time of year restrictions.

(7) Does the project have potential to impact impaired waters, class A waters, or outstanding resource waters;

I do not believe the nature of the proposed project has the potential to impact an impaired water. The project reduces the amount of impervious surface on the lot that will serve to improve stormwater quality that leaves the site.

The DES Wetlands Bureau rules in Chapter Env-Wt 603.02 (e) & (f) have been evaluated and addressed below.

(e)(1) The project meets the standard conditions in Env-Wt 307;

The project meets the standard conditions in Env-Wt 307 as the proposed project meets the standards of Env-Wq 1000, RSA 483-B and Env-Wq 1400. Sediment and erosion controls will also be used and maintained during the proposed construction ensuring protection of water quality on the site. Under Env-Wt 306.05 (a)(2)a. a NHB review has been performed to ensure there are no impacts to protected species or habitats of such species. The protection of Prime Wetlands or Duly-Established 100 foot buffers does not apply as none exist on or adjacent to the subject lot.

(e)(2) The project meets the approval criteria in Env-Wt 313.01;

The project meets the approval criteria in Env-Wt 313.01 as the project meets the avoidance and minimization requirements specified in Env-Wt 313.03, does not require compensatory mitigation, meets applicable conditions specified in Env-Wt 307 (above), meets project specific criteria listed in Env-Wt 600 (above), and the project is located entirely within the boundary of the applicants property.

(f)(1) The project design narrative as described in Env-Wt 603.06;

The project design narrative is provided above.

(f)(2) Design plans that meet the requirements of Env-Wt 603.07;

The design plans meet the above standard.

(f)(3) The water depth supporting information required by Env-Wt 603.08;

The design plans do not provide water depth information as it is non-applicable to the proposed project.

(f)(4) A statement regarding impact on navigation and passage required by Env-Wt 603.09.

Navigation and passage is not applicable to the proposed project.

Please contact me if you have any questions or concerns regarding this application.

Respectfully submitted,



Steven D. Riker, CWS
NH Certified Wetland Scientist/Permitting Specialist
Ambit Engineering, Inc.

2 January, 2023

To Whom It May Concern

**RE: New Hampshire Department of Environmental Services Application for
residential site improvements for David A. Sinclair, 393 New Castle Avenue,
Portsmouth, NH.**

This letter is to inform the New Hampshire Department of Environmental Services in
accordance with State Law that Ambit Engineering is authorized to obtain approvals in
regards to the above referenced property.

Please feel free to call me if there is any question regarding this authorization.

Sincerely,

A handwritten signature in black ink, appearing to read 'David A. Sinclair', with a long horizontal line extending to the right.

David A. Sinclair
PO Box 577
Portsmouth, NH 03802



**STANDARD DREDGE AND FILL
WETLANDS PERMIT APPLICATION**
Water Division/Land Resources Management
Wetlands Bureau
[Check the Status of your Application](#)



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

APPLICANT'S NAME: David A. Sinclair

TOWN NAME: Portsmouth

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

A person may request a waiver of the requirements in Rules Env-Wt 100-900 to accommodate situations where strict adherence to the requirements would not be in the best interest of the public or the environment but is still in compliance with RSA 482-A. A person may also request a waiver of the standards for existing dwellings over water pursuant to RSA 482-A:26, III(b). For more information, please consult the [Waiver Request Form](#).

SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2))

Please use the [Wetland Permit Planning Tool \(WPPT\)](#), the Natural Heritage Bureau (NHB) [DataCheck Tool](#), the [Aquatic Restoration Mapper](#), or other sources to assist in identifying key features such as: [priority resource areas \(PRAs\)](#), [protected species or habitats](#), coastal areas, designated rivers, or designated prime wetlands.

Has the required planning been completed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Does the property contain a PRA? If yes, provide the following information:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&G) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04. 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> Protected species or habitat? <ul style="list-style-type: none"> If yes, species or habitat name(s): Marsh elder (<i>Iva frutescens</i>), Atlantic sturgeon (<i>Acipenser oxirinchus</i>), shortnose sturgeon (<i>Acipenser brevirostrum</i>) NHB Project ID #: 22-2537 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> Bog? 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> Floodplain wetland contiguous to a tier 3 or higher watercourse? 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> Designated prime wetland or duly-established 100-foot buffer? 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone? 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the property within a Designated River corridor? If yes, provide the following information:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> Name of Local River Management Advisory Committee (LAC): 	

lrn@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

<ul style="list-style-type: none"> A copy of the application was sent to the LAC on Month: <input type="text"/> Day: <input type="text"/> Year: <input type="text"/> N/A 	
For dredging projects, is the subject property contaminated? <ul style="list-style-type: none"> If yes, list contaminant: <input type="text"/> 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
For stream crossing projects, provide watershed size (see WPPT or Stream Stats): <input type="text"/> N/A	
SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i)) Provide a brief description of the project and the purpose of the project, outlining the scope of work to be performed and whether impacts are temporary or permanent. DO NOT reply "See attached"; please use the space provided below.	
The project proposes 2,450 sq. ft. of permanent impact and 1,085 sq. ft. of temporary construction impact to the previously developed 100' Tidal Buffer Zone for residential site improvements including installation of porous pavement for the existing and proposed driveway expansion, installation of an underground electric/communication line and replacement of the existing sewer line between the existing home and New Castle Avenue.	
SECTION 3 - PROJECT LOCATION Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.	
ADDRESS: <input type="text"/> 393 New Castle Avenue	
TOWN/CITY: <input type="text"/> Portsmouth	
TAX MAP/BLOCK/LOT/UNIT: <input type="text"/> Map 207, Lot 5	
US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: <input type="text"/> Piscataqua River <input type="checkbox"/> N/A	
(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places): <input type="text"/> X: 1,201,063.2099° North	

lrn@des.nh.gov or (603) 271-2147

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Y: 230,382.7430° West

SECTION 4 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a))

If the applicant is a trust or a company, then complete with the trust or company information.

NAME: David A. Sinclair

MAILING ADDRESS: 765 Middle Street

TOWN/CITY: Portsmouth

STATE: NH

ZIP CODE: 03801

EMAIL ADDRESS: sleddiver@gmail.com

FAX:

PHONE: 720-244-2095

ELECTRONIC COMMUNICATION: By initialing here: , I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))☐ N/A

LAST NAME, FIRST NAME, M.I.: Riker, Steven, D.

COMPANY NAME: Ambit Engineering, Inc.

MAILING ADDRESS: 200 Griffin Road, Unit 3

TOWN/CITY: Portsmouth

STATE: NH

ZIP CODE: 03801

EMAIL ADDRESS: sdr@ambitengineering.com

FAX:

PHONE: 603-430-9282

ELECTRONIC COMMUNICATION: By initialing here *SR*, I hereby authorize NHDES to communicate all matters relative to this application electronically.**SECTION 6 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b))**

If the owner is a trust or a company, then complete with the trust or company information.

☐ Same as applicant

NAME:

MAILING ADDRESS:

TOWN/CITY:

STATE:

ZIP CODE:

EMAIL ADDRESS:

FAX:

PHONE:

ELECTRONIC COMMUNICATION: By initialing here , I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 7 - RESOURCE-SPECIFIC CRITERIA ESTABLISHED IN Env-Wt 400, Env-Wt 500, Env-Wt 600, Env-Wt 700, OR Env-Wt 900 HAVE BEEN MET (Env-Wt 313.01(a)(3))

Describe how the resource-specific criteria have been met for each chapter listed above (please attach information about stream crossings, coastal resources, prime wetlands, or non-tidal wetlands and surface waters):

Please see attached narrative.

SECTION 8 - AVOIDANCE AND MINIMIZATION

Impacts within wetland jurisdiction must be avoided to the maximum extent practicable (Env-Wt 313.03(a)).* Any project with unavoidable jurisdictional impacts must then be minimized as described in the [Wetlands Best Management Practice Techniques For Avoidance and Minimization](#) and the [Wetlands Permitting: Avoidance, Minimization and Mitigation Fact Sheet](#). For minor or major projects, a functional assessment of all wetlands on the project site is required (Env-Wt 311.03(b)(10)).*

Please refer to the application checklist to ensure you have attached all documents related to avoidance and minimization, as well as functional assessment (where applicable). Use the [Avoidance and Minimization Checklist](#), the [Avoidance and Minimization Narrative](#), or your own avoidance and minimization narrative.

**See Env-Wt 311.03(b)(6) and Env-Wt 311.03(b)(10) for shoreline structure exemptions.*

SECTION 9 - MITIGATION REQUIREMENT (Env-Wt 311.02)

If unavoidable jurisdictional impacts require mitigation, a mitigation [pre-application meeting](#) must occur at least 30 days but not more than 90 days prior to submitting this Standard Dredge and Fill Permit Application.

Mitigation Pre-Application Meeting Date: Month: Day: Year:

☒ N/A - Mitigation is not required

SECTION 10 - THE PROJECT MEETS COMPENSATORY MITIGATION REQUIREMENTS (Env-Wt 313.01(a)(1)c)

Confirm that you have submitted a compensatory mitigation proposal that meets the requirements of Env-Wt 800 for all permanent unavoidable impacts that will remain after avoidance and minimization techniques have been exercised to the maximum extent practicable: ☐ I confirm submittal.

☒ N/A – Compensatory mitigation is not required

SECTION 11 - IMPACT AREA (Env-Wt 311.04(g))

For each jurisdictional area that will be/has been impacted, provide square feet (SF) and, if applicable, linear feet (LF) of impact, and note whether the impact is after-the-fact (ATF; i.e., work was started or completed without a permit).

For intermittent and ephemeral streams, the linear footage of impact is measured along the thread of the channel. *Please note, installation of a stream crossing in an ephemeral stream may be undertaken without a permit per Rule Env-Wt 309.02(d), however other dredge or fill impacts should be included below.*

For perennial streams/ivers, the linear footage of impact is calculated by summing the lengths of disturbances to the channel and banks.

Permanent impacts are impacts that will remain after the project is complete (e.g., changes in grade or surface materials).

Temporary impacts are impacts not intended to remain (and will be restored to pre-construction conditions) after the project is completed.

JURISDICTIONAL AREA		PERMANENT			TEMPORARY		
		SF	LF	ATF	SF	LF	ATF
Wetlands	Forested Wetland						
	Scrub-shrub Wetland						
	Emergent Wetland						
	Wet Meadow						
	Vernal Pool						
	Designated Prime Wetland						
	Duly-established 100-foot Prime Wetland Buffer						
Surface Water	Intermittent / Ephemeral Stream						
	Perennial Stream or River						
	Lake / Pond						
	Docking - Lake / Pond						
	Docking - River						
Banks	Bank - Intermittent Stream						
	Bank - Perennial Stream / River						
	Bank / Shoreline - Lake / Pond						
Tidal	Tidal Waters						
	Tidal Marsh						
	Sand Dune						
	Undeveloped Tidal Buffer Zone (TBZ)						
	Previously-developed TBZ	2,450			1,085		
	Docking - Tidal Water						
TOTAL		2,450			1,085		

SECTION 12 - APPLICATION FEE (RSA 482-A:3, I)

☐ **MINIMUM IMPACT FEE:** Flat fee of \$400.

☐ **NON-ENFORCEMENT RELATED, PUBLICLY-FUNDED AND SUPERVISED RESTORATION PROJECTS, REGARDLESS OF IMPACT CLASSIFICATION:** Flat fee of \$400 (refer to RSA 482-A:3, 1(c) for restrictions).

☒ **MINOR OR MAJOR IMPACT FEE:** Calculate using the table below:

Permanent and temporary (non-docking):	3,535 SF	×	\$0.40 =	\$ 1,414
Seasonal docking structure:	SF	×	\$2.00 =	\$
Permanent docking structure:	SF	×	\$4.00 =	\$
Projects proposing shoreline structures (including docks) add \$400 =				\$
Total =				\$ 1,414
The application fee for minor or major impact is the above calculated total or \$400, whichever is greater =				\$

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SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05)

Indicate the project classification.

☐ Minimum Impact Project☒ Minor Project☐ Major Project**SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)**

Initial each box below to certify:

Initials:

SR

To the best of the signer's knowledge and belief, all required notifications have been provided.

Initials:

SR

The information submitted on or with the application is true, complete, and not misleading to the best of the signer's knowledge and belief.

Initials:

SR

The signer understands that:

- The submission of false, incomplete, or misleading information constitutes grounds for NHDES to:
 1. Deny the application.
 2. Revoke any approval that is granted based on the information.
 3. If the signer is a certified wetland scientist, licensed surveyor, or professional engineer licensed to practice in New Hampshire, refer the matter to the joint board of licensure and certification established by RSA 310-A:1.
- The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641.
- The signature shall constitute authorization for the municipal conservation commission and the Department to inspect the site of the proposed project, except for minimum impact forestry SPN projects and minimum impact trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.

Initials:

SR

If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.

SECTION 15 - REQUIRED SIGNATURES (Env-Wt 311.04(d); Env-Wt 311.11)

SIGNATURE (OWNER): _____	PRINT NAME LEGIBLY: _____	DATE: _____
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER): _____	PRINT NAME LEGIBLY: _____	DATE: _____
SIGNATURE (AGENT, IF APPLICABLE): <u>Steven Riker</u>	PRINT NAME LEGIBLY: Steven D. Riker	DATE: 1/5/2023

SECTION 16 - TOWN / CITY CLERK SIGNATURE (Env-Wt 311.04(f))

As required by RSA 482-A:3, I(a)(1), 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(a)(1)

1. IMMEDIATELY sign the original application form and four copies in the signature space provided above.
2. 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.
3. 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.
4. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

Submit the 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 at the address at the bottom of this page. Make check or money order payable to "Treasurer – State of NH".

SHORELAND APPLICATION WORKSHEET

This worksheet *must* be submitted to the NHDES Wetlands Bureau with every Shoreland Permit Application. **A separate shoreland application worksheet must be submitted for each individual lot of record where impacts are proposed.**

For the purposes of this worksheet, “**pre-construction**” impervious surface area³ means all human made impervious surfaces⁴ currently present within the protected shoreland of a lot, whether to be removed or to remain after the project is completed. “**Post-construction**” impervious area means all impervious surfaces that will exist within the protected shoreland of a lot upon completion of the project, including both new and any remaining pre-construction impervious surfaces. All answers shall be given in square feet.

Calculating the Impervious Area of a Lot

CALCULATING THE IMPERVIOUS AREA OF A LOT WITHIN 250 FEET OF THE REFERENCE LINE (Env-Wq 1406.12)			
	STRUCTURE DESCRIPTION	PRE-CONSTRUCTION IMPERVIOUS AREAS	POST-CONSTRUCTION IMPERVIOUS AREAS
PRIMARY STRUCTURE(S) House and all attached decks and porches.	Main/Decks/Porch	3457 FT ²	3457 FT ²
ACCESSORY STRUCTURES All other impervious surfaces excluding lawn furniture, well heads, and fences. Common accessory structures include, but are not limited to: driveways, walkways, patios, and sheds.	Stairs/Landings	120 FT ²	75 FT ²
	Paved Driveway	406 FT ²	0 FT ²
	Gravel Driveway	520 FT ²	0 FT ²
	Ret walls/concrete	104 FT ²	104 FT ²
		FT ²	FT ²
		FT ²	FT ²
TOTAL:		(A) 4607 FT ²	(B) 3636 FT ²
Area of the lot located within 250 feet of reference line:			(C) 14919 FT ²
Percentage of lot covered by pre-construction impervious area within 250 feet of the reference line: <i>[divide (A) by (C) x 100]</i>			(D) 30.9 %
Percentage of lot to be covered by post-construction impervious area within 250 feet of the reference line upon completion of the project: <i>[divide (B) by (C) x 100]</i>			(E) 24.4 %

³ “**Impervious surface area**” as defined in Env-Wq 1402.13 means, for purposes of the impervious surface limitation specified in RSA 483-B:9, V(g), the sum total of the footprint of each impervious surface that is located within the protected shoreland.

⁴ “**Impervious Surface**” as defined in RSA 483-B:4, VII-b means any modified surface that cannot effectively absorb or infiltrate water. Examples of impervious surfaces include, but are not limited to, roofs, and unless designed to effectively absorb or infiltrate water, decks, patios, and paved, gravel, or crushed stone driveways, parking areas, and walkways.

Stormwater Management Requirements

THE IMPERVIOUS AREA THRESHOLDS (RSA 483-B:9, V(g))
<input checked="" type="checkbox"/> A net decrease or no net increase in impervious area is proposed (If line E is less than or equal to line D).
<input type="checkbox"/> The percentage of post-construction impervious area (line E) is less than or equal to 20%. This project does not require a stormwater management plan and does not require a plan demonstrating that each waterfront buffer grid segment at least meets the minimum required tree and sapling point score.
<input type="checkbox"/> A net increase in impervious area is proposed and the percentage of post-construction impervious area (line E) is greater than 20%, but less than 30%. This project requires a stormwater management but, does not require a plan demonstrating that each waterfront buffer grid segment at least meets the minimum required tree and sapling point score. <i>See details on the Application Checklist</i>
<input type="checkbox"/> A net increase in impervious area is proposed and the percentage of post-construction impervious area (line E) is greater than 30%. This project requires a stormwater management plan designed and certified by a professional engineer and requires plans demonstrating that each waterfront buffer grid segment meets at least the minimum required tree and sapling point score. <i>See details on the Application Checklist</i>

Natural Woodland Area Requirement

DETERMINING THE AREA TO REMAIN AS NATURAL WOODLAND	
Total area of the lot between 50 feet and 150 feet of the reference line within which the vegetation currently exists as natural woodland ⁵ (see definition below).	(F) 0 FT ²
Total area of the lot between 50 feet and 150 feet from the reference line.	(G) 5299 FT ²
At least 25% of area (G) must remain in as natural woodland. $[0.25 \times G]$	(H) 1,325 FT ²
Place the lesser of area (F) and calculation (H) on this line. In order to remain compliant with the natural woodland area requirement , this is the minimum area that must remain as natural woodland between 50 feet and 150 feet from the reference line. This area must be represented on all plans and this area, exclusive of existing lawn, must remain in an unaltered state ⁶ .	(I) 0 FT ²
Name of person who prepared this worksheet: Steven D. Riker, CWS	
Name and date of the plan this worksheet is based upon: NH DES Permit Plan-Sheet C1 1/3/23	

⁵ “**Natural Woodland**” means a forested area consisting of various species of trees, saplings, shrubs, and ground covers in any combination and at any stage of growth (483-B:4, XI).

⁶ “**Unaltered State**” means native vegetation allowed to grow without cutting, limbing, trimming, pruning, mowing, or other similar activities except as needed for renewal or to maintain or improve plant health (483-B:4, XXIV-b).



COASTAL RESOURCE WORKSHEET
Water Division/Land Resources Management
Wetlands Bureau
[Check the Status of your Application](#)



RSA/Rule: RSA 482-A/ Env-Wt 600

APPLICANT LAST NAME, FIRST NAME, M.I.: Sinclair, David, A.

Applicability: This worksheet may be used to present the information required for projects in coastal areas in addition to the information required for Lower-Scrutiny Approvals, Expedited Permits, and Standard Permits under Env-Wt 603.01.

Please refer to Env-Wt 605.03 for impacts requiring compensatory mitigation.

SECTION 1 - REQUIRED INFORMATION (Env-Wt 603.02; Env-Wt 603.06; Env-Wt 603.09)

The following information is required for projects in coastal areas.

Describe the purpose of the proposed project, including the overall goal of the project, the core project purpose including a concise description of the facilities and work that could impact jurisdictional areas, and the intended project outcome. Specifically identify all natural resource assets in the area proposed to be impacted and include maps created through a data screening in accordance with Env-Wt 603.03 (refer to Section 2) and Env-Wt 603.04 (refer to Section 3) as attachments.

The project proposes residential site improvements including installation of porous pavement for the existing and proposed driveway expansion, installation of an underground electric/communication line and replacement of the existing sewer line between the existing home and New Castle Avenue.

irm@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO BOX 95, Concord, NH 03302-0095

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For standard permit projects, provide:

- ☒ A Coastal Functional Assessment (CFA) report (refer to Section 3); and
- ☒ A vulnerability assessment (refer to Section 4).

Explain all recommended methods and other considerations to protect the natural resource assets during and as a result of project construction in accordance with Env-Wt 603.04, Env-Wt 311.07, and Env-Wt 313.

A Coastal Vulnerability Assessment and Coastal Functional Assessment is attached to this application per Env-Wt 603.04 and Env-Wt 603.05. An Avoidance & Minimization Form is attached to this application, and also described in the attached narrative letter per Env-Wt 311.07 and Env-Wt 313.

Provide a narrative showing how the project meets the standard conditions in Env-Wt 307 and the approval criteria in Env-Wt 313.01.

The project plan set, specifically the Details-Sheet D1 includes all notes demonstrating compliance with Env-Wt 307 and Env-Wt 313.01.

Provide a project design narrative that includes the following:

- ☒ A discussion of how the proposed project:
 - Uses best management practices and standard conditions in Env-Wt 307;
 - Meets all avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;
 - Meets approval criteria in Env-Wt 313.01;
 - Meets evaluation criteria in Env-Wt 313.01(c);
 - Meets CFA requirements in Env-Wt 603.04; and
 - Considers sea-level rise and potential flooding evaluated pursuant to Env-Wt 603.05;
- ☒ A construction sequence, erosion/siltation control methods to be used, and a dewatering plan; and
- ☒ A discussion of how the completed project will be maintained and managed.

The completed project will result in a porous pavement driveway surface that will need to be maintained by cleaning and vaccuming in order for the surface to infiltrate stormwater as intended (see Porous Pavement detail and maintenance requirements on Details-Sheet D1).

- ☒ Provide design plans that meet the requirements of Env-Wt 603.07 (refer to Section 5);
- ☐ Provide water depth supporting information required by Env-Wt 603.08 (refer to Section 6); and
- ☐ For any major project that proposes to construct a structure in tidal waters/wetlands or to extend an existing structure seaward, provide a statement from the Pease Development Authority Division of Ports and Harbors ("DP&H") chief harbormaster, or designee, for the subject location relative to the proposed structure's impact on navigation. If the proposed structure might impede existing public passage along the subject shoreline on foot or by non-motorized watercraft, the applicant shall explain how the impediments have been minimized to the greatest extent practicable.



SECTION 2 - DATA SCREENING (Env-Wt 603.03, in addition to Env-Wt 306.05)

Please use the Wetland Permit Planning Tool, or any other database or source, to indicate the presence of:

- ☒ Existing salt marsh and salt marsh migration pathways;
- ☒ Eelgrass beds;
- ☒ Documented shellfish sites;
- ☒ Projected sea-level rise; and
- ☒ 100-year floodplain.

Conduct data screening as described to identify documented essential fish habitat, and tides and currents that may be impacted by the proposed project, by using the following links:

- ☐ [National Oceanic and Atmospheric Administration \(NOAA\) Tides & Currents](#); and
- ☐ [NOAA Essential Fish Habitat Mapper](#).
- ☐ Verify or correct the information collected from the data screenings by conducting an on-site assessment of the subject property in accordance with Env-Wt 406 and Env-Wt 603.04.

SECTION 3 - COASTAL FUNCTIONAL ASSESSMENT/ AVOIDANCE AND MINIMIZATION (Env-Wt 603.04; Env-Wt 605.01; Env-Wt 605.02; Env-Wt 605.03)

Projects in coastal areas shall:

- ☒ Not impair the navigation, recreation, or commerce of the general public; and
- ☒ Minimize alterations in prevailing currents.

An applicant for a permit for work in or adjacent to tidal waters/wetlands or the tidal buffer zone shall demonstrate that the following have been avoided or minimized as required by Env-Wt 313.04:

- ☒ Adverse impacts to beach or tidal flat sediment replenishment;
- ☒ Adverse impacts to the movement of sediments along a shore;
- ☒ Adverse impacts on a tidal wetland's ability to dissipate wave energy and storm surge; and
- ☒ Adverse impacts of project runoff on salinity levels in tidal environments.

For standard permit applications submitted for minor or major projects:

- ☒ Attach a CFA based on the data screening information and on-site evaluation required by Env-Wt 603.03. The CFA for tidal wetlands or tidal waters shall be:
 - ☒ Performed by a qualified coastal professional; and
 - ☒ Completed using one of the following methods:
 - a. The US Army Corps of Engineers (USACE) Highway Methodology Workbook, dated 1993, together with the USACE New England District *Highway Methodology Workbook Supplement*, dated 1999; or
 - b. An alternative scientifically-supported method with cited reference and the reasons for the alternative method substantiated.

For any project that would impact tidal wetlands or tidal waters or associated sand dunes, the applicant shall:

irm@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO BOX 95, Concord, NH 03302-0095

www.des.nh.gov

- ☐ Use the results of the CFA to select the location of the proposed project having the least impact to tidal wetlands, tidal waters or associated sand dunes;
- ☐ Design the proposed project to have the least impact to tidal wetlands, tidal waters or associated sand dunes;
- ☐ Where impact to wetland and other coastal resource functions is unavoidable, limit the project impacts to the least valuable functions, avoiding and minimizing impact to the highest and most valuable functions; and
- ☐ Include on-site minimization measures and construction management practices to protect coastal resource areas.

Projects in coastal areas shall use results of this CFA to:

- ☐ Minimize adverse impacts to finfish, shellfish, crustacea, and wildlife;
- ☐ Minimize disturbances to groundwater and surface water flow;
- ☐ Avoid impacts that could adversely affect fish habitat, wildlife habitat, or both; and
- ☐ Avoid impacts that might cause erosion to shoreline properties.

SECTION 4 - VULNERABILITY ASSESSMENT (Env-Wt 603.05)

Refer to the New Hampshire Coastal Flood Risk Summary Part 1: Science and New Hampshire Coastal Flood Risk Summary Part II: Guidance for Using Scientific Projections or other best available science to:

- a. Determine the time period over which the project is designed to serve;

A Coastal Vulnerability Assessment is attached to this application.

- b. Identify the project's relative risk tolerance to flooding and potential damage or loss likely to result from flooding to buildings, infrastructure, salt marshes, sand dunes and other valuable coastal resource areas;

See attached CVA

- c. Reference the projected sea-level rise (SLR) scenario that most closely matches the end of the project design life and the project's tolerance to risk or loss;

See attached CVA

- d. Identify areas of the proposed project site subject to flooding from SLR;

See attached CVA

- e. Identify areas currently located within the 100-year floodplain and subject to coastal flood risk;

See attached CVA

- f. Describe how the project design will consider and address the selected SLR scenario within the project design life, including in the design plans;

See attached CVA

- g. Where there are conflicts between the project's purpose and the vulnerability assessment results, schedule a pre-application meeting with the department to evaluate design alternatives, engineering approaches, and use of the best available science.

☐ Pre-application meeting date held: **N/A**

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STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION ATTACHMENT A: MINOR AND MAJOR PROJECTS



Water Division/Land Resources Management
Wetlands Bureau

[Check the Status of your Application](#)

RSA/ Rule: RSA 482-A/ Env-Wt 311.10; Env-Wt 313.01(a)(1); Env-Wt 313.03

APPLICANT LAST NAME, FIRST NAME, M.I.: Sinclair, David, A.

Attachment A can be used to satisfy some of the additional requirements for minor and major projects regarding avoidance and minimization, as well as functional assessment.

PART I: AVOIDANCE AND MINIMIZATION

In accordance with Env-Wt 313.03(a), the Department shall not approve any alteration of any jurisdictional area unless the applicant demonstrates that the potential impacts to jurisdictional areas have been avoided to the maximum extent practicable and that any unavoidable impacts have been minimized, as described in the Wetlands Best Management Practice Techniques For Avoidance and Minimization.

SECTION I.I - ALTERNATIVES (Env-Wt 313.03(b)(1))

Describe how there is no practicable alternative that would have a less adverse impact on the area and environments under the Department's jurisdiction.

THE PROJECT PROPOSES RESIDENTIAL SITE IMPROVEMENTS INCLUDING INSTALLATION OF POROUS PAVEMENT FOR THE EXISTING AND PROPOSED DRIVEWAY EXPANSION, INSTALLATION OF AN UNDERGROUND ELECTRIC/COMMUNICATION LINE AND REPLACEMENT OF THE EXISTING SEWER LINE BETWEEN THE EXISTING HOME AND NEW CASTLE AVENUE. SINCE A GREAT PORTION OF THE DRIVEWAY TO BE CONVERTED TO POROUS PAVEMENT IS EXISTING, AND THE PROPOSED UTILITY IMPROVMENTS ARE EXISTING, ALTERNATIVES THAT WOULD PROVIDE THE SAME FUNCTION ARE EXTREMELY LIMITED. THE CONVERSION TO POROUS PAVEMENT DOES RESULT IN A REDUCTION OF IMPERVIOUS SURFACE ON THE SITE WHICH WILL PROVIDE A STORMWATER TREATMENT COMPONENT THAT WILL IMPROVE WATER QUALITY THAT LEAVES THE SITE AND ENTERS THE ADJACENT WETLAND RESOURCE.

lrn@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

SECTION I.II - MARSHES (Env-Wt 313.03(b)(2))

Describe how the project avoids and minimizes impacts to tidal marshes and non-tidal marshes where documented to provide sources of nutrients for finfish, crustacea, shellfish and wildlife of significant value.

The proposed project does not impact any salt marshes.

SECTION I.III – HYDROLOGIC CONNECTION (Env-Wt 313.03(b)(3))

Describe how the project maintains hydrologic connections between adjacent wetland or stream systems.

The proposed project does not impact any wetlands and/or streams. The project impacts the previously developed 100' Tidal Buffer Zone.

SECTION I.IV - JURISDICTIONAL IMPACTS (Env-Wt 313.03(b)(4))

Describe how the project avoids and minimizes impacts to wetlands and other areas of jurisdiction under RSA 482-A, especially those in which there are exemplary natural communities, vernal pools, protected species and habitat, documented fisheries, and habitat and reproduction areas for species of concern, or any combination thereof.

The project proposes impacts to the previously developed 100' Tidal Buffer Zone and does not propose any impacts to exemplary natural communities or vernal pools. Per the NHB Review, marsh elder, shortnose sturgeon (*Acipenser brevirostrum*) and Atlantic sturgeon (*Acipenser oxyrinchus*) have been identified as sensitive species on or near the project site. Coordination with NHB and NHF & G in regards to the above protected species is expected and comments from those departments will be forwarded to NH DES upon receipt.

SECTION I.V - PUBLIC COMMERCE, NAVIGATION, OR RECREATION (Env-Wt 313.03(b)(5))

Describe how the project avoids and minimizes impacts that eliminate, depreciate or obstruct public commerce, navigation, or recreation.

The proposed project does not impede recreation, public commerce, or navigation as it is located entirely on private property.

SECTION I.VI - FLOODPLAIN WETLANDS (Env-Wt 313.03(b)(6))

Describe how the project avoids and minimizes impacts to floodplain wetlands that provide flood storage.

The project does not propose any impacts to floodplain wetlands as it is located entirely within uplands providing no decrease in flood storage potential.

SECTION I.VII - RIVERINE FORESTED WETLAND SYSTEMS AND SCRUB-SHRUB –MARSH COMPLEXES (Env-Wt 313.03(b)(7))

Describe how the project avoids and minimizes impacts to natural riverine forested wetland systems and scrub-shrub – marsh complexes of high ecological integrity.

The project does not propose impacts to riverine forested wetland systems and scrub shrub marsh complexes.

SECTION I.VIII - DRINKING WATER SUPPLY AND GROUNDWATER AQUIFER LEVELS (Env-Wt 313.03(b)(8))

Describe how the project avoids and minimizes impacts to wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels.

The wetland resources associated with the project site are not hydrologically connected to a groundwater aquifer or drinking water supply.

SECTION I.IX - STREAM CHANNELS (Env-Wt 313.03(b)(9))

Describe how the project avoids and minimizes adverse impacts to stream channels and the ability of such channels to handle runoff of waters.

The project does not propose any impacts to stream channels.

PART II: FUNCTIONAL ASSESSMENT**REQUIREMENTS**

Ensure that project meets requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).

FUNCTIONAL ASSESSMENT METHOD USED:

Wetland functions and values were assessed using the Highway Methodology Workbook, Wetland Functions and Values: A Descriptive Approach. U.S. Army Corps of Engineers. 1999. The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach. U.S. Army Corps of Engineers. New England Division. 32pp. NAEPP-360-1-30a.

NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: STEVEN D. RIKER, NH CWS #219

DATE OF ASSESSMENT: OCTOBER 14, 2022

Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT: ☒

For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable: ☒

Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.



**AVOIDANCE AND MINIMIZATION
WRITTEN NARRATIVE**
Water Division/Land Resources Management
Wetlands Bureau
[Check the Status of your Application](#)



RSA/ Rule: RSA 482-A/ Env-Wt 311.04(j); Env-Wt 311.07; Env-Wt 313.01(a)(1),b; Env-Wt 313.01(c)

APPLICANT LAST NAME, FIRST NAME, M.I.: Sinclair, David, A.

An applicant for a standard permit shall submit with the permit application a written narrative that explains how all impacts to functions and values of all jurisdictional areas have been avoided and minimized to the maximum extent practicable. This attachment can be used to guide this narrative (attach additional pages if needed). Alternatively, the applicant may attach a completed Avoidance and Minimization Checklist (NHDES-W-06-050) to the permit application.

SECTION 1 - WATER ACCESS STRUCTURES (Env-Wt 311.07(b)(1))

Is the primary purpose of the proposed project to construct a water access structure?

No, the project does not propose a water access structure.

SECTION 2 - BUILDABLE LOT (Env-Wt 311.07(b)(1))

Does the proposed project require access through wetlands to reach a buildable lot or portion thereof?

No. This is not applicable.

SECTION 3 - AVAILABLE PROPERTY (Env-Wt 311.07(b)(2))

For any project that proposes permanent impacts of more than one acre or that proposes permanent impacts to a PRA, or both, are any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, that could be used to achieve the project's purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs?

Since the proposal includes improvements to an existing developed lot, this is not applicable.

SECTION 4 - ALTERNATIVES (Env-Wt 311.07(b)(3))

Could alternative designs or techniques, such as different layouts, different construction sequencing, or alternative technologies be used to avoid impacts to jurisdictional areas or their functions and values on the subject property or on other property that is reasonably available to the applicant as described in the *Wetlands Best Management Practice Techniques for Avoidance and Minimization*?

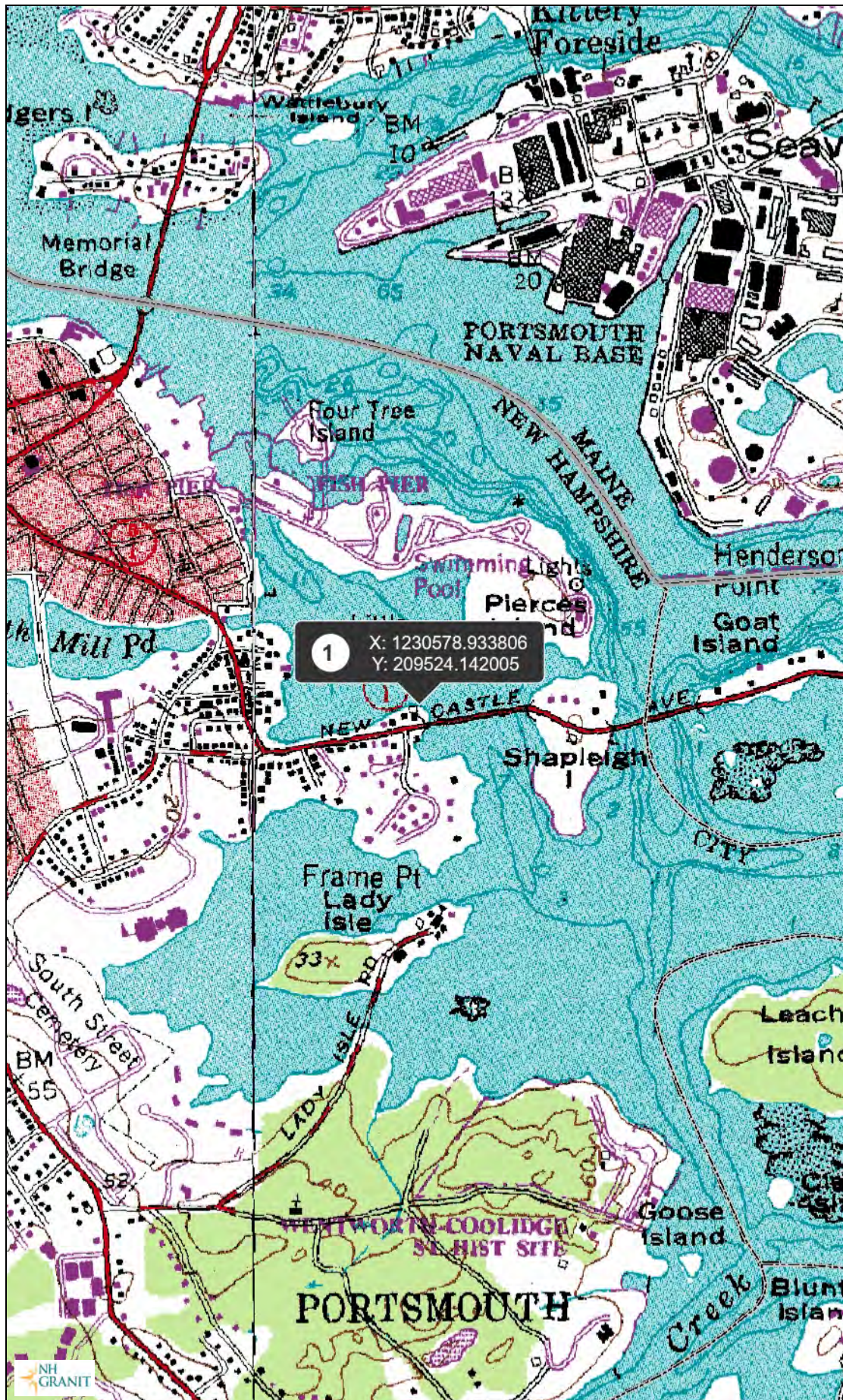
THE PROJECT PROPOSES RESIDENTIAL SITE IMPROVEMENTS INCLUDING INSTALLATION OF POROUS PAVEMENT FOR THE EXISTING AND PROPOSED DRIVEWAY EXPANSION, INSTALLATION OF AN UNDERGROUND ELECTRIC/COMMUNICATION LINE AND REPLACEMENT OF THE EXISTING SEWER LINE BETWEEN THE EXISTING HOME AND NEW CASTLE AVENUE. SINCE A GREAT PORTION OF THE DRIVEWAY TO BE CONVERTED TO POROUS PAVEMENT IS EXISTING, AND THE PROPOSED UTILITY IMPROVMENTS ARE EXISTING, ALTERNATIVES THAT WOULD PROVIDE THE SAME FUNCTION ARE EXTREMELY LIMITED. THE CONVERSION TO POROUS PAVEMENT DOES RESULT IN A REDUCTION OF IMPERVIOUS SURFACE ON THE SITE WHICH WILL PROVIDE A STORMWATER TREATMENT COMPONENT THAT WILL IMPROVE WATER QUALITY THAT LEAVES THE SITE AND ENTERS THE ADJACENT WETLAND RESOURCE.

SECTION 5 - CONFORMANCE WITH Env-Wt 311.10(c) (Env-Wt 311.07(b)(4))

How does the project conform to Env-Wt 311.10(c)? Please note that for a minimum impact project, the applicant may replace this explanation with a certification signed by a certified wetland scientist that the project is located and designed to minimize impacts to wetlands functions and values.

The proposed project located within the previously developed 100' Tidal Bufer Zone will not impact the nearby tidal resources ability to maintain its current functions and values. The improvements will not impede tidal flow or alter hydrology, it will not deter use by wildlife species that currently use the wetland area, and it will not impede any migrational fish movement. As a result, The project will have no impact on the functions and values of the adjacent tidal wetland.

Map by NH GRANIT



Legend

- State
- County
- City/Town

Map Scale

1: 12,988

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Map Generated: 8/4/2022



Notes



**Property Information**

Property ID 0207-0005-0000
Location 393 NEW CASTLE AVE
Owner SINCLAIR DAVID A

**MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT**

City of Portsmouth, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 3/9/2022
Data updated 3/9/2022

Print map scale is approximate.
Critical layout or measurement
activities should not be done using
this resource.

Ambit Engineering Abutter List

David A. Sinclair
393 New Castle Avenue
Portsmouth, NH

Job # 3050.53

Applicant/Owner(s)

[illegible]

Engineer	Ambit Engineering Civil Engineers & Land Surveyors		200 Griffin Road, Unit #3	Portsmouth	NH	03801
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Other Consultants						
Other Consultants						
Other Consultants						

[illegible]



AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

5 January 2023

Todd & Jan Peters
379 New Castle Avenue
Portsmouth, NH 03801

RE: New Hampshire Wetland Application for site improvements for David A. Sinclair, 393 New Castle Avenue, Portsmouth, NH.

Dear Property Owner,

Under NH RSA 482-A, this letter is to inform you in accordance with State Law that a Wetlands Permit will be filed with the New Hampshire Department of Environmental Services (DES) Wetlands Bureau for a permit to **perform residential site improvements**, on behalf of your abutter, **David A. Sinclair**.

This letter is sent to inform you as an abutter to the above-referenced property (according to local Municipal records) that **David A. Sinclair** proposes a project that requires construction in the previously developed tidal buffer zone, and jurisdictional wetland areas.

Plans are on file at this office, and once the application is filed, plans that show the proposed project and wetland and other jurisdictional impacts will be available for viewing during normal business hours at the office of the **Portsmouth** clerk, **Portsmouth city offices**, or once received by DES, at the offices of the DES Wetlands Bureau, (8 a.m. to 4 p.m.) (603) 271-2147. It is suggested that you call ahead to the appropriate office to ensure the application is available for review.

Please feel free to call if you have any questions or comments.

Sincerely,

Steven D. Riker
NH Certified Wetland Scientist – Permitting Specialist

CERTIFIED MAIL/Return Receipt Requested

7022 0410 0002 6196 5630

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at www.usps.com ®.	
OFFICIAL USE	
Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage and Fees	\$
Sent To	
PETERS	
Street and Apt. No., or PO Box No.	
319 NEW CASTLE AVENUE	
City, State, ZIP+4®	
PS Form 3800, April 2015 PSN 7530-02-000-9047	
See Reverse for Instructions	

1893.02



Site Photograph #1

January 2023



Site Photograph #2

January 2023



Site Photograph #3

January 2023



Site Photograph #4

January 2023



Site Photograph #5

January 2023



Site Photograph #6

January 2023



Memo

NH Natural Heritage Bureau NHB DataCheck Results Letter

Please note: portions of this document are confidential.

Maps and NHB record pages are confidential and should be redacted from public documents.

To: John Chagnon, Ambit Engineering, Inc.
200 Griffin Road
Unit 3
Portsmouth, NH 03801

From: NHB Review, NH Natural Heritage Bureau

Date: 8/30/2022 (valid until 08/30/2023)

Re: Review by NH Natural Heritage Bureau

Permits: NHDES - Wetland Standard Dredge & Fill - Major, USACE - General Permit

NHB ID: NHB22-2537

Town: Portsmouth

Location: 393 New Castle Avenue

Description: The project proposes an extension of the existing tidal docking structure.

cc: NHFG Review

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments NHB: Please indicate if work will be completed by a barge and/or if any shoreland areas will be used for construction access and/or staging.
F&G: Please indicate proposed project timing. Please refer to NHFG consultation requirements below.

Plant species	State ¹	Federal	Notes
marsh elder (<i>Iva frutescens</i>)	T	--	Threats are primarily alterations to the hydrology of the wetland, such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat, activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.
Vertebrate species	State ¹	Federal	Notes
Atlantic Sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>)	T	T	Contact the NH Fish & Game Dept and the US Fish & Wildlife Service (see below).
Shortnose Sturgeon (<i>Acipenser brevirostrum</i>)	E	E	Contact the NH Fish & Game Dept and the US Fish & Wildlife Service (see below).

¹Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet

Memo

NH Natural Heritage Bureau NHB DataCheck Results Letter

Please note: portions of this document are confidential.

Maps and NHB record pages are confidential and should be redacted from public documents.

been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section below.

Disclaimer: 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.

IMPORTANT: NHFG Consultation

If this NHB Datacheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB Datacheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to <https://wildlife.state.nh.us/wildlife/environmental-review.html>. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and **must include the NHB Datacheck results letter number and “Fis 1004 consultation request” in the subject line.**

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email: Kim Tuttle kim.tuttle@wildlife.nh.gov with a copy to NHFGreview@wildlife.nh.gov, and include the NHB Datacheck results letter number and “review request” in the email subject line.

Contact NH Fish & Game at (603) 271-0467 with questions.

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB22-2537



New Hampshire Natural Heritage Bureau - Plant Record

marsh elder (*Iva frutescens*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Excellent quality, condition and landscape context ('A' on a scale of A-D).
Comments on Rank: This rank may be for the state rather than relative to others in the region.

Detailed Description: 2021: Lady Isle: Plants intermittently distributed along the westernmost portion of the island. 2020: Tidal Pool: Species observed in flower. 2017: Leachs Island: Several thousand plants spread along 800+ feet of shoreline. 10-20% dieback, 10-15% yellowing, 65-80% normal to vigorous. Aphids observed on 80% of clumps. 2016: Peirce Island: Additional subpopulations located, raising total number of plants to over 600. Plants appear to be in much better health than 2014, with all individuals in fruit and in good vigor. Shaws Hill: Several clumps over an area approximately 30 x 15 feet. Estimated at over 200 individuals. Tidal Pool: Plants in 3 areas along shoreline near tidal pool. 2014 Peirce Island: Over 500 plants were observed, all stunted, with approximately 50-60% dead stems, mostly confined to the upper portions of the plants. 1996: Constant observation since 1953 reported, including all stages of phenology and age structure. 1982: Good clump observed.

General Area: 2017: Leachs Island: Upper edge of brackish marsh/rocky shore. Plants absent from areas with broader expanse of marsh. Rocks present in most areas where the plants are growing. Associated species include black oak (*Quercus velutina*), saltmarsh rush (*Juncus gerardii*), sea-blite (*Suaeda* sp.), hastate-leaved orache (*Atriplex* cf. *prostrata*), smooth cordgrass (*Spartina alterniflora*), Carolina sea-lavender (*Limonium carolinianum*), and seaside plantain (*Plantago maritima* ssp. *juncoides*). 2016: Peirce Island: Population forms a narrow band immediately above the highest observed wrack line along the shore. Associated upland species include staghorn sumac (*Rhus hirta*), autumn-olive (*Elaeagnus umbellata* var. *parvifolia*), Asian bittersweet (*Celastrus orbiculatus*), and speckled alder (*Alnus incana* ssp. *rugosa*). The saline areas downslope of the marsh elder contained over 50% unvegetated substrate, as well as a mixture of cordgrass (*Spartina* sp.) and saltgrass (*Distichlis spicata*). Shaws Hill: Surrounding land use is developed. All plants below highest observable tide line in **high salt marsh**, located among saltmeadow cordgrass (*Spartina patens*), smooth cordgrass (*Spartina alterniflora*), and seaside goldenrod (*Solidago sempervirens*). Tidal Pool: Sagamore Creek/Great Bay shoreline, with smooth cordgrass (*Spartina alterniflora*), saltmarsh rush (*Juncus gerardii*), saltmeadow cordgrass (*Spartina patens*), seaside goldenrod (*Solidago sempervirens*), and sea-blite (*Suaeda* spp.). 1996: On shores of several islands and peninsulas in the more or less enclosed bay system. Associated plant species: *Solidago sempervirens* (seaside goldenrod), *Juncus gerardii* (salt marsh rush), *Spartina patens* (saltmeadow cord-grass), *Triglochin maritimum* (arrow-grass), *Elymus virginicus* (Virginia wild rye), *Atriplex patula* (narrow-leaved orach), and *Artemisia vulgaris* (common mugwort). Substrate: gravel and marsh peat and muck. 1982: On shore at Pleasant Point.

General Comments: 2021: Lady Isle: Site is referred to Belle Isle on reporting form, and appears as Belle Island on some maps, but is called Lady Isle on USGS topo. 2016: Peirce Island: "The population currently appears to be in good health, although the results of the June 2014 surveys indicated that there may be some intermittent pressure on this population. The propensity of this species to grow in a very narrow band along the tide line does not allow for rapid adaptation to changing sea levels, storm events, or polluted runoff that a larger, robust population may resist. If sea levels gradually rise as expected, the marsh elder will be unable to move inland due to a small but steep cut bank that forms the upland break adjacent to the marsh elder population. The remaining subpopulations may also be getting shaded by the adjacent upland vegetation, which appears to be encroaching on the shoreline. This vegetation is comprised of large shrub species and the invasive Oriental bittersweet that is capable of overtaking the native plants in the area."

Management --
Comments:

Location

Survey Site Name: Little Harbor, back channel
Managed By: Little Harbor Trust

County: Rockingham
Town(s): Portsmouth
Size: 61.4 acres Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2021: Lady Isle: Shoreline along western end of Lady Isle. 2017: Leachs Island: Island in New Castle only accessible by boat. Plants observed on south shore of island. 2016: Peirce Island: Along the southern shore of Peirce Island, along the edge of a small cove west of the wastewater treatment facility. Shaws Hill: Take Laurel Lane off New Castle Avenue, bear left onto driveway right-of-way servicing 51A and 51B Laurel Lane. At end of right-of-way, 51B will be located on the right. Tidal Pool: Along Sagamore Creek shoreline on Creek Farm Reservation property in Portsmouth. In the vicinity of Rte. 1B which encircles the Little Harbor back channel from Portsmouth to New Castle and Rye. Many of the sites are visible only by boat.

Dates documented

First reported: 1953 Last reported: 2021-02-10

New Hampshire Natural Heritage Bureau - Animal Record

Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*)**Legal Status**

Federal: Listed Threatened
State: Listed Threatened

Conservation Status

Global: Rare or uncommon
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2016: 1 individual, sex unknown, detected in the lower Piscataqua River. 2015: 1 individual, sex unknown, detected in Portsmouth Harbor. 2012: 1 individual, sex unknown, detected in Little Bay.

General Area: 2016: Tidal waters in Portsmouth Harbor, Little Bay, and the Piscataqua River.

General Comments: --

Management: --

Comments:

Location

Survey Site Name: Piscataqua River
Managed By:

County:

Town(s): Out-Of-State

Size: 7749.3 acres

Elevation:

Precision: Within 1.5 miles of the area indicated on the map (location information is vague or uncertain).

Directions: 2016: Tidal waters of Portsmouth Harbor, Little Bay, and the Piscataqua River.

Dates documented

First reported: 2012-06-02

Last reported: 2016-05-27

The U.S. Fish & Wildlife Service has jurisdiction over Federally listed species. Please contact them at 70 Commercial Street, Suite 300, Concord NH 03301 or at (603) 223-2541.

New Hampshire Natural Heritage Bureau - Animal Record

Shortnose Sturgeon (*Acipenser brevirostrum*)**Legal Status**

Federal: Listed Endangered
State: Listed Endangered

Conservation Status

Global: Rare or uncommon
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2016: 2 individuals, 1 female and 1 sex unknown, detected in Portsmouth Harbor and the lower Piscataqua River. 2015: 3 females and 2 other individuals, sex unknown detected in Portsmouth Harbor. 2014: 1 female detected moving from Portsmouth Harbor up the Piscataqua River to the mouth of the Cocheco River. 2012: 1 female detected in Little Bay. 2011: 1 female detected in Little Bay. 2010: 1 female detected in Little Bay.

General Area: 2016: Tidal waters in Portsmouth Harbor, Little Bay, and the Piscataqua River.

General Comments: --

Management: --

Comments:

Location

Survey Site Name: Piscataqua River

Managed By:

County:

Town(s): Out-Of-State

Size: 7749.3 acres

Elevation:

Precision: Within 1.5 miles of the area indicated on the map (location information is vague or uncertain).

Directions: 2016: Tidal waters of Portsmouth Harbor, Little Bay, and the Piscataqua River.

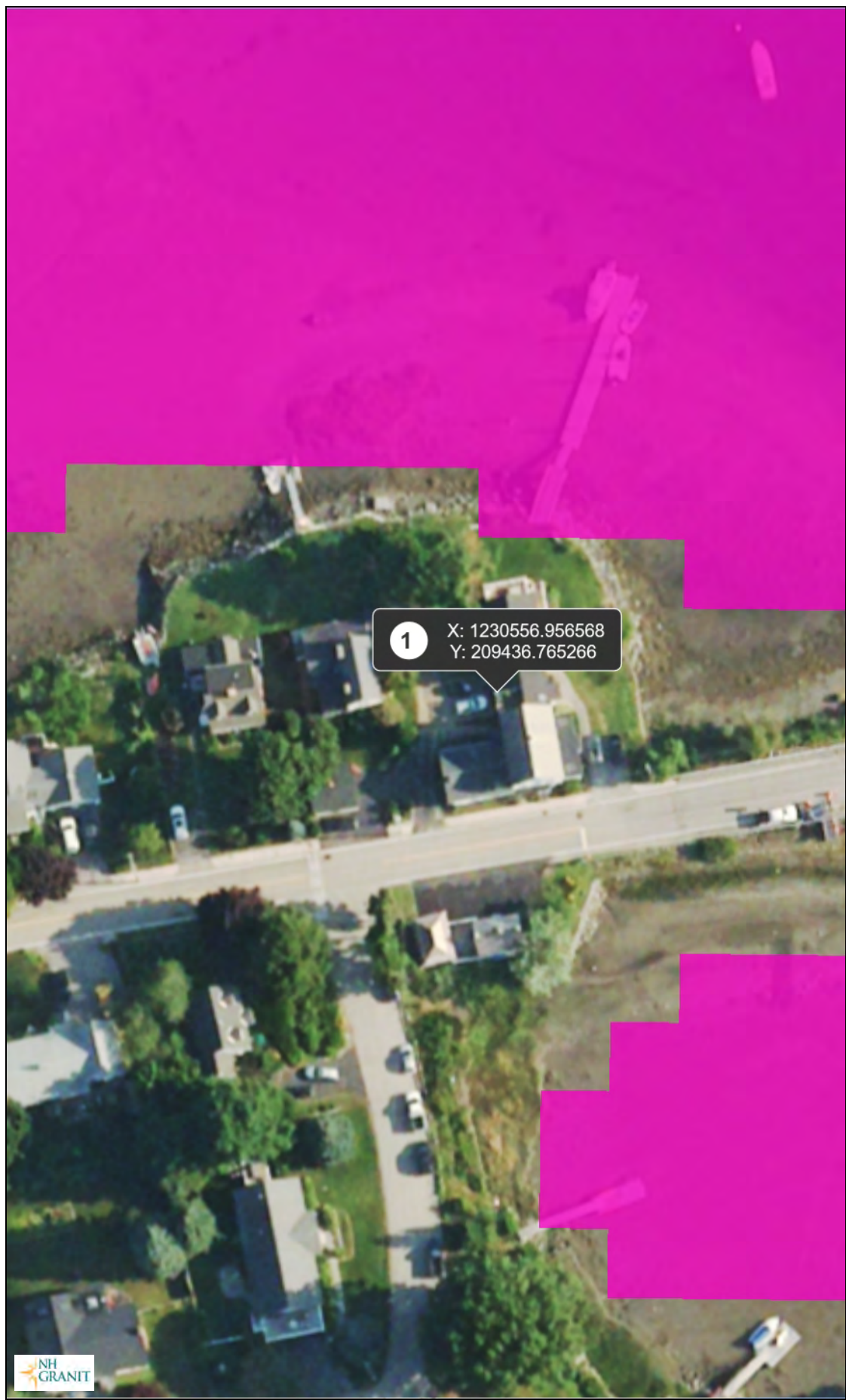
Dates documented

First reported: 2010-11-03

Last reported: 2016-10-20

The U.S. Fish & Wildlife Service has jurisdiction over Federally listed species. Please contact them at 70 Commercial Street, Suite 300, Concord NH 03301 or at (603) 223-2541.

Map by NH GRANIT



Legend

- State
- County
- City/Town
- WAP 2020: Highest Ranked Wildlife Habitat
 - 1 Highest Ranked Habitat in NH
 - 2 Highest Ranked Habitat in Region
 - 3 Supporting Landscape
- Coastal 2019 1-foot RGB

Map Scale

1: 812

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Map Generated: 1/6/2023



Notes

Highest Ranked Wildlife Habitat



Carly Ann Seary

LCHIP	ROA468893	25.00
TRANSFER TAX	RO092577	28,200.00
RECORDING		14.00
SURCHARGE		2.00



Return to: 
 Great Oak Title Services LLC
 4 Greenleaf Woods Drive, Unit 302
 Portsmouth, NH 03801

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS: That **393 New Castle Avenue LLC, a New Hampshire Limited Liability Company**, with a mailing address of PO Box 393, City of Portsmouth, County of Rockingham and State of New Hampshire 03802, for consideration paid grant(s) to **David A. Sinclair and Nicole J. Giusto**, husband and wife, of 765 Middle Street, City of Portsmouth, County of Rockingham, and State of New Hampshire 03801 as joint tenants with rights of survivorship, with WARRANTY COVENANTS:

A certain tract or parcel of land and flats with the buildings thereon situated in Portsmouth, in the County of Rockingham and State of New Hampshire being more particularly bounded and described as follows:

Bounded Northerly and Easterly by the Piscataqua River; Southerly by New Castle Avenue, one hundred eleven (111) feet, more or less; Westerly one hundred fourteen (114) feet, more or less, by lane or way sixteen (16) feet wide separating this property and that of one Burke; with a right-of-way over, in and upon said lane or way; together with the benefit of any other easements or rights- of-way appurtenant to the premises to be conveyed and subject to any easements or rights-of-way which may exist in favor of others.

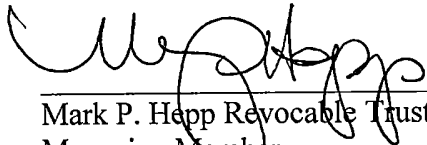
SUBJECT TO and with the benefit of a certain Memorandum of Understanding between to City of Portsmouth, New Hampshire and Kenneth Rothwell and Alida Rothwell dated September 22, 1995, recorded in the Rockingham County Registry of Deeds at Book 3120, Page 2672 to the extent applicable in light of the March 16, 2017 City of Portsmouth Planning Board approval of a Conditional Use Permit associated with 390 New Castle Ave.

Meaning and intending to describe and convey the same premises conveyed to 393 New Castle Avenue LLC from 393 New Castle Avenue LLC by virtue of a deed dated February 19, 2018 and recorded on February 23, 2018 in the Rockingham County Registry of Deeds at Book 5894, Page 1193.

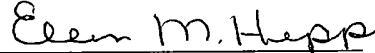
The property is not the residence of the grantor or the grantor's spouse and is not subject to homestead rights.

Executed this 28 day of October, 2019.

393 New Castle Avenue LLC



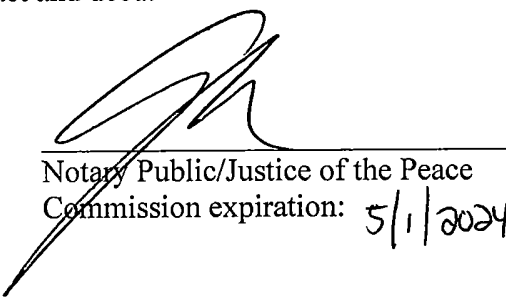
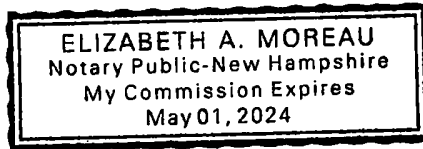
Mark P. Hepp Revocable Trust
Managing Member
Mark P. Hepp, Trustee



Ellen M. Hepp Revocable Trust
Managing Member
Ellen M. Hepp, Trustee

State of New Hampshire
County of Rockingham

Then personally appeared before me on this 28 day of October, 2019, Mark P. Hepp, Trustee of the Mark P. Hepp Revocable Trust, and Ellen M. Hepp, Trustee of the Ellen M. Hepp Revocable Trust as the duly authorized managing members of the 393 New Castle Avenue LLC, and acknowledged the foregoing to be their free act and deed.



Notary Public/Justice of the Peace
Commission expiration: 5/1/2024

Coastal Vulnerability Assessment

Prepared for:

**David A. Sinclair
393 New Castle Avenue
Portsmouth, New Hampshire 03801**

Prepared By:

**Ambit Engineering, Inc
200 Griffin, Unit 3
Portsmouth, New Hampshire 03801**



AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors

Introduction

This Coastal Vulnerability Assessment (CVA) is being provided in support of a New Hampshire Department of Environmental Services (NHDES) Wetland Permit Application for residential site improvements including installation of porous pavement for the existing and proposed driveway expansion, installation of an underground electric/communication line and replacement of the existing sewer line between the existing home and New Castle Avenue. (herein referred to as “project site”). The project site is a residential lot located on the northern side of New Castle Avenue with an occupied residential dwelling. The surrounding land use is residential with similar accessory structures, driveways and landscaped areas.

Methods

On October 14, 2022, Steven D. Riker, CWS from Ambit Engineering, Inc. conducted a site visit to evaluate coastal characteristics of the project site, as well as the functions and values of the tidal wetland area (see attached Coastal Functions and Values assessment). This CVA was completed utilizing the NH Coastal Flood Risk Science and Technical Advisory Panel (2019). New Hampshire Coastal Flood Risk Summary Part: Guidance for Using Scientific Projections. Report Published by the University of New Hampshire (herein referred to as Guidance Document).

Part 1.1 – Project Type

This project proposes site improvements on the residential lot adjacent to the Piscataqua River. The purpose of the site improvements are to provide the owner/applicant with suitable on-site parking for vehicles as well as adequate space for vehicles to access/egress to New Castle Avenue. For more details regarding construction and construction sequences; please refer to the NH DES Wetlands Bureau Application Letter to the Wetlands Inspector and attached NHDES Permit Plan – C2 and Detail Sheet D1.

Part 1.2 – Project Location

The project location is 393 New Castle Avenue, Tax Map 207, Lot 5 and consists of .34 acres of residential upland and shoreline frontage along the Piscataqua River Access to the project site will be from New Castle Avenue for the staging of equipment and materials.

Part 1.3 – Timeline for Desired Useful Life

The desired useful life for this project is considered to be 2100 (50-100 years) due to the fact that the proposed improvements have a life expectancy of approximately 50-75 years.

2.1 – Project Risk Tolerance

The proposed project is considered to have a high risk tolerance considering that the site improvements have a relatively low cost, are relatively easy to modify, propose little to no implications on public function and/or safety; and has relatively low sensitivity to inundation given the existing elevation of the proposed improvements relative to the elevation of MHW.


2.2 – Risk Tolerance of Important Access and Service Areas

The risk tolerance of surrounding access and service areas is not applicable to this project, as the project occurs on a residential, private lot and is intended for private use; primary access of which would be by foot from the residence.

3.1 – Relative Sea Level Rise Scenario (RSLs)

Based on Table 3 in the Guidance Document (see table below), the RSLs for this project (based on the previously determined high risk tolerance) is considered to be on the lower magnitude, and higher probability. The following table depicts the probable sea level rise from 2000 through 2150.

Table 3 from the Guidance Document:

Risk Tolerance	High	Medium	Low	Extremely Low
Example Project	Walking Trail *Docking structure & Stone Revetment	Local Road Culvert	Wastewater Treatment Facility	Hospital
Timeframe	Manage to the following sea level rise (ft*) <i>Compared to the sea level in the year 2000</i>			
	Lower magnitude Higher probability			Higher magnitude Lower probability
2030	0.7	0.9	1.0	1.1
2050	1.3	1.6	2.0	2.3
2100	2.9	3.8	5.3	6.2
2150	4.6	6.4	9.9	11.7

*Added by Ambit Engineering, Inc. based on the application of the Guidance Document towards our project.

3.2 – RSLR Impacts to the Project Evaluation

Projected SLR's as shown above added to the existing elevation of MHW (8.25) provide a future elevation for which the proposed project should be evaluated upon. Relative to surrounding topography and considering the High Risk Tolerance of this project; it is not expected the projected RSLR for this project needs to be a strong consideration. The proposed driveway will be constructed at approximate elevation 14. The projected sea level rise in year 2100 is 2.9 feet resulting in future MHW elevation of 11.15 feet.

3.3 – Other Factors

Other factors were evaluated in conjunction with RSLR including surface water levels, groundwater levels, and current velocities which will increase with sediment erosion and deposition, which will also change. The project's position in the landscape was also considered relative to other infrastructure. The closest surface water to the project site is the adjacent Piscataqua River, projections of RSLR of which have already been depicted and discussed. The proposed project is also located outside of the Flood Hazard Zone (see Existing Conditions Plan-Sheet C1). MHW associated with the project site is located approximately at elevation 8.25. Considering a 2.9 foot RSLR in the year 2100 resulting in an elevation of 11.15, and the proposed driveway constructed at approximate elevation 14, the pervious technology associated with the driveway will function as intended throughout the expected useful life of the residential structure it will serve, simply by the elevation at which it will be constructed.

4.1 – RSLR and Coastal Storms

Due to the project site location being immediately adjacent to the Piscataqua River, it is anticipated that RSLR and storm surge on the proposed project site will be comparable to adjacent properties with similar structures. Considering the high risk tolerance of this project, it is not anticipated that

this project has a significant level of vulnerability to RSLR and coastal storms given the elevation at which the driveway will be constructed.

4.2 – Other Factors

Other factors such as surface water levels, groundwater levels, wind and current velocities have been considered. Considering the high risk tolerance of this project, it is not anticipated that this project has a significant level of vulnerability to groundwater levels, wind and current velocities given the elevation at which the driveway will be constructed.

5.1 – Projected RSL-Induced Groundwater Rise

Based on the Sea-Level Rise Mapper, there is projected groundwater rise associated with RSLR on the project site, however given that the driveway will be constructed at elevation 14, we do not believe groundwater rise should be a strong consideration (see 5.2 below).

5.2 – Projected Groundwater Depth at the Project Location

Determining Groundwater Depth on the site would require geotechnical drilling, however, given knowledge of typical groundwater depths in similar soil parent materials on the NH seacoast, groundwater would likely be encountered between 3 and 5 feet below the soil surface. A test pit was performed on October 14, 2022 and it was determined that Estimated Seasonal High Water Table (ESHWT) is at 32” below the soil surface. Please note that ESHWT is an “estimate” and is certainly subject to seasonal fluctuations, variations in weather & precipitation and various other factors. Please also note that the main purpose of performing the test pit was to assess depth to ledge as shallow depth to bedrock would indicate that the location would not be suitable for a pervious technology. NH Granit does not have RSLR Induced Groundwater Rise data mapped for the project site, but does have data mapped in very proximity which would likely also apply to the subject site. NH Granit indicates that a 1.2-2.2 foot groundwater rise would likely be induced by a 2 foot RSLR. Using an average of 4 feet for a groundwater depth as described above, adding 2.2 for induced groundwater rise, resulting in a projected groundwater depth of 22” below the soil surface. Given this separation to the soil surface, we believe the pervious technology for the proposed driveway will function as intended as the base needed for porous pavement is 22” thick.

6.1 – Best Available Precipitation Estimates

Please see the attached Extreme Precipitation Tables from the Northeast Regional Climate Center.

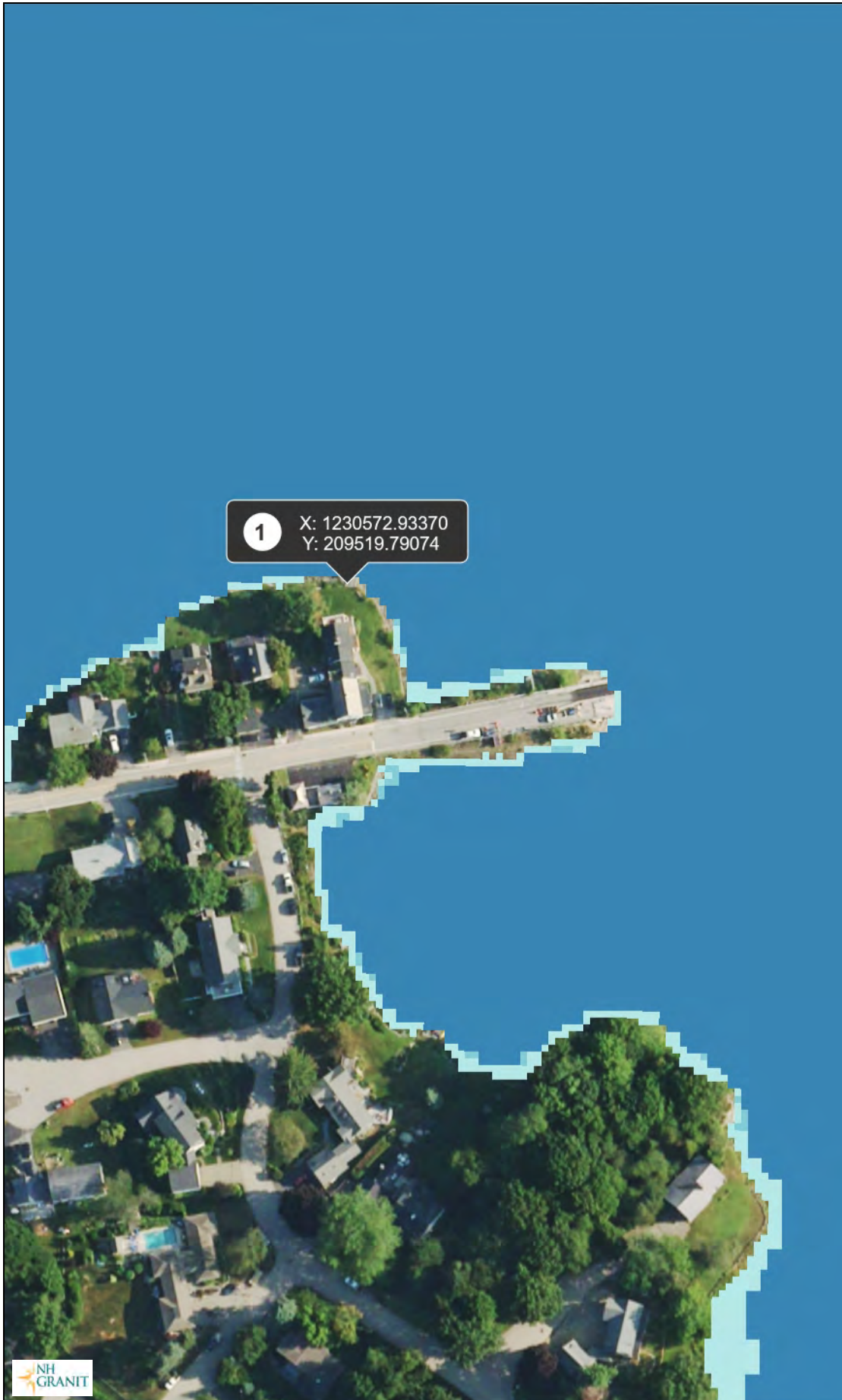
7.1 – Cumulative Coastal Flood Risk to the Project

Based on the high risk tolerance of this project combined with all other factors including RSLR, coastal storms, RSLR-induced groundwater rise, extreme precipitation and/or freshwater flooding occurring together; this project is not considered to be at high risk from coastal flooding.

7.2 – Possible Actions to Mitigate Coastal Flood Risk

Given the high risk tolerance of the proposed project, it is not anticipated that it is necessary to mitigate for coastal flood risk beyond what has already been incorporated into the design plan for the proposed site improvements. The projected SLR scenario through 2100 is 2.9’ and the proposed improvements have been designed to account for this projection.

Map by NH GRANIT



Legend

MHHW + 1-ft SLR

0 - 2

2 - 4

4 - 6

6 - 8

8 - 10

Coastal 2019 1-foot RGB

Map Scale

1: 1,624

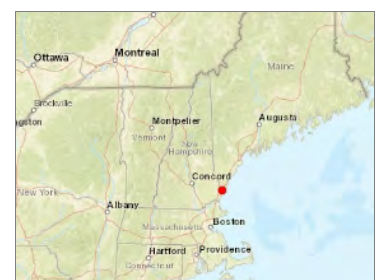
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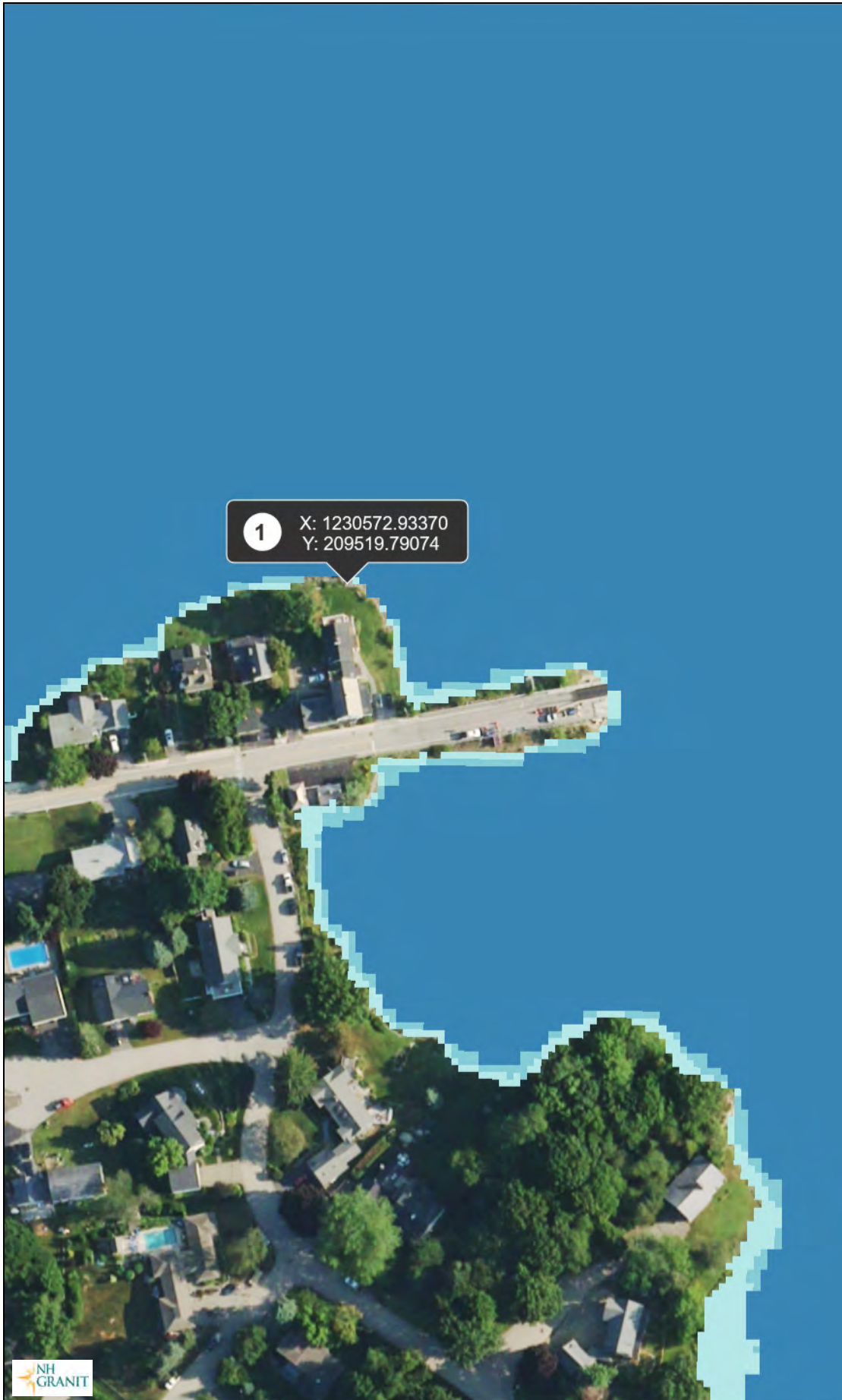


Notes

1 foot SLR



Map by NH GRANIT



Legend

MHHW + 2-ft SLR

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10
- 10 +

Coastal 2019 1-foot RGB

Map Scale

1: 1,624

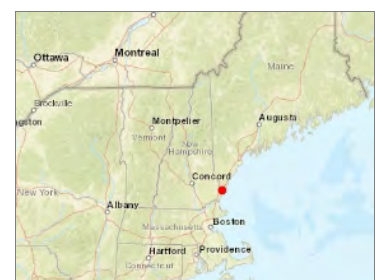
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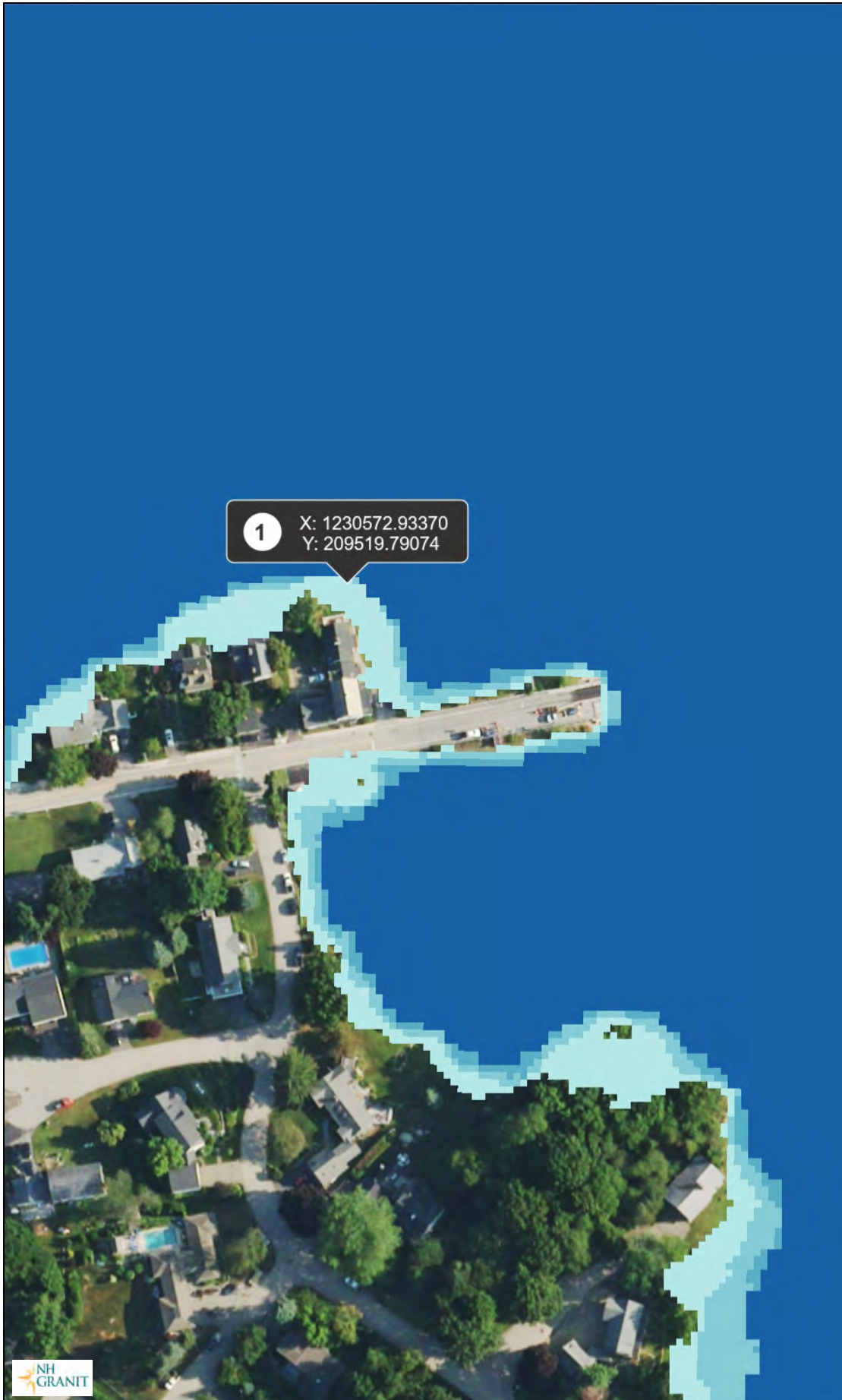


Notes

2 foot SLR



Map by NH GRANIT



Legend

MHHW + 4-ft SLR

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10
- 10 +

Coastal 2019 1-foot RGB

Map Scale

1: 1,624

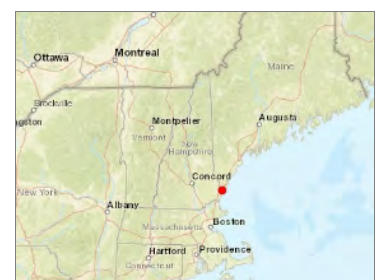
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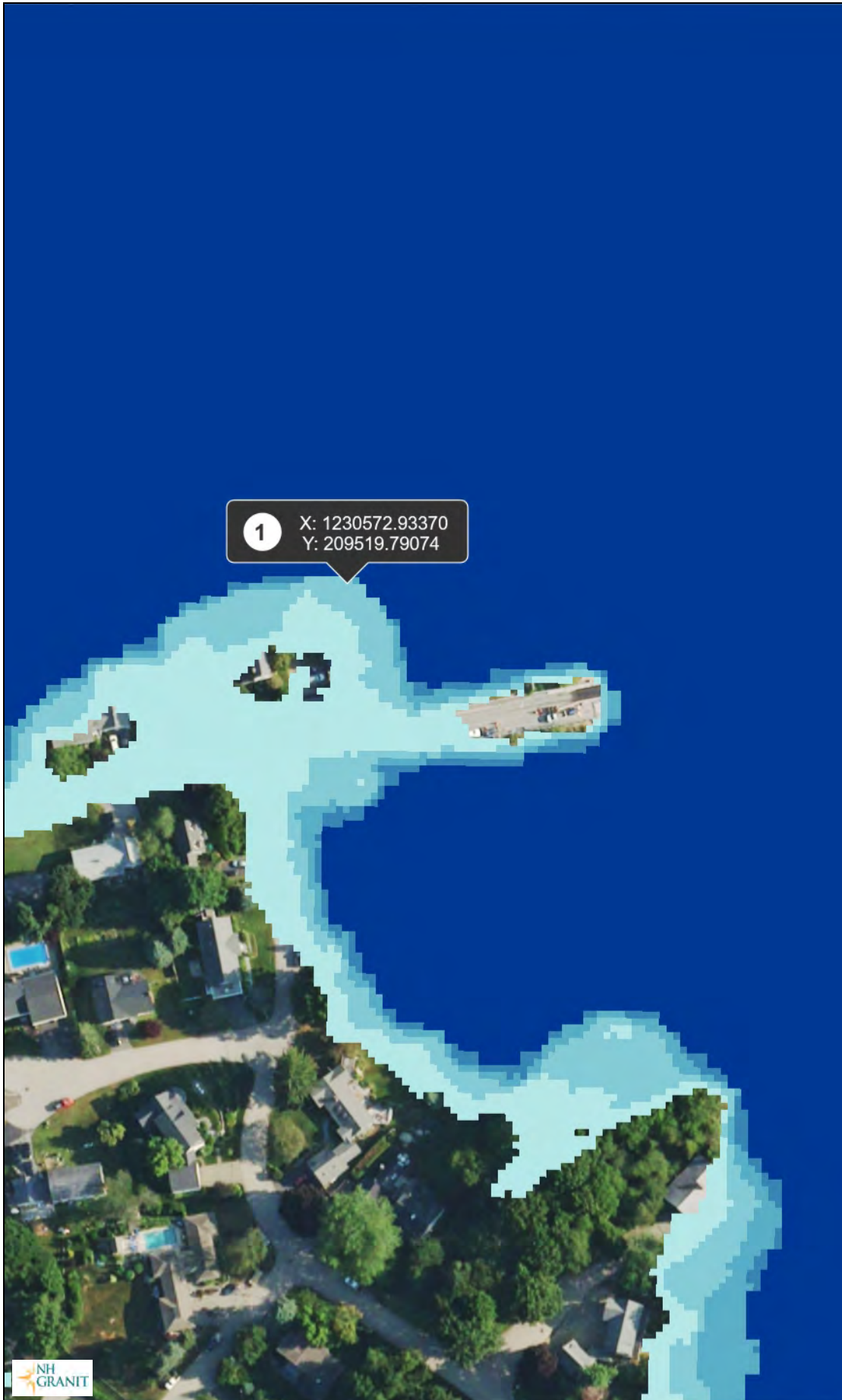


Notes

4 foot SLR



Map by NH GRANIT



Legend

MHHW + 6-ft SLR

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10
- 10 +

Coastal 2019 1-foot RGB

Map Scale

1: 1,624

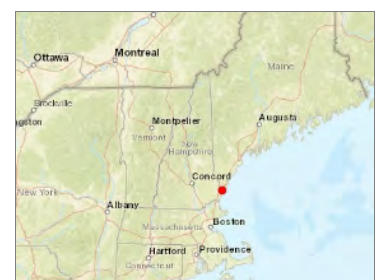
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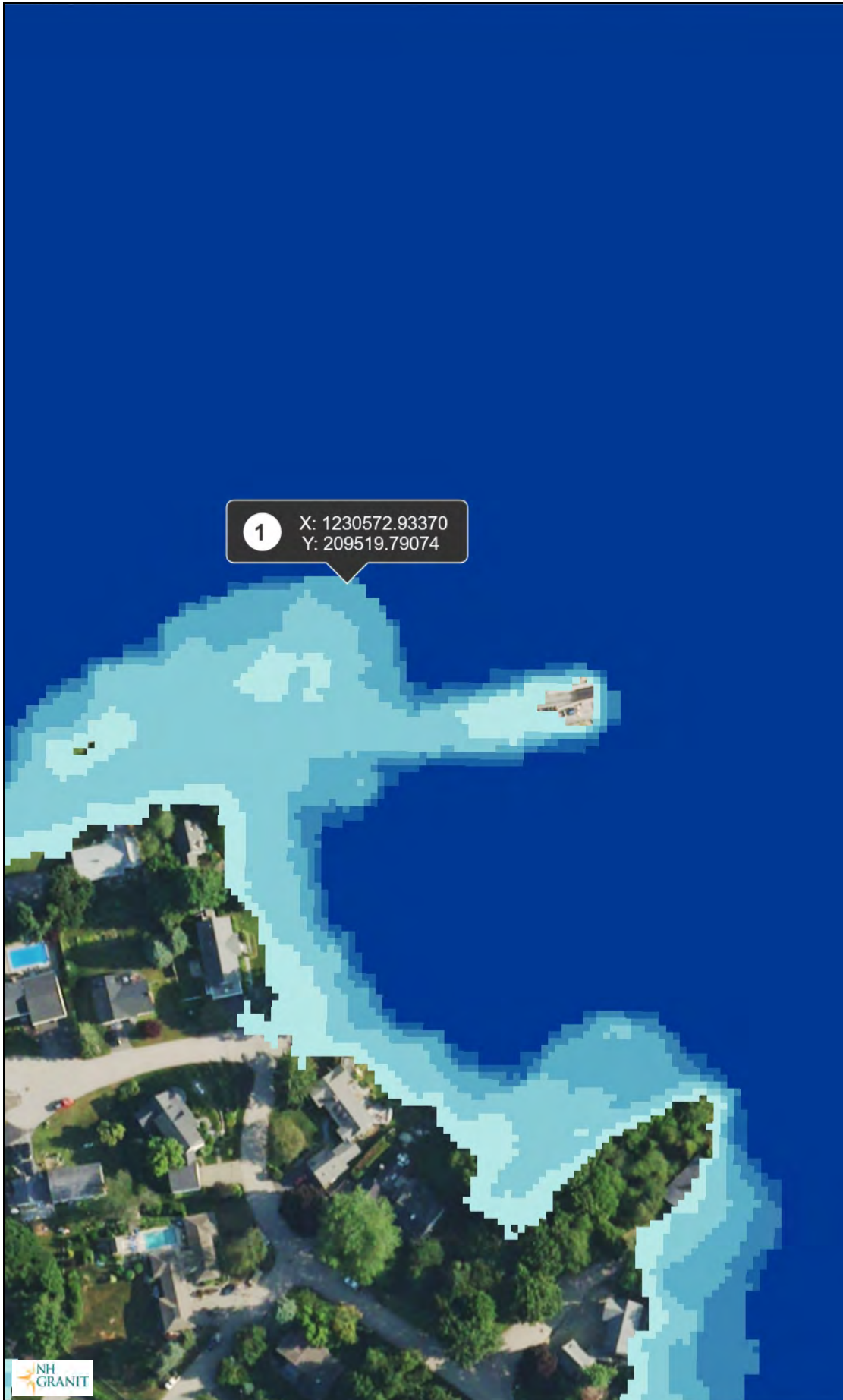


Notes

6 foot SLR



Map by NH GRANIT



Legend

MHHW + 8-ft SLR

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10
- 10 +

Coastal 2019 1-foot RGB

Map Scale

1: 1,624

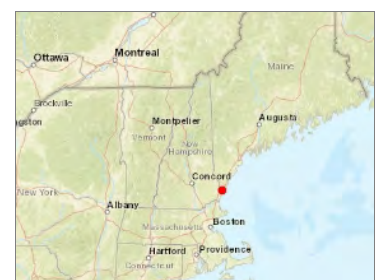
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Map Generated: 8/4/2022



Notes

8 foot SLR



Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	
Location	
Longitude	70.745 degrees West
Latitude	43.071 degrees North
Elevation	0 feet
Date/Time	Tue, 21 Jan 2020 12:37:30 -0500

Precipitation estimates multiplied by 1.15 are listed below:

1-yr: 3.06
2-yr: 3.69
10-yr: 5.59
50-yr: 8.49

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.81	1.04	1yr	0.70	0.98	1.21	1.56	2.03	2.66	2.92	1yr	2.35	2.81	3.22	3.94	4.55	1yr
2yr	0.32	0.50	0.62	0.81	1.02	1.30	2yr	0.88	1.18	1.52	1.94	2.49	3.21	3.57	2yr	2.84	3.43	3.94	4.68	5.33	2yr
5yr	0.37	0.58	0.73	0.98	1.25	1.61	5yr	1.08	1.47	1.89	2.43	3.14	4.07	4.58	5yr	3.60	4.40	5.04	5.94	6.70	5yr
10yr	0.41	0.65	0.82	1.12	1.45	1.89	10yr	1.25	1.73	2.23	2.90	3.75	4.86	5.53	10yr	4.30	5.32	6.09	7.11	7.98	10yr
25yr	0.48	0.76	0.97	1.34	1.78	2.34	25yr	1.54	2.15	2.78	3.64	4.74	6.17	7.10	25yr	5.46	6.83	7.81	9.02	10.05	25yr
50yr	0.54	0.86	1.10	1.54	2.08	2.77	50yr	1.79	2.53	3.30	4.33	5.67	7.38	8.58	50yr	6.54	8.25	9.43	10.81	11.97	50yr
100yr	0.60	0.97	1.25	1.78	2.43	3.27	100yr	2.09	2.99	3.92	5.17	6.77	8.85	10.37	100yr	7.83	9.98	11.39	12.96	14.26	100yr
200yr	0.68	1.11	1.43	2.05	2.84	3.85	200yr	2.45	3.53	4.63	6.14	8.09	10.60	12.54	200yr	9.38	12.06	13.76	15.54	17.00	200yr
500yr	0.80	1.32	1.72	2.50	3.50	4.79	500yr	3.02	4.40	5.79	7.72	10.23	13.47	16.13	500yr	11.92	15.51	17.68	19.77	21.47	500yr

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.36	0.44	0.59	0.72	0.88	1yr	0.62	0.86	0.93	1.33	1.69	2.25	2.48	1yr	1.99	2.38	2.87	3.20	3.91	1yr
2yr	0.31	0.49	0.60	0.81	1.00	1.19	2yr	0.86	1.16	1.37	1.82	2.33	3.06	3.45	2yr	2.71	3.32	3.82	4.55	5.09	2yr
5yr	0.35	0.54	0.67	0.92	1.17	1.40	5yr	1.01	1.37	1.61	2.11	2.73	3.78	4.18	5yr	3.35	4.02	4.72	5.53	6.23	5yr
10yr	0.39	0.59	0.73	1.03	1.33	1.60	10yr	1.14	1.56	1.80	2.38	3.05	4.36	4.85	10yr	3.86	4.66	5.43	6.40	7.18	10yr
25yr	0.44	0.67	0.83	1.19	1.56	1.90	25yr	1.35	1.86	2.10	2.75	3.52	4.74	5.87	25yr	4.20	5.64	6.62	7.77	8.66	25yr
50yr	0.48	0.73	0.91	1.31	1.76	2.16	50yr	1.52	2.12	2.34	3.06	3.91	5.36	6.76	50yr	4.75	6.50	7.69	9.01	9.99	50yr
100yr	0.53	0.81	1.01	1.46	2.01	2.46	100yr	1.73	2.41	2.62	3.40	4.32	6.03	7.80	100yr	5.34	7.50	8.92	10.47	11.53	100yr
200yr	0.59	0.89	1.13	1.63	2.27	2.81	200yr	1.96	2.75	2.93	3.76	4.76	6.77	8.99	200yr	5.99	8.64	10.34	12.17	13.33	200yr
500yr	0.68	1.02	1.31	1.90	2.70	3.36	500yr	2.33	3.28	3.41	4.28	5.40	7.89	10.84	500yr	6.99	10.43	12.56	14.89	16.15	500yr

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.29	0.44	0.54	0.72	0.89	1.09	1yr	0.77	1.06	1.26	1.74	2.20	2.97	3.17	1yr	2.63	3.05	3.58	4.37	5.04	1yr
2yr	0.34	0.52	0.64	0.87	1.07	1.27	2yr	0.92	1.24	1.48	1.96	2.52	3.42	3.71	2yr	3.03	3.57	4.10	4.84	5.62	2yr
5yr	0.40	0.62	0.77	1.05	1.34	1.62	5yr	1.15	1.59	1.89	2.54	3.26	4.34	4.97	5yr	3.84	4.78	5.38	6.39	7.17	5yr
10yr	0.47	0.72	0.89	1.25	1.61	1.98	10yr	1.39	1.94	2.29	3.11	3.97	5.34	6.22	10yr	4.72	5.98	6.84	7.86	8.77	10yr
25yr	0.58	0.88	1.09	1.56	2.05	2.58	25yr	1.77	2.52	2.96	4.08	5.17	7.74	8.37	25yr	6.85	8.05	9.20	10.36	11.43	25yr
50yr	0.67	1.03	1.28	1.84	2.47	3.14	50yr	2.13	3.07	3.61	5.02	6.35	9.69	10.50	50yr	8.57	10.10	11.51	12.76	13.99	50yr
100yr	0.79	1.20	1.50	2.17	2.98	3.83	100yr	2.57	3.74	4.39	6.18	7.81	12.11	13.17	100yr	10.72	12.66	14.41	15.74	17.13	100yr
200yr	0.93	1.40	1.77	2.57	3.58	4.68	200yr	3.09	4.57	5.36	7.61	9.61	15.19	16.53	200yr	13.44	15.89	18.08	19.41	20.97	200yr
500yr	1.16	1.72	2.21	3.21	4.57	6.07	500yr	3.94	5.94	6.96	10.07	12.67	20.50	22.33	500yr	18.14	21.48	24.39	25.60	27.40	500yr

Wetland Functions and Values Assessment

Prepared for:

**David A. Sinclair
393 New Castle Avenue
Portsmouth, New Hampshire 03801**

Prepared By:

**Ambit Engineering, Inc
200 Griffin, Unit 3
Portsmouth, New Hampshire 03801**



Date: October 14, 2022

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INTRODUCTION

The applicant is proposing residential site improvements including installation of porous pavement for the existing and proposed driveway expansion, installation of an underground electric/communication line and replacement of the existing sewer line between the existing home and New Castle Avenue.

The purpose of this report is to present the existing functions and values of the tidal wetlands and to assess any impacts the proposed project may have on their ability to continue to perform these functions and values. The tidal wetlands being impacted were assessed with consideration to their association with the Piscataqua River and the larger marine ecosystem and was not limited to the tidal wetlands immediately on-site.

METHODS

DATA COLLECTION

The tidal wetlands associated with this project area were identified and characterized through field survey and review of existing information. Ambit Engineering, Inc. (Ambit) conducted a site visits in May & October of 2022 to characterize the tidal wetlands and collect the necessary information to complete a functions and values assessment. In addition, Ambit contacted the New Hampshire Natural Heritage Bureau (NHB) regarding existing information of documented rare species or natural communities within the vicinity of the project site.

WETLAND FUNCTIONS AND VALUES ASSESSMENT

Ambit assessed the ability of the tidal wetlands to provide certain functions and values and analyzed the potential affects the proposed project may have on their ability to continue to provide those functions and values. Wetland functions and values were assessed using the *Highway Methodology Workbook, Wetland Functions and Values: A Descriptive Approach*.¹ This method bases function and value determinations on the presence or absence of specific criteria for each of the 13 wetland functions and values (see definitions below). These criteria are assessed through direct field observations and a review of existing resource maps and databases. As part of the evaluation, the most important functions and values associated with the on-site wetlands are identified. In addition, the ecological integrity of the wetlands is evaluated based on the existing levels of disturbance and the overall significance of the wetlands within the local watershed.

- ° **Groundwater Interchange (Recharge/Discharge)**

This function considers the potential for the project area wetlands to serve as groundwater recharge and/or discharge areas. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

- ° **Floodwater Alteration (Storage and Desynchronization)**

This function considers the effectiveness of the wetlands in reducing flood damage by attenuating floodwaters for prolonged periods following precipitation and snow melt events.

- ° **Fish and Shellfish Habitat**

This function considers the effectiveness of seasonally or permanently flooded areas within the subject wetlands for their ability to provide fish and shellfish habitat.

- ° **Sediment/Toxicant Retention**

This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland to function as a trap for sediments, toxicants, or pathogens, and is generally related to factors such as the type of soils, the density of vegetation, and the position in the landscape.

- ° **Nutrient Removal/Retention/Transformation**

This wetland function relates to the effectiveness of the wetland to prevent or reduce the adverse effects of excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

¹ U.S. Army Corps of Engineers. 1999. *The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach*. U.S. Army Corps of Engineers. New England Division. 32pp. NAEPP-360-1-30a.

- **Production Export (Nutrient)**

This function relates to the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

- **Sediment/Shoreline Stabilization**

This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion, primarily through the presence of persistent, well-rooted vegetation.

- **Wildlife Habitat**

This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

- **Recreation (Consumptive and Non-Consumptive)**

This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, and other active or passive recreational activities.

- **Educational/Scientific Value**

This value considers the effectiveness of the wetland as a site for an “outdoor classroom” or as a location for scientific study or research.

- **Uniqueness/Heritage**

This value relates to the effectiveness of the wetland or its associated water bodies to provide certain special values such as archaeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geologic features.

- **Visual Quality/Aesthetics**

This value relates to the visual and aesthetic qualities of the wetland.

- **Endangered Species Habitat**

This value considers the suitability of the wetland to support threatened or endangered species.

FUNCTIONS AND VALUES ASSESSMENT

Results of the wetland functions and values assessment are presented below. This assessment includes a discussion of potential changes to existing wetland functions and values that may occur as a result of the proposed project:

Groundwater Interchange (Recharge/Discharge)

Because there is no identified sand and gravel aquifer underlying the project area, and the wetlands are not underlain by sands or gravel, it is unlikely that significant groundwater recharge is occurring within the tidal wetlands.

Floodwater Alteration (Storage and Desynchronization)

The tidal wetlands associated with the Piscataqua River receive floodwaters from the surrounding watershed and connected waterways; therefore, is considered a principal function considering the large size of the combined waterways.

Fish and Shellfish Habitat

The greater tidal wetland does provide fish and shellfish habitat, is associated with the Piscataqua River; therefore, is considered a principal function.

Sediment/Toxicant Retention

The greater tidal wetland contains dense vegetation and a significant source of sediments or toxicants; therefore, is considered a principal function.

Nutrient Removal/Retention/Transformation

The greater tidal wetland contains dense vegetation and a significant source of sediments or toxicants; therefore, is considered a principal function.

Production Export (Nutrient)

Production export is a wetland function that typically occurs in the form of nutrient or biomass transport via watercourses, foraging by wildlife species, and removal of timber and other natural products. Because the greater tidal wetland provides fish and wildlife habitat, commercial and recreational fisheries opportunities, and nutrients are transferred over several trophic levels in the marine ecosystem, this is considered a principal function.

Sediment/Shoreline Stabilization

Due to the tidal nature and wave action of this wetland; sediment/shoreline stabilization is considered a principal function.

Wildlife Habitat

The greater tidal wetland and the Piscataqua River provide a variety of coastal and marine habitats, therefore would be considered a principal function.

Recreation (Consumptive and Non-Consumptive)

The greater tidal wetland and the Piscataqua River provides a variety of consumptive and non-consumptive recreational opportunities including hunting, fishing and bird watching; therefore, would be considered a principal function.

Education/Scientific Value

The greater tidal wetland and the Piscataqua River are part of a larger marine ecosystem with multiple areas of public access making this a principal value.

Uniqueness/Heritage

The tidal wetland and the Piscataqua River are unique to the seacoast area. Additionally, there are pre and post-colonial historical components associated with the Piscataqua River and the surrounding areas making this a principal value.

Visual Quality/Aesthetics

The Piscataqua River provides aesthetically pleasing coastal views that are viewable from surrounding uplands as well as from the water, making this a principal function.

Endangered Species Habitat

An online inquiry with the NHB resulted in possible rare species in the vicinity of the project site. Ambit Engineering will coordinate with NHB and provide DES with comment once available.

PROPOSED IMPACTS

This report is accompanying a New Hampshire Department of Environmental Services (NHDES) Minimum Impact Wetland Permit Application request 2,450 sq. ft. of permanent impact and 1,085 sq. ft. of temporary construction impact to the previously developed 100' Tidal Buffer Zone for residential site improvements including installation of porous pavement for the existing and proposed driveway expansion, installation of an underground electric/communication line and replacement of the existing sewer line between the existing home and New Castle Avenue.

SUMMARY AND CONCLUSIONS

The jurisdictional tidal wetland is part of a large marine system and provides eleven principal functions and values when evaluated as a whole. These functions and values include: floodflow alteration, fish and shellfish habitat, production export, sediment/shoreline stabilization, wildlife habitat, recreation, education/scientific value, uniqueness/heritage, and visual quality aesthetics. While the entire marine system provides these principal functions and values, the proposed impacts associated with the driveway conversion and expansion will not have any effect on its ability to continue to provide them.

The proposed impacts have been minimized to the greatest extent practicable, while allowing reasonable use of the property. The proposed driveway expansion and conversion to a previous technology will not contribute to additional storm water or pollution. It is anticipated that there will be no effect on any fish or

wildlife species that currently use the site for food, cover, and/or habitat. The proposed site improvements will not impede tidal flow or alter hydrology, it will not deter use by wildlife species that currently use the wetland area. The proposed driveway expansion and conversion to a pervious technology reduces the impervious surface on the lot from 30.9% to 24.4% (911 sq. ft.). The pervious technology also provides a stormwater quality function that will improve water quality that enters the nearby wetland resource.














Based on our assessment of the current functions and values and the proposed site improvements; it is our belief that the proposed project will have no significant impact on the tidal wetlands or greater marine systems ability to continue to provide their functions and values.

APPENDIX A

WETLAND FUNCTION - VALUE EVALUATION FORM

Wetland Function – Value Evaluation Form

Wetland Description: Wetland A is a tidal wetland associated with the Piscataqua River.	File number: 1893.02	
	Wetland identifier: Wetland A	
	Latitude:X:1,230,578.93	Longitude:Y:209,524
	Preparer(s): Ambit Engineering, Inc.	
	200 Griffin Road	
	Date: October 14, 2022	

Function/Value	Capability Y N		Summary	Principal Yes/No
 Groundwater Recharge/Discharge		X	This wetland does not possess the characteristics needed to provide this function as there are no identified underlying sand or gravel aquifers.	—
 Floodwater Alteration	X		The tidal wetland and Piscataqua River do receive floodwater from the surrounding watershed and connected waterways; therefore, this would be considered a principal function.	Y
 Fish and Shellfish Habitat	X		The tidal wetland and Piscataqua River are part of a larger coastal marine system and provide both fish and shellfish habitat. This is considered a Principal Function.	Y
 Sediment/Toxicant Retention	X		The Piscataqua River and greater tidal wetland contains dense vegetation and a source of sediments and toxicants, therefore a principal function.	Y
 Nutrient Removal	X		The Piscataqua River and greater tidal wetland contains dense vegetation and a source of nutrients, therefore a principal function.	Y
 Production Export	X		Because the greater tidal wetland provides fish and wildlife habitat, commercial and recreational fishing opportunities, and nutrients are transferred over several trophic levels in the marine ecosystem, this is considered a principal function.	Y
 Sediment/Shoreline Stabilization	X		Due to the tidal nature and wave action of this wetland; sediment/shoreline stabilization is considered a principal function.	Y
 Wildlife Habitat	X		The greater tidal wetland and the Piscataqua River provides a variety of coastal and marine habitat, therefore would be considered a principal function.	Y
 Recreation	X		The greater tidal wetland provides a variety of consumptive and non-consumptive recreational opportunities including hunting, fishing and bird watching; therefore, would be considered a principal function.	Y
 Education/Scientific Value	X		The greater tidal wetland and Piscataqua River are part of a larger marine ecosystem with multiple areas of public access making this a principal value.	Y
 Uniqueness/Heritage	X		The tidal wetland and Piscataqua River are unique to the seacoast area. Additionally, there are pre and post-colonial historical components associated with the Piscataqua River and the surrounding areas making this a principal value.	Y
 Visual Quality/Aesthetics	X		The Piscataqua River provides aesthetically pleasing coastal views that are seeable from surrounding uplands as well as from the water, making this a principal function.	Y
 ES Endangered Species Habitat	X		An online inquiry with the NH Natural Heritage Bureau resulted in an occurrence of a sensitive species near the project area. Ambit Engineering will coordinate with NHB and NHF & G and will forward comment to NH DES upon receipt.	—
Other				

Notes:

* Attach list of considerations.

APPENDIX B

PHOTO LOG

Site Photograph #1

January 2023



Site Photograph #2

January 2023



Site Photograph #3

January 2023



Site Photograph #4

January 2023



Site Photograph #5

January 2023



Site Photograph #6

January 2023



APPENDIX C

NEW HAMPSHIRE NATURAL HERITAGE BUREAU CORRESPONDENCE

Memo

NH Natural Heritage Bureau NHB DataCheck Results Letter

Please note: portions of this document are confidential.

Maps and NHB record pages are confidential and should be redacted from public documents.

To: John Chagnon, Ambit Engineering, Inc.
200 Griffin Road
Unit 3
Portsmouth, NH 03801

From: NHB Review, NH Natural Heritage Bureau

Date: 8/30/2022 (valid until 08/30/2023)

Re: Review by NH Natural Heritage Bureau

Permits: NHDES - Wetland Standard Dredge & Fill - Major, USACE - General Permit

NHB ID: NHB22-2537

Town: Portsmouth

Location: 393 New Castle Avenue

Description: The project proposes an extension of the existing tidal docking structure.

cc: NHFG Review

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments NHB: Please indicate if work will be completed by a barge and/or if any shoreland areas will be used for construction access and/or staging.
F&G: Please indicate proposed project timing. Please refer to NHFG consultation requirements below.

Plant species	State ¹	Federal	Notes
marsh elder (<i>Iva frutescens</i>)	T	--	Threats are primarily alterations to the hydrology of the wetland, such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat, activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.
Vertebrate species	State ¹	Federal	Notes
Atlantic Sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>)	T	T	Contact the NH Fish & Game Dept and the US Fish & Wildlife Service (see below).
Shortnose Sturgeon (<i>Acipenser brevirostrum</i>)	E	E	Contact the NH Fish & Game Dept and the US Fish & Wildlife Service (see below).

¹Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet

Memo

NH Natural Heritage Bureau NHB DataCheck Results Letter

Please note: portions of this document are confidential.

Maps and NHB record pages are confidential and should be redacted from public documents.

been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section below.

Disclaimer: 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.

IMPORTANT: NHFG Consultation

If this NHB Datacheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB Datacheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to <https://wildlife.state.nh.us/wildlife/environmental-review.html>. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and **must include the NHB Datacheck results letter number and “Fis 1004 consultation request” in the subject line.**

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email: Kim Tuttle kim.tuttle@wildlife.nh.gov with a copy to NHFGreview@wildlife.nh.gov, and include the NHB Datacheck results letter number and “review request” in the email subject line.

Contact NH Fish & Game at (603) 271-0467 with questions.

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB22-2537



New Hampshire Natural Heritage Bureau - Plant Record

marsh elder (*Iva frutescens*)**Legal Status**

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Excellent quality, condition and landscape context ('A' on a scale of A-D).
Comments on Rank: This rank may be for the state rather than relative to others in the region.

Detailed Description: 2021: Lady Isle: Plants intermittently distributed along the westernmost portion of the island. 2020: Tidal Pool: Species observed in flower. 2017: Leachs Island: Several thousand plants spread along 800+ feet of shoreline. 10-20% dieback, 10-15% yellowing, 65-80% normal to vigorous. Aphids observed on 80% of clumps. 2016: Peirce Island: Additional subpopulations located, raising total number of plants to over 600. Plants appear to be in much better health than 2014, with all individuals in fruit and in good vigor. Shaws Hill: Several clumps over an area approximately 30 x 15 feet. Estimated at over 200 individuals. Tidal Pool: Plants in 3 areas along shoreline near tidal pool. 2014 Peirce Island: Over 500 plants were observed, all stunted, with approximately 50-60% dead stems, mostly confined to the upper portions of the plants. 1996: Constant observation since 1953 reported, including all stages of phenology and age structure. 1982: Good clump observed.

General Area: 2017: Leachs Island: Upper edge of brackish marsh/rocky shore. Plants absent from areas with broader expanse of marsh. Rocks present in most areas where the plants are growing. Associated species include black oak (*Quercus velutina*), saltmarsh rush (*Juncus gerardii*), sea-blite (*Suaeda* sp.), hastate-leaved orache (*Atriplex* cf. *prostrata*), smooth cordgrass (*Spartina alterniflora*), Carolina sea-lavender (*Limonium carolinianum*), and seaside plantain (*Plantago maritima* ssp. *juncoides*). 2016: Peirce Island: Population forms a narrow band immediately above the highest observed wrack line along the shore. Associated upland species include staghorn sumac (*Rhus hirta*), autumn-olive (*Elaeagnus umbellata* var. *parvifolia*), Asian bittersweet (*Celastrus orbiculatus*), and speckled alder (*Alnus incana* ssp. *rugosa*). The saline areas downslope of the marsh elder contained over 50% unvegetated substrate, as well as a mixture of cordgrass (*Spartina* sp.) and saltgrass (*Distichlis spicata*). Shaws Hill: Surrounding land use is developed. All plants below highest observable tide line in **high salt marsh**, located among saltmeadow cordgrass (*Spartina patens*), smooth cordgrass (*Spartina alterniflora*), and seaside goldenrod (*Solidago sempervirens*). Tidal Pool: Sagamore Creek/Great Bay shoreline, with smooth cordgrass (*Spartina alterniflora*), saltmarsh rush (*Juncus gerardii*), saltmeadow cordgrass (*Spartina patens*), seaside goldenrod (*Solidago sempervirens*), and sea-blite (*Suaeda* spp.). 1996: On shores of several islands and peninsulas in the more or less enclosed bay system. Associated plant species: *Solidago sempervirens* (seaside goldenrod), *Juncus gerardii* (salt marsh rush), *Spartina patens* (saltmeadow cord-grass), *Triglochin maritimum* (arrow-grass), *Elymus virginicus* (Virginia wild rye), *Atriplex patula* (narrow-leaved orach), and *Artemisia vulgaris* (common mugwort). Substrate: gravel and marsh peat and muck. 1982: On shore at Pleasant Point.

General Comments: 2021: Lady Isle: Site is referred to Belle Isle on reporting form, and appears as Belle Island on some maps, but is called Lady Isle on USGS topo. 2016: Peirce Island: "The population currently appears to be in good health, although the results of the June 2014 surveys indicated that there may be some intermittent pressure on this population. The propensity of this species to grow in a very narrow band along the tide line does not allow for rapid adaptation to changing sea levels, storm events, or polluted runoff that a larger, robust population may resist. If sea levels gradually rise as expected, the marsh elder will be unable to move inland due to a small but steep cut bank that forms the upland break adjacent to the marsh elder population. The remaining subpopulations may also be getting shaded by the adjacent upland vegetation, which appears to be encroaching on the shoreline. This vegetation is comprised of large shrub species and the invasive Oriental bittersweet that is capable of overtaking the native plants in the area."

Management --
Comments:

Location

Survey Site Name: Little Harbor, back channel
Managed By: Little Harbor Trust

County: Rockingham
Town(s): Portsmouth
Size: 61.4 acres Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2021: Lady Isle: Shoreline along western end of Lady Isle. 2017: Leachs Island: Island in New Castle only accessible by boat. Plants observed on south shore of island. 2016: Peirce Island: Along the southern shore of Peirce Island, along the edge of a small cove west of the wastewater treatment facility. Shaws Hill: Take Laurel Lane off New Castle Avenue, bear left onto driveway right-of-way servicing 51A and 51B Laurel Lane. At end of right-of-way, 51B will be located on the right. Tidal Pool: Along Sagamore Creek shoreline on Creek Farm Reservation property in Portsmouth. In the vicinity of Rte. 1B which encircles the Little Harbor back channel from Portsmouth to New Castle and Rye. Many of the sites are visible only by boat.

Dates documented

First reported: 1953 Last reported: 2021-02-10

New Hampshire Natural Heritage Bureau - Animal Record

Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*)**Legal Status**

Federal: Listed Threatened
State: Listed Threatened

Conservation Status

Global: Rare or uncommon
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2016: 1 individual, sex unknown, detected in the lower Piscataqua River. 2015: 1 individual, sex unknown, detected in Portsmouth Harbor. 2012: 1 individual, sex unknown, detected in Little Bay.

General Area: 2016: Tidal waters in Portsmouth Harbor, Little Bay, and the Piscataqua River.

General Comments: --

Management: --

Comments:

Location

Survey Site Name: Piscataqua River
Managed By:

County:

Town(s): Out-Of-State

Size: 7749.3 acres

Elevation:

Precision: Within 1.5 miles of the area indicated on the map (location information is vague or uncertain).

Directions: 2016: Tidal waters of Portsmouth Harbor, Little Bay, and the Piscataqua River.

Dates documented

First reported: 2012-06-02

Last reported: 2016-05-27

The U.S. Fish & Wildlife Service has jurisdiction over Federally listed species. Please contact them at 70 Commercial Street, Suite 300, Concord NH 03301 or at (603) 223-2541.

New Hampshire Natural Heritage Bureau - Animal Record

Shortnose Sturgeon (*Acipenser brevirostrum*)**Legal Status**

Federal: Listed Endangered
State: Listed Endangered

Conservation Status

Global: Rare or uncommon
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2016: 2 individuals, 1 female and 1 sex unknown, detected in Portsmouth Harbor and the lower Piscataqua River. 2015: 3 females and 2 other individuals, sex unknown detected in Portsmouth Harbor. 2014: 1 female detected moving from Portsmouth Harbor up the Piscataqua River to the mouth of the Cocheco River. 2012: 1 female detected in Little Bay. 2011: 1 female detected in Little Bay. 2010: 1 female detected in Little Bay. 2016: Tidal waters in Portsmouth Harbor, Little Bay, and the Piscataqua River.

General Area: 2016: Tidal waters in Portsmouth Harbor, Little Bay, and the Piscataqua River.
General Comments: --
Management: --
Comments:

Location

Survey Site Name: Piscataqua River
Managed By:

County:
Town(s): Out-Of-State
Size: 7749.3 acres Elevation:

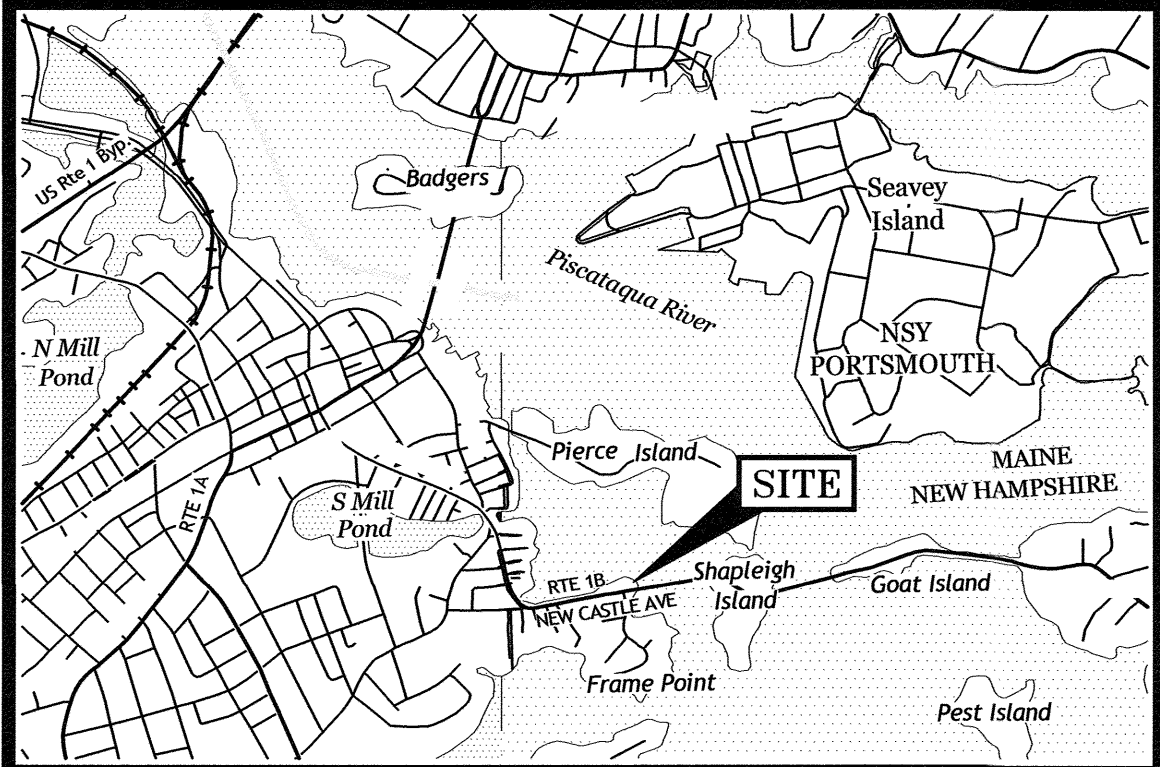
Precision: Within 1.5 miles of the area indicated on the map (location information is vague or uncertain).

Directions: 2016: Tidal waters of Portsmouth Harbor, Little Bay, and the Piscataqua River.

Dates documented

First reported: 2010-11-03 Last reported: 2016-10-20

The U.S. Fish & Wildlife Service has jurisdiction over Federally listed species. Please contact them at 70 Commercial Street, Suite 300, Concord NH 03301 or at (603) 223-2541.



LOCATION MAP

SCALE: 1" = 2000'

LEGEND:

N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
RCD	ROCKINGHAM COUNTY
	REGISTRY OF DEEDS
11/21	MAP 11 / LOT 21
---	BOUNDARY
---	SETBACK
O	IRON ROD/PIPE FOUND
S	SEWER LINE
G	GAS LINE
D	STORM DRAIN
W	WATER LINE
•••	OVERHEAD ELECTRIC/WIRES
100	CONTOUR
---	EDGE OF PAVEMENT (EP)
WB	50' WATERFRONT BUFFER ZONE LINE
TBZ	100' TIDAL BUFFER ZONE LINE
FHZ	FLOOD HAZARD ZONE LINE
Ø	UTILITY POLE (w/ GUY)
W	WATER SHUT OFF/CURB STOP
GV	GAS GATE VALVE
E	METER (GAS, WATER, ELECTRIC)
CB	CATCH BASIN
SM	SEWER MANHOLE
EL	ELEVATION
FF	FINISHED FLOOR
TBM	TEMPORARY BENCHMARK
TYP.	TYPICAL
VGC	VERTICAL GRANITE CURB
LSA	LANDSCAPED AREA

TEST PIT #1

Date: 10/14/22
Logged by: STEVEN D. RIKER
Witnessed by:
ESHW: 32"
Observed Water: NONE
Restrictive layer: NONE
REFUSAL: NONE TO 64"
Percolation rate: 10 min./inch
Roots: NONE

DEPTH	DESCRIPTION
0" - 5"	10 YR 3/1 FINE SANDY LOAM, GRANULAR, FRIABLE
5" - 11"	10 YR 4/2 FINE SANDY LOAM, GRANULAR, FRIABLE
11" - 32"	10 YR 5/3 GRAVELLY FINE SANDY LOAM, GRANULAR, FRIABLE
32" - 64"	2.5 Y 5/2 GRAVELLY FINE SANDY LOAM, GRANULAR, FRIABLE

PLAN REFERENCES:

- 1) EXISTING CONDITIONS SITE PLAN 393 NEW CASTLE AVENUE, LLC PORTSMOUTH, N.H. PREPARED BY AMBIT ENGINEERING, INC. DATED JULY 2014.
- 2) PROPERTY STAKEOUT SKETCH FOR KENNETH J. & ALIDA E. ROTHWELL PROPERTY LOCATED AT 393 NEW CASTLE AVENUE CITY OF PORTSMOUTH COUNTY OF ROCKINGHAM STATE OF NEW HAMPSHIRE PREPARED BY AMBIT ENGINEERING, INC. DATED AUGUST 9, 2010.
- 3) STANDARD BOUNDARY SURVEY MAP 207 - LOT 4 (FORMERLY MAP R7 - LOT 4) FOR JERRY KERNEA 379 NEW CASTLE AVENUE PORTSMOUTH, N.H. COUNTY OF ROCKINGHAM. PREPARED BY AMBIT ENGINEERING, INC. DATED JUNE 2000.

LENGTH TABLE

LINE	BEARING	DISTANCE
L1	N10°30'08"W	2.26'

TIE-LENGTH TABLE

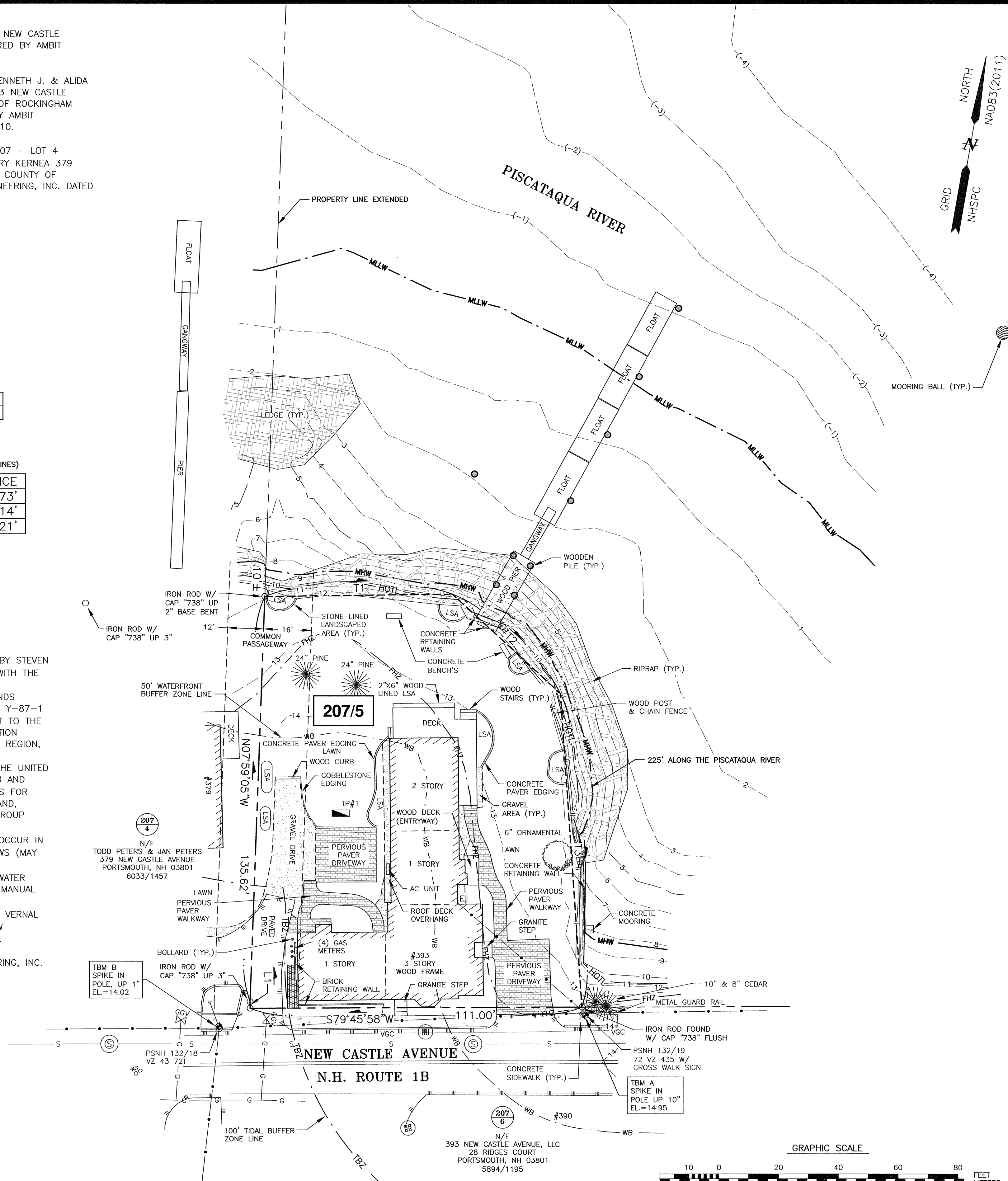
(TIE LINES FOR CLOSURE PURPOSE ONLY-NOT BOUNDARY LINES)

LINE	BEARING	DISTANCE
T1	N79°14'49"E	62.73'
T2	S57°29'00"E	49.14'
T3	S13°58'54"E	105.21'

WETLAND NOTES:

- 1) HIGHEST OBSERVABLE TIDE LINE DELINEATED BY STEVEN D. RIKER, CWS ON 5/25/2022 IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
 - A) U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JAN. 1987). AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012.
 - B) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.2, USDA-NRCS, 2018 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4. NEIWPCC WETLANDS WORK GROUP (2019).
 - C) NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1). USFWS (MAY 1988).
 - D) CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. USFW MANUAL FWS/OBS-79/31 (1997).
 - E) "IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE" (1997). NEW HAMPSHIRE FISH AND GAME DEPARTMENT.

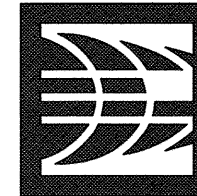
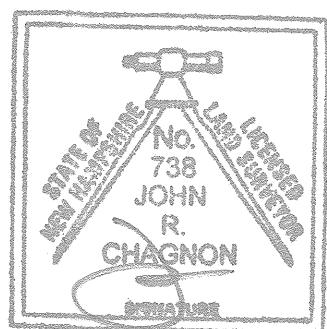
- 2) LINE WAS FIELD LOCATED BY AMBIT ENGINEERING, INC.



"I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN ACCURACY OF THE CLOSED TRAVERSE THAT EXCEEDS THE PRECISION OF 1:15,000."

JOHN R. CHAGNON, LLS #738

DATE



AMBIT ENGINEERING, INC.

Civil Engineers & Land Surveyors

200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

- 1) PARCEL IS SHOWN ON THE CITY PORTSMOUTH ASSESSOR'S MAP 207 AS LOT 5.
- 2) OWNERS OF RECORD:
DAVID A. SINCLAIR &
NICOLE J. GIUSTO
765 MIDDLE STREET
PORTSMOUTH, NH 03801
6052/2161
- 3) PARCEL IS PARTIALLY IN A SPECIAL FLOOD HAZARD AREA (AE EL.8 NAVD88) AS SHOWN ON FIRM PANEL 33015C0278F. DATED 1/29/2021.
- 4) EXISTING LOT AREA:
14,919 S.F. ± TO MHW
0.3425 ACRES ± TO MHW
- 5) PARCEL IS LOCATED IN THE SINGLE RESIDENCE B (SRB) ZONING DISTRICT AND THE HISTORIC OVERLAY DISTRICT.
- 6) DIMENSIONAL REQUIREMENTS:
MIN. LOT AREA: 15,000 S.F.
FRONTAGE: 100 FEET
SETBACKS:
FRONT: 30 FEET
SIDE: 10 FEET
REAR: 30 FEET
MAXIMUM STRUCTURE HEIGHT: 35 FEET
MAXIMUM BUILDING COVERAGE: 20%
MINIMUM OPEN SPACE: 40%
- 7) THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON ASSESSOR'S MAP 207 LOT 5 IN THE CITY OF PORTSMOUTH.
- 8) VERTICAL DATUM IS MEAN LOWER LOW WATER (MLLW). MLLW REFERENCED ON NOAA STATION 8419870 SEAVEY ISLAND, PORTSMOUTH HARBOR, MLLW BEING 4.62 FEET LOWER THAN 0.0 NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GNSS OBSERVATIONS.

SITE IMPROVEMENTS 393 NEW CASTLE AVENUE PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
1	ISSUED FOR APPROVAL	1/3/23
0	ISSUED FOR COMMENT	8/18/22

REVISIONS

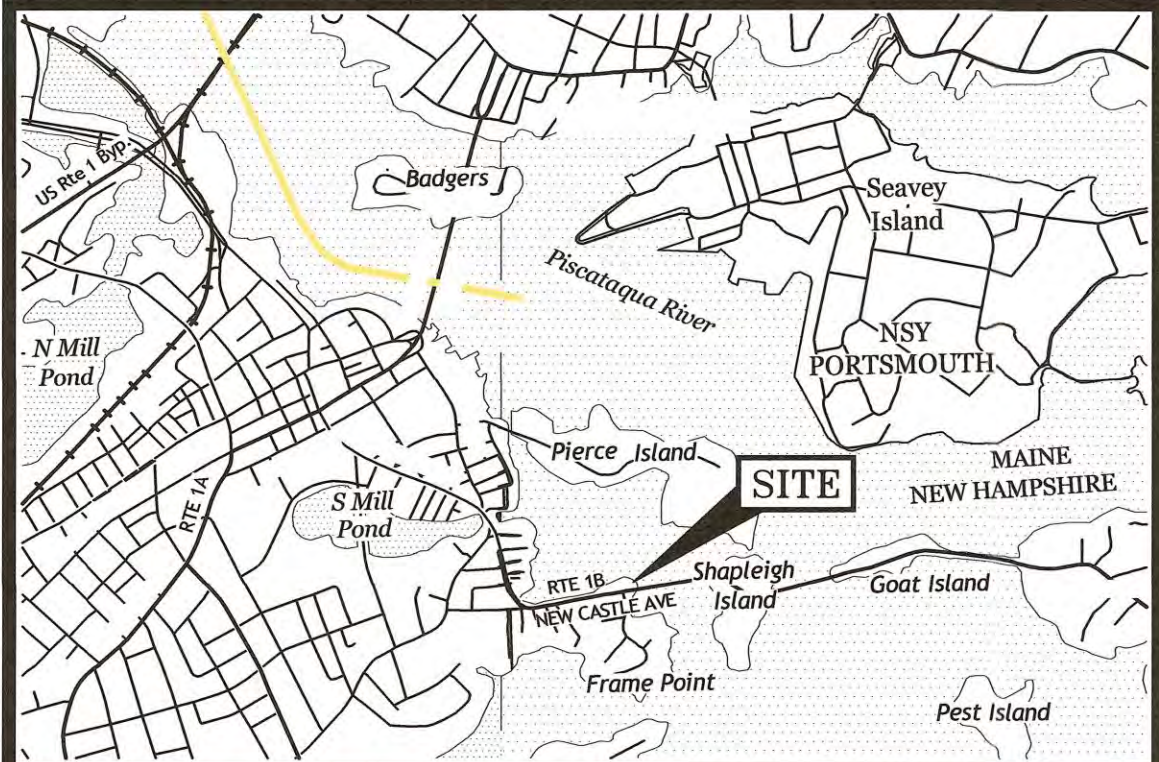


SCALE: 1" = 20'

AUGUST 2022

EXISTING CONDITIONS PLAN

C1



LOCATION MAP

SCALE: 1" = 2000'

LEGEND:

N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
RCRD	ROCKINGHAM COUNTY
	REGISTRY OF DEEDS
11/21	MAP 11 / LOT 21
---	BOUNDARY
---	SETBACK
○	IRON ROD/PIPE FOUND
S	SEWER LINE
G	GAS LINE
D	STORM DRAIN
W	WATER LINE
---	OVERHEAD ELECTRIC/WIRES
100	CONTOUR
---	EDGE OF PAVEMENT (EP)
WB	50' WATERFRONT BUFFER ZONE LINE
TBZ	100' TIDAL BUFFER ZONE LINE
FHZ	FLOOD HAZARD ZONE LINE
○	UTILITY POLE (w/ GUY)
○	WATER SHUT OFF/CURB STOP
○	GAS GATE VALVE
○	METER (GAS, WATER, ELECTRIC)
○	CATCH BASIN
○	SEWER MANHOLE
EL.	ELEVATION
FF	FINISHED FLOOR
TBM	TEMPORARY BENCHMARK
TYP.	TYPICAL
VGC	VERTICAL GRANITE CURB
LSA	LANDSCAPED AREA

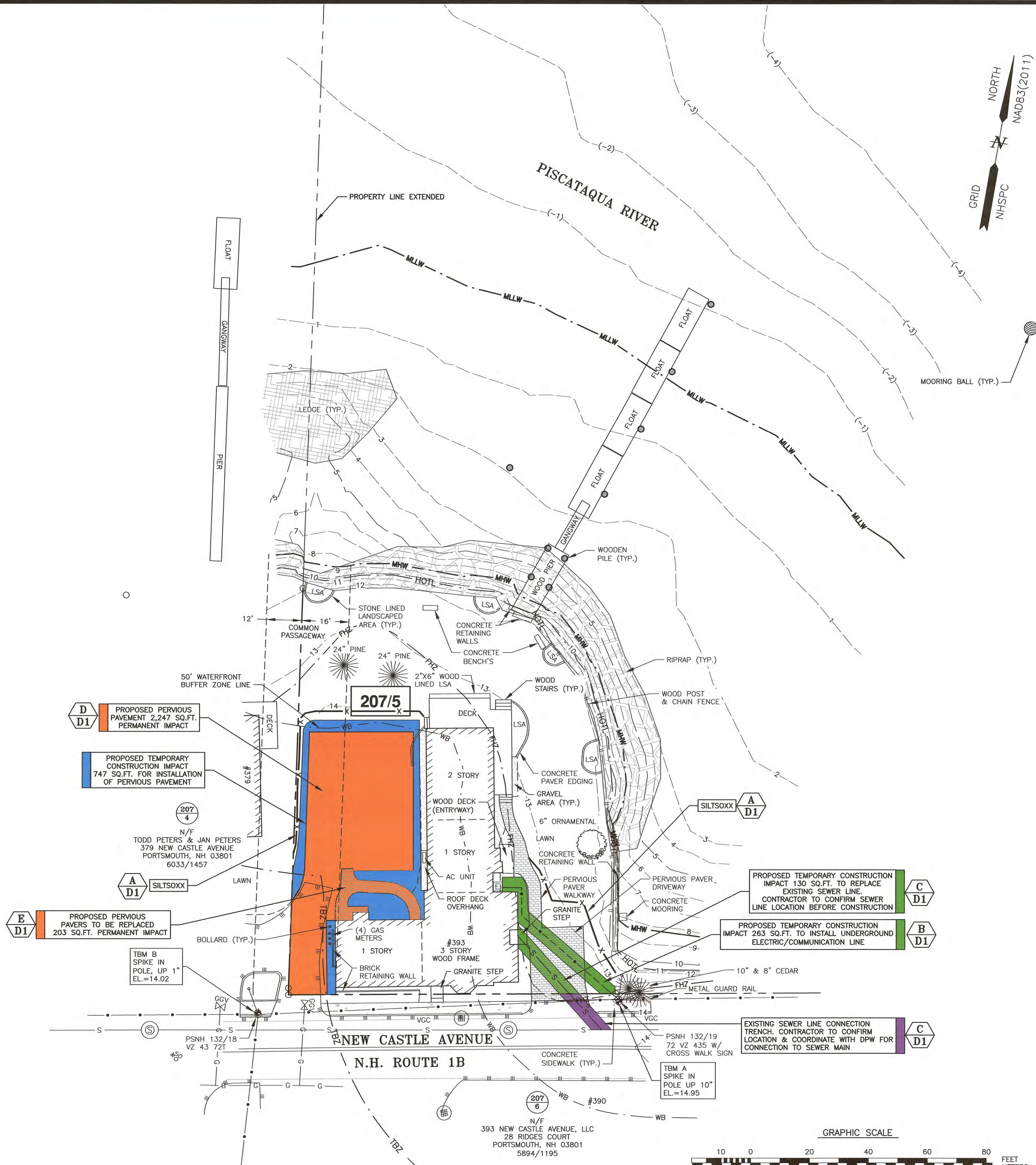
IMPERVIOUS SURFACE AREAS
(TO PROPERTY LINE & MHW)

STRUCTURE	PRE-CONSTRUCTION IMPERVIOUS (S.F.)	POST-CONSTRUCTION IMPERVIOUS (S.F.)
MAIN STRUCTURE	2,994	2,994
DECKS/PORCHES	463	463
STAIRS/LANDINGS	120	75
PAVED DRIVEWAY	406	0
GRAVEL DRIVEWAY	520	0
RETAINING WALLS/CONCRETE	104	104
TOTAL	4,607	3,636
LOT SIZE	14,919	14,919
% LOT COVERAGE	30.9%	24.4%

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JOHN R. CHAGNON, LLS #738

DATE



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REAR: 30 FEET
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MAXIMUM BUILDING COVERAGE: 20%
MINIMUM OPEN SPACE: 40%
- 7) THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED SITE IMPROVEMENTS ON ASSESSOR'S MAP 207 LOT 5 IN THE CITY OF PORTSMOUTH.
- 8) VERTICAL DATUM IS MEAN LOWER LOW WATER (MLLW). MLLW REFERENCED ON NOAA STATION 8419870 SEAVEY ISLAND, PORTSMOUTH HARBOR, MLLW BEING 4.62 FEET LOWER THAN 0.0 NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GNSS OBSERVATIONS.

SITE IMPROVEMENTS
393 NEW CASTLE AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
1	ISSUED FOR APPROVAL	1/3/23
0	ISSUED FOR COMMENT	12/8/22



SCALE: 1" = 20' NOVEMBER 2022

NH DES PERMIT
PLAN

C2

EROSION CONTROL NOTES

CONSTRUCTION SEQUENCE

DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.

INSTALL SILTSOXX TO CONTROL EROSION AND SEDIMENTATION PRIOR TO ANY EARTH MOVING ACTIVITIES.

CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.

CUT AND REMOVE ALL TREES, SHRUBS, SAPLINGS, BRUSH, VINES AND OTHER DEBRIS AND RUBBISH AS REQUIRED.

BEST MANAGEMENT PRACTICES FOR ROADSIDE REMOVAL AND DISPOSAL OF INVASIVE PLANTS WILL BE PERFORMED ON POPULATIONS THAT EXIST WITHIN THE CONSTRUCTION AREA TO PREVENT FUTURE PROPAGATION ON-SITE, AS WELL AS THE SPREAD OF INVASIVE PLANT SEEDS OR VIABLE PLANT MATERIAL DURING TRANSPORTATION OFF SITE, OR AT FINAL PLACE OF DISPOSAL.

STRIP AND STOCKPILE LOAM FROM SITE. STOCKPILES SHALL BE SURROUNDED WITH SILT FENCE TO CONTROL SEDIMENT RUN OFF.

PERFORM SITE DEMOLITION.

CONSTRUCT SITE IMPROVEMENTS.

LOAM AND SEED DISTURBED AREAS IN ACCORDANCE WITH VEGETATIVE PRACTICE AND GENERAL CONSTRUCTION NOTES. CUT AND FILL SLOPES SHALL BE SEEDED IMMEDIATELY AFTER THEIR CONSTRUCTION.

PLANT LANDSCAPING AS NEEDED.

REMOVE TRAPPED SEDIMENTS FROM COLLECTION DEVICES AS APPROPRIATE, AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

GENERAL CONSTRUCTION NOTES

THE EROSION CONTROL PROCEDURES SHALL CONFORM TO SECTION 645 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION" OF THE NHDOT, AND "STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE".

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT.

ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.

DUST CONTROL: IF TEMPORARY STABILIZATION PRACTICES, SUCH AS TEMPORARY VEGETATION AND MULCHING, DO NOT ADEQUATELY REDUCE DUST GENERATION, APPLICATION OF WATER OR CALCIUM CHLORIDE SHALL BE APPLIED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.

SILT FENCES SHALL BE PERIODICALLY INSPECTED DURING THE LIFE OF THE PROJECT AND AFTER EACH STORM. ALL DAMAGED SILT FENCES SHALL BE REPAIRED. SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED IN A SECURED LOCATION.

AVOID THE USE OF FUTURE OPEN SPACES (LOAM AND SEED AREAS) WHEREVER POSSIBLE DURING CONSTRUCTION. CONSTRUCTION TRAFFIC SHALL USE THE ROADBEDS OF THE DRIVEWAY.

TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNTS NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS. CONSTRUCT SILT FENCE AROUND TOPSOIL STOCKPILE.

AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL. STUMPS SHALL BE DISPOSED BY GRINDING OR FILL IN AN APPROVED FACILITY.

ALL FILLS SHALL BE PLACED AND COMPACTED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS.

ALL FILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8 INCHES IN THICKNESS UNLESS OTHERWISE NOTED.

FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIAL SHALL NOT BE INCORPORATED INTO FILLS.

FILL MATERIAL SHALL NOT BE PLACED ON FROZEN FOUNDATION SUBGRADE.

DISTURBED AREAS SHALL BE SEEDED WITHIN 72 HOURS FOLLOWING FINISHED GRADING.

AT NO TIME SHALL ANY DISTURBED AREA REMAIN UNSTABILIZED FOR LONGER THAN 72 HOURS. ALL AREAS WHERE CONSTRUCTION IS NOT COMPLETE WITHIN THIRTY DAYS OF THE INITIAL DISTURBANCE SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.

VEGETATIVE PRACTICE

FOR PERMANENT MEASURES AND PLANTINGS:

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

FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 500 POUNDS PER ACRE OF 10-20-20 FERTILIZER.

SEED SHALL BE SOWN AT THE RATES SHOWN IN THE TABLE BELOW. 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 AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AT A RATE OF 1.5 TO 2 TONS PER ACRE, AND SHALL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE EROSION AND SEDIMENT CONTROL HANDBOOK.

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 SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED.

A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE:

GENERAL COVER	PROPORTION	SEEDING RATE
CREEPING RED FESCUE	50%	100 LBS/ACRE
KENTUCKY BLUEGRASS	50%	
SLOPE SEED (USED ON ALL SLOPES GREATER THAN OR EQUAL TO 3:1)		
CREEPING RED FESCUE	42%	
TALL FESCUE	42%	48 LBS/ACRE
BIRDSFOOT TREFOIL	16%	

IN NO CASE SHALL THE WEED CONTENT EXCEED ONE PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH APPLICABLE STATE AND FEDERAL SEED LAWS.

FOR TEMPORARY PROTECTION OF DISTURBED AREAS: MULCHING AND SEEDING SHALL BE APPLIED AT THE FOLLOWING RATES:
PERENNIAL RYE: 0.7 LBS/1,000 S.F.
MULCH: 1.5 TONS/ACRE

MAINTENANCE AND PROTECTION

THE CONTRACTOR SHALL MAINTAIN ALL LOAM & SEED AREAS UNTIL FINAL ACCEPTANCE AT THE COMPLETION OF THE CONTRACT. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, REMOVAL OF STONES AND OTHER FOREIGN OBJECTS OVER 1/2 INCHES IN DIAMETER WHICH MAY APPEAR AND THE FIRST TWO (2) CUTTINGS OF GRASS NO CLOSER THEN TEN (10) DAYS APART. THE FIRST CUTTING SHALL BE ACCOMPLISHED WHEN THE GRASS IS FROM 2 1/2 TO 3 INCHES HIGH. ALL BARE AND DEAD SPOTS WHICH BECOME APPARENT SHALL BE PROPERLY PREPARED, LIMED AND FERTILIZED, AND RESEEDED BY THE CONTRACTOR AT HIS EXPENSE AS MANY TIMES AS NECESSARY TO SECURE GOOD GROWTH. THE ENTIRE AREA SHALL BE MAINTAINED, WATERED AND CUT UNTIL ACCEPTANCE OF THE LAWN BY THE OWNER'S REPRESENTATIVE.

THE CONTRACTOR SHALL TAKE WHATEVER MEASURES ARE NECESSARY TO PROTECT THE GRASS WHILE IT IS DEVELOPING.

TO BE ACCEPTABLE, SEEDED AREAS SHALL CONSIST OF A UNIFORM STAND OF AT LEAST 90 PERCENT ESTABLISHED PERMANENT GRASS SPECIES, WITH UNIFORM COUNT OF AT LEAST 100 PLANTS PER SQUARE FOOT.

SEEDED AREAS WILL BE FERTILIZED AND RESEEDED AS NECESSARY TO INSURE VEGETATIVE ESTABLISHMENT.

THE SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY UNTIL ADEQUATE VEGETATION IS ESTABLISHED.

THE SILT FENCE BARRIER SHALL BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.

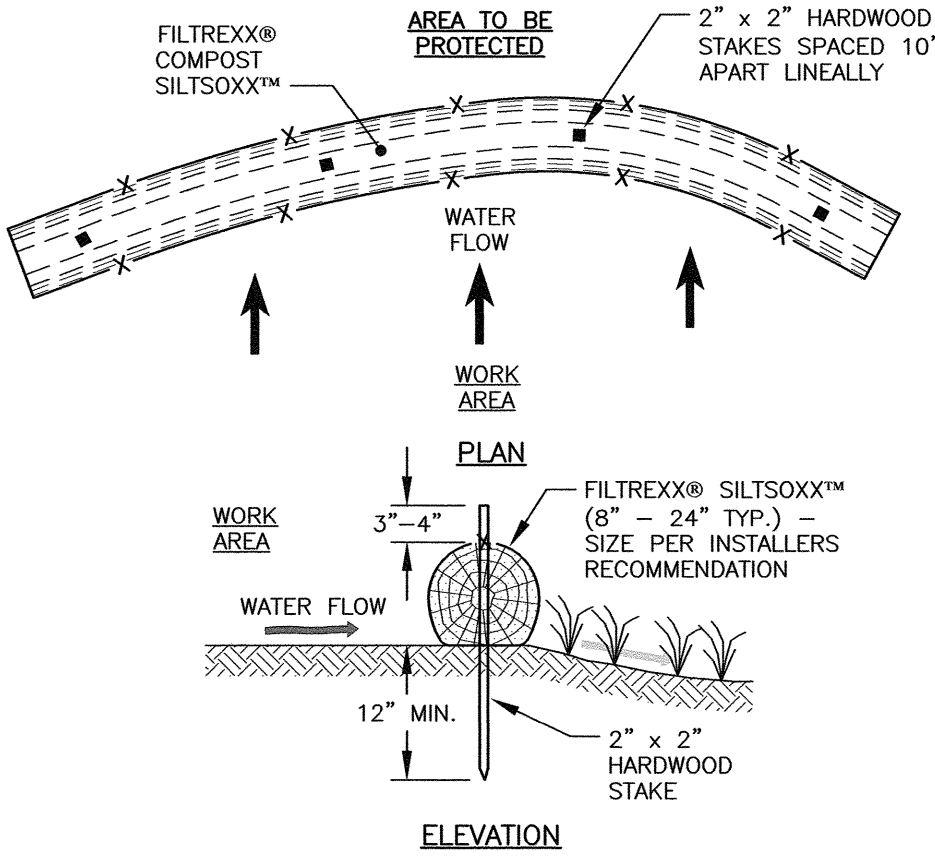
SILT FENCING SHALL BE REMOVED ONCE VEGETATION IS ESTABLISHED, AND DISTURBED AREAS RESULTING FROM SILT FENCE REMOVAL SHALL BE PERMANENTLY SEEDED.

WINTER NOTES

ALL PROPOSED VEGETATED 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 INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.

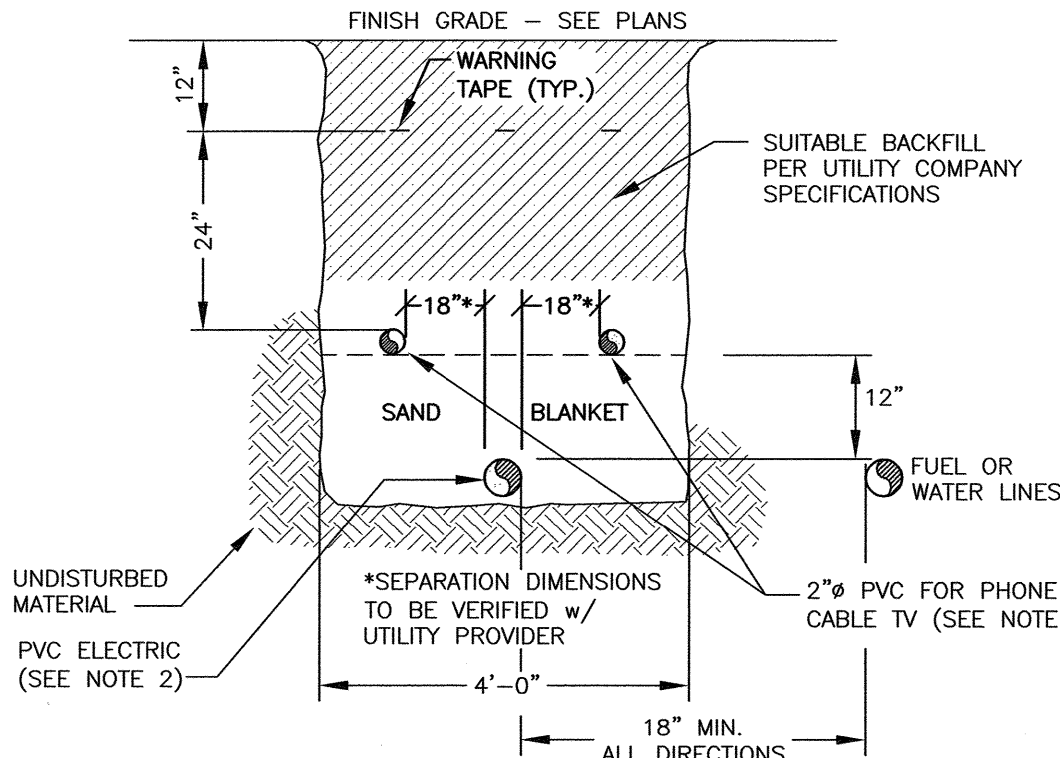
ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.



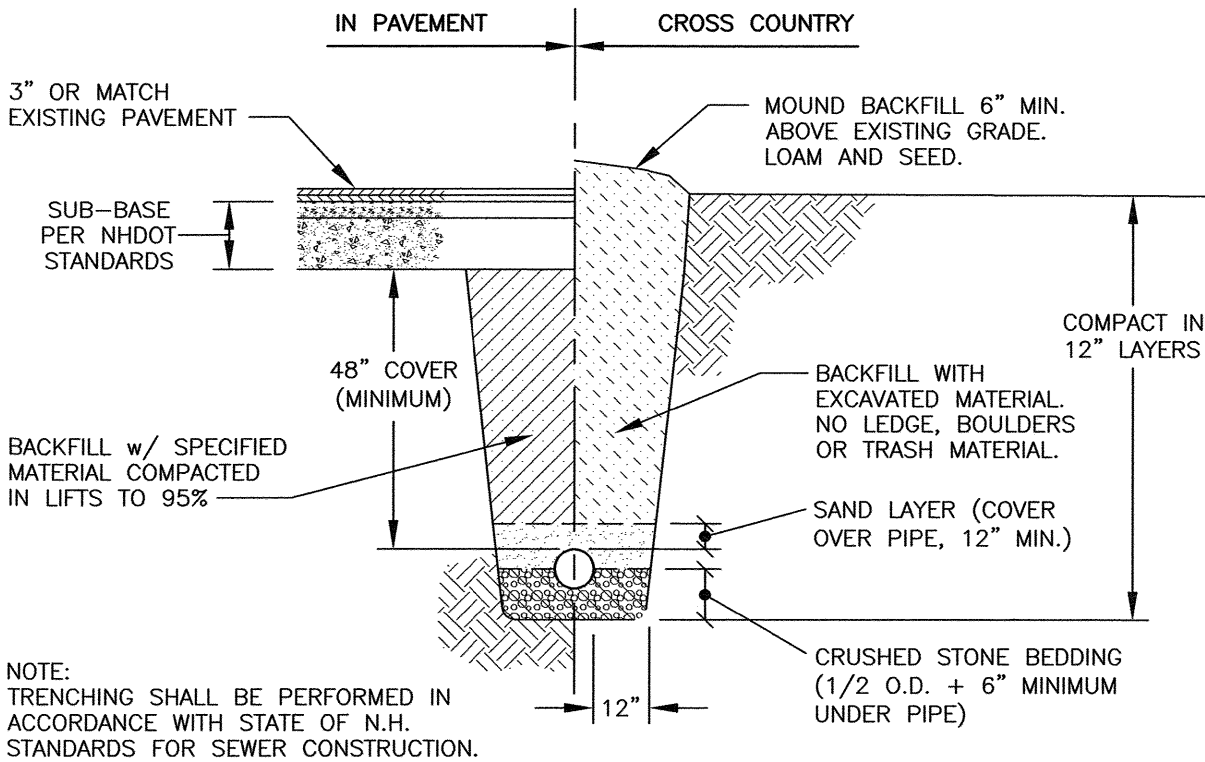
- NOTES:
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
 2. FILTREXX SYSTEM SHALL BE INSTALLED BY A CERTIFIED FILTREXX INSTALLER.
 3. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTRATION SYSTEM IN A FUNCTIONAL CONDITION AT ALL TIMES. IT WILL BE ROUTINELY INSPECTED AND REPAIRED WHEN REQUIRED.
 4. SILTSOXX DEPICTED IS FOR MINIMUM SLOPES, GREATER SLOPES MAY REQUIRE ADDITIONAL PLACEMENTS.
 5. THE COMPOST FILTER MATERIAL WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE ENGINEER.

A FILTREXX® SILTSOXX™ FILTRATION SYSTEM NTS



- NOTES:
- 1) ALL CONDUIT TO BE U.L. LISTED, SCHEDULE 80 UNDER ALL TRAVEL WAYS, & SCHEDULE 40 FOR THE REMAINDER.
 - 2) NORMAL CONDUIT SIZES FOR PSNH ARE 3 INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4 INCH FOR THREE PHASE SECONDARY, AND 5 INCH FOR THREE PHASE PRIMARY.
 - 3) ALL WORK TO CONFORM TO THE NATIONAL ELECTRICAL CODE (LATEST REVISION)
 - 4) INSTALL A 200# PULL ROPE FOR EACH CONDUIT
 - 5) VERIFY ALL CONDUIT SPECIFICATIONS WITH UTILITY COMPANY'S PRIOR TO ANY CONSTRUCTION.

B BURIED ELEC/COMM CABLE NTS



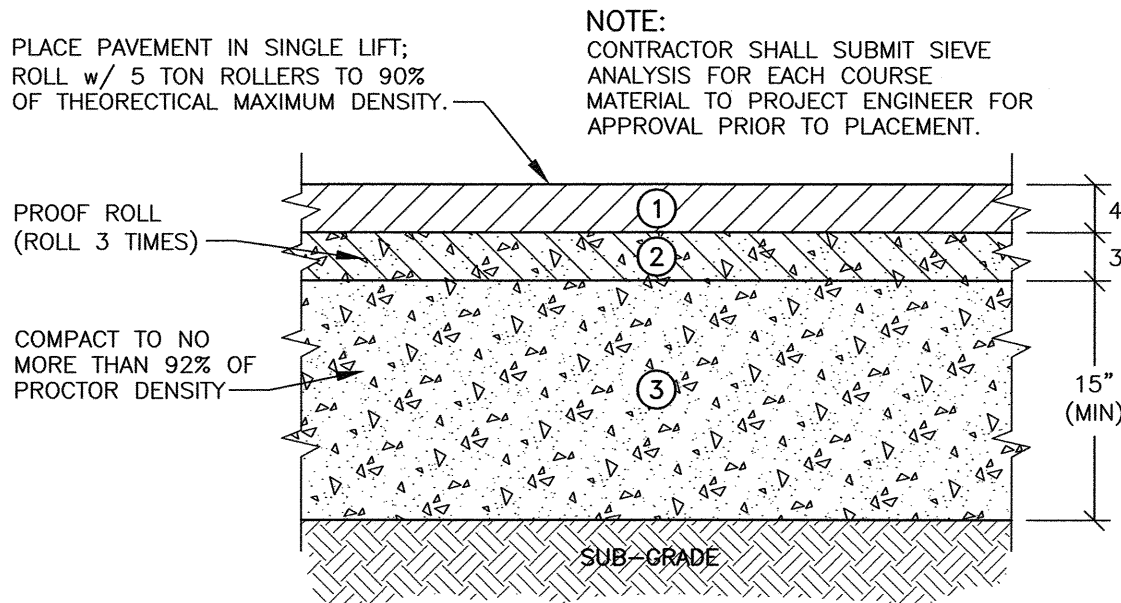
C TRENCH DETAIL FOR SEWER CONNECTION NTS

POROUS PAVEMENT SPECIFICATIONS

①		②		③	
POROUS PAVEMENT w/ THE FOLLOWING GRADATIONS*		CHOKER/RESERVOIR COURSE w/ THE FOLLOWING GRADATIONS**		FILTER COURSE (Item 304.3, Processed Gravel)	
SIEVE SIZE	PASSING BY WEIGHT (%)	SIEVE SIZE	PASSING BY WEIGHT (%)	SIEVE SIZE	PASSING BY WEIGHT (%)
3/4" (19mm)	100	1" (25mm)	100	3" (75mm)	100
1/2" (12.5mm)	85-100	3/4" (19mm)	45-55	2.0" (63mm)	95-100
3/8" (9.5mm)	55-75	1/2" (12.5mm)	40-50	1" (25mm)	55-85
No. 4 (4.75mm)	10-25	3/8" (9.5mm)	35-45	No. 4 (4.75mm)	27-52
No. 8 (2.36mm)	5-10	No. 4 (4.75mm)	---	---	---
No. 200 (0.075mm)	2-4	No. 8 (2.36mm)	0-5	No. 200 (0.075 mm)	0-12 (in sand portion)

* WITH 6% PERFORMANCE GRADED ASPHALT BINDER CONTENT BY VOLUME. AIR VOIDS TO BE 20%

** CRUSHED QUARRY STONE SHALL CONTAIN AT LEAST 2 FRACTURED FACES, & SHALL BE WASHED WITH LESS THAN 1% BY WEIGHT PASSING No. 200 SIEVE.

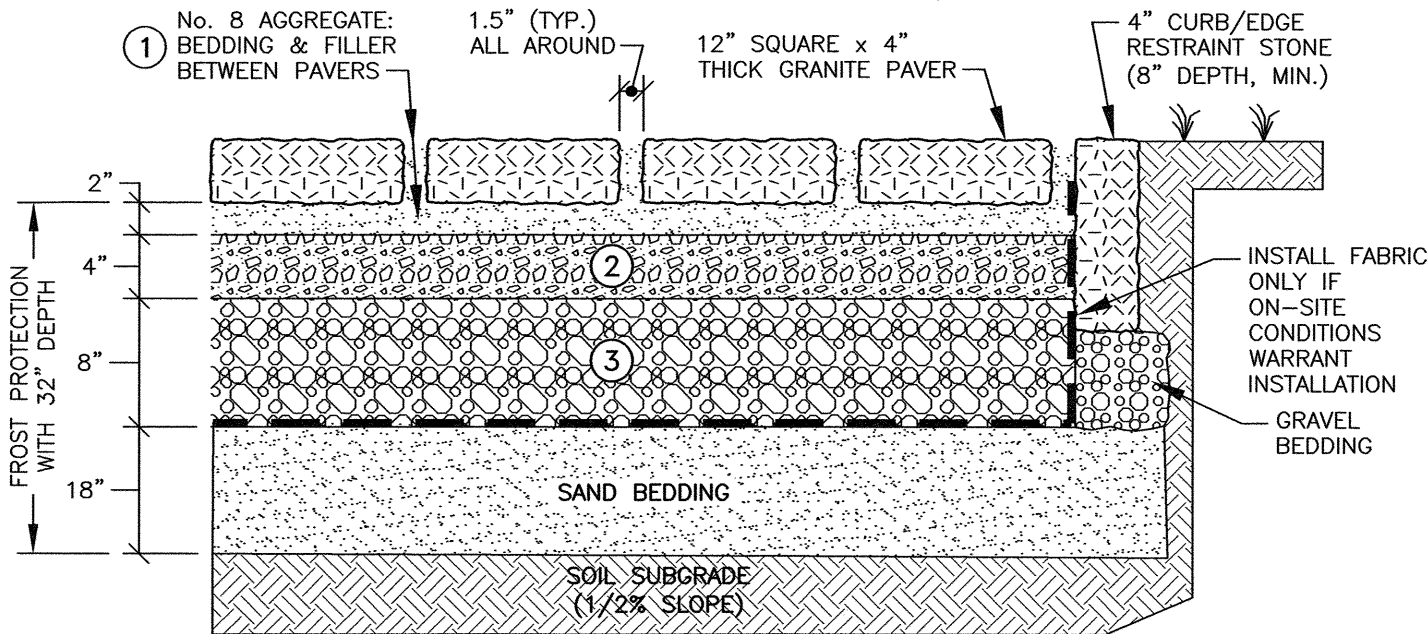


D POROUS PAVING NTS

ASTM D 448 GRADATION TABLE

①		②		③	
ASTM No. 8 BEDDING & JOINT FILLER		ASTM No. 57 STONE OPEN GRADED BASE		ASTM No. 2 STONE SUBBASE	
SIEVE SIZE	PASSING BY WEIGHT (%)	SIEVE SIZE	PASSING BY WEIGHT (%)	SIEVE SIZE	PASSING BY WEIGHT (%)
1/2" (12.5mm)	100	1.5" (37.5mm)	100	3" (75mm)	100
3/8" (9.5mm)	85-100	1" (25mm)	95-100	2.5" (63mm)	90-100
No. 4 (4.75mm)	10-30	1/2" (12.5mm)	25-60	2" (50mm)	35-70
No. 8 (2.36mm)	0-10	No. 4 (4.75mm)	0-10	1.5" 37.5mm)	0-15
No. 16 (1.16mm)	0-5	No. 8 (2.36mm)	0-5	3/4" (19mm)	0-5

- NOTES:
- 1) PAVING SYSTEM BASE DESIGN IS SIMILAR TO BASE REQUIRED FOR THE UNI ECO-STONE PAVER. INSTALLATION SHALL FOLLOW MANUFACTURER'S INSTRUCTIONS FOR PLACEMENT OF BASE MATERIALS.
 - 2) ALL STONE SHALL BE ANGULAR, WITH 90% FRACTURED FACES. STONE SHALL BE WASHED WITH LESS THAN 1% PASSING THE 200 SIEVE.
 - 3) CONTRACTOR SHALL SUBMIT SIEVE ANALYSIS FOR EACH COURSE MATERIAL TO PROJECT ENGINEER FOR APPROVAL PRIOR TO PLACEMENT.



E POROUS PAVER SECTION NTS



AMBIT ENGINEERING, INC.

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NOTES:

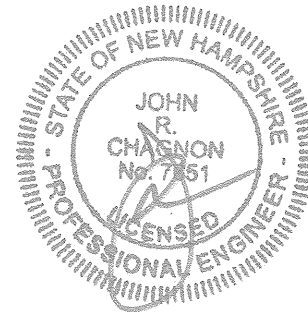
- 1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.
- 2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.
- 3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

SITE IMPROVEMENTS 393 NEW CASTLE AVENUE PORTSMOUTH, N.H.

1	ISSUED FOR APPROVAL	1/3/23
0	ISSUED FOR COMMENT	11/23/22

NO.	DESCRIPTION	DATE
-----	-------------	------

REVISIONS



SCALE: AS SHOWN

NOVEMBER 2022

DETAIL
PLAN

D1