

**WETLANDS PERMIT APPLICATION  
(Standard Review, Major Impact)**

**FOR**

**Watson's Landing**

**1 Clark Drive  
Portsmouth, NH**

**Tax Map 209, Lot 33**

**January 2021**

*Prepared For:*

**Frederick W. Watson Revocable Trust  
Robert D. Watson, Trustee  
53 Sleepy Hollow Drive  
Greenland, NH 03840**

*Prepared By:*

**ALTUS ENGINEERING, INC.  
133 Court Street  
Portsmouth, NH 03801  
Phone: (603) 433-2335**

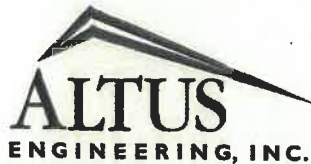






## TABLE OF CONTENTS

NHDES Reviewer Cover Letter	
Letter of Authorization	
Copy of Fee Check	
Letter to City Clerk (Hand Delivered)	
NHDES Wetlands Permit Application	
Coastal Resource Worksheet	
Avoidance and Minimization Written Narrative	
NHDES Wetlands Attachment A	
US Army Corp Attachment B	
Shoreland Permit Application Worksheets – Impervious Area, Natural Woodland Area	
Tax Card Information	
Property Deed & Subdivision Plan & Easement Plan	
National Flood Hazard Layer FIRMette	
NH Natural Heritage Bureau Inventory Review	
NH Dept of Fish and Game Map & USFWS Wetland Inventory Map	
Wetlands Delineation Letter & Sketch, Wetland Permit Planning Tool Results	
NH Aquatic Restoration Mapper Results – No Expected Impacts	
USGS Map	
Aerial Photograph	
Site Photos (see Sheet PHOTO-1 for Photograph Locations)	
Tax Map & Tax Map Detail	
NHDHR Request for Review	
Abutter Notifications:	
Abutters List	
Certified Mail Receipts for Abutter Notices	
Abutter Notification Letter	
Project Plans (22" x 34" Plan – Separate Attachment)	
Watson's Landing, Subdivision Plans	



**Civil  
Site Planning  
Environmental  
Engineering**

133 Court Street  
Portsmouth, NH  
03801-4413

January 8, 2021

New Hampshire Department of Environmental Services  
Land Resources Management, Wetlands Bureau  
29 Hazen Drive  
Concord, New Hampshire 03302-0095

**Re: Wetlands Permit Application  
Watson's Landing - Proposed Four Lot Residential Subdivision  
Tax Map 209 Lot 33  
1 Clark Drive  
Portsmouth, NH  
Altus Project #5090**

Dear Reviewer,

Attached please find a Wetlands Permit Application for a Major Impact project on an existing developed parcel in the City of Portsmouth accessed from Cutts Street via Clark Drive, a private road.

The owner and applicant, the Frederick W. Watson Revocable Trust, is proposing to raze the single family residence, in-ground pool & other site improvements. A proposed cul-de-sac would then be constructed to provide access and frontage for four single family residential lots. All disturbed areas will be loamed & seeded or otherwise treated or returned to original condition.

The enclosed plans illustrate the proposed improvements will take place entirely within the previously developed/disturbed/maintained tidal buffer zone and upland portions of the lot. Please note, there are no proposed disturbances to the resource (Inner Cutts Cove) or the adjacent wetland, salt marsh or mud flats.

The improvements as proposed are the least impacting alternative to the jurisdictional areas in order to connect to an existing city maintained sewer main and install storm water runoff controls.

Please feel free to contact us, the applicant's consulting engineer, at (603) 433-2335, if you have any questions. Thank you for your time and consideration.

Sincerely,

**ALTUS ENGINEERING, INC.**

A handwritten signature in red ink, appearing to read "E. Saari", is written over the printed name.

Erik B. Saari  
VicePresident

Wde/5090-wetlands-4-lot-subdivision-reviewer-letter.doc



**Letter of Authorization**

I, Robert D. Watson, Trustee of the Frederick W. Watson Revocable Trust, hereby authorize Altus Engineering, Inc. of Portsmouth, NH to represent me as the Owner and Applicant in all matters concerning the engineering and related permitting of a residential subdivision on Portsmouth Tax Map 209, Lot 33 located at 1 Clark Drive, Portsmouth, New Hampshire. This authorization shall include any signatures required for Federal, State and Municipal permit applications.



Signature

Robert D. Watson

11/24/20

Date



Witness

Patricia A. Watson

Print Name

11/24/20

Date

FREDERICK W WATSON REV. TRUST  
ROBERT D WATSON, TTEE.  
53 SLEEPY HOLLOW DR.  
GREENLAND, NH 03840

54-7468/2114

601

DATE 1/15/21 PMP



DELIVER DELIVER CHECKS  
STERLING ENTRY HIGH SECURITY



Treasurer, State of NH  
PAY TO THE ORDER OF

\$4,730.00

DOLLARS

Heat Reactive Ink



PISCATAQUA  
SAVINGS BANK  
Portsmouth's Local Bank  
Since 1877

MEMO

1 Clark Dr  
Wetland Buffer permit

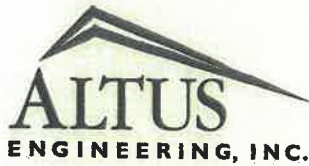
*[Signature]*

MP

⑆211474687⑆ 23 049458⑈ 0601

LOOK FOR FRAUD-DETECTING FEATURES INCLUDING THE SECURITY SQUARE AND HEAT-REACTIVE INK. DETAILS ON BACK.





**Civil  
Site Planning  
Environmental  
Engineering**

133 Court Street  
Portsmouth, NH  
03801-4413

January 8, 2021

Kelli Barnaby, City Clerk  
City of Portsmouth  
1 Junkins Avenue  
Portsmouth, NH 03801

**Re: NHDES Wetlands Permit Application  
Tax Map 209, Lot 33  
1 Clark Drive  
Portsmouth, NH 03801  
P5090**

Dear Ms. Barnaby:

In accordance with RSA 482-A:3, attached please find one original and four copies of the application package submitted on behalf of the Frederick W. Watson Revocable Trust (Tax Map 209, Lot 33) owner and applicant, for a Wetlands Permit Application to the NHDES Wetlands Bureau.

The application proposes to raze the existing house, in-ground pool & cabana and a small shed, create a 4-lot subdivision by constructing a paved cul-de-sac along with associated improvements on the existing residential lot. All disturbed areas will be loamed & seeded or otherwise treated and stabilized or returned to their original condition. The property is accessed from Clark Drive, a private road. The improvements will impact approximately 17,000 s.f.+/- within the NHDES 100-foot Tidal Buffer.

Please note, there are no proposed disturbances to the resource (Inner Cutts Cove) or the adjacent wetland salt marsh or mud flats.

Please feel free to contact us, the Applicant's engineering consultant, at (603) 433-2335, if you have any questions. Thank you for your time concerning this matter.

Sincerely,

A handwritten signature in red ink, appearing to read "E.B. Saari".

Erik B. Saari  
Vice President

Enclosures

Wde/5090.015.Portsmouth-wetlands.cov.ltr.doc



# 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: **Frederick W. Watson Revocable Trust** 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: <ul style="list-style-type: none"> <li>• Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&amp;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.</li> <li>• Protected species or habitat?                         <ul style="list-style-type: none"> <li>○ If yes, species or habitat name(s): <input style="width: 100px;" type="text"/></li> <li>○ NHB Project ID #: <input style="width: 100px;" type="text"/></li> </ul> </li> <li>• Bog?</li> <li>• Floodplain wetland contiguous to a tier 3 or higher watercourse?</li> <li>• Designated prime wetland or duly-established 100-foot buffer?</li> <li>• Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?</li> </ul>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the property within a Designated River corridor? If yes, provide the following information: <ul style="list-style-type: none"> <li>• Name of Local River Management Advisory Committee (LAC): <input style="width: 100px;" type="text"/></li> <li>• A copy of the application was sent to the LAC on Month: <input style="width: 50px;" type="text"/> Day: <input style="width: 50px;" type="text"/> Year: <input style="width: 50px;" type="text"/></li> </ul>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



For dredging projects, is the subject property contaminated? • If yes, list contaminant: <span style="background-color: #cccccc; padding: 0 20px;"> </span>	<input type="checkbox"/> Yes <input type="checkbox"/> No
--	--

Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

For stream crossing projects, provide watershed size (see WPPT or Stream Stats):  
 

**SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(ii))**  
 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.

Demolish single family residence with in-ground pool and associated site improvements. Install raingarden in area of pool and install utilities to prepare land for a proposed four lot subdivision with its own paved cul-de-sac for single family residences. Construct an accessway for use by City of Portsmouth DPW to service a sewer main in an existing easement at edge of Inner Cutts Cove.  
 Cul-de-sac and future homes will not be located in the 100' Tidal Buffer.

**SECTION 3 - PROJECT LOCATION**  
 Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.

ADDRESS: 1 Clark Drive

TOWN/CITY: Portsmouth

TAX MAP/BLOCK/LOT/UNIT: 209/33

US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME:    
 N/A

(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places):  
43.08382° North  
70.77056° 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: Frederick W. Watson Revocable Trust, Robert Watson, Trustee

MAILING ADDRESS: 53 Sleepy Hollow Drive

TOWN/CITY: Greenland, STATE: NH ZIP CODE: 03840

EMAIL ADDRESS: [REDACTED]

FAX: [REDACTED] PHONE: [REDACTED]

ELECTRONIC COMMUNICATION: By initialing here: [REDACTED], 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.: Saari, Erik B,

COMPANY NAME: Altus Engineering, Inc.

MAILING ADDRESS: 133 Court Street

TOWN/CITY: Portsmouth STATE: NH ZIP CODE: 03801

EMAIL ADDRESS: esaari@altus-eng.com

FAX: [REDACTED] PHONE: 603-433-2335

ELECTRONIC COMMUNICATION: By initialing here EBS, 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: [REDACTED]

MAILING ADDRESS: [REDACTED]

TOWN/CITY: [REDACTED] STATE: [REDACTED] ZIP CODE: [REDACTED]

EMAIL ADDRESS: [REDACTED]

FAX: [REDACTED] PHONE: [REDACTED]

ELECTRONIC COMMUNICATION: By initialing here [REDACTED], 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):

Env-Wt 400 - The jurisdictional areas were located by survey and correspond with City of Portsmouth GIS data. All appropriate means to protect this section of Inner Cutts Cove will be utilized and the resource will be protected during demolition of the residence and pool, installation of utility connections and construction of a loam and seed covered gravel drive for City DPW access to the existing sewer main and future connections.

Env-Wt 500 - The existing residence was constructed in 1956 and the lawn area/pool area has been maintained since. The proposed 4-lot subdivision and utility work will involve the razing of the existing residence and pool. With current zoning and regulations the future construction will be located further from the resource. Subtle grading and installation of stormwater treatment BMPs will benefit the resource. Any disturbed areas in the previously developed tidal buffer zone will be stabilized as soon as possible and prior to allowing storm water in to them.

Env-Wt 600, 700 & 900 - The project is defined as Major as it exceeds 10,000 sf of disturbance in the 100-foot buffer from the resource reference line. It is a betterment in that it will reduce impervious in that buffer and provide for better storm water control. NHB review and various databases indicate that while all of these buffers are important there are no species or habitats in the immediate vicinity of the proposed work that is of special concern. Appropriate methods of erosion control will be utilized during the project. The demolition of the existing residence/pool and construction of storm water controls will occur in a single phase.

**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/rivers, 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			<input type="checkbox"/>			<input type="checkbox"/>
	Scrub-shrub Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Emergent Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Wet Meadow			<input type="checkbox"/>			<input type="checkbox"/>
	Vernal Pool			<input type="checkbox"/>			<input type="checkbox"/>
	Designated Prime Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Duly-established 100-foot Prime Wetland Buffer			<input type="checkbox"/>			<input type="checkbox"/>
Surface Water	Intermittent / Ephemeral Stream			<input type="checkbox"/>			<input type="checkbox"/>
	Perennial Stream or River			<input type="checkbox"/>			<input type="checkbox"/>
	Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
	Docking - Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
	Docking - River			<input type="checkbox"/>			<input type="checkbox"/>
Banks	Bank - Intermittent Stream			<input type="checkbox"/>			<input type="checkbox"/>
	Bank - Perennial Stream / River			<input type="checkbox"/>			<input type="checkbox"/>
	Bank / Shoreline - Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
Tidal	Tidal Waters			<input type="checkbox"/>			<input type="checkbox"/>
	Tidal Marsh			<input type="checkbox"/>			<input type="checkbox"/>
	Sand Dune			<input type="checkbox"/>			<input type="checkbox"/>
	Undeveloped Tidal Buffer Zone (TBZ)			<input type="checkbox"/>			<input type="checkbox"/>
	Previously-developed TBZ	11,825		<input type="checkbox"/>			<input type="checkbox"/>
	Docking - Tidal Water			<input type="checkbox"/>			<input type="checkbox"/>
<b>TOTAL</b>		<b>11,825</b>					

**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): 11,825 SF × \$0.40 = \$ 4,730

Seasonal docking structure: SF × \$2.00 = \$

Permanent docking structure: SF × \$4.00 = \$

Projects proposing shoreline structures (including docks) add \$400 = \$

Total = \$

The application fee for minor or major impact is the above calculated total or \$400, whichever is greater = \$ 4,730

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



**SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05)**  
 Indicate the project classification.

<input type="checkbox"/> Minimum Impact Project	<input type="checkbox"/> Minor Project	<input checked="" type="checkbox"/> Major Project
---	--	---

**SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)**

Initial each box below to certify:

Initials: [Redacted] [Redacted] EBJ	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials: [Redacted] [Redacted] EBJ	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: [Redacted] [Redacted] EBJ	The signer understands that: <ul style="list-style-type: none"> <li>The submission of false, incomplete, or misleading information constitutes grounds for NHDES to:                         <ol style="list-style-type: none"> <li>Deny the application.</li> <li>Revoke any approval that is granted based on the information.</li> <li>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.</li> </ol> </li> <li>The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641.</li> <li>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.</li> </ul>
Initials: [Redacted] [Redacted] EBJ	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): [Redacted]	PRINT NAME LEGIBLY: SEE LETTER OF AUTHORIZATION	DATE: [Redacted]
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER): [Redacted]	PRINT NAME LEGIBLY: [Redacted]	DATE: [Redacted]
SIGNATURE (AGENT, IF APPLICABLE): [Redacted]	PRINT NAME LEGIBLY: ERIK B. SAARI	DATE: 11/21/21

**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: [Redacted]	PRINT NAME LEGIBLY: [Redacted]
TOWN/CITY: [Redacted]	DATE: [Redacted]

**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".

[irm@des.nh.gov](mailto: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](http://www.des.nh.gov)



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.: **Frederick W. Watson Revocable Trust**

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 consisting of 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 proposed work includes razing the existing house on the property and removing a large patio, inground swimming pool and cabana that are within 250' of the resource (Inner Cutts Cove). The existing private road (Clark Drive) will be replaced with a paved cul-de-sac to create frontage and access for a 4-lot subdivision. All building envelopes will be outside the 100-foot Tidal Buffer.**

**There are no proposed direct impacts to the wetlands.**

**A NHB review determined there are no expected impacts from the proposed demolition or construction.**

**Note: The property boundary extends to the high water mark, thus the salt marsh and mud flats beyond are off the property.**

**The future residences will be connected to an existing municipal sewer main within an existing easement at the edge of the lot that is located in a city maintained easement. All disturbances will occur in previously developed areas.**

For standard permit projects, provide:

- A Coastal Functional Assessment (CFA) report in accordance with Env-Wt 603.04 (refer to Section 3).
- A vulnerability assessment in accordance with Env-Wt 603.05 (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 311.07, Env-Wt 313, and Env-Wt 603.04.

Temporary erosion control measures including perimeter sediment controls and permanent shallow grass swales constructed in existing lawn areas as well as a raingarden in the area of the existing in-ground pool will greatly improve retention time and quality of stormwater runoff for the site.

Neither the salt marsh or mud flats just off the property are directly impacted.

The closest work to the resource is in the existing city maintained sewer easement and is +/- 12' distance.

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 includes construction of a raingarden and shallow grass swales to increase the retention time, allow for treatment of storm water runoff and discharge of better quality thus the quality of surface water or groundwater will be positively impacted. There are no direct impacts to the wetland complex (salt marsh & mud flats) which is just off the property.

The potential for erosion and sedimentation will be minimized through the use of appropriate Best Management Practices and the potential for introduction of invasive species minimized.

The project site is not located in areas of rare species or critical habitat per NHB Datacheck review. All work will be done in accordance with applicable requirements of the Shoreland Water Quality Protection Act, no new shoreline structures constructed, all disturbed areas will be stabilized in a timely manner. All property line setbacks will be observed, no material removed from or added to the wetlands, all plans will be adhered to, no unpermitted activities will be allowed and any required reports shall be submitted in a timely fashion.



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 project has been specifically designed to remove impervious surfaces from the 100-foot buffer and stay below the 20% threshold for impervious within the 250-foot Shoreland Buffer while improving stormwater management controls, avoiding any direct impacts to wetlands and minimizing any impacts in the 100-foot buffer. No fill will be placed in the flood plain which is at least 77 feet away from the building envelopes. The buildings will be constructed separate from and subsequent to the roadway and associated improvements.

The construction sequence will start with installation of erosion control and sedimentation collection devices. The next steps consist of razing of shed, house, deck, pool & cabana then driveway which will subsequently be replaced with a paved cul-de-sac. Stormwater control improvements and future residence sewer services will then be installed. The four residences, associated driveways and site improvements will then be constructed at a later date and the site will be finish graded, loamed and seeded. When it is stabilized, erosion control devices and accumulated sediment will be removed.

Virtually the entire parcel has been previously developed and maintained as a residence. The future residences will continue to maintain the lawn areas and as many specimen trees as possible.

- 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.

**Not applicable.**

**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, tidal waters, or associated sand dunes, the applicant shall:

- 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, crustacean, 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:

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

70 years and longer (2090).

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.

The project residences and roadway are high value assets and thus have low risk tolerance. Proposed residential building envelopes have been placed further from the tidal influenced resource (Inner Cutts Cove) and higher in elevation than the existing residence, deck, pool and cabana they are replacing. With the installation of stormwater management controls of shallow grass swales and a raingarden the future buildings, infrastructure & associated site improvements are less likely to be at risk to flooding. The raingarden and grass swales will be able to withstand flood waters and should mitigate some of the effects of flooding through the control of peak rates of runoff.

The areas of subsurface utility connections and stormwater control infrastructure have high risk tolerance and have been designed to avoid and minimize impacts in the 100-foot tidal buffer.

The salt marsh and mud flats (just off the property) actually serve to buffer effects from future sea level rise and storms. This project actively was planned to minimize indirect effects on these areas. There are no direct impacts to the resource from this project.

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.

The 2090 Highest SLR Scenario (4.6') most closely matches the project design life span.

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

All areas of the site up to elevation 13.6' are subject to flooding from SLR (current flood elevation 9' + 4.6' SLR = 13.6' future flood elevation).

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

The 100-year floodplain is shown on the project plans.

The existing city maintained sewer main in an existing sewer easement will be utilized for sewer services for the proposed residences, however, the impact is negligible. There will be no fill added to the floodplain and there will only be the minimum disturbance necessary to make the utility connections. All other existing house, deck and pool improvements that are adjacent to the floodplain line (Elevation 9) are being removed.

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

It is expected these utility connections will have a design life of at least 70 years or more due to placing them underground or above future SLR.

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: **Not applicable**



**SECTION 5 - DESIGN PLANS (Env-Wt 603.07, in addition to Env-Wt 311)**

Submit design plans for the project in both plan and elevation views that clearly depict and identify all required elements.

The plan view shall depict the following:

- The engineering scale used, which shall be no larger than one inch equals 50 feet;
- The location of tidal datum lines depicted as lines with the associated elevation noted, based on North American Vertical Datum of 1988 (NAVD 88), derived from [https://tidesandcurrents.noaa.gov/datum\\_options.html](https://tidesandcurrents.noaa.gov/datum_options.html), as described in Section 6.
- An imaginary extension of property boundary lines into the waterbody and a 20-foot setback from those property line extensions;
- The location of all special aquatic sites at or within 100 feet of the subject property;
- Existing bank contours;
- The name and license number, if applicable, of each individual responsible for the plan, including:
  - a. The agent for tidal docking structures who determined elevations represented on plans; and
  - b. The qualified coastal professional who completed the CFA report and located the identified resources on the plan;
- The location and dimensions of all existing and proposed structures and landscape features on the property;
- Tidal datum(s) with associated elevations noted, based on NAVD 88; and
- Location of all special aquatic sites within 100-feet of the property.

The elevation view shall depict the following:

- The nature and slope of the shoreline;
- The location and dimensions of all proposed structures, including permanent piers, pilings, float stop structures, ramps, floats, and dolphins; and
- Water depths depicted as a line with associated elevation at highest observable tide, mean high tide, and mean low tide, and the date and tide height when the depths were measured. Refer to Section 6 for more instructions regarding water depth supporting information.

See specific design and plan requirements for certain types of coastal projects:

- Overwater structures (Env-Wt 606).
- Dredging activities (Env-Wt 607).
- Tidal beach maintenance (Env-Wt 608).
- Tidal shoreline stabilization (Env-Wt 609).
- Protected tidal zone (Env-Wt 610).
- Sand Dunes (Env-Wt 611).

**SECTION 6 - WATER DEPTH SUPPORTING INFORMATION REQUIRED (Env-Wt 603.08)**

Using current predicted NOAA tidal datum for the location, and tying field measurements to NAVD 88, field observations of at least three tide events, including at least one minus tide event, shall be located to document the range of the tide in the proposed location showing the following levels:

- Mean lower low water;
- Mean low water;
- Mean high water;
- Mean tide level;
- Mean higher high water;
- Highest observable tide line; and
- Predicted sea-level rise as identified in the vulnerability assessment in Env-Wt 603.05.

The following data shall be presented in the application project narrative to support how water depths were determined:

- The date, time of day, and weather conditions when water depths were recorded; and
- The name and license number of the licensed land surveyor who conducted the field measurements.

For tidal stream crossing projects, provide:

- Water depth information to show how the tier 4 stream crossing is designed to meet Env-Wt 904.07(c) and (d).

For repair, rehabilitation or replacement of tier 4 stream crossings:

- Demonstrate how the requirements of Env-Wt 904.09 are met.

**SECTION 7 - GENERAL CRITERIA FOR TIDAL BEACHES, TIDAL SHORELINE, AND SAND DUNES (Env-Wt 604.01)**

Any person proposing a project in or on a tidal beach, tidal shoreline, or sand dune, or any combination thereof, shall evaluate the proposed project based on:

- The standard conditions in Env-Wt 307;
- The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;
- The approval criteria in Env-Wt 313.01;
- The evaluation criteria in Env-Wt 313.05;
- The project specific criteria in Env-Wt 600;
- The CFA required by Env-Wt 603.04; and
- The vulnerability assessment required by Env-Wt 603.05.

New permanent impacts to sand dunes that provide coastal storm surge protection for protected species or habitat shall not be allowed except:

- To protect public safety; and
- Only if constructed by a state agency, coastal resiliency project, or for a federal homeland security project.

Projects in or on a tidal beach, tidal shoreline, or sand dune shall support integrated shoreline management that:

- Optimizes the natural function of the shoreline, including protection or restoration of habitat, water quality, and self-sustaining stability to flooding and storm surge; and
- Protects upland infrastructure from coastal hazards with a preference for living shorelines over hardened shoreline practices.

**SECTION 8 - GENERAL CRITERIA FOR TIDAL BUFFER ZONES (Env-Wt 604.02)**

The 100-foot statutory limit on the extent of the tidal buffer zone shall be measured horizontally. Any person proposing a project in or on an undeveloped tidal buffer zone shall evaluate the proposed project based on:

- The standard conditions in Env-Wt 307;
- The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;
- The approval criteria in Env-Wt 313.01;
- The evaluation criteria in Env-Wt 313.05;
- The project specific criteria in Env-Wt 600;
- The CFA required by Env-Wt 603.04; and
- The vulnerability assessment required by Env-Wt 603.05.

Projects in or on a tidal buffer zone shall preserve the self-sustaining ability of the buffer area to:

- Provide habitat values;
- Protect tidal environments from potential sources of pollution;
- Provide stability of the coastal shoreline; and
- Maintain existing buffers intact where the lot has disturbed area defined under RSA 483-B:4, IV.

**SECTION 9 - GENERAL CRITERIA FOR TIDAL WATERS/WETLANDS (Env-Wt 604.03)**

Except as allowed under Env-Wt 606, permanent new impacts to tidal wetlands shall be allowed only to protect public safety or homeland security. Evaluation of impacts to tidal wetlands and tidal waters shall be based on:

- The standard conditions in Env-Wt 307;
- The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;
- The approval criteria in Env-Wt 313.01;
- The evaluation criteria in Env-Wt 313.05;
- The project specific criteria in Env-Wt 600;
- The CFA required by Env-Wt 603.04; and
- The vulnerability assessment required by Env-Wt 603.05.

Projects in tidal surface waters or tidal wetlands shall:

- Optimize the natural function of the tidal wetland, including protection or restoration of habitat, water quality, and self-sustaining stability to storm surge;
- Be designed with a preference for living shorelines over hardened stabilization practices; and
- Be limited to public infrastructure or restoration projects that are in the interest of the general public, including a road, a bridge, energy infrastructure, or a project that addresses predicted sea-level rise and coastal flood risk.



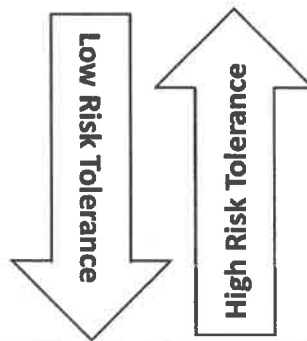
**SECTION 10 – GUIDANCE**

Your application must follow the New Hampshire Coastal Risk and Hazards Commission’s Guiding Principles or other best available science. Below are some of these guidance principles:

- Incorporate science-based coastal flood risk projections into planning;
- Apply risk tolerance\* to assessment, planning, design, and construction;
- Protect natural resources and public access;
- Create a bold vision, start immediately, and respond incrementally and opportunistically as projected coastal flood risks increase over time; and
- Consider the full suite of actions including effectiveness and consequences of actions.

\*Risk tolerance is a project’s willingness to accept a higher or lower probability of flooding impacts. The diagram below gives examples of project with lower and higher risk tolerance:

Critical infrastructures, historic sites, essential ecosystems, and high value assets typically have lower risk tolerance, and thus should be planned, designed, and constructed using higher coastal flood risk projections.



Sheds, pathways, and small docks typically have higher risk tolerance and thus may be planned, designed, and constructed using less protective coastal flood risk projections.



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'S NAME: **Frederick W. Watson Rev. Trust**

TOWN NAME: **Portsmouth**

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 the 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.**

**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.**

**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?

*\*Except as provided in any project-specific criteria and except for NH Department of Transportation projects that qualify for a categorical exclusion under the National Environmental Policy Act.*

**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 as described in the [Wetlands Best Management Practice Techniques For Avoidance and Minimization?](#)

The existing residence, pool and other site improvements within the tidal buffer will be demolished as part of this proposal. All proposed building envelopes are located further from the salt marshes and mud flats and only the minimal disturbance necessary is proposed.

**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)?

*\*\*Except for projects solely limited to construction or modification of non-tidal shoreline structures only need to complete relevant sections of Attachment A.*

The applicant/owner recognizes the value and beauty of the Inner Cutts Cove resource including the mud flats and salt marsh. A concerted effort has been made throughout the entire design process to remove existing impervious features in the 100-foot buffer and install storm water BMP's to ensure and improve the quality of water that does reach the resource.

No wetlands are proposed to be directly impacted. Appropriate erosion control devices and procedures will be utilized to ensure disturbed areas are limited and stabilized as soon as possible.

Future residences in the subdivision will be further from the resource than the existing residence and outside the tidal buffer.





**WETLANDS FUNCTIONAL ASSESSMENT  
WORKSHEET**  
Water Division/Land Resource Management  
Wetlands Bureau  
[Check the Status of your Application](#)



RSA/Rule: RSA 482-A / Env-Wt 311.03(b)(10); Env-Wt 311.10

APPLICANT LAST NAME, FIRST NAME, M.I.: [REDACTED] Watson Revokable Trust

As required by Env-Wt 311.03(b)(10), an application for a standard permit for minor and major projects must include a functional assessment of all wetlands on the project site as specified in Env-Wt 311.10. This worksheet will help you compile data for the functional assessment needed to meet federal (US Army Corps of Engineers (USACE); if applicable) and NHDES requirements. Additional requirements are needed for projects in tidal area; please refer to the [Coastal Area Worksheet \(NHDES-W-06-079\)](#) for more information.

Both a desktop review and a field examination are needed to accurately determine surrounding land use, hydrology, hydroperiod, hydric soils, vegetation, structural complexity of wetland classes, hydrologic connections between wetlands or stream systems or wetland complex, position in the landscape, and physical characteristics of wetlands and associated surface waters. The results of the evaluation are to be used to select the location of the proposed project having the least impact to wetland functions and values (Env-Wt 311.10). This worksheet can be used in conjunction with the [Avoidance and Minimization Written Narrative \(NHDES-W-06-089\)](#) and the [Avoidance and Minimization Checklist \(NHDES-W-06-050\)](#) to address Env-Wt 313.03 (Avoidance and Minimization). If more than one wetland/ stream resource is identified, multiple worksheets can be attached to the application. All wetland, vernal pools, and stream identification (ID) numbers are to be displayed and located on the wetlands delineation of the subject property.

<b>SECTION 1 - LOCATION (USACE HIGHWAY METHODOLOGY)</b>	
ADJACENT LAND USE:	Residential and transportation
CONTIGUOUS UNDEVELOPED BUFFER ZONE PRESENT?	<del>Yes</del> No
DISTANCE TO NEAREST ROADWAY OR OTHER DEVELOPMENT (in feet):	20ft +/-
<b>SECTION 2 - DELINEATION (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)</b>	
CERTIFIED WETLAND SCIENTIST (if in a non-tidal area) or QUALIFIED COASTAL PROFESSIONAL (if in a tidal area) who prepared this assessment: Michael Cuomo CWS 004	
DATE(S) OF SITE VISIT(S): 15 Sep 2020	DELINEATION PER ENV-WT 406 COMPLETED? Yes <del>No</del>
CONFIRM THAT THE EVALUATION IS BASED ON: Both office and field investigation Office and Field examination.	
METHOD USED FOR FUNCTIONAL ASSESSMENT (check one and fill in blank if "other"): USACE Highway Methodology. <input checked="" type="checkbox"/> yes <del>Other scientifically supported method (enter name &amp; title)</del>	

SECTION 3 - WETLAND RESOURCE SUMMARY (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)	
WETLAND ID: A (freshwater) and T (brackish)	LOCATION: (LAT/ LONG) <span style="background-color: #cccccc;">      </span> / <span style="background-color: #cccccc;">      </span> 43 deg. 5' 1.0" -70 deg. 46' 11.1"
WETLAND AREA: Connects to Piscataqua River thru North Mill Pond	DOMINANT WETLAND SYSTEMS PRESENT: Estuarine
HOW MANY TRIBUTARIES CONTRIBUTE TO THE WETLAND? one	COWARDIN CLASS: Estuarine, intertidal, unconsolidated shore; and Palustrine, shrub swamp, seasonal sat'd
IS THE WETLAND A SEPARATE HYDRAULIC SYSTEM? <del>Yes</del> No if not, where does the wetland lie in the drainage basin? intertidal	IS THE WETLAND PART OF: wildlife corridor A wildlife corridor or A habitat island?
IS THE WETLAND IN A 100-YEAR FLOODPLAIN? Yes <del>No</del> subject to tidal action	ARE VERNAL POOLS PRESENT? <del>Yes</del> No (If yes, complete the Vernal Pool Table)
ARE ANY WETLANDS PART OF A STREAM OR OPEN-WATER SYSTEM? Yes <del>No</del>	ARE ANY PUBLIC OR PRIVATE WELLS DOWNSTREAM/DOWNGRADIENT? <del>Yes</del> No
PROPOSED WETLAND IMPACT TYPE: Tidal buffer zone	PROPOSED WETLAND IMPACT AREA: NONE
SECTION 4 - WETLANDS FUNCTIONS AND VALUES (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)	
The following table can be used to compile data on wetlands functions and values. The reference numbers indicated in the "Functions/ Values" column refer to the following functions and values:	
<ol style="list-style-type: none"> <li>1. Ecological Integrity (from RSA 482-A:2, XI)</li> <li>2. Educational Potential (from USACE Highway Methodology: Educational/Scientific Value)</li> <li>3. Fish &amp; Aquatic Life Habitat (from USACE Highway Methodology: Fish &amp; Shellfish Habitat)</li> <li>4. Flood Storage (from USACE Highway Methodology: Floodflow Alteration)</li> <li>5. Groundwater Recharge (from USACE Highway Methodology: Groundwater Recharge/Discharge)</li> <li>6. Noteworthiness (from USACE Highway Methodology: Threatened or Endangered Species Habitat)</li> <li>7. Nutrient Trapping/Retention &amp; Transformation (from USACE Highway Methodology: Nutrient Removal)</li> <li>8. Production Export (Nutrient) (from USACE Highway Methodology)</li> <li>9. Scenic Quality (from USACE Highway Methodology: Visual Quality/Aesthetics)</li> <li>10. Sediment Trapping (from USACE Highway Methodology: Sediment /Toxicant Retention)</li> <li>11. Shoreline Anchoring (from USACE Highway Methodology: Sediment/Shoreline Stabilization)</li> <li>12. Uniqueness/Heritage (from USACE Highway Methodology)</li> <li>13. Wetland-based Recreation (from USACE Highway Methodology: Recreation)</li> <li>14. Wetland-dependent Wildlife Habitat (from USACE Highway Methodology: Wildlife Habitat)</li> </ol>	

[irm@des.nh.gov](mailto: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](http://www.des.nh.gov)

First, determine if a wetland is suitable for a particular function and value ("Suitability" column) and indicate the rationale behind your determination ("Rationale" column). Please use the rationale reference numbers listed in Appendix A of USACE *The Highway Methodology Workbook Supplement*. Second, indicate which functions and values are principal ("Principal Function/value?" column). As described in *The Highway Methodology Workbook Supplement*, "functions and values can be principal if they are an important physical component of a wetland ecosystem (function only) and/or are considered of special value to society, from a local, regional, and/or national perspective". "Important Notes" are to include characteristics the evaluator used to determine the principal function and value of the wetland.

FUNCTION S/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/ VALUE? (Y/N)	IMPORTANT NOTES
1 EI	<del>Yes</del> No	(From NH Method) 1c, 2c, 3a, 4a, 5a, 6c, 7c, 8c, 9c, 10a	<del>Yes</del> No	developed watershed, invasive species, historical wetland fill, road crossings,
2 ED	<del>Yes</del> No	3, 5, 12	<del>Yes</del> No	limited access for viewing, no good viewing location
3 FA	Yes <del>No</del>	1, 2, 4	Yes <del>No</del>	brackish marsh, tidal creek
4 FS	Yes <del>No</del>	3, 4, 6, 7, 9, 13, 18	<del>Yes</del> No	position in watershed makes this wetland of limited effectiveness at flood storage
5 GW	<del>Yes</del> No	7	<del>Yes</del> No	tidal wetland
6 NW	<del>Yes</del> No		<del>Yes</del> No	no endangered species habitat
7 NT	Yes <del>No</del>	2, 3, 4, 5, 6, 7, 8, 9, 14	Yes <del>No</del>	wetland appears to perform this function well
8 PE	Yes <del>No</del>	1, 2, 4, 5, 6, 7, 10, 11,	Yes <del>No</del>	tidal marshes generally perform this function well
9 SQ	Yes <del>No</del>	1, 2, 8,	<del>Yes</del> No	limited scenic quality
10 ST	Yes <del>No</del>	1, 3, 4, 7, 11, 16,	Yes <del>No</del>	both wetlands perform this function
11 SA	Yes <del>No</del>	1, 3, 6, 7, 12, 13, 15	<del>Yes</del> No	limited erosive forces

12 UH	Yes <del>No</del>	1, 3, 7, 11, 12, 13, 14, 22,	<del>Yes</del> No	historical disturbance
13 WR	Yes <del>No</del>	2, 5, 8, 9, 12	<del>Yes</del> No	limited access
14 WH	Yes <del>No</del>	6, 8, 11, 12, 13, 19, 21,	<del>Yes</del> No	fragmented, degraded wetland, though still important function

**SECTION 5 - VERNAL POOL SUMMARY (Env-Wt 311.10)**

Delineations of vernal pools shall be based on the characteristics listed in the definition of “vernal pool” in Env-Wt 104.44. To assist in the delineation, individuals may use either of the following references:

- *Identifying and Documenting Vernal Pools in New Hampshire 3<sup>rd</sup> Ed.*, 2016, published by the New Hampshire Fish and Game Department; or
- The USACE *Vernal Pool Assessment* draft guidance dated 9-10-2013 and form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

All vernal pool ID numbers are to be displayed and located on the wetland delineation of the subject property.

“Important Notes” are to include documented reproductive and wildlife values, landscape context, and relationship to other vernal pools/wetlands.

Note: For projects seeking federal approval from the USACE, please attach a completed copy of The USACE “Vernal Pool Assessment” form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

VERNAL POOL ID NUMBER	DATE(S) OBSERVED	PRIMARY INDICATORS PRESENT (LIST)	SECONDARY INDICATORS PRESENT (LIST)	LENGTH OF HYDROPERIOD	IMPORTANT NOTES
1					There are no wetlands suitable for vernal pool species on this project site
2					
3					
4					
5					

**SECTION 6 - STREAM RESOURCES SUMMARY**



DESCRIPTION OF STREAM: NONE	STREAM TYPE (ROSGEN):
HAVE FISHERIES BEEN DOCUMENTED? Yes No	DOES THE STREAM SYSTEM APPEAR STABLE? Yes No

**OTHER KEY ON-SITE FUNCTIONS OF NOTE:**

The following table can be used to compile data on stream resources. "Important Notes" are to include characteristics the evaluator used to determine principal function and value of each stream. The functions and values reference number are defined in Section 4.

FUNCTION S/ VALUES	SUITABILITY (Y/N)	RATIONALE	PRINCIPAL FUNCTION/ VALUE? (Y/N)	IMPORTANT NOTES
1	Yes No		Yes No	
2	Yes No		Yes No	
3	Yes No		Yes No	
4	Yes No		Yes No	
5	Yes No		Yes No	
6	Yes No		Yes No	
7	Yes No		Yes No	
8	Yes No		Yes No	
9	Yes No		Yes No	
10	Yes No		Yes No	
11	Yes No		Yes No	
12	Yes No		Yes No	
13	Yes No		Yes No	
14	Yes No		Yes No	

**SECTION 7 - ATTACHMENTS (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)**

Wildlife and vegetation diversity/abundance list.

Photograph of wetland.

Wetland delineation plans showing wetlands, vernal pools, and streams in relation to the impact area and surrounding landscape. Wetland IDs, vernal pool IDs, and stream IDs must be indicated on the plans.

For projects in tidal areas only: additional information required by Env-Wt 603.03/603.04. Please refer to the [Coastal Area Worksheet \(NHDES-W-06-079\)](#) for more information.

**Michael Cuomo, Soil Scientist**  
6 York Pond Road, York, Maine 03909  
207 363 4532  
mcuomosoil@gmail.com

Erik Saari, Vice President  
Altus Engineering, Inc.  
133 Court Street  
Portsmouth, NH 03801-4413

22 January 2021

Dear Mr. Saari;

This letter is in reference to the property at the end of Clark Drive in Portsmouth, NH. This +/-3 acre property is identified as tax map 209, lot 33. On 15 September 2020 I conducted an on-site wetland investigation to assist you in planning the redevelopment of this property. This letter will report and explain the results of a wetland evaluation conducted using *The Highway Methodology Workbook Supplement*.

#### SITE DESCRIPTION

The site currently has a single home, garage, and pool. The majority of the lot is landscaped with trees and lawn. Portions of the lot were previously open field or lawn and are now overgrown with shrubs. The land adjacent to the wetlands is steep and overgrown with dense shrubs, many of which are invasive species. There are signs of historical erosion and sedimentation. Invasive species in the uplands near the wetlands are autumn olive, multiflora rose, and common buckthorn. Invasive purple loose-strife was noted in the wetlands.

Two wetlands were identified running roughly parallel to the eastern property line. Both wetlands continue off the property and represent the near edge of a larger wetland system. The wetlands are identified as two because they have different characteristics, but they are adjacent to each other and connected by hydrology and function.

Blue flags A1 to A20 identify a narrow freshwater wetland fringe next to the larger tidal wetland. This is an inland wetland as defined in Portsmouth's zoning. This is a freshwater shrub swamp with silty soils.

Pink and black checked flags labeled T1 to T14 identify the near edge of the tidal wetland along Inner Cutts Cove. This flag line meets the definition of Highest Observable Tide Line as defined in NH Code of Administrative Rules Env-Wt 101.45. This is a tidal wetland as defined in Portsmouth Zoning.

This brackish tidal wetland receives tidal input from North Mill Pond. This is a 'high' marsh dominated by salt meadow grass. Because of previous development and impaired tidal exchange, this waterbody is almost certainly less saline than it was historically.

#### HIGHWAY METHOD

The wetland and buffer were evaluated using the *The Highway Methodology Workbook Supplement*, hereafter referred to as the Highway Method.

The Highway Method was developed to rapidly evaluate and compare a series of wetlands, primarily for the purpose of selecting the highway corridor with the least environmental impact from among alternative routes. For the purpose of this work, it provides an evaluation framework for drawing attention to the most important functions the wetland serves. The Highway Method does not produce a numerical score. It provides guidance and a method for the professional judgment of the evaluator, who selects which functions occur and determines the Principal Function(s). The Highway Method evaluates the entire wetland and buffer, including those areas which are off-site and can not be controlled by the applicant.

#### SUMMARY OF HIGHWAY METHOD RESULTS

The Highway Method data attached is presented in the format preferred by NHDES. NHDES uses slightly different terminology than the published Highway Method. For example, Flood Storage in



the NHDES worksheet is Floodflow Alteration in the Highway Method. This has no effect on the results. NHDES adds one function, Ecological Integrity, and uses the NH Method to generate the rating.

The Principal Functions are:

**Fish and Aquatic Life Habitat;  
Nutrient Trapping, Retention, and Transformation;  
Production Export; and  
Sediment Trapping.**

The wetlands also perform the following functions to a limited degree:

**Flood Storage;  
Scenic Quality;  
Shoreline Anchoring;  
Uniqueness & Heritage;  
Water-based Recreation; and  
Wetland Dependent Wildlife Habitat.**

The wetlands perform the following functions at a very low level level:

**Ecological Integrity;  
Education Potential;  
Groundwater Recharge; and  
Noteworthiness.**

#### PROJECT DESIGN

A Stormwater Management plan has been developed by Altus Engineering. Runoff from the project site will be treated to protect the wetland and water quality. No wetland or flood zone impact is proposed. A dense vegetated buffer exists and for the most part will be retained. Excavation and vegetation removal will not occur on the steeply sloping portion of the wetland buffer. Encroachment within the 100 foot wetland buffer is limited to drainage structures designed to protect water quality.

#### CONCLUSION

All wetlands have value, even those degraded by past and

continuing human activity. Degraded wetlands in urban environments have higher importance than it may first seem because they offer refuge for small wildlife, provide screening and green space. These are remnant wetlands in urban environments where many wetlands have been filled. This degraded wetland also has increased ecological value because it is part of the Piscataqua River ecological system.

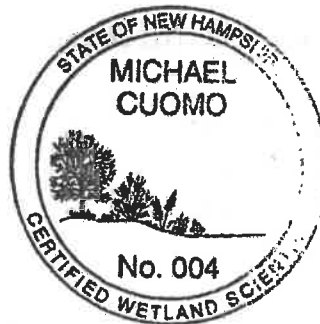
The wetlands on this property are a small portion of a larger wetland system which lies beyond the boundary of the subject property. The proposed impacts under consideration here are to the wetland buffer. No direct wetland impact is proposed. The wetland and it's buffer have a number of undesirable invasive plants, which is a sign of past disturbance, human induced nutrient enrichment, and sediment deposition. Surrounding land uses independent of the proposed project have and will continue to degrade the wetland and 100 foot buffer around the wetlands.

Please call if you have questions regarding this work.

Sincerely,



Michael Cuomo  
NH Wetland Scientist #004





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'S NAME:** Frederick W. Watson Rev, Trust **TOWN NAME:** Portsmouth

Attachment A is required for *all minor and major projects*, and must be completed *in addition* to the Avoidance and Minimization Narrative or Checklist that is required by Env-Wt 307.11.

For projects involving construction or modification of non-tidal shoreline structures over areas of surface waters having an absence of wetland vegetation, only Sections I.X through I.XV are required to be completed.

**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 WILL RAZE AN EXISTING HOUSE AND IN GROUND POOL IN THE 100-FOOT BUFFER. THE MAJORITY OF THE STORMWATER BMP'S WILL BE CONSTRUCTED IN AREAS THAT WILL BE DISTURBED BY THE DEMOLITION ACTIVITY. PROPOSED UTILITIES TO CONNECT TO AN EXISTING MUNICIPAL SEWER LOCATED IN THE TIDAL BUFFER WILL SHARE TRENCHES TO SERVE THE PROPOSED 4-LOT SINGLE FAMILY RESIDENTIAL SUBDIVISION.

**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, crustacean, shellfish, and wildlife of significant value.

The impact areas have been minimized the closer they are to the actual wetland resources (salt marsh and mud flats of Inner Cutts Cove).

There are no impacts to the resource.

The impacts in the 100-foot buffer are limited to removal of a house, in-ground swimming pool and associated cabana, installation of sewer connections to serve future houses and construction of storm water BMP's.

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

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

No wetlands, streams or stormwater channels will be impacted by the project and existing hydrologic connections will be maintained.



**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.

No wetlands are directly impacted by the proposed improvements. The proposed 4-lot subdivision will remove a house, in-ground pool, concrete patio and cabana from the 100-foot tidal buffer.

**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 project has no effect on public commerce, navigation or recreation. This is a 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 has no direct impact on the wetlands, but removing the existing house, in-ground pool, cabana and concrete patio that are closer to the resource than the future houses it will reduce risk of flood damage.

Installation of stormwater BMP's will allow for the detention and treatment of runoff which will minimize flood risk.

The minimum work is proposed in a floodplain area in order to connect the sewer services to the existing sewer main.

There will be no fill added in the flood plain area.

**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 vegetated buffer on this site is predominantly overgrown/invasive species within an adjacent municipal utilities corridor. To the extent that is possible, mature trees and native or natural vegetation that can be retained will be. The property is not within an area of high ecological integrity as it has been developed as a residence. The distance from the future residential development to the resource is being increased and impervious surfaces in the tidal buffer will be eliminated.

**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 project has no effect on drinking water supplies as the adjacent wetland is tidal influenced.

**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 impact any stream channels. There are drainage areas that allow storm runoff to reach the resource. Proposed grading to detain and treat storm water, removal of impervious surfaces within the 100-foot buffer and keeping future development further from the resource will all improve the existing conditions.

**SECTION I.X - SHORELINE STRUCTURES - CONSTRUCTION SURFACE AREA (Env-Wt 313.03(c)(1))**

Describe how the project has been designed to use the minimum construction surface area over surface waters necessary to meet the stated purpose of the structures.

Not applicable to this project.

**SECTION I.XI - SHORELINE STRUCTURES - LEAST INTRUSIVE UPON PUBLIC TRUST (Env-Wt 313.03(c)(2))**

Describe how the type of construction proposed is the least intrusive upon the public trust that will ensure safe docking on the frontage.

Not applicable. There are no docking structures proposed.



**SECTION I.XII - SHORELINE STRUCTURES – ABUTTING PROPERTIES (Env-Wt 313.03(c)(3))**

Describe how the structures have been designed to avoid and minimize impacts on ability of abutting owners to use and enjoy their properties.

Not applicable. No shoreline structures are proposed.

**SECTION I.XIII - SHORELINE STRUCTURES – COMMERCE AND RECREATION (Env-Wt 313.03(c)(4))**

Describe how the structures have been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.

Not applicable. No shoreline structures are proposed.

**SECTION I.XIV - SHORELINE STRUCTURES – WATER QUALITY, AQUATIC VEGETATION, WILDLIFE AND FINFISH HABITAT (Env-Wt 313.03(c)(5))**

Describe how the structures have been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.

Not applicable.

**SECTION I.XV - SHORELINE STRUCTURES – VEGETATION REMOVAL, ACCESS POINTS, AND SHORELINE STABILITY (Env-Wt 313.03(c)(6))**

Describe how the structures have been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.

Not applicable.

**PART II: FUNCTIONAL ASSESSMENT**

**REQUIREMENTS**

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

**FUNCTIONAL ASSESSMENT METHOD USED:**

USACE Highway Methodology

**NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT:** MICHAEL CUOMO, CWS 004

**DATE OF ASSESSMENT:** 15 SEPT. 2020

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.





**US Army Corps  
of Engineers** ®  
New England District

**New Hampshire General Permits (GPs)  
Appendix B - Corps Secondary Impacts Checklist  
(for inland wetland/waterway fill projects in New Hampshire)**

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to “work” include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See <a href="http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm">http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm</a> to determine if there is an impaired water in the vicinity of your work area.*	X	
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?		X
2.2 Are there proposed impacts to SAS, special wetlands. Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at <a href="https://www2.des.state.nh.us/nhb_datacheck/">https://www2.des.state.nh.us/nhb_datacheck/</a> . The book <a href="#">Natural Community Systems of New Hampshire</a> also contains specific information about the natural communities found in NH.		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?		N/A
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		X
2.5 The overall project site is more than 40 acres?		X
2.6 What is the area of the previously filled wetlands?	0 sf	
2.7 What is the area of the proposed fill in wetlands?	0 sf	
2.8 What is the % of previously and proposed fill in wetlands to the overall project site?	0%/0%	
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: <a href="https://www2.des.state.nh.us/nhb_datacheck/">https://www2.des.state.nh.us/nhb_datacheck/</a> USFWS IPAC website: <a href="https://ecos.fws.gov/ipac/location/index">https://ecos.fws.gov/ipac/location/index</a>	X	



3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: <ul style="list-style-type: none"> <li>• PDF: <a href="https://wildlife.state.nh.us/wildlife/wap-high-rank.html">https://wildlife.state.nh.us/wildlife/wap-high-rank.html</a>.</li> <li>• Data Mapper: <a href="http://www.granit.unh.edu">www.granit.unh.edu</a>.</li> <li>• GIS: <a href="http://www.granit.unh.edu/data/downloadfreedata/category/databycategory.html">www.granit.unh.edu/data/downloadfreedata/category/databycategory.html</a>.</li> </ul>	X	
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the GC 21?		N/A
<b>4. Flooding/Floodplain Values</b>	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		N/A
<b>5. Historic/Archaeological Resources</b>		
For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form ( <a href="http://www.nh.gov/nhdhr/review">www.nh.gov/nhdhr/review</a> ) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 11 GC 8(d) of the GP document** <i>(NO HISTORIC PROPERTIES AFFECTED)</i>	X	

\*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.

\*\* If your project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

## 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 area<sup>2</sup> means all human made impervious surfaces<sup>3</sup> 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 1406.11)			
	STRUCTURE DESCRIPTION	PRE-CONSTRUCTION IMPERVIOUS AREAS	POST-CONSTRUCTION IMPERVIOUS AREAS
<b>PRIMARY STRUCTURE(S)</b> House and all <u>attached</u> decks and porches.	House	2650 FT <sup>2</sup>	█ FT <sup>2</sup>
<b>ACCESSORY STRUCTURES</b> 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.	Pool/Conc/Cabana	3100 FT <sup>2</sup>	█ FT <sup>2</sup>
	Driveway/Paved Road	3150 FT <sup>2</sup>	2,200 FT <sup>2</sup>
	Deck	650 FT <sup>2</sup>	█ FT <sup>2</sup>
	Prop. Driveways	█ FT <sup>2</sup>	3,800 FT <sup>2</sup>
	Prop. Residences	█ FT <sup>2</sup>	12,000 FT <sup>2</sup>
	█	█ FT <sup>2</sup>	█ FT <sup>2</sup>
<b>TOTAL:</b>		<b>(A)</b> 9550 FT <sup>2</sup>	<b>(B)</b> 18,000 FT <sup>2</sup>
Area of the lot located within 250 feet of reference line:			<b>(C)</b> 105,000 FT <sup>2</sup>
Percentage of lot covered by pre-construction impervious area within 250 feet of the reference line: <i>[divide (A) by (C) x 100]</i>			<b>(D)</b> 9.1 %
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>			<b>(E)</b> 17.1 %

<sup>2</sup> "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.

<sup>3</sup> "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.

[shoreland@des.nh.gov](mailto:shoreland@des.nh.gov) or (603) 271-2147

NHDES Shoreland Program, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

<http://www.des.nh.gov>

### Stormwater Management Requirements

THE IMPERVIOUS AREA THRESHOLDS (RSA 483-B:9, V(g))	
<input 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 checked="" type="checkbox"/>	The percentage of post-construction impervious area (line E) is less than or equal to 20%. This project <b>does not</b> require a stormwater management plan and <b>does not</b> 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 <b>requires</b> a stormwater management but, <b>does not</b> 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 <b>requires</b> a stormwater management plan designed and certified by a professional engineer and <b>requires</b> 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 <sup>4</sup> (see definition below).	(F) 9500 FT <sup>2</sup>
Total area of the lot between 50 feet and 150 feet from the reference line.	(G) 40200 FT <sup>2</sup>
At least 25% of area (G) must remain in as natural woodland. $[0.25 \times G]$	(H) 10075 FT <sup>2</sup>
Place the lesser of area (F) and calculation (H) on this line. In order to remain compliant with the <b>natural woodland area requirement</b> , this is the minimum area that must remain as natural woodland between 50 feet and 150 feet from the reference line. This area <b>must</b> be represented on all plans and this area, exclusive of existing lawn, must remain in an unaltered state <sup>5</sup> .	(I) 9500 FT <sup>2</sup>
Name of person who prepared this worksheet: Erik B. Saari	
Name and date of the plan this worksheet is based upon: Wetland/Shoreland Permit Appl. Plan , 1/18/21	

<sup>4</sup> "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).

<sup>5</sup> "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).

# 1 CLARK DR

**Location** 1 CLARK DR

**Mblu** 0209/ 0033/ 0000/ /

**Acct#** 28756

**Owner** WATSON FREDERICK W REV TRUST

**PBN**

**Assessment** \$537,200

**Appraisal** \$537,200

**PID** 28756

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$225,300	\$311,900	\$537,200
Assessment			
Valuation Year	Improvements	Land	Total
2020	\$225,300	\$311,900	\$537,200

## Owner of Record

**Owner** WATSON FREDERICK W REV TRUST  
**Co-Owner** ROBERT D WATSON TRUSTEE  
**Address** 53 SLEEPY HOLLOW DR  
 GREENLAND, NH 03840

**Sale Price** \$0  
**Certificate**  
**Book & Page** 5200/1329  
**Sale Date** 03/11/2011  
**Instrument**

**Ownership History**

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
WATSON FREDERICK W REV TRUST	\$0		5200/1329		03/11/2011
WATSON FREDERICK	\$175,000		2933/2950	0	07/14/1992

**Building Information**

**Building 1 : Section 1**

**Year Built:** 1956  
**Living Area:** 1,982  
**Replacement Cost:** \$305,732  
**Building Percent Good:** 67  
**Replacement Cost**  
**Less Depreciation:** \$204,800

Building Attributes	
Field	Description
Style:	Ranch
Occupancy	1
Exterior Wall 2	Vinyl Siding
Interior Wall 2	

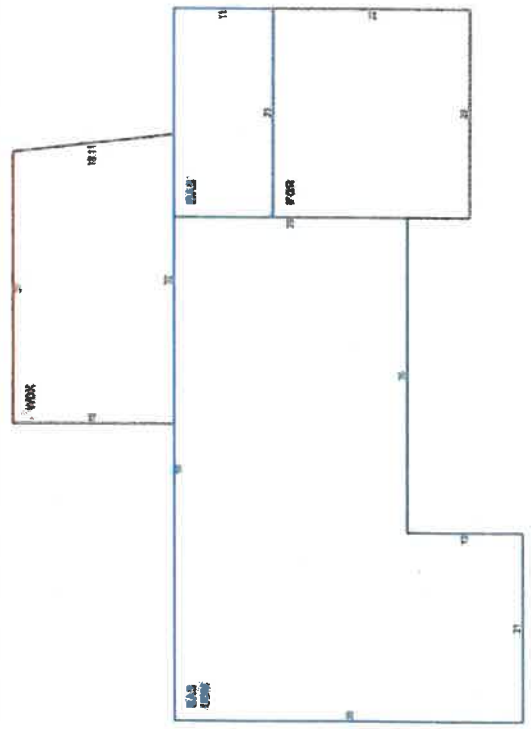


**Building Photo**



(<http://images.vgsi.com/photos2/PortsmouthNHPhotos/N00100\03\35.JPG>)

**Building Layout**



(ParcelSketch.ashx?pid=28756&bid=28756)

Interior Flr 2	Residential
Model	C+
Grade:	1
Stories:	Board & Batten
Exterior Wall 1	Gable/Hip
Roof Structure:	1
WB Fireplaces	1
Extra Openings	Asph/F Gls/Cmp
Roof Cover	Drywall/Sheet
Interior Wall 1	0
Extra Openings	
Bsmt Garage	Carpet
Interior Flr 1	Oil
Heat Fuel	Hot Water
Heat Type:	None
AC Type:	3 Bedrooms
Total Bedrooms:	1
Total Bthrms:	2
Total Half Baths:	0
Total Xtra Fixtrs:	6
Total Rooms:	Avg Quality
Bath Style:	Avg Quality
Kitchen Style:	
Kitchen Gr	
Metal Fireplaces	0

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	1,982	1,982
FGR	Garage, Attached	506	0
UBM	Basement, Unfinished	1,729	0
WDK	Deck, Wood	558	0
		4,775	1,982

**Extra Features**

Extra Features				Legend
Code	Description	Size	Value	Bldg #
REC	REC ROOM	500.00 S.F.	\$12,600	1

**Land**

**Land Use**

Use Code 1013  
 Description SFR WATERFRONT  
 Zone SRB  
 Neighborhood 128  
 Alt Land Appr No  
 Category

**Land Line Valuation**

Size (Acres) 2.8  
 Frontage  
 Depth  
 Assessed Value \$311,900  
 Appraised Value \$311,900

**Outbuildings**

Outbuildings							Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #	
SHD1	SHED FRAME			144.00 S.F.	\$800	1	
SHD1	SHED FRAME			144.00 S.F.	\$500	1	
SPL2	POOL-INGR VNP			512.00 S.F.	\$6,600	1	

**Valuation History**

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$225,300	\$311,900	\$537,200
2019	\$225,300	\$311,900	\$537,200
2018	\$203,800	\$283,400	\$487,200

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$225,300	\$311,900	\$537,200
2019	\$225,300	\$311,900	\$537,200
2018	\$203,800	\$283,400	\$487,200

(c) 2020 Vision Government Solutions, Inc. All rights reserved.

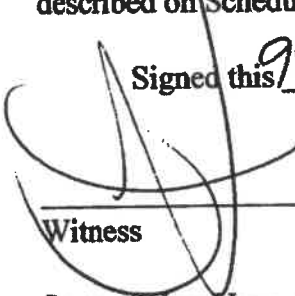


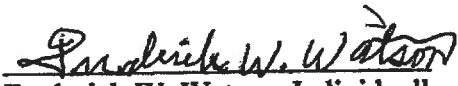
WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, that I, FREDERICK W. WATSON, Individually of Clark Drive, Portsmouth, County of Rockingham and State of New Hampshire, for consideration paid, grants to FREDERICK W. WATSON, TRUSTEE OF THE FREDERICK W. WATSON REVOCABLE TRUST OF 1998 of Clark Drive, Portsmouth County of Rockingham and State of New Hampshire, WITH WARRANTY COVENANTS the following described real estate:

Four parcels or tracts of land with any improvements thereon all being situate in Portsmouth, County of Rockingham and State of New Hampshire being more particularly described on Schedule A attached hereto and made a part hereof

Signed this 9th day of March, 2011.

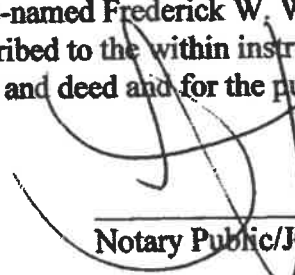
  
\_\_\_\_\_  
Witness

  
Frederick W. Watson, Individually

State of New Hampshire  
Rockingham, ss.

March 9, 2011

Personally appeared the above-named Frederick W. Watson, Individually, known to me, to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same of his own free act and deed and for the purposes therein contained, before me,

  
\_\_\_\_\_  
Notary Public/Justice of the Peace



Betty/re/watsonfredindividuallytowatsonfredtrustee

~~DEED EXEMPT FROM TRANSFER TAX PURSUANT TO RSA 78-B:2 (IX) AS NON-COMMERCIAL TRANSFER.~~

John P McGee, Jr  
Notary Public, State of New Hampshire  
My Commission Expires June 23, 2015

011252

2011 MAR 11 AM 10:24

ROCKINGHAM COUNTY  
REGISTRY OF DEEDS

**SCHEDULE A**

Four tracts of land with any improvements thereon all being situate in Portsmouth, County of Rockingham and State of New Hampshire.

**Tract I**

A certain parcel of land together with the buildings thereon, located on the Northeasterly side of Crescent Way in Portsmouth, in the County of Rockingham and State of New Hampshire, more particularly bounded and described as follows, viz:

Beginning at a point on the Southwesterly sideline of Crescent Way, said point being at the intersection of a proposed street being an extension of Kearsarge Street; thence in a general Northwesterly direction by said Southwesterly sideline of Crescent Way on a curve to the right one hundred twenty-four and twenty-five hundredths (124.25) feet, to land of Richard A. Noiles et al; thence in a general direction to said land of Richard A. Noiles one hundred (100) feet to point of other land of said Noiles; thence in a general Easterly direction by said other land of said Noiles forty-six (46) feet, more or less, to the Westerly sideline of Kearsarge Street extension; thence in a general Southerly direction by said Westerly sideline of Kearsarge Street extension one hundred thirty (130) feet, more or less, to the point of beginning.

Being Lot No. 15 on Assessor's Plan 103, and being more correctly described as follows, viz:

Beginning at a point on the Easterly sideline of Crescent Way at the intersection of Kearsarge Street, thence in a general Northerly direction by Crescent Way on a curve to the right one hundred twenty-four and twenty-five hundredths (124.25) feet to land now or formerly of Noiles; thence in a general Easterly direction by land of Noiles one hundred (100) feet; thence in a general Southeasterly direction by land of Noiles forty-six (46) feet, more or less, to Kearsarge Street; thence in a general Southwesterly direction by Kearsarge Street one hundred thirty (130) feet to the point of beginning.

Being the same premises conveyed to Frederick W. Watson and MaryAnn Watson by deed of Joseph R. MacInnis and Virginia MacInnis dated October 26, 1960 and recorded in Vol. 156, Page 478 of the Rockingham County Registry of Deeds.

**Tract II**

A certain lot or parcel of land, with the buildings thereon, situate in Portsmouth, County of Rockingham and State of New Hampshire, and known as 70 Porpoise Way, as shown on a Plan of Atlantic Heights, recorded in Rockingham County Registry of Deeds as Plan D 0247, bounded and described as follows:

Beginning at a point on the Northeasterly sideline of Porpoise Way at a distance of one hundred fifty-nine and seventy-one hundredths (159.71) feet Northwesterly from



the Northwesterly sideline of Saratoga Way; thence running along the Northeasterly sideline of Porpoise Way in a Northwesterly direction by a curve to the right with a radius of six hundred three and sixty-one hundredths (603.61) feet for a distance of sixty-seven and forty-four hundredths (67.44) feet; thence by #84 Porpoise Way North forty-five degrees seven minutes East ninety-three and eighty-two hundredths (93.82) feet; thence by #75 and #67 Crescent Way South forty-two degrees twelve minutes East sixty and forty-nine hundredths (60.49) feet; thence by #62 Porpoise Way South forty degrees West eighty-eight and ninety-nine hundredths (88.99) feet to the point of beginning.

Excepting and reserving those premises known as 72 Porpoise Way which were conveyed by Frederick W. Watson, Trustee and MaryAnn Watson, Trustee to Anthony Blenkinsop by virtue of deed dated February 10, 2006 recorded in the Rockingham County Registry of Deeds at Book 4617, Page 1777. But conveying with those premises known as 70 Porpoise Way any rights appurtenant such as party wall agreements or understandings.

Subject to utility easements of record and subject to rights of occupying tenants.

Being the same premises conveyed to Frederick W. Watson and MaryAnn Watson by deed of Hilda Hundley, dated April 1, 1982 and recorded in the Rockingham County Registry of Deeds at Book 2409, Page 0999.

### Tract III

#### Portsmouth, New Hampshire

Two certain parcels of land with any buildings thereon, situate in Portsmouth, Rockingham County, New Hampshire, bounded and described as follows:

#### Parcel I

A certain lot or parcel of land, together with the buildings thereon, situate on Cutts Street and Southerly of the Market Street Extension so-called, in the City of Portsmouth and shown on "Plan of Lots for Herbert W. Pope" dated December 1973, drawn by John W. Durgin, C.E., and marked thereon as land of William C. and Marilyn Pope, and being Lot No. 5 and more particularly described as follows:

Beginning at a point on Cutts Street at the westerly corner of the premises herein conveyed at Lot No. 3 as shown on said plan, and running southeasterly and easterly by Lot No. 3 on a curve to the left having a radius of 25 feet a distance of 39.27 feet, thence continuing by said Lot No. 3 by several courses and distances as follows, North 35 ° 20' 12" East 17.51 feet, northeasterly on a curve to the right having a radius of 230 feet a distance of 135.95 feet; South 69 ° 12' 12" West 7.86 feet, northeasterly on a curve to the left having a radius of 700 feet a distance of 95.35 feet; northeasterly and northerly on a curve to the left having a radius of 25 feet a distance of 31.94 feet and northerly, northeasterly and easterly on a curve to the right having a radius of 50 feet a distance of

66.34 feet to a corner; thence turning and running North 25 ° 48' West by said Lot No. 3, 81.6 feet to a concrete bound in the Southerly sideline of land taken by the State of New Hampshire for Market Street Extension and running North 80 ° 45' 12" East by said land of the State of New Hampshire 193.55 feet to a concrete bound; thence continuing still by said land of the State of New Hampshire South 80 ° 51' 56" East 200.65 feet to another concrete bound; thence continuing South 83 ° 15' 51" East still by said land of the State of New Hampshire 50 feet more or less to another concrete bound; thence turning and running westerly and southerly by the westerly edge of the marsh 387 feet more or less to a concrete bound at other land of Herbert W. Pope and being Lot No. 4; thence turning and running North 41 ° 64' 48" West by Lot No. 4, 259.75 feet to a concrete bound at the northeasterly corner of Lot No. 4 on said Plan; thence running by said Lot No. 4 on several courses and distances, viz, southwesterly on a curve to the right having a radius of 750 feet, a distance of 185.34 feet; South 69 ° 12' 12" West 7.86 feet; southwesterly on a curve to the left having a radius of 180 feet a distance of 106.40 feet, South 35 ° 20' 12" West 17.51 feet and southwesterly and southerly on a curve to the left having a radius of 25 feet a distance of 39.27 feet to the northeasterly sideline of Cutts Street; thence turning and running North 54 ° 39' 48" West by the northeasterly sideline of Cutts Street 100 feet to the point of beginning.

Together with all rights to the marsh land lying southerly and easterly of the premises bounded northerly by land of the State of New Hampshire and southwesterly by the southwesterly sideline of Lot No. 5 extended, and southeasterly by the Creek; and also all rights in said Creek legally appurtenant thereto.

Said premises are subject to such rights, if any, as the City of Portsmouth may have in a certain drainage easement 30 feet in width running southeasterly across said premises from the vicinity of station 308+00 on land of the State of New Hampshire and being Market Street Extension; a drainage easement to the State of New Hampshire running southerly across said premises from near station 310+00; and such slope easement as was acquired across the northeast edge of said premises by the State of New Hampshire for the purpose of constructing said Market Street Extension. There is no right of access to said Market Street Extension conveyed.

Together with all right, titled and interest in and to the 6" water main laid in the same.

Said premises are subject to the 20 foot easement granted to the State of New Hampshire for a sidewalk and pipe line as will more fully appear by the deed from Herbert W. Pope to the State of New Hampshire dated August 27, 1969, recorded in Rockingham County Registry of Deeds, Book 1983, Page 235.

Being the same premises conveyed to Frederick W. Watson by deed of Sonya J. Shield, dated July 14, 1992 and recorded in the Rockingham County Registry of Deeds.

Parcel II

A certain tract or parcel of land situate in Portsmouth, Rockingham County, New Hampshire, bounded and described as follows:

Beginning at a concrete bound in the southeasterly sideline of Clark Drive, so-called, and at a point in the southwesterly sideline of other land now or formerly of Joseph Shield and Sonya Shield, it also being the northerly corner of the parcel herein described; thence running South  $41^{\circ} 34' 48''$  East by land of said Shield 259.75 feet to a concrete bound at the edge of the marsh; thence turning and running southwesterly by said marsh 155 feet to a concrete bound at other land now or formerly of Herbert W. Pope; thence turning and running North  $41^{\circ} 24' 48''$  West by said Pope land 324.55 feet to a point in the southeasterly sideline of said Clark Drive and other land of said Shield, thence turning and running northeasterly on the arc of a curve to the left having a radius of 750.00 feet a distance of 156.06 feet to the granite bound and the point of beginning. Containing 42,673 square feet. Meaning and intending to convey parcel as shown on plan of "Lot Line Revision", Portsmouth, New Hampshire for Herbert W. Pope, dated June 12, 1979, #C8792, by John W. Durgin Associates, Inc., to be recorded said parcel lying to the southwest of other land of said Shield. Recorded Rockingham Registry of Deeds June 25, 1979.

Meaning and intending to describe and convey the same premises as conveyed to Sonya Shield by Quitclaim deed of Joseph H. Shield, dated May 7, 1992, and recorded in Book #2924, Page #2868 of the Rockingham County Registry of Deeds.

Being the same premises conveyed to the grantors by deed of Sonya J. Shield, dated July 14, 1992 and recorded in the Rockingham County Registry of Deeds.

#### Tract IV

##### Parcel I

A certain tract or parcel of land situate in Portsmouth, County of Rockingham, New Hampshire, bounded and described as follows:

Beginning at a point in the northerly sideline of Crescent Way at the southerly corner of land of the grantee; thence running N  $22^{\circ} - 28'$  E by land of said grantee 130.0 feet to the northeasterly corner of said grantees land and the southerly corner of land of Richard A. and Lena G. Noiles; thence turning and running S  $61^{\circ} - 34'$  E by other land of the City of Portsmouth 10.77 feet to a corner; thence turning and running S  $22^{\circ} - 28'$  W by said land of the City of Portsmouth about 130 feet to said Crescent Way; thence in a general northwesterly direction about 11 feet to the point of beginning. Containing about 1300 square feet.

Meaning and intending to convey a strip of land 10 feet wide along the easterly sideline of land of the grantee.

##### Parcel 2

A certain tract or parcel of land situate in Portsmouth, County of Rockingham, New Hampshire bounded and described as follows:

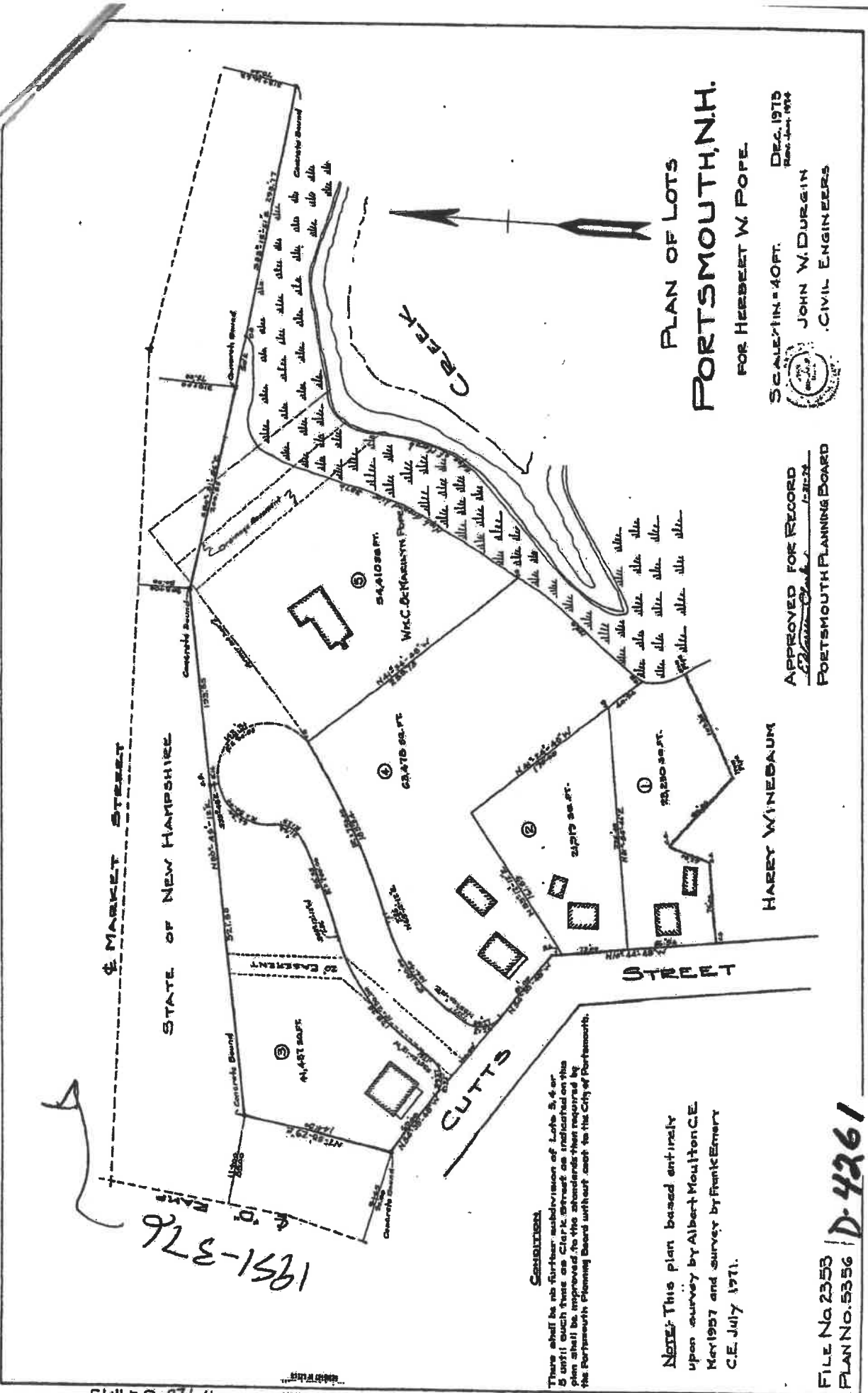
Beginning at a point in the northerly sideline of Crescent Way about 11 feet southeasterly from the southerly corner of land of Frederick W. and Maryann Watson; thence running N 22 ° - 28' E, 130.0 feet and N 61 ° - 32' W, 10.77 feet by land of the City of Portsmouth to be conveyed to said Watson to a corner; thence turning and running N 22 ° - 28' E by land of Richard A. and Lena G. Noiles about 170 feet to the Piscataqua River; thence turning and running in a southeasterly direction by said river about 33 feet to a corner; thence turning and running S 22 ° - 28' W by other land of the City of Portsmouth about 300 feet to Crescent Way; thence turning and running northwesterly by said Way about 26 feet to the point of beginning.

The grantor reserves the right to build and maintain a public street over parcel 2 above and all services incident thereto including but not limited to water and sewerage and including a sewerage pumping station, provided such pumping station does not block access to the land of Richard A. and Lena G. Noiles as referred to above, and subject to the right of Richard A. Noiles and Lena G. Noiles, their heirs, executors and assigns, to a 50 foot right-of-way from Crescent Way for access to the property of Richard A. and Lena G. Noiles as referred to in the above description from Crescent Way over the above property set forth in parcel 2 above and adjoining property of the City of Portsmouth.

Being the same premises conveyed to Frederick W. Watson and MaryAnn Watson herein by deed of the City of Portsmouth, dated October 2, 1970 and recorded in the Rockingham County Registry of Deeds at Book 2037, Page 207.

Further granting and conveying to the grantee any and all land which may be owned in the City of Portsmouth, County of Rockingham and State of New Hampshire not specifically described above.

Betty/re/watsonfrederickscheduleaoffourparcels



PLAN OF LOTS  
**PORTSMOUTH, N.H.**  
 FOR HERBERT W. POPE.

SCALE: 1" = 40 FT.  
 DEC. 1975  
 JOHN W. DURGAIN  
 CIVIL ENGINEERS

APPROVED FOR RECORD  
 PORTSMOUTH PLANNING BOARD

STATE OF NEW HAMPSHIRE

1951-376  
 928-1581

**CONDITIONS**  
 These shall be no further subdivision of Lots 2, 4 or 5 until such time as Clark Street as indicated on this plan shall be improved to the standards then required by the Portsmouth Planning Board without cost to the City of Portsmouth.

**NOTE:** This plan based entirely upon survey by Albert Moulton C.E. May 1957 and survey by Frank Emery C.E. July 1971.

FILE NO. 2353  
 PLAN NO. 5356  
**D-4261**

174 FEB-84 11:43  
 178-B-NINE



3 11:15 AM '85

MARKET STREET EXTENSION  
(PUBLIC VARIABLE WIDTH)

CLARK DRIVE  
(KNOWN AS PRIVATE)

JOSEPH H. & SONYA J. SHIELD  
BK. 2341  
PG. 193A

(PUBLIC 50' WIDE)

STREET

BRIAN P. NICKELL & DAVID A. & SUSAN L. CIOLFI  
BK. 2474  
PG. 338

SUMNER WINEBAUM

N.F. GEORGE HASKELL  
BK. 2344  
PG. 706

CITY OF PORTSMOUTH  
BK. 1804  
PG. 418

N.F. J. HUBBARD  
BK. 1462  
PG. 376

N.F. GEORGE HASKELL  
BK. 2344  
PG. 706

N.F. GEORGE HASKELL  
BK. 2344  
PG. 706

DRIVE

LESLIE (PUBLIC 50' WIDE)



D-13793

PREPARED FOR	Computed by:
	Drawn by: K.M. T.K.
	Checked by: P.J.D.
	Job No: 85-012

"I certify that this survey plot shows the property lines that are the lines of existing ownership and that the lines of divisions and ways shown are those of public or private streets or ways already established and that no new lines for division of existing ownership or for new ways are shown."

*Charles D. Bell*  
DATE 4/4/85 LICENSED LAND SURVEYOR



# National Flood Hazard Layer FIRMette



70°46'33"W 43°5'15"N



USGS The National Map, Orthom imagery. Data refreshed October 2020

Feet 0 250 500 1,000 1,600

## Legend

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

**SPECIAL FLOOD HAZARD AREAS**

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

**OTHER AREAS OF FLOOD HAZARD**

- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile (Zone 2)
- Future Conditions 1% Annual Chance Flood Hazard (Zone X)
- Area with Reduced Flood Risk due to Levee, See Notes, Zone X
- Area with Flood Risk due to Levee (Zone D)

**OTHER AREAS**

- NO SCREEN
- Area of Minimal Flood Hazard (Zone X)
- Effective LOMRR
- Area of Undetermined Flood Hazard (Zone X)

**GENERAL STRUCTURES**

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

**OTHER FEATURES**

- Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transsect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transsect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**

- Digital Data Available
- No Digital Data Available
- Unmapped

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/30/2020 at 4:05 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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



New Hampshire Natural Heritage Bureau  
NHB DataCheck Results Letter

**To:** Eric Weinrieb, Altus Engineering, Inc.  
133 Court Street  
  
Portsmouth, NH 03801

**From:** NH Natural Heritage Bureau

**Date:** 12/24/2020 (valid for one year from this date)

**Re:** Review by NH Natural Heritage Bureau of request submitted 12/11/2020

**NHB File ID:** NHB20-3666

**Applicant:** Frederick W. Watson  
Revocable Trust

**Location:** Portsmouth  
Tax Maps: 209 & 33

**Project**

**Description:** Proposed 4-lot subdivision with single family residences. Demolition of one existing residence.

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 12/11/2020, and cannot be used for any other project.

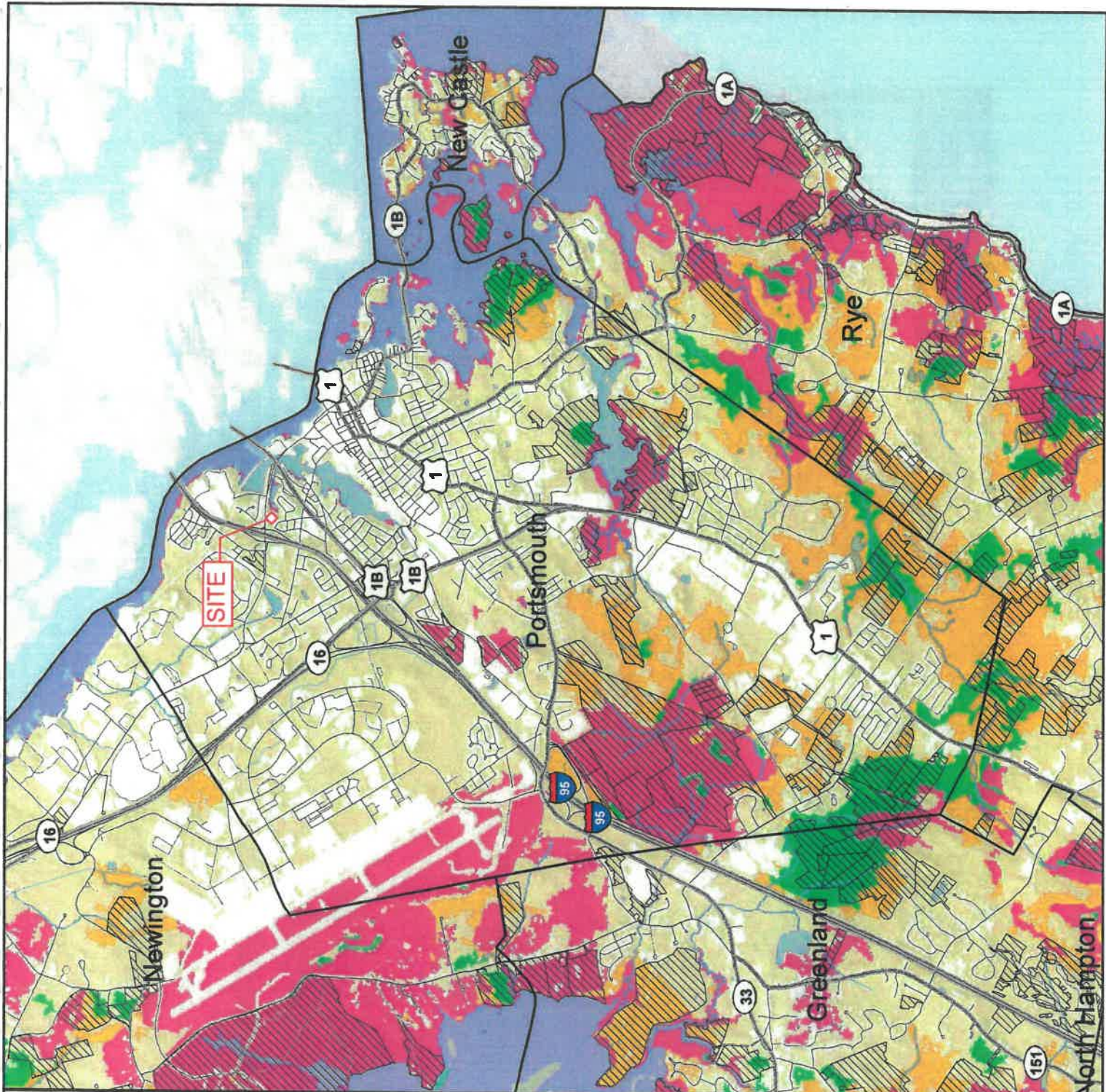






# 2020 HIGHEST RANKED WILDLIFE HABITAT BY ECOLOGICAL CONDITION

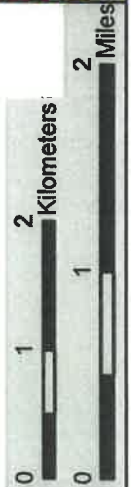
- Highest Ranked Habitat in New Hampshire
- Highest Ranked Habitat in the Biological Region
- Biological region = TNC ecoregional subsection for terrestrial habitats or Aquatic Resource Mitigation region for wetlands and floodplain forest.
- Supporting Landscapes
- Conservation or public



Base map data provided by NH GRANIT at UNH May 2020. Intended for planning use only.



Sept. 2015, spatial data Apr. 2020





**National Wetlands Inventory**  
surface waters and wetlands

ABOUT GET DATA PRINT FIND LOCATION

Measure

1:9,028  
43.084 | -70.757

Shore

Bersum Gardens

**LEGEND**

**Wetlands**

- Estuarine and Marine
- Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub
- Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

**Riparian**

- Forested/Shrub
- Herbaceous

POWERED BY **esri**

U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands\_1c...

Type here to search

3:03 PM  
12/11/2020

**USFWS Wetland Inventory Map**

**Michael Cuomo, Soil Scientist**  
6 York Pond Road, York, Maine 03909  
207.363 4532  
mcuomosoil@gmail.com

Erik Saari, Vice President  
Altus Engineering, Inc.  
133 Court Street  
Portsmouth, NH 03801-4413

16 September 2020

Dear Mr. Saari;

This letter is in reference to the property at the end of Clark Drive in Portsmouth, NH. This +/-3 acre property is identified as tax map 209, lot 33. On 15 September 2020 I conducted a wetland investigation to assist you in planning the redevelopment of this site.

Two wetland boundaries were identified.

Blue flags A1 to A20 mark the edge of a freshwater wetland which traverses the property roughly parallel to the eastern property line. The wetland identified meets the inland wetland definition in Portsmouth Zoning as well as the State and Federal wetland definitions.

Pink and black checked flags labeled T1 to T14 identify the edge of the tidal wetland along North Mill Pond. This flag line meets the definition of Highest Observable Tide Line as defined in NH Code of Administrative Rules Env-Wt 101.45, "...a line defining

the farthest landward limit of tidal flow, not including storm events, that can be recognized by such indicators as the presence of a strand line of flotsam and debris, the landward margin of salt tolerant vegetation, or a physical barrier that blocks farther flow of the tide." This wetland also meets the definition of a tidal wetland in Portsmouth Zoning.

Please call if you have questions regarding this work.

Sincerely,

*Michael Cuomo*

Michael Cuomo

NH Wetland Scientist #004

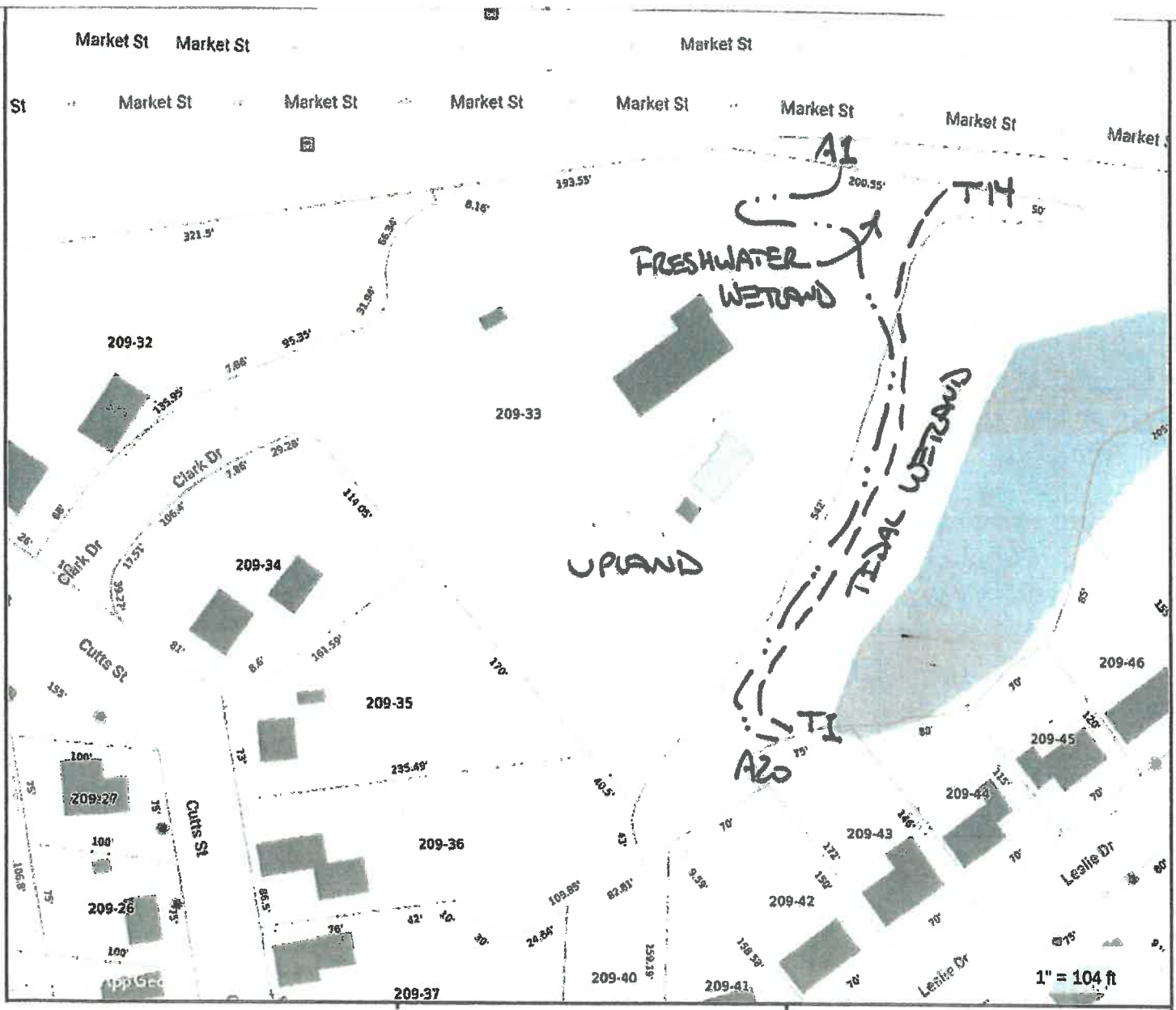
NH Soil Scientist #006



**Michael Cuomo, Soil Scientist**  
6 York Pond Road, York, Maine 03909  
207 363 4532  
mcuomosoil@gmail.com

Rough Sketch of Wetland Flag Lines  
Clark Drive, Portsmouth, NH  
15 September 2020

This sketch is to assist the surveyors in finding the flags. It is not accurate enough for any other purpose.



**EFH Data Notice:** Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional Fishery Management Councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office  
Atlantic Highly Migratory Species Management Division

### Query Results

Degrees, Minutes, Seconds: Latitude = 43°5'2" N, Longitude = 71°14'21" W  
Decimal Degrees: Latitude = 43.08, Longitude = -70.76

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.



### \*\*\* WARNING \*\*\*













Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

### EFH

Show	Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
			Atlantic Sea Scallop	ALL	New England	Amendment 14 to the Atlantic Sea Scallop FMP
			Atlantic Wolffish	ALL	New England	Amendment 14 to the Northeast Multispecies FMP
			Winter Flounder	Eggs Juvenile Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
			Little Skate	Juvenile Adult	New England	Amendment 2 to the Northeast Skate Complex FMP



Show	Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
			Atlantic Herring	Juvenile Adult Larvae	New England	Amendment 3 to the Atlantic Herring FMP
			Atlantic Cod	Larvae Adult Eggs	New England	Amendment 14 to the Northeast Multispecies FMP
			Pollock	Juvenile Eggs Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
			Red Hake	Adult Eggs/Larvae /Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
			Windowpane Flounder	Adult Larvae Eggs Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
			Winter Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
			Smooth Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
			White Hake	Adult Eggs Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
			Thorny Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP

Show	Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
			Bluefin Tuna	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
			Atlantic Mackerel	Eggs Larvae Juvenile	Mid-Atlantic	Atlantic Mackerel, Squid, & Butterfish Amendment 11
			Bluefish	Adult Juvenile	Mid-Atlantic	Bluefish
			Atlantic Butterfish	Adult	Mid-Atlantic	Atlantic Mackerel, Squid, & Butterfish Amendment 11

### HAPCs

Show	Link	Data Caveats	HAPC Name	Management Council
			Inshore 20m Juvenile Cod	NEFMC

### EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

**Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.**

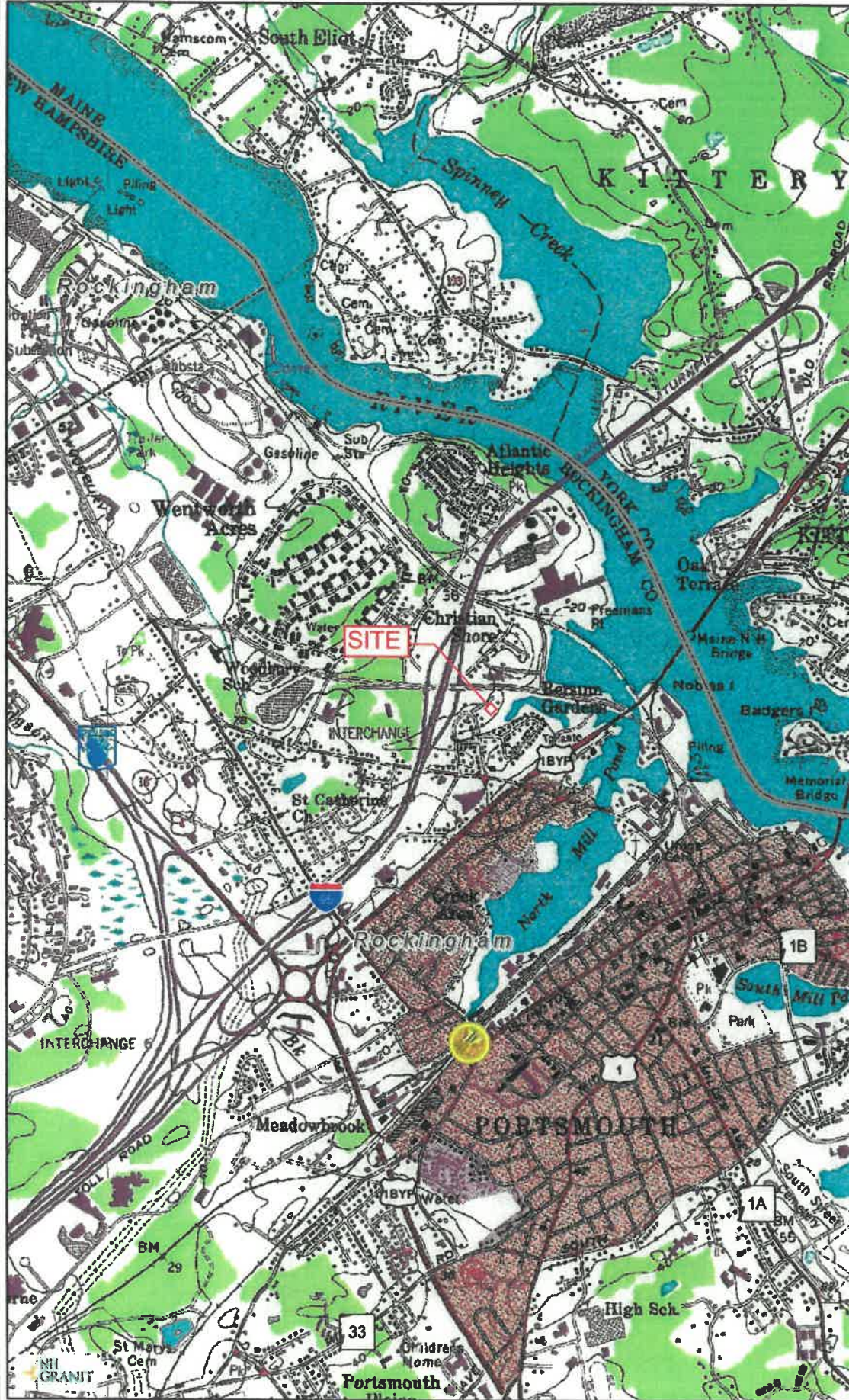
**\*\*For links to all EFH text descriptions see the complete data inventory: [open data inventory -->](#)**

#### **Mid-Atlantic Council HAPCs,**

No spatial data for summer flounder SAV HAPC.



# Map by NH GRANIT



## Legend

- State
- County
- City/Town

Map Scale

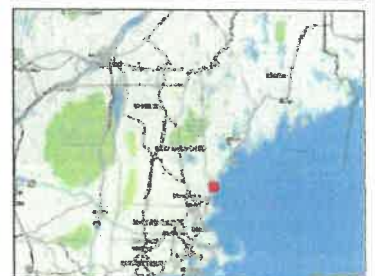
1: 24,000

© NH GRANIT, [www.granit.unh.edu](http://www.granit.unh.edu)

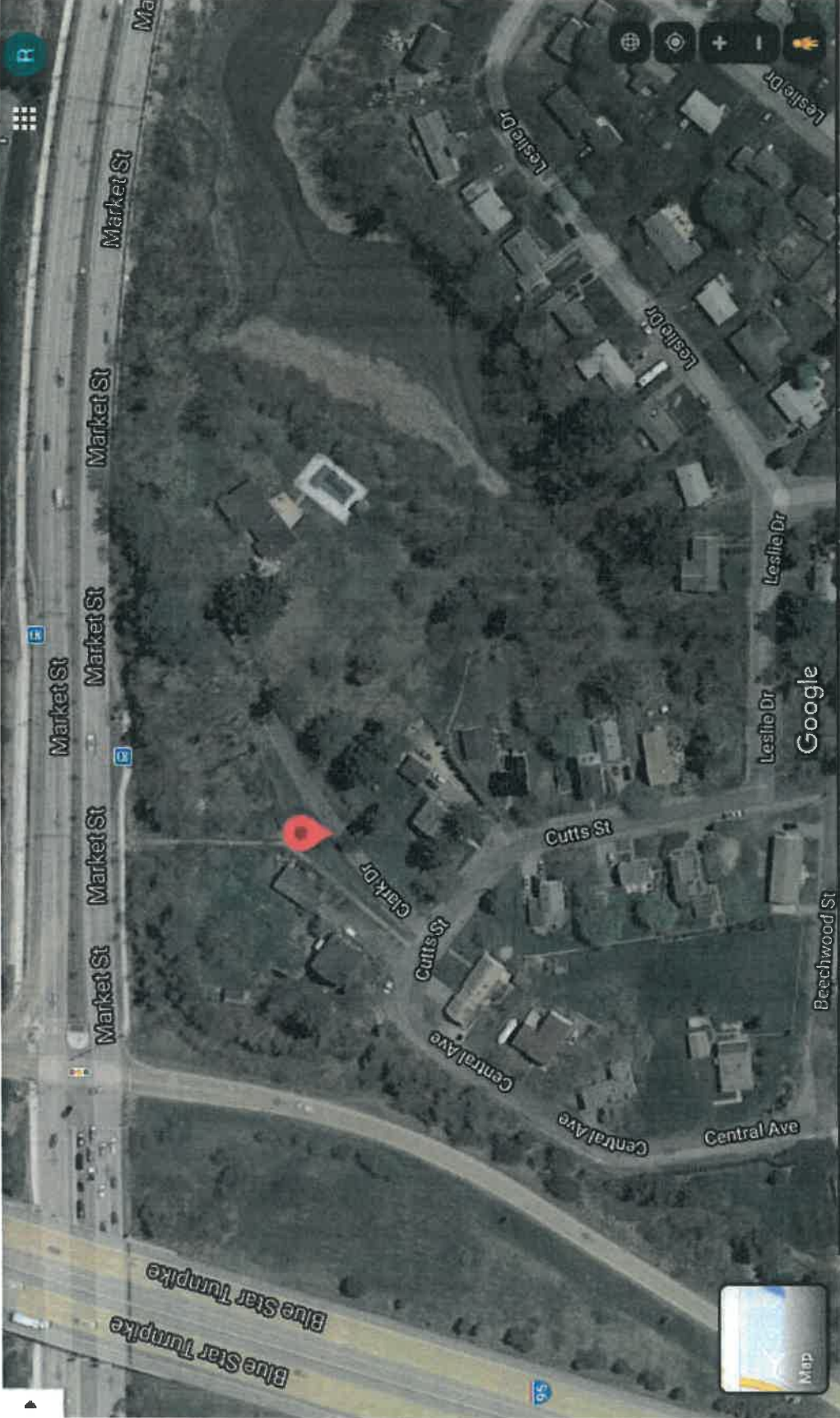
Map Generated: 12/23/2020



## Notes







**AERIAL PHOTOGRAPH**



**Photo #1:**  
Looking northeasterly at existing driveway to be replaced with paved cul-de-sac for accessing new lots. – November 24, 2020

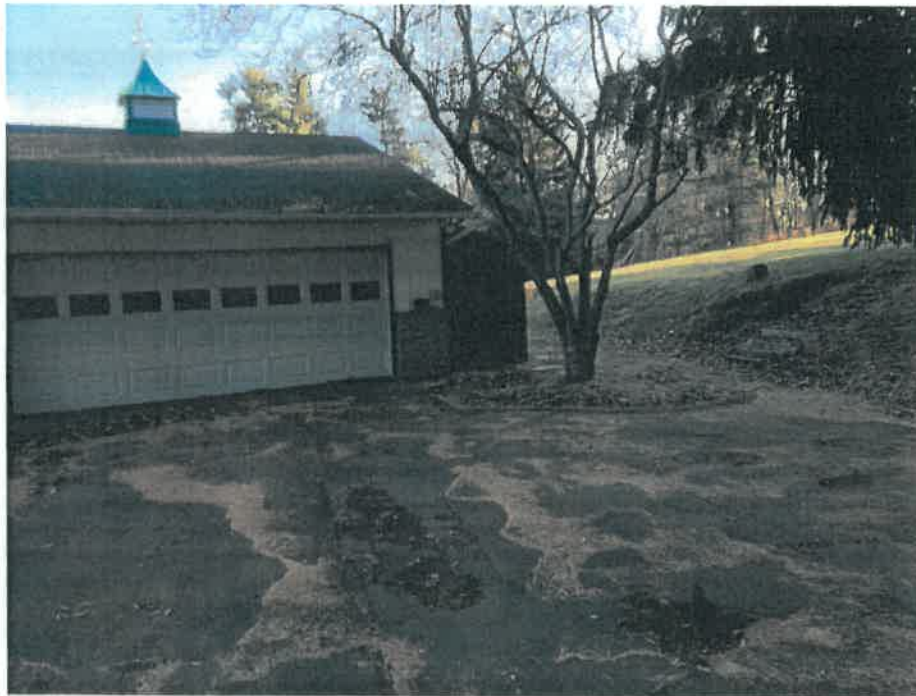


**Photo #2:**  
Looking easterly at backyard pool with Inner Cutts Cove beyond the vegetated wetlands buffer. – November 24, 2020





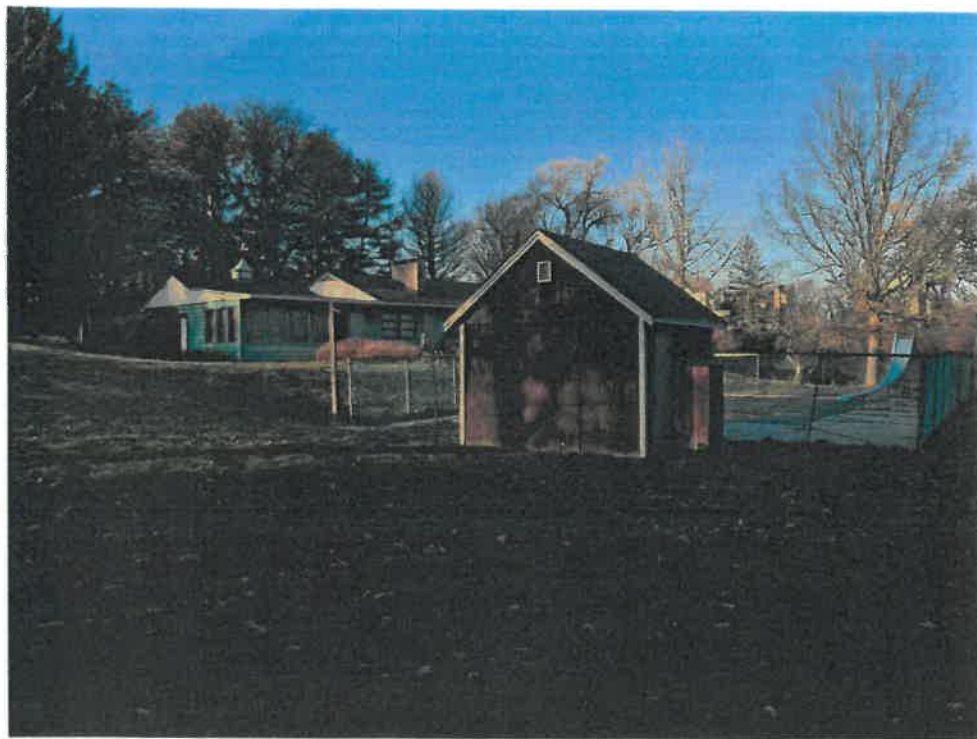
**Photo #5:**  
Looking southerly at existing retaining wall to be removed.  
November 24, 2020



**Photo #6:**  
Looking southeasterly at existing residence to be razed.  
November 24, 2020



**Photo #9:**  
Looking south at existing pool to be removed.  
November 24, 2020



**Photo #10:**  
Looking northeasterly at pool recreation building to be removed.  
November 24, 2020



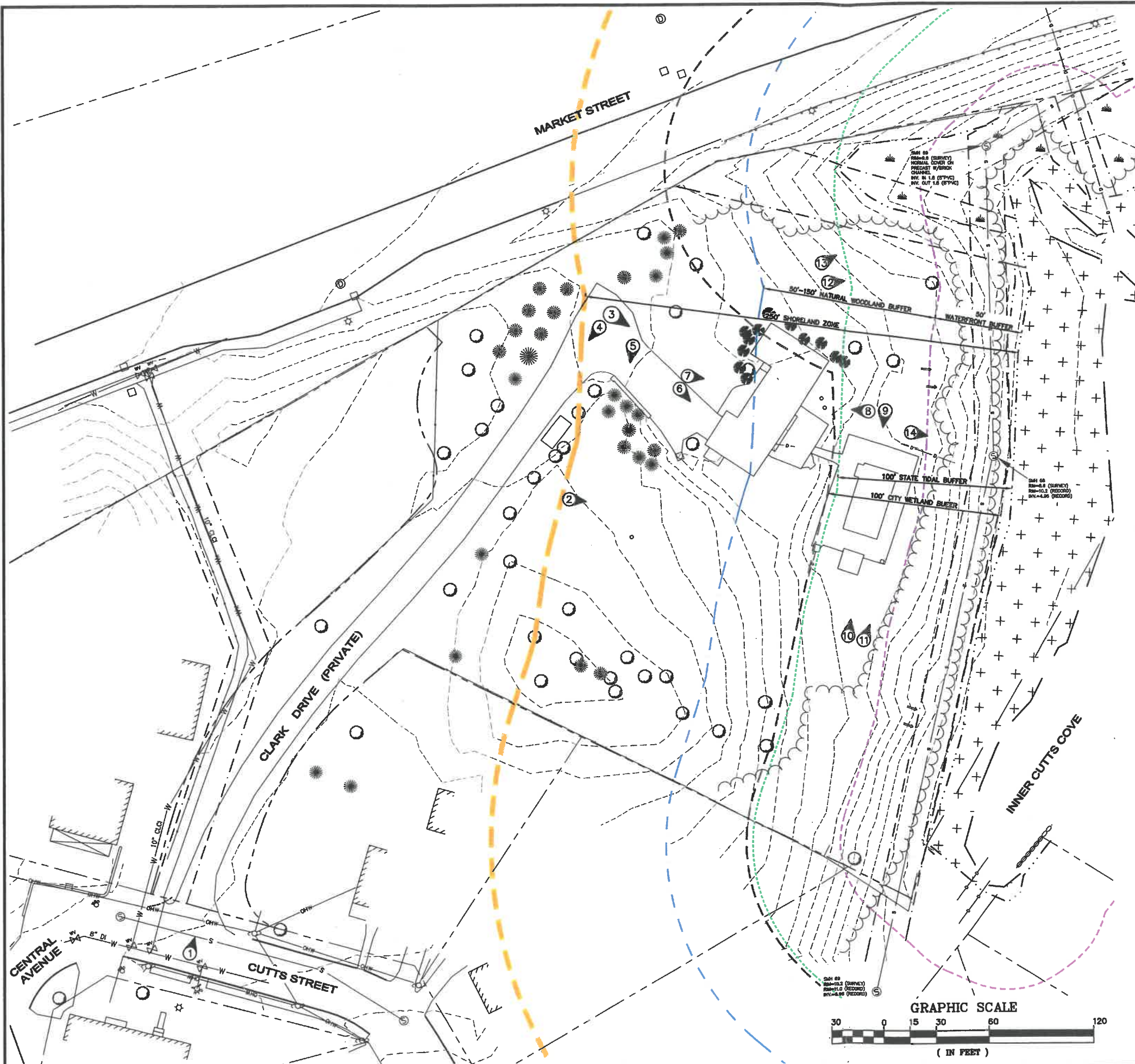


**Photo #13:**  
Looking easterly at existing drainage outlet to Inner Cutts Cove.  
November 24, 2020



**Photo #14:**  
Looking easterly at sewer manhole adjacent to Inner Cutts Cove.  
November 24, 2020



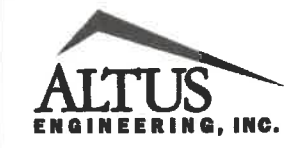
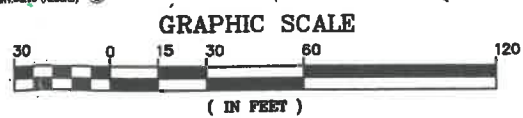


**NOTES**

1. DESIGN INTENT - THIS PLAN IS INTENDED TO PROVIDE THE PHOTOGRAPH LOCATIONS & DIRECTION IN RELATION TO EXISTING FEATURES.
2. THE BASE PLAN USED HERE WAS DEVELOPED FROM "TOPO/ BOUNDARY, WORKSHEET, 1 CLARK DRIVE (PRIVATE)" DATED NOV. 4, 2020 BY KNIGHT HILL LAND SURVEYING SERVICES, INC.

**LEGEND**

- - - - - 50' NHDES PRIMARY BUILDING SETBACK
- - - - - 100' NHDES SETBACK TO HOTEL
- - - - - 100' SETBACK TO FRESHWATER WETLANDS
- - - - - 150' NATURAL WOODLAND BUFFER
- - - - - 250' NHDES SHORELAND SETBACK
- + + + + + TIDAL MUD FLATS
- [Symbol] FRESHWATER WETLANDS
- - - - - HIGHEST OBSERVABLE TIDE LINE (HOTL)
- [Symbol] STONEWALL
- [Symbol] EXISTING TREE LINE
- - - - - EXISTING WATER LINE
- - - - - EXISTING SEWER MAIN
- (2) PHOTOGRAPH LOCATION & DIRECTION



133 Court Street Portsmouth, NH 03801  
 (603) 433-2335 www.altus-eng.com

NOT FOR CONSTRUCTION

ISSUED FOR: CLIENT REVIEW

ISSUE DATE: DECEMBER 29, 2020

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	DISCUSSION	EBS	12/29/20

DRAWN BY: EBS  
 APPROVED BY: EDW  
 DRAWING FILE: 5090-SITE.dwg

SCALE:  
 22" x 34" 1" = 30'  
 11" x 17" 1" = 60'

OWNER:  
**FREDERICK W. WATSON  
 REVOCABLE TRUST,  
 ROBERT D. WATSON,  
 TRUSTEE**  
 63 SLEEPY HOLLOW DRIVE  
 GREENLAND, NH 03840

APPLICANT:  
**FREDERICK W. WATSON  
 REVOCABLE TRUST,  
 ROBERT D. WATSON,  
 TRUSTEE**  
 63 SLEEPY HOLLOW DRIVE  
 GREENLAND, NH 03840

PROJECT:  
**WATSON'S LANDING**  
 TAX MAP 209, LOT 33  
 1 CLARK DRIVE  
 PORTSMOUTH, NH 03801

TITLE:  
**WETLANDS/  
 SHORELAND & CUP  
 PERMIT APPLICATION  
 PHOTO KEY PLAN**

SHEET NUMBER:  
**PHOTO-1**

PS090





Please mail the completed form and required material to:

New Hampshire Division of Historical Resources  
State Historic Preservation Office  
Attention: Review & Compliance  
19 Pillsbury Street, Concord, NH 03301-3570

DHR Use Only

R&C# \_\_\_\_\_

Log In Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Response Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Sent Date \_\_\_\_/\_\_\_\_/\_\_\_\_

## Request for Project Review by the New Hampshire Division of Historical Resources

This is a new submittal

This is additional information relating to DHR Review & Compliance (R&C) #:

### GENERAL PROJECT INFORMATION

Project Title Proposed 4-lot subdivision

Project Location 1 Clark Drive

City/Town Portsmouth Tax Map 209 Lot # 33

NH State Plane - Feet Geographic Coordinates: Easting 1223477 Northing 214069  
(See RPR Instructions and R&C FAQs for guidance.)

Lead Federal Agency and Contact (if applicable) ACOE  
(Agency providing funds, licenses, or permits)

Permit Type and Permit or Job Reference # Not yet assigned

State Agency and Contact (if applicable) NHDES Wetlands

Permit Type and Permit or Job Reference # Not yet assigned

### APPLICANT INFORMATION

Applicant Name Frederick W. Watson Revocable Trust

Mailing Address 53 Sleepy Hollow Drive Phone Number

City Greenland State NH Zip 03840 Email

### CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Erik B. Saari / Altus Engineering, Inc.

Mailing Address 133 Court Street Phone Number 6034332335

City Portsmouth State NH Zip 03801 Email esaari@altus-eng.com

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

**PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION**

Project Boundaries and Description

- Attach the Project Mapping using **EMMIT** or relevant portion of a 7.5' USGS Map. (See RPR Instructions and R&C FAQs for guidance.)
- Attach a detailed narrative description of the proposed project.
- Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
- Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) (Informative photo captions are requested.)
- A DHR records search must be conducted to identify properties within or adjacent to the project area. Provide records search results via EMMIT or in Table 1. (Blank table forms are available on the DHR website.)  
EMMIT or in-house records search conducted on 12 / 24 / 20

Architecture

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area?  Yes  No  
If no, skip to Archaeology section. If yes, submit all of the following information:

Approximate age(s): 64 years

- Photographs of each resource or streetscape located within the project area, with captions, along with a mapped photo key. (Digital photographs are accepted. All photographs must be clear, crisp and focused.)
- If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provide additional photographs showing detailed project work locations. (i.e. Detail photo of windows if window replacement is proposed.)

Archaeology

Does the proposed undertaking involve ground-disturbing activity?  Yes  No  
If yes, submit all of the following information:

- Description of current and previous land use and disturbances.
- Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.)

**Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.**

**DHR Comment/Finding Recommendation** *This Space for Division of Historical Resources Use Only*

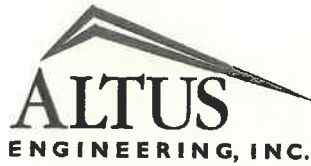
- Insufficient information to initiate review.**  Additional information is needed in order to complete review.
- No Potential to cause Effects  No Historic Properties Affected  No Adverse Effect  Adverse Effect

Comments:

*If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.*

Authorized Signature: \_\_\_\_\_

Date: \_\_\_\_\_



**Civil  
Site Planning  
Environmental  
Engineering**

133 Court Street  
Portsmouth, NH  
03801-4413

December 31, 2020

New Hampshire Department of Environmental Services  
29 Hazen Drive, PO Box 95  
Concord, NH 03302-0095

Re: NHDES Wetlands Permit  
Proposed Shoreline Stabilization Plans  
Tax Sheet 209, Lot 33  
1 Clark Drive  
Portsmouth, NH  
P5090

**ABUTTER'S LIST – Wetlands & Shoreland Permit applications only**

Tax Map / Parcel      Abutter name & address

209 / 32	Nancy A. Gobbi 207-209 Cutts Street Portsmouth, NH 03801
209 / 34	Sandra A. Murtha 545 Ocean Road Portsmouth, NH 03801
209 / 35	Hart Family Revocable Trust Meghan J. & Thomas P. Hart, Co-Trustees 165 Cutts Street Portsmouth, NH 03801
209 / 36	Jennifer E. Munson 149 Cutts Street Portsmouth, NH 03801-3523

wde/5090.011.abutters.list-wetlands-ap-only.doc



U.S. Postal Service™  
**CERTIFIED MAIL® RECEIPT**  
 Domestic Mail Only

For delivery information, visit our website at [www.usps.com](http://www.usps.com)™.

Portsmouth, NH 03801  
**OFFICIAL USE**

Certified Mail Fee: \$3.60

Extra Services & Fees (check box, add fee):  
 Return Receipt (hardcopy) \$0.00  
 Return Receipt (electronic) \$0.00  
 Certified Mail Restricted Delivery \$0.00  
 Adult Signature Required \$0.00  
 Adult Signature Restricted Delivery \$0.00

Postage: \$0.55

Total Postage and Fees: \$4.15

Sent To: **NANCY A. GORBI**  
 Street and Apt. No., or PO Box No.: **201-201 CUTTS STREET**  
 City, State, ZIP+4®: **PORTSMOUTH NH 03801**

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™  
**CERTIFIED MAIL® RECEIPT**  
 Domestic Mail Only

For delivery information, visit our website at [www.usps.com](http://www.usps.com)™.

Portsmouth, NH 03801  
**OFFICIAL USE**

Certified Mail Fee: \$3.60

Extra Services & Fees (check box, add fee):  
 Return Receipt (hardcopy) \$0.00  
 Return Receipt (electronic) \$0.00  
 Certified Mail Restricted Delivery \$0.00  
 Adult Signature Required \$0.00  
 Adult Signature Restricted Delivery \$0.00

Postage: \$0.75

Total Postage and Fees: \$4.35

Sent To: **MAT FAMILY REVOCABLE TRUST**  
 Street and Apt. No., or PO Box No.: **165 CUTTS STREET**  
 City, State, ZIP+4®: **PORTSMOUTH, NH 03801**

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

9060 5906 1000 0542 0202

U.S. Postal Service™  
**CERTIFIED MAIL® RECEIPT**  
 Domestic Mail Only

For delivery information, visit our website at [www.usps.com](http://www.usps.com)™.

Portsmouth, NH 03801  
**OFFICIAL USE**

Certified Mail Fee: \$3.60

Extra Services & Fees (check box, add fee):  
 Return Receipt (hardcopy) \$0.00  
 Return Receipt (electronic) \$0.00  
 Certified Mail Restricted Delivery \$0.00  
 Adult Signature Required \$0.00  
 Adult Signature Restricted Delivery \$0.00

Postage: \$0.55

Total Postage and Fees: \$4.15

Sent To: **JENNIFER E. MUNTIN**  
 Street and Apt. No., or PO Box No.: **149 CUTTS STREET**  
 City, State, ZIP+4®: **PORTSMOUTH NH 03801**

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™  
**CERTIFIED MAIL® RECEIPT**  
 Domestic Mail Only

For delivery information, visit our website at [www.usps.com](http://www.usps.com)™.

Portsmouth, NH 03801  
**OFFICIAL USE**

Certified Mail Fee: \$3.60

Extra Services & Fees (check box, add fee):  
 Return Receipt (hardcopy) \$0.00  
 Return Receipt (electronic) \$0.00  
 Certified Mail Restricted Delivery \$0.00  
 Adult Signature Required \$0.00  
 Adult Signature Restricted Delivery \$0.00

Postage: \$0.75

Total Postage and Fees: \$4.35

Sent To: **SANDRA A. MURTHA**  
 Street and Apt. No., or PO Box No.: **545 OCEAN ROAD**  
 City, State, ZIP+4®: **PORTSMOUTH, NH 03901**

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

0690 5906 1000 0542 0202



**Civil  
Site Planning  
Environmental  
Engineering**

133 Court Street  
Portsmouth, NH  
03801-4413

January 8, 2020

**Subject: NHDES Wetlands Permit Application  
Tax Map 209 Lot 33  
Frederick W. Watson Revocable Trust  
1 Clark Drive  
Portsmouth, NH  
P5090**

Dear Abutter:

Pursuant to State of New Hampshire RSA Chapter 482-A, this letter is to notify you that the Frederick W. Watson Revocable Trust (Tax Map 209, Lot 33), owner and applicant, is submitting a Wetland Permit Application to the NHDES Wetlands Bureau.

The application proposes to raze the existing residence and replace it with a 4-lot residential subdivision. The demolition & subsequent utility installations and other site improvements will impact areas within the previously disturbed 100' tidal buffer zone. There are additional impacts located between the 100-foot and 250-foot zones of the Shoreland Protection Buffer.

**This letter is for the notification of abutting property owners only. The work is greater than 20-feet from abutting your parcel therefore no further action by you is required.**

Once filed, the plans that show the proposed project are available for viewing during normal business hours at the City of Portsmouth City Clerk's office (603) 610-7245 or at the office of the DES Wetlands Bureau (603) 271-2147, 6 Hazen Drive, Concord, N.H. (8am to 4pm). It is suggested the appropriate office is contacted to verify availability of the documents prior to visiting them. Please feel free to contact us, the Applicant's engineering consultant, at (603) 433-2335, if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "E.B. Saari", with a stylized flourish at the end.

Erik B. Saari  
Vice President

wde\5090.008.abutter-notify-wetland.ltr.doc  
**CERTIFIED MAIL**





**Civil  
Site Planning  
Environmental  
Engineering**

133 Court Street  
Portsmouth, NH  
03801-4413

January 8, 2021

**Subject: NHDES Wetlands Permit Application  
Tax Map 209 Lot 33  
Frederick W. Watson Revocable Trust  
1 Clark Drive  
Portsmouth, NH  
P5090**

Dear Abutter:

Pursuant to State of New Hampshire RSA Chapter 482-A, this letter is to notify you that the Frederick W. Watson Revocable Trust (Tax Map 209, Lot 33), owner and applicant, is submitting a Wetland Permit Application to the NHDES Wetlands Bureau.

The application proposes to raze the existing residence and replace it with a 4-lot residential subdivision. The demolition & subsequent utility installations and other site improvements will impact areas within the previously disturbed 100' tidal buffer zone. There are additional impacts located between the 100-foot and 250-foot zones of the Shoreland Protection Buffer.

**This letter is for the notification of abutting property owners only. As the improvements are less than 20-feet from your common property line we are required to attempt to obtain a letter from you stating you have no objections to the proposed improvements that are within 20-feet of the property line.**

**Please review the plan and if you have no objections to the components of the project that are within 20-feet of the common property line, sign the enclosed form and return it in the self-addressed envelope. If the applicant cannot obtain your permission they have the right to apply to NHDES for a waiver of the requirement. The proposed work takes place no closer than the common property line.**

Once filed, the plans that show the proposed project are available for viewing during normal business hours at the City of Portsmouth City Clerk's office (603) 610-7245 or at the office of the DES Wetlands Bureau (603) 271-2147, 6 Hazen Drive, Concord, N.H. (8am to 4pm). It is suggested the appropriate office is contacted to verify availability of the documents prior to visiting them. Please feel free to contact us, the Applicant's engineering consultant, at (603) 433-2335, if you have any questions.

Sincerely,

Erik B. Saari  
Vice President

wde\5090.008.abutter-within-20-feet-notify-wetland.ltr.doc

**CERTIFIED MAIL**

**ABUTTER STATEMENT LETTER  
WETLAND PERMIT APPLICATION**

Altus Engineering, Inc.  
133 Court Street  
Portsmouth, NH 03801

**RE: Wetland Permit Application**

**Tax Map 209, Lot 33  
1 Clark Drive  
Portsmouth, NH 03801**

To whom it may concern,

I/We have reviewed the plan prepared by Altus Engineering, Inc., acting as Agent for The Frederick W. Watson Revocable Trust which depicts proposed improvements associated with the creation of a four-lot residential subdivision at 1 Clark Drive (Proposed as Watson's Landing) and have no objections to the work as proposed.

---

Hart Family Revocable Trust  
165 Cutts Street  
Portsmouth, NH 03801

---

Date

**ABUTTER STATEMENT LETTER**  
**WETLAND PERMIT APPLICATION**

Altus Engineering, Inc.  
133 Court Street  
Portsmouth, NH 03801

**RE: Wetland Permit Application**

**Tax Map 209, Lot 33**  
**1 Clark Drive**  
**Portsmouth, NH 03801**

To whom it may concern,

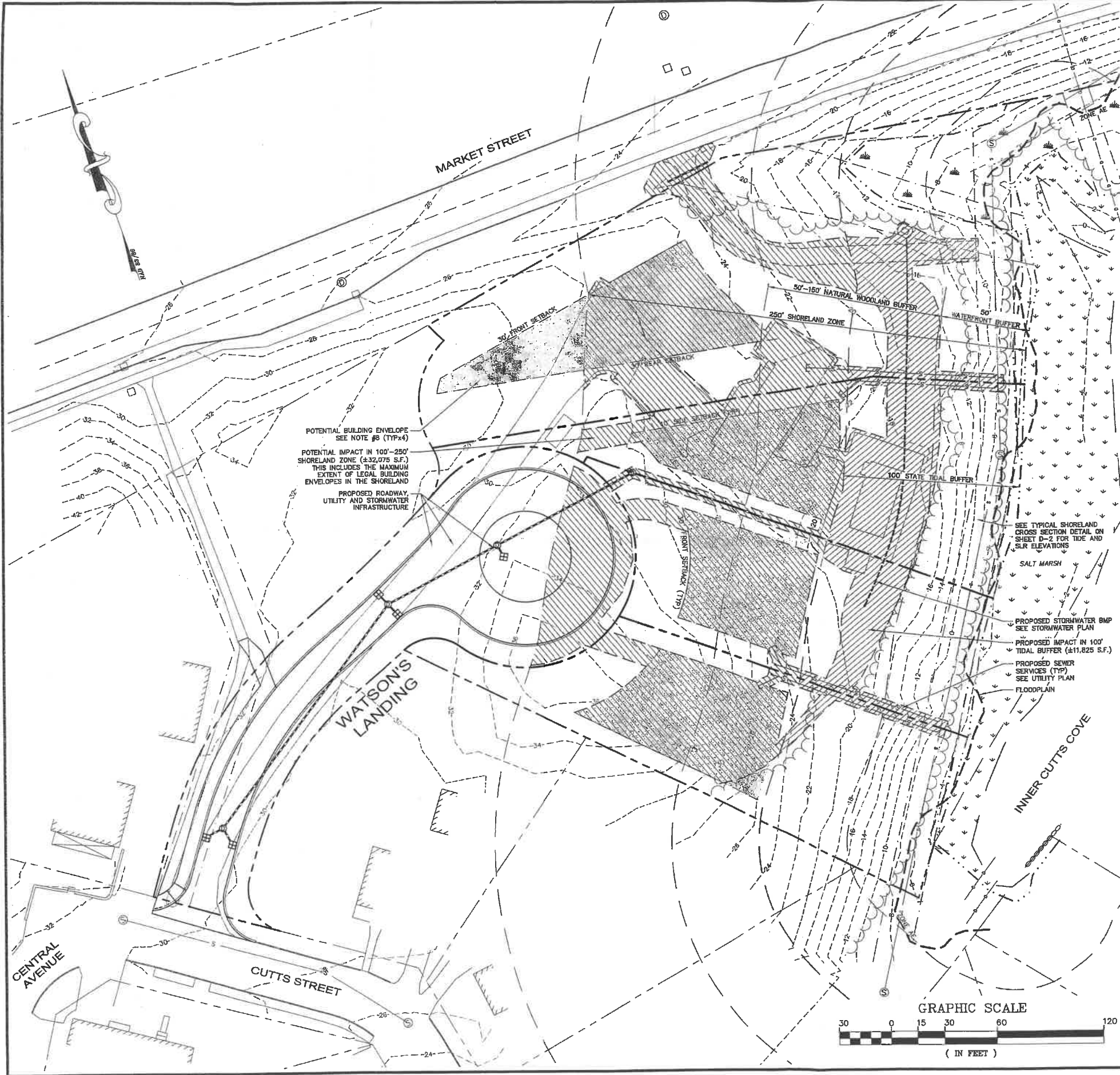
I/We have reviewed the plan prepared by Altus Engineering, Inc., acting as Agent for The Frederick W. Watson Revocable Trust which depicts proposed improvements associated with the creation of a four-lot residential subdivision at 1 Clark Drive (Proposed as Watson's Landing) and have no objections to the work as proposed.

---

Sandra A. Murtha  
545 Ocean Road  
Portsmouth, NH 03801

---

Date



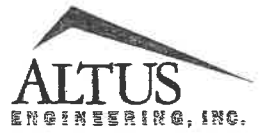
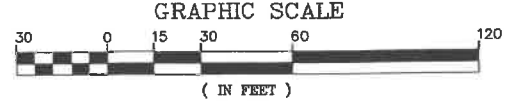
LOCUS  
NOT TO SCALE

**NOTES**

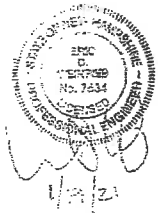
- DESIGN INTENT - THIS PLAN IS INTENDED TO DEPICT A SINGLE-FAMILY RESIDENTIAL SUBDIVISION.
- PROJECT PARCEL: PORTSMOUTH TAX MAP 209, LOT 33
- LOT AREA: ±135,176 S.F. (±3.10 ACRES)
- OWNER: FREDERICK W. WATSON REVOCABLE TRUST  
ROBERT D. WATSON, TRUSTEE  
53 SLEEPY HOLLOW DRIVE GREENLAND, NH 03840
- ROCKINGHAM COUNTY REGISTRY OF DEEDS BK. 5200 PG. 1329, DATED 03/11/2011
- STATE SUBDIVISION APPROVAL N/A (LOT PRE-DATES NHDES REGULATIONS)
- SEWER & WATER SERVICES: CITY OF PORTSMOUTH MUNICIPAL SERVICES
- POTENTIAL BUILDING ENVELOPES INDICATE THE MAXIMUM EXTENT OF FUTURE HOUSE LOCATIONS BASED ON MUNICIPAL BUILDING SETBACKS. AS HOME AND ROADWAY CONSTRUCTION WILL NOT BE PERFORMED CONCURRENTLY, ACTUAL BUILDING FOOTPRINTS AND ASSOCIATED DISTURBANCES ARE UNKNOWN.
- SHORELAND AND TIDAL BUFFER IMPACTS:  
SHORELAND 100'-250': ±32,075 S.F.  
TIDAL BUFFER 0'-100': ±11,825 S.F.  
TOTAL SHORELAND IMPACT: ±43,900 S.F.
- IMPERVIOUS SURFACES IN TIDAL BUFFER:  
EXISTING: ±2,789 S.F.  
PROPOSED: 0 S.F.
- PROPOSED WETLAND DREDGE AND FILL: 0 S.F.
- WETLANDS WERE DELINEATED BY MICHAEL CUOMO, NH CERTIFIED SOILS SCIENTIST #006 AND NH CERTIFIED WETLANDS SCIENTIST #004, ON SEPTEMBER 15, 2018.
- CONSTRUCTION ACTIVITIES SHALL BE MANAGED IN STRICT ACCORDANCE WITH NH RSA 430:53 AND AGR 3800-RELATIVE TO INVASIVE SPECIES. NO INVASIVE SPECIES SHALL BE INSTALLED ON THE PROJECT SITE FOR ANY REASON.

**LEGEND**

- PROPERTY LINE
- - - PROPOSED PROPERTY LINE
- - - EASEMENT LINE
- - - BUILDING SETBACK
- - - 100' CITY WETLAND SETBACK
- - - 100' STATE TIDAL BUFFER
- - - SHORELAND SETBACK
- - - FRESHWATER WETLAND BOUNDARY
- - - TIDAL WETLAND BOUNDARY
- vgc sgc EXISTING PAVEMENT/CURB
- W - EXISTING WATER/CURB STOP/VALVE/HYDRANT
- W - PROPOSED THRUST BLOCK/CURB STOP/VALVE/HYDRANT
- S - EXISTING SEWER/MANHOLE
- S - PROPOSED SEWER/MANHOLE/CLEANOUT
- S - PROPOSED DRAINAGE (HARD PIPE)/CB/DCB/DMH/FES
- S - PROPOSED DRAINAGE (PERFORATED PIPE)/CLEANOUT
- x - SILTFENCE/SEDIMENT BARRIER/CONST. FENCE
- x - EXISTING TREE LINE/BRUSH LINE
- x - PROPOSED DISTURBANCE IN 100'-250' SHORELAND
- x - PROPOSED DISTURBANCE IN 100' TIDAL BUFFER
- x - POTENTIAL BUILDING ENVELOPE
- x - FRESHWATER WETLAND
- x - SALTMARSH



133 Court Street Portsmouth, NH 03801  
(603) 433-2335 www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR: NHDES

ISSUE DATE: JANUARY 18, 2021

NO.	DESCRIPTION	BY	DATE
0	DISCUSSION	EBS	12/31/20
1	NHDES	EBS	01/18/21

DRAWN BY: EBS  
APPROVED BY: EDW  
DRAWING FILE: 5090-SITE.dwg

SCALE:  
22" x 34" 1" = 30'  
11" x 17" 1" = 60'

OWNER:  
**FREDERICK W. WATSON  
REVOCABLE TRUST,  
ROBERT D. WATSON,  
TRUSTEE**  
  
53 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

APPLICANT:  
**FREDERICK W. WATSON  
REVOCABLE TRUST,  
ROBERT D. WATSON,  
TRUSTEE**  
  
53 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

PROJECT:  
**WATSON'S LANDING  
TAX MAP 209, LOT 33  
1 CLARK DRIVE  
PORTSMOUTH, NH 03801**

TITLE:  
**WETLAND/  
SHORELAND PERMIT  
APPLICATION PLAN**

SHEET NUMBER:  
**1 OF 1**





# WATSON'S LANDING Residential Subdivision

**Owner/Applicant:**

FREDERICK W. WATSON REVOCABLE TRUST  
Robert D. Watson, Trustee

53 Sleepy Hollow Drive  
Greenland, NH 03840  
(603) 501-0966

**Civil Engineer:**



133 Court Street  
(603) 433-2335  
Portsmouth, NH 03801  
www.altus-eng.com

**Surveyor:**

KNIGHT HILL LAND SURVEYING SERVICES, INC.  
c/o David Hislop, LLS

34 Old Post Road  
Newington, NH 03801  
(603) 436-1330

**Soil Scientist/Wetland Scientist:**

MICHAEL CUOMO

6 York Pond Road  
York, ME 03909  
(207) 363-4532

**Acoustics Consultant:**

REUTER ASSOCIATES, LLC  
Eric L. Reuter, FASA, INCE Bd. Cert., Principal

10 Vaughan Mall, Suite 201A  
Portsmouth, NH 03801  
(603) 430-2081

1 Clark Drive  
Portsmouth, New Hampshire

Assessor's Parcel 209, Lot 33

ISSUED FOR TAC

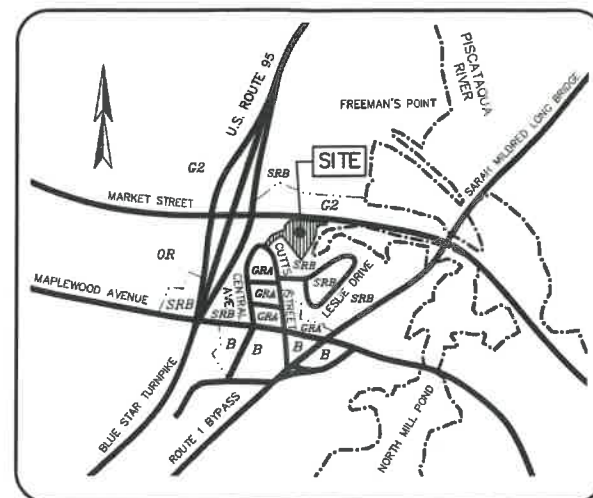
Plan Issue Date:

DECEMBER 1, 2020  
JANUARY 18, 2021

TAC WORK SESSION  
TAC

**Sheet Index  
Title**

Sheet No.:	Rev.	Date
Topo/Boundary Worksheet (by KHLSS)	1 of 1	0 11/04/20
Demolition Plan	C-1	1 01/18/21
Subdivision Plan	C-2	1 01/18/21
Roadway Plan & Profile	C-3	1 01/18/21
Stormwater Management Plan	C-4	1 01/18/21
Utility Plan	C-5	1 01/18/21
Conditional Use Permit Plan	C-6	0 01/18/21
Detail Sheet	D-1	1 01/18/21
Detail Sheet	D-2	1 01/18/21
Detail Sheet	D-3	1 01/18/21
Detail Sheet	D-4	1 01/18/21



LOCUS NOT TO SCALE

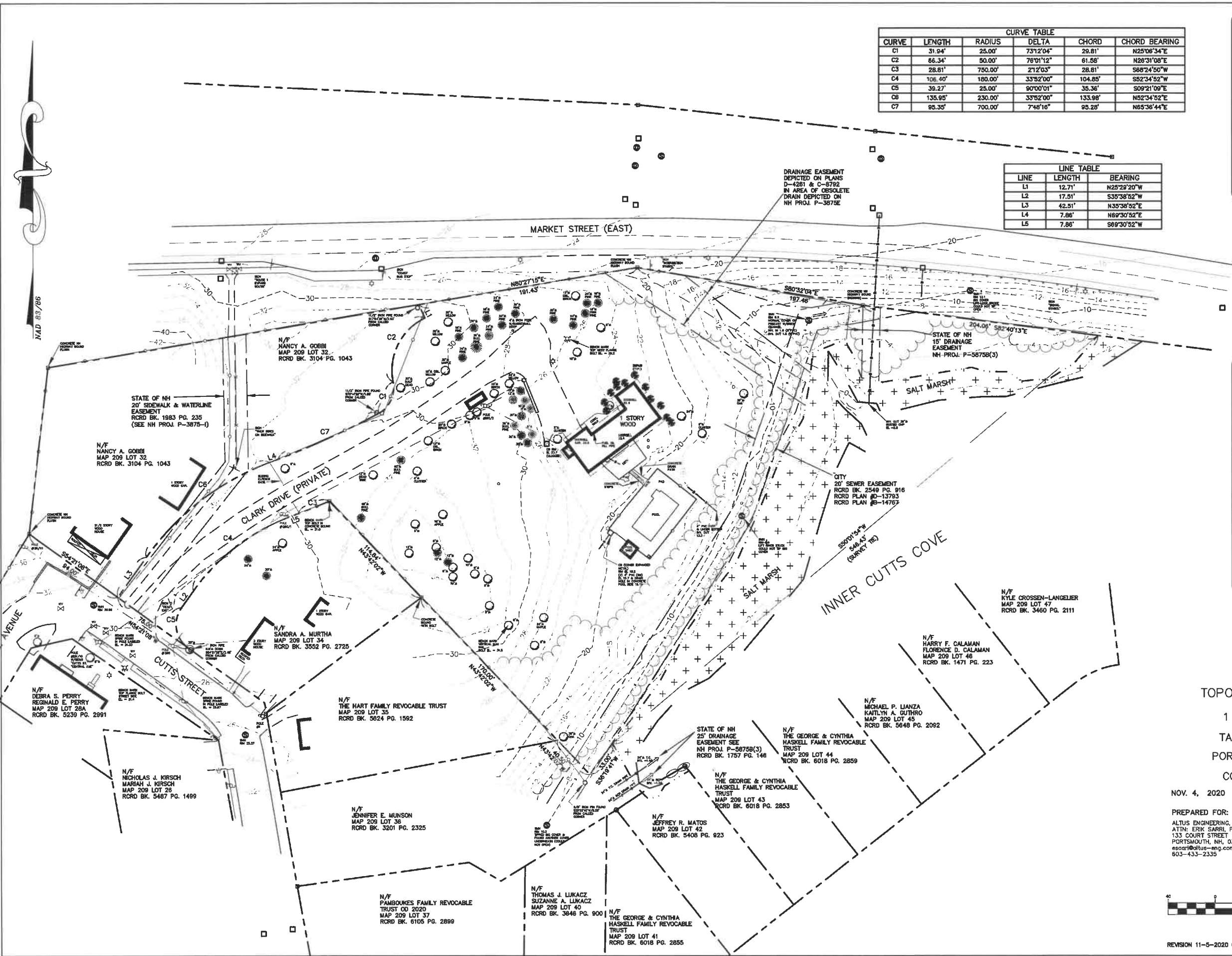
**Permit Summary:**

NHDES Wetlands Permit  
NHDES Shoreland Permit  
Notice of Intent

**Submitted**

January 27, 2021  
January 27, 2021  
By Contractor

**Received**



CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	CHORD BEARING
C1	31.94'	25.00'	73°12'04"	28.81'	N25°06'34"E
C2	66.34'	50.00'	76°01'12"	61.58'	N26°31'08"E
C3	28.81'	750.00'	212°03'	28.81'	S89°24'50"W
C4	108.40'	180.00'	33°52'00"	104.85'	S52°34'52"W
C5	39.27'	25.00'	90°00'01"	35.36'	S09°21'00"E
C6	135.95'	230.00'	33°52'00"	133.98'	N52°34'52"E
C7	65.35'	700.00'	7°48'16"	65.28'	N65°36'44"E

LINE TABLE		
LINE	LENGTH	BEARING
L1	12.71'	N25°29'20"W
L2	17.51'	S33°38'52"W
L3	42.51'	N35°38'52"E
L4	7.86'	N89°30'52"E
L5	7.86'	S89°30'52"W

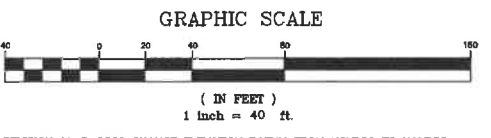
- GENERAL NOTES:**
- 1.) THE EXISTING DETAILS SHOWN WERE LOCATED BY KNIGHT HILL LAND SURVEYING SERVICES, INC. IN OCTOBER 2020.
  - 2.) ELEVATION DATUM NAVD88 ESTABLISHED FROM CUTTS STREET RECONSTRUCTION BENCH MARK SPIKES FOUND IN POLES ACROSS FROM SUBJECT PROPERTY AS LABELED. NH STATE PLANE COORDINATE BASE OF CAD DRAWING ESTABLISHED FROM AMBIT ENGINEERING SUBDIVISION PLAN.
  - 3.) OWNER OF RECORD: FREDERICK W. WATSON REVOCABLE TRUST OF 1998. TAX MAP 209 LOT 33. RECORD DEED: RCRD BOOK 5200 PG. 1329. LOT AREA TO SALT MARSH: 3.1± ACRES.
  - 4.) SUBJECT LOT SUBJECT TO AND BENEFITS FROM AN ELECTRIC AND COMMUNICATIONS SERVICE & MAINTENANCE EASEMENT TO NH ELECTRIC CO. & NEW ENGLAND TELEPHONE & TELEGRAPH CO. PER 1957 DEED BK. 1447 PG. 227. THE DEED HAS NO EASEMENT WIDTH DETAILS.
  - 5.) SUBJECT LOT SUBJECT TO RIGHTS TO THE STATE OF NH TO MAINTAIN SLOPES AND EMBANKMENTS PER 1969 DEED BK. 1957 PG. 146. SEE STATE PLANS PER PLAN REFERENCE 1.

- PLAN REFERENCES:**
- 1.) "STATE OF NH DPW FEDERAL AID PROJECT I-95-(24)14 RIGHT OF WAY PLANS" NH PROJ. P-3875E, NH PROJ. P-3875H-1, NH PROJ. P-3875I, NH PROJ. P-3875J, NH PROJ. P-3875K(2) & NH PROJ. 5875B(3).
  - 2.) "PLAN OF LOTS PORTSMOUTH, NH FOR HERBERT W. POPE" BY JOHN W. DURGIN, REVISED JAN. 1974, RCRD PLAN D-4261.
  - 3.) "LOT LINE REVISION PORTSMOUTH NH FOR HERBERT W. POPE" BY JOHN W. DURGIN ASSOC., DATED JUNE 12, 1979, RCRD PLAN C-8792.
  - 4.) "EASEMENT PLAN OF LAND IN PORTSMOUTH, NH" BY WHITMAN & HOWARD, INC., DATED APRIL 4, 1985, RCRD PLAN D-13793.
  - 5.) "SUBDIVISION PLAN OF LAND IN PORTSMOUTH, NH" BY WHITMAN & HOWARD, INC., DATED OCT. 15, 1985, RCRD PLAN B-14767.
  - 6.) "LOT LINE ADJUSTMENT PLAN 200 CHASE DR. & 373 CUTTS AVE." BY JAMES VERA & ASSOC., DATED 5-23-2013, RCRD PLAN D-38287.
  - 7.) "PLAN OF BERSUM GARDENS FOR MARGO CONST. CO., PORTSMOUTH, NH" BY JOHN W. DURGIN, DATED OCT. 1955, RCRD PLAN 02178.
  - 8.) "PLAN OF LAND PORTSMOUTH NH FOR JOSEPH LAMB" BY JOHN W. DURGIN, DATED DEC. 1968, RCRD PLAN 1303.
  - 9.) "IMPROVEMENTS TO MAPLEWOOD AVE. UTILITY PLAN & PROFILE - CENTRAL & CUTTS FOR PORTSMOUTH DPW" BY GPL, CERTIFIED 1-18-18, SHEETS 52 & 53 OF 184.

TOPO/BOUNDARY WORKSHEET  
 1 CLARK DRIVE (PRIVATE)  
 TAX MAP 209 LOT 33  
 PORTSMOUTH, NEW HAMPSHIRE  
 COUNTY OF ROCKINGHAM  
 NOV. 4, 2020 SCALE 1" = 40' PROJECT # 2222PNTS

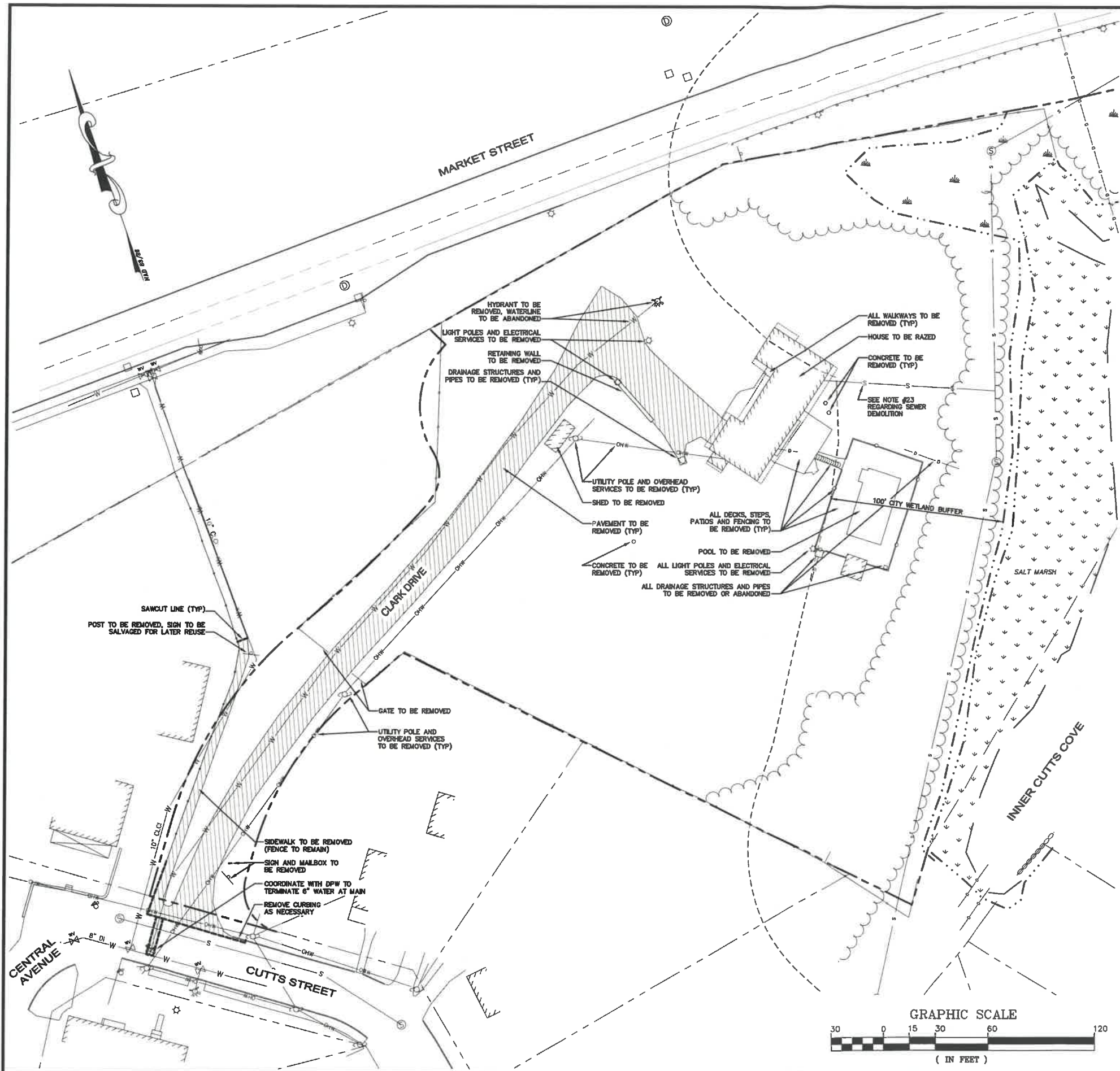
PREPARED FOR:  
 ALTUS ENGINEERING, INC.  
 ATTN: ERIK SARRI, PE.  
 133 COURT STREET  
 PORTSMOUTH, NH, 03801  
 esarr@altus-eng.com  
 603-433-2335

PREPARED BY:  
 KNIGHT HILL LAND SURVEYING  
 SERVICES, INC.  
 c/o DAVID HISLOP, LLS  
 34 OLD POST RD.  
 NEWINGTON, NH, 03801  
 dave@khlandsurveying.com  
 603-436-1330



REVISION 11-5-2020 CHANGE ELEVATION DATUM FROM NVD29 TO NAVD88





**DEMOLITION NOTES**

1. CITY DEMOLITION PERMIT REQUIRED PRIOR TO ANY DEMOLITION ACTIVITIES. CONTRACTOR IS NOTIFIED THAT THIS PERMIT PROCESS MAY REQUIRE A 30-DAY LEAD TIME.
2. CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES SCHEDULED TO REMAIN.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TIMELY NOTIFICATION OF ALL PARTIES, CORPORATIONS, COMPANIES, INDIVIDUALS AND STATE AND LOCAL AUTHORITIES OWNING AND/OR HAVING JURISDICTION OVER ANY UTILITIES RUNNING TO, THROUGH OR ACROSS AREAS TO BE DISTURBED BY DEMOLITION AND/OR CONSTRUCTION ACTIVITIES WHETHER OR NOT SAID UTILITIES ARE SUBJECT TO DEMOLITION, RELOCATION, MODIFICATION AND/OR CONSTRUCTION.
4. ALL UTILITY DISCONNECTIONS/DEMOLITIONS/RELOCATIONS SHALL BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES, PORTSMOUTH DPW AND ABUTTING PROPERTY OWNERS. UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELATED EXCAVATION, TRENCHING AND BACKFILLING.
5. WHERE SPECIFIED TO REMAIN, MANHOLE RIMS, CATCH BASIN GRATES, VALVE COVERS, HANDHOLES, ETC. SHALL BE ADJUSTED TO FINISH GRADE UNLESS OTHERWISE SPECIFIED.
6. SEE EROSION CONTROL PLANS FOR EROSION AND SEDIMENT CONTROL MEASURES THAT SHALL BE IN PLACE PRIOR TO DEMOLITION ACTIVITIES.
7. ALL MATERIALS SCHEDULED FOR DEMOLITION OR REMOVAL ON PRIVATE PROPERTY SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED.
8. ALL MATERIAL SCHEDULED TO BE REMOVED SHALL BE LEGALLY DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS/CODES.
9. WATER: PORTSMOUTH DPW WATER DIVISION, JIM TOW, (603) 427-1530.
10. SEWER: PORTSMOUTH DPW SEWER DIVISION, JIM TOW, (603) 427-1530.
11. TELECOMMUNICATIONS: CONSOLIDATED, JOE CONSIDINE, (603) 427-5525.
12. CABLE: COMCAST, MIKE COLLINS, (603) 679-5695, EXT. 1037.
13. ELECTRICAL: EVERSOURCE, MICHAEL BUSBY, (603) 332-4227, EXT. 5555334.
14. GAS: UNITIL, DAVID BEAULIEU, (603) 294-5144.
15. CONTRACTOR TO CONTACT PORTSMOUTH DPW A MINIMUM OF TWO WEEKS PRIOR TO ANY DEMOLITION TO COORDINATE ALL WORK CONCERNING DISCONNECTION/DEMOLITION OF ANY PROPOSED WATER AND SEWER LINE IMPROVEMENTS.
16. ALL WATER MAIN AND SERVICE DISCONNECTIONS SHALL CONFORM TO PORTSMOUTH DPW STANDARDS.
17. NO BURNING SHALL BE PERMITTED PER LOCAL REGULATIONS.
18. HAZARDOUS MATERIALS ENCOUNTERED DURING DEMOLITION AND CONSTRUCTION ACTIVITIES SHALL BE ABATED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS.
19. AT NO TIME SHALL ANY UTILITY SERVICE OR VEHICULAR ACCESS TO ADJOINING PROPERTIES BE COMPLETELY INTERRUPTED UNLESS A FULL SHUTDOWN IS COORDINATED WITH ALL AFFECTED PARTIES AND UTILITY PROVIDER(S).
20. SHOULD GROUNDWATER BE ENCOUNTERED DURING EXCAVATION, APPROPRIATE BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED TO ENSURE SEDIMENT LADEN WATER IS NOT DISCHARGED INTO THE CITY DRAINAGE SYSTEM. A DISCHARGE PERMIT SHALL BE OBTAINED PRIOR TO DISCHARGING GROUNDWATER.
21. EXISTING HOUSE IS SERVICED BY AN INTERNAL HEATING OIL TANK. REMOVAL AND DISPOSAL OF TANK SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
22. THIS PLAN IS INTENDED TO PROVIDE MINIMUM GUIDELINES FOR THE DEMOLITION OF EXISTING SITE FEATURES. UNLESS OTHERWISE NOTED TO REMAIN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL BUILDINGS, PAVEMENT, CONCRETE, CURBING, SIGNS, POLES, UTILITIES, FENCES, VEGETATION AND OTHER EXISTING FEATURES AS NECESSARY TO FULLY CONSTRUCT THE PROJECT.
23. EXISTING SEWER SERVICE LOCATION IS APPROXIMATE. CONTRACTOR SHALL PERFORM TEST PITS AND OTHER WORK AS NECESSARY TO LOCATE LINE. SERVICE SHALL BE TERMINATED AT THE MAIN IN ACCORDANCE WITH DPW STANDARDS.

**ALTUS ENGINEERING, INC.**

133 Court Street Portsmouth, NH 03801  
(603) 433-2335 www.altus-eng.com



**NOT FOR CONSTRUCTION**

ISSUED FOR: TAC

ISSUE DATE: JANUARY 18, 2021

NO.	DESCRIPTION	BY	DATE
0	TAC WORK SESSION	EBS	12/01/20
1	TAC	EBS	01/18/21

DRAWN BY: EBS  
APPROVED BY: EDW  
DRAWING FILE: 5090-SITE.dwg

SCALE:  
22" x 34" 1" = 30'  
11" x 17" 1" = 60'

OWNER:  
**FREDERICK W. WATSON REVOCABLE TRUST, ROBERT D. WATSON, TRUSTEE**  
63 SLEEPY HOLLOW DRIVE GREENLAND, NH 03840

APPLICANT:  
**FREDERICK W. WATSON REVOCABLE TRUST, ROBERT D. WATSON, TRUSTEE**  
63 SLEEPY HOLLOW DRIVE GREENLAND, NH 03840

PROJECT:  
**WATSON'S LANDING**  
TAX MAP 209, LOT 33  
1 CLARK DRIVE PORTSMOUTH, NH 03801

TITLE:  
**DEMOLITION PLAN**

SHEET NUMBER:  
**C-1**



PERIMETER CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	31.94'	25.00'	73°12'04"
C2	66.34'	50.00'	76°01'12"
C3	28.81'	750.00'	2°12'03"
C4	106.40'	180.00'	33°52'00"
C5	39.27'	25.00'	90°00'01"
C6	135.95'	230.00'	33°52'00"
C7	95.35'	700.00'	7°48'16"

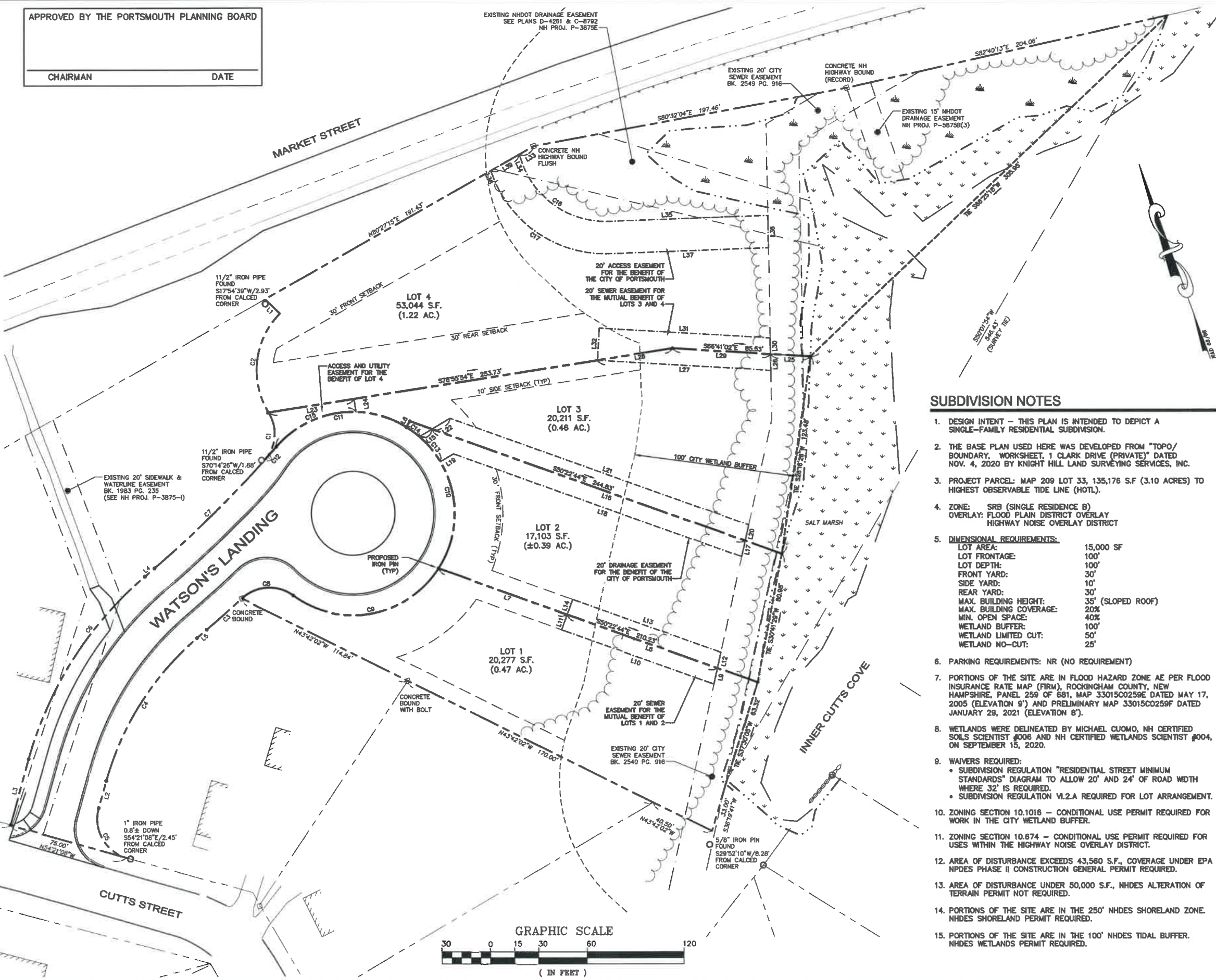
PERIMETER LINE TABLE		
LINE	LENGTH	BEARING
L1	12.71'	N25°29'20"W
L2	17.51'	S35°38'52"W
L3	42.51'	N35°38'52"E
L4	7.86'	N69°30'52"E
L5	7.86'	S89°30'52"W

PROPOSED CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C8	34.44'	25.00'	78°55'33"
C9	102.80'	63.00'	93°29'17"
C10	100.00'	63.00'	90°58'33"
C11	88.06'	63.00'	80°58'39"
C12	10.94'	700.00'	0°53'43"
C13	20.33'	63.00'	18°29'23"
C14	10.00'	63.00'	8°05'41"
C15	58.04'	63.00'	50°57'51"
C16	68.81'	65.00'	71°50'59"
C17	94.05'	75.00'	71°50'59"

PROPOSED LINE TABLE		
LINE	LENGTH	BEARING
L6	4.20'	N51°48'32"E
L7	84.93'	S50°22'44"E
L8	96.86'	S50°22'44"E
L9	10.08'	S32°22'09"W
L10	100.18'	N50°22'44"W
L11	10.00'	N39°37'15"E
L12	10.08'	N32°22'09"E
L13	97.82'	N50°22'44"W
L14	10.00'	S39°37'15"W
L15	9.04'	N79°01'34"E
L16	208.39'	S50°22'44"E
L17	10.08'	S32°22'09"W
L18	190.00'	N50°22'44"W
L19	9.41'	S79°01'34"W
L20	10.08'	N32°22'09"E
L21	198.90'	N50°22'44"W
L22	12.94'	N79°01'34"E
L23	53.96'	S78°55'54"E
L24	8.10'	N110°40'05"E
L25	24.70'	N68°41'02"W
L26	10.03'	S18°55'08"W
L27	107.67'	N68°41'02"W
L28	47.14'	S78°55'54"E
L29	60.83'	S68°41'02"E
L30	10.03'	N18°55'08"E
L31	106.13'	N68°41'02"W
L32	20.00'	S2°18'57"W
L33	10.85'	S80°27'15"W
L34	5.86'	S0°18'19"E
L35	98.72'	S72°09'18"E
L36	20.00'	N18°55'08"E
L37	98.34'	N72°09'18"W
L38	2.61'	N0°18'19"W
L39	20.28'	N60°27'15"E

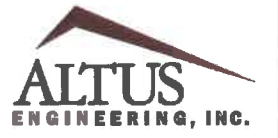
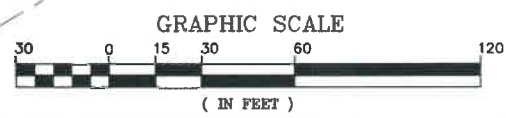
APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN \_\_\_\_\_ DATE \_\_\_\_\_



**SUBDIVISION NOTES**

- DESIGN INTENT - THIS PLAN IS INTENDED TO DEPICT A SINGLE-FAMILY RESIDENTIAL SUBDIVISION.
- THE BASE PLAN USED HERE WAS DEVELOPED FROM "TOPO/BOUNDARY, WORKSHEET, 1 CLARK DRIVE (PRIVATE)" DATED NOV. 4, 2020 BY KNIGHT HILL LAND SURVEYING SERVICES, INC.
- PROJECT PARCEL: MAP 209 LOT 33, 135,176 S.F. (3.10 ACRES) TO HIGHEST OBSERVABLE TIDE LINE (HOTL).
- ZONE: SRB (SINGLE RESIDENCE B)  
OVERLAY: FLOOD PLAIN DISTRICT OVERLAY  
HIGHWAY NOISE OVERLAY DISTRICT
- DIMENSIONAL REQUIREMENTS:**  
LOT AREA: 15,000 SF  
LOT FRONTAGE: 100'  
LOT DEPTH: 100'  
FRONT YARD: 30'  
SIDE YARD: 10'  
REAR YARD: 30'  
MAX. BUILDING HEIGHT: 35' (SLOPED ROOF)  
MAX. BUILDING COVERAGE: 20%  
MIN. OPEN SPACE: 40%  
WETLAND BUFFER: 100'  
WETLAND LIMITED CUT: 50'  
WETLAND NO-CUT: 25'
- PARKING REQUIREMENTS: NR (NO REQUIREMENT)
- PORTIONS OF THE SITE ARE IN FLOOD HAZARD ZONE AE PER FLOOD INSURANCE RATE MAP (FIRM), ROCKINGHAM COUNTY, NEW HAMPSHIRE, PANEL 259 OF 681, MAP 33015C0259E DATED MAY 17, 2005 (ELEVATION 9') AND PRELIMINARY MAP 33015C0259F DATED JANUARY 29, 2021 (ELEVATION 8').
- WETLANDS WERE DELINEATED BY MICHAEL CUOMO, NH CERTIFIED SOILS SCIENTIST #006 AND NH CERTIFIED WETLANDS SCIENTIST #004, ON SEPTEMBER 15, 2020.
- WAIVERS REQUIRED:  
• SUBDIVISION REGULATION "RESIDENTIAL STREET MINIMUM STANDARDS" DIAGRAM TO ALLOW 20' AND 24' OF ROAD WIDTH WHERE 32' IS REQUIRED.  
• SUBDIVISION REGULATION V.2.A REQUIRED FOR LOT ARRANGEMENT.
- ZONING SECTION 10.1018 - CONDITIONAL USE PERMIT REQUIRED FOR WORK IN THE CITY WETLAND BUFFER.
- ZONING SECTION 10.674 - CONDITIONAL USE PERMIT REQUIRED FOR USES WITHIN THE HIGHWAY NOISE OVERLAY DISTRICT.
- AREA OF DISTURBANCE EXCEEDS 43,560 S.F., COVERAGE UNDER EPA NPDES PHASE II CONSTRUCTION GENERAL PERMIT REQUIRED.
- AREA OF DISTURBANCE UNDER 50,000 S.F., NHDES ALTERATION OF TERRAIN PERMIT NOT REQUIRED.
- PORTIONS OF THE SITE ARE IN THE 250' NHDES SHORELAND ZONE. NHDES SHORELAND PERMIT REQUIRED.
- PORTIONS OF THE SITE ARE IN THE 100' NHDES TIDAL BUFFER. NHDES WETLANDS PERMIT REQUIRED.



133 Court Street Portsmouth, NH 03801  
(603) 433-2335 www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR: TAC

ISSUE DATE: JANUARY 18, 2021

NO.	DESCRIPTION	BY	DATE
0	TAC WORK SESSION	EBS	12/01/20
1	TAC	EBS	01/18/21

DRAWN BY: EBS  
APPROVED BY: EDW  
DRAWING FILE: 5090-SITE.dwg

SCALE:  
22" x 34" 1" = 30'  
11" x 17" 1" = 60'

OWNER:  
**FREDERICK W. WATSON  
REVOCABLE TRUST,  
ROBERT D. WATSON,  
TRUSTEE**  
63 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

APPLICANT:  
**FREDERICK W. WATSON  
REVOCABLE TRUST,  
ROBERT D. WATSON,  
TRUSTEE**  
63 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

PROJECT:  
**WATSON'S LANDING  
TAX MAP 209, LOT 33  
1 CLARK DRIVE  
PORTSMOUTH, NH 03801**

TITLE:

SUBDIVISION PLAN

SHEET NUMBER:  
**C-2**

P5090

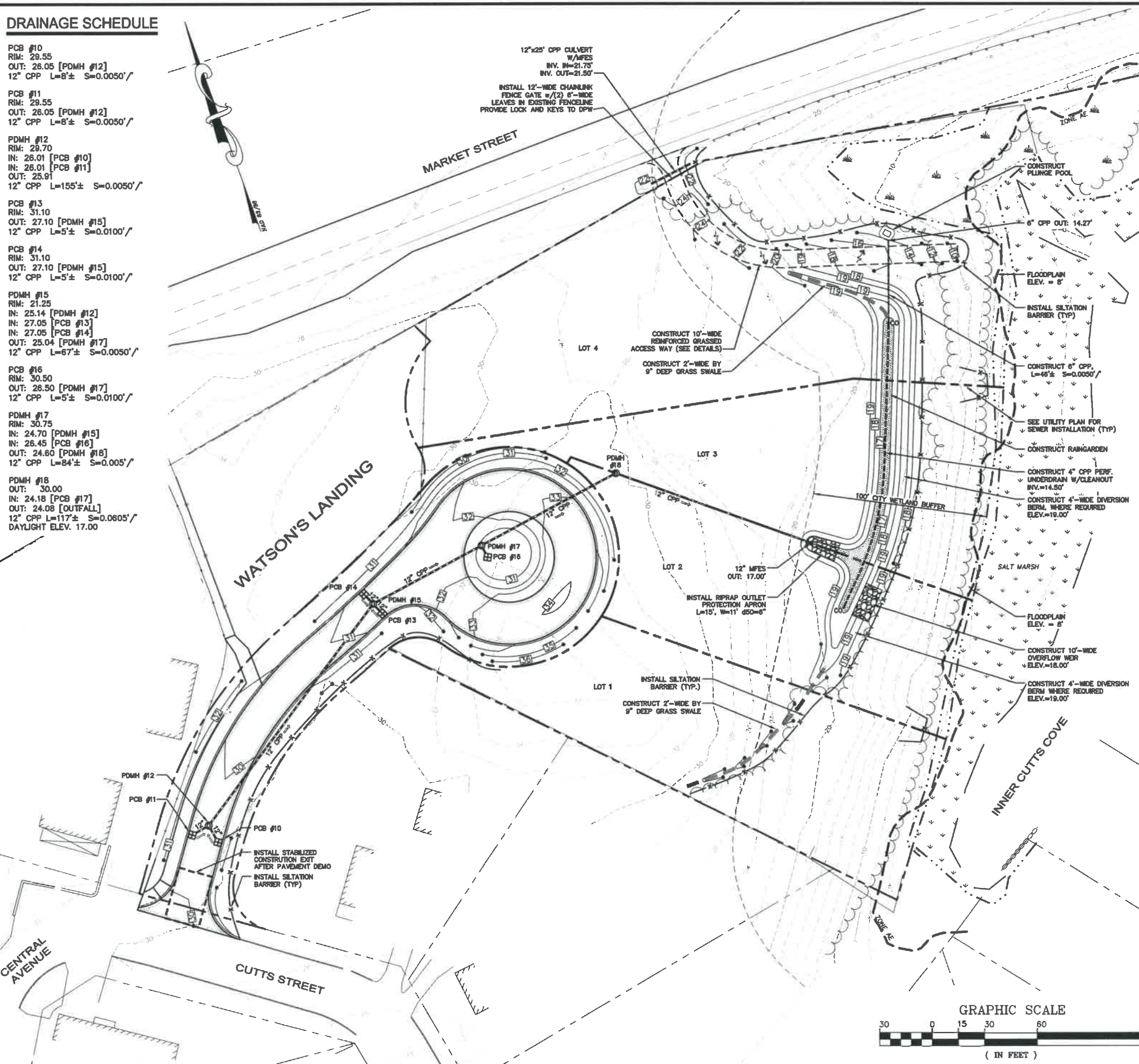






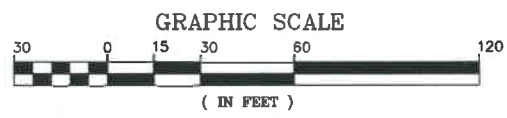
**DRAINAGE SCHEDULE**

- PCB #10  
RIM: 29.55  
OUT: 26.05 [PDMH #12]  
12" CPP L=8'± S=0.0050'/
- PCB #11  
RIM: 29.55  
OUT: 26.05 [PDMH #12]  
12" CPP L=8'± S=0.0050'/
- PDMH #12  
RIM: 29.70  
IN: 26.01 [PCB #10]  
IN: 26.01 [PCB #11]  
OUT: 25.91  
12" CPP L=155'± S=0.0050'/
- PCB #13  
RIM: 31.10  
OUT: 27.10 [PDMH #15]  
12" CPP L=5'± S=0.0100'/
- PCB #14  
RIM: 31.10  
OUT: 27.10 [PDMH #15]  
12" CPP L=5'± S=0.0100'/
- PDMH #15  
RIM: 21.25  
IN: 25.14 [PDMH #12]  
IN: 27.05 [PCB #13]  
IN: 27.05 [PCB #14]  
OUT: 25.04 [PDMH #17]  
12" CPP L=67'± S=0.0050'/
- PCB #16  
RIM: 30.50  
OUT: 26.50 [PDMH #17]  
12" CPP L=5'± S=0.0100'/
- PDMH #17  
RIM: 30.75  
IN: 24.70 [PDMH #15]  
IN: 26.45 [PCB #16]  
OUT: 24.60 [PDMH #18]  
12" CPP L=84'± S=0.005'/'
- PDMH #18  
OUT: 30.00  
IN: 24.18 [PCB #17]  
OUT: 24.08 [OUTFALL]  
12" CPP L=117'± S=0.0605'/'  
DAYLIGHT ELEV. 17.00



**STORMWATER MANAGEMENT NOTES**

1. TOTAL AREA OF PROJECT DISTURBANCE: ±47,550 S.F.
2. DO NOT BEGIN CONSTRUCTION UNTIL ALL STATE AND LOCAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
3. CONTRACTOR SHALL OBTAIN A "DIGSAFE" NUMBER AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.
4. ALL CONSTRUCTION SHALL MEET THE MINIMUM CONSTRUCTION STANDARDS OF THE CITY OF PORTSMOUTH AND NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
5. ALL BENCHMARKS AND TOPOGRAPHY SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING CONSTRUCTION.
6. UNLESS OTHERWISE AGREED IN WRITING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING TEMPORARY BENCHMARKS (TBM) AND PERFORMING ALL CONSTRUCTION SURVEY LAYOUT.
7. PRIOR TO CONSTRUCTION, FIELD VERIFY JUNCTIONS, LOCATIONS AND ELEVATIONS/INVERTS OF ALL EXISTING STORMWATER AND UTILITY LINES. PRESERVE AND PROTECT LINES TO BE RETAINED.
8. TEMPORARY INLET PROTECTION MEASURES SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASINS WITHIN 100' OF THE PROJECT SITE WHEN SITE WORK WITHIN CONTRIBUTING AREAS IS ACTIVE OR SAID AREAS HAVE NOT BEEN STABILIZED.
9. PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES FOR FOUNDATIONS, PAVEMENT AREAS, UTILITY TRENCHES AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL. IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER, EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATIONS. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.
10. IF SUITABLE, EXCAVATED MATERIALS SHALL BE PLACED AS FILL WITHIN UPLAND AREAS ONLY AND SHALL NOT BE PLACED WITHIN WETLANDS. PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION.
11. ALL CATCH BASIN, MANHOLE AND OTHER DRAINAGE RIMS SHALL BE SET FLUSH WITH OR NO LESS THAN 0.1' BELOW FINISH GRADE. ANY RIM ABOVE SURROUNDING FINISH GRADE SHALL NOT BE ACCEPTED.
12. IN ORDER TO PROVIDE VISUAL CLARITY ON THE PLANS, DRAINAGE AND OTHER UTILITY STRUCTURES MAY NOT BE DRAWN TO SCALE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SIZING AND LOCATION OF ALL STRUCTURES AND IS DIRECTED TO RESOLVE ANY POTENTIAL DISCREPANCY WITH THE ENGINEER PRIOR TO CONSTRUCTION.
13. ALL CPP PIPE SHALL BE ADS N-12 OR APPROVED EQUAL.
14. PROJECT SUBJECT TO EPA NPDES PHASE II. NOI, SWPPP AND MINIMUM WEEKLY INSPECTIONS REQUIRED.
15. NO EARTHWORK, STUMPING OR GRUBBING SHALL COMMENCE UNTIL ALL APPROPRIATE SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE PROPERLY MAINTAINED IN GOOD WORKING ORDER FOR THE DURATION OF CONSTRUCTION AND THE SITE IS STABILIZED.
16. SEE DETAIL SHEETS FOR PERTINENT SEDIMENT AND EROSION CONTROL DETAILS AND ADDITIONAL NOTES.
17. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DESIGN STANDARDS AND SPECIFICATIONS SET FORTH IN THE NHDES NH STORMWATER MANUALS, VOL. 1-3, DATED DECEMBER 2008 AS AMENDED.
18. CONTRACTOR SHALL CONTROL DUST BY SPRAYING WATER, SWEEPING PAVED SURFACES, PROVIDING TEMPORARY VEGETATION, AND/OR MULCHING EXPOSED AREAS AND STOCKPILES.
19. THE CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO PREVENT EROSION, PREVENT SEDIMENT FROM LEAVING THE SITE AND/OR ENTERING WETLANDS AND ENSURE PERMANENT SOIL STABILIZATION.
20. ALL EROSION CONTROL BLANKETS AND FASTENERS SHALL BE BIODEGRADEABLE.
21. ALL SWALES AND DETENTION PONDS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
22. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE SIX (6") INCHES OF COMPACTED LOAM, LIMESTONE, FERTILIZER, SEED, AND MULCH USING APPROPRIATE SOIL STABILIZATION TECHNIQUES.
23. UPON COMPLETION OF CONSTRUCTION, ALL DRAINAGE INFRASTRUCTURE SHALL BE CLEANED OF ALL DEBRIS AND SEDIMENT AND ALL TEMPORARY EROSION AND SEDIMENT CONTROLS REMOVED AND ANY AREAS DISTURBED BY THE REMOVAL SMOOTHED AND REVEGETATED.



133 Court Street Portsmouth, NH 03801  
(603) 433-2335 www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR: TAC

ISSUE DATE: JANUARY 18, 2021

NO.	DESCRIPTION	BY	DATE
0	TAC WORK SESSION	EBS	12/01/20
1	TAC	EBS	01/18/21

DRAWN BY: EBS  
APPROVED BY: EDW  
DRAWING FILE: 5090-SITE.dwg

SCALE:  
22" x 34" 1" = 30'  
11" x 17" 1" = 60'

OWNER:  
**FREDERICK W. WATSON  
REVOCABLE TRUST,  
ROBERT D. WATSON,  
TRUSTEE**  
63 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

APPLICANT:  
**FREDERICK W. WATSON  
REVOCABLE TRUST,  
ROBERT D. WATSON,  
TRUSTEE**  
63 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

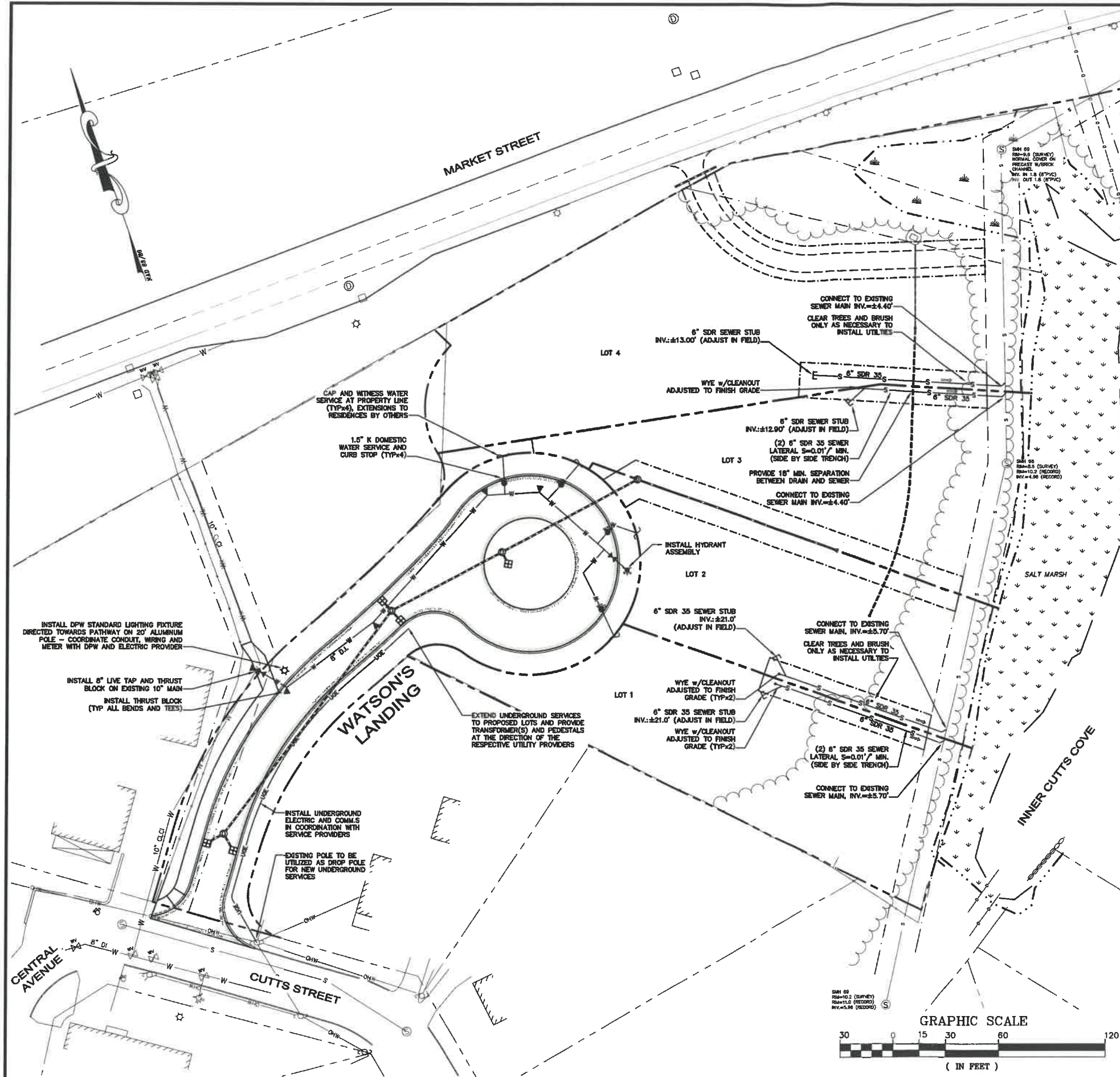
PROJECT:  
**WATSON'S LANDING  
TAX MAP 209, LOT 33  
1 CLARK DRIVE  
PORTSMOUTH, NH 03801**

TITLE:  
**STORMWATER  
MANAGEMENT PLAN**

SHEET NUMBER:  
**C-4**

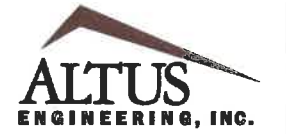
P5090





**UTILITY NOTES**

1. THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE. CATCH BASINS, MANHOLES, WATER GATES, ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY PROVIDERS AND GOVERNMENTAL AGENCIES. AS SUCH, THEY ARE NOT INCLUSIVE AS OTHER UTILITIES AND UNDERGROUND STRUCTURES THAT ARE NOT SHOWN ON THE PLANS MAY EXIST. THE ENGINEER, SURVEYOR AND OWNER ACCEPT NO RESPONSIBILITY FOR POTENTIAL INACCURACIES IN THE PLAN AND/OR UNFORESEEN CONDITIONS. THE CONTRACTOR SHALL NOTIFY, IN WRITING, SAID AGENCIES, UTILITY PROVIDERS, CITY OF PORTSMOUTH DPW AND OWNER'S AUTHORIZED REPRESENTATIVE AND CALL DIG SAFE AT 1 (800) DIG-SAFE AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION WORK.
2. PRIOR TO CONSTRUCTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND FIELD VERIFY JUNCTIONS, LOCATIONS AND ELEVATIONS/INVERTS OF ALL EXISTING AND PROPOSED STORMWATER AND UTILITY LINES. CONFLICTS SHALL BE ANTICIPATED AND ALL EXISTING LINES TO BE RETAINED SHALL BE PROTECTED. ANY DAMAGE DONE TO EXISTING UTILITIES SHALL BE REPAIRED AND, IF NECESSARY, EXISTING UTILITIES SHALL BE RELOCATED AT NO EXTRA COST TO THE OWNER. ALL CONFLICTS SHALL BE RESOLVED WITH THE INVOLVEMENT OF THE ENGINEER, DPW AND APPROPRIATE UTILITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE POSTING OF ALL BONDS AND PAYMENT OF ALL TAP, TIE-IN AND CONNECTION FEES.
4. ALL ROAD/LANE CLOSURES OR OTHER TRAFFIC INTERRUPTIONS SHALL BE COORDINATED WITH THE PORTSMOUTH POLICE DEPARTMENT AND DPW AT LEAST TWO WEEKS PRIOR TO COMMENCING RELATED CONSTRUCTION.
5. ALL CONSTRUCTION SHALL MEET THE MINIMUM CONSTRUCTION STANDARDS OF THE CITY OF PORTSMOUTH AND NHDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, LATEST EDITION. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCHING, BEDDING, BACKFILL & COMPACTION FOR ALL UTILITY TRENCHING IN ADDITION TO ALL CONDUIT INSTALLATION AND COORDINATION OF ALL REQUIRED INSPECTIONS.
7. ALL TRENCHING, PIPE LAYING AND BACKFILLING SHALL CONFORM TO FEDERAL OSHA AND CITY REGULATIONS.
8. FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE ARCHITECT, CONTRACTOR, APPROPRIATE UTILITY COMPANIES AND THE PORTSMOUTH DPW.
9. WATER: PORTSMOUTH DPW WATER DIVISION, JIM TOW, (603) 427-1530.
10. SEWER: PORTSMOUTH DPW SEWER DIVISION, JIM TOW, (603) 427-1530.
11. TELECOMMUNICATIONS: CONSOLIDATED, JOE CONSIDINE, (603) 427-5525.
12. CABLE: COMCAST, MIKE COLLINS, (603) 678-5695, EXT. 1037.
13. ELECTRICAL: EVERSOURCE, MICHAEL BUSBY, (603) 332-4227, EXT. 5555334. ALL ELECTRIC CONDUIT INSTALLATION SHALL BE INSPECTED BY EVERSOURCE PRIOR TO BACKFILL, 48-HOUR MINIMUM NOTICE REQUIRED.
14. GAS: UNITIL, DAVID BEAULIEU, (603) 294-5144.
15. DETECTABLE WARNING TAPE SHALL BE PLACED OVER THE ENTIRE LENGTH OF ALL BURIED UTILITIES, COLORS PER THE RESPECTIVE UTILITY PROVIDERS.
16. ALL WATER MAIN AND SERVICE INSTALLATIONS SHALL BE CONSTRUCTED AND TESTED PER PORTSMOUTH DPW STANDARDS AND SPECIFICATIONS. ALL OTHER UTILITIES SHALL BE TO THE STANDARDS AND SPECIFICATIONS OF THE RESPECTIVE UTILITY PROVIDERS.
17. WHERE WATER LINES CROSS, RUN ADJACENT TO OR ARE WITHIN 5' OF STORM DRAINAGE PIPES OR STRUCTURES, 2"-THICK CLOSED CELL RIGID BOARD INSULATION SHALL BE INSTALLED FOR FROST PROTECTION.
18. PER PORTSMOUTH DPW SPECIFICATIONS, ALL NEW DUCTILE IRON WATERLINES SHALL BE WRAPPED WITH A WATER TIGHT POLYETHYLENE WRAPPING FOR THEIR FULL LENGTH. ALL DOMESTIC WATER SERVICES SHALL BE PROVIDED WITH BACKFLOW PREVENTERS AND ALL JOINTS SHALL HAVE THREE (3) WEDGES PER JOINT.
19. WATER AND SANITARY SEWER LINES SHALL BE LOCATED AT LEAST 10' HORIZONTALLY FROM EACH OTHER. WHERE CROSSING, 18" MINIMUM VERTICAL CLEARANCE SHALL BE PROVIDED WITH WATER INSTALLED OVER SEWER.
20. CONTRACTOR SHALL HAVE A SITE SURVEY CONDUCTED BY A RADIO COMMUNICATIONS CARRIER APPROVED BY THE CITY'S COMMUNICATION DIVISION. THE RADIO COMMUNICATIONS CARRIER MUST BE FAMILIAR AND CONVERSANT WITH THE POLICE AND RADIO CONFIGURATION. IF THE SITE SURVEY INDICATES IT IS NECESSARY TO INSTALL A SIGNAL REPEATER EITHER ON OR NEAR THE PROPOSED PROJECT, THOSE COSTS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE APPLICANT SHALL BE REQUIRED TO PAY FOR THE SITE SURVEY WHETHER OR NOT THE SURVEY INDICATES A REPEATER IS NECESSARY. THE OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR THE CITY. THE SURVEY SHALL BE COMPLETED AND THE REPEATER, IF DETERMINED IT IS REQUIRED, SHALL BE INSTALLED PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY.
21. CONTRACTOR SHALL PROVIDE DPW WITH DETAILS OF TEMPORARY & PERMANENT GROUNDWATER DEWATERING DESIGN IF NECESSARY.



133 Court Street Portsmouth, NH 03801  
(603) 433-2335 www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR: TAC

ISSUE DATE: JANUARY 18, 2021

REVISIONS		
NO.	DESCRIPTION	BY DATE
0	TAC WORK SESSION	EBS 12/01/20
1	TAC	EBS 1/18/21

DRAWN BY: EBS  
APPROVED BY: EDW  
DRAWING FILE: 5090-SITE.dwg

SCALE:  
22" x 34" 1" = 30'  
11" x 17" 1" = 60'

OWNER:  
**FREDERICK W. WATSON  
REVOCABLE TRUST,  
ROBERT D. WATSON,  
TRUSTEE**  
63 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

APPLICANT:  
**FREDERICK W. WATSON  
REVOCABLE TRUST,  
ROBERT D. WATSON,  
TRUSTEE**  
63 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

PROJECT:  
**WATSON'S LANDING  
TAX MAP 209, LOT 33  
1 CLARK DRIVE  
PORTSMOUTH, NH 03801**

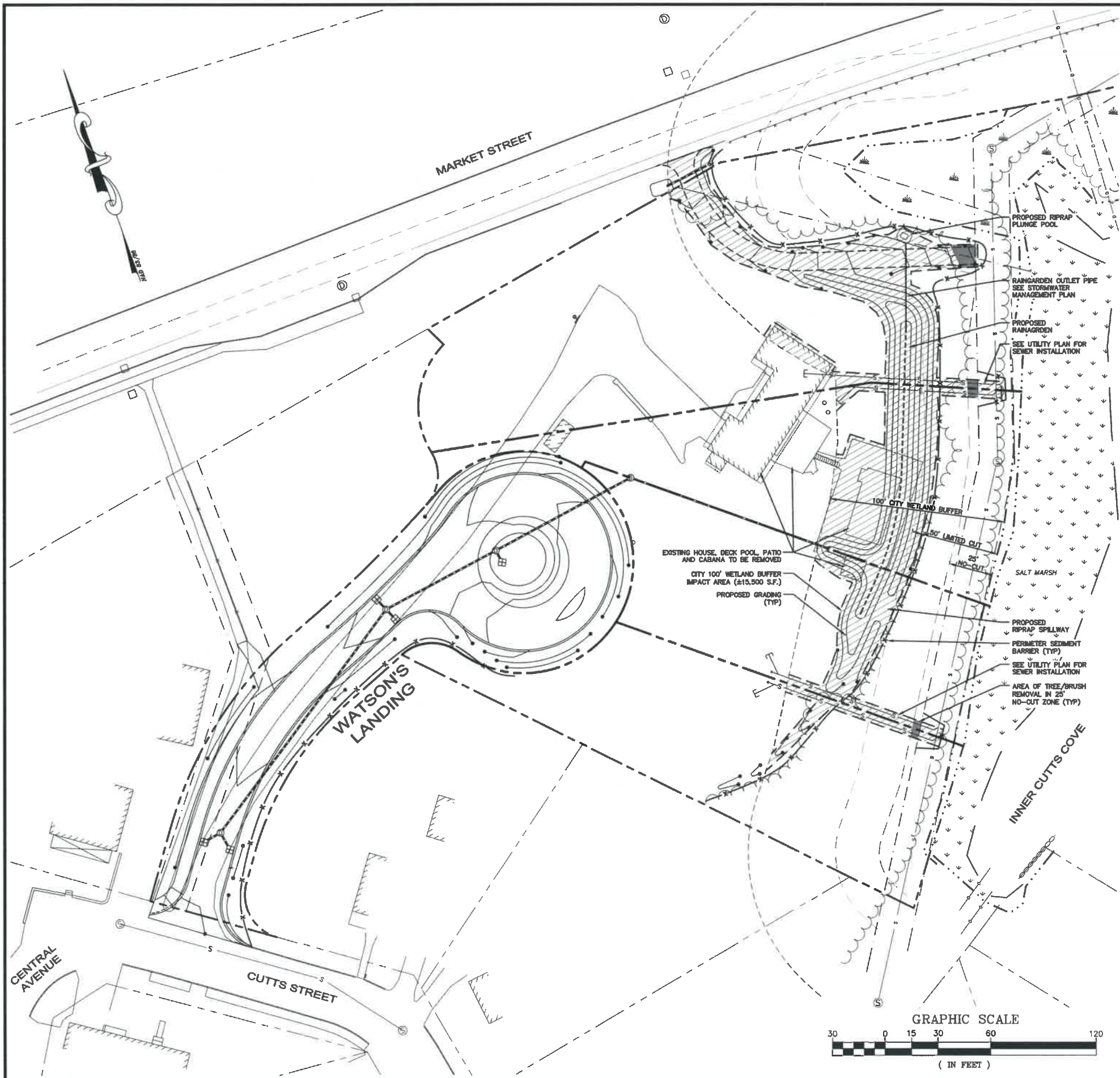
TITLE:

UTILITY PLAN  
SHEET NUMBER:

C-5

P5090



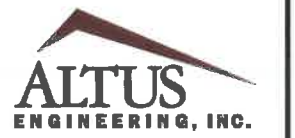


**CONDITIONAL USE PERMIT NOTES**

1. ZONING SECTION 10.1016 – CONDITIONAL USE PERMIT REQUIRED FOR EARTH DISTURBANCE IN THE 100' CITY WETLAND BUFFER.
2. PROJECT PARCEL: MAP 209 LOT 33, 135,176 S.F. (3.10 ACRES) TO HIGHEST OBSERVABLE TIDE LINE (HOTL).
3. WETLAND AREA ON LOT: ±16,397 S.F. (±0.38 ACRES)
4. 100' WETLAND BUFFER ANALYSIS:  
 LAWN: ±23,540  
 BRUSH/WOODLAND: ±20,735 S.F.  
 IMPERVIOUS: ±3,326 S.F.  
 TOTAL BUFFER: ±47,601 S.F. (±1.09 ACRES)
5. AREA OF 100' WETLAND BUFFER IMPACT:  
 ONSITE: ±15,125 S.F.  
 OFFSITE: ±375 S.F. (MARKET STREET RIGHT OF WAY)  
 TOTAL: ±15,500 S.F. (±0.36 ACRES)
6. AREA OF TREE/BRUSH REMOVAL IN BUFFER:  
 0-25': ±252 S.F.  
 25-50': ±252 S.F.  
 50-100': ±756 S.F.  
 TOTAL: ±1,260 S.F.
7. PROPOSED IMPERVIOUS SURFACES IN BUFFER: 0 S.F.
8. PROPOSED WETLAND IMPACT: 0 S.F.
9. WETLANDS WERE DELINEATED BY MICHAEL CUOMO, NH CERTIFIED SOILS SCIENTIST #006 AND NH CERTIFIED WETLANDS SCIENTIST #004, ON SEPTEMBER 15, 2020.
10. CONSTRUCTION ACTIVITIES SHALL BE MANAGED IN STRICT ACCORDANCE WITH NH RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES. NO INVASIVE SPECIES SHALL BE INSTALLED ON THE PROJECT SITE FOR ANY REASON.

**LEGEND**

- — — — — PROPERTY LINE
- - - - - EASEMENT LINE
- - - - - 100' CITY WETLAND SETBACK
- - - - - 50' CITY WETLAND SETBACK (LIMITED CUT)
- - - - - 25' CITY WETLAND SETBACK (NO-CUT)
- - - - - 100' STATE TIDAL BUFFER
- - - - - FRESHWATER WETLAND BOUNDARY
- - - - - TIDAL WETLAND BOUNDARY
- VGC — SGC — EXISTING PAVEMENT/CURB
- S — (S) — EXISTING SEWER/MANHOLE
- x - x - SILTFENCE/SEDIMENT BARRIER/CONST. FENCE
- — — — — EXISTING TREE LINE/BRUSH LINE
- ▨ ▨ ▨ ▨ ▨ PROPOSED DISTURBANCE IN WETLAND BUFFER
- ~ ~ ~ ~ ~ FRESHWATER WETLAND
- ~ ~ ~ ~ ~ SALT MARSH



133 Court Street Portsmouth, NH 03801  
 (603) 433-2335 www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR: TAC

ISSUE DATE: JANUARY 18, 2021

REVISIONS	NO.	DESCRIPTION	BY	DATE
0	TAC		EBS	01/18/21

DRAWN BY: EBS  
 APPROVED BY: EDW  
 DRAWING FILE: 5090-SITE.dwg

SCALE:  
 22" x 34" 1" = 30'  
 11" x 17" 1" = 60'

OWNER:  
**FREDERICK W. WATSON  
 REVOCABLE TRUST,  
 ROBERT D. WATSON,  
 TRUSTEE**  
 53 SLEEPY HOLLOW DRIVE  
 GREENLAND, NH 03840

APPLICANT:  
**FREDERICK W. WATSON  
 REVOCABLE TRUST,  
 ROBERT D. WATSON,  
 TRUSTEE**  
 53 SLEEPY HOLLOW DRIVE  
 GREENLAND, NH 03840

PROJECT:  
**WATSON'S LANDING  
 TAX MAP 209, LOT 33  
 1 CLARK DRIVE  
 PORTSMOUTH, NH 03801**

TITLE:  
**CONDITIONAL USE  
 PERMIT PLAN**

SHEET NUMBER:  
**C-6**

PS090



# SEDIMENT AND EROSION CONTROL NOTES

## PROJECT NAME AND LOCATION

1 CLARK DRIVE  
PORTSMOUTH, NEW HAMPSHIRE  
TAX MAP 209 LOT 33

LATITUDE: 43.084° N  
LONGITUDE: 70.771° W

## OWNER/APPLICANT:

FREDERICK W. WATSON REVOCABLE TRUST, ROBERT D. WATSON, TRUSTEE  
53 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

## DESCRIPTION

The project consists of the demolition of a single family residence and creation of a 4-lot subdivision along with a public cul-de-sac and associated site improvements.

## DISTURBED AREA

The total area to be disturbed for the development is approximately ±47,550 S.F. (±1.09 acres). USEPA NPDES Phase II compliance required.

## PROJECT PHASING

The proposed road and associated utilities will be completed in one phase. Construction of individual house lots to be done later at the owner's discretion.

## NAME OF RECEIVING WATER

The site drains over land to Inner Cutts Cove and eventually the Piscataqua River.

## SEQUENCE OF MAJOR ACTIVITIES

1. Install temporary erosion control measures including perimeter controls, stabilized construction entrance and inlet sediment filters as noted on the plan. All temporary erosion control measures shall be maintained in good working condition for the duration of the project.
2. Remove landscaping, strip loam and stockpile.
3. Demolish existing site features, single family residence, utilities, etc. as shown on Demolition Plan.
4. Rough grade site including placement of borrow materials.
5. Construct building and associated improvements.
6. Construct drainage structures, culverts, utilities & sidewalk base course materials.
7. Install base course paving & curbing.
8. Install top course paving and sidewalks.
9. Loam (6" min) and seed all disturbed areas not paved or otherwise stabilized.
10. When all construction activity is complete and site is stabilized, remove all temporary erosion control measures and any sediment that has been trapped by these devices.
11. House construction on individual lots will be done by others subsequent to roadway construction.

## TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

All work shall be in accordance with state and local permits. Work shall conform to the practices described in the "New Hampshire Stormwater Manual, Volumes 1 - 3", issued December 2008, as amended. As indicated in the sequence of Major Activities, perimeter controls shall be installed prior to commencing any clearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Once construction activity ceases permanently in an area and permanent measures are established, perimeter controls shall be removed.

During construction, runoff will be diverted around the site with stabilized channels where possible. Sheet runoff from the site shall be filtered through appropriate perimeter controls. All storm drain inlets shall be provided with inlet protection measures.

Temporary and permanent vegetation and mulching is an integral component of the erosion and sedimentation control plan. All areas shall be inspected and maintained until vegetative cover is established. These control measures are essential to erosion prevention and also reduce costly rework of graded and shaped areas.

Temporary vegetation shall be maintained in these areas until permanent seeding is applied. Additionally, erosion and sediment control measures shall be maintained until permanent vegetation is established.

## INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

### A. GENERAL

These are general inspection and maintenance practices that shall be used to implement the plan:

1. The smallest practical portion of the site shall be denuded at one time.
2. All control measures shall be inspected at least once each week and following any storm event of 0.5 inches or greater.
3. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours.
4. Built-up sediment shall be removed from perimeter barriers when it has reached one-third the height of the barrier or when "balding" occurs.
5. All diversion dikes shall be inspected and any breaches promptly repaired.
6. Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy growth.
7. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the Plans.
8. An area shall be considered stable if one of the following has occurred:
  - a. Base course gravels have been installed in areas to be paved;
  - b. A minimum of 85% vegetated growth as established;
  - c. A minimum of 3 inches of non-erosive material such as stone or riprap has been installed; or
  - d. Erosion control blankets have been properly installed.
9. The length of time of exposure of area disturbed during construction shall not exceed 45 days.

### B. MULCHING

Mulch shall be used on highly erodible soils, on critically eroding areas, on areas where conservation of moisture will facilitate plant establishment, and where shown on the plans.

1. Timing - In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this:
  - a. Apply mulch prior to any storm event. This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
  - b. Required mulching within a specified time period. The time period can range from 21 to 28 days of inactivity on a area, the length of time varying with site conditions. Professional judgment shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

### 2. Guidelines for Winter Mulch Application -

Type	Rate per 1,000 s.f.	Use and Comments
Hay or Straw	70 to 90 lbs.	Must be dry and free from mold. May be used with plantings.
Wood Chips or Bark Mulch	450 to 920 lbs.	Used mostly with trees and shrub plantings.

## INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CONTINUED)

Material	As per manufacturer Specifications	Used in slope areas, water courses and other Control areas.
Jute and Fibrous Matting (Erosion Blanket)	As per manufacturer Specifications	Used in slope areas, water courses and other Control areas.
Crushed Stone 1/4" to 1-1/2" dia.	Spread more than 1/2" thick	Effective in controlling wind and water erosion.
Erosion Control Mix	2" thick (min)	* The organic matter content is between 80 and 100% dry weight basis. * Particle size by weight is 100% passing a 6" screen and a minimum of 70 % maximum of 85% passing a 0.75" screen. * The organic portion needs to be fibrous and elongated. * Large portions of silt, clays or fine sands are not acceptable in the mix. * Soluble salts content is less than 4.0 mmhos/cm. * The pH should fall between 5.0 and 8.0.

3. Maintenance - All mulches must be inspected periodically, in particular after rainstorms, to check for fill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

### C. PERMANENT SEEDING -

1. Bedding - stones larger than 1 1/2", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 5" to prepare a seedbed and mix fertilizer into the soil.
2. Fertilizer - lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:

Agricultural Limestone @ 100 lbs. per 1,000 s.f.  
10-20-20 fertilizer @ 12 lbs. per 1,000 s.f.

### 3. Seed Mixture (recommended):

Type	Lbs. / Acre	Lbs. / 1,000 s.f.
Tall Fescue	24	0.55
Creeping Red Fescue	24	0.55
Total	48	1.10

### Seed Mixture (For slope embankments):

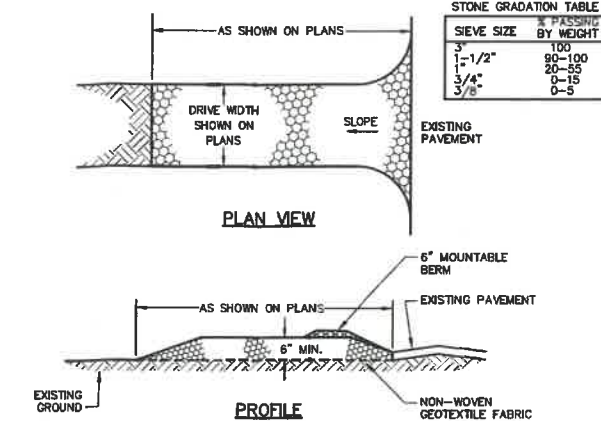
Grass Seed: Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified:

Type	Min. Purity (%)	Min. Germination (%)	Kg./Hectare (Lbs./Acre)
Creeping Red Fescue (c)	96	85	45 (40)
Perennial Rye Grass (a)	98	90	35 (30)
Redtop	95	80	5 (5)
Alsike Clover	97	90(e)	5 (5)
			Total 90 (80)

- a. Ryegrass shall be a certified fine-textured variety such as Pennfine, Flesta, Yorktown, Diplomat, or equal.
  - b. Fescue varieties shall include - Creeping Red and/or Hard Reliant, Scaldis, Koket, or Jamestown.
4. Sodding - sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding on an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook. Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt), etc.

## WINTER CONSTRUCTION NOTES

1. 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 elsewhere seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting. 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;
2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and
3. 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.



## CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - NHDOT STANDARD STONE SIZE #4 - SECTION 703 OF NHDOT STANDARD.
2. LENGTH - DETAILED ON PLANS (50 FOOT MINIMUM).
3. THICKNESS - SIX (6) INCHES (MINIMUM).
4. WIDTH - FULL DRIVE WIDTH UNLESS OTHERWISE SPECIFIED.
5. FILTER FABRIC - MIRAFI 600X OR EQUAL APPROVED BY ENGINEER.
6. SURFACE WATER CONTROL - ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. STABILIZED CONSTRUCTION EXITS SHALL BE INSTALLED AT ALL ENTRANCES TO PUBLIC RIGHTS-OF-WAY, AT LOCATIONS SHOWN ON THE PLANS, AND/OR WHERE AS DIRECTED BY THE ENGINEER.

## STABILIZED CONSTRUCTION EXIT NOT TO SCALE

## INSTALLATION AND MAINTENANCE

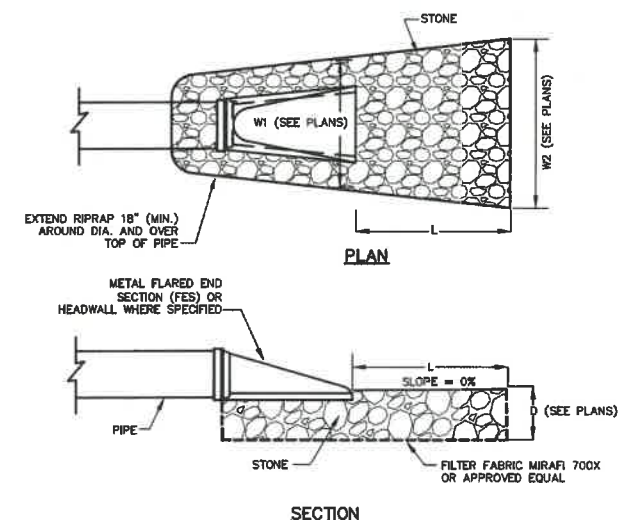
INSTALLATION: REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS, PLACE ABSORBENT PILLOW IN UNIT. STAND GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO CATCH BASIN INSERT SO THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF THE UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE CATCH BASIN INSERT. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY THE UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL ABSORBENTS, REPLACE ABSORBENT WHEN NEAR SATURATION.

## UNACCEPTABLE INLET PROTECTION METHOD:

A SIMPLE SHEET OF GEOTEXTILE UNDER THE GRATE IS NOT ACCEPTABLE.

## STORM DRAIN INLET PROTECTION NOT TO SCALE

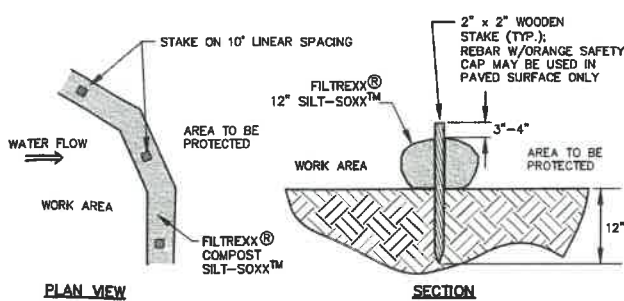


## MAINTENANCE

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

## CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIPRAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE AND FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIPRAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.



- NOTES:
1. SILT-SOXX MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
  2. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
  3. SILT-SOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIREMENTS OF THE SPECIFIC APPLICATION.
  4. ALL SEDIMENT TRAPPED BY SILT-SOXX SHALL BE DISPOSED OF PROPERLY.

## TUBULAR SEDIMENT BARRIER NOT TO SCALE

## RIPRAP OUTLET PROTECTION NOT TO SCALE



133 Court Street Portsmouth, NH 03801  
(603) 433-2335 www.altus-eng.com



## NOT FOR CONSTRUCTION

ISSUED FOR: TAC

ISSUE DATE: JANUARY 18, 2021

NO. DESCRIPTION	BY	DATE
0 TAC WORK SESSION	EBS	12/01/20
1 TAC	EBS	1/18/21

DRAWN BY: EBS  
APPROVED BY: EDW  
DRAWING FILE: 5090-DETAILS.dwg

SCALE: 22" x 34" NOT TO SCALE

OWNER:  
FREDERICK W. WATSON REVOCABLE TRUST,  
ROBERT D. WATSON, TRUSTEE  
53 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

APPLICANT:  
FREDERICK W. WATSON REVOCABLE TRUST,  
ROBERT D. WATSON, TRUSTEE  
53 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

PROJECT:  
WATSON'S LANDING  
TAX MAP 209, LOT 33  
1 CLARK DRIVE  
PORTSMOUTH, NH 03801

TITLE:  
DETAILS SHEET  
SHEET NUMBER:

D-1





NOT FOR CONSTRUCTION

ISSUED FOR: TAC

ISSUE DATE: JANUARY 18, 2021

NO.	DESCRIPTION	BY	DATE
0	TAC WORK SESSION	EBS	12/01/20
1	TAC	EBS	1/18/21

DRAWN BY: EBS

APPROVED BY: EDW

DRAWING FILE: 5090-DETAILS.dwg

SCALE: 22" x 34" NOT TO SCALE

OWNER:  
**FREDERICK W. WATSON  
REVOCABLE TRUST,  
ROBERT D. WATSON,  
TRUSTEE**

63 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

APPLICANT:  
**FREDERICK W. WATSON  
REVOCABLE TRUST,  
ROBERT D. WATSON,  
TRUSTEE**

63 SLEEPY HOLLOW DRIVE  
GREENLAND, NH 03840

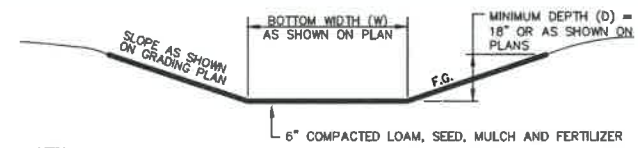
PROJECT:  
**WATSON'S LANDING  
TAX MAP 209, LOT 33  
1 CLARK DRIVE  
PORTSMOUTH, NH 03801**

TITLE:

DETAILS SHEET

SHEET NUMBER:

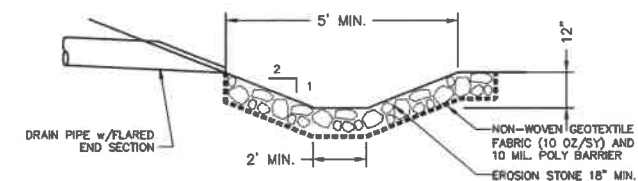
D-2



NOTES:

- THE FOUNDATION AREA OF THE SWALE SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL.
- THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA AND BE FREE OF IRREGULARITIES.
- EARTH FILLS REQUIRED TO MEET SUBGRADE REQUIREMENTS BECAUSE OF OVER EXCAVATION OR TOPOGRAPHY SHALL BE COMPACTED TO THE SAME DENSITY AS THE SURROUNDING SOIL TO PREVENT UNEQUAL SETTLEMENT THAT COULD CAUSE DAMAGE TO THE COMPLETED SWALE.
- VEGETATION SHALL BE ESTABLISHED IN THE SWALE OR AN EROSION CONTROL MATTING INSTALLED PRIOR TO DIRECTING STORMWATER TO IT.
- MAINTENANCE OF THE VEGETATION IS EXTREMELY IMPORTANT IN ORDER TO PREVENT FILLING, EROSION, AND FAILURE OF THE SWALE. MOWING SHALL BE DONE FREQUENTLY ENOUGH TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION AND TO KEEP GRASSES IN A VIGOROUS CONDITION. THE VEGETATION SHALL NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE EROSION RESISTANCE IN THE SWALE.
- THE SWALE SHOULD BE INSPECTED PERIODICALLY AND AFTER ANY STORM GREATER THAN 0.5" OF RAINFALL IN 24 HOURS TO DETERMINE ITS CONDITION. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

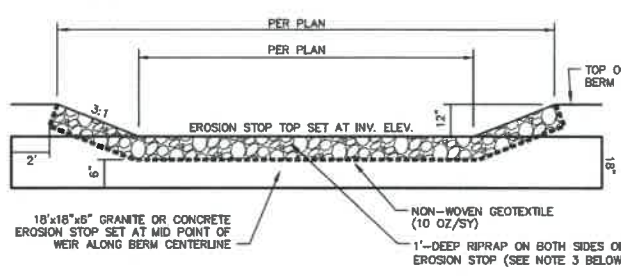
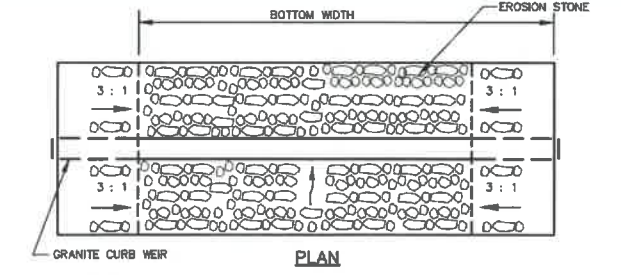
**VEGETATED SWALE NOT TO SCALE**



NOTES:

- CONSTRUCT PLUNGE POOL TO THE WIDTHS AND LENGTHS SHOWN ON THE PLAN.
  - THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIPRAP SHALL BE PREPARED TO ACCOUNT FOR THE DEPTH OF RIPRAP.
  - EROSION STONE USED FOR THE PLUNGE POOL SHALL MEET THE FOLLOWING GRADATION:
- | SIZE | PERCENT PASSING BY WEIGHT |
|------|---------------------------|
| 18"  | 100                       |
| 12"  | 90-100                    |
| 4"   | 0-15                      |
- GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE EROSION STONE. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 18".
  - THE EROSION STONE MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

**PLUNGE POOL NOT TO SCALE**

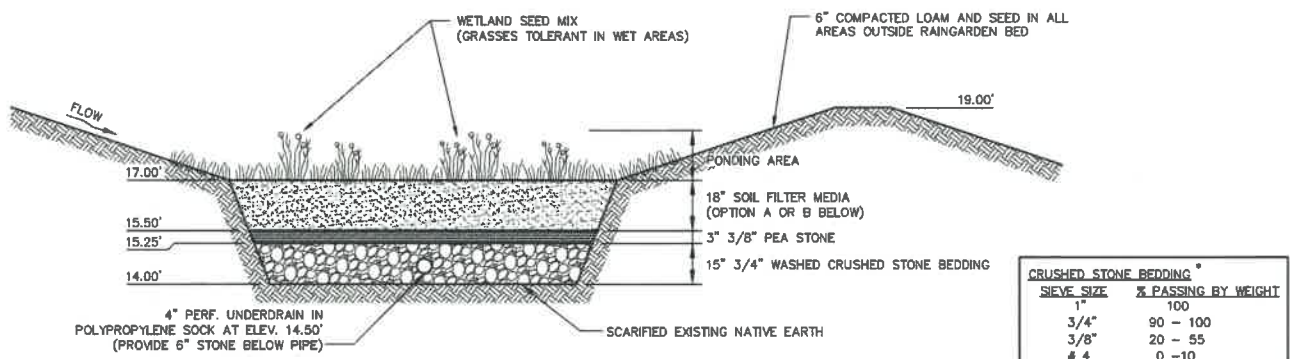


- CONSTRUCT EMERGENCY OVERFLOW WEIR TO THE WIDTHS AND LENGTHS SHOWN ON THE PLAN.
- THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIPRAP SHALL BE PREPARED TO LINES AND GRADES SHOWN ON THE PLANS.
- UNLESS OTHERWISE SPECIFIED OR DIRECTED, RIPRAP USED FOR THE EMERGENCY OVERFLOW WEIR SHALL MEET THE FOLLOWING GRADATION:

SIZE	PERCENT PASSING BY WEIGHT
4"	90-100
2"	0-15

- GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE EROSION STONE. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 18 INCHES.
- THE EROSION STONE MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

**RIPRAP SPILLWAY / OVERFLOW WEIR NOT TO SCALE**



NOTES:

- WHEN CONTRACTOR EXCAVATES RAIN GARDEN AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
- SOIL FILTER MEDIA SHALL EITHER OPTION A OR OPTION B AT CONTRACTOR'S DISCRETION.
- DO NOT PLACE RAINGARDEN INTO SERVICE UNTIL IT HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS STABILIZED.
- DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES TO THE RAINGARDEN DURING ANY STAGE OF CONSTRUCTION.
- DO NOT TRAFFIC EXPOSED SURFACES OF RAINGARDEN WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATION ACTIVITIES WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE BASIN.

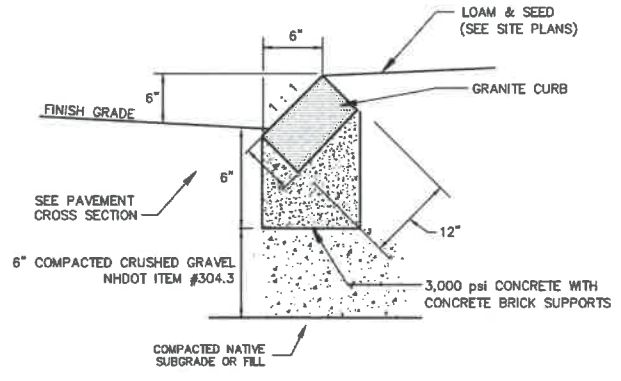
**MAINTENANCE REQUIREMENTS**

- SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS A WARRANTED BY SUCH INSPECTION.
- PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
- AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
- VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING, WEED WHACKING, REMOVAL, AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.

**DESIGN REFERENCES**

- UNH STORMWATER CENTER
- EPA (1999A)
- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 2, DECEMBER 2008 AS AMENDED.

**TYPICAL RAINGARDEN NOT TO SCALE**

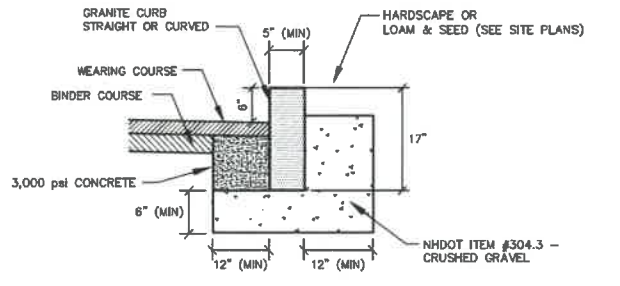


NOTES:

- SEE SITE PLAN FOR LIMITS OF CURBING
- ADJOINING STONES OF STRAIGHT CURB LAID ON CURVES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH
- MINIMUM LENGTH OF STRAIGHT CURB STONES = 18"
- MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
- MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES - SEE CHART

RADIUS FOR STONES WITH SQUARE JOINTS	MAXIMUM LENGTH
18'-28'	1'-8"
29'-41'	2'
42'-55'	3'
56'-68'	4'
69'-82'	5'
83'-95'	6'
97'-110'	7'
OVER 110'	8'

**SLOPED GRANITE CURB NOT TO SCALE**

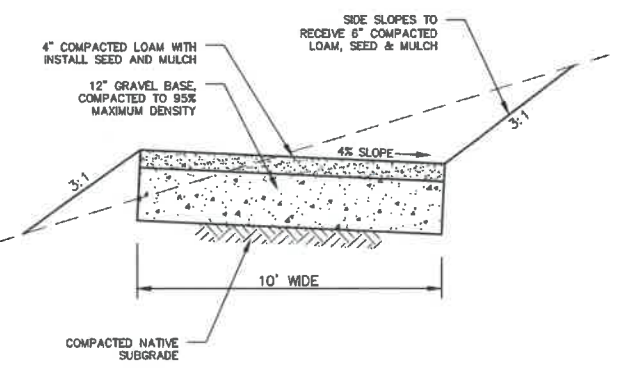


NOTES:

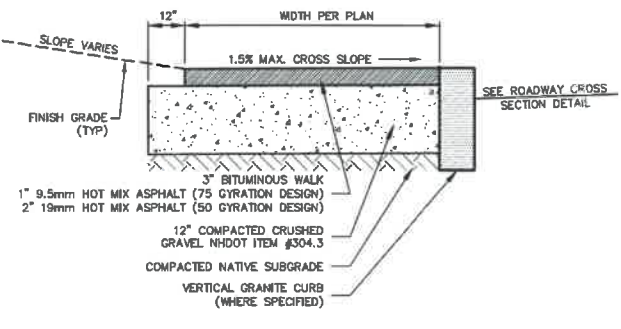
- SEE PLANS FOR CURB LOCATION.
- ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
- MINIMUM LENGTH OF CURB STONES = 3'
- MAXIMUM LENGTH OF CURB STONES = 10'
- MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES - SEE CHART.
- CURB ENDS TO BE ROUNDED AND BATTERED FACES TO BE CUT WHEN CALLED FOR ON THE PLANS.

RADIUS	MAX. LENGTH
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
OVER 60'	10'

**VERTICAL GRANITE CURB NOT TO SCALE**



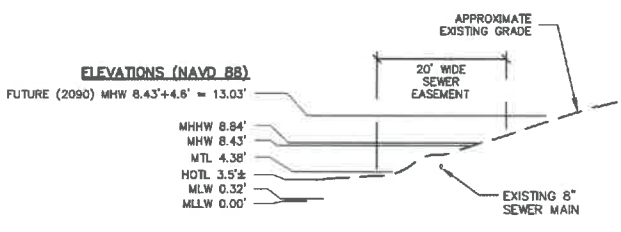
**REINFORCED GRASS ACCESSWAY NOT TO SCALE**



**BITUMINOUS SIDEWALK NOT TO SCALE**

NOTES:

- ALL TIDAL DATA FROM NOAA.
- HOTL FROM WETLANDS MAPPING.
- FUTURE SEA LEVEL RISE PER NH COASTAL FLOOD RISK STUDY.



**TYPICAL SHORELAND CROSS SECTION NOT TO SCALE**

NOT TO SCALE

PS090





NOT FOR CONSTRUCTION

ISSUED FOR: TAC

ISSUE DATE: JANUARY 18, 2021

NO.	DESCRIPTION	BY	DATE
0	TAC WORK SESSION	EDS	12/01/20
1	TAC	EDS	1/18/21

DRAWN BY: EDS  
 APPROVED BY: EDW  
 DRAWING FILE: 5090-DETAILS.dwg

SCALE: 22" x 34" NOT TO SCALE

OWNER:  
**FREDERICK W. WATSON REVOCABLE TRUST, ROBERT D. WATSON, TRUSTEE**

53 SLEEPY HOLLOW DRIVE GREENLAND, NH 03840

APPLICANT:  
**FREDERICK W. WATSON REVOCABLE TRUST, ROBERT D. WATSON, TRUSTEE**

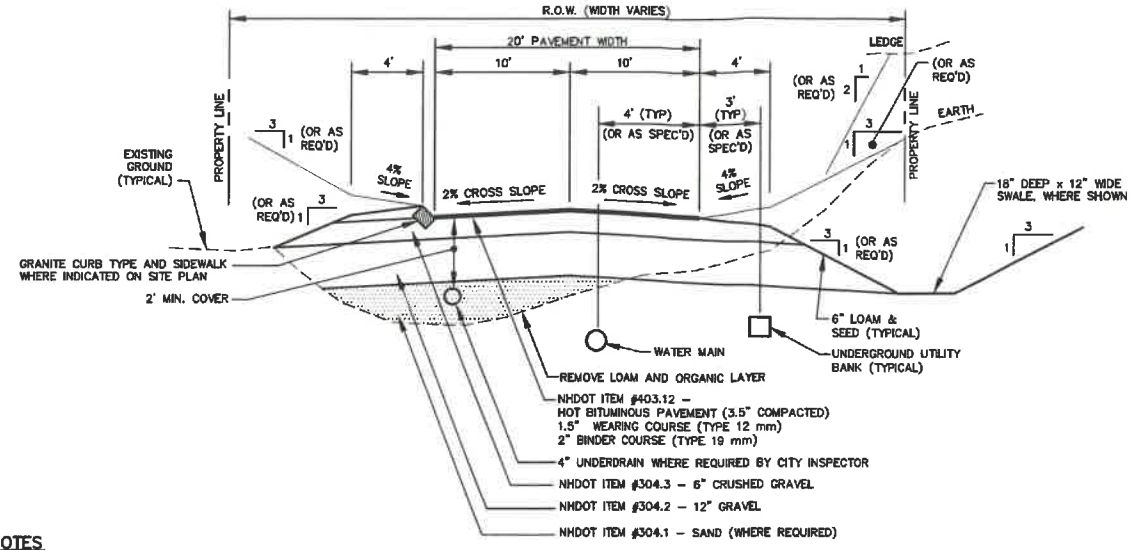
53 SLEEPY HOLLOW DRIVE GREENLAND, NH 03840

PROJECT:  
**WATSON'S LANDING**  
 TAX MAP 209, LOT 33  
 1 CLARK DRIVE PORTSMOUTH, NH 03801

TITLE:  
**DETAILS SHEET**

SHEET NUMBER:

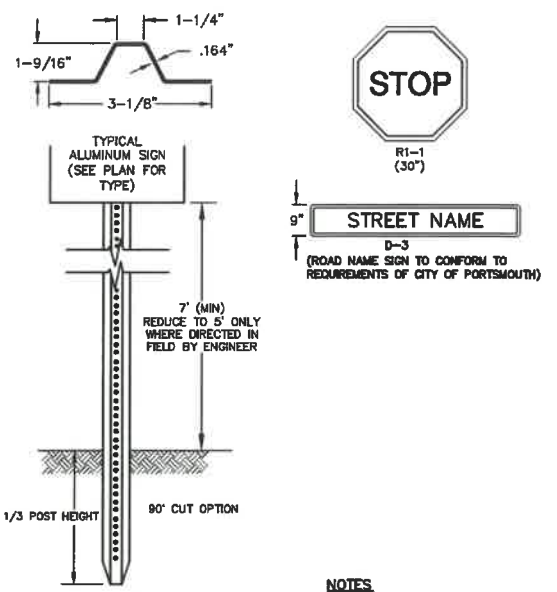
**D-3**



**NOTES**

- EACH GRAVEL BASE COURSE TO BE CONSTRUCTED AT THE PAVEMENT CROSS SLOPE.
- REMOVE LEDGE 18" BELOW LOWEST WORK BEING INSTALLED.
- COMPACT ALL MATERIALS TO 95% STANDARD PROCTOR.
- REMOVE ALL LOAM, CLAY, MUCK, ORGANIC, YIELDING OR OTHERWISE UNSTABLE MATERIAL TO A MINIMUM OF 20" BELOW THE FINISHED GRADE AND INSTALL COMPACTED SAND (OR GRAVEL BORROW APPROVED BY THE ENGINEER) TO SUBGRADE AS NECESSARY.
- THE OVER-EXCAVATION OF UNSUITABLE MATERIAL BEYOND THAT SPECIFIED ABOVE, THE INSTALLATION OF UNDERDRAINAGE, AND/OR THE INSTALLATION OF GEOTEXTILE FABRIC SHALL BE PROVIDED UPON DETERMINATION OF THE DEPARTMENT OF PUBLIC WORKS.
- SUBGRADE SHALL BE FREE OF VOIDS THAT ALLOW MOVEMENT AND/OR SETTLEMENT OF MATERIALS.
- SUBGRADE SHALL BE PROOF-ROLLED WITH A FULLY LOADED DUMP TRUCK PRIOR TO PLACEMENT OF SELECT GRAVELS. PROOF-ROLLING SHALL BE WITNESSED AND APPROVED BY THE ENGINEER.

TYPICAL ROADWAY CROSS SECTION NOT TO SCALE

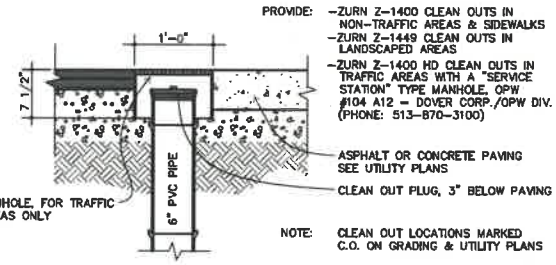


**NOTES**

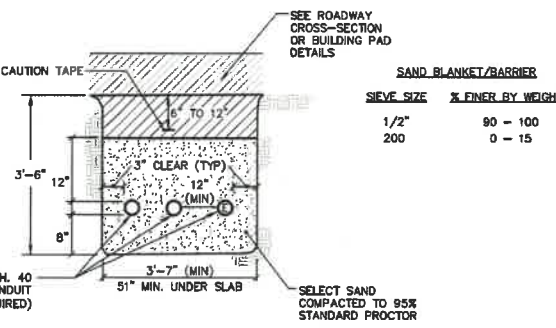
- ALL SIGNS SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

LENGTH: AS REQUIRED  
 WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)  
 HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH  
 STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070 - 1080)

SIGN DETAILS NOT TO SCALE



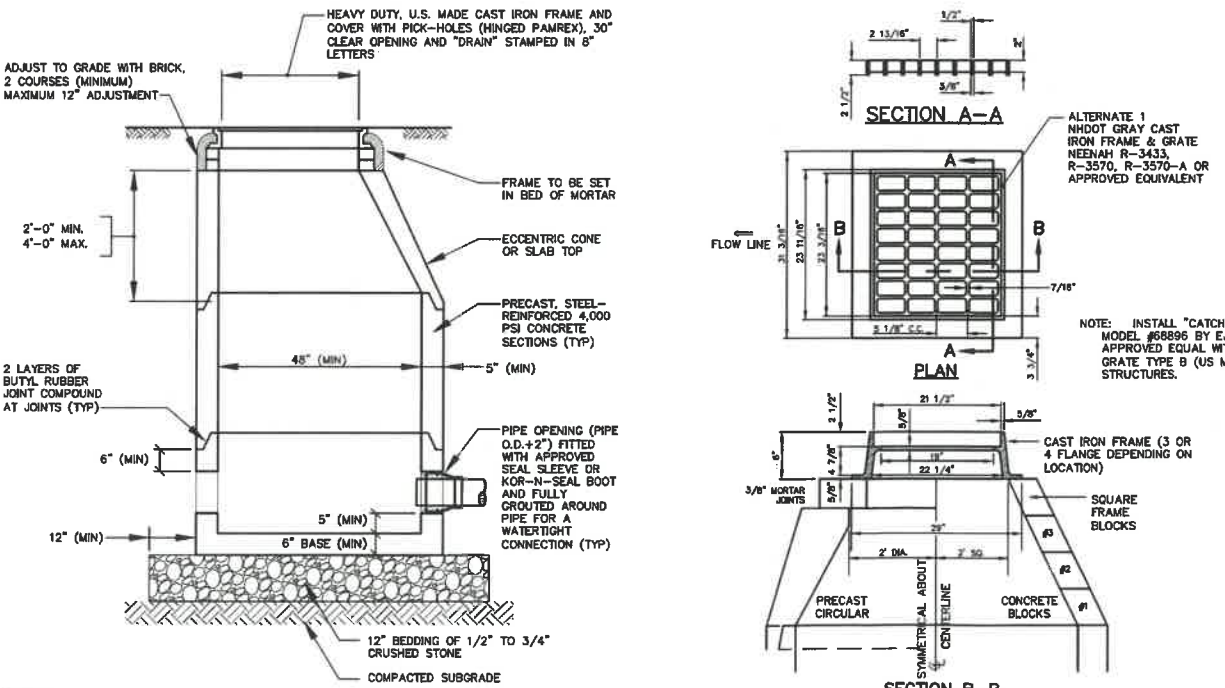
CLEANOUT DETAIL NOT TO SCALE



**NOTES**

- ALL CONDUIT IS TO BE SCHEDULE 40 PVC, ELECTRICAL GRADE, GRAY IN COLOR AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. A 10-FOOT HORIZONTAL SECTION OF RIGID GALVANIZED STEEL CONDUIT WILL BE REQUIRED AT EACH SWEEP, UNLESS IN THE OPINION OF THE SERVICE PROVIDER DESIGNER, THE SWEEP-PVC JOINT IS NOT SUBJECT TO FAILURE DURING PULLING OF THE CABLE. ALL JOINTS ARE TO BE WATERTIGHT.
- ALL 90 DEGREE SWEEPS WILL BE MADE WITH RIGID GALVANIZED STEEL WITH A MINIMUM RADIUS OF 36 INCHES FOR PRIMARY CABLES AND 24 INCHES FOR SECONDARY CABLES.
- BACKFILL MAY BE MADE WITH EXCAVATED MATERIAL OR COMPARABLE, UNLESS MATERIAL IS DEEMED UNSUITABLE BY SERVICE PROVIDER. BACKFILL SHALL BE FREE OF FROZEN LUMPS, ROCKS, DEBRIS, AND RUBBISH. ORGANIC MATERIAL SHALL NOT BE USED AS BACKFILL. BACKFILL SHALL BE IN 6-INCH LAYERS AND THOROUGHLY COMPACTED.
- A SUITABLE PULLING STRING, CAPABLE OF 300 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE SERVICE PROVIDER IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT. A MINIMUM OF TWENTY-FOUR (24) INCHES OF ROPE SLACK SHALL REMAIN AT THE END OF EACH DUCT. PULL ROPE SHALL BE INSTALLED IN ALL CONDUIT FOR FUTURE PULLS. PULL ROPE SHALL BE NYLON ROPE HAVING A MINIMUM TENSILE STRENGTH OF THREE HUNDRED (300) LBS.
- SERVICE PROVIDER SHALL BE GIVEN THE OPPORTUNITY TO INSPECT ALL CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD SERVICE PROVIDER BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
- TYPICAL CONDUIT SIZES ARE 3-INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4-INCH FOR THREE PHASE SECONDARY, AND 5-INCH FOR THREE PHASE PRIMARY. HOWEVER, SERVICE PROVIDERS MAY REQUIRE DIFFERENT TYPES AND SIZES OF CONDUIT THAN THOSE SHOWN HERE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CONDUIT SIZES, TYPES AND NUMBERS WITH EACH SERVICE PROVIDER PRIOR TO ORDERING THEM.
- ROUTING OF CONDUIT, LOCATION OF MANHOLES, TRANSFORMERS, CABINETS, HANDHOLES, ETC. SHALL BE DETERMINED BY SERVICE PROVIDER DESIGN PERSONNEL. THE CONTRACTOR SHALL COORDINATE WITH ALL SERVICE PROVIDERS PRIOR TO THE INSTALLATION OF ANY CONDUIT.
- ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND WHERE APPLICABLE, THE NATIONAL ELECTRICAL CODE. WHERE REQUIRED BY UTILITY PROVIDER, CONDUIT SHALL BE SUPPORTED IN PLACE USING PIPE STANCHIONS PLACED EVERY FIVE (5) FEET ALONG THE CONDUIT RUN.
- UNDER A BUILDING SLAB THE CONDUIT SHALL BE ENCASED IN 6" OF CONCRETE ON ALL SIDES.
- ALL CONDUIT TERMINATIONS SHALL BE CAPPED TO PREVENT DEBRIS FROM ENTERING CONDUIT.

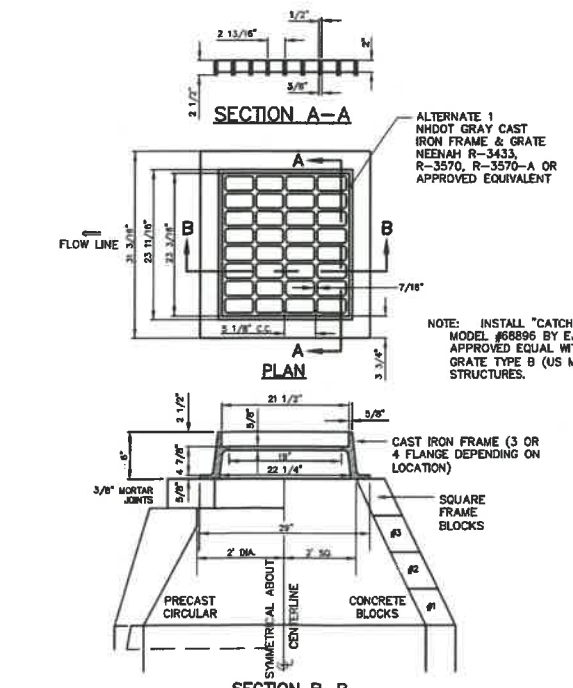
ELECTRIC / COMMUNICATION TRENCH NOT TO SCALE



**NOTES**

- ALL SECTIONS SHALL BE CONCRETE CLASS AA (4000 PSI).
- CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
- THE TONGUE OR GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
- RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
- ALL MANHOLE STRUCTURES SHALL BE DESIGNED FOR H2O LOADING.
- USE H-20 LOADING SLAB TOP SECTION IN LIEU OF ECCENTRIC TOP WHERE PIPE INVERT IS WITHIN 4' OF GRADE.
- MANHOLE STEPS ARE NOT PERMITTED.

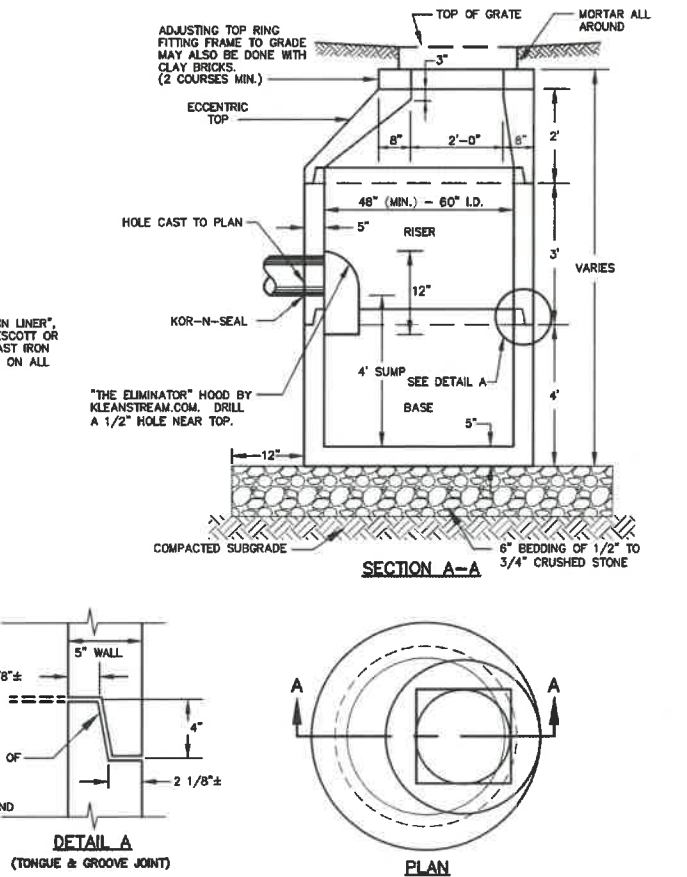
DRAIN MANHOLE DETAIL (PDMH) NOT TO SCALE



**NOTES**

- ALL SECTIONS SHALL BE CONCRETE CLASS AA (4000 PSI).
- CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
- THE TONGUE OR GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
- RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
- ALL STRUCTURES SHALL BE DESIGNED FOR H2O LOADING.
- USE H2O LOADING SLAB TOP SECTION IN LIEU OF ECCENTRIC TOP WHERE PIPE INVERT IS WITHIN 4' OF FINISH GRADE.
- FRAME AND GRATE DIMENSIONS ARE TYPICAL BUT MAY VARY BASED ON PRODUCT SELECTED OR EQUIVALENT APPROVED BY THE ENGINEER.

DEEP SUMP CATCH BASIN NOT TO SCALE



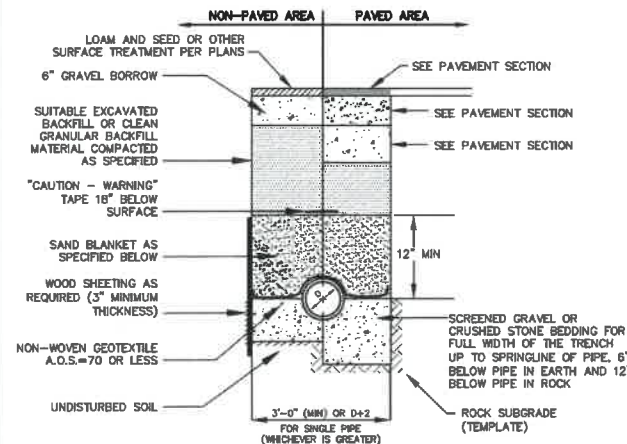
DETAIL A (TONGUE & GROOVE JOINT)

PLAN

NOT TO SCALE

P5090





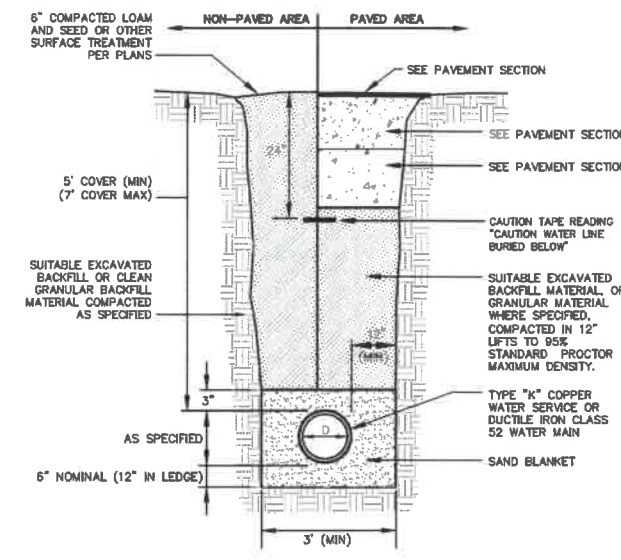
- NOTES**
- BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
  - INSULATE GRAVITY SEWER AND FORCEMAINS WHERE THERE IS LESS THAN 5'-0" OF COVER WITH 2" THICK CLOSED CELL RIGID BOARD INSULATION, 18" ON EACH SIDE OF PIPE.
  - MAINTAIN 12" MINIMUM HORIZONTAL SEPARATION AND WIDTH TRENCH ACCORDINGLY IF MULTIPLE PIPES ARE IN TRENCH.

SAND BLANKET/BARRIER		SCREENED GRAVEL OR CRUSHED STONE BEDDING*	
PIEVE SIZE	% FINER BY WEIGHT	PIEVE SIZE	% PASSING BY WEIGHT
1/2"	90 - 100	1"	100
200	0 - 15	3/4"	90 - 100
		3/8"	20 - 55
		# 4	0 - 10
		# 8	0 - 5

\* EQUIVALENT TO STANDARD STONE SIZE #57 - SECTION 703 OF NHDOT STANDARD SPECIFICATIONS

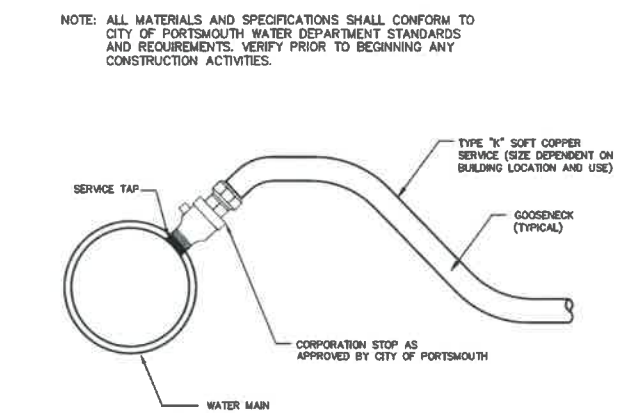
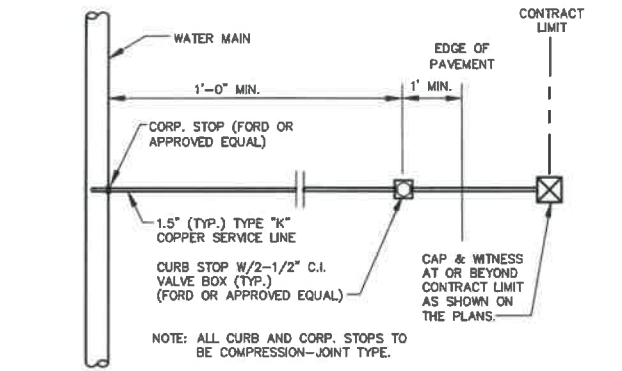
**STANDARD TRENCH NOTES**

- ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE: BACKFILL AS STATED IN THE TECHNICAL SPECIFICATIONS OR AS SHOWN ON THE DRAWING.
- BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING THE GRADATION SHOWN IN THE TRENCH DETAIL. WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1-1/2 INCH TO 1/2 INCH SHALL BE USED.
- SAND BLANKET: CLEAN SAND FREE FROM ORGANIC MATTER MEETING THE GRADATION SHOWN IN THE TRENCH DETAIL. BLANKET MAY BE REPLACED WITH BEDDING MATERIAL FOR CAST-IRON, DUCTILE IRON, AND REINFORCED CONCRETE PIPE PROVIDED THAT NO STONE LARGER THAN 2" IS IN CONTACT WITH THE PIPE AND THE GEOTEXTILE IS RELOCATED ACCORDINGLY.
- SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT, OR CLAY, ALL EXCAVATED LEDGE MATERIAL, ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION, AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. IN CROSS COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK, OR PEAT, IF SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER FOR MAINTENANCE AND POSSIBLE RECONSTRUCTION WILL BE PRESERVED.
- BASE COURSE AND PAVEMENT SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES - DIVISIONS 300 AND 400 RESPECTIVELY.
- SHEETING, IF REQUIRED: WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION 1 FOOT ABOVE THE TOP OF PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE.
- W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES IN NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE OUTSIDE DIAMETER (O.D.) ALSO, W SHALL BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
- FOR CROSS COUNTRY CONSTRUCTION, BACKFILL, FILL AND/OR LOAM SHALL BE MOUND TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- CONCRETE FOR ENCASEMENT SHALL CONFORM TO THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATION REQUIREMENTS FOR CLASS A (3000#) CONCRETE AS FOLLOWS:  
CEMENT: 6.0 BAGS PER CUBIC YARD  
WATER: 5.75 GALLONS PER BAG  
CEMENT MAXIMUM SIZE OF AGGREGATE: 1 INCH  
CONCRETE ENCASEMENT IS NOT ALLOWED FOR PVC PIPE.
- CONCRETE FULL ENCASEMENT: IF FULL ENCASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MINIMUM). BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.
- NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES DESIGN STANDARDS REQUIRE TEN FEET (10') SEPARATION BETWEEN WATER AND SEWER. REFER TO TOWN'S STANDARD SPECIFICATIONS FOR METHODS OF PROTECTION IN AREAS THAT CANNOT MEET THESE REQUIREMENTS.



SAND BLANKET/BARRIER	
PIEVE SIZE	% FINER BY WEIGHT
1/2"	90 - 100
200	0 - 15

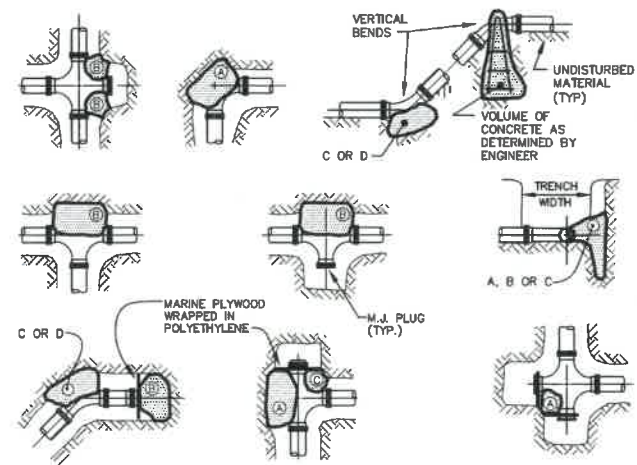
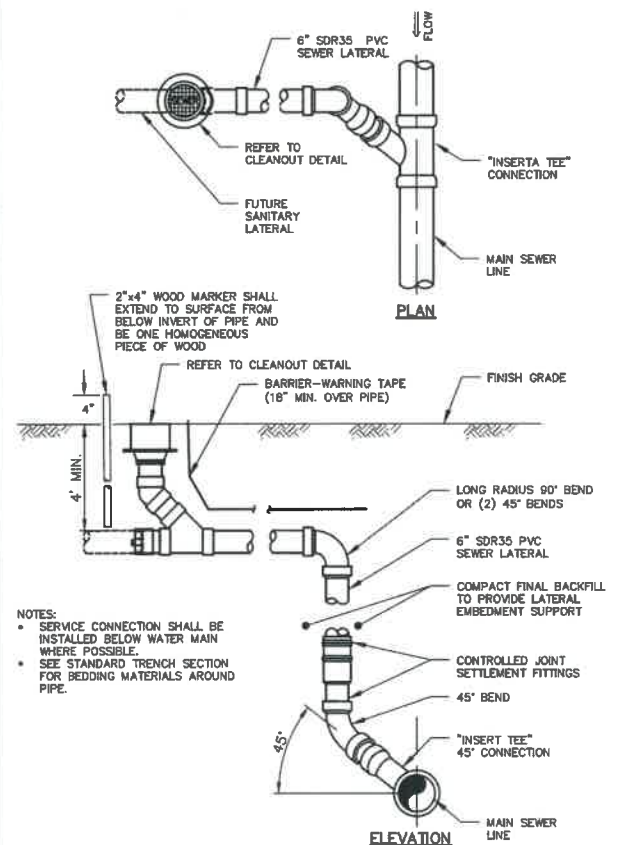
- NOTES**
- BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
  - DUCTILE IRON WATER MAINS SHALL BE POLY WRAPPED FOR THEIR ENTIRE LENGTH.
  - WATER MAINS SHALL HAVE 3 WEDGES PER JOINT.



**DRAINAGE, SEWER & FORCEMAIN TRENCH**

**WATER MAIN TRENCH**

**WATER SERVICE CONNECTION**

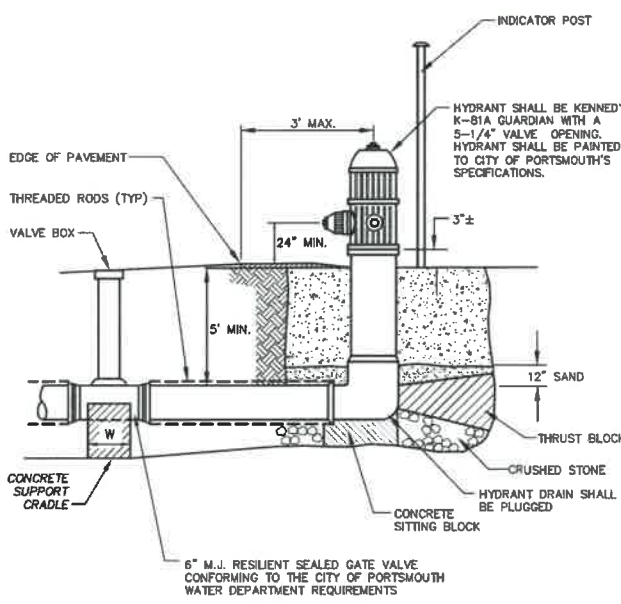


REACTION TYPE	PIPE SIZE			
	4"	6"	8"	10" 12"
A 90°	0.89	2.19	3.82	11.14 17.24
B 180°	0.65	1.55	2.78	8.38 12.00
C 45°	0.48	1.19	2.12	6.02 9.32
D 22-1/2°	0.25	0.60	1.06	3.08 4.74
E 11-1/4°	0.13	0.30	0.54	1.54 2.38

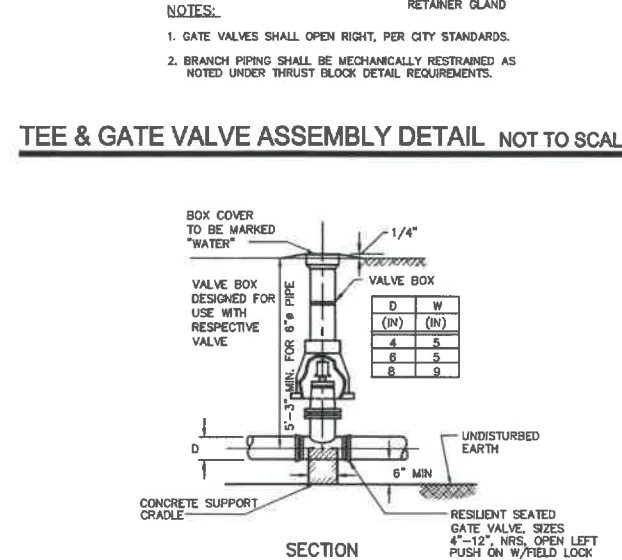
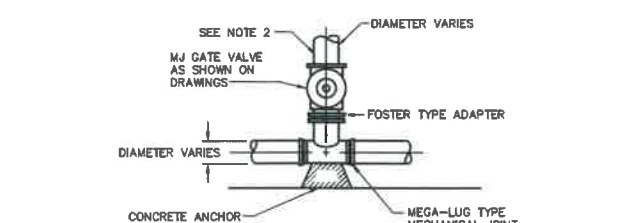
- NOTES**
- POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL.
  - NO JOINTS SHALL BE COVERED WITH CONCRETE. POLYETHYLENE (6 MIL) SHALL BE PLACED AROUND FITTINGS PRIOR TO CONCRETE PLACEMENT.
  - ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
  - PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.

**FIRE HYDRANT**

**TEE & GATE VALVE ASSEMBLY DETAIL**



- NOTES**
- HYDRANT INSTALLATION AND OPERATION TO CONFORM TO REGULATIONS OF THE CITY OF PORTSMOUTH WATER & FIRE DEPARTMENTS.
  - GATE VALVES & HYDRANTS TO OPEN RIGHT (CLOCKWISE).



**DEEP SEWER SERVICE CONNECTION**

**THRUST BLOCKING**

**FIRE HYDRANT**

**WATER VALVE DETAIL**

**ALTUS ENGINEERING, INC.**  
133 Court Street Portsmouth, NH 03801  
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE  
EPIC D. WEINBERG  
No. 7634  
LICENSED PROFESSIONAL ENGINEER  
1/18/21

**NOT FOR CONSTRUCTION**

ISSUED FOR: TAC

ISSUE DATE: JANUARY 18, 2021

NO.	DESCRIPTION	BY	DATE
0	TAC WORK SESSION	EBS	12/01/20
1	TAC	EBS	1/18/21

DRAWN BY: EBS  
APPROVED BY: EDW  
DRAWING FILE: 5090-DETAILS.dwg

SCALE: 22" x 34" NOT TO SCALE

OWNER: FREDERICK W. WATSON REVOCABLE TRUST, ROBERT D. WATSON, TRUSTEE  
53 SLEEPY HOLLOW DRIVE GREENLAND, NH 03840

APPLICANT: FREDERICK W. WATSON REVOCABLE TRUST, ROBERT D. WATSON, TRUSTEE  
53 SLEEPY HOLLOW DRIVE GREENLAND, NH 03840

PROJECT: WATSON'S LANDING  
TAX MAP 209, LOT 33  
1 CLARK DRIVE PORTSMOUTH, NH 03801

TITLE: DETAILS SHEET  
SHEET NUMBER: D-4