The State of New Hampshire NOV26'19 PM 2:27 DAS
Department of Environmental Services
Robert R. Scott, Commissioner

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November 20, 2019

His Excellency, Governor Christopher T. Sununu
and The Honorable Council
State House
Concord, NH 03301

REQUESTED ACTION

Approve Manisha P. Heiderscheidt 2010 Revocable Trust's request to perform the following work on Little Bay in Durham. File # 2019-00695. This project will not have significant impact on or adversely affect the values of Little Bay.

Impact a total of 1,750 square feet of tidal wetland and upland tidal buffer zone to stabilize 77 linear feet along an eroding slope with boulder toe-protection, rip-rap slope and native shrub plantings. Impacts include 258 square feet of temporary disturbance seaward of the highest observable tide line (HOTL) and 1,492 square feet of temporary disturbance landward of the highest observable tide line for construction access, installation, slope re-grading and native shrub planting.

The New Hampshire Department of Environmental Services (NHDES) imposed the following conditions as part of this approval:

1. All work shall be in accordance with plans by Ambit Engineering dated January 2019, revised through September 06, 2019, last received by the NH Department of Environmental Services (NHDES) on September 10, 2019.
2. Not less than 5 state business days prior to starting work authorized by this permit, the permittee shall notify Stephanie.Giallongo@des.nh.gov at the NHDES Wetlands Bureau and the Durham Conservation Commission in writing of the date on which work under this permit is expected to start.
3. A certified wetlands scientist or qualified professional, as applicable, shall monitor the project during construction to verify that all work is done in accordance with the approved plans and narratives, adequate siltation and erosion controls are properly implemented, and no water quality violations occur.
4. Prior to construction, the permittee shall notify Stefanie.Giallongo@des.nh.gov at the NHDES Wetlands Bureau of the certified wetlands scientist or qualified professional, as applicable, who will be responsible for monitoring and ensuring that the project is constructed in accordance with the approved plans. The permittee shall re-notify the NHDES Wetlands Bureau if the identity of the individual changes during the project.
5. A post-construction report, prepared by a certified wetland scientist or qualified professional, as applicable, documenting status of the project area and restored jurisdictional area or buffer, including photographs and an as-built survey plan, shall be submitted to the Stefanie.Giallongo@des.nh.gov at the NHDES Wetlands Bureau within 60 days of the completion of construction.

6. The NHDES Wetlands Bureau may require subsequent monitoring and/or corrective measures if the project area is deemed inadequately stabilized or not constructed in accordance with the approved plans.
7. The permittee or permittee's contractor(s) shall conduct a follow-up inspection in the Fall following the first growing season to review the success of the native shrub planting area and schedule remedial actions if necessary. A monitoring report shall be submitted to Stefanie.Giallongo@des.nh.gov at the NHDES Wetlands Bureau by December 1 after follow-up inspection.
8. Any further work in jurisdiction, as specified in RSA 482-A, on this property will require a new application and approval by the NHDES Wetlands Bureau.
9. All development activities associated with this project shall be conducted in compliance with applicable requirements of RSA 483-B and New Hampshire Administrative Rule Chapter Env-Wq 1400, during and after construction.
10. Work shall be conducted during low tide only. No machinery shall be operated in surface waters.
11. All work shall take place from the upland, and no equipment shall be operated from within tidal wetland areas.
12. Prior to construction, offset stakes shall be set temporarily in the tidal wetland area to ensure that the placement of the boulder toe protection maintains the existing toe of slope and will not encroach further into the tidal wetland area.
13. Stones that currently provide habitat for rocky-intertidal benthic invertebrates or algal species shall be stockpiled separately and reused/repositioned along the base of the slope.
14. Work shall be conducted in a manner that avoids excessive discharges of sediments to fish spawning areas.
15. Any fill used shall be clean sand, gravel, rock, or other suitable material.
16. To prevent the introduction or export of invasive plant species to the site, the permittee's contractor(s) shall clean all soils and vegetation from construction equipment and matting before such equipment is moved to the site and prior to demobilization from the site.
17. All temporary work areas shall be restored to original condition following completion of construction.
18. All dredged and excavated material and construction-related debris shall be placed outside of the areas subject to RSA 482-A. Any spoil material deposited within 250 feet of any surface water shall comply with RSA-483-B.
19. Appropriate siltation, erosion and turbidity controls to protect from the occurrence of sedimentation during tidal cycles shall be in place prior to construction, shall be maintained during construction, and shall remain until the area is stabilized. Temporary controls shall be removed once the area has been stabilized.
20. Work shall be conducted in a manner so as to minimize turbidity and sedimentation to surface waters and wetlands.
21. The contractor responsible for completion of the work shall use techniques described in the New Hampshire Stormwater Manual, Volume 3, Erosion and Sediment Controls During Construction (December 2008).
22. Erosion control products shall be installed per manufacturers recommended specifications.
23. Construction equipment shall be inspected daily for leaking fuel, oil, and hydraulic fluid prior to entering surface waters or wetlands or operating in an area where such fluids could reach groundwater, surface waters, or wetlands.
24. Faulty equipment shall be repaired immediately and prior to entering areas that are subject to RSA 482-A jurisdiction.

25. The permittee's contractor(s) shall maintain appropriate oil/diesel fuel spill kits on site that are readily accessible at all times during construction, and shall train each operator in the use of the kits.
26. All refueling of equipment shall occur outside of surface waters or wetlands during construction. Machinery shall be staged and refueled in upland areas only.

EXPLANATION

The NHDES approved this project on October 10, 2019. The NHDES supported its decision with the following findings:

1. This is a Major Project per Administrative Rule Env-Wt 303.02(a), projects in sand dunes, tidal wetlands, or bogs, except for the repair of existing structures pursuant to Env-Wt 303.04(v).
2. On February 6, 2019, a pre-application meeting was held at the NHDES in Portsmouth.
3. On March 1, 2019, the NHDES received a Wetlands Permit Application to impact 258 square feet of tidal wetland and 1,988 square feet within the previously-developed upland tidal buffer zone for construction of a stone patio and access way to an existing tidal docking structure and shoreline stabilization using riprap protection at the toe of slope and a proprietary engineered system of plastic-wrapped soil lifts at a 1:1 slope plus plastic slope protection at a 2:1 slope above that. The proposed product consisted of flexible plastic erosion control material (high performance turf reinforcement mat [HPTRM]), filled with soil and included a structural element within each lift for added reinforcement. Each lift and the matted slope above was proposed to be seeded and planted with live stakes of native shrub species. The plastic material was designed to stay in place permanently.
4. The proposed stone patio was located at the top of slope and consisted of a 12 foot by 7.25 foot gravel area contained within a 1-foot-thick granite band (totaling 115.5 square feet, thereby maximizing the allowable limit on accessory structures, per New Hampshire Administrative Rule Env-Wq 1405.03(c)).
5. In correspondence dated April 5, 2019, the NH Division of Historical Resources found that the project, as proposed, is not expected to affect any history properties.
6. The Natural Heritage Bureau (NHB) report submitted with the application package (NHB19-0590) cited the presence of an exemplary natural community in the vicinity of the proposed project.
7. In correspondence dated March 19, 2019 and March 29, 2019, the NHB questioned the necessity of the originally-proposed robust synthetic (plastic) engineered solution given the slope and existing condition of this shoreline compared to similar shoreline stabilization projects in the vicinity which have used non-plastic biodegradable materials. The NHB further raised concern regarding the potential for the plastic material to degrade over time thus contributing to micro plastics pollution in the marine environment.
8. In correspondence dated February 08, 2019, the NH Fish and Game Department (NHFG) cited concern for the potential of the plastic material to degrade over time thus contributing to micro plastics pollution in the marine environment.
9. On June 21, 2019, the NHDES staff conducted a field inspection of the proposed project area. Prior field inspections had also been conducted, related to previous permit applications submitted by the property owner (NHDES Wetlands Bureau file numbers: 2018-00207, 2018-00708 and 2018-01046).

10. In correspondence dated June 21, 2019, the NHDES denied the applicant's request based on a failure to demonstrate, pursuant to New Hampshire Administrative Rule Env-Wt 302.03(a), Env-Wt 302.04(a)(2) and Env-Wt 404.01, that the proposal had avoided potential impacts to the maximum extent practicable, that unavoidable impacts had been minimized, that the alternative proposed was the one with the least impact to wetlands or surface waters and that the proposed shoreline stabilization was the least intrusive but practical method.
11. In correspondence dated July 1, 2019, the US Army Corps of Engineers (ACOE) stated that, since the NHDES denied the original permit application, the ACOE is obligated to deny the project without prejudice.
12. In correspondence dated July 18, 2019, the NHDES received a preliminary notice of appeal from the applicant's legal representative indicating their willingness to participate in either mediated or unmediated settlement discussions prior to formal appeal.
13. In correspondence dated July 24, 2019, the NHDES accepted the offer and elected to participate in unmediated settlement discussion.
14. Unmediated settlement discussions were held between the NHDES Wetlands Bureau staff, the applicant and their environmental consultant on August 6, 2019 and August 26, 2019.
15. In correspondence dated August 28, 2019, a Settlement Agreement was executed between the NHDES and the applicant stating that the applicant will submit revised plans and provide the NHDES the ability to re-open the review of Wetlands Permit Application file #2019-00695.
16. A final revised design was received by the NHDES on September 10, 2019.
17. The applicant has provided evidence which demonstrates that this revised proposal is the alternative with the least adverse impact to areas and environments under the NHDES' jurisdiction per New Hampshire Administrative Rule Env-Wt 302.03.
18. The applicant has re-designed the slope stabilization project to maintain the existing toe of slope, minimize structural components, regrade the higher portion of the slope and provide a 10-16 foot native shrub buffer.
19. Work will be done at low tide and from the upland. Stones that currently provide habitat for rocky-intertidal benthic invertebrates or algal species will be repositioned along the base of the reconstructed slope.
20. The existing shoreline is comprised of a mixture of randomly placed stone, debris and vegetation at a 1:1 to 2:1 slope. The proposed project will re-establish a stable slope using boulder toe protection, riprap and native shrub plantings at a 1:1 to 2.5:1 slope.
21. The project is located on the shoreline of Little Bay in Durham, within an area identified by the NHFG as Highest Ranked Habitat in the State, per the NH Wildlife Action Plan.
22. The applicant has demonstrated by plan and example that each factor listed in New Hampshire Administrative Rule Env-Wt 302.04(a) and (c), Requirements for Application Evaluation, has been considered in the design of the project.
23. In accordance with New Hampshire Administrative Rule Env-Wt 302.03(c)(2)d., compensatory mitigation is not required.
24. In accordance with RSA 482-A:8, the NHDES finds that the requirements for a public hearing do not apply as the permitted project is not of substantial public interest, and will not have a significant impact on or adversely affect the values of the estuarine resource, as identified under RSA 482-A:1.1.

25. In accordance with New Hampshire Administrative Rule Env-Wt 304.04, in correspondence dated September 10, 2019, signed authorization was obtained from the abutting land owners (map/lots: 12/1-10 and 1-6) whose properties are located within 20 feet of the project..

Application file documents are being forwarded to the Governor and the Executive Council in connection with their consideration of this matter pursuant to RSA 482-A:3,II.(a) as it is a major project in public waters of the state.

We respectfully request your approval of this item.

Robert R. Scott
Commissioner

NHDES-W-06-012

WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau
Land Resources Management

Check the status of your application: www.des.nh.gov/onestop

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

RECEIVED
COMPLETE

2018-00495
2018-02-20
Initial

1. REVIEW TIME: Indicate your Review Time below. To determine review time, refer to Guidance Document A for instructions.

☐ Standard Review (Minimum, Minor or Major Impact) ☒ Expedited Review (Minimum Impact only)

2. MITIGATION REQUIREMENT:

If mitigation is required a Mitigation Pre-Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if Mitigation is Required, please refer to the Determine If Mitigation is Required Frequently Asked Question.

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

☒ N/A - Mitigation is not required

3. PROJECT LOCATION:

Separate wetland permit applications must be submitted for each municipality that wetland impacts occur within.

ADDRESS: **32 Cedar Point Road**			TOWN/CITY: **Durham**
TAX MAP: **12**	BLOCK:	LOT: **1-8**	UNIT:
USGS TOPO MAP WATERBODY NAME: **Little Bay** ☐ NA		STREAM WATERSHED SIZE: ☒ NA	
LOCATION COORDINATES (If known): **X:1,201,063.2099 Y: 230,382.7430**		☐ Latitude/Longitude ☐ UTM ☒ State Plane	

4. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

The project proposes 1,988 sq. ft. of permanent impact to the previously developed 100' Tidal Buffer Zone, and 258 sq. ft. of permanent impact to tidal waters for shoreline stabilization and construction of a stone/granite patio which will provide foot access to the previously approved tidal docking structure (DES File: 2018-00708).

5. SHORELINE FRONTAGE:

☐ NA This does not have shoreline frontage. SHORELINE FRONTAGE: **77 feet**

Shoreline frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line.

6. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:

Please indicate if any of the following permit applications are required, and if required, the status of the application. To determine if other Land Resources Management Permits are required, refer to the Land Resources Management Web Page.

Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	☐ YES ☒ NO	____	☐ APPROVED ☐ PENDING ☐ DENIED
Individual Sewerage Disposal per RSA 485-A:2	☐ YES ☒ NO	____	☐ APPROVED ☐ PENDING ☐ DENIED
Subdivision Approval Per RSA 485-A	☐ YES ☒ NO	____	☐ APPROVED ☐ PENDING ☐ DENIED
Shoreland Permit Per RSA 483-B	☐ YES ☒ NO	____	☐ APPROVED ☐ PENDING ☐ DENIED

7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:

See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB 19 - 0590

b. ☐ Designated River the project is in ¼ miles of: _____; and date a copy of the application was sent to the Local River Management Advisory Committee: Month: __ Day: __ Year: ____
☒ N/A

MUNICIPAL SIGNATURES

12. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application and

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

Conservation Commission Signature	Print name legibly	Date

DIRECTIONS FOR CONSERVATION COMMISSION:

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained prior to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will be reviewed in the standard review time frame.

13. TOWN / CITY CLERK SIGNATURE

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

Town/City Clerk Signature	Print name legibly	Town/City	Date
Barbara Landgraf	BARBARA LANDGRAF	Durham	2/27/19

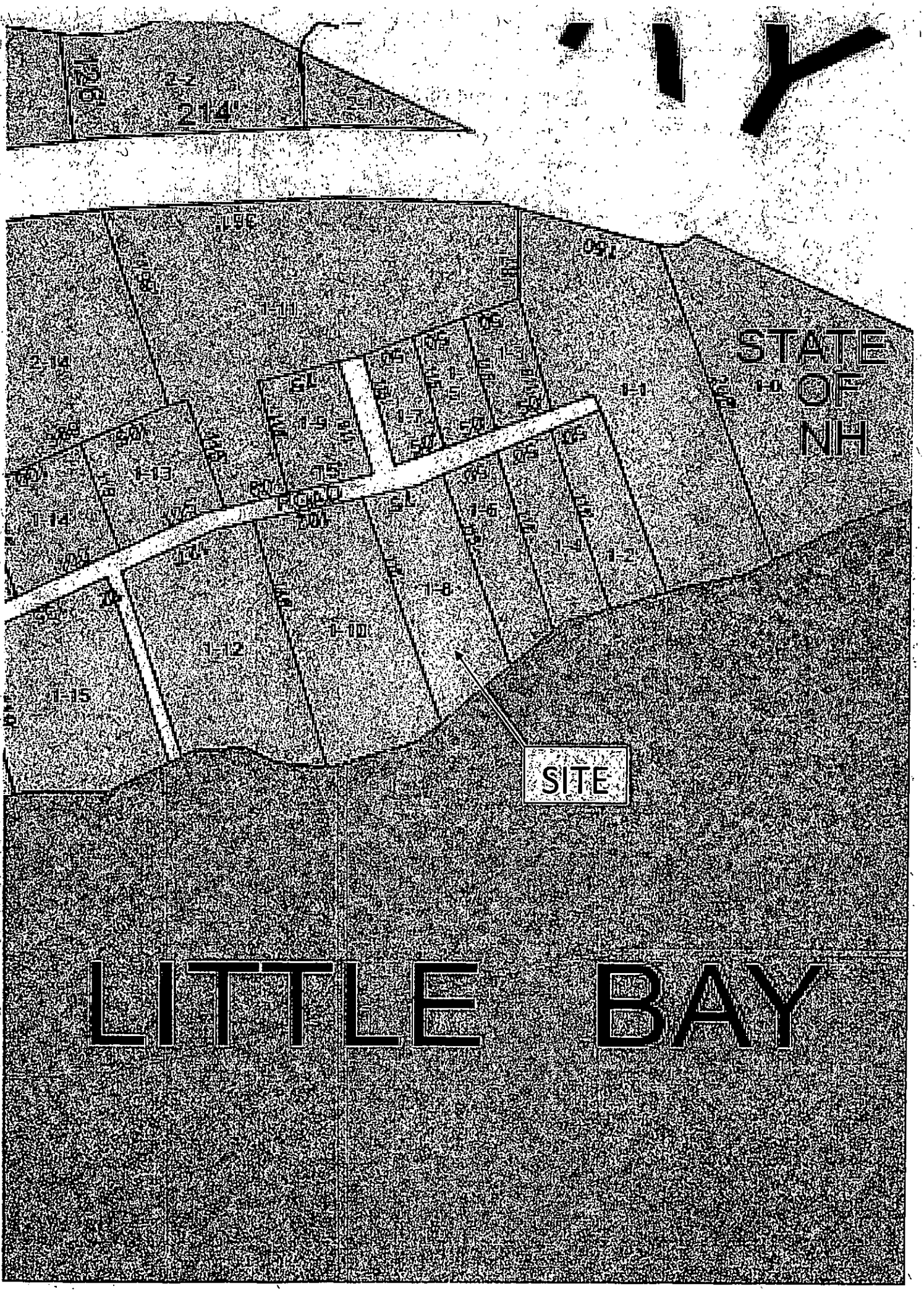
DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

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

DIRECTIONS FOR APPLICANT:

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


STATE OF NH
SITE
LITTLE BAY

CONFIDENTIAL – NH Dept. of Environmental Services review

Memo

NH NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

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

From: Amy Lamb, NH Natural Heritage Bureau
Date: 2/25/2019 (valid for one year from this date)
Re: Review by NH Natural Heritage Bureau
NHB File ID: NHB19-0590 Town: Durham Location: Tax Maps: Tax Map 12, Lot 1-8
Description: The project proposes shoreline stabilization along the existing steep slope on the subject lot and construction of a pervious patio.

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

Comments: Please send NHB a site plan detailing existing and proposed conditions, planting plan, stabilization methods, and any impacts to the sparsely vegetated intertidal system.

Natural Community	State[1]	Federal	Notes
Sparsely vegetated intertidal system	--	--	Threats to these communities are primarily alterations to the hydrology of the wetland (such as alterations that might affect the sheet flow of tidal waters across the intertidal flat) and increased input of nutrients and pollutants in storm runoff.

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

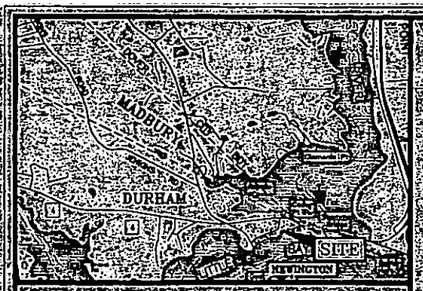
ABUTTER'S LIST

JN 2552.16

Client: Manisha P. Heiderscheidt 2010 Revocable Trust

Project Address: 32 Cedar Point Road, Dover, NH

MAP	LOT	NAME(S)	PO BOX	STREET ADDRESS	CITY/STATE/ZIP
12	1-10	Thomas J. Fleming			
12	1-6	Craig S. Harris			



LOCATION MAP SCALE 0 1" = 2000'

LEGEND

EXISTING / PROPOSED

N/F — NOW OR FORMERLY
RECORD OF / PROPERTY OF
STRAFFORD COUNTY REGISTRY OF DEEDS
MAP 11 / LOT 31
RAILROAD SPIKE FOUND/SET
IRON ROD FOUND/SET
IRON PIPE FOUND/SET
DRILL HOLE FOUND/SET
MAGNET BOUND FOUND
TOWN BOUND FOUND
BOUND W/ DRILL HOLE
CATCHBASIN ELECTRIC/TELECO
CONTOUR
SPOT ELEVATION
EDGE OF PAVEMENT (EP)
WOODS TREE LINE
UTILITY POLE (UP) GUY
EDGE OF WETLAND FLAGGED
SWAMP / MARSH
ELEVATION
EDGE OF PAVEMENT
FINISHED FLOOR
INVERT
TEMPORARY BENCHMARK
TYPICAL
LANDSCAPED AREA

PLAN REFERENCES

1) "EXISTING CONDITIONS PLAN PREPARED FOR DAVID GERARD AND MARIA BOWDEN-GERARD TAX MAP 12 LOT 1-8 32 CEDAR POINT ROAD TOWN OF DURHAM COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE" PREPARED BY McENANEY SURVEY ASSOCIATES, INC. DATED MARCH 20, 2007. S.C.R.D. PLAN 80-58.

2) "BOUNDARY LINE AGREEMENT FOR ROEMER/SLY IN DURHAM, NH" PREPARED BY SEACOAST ENGINEERING ASSOCIATES, INC. DATED JANUARY 10, 1989. S.C.R.D. PLAN 32-103.

3) "PLAN OF LOT JACOB CIBOROWSKI DURHAM NEW HAMPSHIRE" PREPARED BY C.L. DAVIS & ASSOCIATES. DATED OCTOBER 1970. S.C.R.D. POCKET 1 FOLDER 13 PLAN 33.

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

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

PAUL A. COMERTON, LLS #1000 — DATE 11/16/17

TEST PIT #1, ELEV. 18.8±
Date: 12/6/17
Logged by: STEVE RIKER
Witnessed by: AUDREY CLINE
ESHWT: 14"
Observed Water: NONE
Restrictive layer: 18"
REFUSAL: NONE TO 34"
Percolation rate: 6 min./inch
Roots: NONE

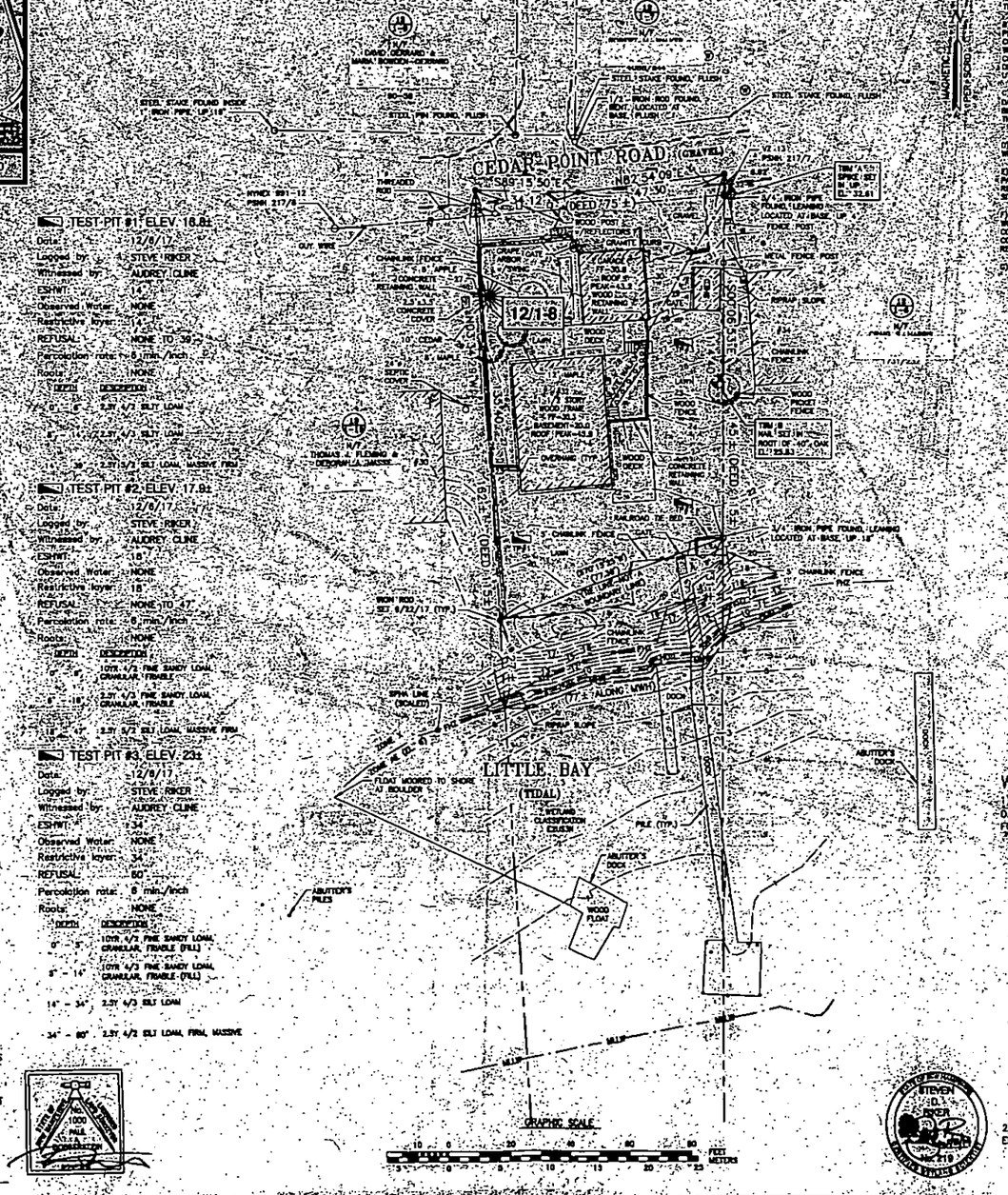
DEPTH	DESCRIPTION
0" - 8"	10YR 4/3 FINE SANDY LOAM, GRANULAR, FRIABLE
8" - 18"	2.5Y 4/3 FINE SANDY LOAM, GRANULAR, FRIABLE
18" - 34"	2.5Y 4/3 SILT LOAM, MASSIVE FIRM

TEST PIT #2, ELEV. 17.9±
Date: 12/6/17
Logged by: STEVE RIKER
Witnessed by: AUDREY CLINE
ESHWT: 18"
Observed Water: NONE
Restrictive layer: 18"
REFUSAL: NONE TO 47"
Percolation rate: 6 min./inch
Roots: NONE

DEPTH	DESCRIPTION
0" - 8"	10YR 4/3 FINE SANDY LOAM, GRANULAR, FRIABLE
8" - 18"	2.5Y 4/3 FINE SANDY LOAM, GRANULAR, FRIABLE
18" - 47"	2.5Y 4/3 SILT LOAM, MASSIVE FIRM

TEST PIT #3, ELEV. 23±
Date: 12/6/17
Logged by: STEVE RIKER
Witnessed by: AUDREY CLINE
ESHWT: 34"
Observed Water: NONE
Restrictive layer: 34"
REFUSAL: 80"
Percolation rate: 6 min./inch
Roots: NONE

DEPTH	DESCRIPTION
0" - 8"	10YR 4/3 FINE SANDY LOAM, GRANULAR, FRIABLE (FILL)
8" - 14"	10YR 4/3 FINE SANDY LOAM, GRANULAR, FRIABLE (FILL)
14" - 34"	2.5Y 4/3 SILT LOAM
34" - 80"	2.5Y 4/3 SILT LOAM, FIRM, MASSIVE



DEMOLITION NOTES

1) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE DRAWINGS ARE NOT WARRANTED TO BE KNOWN OR THE ONLY ONES IN THE CONSTRUCTION AREA. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE, UTILITIES AND ANTICIPATE CONFLICTS. CONTRACTOR SHALL REPAIR EXISTING UTILITIES DAMAGED BY CONSTRUCTION WORK. RELOCATE EXISTING UTILITIES WHICH ARE REQUIRED TO BE RELOCATED PRIOR TO THEIR REMOVAL, AND MAINTAIN UTILITIES AREAS OF THE PROJECT.

2) ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES. THE CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, AND/OR DISPOSAL OF SALVAGE OF UTILITIES WITH THE OWNER AND ANY PROPERTY UTILITY COMPANY, AS NEEDED.

3) ANY EXISTING WORK SCHEDULED TO REMAIN OR ADJACENT PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/DEMOLITION ACTIVITIES SHALL BE REPAIRED OR REPLACED TO THE APPROVED EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

4) IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL THE PERMIT APPROVALS.

5) THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.

6) ANY CONTAMINATED MATERIAL REMOVED DURING THE COURSE OF THE WORK WILL REQUIRE HANDLING IN ACCORDANCE WITH HANDLES REGULATIONS. CONTRACTOR SHALL HAVE A HEALTH AND SAFETY PLAN IN PLACE AND COMPLY WITH ALL APPLICABLE PERMITS, APPROVALS, AUTHORIZATIONS AND REGULATIONS.

7) ALL THE EXISTING SITE IMPROVEMENTS ARE TO BE REMOVED.

WETLAND NOTES

1) HIGHEST OBSERVABLE TIDE LINE DELINEATED BY STEVEN D. RIKER, CWS ON 8/10/2017 IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
   A) U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JAN. 1987) AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012.
   B) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.1, USDA-NRCS, 2017 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4, NEIWPCC WETLANDS WORK GROUP (2017).
   C) NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1), USFWS (MAY 1988).
   D) CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES, USFW MANUAL FWS/OBS-79/31 (1997).
   E) IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE (1997), NEW HAMPSHIRE FISH AND GAME DEPARTMENT.
2) WETLAND FLAGS WERE FIELD LOCATED BY AMBIT ENGINEERING, INC.

STEVEN D. RIKER — 819 — CERTIFIED WETLAND SCIENTIST

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road - Unit 3
Portsmouth, NH 03801
Tel (603) 430-9282
Fax (603) 436-2315

NOTES

1) PARCEL IS SHOWN ON THE TOWN OF DURHAM ASSESSOR'S MAP 12 AS LOT 1-8.

2) OWNERS OF RECORD:
MANISHA P. HEIDERSCHEIDT
2010 REVOCABLE TRUST
MANISHA P. HEIDERSCHEIDT &
BENEDICT C. HEIDERSCHEIDT, TRUSTEES
4495/149

3) A PORTION OF THE PARCEL IS IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON FIRM PANEL 33017C0340E EFFECTIVE DATE SEPTEMBER 30, 2015.

4) EXISTING LOT AREA:
11,794± SF
0.270± ACRES

5) PARCEL IS LOCATED IN RESIDENCE COASTAL (RC) ZONING DISTRICT AND IS SUBJECT TO THE SHORELAND PROTECTION OVERLAY DISTRICT.

6) DIMENSIONAL REQUIREMENTS:

MIN. LOT AREA:		130,000 SF
FRONTAGE:	ROAD	300 FEET
	SHORELAND	200 FEET
SETBACKS:	FRONT	30 FEET
	SIDE	50 FEET
	REAR	50 FEET
MAXIMUM BUILDING HEIGHT:		30 FEET (35 WITH CONDITIONAL USE)
MAXIMUM IMPERVIOUS SURFACE RATIO:		20%

7) THE PURPOSE OF THIS PLAN IS TO SHOW THE RESULTS OF A STANDARD BOUNDARY AND TOPOGRAPHIC SURVEY OF TAX MAP 12 LOT 1-8 IN THE TOWN OF DURHAM.

8) VERTICAL DATUM IS MEAN LOWER LOW WATER PER NOAA STATION 0420411 - DOVER, COCHECO POWER, 0 MLLW BEING 13.93' LOWER THAN 0 NAVD88. BASIS OF VERTICAL DATUM IS NH DOT BENCHMARK 133-0410.

9) CEDAR POINT ROAD IS REFERRED IN THE SUBJECT PARCEL AS WELL AS ABUTTING DEEDS AS AN EIGHTEEN FOOT RIGHT OF WAY. FOR THE PURPOSE OF ESTABLISHING THE BOUNDARIES OF THE PARCEL THIS WIDTH WAS HELD. RIGHTS OF THE PUBLIC MAY EXIST OVER THE TRAVELED PORTION OF CEDAR POINT ROAD WITHIN THE BOUNDARIES OF THE SUBJECT PARCEL.

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NO.	DESCRIPTION	DATE
	REVISIONS	
3.	ADD WETLAND NOTES	9/10/18
2.	CHANGE VERTICAL DATUM TO MLLW	1/8/18
1.	ISSUED FOR APPROVAL	12/5/18
1.	ADD MONUMENTS AS SET	10/18/17
0.	ISSUED FOR COMMENT	9/5/17

STANDARD BOUNDARY AND TOPOGRAPHIC SURVEY
TAX MAP 12 - LOT 1-8
OWNER
MANISHA P. HEIDERSCHEIDT
2010 REVOCABLE TRUST
32 CEDAR POINT ROAD
TOWN OF DURHAM
COUNTY OF STRAFFORD
STATE OF NEW HAMPSHIRE

SCALE 1"=20' — SEPTEMBER 2017

FB 231 PG 68 — 8801

NHDES APPROVED PLAN (smg)

WETLAND IMPACT AREAS (IN SQ. FT.)

IMPACT TYPE	PROPOSED IMPACT AREA	IMPACT TYPE
TIDAL WATERS / WETLAND (E2US/W)	258 S.F.	TEMPORARY
TIDAL BUFFER ZONE	1,492 S.F.	PERMANENT
TOTAL	1,750 S.F.	

WETLAND NOTES:

1) HIGHEST OBSERVABLE TIDE LINE DELINEATED BY STEVEN D. RIKER, CWS, ON 8/10/2017 IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
   A) U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JAN. 1987) AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH CENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY, 2012.
   B) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.1, USDA, NRCS, 2017, AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4, NEWPCC WETLANDS WORK GROUP (2017).
   C) NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1) - USFWS, (MAY, 1988).
   D) CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES - USFW MANUAL - FWS/OBS-79/31, (1997).
   E) IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE, (1997). NEW HAMPSHIRE FISH AND GAME DEPARTMENT.
2) WETLAND FLAGS WERE FIELD LOCATED BY AMBIT ENGINEERING, INC.

PLANTING NOTES

NATIVE SHRUB PLANTING AREA

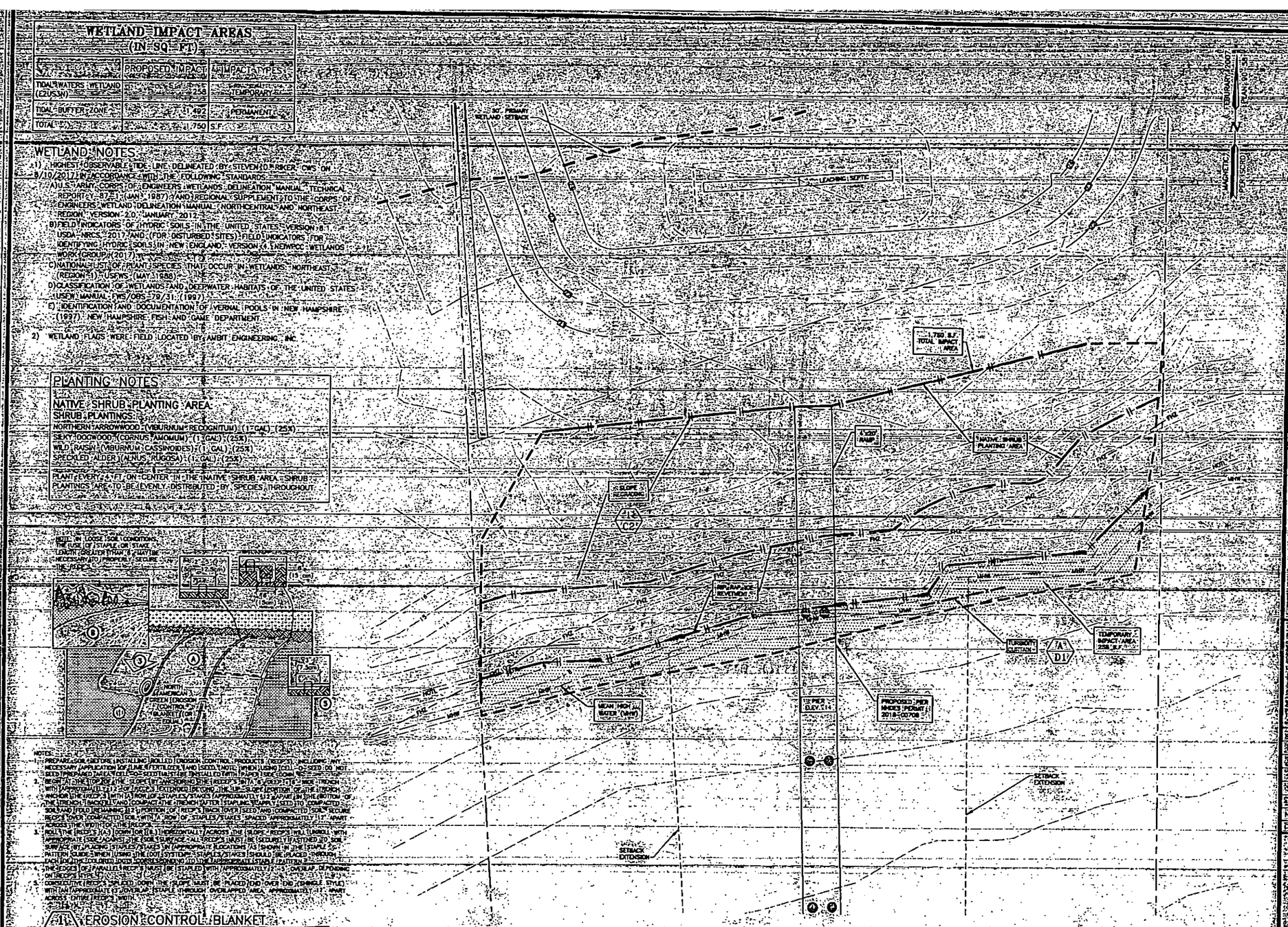
SHRUB PLANTINGS:
- NORTHERN ARROWWOOD (VIBURNUM RECOGNITUM) (17 GAL) (25%)
- SILKY DOGWOOD (CORNUS AMOMUM) (1 GAL) (25%)
- WILD RAISIN (VIBURNUM CASSINOIDES) (1 GAL) (25%)
- SPECKLED ALDER (ALNUS RUGOSA) (1 GAL) (25%)

PLANT EVERY 4 FT. ON CENTER IN THE NATIVE SHRUB AREA. SHRUB PLANTINGS ARE TO BE EVENLY DISTRIBUTED BY SPECIES THROUGHOUT.

NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTH OR ATTACHMENT MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

NOTICE:
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME AND FERTILIZER. SEED ALL SOILS BEFORE INSTALLING RECP'S. WHEN USING DOT-SPECIFIED SEED MIXTURES, CAREFULLY CHECK SEED MIXTURE LABELS TO ENSURE THAT THE PROPER SEED MIXTURE IS SPECIFIED. ALL SEED SHOULD BE TESTED FOR PURITY AND GERMINATION WITHIN 6 MONTHS PRIOR TO PLANTING. SEED THAT HAS NOT BEEN TESTED OR THAT EXCEEDS THE 6 MONTH LIMIT SHOULD BE RETESTED. DO NOT USE SEED THAT HAS LOST MORE THAN 10% OF ITS GERMINATION POTENTIAL.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 6" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL TUMBLE WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT 3 STYLE BIODEGRADABLE STAPLE PATTERN GUIDE, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE RECP'S, AS SPECIFIED IN THE APPROPRIATE STAPLE PATTERN GUIDE. ADDITIONAL STAPLES MAY BE NECESSARY. REFER TO MANUFACTURER'S GUIDE FOR COMPLETE AND MORE PRECISE INSTALLATION INSTRUCTIONS.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLES THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.

#11 / C2 EROSION CONTROL BLANKET
NORTH AMERICAN GREEN SLOPE TREATMENT — NTS



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ENVIRONMENTAL SERVICES

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1) PARCEL IS SHOWN ON THE TOWN OF DURHAM ASSESSOR'S MAP 12 AS LOT 7-8.
2) OWNERS OF RECORD:
   MANISHA P. HEIDERSCHEIDT
   2010 REVOCABLE TRUST OF
   MANISHA P. HEIDERSCHEIDT &
   BENEDICT C. HEIDERSCHEIDT, TRUSTEES
   4495/149
3) A PORTION OF THE PARCEL IS IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON FIRM PANEL 33017C0340E EFFECTIVE DATE SEPTEMBER 30, 2015.
4) EXISTING LOT AREA:
   11,794± S.F.
   0.2708± ACRES
5) PARCEL IS LOCATED IN RESIDENCE COASTAL (RC) ZONING DISTRICT AND IS SUBJECT TO THE SHORELAND PROTECTION OVERLAY DISTRICT.
6) THE PURPOSE OF THIS PLAN IS TO SHOW THE LOCATION OF PROPOSED RETAINING WALL AND GRADING AS WELL AS REPAIR TO AN EXISTING REVETMENT ON TAX MAP 12 LOT 51-8.
7) VERTICAL DATUM IS MEAN LOW LOW WATER LEVEL. NAVD88. BASIS OF VERTICAL DATUM IS NH DOT BENCHMARK 133-041.0.
8) PROPERTY HAS 77'± OF SHORE FRONTAGE.

NO.	DESCRIPTION	DATE
	REVISIONS	
#7	REMOVED GRASS PLANTING AREA	9/6/19
#6	REMOVED RETAINING WALL	6/25/19
#5	PLANTING LIMIT CLARITY	6/9/19
#3	ADDED MHW LINE	5/22/19
#2	REVISED PATIO LOCATION	2/13/19
#1	REVISED PER ACF REVIEW	1/23/19

STEVEN D. RIKER — NUMBER 3219 — CERTIFIED WETLAND SCIENTIST

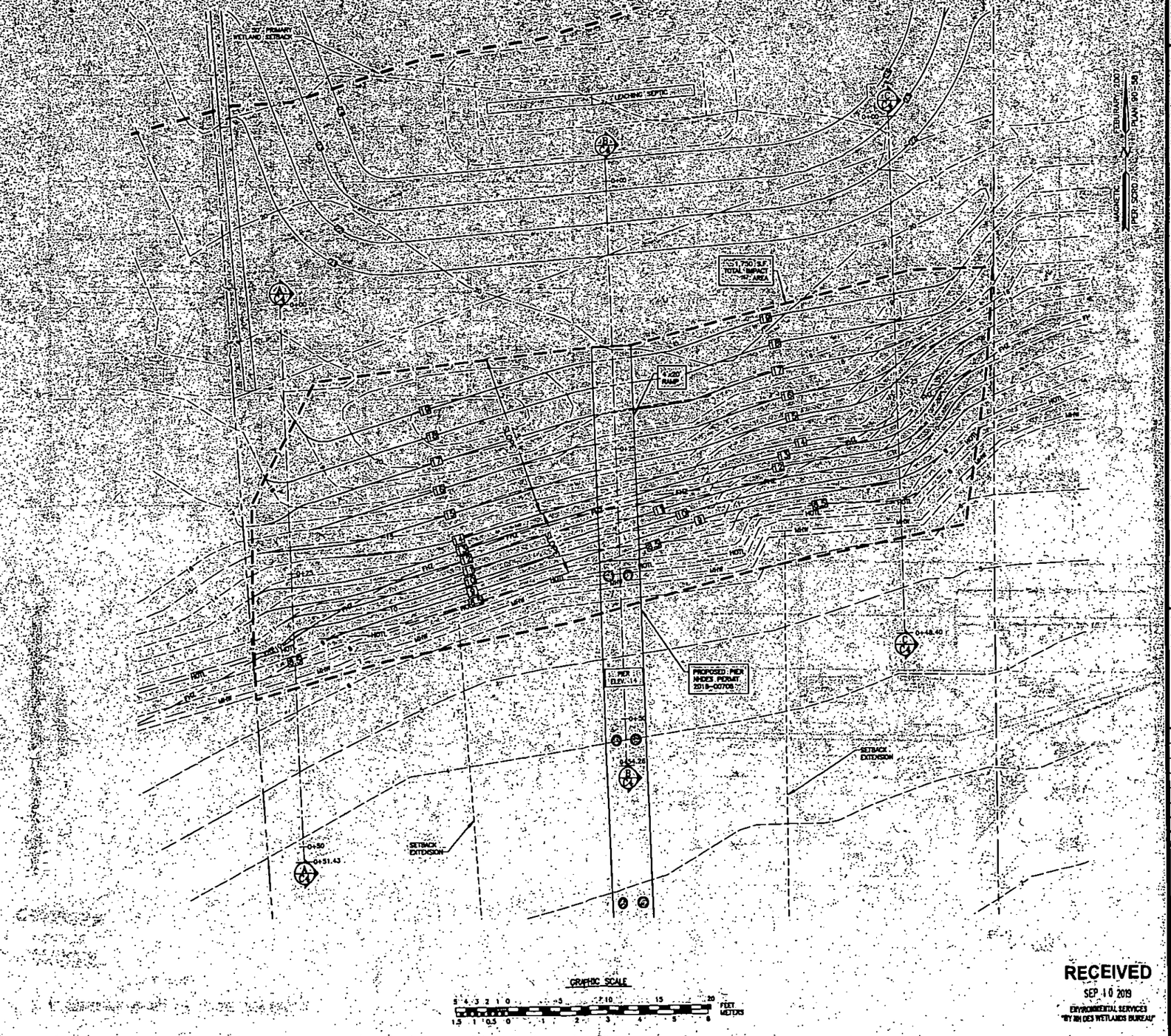
JOHN R. CHAGNON — No. 7801 — LICENSED LAND SURVEYOR — STATE OF NEW HAMPSHIRE

HEIDERSCHEIDT RESIDENCE
32 CEDAR POINT ROAD
DURHAM, N.H.

SCALE: 1" = 5' — JANUARY 2019

REVETMENT PERMIT PLAN

C2



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"BY NH DES WETLANDS BUREAU"

Civil Engineers & Land Surveyors
800 Griffin Road / Unit 12
Portsmouth, N.H. 03801 / 7114
TEL: (603) 436-2818
Fax: (603) 436-2818

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION (NHDES: DECEMBER 2008).

4) VERTICAL DATUM IS MEAN LOW LOW WATER (LEVEL NAVD88 (MLLW). BASIS OF VERTICAL DATUM IS NH DOT BENCHMARK 113-0410.

HEIDERSCHEIDT RESIDENCE
32 CEDAR POINT ROAD
DURHAM, N.H.

NO.	DESCRIPTION	DATE
8	REMOVED RETAINING WALL	8/23/19
5	PLANTING UNIT CLARITY	8/9/19
4	RIP RAP & SLOPE TREATMENT	7/29/19
3	ADDED MHW LINE	5/22/19
2	REVISED PATIO LOCATION	2/13/19
1	REVISED PER ACF REVIEW	1/23/19

REVISIONS

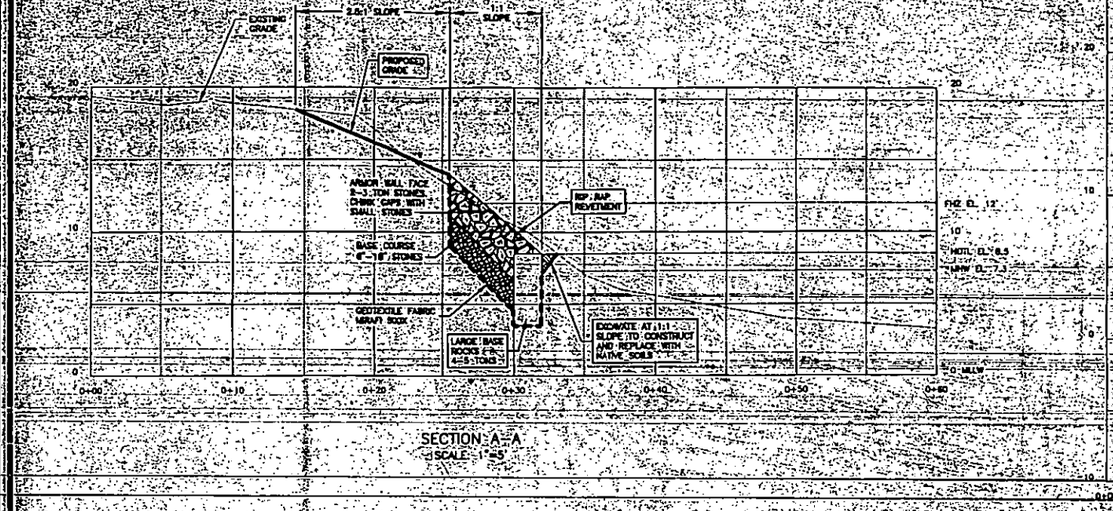
STATE OF NEW HAMPSHIRE STEVEN D. RIKER No. 219 LICENSED LAND SURVEYOR

STATE OF NEW HAMPSHIRE JOHN R. CHAGNON No. 17641 PROFESSIONAL ENGINEER

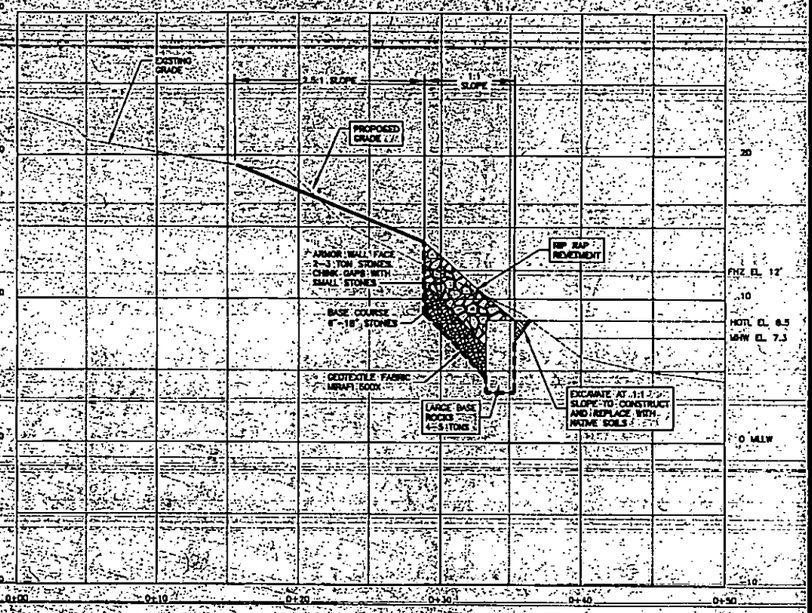
SCALE 1"=5' JANUARY 2019

REVETMENT DESIGN PLAN

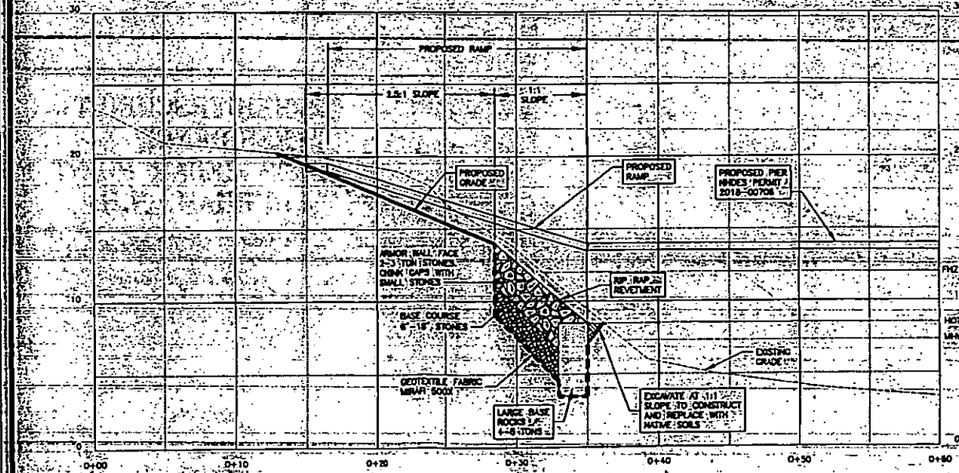
C3



SECTION A-A
SCALE 1"=5'



BASE COURSE
SECTION C-C
SCALE 1"=5'



SECTION B-B
SCALE 1"=5'

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GRAPHIC SCALE
5 4 3 2 1 0 5 10 15 20 FEET
1.5 1 0.5 0 1 2 3 4 5 6 METERS

GRAPHIC SCALE

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel: (603) 430-9282
Fax: (603) 436-2315

NOTES:

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4) VERTICAL DATUM IS MEAN LOW LOW WATER LEVEL. NAVD88 (MLLW) BASIS OF VERTICAL DATUM IS NH DOT BENCHMARK 133-0410.

HEIDERSCHEIDT RESIDENCE
32 CEDAR POINT ROAD
DURHAM, N.H.

NO	DESCRIPTION	DATE
6	REMOVED RETAINING WALL	10/23/19
5	PLANTING LIMIT CLARITY	10/9/19
4	RIP RAP & SLOPE TREATMENT	9/20/19
3	ADDED MHW LINE	8/22/19
2	REVISED PATIO LOCATION	8/13/19
1	REVISED PER ACF REVIEW	7/23/19

REVISIONS

SCALE 1"=5' JANUARY, 2019

REVETMENT SECTIONS

C4

SEQUENCE OF CONSTRUCTION

1) MOBILIZATION OF EXCAVATOR, BOBCAT AND MATERIALS TO THE SITE VIA APPROVED ACCESS AND LAYDOWN AREAS.
2) MOBILIZATION OF EQUIPMENT TRUCKS TO THE SITE.
3) LAYOUT OF WORK AREA EXTENTS TO BE COMPLETED PRIOR TO START OF WORK.
4) EROSION CONTROL FENCING TO BE INSTALLED IN AREAS WHERE FEASIBLE.
5) ALL WORK WILL BE PERFORMED AT LOW TIDE TO MINIMIZE SEDIMENTATION.
6) MOST WORK TO BE COMPLETED FROM THE TOP OF THE EMBANKMENT BY EXCAVATOR. ONE SECTION AT THE NORTHERN END OF THE AREA OF WORK WILL REQUIRE ACCESS TO THE TOE OF THE EMBANKMENT WITH THE EXCAVATOR BELOW THE HOTL. CRANE MATS WILL BE USED UNDER THE EXCAVATOR TO TRAVERSE AND WORK IN THE INTERTIDAL AREA. THE AREA OF TEMPORARY IMPACT FROM ACCESS BY THE EXCAVATOR IS ENTIRELY OVER AN AREA OF SHALE/LEDGE SO THERE WILL BE MINIMAL IMPACT.
7) IN AREAS WHERE STABILIZATION WILL OCCUR, THE EMBANKMENT WILL BE RESHAPED WHERE POSSIBLE. A TOE DUG IN AND A NON WOVEN GEOTEXTILE FILTER FABRIC INSTALLED. WORK ON THE SLOPE WILL BE LIMITED TO THE MAXIMUM AREA THAT CAN BE RESHAPED AND STABILIZED IN A WORKDAY THUS MINIMIZING EROSION FROM OPEN SOIL.
8) AFTER INSTALLATION OF THE FILTER FABRIC AND THE LAYER OF CRUSHED GRAVEL WILL BE BROUGHT IN AND LAID ON TOP. FINALLY ARMOUR STONE WILL BE SET ON TOP OF THE CRUSHED GRAVEL AND THEN CHINKED, STARTING WITH THE INSTALLATION OF THE TOE.
9) ONCE THE RIPRAP HAS BEEN INSTALLED THE REMAINING PORTION OF THE SLOPE WILL BE STABILIZED USING THE PROPOSED VEGETATIVE STABILIZATION PLAN.
10) ALL TEMPORARY AREAS OF IMPACT FROM ACCESS AND LAYDOWN WILL BE RESTORED AFTER COMPLETION OF THE PROPOSED STABILIZATION WORK. ONCE ALL AREAS HAVE BEEN STABILIZED THEN EROSION CONTROL SYSTEMS WILL BE REMOVED.

DISCHARGES AVOIDANCE MINIMIZATION AND MITIGATION

DISCHARGES OF DREDGED OR FILL MATERIAL INTO WATERS OF THE U.S. AND ANY SECONDARY IMPACTS SHALL BE AVOIDED AND MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE. PERMITTEES MAY ONLY FILL THOSE JURISDICTIONAL WETLANDS AND WATERWAYS THAT THE CORP AND NHDES AUTHORIZES TO BE FILLED AND IMPACT THOSE AREAS THAT THE CORPS AND AND NHDES AUTHORIZES AS SECONDARY IMPACTS. IF NOT SPECIFICALLY AUTHORIZED BY USACOE AND AND NHDES, ANY UNAUTHORIZED FILL OR SECONDARY IMPACT TO WETLANDS MAY BE CONSIDERED AS A VIOLATION OF THE CWA.

UNLESS SPECIFICALLY AUTHORIZED USACOE AND AND NHDES, NO WORK SHALL DRAIN A WATER OF THE U.S. BY PROVIDING A CONDUIT FOR WATER ON OR BELOW THE SURFACE.

HEAVY EQUIPMENT IN WETLANDS

HEAVY EQUIPMENT OTHER THAN FIXED EQUIPMENT (DRILL RIGS, FIXED CRANES, ETC.) WORKING IN WETLANDS SHALL NOT BE STORED, MAINTAINED OR REPAIRED IN WETLANDS, UNLESS IT IS LESS ENVIRONMENTALLY DAMAGING OTHERWISE, AND AS MUCH AS POSSIBLE SHALL NOT BE OPERATED WITHIN THE INTERTIDAL ZONE. WHERE CONSTRUCTION REQUIRES HEAVY EQUIPMENT OPERATION IN WETLANDS, THE EQUIPMENT SHALL EITHER HAVE LOW GROUND PRESSURE (<3 PSI), OR SHALL NOT BE LOCATED DIRECTLY ON WETLAND SOILS AND VEGETATION. IT SHALL BE PLACED ON SWAMP MATS THAT ARE ADEQUATE TO SUPPORT THE EQUIPMENT IN SUCH A WAY AS TO MINIMIZE DISTURBANCE OF WETLAND SOIL AND VEGETATION. SWAMP MATS ARE TO BE PLACED IN THE WETLAND FROM THE UPLAND OR FROM EQUIPMENT POSITIONED ON SWAMP MATS IF WORKING WITHIN A WETLAND. DRAGGING SWAMP MATS INTO POSITION IS PROHIBITED. OTHER SUPPORT STRUCTURES THAT ARE LESS IMPACTING AND ARE CAPABLE OF SAFELY SUPPORTING EQUIPMENT MAY BE USED WITH WRITTEN CORPS AND NHDES AUTHORIZATION. SIMILARLY, NOT USING MATS DURING FROZEN, DRY OR OTHER CONDITIONS MAY BE ALLOWED WITH WRITTEN CORPS AND NHDES AUTHORIZATION. AN ADEQUATE SUPPLY OF SPILL CONTAINMENT EQUIPMENT SHALL BE MAINTAINED ON SITE. CORDUROY ROADS AND SWAMP/CONSTRUCTION MATS ARE CONSIDERED AS FILL WHETHER THEY'RE INSTALLED TEMPORARILY OR PERMANENTLY.

TIME OF YEAR WORK WINDOW AND NOISE RESTRICTIONS

1. WORK ANTICIPATED TO BE COMPLETED DURING THE LATE SUMMER OR EARLY FALL. LBS. AND A WOOD CUSHION IS USED BETWEEN THE HAMMER AND STEEL PILE.

WORK SITE RESTORATION

- UPON COMPLETION OF CONSTRUCTION, ALL DISTURBED WETLAND AREAS SHALL BE PROPERLY STABILIZED. ANY SEED MIX SHALL CONTAIN ONLY PLANT SPECIES NATIVE TO NEW ENGLAND.
- THE INTRODUCTION OR SPREAD OF INVASIVE PLANT SPECIES IN DISTURBED AREAS IS PROHIBITED.
- IN AREAS OF AUTHORIZED TEMPORARY DISTURBANCE, IF TREES ARE CUT THEY SHALL BE CUT AT GROUND LEVEL AND NOT UPROOTED IN ORDER TO PREVENT DISRUPTION TO THE WETLAND SOIL STRUCTURE AND TO ALLOW STUMP SPROUTS TO REVEGETATE THE WORK AREA, UNLESS OTHERWISE AUTHORIZED.
- WETLAND AREAS WHERE PERMANENT DISTURBANCE IS NOT AUTHORIZED SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND ELEVATION, WHICH UNDER NO CIRCUMSTANCES SHALL BE HIGHER THAN THE PRE-CONSTRUCTION ELEVATION. ORIGINAL CONDITION MEANS CAREFUL PROTECTION AND/OR REMOVAL OF EXISTING SOIL AND VEGETATION, AND REPLACEMENT BACK TO THE ORIGINAL LOCATION SUCH THAT THE ORIGINAL SOIL LAYERING AND VEGETATION SCHEMES ARE APPROXIMATELY THE SAME, UNLESS OTHERWISE AUTHORIZED.

SEDIMENTATION AND EROSION CONTROL

ADEQUATE SEDIMENTATION AND EROSION CONTROL MANAGEMENT MEASURES, PRACTICES AND DEVICES, SUCH AS PHASED CONSTRUCTION, VEGETATED FILTER STRIPS, GEOTEXTILE SILT FENCES, STORMWATER DETENTION AND INFILTRATION SYSTEMS, SEDIMENT DETENTION BASINS, OR OTHER DEVICES SHALL BE INSTALLED AND PROPERLY MAINTAINED TO REDUCE EROSION AND RETAIN SEDIMENT ON-SITE DURING AND AFTER CONSTRUCTION. THEY SHALL BE CAPABLE OF PREVENTING EROSION, OF COLLECTING SEDIMENT, SUSPENDED AND FLOATING MATERIALS, AND OF FILTERING FINE SEDIMENT. THE DISTURBED AREAS SHALL BE STABILIZED AND THESE DEVICES SHALL BE REMOVED UPON COMPLETION OF WORK. THE SEDIMENT COLLECTED BY THESE DEVICES SHALL BE REMOVED AND PLACED AT AN UPLAND LOCATION, IN A MANNER THAT WILL PREVENT ITS LATER EROSION INTO A WATERWAY OR WETLAND. ALL EXPOSED SOIL AND OTHER FILLS SHALL BE PERMANENTLY STABILIZED AT THE EARLIEST PRACTICABLE DATE.

SPAWNING AREAS

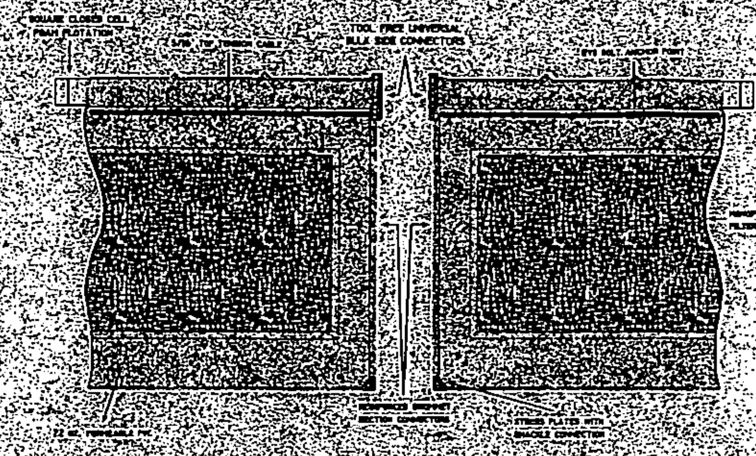
DISCHARGES OF DREDGED OR FILL MATERIAL, AND/OR SUSPENDED SEDIMENT PRODUCING ACTIVITIES IN FISH AND SHELLFISH SPAWNING OR NURSERY AREAS, OR AMPHIBIAN AND MIGRATORY BIRD BREEDING AREAS, DURING SPAWNING OR BREEDING SEASONS SHALL BE AVOIDED. IMPACTS TO THESE AREAS SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE DURING ALL TIMES OF THE YEAR. INFORMATION ON SPAWNING HABITAT FOR SPECIES MANAGED UNDER THE MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT (I.E., EFH FOR SPAWNING ADULTS) CAN BE OBTAINED FROM THE NMFS WEBSITE AT: WWW.NERO.NOAA.GOV/HCD.

ENVIRONMENTAL FUNCTIONS AND VALUES

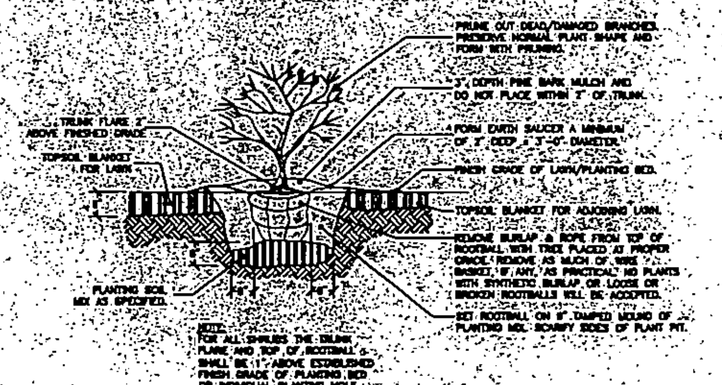
THE PERMITTEE SHALL MAKE EVERY REASONABLE EFFORT TO 1) CARRY OUT THE CONSTRUCTION OR OPERATION OF THE WORK AUTHORIZED BY USACOE AND NHDES HEREIN IN A MANNER THAT MINIMIZES ADVERSE IMPACTS ON FISH, WILDLIFE AND NATURAL ENVIRONMENTAL VALUES, AND 2) PROHIBIT THE ESTABLISHMENT OR SPREAD OF PLANT SPECIES IDENTIFIED AS NON-NATIVE INVASIVE SPECIES BY ANY FEDERAL OR STATE AGENCY. SEE THE SECTION ON INVASIVE SPECIES AT HTTP://WWW.NAE.USACE.ARMY.MIL/REGULATORY/ FOR CONTROL METHODS.

INSPECTIONS

THE PERMITTEE SHALL ALLOW THE CORPS AND NHDES TO MAKE PERIODIC INSPECTIONS AT ANY TIME DEEMED NECESSARY IN ORDER TO ENSURE THAT THE WORK IS BEING OR HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT. THE CORPS AND NHDES MAY ALSO REQUIRE POST-CONSTRUCTION ENGINEERING DRAWINGS FOR COMPLETED WORK.



A / C3 TYPE 2 HD PERMEABLE TURBIDITY CURTAIN
(OR EQUAL) NTS



B / C3 SHRUB PLANTING DETAIL
(SHRUB PLANTING DETAIL APPLIES TO EVERGREEN AND DECIDUOUS SHRUBS) (IF NEEDED) NTS

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AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors

NOTES:

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3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION." (NHDES DECEMBER 2008).

HEIDERSCHEIDT RESIDENCE
32 CEDAR POINT ROAD
DURHAM, N.H.

NO.	DESCRIPTION	DATE
1	REMOVE DETAIL C	2/13/19
0	ISSUED FOR COMMENT	1/4/19

REVISIONS

STATE OF NEW HAMPSHIRE JOHN R. CHAGNON No. 7151 LICENSED PROFESSIONAL ENGINEER

SCALE: AS SHOWN — JANUARY 2019

REVETMENT DETAILS — D1

2552.18