REGULAR MEETING
CONSERVATION COMMISSION

1 JUNKINS AVENUE
PORTSMOUTH, NEW HAMPSHIRE
EILEEN DONDERO FOLEY COUNCIL CHAMBERS

4:00 P.M. **February 14, 2024**

AGENDA (revised on February 09, 2024)

I. APPROVAL OF MINUTES

1. January 10, 2024

II. WETLAND CONDITIONAL USE PERMIT APPLICATIONS (OLD BUSINESS)

1. 90 F.W. Hartford Drive
   Amrishi & Andrea Chicooree, Owners
   Assessor Map 269, Lot 45

2. 224 Broad Street, Unit 3
   Perkins Kwoka Joint Revocable Trust, Katelyn E. & Rebecca P. Kwoka Trustees, Owners
   Assessor Map 131, Lot 13

III. WETLAND CONDITIONAL USE PERMIT APPLICATIONS (NEW BUSINESS)

1. 300 Gosling Road
   Public Service Company of NH, Owner
   Assessor Map 214, Lot 3

2. 50 Odiorne Point Road
   Rosemary L. Gardner Revocable Trust, Owner
   John E. Gardner Trustee, Co-Owner
   Assessor Map 224, Lot 10-3

IV. STATE WETLAND BUREAU APPLICATIONS (NEW BUSINESS)

1. Dredge and Fill- Minor Impact
   333 Borthwick Avenue
   HCA Health Services of New Hampshire, Owner
   Assessor Map 240, Lot 2-1

V. WORK SESSIONS

1. 50 Clough Drive
   City of Portsmouth, Owner

Assessor Map 206, Lot 20

VI. OTHER BUSINESS

1. Welcome Talia Sperduto!
2. Peirce Island Kayak Launch

VII. ADJOURNMENT

**Members of the public also have the option to join this meeting over Zoom, a unique meeting ID and password will be provided once you register. To register, click on the link below or copy and paste this into your web browser:*
https://us06web.zoom.us/webinar/register/WN_C-Er8GASRRiHsiB96pTgBQ

REGULAR MEETING
CONSERVATION COMMISSION

1 JUNKINS AVENUE
PORTSMOUTH, NEW HAMPSHIRE
EILEEN DONDERO FOLEY COUNCIL CHAMBERS

4:00 P.M. **January 10, 2024**

Minutes

Present: Samantha Collins, Chair; Barbara McMillian, Vice Chair; Members: Lynn Vaccaro, Adam Fitzpatrick, Jessica Blasko, Alice Carey, Stewart Sheppard, Alternates: Brian Gibb

I. APPROVAL OF MINUTES

1. November 8, 2023

[5:39] Vice Chair McMillan made a motion to approve the minutes with the following edit: On page 4, change 'vice chair' to 'chair' before Collins. Ms. Blasko seconded the motion. The motion passed 7-0.

2. December 13, 2023

[6:07] Chair Collins noted that she was not present for the December meeting and would not be voting on these minutes. Ms. Blasko made a motion to approve the minutes as presented. Vice Chair McMillan seconded the motion. The motion passed 6-0.

II. WETLAND CONDITIONAL USE PERMIT APPLICATIONS (OLD BUSINESS)

1. **REQUEST TO POSTPONE**
   90 F.W. Hartford Drive
   Amrishi & Andrea Chicooree, owners
   Assessor Map 269, Lot 45

[6:50] Ms. Blasko made a motion to postpone this application until the February meeting. Vice Chair McMillan seconded the motion. The motion passed 7-0.

2. **224 Broad Street, Unit 3**
   Perkins Kwoka Joint Revocable Trust, Katelyn E. & Rebecca P. Kwoka Trustees, Owners
   Assessor Map 131, Lot 13

[7:28] Mr. Sheppard arrived.

[7:29] Katelyn Kwoka, owner of the property, came to speak to this application along with Shane Mahoney from Groundswell Landscape. Ms. Kwoka noted that they had provided an updated

plan with new materials based on the feedback given at the site walk. The plan involves creating an addition onto the existing home along with some buffer improvements and various landscaping/hardscaping projects.

[9:09] Chair Collins announced that she would recuse herself from the application due to her connection to the applicant.

[9:35] Vice Chair McMillan stated that there is more information needed about the specifics of the planting plans and the drainage outlet for the site.

Mr. Mahoney answered the question saying that on plan there is an open strip drain along side of the house and proposed area. It is a strip drain to collect water from the house. There will not be too much water in this drain due to the pitch of the house. Naturally, the land slopes to the wetland. The idea with the pipe is to capture the water and infiltrate it back into the ground closer to the resource. If there is concern with the pipe, they could remove it from the plan. The pipe is pervious and will infiltrate or allow overflow to move out from the property. The overall proposed deck size decreased from what currently exists today. Under the deck there is proposed crushed stone to handle the overflow of water. Mr. Mahoney said the applicant would prefer to have the perforated pipe, and it could then discharge underneath the deck instead of on anyone else's property.

[13:52] Vice Chair McMillan said they did not have enough information to understand what is going where on the plan. It can be called out on the plan specifically that there is a discharge area under the deck. Mr. Mahoney responded that the current plan is to have an all micro clover lawn sloping away from the house and the strip drain should not be taking on water.

[15:22] Vice Chair McMillan pointed out that there is usually a staff memo from the City that addresses new applications but this did not include one. Ms. Homet noted that the City did not have a staff memo as there were no new materials that were submitted by the deadline to post the packet. She mentioned that staff would like to see a landscape plan showing exact locations for drainage and more in-depth plans in place. Therefore, this application should be postponed to show that information before proceeding.

[16:40] Adam Fitzpatrick asked if there were plans to put the pipe behind the proposed retaining wall. Mr. Mahoney said there typically is pipe behind the wall to aid in drainage to move water away from wall. The water from the wall could also go below the deck to manage any overflow water to infiltrate into the ground.

[21:05] Ms. Blasko asked why the retaining wall material is described as TBD. Mr. Mahoney stated that they had not yet decided the stone material for the wall and the exact species of plants, exact type of hardscaping stones, etc. They are still looking for feedback from the Commission before they get all those details together.

[22:19] Ms. Carey mentioned that it is hard to see what the slope is on the site. Ms. Kwoka responded by describing the slope and showing it on the plans, along with where the storm water currently flows.

[23:43] Ms. Vaccaro noted that there is a severe slope and a change in grade would mean extra soil, where would that go? Mr. Mahoney responded that there will be 20-40 yards of soil to dispose of to shave down area for the new micro clover lawn and excavation for the crushed stone areas. This soil would be taken off site and disposed of at the proper facility.

[24:35] Vice Chair McMillan had some comments about the language used during this presentation, noting that this presentation sounded more like a work session. She noted that it was great to get ideas, but would the applicants prefer to be in a work session? Mr. Mahoney agreed that they did not need to get approval today but would prefer to get the final plan back to the Conservation Commission.

[26:05] Ms. Kwoka asked how the vote to pass the application would be impacted if they did not have the full planting plan today. She noted that she would prefer to move the application forward as is, without the details on materials, pipe location, planting specs, etc. She would like more specific information on what the requirements are that are needed to get an application passed on to the Planning Board.

Vice Chair McMillan said that the Commission would need to see more details to know exactly what is being proposed and where. Ms. Homet said that they typically see much more detail on the plan so it is clear what they are approving.

[30:48] Ms. Blasko also said they need to have more detail in the application, especially if they were to approve of something that is very generalized without a lot of details which might then go and change down the road on the way to the Planning Board.

[31:36] Ms. Kwoka said that they may not pick out materials before the next meeting. She wondered if the material choice would be important for approval. Vice Chair McMillan said that she did not think the choice between wall stone materials should impact whether it gets approved or denied. It could be more helpful if the next application included a few choices for materials or a backup so that if something like cost or expenses get in the way of one material, you could still use what was discussed or planned as a backup or second option.

Mr. Mahoney reiterated that they would need a new plan with a planting plan and species with plant size and a full layout. He will also delineate where each pipe is with arrows and notes on proposed slope and notation of what will be built and where infiltration will occur.

[34:10] Vice Chair McMillan asked about the tarping they had seen during the site walk. Ms. Kwoka said that the tarps are covering knotweed.

[35:12] Ms. Blasko made a motion to postpone the application to the February meeting. Mr. Fitzpatrick seconded the motion.

Ms. Blasko thanked the applicant for taking the time to give them more information.

The motion passed unanimously with Chair Collins abstaining (6-0).

III. WORK SESSIONS

1. 913 Sagamore Avenue
Hogswave LLC, Owner
Assessor Map 223, Lot 27

[39:50] Chair Collins introduced this work session.

Property owners John and Heidi Ricci came to present their application for a work session to get input on their proposal for 913 Sagamore Avenue. Mr. Ricci mentioned that they had been a part of the site walks last week. Mr. Ricci went on to describe their proposal to remove and replace an 1,100 sf home with a 2300 sf home. This would include new municipal water/sewer and a reduction of impervious surface. The long-term goal would be to reduce impervious by about 10% across the property. They also plan to improve water quality with plantings and would like to do a 5' buffer along Sagamore Creek, possibly low bush blueberries. This application would also have to go through the Board of Adjustment as they will need a variance for residential use in the existing waterfront business zone.

[42:55] Chair Collins thanked the applicant for hosting the site walk and mentioned how it was helpful to see the current home and use it as a scale for what was being proposed. She noted that there had been a lot of rain and big tides that day (of the regular meeting). Mr. Ricci said that the floodwaters don't really crest over the driveway area where the concrete embankment currently is.

Chair Collins noted all the plantings within the 5' buffer from the water would likely need to be salt tolerant. Mr. Ricci agreed and noted that he would like to build up a berm in that area and keep the existing riprap to combat storm surge.

[45:22] Ms. Blasko said she appreciated all the efforts to connect to the city water and sewer. She had ran over the Sagamore Bridge today and noted that their dock was underwater and the floodwaters were within 5' of their gravel driveway. Ms. Blasko questioned how the applicant would address the shoreline impacts and work to prevent erosion, especially when the water gets higher.

[47:21] Mr. Ricci responded that the erosion is easy to address but the vegetation will be interesting. During the off season/non-growing season, storm events seem to occur the most. He noted that the garage is out of the floodplain and to date they have not had water splash over onto the property.

Mr. Sheppard noted that it may be worth paying attention to updated data and sea level rise projections as it will impact the forever home that they are building.

Mr. Ricci said that there is a decrease in sea level from NH North as the glaciers leave, the granite is rebounding. The data he observed does not point to 3' of sea level rise in the future.
[49:58] Ms. Carey said it would be helpful to see the future sea level rise projections on the plan

and show the tolerance for risk.

Mr. Ricci said the basement elevation of the existing house is well above the flood elevation.

[52:00] Vice Chair McMillan asked a question about the proposed building and how close it would be to the resource, and the ledge behind the house.

Mr. Ricci responded that they would perform some ledge probes in advance. They would like to leave the ledge that is currently behind the house, but where the house is proposed, they believe would not need to impact the ledge. Vice Chair McMillan if they had considered moving the house back to get it out of the buffer and avoid the ledge. Mr. Ricci said that by moving it back they would be digging into virgin soil and does not like the idea of digging on the site.

[54:23] Mr. Sheppard asked the applicant to point out the trees to be removed. He followed with a question about if the applicant could consider avoiding removing the big trees and coming up with a planting plan that would be very detailed. Mr. Ricci responded that their hope is to come back before the commission with a planting plan that is impressive to the commission. He noted that they did not want to come to a work session with a detailed planting plan because he anticipated having a back and forth at this meeting to learn how best to start planning one.

Mr. Fitzpatrick asked a question about the site's slope, where the retaining wall would be below the proposed house and what will happen to the water coming off the proposed dwelling. Mr. Ricci wants to create a single slope roof on the new dwelling and that would direct drainage to where the paved drive is being removed and there would be an added rip rap swale that directs water to the area of current concrete near the water where they would create a vegetated level spreader. He would like to see rip rap where the retaining wall currently sits.

[59:25] Chair Collins said she hears rip rap a lot and would like to see more natural vegetation that tries to limit the use of hardscaping. Solutions that are alternatives to hardscaping are preferred. The proposed house size is about three times the size of the current structure. She would appreciate any effort to remove as much from the buffer as possible. Mr. Ricci responded that many of the structures and impervious there currently are there for maintenance of the boats on the water and some is needed to keep the working waterfront going forward.

[1:03:21] Ms. Vaccaro asked if it would be a full basement and if so, would the ledge require excavation? Mr. Ricci said they would only put in a basement where they could without having to remove ledge.

[1:04:09] Vice Chair McMillan asked if they could delineate the areas that they want cars to stay out of such as landscaped or grassed areas. Mr. Ricci said it would be well defined. Vice Chair McMillan noted that she was very concerned about building in the buffer area. The criteria for this permit says that if there is an alternative location then it should be put there and any effort to get it out of the buffer would be important to her. She would appreciate any efforts to reduce the area of building in the buffer. She would also like to see an effort to protect more trees. It is an intensely used area and there is a business, but she really does not feel like it is going to help the site which is currently in poor shape. The current design does mitigate intense use of the site.

Plantings right along the shore will not be viable.

[1:08:15] Chair Collins said that they should look closer at the existing ledge on site and try to move more of the proposal out of the buffer. She appreciated the removal of the gravel drive and that they are on the right track in terms of plantings. She is having the most trouble with the size of the structure and scale of it within the 100' buffer.

[1:09:04] Mr. Sheppard said he struggles with the size of the building and its proximity to the water. Mr. Ricci said they will live there but they run the marina and cater to 18 boats and water slips valves. Some material is currently kept in the garage and on site for the waterfront business.

[1:10:42] Ms. Homet mentioned that if they choose to move forward with submitting a permit application, it would be helpful to have a drainage plan as well as landscape plans showing locations, species, size, etc. Staff also talked about pointing out the highest observable tide line (HOTL) on the plan and 25' and 50' buffer lines which are helpful references. Mr. Ricci noted that if they come back they will have an engineer and/or wetland to help with this.

[1:12:14] Chair Collins mentioned that it would be helpful to have someone come out and map out the exact location of ledge. This would be helpful to see that it was clearly determined they cannot move the house due to ledge. Mr. Ricci responded that they do plan to come back with ledge probe information.

[1:12:51] Vice Chair McMillan also noted that a maintenance plan and BMP's should be clearly spelled out in a future application.

IV. OTHER BUSINESS

1. Welcome Alice Carey!

[1:13:38] Chair Collins welcomed the newest member of the Conservation Commission, Alice Carey.

2. Election of Officers

[1:13:55] Chair Collins introduced this item and noted that they have to have an election of officers every year. To elect an officer, they need to get a nomination for the Chair and Vice Chair. Ms. Homet read the exact language from the rules and noted that she actually had an out-of-date version and the most up to date rules for the Commission do not require a secret ballot.

[1:15:36] Ms. Vaccaro asked if Chair Collins and Vice Chair McMillan were willing to serve in their roles again. Chair Collins said she would be willing to serve again.

[1:15:51] Ms. Blasko made a motion to elect Samantha Collins as Chair and Barbara McMillan as Vice Chair. Mr. Sheppard seconded the motion.

[1:16:11] Ms. Vaccaro said she appreciates the experience they both bring to the Commission. Chair Collins said she is happy to do it for another year.

[1:16:44] Ms. Blasko seconded the thanks for their work and effort.

The motion was approved unanimously (7-0).

3. Belle Isle Land Management Plan Update

[1:17:38] Ms. Homet offered a Belle Isle update on the land management plan. This is an annual report that is being done. It shows invasive species removal, mowing of the meadow. The updated plan shows that they are continuing to manage the property over the next year, but they are getting close to wrapping up all the work on the site. Ms. Vaccaro clarified that this plan was for the overall Island development, and not just the bridge. Ms. Homet confirmed.

[1:21:55] Ms. Homet asked who was interested in being on a workgroup or subcommittee for looking into conservation land acquisition. She would like to get a number for how many commissioners would wants to be a participant. Vice Chair McMillan said she would like to join. They could discuss a plan for the group at the first meeting. Mr. Sheppard said he'd like to be part of it. Ms. Vaccaro asked if getting the word out would be a role for the group. Vice Chair McMillan said she should watch the work session from November as that was one subject that was talked about already.

[1:25:54] Chair Collins announced that in the current rules, they have to make a vote to extend the meeting if it goes beyond 5:30 p.m. She asked if the commission wanted to change that rule to carry the regular meeting time end beyond that since the meeting now starts later.

[1:26:26] Ms. Blasko made a motion to change the rules so that the standard meeting end time would be moved to 6:00 p.m. with a need for a vote to continue the meeting beyond that time. Mr. Fitzpatrick seconded the motion. The motion passed unanimously (7-0).

V. ADJOURNMENT

The meeting adjourned at 5:35 p.m.

Memo

TO: Conservation Commission Members
FROM: Kate Homet, Associate Environmental Planner
CC: Peter Britz, Planning & Sustainability Director
DATE: February 9, 2023
SUBJ: February 14, 2024 Conservation Commission Meeting

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90 FW Hartford Drive
Amrishi & Andrea Chicooree
LU-23-142

February 2024 Update:

The applicant came before the Conservation Commission in September and December 2023 to receive an after the fact permit for the unauthorized removal of up to 28 trees within the wetland and wetland buffer, including 1 tree within the wetland, 21 trees within the 0-25' buffer and 7 trees in the 25-50' buffer. After receiving a postponement of their application in September, the applicant was tasked with completing the following conditions:

> *1. A certified wetland scientist shall delineate the wetland on this property. If the property owner chooses not to hire a certified wetland scientist, they must utilize the City's map for calculating their total buffer impact and the resulting necessary mitigation square footage.*
>
> *2. A restoration plan will be submitted that is done with the aid of a wetland scientist to ensure proper native species are chosen and the correct size of mitigation is proposed.*

In December 2023, the applicant hired a certified wetland scientist to delineate the property and a report on the findings was submitted. The applicant had also submitted a list of potential plants for that update. At the regular meeting, this application had been postponed to the next meeting with a list of conditions to have been met before a resubmittal, including:

1. *A robust restoration plan be submitted with the approval and stamp of a certified wetland scientist. At the least, this plan must include the following:*

    a. Planting efforts that address a proper size of mitigation for what was removed

    b. All proposed plantings will have their location shown on the plan, along with species, height, size, and age of plant at time of planting.

c. Plans for revegetation and restoration of the 25' vegetated buffer with native plantings and proposed management of this zone
d. Restoration of the T1 and T2 tree removal sites (note: any stump removal will require a separate wetland conditional use permit)

e. Information on existing stumps and any proposed removals

f. The location of any proposed mowing lines

g. Proposed maintenance plans for the wetland buffer

In January 2024, the applicant requested a postponement until February.

In February 2024, the applicant submitted an update to their application. The restoration plan submitted appears adequate and includes restoration of the T2 area – this includes the planting of a red maple within the wetland and 21 young trees/shrubs planted randomly and uniformly throughout the T2 area and the vegetative buffer. These will include red maples, white pines and highbush blueberry shrubs.

Additionally, the applicant is proposing that a portion of the 25' vegetated buffer be considered a 'no mow' area.

The applicant is proposing a status report be submitted to the City 30 days after planting is complete. Additionally, they are proposing additional inspection reports as necessary for the first two growing seasons, with a report to be submitted by June 30th of each year to the City.

Recommendation: Staff recommends the approval of this after the fact wetland conditional use permit with the following stipulations:

1. In accordance with Section 10.1018.40 of the Zoning Ordinance, applicant shall install permanent wetland boundary markers. We suggest that these markers are placed along the 25' vegetative buffer at intervals of every 50 feet. These must be installed prior to the start of any construction. These can be purchased through the City of Portsmouth Planning and Sustainability Department.

2. All restoration work must be completed by June 30th, 2024.

3. A monitoring report for the first two years after planting will be required to be submitted annually to the Planning and Sustainability Department. The first report shall be submitted after the restoration work has been completed. This report will include an update on all plant health, growth, and establishment. Additionally, it should include invasive management techniques, methods for irrigation and information on routine maintenance practices. The report must demonstrate at least an 80% survival rate of new plantings after the first two years of monitoring, if not, then replanting will be required.

224 Broad Street Unit 3
Perkins Kwoka Joint Revocable Trust
LU-23-179

In December 2023, the applicant requested postponement of this application until the January meeting.

In January 2024, the requested new materials for this application were not submitted on time.

February 2024 Update:

This application is requesting a Wetland Conditional Use Permit for the replacement and expansion of an existing 192 s.f. sunroom and the demolition of a 286 s.f. rear deck, with new construction proposed for an addition of 384 s.f. to the existing sunroom, a new 367.5 s.f. rear deck and regrading of a portion of the site for the installation of a retaining wall and underdrain for stormwater control. Additionally, the applicant is proposing to remove 491 s.f. of existing pavers and asphalt to be replaced with 401 s.f. of new pavers. This proposal includes the removal of the existing lawn to be replaced with a micro-clover seed mix, an extensive planting plan, and a stone drip edge surrounding the new sunroom and deck.

1. *The land is reasonably suited to the use activity or alteration.*

The applicant is proposing all work within the wetland buffer and outside the buffer. The existing site has a steep slope which has been directing stormwater into and around the existing home, instead of towards the adjacent wetland. The proposed stormwater controls will involve some regrading of the lawn and the redirection of stormwater away from the home and through an underdrain to outlet underneath the expanded deck. This proposed deck will have ¾" spaced decking and will have crushed stone underneath for infiltration.

2. *There is no alternative location outside the wetland buffer that is feasible and reasonable for the proposed use, activity or alteration.*

The majority of this property is within the 100 ft. buffer. The existing home is within the buffer and experiencing impacts of stormwater and ponding on the property. The applicant is proposing to address these issues with new stormwater controls and the addition of plantings, while working to reduce the impervious surface where possible.

3. There will be no adverse impact on the wetland functional values of the site or surrounding properties.

The applicant is proposing to redirect stormwater directly through an underdrain and into a crushed stone area to slow infiltration. This should improve the flooding conditions for the home while directing the flow closer to the wetland with an option for infiltration into the soil.

4. Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals.

The applicant is proposing to maintain all existing trees and vegetation. In addition, the applicant will be improving the vegetation on site by planting a native micro-clover lawn in addition to planting beds and multiple trees and shrubs.

5. The proposal is the alternative with the least adverse impact to areas and environments under the jurisdiction of this section.

While the applicant is proposing an expansion of the home within the buffer, the expansion is occurring in the direction opposite of the wetland and will be compensated with a reduction in existing impervious. There are plans for overall improvements to the buffer however details regarding the permeability of the pavers is needed to better understanding the impervious surface calculations.

6. Any area within the vegetated buffer strip will be returned to a natural state to the extent feasible.

The applicant is proposing to stay completely outside of the 25' vegetated buffer.

Recommendation: Staff recommends the approval of this application with the following stipulations:

1. Please consider speaking with your neighbor to address proper signage of the 25' wetland buffer edge located behind your property. These education markers could have an impact on reducing the foot traffic and disturbance in these sensitive areas.

2. Applicant shall provide details of the proposed paver entry and their permeability.

300 Gosling Road
Public Service Company of New Hampshire
LU-24-2

This is a utility structure replacement project with work throughout the Portsmouth transmission corridor between Gosling Road to Echo Avenue and between Borthwick Avenue and the Ocean Road Substation. The purpose of this work is to replace existing wood utility pole structures with steel to increase the long-term viability of the lines. The proposed steel poles will be approximately 5-10' higher than the existing wooden poles. The current application crosses through primarily rural and industrial upland and wetland areas. Work in the right of way is proposed in upland shrublands and wetland emergent and scrub shrub habitats. This project proposes 256,869 s.f. of temporary wetland impacts for equipment access and work pad placement and 79,310 s.f. of temporary impacts within the buffer. An NHDES permit will also be filed for this proposed work.

According to *Article 10 Section 10.1017.650* the applicant must satisfy the following conditions for approval of this utility project.

1. The proposed project is in the public interest.

The project is necessary to maintain existing corridor powerlines with upgraded support poles.

2. Design, construction, and maintenance methods will utilize best management practices to minimize any detrimental impact of such use upon the wetland and will include restoration of the site as nearly as possible to its original grade condition and vegetated state.

The applicant has stated that the work will be conducted in accordance with NHDES Best Management Practices Manual for Utilities in and Adjacent to Wetlands and Waterbodies (NH DNCR 2019). Prior to placement of timber mats, the applicant has stated they will inspect the mats to ensure cleanliness and will clean them off with each reuse. Wooden timber matting will be used to minimize the disturbance of wetlands and sensitive areas and once removed, the areas will be restored and stabilized with seed and mulch. Any areas of soil disturbance will be stabilized with seed and straw mulch.

3. No alternative feasible route exists which does not cross or alter a wetland or have a less detrimental impact on a wetland.

The applicant has chosen the routes with the least amount of impact to access the replacement poles, but the applicant has selected access designed to utilize existing historical access routes where possible to minimize impacts.

4. Alterations of natural vegetation or managed woodland will occur only to the extent necessary to achieve construction goals.

The vegetation is expected to return to its original configuration after the timber mats are removed. However, there will be some vegetation removed exactly where the structure replacement is proposed to occur.

Recommendation: Staff believes the applicant has provided a work plan which is best suited to the nature of the work required to maintain the utility lines in this corridor and recommends this application be approved as proposed.

50 Odiorne Point Road
Rosemary L. Gardner Revocable Trust, owner
John E. Gardner trustee, co-owner
LU-24-7

This application is for an after the fact wetland conditional use permit. In the summer of 2022, the property owners had been found to be in violation of Article 10 of the City of Portsmouth Zoning Ordinance. The violations on the property consisted of the construction without permits of a 376 s.f. stone wall within a prime and tidal wetland buffer and within an inland wetland and wetland buffer. Additionally, the unpermitted construction of a 776 s.f. stone swale to redirect stormwater directly into the salt marsh. This swale has impacts in the prime/tidal wetland buffer, the inland wetlands and their buffers. In addition to the swale, 444 s.f. of crushed stone had been spread across the buffer area to help reduce erosion. The property owners were asked to come into compliance by submitting a plan for restoration of this area with both the State and the City. The proposed restoration plan within this application is for the City's wetland conditional use permit.

1. *The land is reasonably suited to the use activity or alteration.*

   The property owner has performed unpermitted work which is not reasonably suited to the wetland habitats on the property. To come into compliance with these criteria, the applicant is proposing to reconfigure the wall with a reduction in height to keep it at 0.5-1.5' tall with a 3-4' base. The gravel will be removed completely, and the swale stones will be mostly removed along with the existing liner to be replaced with vegetation for natural filtration and slowing of stormwater.

2. *There is no alternative location outside the wetland buffer that is feasible and reasonable for the proposed use, activity or alteration.*

   The installation of the stone swale and the large stone wall have direct impacts on the surrounding wetlands and have a negative impact on stormwater quality entering the marsh. The proposed removal of the majority of the stone swale and replacement with vegetation should help to restore the quality of runoff entering the marsh.

3. *There will be no adverse impact on the wetland functional values of the site or surrounding properties.*

   The site has been adversely impacted already due to the unpermitted work. The proposed planting and restoration plan is robust and has extensive monitoring proposed which should help to reduce impacts to the wetlands once vegetation becomes established.

4. *Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals.*

   This proposal aims to restore areas previously disturbed within wetlands and buffers. The planting of vegetation will be positive for improving the inland wetlands and buffers, and all of the vegetative buffers should be maintained naturally to further enhance the quality of the wetlands and the stormwater runoff. The proposed plantings and maintenance are impressive and should result in a successful vegetative buffer.

5. *The proposal is the alternative with the least adverse impact to areas and environments under the jurisdiction of this section.*

The proposal to restore the areas of disturbance and mitigate the impacts of what is being left behind should have a positive impact on the health of the surrounding wetlands and vegetation.

6. *Any area within the vegetated buffer strip will be returned to a natural state to the extent feasible.*

This proposal includes a large amount of live stake plantings to replace the stone swale and work to slow and infiltrate stormwater before reaching the resources. It is critical that applicants retain the first 25' of the buffer as vegetated with minimal maintenance to enhance the quality of the wetland it is buffering.

Recommendation: Staff recommends the approval of this after the fact wetland conditional use permit with the following stipulations:

1. In accordance with Section 10.1018.40 of the Zoning Ordinance, applicant shall install permanent wetland boundary markers. We suggest that these markers are placed along the 25' vegetative buffer at intervals of every 50'along the property. These must be installed prior to the start of any construction. These can be purchased through the City of Portsmouth Planning and Sustainability Department.

Restoration Program

Marc E. Jacobs, *CSS, CWS, PWS, CPESC*
Professional Wetland / Soil Scientist
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VIA EMAIL to a.chicoree@gmail.com

January 29, 2024

Mr. Amrishi 'Ash' Chicooree
90 F.W. Hartford Drive
Portsmouth, N.H. 03801

Re: Assessor's Map 269, Lot 45
90 F.W. Hartford Drive
Portsmouth, N.H.

Subject: Wetland Buffer Restoration Program

Dear Mr. Chicooree,

The following specifications are offered as a wetland buffer restoration program and are intended to address stipulation 1.d. as well as other stipulations in the letter from the Portsmouth Conservation Commission (PCC) dated December 21, 2023, which was issued after a public meeting and their earlier site visit in August 2023 to document the removal of trees within the buffer zone at the above-referenced location without their prior review and authorization. Refer to Figure 1 for a depiction of the area.

This program addresses area T2, but does not address the common area, previously referred to in my November 22, 2023 delineation report as area T1. Area T1 straddles the property line with your neighbor at 80 F.W. Hartford Drive. Area T1 lies within the 100-foot wetland buffer and the trees in this area were also cut but it is my understanding that you and the neighbor intend to coordinate regarding the future of this area. Until that coordination happens we cannot properly address area T1 in this wetland buffer restoration program.

The quantity of trees to be planted to restore a wetland and/or its buffer would customarily be determined using the size - in square feet (SF) - of the area that was cut or graded, and the desired density (for example, 15-feet on center) of specimens, especially where the area has been grubbed and the stumps have been removed. However, there has been no survey of the T2 area by a land surveyor and no scaled drawing exists which accurately depicts the size of Area T2 in SF. Furthermore, the area has not been graded, the stumps from the trees that were cut remain and, regarding stipulation 1.e. in the PCC letter, are not proposed to be removed, therefore we have used the tally of stumps provided in Table 1 from our November 22, 2023 letter as the basis for the quantity and species of trees proposed for planting in the 0-25' portion of the T2 buffer zone area per stipulations 1.a. and 1.c. in the PCC letter. Refer to Table 1 below.

609 Portsmouth Avenue
PO Box 417
Greenland, NH 03840-0417

Phone **(603) 686-5097**
Fax **(603) 686-5142**
Mobile **(603) 534-SOIL (7645)**

TABLE 1

TREE SPECIES	0-25 FT BUFFER	25-50 FT BUFFER
	Diameter (inches)	**Diameter (inches)**
Red maple *(Acer rubrum)*	7, 9, 9, 9, 10, 13, 19	14*, 14
White pine *(Pinus strobus)*	5*, 6*, 8*, 18, 21, 21, 23, 24	8
Eastern hemlock *(Tsuga Canadensis)*	6, 7, 7, 9, 9, 11, 16	7, 7, 14
Black birch *(Betula lenta)*	9	NA
Red oak *(Quercus rubra)*	22	18, 22
TOTAL Number of Trees (live)	**21 Total**	**7 Total**

*These stumps represent dead trees or trees that were removed long before the trees that were recently removed.

Plant Specifications

The specified plantings identified below were chosen as a result of the tally of stumps or because the species is generally represented elsewhere on site. Any substitutions of plant materials due to lack of commercial availability or delays in installation due to seasonal conditions (such as drought, frost or snow) shall be preapproved in writing by the wetland scientist and the City of Portsmouth. If the specimens are installed between October 1 and December 1 in any year, they will be mulched with an apron of wood chips, bark mulch or similar. (Installation after December 1 or before April 1 in any year is not recommended.) Any apron will be 3 inches in depth, will not bury the stem but will extend outward at least 1 foot from the stem in all directions. (The apron is recommended after planting in any season.) All woody shrub species shall be non-ornamental varieties. No stumps are proposed to be removed. With the exception of one red maple which is proposed for actual wetlands, proposed shrubs will be planted randomly but uniformly between existing stumps within the T2 area and specifically within the 0-25' buffer per stipulation 1.c in the PCC letter. Refer to Table 2 below.

Note that while we refer to trees throughout this program, all trees will be planted as shrubs and the expectation is that they will mature into trees with the passage of time. (The technical definition of trees comprises specimens that are 5 inches or more in diameter at breast height [dbh], which is measured 4.5 feet from the ground surface. Acquisition and installation of specimens of that size is not practicable).

We have not proposed any eastern hemlock (*Tsuga Canadensis*) specimens although hemlock stumps were commonly observed within Area T2. Hemlock is susceptible to hemlock woolly adelgid, a non-native invasive insect pest, which is proliferating rapidly in our region.

TABLE 2

STRATUM	SPECIES / MIX Common (*scientific*) name	SIZE / RATE	QUANTITY / LOCATION
Tree	Red Maple (*Acer rubrum*)	4-5' minimum	7 specimens randomly but uniformly placed within the 0-25' buffer in Area T2 uplands. *One specimen shall be located within the wetland.*
	White pine (*Pinus strobus*)	2-3' minimum	7 specimens randomly but uniformly placed within the 0-25' buffer in Area T2 uplands.
Shrub	High Bush Blueberry (*Vaccinium corymbosum*)	36"- 48" minimum height	7 specimens randomly but uniformly placed within the 0-25' buffer in T2 uplands.
			Total of 21 shrubs

In the absence of a bonafide land survey, it is impractical to show the exact locations of individual specimens proposed for planting per stipulation 1.b in the PCC letter. Similarly, we were unable to show the locations of individual stumps in our delineation report for analogous reasons; due to the scale of GIS mapping resources. We have however prepared a sketch which shows the approximate location of plantings proposed for installation within the 0-25' buffer. Refer to Figure 2. We are also proposing that staff from our office we will be on site to lay out the plants and guide the installation of proposed plantings.

Long-term Monitoring and Status Reports

Within 30 days of completion of the plant installation work, an initial status report, including photographs), will be prepared and submitted to the City of Portsmouth. Status reports will provide information regarding the following parameters (minimally):

- An inventory and the general status (health) of shrubs,
- observations regarding the uniformity of live vegetation throughout the 0-25' buffer of Area T2,
- any plant substitutions (initial report only),
- observations of any commonly accepted invasive vegetation species (with an emphasis on new infestations [area or species] or expansions of existing infestations), and
- recommended remedial measures or corrective actions, if any.

As necessary to confirm the successful re-establishment of restored buffer zone, additional inspections and status reports will be prepared and submitted to the City of Portsmouth by June 30th for two (2) additional growing seasons following installation of restoration plantings. In addition to those items listed above, subsequent reports will document the following ecological performance standard: a minimum of 75 percent survival/establishment of the woody tree / shrub plantings installed within restored wetland buffer. Woody stems must be uniformly distributed.

The percentage of trees and shrubs deemed to have survived will be based upon an actual woody stem count and will be compared to the total quantity of woody stems originally planted. Shrubs will be considered living (and therefore counted in the tally) if they exhibit at least 25 percent foliage during the normal growing season. The woody stem count may also include suitable woody specimens that have colonized the restored wetland buffer areas from surrounding natural areas and which were not represented in the original plant list specified in Table 1 above. Suitable woody specimens include those which are not considered invasive or exotic according to commonly accepted sources.

Where inspections and status reports demonstrate that the ecological performance standard stated above has not been achieved at the end of two (2) full growing seasons, or as soon as it may be apparent that site conditions may not result in a successful restoration of wetland buffer, the status report will identify any recommended corrective action(s), such as replanting or invasive species management, that may be necessary to bring the restored wetland buffer area into compliance with this program. The City of Portsmouth will be consulted prior to initiating any remedial actions. (After 2 years and any remedial plantings, the restored buffer area will be allowed to grow naturally (without alteration) in perpetuity. Any future proposed management activities will be pre-approved through prior consultation with the PCC or submittal of a Conditional Use Permit application.)

While it is anticipated that the wetland scientist of record or another suitably qualified individual will be conducting future inspections and preparing status reports, the property owner will ultimately be the party responsible for providing status reports as well as implementing any remedial measures or corrective actions which may be needed to bring the restored wetland buffer area into compliance with this program.

Other

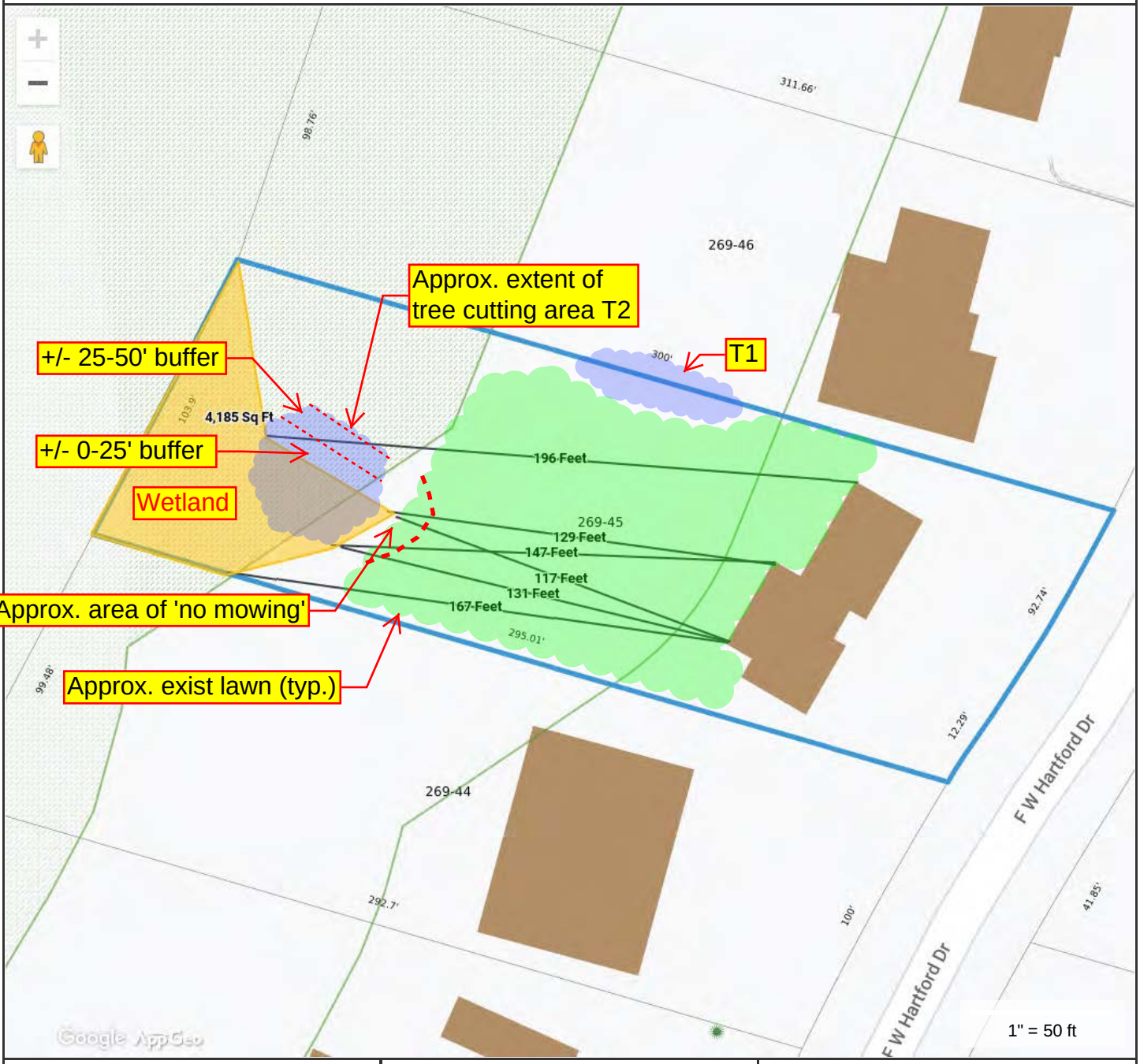
Regarding stipulation 1.f. in the December 21, 2023 PCC letter, the portion of the 25-foot buffer that is currently being mowed, I understand it is your intention to cease mowing this area in perpetuity. No shrub plantings are proposed here. We have identified the approximate area on the attached buffer restoration sketch. This area will need to be measured with a fiberglass tape and staked-out in the field. It is our recommendation that you propose a permanent means of marking the limits of this area in the field. A line of boulders may be the easiest method and would not require any short or long-term maintenance.

Please contact the undersigned with any questions.

Cordially,

Marc Jacobs, CWS, CSS, CPESC

F W Hartford Drive



Property Information

Property ID	0269-0045-0000
Location	90 FW HARTFORD DR
Owner	CHICOOREE AMRISHI A

Buffer Restoration Sketch
Marc Jacobs, CWS MCJ
January 29, 2024
Features w/o exact dimensions (from GIS) are not-to-scale and will be measured in the field during implementation of this program.

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

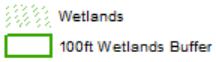
City of Portsmouth, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 08/24/2023
Data updated 3/9/2022

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

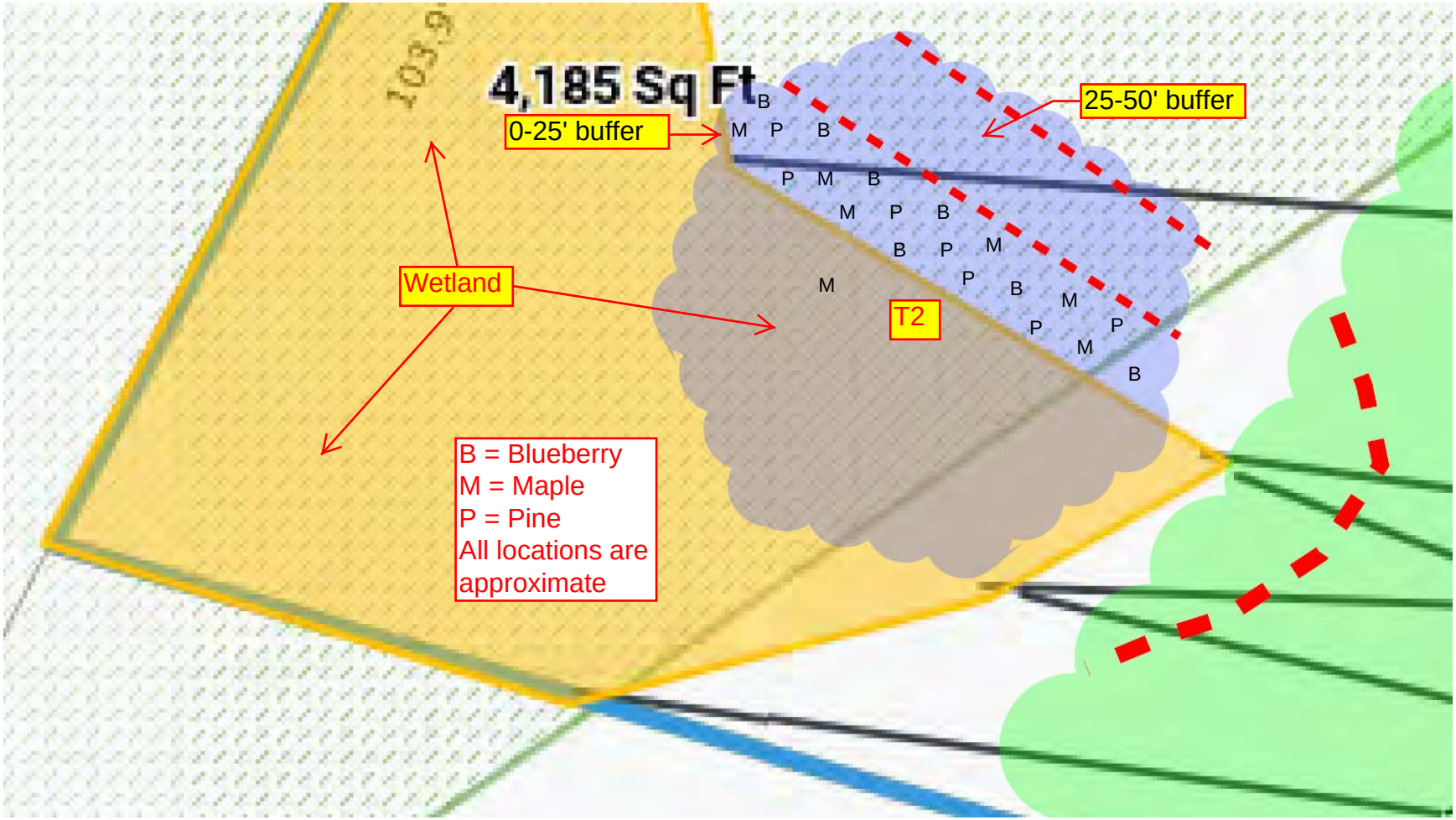
Map Theme Legends

Wetlands



City of Portsmouth

FIGURE 2



PLANTING DETAIL
90 F.W. Hartford Dr.
Portsmouth, NH
January 29, 2024

PERKINS KWOKA JOINT REV TST
KWOKA REBECCA P & KATELYN E
TRUSTEES
224 Broad St.
Portsmouth, NH 03801

Samantha Collins, Chair
Conservation Commission
City of Portsmouth

October 19, 2023

Dear Mrs. Collins:

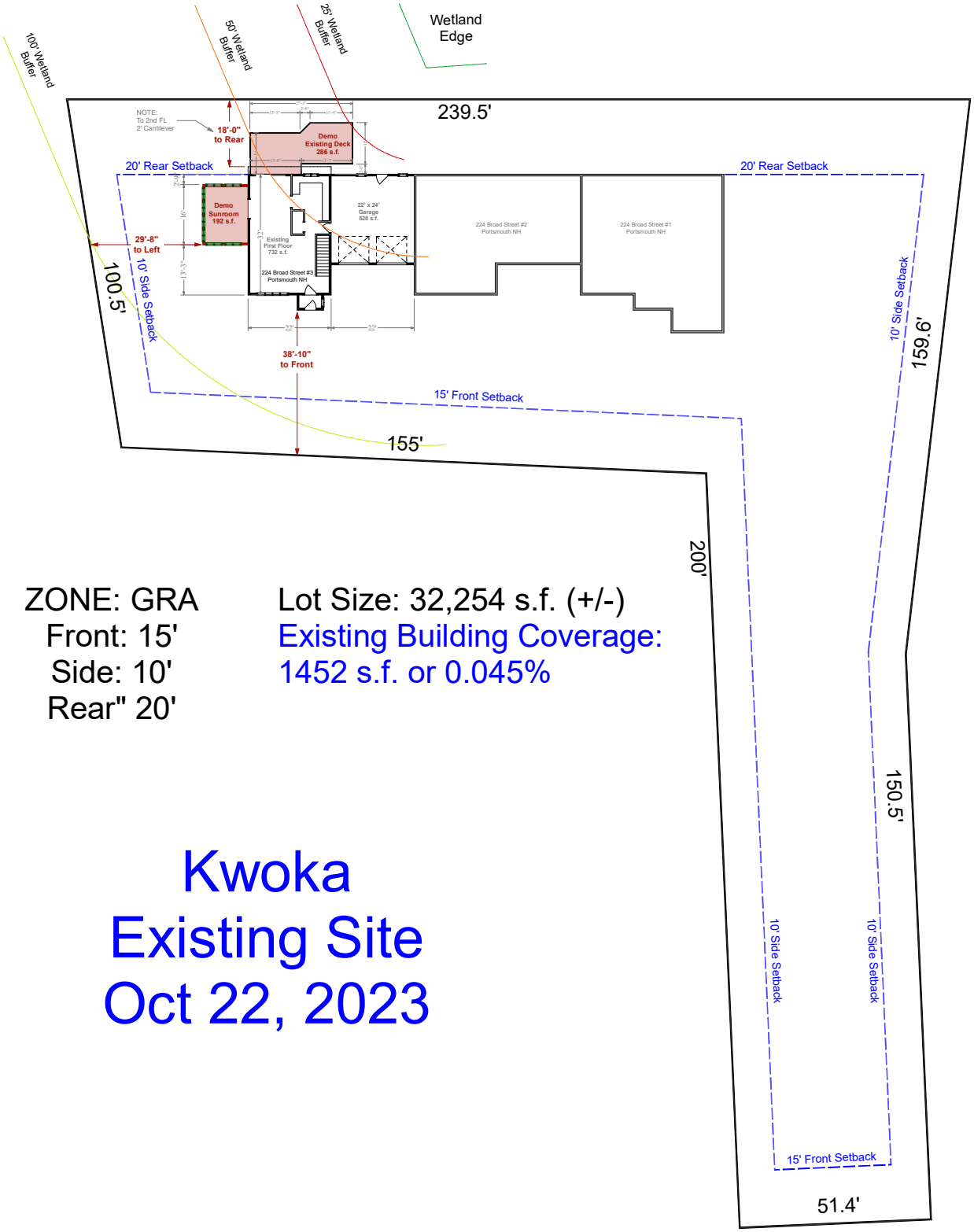
Attached are the plans for some landscaping improvements and an addition to our primary home. The intent is to replace a sunroom which has rotted due to the very wet ground, and to help the surface water from our yard drain properly into the wetland. We have small children and the yard is hard to use, as it has a large grade and the water is trapped in our yard. We hope to install appropriate drainage and plantings to help some surface water to be retained for plantings, and other surface water to be filtered as it drains towards the wetland.

As you will note, we intend to plant microclover as a native plantings and to avoid all use of pesticide and herbicide. We will install extensive plantings and improve the grade of the space, adding a pollinator garden and additional drainage. The open aggregate drainage strip is designed to slow surface water flow and encourage filtration back into the soil. You will also note that our proposed deck is at ¾" spacing with crushed stone underneath to filter runoff surface water.

We look forward to discussing these plans with you.

Thank you,

Katelyn Kwoka

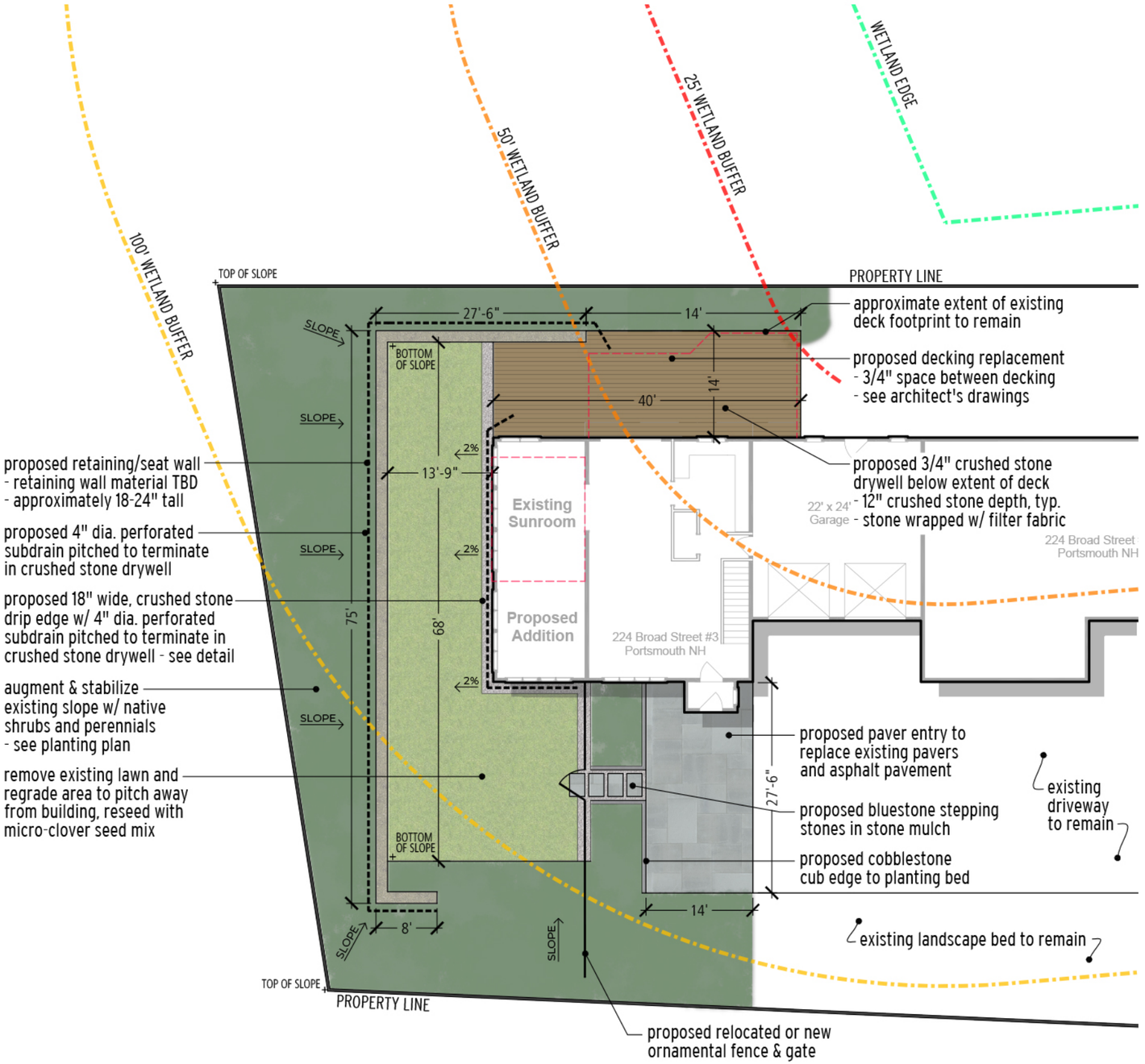


ZONE: GRA
Front: 15'
Side: 10'
Rear" 20'

Lot Size: 32,254 s.f. (+/-)
Existing Building Coverage:
1452 s.f. or 0.045%

Kwoka
Existing Site
Oct 22, 2023

Scale: 1" = 40'-0"
(On Letter)

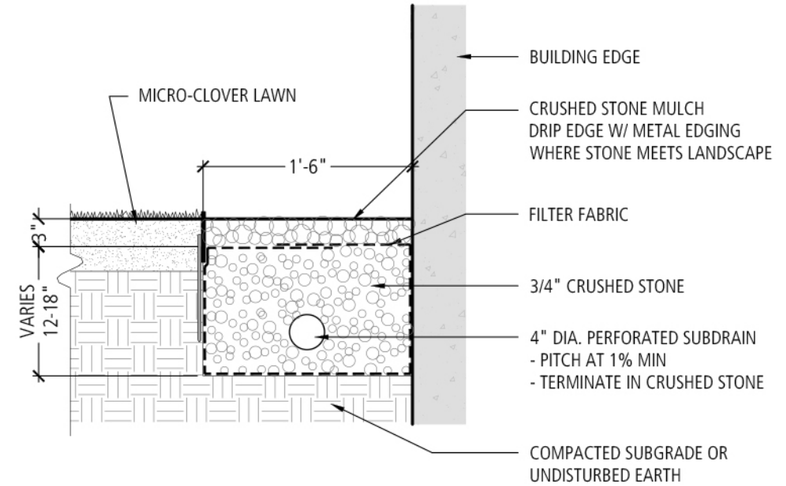


Proposed Landscape Plan

Existing to be Removed	Area
Existing Sunroom	192 SF
Existing Pavement (pavers/asphalt)	491 SF

Proposed Improvements	Area
Proposed Sunroom Addition	384 SF
Proposed Deck Expansion	200 SF
Proposed Pavement (pavers)	401 SF
Proposed Planting Bed	2,385 SF
Proposed Micro-clover Lawn	1,115 SF

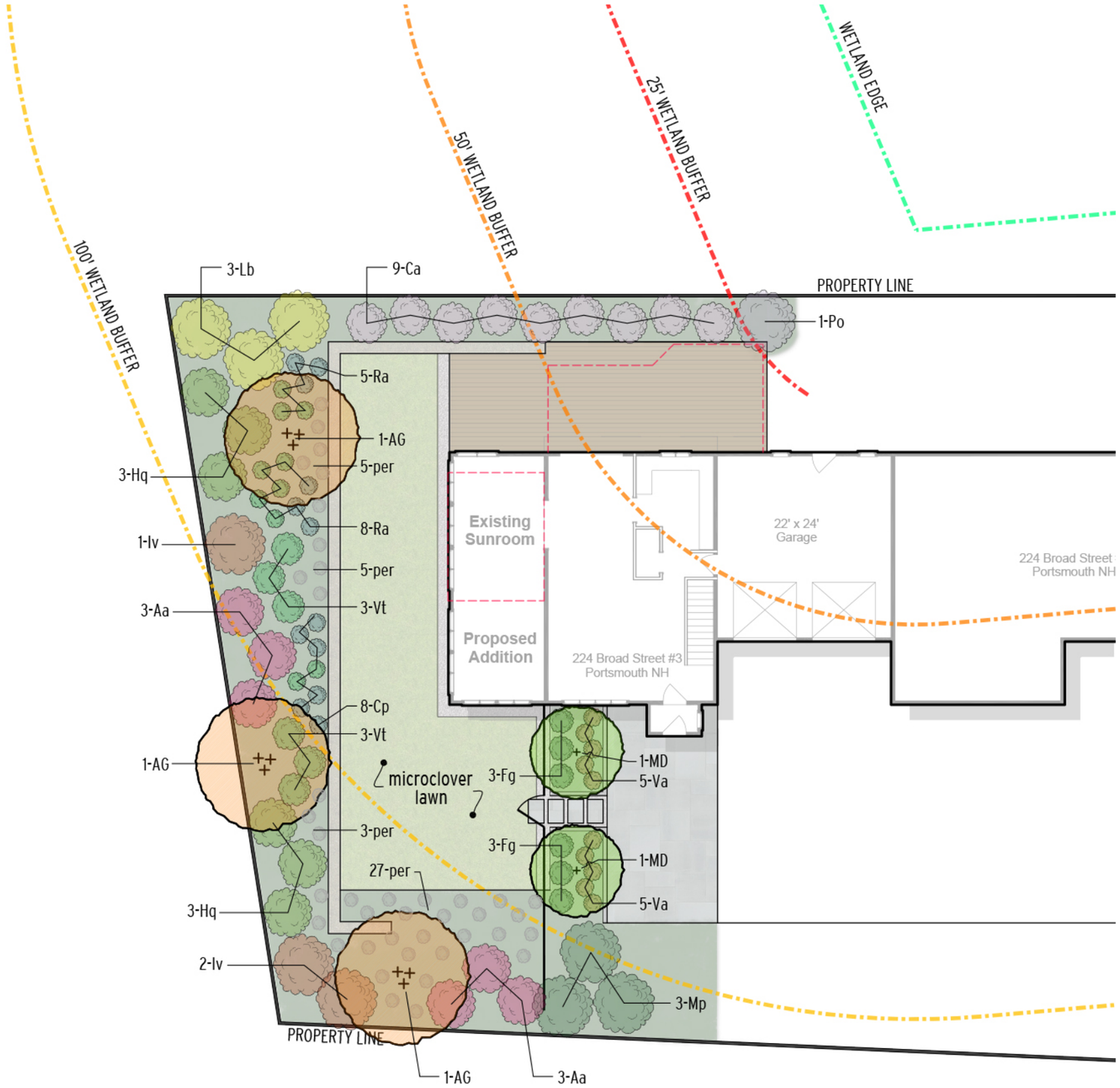
Table: Existing to be Removed Area & Proposed Improvements Area



Detail: Proposed Crushed Stone Drip Edge w/ Perforated Subdrain

Scale: Not to Scale

NOT FOR CONSTRUCTION



Proposed Planting Plan

Trees

Quantity	Symbol	Size	Scientific Name	Common Name	Size & Comments
3	**AG**	7-8'	Amelanchier grandiflora 'Autumn Brilliance'	Serviceberry	15-25' - native, white flowers, edible fruit, brilliant red-orange fall foliage
2	**MD**	2.5 CAL	Malus domestica 'Gala'	Apple Tree	15-20' - white flowers spring, deep green foliage, apples in fall

Shrubs

Quantity	Symbol	Size	Scientific Name	Common Name	Size & Comments
6	**Aa**	3 GAL	Aronia melanocarpa	Black Chokeberry	5' - native, white flowers spring, edible fruit, brillaint autumn foliage
8	**Cp**	1 GAL	Comptonia peregina	Sweet Fern	4' - native, colonizing deciduous shrub with fragrant fern-like leaves
10	**Ca**	3 GAL	Clethera alnifolia	Summersweet	6' - native, fragrant white flowers
6	**Fg**	3 GAL	Fothergilla gardenii	Dwarf Fothergilla	3' - native, compact, fragrant white flowers, multicolor autumn foliage
6	**Hq**	3 GAL	Hydrangea quercifolia 'Alice'	Oakleaf Hydrangea	6' - native, compact ,abundant large white flowers turn pink with maturity
3	**Iv**	3 GAL	Ilex verticillata 'Winter Red'	Winterberry	6' - native, heavy fruiting, large, intense red berries, dark green foliage
3	**Lb**	3 GAL	Lindera benzoin	Spicebush	8' - native, light green leaves turn yellow autumn, yellow flowers
3	**Mp**	3 GAL	Morella pensylvanica	Northern Bayberry	8-10' - native, wide, upright, glossy green aromatic foliage
1	**Po**	3 GAL	Physocarpus opulifolius	Common Ninebark	6-10' - native, upright, exfoliating bark, purple foliage with white flowers
13	**Ra**	1 GAL	Rhus aromatica 'Gro-Low'	Sumac	2-3' - native, green leaves, scarlet-orange autumn, aromatic yellow flowers
10	**Va**	1 GAL	Vaccinium angustifolium	Lowbush blueberry	12" - native, groundcover, edible fruit, red deciduous autumn foliage
6	**Vt**	3 GAL	Viburnum trilobum 'Bailey Compact'	American Cranberrybush	5' - native, green leaves, white flowers, edible fruit, brilliant red autumn foliage

Perennials & Groundcovers

Quantity	Symbol	Size	Scientific Name	Common Name	Size & Comments
40	**per**				
5	**ah**	1 GAL	Amsonia hubrechtii	Blue Star	36" - native, bluer flowers, dark green needle foliage, yellow autumn
5	**an**	1 GAL	Aster novae-angliae 'Purple Dome'	New England Aster	18" - native, dwarf, semidouble bright purple flowers, heavy bloomer
10	**dp**	1 GAL	Dennstaedtia punctilobula	Hay Scented Fern	20" - native, fast growing groundcover, lacy fragrant fronds
5	**ep**	1 GAL	Echinacea purpurea 'Kims Knee High'	Coneflower	18" - native, dwarf, clear pink flowers
5	**ls**	1 GAL	Liatris spicata 'Kobold'	Gayfeather	24" - native, spikes of lilac-mauve flowers
5	**md**	1 GAL	Monarda didyma 'Rasberry Wine'	Wild Bergamot	3-4' - native, clear wine-ed flowers, mildew resistant
5	**rf**	1 GAL	Rudbeckia fulgida 'Fulgida'	Black-eyed Susan	2-3' - hnative, deep yellow daisy like flowers w/ black centers

Proposed Plant List

NOT FOR CONSTRUCTION

groundswell landscape DESIGN CONSULT MANAGE

January 8, 2024

Conservation Commission Notes

Prepared for Client:
Kwoka Residence
224 Broad Street
Portsmouth, NH 03801

Notes on items per email 12/8/23:

#1 – Wetland boundary markers will be purchased and installed for the 25-foot buffer. Exact locations of boundary markers TBD.

#2 – Perforated 4-inch diameter drainage pipe will be installed behind the base of proposed retaining wall. Pipe shall be pitched at 2%, in order to slowly move water downslope. Daylighting of pipe will occur before the terminus of retaining wall closest to resource area. From end of pipe @ daylight, water will have approximately 20 feet to flow on-grade, at a very shallow slope. This should allow water to infiltrate soil before arriving at resource area.

#3 – Planting Palette and General Locations:
All new plantings will occur within the area of Dark Green – as shown on plan dated 10/13/23. Generally, the plantings will layer up from groundcovers, perennials, woody shrubs, to a selection of ornamental and fruiting trees. Plant palette shall be further developed by determination of soil type, sun exposure, and feedback from the Conservation Commission. Exact plant locations will be determined by working around existing roots, stumps, and large rocks, while considering slope, erosion control, and spacing for a healthy plant community.

Working Plant Palette – Woody Native:

Amelanchier canadensis	Aronia melanocarpa	Ilex verticillata
Amelanchier x grandiflora	Clethra alnifolia	Myrica pensylvanica
Apple – Fruit	Comptonia peregrina	Rhus aromatica
Cherry – Fruit	Cornus sericea	Sambucus canadensis
Pear - Fruit	Hamamelis virginiana	Viburnum dentatum

Working Plant Palette – Perennial Native:

Achillea	Cimicifuga racemose	Monarda fistulosa	Strawberry
Arctostaphylos uva-ursi	Fern ‘Hayscented’	Sporobolus heterolepis	Blueberry
Aster symphyotrichum	Iris versicolor	Thyme	Raspberry

groundswell landscape DESIGN CONSULT MANAGE

#4 – Paver Stones to Replace Asphalt Area:
Process of paver stone installation shall include the removal of approximately 375 SF of existing concrete pavers and asphalt.
Base materials for new paver stone installation shall include permeable aggregate (4-6 inches) of ¾" crushed stone mixed with stone dust.
Setting bed (on top of base materials) shall be 1-inch of stone dust OR angular sand.
Paver stones shall be Granite Cobblestones OR Reclaimed Granite 'Bars', set dry into permeable setting bed. Joints shall be filled with permeable stone dust OR angular sand.

During the meeting scheduled for 1/10/24 @ 3:30 pm, I will be available to answer any questions about the design and overall construction process.

Regards,

Shane Mahoney, ASLA
Owner | Manager
Groundswell Landscape, LLC
4 4th Street
Amesbury, MA 01913

p. 978-273-0870
e. shane@thegroundswelldesign.com

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5 Commerce Park North
Suite 201
Bedford, NH 03110
T: 603.623.3600
F: 603.624.9463
www.gza.com

January 16, 2024
File No. 04.0191410.47

City of Portsmouth
Planning Board
Attn: Rick Chellman, Chairman
1 Junkins Ave, 3rd Floor
Portsmouth, New Hampshire 03801

Re: Conditional Use Permit Application
Eversource Energy
Resistance Substation Retirement Project
Portsmouth, New Hampshire

Dear Chairman Chellman:

This letter transmits a Conditional Use Permit Application on behalf of Public Service Company of New Hampshire doing business as Eversource Energy (Eversource), for Resistance Substation Retirement Project (see attached **Figure 1, Locus Plan**). On behalf of Eversource, GZA GeoEnvironmental, Inc. (GZA) is requesting consideration of a Conditional Use Permit Application for required impacts within the City of Portsmouth.

The proposed project includes the retirement the Resistance Substation located in Portsmouth, New Hampshire and associated electric line work required to retire the substation. The electric line work includes the removal of 0.6 miles of the existing T-13 Transmission Line and installation of a new 0.6-mile 34.5 kV Distribution Line to connect the new Portsmouth terminal. Additionally, the project requires the reconductoring and replacement of existing structures along 1.5 miles of the 3171 Transmission Line from Ocean Road to the 2102 Tap, which in total crosses through portions of Portsmouth and Greenland, New Hampshire, for approximately 2.1 miles. See **Figure 2 – Access and Permitting Plans** for a depiction of the proposed project. In Portsmouth, the proposed work crosses through primarily rural and industrial upland and wetland areas. Natural cover within the ROW includes upland shrublands and wetland emergent and scrub-shrub habitats.

In total, the proposed project requires approximately 256,869 sq. ft. of temporary wetland impact for equipment access and work pad placement. The proposed project also requires 79,310 sq. ft. of temporary buffer impact in

uplands for access and work pad placement. A summary of proposed wetland and buffer impacts is provided in the table below.

Table 1 – Summary of Wetland and Surface Water Buffer Impacts

Wetland ID	Classification	Temporary Wetland Impact (sq. ft.)	Temporary Upland Buffer Impact (sq. ft.)
GW-1	PEM1/PSS1/PFO1E,Fg/R2UB	102,309	6,931
PW-1	PEM1/PSS1E,Fg	141,042	17,373
PW-2	PEM1/PSS1E	0	0
PW-3	PEM1/PSS1E	0	0
PW-4	PEM1/PSS1E	0	0
PW-5	PEM1/PSS1E	0	0
PW-6	PEM1/PSS1E	3,530	19,968
PW-7	PEM1/PSS1E,H	2,089	5,666
PW-8	PEM1/PSS1E	0	0
PW-9	PEM1/PSS1Ex	0	0
PW-10	PSS1Ex	0	3,029
PW-11	PSS1/PEM1Ex	0	3,029
PW-12	PEM1/PSS1E	3,416	5,994
PW-13	PEM1/PSS1E	4,483	11,988
PW-14	PSS1/PEM1E	0	3,103
PW-15	PEM1E	0	2,229
	Total	***256,869***	***79,310***

Key to classifications:

P = palustrine wetland system
SS = scrub-shrub, 1 = broad-leaved deciduous
EM = emergent, 1= persistent, 5 = Phragmites

Modifiers
E = nontidal, seasonally flooded/saturated
H = permanently flooded

The proposed project is necessary in order to support current and future electricity demands in the region. The existing wood structures will be replaced with wood equivalent steel structures in order to increase the long-term reliability of the line. There are no proposed expansions to the ROW associated with this project. In addition, work is proposed within an existing and maintained utility ROW, and therefore tree removal is not anticipated as part of this project. Pole replacements will be on average 5-10-ft higher than existing poles due to updated National Electric Safety Code Standards. Work is proposed to begin in May 2024 and pending emergencies and weather-related delays, the proposed project will be completed by December 2024.

In addition to this Conditional Use Permit, Eversource will also be filing a Standard Dredge and Fill Wetlands Application with the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau.

Wetlands were delineated by GZA in 2016 and confirmed in 2022 and 2023 in accordance with the United States Army Corps of Engineers (USACE) Wetlands Delineation Manual using the Routine Determinations Method, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual as required by the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau and the USACE. GZA

photographed resources and recorded data relevant to functions and values provided by these natural resources within the ROW in November 2022 and June and August 2023. GZA classified wetlands in accordance with the "Classification of Wetlands and Deepwater Habitats of United States" (Federal Geographic Committee, 2013).

Where proposed access and work pads are located within existing wetlands, timber matting will be utilized to minimize and prevent rutting and compaction within wetlands. Work will be conducted in accordance with NHDES Best Management Practices Manual for Utilities in and Adjacent to Wetlands and Waterbodies (March 2019). Prior to placement of timber matting within wetlands, timber mats will be reviewed to ensure cleanliness to prevent spread of invasive plant species. Upon completion of work, timber matting will be removed and temporarily impacted wetlands will be stabilized with straw and will be restored using a native herbaceous seed mix.

In accordance with the City of Portsmouth Zoning Ordinance, Article 10, section 10.1017.60, a Conditional Use Permit may be issued by the Planning Board for the construction of Public and Private Utilities within Rights-of-Ways in wetlands and wetland buffers provided that certain conditions are satisfied. The following section describes how the proposed project meets the stated conditions.

A. ***The proposed construction is in the public interest****.* The proposed project is necessary to maintain the power supply of the existing distribution and transmission lines and if the work is not conducted, the utility poles could eventually fail and prevent power transmission. The project will improve the existing distribution line and increase reliability. This project does not propose expansion of the existing utility line ROW. The project includes replacement and maintenance of existing infrastructure within an existing and maintained utility ROW.

B. ***Design, construction, and maintenance methods will utilize best management practices to minimize any detrimental impact of such use upon the wetland and will include restoration of the site as nearly as possible to its original grade, condition, and vegetated state.*** As previously mentioned, the proposed work will be conducted in accordance with NHDES Best Management Practices Manual for Utilities in and Adjacent to Wetlands and Waterbodies (March 2019). The access for the project has been sited to avoid prime wetlands and prime wetland buffers to the greatest extent feasible. In addition, the project utilizes existing access trails within the ROW wherever possible to limit and prevent new disturbance. Where access ways temporarily cross a wetland or wetland buffer, the proposed project has been designed to minimize temporary wetland impacts through the use of timber matting. Matting will be temporarily placed in a narrow section of the wetland, to provide appropriate access and prevent rutting and compaction.

Best management practices that include the installation and maintenance of erosion and sediment barriers will be used during construction. In addition, timber matting will be reviewed prior to placement to prevent the spread of invasive plant species. Upon completion of work, temporarily impacted areas will be seeded and mulched with a native herbaceous seed mix to establish permanent vegetative cover, as necessary, to promote restoration as nearly as possible to its original grade, condition, and vegetated state.

C. ***No alternative feasible route exists which does not cross or alter a wetland or have a less detrimental impact on a wetland****.* There are no alternatives with less impact that maintain the safety and reliability

of the existing transmission line. Access is sited within an existing and maintained utility ROW. In addition, the project has been designed to utilize existing historical access routes along the ROW, where possible, to minimize impacts to wetlands.

D. ***Alterations of natural vegetation or managed woodland will occur only to the extent necessary to achieve construction goals.*** The proposed project will utilize existing access trails within the ROW to limit disturbance to wetlands and wetland buffers to the greatest extent feasible. Timber matting will be used to limit impacts on natural vegetation. Best management practices will be used to restore the site as nearly as possible to its original grade, condition and vegetated state. Permanent alterations of natural vegetation are proposed only where Eversource has identified utility structures which must be replaced in order to maintain current and projected future energy demands.

GZA conducted a wetland Function and Value Assessment November 2022. Wetlands within the ROW corridor are typically capable of production export, nutrient removal, and groundwater recharge and discharge. Common principal functions and values include sediment and toxicant retention due to wetlands having close proximity to roadways, wildlife habitat, and flood flow alteration. It is not anticipated that the long-term functions and values of these wetlands will be impacted as a result of the proposed project. The project is maintenance of existing utility infrastructure.

Should you have any questions, please contact Mr. Conor Madison at 603-232-8784 or at conor.madison@gza.com.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Conor E. Madison, CPESC, CESSWI
Project Manager

Deborah M. Zarta Gier, CNRP
Principal

Tracy L. Tarr, CWS, CESSWI
Consultant/Reviewer

Attachments: Conditional Use Permit Application Form - Online
List of Abutters
Photo Log
Wetland Function and Value Assessment
Figure 1 – Locus Plan
Figure 2 – Access and Permitting Plans
Application Fee

List of Abutters

Resistance Substation Retirement Project
Eversource Energy
Abutters List
Portsmouth, New Hampshire

Wetland Scientist
GZA GeoEnvironmental, Inc.
Attn: Tracy Tarr, CWS, CWB, CESSWI
5 Commerce Park North, Suite 201
Bedford, NH 03110

Tax Map 0214-0003-0000, 0281-0002-0000, R21-052-000
Owner/Applicant
Eversource Energy
PO Box 270
Hartford, CT 06141

Tax Map 0213-0011-0000, 0214-0001-0000, 0214-0002-0000, 58-04, 28-5
GSP Schiller LLC
431 River Road
Bow, NH 03304

Tax Map 0278-0001-0000, 0280-0003-0000, 0281-0001-0000, 0260-0140-0000, 0260-0159-0000, 0259-0010-0000, 0259-0014-0000, 0240-0002-1001
City of Portsmouth
PO Box 628
Portsmouth, NH 03801

Tax Map 0263-0003-0000, 0278-0002-0000, 0278-0003-0000, 0282-0005-0000, 0259-0001-0000, 0234-0007-0003, 0212-0122-0000, R20-001-000
City of Portsmouth
1 Junkins Ave
Portsmouth, NH 03801

Tax Map 0165-0014-0000, 0165-0014-0000, 0165-0014-0000
Boston & Maine Corp.
Iron Horse Pk High Street
No. Billerica, MA 01862

Tax Map 0258-0054-0000, 0263-0001-0006,
State of NH Fish & Game
11 Hazen Drive
Concord, NH 03301

Tax Map 0279-0001-0000, 0279-0002-0000, 0279-0008-0000, 0279-0009-0000
Aranosian Oil Co
557 N State Street
Concord, NH 03301

Tax Map 0121-0001-0000, 0121-0001-0000
Boston & Maine Railroad
Market Street
Portsmouth, NH 03801

Tax Map 0216-0001-0010
First Citizens Bank & Trust Co
FCB Mail Code DAV41 100 E Tyron Road
Raleigh, NC 27603

Tax Map 0216-0001-0011, 0213-0001-0000, 0213-0012-0000, 0216-0001-008A
135 Commerce Way LLC
210 Commerce Way Suite 300
Portsmouth, NH 03801

Tax Map 0263-0001-0001
Portsmouth Medical Office Bldg
100 Griffin Road
Portsmouth, NH 03801

Tax Map 0279-0004-0000
Darvid Elisabeth Rev Trust
1630 Greenland Road
Portsmouth, NH 03801

Tax Map 0279-0006-0000
PDNED Greenland LLC
75 Park Plaza
Boston, MA 0216

Tax Map 0280-0001-0000, R21-048-000
Coastal Concrete Company Inc.
PO Box 540
Wakefield, MA 01880

Tax Map 0320-0000-0000, R22-032-000
Pease Airport District
55 International Drive
Portsmouth, NH 03801

Tax Map 0279-0003-0000
Christopher Beliveau
1620 Greenland Road
Portsmouth, NH 03801

Tax Map 0279-0005-0000
Robert Keene
1640 Greenland Road
Portsmouth, NH 03801

Tax Map 0279-0007-0000
Shevlin Family Rev Trust
1648 Greenland Road
Portsmouth, NH 03801

Tax Map 0280-0002-0000, R21-045-000
National Propane LP
PO Box 798
Valley Forge, PA 19482

Tax Map 0262-0010-0000
United States America GZA
Property Management
10 Causeway Street
Boston, MA 02222

Tax Map 0300-0001-0000
James Jalbert
185 Grafton Road
Portsmouth, NH 03801

Tax Map 0260-0001-0000
Shephane & Matthew Campagna
100 Sherburne Road
Portsmouth, NH 03801

Tax Map 0260-0004-0000
Philip Griggs
176 Sherburne Road
Portsmouth, NH 03801

Resistance Substation Retirement Project
Eversource Energy
Abutters List
Portsmouth, New Hampshire

Tax Map 0260-0137-0000
Cynthia Jeffries
7 Victory Road
Portsmouth, NH 03801

Tax Map 0260-0138-0000
Sean Evans
96 Sagamore Road
Rye, NH 03870

Tax Map 0260-0139-0000
Thomas Oleary
316 Colonial Drive
Portsmouth, NH 03801

Tax Map 0260-0141-0000
Jared Bedrick
296 Colonial Drive
Portsmouth, NH 03801

Tax Map 0260-0142-0000
Michael Doll
284 Colonial Drive
Portsmouth, NH 03801

Tax Map 0260-0143-0000
Paul Monaghan
272 Colonial Drive
Portsmouth, NH 03801

Tax Map 0260-0144-000
Craig Simmons
9 Worthen Road
Portsmouth, NH 03801

Tax Map 0260-0145-0000
Kimberly Scott
14 Worthen Road
Portsmouth, NH 03801

Tax Map 0260-0169-0000
Amanda Kaplan
664 State Street Apt 4
Portsmouth, NH 03801

Tax Map 0318-0003-0000
Pease Development Authority
Treatment Plant
Corporate Drive
Portsmouth, NH 03801

Tax Map 0259-0002-0000
Foley/Ciccolini Family Trust
61 Malcom Road South #16
Bridgton, ME 04009

Tax Map 0259-0003-0000
Amanda & Peter Getman
888 Greenland Road
Portsmouth, NH 03801

Tax Map 0259-0005-0000
Gail Wholey
933 Greenland Road
Portsmouth, NH 03801

Tax Map 0259-0009-0000
Douglas Crossman
52 Shelburne Road
Portsmouth, NH 03801

Tax Map 0262-0001-0001
Steven Cobert
20 Shelburne Road
Portsmouth, NH 03801

Tax Map 0262-0002-0000
Richard Blalock
922 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0003-0000
Michael Thomson
930 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0004-000
Kate Arruda
946 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0005-0000
Shannon Francois
962 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0006-0000
Meghan Rice
1002 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0007-0000
Ashley Spinale
1000 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0008-0000
Amy Lalime
1004 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0009-0000
State of NH
State House
Concord, NH 03301

Tax Map 0240-0001-0000
Liberty Mutual Insurance Co
Attn: Joanne Bragg
175 Berkeley Street
Boston, MA 02116

Tax Map 0259-0012-0000
Orchard Park Condos
875 Greenland Road
Portsmouth, NH 03801

Tax Map 0529-0013-0000
Chadwick & Trefethen Inc
50 Borwich Ave
Portsmouth, NH 03801

Tax Map 0259-0014-0001
Millennium Borthwick II LLC
155 Borthwick Ave
Portsmouth, NH 03801

Resistance Substation Retirement Project
Eversource Energy
Abutters List
Portsmouth, New Hampshire

Tax Map 0259-0015-0000
Northeast Credit Union
Attn: Accounting
PO Box 1240
Portsmouth, NH 03801

Tax Map 0259-0016-0000
Kennedy Edeltraud Trust of 2017
719 Greenland Road
Portsmouth, NH 03801

Tax Map 0240-0002-0001
HCA Health Services of NH Inc.
PO Box 680610
Indianapolis, IN 46280

Tax Map 0215-0001-0000
Retrosi Properties LLC
150 Gosling Road
Portsmouth, NH 03801

Tax Map 0215-0009-0000
Kelly Properties Trust
PO Box 342
Rye Beach, NH 03871

Tax Map 0215-0014-0000
Cole BJ Portfolio II LLC
25 Research Drive
Westborough, MA 01581

Tax Map 0216-0001-0001
150 Commerce Way LLC
210 Commerce Way Suite 100
Portsmouth, NH 03801

Tax Map 0216-0001-0002
Commerce Center at Portsmouth
273 Corporate Drive Suite 150
Portsmouth, NH 03801

Tax Map 0216-0001-0009
175 Commerce Road LLC
725 Canton Street
Norwood, MA 02062

Tax Map 0216-0003-0000
Bromley Portsmouth LLC
57 Dedham Ave
Needham, MA 02492

Tax Map 0212-0121-0000
PHA Housing Development
245 Middle Street
Portsmouth, NH 03801

Tax Map 0212-0123-0000
Lewis Family Trust 2019
595 Las Colindas Road
San Rafael, CA 94903

Tax Map 0212-0168-0000, 0212-0167-0000
Atlantic Pointe Condominium
7 Tokanel Road
Windham, NH 03087

Tax Map 0213-0003-000
Thom Graeme
212 Mayfield Circle
Alpharette, GA 30009

Tax Map 0213-0006-0000
Abdallah Alhamdan
12 Dunlin Way
Portsmouth, NH 03801

Tax Map 0213-0007-0000
Melissa Gillis
14 Dunlin Way
Portsmouth, NH 03801

Tax Map 0213-0008-0000
Dipentima Family Rev Living Trust
16 Dunlin Way
Portsmouth, NH 03801

Tax Map 0213-0009-0000
Nania Family Trust
18 Dunlin Way
Portsmouth, NH 03801

Tax Map 0213-0010-0000
Raad Mukhlis
20 Dunlin Way
Portsmouth, NH 03801

Tax Map 0217-0002-0000
Spinnaker Point Condo
70 Spinnaker Way
Portsmouth, NH 03801

Tax Map 0218-0040-0000
Gita Paudel
10 Dunlin Way
Portsmouth, NH 03801

Tax Map 0218-0041-0000
Dragan Vidacic
8 Dunlin Way
Portsmouth, NH 03801

Tax Map 0218-0042-0000
Maass Family Rev Trust
6 Dunlin Way
Portsmouth, NH 03801

Tax Map 0218-0043-0000
Kristina Jette
2 Dunlin Way
Portsmouth, NH 03801

Tax Map 0212-0124-0000
Kenneth Hall
276 Crescent Way
Portsmouth, NH 03801

Tax Map 0212-0125-0000
Evon Cooper
16 Garland Road
Lincoln, MA 01773

Tax Map 0212-0126-0000
Karole Smith Rev Trust
254 Crescent Way
Portsmouth, NH 03801

Resistance Substation Retirement Project
Eversource Energy
Abutters List
Portsmouth, New Hampshire

Tax Map 0212-0128-0000
Bruce Teatrowe
226 Crescent Way
Portsmouth, NH 03801

Tax Map 0212-0128-0001
Lori Santana
224 Crescent Way
Portsmouth, NH 03801

Tax Map 0212-0129-0000
Keith Hodgdon
220 Crescent Way
Portsmouth, NH 03801

Tax Map 0212-0130-0000
Francis Hartford
1810 State Road
Eliot, ME 03903

Tax Map 0212-0133-0000
Richard Woodhead
187 Porpoise Way
Portsmouth, NH 03801

Tax Map 0212-0153-0000
Alan Baker
180 Porpoise Way
Portsmouth, NH 03801

Tax Map 0212-126A-0000
Atlantic Heights LLC
480 Route 101
Bedford, NH 03101

Tax Map 0258-0020-0000
John Madden Jr
700 Greenland Road
Portsmouth, NH 03801

Tax Map 0258-0021-0000
David Kennard
17 Griffin Road
Portsmouth, NH 03801

Tax Map 0258-0030-0000
Stamatia Miminas
49 Griffin Road
Portsmouth, NH 03801

Tax Map 0260-0146-0000
Abigail Schilemmer
234 Colonial Drive
Portsmouth, NH 03801

Tax Map R20-008-000
AG-EIP 150 Ocean Road LLC
245 Park Ave 24th Floor
New York, NY 10167

Tax Map R21-051-000
Bluebird Greenland, LLC
125 Ocean Road
Greenland, NH 03840

Tax Map R21-054-000
TA Operating LLC
24601 Center Ridge Road
Suite 200
Westlake, OH 44145

Tax Map R21-017-000
Marilyn Twombly
703 Narrow Leaf Drive
Upper Marlborough, MD 20774

Tax Map R21-044-000
Target Corporation
PO Box 9456
Minneapolis, MN 55440

Tax Map R21-044-000
Lowes Home Center Inc
1000 Lowes Blvd
Morresville, NC 28117

Tax Map R21-044-000
Stop & Shop
PO Box 6500
Carlisle, PA 17013

Photo Log

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 1: Looking north at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 94 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

Photograph No. 2: Looking south at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 94 on the 3171 Line ROW off Ocean Road, Greenland, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 3: Looking northeast at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 93 on the 3171 Line ROW off Ocean Road, Greenland, NH.

Photograph No. 4: Looking east at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 92 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 5: Looking southwest at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 91 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

Photograph No. 6: Looking north at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 90 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 7: Looking east at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 89 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

Photograph No. 8: Looking east at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 88 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 9: Looking west at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 87 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

Photograph No. 10: Looking north towards Structure 86 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 11: Looking east at Structures 85 and 84 on the 3171 Line ROW off NH33, Portsmouth, NH

Photograph No. 12: Looking east at Wetland PW-1 (PEM1/PSS1E.Fg) near Structure 83 on the 3171 Line ROW off NH33, Portsmouth, NH

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 13: Looking southwest at Wetland PW-1 (PEM1/PSS1E.Fg) near Structure 82 on the 3171 Line ROW off NH33, Portsmouth, NH

Photograph No. 14: Looking west at Wetland PW-1 (PEM1/PSS1E.Fg) near Structure 81 on the 3171 Line ROW off NH33, Portsmouth, NH

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 15: Looking southwest at Wetland PW-1 (PEM1/PSS1E.Fg) near Structure 80 on the 3171 Line ROW off NH33, Portsmouth, NH

Photograph No. 16: Looking northwest at Wetland PW-1 (PEM1/PSS1E.Fg) near Structure 79 on the 3171 Line ROW off NH33, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 17: Looking west at Wetland PW-1 (PEM1/PSS1E.Fg) near Structures 78 and 77 on the 3171 Line ROW off NH33, Portsmouth, NH.

Photograph No. 18: Looking northeast at Wetland PW-1 (PEM1/PSS1E.Fg) towards Structure 77 to 73 on the 3171 Line ROW off NH33, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 19: Looking northwest towards Structures 72 and 72.6 on the 3171 Line ROW off NH33, Portsmouth, NH.

Photograph No. 20: Looking southeast at Structures 72.1 to 72.5 on the 3171 Line ROW off Griffin Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 21: Looking northeast at Structure 1 on the T13 Line ROW off Gosling Road, Portsmouth, NH.

Photograph No. 22: Looking south near Wetland PW-2 (PEM1/PSS1E) on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 23: Looking northwest near Wetland PW-3 (PEM1/PSS1E) between Structures 1 and 2 on the T13 Line ROW off Gosling Road, Portsmouth, NH.

Photograph No. 24: Looking southwest at Structure 2 on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 25: Looking northwest at Wetland PW-4 (PEM1/PSS1E) near Structure 2 on the T13 Line ROW off Gosling Road, Portsmouth, NH.

Photograph No. 26: Looking south at Structure 3 and Wetlands PW-5 (PEM1/PSS1E) and PW-6 (PEM1/PSS1E) on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 27: Looking west at Structure 3.5 and Wetland PW-6 (PEM1/PSS1E) on the T13 Line ROW off Gosling Road, Portsmouth, NH.

Photograph No. 28: Looking southeast at Structure 4 on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 29: Looking south at Structure 5 on the T13 Line ROW off Gosling Road, Portsmouth, NH.

Photograph No. 30: Looking east at Structure 6 and Wetland PW-7 (PEM1/PSS1E,H) on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 31: Looking east at Wetlands PW-9 (PEM1/PSS1Ex) and PW-8 (PEM1/PSS1E) near Structure 6 on the T13 Line ROW off Gosling Road, Portsmouth, NH.

Photograph No. 32: Looking east at Structure 7 and Wetlands PW-10 (PSS1Ex) and PW-11 (PSS1/PEM1Ex) on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 33: Looking east at Wetland PW-11 (PSS1/PEM1Ex) between Structures 7 and 8 on the T13 Line ROW off Gosling Road, Portsmouth, NH

Photograph No. 34: Looking northeast at Structure 9 and Wetland PW-12 (PEM1/PSS1E) on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023

Photograph No. 35: Looking east at Wetland PW-13 (PEM1/PSS1E) and Structure 10 on the T13 Line ROW off Gosling Road, Portsmouth, NH.

Photograph No. 36: Looking southeast at Wetlands PW-13 (PEM1/PSS1E), PW-14 (PSS1/PEM1E), and PW-15 (PEM1E), and at Structures 10 and 11 on the T13 Line ROW off Gosling Road, Portsmouth, NH.

Wetland Function and Value Assessment

3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-1 **PEM1/PSS1E,Fg**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	Y		1, 2, 6	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	Y
Floodflow Alteration	Y		3, 4, 5, 6, 7, 8, 9, 18	The wetland receives and retains overland sheet flow. Dense vegetation is present.	Y
Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N
Sediment/Toxicant Retention	Y		1, 2, 4, 5, 8	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention and accepts runoff from I95 North.	Y
Nutrient Removal	Y		2, 3, 5, 6, 7, 8, 9, 10	Dense vegetation and poorly drained organic soils are present with ponded water.	Y
Production Export	Y		1, 4, 5, 7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	Y
Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N
Wildlife Habitat	Y		5, 6, 7, 8, 11, 13, 18, 19, 23	A portion of the wetland is located in “highest ranked habitat in New Hampshire” (see Wildlife Action Plan overlay).	Y
Recreation		N	1, 5	There are no water-based recreational opportunities present.	N
Educational/Scientific Value	Y		5, 6	The wetland is located on City of Portsmouth conservation land (Great Bog). However, parking suitable for school buses is not present and the wetland is located under an active distribution line adjacent to Interstate 95 and an existing rail bed.	N
Uniqueness/Heritage	Y		13, 17, 19	The wetland contains a Priority Resource Area (PRA) mapped Peatland Habitat in the northeast portion of the wetland.	N
Visual Quality/Aesthetics		N	2, 8, 12	The wetland does not contain open water or emergent marsh vistas and is surrounded by Interstate 95 and an existing rail bed.	N
ES Endangered Species Habitat	Y		1, 2	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N

Notes: Plants within the herbaceous layer include reed canary grass, broadleaf cattail, jewel weed, cinnamon fern, sensitive fern, reed canary grass, phragmites, and sphagnum moss. Plants within the shrub/sapling layer include meadowsweet, silky dogwood, glossy buckthorn, red maple, and gray birch.

3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-2 **PEM1/PSS1E**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	**Y**		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	**N**
Floodflow Alteration	**Y**		5, 6, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	**N**
Fish and Shellfish Habitat		**N**	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	**N**
Sediment/Toxicant Retention	**Y**		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention and accepts runoff from Gosling Road.	**Y**
Nutrient Removal	**Y**		3, 8, 9	Dense vegetation is present.	**N**
Production Export	**Y**		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	**N**
Sediment/Shoreline Stabilization		**N**	Not Applicable	No streams or shoreline edges are associated with the wetland.	**N**
Wildlife Habitat	**Y**		7, 8	The wetland contains scrub-shrub cover in a commercial area. Over size limits its capability.	**N**
Recreation		**N**	5	There are no water-based recreational opportunities present.	**N**
Educational/Scientific Value		**N**	5	The wetland is located on private property and is located under an active transmission line.	**N**
Uniqueness/Heritage		**N**	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	**N**
Visual Quality/Aesthetics		**N**	8	The wetland does not contain open water or emergent marsh vistas.	**N**
ES Endangered Species Habitat		**N**	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	**N**

Notes:

3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-3 **PEM1/PSS1E**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	**Y**		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	**N**
Floodflow Alteration	**Y**		5, 6, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	**N**
Fish and Shellfish Habitat		**N**	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	**N**
Sediment/Toxicant Retention	**Y**		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention.	**Y**
Nutrient Removal	**Y**		3, 8, 9	Dense vegetation is present.	**N**
Production Export	**Y**		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	**N**
Sediment/Shoreline Stabilization		**N**	Not Applicable	No streams or shoreline edges are associated with the wetland.	**N**
Wildlife Habitat	**Y**		7, 8	The wetland contains scrub-shrub cover in a commercial area. Over size limits its capability.	**N**
Recreation		**N**	5	There are no water-based recreational opportunities present.	**N**
Educational/Scientific Value		**N**	5	The wetland is located on private property and is located under an active transmission line.	**N**
Uniqueness/Heritage		**N**	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	**N**
Visual Quality/Aesthetics		**N**	8	The wetland does not contain open water or emergent marsh vistas.	**N**
ES Endangered Species Habitat		**N**	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	**N**

Notes:

3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-4 **PEM1/PSS1E**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N
Floodflow Alteration	Y		5, 6, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	N
Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N
Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention.	Y
Nutrient Removal	Y		3, 8, 9	Dense vegetation is present.	N
Production Export	Y		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	N
Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N
Wildlife Habitat	Y		7, 8	The wetland contains scrub-shrub cover in a commercial area.	N
Recreation		N	5	There are no water-based recreational opportunities present.	N
Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N
Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N
Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N

Notes:

3171 & T13 STRUCTURE REPLACEMNT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-4 **PEM1/PSS1E**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	**Y**		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	**N**
Floodflow Alteration	**Y**		5, 6, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	**N**
Fish and Shellfish Habitat		**N**	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	**N**
Sediment/Toxicant Retention	**Y**		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention.	**Y**
Nutrient Removal	**Y**		3, 8, 9	Dense vegetation is present.	**N**
Production Export	**Y**		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	**N**
Sediment/Shoreline Stabilization		**N**	Not Applicable	No streams or shoreline edges are associated with the wetland.	**N**
Wildlife Habitat	**Y**		7, 8	The wetland contains scrub-shrub cover in a commercial area.	**N**
Recreation		**N**	5	There are no water-based recreational opportunities present.	**N**
Educational/Scientific Value		**N**	5	The wetland is located on private property and is located under an active transmission line.	**N**
Uniqueness/Heritage		**N**	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	**N**
Visual Quality/Aesthetics		**N**	8	The wetland does not contain open water or emergent marsh vistas.	**N**
ES Endangered Species Habitat		**N**	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	**N**

Notes:

3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-6 **PEM1/PSS1E**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	**Y**		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	**N**
Floodflow Alteration	**Y**		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present. Some ponded water is present.	**N**
Fish and Shellfish Habitat		**N**	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	**N**
Sediment/Toxicant Retention	**Y**		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention.	**Y**
Nutrient Removal	**Y**		3, 8, 9	Dense vegetation is present.	**N**
Production Export	**Y**		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	**N**
Sediment/Shoreline Stabilization		**N**	Not Applicable	No streams or shoreline edges are associated with the wetland.	**N**
Wildlife Habitat	**Y**		7, 8	The wetland contains scrub-shrub cover in a commercial area.	**N**
Recreation		**N**	5	There are no water-based recreational opportunities present.	**N**
Educational/Scientific Value		**N**	5	The wetland is located on private property and is located under an active transmission line.	**N**
Uniqueness/Heritage		**N**	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	**N**
Visual Quality/Aesthetics		**N**	8	The wetland does not contain open water or emergent marsh vistas.	**N**
ES Endangered Species Habitat		**N**	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	**N**

Notes:

3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-7 **PEM1/PSS1E,H**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N
Floodflow Alteration	Y		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present. Some ponded water is present.	N
Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N
Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention.	Y
Nutrient Removal	Y		3, 8, 9	Dense vegetation is present.	N
Production Export	Y		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	N
Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N
Wildlife Habitat	Y		7, 8, 18	The wetland contains a potential vernal pool and scrub-shrub cover in a commercial area.	Y
Recreation		N	5	There are no water-based recreational opportunities present.	N
Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N
Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N
Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N

Notes:

3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-8 **PEM1/PSS1E**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	**Y**		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	**N**
Floodflow Alteration	**Y**		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	**N**
Fish and Shellfish Habitat		**N**	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	**N**
Sediment/Toxicant Retention	**Y**		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention. The wetland accepts stormwater from surrounding roads.	**Y**
Nutrient Removal	**Y**		3, 8, 9	Dense vegetation is present.	**N**
Production Export	**Y**		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	**N**
Sediment/Shoreline Stabilization		**N**	Not Applicable	No streams or shoreline edges are associated with the wetland.	**N**
Wildlife Habitat	**Y**		7, 8	The wetland contains scrub-shrub cover in a commercial area.	**N**
Recreation		**N**	5	There are no water-based recreational opportunities present.	**N**
Educational/Scientific Value		**N**	5	The wetland is located on private property and is located under an active transmission line.	**N**
Uniqueness/Heritage		**N**	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	**N**
Visual Quality/Aesthetics		**N**	8	The wetland does not contain open water or emergent marsh vistas.	**N**
ES Endangered Species Habitat		**N**	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	**N**

Notes:

3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-9 **PEM1/PSS1Ex**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	**Y**		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	**N**
Floodflow Alteration	**Y**		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	**N**
Fish and Shellfish Habitat		**N**	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	**N**
Sediment/Toxicant Retention	**Y**		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention. The wetland accepts stormwater from surrounding roads.	**Y**
Nutrient Removal	**Y**		3, 8, 9	Emergent and scrub shrub cover is present.	**N**
Production Export	**Y**		7, 12	The wetland contains dense vegetation.	**N**
Sediment/Shoreline Stabilization		**N**	Not Applicable	No streams or shoreline edges are associated with the wetland.	**N**
Wildlife Habitat	**Y**		7, 8	The wetland contains scrub-shrub cover in a commercial area.	**N**
Recreation		**N**	5	There are no water-based recreational opportunities present.	**N**
Educational/Scientific Value		**N**	5	The wetland is located on private property and is located under an active transmission line.	**N**
Uniqueness/Heritage		**N**	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	**N**
Visual Quality/Aesthetics		**N**	8	The wetland does not contain open water or emergent marsh vistas.	**N**
ES Endangered Species Habitat		**N**	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	**N**

Notes:

3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-10 **PSS1Ex**		**GZA Personnel: Peter Petkauskos, Tracy Tarr**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	**Y**		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	**N**
Floodflow Alteration	**Y**		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	**N**
Fish and Shellfish Habitat		**N**	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	**N**
Sediment/Toxicant Retention	**Y**		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention. The wetland accepts stormwater from surrounding roads.	**Y**
Nutrient Removal	**Y**		3, 8, 9	Scrub shrub cover is present.	**N**
Production Export	**Y**		7, 12	The wetland contains dense vegetation.	**N**
Sediment/Shoreline Stabilization		**N**	Not Applicable	No streams or shoreline edges are associated with the wetland.	**N**
Wildlife Habitat	**Y**		7, 8	The wetland contains scrub-shrub cover in a commercial area.	**N**
Recreation		**N**	5	There are no water-based recreational opportunities present.	**N**
Educational/Scientific Value		**N**	5	The wetland is located on private property and is located under an active transmission line.	**N**
Uniqueness/Heritage		**N**	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	**N**
Visual Quality/Aesthetics		**N**	8	The wetland does not contain open water or emergent marsh vistas.	**N**
ES Endangered Species Habitat		**N**	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	**N**

Notes:

3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-11 **PSS1/PEM1Ex**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	**Y**		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	**N**
Floodflow Alteration	**Y**		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present. Ponded water is present in an existing stormwater basin.	**N**
Fish and Shellfish Habitat		**N**	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	**N**
Sediment/Toxicant Retention	**Y**		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention. The wetland accepts stormwater from surrounding roads and contains a stormwater basin.	**Y**
Nutrient Removal	**Y**		3, 8, 9	Scrub shrub and emergent cover is present.	**N**
Production Export	**Y**		7, 12	The wetland contains dense vegetation.	**N**
Sediment/Shoreline Stabilization		**N**	Not Applicable	No streams or shoreline edges are associated with the wetland.	**N**
Wildlife Habitat	**Y**		7, 8	The wetland contains scrub-shrub cover in a commercial area.	**N**
Recreation		**N**	5	There are no water-based recreational opportunities present.	**N**
Educational/Scientific Value		**N**	5	The wetland is located on private property and is located under an active transmission line.	**N**
Uniqueness/Heritage		**N**	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	**N**
Visual Quality/Aesthetics		**N**	8	The wetland does not contain open water or emergent marsh vistas.	**N**
ES Endangered Species Habitat		**N**	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	**N**

Notes:

3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-12 and PW-13 **PEM1/PSS1E**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	**Y**		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	**N**
Floodflow Alteration	**Y**		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	**N**
Fish and Shellfish Habitat		**N**	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	**N**
Sediment/Toxicant Retention	**Y**		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention. The wetland accepts stormwater from surrounding roads.	**Y**
Nutrient Removal	**Y**		3, 8, 9	Scrub shrub and emergent cover is present.	**N**
Production Export	**Y**		7, 12	The wetland contains dense vegetation.	**N**
Sediment/Shoreline Stabilization		**N**	Not Applicable	No streams or shoreline edges are associated with the wetland.	**N**
Wildlife Habitat	**Y**		7, 8	The wetland contains scrub-shrub cover in a commercial area.	**N**
Recreation		**N**	5	There are no water-based recreational opportunities present.	**N**
Educational/Scientific Value		**N**	5	The wetland is located on private property and is located under an active transmission line.	**N**
Uniqueness/Heritage		**N**	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	**N**
Visual Quality/Aesthetics		**N**	8	The wetland does not contain open water or emergent marsh vistas.	**N**
ES Endangered Species Habitat		**N**	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	**N**

Notes:

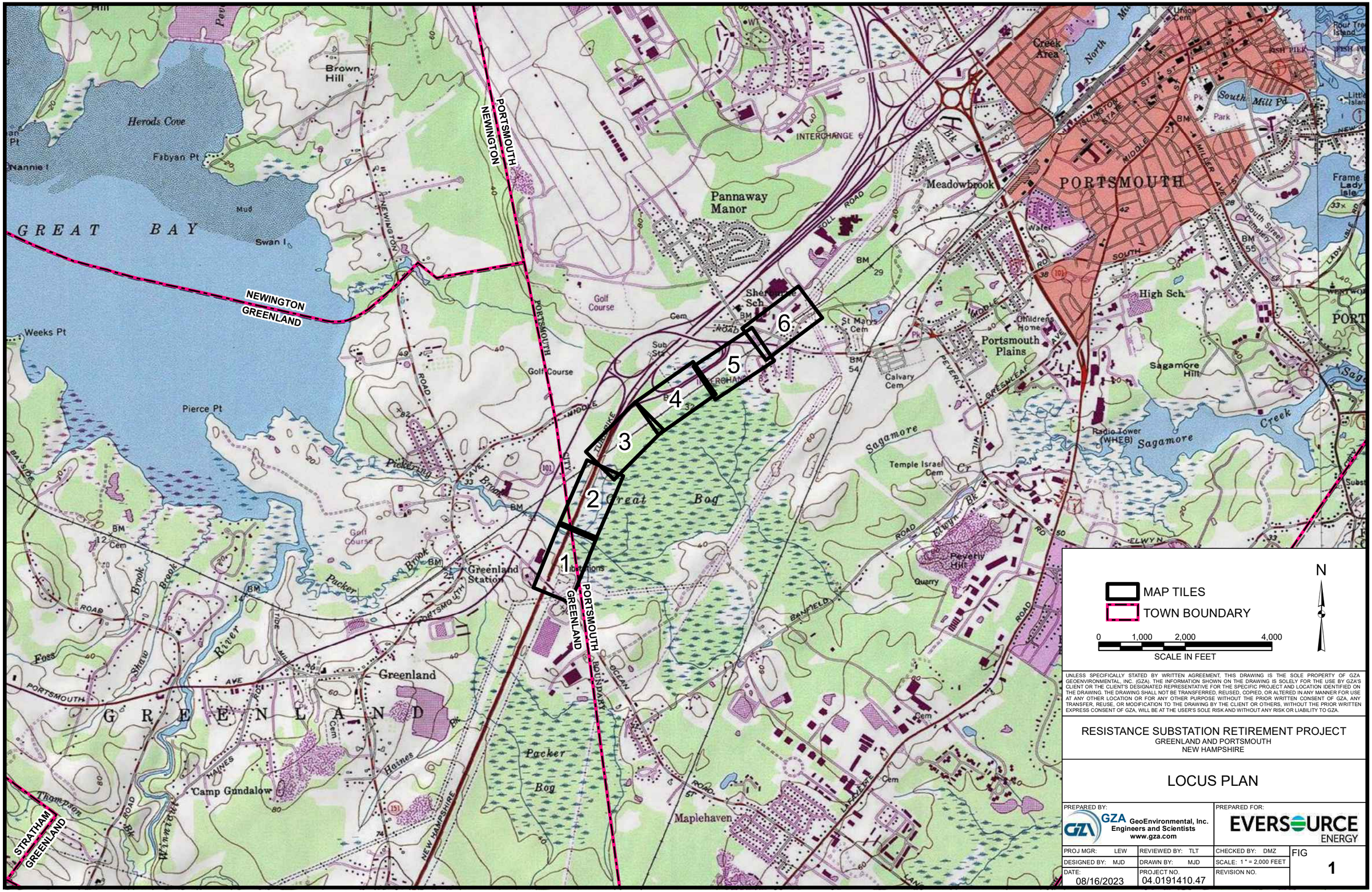
3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE

File No: 04.0191410.47	**WETLAND FUNCTION – VALUE EVALUATION FORM**	**Date: 10/19/2023**	
Wetland ID: PW-12 and PW-13 **PSS1/PEM1E**		**GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS**	

Function/Value	Capability Y	Capability N	Rationale (Reference #)	Summary	Principal Yes/No
Groundwater Recharge/Discharge	**Y**		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	**N**
Floodflow Alteration	**Y**		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	**N**
Fish and Shellfish Habitat		**N**	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	**N**
Sediment/Toxicant Retention	**Y**		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention. The wetland accepts stormwater from surrounding roads.	**Y**
Nutrient Removal	**Y**		3, 8, 9	Scrub shrub and emergent cover is present.	**N**
Production Export	**Y**		7, 12	The wetland contains dense vegetation.	**N**
Sediment/Shoreline Stabilization		**N**	Not Applicable	No streams or shoreline edges are associated with the wetland.	**N**
Wildlife Habitat	**Y**		7, 8	The wetland contains scrub-shrub cover in a commercial area.	**N**
Recreation		**N**	5	There are no water-based recreational opportunities present.	**N**
Educational/Scientific Value		**N**	5	The wetland is located on private property and is located under an active transmission line.	**N**
Uniqueness/Heritage		**N**	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	**N**
Visual Quality/Aesthetics		**N**	8	The wetland does not contain open water or emergent marsh vistas.	**N**
ES Endangered Species Habitat		**N**	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	**N**

Notes:

Figure 1 – Locus Plan



N

MAP TILES

TOWN BOUNDARY

0 1,000 2,000 4,000

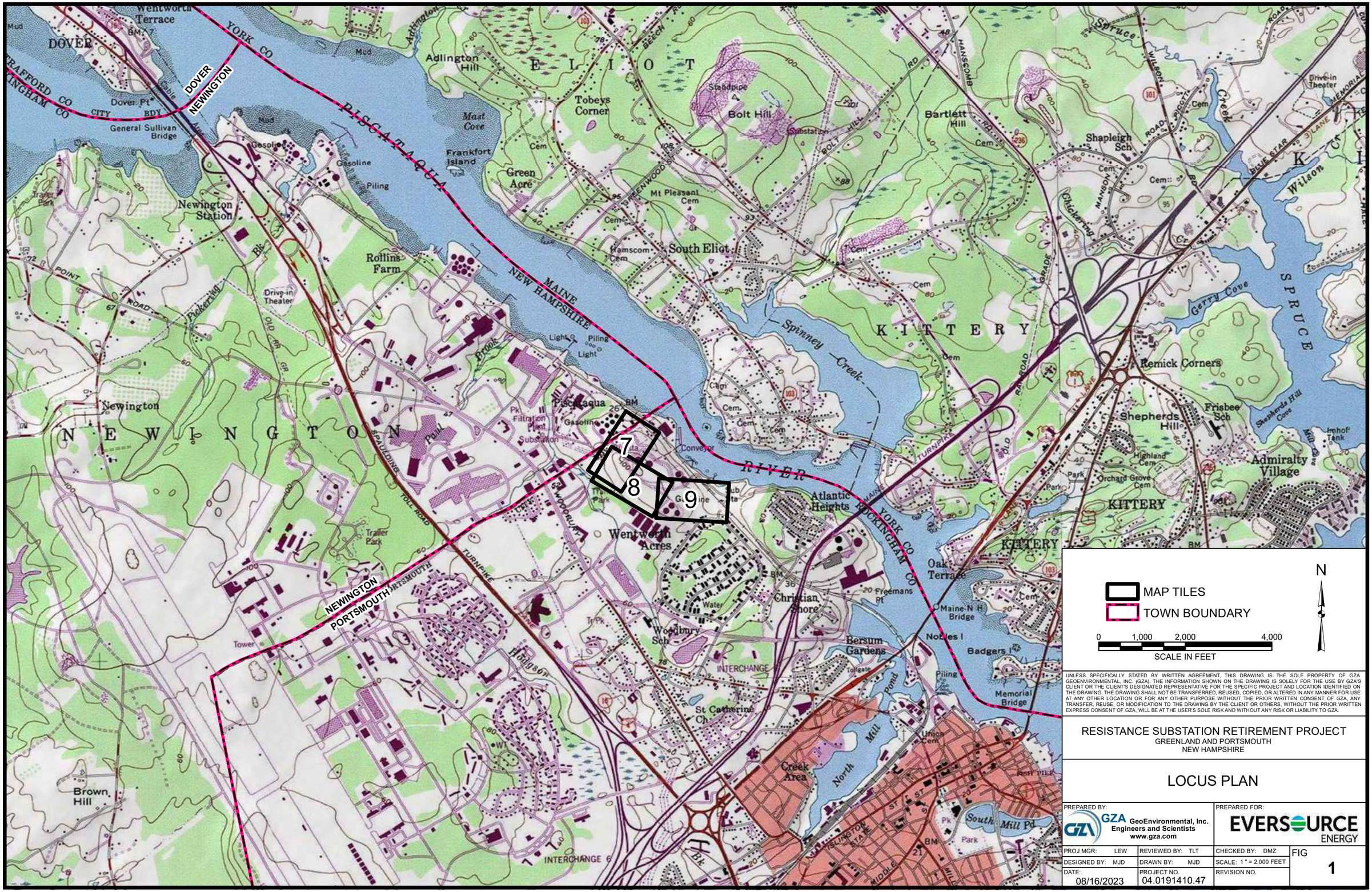
SCALE IN FEET

RESISTANCE SUBSTATION RETIREMENT PROJECT

GREENLAND AND PORTSMOUTH
NEW HAMPSHIRE

LOCUS PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVERSOURCE ENERGY	
PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	FIG 1
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE: 1 " = 2,000 FEET	
DATE: 08/16/2023	PROJECT NO. 04.0191410.47	REVISION NO.	



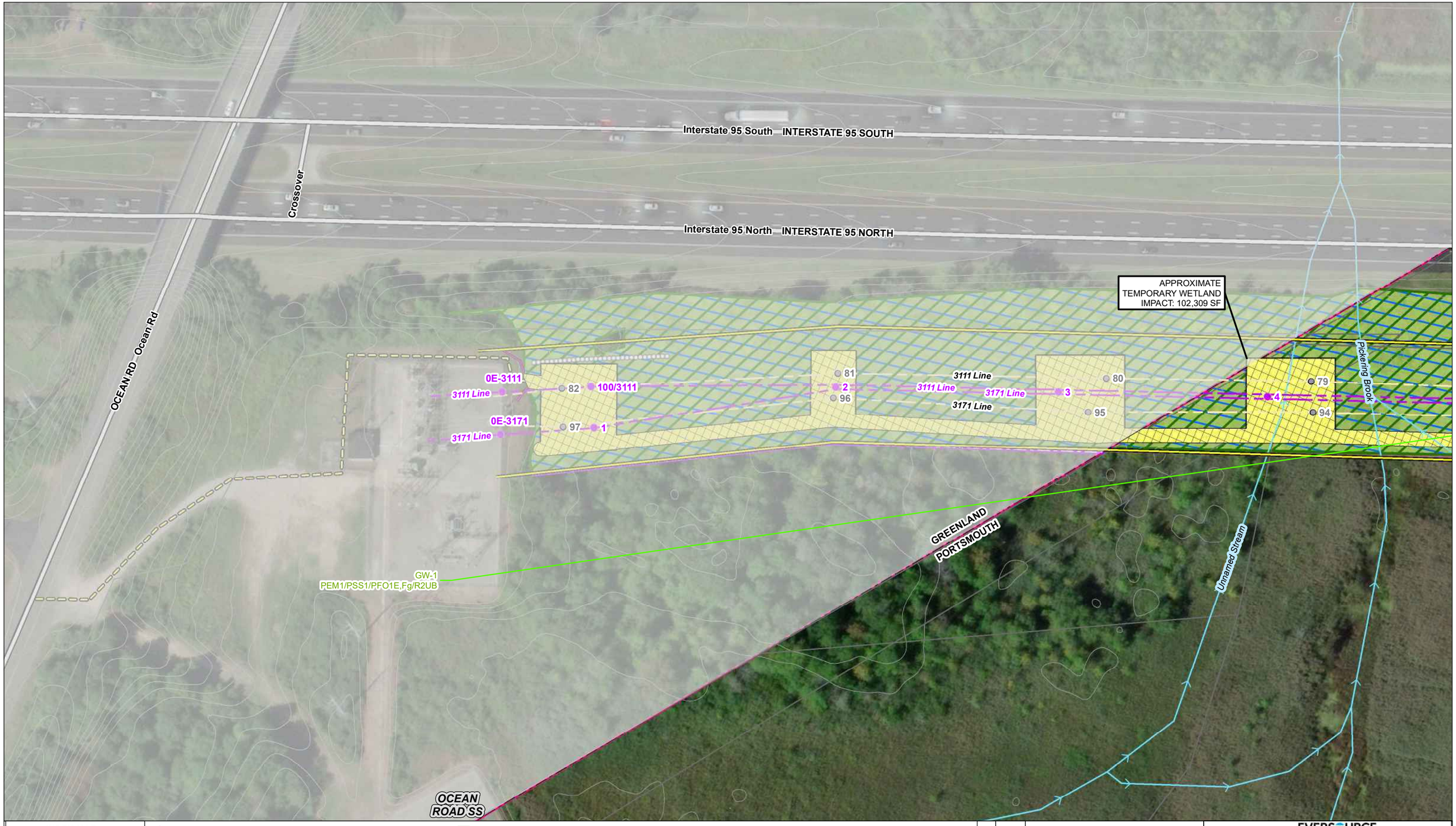
RESISTANCE SUBSTATION RETIREMENT PROJECT

GREENLAND AND PORTSMOUTH
NEW HAMPSHIRE

LOCUS PLAN

PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com
PREPARED FOR:	EVERSOURCE ENERGY
PROJ MGR: LEW	REVIEWED BY: TLT
DESIGNED BY: MJD	DRAWN BY: MJD
DATE: 08/16/2023	PROJECT NO. 04.0191410.47
CHECKED BY: DMZ	SCALE: 1 " = 2,000 FEET
REVISION NO.	FIG 1

Figure 2 – Access and Permitting Plans



INDEX MAP

- PROPOSED STRUCTURE
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- NHDOT ROADS
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- FLOWLINES
- TRANSMISSION LINE
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- TOWN BOUNDARY
- RAILROAD
- 2FT CONTOURS
- APPROXIMATE WETLAND BUFFER
- APPROXIMATE WETLAND BUFFER IMPACT

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N

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

RESISTANCE SUBSTATION RETIREMENT PROJECT

GREENLAND/PORTSMOUTH, NH | MAP SHEET

Date: December, 2023 | **1 OF 9**

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GREENLAND
PORTSMOUTH

INTERSTATE 95 SOUTH Interstate 95 South

Interstate 95 North INTERSTATE 95 NORTH

GW-1
PEM1/PSS1/PFO1E,Fg/R2UB

APPROXIMATE
TEMPORARY WETLAND
IMPACT: 102,309 SF

APPROXIMATE
WETLAND BUFFER
IMPACT: 6,931 SF

Unnamed Stream

3111 Line
3171 Line

5 6 7 8 9 10 11 12
73 74 75 76 77 78
88 89 90 91 92 93

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RESISTANCE SUBSTATION RETIREMENT PROJECT

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Interstate 95 South — INTERSTATE 95 SOUTH

I-95 SB Exit 3 On-ramp (NH-33)

SPAULDING TPKE NB EXIT 3 ON-RAMP (WOODBURY AVE)

Spaulding Tpke NB Exit 3 On-ramp (Woodbury Ave)

Crossover

INTERSTATE 95 NORTH — Interstate 95 North

APPROXIMATE WETLAND BUFFER IMPACT: 6,931 SF

APPROXIMATE TEMPORARY WETLAND IMPACT: 139,792 SF

APPROXIMATE TEMPORARY WETLAND IMPACT: 102,309 SF

APPROXIMATE WETLAND BUFFER IMPACT: 16,707 SF

3111 Line

3171 Line

GW-1
PEM1/PSS1/PFO1E,Fg/R2UB

PW-1
PEM1/PSS1E,Fg

Unnamed Stream

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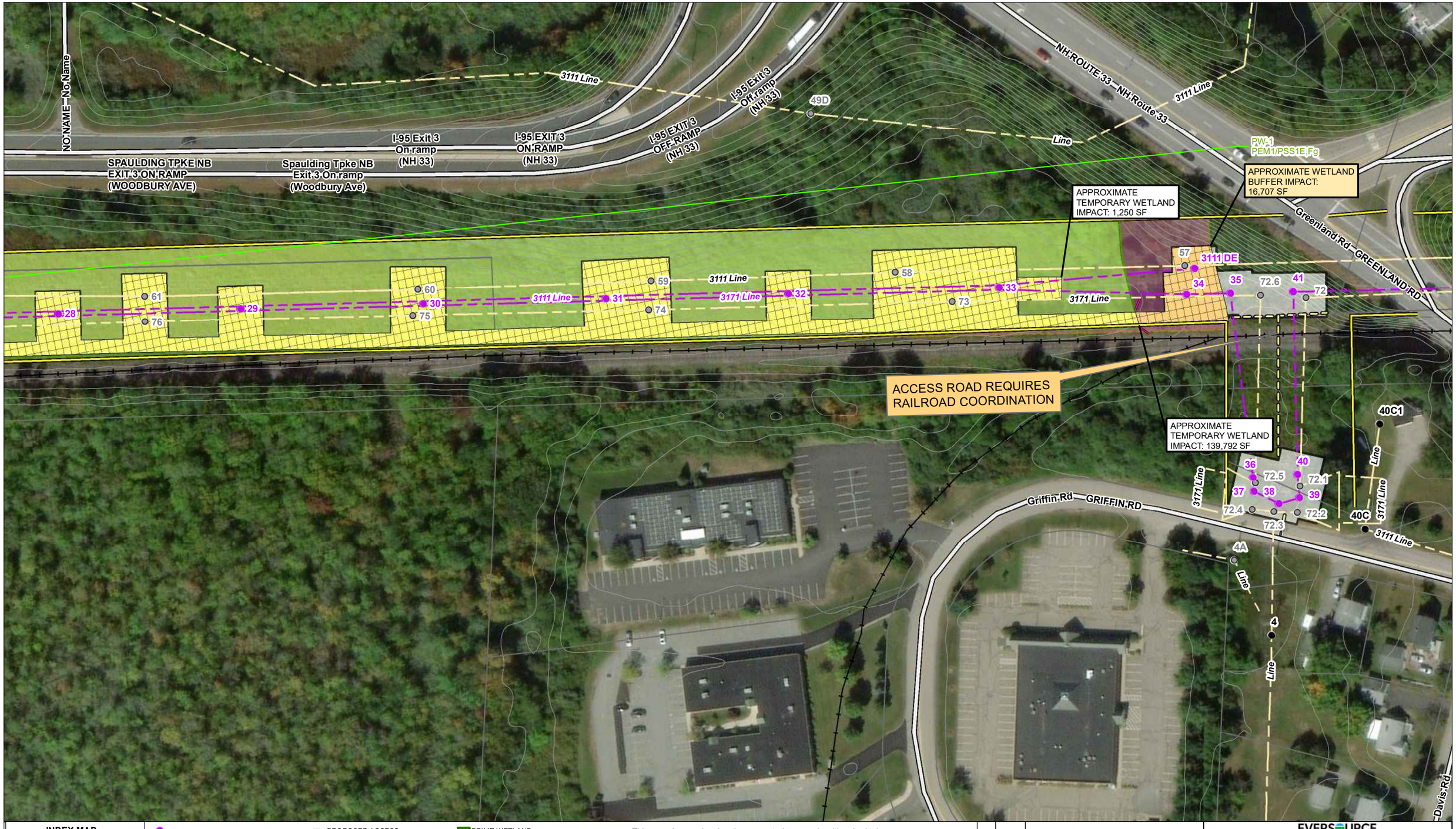

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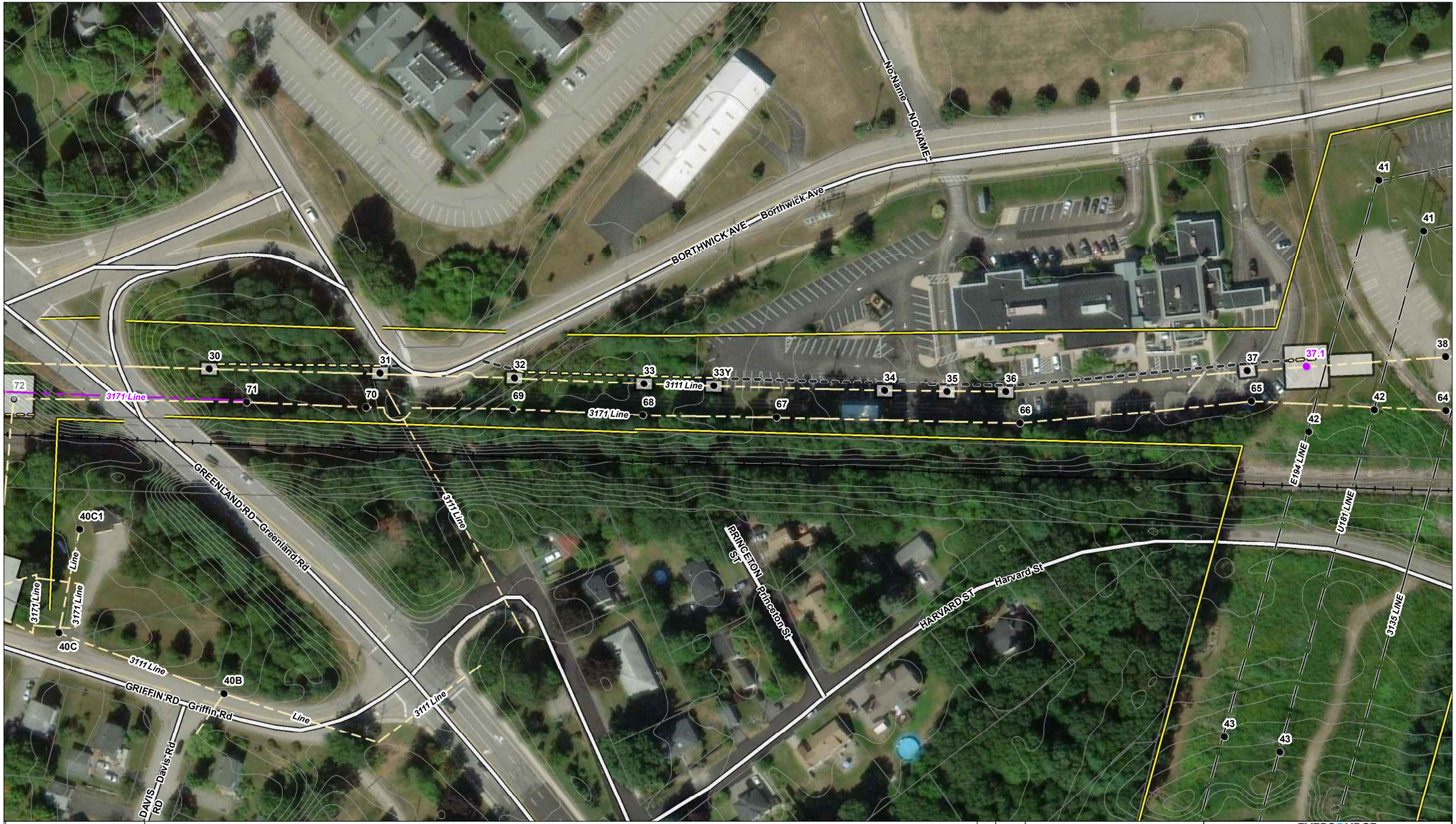

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SCHILLER SS

PORTSMOUTH SS

Portsmouth S/S

Schiller S/S

Schiller S/S

Schiller S/S

Schiller S/S

NO NAME

APPROXIMATE WETLAND BUFFER IMPACT: 2,500 SF

APPROXIMATE TEMPORARY WETLAND IMPACT: 3,530 SF

APPROXIMATE WETLAND BUFFER IMPACT: 17,468 SF

339 Line

Z156 Line

T13 Line

1-E194 Line

U181 Line

E194 LINE

U181 LINE

316 Line

PW2A Line

Gosling Rd – PORTSMOUTH

NEWINGTON

GOSLING RD

No. Name

PW-2
PEM1/PSS1E

PW-3
PEM1/PSS1E

PW-4
PEM1/PSS1E

PW-5
PEM1/PSS1E

PW-6
PEM1/PSS1E

0.5

1

2

3

4

11

12

13

14

3:5

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PW-3
PEM1/PSS1E

3176 Line

E194 LINE

E194 Line

U181 LINE

U181 Line

PW-4
PEM1/PSS1E

PW-5
PEM1/PSS1E

PW-6
PEM1/PSS1E

NO NAME

No Name

Z156 Line

Portsmouth
S/S

PORTSMOUTH SS

APPROXIMATE TEMPORARY
WETLAND IMPACT: 3,530 SF

APPROXIMATE WETLAND
BUFFER IMPACT: 2,500 SF

APPROXIMATE
WETLAND BUFFER
IMPACT: 17,468 SF

T13 Line

339 Line

APPROXIMATE
WETLAND BUFFER
IMPACT: 5,666 SF

PW-7
PEM1/PSS1E,H

PW-8
PEM1/PSS1E

PW-9
PEM1/PSS1Ex

APPROXIMATE TEMPORARY
WETLAND IMPACT: 1,848 SF

APPROXIMATE TEMPORARY
WETLAND IMPACT: 241 SF

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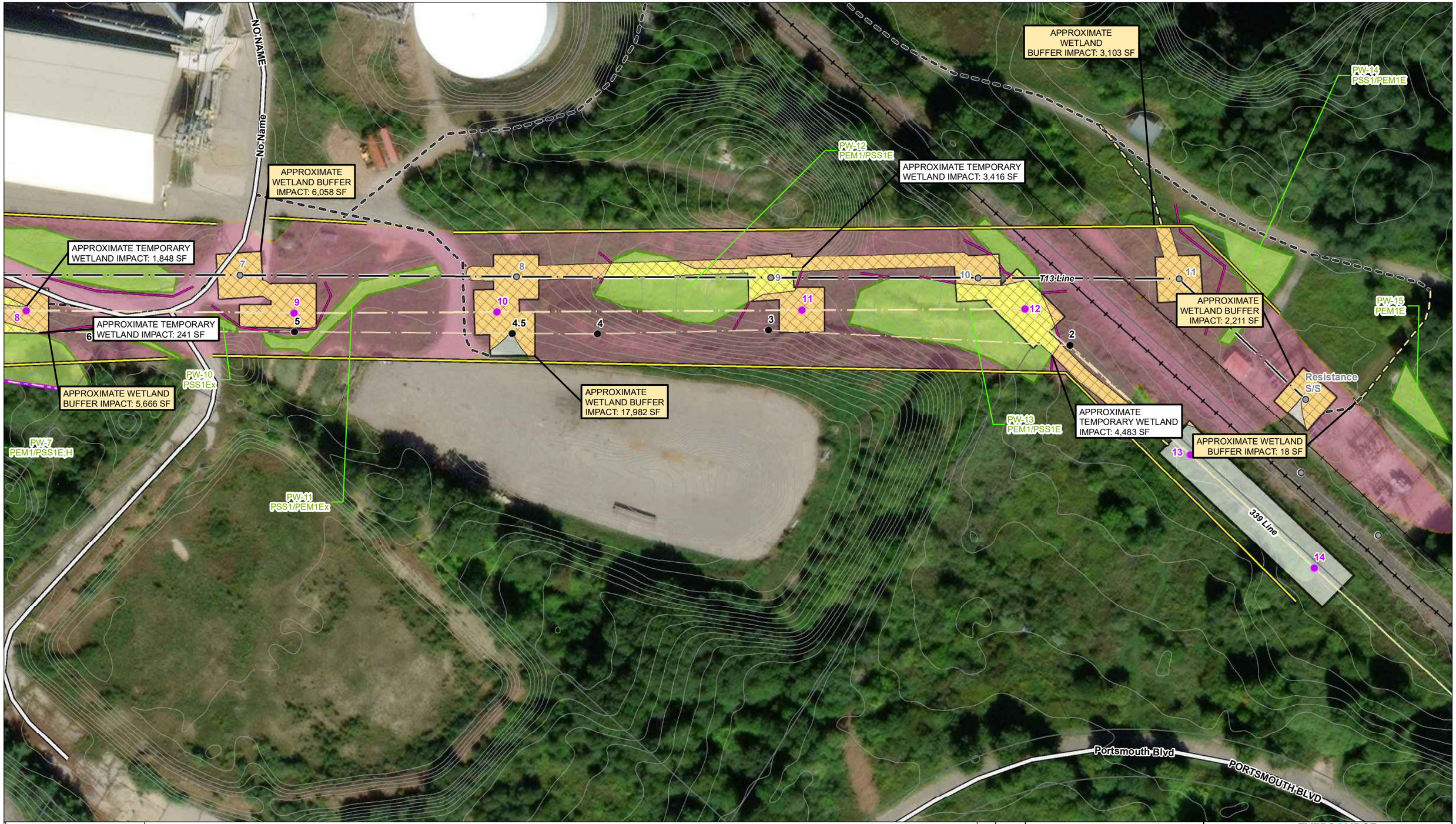

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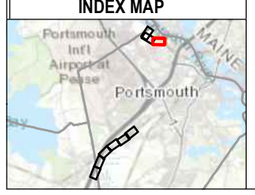

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Application Fee

ENVIRONMENTAL CONSULTANTS

January 24, 2024

City of Portsmouth
Planning & Sustainability
1 Junkins Avenue
Portsmouth, NH 03801

Re: Property Owner Authorization for Submittal of a Wetland Conditional Use Permit
50 Odiorne Point Road
Portsmouth, New Hampshire

To Whom it May Concern:

I (John Gardner), the property owner of the 50 Odiorne Point Road parcel, authorize Elizabeth Olliver of Normandeau Associates, Inc. to submit on my behalf an application for a Wetlands Conditional Use Permit for completion of restoration activities on said parcel.

Sincerely,

John Gardner

John Gardner

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

January 29, 2024

NHDES Water Division/Land Resources Management
Wetlands Bureau
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302
and
City of Portsmouth
Planning & Sustainability
1 Junkins Avenue
Portsmouth, NH 03801

Re: Restoration Plan
Gardner Property: Stone Wall, Swale, and Vegetation Restoration Project
Portsmouth, New Hampshire

Dear NHDES:

On behalf of Mr. John (Jack) Gardner, Normandeau Associates, Inc. (Normandeau) is submitting this Restoration Plan for the proposed Stone Wall, Swale, and Vegetation Restoration Project to address violations of the New Hampshire Wetland Rules and the City of Portsmouth's Zoning Ordinance associated with unpermitted work in jurisdictional areas at 50 Odiorne Point Road in Portsmouth, NH (Property).

Mr. Gardner is seeking approval from the New Hampshire Department of Environmental Services (NHDES) and the City of Portsmouth to conduct a restoration on the Property in response to a notification that the Property is in violation of the City of Portsmouth's Zoning Ordinance and the Fill and Dredge in Wetlands Act (RSA 482-A), Administrative Rules (Env-Wt 100-900) due to grading, installation of fill, and vegetation removal within the City of Portsmouth's 25' wetland buffer zone and the 100' Previously Develop Tidal Buffer Zone without prior application and approval for a City of Portsmouth Wetland Conditional Use Permit and/or a State Wetland Permit issued by NHDES. Mr. Gardner is required by the City of Portsmouth and NHDES to submit a restoration plan for mitigation of the unpermitted work completed on the Property. Normandeau provided wetlands consulting and wetlands delineation services, including the designing of the proposed restoration measures and methods in consultation with representatives from the City of Portsmouth and NHDES.

Included with this submittal is a detailed project overview narrative, required plans and figures, and additional supporting materials. Site visits to discuss the property were held on January 12, 2023 and May 22, 2023 and a virtual meeting was held on May 10, 2023 with additional phone correspondence with NHDES in December 2023.

A preliminary review of this restoration plan was completed by David Price of NHDES and Peter Britz and Kate Homet of the City of Portsmouth Planning & Sustainability Department. Both parties provided feedback based on this review and Normandeau has updated the restoration proposal accordingly.

Please feel free to contact Elizabeth Olliver at (603) 637-1122 or at eolliver@normandeau.com if you have any questions.

Sincerely,

Elizabeth A Olliver

Elizabeth Olliver
Senior Scientist

Attachments: Restoration Plan

CC: Mr. John (Jack) Gardner via Email

Restoration Plan

Gardner Property: Stone Wall, Swale, and Vegetation Restoration Project

Prepared For
Mr. John (Jack) Gardner
50 Odiorne Point Road
Portsmouth, NH 03801

Prepared By
Normandeau Associates, Inc.
25 Nashua Road
Bedford, NH 03110
(603) 472-5191
www.normandeau.com

January 2024

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RESTORATION PLAN NARRATIVE

PROJECT INTRODUCTION

Normandeau Associates, Inc. ("Normandeau") has prepared this restoration plan on behalf of Mr. John (Jack) Gardner in response to a requested mitigation for work completed in violation of the City of Portsmouth's Zoning Ordinance and the Fill and Dredge in Wetlands Act (RSA 482-A), Administrative Rules (Env-Wt 100-900) at 50 Odiorne Point Road in Portsmouth, New Hampshire ("the Property"). This work includes grading, installation of fill, and vegetation removal associated with the rebuilding of a pre-existing stone wall at the base of the Property in summer 2022 and the progressive installation of a stone swale that routes stormwater across the property between 2010 and summer 2022. Mr. Gardner proposes to restore the rebuilt section of stone wall to a design consistent with adjacent undisturbed stone wall on the property, completely remove the most recently installed section of stone swale, remove the lining and majority of stone in the older portion of the swale with a minimal amount of stone placed back in for temporary stabilization purposes, install woody vegetation throughout the length of the swale restoration, and restore and/or enhance vegetation coverage in previously disturbed areas of the Property. Normandeau provided environmental resource consultation, wetlands delineation, and restoration design services. Base Flow, LLC conducted a hydrological study of flows being conveyed by the existing stone swale. Knights Hill Survey surveyed the existing conditions on the Property.

SITE DESCRIPTION

The Property is 1.17 acres containing a private residence, driveway, and landscaped lawns and beds in front and behind the residence. The back of the Property slopes down to a stone wall that divides maintained backyard from the salt marsh that occurs along the shoreline of Tucker's Cove (POGW1 on the Project Plans in Attachment B), portions of which are infested by the invasive common reed (*Phragmites australis*). The stone wall was rebuilt in summer 2022 in response to erosion observed by Mr. Gardner in the vicinity of the pre-existing stone wall in 2021. The southern portion of this rebuilt stone wall extends 42 feet over the property line onto the abutting parcel (68 Odiorne Point Road) and was rebuilt following a verbal receipt of permission to do so by the abutting parcel owner (Mr. James Polus).

A stone swale extends northwest down the property slope from near the northwest corner of the residence to the northern end of the rebuilt stone wall, ranging in width from approximately 6 to 10 feet. This swale was progressively installed between 2010 and 2022, again in response to erosion observed on the slope directly north of the existing swale by Mr. Gardner shortly after purchasing the property in 2006. The cause of this erosion is stormwater flow from two culverts exiting a roadside headwall located on the parcel directly to the north. The northern culvert hydraulically connects to undelineated wetlands across Odiorne Point Road, while the southern culvert hydraulically connects to a portion of the storm drain system for the development. The stormwater from these culverts becomes channelized as a single channel upgradient of the Gardner property (POGS1 on the Project Plans in Attachment B). Prior to installation of the stone swale, Mr. Gardner observed progressive loss of vegetation cover and erosion of the substrate on the slope leading down to the salt marsh, which prompted his installation of the upper portion of the stone swale and a request for a site visit from representatives of the City of Portsmouth ("the City") in 2017 to discuss the issue of

erosion in the area directly north of the swale. Extension of the stone swale to its current configuration was completed in 2022 in response to erosion observed at the downstream end of the swale. Currently, much of the stormwater flow from the two culverts out of the roadside headwall is captured by the stone swale and a natural re-establishment of herbaceous ground cover on the slope north of the swale has been observed. However, some stormwater flow does escape from the swale at the top of the slope where plastic landscaping edging along the side of the swale has become unseated and is overtopped during certain events. The area into which the culverts discharge on the adjacent property, the previously eroded slope, and a small portion of the rebuilt stone wall lies within a palustrine forest wetland (POGW2 on the Project Plans in Attachment B). Please see Attachment A – Gardner Property Natural Resource Survey Report for a more detailed discussion of the existing natural resources on the Property, Attachment D – Gardner Property Hydrology & Hydraulic Memo for a discussion of the study of hydraulic flow conveyed by the existing swale, and Attachment G – NHDES Requested Protected Shoreland Data and Additional Buffer Information for the additional Protected Shoreland data requested by NHDES following their initial review of this restoration plan, as well as mapping of the various jurisdictional state and City of Portsmouth buffers.

PROJECT MOTIVATION

Normandeau was contracted by Mr. Gardner to provide services to facilitate bringing the Property under local and state regulatory compliance. A natural resource survey and wetland delineation of the parcel by a New Hampshire Certified Wetland Scientist, as well as a hydraulic study for the property, were completed in Fall/Winter 2022. Findings from this natural resource survey and the hydraulic study were provided to the City's Planning and Sustainability Department and the New Hampshire Department of Environmental Services ("NHDES") with a request for guidance from NHDES on what would be required to bring the property under state regulatory compliance, as what would be required from a local perspective was already stipulated in the Notice of Violation sent by the City. Following the receipt of guidance from NHDES and the City during site visits on January 12, 2023 and May 22, 2023, as well as virtual meeting with NHDES and the City on May 10, 2023, the property was surveyed by a New Hampshire Licensed Land Surveyor (Knights Hill Land Surveying, Inc.) in August 2023.

During the site visits and the virtual meetings, the following items of concern were identified by Mr. David Price of NHDES and Mr. Peter Britz of the City:

1. Most of the stone wall along the base of the property was rebuilt in Summer 2022 to be 2.5 ft. tall and 3 ft. wide, with a fitted and squared off design and a 327 sq. ft. footprint; 316 sq. ft. of which lies in wetland buffer area and 11 sq. ft. in wetland POGW2. The southern 122 sq. ft. of the rebuilt wall extends 42 ft. onto the abutting property to the south (68 Odiorne Point Road) and was rebuilt with verbal permission from the abutting property owner (Mr. James Polus). Rebuilding of the wall was achieved through the repositioning of existing stone from the collapsing stone wall on site to reform the base of the wall along the pre-existing centerline of the wall. An estimated addition of 10-15 tons of stone and filler gravel/crushed stone sourced from off- site were used to cleanly square off the wall and

increase its height. A small gap in the wall was established to provide easier access to the salt marsh below the wall that is periodically treated for *Phragmites* management. This resulted in a loss of 2,240 sq. ft. of herbaceous ground cover within the State 100' wetland buffer for wetland POGW1, which is a tidal and prime wetland, and the combined City of Portsmouth's 100' wetland buffer for wetlands POGW1 and POGW2. While concerns were originally raised about the potential use of a cementing agent in the 2022 rebuild, inspection of the wall by NHDES, City, and Normandeau staff during the May 2023 site visit confirmed that to not be the case.

2. A stone swale has been progressively installed on the property by the Owner between 2010 and 2022 to manage stormwater flow onto the Property that was resulting in loss of vegetation cover and erosion of the substrate. The upslope half of the swale, hereafter referred to as the Upper Swale, existed prior to 2022 and primarily consists of stone brought in from off site and installed by a contractor hired by the Owner that is underlain by a liner material. Periodic additions of stone collected on site by Mr. Gardner were made to re-enforce the edges of the Upper Swale and further contain flow within it. In total, the Upper Swale has a 476 sq. ft. footprint. Due to observed erosion and channel incision at the downslope end of the swale, the swale was extended an additional 300 sq. ft. at the same time as the rebuilding of the stone wall in summer 2022. This was achieved through the installation of landscaping fabric within an incising channel area at the downstream end of the existing stone lined swale, which was then topped with 4-inch stone left over from the stone wall rebuild. Collectively, the swale now impacts 776 sq. ft. of POGW2.

3. Left over gravel/crush stone was spread over 444 sq. ft. of the substrate north of the summer 2022 swale extension and 50 sq. ft. of substrate in the gap between the two sections of rebuilt stone wall with the intent of increasing substrate surface roughness and reducing erosion. The 444 sq. ft. of gravel north of the swale extension falls entirely within POGW2. The 50 sq. ft. associated with the gap in the wall falls within the 100' buffer of the tidal prime wetland downslope but does not directly impact any wetland areas.

The actions listed above, as well as the access of the property by equipment and associated loss of vegetation have resulted in a total disturbance of 4,572 sq. ft. on the property between 2010 and Summer 2022. These impacts fall within multiple overlapping jurisdictional areas including a delineated freshwater wetland (POGW2); the 100' tidal buffer zone and duly established 100' buffer of the Prime Wetlands along Sagamore Creek; the 250-ft Protected Shoreland of Sagamore Creek; and the City of Portsmouth's 100' wetland buffers for POGW1 and POGW2. Tables presenting the breakdown of these various impacts are provided below (Table 1 and 2).

Table 1 – Impacts to State Jurisdictional Areas

Jurisdictional Areas	Area (sq. ft.)
Delineated freshwater wetland (POGW2)	1,231
100-ft Previously Developed Tidal Buffer Zone and Prime Wetland Buffer	4,208*

250-ft Protected Shoreland (also total impacts on the property)	4,572*

* Includes impacts to overlapping jurisdictional areas

Table 2 – Wetland or Wetland Buffer Activity (Information provided in Steps 9 and 11 of the Wetlands Conditional Use Permit application)

Jurisdictional Areas	**Area (sq. ft.)**
Total Area of Inland Wetland (POGW2) both on and off the parcel	9,345
Total Area of Vernal Pool both on and off the parcel	0
Distance of proposed activity to edge of wetland	0
Total Wetland Buffer Area on Lot	24,277
Wetland Buffer Area to be Disturbed	3,341
Total Inland Wetland Area on Lot	6,133
Inland Wetland Area to be Disturbed	1,231
Total Vernal Pool Area on Lot	0
Vernal Pool Area to be Disturbed	0
Total Tidal Wetland Area on Lot	12,104
Tidal Wetland Area to be Disturbed	0
Total Impacts to Jurisdictional Areas on Property	**4,572**

This work was completed without prior obtainment of local and/or state level permits. While revegetation of the disturbed area is naturally occurring, after-the-fact permitting of the reconstructed stone wall and the stone swale as it exists now is not feasible, as both the City and NHDES have indicated the stone wall reconstruction and stone swale installation do not conform with existing regulations.

Thus, the City of Portsmouth and NHDES have requested that the following restoration actions be taken:

1. The stone wall be restored to a lower, loose-pile configuration that conforms with pre-disturbance conditions. As full documentation of wall prior to disturbance does not exist, the City and NHDES have agreed to the use of the existing stone wall at the northern end of the property that was not touched as part of the 2022 rebuild as a template. See Figures 1 and 2 in Attachment B.
2. The Lower Swale be completely removed and replaced with a combination of woody shrub and herbaceous groundcover. The liner and majority of stone in the upper half of the swale be removed and woody shrub also be installed. Re-installation of a minimal amount of stone will be permitted in the Upper Swale for stabilization purposes along the northwestern edge of the swale where it curves at the top of the slope. Re-installation of this stone is permitted with the understanding that when vegetation becomes established and the area is stabilized, some or all of the stone may be required to be removed at a future date. The decision to proceed with this removal will be

considered in coordination with NHDES and the City during post-construction monitoring.

3. All gravel/crushed stone spread over the substrate north of the Lower Swale and in the gap between the two sections of stone wall be completely removed.
4. All areas disturbed by the proposed restoration work be revegetated with native species appropriate for the environment.

Below Normandeau presents a plan for addressment of the restoration action items requested by the City and NHDES.

PROPOSED RESTORATION ACTIONS

On behalf of the Owner, Normandeau proposes to restore the rebuilt stone wall to a height, width, and loose-pile design extrapolated from undisturbed stone wall at the northern end of the Property, remove the filler gravel and stone installed in the substrate and stone wall, remove the Lower Swale, remove the underlying liner and majority of stone from the Upper Swale, install woody vegetation throughout the existing swale footprint to improve stormwater management functionality, and restore and/or enhance vegetative cover in various portions of 100-ft tidal buffer zone. This work is proposed to be completed in Spring/Summer 2024, pending approval of this restoration plan by NHDES and the City, attainment of all necessary permits, and acquisition of necessary planting materials.

RESTORATION AREA 1 - STONE WALL RESTORATION

The rebuilt stone wall (located in what is referred to on the plans in Attachment B as Restoration Area 1) will be restored to a lower height, with a loose-pile configuration. As comprehensive documentation of the wall prior to the rebuild in 2022 does not exist, the City and NHDES agreed during the May 22, 2023 site visit to use the existing stone wall on the northern end of the property that was not been disturbed as a template. See Figures 1 and 2 on Sheet 5 in Attachment B. The estimated 10-15 tons of filler stone and gravel brought in for the 2022 work will be removed from the 109 feet of rebuilt wall and disposed of off-site. The contractor responsible for the rebuilding of the wall in 2022 may provide advisement on which stone within the wall was brought in and which already existed on site. The 50 sq. ft. of gravel spread over the substrate in the gap between the two sections of rebuilt wall and in a small apron downslope of it will also be removed and disposed off-site. The larger, pre-existing stones that form the base of the wall will be retained to reconstruct the wall into a loose-pile design and the gap between the two sections of wall will be closed. The centerline of the restored wall will follow the centerline of the existing wall, as field review suggests the position of this centerline does not vary significantly from pre-disturbance conditions. Survey of the width of the existing undisturbed section of stone wall at the northern end of the property across three cross-sections determined it to have a 3.3 to 4.6 ft. wide base and a variable height ranging from of 0.5 to 1.73 ft. Based on this, we propose a restored loose-pile stone wall design with a variable base width of 3 to 4 ft. and a variable height of 0.5 to 1.5 ft. depending on available material after removal of the filler stone and gravel. Stone placement should avoid creating any level or squared off surfaces, resulting in a loosely triangular or mounded cross-section like that shown on Sheet 5 in Attachment B – Project Plans: Proposed Stone Wall Detail.

Written permission from the abutting property owner (Mr. James Polus) to restore the 122 sq. ft. of stone wall on the abutting property to the south (68 Odiorne Point Road) is provided in Attachment H.

Following removal of the substrate protection from the area upslope of the stone wall, the opportunistic vegetation cover currently in Restoration Area 1 will be retained to the extent practicable, if determined to not contain invasive species. This area will be lightly aerated using hand tools to mitigate soil compaction and prepare the substrate for planting. A mix of woody shrubs will be planted, including coastal sweet-pepperbush (*Clethra alnifolia*), American yew (*Taxus canadensis*), and mapleleaf viburnum (*Viburnum acerifolium*). Finally, a custom project seed mix consisting of deer tongue (*Dichanthelium clandestinum*), switch panicgrass (*Panicum virgatum*), and path rush (*Juncus tenuis*) will be spread over the over the substrate following completion of shrub installation and covered with a light layer of weed free straw. Please see Sheets 6 and 8 in Attachment B for specifications regarding the project seed mix and appropriate application rate, the proposed shrub species, their installation, and the estimated number of shrubs required for Restoration Area 1.

RESTORATION AREA 2 – LOWER SWALE REMOVAL

The 4-inch angular stone and landscaping fabric comprising the Lower Swale and the excess gravel spread on the 444 sq. ft of substrate north of the Lower Swale (referred to as Restoration Area 2), will be removed and disposed off-site. Minor grading of the substrate in Restoration Area 2 will be done as needed to remove remnants of any channel topography from the landscape. Grading may be performed using hand tools and/or the equipment discussed below as needed to complete the work. Biodegradable, wildlife-friendly erosion control blanket will be installed overtop the former Lower Swale footprint after completion of any necessary grading. Please see Sheet 4 in Attachment B for specifications on the erosion control blanket to be used and its installation.

Restoration of vegetation cover in Restoration Area 2 will be achieved through the combined installation of live stakes (or tubelings, depending on time of work) of silky dogwood (*Cornus amomum*) and pussy willow (*Salix discolor*) within the former footprint of the Lower Swale and shrub plantings of meadowsweet (*Spiraea alba var. latifolia*) in the area previously spread with gravel. Live stakes will be installed through the erosion control blanket. As with Restoration Area 1, the custom Project Seed Mix will be spread over the substrate following completion of live stake and shrub installation, then covered with a light layer of weed-free straw. Please see Sheets 6 through 8 in Attachment B for specifications regarding the project seed mix, live stakes and shrubs, their installation, and the estimated numbers required for Restoration Area 2.

RESTORATION AREA 3 – UPPER SWALE VEGETATIVE ENHANCEMENT

With agreement from the City of Portsmouth and NHDES, the liner and most of the stone in the Upper Swale (Restoration Area 3) will be removed and biodegradable, wildlife-friendly erosion control blanket will be installed overtop the substrate. Live stakes of silky dogwood (*Cornus amomum*) and pussy willow (*Salix discolor*) will be installed through the erosion control blanket. The plastic landscape siding along the northwestern edge of the Upper Swale, where it curves

before progressing downslope, will be removed and a minimal amount of retained stone will be re-established along the edge of the swale in this area. Twelve shrubs consisting of a mixture of silky dogwood and pussy willow will be planted in two rows directly downslope of this edging to help manage stormwater flow that overtops the edge of the swale during storm events. Finally, the New England Semi-shade Grass and Forbs seed mix from New England Wetland Plants will be spread over the slope north of the swale to help boost vegetation coverage in the area that was experiencing erosion prior to installation of the swale. Stone not re-installed in the Upper Swale will be disposed of off-site. The potential for hand removal of the stone in the Upper Swale will be considered in consultation with NHDES and the City during the five (5) year post-construction monitoring period following establishment of the live stakes. Please see Sheets 6 through 8 in Attachment B for specifications regarding live stakes and shrubs, their installation, and the estimated numbers required for Restoration Area 3. Please see Attachment E for a specification sheet of the species included in the New England Semi-shade Grass and Forbs seed mix and recommended application rate.

RESTORATION AREA 4 – ACCESS ROUTE RESTORATION

Upon completion of all activities requiring use of the access route from the driveway down to the bottom of the Property, the ground will be lightly aerated in preparation for planting and erosion control blanket installed on the steepest portions. Plantings of New York fern (*Parathelypteris noveboracensis*) or native fern sod depending on pricing and availability will be installed as depicted in Restoration Area 4 on Sheet 2 in Attachment B. The areas between plants and the portion of access route outside of the 100' previously developed tidal buffer zone will be spread with New England Erosion Control/Restoration Mix for Dry Sites from New England Wetland Plants. Please see Attachment F for a specification sheet of the species included in this seed mix and recommended application rate.

Please see Sheets 6 through 8 in Attachment B for specifications regarding all proposed plant species, installation of live stake and shrub plantings, appropriate seed application rates, and the estimated number of live stakes and plantings required for each Restoration Area.

TIMING OF WORK AND GENERAL COMMENTS

All work will be conducted in accordance with the best management practices outlined by the *New Hampshire Stormwater Manual* dated December 2008. Prior to the start of any restoration activities, erosion and sediment controls ("ESCs") will be installed. Please see Sheets 2 through 4 in Attachment B for proposed placement of these ESCs and specifications regarding their installation and maintenance. These ESCs will remain in place, be maintained, and supplemented for the duration of earth disturbing activities and for as long as necessary following completion of restoration activities until the substrate is determined satisfactorily stabilized by vegetation growth (>75% vegetation coverage) by the Environmental Monitor for the project. Erosion and sediment controls shown placed across the access route should be temporarily moved aside during active work and replaced at the end of the workday.

The equipment to be used will be the lightest weight equipment capable of conducting the work, while maintaining a safe and practical workflow. It is currently anticipated a small skid

steer and/or excavator may be necessary safely and efficiently remove the filler stone and gravel from the Property. Plywood sheeting will be placed over the substrate in Restoration Area 1 that the equipment must cross to prevent the development of ruts and access of the Property by heavy equipment should be avoided during wet conditions.

The activities outlined above are anticipated to take approximately two weeks in spring/early summer 2024. To the extent practicable, timing of activities requiring significant earth disturbance and the use of motorized equipment (i.e., stone wall restoration and removal of stone taken from the swale from the Property) should be conducted during drier substrate conditions, when significant rain events or high tide conditions that could result in erosion of active work areas are not in the forecast. Similarly, installation of all planting materials and application of seed should also not be conducted when significant rain events are in the forecast, as significant stormwater runoff shortly after installation could negatively impact their establishment. However, the use of live stakes requires their installation to be completed before the end of the woody vegetation senescence period (typically the end of March into early April). As the appropriate timing for installation of the live stakes may not align with sufficiently dry enough conditions to bring heavy equipment onto the property, the stone from the swale in Restoration Areas 2 and 3 and gravel over the substrate in Restoration Area 2 may be removed by hand and temporarily stockpiled within Restoration Area 1 or elsewhere within the previously disturbed tidal buffer zone on the property that does not contain wetlands. This stockpiled stone and gravel will be removed later in spring/summer 2024 as site conditions allow. Any temporary loss of vegetation covering the substrate beneath stockpiled stone and/or gravel within the previously developed tidal buffer zone will be restored as part of restoration efforts.

Per Section 10.1018.23 of the City of Portsmouth Zoning Ordinance, removal or cutting of vegetation is prohibited in a wetland or the vegetated buffer strip of a wetland. However, the 25-ft vegetated buffer strip of wetland POGW2 contains developed features, including portions of the primary residence, regularly mowed front and backyard lawns, and landscaped garden beds that are regularly maintained. The property owner requests the following allowances be made for him to maintain the aesthetic quality and value of the property:

1. Allow continued maintenance of the existing landscaped beds and portions of lawns that fall within the 25-ft vegetated buffer of wetland POGW2. These currently maintained areas will not be expanded past their current footprint and “Do not disturb or cut” signage will be posted along the boundary between the restoration areas and/or the wetland boundary and the existing maintained portions of the property to define this extent. Placement of this signage, either mounted on trees or on short permanent mountings in the ground, at the locations shown on Sheet 3 in Attachment B will designate the combined extent of restoration and wetland area on the property to be protected from future accidental landscaping and/or cutting in alignment with Section 10.1018.40 of the City’s Zoning Ordinance.

2. Allow periodic pruning of shrubby vegetation within the restoration areas, once determined to be established and healthy. This periodic pruning will be to a height no less than 3 feet in accordance with Protected Shoreland requirements.

The Construction Sequence and Notes provided below and in Attachment B – Project Plans detail the proposed sequence restoration of activities on site and general notes.

CONSTRUCTION SEQUENCE AND NOTES

Notification of the specific timing and commencement of the various phases of restoration work will be communicated to the City's Planning and Sustainability Department and NHDES via email an agreed number of days prior to the start of work. The restoration work is to be conducted under the supervision of a qualified Environmental Monitor approved by the City of Portsmouth Conservation Commission and NHDES. The environmental monitor will be on-site to monitor restoration activities as necessary and adjust when appropriate to meet restoration goals, ensure compliance with project permits, and notify the City and NHDES at required inspection periods. Presented below is an ideal order of restoration activities on the Property. As discussed above, it may be necessary to rearrange the order of these activities to meet the timing needs of live stake installation in the swale while minimizing impacts by heavy equipment should early spring 2024 conditions on site be overly wet. The Environmental Monitor shall communicate the need for this adjustment to the City and NHDES prior to commencement of work.

1. Installation of all necessary erosion and sediment controls and substrate protection in Restoration Area 1 as shown on the plans and specified in the notes in Attachment B.

2. Remove the estimated 10-15 tons of non-native stone and gravel forming the top portion of the stone wall in Restoration Area 1 and the Lower Swale Restoration Area 2.

3. Remove all non-native gravel spread over the substrate in the 50 sq. ft. area between the sections of rebuilt wall in Restoration Area 1 and in the 444 sq. ft. area north of the lower half of the swale in Restoration Area 2. Also remove any remaining landscaping fabric from the Lower Swale.

4. Remove all the stone and liner from the Upper Swale in Restoration Area 3. Retain a subset of smaller stones for re-installation in the Upper Swale.

5. Reconfigure the remaining native stones on site to create a stone wall with a general cross-section shape and dimensions as outlined in the Proposed Stone Wall Detail on Sheet 5 in Attachment B. Centerline of the stone wall should follow that of the existing wall.

6. Regrade substrate in Restoration Area 2 to eliminate any trace channel topography and install biodegradable, wildlife friendly erosion control blanket over the swale footprint in Restoration Areas 2 and 3.

7. Remove substrate protection in Restoration Area 1, lightly aerate the substrate to mitigate soil compaction and prepare substrate for planting.

8. Install all shrubs and/or live stakes as specified on Sheets 3 and 6 through 8 in Restoration Areas 1 through 3. Re-install a minimal amount of reserved smaller stone in the Upper Swale at the same time as live stakes installation.

9. Lightly aerate the soil to mitigate soil compaction and install fern plantings in Restoration Area 4 as specified on Sheets 3, 6, and 8.

10. Spread the seed mixes at the appropriate application rates specified in the Restoration Planting Table on Sheet 6 in Attachment B. Cover all disturbed seeded areas with a light layer of weed-free straw.

11. Install any supplemental erosion and sediment controls determined needed at the conclusion of restoration activities.

12. Install "Do not disturb or cut" signage at specified locations shown on Sheet 3.

13. Complete as-built documentation and reporting and commence post-construction monitoring protocols as discussed below.

14. Temporary erosion and sediment controls will remain in place and be maintained until the site has been confirmed to be stabilized (>75% herbaceous ground cover and a lack of signs of erosion and sediment transport in all disturbed portions of the project area) by the environmental monitor. Maintenance and removal of erosion controls such as filter socks, silt fencing, and/or hay bales will be done by hand and be the responsibility of the Environmental Monitor. Erosion control blankets will remain in place and be allowed to biodegrade into the substrate.

This construction sequence is also provided on Sheet 9 in Attachment B – Project Plans. Please see Attachment C – Project Plan Detail Notes for full size copies of additional construction and planting notes included with the details provided in Attachment B – Project Plans.

AS-BUILT REPORTING

Following completion of the restoration activities described above, an as-built report, set of as-built plans, and photo log documenting the activities completed and conditions on site at the conclusion of restoration activities will be developed. A set of permanent photo stations around the restored and/or enhanced portions of the property will be selected, and their locations recorded with a GPS for inclusion on the as-built plans. Photos of the restored and enhanced areas on the property will be taken from these established photo stations at approximately the same angle and magnification during each follow-up site visit to the property. The location and species of each installed container shrub will also be GPS recorded and presented on the as-built plans. Finally, a tally of all woody vegetation plantings (both container shrubs and live stakes/tubelings) installed in Restoration Areas 1-3 will be recorded and provided as part of the

as-built report to serve as a baseline for assessing woody planting survival during post-construction monitoring. The as-built report, plans, and photo log will be provided to Mr. Gardner, the City, and NHDES within two weeks of the completion of restoration activities.

POST-CONSTRUCTION MONITORING PLAN AND PERMFORMANCE STANDARDS

STANDARDS OF SUCCESS

For the restoration project to be considered successful, the following conditions must be met in each Restoration Area:

1. Have at least 75% areal cover by planted and native volunteer species by the end of the second growing season and through the end of the monitoring period;

2. Have at least 80% survival of the planted container shrubs by the end of Year 1 of the monitoring period;

3. Have sufficiently successful establishment of the live stakes/tubelings in the swale by the end of Year 1 to avoid development of large gaps in woody vegetation coverage in the swale;

4. Have stable substrate with no erosion problems; and

5. Control any invasive plant species, if present, for the duration of the monitoring period.

TIMING AND FREQUENCY OF MONITORING

Immediately following completion of restoration activities, we propose to conduct inspections on a biweekly basis and within 24 hours of a storm event with >0.25 inches of rain until >75% herbaceous vegetation coverage is achieved in Restoration Areas 1 and 2. If no signs of erosion are observed in any of the Restoration Areas by the time that goal is achieved and the Environmental Monitor deems it to be appropriate, the remaining temporary erosion controls including any filter socks, silt fencing, and/or hay bales will be removed by hand. At this time, the Project will transition to conducting one planned visit annually with additional visits after significant storm events and/or when concern is raised by the property owner. Notification of this reduction in monitoring frequency will be communicated to the City and NHDES via submittal of a brief status report for the Project via email.

Long term progress of the Project's achievement of the conditions discussed above will be assessed during annual site visits. Annual assessments will occur in late June/early July with the first assessment occurring after completion of the proposed restoration actions and continuing for up to 5 years post completion of the initial restoration activities. Additional assessments may be conducted should an instance of disruption to the restoration be reported. During annual assessments, the environmental monitor will walk the property to photo document and record observations on the conditions in each Restoration Area. The estimated overall percent

cover of vegetation and invasive species in each Restoration Area, as well as a list of the observed plant species will be recorded. In Restoration Areas 1 through 3, a tally of the successfully established woody plantings (both planted container shrubs and live stakes/tubelings) will be conducted for comparison against the as-built tally and previous annual assessments. General observations of the health and propagation of the woody plantings will also be noted.

The results from each annual assessment will be presented in a report that compares them to the conditions listed above and previous annual assessment results. This report will be provided to the property owner by August 31st and the City and NHDES by September 30th of the given year of the assessment. Any evidence of the Project failing to meet the conditions listed above will immediately be brought to the attention of the property owner. In the case of Condition 2, if there is a less than 80% survival of the planted container shrubs by the end of Year 1, those shrubs which have failed will be assessed to determine if in-kind replacement of the shrubs is appropriate or if selection of an alternative species is more appropriate. Planting of replacement shrubs will occur the following year. In the case of Condition 3, if large patches of lives stakes/tubelings are observed to have not become established by the end of Year 1 (i.e., are not alive), additional live stakes/tubelings will be installed to replace them and fill in the gaps. The determination of what constitutes as a large patch of unsuccessful live stakes/tubelings will depend on its size, functional position within the swale, and observations made by the environmental monitor during or after storm events on how the lack of success of these live stakes is impacting flow within the restored swale.

Plans for addressment of any concerns observed as part of the post-construction monitoring will be developed in collaboration with the property owner, NHDES, and the City of Portsmouth Planning and Sustainability Department, and presented as part of the annual report for final review and approval. Finally, the annual report will provide a discussion on the feasibility of hand removal of some or all of the stone re-installed in the Upper Swale. The decision to proceed with removal of some or all this stone will be made in discussion with NHDES and the City of Portsmouth Planning and Sustainability Department and will weigh the benefits of removing the little remaining hardscape from a wetland area against the potential risk of disrupting the established swale system and destabilizing the slope. If a decision is made to remove stone, this removal should occur when no rain is in the forecast and the project seed mix or other native seed mix approved by NHDES and City of Portsmouth Planning and Sustainability Department should be spread over areas where stone is to be removed to stabilize the newly exposed substrate.

Attachment A: Gardner Property Natural Resource Report

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

Gardner Property
Natural Resource Survey Report

Portsmouth, New Hampshire

Presented To:

Mr. John (Jack) Gardner.
50 Odiorne Point Road

Portsmouth, NH, 03801

Submitted By:

Normandeau Associates, Inc.
25 Nashua Road
Bedford, NH 03110

February 21, 2023

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Contents

Figures

Attachments

1.0 Introduction

Normandeau Associates, Inc. (Normandeau) conducted a wetland delineation and natural resource surveys on the Gardner property (Map 224 Block 10 Lot 3) on Odiorne Point Road in Portsmouth, New Hampshire (Figure 1). This property contains the Gardner's private residence. Following a site visit to the Gardner property by City of Portsmouth staff on June 16, 2022, Peter Britz, Environmental Planner/Sustainability Coordinator, issued a letter documenting that the property was in violation of the Zoning Ordinance of the City of Portsmouth, NH due to work that was completed in the City's 100' tidal buffer zone without a permit. The work included the grading and/or installation of fill around a rebuilt stone wall at the base of the property and the installation of stone extending a pre-existing stone swale that routes water across the property. The stone swale, soil and grading, wall reconstruction, and vegetation removal within the 25' wetland buffer all constitute work in the buffer zone which is not allowed without a City of Portsmouth Wetland Conditional Use Permit and a State Wetland Permit issued by NH Department of Environmental Services. Following recommendations made by City of Portsmouth staff during a meeting on July 19, 2022, Mr. Gardner contacted Normandeau on July 21, 2022 and, following a period of proposal development involving site visits for scoping purposes, Mr. Gardner contracted Normandeau for support services to bring the property under local and state regulatory compliance. As part of these services, a Normandeau wetland scientists completed a natural resource survey and delineation of the entire parcel on November 11 and 29, 2022, supplemented by photos and observations made during a proposal development site visit on August 11, 2022.

The Gardner property is 1.17 acres containing a private residence, driveway, and landscaped lawn at the front of the property. The back of the property slopes down to a stone wall that divides the landscaped backyard from salt marsh that occurs along the shoreline of Tucker's Cove, portions of which are infested by the invasive common reed (*Phragmites australis*). This stone wall was rebuilt in 2022 in response to observed erosion in the vicinity of the pre-existing stone wall in 2021. A stone swale extends northwest down the property slope from near the northwest corner of the residence to the northern end of the stone wall, ranging in width from approximately 6 to 10 feet. This swale was progressively installed between 2009 and 2022, again in response to erosion observed by the property shortly after purchasing the property in 2006. Most of the parcel upslope of the salt marsh is upland, with a freshwater wetland that includes the stone swale along most the northern side of the parcel and extends northeast onto the neighboring property to the north.

A summary of the site characteristics, methodology, and results of the natural resource surveys are provided below.

2.0 Desktop Mapping and Resource Data

The Wetland Permit Planning Tool (WPPT, Figure 2a) mapped the salt marsh bordering Tucker's Cove as floodplain wetland contiguous to a tier-3-or-higher watercourse and a designated prime wetland with a duly established 100-ft buffer. Therefore, these wetlands and areas within their 100-ft buffer are Priority Resource Areas (PRAs) according to New Hampshire Department of Environmental Services (NHDES) wetland regulations. The parcel is in the Upper Sagamore Creek water quality assessment unit (AUID: NHEST600031001-03) (Figure 2b). This assessment unit is listed as Severe for Aquatic Life Integrity and Recreation, and Poor for Fish and Shellfish Consumption on the 2018 305(b)/303(d) Assessment Watershed Report Card. The 2020 NH Wildlife Action Plan map of Highest Ranked Wildlife Habitat by Ecological Condition (Figure 2c) classifies the salt marsh as highest ranked habitat in New Hampshire based on the rarity of the habitat in the state. The Natural Resource Conservation Service (NRCS) has mapped the majority of the parcel as well-drained Chatfield-Hollis-Canton complex, while the salt marsh along the northwestern end of the parcel is very-poorly-drained Westbrook mucky peat (Figure 3). The Federal Emergency Management Agency (FEMA) mapped the 100-year floodplain at an elevation of 8 feet (Figure 4).

3.0 Vegetated Wetland Delineation and Assessment

3.1 Methods

Wetland boundaries were delineated according to the 1987 *Corps of Engineers Wetland Delineation Manual* and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*, which utilize the three-parameter approach (i.e., evaluating the site for the presence of hydric soils, hydrophytic vegetation and wetland hydrology) for identifying wetlands and determining their jurisdictional limits[1,2]. The 1987 Corps Manual and the Regional Supplement describe the methodology that is required for wetland delineations that are subject to review under the NHDES Wetland Rules (Env-Wt 406.01). The wetland boundaries were flagged with pink "Wetland Delineation" flagging. The flags for each wetland are sequentially numbered and remain at the site. A New Hampshire Certified Wetland Scientist (NHCWS #298) reviewed the wetland delineation. Flags were GPS-surveyed at the time of delineation. Data from paired upland-wetland U.S. Army Corps of Engineers (USACE) data plots were collected to document representative wetland boundary information.

Wetlands were classified according to the US Fish and Wildlife Services classification system (Cowardin)[3] and functions and values (services) assessed based on the USACE Highway Methodology Workbook Supplement (1999)[4].

3.2 Results

Two wetlands were delineated within the study area. A sketch map of the wetlands is included in Figure 5 and a summary of significant characteristics is provided in Table 1 below. Brief descriptions of the wetlands are included below, and representative site photos are included in Attachment A. USACE wetland determination data forms for selected wetland are included in Attachment B and Highway Methodology Function and Values (Services) forms are included in Attachment C.

Wetland POGW1

Wetland POGW1 is an estuarine intertidal emergent wetland (E2EM1,5P) that occurs just downslope of the stone wall on the Gardner parcel, along the shoreline of Tucker's Cove that extends north and south of the parcel boundaries. Portions of this wetland, including most of the area within the Gardner property, are infested by the invasive common reed (*Phragmites australis*). The Gardner portion of this wetland is currently undergoing periodic spray treatment under a state permit to manage this invasive species. The stone swale installed to manage stormwater runoff on the parcel drains into POGW1 at the northern end of the rebuilt stone wall. The majority of the POGW1 within the Gardner parcel is dominated by common reed, although smooth cordgrass (*Spartina alterniflora*) becomes dominant downslope towards Tucker's Cove. In areas of the wetland adjacent the Gardner parcel not infested with common reed, the marsh platform is dominated by smooth cordgrass and,

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[1] U.S. Army Corps of Engineers. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiments Station.

[2] U.S. Army Corps of Engineers. 2011. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

[3] Classification of Wetlands and Deepwater Habitats of the United States", adapted from Cowardin, Carter, Golet and LaRoe (1979), August 2013, FGDC- STD-004-2013.

[4] US Army Corps of Engineers New England District. September 1999. The Highway Methodology Workbook Supplement, Wetland Functions and Values, A Descriptive Approach. NAEEP-360-1-30a. 32 pp.

in higher elevation areas, saltmeadow cordgrass (*Spartina patens*). The landward edge of the saltmarsh contains some species more typical of freshwater wetlands, especially arrow-leaved tearthumb (*Persicaria sagittata*). The highest observable tide line (HOTL) is coincident with the boundary of this wetland on the Gardner parcel. Soils in the data plot were silt loams and met the depleted below dark surface hydric soil indicator. The wetland is regularly flooded at high tide, resulting in an observed water table at the substrate surface and water marks on woody vegetation stumps on the upslope fringe of the wetland. This wetland provides several functions and services, principle of which is sediment/shoreline stabilization due to its location on the shoreline of Tucker's Cover and uniqueness and heritage due to its designation as a prime wetland. POGW1 is also suitable for floodflow alteration, fish/shellfish habitat, sediment/toxicant retention, nutrient removal/retention, production export, and wildlife habitat, due to the high vegetation density, potential for runoff from lawns and impervious surfaces, and extent of saltmarsh habitat. This wetland is considered a PRA under NHDES Wetland Regulations due to its classification as a tidal wetland and floodplain wetland contiguous to a tier 3 or higher watercourse, as well as being a designated a prime wetland (Env-Wt 103.66).

Wetlands POGW2

Wetlands POGW2 is a forested wetland (PFO1E) that occurs on the slope on the northern half of the Gardner parcel, running from near the front of the property down to the stone wall at the back. This wetland extends onto the parcel to the north (26 Odiorne Point Rd.), where it is hydraulically connected via two culverts to undelineated potentially wetlands across the road at 49 Odiorne Point Rd. (Culvert N) and a portion of the stormwater drainage system for Odiorne Point Rd. (Culvert S). Discharge from these culverts exits the roadside headwall, becomes channelized into a single channel, and drains southwest onto the Gardner parcel adjacent the northern side of the house. The direction of flow shifts northwest once on the Gardner property, following the direction slope and is captured by the stone swale along the southwestern edge of POGW2. The tree/shrub canopy in the upslope portion of POGW2, into which the culverts discharge, is dominated by American hornbeam (*Carpinus caroliniana*) and red maple (*Acer rubrum*), with a dense herbaceous understory dominated by jewelweed (*Impatiens capensis*), poison-ivy (*Toxicodendron radicans*), sensitive fern (*Onoclea sensibilis*), and field horsetail (*Equisetum arvense*). The tree canopy in the mid and lower slope portions of POGW2 adjacent the stone swale are dominated by red maple with some red oak (*Quercus rubra*) and eastern white pine (*Pinus strobus*) also present. The understory in the mid to lower slope areas is dominated by switch panicgrass (*Panicum virgatum*), fowl manna grass (*Glyceria striata*), creeping buttercup (*Ranunculus repens*), and common wrinkle-leaved goldenrod (*Solidago rugosa*), which reduces in coverage progressing downslope. The hydric soil indicator is A11. Depleted below dark surface, with a water table observed within 6" of the substrate surface. Small patches of the invasive shrubs multiflora rose (*Rosa multiflora*) and false glossy buckthorn (*Frangula alnus*) were also observed in the mid slope portion of this wetland. This wetland provides fewer functions and services than POGW1, principle of which is sediment/toxicant retention due to its receiving of stormwater runoff. This wetland is also suitable for groundwater recharge/discharge, floodflow alteration, production export, sediment stabilization, and wildlife habitat. POGW2 is considered a PRA under NHDES Wetland Regulations due to its location within the duly-established 100-foot buffer of the designated prime wetland downslope that occurs along the entire shoreline of Tucker's Cove.

4.0 Channel Delineation

4.1 Methods

Stream channels located in and adjacent to the property were mapped using survey methods. The location of each culvert and points delineating the centerline of each channel were GPS-located on November 11. Stream characteristics including water depth at the time of survey, bankfull width, bank height, and dominant bed

substrate were identified at the time of the survey. Flow regime was determined for each stream based on bed and bank characteristics, as well as incorporating the flow observations of the landowner.

4.2 Results

Two streams, each originating from a separate culvert exiting a roadside headwall, were identified on the parcel to the north. These streams converge to form a single stream channel that flows onto the Garner property. These streams are discussed in more detail below.

Stream POGS1

POGS1 is channel which begins in the upslope portion of POGW2, sourced from a culvert that hydraulically connects wetland POGW2 with at a portion of the stormwater drainage system for the development. The channel runs northwest approximately 34 feet before converging with POGS2 to form a single channel. This combined flow runs southwest onto the Gardner parcel and is captured by the stone swale installed by the Gardner's. The swale conveys this flow northwest down the slope of the property to the northern end of the rebuilt stone wall. All channelized flow associated with POGS1 is contained within the delineated boundary of wetland POGW2. No evidence of channelized flow or sedimentation was observed downslope of the end of the swale into wetland POGW1. Prior to being captured by the stone swale POGS1 is classified as a riverine, ephemeral stream with a mud bottom. Under the Cowardin system ephemeral streams are not formally assigned, but the USACE tracks them under the classification R6. The NHDES Wetland Rules protect ephemeral streams as a jurisdictional area subject to regulation RSA 482-A (Env-Wt 103.25). Runoff from rainfall and snowmelt is the primary source of stream flow and so the stream has flowing water only during, and for a short duration after, precipitation or thaw events. The natural portion of the POGS1 channel has an average bankfull width of 1 foot and an average bank height of 4 inches. The stone swale portion of POGS1 has an average bankfull width of 6 feet and an average bank height of 1 inch. No water was observed within the natural or stone swale portion of the channel at the time of the natural resource survey.

Stream POGS2

POGS2 is a short channel located in the upslope portion of POGW2, sourced from a culvert that hydraulically connects wetland POGW2 with undelineated wetlands across Odiorne Point Rd. The channel runs southwest approximately 61 feet before converging with POGS1 to form a single channel. POGS2 is classified as a riverine, ephemeral stream with a mud bottom. Under the Cowardin system ephemeral streams are not formally assigned, but the USACE tracks them under the classification R6. Runoff from rainfall and snowmelt is the primary source of stream flow and so the stream has flowing water only during, and for a short duration after, precipitation or thaw events. The channel has an average bankfull width of 1 foot and an average bank height of 4 inches. No water was observed within the channel at the time of the natural resource survey.

Table 1 - Summary of delineated wetland and stream characteristics.

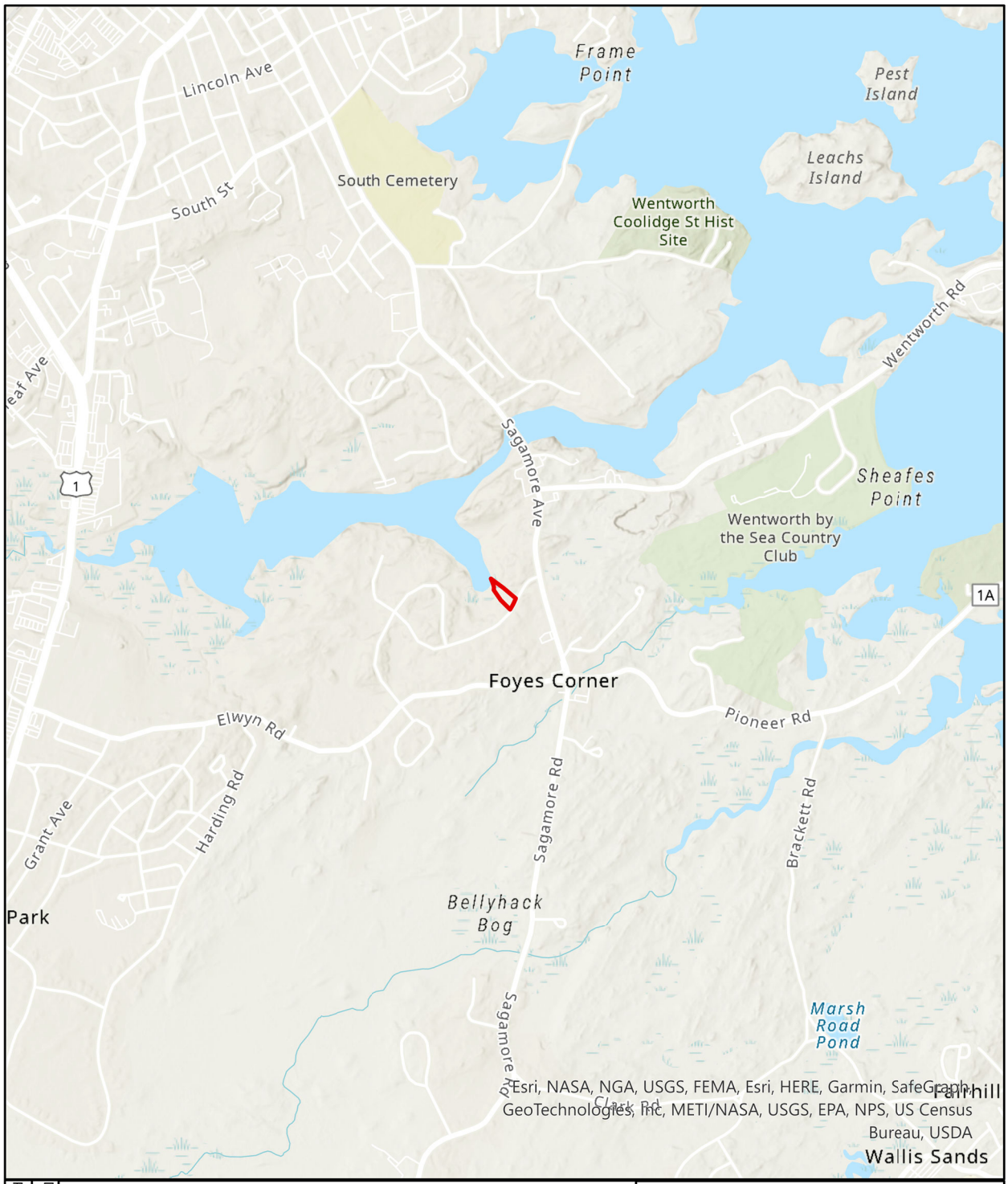
Wetland ID	Cowardin Classification	PRA	Associated Watercourse	Delineated Area/Length
POGW1	E2EM1,5P (100%)	Y	Sagamore Creek	12,104 sq. ft.
POGW2	PFO1E (100%)	Y	POGS1	9,345 sq. ft.
POGS1	R6UB3	Y	POGS2	163 ft. (on parcel) and 65 ft. (off parcel)
POGS2	R6UB3	N	POGS1	61 ft. (off parcel)

5.0 Discussion

Wetlands on the Gardner parcel, as well as the duly established 100-ft buffer of POGW1, are PRAs, and therefore permanent impacts of any size to these wetlands or the buffer are subject to compensatory mitigation. Clearing of vegetation in wetlands is considered a secondary impact, and the USACE may require mitigation for secondary impacts. Alteration of natural habitats adjacent to streams is also considered a secondary impact potentially subject to mitigation by the USACE if the alteration impairs the stream, so minimizing clearing and earthwork is imperative.

Correspondence with NHDES and the City of Portsmouth regarding the proposed project following a site visit to the property on January 12, 2023 is ongoing. Correspondence with the NH Natural Heritage Bureau (NHNHB) in response to the documented occurrence of a protected habitat in the vicinity of the proposed project area is ongoing following completion of a virtual meeting to discuss the proposed work and restoration planting plan. NHNHB has expressed satisfaction with the proposed project activities and planting plan but has requested they be kept informed should any significant changes to the proposed work or restoration plan occur. The results of the NHNHB review does not include any wildlife species records and therefore formal consultation with NH Fish & Game (NHFG) is not anticipated at this time.

Figures



50 Odiorne Point Road Property Line

N

0 1,000 2,000 Feet

Project No.: 24731.000

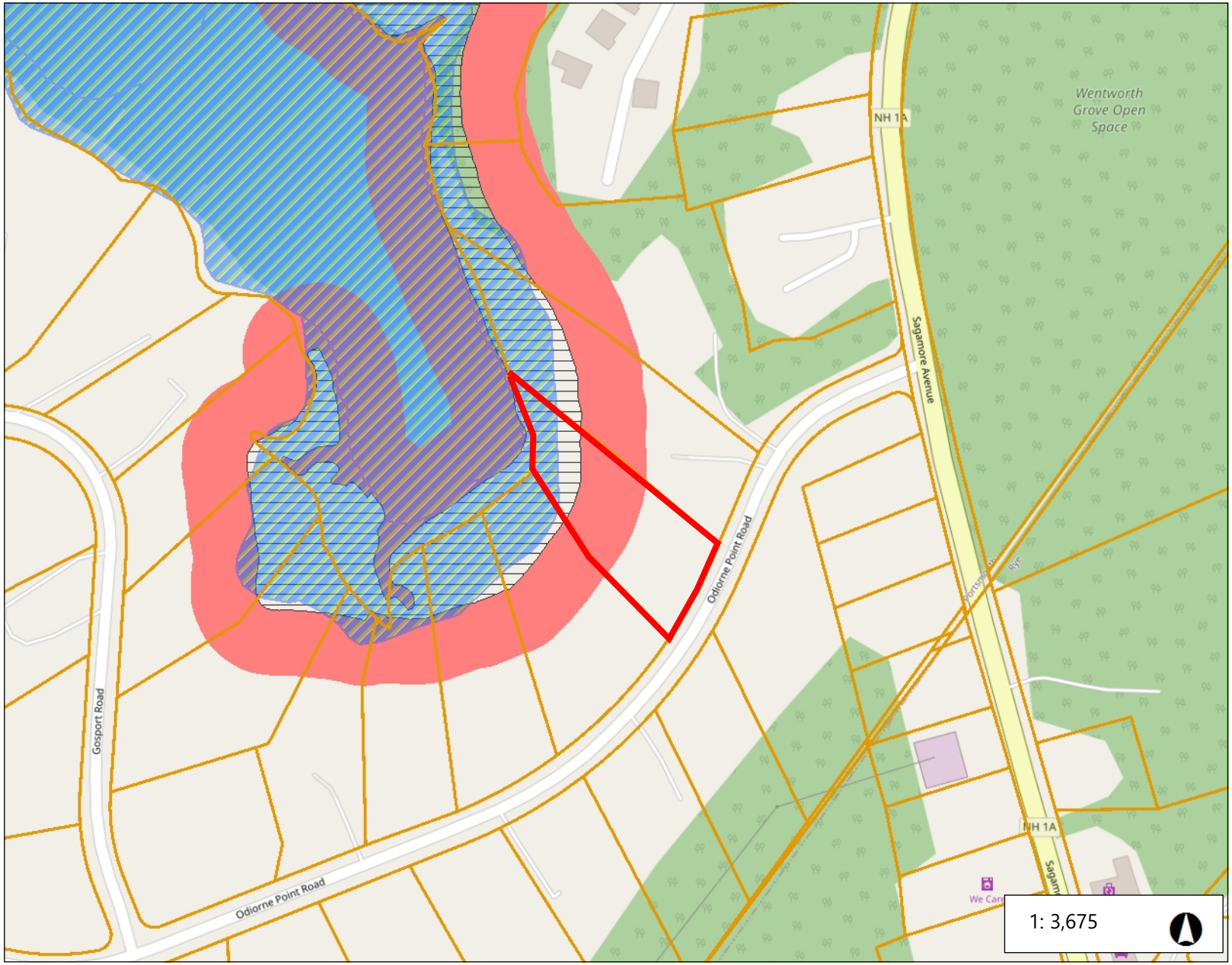
Drawn By: eolliver

Gardner Property
Project Locus
Portsmouth, NH

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

25 Nashua Road Bedford, NH 03110
(603) 472-5191 www.normandeau.com

Figure 2a. Wetland Permit Planning Tool - PRAs



Gardner Parcel

Legend

NH Parcels

Parcel Polygons

Flood Plain Wetlands Adjacent to Tier 3 Streams Prime Wetlands

Prime Wetlands

100 ft Prime Wetland Buffer

Dunes

backdune

foredune

interdune

other

Notes

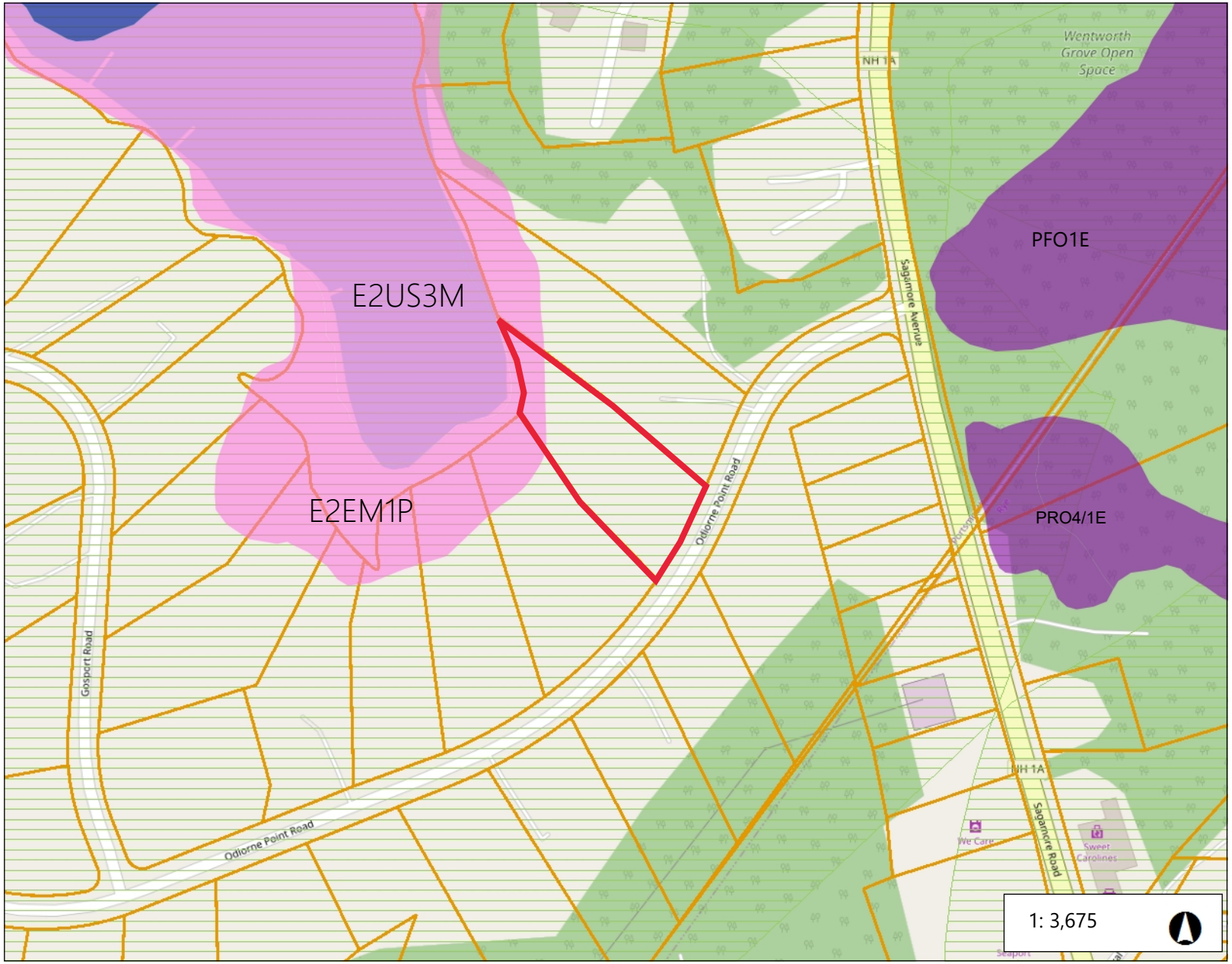
0.1 0 0.06 0.1 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Figure 2b. Wetland Permit Planning Tool - Impaired Waters and NWI Plus



Gardner Parcel

Legend

NH Parcels

- Parcel Polygons

Wetland Types and NWIPlus

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

- Watersheds with Chloride Impairments 2016
- Surface Waters with Impairments 2016 with Quarter Mile Buffer

Notes

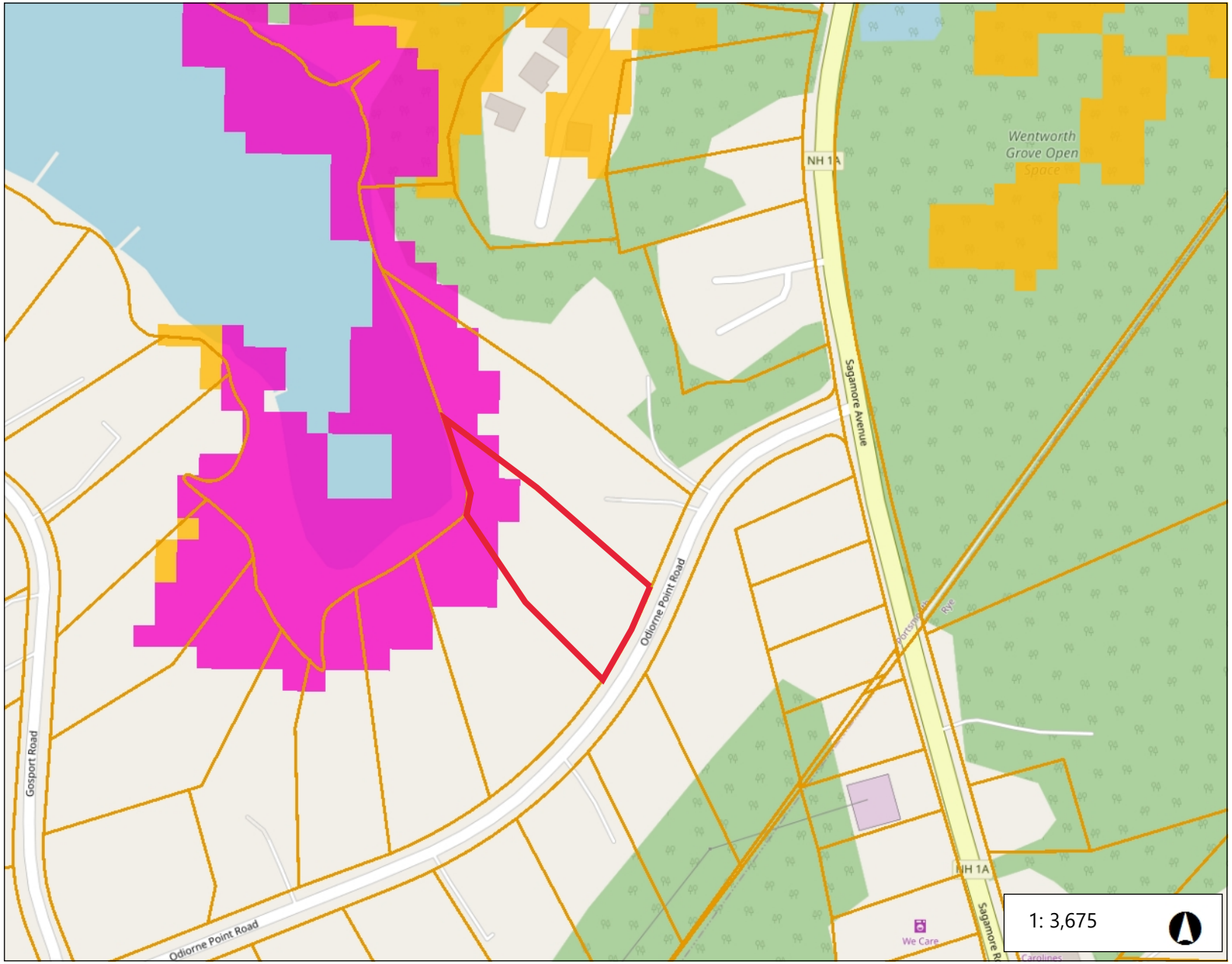
0.1 0 0.06 0.1 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Figure 2c. Wetland Permit Planning Tool - 2020 Highest Ranked Wildlife Habitat by Ecological Condition



Gardner Parcel

Legend

NH Parcels

Parcel Polygons

Highest Ranked Wildlife Habitat

0

1 Highest Ranked Habitat in NH

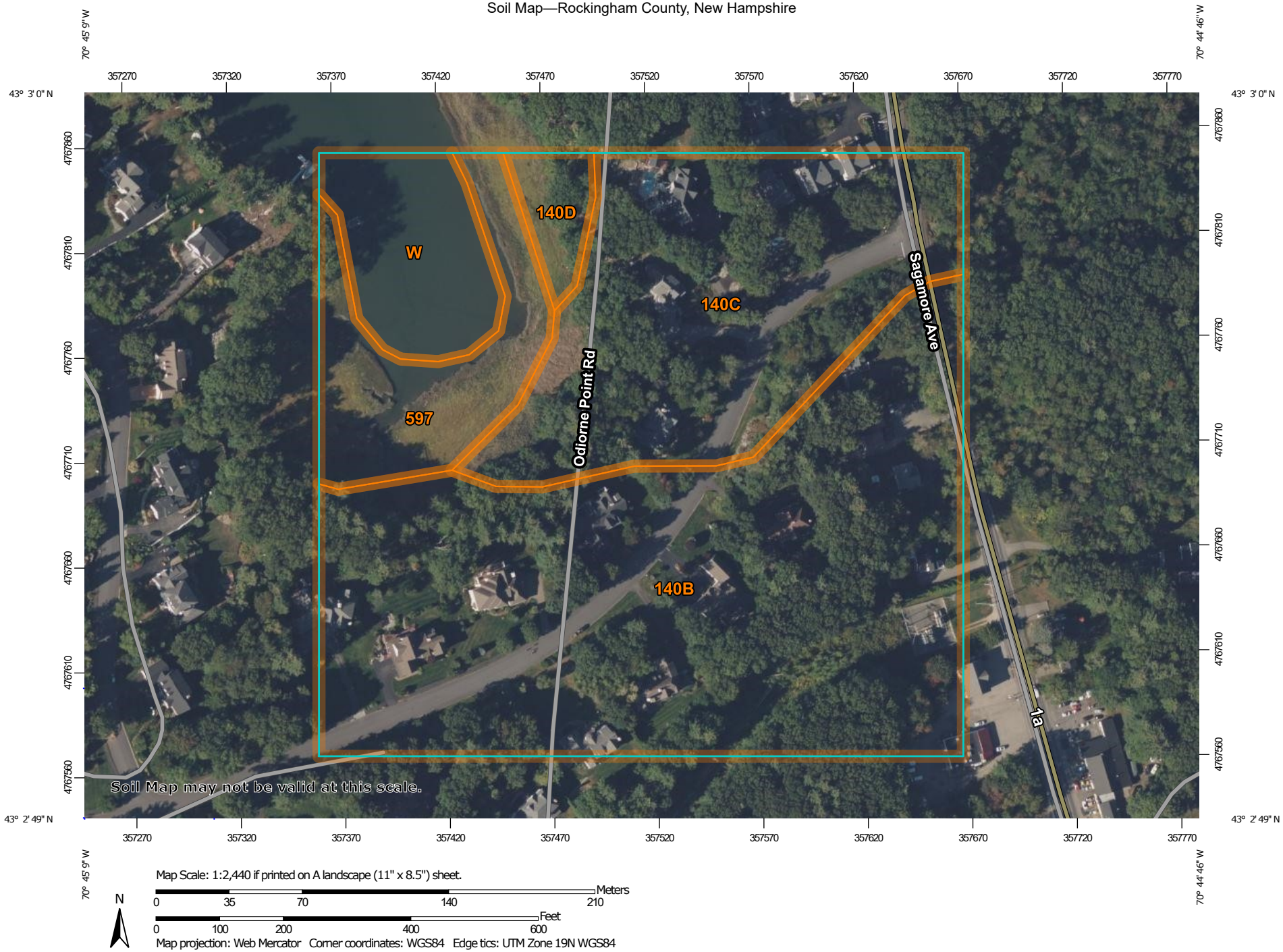
2 Highest Ranked Habitat in Regior

3 Supporting Landscape

Notes

0.1 0 0.06 0.1 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere



Map Scale: 1:2,440 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Rockingham County, New Hampshire
Survey Area Data: Version 25, Sep 12, 2022

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

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
140B	Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky	11.7	53.3%
140C	Chatfield-Hollis-Canton complex, 8 to 15 percent slopes, rocky	6.0	27.4%
140D	Chatfield-Hollis-Canton complex, 15 to 35 percent slopes, rocky	0.5	2.3%
597	Westbrook mucky peat, 0 to 2 percent slopes, very frequently flooded	2.1	9.6%
W	Water	1.6	7.4%
Totals for Area of Interest		**22.0**	**100.0%**

National Flood Hazard Layer FIRMette

FEMA

70°45'17"W 43°3'9"N

70°44'39"W 43°2'43"N

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

1:6,000

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

Legend

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

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

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

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

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

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

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

N

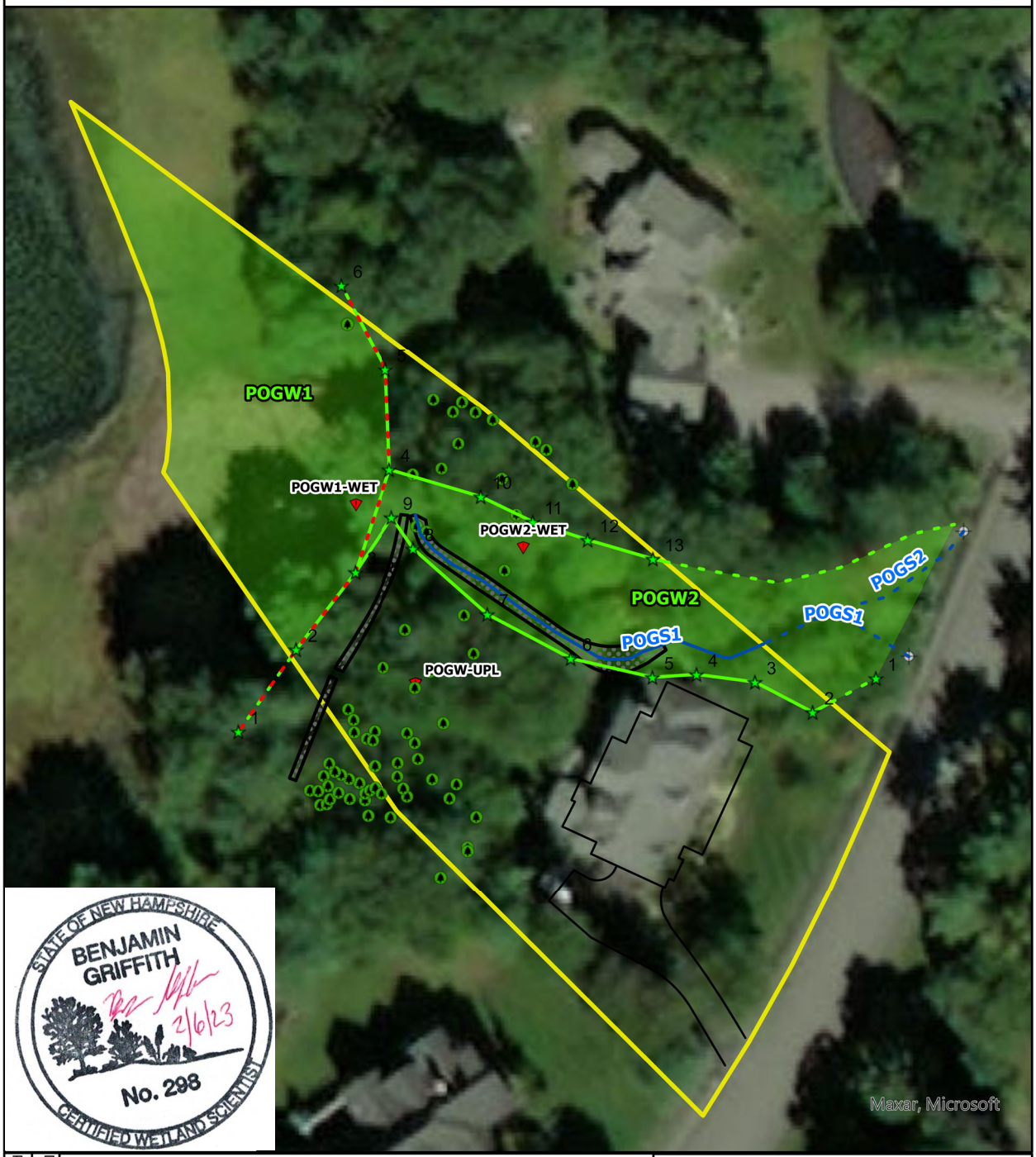
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/10/2023 at 3:40 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, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Wetlands delineated by Elizabeth Olliver under the supervision of Benjamin Griffith (Certified Wetland Scientist #298) on November 11th and 29th, 2022.



STATE OF NEW HAMPSHIRE
BENJAMIN GRIFFITH
2/6/23
No. 298
CERTIFIED WETLAND SCIENTIST

Project No.: 24731.000

Drawn By: eolliver

- Wetland Flag
- Stream Centerline
- Stream Centerline (off parcel)
- Stream Centerline (on parcel)
- Wetland Boundaries
- HOTL
- Wetland Boundary (off parcel)
- Wetland Boundary (on parcel)
- Delineated Wetland Area
- Tree
- Culvert
- USACE Plot
- House
- Driveway
- Stone Swale
- Rebuilt Stone Wall
- Property Line

N

0 30 60 Feet

Gardner Property
Natural Resource Delineation
Portsmouth, NH

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS
25 Nashua Road Bedford, NH 03110
(603) 472-5191 www.normandeau.com

Attachment A

Site Photographs

Project Site Overview

Photo 1. Upper portion of the access route off the driveway to stone wall and swale project area, viewing southwest. (08-11-22)

Photo 2. Lower portion of the access route off the driveway to stone wall and swale project area, viewing northwest. (08-11-22)

Photo 3. Wider overview of the slope above the stone wall and south of the stone swale, viewing southeast. (08-11-22)

Photo 4. Overview of the northern half of the Gardner property containing POGW2 and the stone wale, viewing northwest from the deck. (08-11-22)

Photo 5. Overview of the upland slope south of the stone swale, viewing west from the deck. (08-11-22)

Photo 6. Overview of the upland slope south of the stone swale, viewing west. (08-11-22)

Stone Wall Overview

Photo 7. Area directly upslope of the stone wall previously disturbed by stone wall reconstruction, viewing south. (08-11-22)

Photo 8. Overview of the downslope side of the stone wall, viewing south from the northern end of the stone wall. Wetland POGW1 occurs in the right side of the photo. (08-11-22)

Photo 9.Overview of pre-existing stone wall on property to the south of the Gardner property, viewing south. (08-11-22)

Wetland POGW1 (Salt marsh at western end of Gardner property)

Photo 10. Overview of the POGW1, viewing west-southwest. (08-11-22)

Photo 11.Overview of POGW1 north of the Gardner property salt marsh, viewing north. (08-11-22)

Photo 12.Overview of POGW1 west of the Gardner property, viewing south. Area shown is undergoing treatment for Phragmites australis. (08-11-22)

Photo 13.Overview of POGW1 closer to the open water of Tucker's Cove, viewing southwest. Area shown is undergoing treatment for Phragmites australis. (08-11-22)

Wetland POGW2 and Stone Swale

Photo 14. Overview of the undelineated area and the inflow on eastern side of Odiorne Point Road that flows to the northern culvert outflow into POGW2 shown in Photo 16, viewing north. (08-11-22)

Photo 15. Overview of the northeastern most portion of POGW2 off the Gardner property containing Photos 16 to 20, viewing northeast. (08-11-22)

Photo 16. Northern culvert outflow (source of delineated POGS2) into POGW2, viewing west. (08-11-22)

Photo 17. Southern culvert outflow (source of POGS1) into POGW2, viewing west. (08-11-22)

Photo 18. POGS1 leading from the southern culvert outflow from the headwall at the northwestern edge of POGW2 (shown in Photo 17), viewing west, upstream. (08-11-22)

Photo 19. POGS1 leading onto the Gardner property from the culverts located at the northeastern end of POGW2, viewing northeast, upstream. Head wall from which the flows are sourced is in the upper right portion of the photo. Blue arrows indicate the paths of POGS1 and POGS2 from the two culvert outflows from the headwall to where they merge in the foreground. (08-11-22)

Photo 20. POGS1 leading onto the Gardner property from the culverts located at the northeastern end of POGW2, viewing south, downstream. Property boundary is indicated by the green rod indicated by the red arrow. (08-11-22)

Photo 21. POGS1 leading onto the Gardner property from the culverts located at the northeastern end of POGW2, viewing southwest, downstream. Property boundary is indicated by the green rod visible in the right side of the photo. (08-11-22)

Photo 22. POGS1 leading onto the Gardner property from the culverts located at the northeastern end of POGW2, viewing north-northeast, upstream. Property boundary is indicated by the green rod indicated by the red arrow. (08-11-22)

Photo 23. POGS1 bound by POGW2 running parallel to the northern side of the Gardner house, viewing southwest downstream. Channel path is indicated by the blue arrows. (08-11-22)

Photo 24. POGS1 parallel the north side of the house on the Gardner property in POGW2, viewing east upstream. (08-11-22)

Photo 25. Plastic landscaping barrier that funnels flow from POGS1 into the upper portion of the stone swale, viewing north. (08-11-22)

Photo 26. Upper portion of wetland POGW2, viewing west downslope from the plastic landscaping barrier forming the northwestern boundary of the channel that funnels into the upper portion of the stone swale. (08-11-22)

Photo 27. Overview of the older portion of the stone swale, viewing west from the near the top of the swale. (08-11-22)

Photo 28. Overview of the older, upper portion of the stone swale, viewing east upslope. (08-11-22)

Photo 29. Overview of the newer portion of the stone swale, viewing east from below the reconstructed stone wall. Location of the top of the stone swale extension is indicated by the red arrow. (08-11-22)

Photo 30. Lower portion of wetland POGW2, viewing east upslope from near the bottom of the stone swale. Top of the stone swale extension is indicated by the red arrow (08-11-22)

Photo 31. Bottom of the new portion of the stone swale, viewing west. (08-11-22)

Photo 32. Bottom of the stone swale, viewing northwest. (11-11-22)

Attachment B

USACE Wetland Determination Data Sheets

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Gardner Property Stone Wall and Swale Addressment City/County: Portsmouth/Rockingham Sampling Date: November 11, 2022

Applicant/Owner: Jack Gardner State: NH Sampling Point: POGW1and2-UPL

Investigator(s): E. Olliver and B. Griffith Section, Township, Range:

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): None Slope %: 3

Subregion (LRR or MLRA): LRR R Lat: Long: Datum: WGS 1984

Soil Map Unit Name: Chatfield-Hollis-Canton complex NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X, Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation X, Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
This area is was relatively recently impacted by work on the property and is part of a regularly maintained lawn area as well. Additionally, the field delineation was completed following plant senescence making identification and determination of herbaceous species percent coverages difficult.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: OGW1and2-UF

Tree Stratum (Plot size: 30' R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	50	Yes	FAC
2. *Pinus strobus*	40	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	90	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' R)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5' R)			
1. *Symphyotrichum spp*	3	No	
2. Unidentified graminoids	5	Yes	
3. *Leucanthemum vulgare*	10	Yes	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	18	=Total Cover	
Woody Vine Stratum (Plot size: 30' R)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	50	x 3 =	150
FACU species	40	x 4 =	160
UPL species	10	x 5 =	50
Column Totals:	100 (A)		360 (B)

Prevalence Index = B/A = 3.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Field delineation was conducted after senescence of most of the herbaceous vegetation for the season. Additionally, the area is located on maintained private property and the plot area likely contained species that were planted by the property owner or previous property owner.

SOIL

Sampling Point: OGW1and2-UP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 3/3	100						loamy
5 - 9	10YR 5/6	100						sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Gardner Property Stone Wall and Swale Addressment City/County: Portsmouth/Rockingham Sampling Date: November 11, 2022

Applicant/Owner: City of Portsmouth State: NH Sampling Point: POGW1-Wet

Investigator(s): E. Olliver and B. Griffith Section, Township, Range:

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: Long: Datum: WGS 1984

Soil Map Unit Name: Chatfield-Hollis-Canton complex NWI classification: E2EM1P (from NH WPPT)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X, Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation X, Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No 0	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
This portion of the salt marsh has been infested by Phragmites australis and is under treatment for management of the invasive plant species. Additionally, the field delineation was completed following plant senescence making identification and determination of herbaceous species percent coverages difficult.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- X High Water Table (A2)
- Saturation (A3)
- X Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes X	No	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Surface water was not observed within the plot at the time of the November 11th delineation but has been observed in other portions of the wetland.

VEGETATION – Use scientific names of plants.

Sampling Point: POGW1-Wet

Tree Stratum (Plot size: 30' R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra*	40	Yes	FACU
2. *Pinus strobus*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' R)			
1. *Smilax rotundifolia*	2	No	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	2	=Total Cover	
Herb Stratum (Plot size: 5' R)			
1. *Phragmites australis*	10	Yes	FACW
2. *Persicaria sagittata*	20	Yes	OBL
3. Unidentified graminoids	7	No	
4. *Rosa multiflora*	1	No	FACU
5. *Typha latifolia*	2	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40	=Total Cover	
Woody Vine Stratum (Plot size: 30' R)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	22	x 1 =	22
FACW species	10	x 2 =	20
FAC species	2	x 3 =	6
FACU species	51	x 4 =	204
UPL species	0	x 5 =	0
Column Totals:	85 (A)		252 (B)

Prevalence Index = B/A = 2.96

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Field delineation was conducted after senescence of most of the herbaceous vegetation for the season. Additionally, the area has recently undergone chemical treatment for Phragmites australis infestation.

SOIL

Sampling Point POGW1-Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 3	7.5YR 2.5/1	100						Sandy silt/loamy
3 - 6	7.5YR 5/1	100						Sandy silt

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** ____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Gardner Property Stone Wall and Swale Addressment City/County: Portsmouth/Rockingham Sampling Date: November 11, 2022

Applicant/Owner: Jack Gardner State: NH Sampling Point: POGW2-Wet

Investigator(s): E. Olliver and B. Griffith Section, Township, Range:

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope %: 3

Subregion (LRR or MLRA): LRR R Lat: Long: Datum: WGS 1984

Soil Map Unit Name: Chatfield-Hollis-Canton complex NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X, Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation X, Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
This area is located on a maintained private property and thus some of the plants could have been planted by the property owner or previous property owner. Additionally, the field delineation was completed following plant senescence making identification and determination of herbaceous species percent coverages difficult.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes X	No	Depth (inches): 4
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): 6

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Saturation presence was subtle.

VEGETATION – Use scientific names of plants. Sampling Point: POGW2-Wet

Tree Stratum (Plot size: 30' R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	50	Yes	FAC
2. *Pinus strobus*	5	No	FACU
3. *Quercus rubra*	5	No	FACU
4.			
5.			
6.			
7.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' R)			
1. *Rosa multiflora*	5	Yes	FACU
2. *Frangula alnus*	3	Yes	FAC
3. *Viburnum plicatum**			UPL
4.			
5.			
6.			
7.			
	8	=Total Cover	
Herb Stratum (Plot size: 5' R)			
1. *Symphyotrichum spp*	10	No	
2. *Solidago rugosa*	20	Yes	FAC
3. *Ranunculus repens*	25	Yes	FAC
4. *Panicum virgatum*	30	Yes	FAC
5. *Circaea canadensis*	2	No	FACU
6. *Glyceria striata*	20	Yes	OBL
7. *Verbena urticifolia*	10	No	FAC
8. *Epilobium palustre*	2	No	OBL
9.			
10.			
11.			
12.			
	119	=Total Cover	
Woody Vine Stratum (Plot size: 30' R)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	22	x 1 =	22
FACW species	0	x 2 =	0
FAC species	138	x 3 =	414
FACU species	17	x 4 =	68
UPL species	0	x 5 =	0
Column Totals:	177 (A)		504 (B)

Prevalence Index = B/A = 2.85

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Field delineation was conducted after senescence of most of the herbaceous vegetation for the season. Additionally, the area is located on maintained private property and the plot area likely contained species that were planted by the property owner or previous property owner.

*=Planted

SOIL

Sampling Point POGW2-Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	2.5Y 2.5/1	100					Loamy/Clayey	
6 - 10	2.5Y 4/1	70	2.5Y 5/3	30	C	PL	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** ____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Attachment C

Wetland, Vernal Pool, and Stream

Functions and Values Forms

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

Stream Data Sheet

Gardner Property

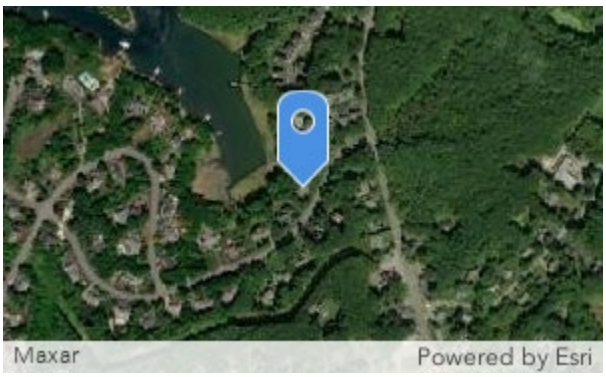
Portsmouth , NH

Stream ID:	POGS1	**Stream Name:**	
Cowardin Classification:	R6UB3	**Delineator(s):**	Elizabeth Olliver
Flow Regime:	Ephemeral	**Number of Flags:**	No flags hung
Associated Wetland:	Yes	**Wetland ID:**	POGW2
Stream Notes:			

Stream Characteristics:

Flow Observations:	Dry
Bed composition:	Fines w/ large cobble in portions.
Bank Height (ft):	0.5
Average Bankfull Width (ft)	1
Average Depth (inches):	0
Riffle/Pool Complex:	No
Defined Bed and Bank	No
Shown on USGS Topo?	No
Flows Continuously for at least 6 Months?	No
Aquatic Organisms Present?	No
Aquatic Vegetation Present?	No
Scoured Mineral Bottom?	Yes

Location:



Photos:

Southern culvert outflow serving as the delineated upstream end of POGS1 in wetland POGW2. (08-11-22)

Channel leading from the southern culvert outflow from the headwall at the western end of POGW2 (shown in Photo 1), viewing west, upstream. (08-11-22)

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

Channel leading onto the Gardner property after POGS1 and POGS2 merge, viewing south, downstream. Approximate property boundary location is indicated by the green rod visible to the left of the channel. (08-11-22)

Wetland Function- Value Evaluation Form

Total area of wetland? 9,345 sq. ft. Human made? N Is wetland part of a wildlife corridor? N or a "habitat island"? N

Adjacent land use Residential and road Distance to nearest roadway or other development 10 ft

Dominant wetland systems present PFO1E Contiguous undeveloped buffer zone present N

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin Mid point

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland ID POGW2

Latitude Longitude

Prepared by: eolliver_NAI_USA Date 11/11/2022

Wetland Impact:

Type Area

Evaluation based on:

Office X Field X

Corps manual wetland delineation completed? Y__X___ N_____

Function/Value	Suitability Y/N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	15	☐	
Floodflow Alteration	Y	3,4,5,9,13,6	☐	
Fish and Shellfish Habitat	N		☐	
Sediment/Toxicant Retention	Y	1,4	☐	
Nutrient Removal	N		☐	
Production Export	N		☐	
Sediment/Shoreline Stabilization	Y	1,2,3,4,8,9	☐	
Wildlife Habitat	N		☐	
Recreation	N		☐	
Educational/Scientific Value	N		☐	
Uniqueness/Heritage	N		☐	
Visual Quality/Aesthetics	N		☐	
ES Endangered Species Habitat	N		☐	
Other	no			

Notes:

* Refer to backup list of numbered considerations.

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	5			Modification of flow from culvert and stone swale.
2	N		☐	
3	N		☐	
4	Y	3,4,5,9,13,6	☐	
5	Y	15	☐	
6	N		☐	
7	N		☐	
8	N		☐	
9	N		☐	
10	Y	1,4	☐	
11	Y	1,2,3,4,8,9	☐	
12	N		☐	
13	N		☐	
14	N		☐	

Notes:

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Stream Data Sheet

Gardner Propery

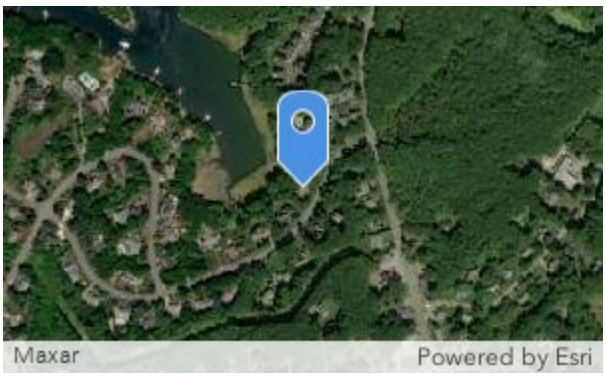
Portsmouth , NH

Stream ID:	POGS2	**Stream Name:**	
Cowardin Classification:	R6UB3	**Delineator(s):**	Elizabeth Olliver
Flow Regime:	Ephemeral	**Number of Flags:**	No flags hung
Associated Wetland:	Yes	**Wetland ID:**	POGW2
Stream Notes:			

Stream Characteristics:

Flow Observations:	Dry
Bed composition:	Fines w/large cobble in portions
Bank Height (ft):	0.5
Average Bankfull Width (ft)	1
Average Depth (inches):	0
Riffle/Pool Complex:	No
Defined Bed and Bank	No
Shown on USGS Topo?	No
Flows Continuously for at least 6 Months?	No
Aquatic Organisms Present?	No
Aquatic Vegetation Present?	No
Scoured Mineral Bottom?	Yes

Location:



Photos:

Northern culvert outflow serving as the delineated upstream end of POGS2 in wetland POGW2. (08-11-22)

Merging of flow from POGS2 and POGS1 in portion of POGW2 off the Gardner parcel. (08-11-22)

Wetland Function- Value Evaluation Form

Total area of wetland? 9,345 sq. ft. Human made? N Is wetland part of a wildlife corridor? N or a "habitat island"? N

Adjacent land use Residential and roads Distance to nearest roadway or other development 10 feet

Dominant wetland systems present PFO1E Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin Mid point

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland ID POGW2
Latitude Longitude
Prepared by: eolliver_NAI_USA Date 11/11/2022
Wetland Impact:
Type Area
Evaluation based on:
Office X Field X
Corps manual wetland delineation completed? Y__X___ N_____

Function/Value	Suitability Y/N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	15	☐	
Floodflow Alteration	Y	3,4,5,9,13,6	☐	
Fish and Shellfish Habitat	N		☐	
Sediment/Toxicant Retention	Y	1,4	☐	
Nutrient Removal	N		☐	
Production Export	N		☐	
Sediment/Shoreline Stabilization	Y	1,2,3,4,8,9	☐	
Wildlife Habitat	N		☐	
Recreation	N		☐	
Educational/Scientific Value	N		☐	
Uniqueness/Heritage	N		☐	
Visual Quality/Aesthetics	N		☐	
ES Endangered Species Habitat	N		☐	
Other	no			

Notes:

* Refer to backup list of numbered considerations.

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	5			Modification of flow from culvert.
2	N		☐	
3	N		☐	
4	Y	3,4,5,9,13,6	☐	
5	Y	15	☐	
6	N		☐	
7	N		☐	
8	N		☐	
9	N		☐	
10	Y	1,4	☐	
11	Y	1,2,3,4,8,9	☐	
12	N		☐	
13	N		☐	
14	N		☐	

Notes:

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

Wetland Functions and Values Data Sheet

Gardner Stone Wall and Swale

Portsmouth, NH

Wetland ID:	POGW1	**Delineator(s):**	Elizabeth Olliver
Cowardin Classification:	E2EM1/5 (60/40%)	**Survey Date:**	November 11, 2022
Number of Flags:	6	**Open Water:**	No
Wetland Open/Closed	Open	**Wetland Open Details**	1 and 6
Associated Stream:	No	**Stream ID:**	Sagamore Creek into Tucker's Cove. Not delineated as part of this project.
Vernal Pool/Potential Vernal Pool Identified:	No	**VP/PVP ID:**	None
Wetland Description:	Salt marsh wetland invaded by stands of Phragmites with more freshwater species along top of wetland near stone wall.		

Functions and Values:

Groundwater Recharge/Discharge	No
Floodflow Alteration	Suitable
Fish/Shellfish Habitat	Suitable
Sediment/Toxicant Retention	Suitable
Nutrient Removal/Retention	Suitable
Production Export	Suitable
Sediment/Shoreline Stabilization	Principal
Wildlife Habitat	Suitable
Recreation	No
Education/Scientific Value	No
Uniqueness/Heritage	Principal
Visual Quality/Aesthetics	No
Rare/Threatened and Endangered Species	No
Other	no

Soils:

Texture: Silty
Parent Material: Alluvium
Restrictive Layer: No
Hydric Soil Indicator(s): A11. Depleted below dark surface

Soil Notes:

Dominant Plants:

Tree

Sapling/ Shrub

Herb/Seedling
Spartina alterniflora, Spartina patens, and *Persicaria sagittate*

Woody Vine

Invasives
Phragmites australis

Location:

Special wetland type/Unique Swamp: Tidal wetland.

Wetland Comments: Wetland is undergoing treatment for Phragmites australis.

NHDES Priority Resource Area / USACE Special Aquatic Site? Yes. Prime wetland with a duly established 100-ft buffer.

Wildlife:

List of observed wildlife: None

List of Potential Wildlife Small mammals and coastal wetland birds.

Evidence of wildlife: None

Wildlife and Habitat Comments: None

Photos:

Photo 1. Viewing across wetland towards bay from the rebuilt stone wall near POGW1 flag 3, viewing northwest. (11-11-22)

Photo 2. Viewing across wetland to outlet into bay from near POGW1 flag 3, viewing southwest. (11-11-22)

Photo 3. Looking along the upslope boundary of POGW1, viewing south. (11-11-22)

Wetland Function- Value Evaluation Form

Total area of wetland? 12,104 sq. ft. Human made? No Is wetland part of a wildlife corridor? N or a "habitat island"? N

Adjacent land use Residential and Tucker's Cove. Distance to nearest roadway or other development 100 ft

Dominant wetland systems present E2EM1,5 Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin Bottom

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland ID POGW1

Latitude _____ Longitude _____

Prepared by: eolliver_NAI_USA Date 11/11/2022

Wetland Impact: None

Type _____ Area _____

Evaluation based on:

Office X Field X

Corps manual wetland delineation completed? Y X N _____

Function/Value	Suitability Y/N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N		☐	
Floodflow Alteration	Y	5,6,9	☐	
Fish and Shellfish Habitat	Y	1,2	☐	
Sediment/Toxicant Retention	Y	2,1,3,4	☐	
Nutrient Removal	Y	3,4,5,7,10	☐	
Production Export	Y	2	☐	
Sediment/Shoreline Stabilization	Y	6,7,10,11,12,15	☑	
Wildlife Habitat	Y	6,7,8	☐	
Recreation	N		☐	
Educational/Scientific Value	N		☐	
Uniqueness/Heritage	Y		☑	
Visual Quality/Aesthetics	N		☐	
ES Endangered Species Habitat	N		☐	
Other	no			

Notes:

* Refer to backup list of numbered considerations.

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1				
2	N		☐	
3	Y	1,2	☐	
4	Y	5,6,9	☐	
5	N		☐	
6	N		☐	
7	Y	3,4,5,7,10	☐	
8	Y	2	☐	
9	N		☐	
10	Y	2,1,3,4	☐	
11	Y	6,7,10,11,12,15	☑	
12	Y		☑	
13	N		☐	
14	Y	6,7,8	☐	

Notes:

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

Wetland Functions and Values Data Sheet

Gardner Stone Wall and Swale

Portsmouth, NH

Wetland ID:	POGW2	**Delineator(s):**	Elizabeth Olliver
Cowardin Classification:	PF01E, 100%	**Survey Date:**	November 11, 2022
Number of Flags:	13	**Open Water:**	No
Wetland Open/Closed	Open	**Wetland Open Details**	1 and 13
Associated Stream:	Yes	**Stream ID:**	POGS1 and POGS2
Vernal Pool/Potential Vernal Pool Identified:	No	**VP/PVP ID:**	
Wetland Description:	Small wetland that culverts drain into. Wetland drains down to the slope towards the salt marsh and it's boundary meets with the salt marsh boundary.		

Functions and Values:

Groundwater Recharge/Discharge	Suitable
Floodflow Alteration	Suitable
Fish/Shellfish Habitat	No
Sediment/Toxicant Retention	Principal
Nutrient Removal/Retention	No
Production Export	Suitable
Sediment/Shoreline Stabilization	Suitable
Wildlife Habitat	Suitable
Recreation	No
Education/Scientific Value	No
Uniqueness/Heritage	No
Visual Quality/Aesthetics	No
Rare/Threatened and Endangered Species	No
Other	no

Soils:

Texture: Loamy
Parent Material: Till
Restrictive Layer: No
Hydric Soil Indicator(s): A11. Depleted below dark surface
Soil Notes: None

Dominant Plants:

Tree
Carpinus caroliniana and *Acer rubrum*

Sapling/ Shrub
Acer rubrum and *Frangula alnus*

Herb/Seedling
Equisetum arvense, Impatiens capensis, Toxicodendron radicans, Onoclea sensibilis, Panicum virgatum, Glyceria striata, Ranunculus repens, and *Solidago rugosa*

Woody Vine

Invasives
Rosa multiflora and *Frangula alnus*

Location:

Special wetland type/Unique Swamp: No

Wetland Comments: Wetland receives flow from stormwater system and from undelineated potential wetlands across the road.

NHDES Priority Resource Area / USACE Special Aquatic Site? A portion of this wetland lies within the duly established 100-ft buffer of the prime wetlands bordering Tucker's Cover downslope (delineated as POGW1).

Wildlife:

List of observed wildlife: None

List of Potential Wildlife Small mammals, amphibians, turtles, and birds.

Evidence of wildlife: None

Wildlife and Habitat Comments: None

Photos:

Photo 1. Viewing into the upper portion of the wetland between flags 4 and 5, viewing northeast. (11-11-22)

Photo 2. Viewing down into mid portion of the wetland running down the slope. Near first turn into swale between flags 5 and 6, viewing northwest. (11-11-22)

Photo 3. Viewing upslope into upper portion of the wetland. Near first turn into swale between flags 5 and 6, viewing northeast. (11-11-22)

Wetland Function- Value Evaluation Form

Total area of wetland? 9, 345 sq. ft. Human made? Unclear Is wetland part of a wildlife corridor? N or a "habitat island"? N

Adjacent land use Private property and roadway Distance to nearest roadway or other development 10 ft.

Dominant wetland systems present PF01E Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin Mid point

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland ID POGW2
Latitude Longitude
Prepared by: eolliver_NAI_USA Date 11/25/2022
Wetland Impact:
Type Area
Evaluation based on:
Office X Field X
Corps manual wetland delineation completed? Y__X___ N_____

Function/Value	Suitability Y/N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2,4,7	☐	
Floodflow Alteration	Y	4,5,6,9	☐	
Fish and Shellfish Habitat	N		☐	
Sediment/Toxicant Retention	Y	2,1 10	☑	
Nutrient Removal	N		☐	
Production Export	Y	2,1	☐	
Sediment/Shoreline Stabilization	Y	1	☐	
Wildlife Habitat	Y	8,7	☐	
Recreation	N		☐	
Educational/Scientific Value	N		☐	
Uniqueness/Heritage	N		☐	
Visual Quality/Aesthetics	N		☐	
ES Endangered Species Habitat	N		☐	
Other	no			

Notes:

* Refer to backup list of numbered considerations.

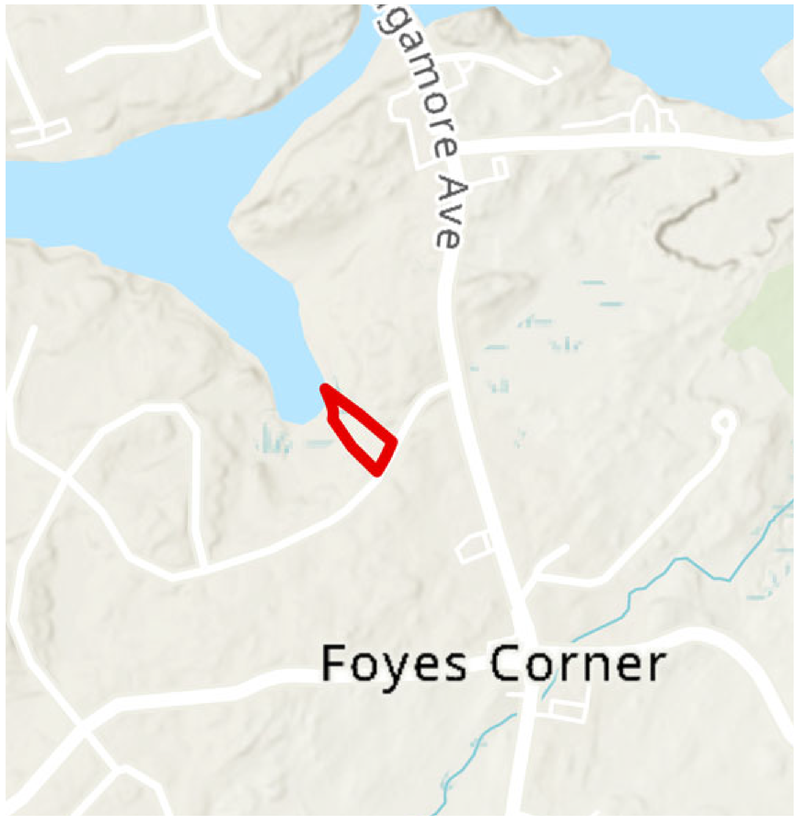
FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	3.6			
2	N		☐	
3	N		☐	
4	Y	4,5,6,9	☐	
5	Y	2,4,7	☐	
6	N		☐	
7	N		☐	
8	Y	2,1	☐	
9	N		☐	
10	Y	2,1 10	☑	
11	Y	1	☐	
12	N		☐	
13	N		☐	
14	Y	8,7	☐	

Notes:

Attachment B: Project Plans

GARDNER PROPERTY RESTORATION PROJECT

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS



PROJECT LOCUS

EROSION AND SEDIMENT CONTROL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES (ECSs) SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE NHDES BEST MANAGEMENT PRACTICES MANUAL FOR UTILITY MAINTENANCE IN AND ADJACENT TO WETLANDS AND WATERBODIES IN NEW HAMPSHIRE DATED MARCH 2019. PLEASE SEE DETAILS REGARDING SUGGESTED ESCs ON SHEET 4.
2. MEANS OF EROSION AND SEDIMENT PROTECTION AS NOTED ON THE DRAWINGS INDICATE MINIMUM RECOMMENDED PROVISIONS. THE CONTRACTOR IS RESPONSIBLE FOR FINAL SELECTION AND PLACEMENT OF EROSION AND SEDIMENTATION CONTROLS BASED ON ACTUAL SITE AND CONSTRUCTION CONDITIONS. ADDITIONAL MEANS OF PROTECTION SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED FOR CONTINUED OR UNFORESEEN EROSION PROBLEMS, OR AS DIRECTED BY THE ENVIRONMENTAL MONITOR, AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. ESCs SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF AND DURING ALL PHASES OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO AND IMMEDIATELY AFTER ANY DISTURANCE OF EXISTING SURFACE MATERIAL ON THE SITE.
4. AFTER ANY SIGNIFICANT RAINFALL (>0.25 INCHES OF RAINFALL WITHIN 24 HOURS), ESCs SHALL BE INSPECTED FOR INTEGRITY. ANY DAMAGE SHALL BE CORRECTED IMMEDIATELY.
5. PERIODIC INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES SHALL BE PROVIDED TO ENSURE THAT THE INTENDED PURPOSE IS ACCOMPLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEDIMENT LEAVING THE LIMIT OF WORK. ESCs SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKDAY.
6. THE CONTRACOTR SHALL BE RESPONSIBLE FOR PREVENTING SEDIMENT FROM ENTERING ANY STORM DRAINAGE SYSTEM AND FROM BEING CONVEYED TO ANY WETLAND RESOURCE AREA, PUBLIC WAYS, ABUTTING PROPERTY, OR OUTSIDE OF THE PROJECT LIMITS.
7. ANY SEDIMENT TRACKED ONTO PAVED AREAS SHALL BE SWEPT AT THE END OF EACH WORKING DAY.
8. ANY AREAS OUTSIDE OF THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED BY THE CONTRACTOR TO THE PRE-CONSTRUCTION CONDITION/GRADE AT NO COST TO THE OWNER.

GENERAL PROJECT NOTES:

1. TOPOGRAPHIC DATA, PROPERTY LINE INFORMATION, AND EXISTING FEATURES ARE PROVIDED IN THE “EXISTING CONDITIONS PLAN” PREPARED BY KNIGHT HILL LAND SURVEYING SERVICES, INC. DATED 11/06/23.
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, REGULATIONS, AND SAFETY CODES IN THE EXECUTION OF THIS RESTORATION PLAN.
3. THE LOCATION OF ALL AND ELEVATIONS OF ALL EXISTING UTILITIES ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN. PRESENCE AND LOCATIONS OF ALL UTILITIES WITHIN THE LIMIT OF WORK MUST BE DETERMINED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL KEEP A RECORD OF ANY DISCREPANCIES OR CHANGES IN THE LOCATIONS OF ANY UTILITIES SHOWN OR ENCOUNTERED DURING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND NORMANDEAU ASSOCIATES, INC. ANY DAMAGE RESULTING FROM THE FAILURE OF THE CONTRACTOR TO MAKE THESE DETERMINATIONS AND CONTACTS SHALL BE BORNE BY THE CONTRACTOR.
4. THE CONTRACTOR SHALL, THROUGHOUT CONSTRUCTION, TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKS, GRADING, SIDEWALKS, AND SITE DETAILS OUTSIDE OF THE LIMIT OF WORK AS DEFINED ON THE DRAWINGS AND SHALL REPAIR AND REPLACE OR OTHERWISE MAKE GOOD AS DIRECTED BY THE ENVIRONMENTAL MONITOR OR OWNER’S DESIGNATED REPRESENTATIVE ANY SUCH OR OTHER DAMAGE SO CAUSED.
5. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION MEANS AND METHODS.
6. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE AND CONSTRUCTION DOCUMENTS TO DEVELOP A THOROUGH UNDERSTANDING OF THE PROJECT, INCLUDING ANY SPECIAL CONDITIONS AND CONSTRAINTS.
7. IT IS THE CONTRACTOR’S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PROJECT SITE AND TO VERIFY ALL CONDITIONS IN THE FIELD AND REPORT DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE OWNER OR OWNER’S REPRESENTATION IMMEDIATELY.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND ESTABLISHMENT OF ALL EROSION AND SEDIMENT CONTROLS.
9. ELEVATION REFERENCED TO NAVD88.

GENERAL NOTES:

1.) THE EXISTING SITE DETAILS DEPICTED ON THIS PLAN ARE THE RESULTS OF AN ON THE GROUND INSTRUMENT FIELD SURVEY CONDUCTED AUGUST, 2023 BY KNIGHT HILL LAND SURVEYING SERVICES, INC.

2.) PORTIONS OF SUBJECT LOT LIE IN THE FEMA FLOOD ZONE AE DETERMINED TO BE AT OR BELOW ELEVATION 8 OF THE NORTH AMERICAN VERTICAL DATUM OF 88 (NAVD88) PER FLOOD INSURANCE RATE MAP (FIRM) 33015C0270F EFFECTIVE 1/29/2021.

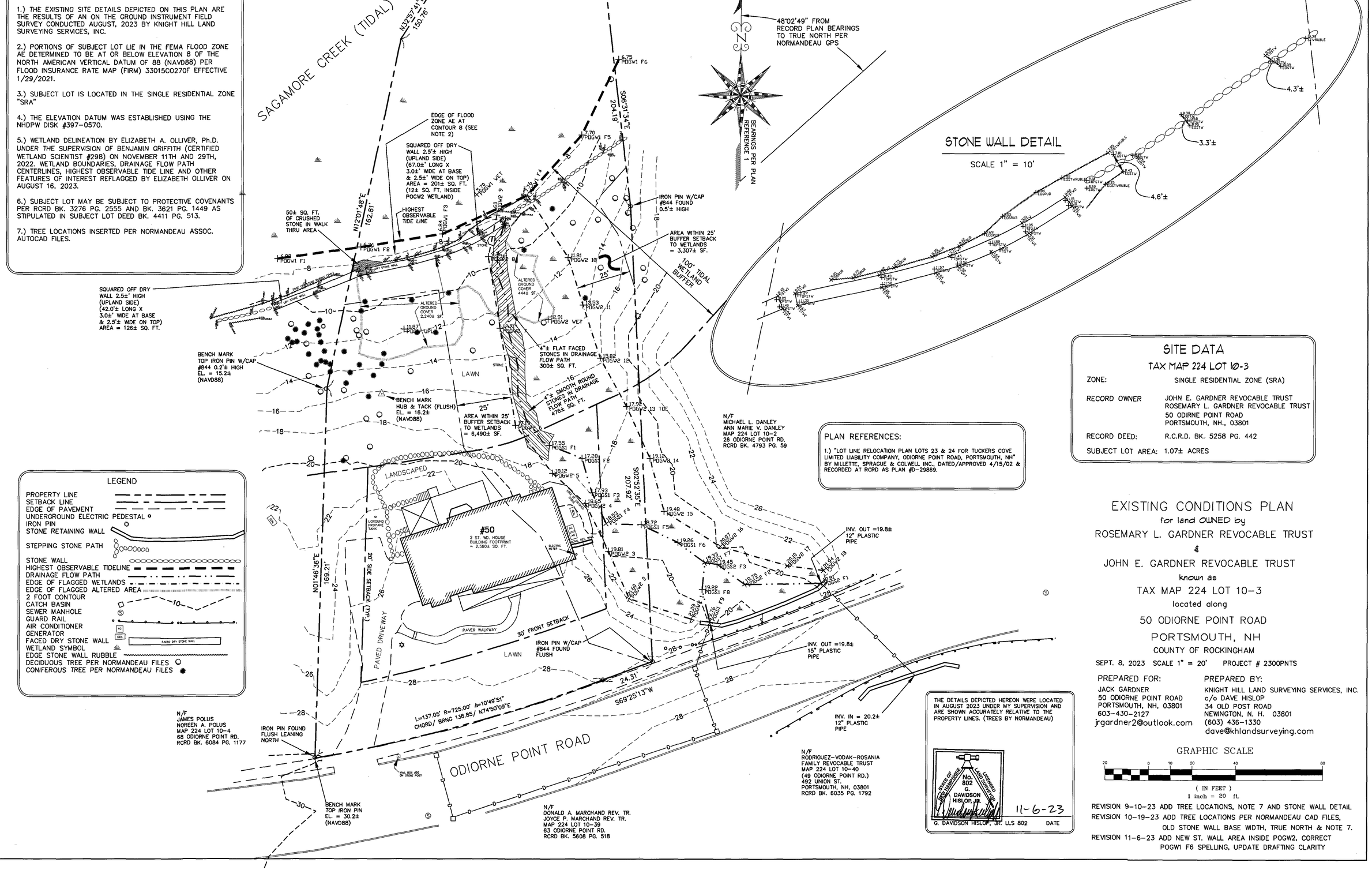
3.) SUBJECT LOT IS LOCATED IN THE SINGLE RESIDENTIAL ZONE "SRA"

4.) THE ELEVATION DATUM WAS ESTABLISHED USING THE NHDPW DISK #397-0570.

5.) WETLAND DELINEATION BY ELIZABETH A. OLLIVER, Ph.D. UNDER THE SUPERVISION OF BENJAMIN GRIFFITH (CERTIFIED WETLAND SCIENTIST #298) ON NOVEMBER 11TH AND 29TH, 2022. WETLAND BOUNDARIES, DRAINAGE FLOW PATH CENTERLINES, HIGHEST OBSERVABLE TIDE LINE AND OTHER FEATURES OF INTEREST REFLAGGED BY ELIZABETH OLLIVER ON AUGUST 16, 2023.

6.) SUBJECT LOT MAY BE SUBJECT TO PROTECTIVE COVENANTS PER RCRD BK. 3276 PG. 2555 AND BK. 3621 PG. 1449 AS STIPULATED IN SUBJECT LOT DEED BK. 4411 PG. 513.

7.) TREE LOCATIONS INSERTED PER NORMANDEAU ASSOC. AUTOCAD FILES.



STONE WALL DETAIL

SCALE 1" = 10'

LEGEND

- PROPERTY LINE
- SETBACK LINE
- EDGE OF PAVEMENT
- UNDERGROUND ELECTRIC PEDESTAL
- IRON PIN
- STONE RETAINING WALL
- STEPPING STONE PATH
- STONE WALL
- HIGHEST OBSERVABLE TIDELINE
- DRAINAGE FLOW PATH
- EDGE OF FLAGGED WETLANDS
- EDGE OF FLAGGED ALTERED AREA
- 2 FOOT CONTOUR
- CATCH BASIN
- SEWER MANHOLE
- GUARD RAIL
- AIR CONDITIONER (AC)
- GENERATOR (GEN)
- FACED DRY STONE WALL (FACED DRY STONE WALL)
- WETLAND SYMBOL
- EDGE STONE WALL RUBBLE
- DECIDUOUS TREE PER NORMANDEAU FILES
- CONIFEROUS TREE PER NORMANDEAU FILES

PLAN REFERENCES:

1.) "LOT LINE RELOCATION PLAN LOTS 23 & 24 FOR TUCKERS COVE LIMITED LIABILITY COMPANY, ODIORNE POINT ROAD, PORTSMOUTH, NH" BY MILLETTE, SPRAGUE & COLWELL INC., DATED/APPROVED 4/15/02 & RECORDED AT RCRD AS PLAN #D-29869.

THE DETAILS DEPICTED HEREON WERE LOCATED IN AUGUST 2023 UNDER MY SUPERVISON AND ARE SHOWN ACCURATELY RELATIVE TO THE PROPERTY LINES. (TREES BY NORMANDEAU)

STATE OF NEW HAMPSHIRE — No. 802 — G. DAVIDSON HISLOP, JR. — LICENSED LAND SURVEYOR

11-6-23

G. DAVIDSON HISLOP, JR. LLS 802 DATE

SITE DATA

TAX MAP 224 LOT 10-3

ZONE:	SINGLE RESIDENTIAL ZONE (SRA)
RECORD OWNER	JOHN E. GARDNER REVOCABLE TRUST ROSEMARY L. GARDNER REVOCABLE TRUST 50 ODIRNE POINT ROAD PORTSMOUTH, NH., 03801
RECORD DEED:	R.C.R.D. BK. 5258 PG. 442
SUBJECT LOT AREA:	1.07± ACRES

EXISTING CONDITIONS PLAN

for land OWNED by

ROSEMARY L. GARDNER REVOCABLE TRUST

&

JOHN E. GARDNER REVOCABLE TRUST

known as

TAX MAP 224 LOT 10-3

located along

50 ODIORNE POINT ROAD

PORTSMOUTH, NH

COUNTY OF ROCKINGHAM

SEPT. 8, 2023 SCALE 1" = 20' PROJECT # 2300PNTS

PREPARED FOR:
JACK GARDNER
50 ODIORNE POINT ROAD
PORTSMOUTH, NH, 03801
603-430-2127
jrgardner2@outlook.com

PREPARED BY:
KNIGHT HILL LAND SURVEYING SERVICES, INC.
c/o DAVE HISLOP
34 OLD POST ROAD
NEWINGTON, N. H. 03801
(603) 436-1330
dave@khlandsurveying.com

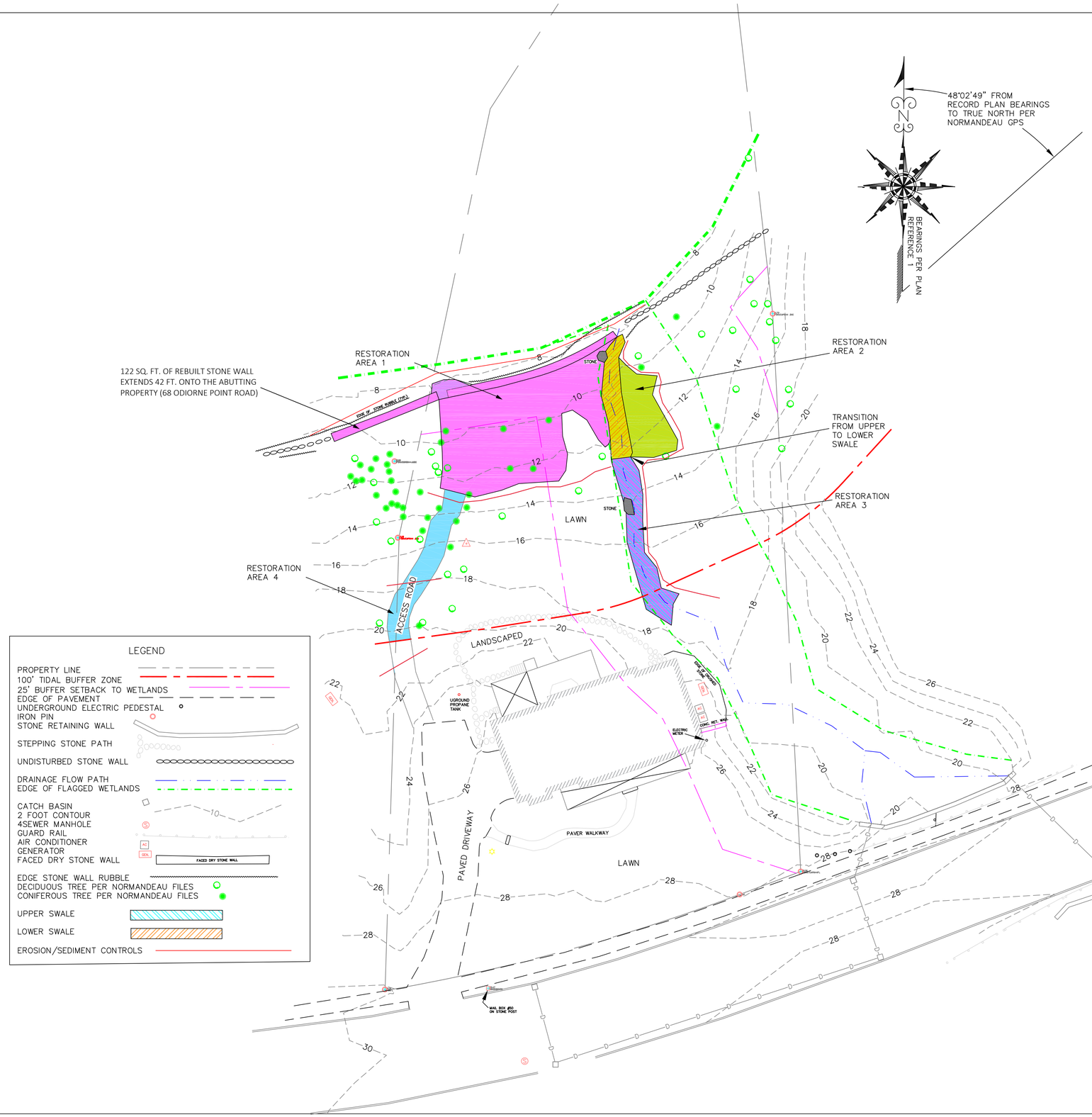
GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

REVISION 9-10-23 ADD TREE LOCATIONS, NOTE 7 AND STONE WALL DETAIL
REVISION 10-19-23 ADD TREE LOCATIONS PER NORMANDEAU CAD FILES, OLD STONE WALL BASE WIDTH, TRUE NORTH & NOTE 7.
REVISION 11-6-23 ADD NEW ST. WALL AREA INSIDE POGW2, CORRECT POGW1 F6 SPELLING, UPDATE DRAFTING CLARITY

2300PNTS



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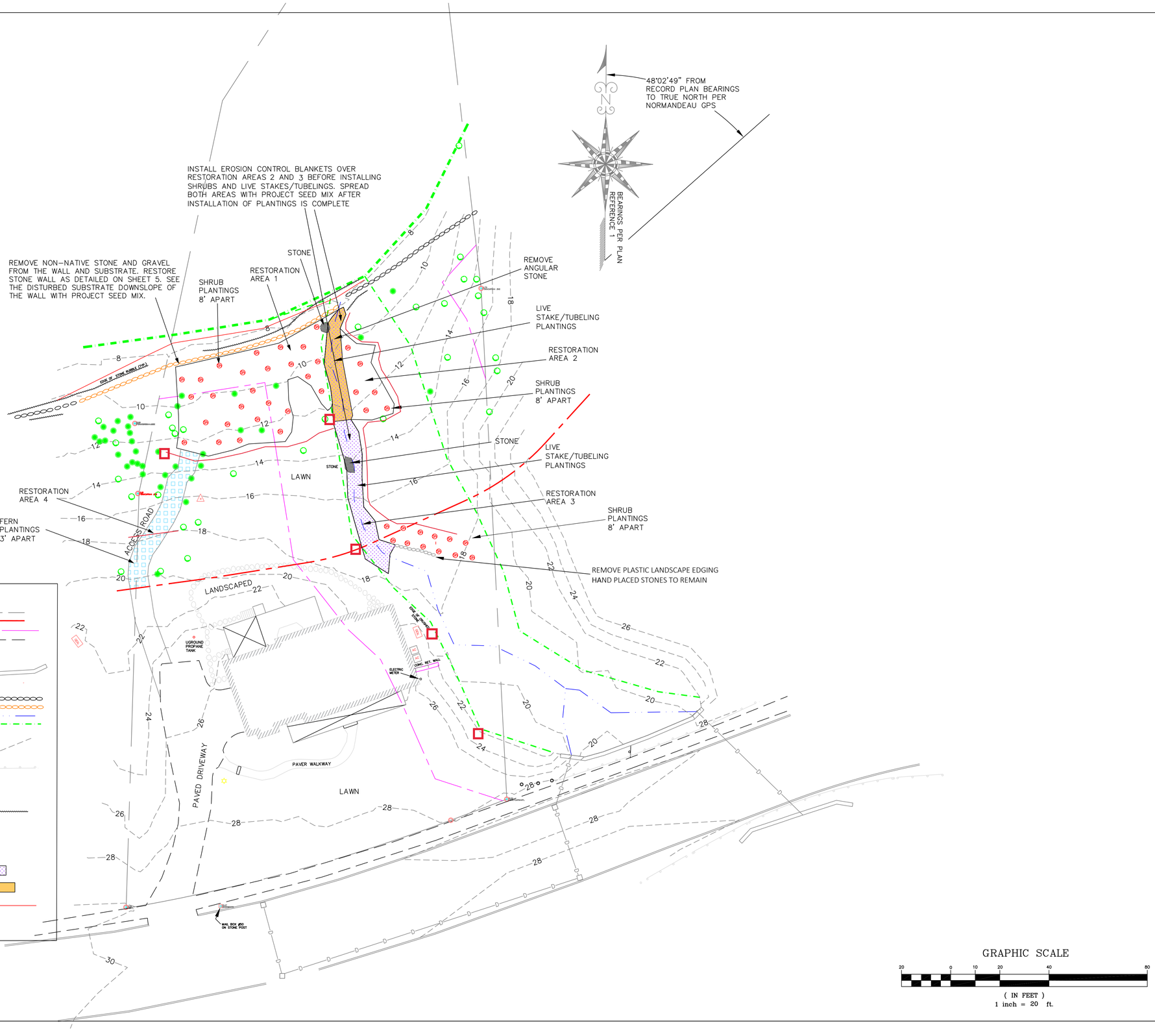
NORMANDEAU ASSOCIATES, INC.
PORTSMOUTH, NEW HAMPSHIRE

PROPOSED RESTORATION AREAS
AND EROSION AND SEDIMENT CONTROLS

PROJECT NUMBER:
24780.000

SHEET NUMBER: 2 OF 9



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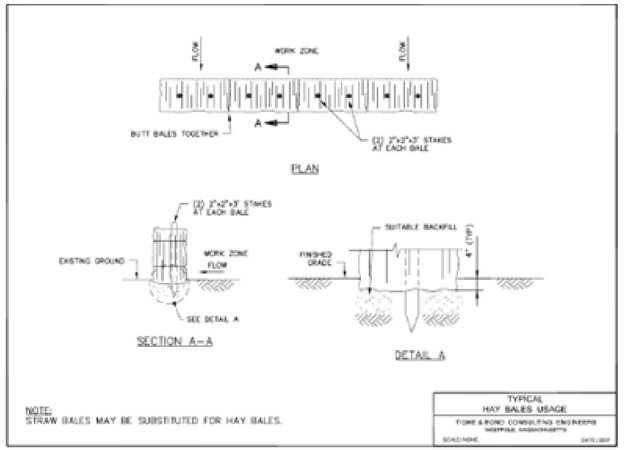
PROPOSED CONDITIONS AND PLANTING PLAN

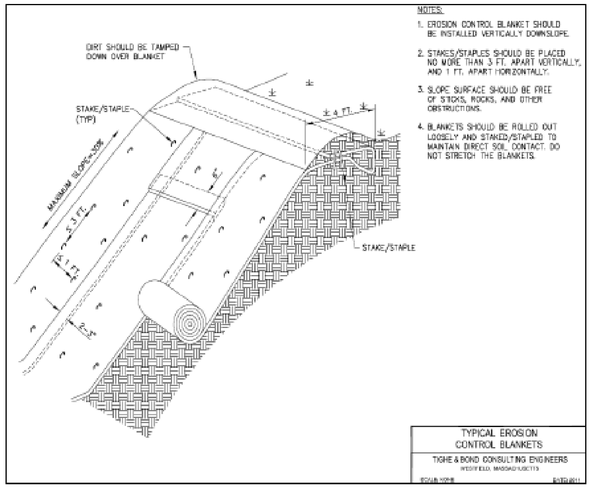
PROJECT NUMBER: 24780.000

SHEET NUMBER: 3 OF 9

Properly installed hay bale barrier with silt fence (direction of flow indicated by arrow).

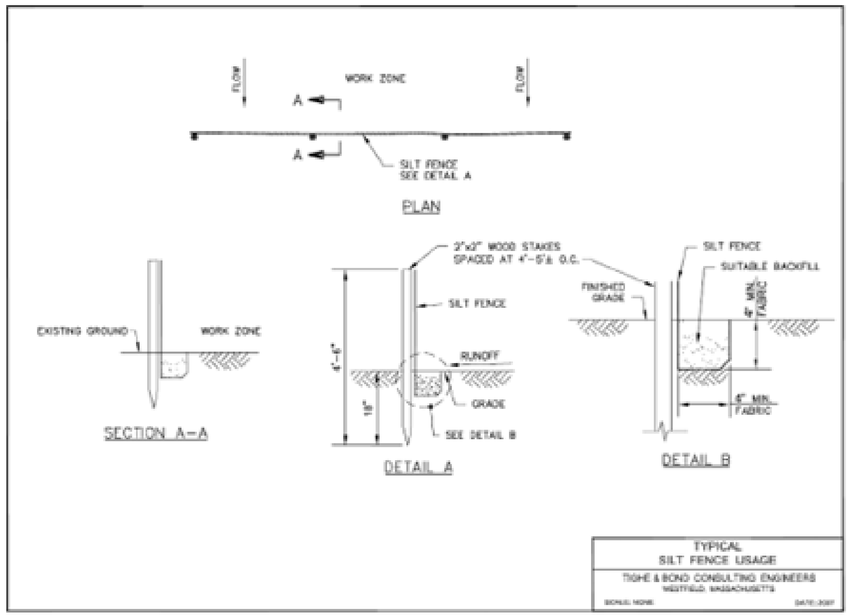


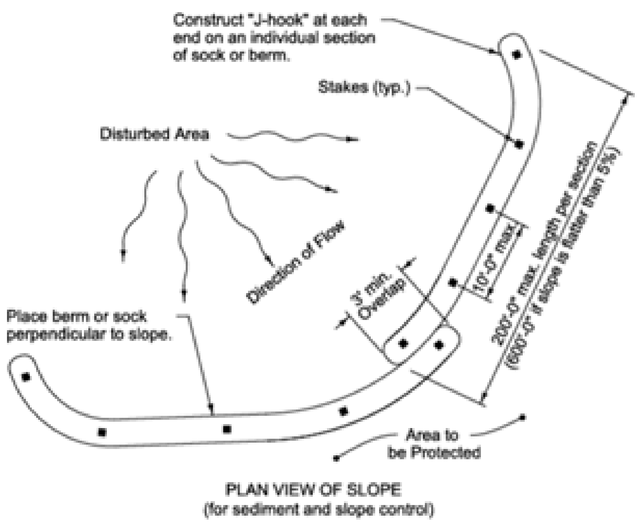
TYPICAL WEED FREE STRAW OR HAY BALE INSTALLATION

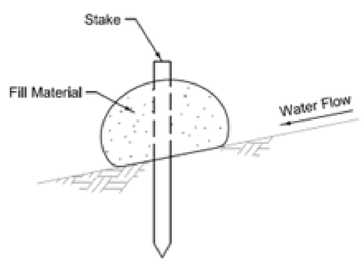


TYPICAL EROSION CONTROL BLANKET INSTALLATION

TYPICAL SILT FENCE INSTALLATION







TYPICAL FILTER SOCK INSTALLATION PLAN AND CROSS-SECTION VIEW

REFERENCES:
TYPICAL WEED FREE STRAW OR HAY BALE, EROSION CONTROL BLANKET, AND SILT FENCE INSTALLATION DETAILS ARE SOURCED FROM THE NHDES BEST MANAGEMENT PRACTICES MANUAL FOR UTILITY MAINENCE IN AND ADJACENT TO WETLANDS AND WATERBODIES IN NEW HAPSHIRE DATED MARCH 2019

TYPICAL FILTER SOCK INSTALLATION DETAILS ARE SOURCED FROM THE IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS - STANDARD SPECIFICATIONS

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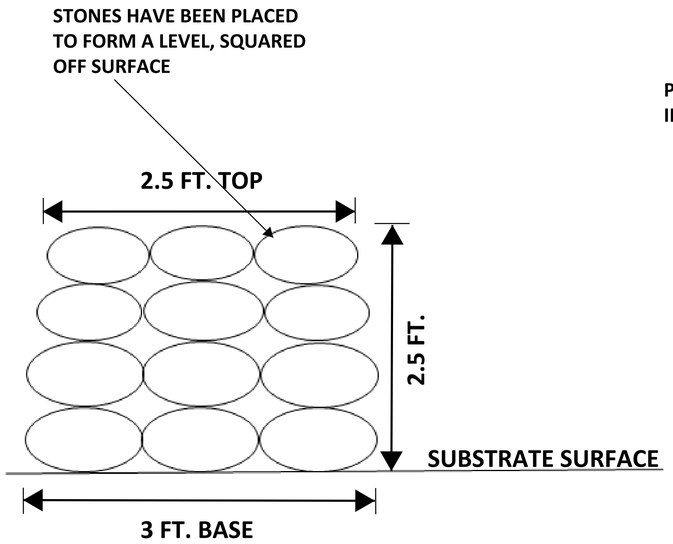
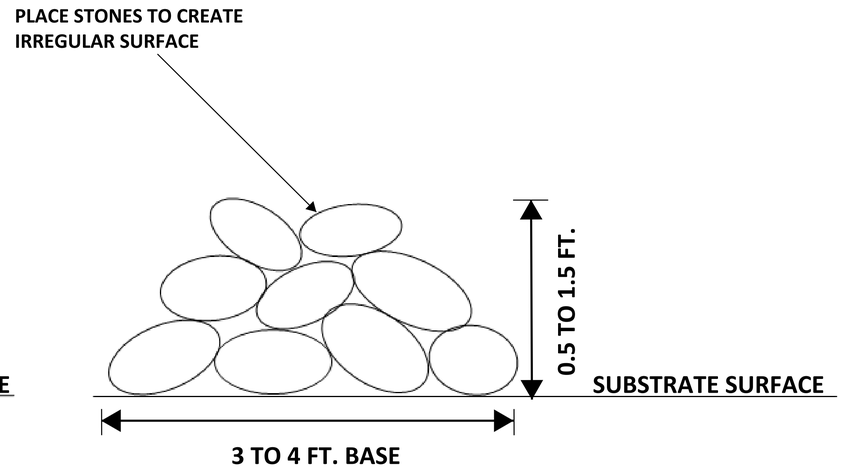
EROSION CONTROL DETAILS

PROJECT NUMBER: 24780.000



TYPICAL EXISTING STONE WALL CROSS-SECTION
(NOT TO SCALE)



TYPICAL PROPOSED STONE WALL CROSS-SECTION
(NOT TO SCALE)

STONE WALL RESTORATION NOTES:

1. THE 10-15 TONS OF FILLER STONE AND GRAVEL BROUGHT IN FROM OFF-SITE SHALL BE REMOVED FROM THE STONE WALL TO THE EXTENT PRACTICAL AND DISPOSED OFF-SITE.
2. REMAINING STONE ON-SITE SHALL BE REORGANIZED AS NEEDED TO CREATE A LOW, LOOSE-PILE STONE WALL CONSISTENT WITH THE UNDISTURBED SECTION OF STONE WALL AT THE NORTHERN END OF THE PROPERTY (SEE FIGURES 1 AND 2 BELOW)
3. THE RESTORED STONE WALL SHALL BE BUILT TO HAVE A BASE OF VARIABLE WIDTH BETWEEN 3 AND 4 FEET AND A VARIABLE HEIGHT BETWEEN 0.5 AND 1.5 FEET RELATIVE TO THE SUBSTRATE SURFACE ON THE UPSLOPE SIDE OF THE WALL.
4. THE CROSS-SECTION SHAPE OF THE RESTORED WALL SHALL GENERAL CONFORM WITH THAT SHOWN IN THE PROPOSED STOEN WALL DETAIL, WITH NO LEVELED OR SQUARED OFF SURFACES.

*PLEASE NOTE THAT THE CROSS-SECTION DETAILS AND THE NUMBER AND DIMENSION OF STONES WITHIN THEM ARE REPRESENTATIVE AND NOT DRAWN TO SCALE OR TO REPLICATE REAL WORLD CONDITIONS.

FIGURE 1. UNDISTURBED PORTION OF STONE WALL AT NORTHERN END OF PROPERTY. CORRESPONDS WITH THE SECTION OF STONE WALL CIRCLED IN RED IN FIGURE 2. (8/26/23)

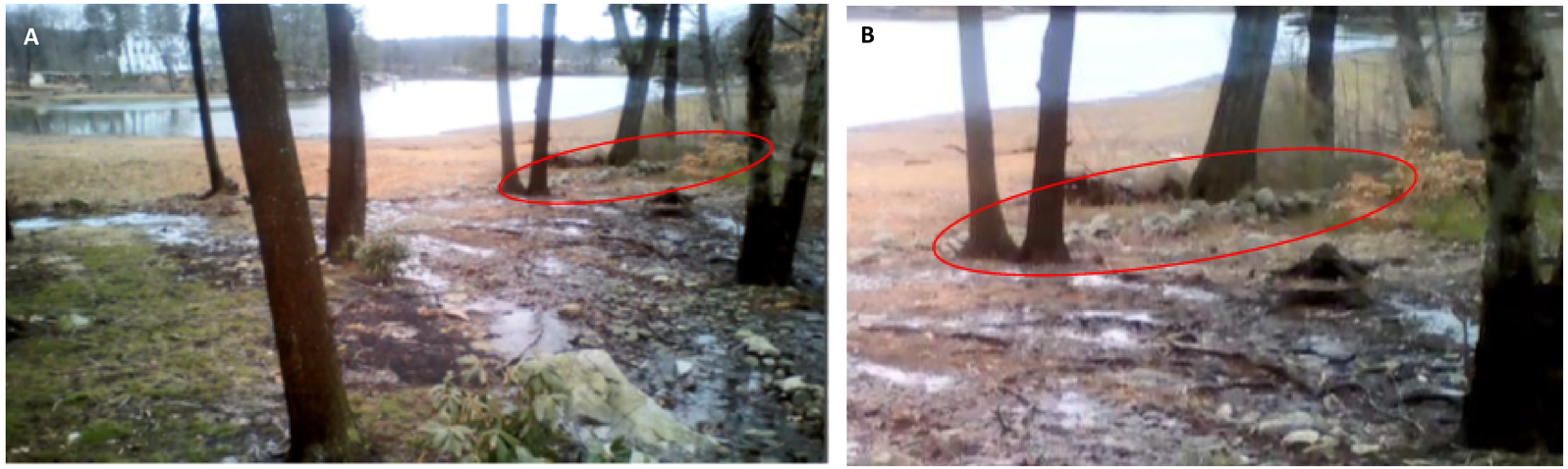


FIGURE 2. A) SCREEN CAPTURE FROM VIDEO SHOWING CONDITIONS ON IN VICINITY OF THE CURRENT LOWER HALF OF THE SWALE. VIDEO DATES TO PRIOR TO THE STONE WALL REBUILD IN 2022 BUT AFTER THE COMPLETION OF THE UPPER STONE SWALE INSTALLTION IN 2017. AREA CIRCLED IN RED REPRESENTS THE SECTION OF UNDISTURBED STONE WALL TO SERVE AS THE TEMPLATE FOR THE STONE WALL RESTORATION BASED ON DISCUSSIONS WITH THE CITY AND NHDES. B) ZOOMED IN VIEW OF THE TEMPLATE SECTION OF STONE WALL

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STONE WALL RESTORATION DETAILS

PROJECT NUMBER:
24780.000

SHEET NUMBER: 5 OF 9

RESTORATION PLANTINGS				
PLANT NAME	**TYPE**	**PLANT SIZE**	**PLANT QUANTITY**	**SPACING**
RESTORATION AREA 1 - STONE WALL RESTORATION				
CLETHRA ALNIFOLIA + (SWEET PEPPERBUSH)	SHRUB PLANTING	18-24" CONTAINER	8	8 FT. OC
TAXUS CANADENSIS ^ (AMERICAN YEW)	SHRUB PLANTING	Not listed at NEWP	8	8 FT. OC
VIBURNUM ACERIFOLIUM + (MAPLELEAF VIBURNUM)	SHRUB PLANTING	18-24" CONTAINER	10	8 FT. OC
RESTORATION AREA 2 - LOWER SWALE REMOVAL				
SPIRAEA ALBA + (MEADOWSWEET)	SHRUB PLANTING	18-24" CONTAINER	6	8 FT. OC
CORNUS AMOMUM + (SILKY DOGWOOD)	LIVE STAKE/TUBELING	2-3' (LIVE STAKES)/ 5" DEEP PLUG (TUBELINGS)	67	1-2 FT. OC
SALIX DISCOLOR + (PUSSY WILLOW)	LIVE STAKE/TUBELING	2-3' (LIVE STAKES)/ 5" DEEP PLUG (TUBELINGS)	67	1-2 FT. OC
PROJECT SEED MIX (TO BE SPREAD IN RESTORATION AREAS 1 AND 2)				
DICHANTHELIUM CLANDESTINUM * (DEER TONGUE)	SEED	-	1 lb./1000 sq. ft.	-
PANICUM VIRGATUM * (SWITCH PANIC GRASS)	SEED	-	1/2 lb./1000 sq. ft.	-
JUNCUS TENUIS ‡ (PATH RUSH)	SEED	-	0.6 lb./acre	-
RESTORATION AREAS 3 - UPPER SWALE REMOVAL				
CORNUS AMOMUM + (SILKY DOGWOOD)	LIVE STAKE/TUBELING	2-3' (LIVE STAKES)/ 5" DEEP PLUG (TUBELINGS)	106	1-2 FT. OC
SALIX DISCOLOR + (PUSSY WILLOW)	LIVE STAKE/TUBELING	2-3' (LIVE STAKES)/ 5" DEEP PLUG (TUBELINGS)	106	1-2 FT. OC
CORNUS AMOMUM + (SILKY DOGWOOD)	SHRUB PLANTING	18-24" CONTAINER	6	8 FT. OC
SALIX DISCOLOR + (PUSSY WILLOW)	SHRUB PLANTING	18-24" CONTAINER	6	8 FT. OC
NEW ENGLAND SEMI-SHADE GRASS AND FORBS +	SEED	-	1lb/1450 sq. ft.	-
RESTORATION AREA 4 - ACCESS ROUTE RESTORATION				
PARATHELYPTERIS NOVEBORACENSIS + (NEW YORK FERN)	FERN PLANTING	#1	60	2-3 FT. OC
NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES +	SEED	-	1lb/1250 sq. ft.	-

GENERAL PLANTING NOTES:

1. **PLANTING MATERIALS CURRENTLY PROPOSED TO BE SOURCED FROM THE FOLLOWING PROVIDERS:**
   NEW ENGLAND WETLAND PLANTS, INC. (INDICATED BY +)
   PIERSON NURSERIES, INC. (INDICATED BY ^)
   THE VERMONT WILDFLOWER FARM (INDICATED BY *)
   ERNEST SEEDS (INDICATED BY ‡)
2. **SPACING OF PLANTING INSTALLATIONS FOR EACH SPECIES SHALL CONFORM WITH THE OFF-CENTER SPACING INFORMATION PROVIDED IN THE RESTORATION PLANTINGS TABLE.**
3. **CHOICE OF WHETHER TO USE LIVE STAKES OR TUBELINGS WILL DEPEND ON THE TIMING OF WORK. LIVE STAKES SHOULD ONLY BE USED IF IT IS POSSIBLE TO COMPLETE LIVE STAKE PLANTING PRIOR TO THE END OF THE WOODY VEGETATION SENESCENCE PERIOD (TYPICALLY THE END OF MARCH INTO EARLY APRIL).**
4. **APPLICATION RATE OF EACH SEED OR SEED MIX USED SHALL CONFORM WITH THOSE PROVIDED BY THE SELLER, WHICH ARE PROVIDED IN THE RESTORATION PLANTING TABLE. SEED CAN BE SOWN BY HAND OR WITH A HANDHELD SPREADER.**
5. **A LIGHT MULCH (NO MORE THAN 1" THICK) OF CLEAN, WEED FREE STRAW IS RECOMMENDED IN ALL RESTORATION AREAS.**
6. **IF SPRING CONDITIONS ARE DRIER THAN USUAL, WATERING OF PLANTINGS AND SEEDED AREA MAY BE REQUIRED.**
7. **A WARRANTY OF 1 YEAR, 85 PERCENT CARE AND REPLACEMENT WARRANTY FOR ALL PURCHASED SHRUB AND FERN PLANTINGS SHALL BE MAINTAINED BY THE CONTRACTOR RESPONSIBLE PLANTING INSTALLATION. A PERIOD OF CARE AND REPLACEMENT SHALL BEGIN AFTER INSPECTION AND APPROVAL OF THE INITIAL PLANTINGS INSTALLATION AND CONTINUE FOR 1 YEAR, WITH ONE POTENTIAL REPLACEMENT PERIOD. THE CONTRACTOR INSTALLING THE PLANTINGS SHALL NOT BE RESPONSIBLE FOR PLANTINGS THAT HAVE BEEN DAMAGED BY VANDALISM, FIRE, FLOODING, OR OTHER ACTIVTIES BEYOND THE CONTRACTORS CONTROL.**

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GENERAL PLANTING DETAILS

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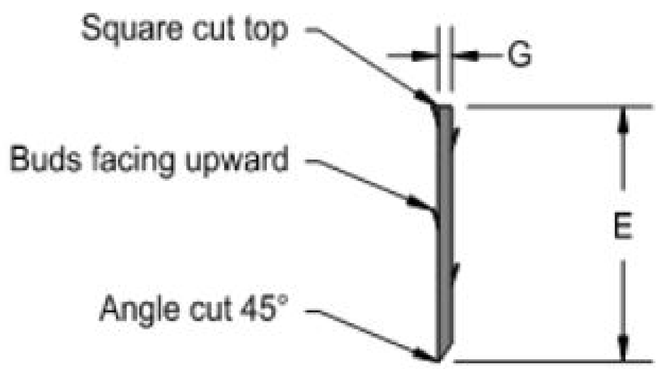
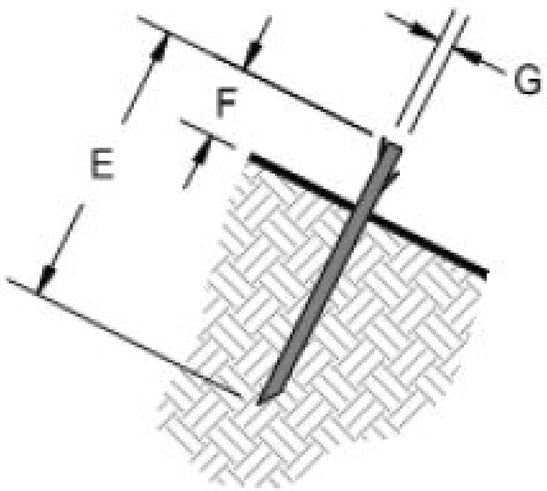


LIVE STAKE DETAIL

TUBELING DETAIL



INSTALLED LIVE STAKE DETAIL

INSTALLED TUBELING DETAIL

LIVE STAKE/TUBELING NOTES:

1. LIVE STAKES/TUBELINGS SHALL CONSIST OF A MIX OF THE TWO FOLLOWING SPECIES, WITH EACH SPECIES COMPRISING APPROXIMATELY 50 PERCENT OF THE MIX: SILKY DOGWOOD (CORNUS AMOMUM) AND PUSSY WILLOW (SALIX DISCOLOR).

2. SEE GENERAL PLANTING NOTE #3 ON SHEET 6 REGARDING CHOICE OF USING LIVE STAKES VERSUS TUBELINGS FOR THIS PROJECT.

3. IF USING LIVE STAKES:
   a. LIVING CUTTINGS FOR LIVE STAKES SHALL BE ½ TO 1 ½ INCHES IN DIAMETER (G IN LIVE STAKE DETAILS) AND 2 TO 3 FEET IN LENGTH (E LIVE STAKE DETAILS). SIDE BRANCHES SHALL BE REMOVED AND THE BARK LEFT INTACT PRIOR TO INSTALLATION. BUDS ON THE STAKES SHALL BE ORIENTED IN AN UPWARD POSITION AND THE BASAL ENDS TAPERED FOR EASY INSERTION INTO THE SUBSTRATE. THE TOP SHALL BE CUT SMOOTH AND SQUARE
   b. PILOT HOLES, SMALLER IN DIAMETER THAN THE LIVE STAKES, SHALL BE DRILLED/DRIVEN INTO THE SUBSTRATE. THE STAKE SHALL THEN BE DRIVEN INTO THE PILOT HOLES SO THAT 67 TO 75 PERCENT OF EACH STAKE IS BELOW THE GROUND SURFACE (DIFFERENCE BETWEEN E AND F IN INSTALLED LIVE STAKE DETAIL).

4. IF USING TUBELINGS:
   a. TUBELINGS SHALL CONSIST OF A ROOTED CUTTING IN A 5-INCH DEEP PLUG CELL AND MEASURE BETWEEN 8 AND 24 INCHES IN HEIGHT.
   b. PLANTING HOLES SLIGHTLY DEEPER AND WILDER THAN THE 5-INCH DEEP PLUGS SHALL BE DUG INTO THE SUBSTRATE. THE PLUGS SHALL BE PLACED IN THESE HOLES AND BACK FILLED WITH EXCESS SOIL.

5. LIVE STAKES/TUBELINGS SHALL BE PLANTED AT 90 DEGREE ANGLE TO THE SUBSTRATE AND BE SPACED 1 TO 2 FEET OFF-CENTER. SMALLER SPACING (1 FOOF OFF-CENTER) SHALL BE USED IN THE CENTER 3 to 4 FEET OF THE SWALE, WITH SPACING GRADUALLY INCREASED UP TO 2 FEET OFF-CENTER PROGRESSING OUT TO THE SIDES OF THE SWALE. THE TWO SPECIES SHALL BE RANDOMLY INTERMIXXED.

6. MINIMAL RETAINED STONE SHALL BE INSTALLED BACK IN THE UPPER SWALE IN RESTORATION AREA 3 AT THE SAME TIME AS THE LIVE STAKE/ TUBELING INSTALLATION.

7. STAKES/TUBELINGS SHALL BE INSTALLED THROUGH THE EROSION CONTROL BLANKET, TO BE INSTALLED AFTER FINALIZATION OF ANY NECESSARY GRADING.

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LIVE STAKE/TUBELING DETAILS

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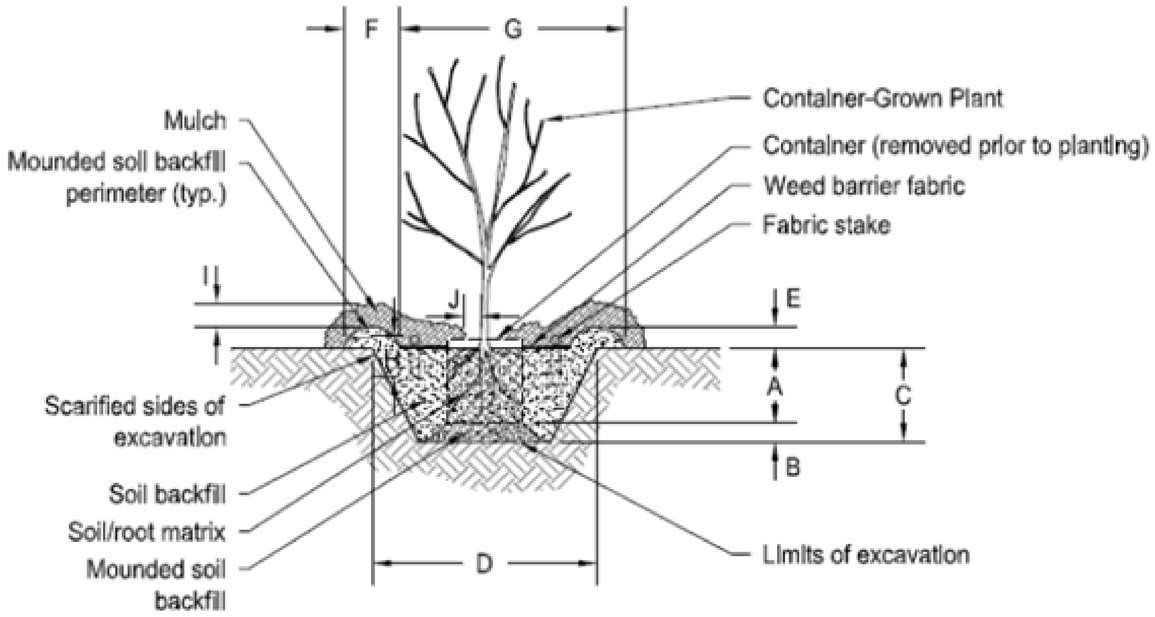

TYPICAL CONTAINER-GROWN PLANT INSTALLATION DETAIL

SHRUB AND FERN PLANTING NOTES:

1. **SHRUBS TO BE INSTALLED IN RESTORATION AREA 1 SHALL CONSIST OF A MIX OF THE THREE FOLLOWING SPECIES, WITH EACH SPECIES COMPRISING NO MORE THAN 50 PERCENT AND NO LESS THAN 20 PERCENT OF THE MIX: SWEET PEPPERBUSH (CLETHRA ALNIFOLIA), AMERICAN YEW (TAXUS CANADENSIS), AND MAPLELEAF VIBURNUM (VIBURNUM ACERFOLIUM). SHRUB SPECIES SHOULD BE PLANTED IN AN INTERMIXXED CONFIGURATION.**
2. **SHRUBS TO BE INSTALLED IN RESTORATION AREAS 2 SHALL BE MEADOWSWEET (SPIRAEA ALBA VAR. LATIFOLIA).**
3. **SHRUBS TO BE INSTALLED IN RESTORATION AREA 3 SHALL BE SILKY DOGWOOD (CORNUS AMOMUM) AND PUSSY WILLOW (SALIX DISCOLOR) AND SHOULB BE INTERMIXXED WHEN PLANTING.**
4. **FERNS TO BE INSTALLED IN RESTORATION AREA 4 SHALL CONSIST OF NEW YORK FERN (PARATHELYPTERIS NOVEBORACENSIS).**
5. **SHRUB AND FERN PLANTINGS SHALL BE INSTALLED BASED ON THE CONTAINER-GROWN PLANT INSTALLATION DETAIL AND ASSOCIATED TABLE.**
6. **SHRUBS SHALL BE INSTALLED IN A SPACING OF 8 FT. OFF-CENTER FROM OTHER SHRUBS. IN RESTORATION AREAS 1 THROUGH 3, THE THREE SPECIES OF SHRUB TO BE USED IN RESTORATION AREA 1 SHOULD BE INTERMIXXED.**
7. **FERNS SHALL BE INSTALLED IN A SPACING OF 2 to 3 FT. OFF-CENTER.**

Dimension[1]	Name	Typical Unit	Guidelines[2]	Description
A	Planting depth	Varies	Depth as required based on dimension of container soil and roots.	Planting depth of the container grown plant.
B	Heigth of mounded soil backfill	Inches	--	Height of mounded loose soil placed in over-excavated planting pit.
C	Depth of planting pit	Varies	Depth as required based on dimension of container soil and roots.	Depth of the planting pit; accomodates dimension of container soil and roots as well as mounded loose soil at bottom of pit.
D	Width of planting pit	Varies	1 ½ to 2 times the width of the container soil and roots.	Over-excavated width of the planting pit; accomodates the width of the container soil and roots.
E	Heigth of mounded soil perimeter	Inches	3"	Height of soil berm constructed along the perimeter of the planting pit; helps retain water.
F	Width of mounded soil perimeter	Inches	8"	Width of soil berm constructed along the perimeter of the planting pit; helps retain water.
G	Width of weed barrier fabric (not recommended)	Inches	--	Width of fabric placed on surface to control weeds within the mounded soil perimeter
H	Fabric stake length (not recommended)	Inches	4-6"	Length of staples/spikes used to secure weed barrier fabric
I	Thickness of mulch	Inches	1"	Thickness of weed free straw mulch.
J	Gap between mulch and plant stem/trunk	Inches	2"	Room between plant stem/trunk and mulch.

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CONTAINER GROWN PLANTING NOTES

PROJECT NUMBER: 24780.000

Construction Sequence

1. **Installation of all necessary erosion and sediment controls and substrate protection in Restoration Area 1 as shown on the plans and specified in the notes in Attachment B.**

2. **Remove the estimated 10-15 tons of non-native stone and gravel forming the top portion of the stone wall in Restoration Area 1 and the Lower Swale Restoration Area 2.**

3. **Remove all non-native gravel spread over the substrate in the 50 sq. ft. area between the sections of rebuilt wall in Restoration Area 1 and in the 444 sq. ft. area north of the lower half of the swale in Restoration Area 2. Also remove any remaining landscaping fabric from the Lower Swale.**

4. **Remove all the stone and liner from the Upper Swale in Restoration Area 3. Retain a subset of smaller stones for re-installation in the Upper Swale.**

5. **Reconfigure the remaining native stones on site to create a stone wall with a general cross-section shape and dimensions as outlined in the Proposed Stone Wall Detail on Sheet 5 in Attachment B. Centerline of the stone wall should follow that of the existing wall.**

6. **Regrade substrate in Restoration Area 2 to eliminate any trace channel topography and install biodegradable, wildlife friendly erosion control blanket over the swale footprint in Restoration Areas 2 and 3.**

7. **Remove substrate protection in Restoration Area 1, lightly aerate the substrate to mitigate soil compaction and prepare substrate for planting.**

8. **Install all shrubs and/or live stakes as specified on Sheets 3 and 6 through 8 in Restoration Areas 1 through 3. Re-install a minimal amount of reserved smaller stone in the Upper Swale at the same time as live stakes installation.**

9. **Lightly aerate the soil to mitigate soil compaction and install fern plantings in Restoration Area 4 as specified on Sheets 3, 6, and 8.**

10. **Spread the seed mixes at the appropriate application rates specified in the Restoration Planting Table on Sheet 6 in Attachment B. Cover all disturbed seeded areas with a light layer of weed-free straw.**

11. **Install any supplemental erosion and sediment controls determined needed at the conclusion of restoration activities.**

12. **Install "Do not disturb or cut" signage at specified locations shown on Sheet 3.**

13. **Complete as-built documentation and reporting and commence post-construction monitoring protocols.**

14. **Temporary erosion and sediment controls will remain in place and be maintained until the site has been confirmed to be stabilized (>75% herbaceous ground cover and a lack of signs of erosion and sediment transport in all disturbed portions of the project area) by the environmental monitor. Maintenance and removal of erosion controls such as filter socks, silt fencing, and/or hay bales will be done by hand and be the responsibility of the Environmental Monitor. Erosion control blankets will remain in place and be allowed to biodegrade into the substrate.**

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CONSTRUCTION SEQUENCE

PROJECT NUMBER: 24780.000

Attachment C: Project Plan Notes

Full size copies of the notes provided on the Cover Sheet and Sheets 5 through 8 of the Project Plans in Attachment B.

EROSION AND SEDIMENT CONTROL NOTES (COVER SHEET):

1. ALL EROSION AND SEDIMENT CONTROL MEASURES (ECSs) SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE NHDES BEST MANAGEMENT PRACTICES MANUAL FOR UTILITY MAINTENANCE IN AND ADJACENT TO WETLANDS AND WATERBODIES IN NEW HAMPSHIRE DATED MARCH 2019. PLEASE SEE DETAILS REGARDING SUGGESTED ESCs ON SHEET 4.

2. MEANS OF EROSION AND SEDIMENT PROTECTION AS NOTED ON THE DRAWINGS INDICATE MINIMUM RECOMMENDED PROVISIONS. THE CONTRACTOR IS RESPONSIBLE FOR FINAL SELECTION AND PLACEMENT OF EROSION AND SEDIMENTATION CONTROLS BASED ON ACTUAL SITE AND CONSTRUCTION CONDITIONS. ADDITIONAL MEANS OF PROTECTION SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED FOR CONTINUED OR UNFORESEEN EROSION PROBLEMS, OR AS DIRECTED BY THE ENVIRONMENTAL MONITOR, AT NO ADDITIONAL EXPENSE TO THE OWNER.

3. ESCs SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF AND DURING ALL PHASES OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO AND IMMEDIATELY AFTER ANY DISTURANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

4. AFTER ANY SIGNIFICANT RAINFALL (>0.25 INCHES OF RAINFALL WITHIN 24 HOURS), ESCs SHALL BE INSPECTED FOR INTEGRITY. ANY DAMAGE SHALL BE CORRECTED IMMEDIATELY.

5. PERIODIC INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES SHALL BE PROVIDED TO ENSURE THAT THE INTENDED PURPOSE IS ACCOMPLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEDIMENT LEAVING THE LIMIT OF WORK. ESCs SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKDAY.

6. THE CONTRACOTR SHALL BE RESPONSIBLE FOR PREVENTING SEDIMENT FROM ENTERING ANY STORM DRAINAGE SYSTEM AND FROM BEING CONVEYED TO ANY WETLAND RESOURCE AREA, PUBLIC WAYS, ABUTTING PROPERTY, OR OUTSIDE OF THE PROJECT LIMITS.

7. ANY SEDIMENT TRACKED ONTO PAVED AREAS SHALL BE SWEPT AT THE END OF EACH WORKING DAY.

8. ANY AREAS OUTSIDE OF THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED BY THE CONTRACTOR TO THE PRE-CONSTRUCTION CONDITION/GRADE AT NO COST TO THE OWNER.

GENERAL PROJECT NOTES (COVER SHEET):

TOPOGRAPHIC DATA, PROPERTY LINE INFORMATION, AND EXISTING FEATURES ARE PROVIDED IN THE "EXISTING CONDITIONS PLAN" PREPARED BY KNIGHTS HILL LAND SURVEYING SERVICES, INC. DATED 11/06/23.

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, REGULATIONS, AND SAFETY CODES IN THE EXECUTION OF THIS RESTORATION PLAN.

THE LOCATION OF ALL AND ELEVATIONS OF ALL EXISTING UTILITIES ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN. PRESENCE AND LOCATIONS OF ALL UTILITIES WITHIN THE LIMIT OF WORK MUST BE DETERMINED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL KEEP A RECORD OF ANY DISCREPANCIES OR CHANGES IN THE LOCATIONS OF ANY UTILITIES SHOWN OR ENCOUNTERED DURING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND NORMANDEAU ASSOCIATES, INC. ANY DAMAGE RESULTING FROM THE FAILURE OF THE CONTRACTOR TO MAKE THESE DETERMINATIONS AND CONTACTS SHALL BE BORNE BY THE CONTRACTOR.

THE CONTRACTOR SHALL, THROUGHOUT CONSTRUCTION, TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKS, GRADING, SIDEWALKS, AND SITE DETAILS OUTSIDE OF THE LIMIT OF WORK AS DEFINED ON THE DRAWINGS AND SHALL REPAIR AND REPLACE OR OTHERWISE MAKE GOOD AS DIRECTED BY THE ENVIRONMENTAL MONITOR OR OWNER'S DESIGNATED REPRESENTATIVE ANY SUCH OR OTHER DAMAGE SO CAUSED.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION MEANS AND METHODS.

PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE AND CONSTRUCTION DOCUMENTS TO DEVELOP A THOROUGH UNDERSTANDING OF THE PROJECT, INCLUDING ANY SPECIAL CONDITIONS AND CONSTRAINTS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PROJECT SITE AND TO VERIFY ALL CONDITIONS IN THE FIELD AND REPORT DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE OWNER OR OWNER'S REPRESENTATION IMMEDIATELY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND ESTABLISHMENT OF ALL EROSION AND SEDIMENT CONTROLS.

ELEVATION REFERENCED TO NAVD88.

STONE WALL RESTORATION NOTES (SHEET 5):

1. THE 10-15 TONS OF FILLER STONE AND GRAVEL BROUGHT IN FROM OFF-SITE SHALL BE REMOVED FROM THE STONE WALL TO THE EXTENT PRACTICAL AND DISPOSED OFF-SITE.

2. REMAINING STONE ON-SITE SHALL BE REORGANIZED AS NEEDED TO CREATE A LOW, LOOSE-PILE STONE WALL CONSISTENT WITH THE UNDISTURBED SECTION OF STONE WALL AT THE NORTHERN END OF THE PROPERTY (SEE FIGURES 1 AND 2 BELOW)

3. THE RESTORED STONE WALL SHALL BE BUILT TO HAVE A BASE OF VARIABLE WIDTH BETWEEN 3 AND 4 FEET AND A VARIABLE HEIGHT BETWEEN 0.5 AND 1.5 FEET RELATIVE TO THE SUBSTRATE SURFACE ON THE UPSLOPE SIDE OF THE WALL.

4. THE CROSS-SECTION SHAPE OF THE RESTORED WALL SHALL GENERALLY CONFORM WITH THAT SHOWN IN THE PROPOSED STOEN WALL DETAIL, WITH NO LEVELED OR SQUARED OFF SURFACES.

GENERAL PLANTING NOTES (SHEET 6):

1. PLANTING MATERIALS CURRENTLY PROPOSED TO BE SOURCED FROM THE FOLLOWING PROVIDERS:
   NEW ENGLAND WETLAND PLANTS, INC. (INDICATED BY +)
   PIERSON NURSERIES, INC. (INDICATED BY ^)
   THE VERMONT WILDFLOWER FARM (INDICATED BY *)
   ERNEST SEEDS (INDICATED BY ǂ)

2. SPACING OF PLANTING INSTALLATIONS FOR EACH SPECIES SHALL CONFORM WITH THE OFF-CENTER SPACING INFORMATION PROVIDED IN THE RESTORATION PLANTINGS TABLE.

3. CHOICE OF WHETHER TO USE LIVE STAKES OR TUBELINGS WILL DEPEND ON THE TIMING OF WORK. LIVE STAKES SHOULD ONLY BE USED IF IT IS POSSIBLE TO COMPLETE LIVE STAKE PLANTING PRIOR TO THE END OF THE WOODY VEGETATION SENESCENCE PERIOD (TYPICALLY THE END OF MARCH INTO EARLY APRIL).

4. APPLICATION RATE OF EACH SEED OR SEED MIX USED SHALL CONFORM WITH THOSE PROVIDED BY THE SELLER, WHICH ARE PROVIDED IN THE RESTORATION PLANTING TABLE. SEED CAN BE SOWN BY HAND OR WITH A HANDHELD SPREADER.

5. A LIGHT MULCH (NO MORE THAN 1” THICK) OF CLEAN, WEED FREE STRAW IS RECOMMENDED IN RESTORATION AREAS 1, 2, AND 4.

6. IF SPRING CONDITIONS ARE DRIER THAN USUAL, WATERING OF PLANTINGS AND SEEDED AREA MAY BE REQUIRED.

7. A WARRANTY OF 1 YEAR, 85 PERCENT CARE AND REPLACEMENT WARRANTY FOR ALL PURCHASED SHRUB AND FERN PLANTINGS SHALL BE MAINTAINED BY THE CONTRACTOR RESPONSIBLE PLANTING INSTALLATION. A PERIOD OF CARE AND REPLACEMENT SHALL BEGIN AFTER INSPECTION AND APPROVAL OF THE INITIAL PLANTINGS INSTALLATION AND CONTINUE FOR 1 YEAR, WITH ONE POTENTIAL REPLACEMENT PERIOD. THE CONTRACTOR INSTALLING THE PLANTINGS SHALL NOT BE RESPONSIBLE FOR PLANTINGS THAT HAVE BEEN DAMAGED BY VANDALISM, FIRE, FLOODING, OR OTHER ACTIVTIES BEYOND THE CONTRACTORS CONTROL.

LIVE STAKE/TUBELING NOTES (SHEET 7):

1. LIVE STAKES/TUBELINGS SHALL CONSIST OF A MIX OF THE TWO FOLLOWING SPECIES, WITH EACH SPECIES COMPRISING APPROXIMATELY 50 PERCENT OF THE MIX: SILKY DOGWOOD (CORNUS AMOMUM) AND PUSSY WILLOW (SALIX DISCOLOR).

2. SEE GENERAL PLANTING NOTE #3 ON SHEET 6 REGARDING CHOICE OF USING LIVE STAKES VERSUS TUBELINGS FOR THIS PROJECT.

3. IF USING LIVE STAKES:
    a. LIVING CUTTINGS FOR LIVE STAKES SHALL BE ½ TO 1 ½ INCHES IN DIAMETER (G IN LIVE STAKE DETAILS) AND 2 TO 3 FEET IN LENGTH (E LIVE STAKE DETAILS). SIDE BRANCHES SHALL BE REMOVED AND THE BARK LEFT INTACT PRIOR TO INSTALLATION. BUDS ON THE STAKES SHALL BE ORIENTED IN AN UPWARD POSITION AND THE BASAL ENDS TAPERED FOR EASY INSERTION INTO THE SUBSTRATE. THE TOP SHALL BE CUT SMOOTH AND SQUARE
    b. PILOT HOLES, SMALLER IN DIAMETER THAN THE LIVE STAKES, SHALL BE DRILLED/DRIVEN INTO THE SUBSTRATE. THE STAKE SHALL THEN BE DRIVEN INTO THE PILOT HOLES SO THAT 67 TO 75 PERCENT OF EACH STAKE IS BELOW THE GROUND SURFACE (DIFFERENCE BETWEEN E AND F IN INSTALLED LIVE STAKE DETAIL).

4. IF USING TUBELINGS:
    a. TUBELINGS SHALL CONSIST OF A ROOTED CUTTING IN A 5-INCH DEEP PLUG CELL AND MEASURE BETWEEN 8 AND 24 INCHES IN HEIGHT.
    b. PLANTING HOLES SLIGHTLY DEEPER AND WIDER THAN THE 5-INCH DEEP PLUGS SHALL BE DUG INTO THE SUBSTRATE. THE PLUGS SHALL BE PLACED IN THESE HOLES AND BACK FILLED WITH EXCESS SOIL.

5. LIVE STAKES/TUBELINGS SHALL BE PLANTED AT 90 DEGREE ANGLE TO THE SUBSTRATE AND BE SPACED 1 TO 2 FEET OFF-CENTER. SMALLER SPACING (1 FOOF OFF-CENTER) SHALL

BE USED IN THE CENTER 3 to 4 FEET OF THE SWALE, WITH SPACING GRADUALLY INCREASED UP TO 2 FEET OFF-CENTER PROGRESSING OUT TO THE SIDES OF THE SWALE. THE TWO SPECIES SHALL BE RANDOMLY INTERMIXXED.

6. MINIMAL RETAINED STONE SHALL BE INSTALLED BACK IN THE UPPER SWALE IN RESTORATION AREA 3 AT THE SAME TIME AS THE LIVE STAKE/TUBELING INSTALLATION.

7. STAKES/TUBELINGS SHALL BE INSTALLED THROUGH THE EROSION CONTROL BLANKET, TO BE INSTALLED AFTER FINALIZATION OF ANY NECESSARY GRADING.

SHRUB AND FERN PLANTING NOTES (SHEET 8):

1. SHRUBS TO BE INSTALLED IN RESTORATION AREA 1 SHALL CONSIST OF A MIX OF THE THREE FOLLOWING SPECIES, WITH EACH SPECIES COMPRISING NO MORE THAN 50 PERCENT AND NO LESS THAN 20 PERCENT OF THE MIX: SWEET PEPPERBUSH (CLETHRA ALNIFOLIA), AMERICAN YEW (TAXUS CANADENSIS), AND MAPLELEAF VIBURNUM (VIBURNUM ACERFOLIUM). SHRUB SPECIES SHOULD BE PLANTED IN AN INTERMIXXED CONFIGURATION

2. SHRUBS TO BE INSTALLED IN RESTORATION AREAS 2 SHALL BE MEADOWSWEET (SPIRAEA ALBA VAR. LATIFOLIA).

3. SHRUBS TO BE INSTALLED IN RESTORATION AREA 3 SHALL BE SILKY DOGWOOD (CORNUS AMOMUM) AND PUSSY WILLOW (SALIX DISCOLOR).

4. FERNS TO BE INSTALLED IN RESTORATION AREA 4 SHALL CONSIST OF NEW YORK FERN (PARATHELYPTERIS NOVEBORACENSIS).

5. SHRUB AND FERN PLANTINGS SHALL BE INSTALLED BASED ON THE CONTAINER-GROWN PLANT INSTALLATION DETAIL AND ASSOCIATED TABLE.

6. SHRUBS SHALL BE INSTALLED IN A SPACING OF 8 FT. OFF-CENTER FROM OTHER SHRUBS.

7. FERNS SHALL BE INSTALLED IN A SPACING OF 2 TO 3 FT. OFF-CENTER.

Attachment D: Gardner Property Hydrology & Hydraulic Memo

BASE FLOW, LLC
3 Brimstone Hill Road, Amherst, NH 03031
C (603) 809-6101 baseflowinfo@gmail.com

Februrary 15, 2023

MEMO

To: Elizabeth Olliver, Normandeau Associates, Inc.

From: Gabe Bolin, PE

Base Flow Project No. 2022-01
Subject: Gardner Stone Wall & Swale, H&H Analysis

Base Flow, LLC (Base Flow) has prepared this memo to summarize a hydrology and hydraulic (H&H) analysis performed for the Gardner property, located at 50 Odiorne Point Road in Portsmouth, New Hampshire. The property is located along the shoreline of Sagamore Creek and receives surface water flows from both an unnamed stream and a stormwater runoff collection system associated with Odiorne Point Road. Surface water flows during storm events has caused soil erosion in the northern portion of the property, and the property owner previously installed a stone swale to convey storm flows through the property and to Sagamore Creek to mitigate the erosion. The property owner has also reported regular erosion of the ground surface directly north of the swale due to flows that are not contained in the swale during moderate to large storm events.

Unrelated to this analysis, the property owner recently improved upon the existing stone wall along the shorefront portion of the property. Due to conflicts with the wall installation and the New Hampshire Department of Environmental Services (NHDES) wetland regulations, the wall, swale and overall property is under review by NHDES staff and questions were raised as to whether the stone swale should be replaced with a more 'green' solution. Therefore, the purpose of this H&H analysis was to evaluate alternatives to the current stone swale, specifically to 1) determine if a greener solution was feasible and if that solution would 'hold up' to the existing surface water flow regime, and 2) if so, develop 1-2 green solution alternatives.

1. Existing Conditions

Base Flow performed a topographic survey of the site on November 11, 2022. A GPS base and rover unit was used to collect location and elevation data of the ground and site features including but not limited to the roadway edge, catch basin inverts, utilities, pipe inverts, trees, edge of driveway, landscaping features, house corners, stone walls, stream thalweg and banks, conveyance swale centerline and edge, tidal limits, etc. Data was collected in state plane coordinates (NAD83) and refers to the NAVD88 vertical datum. Data was uploaded into an AutoCAD drawing and used to create a triangulated irregular network (TIN), or graphical representation of the ground surface for the site. Contours were applied to the TIN and other features were developed to represent existing conditions. The AutoCAD drawing for this project is provided as Sheet 1, included at the end of this document.

The unnamed stream has an approximate drainage area of 21.51 acres (0.03 mi^2; StreamStats, 2023). Land use in the drainage area consists primarily of low density residential and forest, with 14.4% of the area covered by impervious surfaces and 22.6% covered by mix forest (StreamStats, 2023). Stream flow is conveyed to the property via a 12" high-density polyethylene (HDPE) pipe that exists under Odiorne Point Road. The pipe discharges at a large, stone masonry headwall adjacent to the property and neighboring property.

The stormwater collection system discharges via a 15" HDPE pipe at the same headwall. From inspection during our survey, the system consists of a few stormwater curb inlets and a relatively small subsurface stormwater conveyance system that collects stormwater along approximately 300 linear feet of Odiorne Point Road adjacent to Sagamore Avenue (NH Route 1A) and conveys it to the outlet at the headwall.

Surface water flows from both the unnamed stream and stormwater collection system combine approximately 35 feet northwest of the headwall and continues to flow west approximately 70 feet through a forested/vegetated natural area until flow reaches the stone swale. The property owner uses a section of landscape edging at the head of the swale to encourage flow into the swale, after which flows travel approximately 120 feet along the swale before discharging near the northern edge of the improved stone wall. Flow then travels around the wall and eventually into the creek. The depth of channel flow in the natural area upstream of the swale, which is primarily flat, is 1-2" with no real defined bankfull width. The stone swale, as shown in Figure 1, drops in elevation from approximately 17.5' to 8.4' for a slope of 7.6%. The swale is 10.5' wide at its widest section upslope and reduces down to 5-6' wide over the straight portion of the swale. It is comprised of mostly river cobble, with stone sizes ranging roughly from 3 to 6 inches in diameter (measured along the stone intermediate axis) with a few boulders located randomly in the swale.

The area directly north of the swale also receives stormwater runoff flows during certain events, when flows bypass the landscaping edging to the north. Some evidence of low to moderate soil erosion was observed in this area although it was difficult to make a full assessment due to leaf cover. However, it is evident that this area and most of the back yard adjacent to the creek cannot support grass or turf growth due to the density of trees on the property and resultant shade. The portion of this area subject to erosion would most likely not hold a layer of topsoil due to the frequency of stormwater flows. Figure 1 below provides photos of this portion of the property.

***Figure 1**. Downstream end of swale and discharge by improved stone wall end (top left); stone swale looking upstream, photo taken from area close to stone wall end (right); property directly north of swale subject to erosion, looking upstream, photo taken from area close to stone wall end (lower left).*

2. H&H Analysis

2-1: Hydrology

Base Flow accessed the StreamStats web application to obtain 1) approximate limits of the drainage area contributing surface water flows to the site and 2) estimated peak flows for recurrence interval storm events, to be used as input for the hydraulic model.

For quality control purposes, Base Flow performed a check of the drainage area limits provided by StreamStats with respect to accuracy, to ensure that the peak flow values provided are representative of existing conditions. We utilized our knowledge of the existing stormwater conveyance system and publicly available LiDAR (NHGranit, 2023) to confirm the delineation. It was concluded that the StreamStats

delineation was accurate after confirming that 1) the local stormwater conveyance system ends close to the neighboring property to the south along Odiorne Point Road (near the local highpoint in the roadway) and 2) the delineation seems to follow the drainage divides as indicated by elevations represented by local LiDAR. There are additional stormwater conveyance systems along Odiorne Point Road, however they convey flows to the south and do not contribute flow to this drainage area.

Table 1 provides a range of peak flow values relative to specific recurrence interval storm events, obtained from StreamStats. These flows were used as input for the one-dimensional steady state hydraulic model discussed in detail below.

Table 1: Summary of Peak Flows at the Site

Recurrence Interval (years)	Flow (cfs)
2	1.48
5	2.94
10	4.34
25	6.52
50	8.51
100	11.00

Source: Output from USGS StreamStats
Abbreviations: cfs = cubic feet per second
Date and Author: 2-15-2023, GMB

2-2: Hydraulics

Base Flow used the US Army Corps of Engineers (USACE) Hydrologic Engineering Center's River Analysis System model (HEC-RAS; http://www.hec.usace.army.mil/software/hec-ras/) to develop a one-dimensional, steady flow hydraulic model of the unnamed stream and adjacent areas. This model was used to simulate the peak flows for existing conditions.

The TIN surface developed as part of this project was used as the source of topography for the existing conditions hydraulic model. TIN surface data along cross sections defined in the AutoCAD map were exported from AutoCAD and imported into HEC-RAS Mapper, a user interface provided with the program. The series of long, dashed lines on Sheet 1 with labels 'STA = 1+XX' provide a graphical representation of the cross sections. The station numbering starts from zero at the end of the hydraulic model (at the northern

end of the improved wall) and continues in the upstream direction to the start of the model, at station 5+74 (not visible in Sheet 1).

Once the geometry file was created, features such as the swale, headwall, pipes, ineffective flow areas, upstream channel, stream bank stations, distances between cross-sections, and Manning's roughness coefficient at each cross-section were more fully defined. Manning's n values were selected based on channel surface roughness and presence of vegetation, informed from on site inspections and observations of aerial imagery.

HES-RAS requires boundary conditions to set the starting water surface elevation at the upstream and/or downstream ends of the river system being modeled. Additionally, a flow regime (subcritical, supercritical, or mixed) must be selected for each analysis. For this project, the steady flow analysis was completed using a subcritical flow regime, which is well suited for the size of site and hydraulic conditions. While only the downstream boundary condition is needed for a subcritical flow analysis, we specified upstream and downstream normal depth energy slope boundary conditions equal to 0.008 and 0.073, respectively, for all flow profiles. The energy slopes were estimated based on the channel slopes in the vicinity of the upstream and downstream portions of the project.

2-3: Model Results

Table 2 provides results at Station 0+44, which corresponds to a location that is approximately in the middle of the straight section of the swale (Sheet 1). The table provides results for velocity and shear within the limits of the swale channel. As discussed further in Section 3, these variables are considered most relevant to the assessment of erosion potential due to surface water flows on the property.

Table 2: Summary of Model Results at Station 0+44

Recurrence Interval (years)	Q Total (cfs)	Velocity in Channel (ft/s)	Shear in Channel (lb/sq ft)
2	1.48	2.53	0.79
5	2.94	2.87	0.92
10	4.34	3.12	1.04
25	6.52	2.99	0.90
50	8.51	2.18	0.44
100	11.00	2.39	0.52

Source: Output from HEC-RAS model
Abbreviations: cfs = cubic feet per second; ft/s = feet per second; lb/sq ft = pounds force per square foot
Date and Author: 2-15-2023, GMB

3. Discussion & Conclusions

Table 2 provides model results for velocity, which is the speed at which surface water flows over a channel boundary, and shear, which is a measure of the fluid force on the channel boundary. While in this analysis, both parameters will be used to assess the potential for channel erosion to occur, shear is the more applicable variable to predict the potential of channel boundary erosion.

When the ability of a stream to transport sediment exceeds the availability of sediments within the incoming flow, and stability thresholds for the material forming the boundary of the channel are exceeded, erosion occurs (Fischenich, 2001). For this project, it is suspected that there is a relatively low amount of sediment in the incoming flow, and the velocity and the shear forces associated with that flow range from moderate to high, depending on the intensity and duration of the storm event. So, the potential for erosion at the site is dependent on the channel boundary material and the particular storm event.

A relation of channel boundary material, flow velocity and shear is provided as Table 2 in Fischenich, 2001 (https://www.marincounty.org/-/media/files/departments/pw/mcstoppp/residents/fischenichstabilitythresholds.pdf). The table includes permissible shear stress and velocity values for soils, varying types of vegetation and types of stabilization techniques from a variety of sources. Ranges of values presented in the table reflect various measures presented within the literature (Fischenich, 2001).

Similarly, Table 3 below provides permissible shear stress and velocity values for the boundary types applicable to existing conditions at the site, along with recurrence intervals exceed (per the hydraulic model) for each boundary type.

Table 3: Summary of Permissible Shear Stress and Velocity for Applicable Channel Lining Materials with Recurrence Interval Exceedances

Boundary Category	Boundary Type	Permissible Shear Stress (lb/sq ft)	Permissible Velocity (ft/s)	Recurrence Intervals Exceeded (shear and/or velocity)
Soils	Silty Loam (noncolloidal)	0.045 – 0.05	1.75 – 2.25	All (except 50-year for velocity)
	Firm Loam	0.075	2.5	All (except 50 & 100-year for velocity)
Gravel/ Cobble	2-inch	0.67	3 - 6	All (except 50 & 100-year for shear)
	6-inch	2.0	4 – 7.5	None
Soil Bioengineering	Wattles	0.2 – 1.0	3.0	10-year for both

Source: Fischenich, 2001 (columns 1-4); Base Flow (column 5)
Abbreviations: ft/s = feet per second; lb/sq ft = pounds force per square foot
Date and Author: 2-15-2023, GMB

The boundary types included in Table 3 include what already exists on site, including our interpretation of site surficial soils and those materials found in the stone swale. We also reviewed the table in the Fischenich document for boundary types that could be included in the table for green alternatives, however, the choices were limited due to the anticipated growth limitations for vegetation at the site. For example, no boundary types from the Vegetation category of Table 2 in the Fischenich reference are included in our Table 3 above because we do not expect that turf or grasses can be established at the site due to light limitations. Temporary Degradable Rolled Erosion Control Products (RECPs) and Non-Degradable RECPs were also not considered because all of those products depend on the long-term establishment of vegetation. Wattles is the only item from the Soil Bioengineering category included in the analysis since it does not relay on establishment of vegetation, however, wattles are considered temporary controls and they would not be feasible as a long-term solution. The remaining items in that category either rely on vegetation establishment, are not a viable long-term option or may introduce aggressive plant species that may not be appropriate for the habitable portion of a residential backyard.

The comparisons made in Table 3 indicate that bare soils at the site are subject to erosion from surface water flows during all major recurrence interval storm events. Small gravels (≤2 inches) are also subject to erosion during the higher frequency storm events.

The 6-inch material is the only material in the comparison that is predicted to remain stable during all events, according to the estimates in the Fischenich document. These findings are consistent with the existing conditions of the stable stone swale and reports from the land owner that since installation of the swale, erosion within the limits of the swale has been successfully mitigated. These findings are also consistent with

the landowner claims that any flows that bypass the stone swale often result in soil erosion of the portion of the property directly north of the swale, and limited observations of erosion in this area made by Base Flow staff during the site survey.

Based on this analysis, we have concluded that the existing stone swale is the most appropriate solution to address erosion at the property. Considering the limited alternatives for replacement of the stone swale, the potential land disturbance that would occur along the creek shoreline if it was replaced, and the potential unnecessary costs to the landowner, we believe that there is no reason to pursue development of alternatives to the stone swale and believe that the existing swale should remain in place.

If a greener solution is still desired, it may be possible to plant between some of the stones in the swale. This could serve as a compromise that would incorporate vegetation, potentially improve water quality and still provide for the channel boundary stability required for the flow regime. However, plants would be limited to those that are shade tolerant and a maintenance plan may need to be developed with the landowner.

4. References

Fischenich, C., 2001. Stability Thresholds for Stream Restoration Materials. USAE Research and Development Center, Environmental Laboratory, Vicksburg MS. ERDC TN-EMRRP-SR-29. May, 2001. (Available at: https://www.marincounty.org/-/media/files/departments/pw/mcstoppp/residents/fischenichstabilitythresholds.pdf)

U.S. Geological Survey, 2016. The StreamStats program, online at http://streamstats.usgs.gov, accessed on (December 5, 2022).

Attachment E: New England Semi-Shade Grass and Forbs Mix

NEW ENGLAND WETLAND PLANTS, INC

820 WEST STREET, AMHERST, MA 01002

PHONE: 413-548-8000 FAX 413-549-4000

EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

New England Semi-Shade Grass and Forbs Mix

Botanical Name	Common Name	Indicator
Elymus virginicus	Virginia Wild Rye	FACW-
Elymus canadensis	Canada Wild Rye	FACU+
Festuca rubra	Red Fescue	FACU
Chamaecrista fasciculata	Partridge Pea	FACU
Liatris spicata	Spiked Gayfeather/Marsh Blazing Star	FAC+
Onoclea sensibilis	Sensitive Fern	FACW
Aster prenanthoides (Symphyotrichum prenanthoide	Zigzag Aster	FAC
Eupatorium fistulosum (Eutrochium fistulosum)	Hollow-Stem Joe Pye Weed	FACW
Eupatorium perfoliatum	Boneset	FACW
Juncus tenuis	Path Rush	FAC

PRICE PER LB. $87.00 MIN. QUANITY 1 LBS. **TOTAL:** $87.00 APPLY: 30 LBS/ACRE :1450 sq ft/lb

The New England Semi Shade Grass & Forb Mix contains a broad spectrum of native grasses and forbs that will tolerate semi-shade and edge conditions. Always apply on clean bare soil. The mix may be applied by hydro-seeding, by mechanical spreader, or on small sites it can be spread by hand. Lightly rake, or roll to ensure proper seed to soil contact. Best results are obtained with a Spring seeding. Late Spring and early Summer seeding will benefit with a light mulching of weed-free straw to conserve moisture. If conditions are drier than usual, watering will be required. Late Fall and Winter dormant seeding require an increase in the seeding rate. Fertilization is not required unless the soils are particularly infertile. Preparation of a clean weed free seed bed is necessary for optimal results.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is $/bulk pound, FOB warehouse, Plus SH and applicable taxes.

Attachment F: New England Erosion Control/Restoration Mix for Dry Sites

NEW ENGLAND WETLAND PLANTS, INC

820 WEST STREET, AMHERST, MA 01002

PHONE: 413-548-8000 FAX 413-549-4000

EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

New England Erosion Control/Restoration Mix for Dry Sites

Botanical Name	Common Name	Indicator
Elymus canadensis	Canada Wild Rye	FACU+
Festuca rubra	Red Fescue	FACU
Lolium multiflorum	Annual Ryegrass	
Lolium perenne	Perrenial Ryegrass	
Schizachyrium scoparium	Little Bluestem	FACU
Panicum virgatum	Switch Grass	FAC
Sorghastrum nutans	Indian Grass	UPL

PRICE PER LB. $18.00 MIN. QUANITY 5 LBS. **TOTAL:** $90.00 APPLY: 35 LBS/ACRE :1250 sq ft/lb

The New England Erosion Control/Restoration Mix For Dry Sites provides an appropriate selection of native and naturalized grasses to ensure that dry and recently disturbed sites will be quickly revegetated and the soil surface stabilized. It is an appropriate seed mix for road cuts, pipelines, steeper slopes, and areas requiring quick cover during the ecological restoration process. The mix may be applied by hydro-seeding, by mechanical spreader, or on small sites it can be spread by hand. Lightly rake, or roll to ensure proper soil-seed contact. Best results are obtained with a Spring or late Summer seeding. Late Spring through Mid-Summer seeding will benefit from a light mulching of weed-free straw to conserve moisture. If conditions are drier than usual, watering will be required. Fertilization is not required unless the soils are particularly infertile. Preparation of a clean weed free seed bed is necessary for optimal results.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is $/bulk pound, FOB warehouse, Plus SH and applicable taxes.

Attachment G: NHDES Requested Protected Shoreland Data and Additional Buffer Information

INTRODUCTION

As part of the 2022 natural resource survey of the Gardner Property, Normandeau Associates, Inc. (Normandeau) completed a tree inventory of all trees in the vicinity of the disturbed portions of the Gardner property associated with the stone swale and stone wall. The reference line for this inventory is the HOTL, which was delineated by Normandeau in November 2022 and surveyed by Knights Hill Survey in August 2023. The data and summary report provided in this supplemental attachment has been developed at the request of New Hampshire Department of Environmental Services as part of the process for receiving approval for the restoration plan for the property. This report outlines the results of this tree inventory, methods used, and the basic Protected Shoreland regulatory requirements associated with removal of vegetation from the site.

Vegetation is an important component in preserving and protecting water quality. Well vegetated shorelands that are comprised of native trees, shrubs, and ground cover provide significant benefits in terms of stormwater runoff. The Shoreland Water Quality Protection Act (SWQPA), RSA 483-B, serves to protect the water quality of New Hampshire's surface waters by managing the disturbance of shoreland areas. The protected shoreland area includes lands located within 250 feet from the reference line of public waters. The reference line for coastal waters is the highest observable tide line (HOTL), which means a line defining the furthest landward limit of tidal flow. The HOTL was previously delineated by Normandeau in November 2022.

The SWQPA attempts to maintain a shoreland buffer of natural vegetation to reduce the transportation of excess nutrients, sediments, and other pollutants into waterbodies. The SWQPA protects a 150-foot wide vegetated buffer adjacent to public waters such as lakes, ponds, rivers, and tidal waters. The vegetated buffer area is divided into two zones: the waterfront buffer and the natural woodland buffer. The waterfront buffer encompasses the first 50 feet beginning at the reference line, and the natural woodland buffer includes the area between 50 feet and 150 feet from the reference line.

Trees and saplings can be removed from the protected shoreland area, though different vegetation removal limitations apply within the two zones described above. Removal of trees and saplings within the waterfront buffer must be performed in accordance with a grid and point system. Removal of trees and saplings within the natural woodland buffer must comply with the unaltered state requirement. There are no limitations on tree removal in areas extending beyond 150 feet from the reference line.

METHODS

While the entire property falls within the 250 ft protected shoreland of Sagamore Creek, the tree inventory was limited to those areas in the vicinity of the disturbed areas in the back half of the property including the areas containing the stone swale, rebuilt stone wall, and access

route down to the stone wall from the driveway. Thus, this inventory does not represent a fully inventory of trees on the property. Each tree/sapling was located using a GPS unit capable of sub-meter accuracy, identified to the species level, if possible, and a diameter at breast height (DBH) measurement recorded. When a cluster of trees or saplings were growing from one individual plant, a diameter was recorded for each stem within the grouping. In addition to performing the inventory of individual trees and saplings, a general description of understory vegetation within the survey areas was also documented.

After conducting the field inventories, trees and saplings within the waterfront buffer (first 50 feet beginning at the reference line) were assigned a score based on DBH. Tree and sapling scores were calculated using the following guidelines:

- Diameter of one to three inches = 1 point
- Diameter greater than 3 inches and including 6 inches = 5 points
- Diameter greater than 6 inches and including 12 inches = 10 points
- Diameter greater than 12 inches = 15 points

For specimens with multiple stems greater than 1 inch, a diameter was recorded for each individual stem as described above. To calculate the score for plants with multiple stems, the score for each stem was determined, and then a sum of all scores for the plant resulted in a total score for that specimen. For example, a plant with three stems measuring diameters of 3 inches (1 point), 5 inches (5 points), and 6 inches (5 points) was assigned a total score of 11 points.

To complete each tree inventory assessment, the waterfront buffer in each surveyed area was divided into 25-foot by 50-foot grid segments. The purpose of the grid segments was to determine the tree and sapling score within each grid. Under the SWQPA, a minimum tree and sapling score of 25 points must be maintained within each grid segment. A general characterization of the percent shrub cover within the waterfront buffer was also recorded during each survey. This included an account of dominant species as well as the presence of any invasive species that were not recorded during the tree inventories.

RESULTS

The conditions at the back of the Gardner property, where the tree survey was conducted, consisted of a combination of regularly mowed lawn, landscaped garden beds, minimally to unmaintained fringing woodlands north and south of the mowed lawn, and a tidal wetland forming the very back of the property. Much of the woodland buffer (between 50 and 150 feet from the HOTL) has been developed on this property, although the fringing woodlands north and south of the mowed lawn (shaded in purple in the map below) constitute as unaltered natural woodland and comprise 33% of the woodland buffer on the property. The southern portion of unaltered woodlands has an understory that is sparsely vegetated with New York fern (*Parathelypteris noveboracensis*) that was impacted by the access route from the driveway to the stone wall. The northern portion of unaltered woodlands has an understory that is more

densely vegetated, primarily with herbaceous species, and contains a freshwater palustrine forest wetland (POGW2) that was eroded by stormwater runoff from the two culverts upslope prior to the installation of the swale. Please see Attachment A – Garner Property Natural Resource Report for specific information on the groundcover within this area and for photos of the protected shoreland on the property. Between the maintained lawn and rebuilt stone wall, a strip of bare substrate was observed that was the result of impacts by equipment used during the stone wall rebuild and swale extension in 2022. As stated above, the tree survey focused on those trees and saplings near the disturbed portions of the property and the species observed within the 50-foot waterfront buffer are displayed in Table 1 below. The most dominant species within the waterfront buffer were Eastern white pine (*Pinus strobus*) and sweet birch (*Betula lenta*). A total of twelve (12) Eastern white pine were recorded in the waterfront buffer with an average diameter of 10.2 inches. A total of seven (7) sweet birch were documented within the waterfront buffer with an average diameter of 8 inches.

Table 1. Trees and sapling inventory within the Gardner property waterfront buffer.

Scientific Name	**Common Name**
Betula lenta	Sweet birch
Pinus strobus	Eastern white pine
Quercus alba	White oak
Quercus rubra	Northern red oak
Acer rubrum	Red maple

As detailed in the methods section of this report, the waterfront buffer was divided into 25-foot by 50-foot grid segments, with a total of 7 grids located on the Gardner property. The scores within grid segments ranged from a low of 0 points in Grid 1 to a high of 62 points in Grid 7 (Table 2). All grid segments and the location of each tree and shrub inventoried are depicted in the map provided at the end of this report. Please note that two of the grids, Grids 1 and 7, are not fully contained within the limits of the property. In the case of Grid 1, most of the grid lies outside of the property boundary. While the tree survey suggests no trees occur within this this grid, that is potentially misleading because the tree survey in this area was kept strictly within the property boundary due to its distance from the impacts on the property and proposed impacts associated with the restoration plan. In the case of Grid 7, most of this grid lies within the property boundary and was fully surveyed because the rebuilt stone wall now proposed to be restored extends off the property in this area. A score for the entire grid, as well as for just the portion of the grid within the property boundaries is provided in the table below.

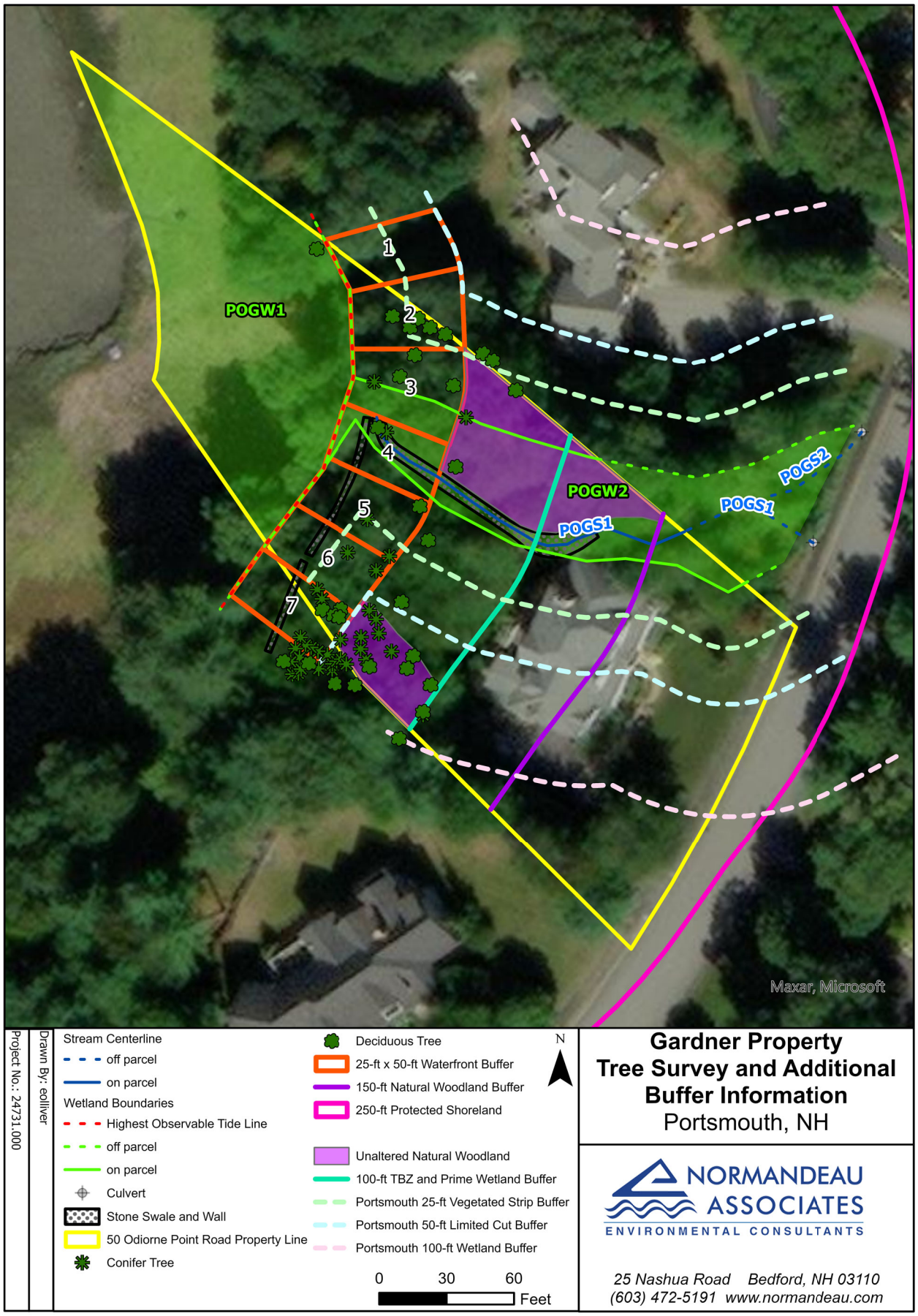
Table 2. Trees identified in the Gardner property survey.

Grid	Species	Stem Diameter (in.)					Tree and Sapling Score
		1	2	3	4	5	
Grid 1 Total Tree Score for portion on the property							**0**
2	Betula lenta	8	-	-	-	-	10
2	Betula lenta	8	5	-	-	-	15
2	Betula lenta	4	-	-	-	-	5
2	Quercus rubra	10	-	-	-	-	10
2	Quercus alba	12	-	-	-	-	10
Grid 2 Total Tree Score							**50**
3	Quercus alba	10	-	-	-	-	10
3	Quercus alba	1	-	-	-	-	1
3	Betula lenta	6	10	12			25
3	Pinus strobus	30	-	-	-	-	15
Grid 3 Total Tree Score							**51**
4	Quercus rubra	16	-	-	-	-	15
4	Pinus strobus	16	-	-	-	-	15
Grid 4 Total Tree Score							**30**
5	Quercus rubra	14	13	-	-	-	30
5	Pinus strobus	12	-	-	-	-	10
5	Pinus strobus	14	-	-	-	-	15
Grid 5 Total Tree Score							**55**
6	Pinus strobus	10	-	-	-	-	10
6	Pinus strobus	12	-	-	-	-	10
Grid 6 Total Tree Score							**20**
7	Betula lenta	10	-	-	-	-	10
7	Betula lenta	12	-	-	-	-	10
7	Betula lenta	8	-	-	-	-	10
7	Acer rubrum	4	-	-	-	-	5
7	Pinus strobus	8	-	-	-	-	10
7	Pinus strobus	6	-	-	-	-	5
Grid 7 Total Tree Score for portion on the property							**50**
7	Pinus strobus	3	-	-	-	-	1
7	Pinus strobus	1	-	-	-	-	1
7	Pinus strobus	4	-	-	-	-	5
7	Pinus strobus	6	-	-	-	-	5
Grid 7 Total Score including trees not on the property							**62**

DISCUSSION

The unpermitted work completed on the property between 2010 and 2022 in the protected shoreland area resulted in loss of herbaceous cover and increased hardscape in association with the stone swale. However, none of these activities involved the removal of any pre-existing shrubs, saplings, and/or trees and the currently proposed restoration will result in a nearly complete removal of the unpermitted hardscape associated with the swale. The restoration will also restore the lost herbaceous vegetation cover and enhance the protected shoreland beyond

its condition pre-disturbance through the installation of shrubby vegetation in multiple portions of the protected shoreland. Container shrub plantings will be installed in the area upslope of the stone wall, within the waterfront buffer, as well as further up in the unaltered natural woodland adjacent to the curvature in the swale at the top of the slope. Additionally, the swale will be converted from a hardscape to a fully vegetated green design with the removal of all geotextile liners and most of the stone and the installation of live stakes/tubelings, which will improve the management of stormwater runoff across the property.



Please note, the extent of rebuilt stone wall and existing swale presented on this map represent the data collected as part of the initial natural resource survey in November 2022. Please refer to Attachment B for the survey grade presentation of the stone wall and swale features on the property.

Attachment H: Permission from abutting property owner to restore section of stone wall on their property to approximate pre-existing conditions

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

January 29, 2024

City of Portsmouth
Planning & Sustainability
1 Junkins Avenue
Portsmouth, NH 03801

Re: Property Owner Authorization for Completion of Work on Property in Association with Work on the 50 Odiorne Point Road Property
68 Odiorne Point Road
Portsmouth, New Hampshire

To Whom it May Concern:

I (James Polus), the property owner of the 68 Odiorne Point Road parcel, confirm that I provided verbal approval for Mr. John Gardner to rebuild a portion of existing stone wall on my property in the summer of 2022. Pending the approval of the necessary Wetland's Conditional Use Permit from the City of Portsmouth and Restoration Order from the New Hampshire Department of Environmental Services, I now grant permission for Mr. Gardner to restore that rebuilt stone wall to approximate pre-existing conditions as outlined in the Gardner Property: Stone Wall, Swale, and Vegetation Restoration Project dated January 2024.

Sincerely,

James Polus

GOVE ENVIRONMENTAL SERVICES, INC.
AGENT

NHDES WETLANDS BUREAU
MINOR IMPACT
DREDGE & FILL APPLICATION

Commercial Addition

Portsmouth Regional Hospital

Portsmouth, NH

January, 2023

Prepared By:

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

GES# 2019175

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STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION

Water Division / Land Resources Management

Check the Status of your Application

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

APPLICANT'S NAME: HCA Health Services of Ne\ **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?	(●) Yes ( ) No
Does the property contain a PRA? If yes, provide the following information:	(●) Yes ( ) No
• Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHFG) 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.	( ) Yes (●) No
• Protected species or habitat? ○ If yes, species or habitat name(s): Blanging turtle (Emydoidea ○ NHB Project ID #: NHB23-2592	(●) Yes ( ) No
• Bog?	( ) Yes (●) No
• Floodplain wetland contiguous to a tier 3 or higher watercourse?	( ) Yes (●) No
• Designated prime wetland or duly-established 100-foot buffer?	(●) Yes ( ) No
• Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?	( ) Yes (●) No
Is the property within a Designated River corridor? If yes, provide the following information: • Name of Local River Management Advisory Committee (LAC): • A copy of the application was sent to the LAC on Month: Day: Year:	( ) Yes (●) No

For dredging projects, is the subject property contaminated? • If yes, list contaminant:	○ Yes ◉ No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	○ Yes ◉ No
For stream crossing projects, provide watershed size (see WPPT or Stream Stats):	

SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))

Provide a description of the project and the purpose of the project, the need for the proposed impacts to jurisdictional areas, an outline of the scope of work to be performed, and whether impacts are temporary or permanent.

The applicant is applying for an after the fact dredge and fill application for impacts to a man-made detention basin associated with the expansion of the hospitals new oncology wing. The impacts involve 200sf of direct permanent wetland impact, and 3,879sf of temporary disturbance. There is a State Prime Wetland Buffer that encroaches into the project area and overlaps the area of temporary disturbance resulting in 961 SF of temporary impact within the prime wetland buffer. No additional wetland impacts are proposed with the hospital expansion project.

SECTION 3 - PROJECT LOCATION

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

ADDRESS: 333 Borthwick ave

TOWN/CITY: Portsmouth

TAX MAP/BLOCK/LOT/UNIT: Tax Map 240 Lot 2-1

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

(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places):

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: HCA Health Services of New Hampshire		
MAILING ADDRESS: PO BOX 80610		
TOWN/CITY: Indianapolis	STATE: IN	ZIP CODE: 46580
EMAIL ADDRESS: Trip.DeMoss@hcahealthcare.com		
FAX:	PHONE:	

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

SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))

☐ N/A

LAST NAME, FIRST NAME, M.I.: Walden, Brenden, M		
COMPANY NAME: Gove Environmental Services, Inc.		
MAILING ADDRESS: 8 Continental Drive, Building 2, Unit H		
TOWN/CITY: Exeter	STATE: NH	ZIP CODE: 03833
EMAIL ADDRESS: bwalden@gesinc.biz		
FAX:	PHONE: 207-710-7863	

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

SECTION 6 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b))

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

■ Same as applicant

NAME:		
MAILING ADDRESS:		
TOWN/CITY:	STATE:	ZIP CODE:
EMAIL ADDRESS:		
FAX:	PHONE:	

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

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

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

This is an after the fact minor impact project with impacts greater then 3,000 SF to a man made detention basin for the expansion of the Portsmouth Regional Hospital Oncology Wing. This will meet the criteria outlined in 524 for commercial and residential developments.

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

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

	JURISDICTIONAL AREA	PERM. SF	PERM. LF	PERM. ATF	TEMP. SF	TEMP. LF	TEMP. ATF
Wetlands	Forested Wetland			☐			☐
	Scrub-shrub Wetland			☐			☐
	Emergent Wetland		200	☒	2918		☒
	Wet Meadow			☐			☐
	Vernal Pool			☐			☐
	Designated Prime Wetland			☐			☐
	Duly-established 100-foot Prime Wetland Buffer			☐	961		☒
Surface	Intermittent / Ephemeral Stream			☐			☐
	Perennial Stream or River			☐			☐
	Lake / Pond			☐			☐
	Docking - Lake / Pond			☐			☐
	Docking - River			☐			☐
Banks	Bank - Intermittent Stream			☐			☐
	Bank - Perennial Stream / River			☐			☐
	Bank / Shoreline - Lake / Pond			☐			☐
Tidal	Tidal Waters			☐			☐
	Tidal Marsh			☐			☐
	Sand Dune			☐			☐
	Undeveloped Tidal Buffer Zone (TBZ)			☐			☐
	Previously-developed TBZ			☐			☐
	Docking - Tidal Water			☐			☐
	TOTAL						

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): 4079	SF	× $0.40 =	$ 1631.6
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 $400, whichever is greater =			*$* 1631.2

SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05) Indicate the project classification.		
☐ Minimum Impact Project	■ Minor Project	☐ Major Project

SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)	
Initial each box below to certify:	
Initials:	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials:	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:	The signer understands that: • The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: 1. Deny the application. 2. Revoke any approval that is granted based on the information. 3. If the signer is a certified wetland scientist, licensed surveyor, or professional engineer licensed to practice in New Hampshire, refer the matter to the joint board of licensure and certification established by RSA 310-A:1.
Initials:	If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.

SECTION 15 - REQUIRED SIGNATURES (Env-Wt 311.04(d); Env-Wt 311.11)		
SIGNATURE (OWNER):	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (AGENT, IF APPLICABLE):	PRINT NAME LEGIBLY:	DATE:

SECTION 16 - TOWN / CITY CLERK SIGNATURE (Env-Wt 311.04(f))	
As required by RSA 482-A:3, I(a)(1), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.	
TOWN/CITY CLERK SIGNATURE:	PRINT NAME LEGIBLY:
TOWN/CITY:	DATE:

DIRECTIONS FOR TOWN/CITY CLERK:
Per RSA 482-A:3, I(a)(1)

1. IMMEDIATELY sign the original application form and four copies in the signature space provided above.
2. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
3. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board.
4. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:
Submit the original permit application form bearing the signature of the Town/City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery at the address at the bottom of this page. Make check or money order payable to “Treasurer – State of NH”.

Keep this checklist for your reference; do not submit with your application.

APPLICATION CHECKLIST

Unless specified, all items below are required. Failure to provide the required items will delay a decision on your project and may result in denial of your application. Please reference statute RSA 482-A, Fill and Dredge in Wetlands, and the Wetland Rules Env-Wt 100-900.

- ☐ The completed, dated, signed, and certified application (Env-Wt 311.03(b)(1)).
- ☐ Correct fee as determined in RSA 482-A:3, I(b) or (c), subject to any cap established by RSA 482-A:3, X (Env-Wt 311.03(b)(2)). Make check or money order payable to "Treasurer – State of NH".
- ☐ The Required Planning actions required by Env-Wt 311.01(a)-(c) and Env-Wt 311.03(b)(3).
- ☐ US Army Corps of Engineers (ACE) "Appendix B, New Hampshire General Permits (GPs), Required Information and Corps Secondary Impacts Checklist" and its required attachments (Env-Wt 307.02). This includes the US Fish and Wildlife Service IPAC review and Section 106 Historic/Archaeological Resource review.
- ☐ Project plans described in Env-Wt 311.05 (Env-Wt 311.03(b)(4)).
- ☐ Maps, or electronic shape files and meta data, and other attachments specified in Env-Wt 311.06 (Env-Wt 311.03(b)(5)).
- ☐ Explanation of the methods, timing, and manner as to how the project will meet standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7)).
- ☐ If applicable, the information regarding proposed compensatory mitigation specified in Env-Wt 311.08 and Chapter Env-Wt 800 - Permittee Responsible Mitigation Project Worksheet, unless not required under Env-Wt 313.04 (Env-Wt 311.03(b)(8); Env-Wt 311.08; Env-Wt 313.04).
- ☐ Any additional information specific to the **type of resource** as specified in Env-Wt 311.09 (Env-Wt 311.03(b)(9); Env-Wt 311.04(j)).
- ☐ Project specific information required by Env-Wt 500, Env-Wt 600, and Env-Wt 900 (Env-Wt 311.03(b)(11)).
- ☐ A list containing the name, mailing address and tax map/lot number of each abutter to the subject property (Env-Wt 311.03(b)(12)).
- ☐ Copies of certified postal receipts or other proof of receipt of the notices that are required by RSA 482-A:3, I(d) (Env-Wt 311.03(b)(13)).
- ☐ Project design considerations required by Env-Wt 313 (Env-Wt 311.04(j)).
- ☐ Town tax map showing the subject property, the location of the project on the property, and the location of properties of abutters with each lot labeled with the name and mailing address of the abutter (Env-Wt 311.06(a)).
- ☐ Dated and labeled color photographs that:
  - (1) Clearly depict:
    - a. All jurisdictional areas, including but not limited to portions of wetland, shoreline, or surface water where impacts have or are proposed to occur.
    - b. All existing shoreline structures.
  - (2) Are mounted or printed no more than 2 per sheet on 8.5 x 11 inch sheets (Env-Wt 311.06(b)).
- ☐ A copy of the appropriate US Geological Survey map or updated data based on LiDAR at a scale of one inch equals 2,000 feet showing the location of the subject property and proposed project (Env-Wt 311.06(c)).
- ☐ A narrative that describes the work sequence, including pre-construction through post-construction, and the relative timing and progression of all work (Env-Wt 311.06(d)).

lrm@des.nh.gov or (603) 271-2147
29 Hazen Drive, PO Box 95, Concord, NH 03302-0095
des.nh.gov

- ☐ For all projects in the protected tidal zone, a copy of the recorded deed with book and page numbers for the property (Env-Wt 311.06(e)).
- ☐ If the applicant is not the owner in fee of the subject property, documentation of the applicant's legal interest in the subject property, provided that for utility projects in a utility corridor, such documentation may comprise a list that:
  - (1) Identifies the county registry of deeds and book and page numbers of all of the easements or other recorded instruments that provide the necessary legal interest; and
  - (2) Has been certified as complete and accurate by a knowledgeable representative of the applicant (Env-Wt 311.06(f)).
- ☐ The NHB memo containing the NHB identification number and results and recommendations from NHB as well as documentation of any consultation requests made to NHFG, communications and information related to the consultation, with the consultation results and recommendations from NHFG. (Env-Wt 311.06(g)). See Wetlands Permitting: Protected Species and Habitat Fact Sheet.
- ☐ A statement of whether the applicant has received comments from the local conservation commission and, if so, how the applicant has addressed the comments (Env-Wt 311.06(h)).
- ☐ For projects in LAC jurisdiction, a statement of whether the applicant has received comments from the LAC and, if so, how the applicant has addressed the comments (Env-Wt 311.06(i)).
- ☐ If the applicant is also seeking to be covered by the state general permits, a statement of whether comments have been received from any federal agency and, if so, how the applicant has addressed the comments (Env-Wt 311.06(j)).
- ☐ Avoidance and Minimization Written Narrative or the Avoidance and Minimization Checklist, or your own avoidance and minimization narrative (Env-Wt 311.07).
- ☐ For after-the-fact applications: information required by Env-Wt 311.12.
- ☐ Coastal Resource Worksheet for coastal projects as required under Env-Wt 600.
- ☐ Prime Wetlands information required under Env-Wt 700. See WPPT for prime wetland mapping.
- ☐ For non-tidal shoreline structure projects, the length of shoreline frontage per Env-Wt 311.09(b)(1)

Required Attachments for Minor and Major Projects

- ☐ Attachment A: Minor and Major Projects (Env-Wt 313.03).
- ☐ Functional Assessment Worksheet or others means of documenting the results of actions required by Env-Wt 311.10 as part of an application preparation for a standard permit (Env-Wt 311.03(b)(3); Env-Wt 311.03(b)(10)). See Functional Assessments for Wetlands and Other Aquatic Resources Fact Sheet. For shoreline structures, see shoreline structures exemption in Env-Wt 311.03(b)(10)).

Optional Materials

- ☐ Stream Crossing Worksheet which summarizes the requirements for stream crossings under Env-Wt 900.
- ☐ Request for concurrent processing of related shoreland / wetlands permit applications (Env-Wt 313.05).

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: HCA Health Services of New Hampshire 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.*

This after the fact impact to a man made detention basin resulted in under an acre of permanent wetland impact. There were temporary impacts to a duly established prime wetland buffer that encroaches on the property across Borthwick Ave however those impacts will not result in any observable effect to the functions and values of that buffer. Additionally the functions and values of the detention basin will be preserved and maintained as a man made stormwater feature.

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 after the fact impacts related to the construction of the oncology wing were minimized to the greatest extant practicable. The existing infrastructure and architecture did narrowed the location of the expansion. The size of the expansion was necessary to meet the project objectives and house the necessary rooms, staff and equipment for the wing.

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 project limited the impacts to the detention basin to only what was needed to meet the project objectives. This impact will have no long term effects to the functions and values of the man-made detention basin as the basin was increased in size to account for the additional stormwater as well as the loss to a small portion of the wetland.

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: HCA Health Services OF New Hampshire 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 AFTER THE FACT WETLAND IMPACTS RELATED TO THE CONSTRUCTION OF THE ONCOLOGY WING OF THE PORTSMOUTH REGIONAL HOSPITAL WERE THE LEAST IMPACTING ALTERNATIVE AS THE EXISTING ARCHITECTURE OF THE BUILDLING WOULD ONLY ALLOW FOR EXPANSION AT THIS PORTION OF THE BUILDING SUITABLE FOR THE PROJECT OBJECTIVES. THE PERMANENT IMPACTS TO THE MAN MADE DETENTION BASIN WERE LIMITED TO THE EXTERIOR OF THE WETLAND WITH TEMPORARY IMPACTS BEING RESTORED PER THE LANDSCAPING PLAN. ADDITIONALLY THE DETENTION BASIN WAS INCREASED IN SIZE TO SUPPORT THE ADDITIONAL STORMWATER AS WELL AS REPLICATED THE LIMITED PERMANENT LOSS DUE TO THE PROJECT CONSTRUCTION.

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 project did not have any direct impacts to marshes that support or provide nutrients for finfish, crustaceans, shellfishm and wildlife of signficiant value.

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

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

The impacts were to the exterior of a man-made detention basin, that was increased in size to accommodate the additional stormwater contribution from the expansion. This increase in size will maintain existing hydrology in this area.

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

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

The contructed expansion had direct and temporary wetland impacts to a man made detention basin. This area as it is a man made stormwater feature does not meet the criteria for an exemplary natural community. Additionally this isolated area is surrounded by development as well as roaways and would not be considered suitable habitat for protected species or repoductive habitat for those species.

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 constructed expansion was conducted entirely on private property and had no negative impacts that would elimineate depreciate or obstruct public commerce, navigation or recreation with the completion of the project.

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.

No floodplain wetlands were impacted with the construction activities

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.

Impacts were directed to a man made detention basin.

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 proposed project has impacts to a man made storm water feature and will not result in any observable impacts to water quality.

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.

There are no proposed impacts to stream channels with this project.

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.

No shoreline structures proposed

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.

No shoreline 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.

No shoreline structures 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.

No shoreline structures 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.

No shoreline structures proposed

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.

No shoreline structures proposed

PART II: FUNCTIONAL ASSESSMENT
REQUIREMENTS Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).
FUNCTIONAL ASSESSMENT METHOD USED: Army Corps of Engineers Highway Methodolog
NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: BRENDEN WALDEN CWS #297
DATE OF ASSESSMENT: 9/5/2023
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.

WETLANDS RULE WAIVER OR DWELLING OVER WATER WAIVER REQUEST FORM

WATER DIVISION/LAND RESOURCES MANAGEMENT WETLANDS BUREAU

RSA/Rule: RSA 482-A/ Env-Wt 204

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

A person may request a waiver to requirements in Rules Env-Wt 100-900 to accommodate situations where strict adherence to the requirements would not be in the best interests of the public or the environment. A person may also request a waiver of standard for existing dwellings over water pursuant to RSA 482-A:26, III (b).

SECTION 1 - PROJECT LOCATION INFORMATION (Env-Wt 204.03(c))			
ADDRESS: 333 Borthwick Ave	TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03802
TAX MAP/LOT NUMBER: Map 240 Lot 2-1			
SECTION 2 - WAIVER REQUESTOR INFORMATION (Env-Wt 204.03(a))			
LAST NAME, FIRST NAME, M.I.: Walden, Brenden, M.			
MAILING ADDRESS: 8 Continental Drive, Building 2 Unit H			
TOWN/CITY: Exeter		STATE: NH	ZIP CODE: 03833
EMAIL ADDRESS (if available): bwalden@gesinc.biz or if not FAX NUMBER:		DAYTIME TELEPHONE NUMBER: 207-710-7863	
SECTION 3 - APPLICANT INFORMATION (Env-Wt 204.03(b)) If request is being made on behalf of someone else, include the following information regarding the person being represented. If requestor is the applicant, check the following box and proceed to Section 4. ☐ Requestor is the applicant.			
LAST NAME, FIRST NAME, M.I.: HCA Health Services of New Hampshire			
MAILING ADDRESS: Po Box 80610			
TOWN/CITY: Indianapolis		STATE: IN	ZIP CODE: 46580
EMAIL ADDRESS (if available): Trip.DeMoss@hcahealthcare.com or if not FAX NUMBER:		DAYTIME PHONE NUMBER:	

SECTION 4 - WAIVER INFORMATION

SECTION 4A - WAIVER TO RULE Env-Wt 100-900

☐ N/A - If you are not requesting a rule waiver, check this box and proceed to Section 4b

Provide the number of the specific section of each rule for which a waiver is sought (Env-Wt 204.03(d)):
Env-Wt Env-Wt 306.05(a)(1) & 311.10

Provide a complete explanation of why a waiver is being requested, including an explanation of the operational and economic consequences of complying with the requirement and, if the requested waiver would extend the duration of a permit, the reason(s) why the permit holder was not able to complete the project within the specified time (Env-Wt 204.03(f)(1)):

The applicant is seeking relief from the above cited rules regarding the delineation of all jurisdictional areas on the subject property along with the functional assessment of the areas beyond the field delineated areas on the subject property. This is an after the fact application with minimal impacts to a man-made detention basin required to accommodate the oncology wing addition. This location was required due to the existing architechture of the building on site.

If applicable, provide a complete explanation of the alternative that is proposed to be substituted for the requirement in Env-Wt, including written documentation or data, or both, to support the alternative (Env-Wt 204.03(g)):

A field delineation of the areas in the relevant vacinity of the expansion was completed and the functions and values of those areas was evaluated.

SECTION 4B – DWELLING OVER WATERS WAIVER UNDER RSA 482-A:26, III(b).

☒ N/A - If you are not requesting a standard waiver, check this box and proceed to Section 5)

Identify the specific standard to which a waiver is being requested (Env-Wt 204.03(e)):
RSA 482-A:

Provide a complete explanation of why a waiver is being requested, including a complete explanation of how the statutory criteria of RSA 482-A:26, III(b) will be met (Env-Wt 204.03(f)(2)):

SECTION 5 - ADDITIONAL WAIVER INFORMATION (Env-Wt 204.03(h); Env-Wt 204.03(i))

(applicable to Waivers of Rules *and* Standards under RSA 482-A:26, III(b))

Indicate whether the waiver is needed for a limited duration and, if so, an estimate of when the waiver will no longer be needed (Env-Wt 204.03(h)):

This waiver is limited to this portion of the project any other projects that may require wetland impacts will either need to request an additional waiver or will need to meet the adminitrative rules.

Provide a complete explanation of why the applicant believes that having the waiver granted will meet the criteria in Env-Wt 204.05 or 204.06, as applicable (Env-Wt 204.03(i)):

The applicant meets all the criteria outlined in 204.05(a) as this after the fact direct wetland impact to an isolated man made detention basin does not have any significant adverse or avoidable impacts to wetlands, or public health or saftey. Additionally, this granting of this waiver would benefit the public to be able to continue the use of the Oncology wing pending a CO.

SECTION 6 - REQUIRED CERTIFICATIONS (Env-Wt 204.04)

Initial each box and sign below to certify:

Initials:	The information provided is true, complete, and not misleading to the knowledge and belief of the signer.
Initials:	The signer understands that: • Any waiver granted based on false, incomplete, or misleading information shall be subject to revocation; and • He or she is subject to the penalties for falsification in official matters, currently established in RSA 641.

SECTION 7 - REQUESTOR SIGNATURE (Env-Wt 204.04)

SIGNATURE (APPLICANT): *	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (REQUESTOR):	PRINT NAME LEGIBLY:	DATE:

*In lieu of an applicant signature, you may include a separate signed and dated authorization for the requestor to act on the person's behalf in connection with the request.

WETLANDS RULE WAIVER OR DWELLING OVER WATER WAIVER REQUEST FORM CRITERIA/DECISION

WATER DIVISION/LAND RESOURCES MANAGEMENT WETLANDS BUREAU

(Keep this sheet for your reference; do not submit it with your application)

RSA/Rule: RSA 482-A/ Env-Wt 204

SECTION 1 - WAIVER CRITERIA

SECTION 1A - CRITERIA FOR WAIVERS TO RULES (Env-Wt 204.05)

(a) The Department shall grant a waiver to a requirement established in subtitle Env-Wt that will not extend the duration of a wetlands permit only if:
- (1) Granting a waiver will not result in:
  - a. An avoidable adverse impact on:
    1. The environment or natural resources of the state, including but not limited to jurisdictional areas and protected species or habitat; or
    2. Public health or public safety;
  - b. An impact on abutting properties that is more significant than that which would result from complying with the rule; or
  - c. A statutory requirement being waived; and
- (2) Any benefit to the public or the environment from complying with the rule is outweighed by the operational or economic costs to the applicant.

(b) The Department shall grant a waiver that has the effect of extending the duration of a wetlands permit that does not qualify for the statutory extension under RSA 482-A:3, XIV-a only if:
- (1) The permit holder:
  - a. Was precluded from proceeding under the permit due to actions taken by persons opposed to the project; or
  - b. Rationally refrained from proceeding under the permit due to reasonable uncertainties surrounding the project's legal viability, which shall not include uncertainties regarding the project's financial viability;
- (2) If other permits are required for the project, at least one other permit already has a duration that extends beyond the expiration of the wetlands permit or, if the other permit expires concurrently or prior to the wetlands permit, the permit holder reasonably anticipates that an extension will be obtained; and
- (3) Extending the permit will not result in:
  - a. Adverse impacts on public health or safety, or the environment or natural resources of the state, that would be greater than those accounted for in the permit that was issued; or
  - b. Adverse impacts on abutting properties that is more significant than that which would have resulted if the project had been initiated in time to be completed during the permit term.

SECTION 1B - CRITERIA FOR WAIVERS UNDER RSA 482-A:26, III(b) (Env-Wt 204.06)

The Department shall grant a waiver under RSA 482-A:26, III(b) if:

(a) The waiver will not result in:
  (1) An avoidable adverse impact on the environment or natural resources of the state, public health or public safety;
  (2) Any interference with the public trust in waters held by the state; or
  (3) An adverse impact on abutting properties that is more significant than that which would result from complying with the rule; and

(b) The following criteria from RSA 482-A:26, III(b) are met:
  (1) The effect of the requested repair or reconstruction represents greater protection of public water or the environment;
  (2) Such repair or reconstruction does not change a recreational, water-based activity to a land-based, residential or commercial activity;
  (3) There will be no expansion of the existing footprint, outside dimensions, or square footage of floor space; and
  (4) There will be a net reduction in the total square footage of kitchen, bathroom, shower, and toilet facilities.

SECTION 2 – DECISION (Env-Wt 204.07)

(a) The Department shall notify the requestor of the decision in writing. If the request is denied, the Department shall identify the specific reason(s) for the denial.

(b) If a waiver is granted, the Department shall impose such conditions, including time limitations, as the Department deems necessary to ensure that the activities conducted pursuant to the waiver will be consistent with the applicable criteria.

GOVE ENVIRONMENTAL SERVICES, INC.

Date: December 10, 2023

Subject: Functions and Values Analysis

Re: Minor Dredge and Fill Application
333 Borthwick Ave, Portsmouth

The subject property located on 333 Borthwick Ave, in Portsmouth, NH, identified by Tax map 240 Lot 2-1. This is an after the fact project, consisting of the construction of an addition to Portsmouth Regional Hospital to accommodate an newly developed Oncology Wing. The project area was reviewed and field delineated by Brenden Walden, a NH CWS, in the fall of 2019. During the wetland delineation of the property, two wetlands were identified within the scope of the project area with a third off property. These wetlands area identified and discussed below as Wetland A, B, & C. Wetland B the wetland observed off property is discussed as the wetland has been identified as a state prime wetland with a duly established 100 ft wetland buffer that encroaches into the project area. A wetland function and value assessment was conducted using the US Army Corps Highway Methodology for the three wetlands identified and will be discussed in more detail below.

The US Army Corps Highway Methodology considers 13 categories of function or value within a particular wetland area:

1. **Groundwater recharge/discharge:** This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Recharge should relate to the potential for the wetland to contribute water to an aquifer. Discharge should relate to the potential for the wetland to serve as an area where ground water can be discharged to the surface.
2. **Floodflow Alteration:** This function considers the effectiveness of the wetland in reducing flood damage by attenuation of floodwaters for prolonged periods following precipitation events.
3. **Fish and Shellfish Habitat:** This function considers the effectiveness of seasonal or permanent water bodies associated with the wetland in question for fish and shell fish habitat.
4. **Water Quality—Sediment/Toxicant/Pathogen Retention:** This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants or pathogens.
5. **Water Quality—Nutrient Removal/Retention/Transformation:** This function relates to the effectiveness of the wetland to prevent adverse effects of excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers or estuaries.
6. **Production Export:** This function relates to the effectiveness of the wetland to produce food or usable products for human, or other living organisms.
7. **Sediment/Shoreline Stabilization:** This function relates to the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.
8. **Wildlife Habitat:** This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and or migrating species must be considered.
9. **Recreation:** This value considers the effectiveness of the wetland and associated watercourses to provide recreational opportunities such as canoeing, boating, fishing, hunting and other active or passive recreational activities. Consumptive opportunities consume or

diminish the plants, animals or other resources that are intrinsic to the wetland, whereas non-consumptive opportunities do not.

10. **Educational/Scientific Value:** This value considers the effectiveness of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.
11. **Uniqueness/Heritage:** This value relates to the effectiveness of the wetland or its associated water bodies to produce certain special values. Special values may include such things as archeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geological features.
12. **Visual Quality/Aesthetics:** This value relates to the visual and aesthetic qualities of the wetland.
13. **Threatened or Endangered Species Habitat:** This value relates to the effectiveness of the wetland or associated water bodies to support threatened or endangered species

Functions are self-sustaining properties of wetlands, which exist in the absence of human involvement. Values refers to the benefits gained by human society from a given wetland or ecosystem and their inherit functions. Functions and values identified as "Principal" have been determined to be significant features of the wetland being evaluated. This does not necessarily indicate the wetland supports these functions or values at a significant level in comparison to other wetlands in the region or even near the site. A discussion of the evaluated areas and the associated functions and values is provided in the sections below.

Wetland A:

Wetland A is a man-made wetland system designed to direct stormwater around the hospital ground with hydrologic connections to adjacent wetlands through existing culverts. The wetland is dominantly vegetated with Phragmites, with some shrubs and trees existing along the boundary of the wetland. Areas of open water with unknown depth are present, and there is identified flow occurring near the norther outlet structure. Functions and values associated with this wetland identified with this wetland include, Groundwater Recharge/Discharge, Floodlfow Alteration, Sediment and Toxicant Retention, Nutrient Removal, Production Export, Sediment and Shorleline Stabilization, and Wildlife Habitat. These functions are attributed to the nature of the wetland's development, existing dense vegetation, association with a watercourse and hydrologic connectivity up and down stream. This wetland had no impacts with the associated expansion and is not expected to have any observable effects to the existing identified functions of the wetland.

Wetland B:

Wetland B is a wetland identified off site to the south of the subject property that is classified as a state prime wetland with a duly established 100ft prime wetland buffer that extends on the subject property and encroaches into the project area. This is a large emergent wetland with various areas of ponded water occurring within the wetland. Functions identified with this wetland system included, Groundwater Recharge/Discharge, Floodlfow Alteration, Sediment and Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat. These functions would typically be protected by a natural wetland buffer, however, the 100 ft buffer in this case crosses an existing roadway feature and extends onto the subject property, a commercial with limited natural frontage. As it relates to the development of the constructed addition and the temporary impacts that occurred within the prime wetland buffer, to be revegetated, should not have any observable impacts to the identified functions and values of the adjacent off site prime wetland, or its buffer.

Wetland C:

Wetland C is a man-made legally constructed detention basin located south of the Portsmouth regional hospital. This is an isolated stormwater feature that has developed wetland characteristics with dense emergent vegetation growth throughout the area. This wetland is limited on its functions due to its isolated location, overall size, and origin. The functions identified with this wetland consist of Groundwater Recharge/Discharge, Sediment and Toxicant Retention, and Nutrient Removal all typical functions of a stormwater feature. A total of 200 sf of direct permanent impact is a result of the constructed addition, however, with the design of this project the overall size of this detention area has increased and is proposed to be revegetated per the landscaping plans. This expansion of the stormwater feature will likely result in a long term net benefit to the identified functions and values.

Overall, the applicant has limited all wetland impacts to the greatest extent practicable and designed the project to be the least impacting alternative practicable. Though the project is an after the fact the design worked effectively to ensure that there would be no significant loss to any of the overall functions and values of the wetlands identified on the subject property or to adjacent properties and resource areas. The proposed project has limited impacts to the lowest functioning wetland on property. Again, the stormwater feature that was impacted has been increased in size and will be revegetated to replicate pre-project conditions.

This concludes the functions and values analysis for the Minor Dredge and Fill Application for 333 Borthwick Ave, Portsmouth. If you have any other questions or believe I can assist you and any other way please feel free to contact me either by email: bwalden@gesinc.biz or by phone: 207- 710-7863.

Sincerely

Brenden Walden

President & Wetland Scientist
Gove Environmental Services, Inc.


A
c
B

Wetland Function-Value Evaluation Form

Total area of wetland unknown Human made? yes Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Commercial development and roadway Distance to nearest roadway or other development >50ft

Dominant wetland systems present R2UBFx Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? lower

How many tributaries contribute to the wetland? unknown Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. A

Latitude _____ Longitude _____

Prepared by: BMW Date 12/7/23

Wetland Impact:
Type N/a Area N/a

Evaluation based on:
Office x Field x

Corps manual wetland delineation completed? Y x N _____

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	y	1,2,4,6,7,9,15	y	wetland associated with a stream, has high density of vegetation, shows varying levels of water depth
Floodflow Alteration	y	3,4,5,6,7,8,9,10,11,12,13,15,16,18	y	Wetland associated with a watercourse hydrologically connected to upstream and down stream wetlands.
Fish and Shellfish Habitat	n	hydroperiod unknown	n	Level of permanent water depth is unknown
Sediment/Toxicant Retention	y	1,2,3,4,5,6	y	Slow moving water with high density of vegetation
Nutrient Removal	y	3,4,5,6,7,8,9,10,11	y	dense vegetation for nutrient acquisition
Production Export	Y	1,2,5,7,10,11,	y	associated with a watercourse with potential for flushing
Sediment/Shoreline Stabilization	Y	1,2,3,4,12,13,15	y	bank of water course is effectively stable from existing vegetation
Wildlife Habitat	Y	7,8,13,17,18,19,20,21	Y	man influenced wetland with associated water course and dense vegetation
Recreation	n	10,11	n	private property
Educational/Scientific Value	n	11,13,14	n	private property
Uniqueness/Heritage	n	1,10,11,17,	n	private property
Visual Quality/Aesthetics	n	6,9,12	n	private property
ES Endangered Species Habitat		See NHB		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland unknown Human made? no Is wetland part of a wildlife corridor? unknown or a "habitat island"? no

Adjacent land use Institutional, public transit Distance to nearest roadway or other development <50 ft

Dominant wetland systems present pem1e Contiguous undeveloped buffer zone present yes

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? lower

How many tributaries contribute to the wetland? unknown Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. B

Latitude _____ Longitude _____

Prepared by: BMW Date 12/7/23

Wetland Impact:
Type temporary Prime wetland Buffer Area 961 sf

Evaluation based on:
Office x Field x

Corps manual wetland delineation completed? Y x N _____

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	y	1,2,4,6,9,15	y	large, densely vegetative wetland
Floodflow Alteration	y	1,2,3,5,6,7,8,9,10,13,14,18	y	large wetland downstream of smaller wetlands
Fish and Shellfish Habitat	n		n	no deep water habitat identified
Sediment/Toxicant Retention	y	1,3,4,5,6,7,8,9,10,12,15,16	y	large wetland with slow moving hydrology; dense vegetation present
Nutrient Removal	y	1,3,4,5,7,8,9,10,11	y	dense vegetation and slow moving hydrology
Production Export	n	1,2,4,7,	n	no evidence of production leaving wetland
Sediment/Shoreline Stabilization	n		n	no shoreline identified
Wildlife Habitat	y	1,3,6,7,8,13,16,18,19,20,	y	large prime wetland with varying levels of habitat structure to support species
Recreation	y	5,7,10,12	n	densely vegetated emergent wetland system with limited opportunities for recreation
Educational/Scientific Value	y	2,3,4,6,10,13,	n	no easily accessible access
Uniqueness/Heritage	y	1,10,13,16,17,	n	no easily accessible access
Visual Quality/Aesthetics	y	2,5,8,12	n	limited vegetation diversity and not easily accessed
ES Endangered Species Habitat		See NHB		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland unknown Human made? yes Is wetland part of a wildlife corridor? no or a "habitat island"? no

Adjacent land use Commercial/roadway Distance to nearest roadway or other development >50 ft

Dominant wetland systems present PEM1 Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? lower

How many tributaries contribute to the wetland? unknown Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. C

Latitude _____ Longitude _____

Prepared by: BMW Date 12/7/23

Wetland Impact:
Type Fill Area 200 SF

Evaluation based on:
Office x Field x

Corps manual wetland delineation completed? Y x N _____

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	y	1,2,4,6,9,15	y	Man-Made detention basin with dense vegetation and variable water levels
Floodflow Alteration	y	2,5,6,8,14,18	n	Isolated man-made detention basin
Fish and Shellfish Habitat	n		n	no deep water habitat identified
Sediment/Toxicant Retention	y	1,3,4,5,6,8,9	y	man made storm water feature
Nutrient Removal	y	3,4,5,7,8,9,10,	y	dense vegetation present
Production Export	n		n	Isolated man made detention basin with no export occuring
Sediment/Shoreline Stabilization	n		n	man made stormwater feature no shoreline present
Wildlife Habitat	n	13,18,19,20,21	n	man made storm water feature in commercial area
Recreation	n		n	private property / man-made detention basin
Educational/Scientific Value	n		n	private property / man-made detention basin
Uniqueness/Heritage	n		n	private property / man-made detention basin
Visual Quality/Aesthetics	n	9	n	private property / man-made detention basin
ES Endangered Species Habitat		See NHB		
Other				

Notes:

* Refer to backup list of numbered considerations.

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 http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*	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 https://www2.des.state.nh.us/nhb_datacheck/. The book Natural Community Systems of New Hampshire 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.)	N/A	
2.5 The overall project site is more than 40 acres?		X
2.6 What is the area of the previously filled wetlands?	Unknown	
2.7 What is the area of the proposed fill in wetlands?	200SF	
2.8 What is the % of previously and proposed fill in wetlands to the overall project site?	Unknown	
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: https://www2.des.state.nh.us/nhb_datacheck/ USFWS IPAC website: https://ecos.fws.gov/ipac/location/index	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: • PDF: https://wildlife.state.nh.us/wildlife/wap-high-rank.html. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.		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	
4. Flooding/Floodplain Values	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	
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) 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**	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.

2.0 GENERAL INFORMATION

PREPARED BY (AGENT CONTACT): Brenden Walden

2.1 PROJECT NAME, PLANS, AND MAPS

PROJECT NAME: Portsmouth Regional Hospital Oncology Expansion

SITE PLANS/MAPS:
Existing Conditions Plan
Proposed Plan
8½"x11" USGS Quad Sheet Locus Map
8½"x11" Wildlife Action Plan
8½"x11" Aerial Imagery
11x17" Overview Plan
11x17" Wetland Impact Plan Detail
11x17" Project Site Tax Map

2.2 TECHNICAL STANDARDS

2.2.1 Gove Environmental Services, Inc. delineated the wetlands during the spring of 2019, utilizing the standards of the Corps of Engineers *Wetlands Delineation Manual*[1] and the NH DES Wetlands Bureau *Code of Administrative Rules*[2].

2.2.2 Wetland flags were surveyed by Jame Vera and Associates Inc.

2.2.3 Wetlands were classified by GES utilizing the criteria of *Classification of Wetlands and Deepwater Habitats of the United States*[3].

2.2.4 Dominant hydric soil conditions within the wetlands were identified by GES utilizing the criteria of *Field Indicators for Identifying Hydric Soils in New England*[4].

2.2.5 Dominance of wetland vegetation was assessed by GES utilizing the *National List of Plant Species That Occur in Wetlands: Northeast (Region 1)*[5].

[1] Environmental Laboratory. 2012. "Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral and Northeast Region." Version 2.0. Technical Report ERDC/EL TR-10-12.
[2] NH Code Admin. R. [Wt] Ch. 100-1000.
[3] Cowardin, L. M., 1979. Classification of Wetlands and Deepwater Habitats in the United States. Washington, D.C.: U.S. Department of the Interior, Fish and Wildlife Service.
[4] New England Hydric Soils Technical Committee, Version 4. June 2020. "Field Indicators for Identifying Hydric Soils in New England."
[5] Lichvar, R.W. & Kartesz, J.T. 2009. North American Digital Flora: National Wetland Plant List. 2.2.1.

2.3 SITE DESCRIPTION/WETLANDS OVERVIEW

The ~20-acre subject property located on Tax Map 240 Lot 2-1 is a commercially developed property for the Portsmouth Regional Hospital located between Interstate 95 and Borthwick Ave. During the limited field assessment in 2019 two manmade emergent wetlands were identified. An isolated legally constructed man-made detention basin located along the frontage of the property, and a large drainage swale with hydrologic connectivity from both wetlands across Borthwick Ave and the adjacent property to the south west. A NH State Designated Prime Wetland (#015) with a duly established 100 ft buffer is located south of the property across from Borthwick Ave. Functions and values of each of those areas are to be discussed in more detail in the attached functional assessment below. The overall property is part of an urbanized area with both commerce and residential areas.

3.0 PROJECT OVERVIEW

The application is for an After the Fact impact that was identified with as the construction was about half underway. The after the fact information related to the impacts is discussed below. The project proposed an expansion of the existing building on property to accommodate an Oncology Wing for Portsmouth Regional Hospital. Due to the current layout and architectural design of the building the expansion area was limited to its proposed area. With the expansion 200 SF of wetland impact was directed to the man-made detention basin with an additional 2,918 SF total of temporary wetland impact. In addition, there was 961 SF of temporary impact identified that occurred within the 100 ft prime wetland buffer. This project impacted the exterior portions of the identified jurisdictional area as well as expanded the detention basin from its original size which will create a long-term benefit to the resource area. The functions and values of the impacted wetland will be replicated and potentially enhanced with the increase size to the area.

3.1 AFTER THE FACT APPLICATION

Env-Wt 311.12 After-the-Fact Applications.
(a) In addition to a complete application package as specified in Env-Wt 311.03, an after-the-fact application shall include the following:

(1) A current conditions plan that clearly identifies all disturbances and construction performed without a permit, delineated as specified in chapter 5 of the US ACE Regional Supplement, available as noted in Appendix B;

Please see attached plans reflecting the full build out.

(2) Copies of aerial photographs and other information to document the basis for the delineation;

A field delineation was conducted prior to the impacts associated with the project per the standards outlined in this application.

(3) A restoration plan for all impacted jurisdictional areas to be restored, prepared by a licensed professional, with a wetland delineation stamped by a certified wetland scientist;

The project is now complete and followed the build out plan as well as the landscaping plan associated with the project. No further restoration of the area should be required as the area was previously part of a man-made detention basin and will revegetate within the next growing season.

(4) A monitoring plan designed to ensure that the restoration is successful; and

The current conditions of the site are stable and vegetation in this area was proposed to remain emergent persistent as was currently present in the remaining areas of the detention basin. Additionally, the area was increased as to maintain its usefulness.

(5) An explanation as to why work was performed prior to having a permit.

Unfortunately at the time that the work was beginning the engineers were not experienced with state processes and how man-made wetlands are still considered jurisdictional at the state level. Once a City Conditional Use Permit was acquired they believed they could begin to conduct work on the property.

(b) Applications received after work is completed shall be subjected to the same technical review and criteria as any other standard application.

We understand and the application is believed to be a permittable project.

(c) The department's acceptance of an after-the-fact application shall not in any way preclude or limit the exercise of any enforcement authority conferred by law on the department, the attorney general, or any other federal, state, or local authority.

We understand.

(d) Subject to (e), below, the department shall process an after-the-fact application in accordance with Env-Wt 312 within 50 days of receiving an administratively complete after-the-fact application, including necessary attachments, for a project having less than one acre of impact and within 75 days for larger projects.

We understand the review timelines for this project.

(e) The time limits in (d), above, shall not apply if:

(1) The project is the subject of an ongoing enforcement investigation, enforcement action, or department of justice case, in which case the timeframe of the ongoing action shall take precedence; or

N/A

(2) The application requires additional information or requires the department to perform a field inspection of the project, in which case the department shall make its decision on the application within 60 days of the receipt of the additional information or completion of the field inspection, as applicable

We understand the time line as stated above.

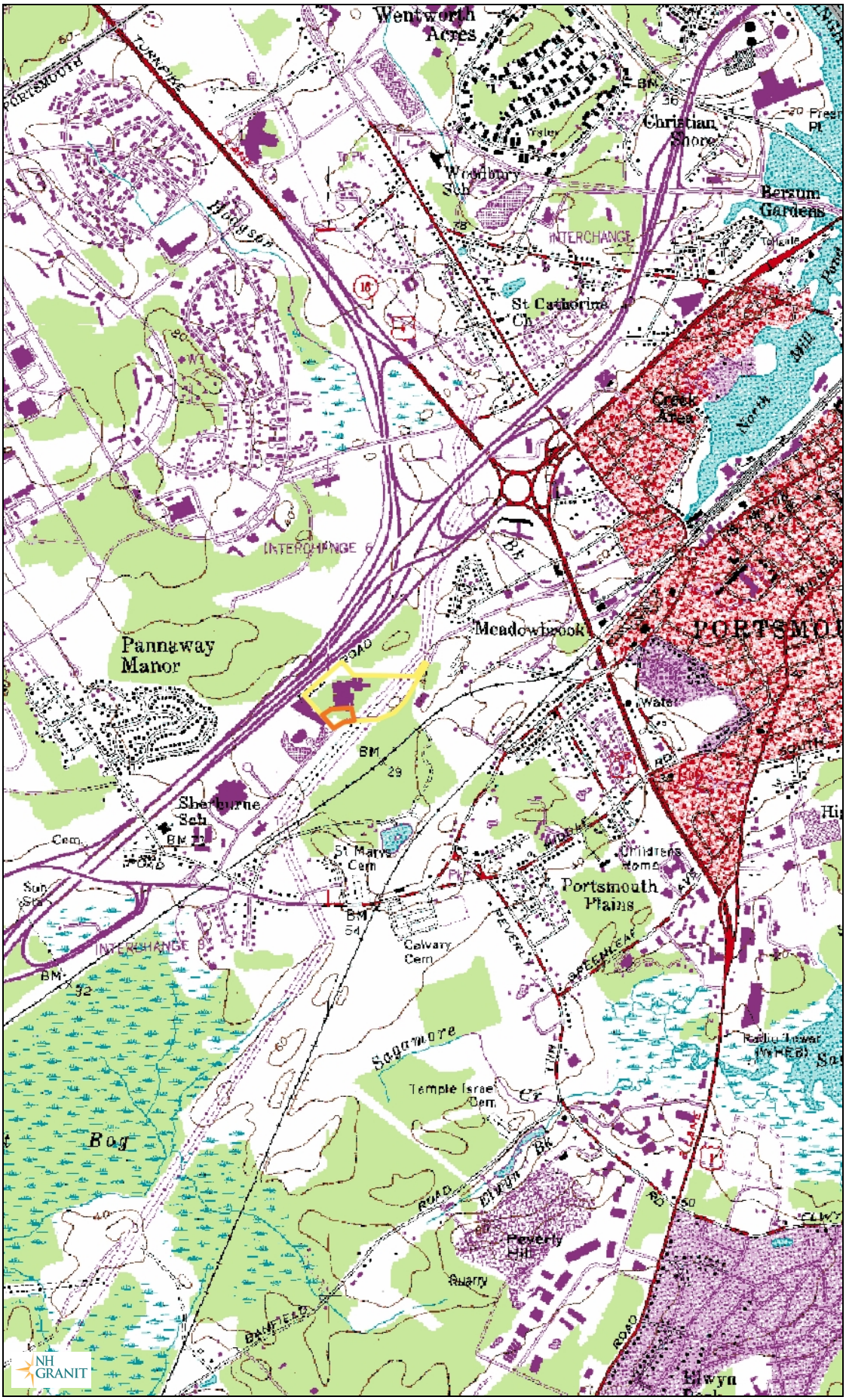
3.2 704.02 SUPPLEMENTARY INFORMATION AND CRITERIA FOR APPROVAL

Env-Wt 704.02 Supplementary Information and Criteria for Approval. An applicant for a project in a prime wetlands/buffer shall submit a functional assessment and impact analysis to demonstrate, by clear and convincing evidence as required by RSA 482-A:11, IV(a), that the criteria in RSA 482-A:11, IV(a) are met, namely that the proposed project, either alone or in conjunction with other human activity, will not result in the significant net loss of any of the values set forth in RSA 482-A:1, reprinted in Appendix D.

The 100 Ft Duly Established State Prime Wetland Buffer encroaches onto the subject property from across Borthwick Ave and has no direct wetland connectivity to the impacted wetland. As identified in the functions and values assessed for the impacted wetland per the ACOE Highway Methodology the man-made detention basin had minimal functions and values purely based on its limited size, location on the landscape and origin relative to the surrounding wetlands. As this wetland was constructed to serve as a detention basin for the purposed of stormwater management of a commercial property, the limited area that was disturbed within the prime wetland buffer will have no long-term negative effects to the functions and values of the disconnected prime wetland or its surrounding buffer. The area will also be revegetated per the landscaping plan attached to maintain the emergent vegetation within the wetland as well as the expansion area of the detention basin.

1985 USGS QUAD SHEET LOCUS MAP
Scale 1:24,000

USGS



Legend

- State
- County
- City/Town

Map Scale

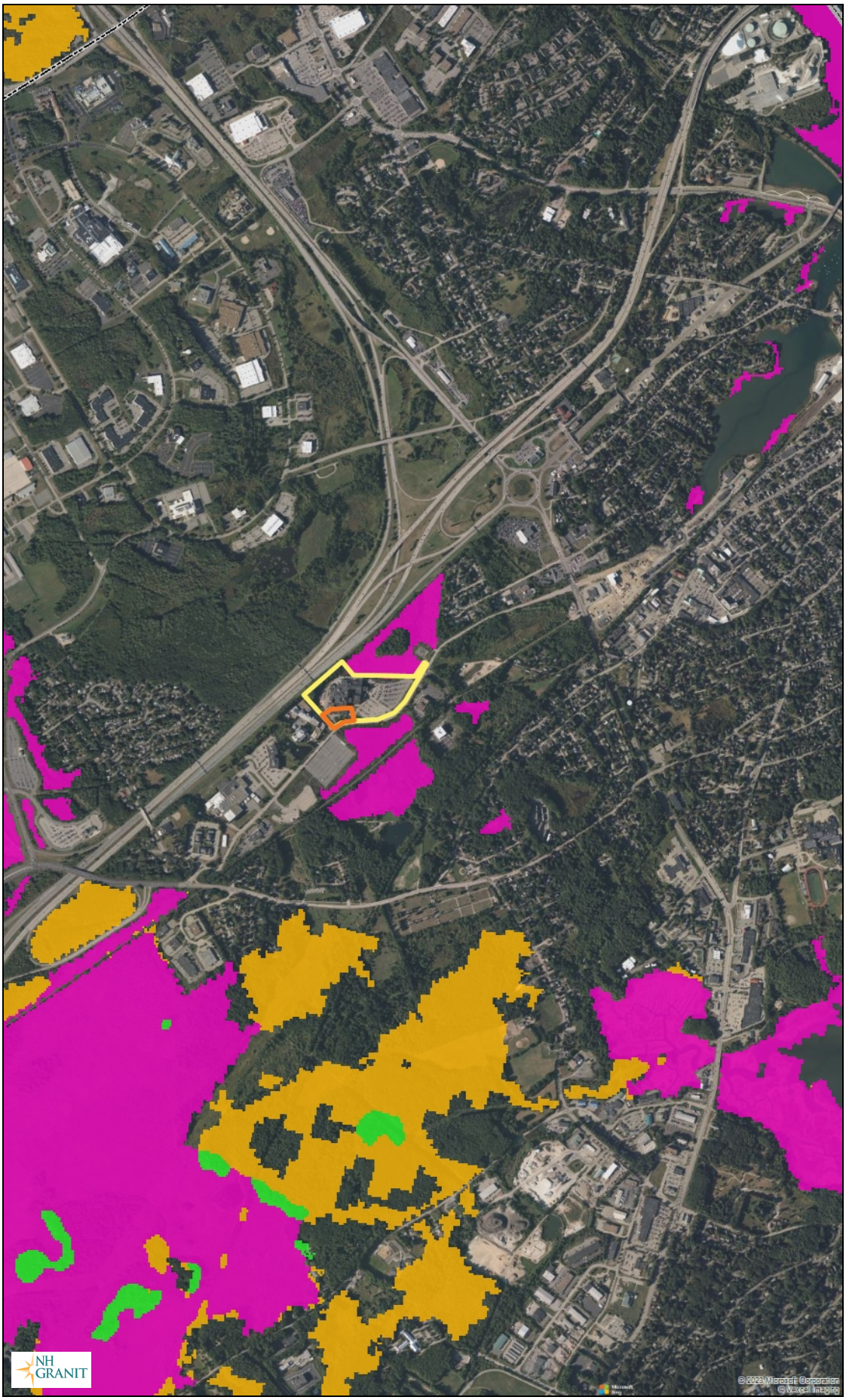
1: 24,000

Map Generated: 1/10/2024

Notes

Wildlife Action Plan
Scale 1:24,000

Highest Ranked Habitat



Legend

- State
- County
- City/Town

WAP 2020: Highest Ranked Wildlife Habitat

- 1 Highest Ranked Habitat in NH
- 2 Highest Ranked Habitat in Regior
- 3 Supporting Landscape

Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

Aerial Imagery

Aerial

Legend

- State
- County
- City/Town

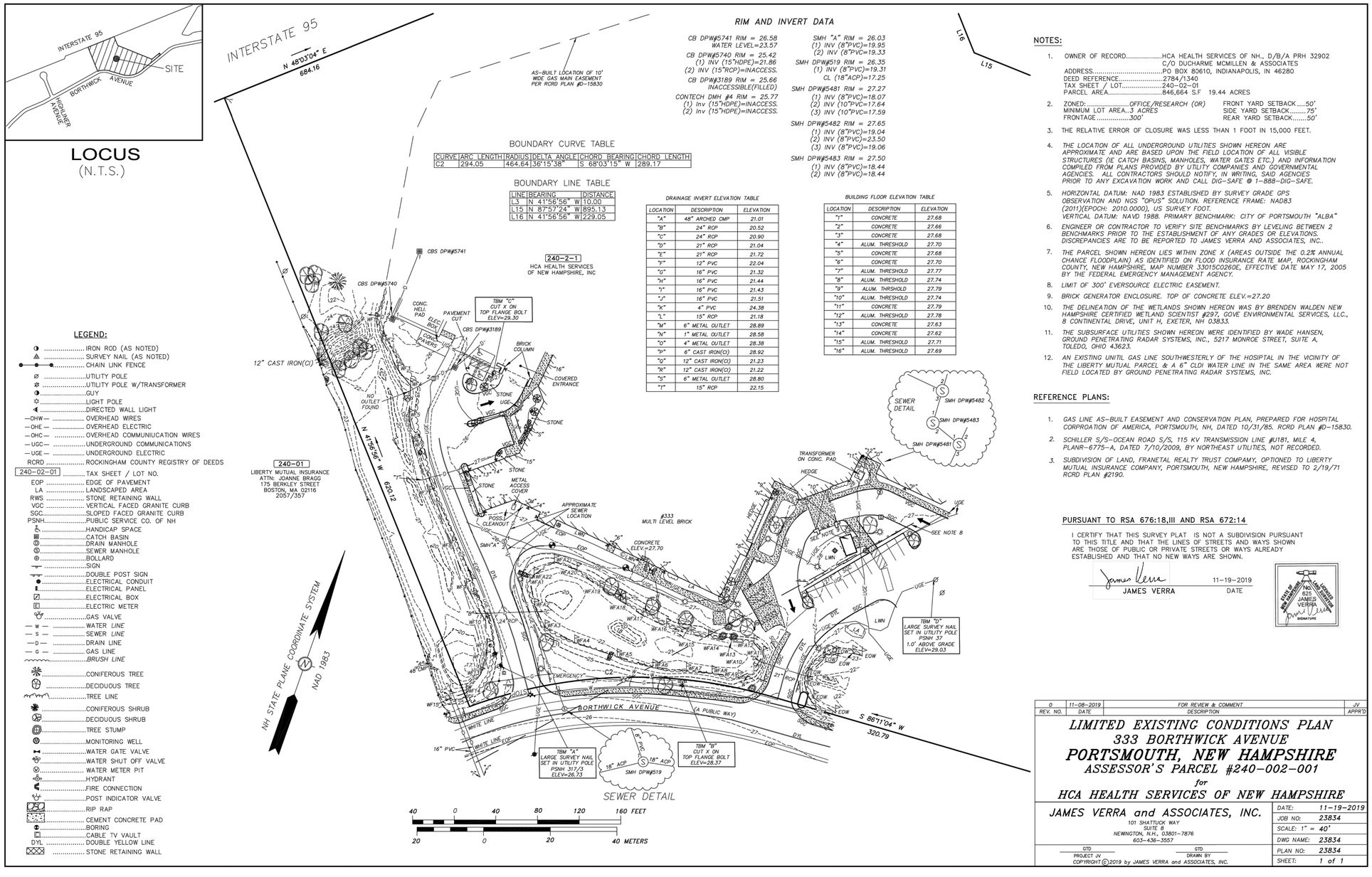
Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

EXISTING CONDITIONS PLAN



DRAINAGE INVERT ELEVATION TABLE

LOCATION	DESCRIPTION	ELEVATION
"A"	48" ARCHED CMP	21.01
"B"	24" RCP	20.52
"C"	24" RCP	20.90
"D"	21" RCP	21.04
"E"	21" RCP	21.72
"F"	12" PVC	22.04
"G"	16" PVC	21.32
"H"	16" PVC	21.44
"I"	16" PVC	21.43
"J"	16" PVC	21.51
"K"	4" PVC	24.38
"L"	15" RCP	21.18
"M"	6" METAL OUTLET	28.89
"N"	1" METAL OUTLET	28.58
"O"	4" METAL OUTLET	28.38
"P"	6" CAST IRON(CI)	28.92
"Q"	12" CAST IRON(CI)	21.23
"R"	12" CAST IRON(CI)	21.22
"S"	6" METAL OUTLET	28.80
"T"	15" RCP	22.15

BUILDING FLOOR ELEVATION TABLE

LOCATION	DESCRIPTION	ELEVATION
"1"	CONCRETE	27.68
"2"	CONCRETE	27.66
"3"	CONCRETE	27.68
"4"	ALUM. THRESHOLD	27.70
"5"	CONCRETE	27.68
"6"	CONCRETE	27.70
"7"	ALUM. THRESHOLD	27.77
"8"	ALUM. THRESHOLD	27.74
"9"	ALUM. THRSHOLD	27.79
"10"	ALUM. THRESHOLD	27.74
"11"	CONCRETE	27.79
"12"	ALUM. THRESHOLD	27.78
"13"	CONCRETE	27.63
"14"	CONCRETE	27.62
"15"	ALUM. THRESHOLD	27.71
"16"	ALUM. THRESHOLD	27.69

NOTES:

1. OWNER OF RECORD.....HCA HEALTH SERVICES OF NH., D/B/A PRH 32902 C/O DUCHARME MCMILLEN & ASSOCIATES
ADDRESS.....P.O BOX 80610, INDIANAPOLIS, IN 46280
DEED REFERENCE.....2784/1340
TAX SHEET / LOT.....240-02-01
PARCEL AREA.....846,664 S.F 19.44 ACRES
2. ZONED:.....OFFICE/RESEARCH (OR) FRONT YARD SETBACK....50'
MINIMUM LOT AREA..3 ACRES SIDE YARD SETBACK.....75'
FRONTAGE.....300' REAR YARD SETBACK.....50'
3. THE RELATIVE ERROR OF CLOSURE WAS LESS THAN 1 FOOT IN 15,000 FEET.
4. *THE LOCATION OF ALL 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 COMPANIES AND GOVERNMENTAL AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, SAID AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG-SAFE @ 1-888-DIG-SAFE.*
5. *HORIZONTAL DATUM: NAD 1983 ESTABLISHED BY SURVEY GRADE GPS OBSERVATION AND NGS "OPUS" SOLUTION. REFERENCE FRAME: NAD83 (2011)(EPOCH: 2010.0000), US SURVEY FOOT.*
VERTICAL DATUM: NAVD 1988. PRIMARY BENCHMARK: CITY OF PORTSMOUTH "ALBA"
6. *ENGINEER OR CONTRACTOR TO VERIFY SITE BENCHMARKS BY LEVELING BETWEEN 2 BENCHMARKS PRIOR TO THE ESTABLISHMENT OF ANY GRADES OR ELEVATIONS. DISCREPANCIES ARE TO BE REPORTED TO JAMES VERRA AND ASSOCIATES, INC.*
7. *THE PARCEL SHOWN HEREON LIES WITHIN ZONE X (AREAS OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS IDENTIFIED ON FLOOD INSURANCE RATE MAP, ROCKINGHAM COUNTY, NEW HAMPSHIRE, MAP NUMBER 33015C0260E, EFFECTIVE DATE MAY 17, 2005 BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.*
8. *LIMIT OF 300' EVERSOURCE ELECTRIC EASEMENT.*
9. *BRICK GENERATOR ENCLOSURE. TOP OF CONCRETE ELEV.=27.20*
10. *THE DELINEATION OF THE WETLANDS SHOWN HEREON WAS BY BRENDEN WALDEN NEW HAMPSHIRE CERTIFIED WETLAND SCIENTIST #297, GOVE ENVIRONMENTAL SERVICES, LLC., 8 CONTINENTAL DRIVE, UNIT H, EXETER, NH 03833.*
11. *THE SUBSURFACE UTILITIES SHOWN HEREON WERE IDENTIFIED BY WADE HANSEN, GROUND PENETRATING RADAR SYSTEMS, INC., 5217 MONROE STREET, SUITE A, TOLEDO, OHIO 43623.*
12. *AN EXISTING UNITIL GAS LINE SOUTHWESTERLY OF THE HOSIPTAL IN THE VICINITY OF THE LIBERTY MUTUAL PARCEL & A 6" CLDI WATER LINE IN THE SAME AREA WERE NOT FIELD LOCATED BY GROUND PENETRATING RADAR SYSTEMS, INC.*

REFERENCE PLANS:

1. *GAS LINE AS-BUILT EASEMENT AND CONSERVATION PLAN, PREPARED FOR HOSPITAL CORPROATION OF AMERICA, PORTSMOUTH, NH, DATED 10/31/85. RCRD PLAN #D-15830.*
2. *SCHILLER S/S-OCEAN ROAD S/S, 115 KV TRANSMISSION LINE #U181, MILE 4, PLANR-6775-A, DATED 7/10/2009, BY NORTHEAST UTILITIES, NOT RECORDED.*
3. *SUBDIVISION OF LAND, FRANETAL REALTY TRUST COMPAMY, OPTIONED TO LIBERTY MUTUAL INSURANCE COMPANY, PORTSMOUTH, NEW HAMPSHIRE, REVISED TO 2/19/71 RCRD PLAN #2190.*

PURSUANT TO RSA 676:18,III AND RSA 672:14

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.

JAMES VERRA 11-19-2019
JAMES VERRA DATE

NH 825 JAMES VERRA SIGNATURE

REV. NO.	DATE	DESCRIPTION	APPR'D
0	11-08-2019	FOR REVIEW & COMMENT	JV

LIMITED EXISTING CONDITIONS PLAN
333 BORTHWICK AVENUE
PORTSMOUTH, NEW HAMPSHIRE
ASSESSOR'S PARCEL #240-002-001
for
HCA HEALTH SERVICES OF NEW HAMPSHIRE

JAMES VERRA and ASSOCIATES, INC.
101 SHATTUCK WAY
SUITE B
NEWINGTON, N.H., 03801-7876
603-436-3557

GTD PROJECT JV
GTD DRAWN BY

DATE: 11-19-2019
JOB NO: 23834
SCALE: 1" = 40'
DWG NAME: 23834
PLAN NO: 23834
SHEET: 1 of 1

RESPONSIBILITY: ZCN DWN
CHECKED BY: CRA DATE

DRAWING FILE: BM 360.0\23834\DS_ - Portsmouth Radiation Oncology\23834DS Portsmouth Oncology_R20.vwt
PLOTTED ON: 22/1/2022 9:30:10 AM

GENERAL CONTRACTORS

REVISIONS:

DATE: 04/25/2022

CONSTRUCTION DOCUMENTS - PRICING SET

GOULD TURNER GROUP, P.C.
ARCHITECTURE
615 3RD AVENUE SOUTH, SUITE 600
NASHVILLE, TENNESSEE 37210

GOULD TURNER GROUP
Architects - Planners - Interiors

PORTSMOUTH REGIONAL HOSPITAL
RADIATION ONCOLOGY ADDITION
333 BORTHWICK AVE, PORTSMOUTH, NH
HCA# 3290200021
GTG# 3763305

VENDOR INFORMATION

CIVIL CONSULTANT
KIMLEY-HORN & ASSOCIATES, INC
ANN MARIE STEVENS, SUITE 285
WALTHAM, MA 02451
MANAGER: CHRIS AKERS

STRUCTURAL CONSULTANT
STANLEY D. LINDSEY & ASSOC., LTD.
3010 HIGHWOODS BLVD., BLDG 1, STE 175
RALEIGH, NC 27604
MANAGER: MARK HILNER

M.P.E. & T CONSULTANT
I.C. THOMASSON ASSOCIATES, INC.
401 CHURCH STREET, SUITE 500
NASHVILLE, TN 37219
MANAGER: ZACK MCCOY

HCA Healthcare
HCA DESIGN MANAGER:
MIKE MAHAFFEY PH 615-344-9268
HCA CONSTRUCTION MANAGER:
RYAN MAGUIRE PH 615-344-2487

SURVEY BY OTHERS
C0.02

811 Know what's below. Call before you dig.

SITE PLANS

SITE DATA TABLE

OWNER OF RECORD	HCA HEALTH SERVICES OF NH INC D/B/A PRH 32902	
SITE ADDRESS	333 BORTHWICK AVE, PORTSMOUTH, NH 03801	
SITE AREA	± 20.87 AC	
DISTURBANCE LIMITS W/ THIS PROJECT	± 0.7 AC	
TAX MAP & LOT	TAX MAP 240, LOT 2-1	
ZONING	OR - OFFICE RESEARCH	
SETBACKS	REQUIRED	PROPOSED
FRONT YARD SETBACK	50'-0"	±40'
REAR YARD SETBACK	50'-0"	±157'
SIDE YARD SETBACK	75'-0"	±71' * (EXISTING)
MIN. OPEN SPACE ON A LOT	30%	±39.0%
MAX BUILDING COVERAGE	30%	± 20.1%
BUILDING DATA		
	EXISTING	PROPOSED ADDITION
HOSPITAL BEDS	233	0
HOSPITAL/ MOB FLOOR PLATE	±173,916 SF	± 8,700 SF
HOSPITAL GROSS AREA	±427,495 SF	± 8,870 SF
MEDICAL OFFICE BUILDING GROSS AREA (ATTACHED TO HOSPITAL BUILDING)	±46,665 SF	0 SF
BUILDING HEIGHT	± 65'-4"	± 14'-8"

PAVEMENT LEGEND

	DESCRIPTION	DET #/ SHT #
	SIDEWALK CONCRETE	1 / C7.00
	ASPHALT PAVEMENT	2 / C7.00
	CONCRETE PAVEMENT	3 / C7.00
	MOBILE IMAGING CONCRETE PAD	4 / C7.00
	SPECIALITY SIDEWALK PAVEMENT	NOTE THIS SHEET

SPECIALITY SIDEWALK PAVEMENT NOTE

COLORED CONCRETE SURFACE WITH MEDIUM BROOM FINISH, CONSISTING OF SCOFIELD LITHOCHROME COLOR HARDENER, COLOR TO BE SELECTED BY ARCHITECT. SEAL CURED, COLORED SURFACE WITH SCOFIELD SCOFIELD CURESEAL-VOC MATTE FINISH CLEAR SEALANT. PREPARE SURFACES AND APPLY MATERIALS PER MANUFACTURER'S SPECIFICATIONS.

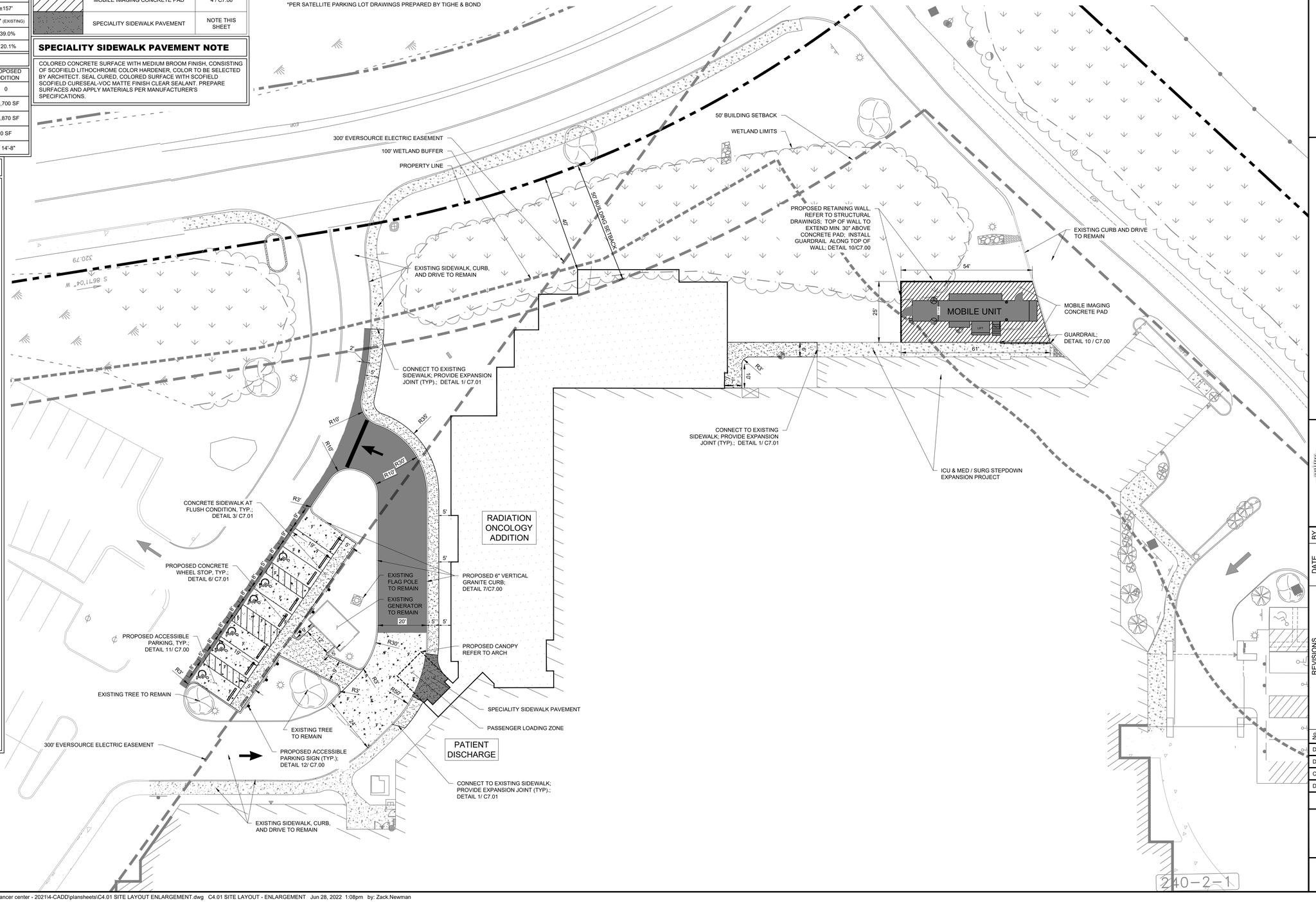
PARKING SUMMARY

	EXISTING	DEMOLISHED	PROPOSED	NET RESULT
ONSITE STANDARD SPACES	754	11	2	745
ONSITE ACCESSIBLE (INCLUDING VAN ACCESSIBLE)	29	4	6	31
OFFSITE STANDARD SPACES*	0	0	490	490
OFFSITE ACCESSIBLE (INCLUDING VAN ACCESSIBLE)*	0	0	11	11
TOTAL				1277

*PER SATELLITE PARKING LOT DRAWINGS PREPARED BY TIGHE & BOND

SITE LAYOUT NOTES

1. INSTALL CONCRETE JOINTS WHERE SHOWN ON PLANS AND DETAILS. ALIGN ON WALLS, BUILDINGS, RADII, ETC. EVENLY SPACE BETWEEN ELEMENTS AS SHOWN. PROVIDE EXPANSION JOINTS BETWEEN CONCRETE PAVEMENT AND ALL VERTICAL ELEMENTS (WALLS, CURBS, ETC.).
2. ALL RADIUS ARE 3' UNLESS OTHERWISE NOTED.
3. LAYOUT ALL CURVES SMOOTHLY WITH NO ABRUPT CHANGES AT TANGENT POINTS.
4. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
5. LAYOUT ALL ELEMENTS IN FIELD AND CONTACT OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE BEGINNING ANY CONSTRUCTION.
6. CONTRACTOR TO TAKE ALL PRECAUTIONS TO FIND AND AVOID SITE UTILITIES. ALL UTILITIES ARE NOT SHOWN ON DRAWING. VERIFY LOCATIONS AND CONSIDER SUCH WHEN ESTIMATING.
7. ALL LANDSCAPE ISLANDS SHALL BE MOUNDED WITH TOPSOIL 4" ABOVE THE CURB LINE TO PROMOTE POSITIVE DRAINAGE.
8. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL BE INSTALLED PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
9. ALL PAVEMENT MARKINGS ON-SITE ARE PAINT, UNLESS OTHERWISE NOTED.
10. SAW CUT LINES SHALL BE DONE IN A STRAIGHT NEAT LINE A MINIMUM OF 18" FROM THE EXISTING EDGE OF PAVEMENT.
11. IF DURING CONSTRUCTION ACTIVITIES ANY EVIDENCE OF THE PRESENCE OF STATE AND FEDERALLY PROTECTED PLANT AND/OR ANIMAL SPECIES IS DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP AND CITY OF PORTSMOUTH SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE PLANT AND/OR ANIMAL SPECIES FOUND ON THE SITE.
12. PRIOR TO THE START OF THE CLEARING AND GRUBBING, OR ANY SOIL DISTURBANCE CONTACT PORTSMOUTH STORMWATER MGMT. AT (603) 427-1530 FOR A POTENTIAL SOIL EROSION AND SEDIMENT CONTROL, PRE-INSPECTION MEETING.
13. THE CONTRACTOR MUST PROVIDE A DEWATERING PLAN, IF APPLICABLE, TO CITY OF PORTSMOUTH BUILDING AND SITE DEVELOPMENT DIVISION AT (603) 610-7243 FOR REVIEW PRIOR TO THE EROSION CONTROL MEASURES PRE-INSPECTION MEETING.
14. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
15. RECORDING NOTE:
    - THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
    - ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
16. TOPOGRAPHY AND EXISTING CONDITIONS FROM FIELD SURVEY PERFORMED BY *JAMES VERRA & ASSOCIATES, INC.* ON 10/2019.
17. FLOOD HAZARD ZONE: ZONE X (OUTSIDE THE 2% ANNUAL CHANCE FLOODPLAIN) PER F.I.R.M. #33015C0260F, DATED 01/29/2021.
18. HORIZONTAL DATUM IS BASED ON NAD 1983.
19. VERTICAL DATUM BASED ON NAVD88.
20. JURISDICTIONAL WETLANDS DELINEATED BY *GOVE ENVIRONMENTAL SERVICES, INC.* DURING OCTOBER 2019 IN ACCORDANCE WITH:
    - 2012 CORPS OF ENGINEERS WETLANDS DELINEATIONS MANUAL, TECHNICAL REPORT ERDC/ EL TR-12-1,
    - FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4, APRIL 2019.
    - US ARMY CORPS OF ENGINEERS NATIONAL WETLAND PLAN LIS, 2018.
    - CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE U.S.. USFW MANUAL FWS/ OBS-79/31 (1979).
21. UNDERGROUND ELECTRIC, WATER, GAS, & SEWER LOCATIONS BASED ON SURFACE MARKINGS BY *GPRS, INC* ON 10/2019.



Kimley»Horn
404 WYMAN STREET, SUITE 385 WALTHAM, MA 02451
MAIN:781.328.0676 | WWW.KIMLEY-HORN.COM

PORTSMOUTH REGIONAL HOSPITAL
RADIATION ONCOLOGY ADDITION
PORTSMOUTH, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE
ANDREW JAMES SCHALL
No. 15914
LICENSED PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DESIGNED BY: ZCN
DRAWN BY: ZCN
CHECKED BY: MEH
DATE: 06/28/2022
KIMLEY-HORN PROJECT NO. 118252004

SITE LAYOUT - ENLARGEMENT

C4.01

240-2-1

WETLAND IMPACT PLAN

GRADING PLAN LEGEND

28.60	SPOT ELEVATION		
HP	HIGH POINT	LP	LOW POINT
TC	TOP OF CURB	BC	BOTTOM OF CURB / GUTTER LINE
TW	GRADE AT TOPSIDE OF WALL	BW	GRADE AT BOTTOM SIDE OF WALL
INV	INVERT	RIM	TOP OF GRATE / COVER
ME	MATCH EXISTING		
FFE 28.60	FINISH FLOOR ELEVATION		
27	EXISTING CONTOUR		
27	PROPOSED CONTOUR		

WETLAND IMPACT LEGEND

	DESCRIPTION	AREA
	TEMPORARY WETLAND DISTURBANCE	4,400 SF
	PERMANENT WETLAND DISTURBANCE	200 SF
	PROPOSED WETLANDS	1,150 SF

WETLAND SUMMARY

EXISTING WETLAND AREA:	± 10,300 SF
PERMANENT WETLAND DISTURBANCE:	± 200 SF
PROPOSED WETLAND ADDED:	± 1,150 SF
NEW WETLAND AREA:	± 11,250 SF

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

WETLAND DISTURBANCE

EX. A

WETLAND DISTURBANCE

EX. A

Know what's below. Call before you dig.

GENERAL CONTRACTORS

REVISIONS:

DATE: 04 / 25 / 2022

CONSTRUCTION DOCUMENTS - PRICING SET

GOULD TURNER GROUP, P.C.
ARCHITECTURE
615 3RD AVENUE SOUTH, SUITE 600
NASHVILLE , TENNESSEE 37210

GOULD TURNER GROUP
Architects - Planners - Interiors

PORTSMOUTH REGIONAL HOSPITAL
RADIATION ONCOLOGY ADDITION
333 BORTHWICK AVE, PORTSMOUTH, NH

HCA# 3290200021
GT/# 3766305

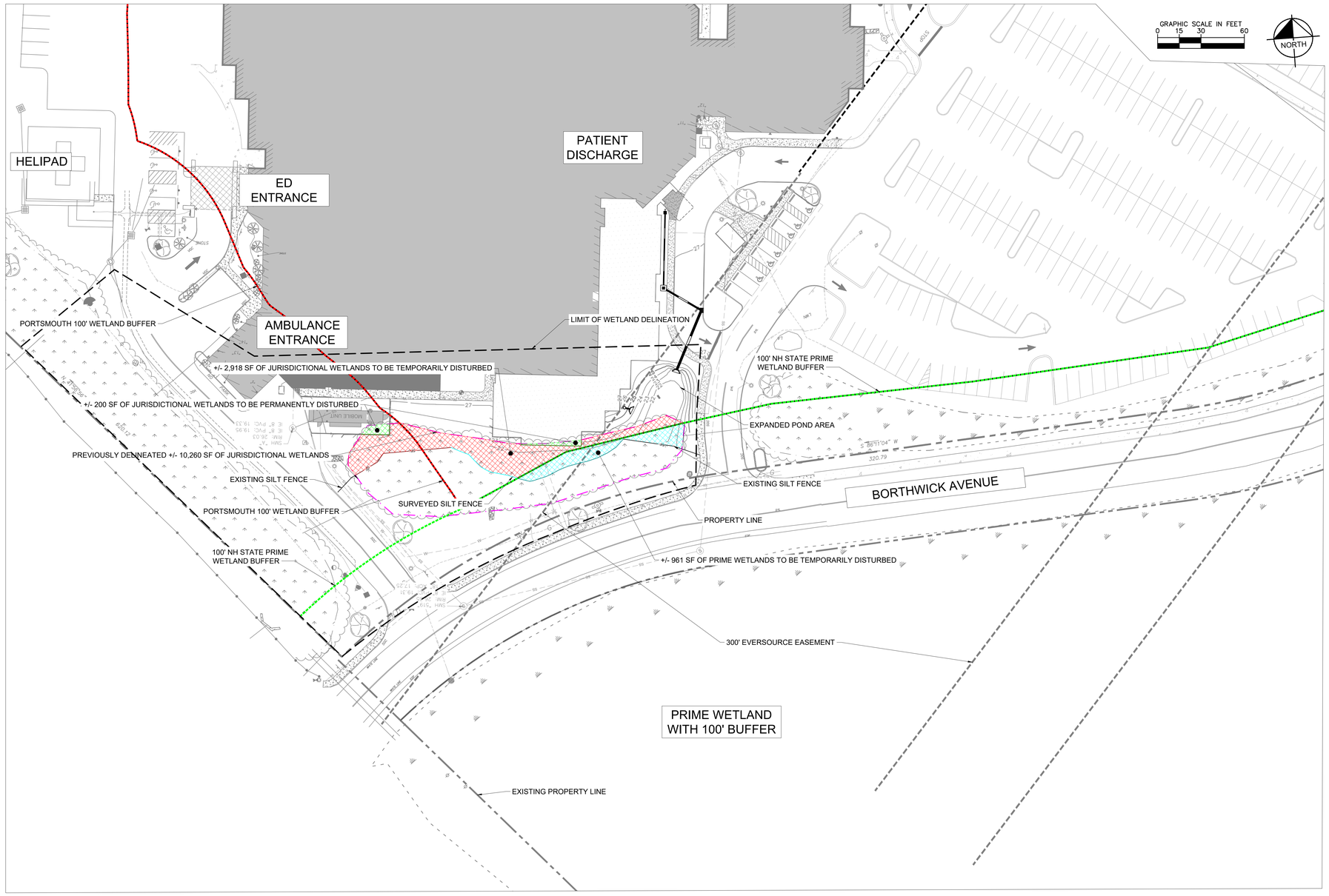
VENDOR INFORMATION

HCA Healthcare	
HCA DESIGN MANAGER: JAKE ALLMAN PH: 615.344.9599	M.P.E. & T CONSULTANT: I.C. THOMASSON ASSOCIATES, INC. 1979 LAKEPOINTE, SUITE 500 NASHVILLE, TN 37214 MANAGER: ZACK McCOY
HCA CONSTRUCTION MANAGER: RYAN MAGUIRE PH: 615-344-2497	STRUCTURAL CONSULTANT: STANLEY D. LINDSEY & ASSOC., LTD. 3500 OLD HICKORY BLVD., BLDG 1, STE 175 BRENTWOOD, TN 37027 MANAGER: MARK HILNER
	CIVIL CONSULTANT: KIMLEY-HORN & ASSOCIATES, INC. 484 HUNTINGTON PARK DR., SUITE 385 WALTHAM, MA 02451 MANAGER: CHRIS AKERS

RESPONSIBILITY: ZCN
CHECKED BY: CRA

ISSUE	DATE

DRAWING FILE: BIM 360://3766305_Portsmouth Radiation Oncology/3766305 Portsmouth Onco_R20.rvt
PLOTTED ON: 12/17/2021 2:30:10 AM



LEGEND		
TEMPORARILY DISTURBED WETLAND		+/- 2,918 SF
PERMANENTLY DISTURBED WETLAND		+/- 200 SF
TEMPORARILY DISTURBED PRIME WETLAND		+/- 961 SF

Kimley»Horn

PORTSMOUTH HOSPITAL

WETLAND DISTURBANCE

December 7, 2023

0 30 60 120 180 NORTH

Drawing name: K:\NSH_LDEV\118252004 – Portsmouth – Cancer Center – 2021\4-CADD\Exhibits\11132023_Wetland Exhibits\EXISTING CONDITIONS – OVERALL.dwg WETLAND DISTURBANC Dec 07, 2023 9:47am by: nick.slay

PHOTOLOG OF IMPACT AREAS

GOVE ENVIRONMENTAL SERVICES, INC.

Photo Log
Portsmouth Regional Hospital
Taken: 5/17/23

Photo #1: Looking at the dewatering area for the project.

Photo #2: Another view of the dewatering system.

Photo #3: Looking at the construction area from Borthwick Ave.

Photo #4: Looking at the active construction area.

Photo #5: Looking at the ongoing construction and erosion control.

Photo #6: Looking at the ongoing construction and erosion controls.

Photo #7: Looking at the erosion control methods adjacent to the construction.

Photo #8: Another view of the erosion control measures.

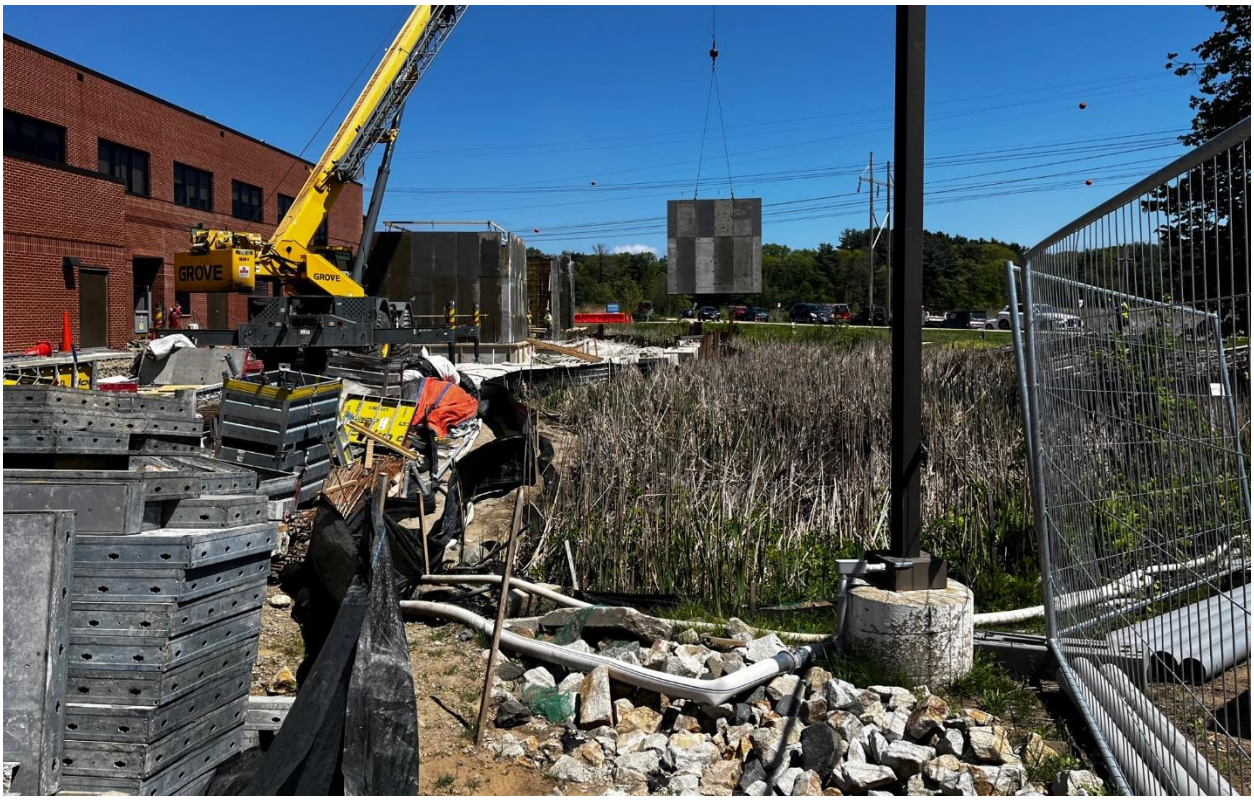


Photo #9: Looking at the ongoing construction and erosion controls.

GOVE ENVIRONMENTAL SERVICES, INC.

Updated Photo Log
Portsmouth Regional Hospital
Taken: 9/6/23

Photo #1: Looking at the dewatering system that doesn't appear to be in use anymore.

Photo #2: Looking at the continued construction at the location of the mobile unit.

Photo #3: Looking at the construction activities from Borthwick Ave.

Photo #4: Looking at the almost complete exterior structure.

Photo #5: Looking at the almost finished exterior of the ongoing construction.

Photo #6: Looking at the ongoing construction and stable erosion control methods.

FIS 1004 CONSULTATION PACKAGE

GOVE ENVIRONMENTAL SERVICES, INC.

January 10, 2024

NH Fish and Game Department
Attn. Wildlife Division, Nongame Program
11 Hazen Drive
Concord, N.H. 03301

Re: Request for NHFG Fis 1004 Consultation
NHB23-2592
Portsmouth Regional Hospital Oncology Expansion
333 Borwick Ave
Portsmouth, NH

Dear NHF&G Reviewer:

We are pleased to provide the following information and enclosed documents in support of a consultation under Fis1004 for the after the fact construction of the oncology expansion for Portsmouth regional hospital in Portsmouth, NH. Several figures depicting the location of the site and proposed work have been attached along with photographs of the site. A wetland report and fill set of plans are included under separate cover.

Fis 1004.03 (c) The following information shall be provided to the department:

(1) A copy of the department of natural and cultural resources NHB DataCheck tool results letter, dated within one year of the date of the consultation request, and which includes the DataCheck tool results letter number;

Please see attached NHB23-2592

(2) The applicant's full name;

HCA Health Services of New Hampshire

(3) The applicant's mailing address;

PO box 80601
Indianapolis, IN, 46580

(4) The applicant's telephone number and email address to be used for the purpose of contact;

Attention: Trip DeMoss
Trip.DeMoss@hcahealthcare.com
615.344.1604

(5) If the applicant is a corporation, firm, partnership, association, institution, or public or private agency, the name, mailing address, and email address of the person who will respond to requests for information on behalf of the applicant;

Brenden Walden
Gove Environmental Services, Inc.
bwalden@gesinc.biz
207-710-7863

(6) The name, mailing address, and email address of any person acting as an agent of the applicant,or any consultant who will submit information to the department on behalf of the applicant;

Brenden Walden
Gove Environmental Services, Inc.
bwalden@gesinc.biz
207-710-7863

(7) Description of the proposed action;

The applicant is applying to NH DES for an After the Fact Dredge and Fill Permit for permanent impacts to a man-made detention basin. The project at this time is completed and no further work is being proposed on this area of the property. The project resulted in 200 SF of permanent impact to man-made emergent wetland that was field delineated in 2019. Temporary impacts were associated with the project and are to be restored per the attached landscaping plan.

(8) Description of the project parcel by reference to street address and town, and, if available, a geographical information system defined project boundary;

The ~20-acre project parcel is located on 33 Borthwick Ave, Portsmouth, NH identified on the assessors map as Tax Map 240 Lot 2-1. A tax map has been attached outlining the location of the property.

(9) A listing of any state or federal permits which have been applied for, have been granted, or which will be necessary for the proposed action to proceed;

This is an After the Fact Permit application that will be submitted to NH DES to be in compliance. This will also require a General Permit from ACOE to be in compliance as well.

(10) The current condition of the action area prior to any proposed modifications, including a description of known or discernible actions within the preceding 24 months that have altered the site, including but not limited to, timber harvests, significant impact from storms, removal of gravel or stone, or addition or removal of structures;

Prior to the work having commenced the conditions of the project area consisted of maintained lawn area and moderately maintained detention area with dense cattail growth throughout. As of now the project area is stable and does not have any active work occurring as the project construction is complete.

(11) Any habitat features supporting or that could support threatened and endangered species that have been identified; and

Blanding's Turtle (Emydoidea blandingii)
Found in wetland habitats with permanent shallow water and emergent vegetation such as marshes, swamps, bogs, and ponds. Use vernal pools extensively in spring and while traveling through the landscape. May use slow rivers and streams as mechanisms for dispersal between wetlands. Extensive use of terrestrial habitats for nesting and travel among wetlands.

The identified wetlands on site have the capability to be considered potentially suitable habitat for this species however access between wetlands is considered bisected by roadways or constricted by crossings. Since a majority of the impact was considered, temporary there should be no long-term disruptions in this area.

(12) A description of any conservation measures proposed by the applicant to avoid, minimize, or mitigate potential harm to threatened and endangered species and habitat determined to be critical, including but not limited to:
a. Design modifications to proposed actions to protect species from harm.

As this is an After the Fact application it is unclear what design modification were proposed to protect the identified species from harm. At this time the project is complete and there are no construction activities taking place.

b. Modifications to proposed actions such as alteration of the timing of proposed actions to protect species from harm;

As previously stated, this is an After the Fact application and it is unclear if time of year or other actions were taken to protect the species. At this time the project is complete and there are no construction activities taking place.

c. Design crossing structures to maintain and enhance habitat quality and accommodate movement of species;

Based on the proposed plans no crossing structures were proposed with this project.

d. Education and training for construction personnel as to what construction activities have the potential to cause adverse impacts to species;

As previously stated, this is an After the Fact application and it is unclear if educational training for construction personnel was conducted prior to construction activities to protect the species. At this time the project is complete and there are no construction activities taking place.

e. Signage to identify specific locations where construction activities must avoid potential adverse impacts to species;

To my knowledge no signage was placed as it applies to Blandings Turtles.

f. Continued research and monitoring of identified species;

N/A.

g. Protection or restoration of wildlife corridors;

This After the Fact impact was to an isolated man made detention basin with primary impacts being temporary with no long term impacts to any potential corridors that may exist.

h. Maintenance, enhancement, or protection of habitat buffer areas; and

None were proposed with this project.

i. Habitat protection, management, or restoration.

None were proposed with this project.

(d) An applicant seeking consultation to meet permit requirements under Env-Wt 311, Env-Wq 1406.06, or Env-Wq 1503.05, shall provide the following additional information to the department to initiate consultation:

(1) A topographic map identifying the action area at a scale of 1:24,000 or closer, and which shows property lines and the limits of proposed disturbance;

See attached Proposed Impact Map showing the buildout of the After the Fact impact.

(2) An aerial photograph identifying the current condition of the action area at a scale of 1:24,000 or closer and which shows property lines and the limits of proposed disturbance;

See attached most recent google earth aerial photography of the project area.

(3) Site photographs with dates and a photograph location plan, showing existing conditions, habitat features, and possible locations of identified threatened and endangered species, if known;

See attached photo log and photo map.

(4) Project site plan sheets showing the area of proposed disturbance and location of any proposed new or modified structures;

See attached plan sheets.

(5) Any reports created to assess the site, including but not limited to wetland assessments, vernal pool surveys, or other site visit observations; and

Please see attached Wetland Delineation Letter of Findings.

(6) Any other available information, from whatever source, that describe the potential impacts of the proposed action on listed species or habitat.

N/A.

(e) Consultation sought for an "after the fact" permit shall provide the following additional information to the department to initiate consultation:
(1) If pursuant to Env-Wt 311.12:

a. A restoration plan for all impacted jurisdictional areas to be restored, prepared by a licensed professional, with a wetland delineation stamped by a certified wetland scientist;

There is no proposal for a formal restoration of the impacted jurisdictional areas. The temporary impacts will be restored per the proposed landscaping plan.

b. A monitoring plan designed to ensure that the restoration is successful; and

There is no proposed monitoring plan for the disturbances to the man-made detention basin.

c. An explanation as to why work was performed prior to having a permit; or

The project went through the town process and received approvals at the time level for impacts to a man-made wetland. There was a miscommunication with the engineering team, contractors, and GES. At the conception of the project GES was waiting for a determination on classification of permitting level due to the possible encroachment. During this time the engineering team, moved forward with the city permitting for the project, which was approved. Since we had no direction from DES and the project changed hands within the engineering firm, there was a disconnect as it relates to what is required to impact jurisdictional wetlands, man-made or not. This was addressed as the engineer reached back out to GES as it relates to one of the criteria of approval that were required by the city. Since then we have met with DES and begun working towards a permit application with the engineer/applicant.

(2) If pursuant to Env-Wq 1503.31:
a. A current conditions plan that clearly identifies all disturbances and construction performed without a permit;

N/A not AOT related.

b. A description of all prior disturbances on the property; and

N/A not AOT related.

c. An explanation of why work was performed prior to having a permit.

N/A not AOT related.

Fis 1004.04 Signatures and Certifications Required.
(a) Each document, or group of documents intended as a single submission, that is submitted to the department, including but not limited to applications, requests, and reports, shall:
(1) If submitted in paper format, be signed and dated by the applicant, owner or the agent of either, and show the typed or printed name and title, if applicable, of the individual who signed; or

N/A

(2) If submitted in electronic format, be electronically signed and dated by the applicant, owner or the agent of either, and show the name and title, if applicable, of the individual who signed.

See below signature.

(b) Each physical or electronic signature required by (a), above, shall constitute certification by the signer that:
(1) The information contained in or otherwise submitted with the document is true, complete, and not misleading to the best of the signer's knowledge and belief; and

*Initial:*_____

(2) The signer understands that the submission of false, incomplete, or misleading information shall constitute grounds, pursuant to Fis 1004.13, for the department to:
a. Suspend consultation pending submission of true, complete, and not misleading information;
b. Terminate consultation;
c. Withdraw any recommendations made to the referring state agency under this part; or
d. Report the suspension, termination, or withdrawal of recommendations, and the fullcircumstances of the submission, to the referring state agency for action in the pending orcompleted request for a permit or other action.

*Initial:*_____

If you should have any questions or request for additional information, please don't hesitate to contact me directly. I look forward to your comments.

Sincerely,

Name: Brenden Walden Signature:_____
Title: President & CWS #297
Company: Gove Environmental Services, Inc. Date: January 10, 2024

Attachments: NHB
Aerial Photo
USGS Topo Map
Habitat Cover Map
Highest Ranked Wildlife Habitat Map
Wildlife Corridors Map/Secondary Wildlife Corridors Map
Prioritized Habitat Blocks Map
Conservation Parcels Map
NRCS Soils
Photo Log and Map
Project Plans

NHB

NHB DataCheck Results Letter
NH Natural Heritage Bureau
Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

To: Brenden Walden, Gove Environmental Services, Inc.
8 Continental Drive Bldg 2 Unit H
Exeter, NH 03833
info@gesinc.biz

From: NHB Review
NH Natural Heritage Bureau
Main Contact: Ashley Litwinenko - nhbreview@dncr.nh.gov

cc: NHFG Review

Date: 09/05/2023 (valid until 09/05/2024)
Re: DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game
Permits: NHDES - Wetland Standard Dredge & Fill - Minor, USACE - General Permit

NHB ID: NHB23-2592

Town: Portsmouth
Location: 333 Borthwick Ave

Project Description: The applicant is applying for an after the fact dredge and fill application for impacts to a manmade detention basin associated with the expansion of the hospitals new oncology wing. The impacts involve 200sf of direct permanent impact, 4,400 sf of temporary disturbance, with an expansion of the detention basin of approximately 1,150 SF. No additional wetland impacts are proposed in association with the hospital expansion project.

Next Steps for Applicant:

NHB's database has been searched for records of rare species and exemplary natural communities. Please carefully read the comments and consultation requirements below.

NHB Comments: No comments at this time.

NHFG Comments: Please refer to NHFG consultation requirements below. Please indicate how much of project is still in progress.

NHB Consultation

If this NHB DataCheck letter includes records of rare plants and/or natural communities/systems, please contact NHB and provide any requested supplementary materials by emailing nhbreview@dncr.nh.gov.

If this NHB DataCheck letter DOES NOT include any records of rare plants and/or natural communities/systems, no further consultation with NHB is required.

NH Fish and Game Department Consultation

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

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

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email NHFGreview@wildlife.nh.gov, and include the NHB DataCheck results letter number and "review request" in the email subject line.
Contact NH Fish & Game at (603) 271-0467 with questions.

NHB Database Records:
The following record(s) have been documented in the vicinity of the proposed project.
Please see the map and detailed information about the record(s) on the following pages.

Vertebrate species	State[1]	Federal	Notes
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).

[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 20 or more years ago.

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

Disclaimer: NHB's database can only tell you of known occurrences that have been reported to NHFG/NHB. Known occurrences are based on information gathered by qualified biologists or members of the public, reported to our offices, and verified by NHB/NHFG.
However, many areas have never been surveyed, or have only been surveyed for certain species.
NHB recommends surveys to determine what species/natural communities are present onsite.

NHB23-2592


Portsmouth
Blanding's Turtle
N
Legend
Site bounds
Plant
Animal
Community
System
towns
0 0.05 0.1 0.15 0.2 0.25
Miles

NHB DataCheck Results Letter
NH Natural Heritage Bureau
Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

NHB23-2592 EOCODE: ARAAD04010*632*NH

New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status	Conservation Status
Federal: Not listed	Global: Apparently secure but with cause for concern
State: Listed Endangered	State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2011: Area 12906: 1 adult observed.
General Area: 2011: Area 12906: Marsh along railroad tracks.
General Comments: --
Management Comments: --

Location

Survey Site Name: Meadowbrook
Managed By: Hospital Corporation of America

County: Rockingham
Town(s): Portsmouth
Size: 1.9 acres Elevation:

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

Directions: 2011: Area 12906: Marsh adjacent to 333 Borthwick Avenue, behind Portsmouth Regional Hospital.

Dates documented

First reported: 2011-05-07 Last reported: 2011-05-07

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

AERIAL PHOTO

Aerial

Legend

- State
- County
- City/Town

Map Scale

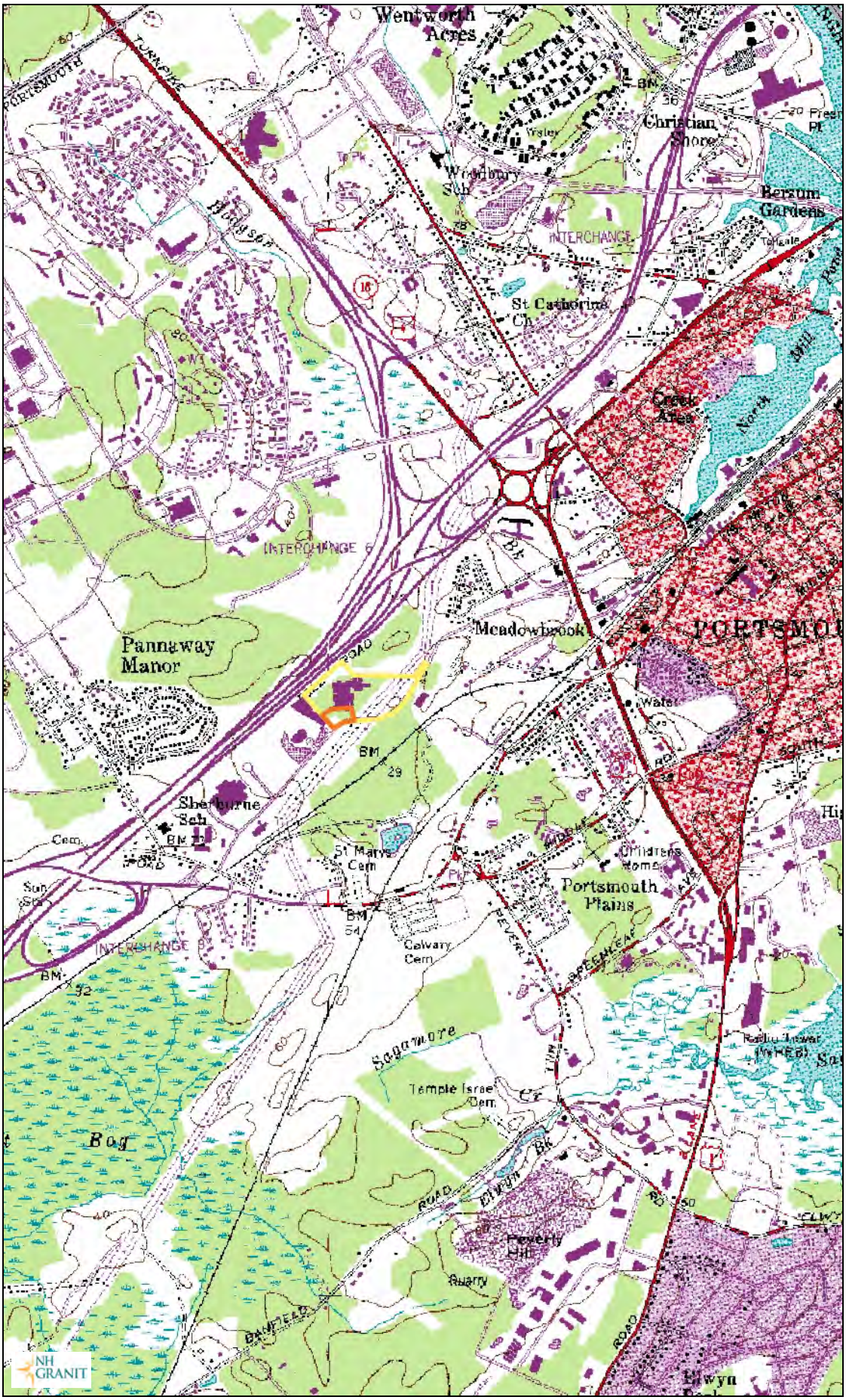
1: 24,000

Map Generated: 1/10/2024

Notes

USGS TOPO MAP

USGS



Legend

- State
- County
- City/Town

Map Scale

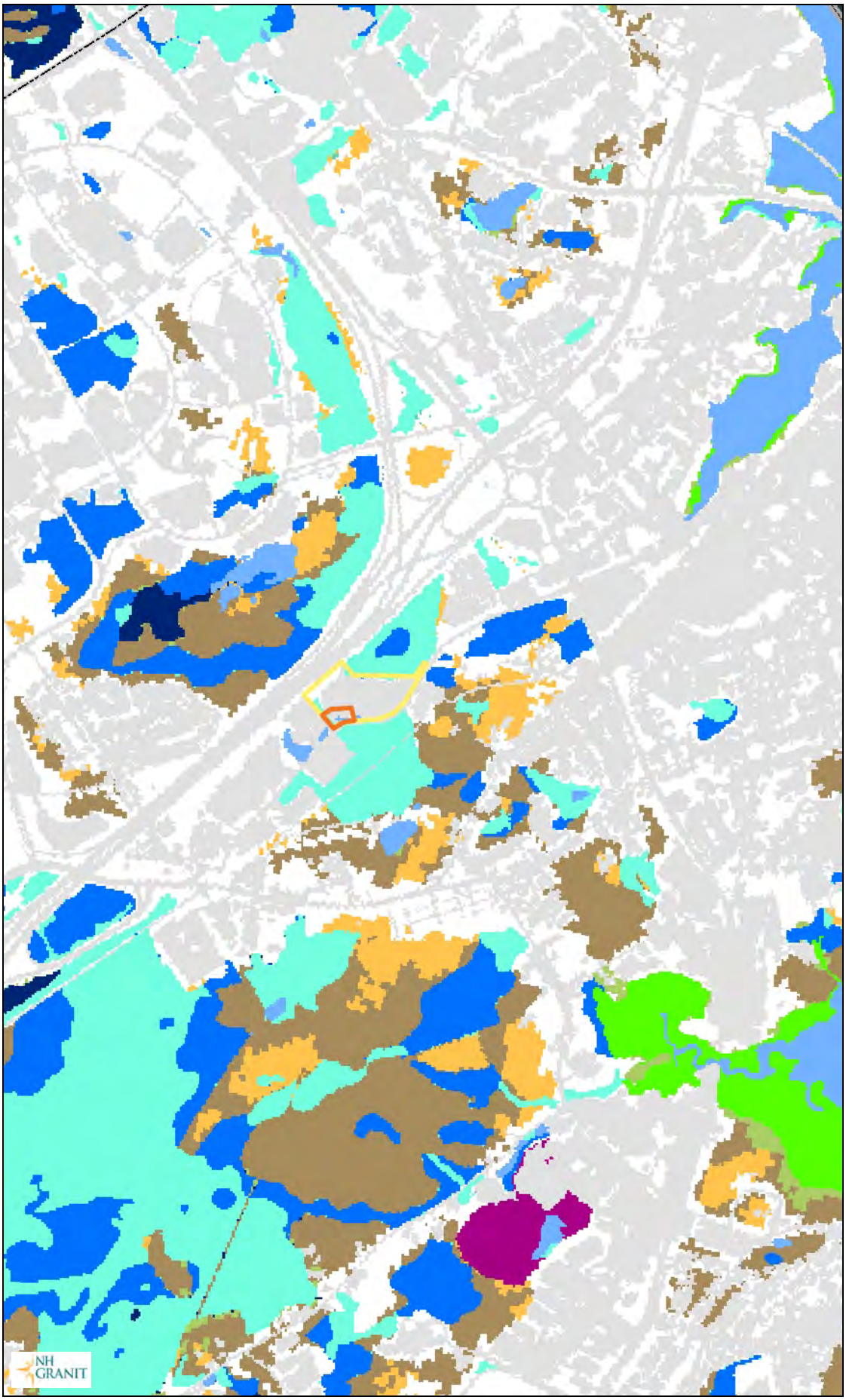
1: 24,000

Map Generated: 1/10/2024

Notes

HABITAT COVER MAP

Habitat Cover



Legend

- State
- County
- City/Town

WAP 2020: Wildlife Habitat l Cover

- Alpine
- Appalachian oak-pine
- Cliff and Talus slope
- Coastal island and Rocky coast
- Developed Impervious
- Developed or Barren land
- Dune
- Floodplain forest
- Grassland
- Hemlock-hardwood-pine
- High-elevation spruce-fir
- Lowland spruce-fir
- Northern hardwood-conifer
- Northern swamp
- Open water
- Peatland
- Pine barren
- Rocky ridge
- Salt marsh
- Sand/Gravel
- Temperate swamp
- Marsh and shrub wetland

Map Scale

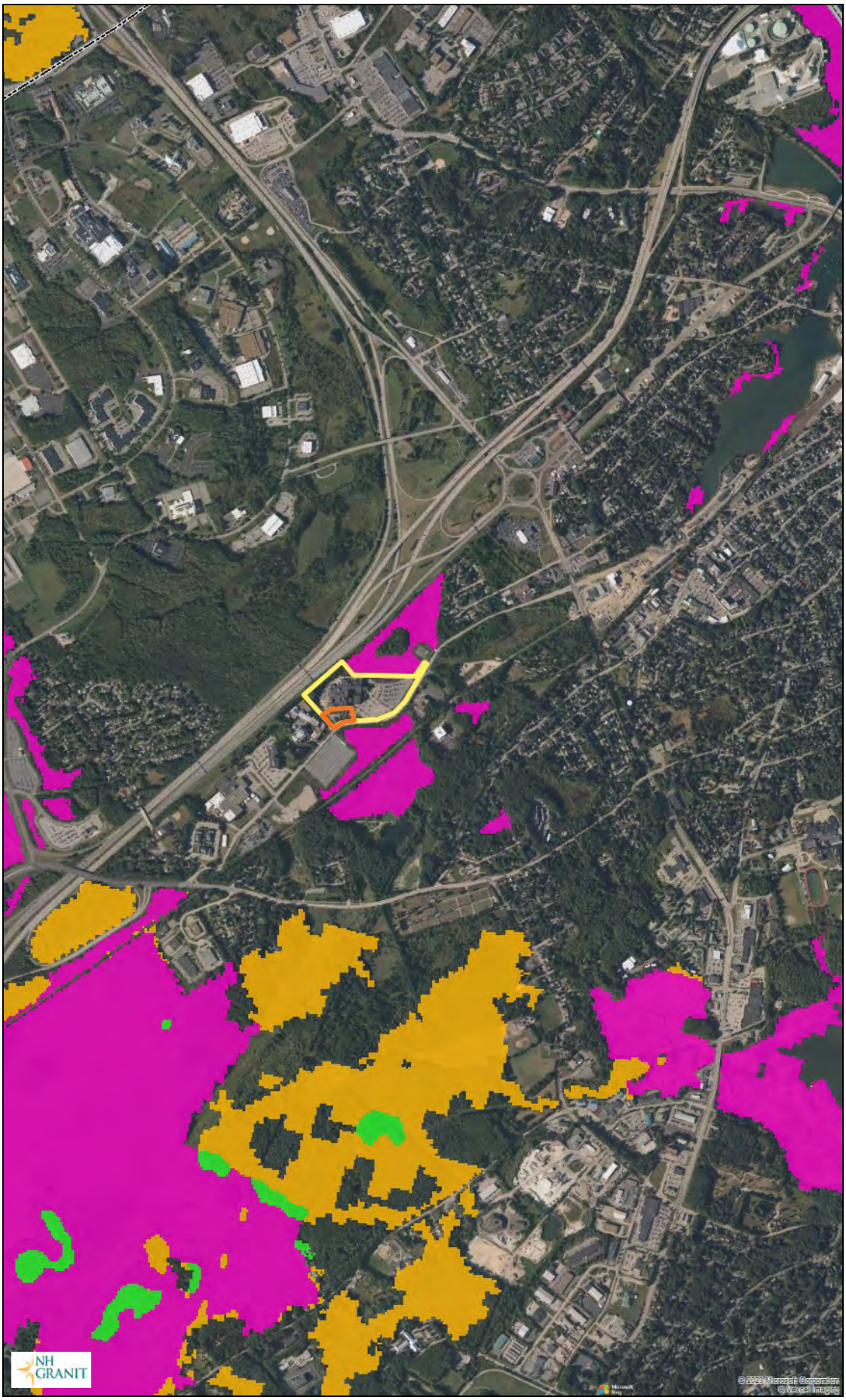
1: 24,000

Map Generated: 1/10/2024

Notes

HIGHEST RANKED WILDLIFE HABITAT MAP

Highest Ranked Habitat



Legend

- State
- County
- City/Town

WAP 2020: Highest Ranked Wildlife Habitat

- 1 Highest Ranked Habitat in NH
- 2 Highest Ranked Habitat in Regior
- 3 Supporting Landscape

Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

WILDLIFE CORRIDORS MAP/SECONDARY WILDLIFE CORRIDORS MAP

Wildlife Corridors

Legend

- Wildlife Corridors
- State
- County
- City/Town

Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

Secondary Wildlife Corridors

Legend

- Wildlife Secondary Corridors
- State
- County
- City/Town

Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

PRIORITIZED HABITAT BLOCKS MAP

Prioritized Habitat Blocks

Legend

- Prioritized Habitat Blocks
- State
- County
- City/Town

Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

CONSERVATION PARCELS MAP

Conservation Land

Legend

- State
- County
- City/Town
- Conservation and Public Lar

Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

NRCS SOILS

Map Scale: 1:5,490 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Rockingham County, New Hampshire
Survey Area Data: Version 26, Aug 22, 2023

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

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
33A	Scitico silt loam, 0 to 5 percent slopes	0.0	0.0%
134	Maybid silt loam	0.0	0.0%
140B	Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky	13.1	9.1%
140C	Chatfield-Hollis-Canton complex, 8 to 15 percent slopes, rocky	31.8	22.1%
299	Udorthents, smoothed	47.0	32.6%
495	Natchaug mucky peat, 0 to 2 percent slopes	29.2	20.2%
538A	Squamscott fine sandy loam, 0 to 5 percent slopes	8.8	6.1%
547B	Walpole very fine sandy loam, 3 to 8 percent slopes, very stony	0.1	0.0%
699	Urban land	13.8	9.6%
799	Urban land-Canton complex, 3 to 15 percent slopes	0.3	0.2%
Totals for Area of Interest		**144.1**	**100.0%**

PHOTO LOG AND MAP

GOVE ENVIRONMENTAL SERVICES, INC.

Photo Log
Portsmouth Regional Hospital
Taken: 5/17/23

Photo #1: Looking at the dewatering area for the project.

Photo #2: Another view of the dewatering system.

Photo #3: Looking at the construction area from Borthwick Ave.

Photo #4: Looking at the active construction area.

Photo #5: Looking at the ongoing construction and erosion control.

Photo #6: Looking at the ongoing construction and erosion controls.

Photo #7: Looking at the erosion control methods adjacent to the construction.

Photo #8: Another view of the erosion control measures.

Photo #9: Looking at the ongoing construction and erosion controls.

GOVE ENVIRONMENTAL SERVICES, INC.

Updated Photo Log
Portsmouth Regional Hospital
Taken: 9/6/23

Photo #1: Looking at the dewatering system that doesn't appear to be in use anymore.

Photo #2: Looking at the continued construction at the location of the mobile unit.

Photo #3: Looking at the construction activities from Borthwick Ave.

Photo #4: Looking at the almost complete exterior structure.

Photo #5: Looking at the almost finished exterior of the ongoing construction.

Photo #6: Looking at the ongoing construction and stable erosion control methods.

PROJECT PLANS

SITE DATA TABLE

OWNER OF RECORD	HCA HEALTH SERVICES OF NH INC D/B/A PRH 32902	
SITE ADDRESS	333 BORTHWICK AVE, PORTSMOUTH, NH 03801	
SITE AREA	± 20.87 AC	
DISTURBANCE LIMITS W/ THIS PROJECT	± 0.7 AC	
TAX MAP & LOT	TAX MAP 240, LOT 2-1	
ZONING	OR - OFFICE RESEARCH	
SETBACKS	REQUIRED	PROPOSED
FRONT YARD SETBACK	50'-0"	±40'
REAR YARD SETBACK	50'-0"	±157'
SIDE YARD SETBACK	75'-0"	±71' * (EXISTING)
MIN. OPEN SPACE ON A LOT	30%	±39.0%
MAX BUILDING COVERAGE	30%	± 20.1%

BUILDING DATA		
	EXISTING	PROPOSED ADDITION
HOSPITAL BEDS	233	0
HOSPITAL/ MOB FLOOR PLATE	±173,916 SF	± 8,700 SF
HOSPITAL GROSS AREA	±427,495 SF	± 8,870 SF
MEDICAL OFFICE BUILDING GROSS AREA (ATTACHED TO HOSPITAL BUILDING)	±46,665 SF	0 SF
BUILDING HEIGHT	± 65'-4"	± 14'-8"

PAVEMENT LEGEND

	DESCRIPTION	DET #/ SHT #
	SIDEWALK CONCRETE	1 / C7.00
	ASPHALT PAVEMENT	2 / C7.00
	CONCRETE PAVEMENT	3 / C7.00
	MOBILE IMAGING CONCRETE PAD	4 / C7.00
	SPECIALITY SIDEWALK PAVEMENT	NOTE THIS SHEET

SPECIALITY SIDEWALK PAVEMENT NOTE

COLORED CONCRETE SURFACE WITH MEDIUM BROOM FINISH, CONSISTING OF SCOFIELD LITHOCHROME COLOR HARDENER, COLOR TO BE SELECTED BY ARCHITECT. SEAL CURED, COLORED SURFACE WITH SCOFIELD SCOFIELD CURESEAL-VOC MATTE FINISH CLEAR SEALANT. PREPARE SURFACES AND APPLY MATERIALS PER MANUFACTURER'S SPECIFICATIONS.

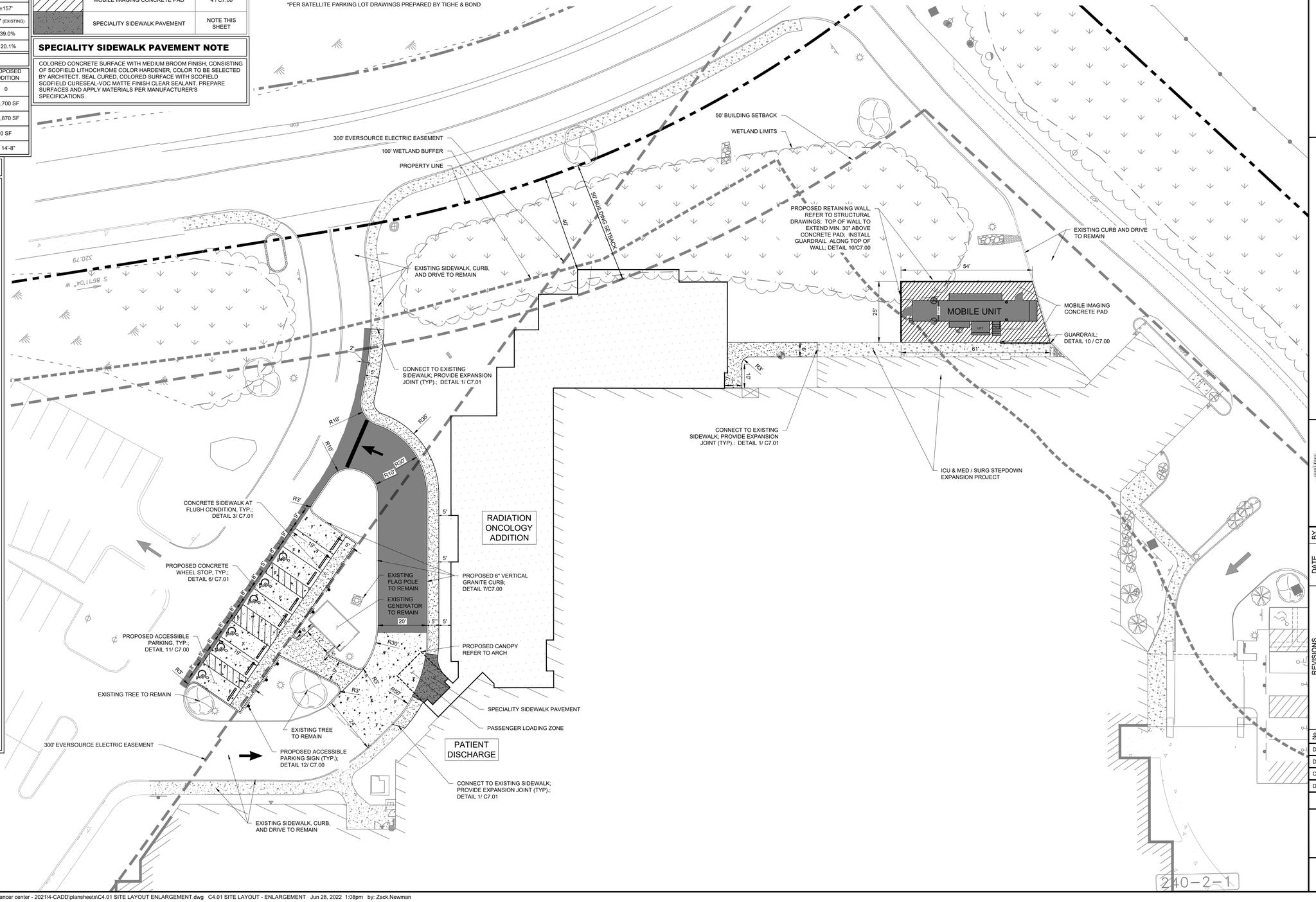
PARKING SUMMARY

	EXISTING	DEMOLISHED	PROPOSED	NET RESULT
ONSITE STANDARD SPACES	754	11	2	745
ONSITE ACCESSIBLE (INCLUDING VAN ACCESSIBLE)	29	4	6	31
OFFSITE STANDARD SPACES*	0	0	490	490
OFFSITE ACCESSIBLE (INCLUDING VAN ACCESSIBLE)*	0	0	11	11
TOTAL				1277

*PER SATELLITE PARKING LOT DRAWINGS PREPARED BY TIGHE & BOND

SITE LAYOUT NOTES

1. INSTALL CONCRETE JOINTS WHERE SHOWN ON PLANS AND DETAILS. ALIGN ON WALLS, BUILDINGS, RADII, ETC. EVENLY SPACE BETWEEN ELEMENTS AS SHOWN. PROVIDE EXPANSION JOINTS BETWEEN CONCRETE PAVEMENT AND ALL VERTICAL ELEMENTS (WALLS, CURBS, ETC.).
2. ALL RADIUS ARE 3' UNLESS OTHERWISE NOTED.
3. LAYOUT ALL CURVES SMOOTHLY WITH NO ABRUPT CHANGES AT TANGENT POINTS.
4. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
5. LAYOUT ALL ELEMENTS IN FIELD AND CONTACT OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE BEGINNING ANY CONSTRUCTION.
6. CONTRACTOR TO TAKE ALL PRECAUTIONS TO FIND AND AVOID SITE UTILITIES. ALL UTILITIES ARE NOT SHOWN ON DRAWING. VERIFY LOCATIONS AND CONSIDER SUCH WHEN ESTIMATING.
7. ALL LANDSCAPE ISLANDS SHALL BE MOUNDED WITH TOPSOIL 4" ABOVE THE CURB LINE TO PROMOTE POSITIVE DRAINAGE.
8. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL BE INSTALLED PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
9. ALL PAVEMENT MARKINGS ON-SITE ARE PAINT, UNLESS OTHERWISE NOTED.
10. SAW CUT LINES SHALL BE DONE IN A STRAIGHT NEAT LINE A MINIMUM OF 18" FROM THE EXISTING EDGE OF PAVEMENT.
11. IF DURING CONSTRUCTION ACTIVITIES ANY EVIDENCE OF THE PRESENCE OF STATE AND FEDERALLY PROTECTED PLANT AND/OR ANIMAL SPECIES IS DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP AND CITY OF PORTSMOUTH SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE PLANT AND/OR ANIMAL SPECIES FOUND ON THE SITE.
12. PRIOR TO THE START OF THE CLEARING AND GRUBBING, OR ANY SOIL DISTURBANCE CONTACT PORTSMOUTH STORMWATER MGMT. AT (603) 427-1530 FOR A POTENTIAL SOIL EROSION AND SEDIMENT CONTROL, PRE-INSPECTION MEETING.
13. THE CONTRACTOR MUST PROVIDE A DEWATERING PLAN, IF APPLICABLE, TO CITY OF PORTSMOUTH BUILDING AND SITE DEVELOPMENT DIVISION AT (603) 610-7243 FOR REVIEW PRIOR TO THE EROSION CONTROL MEASURES PRE-INSPECTION MEETING.
14. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
15. RECORDING NOTE:
    - THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
    - ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
16. TOPOGRAPHY AND EXISTING CONDITIONS FROM FIELD SURVEY PERFORMED BY *JAMES VERRA & ASSOCIATES, INC.* ON 10/2019.
17. FLOOD HAZARD ZONE: ZONE X (OUTSIDE THE 2% ANNUAL CHANCE FLOODPLAIN) PER F.I.R.M. #33015C0260F, DATED 01/29/2021.
18. HORIZONTAL DATUM IS BASED ON NAD 1983.
19. VERTICAL DATUM BASED ON NAVD88.
20. JURISDICTIONAL WETLANDS DELINEATED BY *GOVE ENVIRONMENTAL SERVICES, INC.* DURING OCTOBER 2019 IN ACCORDANCE WITH:
    - 2012 CORPS OF ENGINEERS WETLANDS DELINEATIONS MANUAL, TECHNICAL REPORT ERDC/ EL TR-12-1,
    - FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4, APRIL 2019.
    - US ARMY CORPS OF ENGINEERS NATIONAL WETLAND PLAN LIS, 2018.
    - CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE U.S.. USFW MANUAL FWS/ OBS-79/31 (1979).
21. UNDERGROUND ELECTRIC, WATER, GAS, & SEWER LOCATIONS BASED ON SURFACE MARKINGS BY *GPRS, INC* ON 10/2019.



Kimley»Horn
404 WYMAN STREET, SUITE 385 WALTHAM, MA 02451
MAIN:781.328.0676 | WWW.KIMLEY-HORN.COM

PORTSMOUTH REGIONAL HOSPITAL
RADIATION ONCOLOGY ADDITION
PORTSMOUTH, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE
ANDREW JAMES SCHALL
No. 15914
LICENSED PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DESIGNED BY: ZCN
DRAWN BY: ZCN
CHECKED BY: MEH
DATE: 06/28/2022
KIMLEY-HORN PROJECT NO. 118252004

SITE LAYOUT - ENLARGEMENT

C4.01

240-2-1

DRAWING FILE: BIM 360://3766305 - Portsmouth Radiation Oncology/3766305 Portsmouth Onco_R20.rvt
PLOTTED ON: 12/17/2021 9:30:10 AM

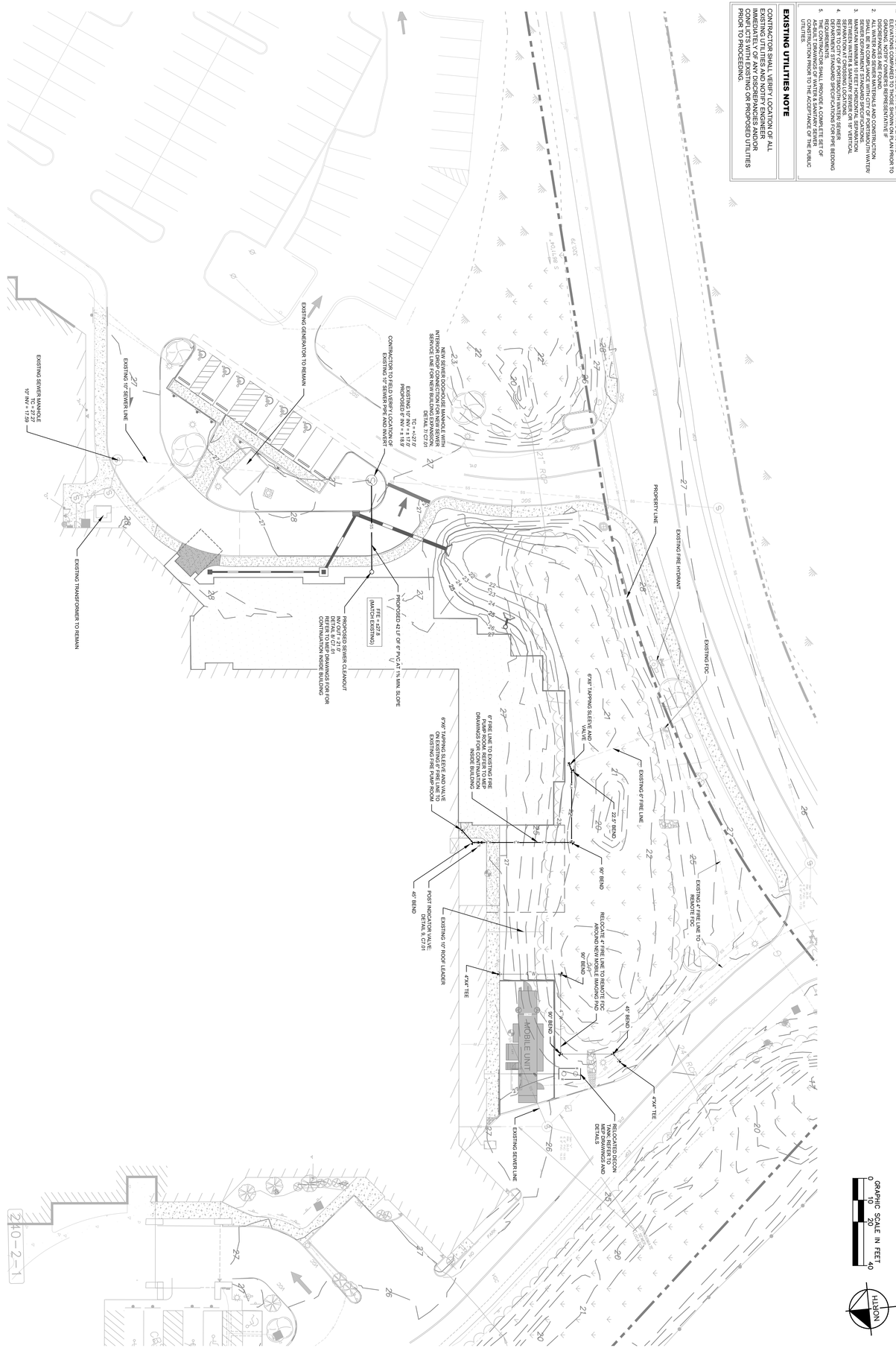
RESPONSIBILITY: ZCN
CHECKED BY: CRA (NAME) (DATE)

UTILITY NOTES

1. CONTRACTOR RESPONSIBLE FOR VERIFYING EXISTING UTILITY LOCATIONS AND ELEVATIONS PRIOR TO GRADING. NOTIFY OWNERS REPRESENTATIVE IF DISCREPANCIES ARE FOUND.
2. ALL WATER AND SEWER MATERIALS AND CONSTRUCTION SHALL BE IN COMPLIANCE WITH CITY OF PORTSMOUTH WATER AND SEWER DEPARTMENT STANDARDS.
3. MAINTAIN MINIMUM 10 FEET HORIZONTAL SEPARATION BETWEEN WATER AND SEWER, 18" VERTICAL SEPARATION AT CROSSING LOCATIONS.
4. BEDDING SHALL BE PER CITY OF PORTSMOUTH DEPARTMENT STANDARD SPECIFICATIONS FOR PIPE BEDDING AS BUILT DRAWINGS OF WATER & SANITARY SEWER
5. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF LOCATION AND PRESSURE TESTING RESULTS PRIOR TO THE ACCEPTANCE OF THE PUBLIC UTILITIES

EXISTING UTILITIES NOTE

CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES AND NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS WITH EXISTING OR PROPOSED UTILITIES PRIOR TO PROCEEDING.



Know what's below. Call before you dig. 811

HCA Healthcare	M,P,E, & T CONSULTANT	STRUCTURAL CONSULTANT	CIVIL CONSULTANT	GENERAL CONTRACTORS
HCA DESIGN MANAGER: MIKAL MALIK PH: 615-344-6598 HCA CONSTRUCTION MANAGER: RYAN MAGUIRE PH: 615-344-2487	I.C. THOMASSON ASSOCIATES, INC. 2950 KRAFT DRIVE, SUITE 500 NASHVILLE, TN 37204 MANAGER: ZACK McCOY	STANLEY D. LINDSEY & ASSOC., LTD. 750 OLD HICKORY BLVD., BLDG 1, STE 175 BRENTWOOD, TN 37027 MANAGER: MARK HILNER	KIMLEY-HORN & ASSOCIATES, INC 404 WYMAN STREET, SUITE 385 WALTHAM, MA 02451 MANAGER: CHRIS AKERS	

VENDOR INFORMATION

PORTSMOUTH REGIONAL HOSPITAL
RADIATION ONCOLOGY ADDITION
333 BORTHWICK AVE, PORTSMOUTH, NH
HCA# 3290200021
GTG# 3766305

GOULD TURNER GROUP
Architects · Planners · Interiors

GOULD TURNER GROUP, P.C.
ARCHITECTURE
615 3RD AVENUE SOUTH, SUITE 600
NASHVILLE , TENNESSEE 37210

CONSTRUCTION DOCUMENTS - PRICING SET

REVISIONS:

DATE:
04 / 25 / 2022

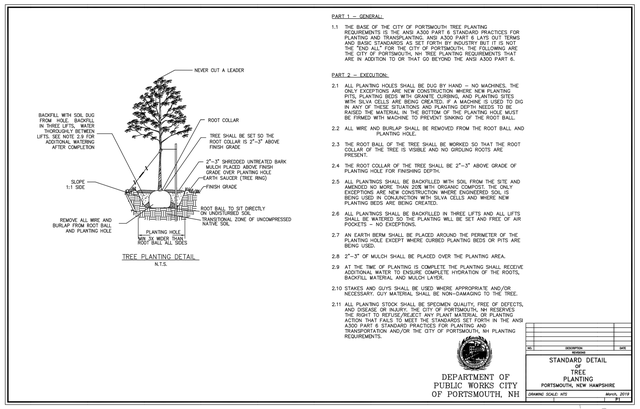
SITE UTILITY PLAN
C6.00

PLANT_SCHEDULE

CANOPY TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT.	CALIPER	HEIGHT
	AF	6	CORYLUS AMERICANA / AUTUMN BLAZE MAPLE	B&B	3" MIN.	14'-16' HT.

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	HEIGHT
	AM	11	ARONIA MELANOCARPA / BLACK CHOKEBERRY	5 GAL	9-FT O.C.	3-FT MIN.
	PV	50	PANICUM VIRGATUM / SWITCHGRASS	1 GAL	2-FT O.C.	18" MIN.

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME
	SOD	4,030 SF	SOD
	VARIES	7,600 SF	CONSERVATION SEED MIX / NEW ENGLAND WETMIX (WETLAND SEED MIX)



TREE PLANTING DETAIL
N.T.S.

PART 1 – GENERAL:

1.1 THE BASE OF THE CITY OF PORTSMOUTH TREE PLANTING REQUIREMENTS IS THE ANSI A300 PART 6 STANDARD PRACTICES FOR PLANTING AND TRANSPLANTING. ANSI A300 PART 6 LAYS OUT TERMS AND BASIC STANDARDS AS SET FORTH BY INDUSTRY BUT IT IS NOT SPECIFIC ENOUGH FOR MUNICIPAL PLANTING REQUIREMENTS. THE CITY OF PORTSMOUTH ADDS TO THE TREE PLANTING REQUIREMENTS THAT ARE IN ADDITION TO OR THAT GO BEYOND THE ANSI A300 PART 6.

PART 2 – EXECUTION:

2.1 ALL PLANTING HOLES SHALL BE DUG BY HAND – NO MACHINES. THE ONLY EXCEPTIONS ARE NEW CONSTRUCTION WHERE NEW PLANTING BEDS ARE BEING CREATED OR WHERE CONSTRUCTION IS ONGOING AND WITH SILVA CELLS ARE BEING CREATED. IF A MACHINE IS USED TO DIG IN ANY OF THESE SITUATIONS AND PLANTING DEPTH NEEDS TO BE ADJUSTED, MATERIAL ON THE BOTTOM OF THE PLANTING HOLE MUST BE FIRMED WITH MACHINE TO PREVENT SINKING OF THE ROOT BALL.

2.2 ALL WIRE AND BURLAP SHALL BE REMOVED FROM THE ROOT BALL AND PLANTING HOLE.

2.3 THE ROOT BALL OF THE TREE SHALL BE WORKED SO THAT THE ROOT COLLAR OF THE TREE IS VISIBLE AND NO GIRDLING ROOTS ARE PRESENT.

2.4 THE ROOT COLLAR OF THE TREE SHALL BE 2"–3" ABOVE GRADE OF PLANTING HOLE FOR FINISHING DEPTH.

2.5 ALL PLANTINGS SHALL BE BACKFILLED WITH SOIL FROM THE SITE AND AMENDED NO MORE THAN 20% WITH ORGANIC COMPOST. THE ONLY EXCEPTIONS ARE NEW CONSTRUCTION WHERE ENGINEERED SOIL IS BEING USED IN CONJUNCTION WITH SILVA CELLS AND WHERE NEW PLANTING BEDS ARE BEING CREATED.

2.6 ALL PLANTINGS SHALL BE BACKFILLED IN THREE LIFTS AND ALL LIFTS SHALL BE WATERED SO THE PLANTING WILL BE SET AND FREE OF AIR POCKETS – NO EXCEPTIONS.

2.7 AN EARTH BERM SHALL BE PLACED AROUND THE PERIMETER OF THE PLANTING HOLE EXCEPT WHERE CURBED PLANTING BEDS OR PITS ARE BEING USED.

2.8 2"–3" OF MULCH SHALL BE PLACED OVER THE PLANTING AREA.

2.9 AT THE TIME OF PLANTING IS COMPLETE THE PLANTING SHALL RECEIVE ADDITIONAL WATER TO ENSURE COMPLETE HYDRATION OF THE ROOTS, BACKFILL MATERIAL AND MULCH LAYER.

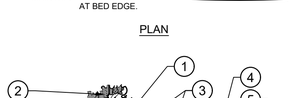
2.10 STAKES AND GUYS SHALL BE USED WHERE APPROPRIATE AND/OR NECESSARY. GUY MATERIAL SHALL BE NON-GIMMORING TO THE TREE.

2.11 ALL PLANTING STOCK SHALL BE SPECIMEN QUALITY, FREE OF DEFECTS, AND DISEASE OR INJURY. THE CITY OF PORTSMOUTH, NH RESERVES THE RIGHT TO REFUSE/REJECT ANY PLANT MATERIAL OR PLANTING THAT DOES NOT MEET THE STANDARDS SET FORTH IN THE ANSI A300 PART 6 STANDARD PRACTICES FOR PLANTING AND TRANSPORTATION AND/OR THE CITY OF PORTSMOUTH, NH PLANTING REQUIREMENTS.

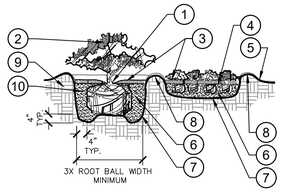
DEPARTMENT OF PUBLIC WORKS CITY OF PORTSMOUTH, NH

NO.	DESCRIPTION	DATE
	REVISED	

STANDARD DETAIL OF TREE PLANTING
PORTSMOUTH, NEW HAMPSHIRE
DRAWING SCALE: NTS — March, 2019 — P1



PLAN



SECTION

1. TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.
2. PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT.
3. 3" MULCH LAYER AS SPECIFIED.
4. EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.
5. FINISHED GRADE (SEE GRADING PLAN).
6. PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES) NOTE: WHEN GROUND-COVERS AND SHRUBS USED IN MASSES, ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
7. SCARIFY OF PLANTING PIT SIDES AND BOTTOM.
8. 4" HIGH BERM FIRMLY COMPACTED.
9. UNDISTURBED NATIVE SOIL.
10. FERTILIZER TABLETS (MAX 3" DEEP)

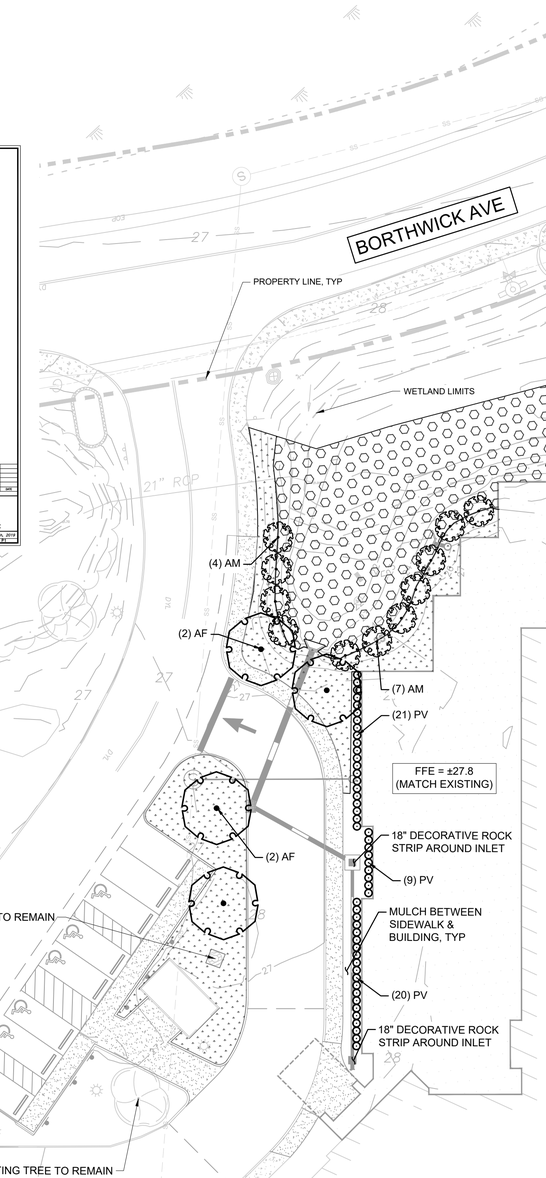
NOTES:

A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

B. WHEN SHRUBS ARE PRUNED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS / HEIGHT.

C. ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.

1 / L101 — SHRUB/GROUNDCOVER PLANTING
SECTION / PLAN — NTS



GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

Kimley»Horn
404 WYMAN STREET, SUITE 385 WALTHAM, MA 02451
MAIN:781.328.0676 | WWW.KIMLEY-HORN.COM

PORTSMOUTH REGIONAL HOSPITAL
RADIATION ONCOLOGY ADDITION
PORTSMOUTH, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE – ANDREW JAMES SCHALL No. 15914 – LICENSED PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DESIGNED BY: ZCN
DRAWN BY: ZCN
CHECKED BY: MEH
DATE: 06/28/2022
KIMLEY-HORN PROJECT NO. 118252004

LANDSCAPE PLAN

L1.00

GRADING PLAN LEGEND

28.60 SPOT ELEVATION

HP	HIGH POINT	LP	LOW POINT
TC	TOP OF CURB	BC	BOTTOM OF CURB / GUTTER LINE
TW	GRADE AT TOPSIDE OF WALL	BW	GRADE AT BOTTOM SIDE OF WALL
INV	INVERT	RIM	TOP OF GRATE / COVER
ME	MATCH EXISTING		

FFE 28.60 FINISH FLOOR ELEVATION

27 EXISTING CONTOUR

27 PROPOSED CONTOUR

WETLAND IMPACT LEGEND

	DESCRIPTION	AREA
	TEMPORARY WETLAND DISTURBANCE	4,400 SF
	PERMANENT WETLAND DISTURBANCE	200 SF
	PROPOSED WETLANDS	1,150 SF

WETLAND SUMMARY

EXISTING WETLAND AREA:	± 10,300 SF
PERMANENT WETLAND DISTURBANCE:	± 200 SF
PROPOSED WETLAND ADDED:	± 1,150 SF
NEW WETLAND AREA:	± 11,250 SF

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

WETLAND DISTURBANCE

EX. A

WETLAND DISTURBANCE

EX. A

Know what's below. Call before you dig.

GENERAL CONTRACTORS

REVISIONS:

DATE: 04 / 25 / 2022

CONSTRUCTION DOCUMENTS - PRICING SET

GOULD TURNER GROUP, P.C.
ARCHITECTURE
615 3RD AVENUE SOUTH, SUITE 600
NASHVILLE , TENNESSEE 37210

GOULD TURNER GROUP
Architects - Planners - Interiors

M.P.E. & T CONSULTANT	I.C. THOMASSON ASSOCIATES, INC. JOE HUGHTON, PE PH: 615.244.6599 MANAGER: ZACK McCOY
STRUCTURAL CONSULTANT	STANLEY D. LINDSEY & ASSOC., LTD. 5050 LINDSEY DRIVE, BLDG 1, STE 175 BRENTWOOD, TN 37027 MANAGER: MARK HILNER
CIVIL CONSULTANT	KIMLEY-HORN & ASSOCIATES, INC. ANTHONY MARTIN, PE PH: 615.564.2701 MANAGER: CHRIS AKERS

HCA Healthcare

HCA DESIGN MANAGER:
JAKE ALLMAN PH: 615.344.9599

HCA CONSTRUCTION MANAGER:
RYAN MAGUIRE PH: 615-344-2497

PORTSMOUTH REGIONAL HOSPITAL
RADIATION ONCOLOGY ADDITION
333 BORTHWICK AVE, PORTSMOUTH, NH

HCA# 3290200021
GTG# 3766305

VENDOR INFORMATION

WETLAND DISTURBANCE

EX. A

RESPONSIBILITY: ZCN
CHECKED BY: CRA

ISSUE	DATE

DRAWING FILE: BIM 360://3766305_Portsmouth Radiation Oncology/3766305 Portsmouth Onco_R20.rvt
PLOTTED ON: 12/17/2021 2:30:10 AM

Appendix I
New Hampshire Natural Heritage Bureau Inquiry

NHB DataCheck Results Letter
NH Natural Heritage Bureau
Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

To: Brenden Walden, Gove Environmental Services, Inc.
8 Continental Drive Bldg 2 Unit H
Exeter, NH 03833
info@gesinc.biz

From: NHB Review
NH Natural Heritage Bureau
Main Contact: Ashley Litwinenko - nhbreview@dncr.nh.gov

cc: NHFG Review

Date: 09/05/2023 (valid until 09/05/2024)
Re: DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game
Permits: NHDES - Wetland Standard Dredge & Fill - Minor, USACE - General Permit

NHB ID: NHB23-2592

Town: Portsmouth
Location: 333 Borthwick Ave

Project Description: The applicant is applying for an after the fact dredge and fill application for impacts to a manmade detention basin associated with the expansion of the hospitals new oncology wing. The impacts involve 200sf of direct permanent impact, 4,400 sf of temporary disturbance, with an expansion of the detention basin of approximately 1,150 SF. No additional wetland impacts are proposed in association with the hospital expansion project.

Next Steps for Applicant:

NHB's database has been searched for records of rare species and exemplary natural communities. Please carefully read the comments and consultation requirements below.

NHB Comments: No comments at this time.

NHFG Comments: Please refer to NHFG consultation requirements below. Please indicate how much of project is still in progress.

NHB Consultation

If this NHB DataCheck letter includes records of rare plants and/or natural communities/systems, please contact NHB and provide any requested supplementary materials by emailing nhbreview@dncr.nh.gov.

If this NHB DataCheck letter DOES NOT include any records of rare plants and/or natural communities/systems, no further consultation with NHB is required.

NH Fish and Game Department Consultation

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

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

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email NHFGreview@wildlife.nh.gov, and include the NHB DataCheck results letter number and "review request" in the email subject line.
Contact NH Fish & Game at (603) 271-0467 with questions.

NHB Database Records:
The following record(s) have been documented in the vicinity of the proposed project.
Please see the map and detailed information about the record(s) on the following pages.

Vertebrate species	State[1]	Federal	Notes
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).

[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 20 or more years ago.

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

Disclaimer: NHB's database can only tell you of known occurrences that have been reported to NHFG/NHB. Known occurrences are based on information gathered by qualified biologists or members of the public, reported to our offices, and verified by NHB/NHFG.
However, many areas have never been surveyed, or have only been surveyed for certain species.
NHB recommends surveys to determine what species/natural communities are present onsite.

NHB23-2592


Portsmouth
Blanding's Turtle
N
Legend
Site bounds
Plant
Animal
Community
System
towns
0 0.05 0.1 0.15 0.2 0.25
Miles

NHB DataCheck Results Letter
NH Natural Heritage Bureau
Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

NHB23-2592 EOCODE: ARAAD04010*632*NH

New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status	Conservation Status
Federal: Not listed	Global: Apparently secure but with cause for concern
State: Listed Endangered	State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2011: Area 12906: 1 adult observed.
General Area: 2011: Area 12906: Marsh along railroad tracks.
General Comments: --
Management Comments: --

Location

Survey Site Name: Meadowbrook
Managed By: Hospital Corporation of America

County: Rockingham
Town(s): Portsmouth
Size: 1.9 acres Elevation:

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

Directions: 2011: Area 12906: Marsh adjacent to 333 Borthwick Avenue, behind Portsmouth Regional Hospital.

Dates documented

First reported: 2011-05-07 Last reported: 2011-05-07

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

Appendix II
New Hampshire Department of Historic Resources Inquiry

Appendix III
Tax Map, List of Abutters, Abutter Notification Letter, and Certified Mail Receipts

I-95 SOUTH

I-95 NORTH

BORTHWICK AVE

EILEEN DONDERO FOLEY AVE

1
11.230 ac

2-1
20.670 ac

2-1001
9.060 ac

3
10.740 ac

2-2001
9.510 ac

2-2
4.970 ac

259-14-1

234-7-3

234-7-4A

241-25-1

165-14

241-16

621.45'
600.00'
182.05'
52.73'
186.45'
997.10'
684.16'
629.16'
710.84'
229.05'
190'
280'
110'
240.61'
125'
343'
393'
880.14'
200.40'
193.51'
730.82'
452.70'
708.81'
254.12'
320.79'
1232.53'
233.66'
50'
96.11'
108.71'
27.88'
126.68'
478.64'
31.43'
5.79'
83.77'
43.95'
143.78'
406.55'
94.83'
447.16'
463.83'
698.00'
406.9'
135.03'
42.47'
90.00'
719.38'
46.55'
65.34'
138'
25'
100'
16.77'
70.00'
765.64'
805.41'
51.1'
64.23'
304.86'
29.84'
167.39'
17.34'
76.76'
26.46'
194.84'
910'
182.92'
473.55'
8.50'
110.10'
42.81'
473.20'
54.91'
26.89'
5.70'
70.96'
620.81'
50.00'
24.25'
26.81'
5.89'
74.57'
5.97'
714.67'
30'
300'
201'

Partial Legend

See the cover sheet for the complete legend.

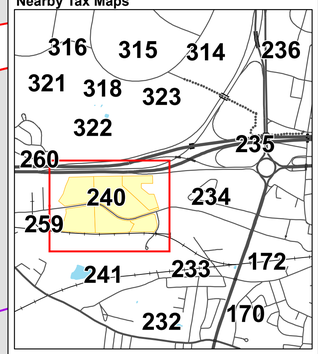
7-5A	Lot or lot-unit number
2.56 ac	Parcel area in acres (ac) or square feet (sf)
25	Address number
233-137	Parcel number from a neighboring map
68'	Parcel line dimension
SIMS AVE	Street name

Parcel/Parcel boundary
Parcel/ROW boundary
Water boundary
Structure (1994 data)
Parcel covered by this map
Parcel from a neighboring map (see other map for current status)

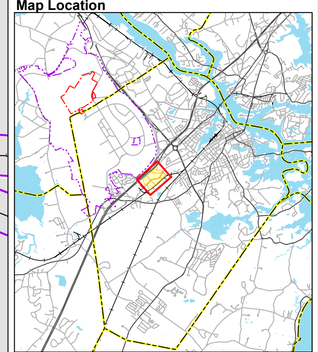
0 50 100 200 300 Feet
0 20 40 80 Meters

This map is for assessment purposes only. It is not intended for legal description or conveyance.
Parcels are mapped as of April 1.
Building footprints are 2006 data and may not represent current structures.
Streets appearing on this map may be paper (unbuilt) streets.
Lot numbers take precedence over address numbers. Address numbers shown on this map may not represent posted or legal addresses.

Nearby Tax Maps



Map Location



Portsmouth, New Hampshire
2022

Tax Map 240

Subject Property

Tax Map 240 Lot 2-1
HCA Health Services of New Hampshire
PO Box 80610,
Indianapolis, IN 46280

Abutters:

Tax Map 240 Lot 1
Liberty Mutual Insurance Company
Attn: Joanne Bragg
175 Berkeley St
Boston, MA 02116

Tax Map 240 Lot 2-1001
City of Portsmouth DPW
PO Box 628
Portsmouth, NH 03802

Tax Map 234 Lot 7-3
City of Portsmouth
1 Junkins Ave
Portsmouth, NH 03802

January 4, 2024

«Name»
«Street»
«TownStateZip»

Re: Portsmouth Regional Hospital Oncology Expansion
Subject: NH Department of Environmental Services Wetlands Bureau
Minor Impact Dredge & Fill Application

Dear Abutter:

The purpose of this letter is to inform you HCA Health Services of New Hampshire of Indianapolis, IN is applying to the NH Department of Environmental Services Wetlands Bureau, which requires this notice for an After the Fact Dredge and Fill permit for impacts areas under its jurisdiction. The applicant's project has impacted 200 SF of direct wetland impact to a man-made detention basin associated with the expansion of the hospital's new oncology wing. The project is proposed on Tax map 240 Lot 2-1 on 333 Borthwick Ave, Portsmouth, NH.

A copy of the application, including plans, will be made available for your review at the town offices and at the NH Department of Environmental Services Wetlands Bureau, 29 Hazen Drive in Concord.

If you have any questions that we might be able to answer, please do not hesitate to contact our office.

Sincerely,

Brenden Walden
GES, Inc.

LITTLE HARBOUR SCHOOL PLAYGROUND

CONCEPT DESIGN

DRAFT V.1 | JAN. 2024

WHOLE SYSTEMS DESIGN COLLECTIVE
Whole Systems Design + For A Culture

LITTLE HARBOUR SCHOOL PLAYGROUND

OVERALL BASE MAP and EXISTING CONDITIONS

LEGEND

- Property Line
- Parcels
- Existing Contours (1 FT)
- Asphalt
- Water Body
- Marsh
- Wetland
- Wetlands Setback (25 FT)
- Wetlands Setback (100 FT)
- FEMA 100yr Flood
- Existing Stormwater Feature
- Existing Buildings
- Existing Fence
- Existing Site Features
- Existing Deciduous Tree
- Existing Coniferous Tree
- Existing Forest
- Limit of Work
- 20' Fire Truck Access Setback
- Overhead Utilities
- Existing Woodchip Play Areas
- Existing Planted Areas

NOTES

Town, County:	Portsmouth, Rockingham
Physiographic Region:	Appalachian Highlands, New England Province
Watershed:	Piscataqua River
USDA Hardiness Zone:	6a
Climate:	Humid Continental (Dfb)
Change in Elevation (GIS):	14'
Acreage:	~ 33

LITTLE HARBOUR SCHOOL PLAYGROUND
CONCEPT IMAGERY


BRIDGE OVER STORMWATER FEATURE


LOG STEPPERS


SAND PLAY


PATH THROUGH PLAY MULCH


WILLOW TUNNEL


MOUNDS

LITTLE HARBOUR SCHOOL PLAYGROUND
CONCEPTUAL SKETCH

DRAFT V.1 JAN 2024

PLAN

1. REMAINING ASPHALT - INCLUDES THE BASKETBALL COURTS, FOUR SQUARE, ADA ACCESSIBLE PATH, AND FIRE TRUCK ACCESS
2. INTEGRATED STORMWATER FEATURES MITIGATE CURRENT DRAINAGE ISSUES AND INCREASE SENSORY EXPERIENCE
3. MOUNDS DEFINE BUFFER EDGE WHILE PROVIDING VISUAL VANTAGE POINTS AND UNIQUE SPACES
4. MAIN PLAY AREA FEATURES LANDSCAPE STRUCTURES PLAY EQUIPMENT INCLUDING THE TREE TOPS AND QUANTIS STRUCTURES, 12 SWINGS & 2 SPINNERS
5. NATURE PLAY AREA INCLUDES NATURAL EQUIPMENT FOCUSED TOWARD BALANCE AND EXPLORATION
6. SAND PLAY AREA ENCOURAGES KIDS TO INTERACT WITH THE EARTH AND GET THEIR HANDS DIRTY
7. PLAY FIELD PUSHES SLIGHTLY TO THE NORTH TO ALLOW FOR A MEADOW BUFFER THAT ENCOURAGES STORMWATER INFILTRATION
8. ADDITIONAL BIKE RACKS ELIMINATE BICYCLE CLUTTER AND CONSOLIDATE STORAGE INTO ONE AREA
9. NATIVE MEADOW BUFFER ENCOURAGES STORMWATER INFILTRATION
10. STUDENT MEMORIAL AT BASKETBALL COURT
11. ADDED LANDSCAPE BUFFER ALONG ROAD PROVIDES SEPARATION BETWEEN PLAY AND TRAFFIC

LEGEND

LANDSCAPE AREAS

- Asphalt
- Lawn
- Stormwater Retention
- Planted Areas & Mounds
- Woodchips
- Sand

FEATURES

- Footpath
- Landscape Boulders
- Granite Benches
- Granite Wearstones & Steps
- Stump Hop
- Willow Tunnel
- Trees
- Drainage Swale
- LSI Play Equipment

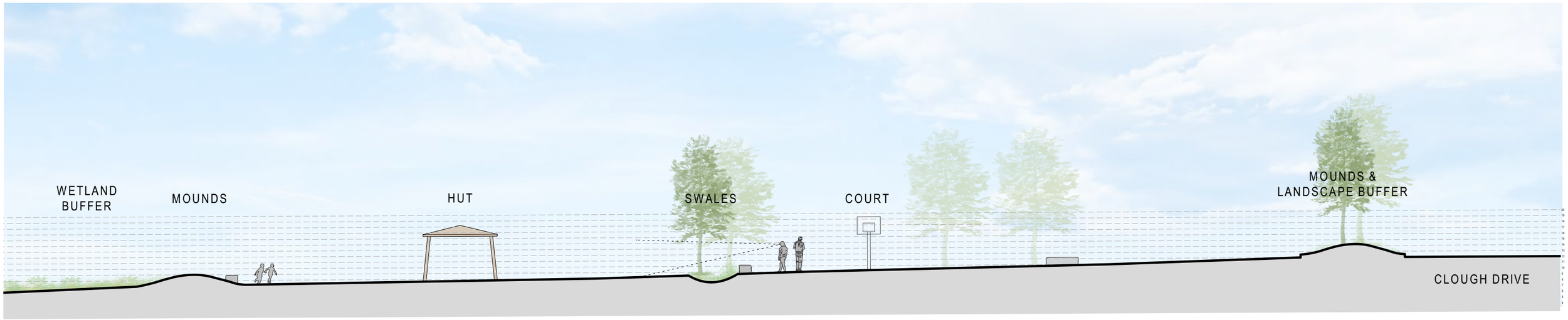
SCALE

1" = 50'-0"

0 50' 100'

WHOLE SYSTEMS DESIGN COLLECTIVE
Whole Systems Design + For A Culture

LITTLE HARBOUR SCHOOL PLAYGROUND
LANDSCAPE SECTION



1 **SECTION**
Scale: 1" = 20'-0"

LITTLE HARBOUR SCHOOL PLAYGROUND
NEW PLAY EQUIPMENT


LSI TREE TOPS


LSI QUANTIS


LSI CURVA


LSI OODLE


LSI SWINGS

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

January 18, 2024

PORTSMOUTH MUNICIPAL CLERK/CONSERVATION COMMISSION
1 JUNKINS AVE
PORTSMOUTH NH 03801

Re: Received Standard Dredge and Fill Wetlands Permit Application (RSA 482-A)
NHDES File Number: 2024-00119
Subject Property: 333 Borthwick Ave, Portsmouth, Tax Map #240, Lot #2-1

Dear Sir or Madam:

On January 17, 2024, the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau received the above-referenced Standard Dredge and Fill Wetlands Permit Application (Application). On January 18, 2024, NHDES determined the Application was administratively complete in accordance with RSA 482-A:3, XIV. *Please note this letter is **not** a permit or authorization to begin work.*

Pursuant to RSA 482-A:11, III, if notification by a local conservation commission, local river management advisory committee, or the New Hampshire Rivers Council pursuant to this paragraph is not received by the department within 14 days (**January 25, 2024**) following the date the notice is filed with the municipal clerk, the department shall not suspend its normal action, but shall proceed as if no notification has been made. Please include the NHDES file number on the written notification.

Please provide a copy of this letter to all local level departments, boards, and commissions. Pursuant to current state laws and regulations, NHDES is not authorized to consider local zoning and regulatory issues pertaining to a project. These issues must be addressed at the local level.

If you have any questions, please contact the Wetlands Bureau at (603) 271-2147.

Sincerely,

Rumi Shrestha
Application Receipt Center, Wetlands Bureau
Land Resources Management, Water Division