SITE & CONDITIONAL USE APPLICATIONS

FOR

PEASE WASTEWATER TREATMENT FACILITY REHABILITATION

135 Corporate Drive
Portsmouth, NH

June 13, 2025

Prepared For:

AECOM Technical Services, Inc.
250 Apollo Drive
Chelmsford, MA 01824

On Behalf Of:

City of Portsmouth New Hampshire
Department of Public Works
680 Peverly Hill Road
Portsmouth, NH 03801

Prepared By:

Altus Engineering
133 Court Street
Portsmouth, NH 03801
Phone: (603) 433-2335

ALTUS ENGINEERING

Altus Project 5336

Pease Development Authority
55 International Drive, Portsmouth, NH 03801, (603) 433-6088

Conditional Use Permit Application

For PDA Use Only			
Date Submitted:	Municipal Review:	Fee:	
Application Complete:	Date Forwarded:	Paid:	Check #:

Applicant Information

Applicant: City of Portsmouth DPW	Agent: AECOM Technical Services, Inc.
Address: 680 Peverly Hill Road Portsmouth, NH 03801	Address: 250 Apollo Drive Chelmsford, MA 01824
Business Phone: (603) 427-1530	Business Phone: (978) 905-2100
Mobile Phone:	Mobile Phone:
Fax: (603) 427-1539	Fax:

Site Information

Portsmouth Tax Map: 303 | Lot #: 6 | Zone: Airport Buisiness Commercial Zone

Address / Location of Work: 135 Corporate Drive, Portsmouth, NH 03801

Proposed Activity (check all that apply)	Impacted Jurisdictional Area(s): Check all that apply
X New Structure	Wetland
X Expansion of Existing Structure	X Wetland Buffer
X Other site alteration (specify): NEW STORMWATER INFASTRUCTURE & WWTF RELATED UTILITY IMPROVEMENTS	

Total area of wetland on subject lot:	127,000 SF
Total area of wetland buffer on subject lot:	163,100 SF
Distance of proposed structure or activity to edge of wetland:	TBD LF

	On subject lot	Off subject lot
Area of wetland impacted:	0 SF	0 SF
Area of wetland buffer impacted:	19,200 SF	500 SF
Total area of wetland and wetland buffer impacted:	19,200 SF	500 SF

Provide complete description of site and work to be completed:

The Pease Wastewater Treatment Facility is proposing improvements to the existing site that includes: demo and rehabilitation of existing buildings, construction of new buildings, new piping to support the facility, new electrical utilities, new stormwater infrastructure, new parking and access ways and replacement of the water line.

All above information shall be shown on a site plan submitted with this application. Provide 3 full size hard copies and one PDF copy of all application materials as well as one half-size set of drawings to PDA. Applicant shall supply additional copies as may be required by applicable municipality.

Certification

I hereby certify under the penalties of perjury that the foregoing information and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I hereby apply for conditional use and acknowledge I will comply with all regulations and any conditions established by the PDA Committees and Board in the development and construction of this project.

Signature of Applicant — Date: 6/11/25

Peter Rice
Printed Name

N:\Engineer\Conditional Use Permit Application.xlsx

Section 2

Conditional Use Narrative

ALTUS ENGINEERING

ALTUS ENGINEERING

Civil
Site Planning
Environmental
Engineering

133 Court Street
Portsmouth, NH
03801-4413

CONDITIONAL USE PERMIT APPLICATION
Pease Wastewater Treatment Facility
NARRATIVE
June 13, 2025

On behalf of the Applicant, City of Portsmouth Department of Public Works (DPW), AECOM Technical Services (AECOM) and Altus Engineering, LLC (Altus) respectfully submits a Wetlands Conditional Use Permit application for the rehabilitation of the Pease Wastewater Treatment Facility (WWTF) at 135 Corporate Drive. The DPW proposes to significantly renovate the 70+ year old facility.

The WWTF is a ±12.1-acre parcel identified on the Portsmouth Assessor Maps on Tax Map 303, Lot 6. The lot is bounded by the Spaulding Turnpike (U.S. Highway Route 16) to the northeast, Tony Rahn Park to the southeast, Corporate Drive to the southwest and the area to the northwest is undeveloped. The WWTF buildings are located in the center and eastern portion of the parcel. A section of Hodgson Brook is located along the southwest property boundary between the lot and Corporate Drive. The west boundary of the property is undeveloped and there is a mix of woods, maintained lawn and wetland.

The existing built above ground infrastructure includes a Lab/Administration Building, a Blower/Dewatering Building, a Control Operations Building, a Septage Receiving Building, a Headworks Building, a Sludge Storage tank, a Chlorine Contact Tank, two Sequencing Batch reactors, two Primary Clarifiers, and two Post Equalization Tanks. There is also an abandoned Digester and two abandoned Trickling Filter Bases on the property. The facility was originally part of the Pease Air Force Base and is under the jurisdiction of the Pease Development Authority (PDA). The City of Portsmouth operates the WWTF that is under the jurisdiction of the PDA.

The proposal includes construction of four new buildings on the parcel: a new Primary Sludge Pump Station (±480 S.F.), new Electrical/Control Building (±653 S.F.), new Chemical Storage Building (±1,956 S.F.) and an expansion of the existing Lab/Administration Building (±912 S.F.). It also includes razing the existing Control Operations Building. Other improvements to the site include new utilities to each of the buildings, new piping to support the facilities treatment operations, a new generator with concrete pad, a new electrical transformer with concrete pad, new sidewalks, new parking and access ways, and stormwater infrastructure.

Wetlands have been identified on the site, primarily in the western and southern corners of the lot; and small wetland has been identified along the northeast boundary. Portions of the existing WWTF lie within the 100-foot wetland buffer. The project proposes to limit disturbing the wetland buffer as much as possible, but based on the existing layout of the WWTF and the

location of the wetlands, some impact to the wetland buffer is unavoidable. The wetlands and 100-foot wetlands buffer encompasses a significant portion of the lot, making improvements impossible without a Conditional Use Permit. The majority of the on-site wetland is undisturbed and allowed to grow naturally. The WWTF was constructed prior to City wetland buffer regulations and before most zoning ordinances were enacted; additionally the WWTF was constructed by the Air Force which is exempt from most permitting requirements.

The WWTF has an access road from Corporate Drive that crosses over Hodgson Brook. Most of the existing WWTF buildings are located outside of the 100-foot buffer, however there are some existing structures and paved surfaces located within the 100-foot buffer. Currently the entirety of the Septage Receiving Building and Equalization Tank #1 are located within the buffer, additionally a half of Equalization Tank #2 and portions of the Sludge Storage Tank and Sequencing Batch Reactor #1 are also located within the buffer. The existing site has approximately 26,300 SF of impervious surfaces within the buffer consisting of the buildings listed above and paved surfaces.

This project proposes disturbances to the 100-foot wetland buffer area that are in three distinct "areas" on the property. The largest disturbance area within the buffer area is the proposed ±2,500 SF Chemical Storage Building located along the northeast boundary of the site. Based on buildable space remaining on the property, this is the optimal location for the new building. It is close enough to the existing facility to reduce the amount of associated piping needed to support the facility and the building will be surrounded by existing pavement on three sides. There is also existing pavement between the proposed building and the existing wetland. Additionally, stormwater infrastructure will be constructed around the building to adequately capture stormwater runoff and discharge it to the onsite drainage system. The proposed building is approximately 27 feet to the wetland.

The second disturbance area within the buffer on the property is the widening of the access road and construction of a bioretention cell near the entrance to the WWTF. The widening of the access road will add approximately 430 S.F. of pavement within the wetland buffer. However, the construction of the bioretention cell will treat impervious runoff from the site and control the rate of discharge from the contributing catchments. The site currently does not have any stormwater treatment SCMs (Stormwater Control Measures) and the two proposed bioretention cells are sized to treat more impervious surface than the amount of new impervious area that is proposed in this project. The proposed paving associated with widening the access road is approximately 37 feet from the wetlands at the closest point.

The third disturbance area within the wetland buffer area is from the proposed trenching and piping activities that are required throughout the property. These areas are not as confined as the previous two, but this type of disturbance will be less of an impact when construction is completed. These disturbances are below grade and the land will be returned to existing conditions when construction is completed.

The WWTF is overdue in replacing/upgrading water, electric and stormwater utilities. Additionally, with the demolition and construction of several buildings that support the WWTF

operation, underground piping associated with these buildings will also need to be constructed. A portion of these activities will need to be completed within the wetland buffer. Unlike the previous two areas of disturbance within the wetlands buffer area, these disturbances will be temporary. The distance of these improvements to existing wetlands varies across the site, however the new water service from Corporate Drive along the access road will be closest to the existing wetlands.

In accordance with Chapter 300 Pease Development Authority Zoning Requirements, Part 304-A Pease Wetlands Protection, the project will require a Conditional Use Permit from the Planning Board. The project does not require any additional relief from the City of Portsmouth Zoning Ordinance.

Per Part 304-A.08 for criteria for approval of a Conditional Use Permit, Altus offers the following:

(1) The land is reasonably suited to the use;

The property is an existing wastewater treatment facility located in the Airport Business Commercial Zone. The existing site currently serves residential, industrial and commercial users. The proposed project does not change the use of the site.

(2) There is no alternative location outside the wetland buffer that is feasible and reasonable for the proposed use;

<u>The proposed Chemical Storage Building:</u>

The existing lot is already significantly developed to support the existing WWTF, new buildings under this proposed project are located near to the existing buildings and in areas that have already been disturbed during the original construction of the WWTF.

A significant amount of the lot that has not been previously disturbed remains undeveloped, wetland or wetland buffer. Building within the wetland is not feasible and a large portion of the lot is within the wetland buffer. Construction in undeveloped areas would cause more overall disturbance on the parcel. Building within the buffer near the existing WWTF structures reduces overall disturbance.

<u>The new pavement for the access road and bioretention cell #1:</u>

The existing access road already travels through the wetland buffer and relocation of the access road is not feasible. The widening of the road is to provide safer access for vehicles and to provide protection to the underground duct bank that provides power to all of PDA. The amount of new impervious within the buffer

(±2,950 S.F.) is minimal compared to the amount of total on-site buffer area (±163,100 S.F.) and buffer area that is already impervious (±26,300 S.F.). The location of the bioretention cell was ideal to maximize the amount of stormwater treatment and control of offsite flows. While this cell is located in the buffer, when construction is completed it will be a permeable grassed depression.

<u>The utility trenching and piping activities:</u>

The property has significant areas of wetland and wetland buffer encumbering a significant portion of the site. No utility piping is within the wetlands. New utility piping activities within the buffer are unavoidable based on the location of the existing access road and the existing buildings on site. Where possible, piping and trenching in the wetland buffer is avoided but in many situations there is no other option. While construction is ongoing temporary erosion control SCMs will be in place to protect resource assets. When this work is completed the areas disturbed will be returned to existing conditions, either to be repaved or loamed and seeded as necessary.

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

The majority of the on-site wetland system is undisturbed and a majority of the WWTF is outside of the 100-foot wetlands buffer. Most of the areas within the wetland buffer to be impacted during this project have already been disturbed previously during the original construction of the WWTF. Work within the wetland buffer for this project should not have any adverse impacts on the functional values of the wetland areas or surrounding properties.

<u>The Proposed Chemical Storage building:</u>

The existing wetland system near the proposed building is a small stormwater ditch that is downstream from the Spaulding Turnpike. This wetland discharges into a 36" drainage culvert that travels across the site. While the proposed building is adding impervious area to the wetland buffer, stormwater SCM's are proposed control flows from this new building that were not previously in place. While no stormwater treatment is present for this building, stormwater treatment has been proposed elsewhere on the site to offset the impact of this proposed building.

<u>The new pavement for the access road and bioretention cell #1:</u>

The existing wetland system to the southeast is a small depression that collects rainwater from upgradient. There is no direct connection between this small patch of wetland and Hodgeson Brook that is located to the west and south. This small wetland already collects large amounts of runoff from the existing WWTF access

road and there is no existing stormwater treatment. While the new pavement for the access road is adding impervious area within the wetland buffer it is only increasing by ±430 SF. Additionally, the bioretention cell is proposed to intercept a large amount of the runoff from the access road that currently discharges to the wetland and provide treatment, where previously it was untreated.

<u>The utility piping and trenching activities:</u>

No adverse impacts to the wetland functional values are anticipated. This type of work is only temporarily disturbing the existing ground surface and proper erosion control SCM's will be in place to protect areas outside of the work. When construction is completed these areas will be returned to existing conditions. Additionally, the utilities to be installed within the buffer are primarily water, stormwater and electric which all pose a minimal risk to wetland functional value. Areas disturbed will be returned to existing conditions after the work is completed.

The site effective impervious area will increase in both the wetland buffer and the entire lot, however two bioretention cells are proposed to provide treatment to impervious surfaces that currently do not exist on the site. Furthermore, the bioretention cells have been sized to treat more impervious surface area (±6,844 S.F.) than is being added under this project (±4,006 S.F.). In summary, stormwater quantity will be enhanced and volume and peak rate of runoff discharging from the site will be reduced. These improvements provide a benefit to Hodgson Brook and the properties located down gradient.

(4) Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals; and

The entire WWTF rehabilitation project will be within areas that have previously been disturbed. Tree and shrub removal within the buffer will be minimal.

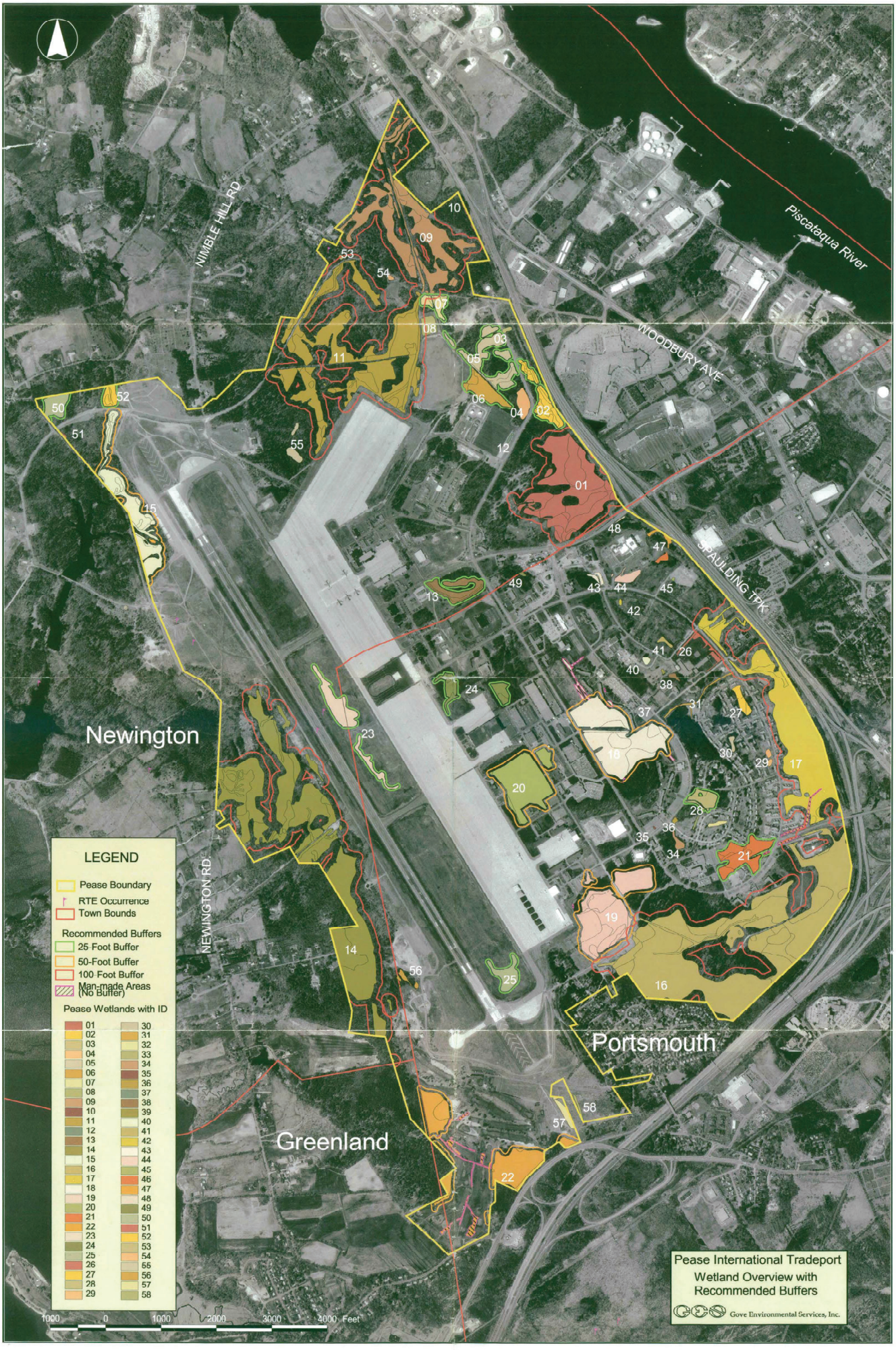
(5) Potential impacts have been avoided to the maximum extent practicable and unavoidable impacts have been minimized.

Yes, as stated under previous conditions, impacts and disturbance to the wetland buffer have been avoided or minimized to the maximum extent practicable. Wetland buffer areas were avoided where possible, however the lot is already significantly developed in areas outside of wetlands and wetland buffers. Areas chosen within the buffer were identified as areas where overall disturbance on the site could be minimized. Stormwater treatment SCM's are also being utilized to further reduce adverse impacts to wetland areas that are not present on the existing site.

Section 3

Pease Development Authority Wetland Overview with Recommended Buffers Plan

ALTUS ENGINEERING



Section 4

Wetlands Buffer Conditional Use Plan

ALTUS ENGINEERING

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

Eric Weinrieb, P.E.
Altus Engineering, LLC
133 Court Street
Portsmouth, NH 03801-4413

21 April 2025

Dear Mr. Weinrieb;

This letter is in reference to the proposed Pease Wastewater Treatment Facility Rehabilitation, located at 135 Corporate Drive on Pease Tradeport in Portsmouth, NH. In October and November of 2022 I conducted a wetland delineation and functional assessment of the wetlands on this site to assist you in permitting.

Pease Development Authority Zoning Ordinance defines wetlands as follows:
304-A.02 Wetlands Defined (a) "Wetlands" means an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include, but are not limited to swamps, streams, ponds, vernal pools, marshes, bogs, tidal wetlands and similar areas. Man-made storm water treatment areas as shown on site plans approved by the Pease Development Authority after January 1, 1992 shall not be construed as wetlands; nor shall roadside drainage ditches whose principal purpose is to facilitate the drainage of surface water from the adjacent roadway.

(b) Delineation Requirements: The precise location of a wetland boundary in any particular case must be determined by on-site inspection of soils, vegetation, and hydrology by a New Hampshire Certified wetland scientist using the Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (January 1987) and Field Indicators for Identifying Hydric Soils in New Hampshire (Version 3) published by the New Hampshire Department of Environmental Services or other agency with applicable jurisdiction. (c) Wetlands shown on proposed development plans shall have been delineated no earlier than three years before the date of any application.

(c) The reviewing Board shall evaluate an application in accordance with The Highway Methodology Workbook Supplement - Wetland Functions and Values: A Descriptive Approach.

Portsmouth Zoning 10.1017.22 (3) requires "More than 250 sq. ft. of alteration to the wetland buffer (regardless of the amount of alteration to the wetland): a description of the 100-foot buffer including vegetation type, the percent of the buffer with invasive species, and the percent of the buffer that is paved or developed. "

Three wetland segments on or closest to the property were identified with sequentially numbered blue flagging. All wetlands meeting the State of New Hampshire and federal definitions are also included within the flag lines.

WETLAND A

Blue flags A1 to A45 begin at the north west of the project site along Corporate Drive, extend to the access road, reverse direction and end north of the site. This is a shrub wetland (PSS1E using the Cowardin classification system) underlain by silty poorly and very poorly drained glacio-marine soils. Hodgson Brook flows through this wetland in a man-made channel parallel to Corporate Drive. Dominant shrubs are autumn olive, speckled alder, and rugosa rose. Dominant herbs are purple loose-strife, broad leaved cattail, and goldenrods. The entire wetland buffer contains invasive plant species intermixed with native plants and about 75% of the buffer is already developed. This wetland continues off the project site and is part of a larger wetland complex.

WETLAND B

Blue flags B1 to B10 identify a channelized intermittent stream at the outlet of existing drainage. This lies north east of the site, in the direction of the Spaulding Turnpike. This is a shrub wetland (PSS1E using the Cowardin classification system) underlain by silty poorly drained glacio-marine soils. Dominant shrubs are red-oiser dogwood and raspberries. Dominant herbs are purple loose-strife, bittersweet night shade, and goldenrods. There are climbing bittersweet vines. The entire wetland buffer contains invasive plant species intermixed with native plants and about 50% of the buffer is already developed. This wetland connects the constructed drainage systems at the wastewater treatment plant with the Spaulding Turnpike road-side swales.

WETLAND C

Blue flags C1 to C7 identify a wetland in the south west corner of the project site, near the access road. This is a shrub wetland (PSS1E using the Cowardin classification system) underlain by silty poorly drained glacio-marine soils. Dominant shrubs are silky dogwood and raspberries. Dominant herbs are purple loose-strife, bittersweet night shade, and goldenrods. There are climbing bittersweet vines. The entire wetland buffer contains invasive plant species intermixed with native plants and about 50% of the buffer is already developed.

The site and surrounding area are significantly disturbed by human occupation. The wetland buffers contain structures, pavement, and landscaping.

WETLAND FUNCTIONAL ASSESSMENT

The wetlands have been evaluated using *The Highway Methodology Workbook Supplement - Wetland Functions and Values: A Descriptive Approach,* as required. The evaluation focused on wetland A as it is the largest wetland present and the more significant because it contains the channelized Hodgson Brook. The worksheet, photographs, flood map, and locus map are attached. The results are briefly summarized and interpreted in the following paragraphs.

There are three Principle Valuable Functions: Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal. These are elevated at this site because of dense vegetation, flat topography, fine grained sediments, and a constricted outlet for the channelized Hogdson Brook. Floodflow Alteration is also elevated because of considerable high value infrastructure in the immediate area and down-stream.

The wetland performs the following functions to a moderate degree.

Sediment/Shoreline Stabilization: dense vegetation borders Hogdson Brook, but this function is limited by Corporate Drive along the westerly side.

Production Export (Nutrient): flowering plants supporting pollinators and seed bearing plants are present, but this function is limited by the density of invasive plant species.

Wildlife Habitat: The wetland serves as a wildlife 'refuge' in a developed environment, but human disturbance surrounding the wetland limits this function.

Visual Quality/Aesthetics: The dense wetland vegetation acts as an visual buffer between the wastewater treatment facility and surrounding uses, but this function is limited by odor, invasive plants, and lack of vegetative diversity.

The wetland performs the following functions to a limited degree.

Groundwater Recharge/Discharge: The wetland is underlain by soils high in silt and clay.

Fish and Shellfish Habitat: The watercourse is not deep and oxygenated enough for fisheries.

Educational and Scientific Value: The wetland exhibits characteristics of past human disturbance and altered plant community structure.

Non-Consumptive Recreation: The wetland is difficult to access due to dense vegetation and lack of trails.

Uniqueness and Heritage: The wetland type is common and widespread, resulting from agricultural clearing followed by abandonment. Invasive species are common and there is limited native species diversity.

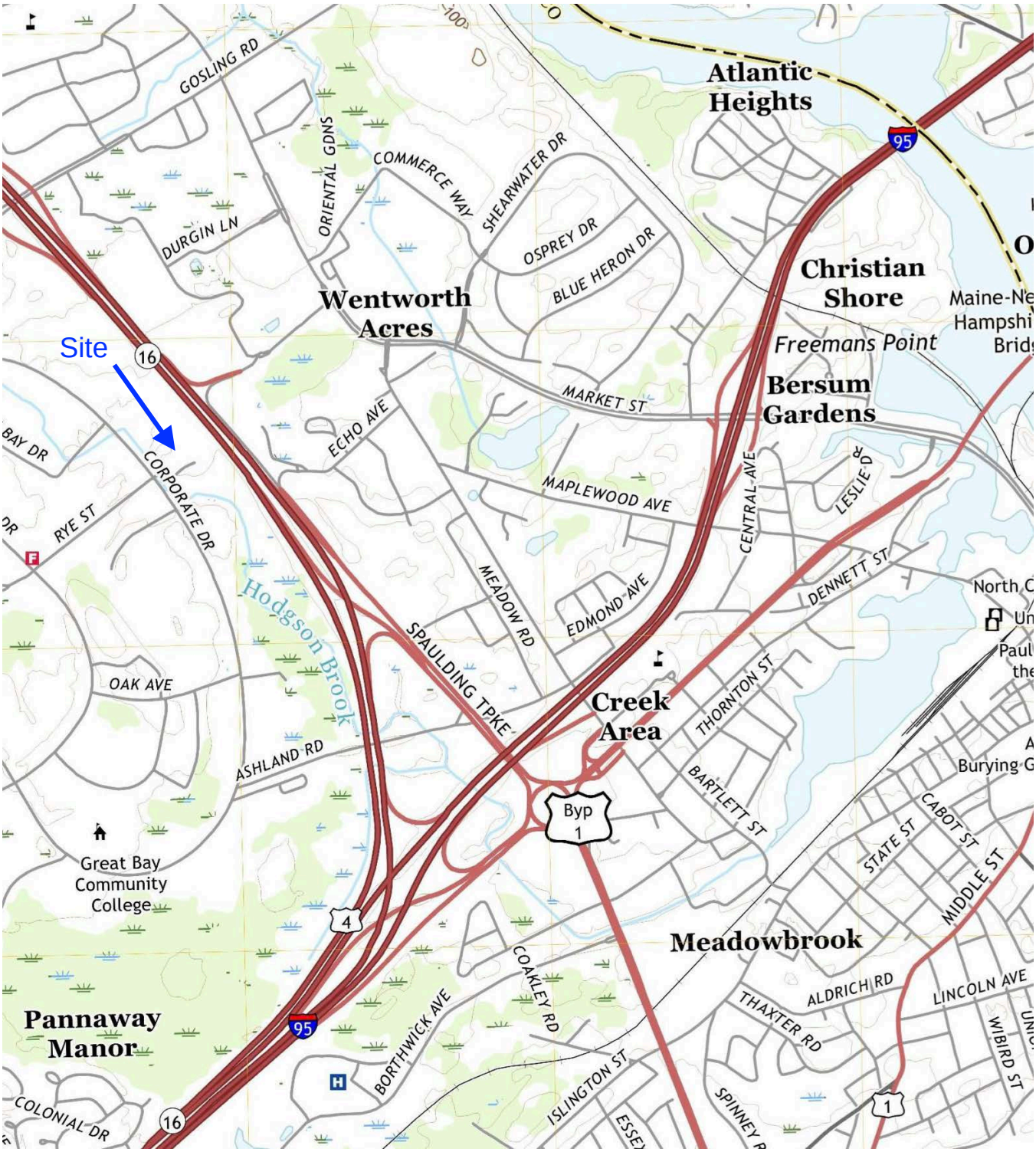
In response to NH Natural Heritage Bureau database search, the site will be investigated for smooth black sedge by a qualified botanist when the season is appropriate. If found in a wetland on-site, that alone would elevate the wetland's ecological importance.

Please call if you have questions regarding this work.

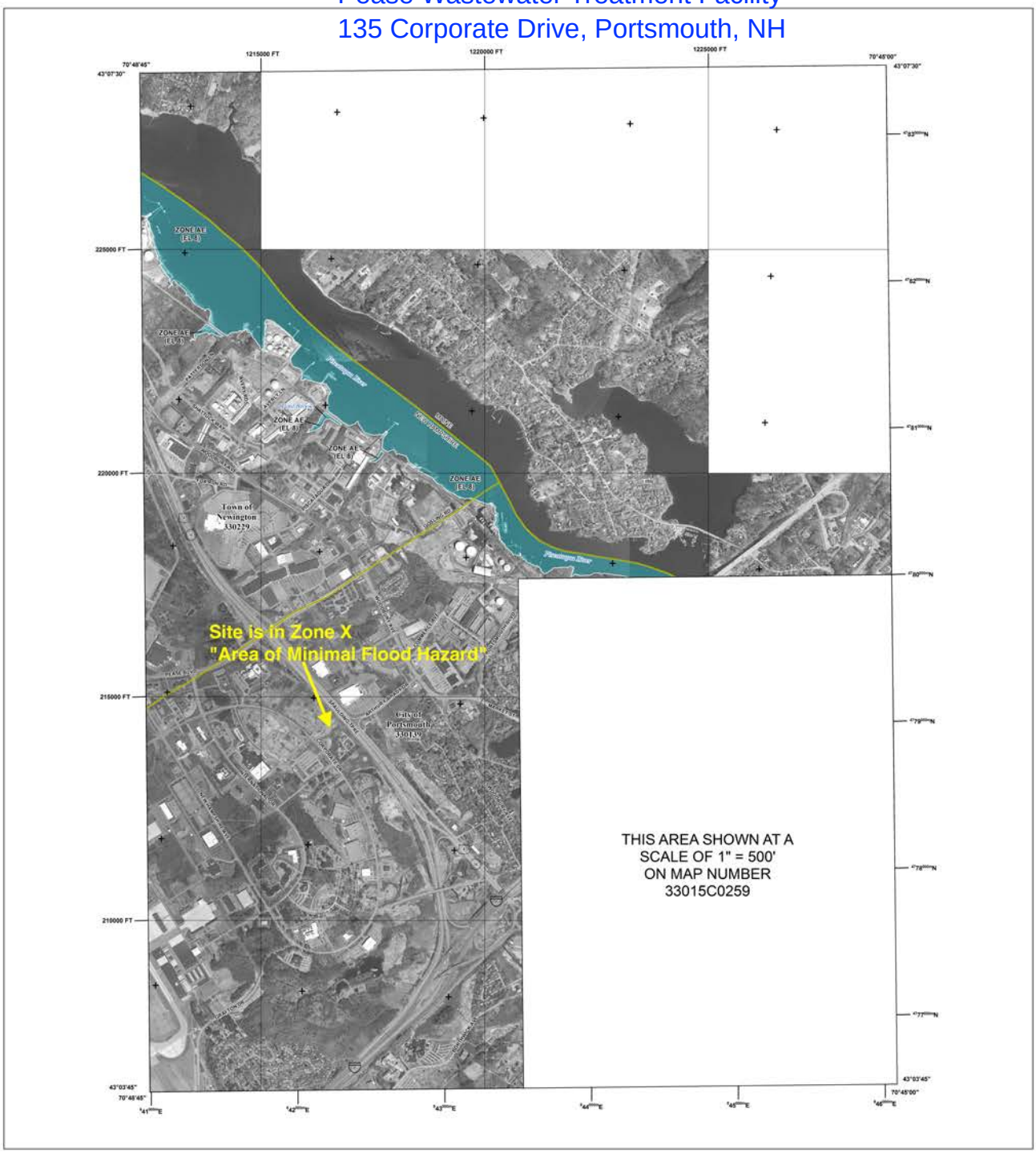
Sincerely,

Michael Cuomo
NH Soil Scientist #006
NH Wetland Scientist #004

Locus Map
Pease Wastewater Treatment Facility
135 Corporate Drive, Portsmouth, NH



Pease Wastewater Treatment Facility
135 Corporate Drive, Portsmouth, NH



FLOOD HAZARD INFORMATION

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

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT HTTPS://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) Zone A, 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
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall
- 18.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- Base Flood Elevation Line (BFE)

OTHER FEATURES
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Mapping and Insurance eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Mapping and Insurance eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). This information was derived from digital orthophotography at a 1-foot resolution from photography dated 2010.

SCALE

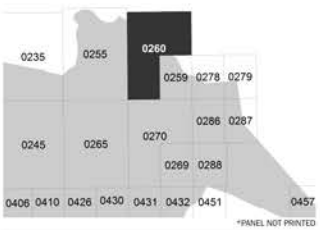
Map Projection: NAD 1983 StatePlane New Hampshire FIPS 2800 Feet; Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 1,000 feet 1:12,000

0 1,000 2,000 4,000 Feet

0 260 520 1,040 Meters

PANEL LOCATOR



*PANEL NOT PRINTED

FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(All Jurisdictions)

PANEL 260 OF 681

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
NEWINGTON, TOWN OF	330229	0260	F
PORTSMOUTH, CITY OF	330139	0260	F

VERSION NUMBER 2.3.2.1

MAP NUMBER 33015C0260F

MAP REVISED January 29, 2021

WETLAND FUNCTION-VALUE ASSESSMENT

WETLAND I.D. A

PROJECT NAME: Pease Wastewater Treatment Facility

PROJECT LOCATION: 135 Corporate Drive PREPARED BY: Michael Cuomo DATE: 21 October 2022

TOTAL APPROXIMATE AREA OF WETLAND: IS WETLAND PART OF A WILDLIFE CORRIDOR? yes OR A "HABITAT ISLAND"? no

ADJACENT LAND USE? Commercial/industrial/transportation MAN MADE? no DISTANCE TO NEAREST ROADWAY OR OTHER DEVELOPMENT 25ft

DOMINANT WETLAND SYSTEMS PRESENT: Palustrine shrub swamp 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?

OF TRIBUTARIES INTO THE WETLAND? two AQUATIC DIVERSITY/ABUNDANCE low VEGETATIVE DIVERSITY/ABUNDANCE moderate diversity high abundance

WILDLIFE DIVERSITY/ABUNDANCE moderate ANTICIPATED IMPACTS Buffer only WETLAND AREA IMPACTED: NONE

TREES	SHRUBS	HERBS	WILDLIFE	COMMENTS
few red maple (Acer rubrum)	Autumn olive (Elaegnus umbellata) speckled alder (Alnus rugosa) multiflora rose (Rosa multiflora)	purple loose-strife (Lythrium salicaria) broad-leaf cattail (Typha latifolia) Goldenrod (Solidago sp.)		Soils are mostly the Scitico annd Maybid series. These are poorly and very poorly drained glacial marine and lacustrine origin sediments high in silt and clay. Generally these key out as hydric soils using National Indicator A11. The stream channel of Hodgson Brook is within the wetland. The Brook has been significantly altered by human activity. Invasive plant species are widespread in the wetland and uplands

FUNCTION	Occurrence Y	Occurrence N	Rationale Numbers	Principal Valuable Function(s)	Comments
Groundwater Recharge/Discharge		No	6, 7		Underlain by soils high in silt and clay
Floodflow Alteration	Yes		1, 4, 6, 9, 10, 13, 15, 18	Principal function	Dense vegetation, flat topography, and constricted outlet for Hodgson Brook
Sediment/Shoreline Stabilization	Yes		1, 4, 6, 7, 9, 12, 14,		Dense vegetation of sufficient width borders the Brook
Sediment/Toxicant Retention	Yes		1, 2, 3, 4, 5, 7, 10, 13, 14, 16,	Principal function	Dense vegetation, flat topography, and constricted outlet for Hodgson Brook
Nutrient Removal	Yes		3, 4, 7, 8, 9, 10, 11, 13,	Principal function	Dense vegetation, fine grained sediments, and constricted outlet
Production Export (Nutrient)	Yes		1, 4, 7, 12,		Dense vegetation includes flowing plants for pollenators and seed bearing plants for forage
Fish & Shellfish Habitat		No			Watercourse not deep and oxygenated enough for fisheries
Wildlife Habitat	Yes		17, 19,		Human disturbance limits this function, but wetland serves as refuge in local area
Endangered Species Habitat					Unknown : site will be investigated by others for smooth black sedge when appropriate
Visual Quality/Aesthetics	Yes		4, 9		Odor, lack of vegetative diversity, dense vegetation
Educational Scientific Value		No			Human disturbance, many invasive plants
Recreation ((Non)Consumptive)		No			Difficult to access and enter, dense vegetation, no trails
Uniqueness/Heritage		No	1, 2, 7, 9, 22,		Common wetland type resulting from regrowth after agricultural clearing, invasive species common, limited vegetative diversity

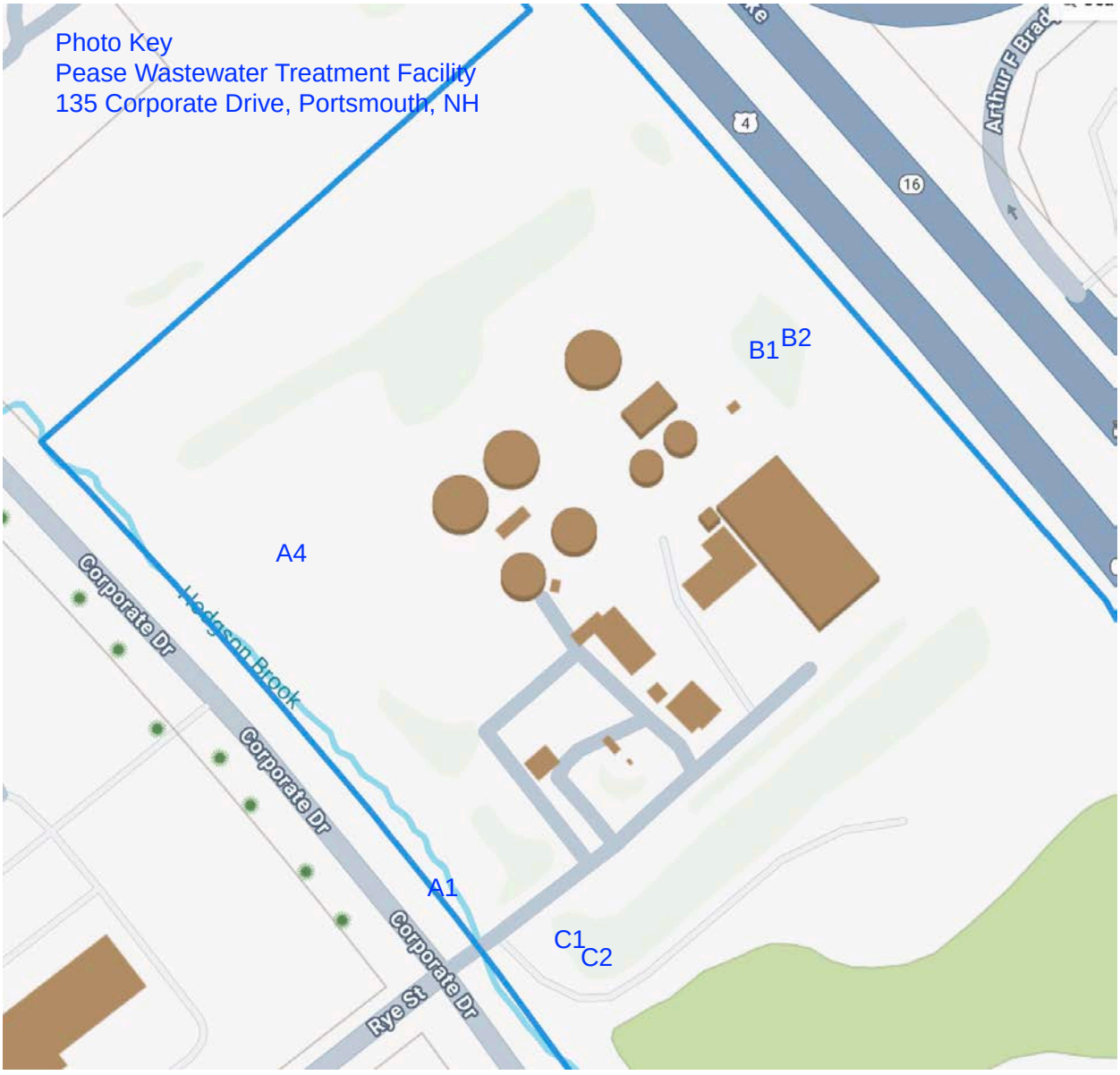


Photo Key
Pease Wastewater Treatment Facility
135 Corporate Drive, Portsmouth, NH
4
16
Arthur F Brad
B1
B2
A4
Hodgson Brook
Corporate Dr
Corporate Dr
Corporate Dr
A1
C1
C2
Rye St

Photo A1
Pease Wastewater Treatment Facility
135 Corporate Drive, Portsmouth, NH
October 2022

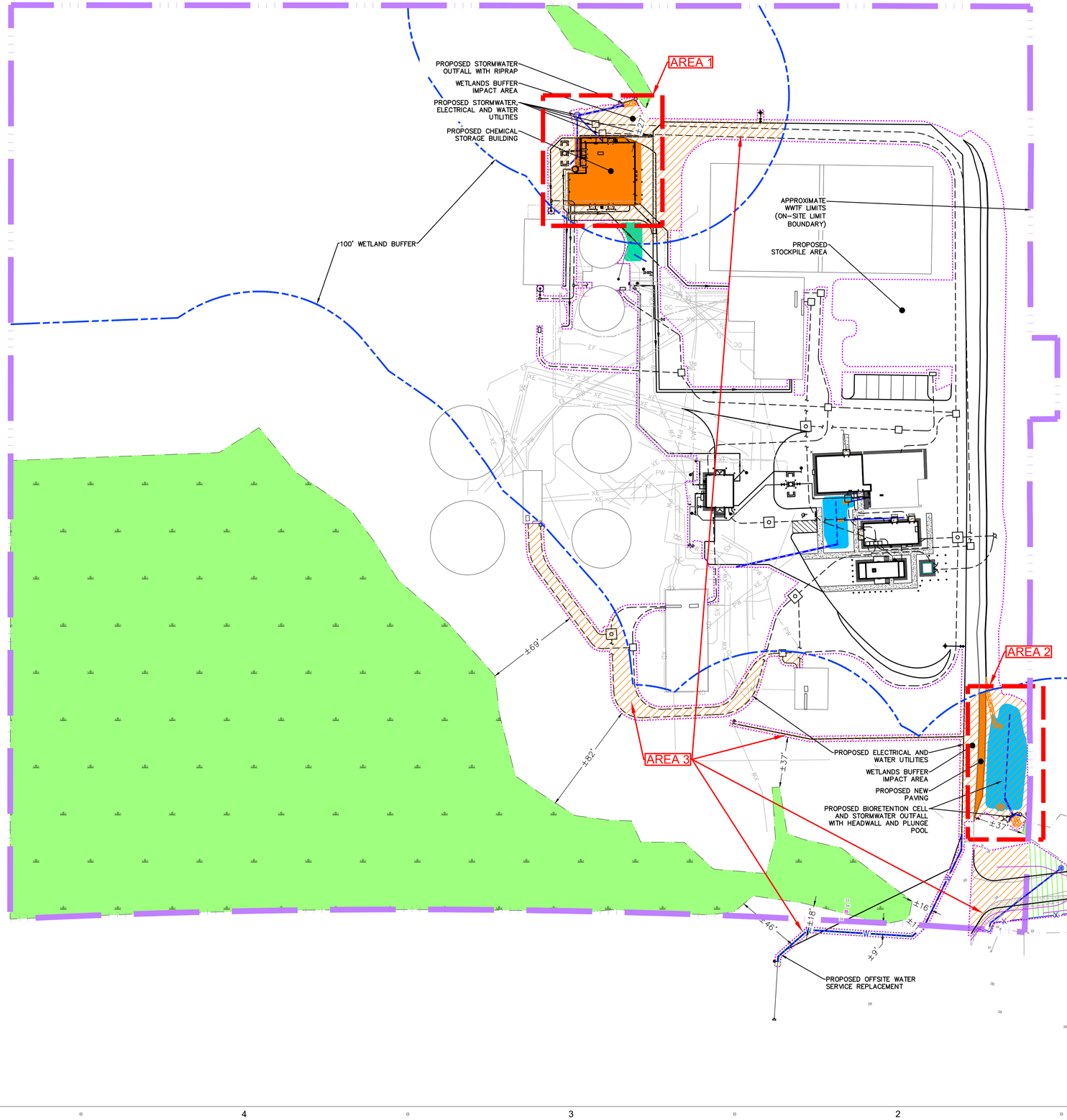
Photo A4
Pease Wastewater Treatment Facility
135 Corporate Drive, Portsmouth, NH
October 2022

Photo B1
Pease Wastewater Treatment Facility
135 Corporate Drive, Portsmouth, NH
October 2022

Photo B2
Pease Wastewater Treatment Facility
135 Corporate Drive, Portsmouth, NH
October 2022

Photo C1
Pease Wastewater Treatment Facility
135 Corporate Drive, Portsmouth, NH
October 2022

Photo C2
Pease Wastewater Treatment Facility
135 Corporate Drive, Portsmouth, NH
October 2022



LEGEND

- APPROX. WWTF LIMIT
- 60 EXISTING CONTOUR
- 60 PROPOSED CONTOUR
- WETLANDS
- LIMIT OF DISTURBANCE
- 100' WETLANDS BUFFER
- ON-SITE WETLANDS BUFFER DISTURBANCE AREA
- OFF-SITE WETLANDS BUFFER DISTURBANCE AREA
- ON-SITE NEW IMPERVIOUS IN WETLANDS BUFFER
- PROPOSED BIORETENTION CELL
- PROPOSED STORMWATER BASIN

WETLAND BUFFER SUMMARY

	AREA (S.F.)	% OF LOT
APPROX. WWTF AREA (ON-SITE)	±502,200	100
TOTAL ON-SITE DELINEATED WETLAND AREA	±125,900	25.1
TOTAL ON-SITE WETLANDS BUFFER AREA	±139,000	27.7
TOTAL COMBINED ON-SITE WETLANDS AREA (DELINEATED WETLAND + WETLANDS BUFFER)	±264,900	52.7
WWTF AREA NOT WITHIN TOTAL COMBINED ON-SITE WETLANDS AREA	±237,300	47.3
EXISTING IMPERVIOUS AREA WITHIN THE WETLANDS BUFFER AREA	±26,400	19.0
PROPOSED NEW ON-SITE IMPERVIOUS AREA WITHIN THE WETLANDS BUFFER AREA	±2,950	2.1
PROPOSED ON-SITE TEMPORARY DISTURBANCE WITHIN THE WETLANDS BUFFER AREA	±18,550	13.3
TOTAL PROPOSED ON-SITE IMPACTS WITHIN THE WETLANDS BUFFER AREA (NEW ON-SITE IMPERVIOUS + TEMPORARY DISTURBANCE)	±21,500	15.5
PROPOSED OFF-SITE TEMPORARY DISTURBANCE WITHIN THE WETLANDS BUFFER	±2,100	N/A
TOTAL PROPOSED IMPACT WITHIN THE WETLANDS BUFFER (ON-SITE + OFF-SITE)	±23,600	N/A

*AREAS BASED ON GENERAL LIMITS OF WWTF FENCED AREA AND PROPERTY BOUNDARIES

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

AECOM

PROJECT

PEASE WASTEWATER TREATMENT FACILITY REHABILITATION

135 Corporate Drive
Portsmouth, NH 03801

OWNER

CITY OF PORTSMOUTH NEW HAMPSHIRE

DEPARTMENT OF PUBLIC WORKS
680 Peverly Hill Road
Portsmouth, NH 03801
603-427-1530 tel 603-427-1539 fax
http://www.cityofportsmouth.com/publicworks

ENGINEER

AECOM TECHNICAL SERVICES, INC.
250 APOLLO DRIVE
CHELMSFORD, MA 01824
PHONE: (978) 905-2100
www.aecom.com

CONSULTANTS

HVAC, PLUMBING, FIRE PROTECTION
Petersen Engineering, INC
PO Box 4516
Portsmouth, NH 03802
603-436-4233 tel
https://www.petersenengineering.com

STORMWATER DESIGN
Altus Engineering
133 Court Street
Portsmouth, NH 03801
603-433-2335 tel
https://www.altus-eng.com

REGISTRATION

100% SUBMITTAL
PRELIMINARY COPY

NOTE: This document is preliminary only and is not intended for any purpose except review and comment by the owner and its agents.

ISSUE/REVISION

I/R	DATE	DESCRIPTION
	3/26/2025	INITIAL SUBMISSION
	4/28/2025	REV. PER COMMENTS
	5/29/2025	OFF-SITE CONCEPT
	6/27/2025	PER. CITY COMMENT

STATE OF NEW HAMPSHIRE – ERIC D. WEINRIEB No. 7634 LICENSED PROFESSIONAL ENGINEER –
6/27/25

PROJECT NUMBER

60693508

Designed By:	EDW
Drawn By:	PMJ
Dept Check:	EDW
Proj Check:	-
Date:	JUNE 27, 2025
Scale:	1" = 40'

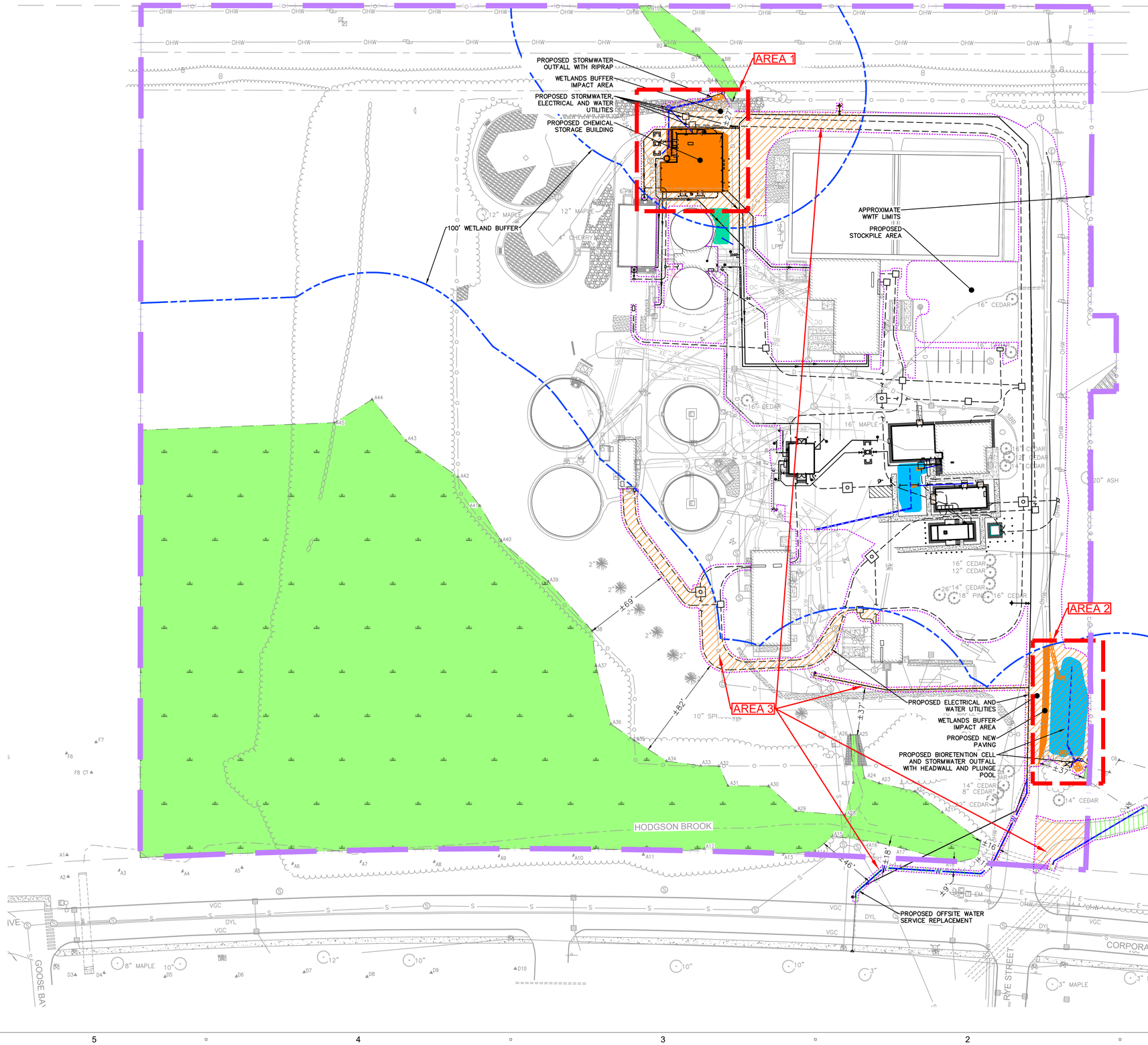
DISCIPLINE

SHEET TITLE

WETLANDS BUFFER CONDITIONAL USE PLAN

SHEET NUMBER

CU-1



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- APPROX. WWTF LIMIT
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- LIMIT OF DISTURBANCE
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- ONSITE WETLANDS BUFFER DISTURBANCE AREA
- PROPOSED NEW IMPERVIOUS IN BUFFER
- PROPOSED BIORETENTION CELL
- PROPOSED STORMWATER BASIN
- OFFSITE WETLANDS BUFFER DISTURBANCE AREA

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TOTAL WETLANDS BUFFER AREA (WETLAND + WETLANDS BUFFER)	±264,900	52.7
WWTF AREA NOT WITHIN TOTAL WETLANDS BUFFER AREA	±237,300	47.3
EXISTING IMPERVIOUS WITHIN TOTAL WETLANDS BUFFER AREA	±26,400	10.0
PROPOSED NEW IMPERVIOUS WITHIN TOTAL WETLANDS BUFFER AREA	±2,950	1.1
PROPOSED ONSITE IMPACTS WITHIN TOTAL WETLANDS BUFFER AREA (DISTURBANCE + NEW IMPERVIOUS)	±20,500	7.7
PROPOSED OFFSITE IMPACTS WITHIN WETLANDS BUFFER	±2,100	N/A

*AREAS BASED ON GENERAL LIMITS OF WWTF FENCED AREA AND PROPERTY BOUNDARIES

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(IN FEET)

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STATE OF NEW HAMPSHIRE – ERIC D. WEINRIEB No. 7634 LICENSED PROFESSIONAL ENGINEER –

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