



TOWN OF HUDSON

Conservation Commission



Randy Brownrigg, Chairman

Dave Morin, Selectmen Liaison

12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-816-1291

SPECIAL WETLANDS CONDITIONAL USE PERMIT REVIEW MEETING AGENDA JUNE 2, 2020

COVID-19 Meeting Procedure

Due to the Covid-19 pandemic, and pursuant to Governor Sununu's Executive Order #12, the Conditional Use Review Committee will be with limited physical presence. Accordingly, public input on agenda items will be heard only in advance by written comment or by phone during the meeting.

To provide input to the committee, please email edhima@hudsonnh.gov with your name, address, phone number and the agenda item you wish to speak on. If you don't have access to email, please call 603-318-8286.

If you have any questions, please contact edhima@hudsonnh.gov or 603-318-8286.

The Town of Hudson Conservation Commission will hold a meeting on **June 2, 2020** at 7:00 p.m. in the Community Center, located at 12 Lions Ave., Hudson, NH.

I. Call to Order:

- a. Pledge of Allegiance
- b. Roll Call
- c. Alternates
- d. Public Input Related to Non-Agenda Items

II. New Business:

- a. Conditional Use Permit Application Review:
Hudson Logistics Center - Green Meadow Golf Course; Map: 234, Lot 005-000 and Map 239, Lot 001-000
- b. Public Input
- c. Set Up Site Visit

III. Commissioner's Comments:

IV. Adjournment

All plans and applications are available for review by request. Comments may be submitted in writing until 10:00 a.m. on the Monday prior to the day of the meeting.


Randy Brownrigg, Chairman

Public Input Process

Hudson Community Center, 12 Lions Ave, Hudson, NH

June 2, 2020 at 7:00 PM

Due to the COVID-19/Coronavirus pandemic please see below:

Access to this meeting shall be provided in the following manner:

1. Access to this meeting will be live cast via Hudson Community Television (HCTV).
2. Conservation Commission members and applicants may be participating physically.

Public (in-person) Participation Instructions:

If you plan to attend the meeting in-person at the Community Center, please be aware of the following precautions:

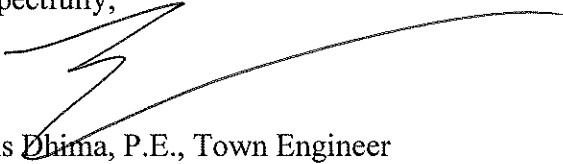
1. Public seating will comply with Universal/CDC guidelines following social distancing protocols.
2. A microphone will be situated between the board and public seating for public comment without the need to touch the microphone.
3. Conservation Commission members will be appropriately distanced.
4. If you are not feeling well, have a fever, a cough, shortness of breath or other cold or flu symptoms, please do not attend this meeting in person.

Remote Participation Instructions:

1. To **OBSERVE** the meeting in real-time, either:
 1. Go to <http://hudsonctv.com/CablecastPublicSite/watch/2?channel=3> or,
 2. Comcast customers can tune in to **Channel 22** on your television or,
 3. Go to www.hudsonctv.com and scroll to the bottom "Browse our other channels" and click 22-Government.
2. To **COMMENT** in **REAL-TIME**, get added to the list by emailing edhima@hudsonnh.gov at *any time* before the public hearing is opened with your:
 1. Name
 2. Address
 3. Phone Number
3. The order of public comment will be as follows. When the Conservation Commission opens the public input, those physically present that wish to comment will be called upon first. The Conservation Commission will then call remote commenters in the order their email was received. All commenters, physically present and remote, will be audible to those observing the meeting.
4. If you do not have access to e-mail, or are experiencing technical difficulties, call 603-318-8286. Leave a voicemail with your information if necessary. Please use email per step #2 if possible.
5. You may also submit your comments or questions in advance of the scheduled meeting to the Engineering Department via:
 1. E-mail to edhima@hudsonnh.gov

2. Written comments can be submitted by mail to the Engineering Department (please include your name/address with the comments). Letters should be addressed to the Engineering Department, 12 School Street, Hudson, NH 03051.
3. All written comments must be received by 10 a.m. the Monday prior to the meeting.

Respectfully,

A handwritten signature in black ink, appearing to read 'Elvis Dhina', with a long, sweeping horizontal stroke extending to the right.

Elvis Dhina, P.E., Town Engineer

May 19, 2020

Via Email and U.S. Mail

Town of Hudson Conservation Commission
Attn: Elvis Dhima, P.E., Town Engineer
12 School Street
Hudson, NH 03051

RE: Hudson Logistics Center - Conditional Use Permit Application
Supplemental Filing

Dear Elvis:

This letter and supporting materials is intended to supplement the Conditional Use Permit Application that our client, Hillwood Enterprises, L.P. (“Hillwood”), filed with the Town on April 21, 2020 in support of its proposed redevelopment of the Greenmeadow Golf Club into the Hudson Logistics Center (the “Project”). This letter provides a brief overview of the Project, summarizes the access and lot development as it relates to Wetland Conservation Overlay District (the “District”) impacts occasioned by same, analyzes the use-specific and general conditional use permit criteria contained within §334-36(C) and §334-37 of the recently revised Article IX of the Town of Hudson’s Zoning Ordinance which regulates the District, and provides additional plans, an updated Wetland Report from Gove Environmental Services, Inc and the completed Wetland Conditional Use Permit Checklist, as indicated below. Pursuant to our recent conversations, we respectfully request to be scheduled for an initial meeting with the Conservation Commission on June 2, 2020 or other date which you and the Conservation Commission deem appropriate.

Referenced below and enclosed herewith please find: 1) the Overall Site Plan previously filed with the Planning Board (the “Site Plan”) ¹; 2) a Wetland Impact Plan²; 3) a Proposed Mitigation Plan³; 4) the Overall Grading and Drainage Plan previously filed with the Planning Board (the “Grading and Drainage Plan”) ⁴, an updated Wetland Report⁵, a revised Site Data Sheet updating wetland impact figures to supplement the previously filed Conditional Use Permit Application⁶ and a completed Wetland Conditional Use Permit Checklist to supplement the Conditional Use Permit Application.⁷

¹ See Enclosure 1.

² See Enclosure 2.

³ See Enclosure 3.

⁴ See Enclosure 4.

⁵ See Enclosure 5.

⁶ See Enclosure 6.

⁷ See Enclosure 7.

Executive Summary

The Project was designed to minimize impacts to the Wetland Conservation Overlay District and to wetland functions and values and preserve the highest value wetlands and wildlife habitats on the Property. There are no alternate layouts that would further reduce impacts or better preserve high-value wetlands and wildlife habitats. The vast majority of District impacts are access impacts necessitated by the characteristics of the Property. The remaining lot development impacts affect low-value wetlands and if the proposed buildings and other site improvements were configured to avoid said impacts, more significant impacts would be incurred elsewhere and to more valuable wetlands associated with Limit Brook, the Merrimack River or their respective buffers. Additionally, significant compensatory mitigation is proposed by Hillwood that will offset Project impacts and advance the purpose of the Wetland Conservation Overlay District Ordinance. A positive endorsement on Hillwood’s Conditional Use Permit Application from the Conservation Commission is reasonable under the circumstances.

Introduction

The Hudson Logistics Center is proposed to be located on real property consisting of approximately 399.12 acres which is further identified as Town Tax Map 234, Lots 5, 34 and 35, and Town Tax Map 239, Lot 1 (the “Property”), as depicted on the Site Plan.

Hillwood is proposing to consolidate Tax Map 234, Lot 5 and Tax Map 239, Lot 1 and then subdivide the consolidated lot into three new lots (individually and respectively to be known as Lots “A”, “B” and “C”, as depicted on the Site Plan). The Hudson Logistics Center will consist of three new distribution and logistics buildings, one to be sited on each of the proposed lots, which will together constitute 2,603,400 sf of new building footprint. Primary access to the Hudson Logistics Center will be provided via a new dedicated subdivision road extending approximately 2,670 ft from Lowell Road and terminating at a cul-de-sac which will provide frontage to Lots A, B and C (“Green Meadow Drive”).⁸ Secondary access to the site will be provided via an accessway on the northern portion of the Property which will connect with an access easement located on the abutting Sam’s Club parcel (the “Secondary Access”).

The Project contemplate access and lot development impacts to the District as described below.

⁸ See Enclosure 1.

Analysis

1) Proposed District Impacts

Permitted conditional uses within the District include access impacts⁹ and lot development impacts.¹⁰ In this case, a Conditional Use Permit for access and lot development impacts is sought for a total of 295,162 sf of impact (69,449 sf wetland and 225,713 sf Buffer) caused by 14 discrete impact areas within the District¹¹, as defined by the Zoning Ordinance.¹² The proposed impacts, depicted on the Wetland Impact Plan, are primarily associated with the construction of Green Meadow Drive and the Secondary Access, both of which are required to provide access to the Property’s uplands which are located on the western side of the Property. More specifically, of the 295,162 sf of total impact, 246,130 sf of impact (68,679 sf wetland and 177,451 sf Buffer), approximately 83.4%, are occasioned by Green Meadow Drive and the Secondary Access (the “**Access Impacts**”). Only 49,032 sf of impact (770 sf wetland and 48,262 sf Buffer) will be caused by lot development to include paved areas, stormwater management and grading (the “**Lot Development Impacts**”).¹³

While the District does not include “manmade facilities”,¹⁴ the Wetland Impact Plan also depicts three manmade ponds (golf course water features) totaling 44,730 sf which will be impacted by the Project. No conditional use permit is required for these impacts from the Planning Board pursuant to Section 334-35(C) of the Zoning Ordinance. These impacts will be addressed, however, pursuant New Hampshire Department of Environmental Services (“NHDES”) review and permitting process.

2) Use-Specific Conditional Use Permit Criteria

Below, we address the individual conditional use permit criteria of Section 334-36(C)(2) of the Zoning Ordinance, applying to the Access Impacts, and Section 334-36(C)(4), applying to the Lot Development Impacts.

- **Access Impact Specific Criteria (Section 334-36(C)(2))**

Pursuant to Section 334-36(C)(2) of the Zoning Ordinance, streets, roads, and

⁹ Zoning Ordinance, §334-36(C)(2).

¹⁰ Zoning Ordinance, §334-36(C)(4).

¹¹ See Wetland Impact Plan, Impact Areas A – J, 1, 2, 3, and 4.1.

¹² Zoning Ordinance, §334-35(A) defines the boundaries of the District as inclusive of all surface waters, wetlands of any size, and a 50-foot buffer around wetlands and surface waters (hereinafter the “Buffer”).

¹³ See Wetland Impact Plan, Impact Areas 2, 3 and 4.1.

¹⁴ See §334-35(C) (“The Wetland Conservation Overlay District shall not include those wetlands which have developed as a result of the construction of storm water treatment and/or detention facilities, agricultural use, waste treatment, or other water dependent structures or uses, *and manmade facilities*”) (emphasis added).

other access ways are permitted as conditional uses if: 1) the access way is essential to the productive use of the land beyond the District; 2) the access ways are located and constructed in such a way as to minimize the potential for detrimental impact to the District; 3) the access ways are planned, designed, and constructed in a manner consistent with applicable State and local standards; and 4) there are no viable alternatives available.

As referenced above, 83.4% of the District impacts occasioned by the Project are Access Impacts caused by the construction of Green Meadow Drive and the Secondary Access. The criteria of Section 334-36(C)(2) are subsumed by those in Section 334-37(A), which are addressed below. To summarize, the only way to access the viable uplands on the western part of the Property is for access ways to traverse areas of land within the District on the eastern side of the Property. In this case, the proposed access ways have been designed to limit the extent of wetland impacts and the effect the proposed impacts have on wetland functions and values, as described in greater detail below.

Under the circumstances of this case, Hillwood meets the specific conditional use permit criteria of Section 334-36(C)(2) of the Zoning Ordinance.

- **Lot Development Impact Specific Criteria (Section 334-36(C)(4))**

Pursuant to Section 334-36(C)(4), Lot Development Impacts are permitted as conditional uses where the applicant can demonstrate that: 1) the use will not significantly interfere with wetland functions and values, water quality, or wildlife habitat pursuant to the statement of purpose of the Zoning Ordinance, or, 2) in the alternative, the use will impact wetlands functions and values; but, in the opinion of the Planning Board, such uses are not contrary to the public interest and will result in significant public benefit provided:

- Compensatory mitigation is provided such that those District functions and values to be impacted will be off-set in whole. Such mitigation may be located on or off site. As a guide to the type and extent of compensatory mitigation considered, reference shall be made to the New England District Compensatory Mitigation Guidance, US Army Corps of Engineers, New England District, Regulatory Division, 7-22010 as amended; and
- Hillwood has demonstrated avoidance and minimization to the fullest extent practical.

In this case, of the proposed District impacts, 16.6% of same (49,032 sf) are occasioned by Lot Development Impacts depicted as wetland impact areas 2, 3 and 4.1 on the enclosed Wetland Impact Plan. Wetland impact areas 2, 3 and 4.1, all located on the

eastern side of Lots A and C and consist primarily of grading impacts.¹⁵ While minor impacts on the wetland functions and values are proposed by virtue of these impacts, they are not contrary to the public interest, and the Project will result in significant public benefit in the form of significant compensatory mitigation. Further, Hillwood has demonstrated avoidance and minimization to the fullest extent practical.

More specifically, Hillwood proposes two areas of preservation in the eastern portion of the Property totaling approximately 81 acres as depicted in the Wetland Mitigation Plan. These two areas encompass the majority of the wetlands on the Property including the entire course of Limit Brook and its associated wetlands, which are among the highest value wetlands on the Property. The proposed preservation area alone is approximately 75 times the proposed Lot Development Impact or more than 3 times the preservation that would be required under the US Army Corps of Engineers Compensatory Mitigation Guidance at the relevant 20:1 ratio. Additional mitigation is also being provided through restoration of the area within 250 feet of the Merrimack River. In that vein, 25,761 sf of existing pavement and the irrigation pump house on the bank of the Merrimack River will be removed and the entire 26 acres of maintained turf adjacent to the river will be naturalized using a native meadow seed mix.

Hillwood's proposed Lot Development Impacts are not contrary to public interest because the purpose of the Wetland Conservation Overlay District Ordinance is to "protect the health, safety and general welfare of the public by promoting the most appropriate use of land and by protecting wetland and surface water ecosystems and water quality in accordance with the goals and objectives of Hudson's Master Plan."¹⁶ In this case, though greater than 2,600,000 sf of new building development is proposed, the impact to the District has been minimized to the greatest extent possible which promotes the reasonable and appropriate use of the Property as proposed. Moreover, the public interest benefits greatly via the significant mitigation proposed by Hillwood as referenced above and Hillwood has demonstrated avoidance and minimization to the fullest extent practical, as discussed in greater detail below.

Under the circumstances of this case, Hillwood meets the specific conditional use permit criteria of Section 334-36(C)(4) of the Zoning Ordinance applying to the Lot Development Impacts.

3) General Conditional Use Permit Criteria (§334-37(A))

In addition to satisfying the use specific criteria above, Hillwood's proposal satisfies the general Conditional Use Permit criteria contained in §334-37(A) of the Zoning Ordinance, as detailed below.

¹⁵ See Site Plan, Wetlands Impact Plan, Grading and Drainage Plan.

¹⁶ See Zoning Ordinance, §334-33.

- **§334-37(A)(1): The proposed activity minimizes degradation of land situated within the District and offsets potential adverse impacts to functions and values of wetlands, surface waters, and vernal pools.**

The Project has been designed to limit the extent of wetland impacts and the effect the proposed impacts have on wetland functions and values. The project completely avoids impacts to the most valuable wetlands with the greatest function and value.

Green Meadow Drive has been routed through uplands where possible and along the edge of forested wetland that is already directly adjacent to existing development at 267 Lowell Road. These edge impacts result in less impact to wetland functions and values which remain intact within the interior of the forested wetland which is left undivided and undisturbed. Where the proposed access roads cross wetlands, the narrowest crossing points have been utilized. Regarding the Secondary Access, 11-foot-high retaining walls have been utilized to avoid additional impacts from slope grading. An oversized structure has also been used at this crossing to maintain stream connectivity to the maximum extent practical, given the existence of the highway little more than 100-feet downstream.

Impacts necessary for the cul-de-sac at the terminus of Green Meadow Drive have been minimized with the use of retaining walls. Though the impacts at this location are seemingly large, this area is entirely maintained golf course turf with no identifiable wetland function or value. Impacts to wetland function and value have therefore been avoided with this configuration as have potential impacts to other more significant wetlands elsewhere in the District.

The shallow ponds that make up the bulk of the impact from the development are isolated from other wetlands, their edges are routinely mowed, and they exhibit signs of heavy nitrification. These shallow ponds support very limited wetland function and value. By locating the development in the main portion of the golf course and impacting these ponds, impacts to the most valuable and functionally important wetlands are avoided. These include the Limit Brook wetland complex, the Merrimack River and its buffer, and the bulk of the forested wetland on the eastern portion of the site. Buffer impacts for the development are primarily limited to areas of existing marinated lawn with very limited, if any, supportive function for adjacent wetland areas.

A single vernal pool was identified on the Property. It is located in the forested wetland just outside the golf course and will not be impacted by the Project. The forested buffer to this pool will also be left intact with impacts occurring only within the portion of the buffer which is currently maintained golf course lawn and generally does not support vernal pool species habitat.

As the proposed activity has been thoughtfully designed to minimize degradation of land situated within the District by preserving high-value wetlands and buffers, thereby offsetting any adverse impacts to functions and values of wetlands, surface waters, and vernal pools in the District, a reasonable conclusion is that Hillwood's proposal satisfies Section 334-37(A)(1) of the Zoning Ordinance.

- **§334-37(A)(2): The proposed activity will have no significant negative environmental impact to abutting or downstream properties and/or hydrologically connected water and/or wetland resources.**

The potential for impacts to occur downstream or offsite has largely been avoided by avoiding impacts to areas with the most potential for offsite effects. There are no impacts to Limit Brook, its associated wetland, or its 100-year Floodplain. Impacts to the 100-year Floodplain of the Merrimack River have also been avoided as has any impact to the bank of the river or the river itself.

The Merrimack River by far has the most potential scientific, educational, aesthetic, recreational, economic, and other public use and value. These values will be protected and advanced by limiting work within the 250-foot riparian area to stormwater management BMP's and by providing for restoration and naturalization of this area, which is currently predominantly maintained golf course turf.

Finally, the majority of the proposed impacts are to isolated manmade ponds outside the District, or edges of forested wetland with little or no potential for downstream impacts or effect on hydrological connectivity. The areas where crossings are proposed have been designed to maintain connections between adjacent areas. A larger than required structure is being used for the Secondary Access which will ensure that there are no impacts to stream connectivity or change in flow characteristics.

As the Project has been designed to have no negative environmental impact to abutting or downstream properties and/or hydrologically connected and/or wetland resources, a reasonable conclusion is that Hillwood's proposal satisfies Section 334-37(A)(2) of the Zoning Ordinance.

- **§334-37(A)(3): The proposed activity or use cannot practicably be located otherwise on the site to eliminate or reduce impact to the Wetland Conservation Overlay District.**

With regard to the Access Impacts, wetlands extend across the entire eastern portion of the Property with Steele Road being the only existing access. Steele Road cannot be used to access the site for the proposed use due primarily to concerns related to the residential uses to the south of Steele Road. Wetland impacts to gain access to the site from Lowell Road are therefore unavoidable. Given the need to utilize the existing intersections on Lowell Road, the existing access easements, and the design requirements

for trucks, the proposed access roads cannot be reconfigured or relocated to further reduce impacts.

Regarding the Lot Development Impacts, the proposed warehouse and distribution use involves large buildings which must be located to provide access to loading docks to maximize efficiency for larger trucks. The shape of the buildings cannot be significantly changed so the ability to reconfigure the layout is extremely limited. The buildings on Lots A, B and C, and the associated paved areas have been located within the existing open area of the golf course which lies almost entirely outside the District. The cul-de-sac at the end of the proposed main access has been located so it is able to serve and provide frontage to all lots from a compact central location. This configuration limits impacts to low value manmade ponds, areas of wet maintained lawn, and the tip of a finger like projection of forested wetland. Impacts to the Buffer in this area are limited to existing maintained lawn.

If the buildings and other site elements were reconfigured in an attempt to avoid the proposed impacts, impacts would be incurred elsewhere and to more valuable wetlands associated with Limit Brook, The Merrimack River, or their associated buffers. Alternate layouts cannot be used to further reduce impacts at this site.

As the proposed uses cannot practicably be located otherwise on the site to eliminate or reduce impact to the District, a reasonable conclusion is that Hillwood's proposal satisfies §334-37(A)(3) of the Zoning Ordinance.

- **§334-37(A)(4): The proposed activity incorporates the use of those Best Management Practices recommended by the New Hampshire Department of Environmental Services and/or other State agencies having jurisdiction.**

The proposed project was designed with the adjacent resources in mind with guidance from the *Best Management Practice Techniques for Avoidance and Minimization* manual prepared by USEPA, and NHDES. The project also includes comprehensive stormwater management for treatment and attenuation of runoff that has been designed in accordance with NH Alteration of Terrain program. A comprehensive construction phasing, erosion, and sedimentation control plan has been developed for the construction phase of the project to ensure maximum protection of the adjacent resource areas during construction. BMP's employed meet or exceed those specified in *New Hampshire Stormwater Manual Volume 3: Erosion and Sediment Controls during Construction*.

As the proposed project incorporates the use of those BMPs recommended by the State, as referenced above, a reasonable conclusion is that Hillwood's proposal satisfies §334-37(A)(4) of the Zoning Ordinance.

SMOLAK & VAUGHAN LLP

Town of Hudson

May 19, 2020

- **§334-37(A)(5): All applicable Federal and/or State permit(s) have been received for the proposed activity in accordance with New Hampshire Code of Administrative Rules – Part Env-Wt 100-800 and Section 404 of the Federal Clean Water Act, as amended.**

A New Hampshire Dredge & Fill Application was submitted to NHDES and accepted as complete on 5/7/20 (File # 2020-00956). Several interagency pre-application meetings were held with NHDES, Army Corps of Engineers, and US Environmental Protection Agency to discuss the project and scope of impacts. Based on these meetings, and the fact that the proposed impact falls below the threshold where an Individual Permit would be required under Section 404 of the Clean Water Act, we expect the project to be covered under the NH Programmatic General Permit. No separate application will therefore be required under the Clean Water Act.

- **§334-37(A)(6): Where applicable, proof of application to all required State and/or Federal permits.**

A New Hampshire Dredge & Fill Application was submitted to NHDES and accepted as complete on 5/7/20 (File # 2020-00956). We also anticipate that Hillwood will file an Alteration of Terrain Permit in the near future.

Conclusion

Do not hesitate to contact me with any comments, questions or concerns. Thank you for your time.

Very truly yours,

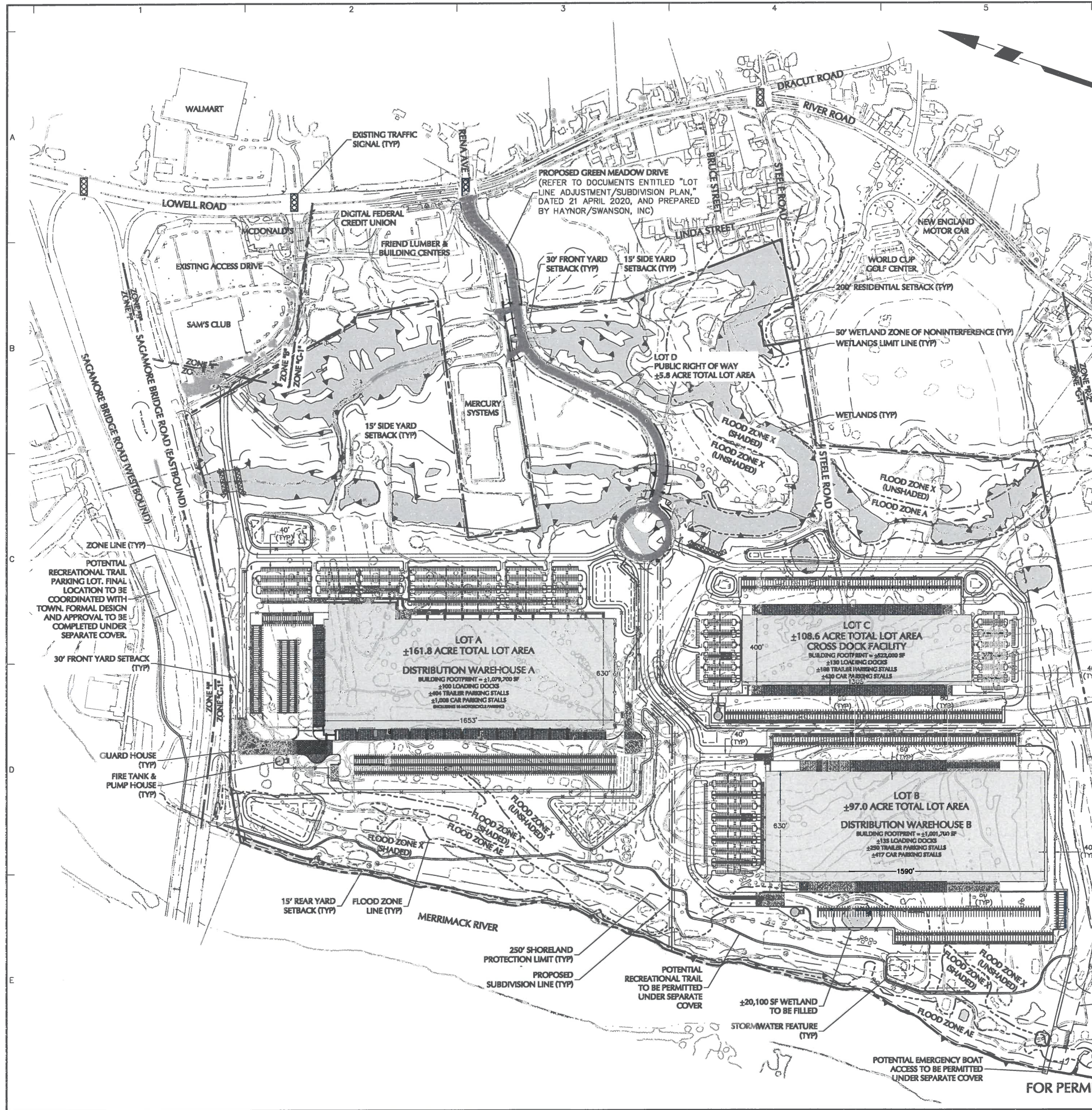
SMOLAK & VAUGHAN, LLP



John T. Smolak, Esq.

Enclosures (7)

cc: Justin Dunn, LEED AP, Hillwood (email only)
Langan (email only)
Gove Environmental Services, Inc. (email only)
Justin L. Pasay, Esq. (email only)



DIMENSIONAL REQUIREMENTS (LOT A)

REFERENCE: TOWN OF HUDSON ZONING ORDINANCE & LAND USE REGULATIONS (LAST REVISED 10/2015)
 ZONE: GENERAL 1 (G-1) WITH GREEN MEADOW GOLF CLUB OVERLAY AND BUSINESS (B)
 PROPOSED USE: DISTRIBUTION WAREHOUSE (PERMITTED)

ITEM	REQUIRED	PROPOSED	SECTION
LOT/BUILDING			
MINIMUM LOT AREA	2 AC	±161.8 AC	334 ATCH. 4
MINIMUM OPEN SPACE ¹	40%	±64%	276-11.1B(24)(b)
MAXIMUM BUILDING HEIGHT	50 FT	±45.75 FT	334-14.A
MINIMUM LOT FRONTAGE	200 LF	±2,019 LF	334 ATCH. 4
MINIMUM FRONT YARD SETBACK ²	30 FT	±349 FT	334 ATCH. 4
MINIMUM SIDE YARD SETBACK ²	15 FT	±123 FT	334 ATCH. 4
MINIMUM REAR YARD SETBACK ²	15 FT	±734 FT	334 ATCH. 4
MINIMUM RESIDENTIAL ZONE SETBACK ²	200 FT	N/A	276-11.1B(12)(c)
PARKING			
MINIMUM PARKING STALL COUNT	AS REQUIRED BY THE PLANNING BOARD	±1,008	275-B.C(2)
MINIMUM PARKING STALL DIMENSIONS ³	10 FT X 20 FT	9 FT X 18 FT	275-B.C(4)
MINIMUM DRIVE AISLE WIDTH	24 FT	24 FT	275-B.C(5)(e)

DIMENSIONAL REQUIREMENTS (LOT B)

REFERENCE: TOWN OF HUDSON ZONING ORDINANCE & LAND USE REGULATIONS (LAST REVISED 10/2015)
 ZONE: GENERAL 1 (G-1) WITH GREEN MEADOW GOLF CLUB OVERLAY
 PROPOSED USE: DISTRIBUTION WAREHOUSE (PERMITTED)

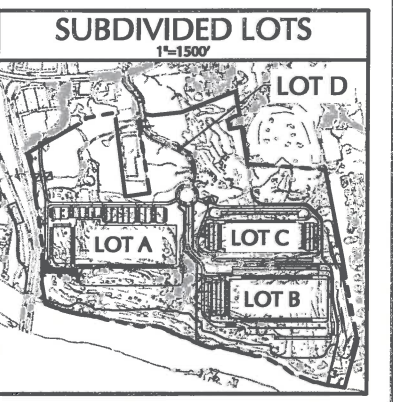
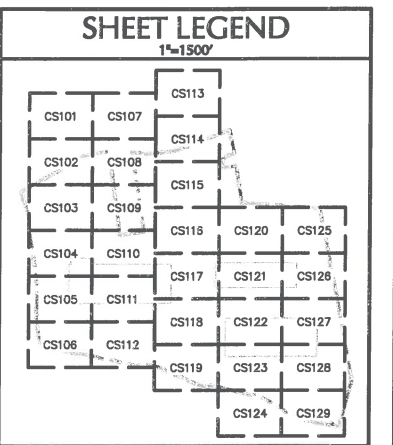
ITEM	REQUIRED	PROPOSED	SECTION
LOT/BUILDING			
MINIMUM LOT AREA	2 AC	±97.0 AC	334 ATCH. 4
MINIMUM OPEN SPACE ¹	40%	±50%	276-11.1B(24)(b)
MAXIMUM BUILDING HEIGHT	50 FT	±50 FT	334-14.A
MINIMUM LOT FRONTAGE	200 LF	±205 LF	334 ATCH. 4
MINIMUM FRONT YARD SETBACK ²	30 FT	±1,348 FT	334 ATCH. 4
MINIMUM SIDE YARD SETBACK ²	15 FT	±245 FT	334 ATCH. 4
MINIMUM REAR YARD SETBACK ²	15 FT	±483 FT	334 ATCH. 4
MINIMUM RESIDENTIAL ZONE SETBACK ²	200 FT	±259 FT	276-11.1B(12)(c)
PARKING			
MINIMUM PARKING STALL COUNT	AS REQUIRED BY THE PLANNING BOARD	±417	275-B.C(2)
MINIMUM PARKING STALL DIMENSIONS ³	10 FT X 20 FT	9 FT X 18 FT	275-B.C(4)
MINIMUM DRIVE AISLE WIDTH	24 FT	24 FT	275-B.C(5)(e)

DIMENSIONAL REQUIREMENTS (LOT C)

REFERENCE: TOWN OF HUDSON ZONING ORDINANCE & LAND USE REGULATIONS (LAST REVISED 10/2015)
 ZONE: GENERAL 1 (G-1) WITH GREEN MEADOW GOLF CLUB OVERLAY
 PROPOSED USE: DISTRIBUTION WAREHOUSE (PERMITTED)

ITEM	REQUIRED	PROPOSED	SECTION
LOT/BUILDING			
MINIMUM LOT AREA	2 AC	±108.6 AC	334 ATCH. 4
MINIMUM OPEN SPACE ¹	40%	±89%	276-11.1B(24)(b)
MAXIMUM BUILDING HEIGHT	50 FT	±50 FT	334-14.A
MINIMUM LOT FRONTAGE	200 LF	±1,932 LF	334 ATCH. 4
MINIMUM FRONT YARD SETBACK ²	30 FT	±552 FT	334 ATCH. 4
MINIMUM SIDE YARD SETBACK ²	15 FT	±245 FT	334 ATCH. 4
MINIMUM REAR YARD SETBACK ²	15 FT	±538 FT	334 ATCH. 4
MINIMUM RESIDENTIAL ZONE SETBACK ²	200 FT	±538 FT	276-11.1B(12)(c)
PARKING			
MINIMUM PARKING STALL COUNT	AS REQUIRED BY THE PLANNING BOARD	±420	275-B.C(2)
MINIMUM PARKING STALL DIMENSIONS ³	10 FT X 20 FT	9 FT X 18 FT	275-B.C(4)
MINIMUM DRIVE AISLE WIDTH	24 FT	24 FT	275-B.C(5)(e)

NOTES:
 1. PER SECT. 276-11.1B(24). OPEN SPACE IS DEFINED AS "GRASSED, TREED, LANDSCAPED, OR NATURAL GROWTH AREAS DESIGNATED FOR NO ACTIVITY ASSOCIATED WITH THE NONRESIDENTIAL USE PROPOSED; THERE MUST BE REASONABLE OPEN SPACE NEAR OR ADJACENT TO EACH BUILDING OR STRUCTURE, INCLUDING PAVEMENT, AS DETERMINED BY THE PLANNING BOARD."
 2. PER SECT. 276-11.1B(12). NO BUILDINGS, PARKING, OR DISPLAY AREAS MAY BE LOCATED IN THE SETBACK.
 3. PER SECT. 275-B.C(4), 9 FT X 18 FT PARKING STALLS ALLOWED WITH PLANNING BOARD VOTE.



Date	Description	No.
Revisions		
LANGAN Langan Engineering and Environmental Services, Inc. 888 Boylston Street, Ste 510 Boston, MA 02199 T: 617.824.9100 F: 617.824.9101 www.langan.com		

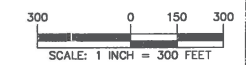
Project: **HUDSON LOGISTICS CENTER**
 MAP No. 239, LOT No. 1

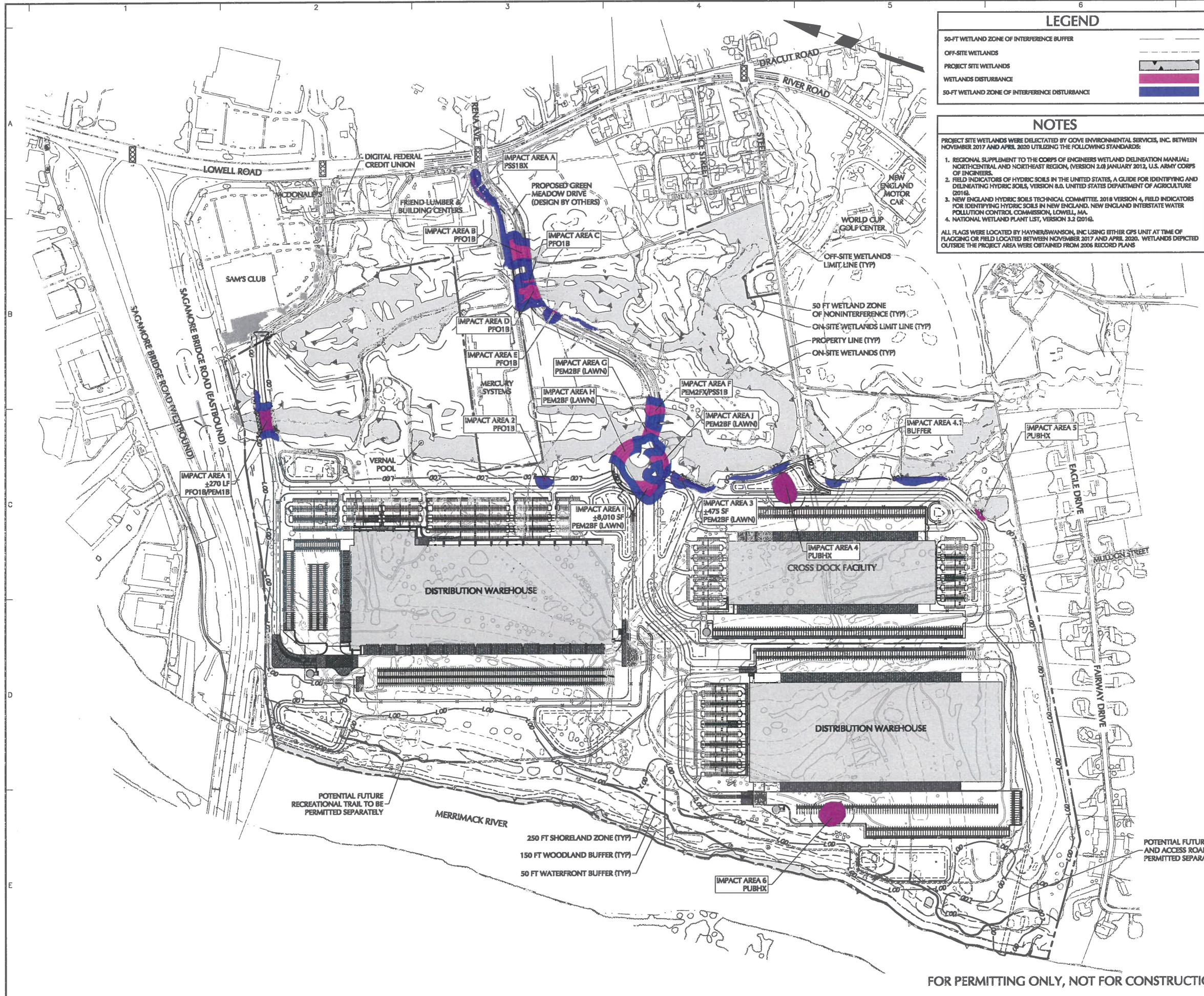
HUDSON NEW HAMPSHIRE
 Drawing Title

OVERALL SITE PLAN

Project No.	Drawing No.
151010101	CS100
Date	
04-21-2020	
Drawn By	
CLR	
Checked By	
NLK	

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LEGEND

- 50-FT WETLAND ZONE OF INTERFERENCE BUFFER
- OFF-SITE WETLANDS
- PROJECT SITE WETLANDS
- WETLANDS DISTURBANCE
- 50-FT WETLAND ZONE OF INTERFERENCE DISTURBANCE

NOTES

PROJECT SITE WETLANDS WERE DELINEATED BY COVE ENVIRONMENTAL SERVICES, INC. BETWEEN NOVEMBER 2017 AND APRIL 2020 UTILIZING THE FOLLOWING STANDARDS:

- REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH-CENTRAL AND NORTH-EAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
- FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0, UNITED STATES DEPARTMENT OF AGRICULTURE 2016.
- NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE, 2018 VERSION 4, FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION, LOWELL, MA.
- NATIONAL WETLAND PLANT LIST, VERSION 3.2 (2016).

ALL FLAGS WERE LOCATED BY HAYNES SWANSON, INC USING EITHER GPS UNIT AT TIME OF FLAGGING OR FIELD LOCATED BETWEEN NOVEMBER 2017 AND APRIL 2020. WETLANDS DEPICTED OUTSIDE THE PROJECT AREA WERE OBTAINED FROM 2006 RECORD PLANS

WETLANDS DISTURBANCE

IMPACT AREA	WETLAND CLASSIFICATION	REASON FOR IMPACT	SIZE (SF)	50-FT BUFFER (SF)
A	DRAINAGE DITCH (MANHOLE)	MAIN ACCESS	1,344	81,375
B	FORESTED WETLAND	MAIN ACCESS	11,220	4,540
C	FORESTED WETLAND	MAIN ACCESS	1,700	5,530
D	FORESTED WETLAND	MAIN ACCESS	9,725	10,514
E	FORESTED WETLAND	MAIN ACCESS	680	19,775
F	POND, EMERGENT/ SCRUB, SHRUB EDGE	MAIN ACCESS	6,850	33,585
G	WET MAINTAINED LAWN	MAIN ACCESS	3,210	-
H	WET MAINTAINED LAWN	MAIN ACCESS	10,910	-
I	WET MAINTAINED LAWN	MAIN ACCESS	9,010	6,327
J	WET MAINTAINED LAWN	MAIN ACCESS	5,705	187
1	FORESTED WETLAND PERENNIAL STERAM	SECOND ACCESS	9,135	13,298
2	FORESTED WETLAND	LOT DEVELOPMENT	295	6,505
3	WET MAINTAINED LAWN	LOT DEVELOPMENT	475	14,169
4.1	WET MAINTAINED LAWN	LOT DEVELOPMENT	-	27,488
TOTAL IMPACTS WITHIN WETLAND CONSERVATION OVERLAY DISTRICT			69,449	225,213
4	POND (MANMADE)	LOT DEVELOPMENT	21,970	N/A
5	POND (MANMADE)	LOT DEVELOPMENT	2,540	N/A
6	POND (MANMADE)	LOT DEVELOPMENT	20,120	N/A
TOTAL IMPACTS TO MANMADE PONDS			44,730	N/A
TOTAL PROJECT IMPACTS			114,179	225,213

Date	Description	No.
05/21/20	SUPPLEMENTAL P&Z SUBMISSION	1

Signature _____ Date _____
 PROFESSIONAL
 PROFESSIONAL LICENSE No. 0000000000

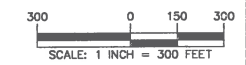
LANGAN
 Langan Engineering and
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 888 Boylston Street, Ste 510
 Boston, MA 02199
 T: 617.824.9100 F: 617.824.9101 www.langan.com

Project
HUDSON LOGISTICS CENTER
 MAP No. 239, LOT No. 1

HUDSON NEW HAMPSHIRE
 Drawing Title
WETLAND IMPACT PLAN

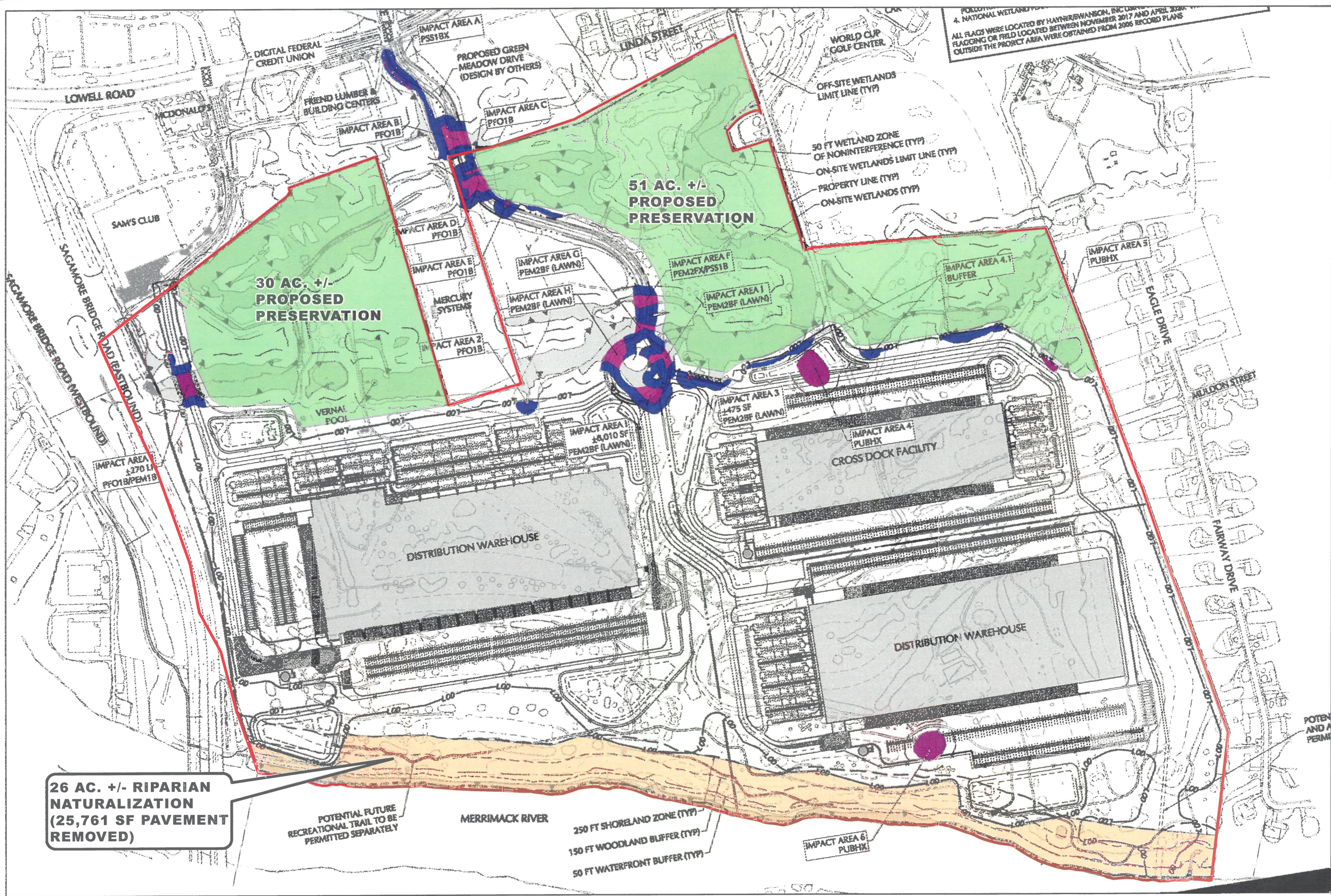
Project No. 151010101	Figure FG01
Date 04/15/2020	
Drawn By CDR	
Checked By NLK	Sheet 1 of 1

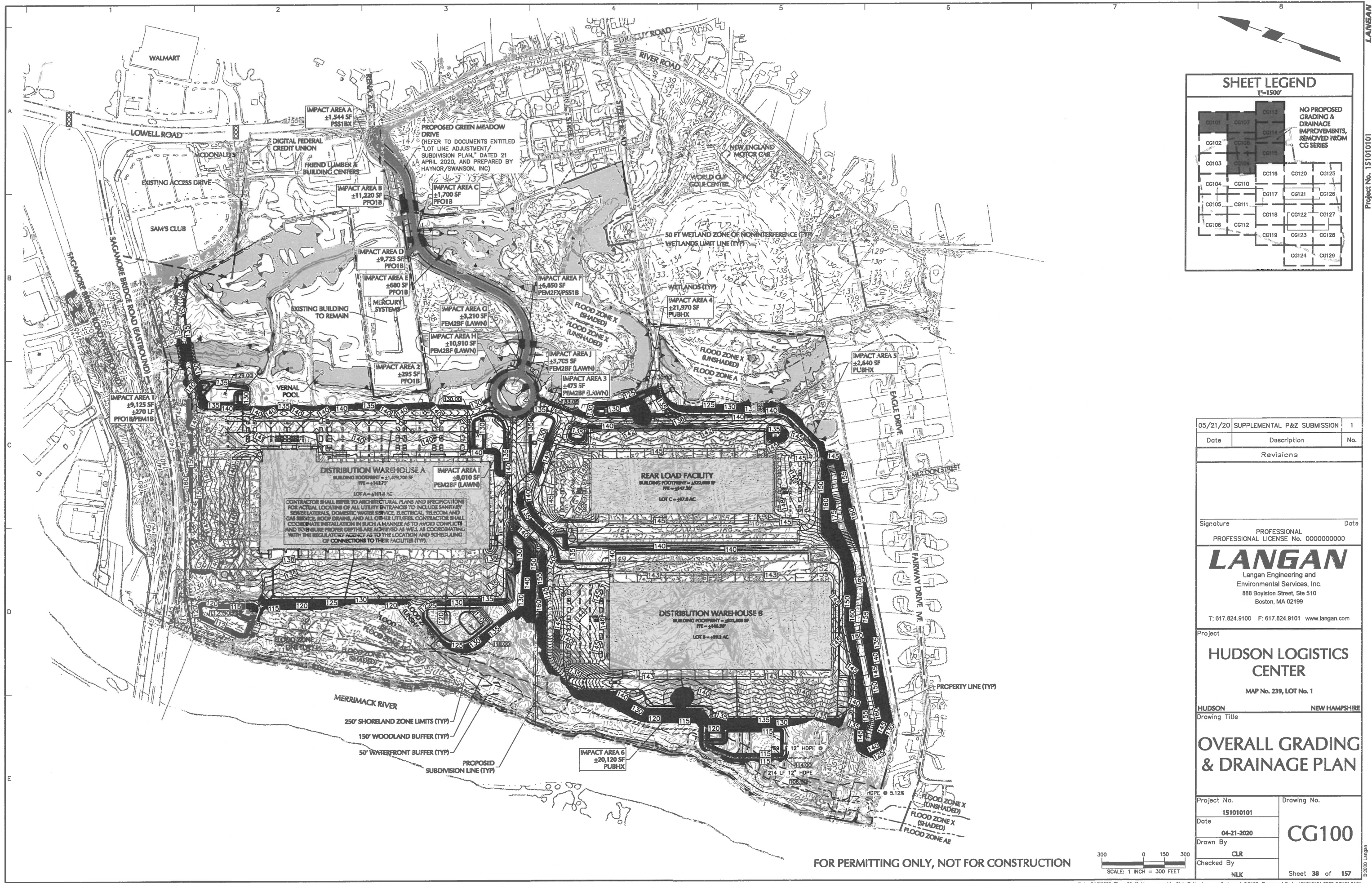
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Project No. 151010101

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SHEET LEGEND
1"=1500'

CG101	CG107	CG113	NO PROPOSED GRADING & DRAINAGE IMPROVEMENTS, REMOVED FROM CG SERIES
CG102	CG108	CG114	
CG103	CG109	CG115	
CG104	CG110	CG116	
CG105	CG111	CG117	
CG106	CG112	CG118	
		CG119	
		CG120	
		CG121	
		CG122	
		CG123	
		CG124	
		CG125	
		CG126	
		CG127	
		CG128	
		CG129	

05/21/20	SUPPLEMENTAL P&Z SUBMISSION	1
Date	Description	No.

Revisions

Signature _____ Date _____
PROFESSIONAL
PROFESSIONAL LICENSE No. 000000000

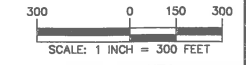
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Project
HUDSON LOGISTICS CENTER
MAP No. 239, LOT No. 1

HUDSON NEW HAMPSHIRE
Drawing Title
OVERALL GRADING & DRAINAGE PLAN

Project No. 151010101	Drawing No. CG100
Date 04-21-2020	Sheet 38 of 157
Drawn By CLR	
Checked By NLK	

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**Wetlands & Natural Resources
Proposed Hudson Logistics Center
43 Steele Road
Hudson, NH**

The following narrative provides an inventory of the wetlands and other natural resources associated with the proposed Hudson Logistics Center project, which is a redevelopment of the existing Green Meadow Golf Club. This information is provided in support of the related Conditional Use Permit Application for proposed impacts within the Wetlands Conservation Overlay District.

WETLAND DELINEATION

Various portions of the wetlands on this 273 acres property have been delineated and re-delineated several times by Gove Environmental Services personnel since 2005. For the current proposal, Brendan Quigley, NHCWS #249 re-flagged all wetland areas within the project area utilizing the following standards:

1. *US Army Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1 (Jan 1987) **AND** Regional Supplement to Corps of Engineers Wetland Delineation Manual; Northcentral and Northeast Region, Version 2.0, January 2012.
2. Field Indicators of Hydric Soils in the United States, Version 8.0, 2016 **AND (for disturbed sites)** *New England Hydric Soils Technical Committee. 2017 Version 4, Field Indicators for Identifying Hydric Soils in New England*. New England Interstate Water Pollution Control Commission, Lowell, MA.
3. *National Wetland Plant List*, Version 3.3 (2016).

Limited flagging along the access roads was completed in 2017 during early planning. The majority of the wetland delineation depicted on the *Hudson Logistics Center* plans was conducted in the fall 2019. All flagging was surveyed by Hayner Swanson, Inc., either in 2017 or recently in 2019/2020.

The property has several extensive areas of wetland in addition to the large areas of manicured lawn that dominate the property. Other than the relatively undisturbed bank of the Merrimack River, which defines the entire 5,000-foot (+/-) western boundary of the property, wetlands are characterized by a long history of alteration predating the regulation of freshwater wetlands. Prior to construction of the golf course, the property was largely cleared and actively managed for agriculture like most of the surrounding land. The most substantial changes occurred between 1952 and 1965 during which intensive aggregate extraction and large scale alteration of the terrain was carried out to create the two 18-hole courses that exist today. During this time, naturally occurring wetlands onsite underwent varying degrees of modification by clearing, filling, channelization, and excavation. Significant areas of wetland or uplands adjacent to wetlands were excavated in order to create water features suitable for the for the golf course landscape. Several of these excavations created isolated circular ponds. Many other areas of water, however, remain hydrologically connected forming a complex arraignment of wetlands, channels, and waterbodies in the eastern portion of the site. A figure is included in the attachments depicting the current wetlands on a 1952 aerial photo, clearly demonstrating the alterations carried out to create the golf course.

These wetlands fall into two main categories. One is a largely forested wetland system in the northeast of the site that is associated with an unnamed stream flowing off-site to the north, through a culvert under the portion of Circumferential Highway. Second is a more diverse system of forested, scrub-shrub, emergent, and open water wetlands directly or indirectly associated with Limit Brook. This perennial stream flows onto the property in the southeast corner, makes a single meander and leaves the site to the south. Both streams and all their associated wetlands are tributary to the Merrimack River. The excavated and isolated ponds throughout the golf course also clearly lie in the watershed of the Merrimack River but are not directly connected to each other or to the other wetlands. These ponds make up a third general category of resource on the property.

In order to provide more detailed descriptions and functional assessment of these wetlands they have been broken up into eight (8) evaluation areas based on connectivity and classification. The extent of each evaluation area and its reference number is depicted on the attached figure.

WETLAND FUNCTIONS & VALUES

A wetland function and value assessment was conducted on the six evaluation areas using the US Army Corps Highway Methodology guidelines. This methods 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 “primary” have been determined to be significant features of the wetland being evaluated. This does not necessarily indicate the wetland performs these functions or values at a significant level in comparison to other wetlands in the region or even near the site. A discussion of each evaluation area on site and their functions and values is provided in the sections below.

Evaluation Area 1

This is the Merrimack River and its steep bank which forms the western boundary of the project site. This resource is classified as lower perennial riverine, with a permanently flooded, unconsolidated bottom (R2UBH)¹. The steep bank extending from the edge of the maintained golf course down to the river edge is forested with mature pine, oaks, and lesser amounts of birch and maple.

Functions/Values

The Merrimack River is a major New Hampshire river that supports numerous functions and values at a high level. *Wildlife habitat, Aesthetic and Recreational Value, Cultural Significance, and Shoreline Stabilization* are among the Primary Functions and values of the River in this area. Most relevant and significant for this property is likely the Shoreline Stabilization value. Rather than being supported by the river itself this value is supported by the forested high bank between the high-water mark and the top of the bank at the level of the golf course. This area serves to stabilize the shoreline contain peak flow during flood events.

Evaluation Area 2

This evaluation area consists of a complex of wetlands occupying the northeast corner of the site. The predominant wetland type is forested wetland dominated by Red Maple with an understory of Witch Hazel, Highbush Blueberry, and Nannyberry. Royal Fern, Cinnamon Fern, and Sensitive Fern are common in the herbaceous layer. These wetlands are classified as deciduous, forested wetland, with saturated hydrology (PFO1B).

Water flows into the wetland from the surrounding uplands and from stormwater discharges associated with the adjacent development, including a large detention basin and drainage ditch. Several excavated ditches in the wetland and at the edge of the existing golf course direct water a small unnamed stream, which is depicted as perennial on the USGS map. Alterations and ditching in this area make the original

¹ 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.

path and extent of this stream unclear. Currently, a natural channel only exists within the wetland just south the highway before it flows off site through a culvert under the roadway. The stream ultimately drains to the Merrimack River approximately 1600' to the northwest of the site.

Functions/Values

The Primary functions of the wetlands in Evaluation Area 2 include *Flood Flow Alteration*, *Sediment/Toxicant Retention*, and *Nutrient Removal/Retention/Transformation*. Wildlife habitat and Production Export are also supported but have not been considered primary functions.

The Primary functions are derived from a combination of proximity to development and association with a stream that is tributary to the Merrimack River. Significant runoff from adjacent developed areas is directed to these wetlands numerous opportunities for sediment trapping and nutrient transformation before leaving the site. The constricted outlet and basin character of the lower portion of the wetland also provides some storage during periods of significant rainfall, therefore serving a flood follow alteration function. Both of these functions are somewhat diminished overall by the ditches that have been excavated in the wetland and its position low in the watershed.

Wildlife habitat and production export function is derived from the variety of hard and soft mast producing species as well as the well-developed multi-canopy character of the forested wetland. These functions are limited, however, by the proximity of development and transportation infrastructure on all sides of the wetland.

Evaluation Area 3

This primarily forested wetland shares many characteristics with the lower part of Evaluation Area 2. It is a Red Maple dominated swamp, with an understory species including Winterberry, Highbush Blueberry, Royal Fern, Cinnamon Fern, and Skunk Cabbage. The long term hydrology of the wetland is likely saturated/seasonally flooded but it is currently flooded due to a beaver dam at its southern. The classification of this wetland is therefore, deciduous, forested, wetland with a saturated and seasonally flooded hydrology that is influenced by beaver (PFO1Eb).

The forested wetland drains south through an excavated channel connecting it to Evaluation Area 5 and ultimately Limit Brook. The beaver dam that is currently maintaining a higher water level in the wetland is located at the beginning of this channel. Water levels in the channel vary seasonally, resembling a liner pond at higher water levels, and more of an emergent wetland at in the middle of the summer. Given its narrow shape and limited water depth, even at high water, this area has been classified as a Semi-permanently flooded excavated emergent wetland with a saturated scrub shrub edge (PEM2Fx/PSS1B). Emergent vegetation is dominated by a variety of sedges, rushes and wildflowers. Dominant species along its shrub edge include Silky dogwood, Meadowsweet, Gray Birch, and Glossy Buckthorn.

An area of hydric soils and wetland hydrology also extend from the forested portion of the wetland into the maintained turf of the adjacent golf course. This area has been evaluated separately as Evaluation Area 3.1 given its very different characteristics and function.

Functions/Values

The primary functions of Evaluation Area 3 are *Nutrient Attenuation*, *Flood flow Alteration*, and *Wildlife Habitat*. Because of its emergent and forested characteristics that occur between managed golf course

turf and areas of ponded water, Nutrient Attenuation is an important function of this area. Excess nutrients in runoff are taken up and held as vegetation rather than entering areas of open water. The restricted outlet at the beginning of the narrow channel, even in the absence of the current beaver dam, increases retention time, supporting nutrient transformation. Heavy algae growth in the currently flooded wetland provides strong evidence that the wetland does carry out this function. This storage capacity created by the restricted outlet also supports flood flow alteration function. Wildlife habitat and Production Export are present in the form of numerous soft-mast producing species in the scrub-shrub stratum that are likely utilized by numerous song birds and small mammals. The shallow pond-like character of the connecting ditch, as well as the flooded forested wetland are suitable to amphibians and turtles. Vernal pool breeding activity, though very modest, was in fact noted in the forested wetland during the spring of 2020. This is discussed further in the Vernal Pool section.

Evaluation Area 3.1

The wetland being evaluated in this area consists maintained lawn area extending between the forested wetland in Area 3 to one of the ponds in Area 5. Both hydric soils and signs of wetland hydrology were documented in this area, and although vegetation consists of golf course turf, this is an artificially maintained condition that would cease if mowing ended. This wetland has been designated as saturated wet meadow with a “farmed” modifier (PEM2Bf). This area may have represented the extent of wetland in this area predating large scale alteration of the landscape or could have developed due to these alterations and the new drainage patterns that it created.

Functions/Values

Though technically qualifying as wetlands, these areas of maintained lawn hold very little, if any, functional wetland value. Other than intermittent ponding, there is no surface water, no wildlife habitat, or unique or interesting features. The primary function of this wetland is limited *Groundwater Discharge*.

Evaluation Area 4

This area is located in the eastern portion of the project site just south of Evaluation Area 2 but separated by the access driveway for Parcel 234/4, currently occupied by Mercury Systems. The Evaluation Area 4 consists of forested, Red Maple dominated wetland similar to that described in Evaluation Areas 2 and 3 but with stable saturated hydrology (PFO1B). These forested wetlands drain south toward Limit Brook but are not directly associated with the waterway.

Functions/Values

The Primary functions of the wetlands in Evaluation Area 4 include *Flood Flow Alteration, Sediment/Toxicant Retention, and Nutrient Removal/Retention/Transformation*. Wildlife habitat and Production Export, and Groundwater Discharge are also supported but have not been considered primary functions.

Evaluation Area 5

This evaluation area consists of wetlands associated with Limit Brook which is a perennial tributary to the Merrimack River. The stream enters the site from the east first flowing through a complex of relatively natural emergent and scrub shrub wetlands bordered by areas of golf course turf. These wetlands are areas dominated by cattail, numerous sedges, rushes, Silky Dogwood, and Arrow-Wood. These wetlands are classified as PEM1E/PSS1E. The stream then flows into two interconnected ponds

that were excavated during construction of the golf course as water features. Their water level is maintained by a small dam located adjacent to Steele Road. These ponds are too small and shallow to be classified as lacustrine features so they are classified under the Palustrine system as areas of Unconsolidated Bottom, in this case also excavated and impounded (PUBHxh). The ponds have fringe of scrub-shrub and emergent saturated wetlands (PEM2/PSS1E) but are otherwise surrounded by golf-course. Dominant species in the fringe wetland areas include Speckled Alder, Purple Loosestrife, Reed Canary Grass, and numerous other meadow species such as goldenrods and asters.

Functions/Values

The primary functions of the wetlands in Evaluation Area 5 are *Wildlife Habitat, Nutrient Attenuation, and Flood flow Alteration*. The variety of wetland types present in this wetland complex, in association with a perennial stream and ponds, supports a number wildlife habitat functions. These range from the presence of numerous soft-mast producing species in the scrub-shrub stratum which provides foraging habitat for numerous songbirds and small mammals, to the ponds, typically suitable for warm water fish species, amphibians, and turtles. Though several barriers exist to free travel along the Limit Brook corridor it likely does provide access between the habitats on this site and a large utility right-of-way located to the south which extends do to the Merrimack River.

Because of its association with a golf course turf and a perennial stream, Nutrient Attenuation is an important function of this area. Excess nutrients in runoff are taken up and held as vegetation rather than entering areas of open water. Additionally, the broad nature of the areas on either side of the stream provide ample floodwater storage during major rain events and during spring snowmelt. This wetland complex also has several secondary functions including Shoreline Stabilization and Production Export.

Evaluation Area 6

This area is the continued flow path of Limit Brook extending from the south side of Steele Road to the southeastern property boundary. It has been evaluated separately since these wetlands also lie within the 100-year floodplain of Limit Brook and therefore qualify as a Priority Resource Area. It consists of a shallow pond, an area of ditched wet meadow, and a more natural emergent and scrub-scrub shrub wetland extending to the southern property line. The excavated pond is similar to those in Area 5 but appears shallower and more likely to have a vegetation in the water. It has therefore been classified as an area of Palustrine Aquatic Bed wetland (PABHxh). A narrow ditched channel extends from a pipe at the downstream end of the pond through maintained turf. Dominant species in the fringe wetland around the pond and this ditched wet meadow are consistent with Area 5 although shrubs are largely absent so they have been classified as saturated emergent (PEM2B). The final portion of wetland in the evaluation area is a largely natural emergent and scrub-scrub shrub wetland through which Limit Brook flows unimpeded off site to the south. This wetland is similar to the wetland in Area 4 where Limit Brook enters the site. It is numerous sedges, rushes, ferns, Silky Dogwood, and Arrow-Wood. This wetland is classified as PEM1E/PSS1E.

Functions/Values

The primary functions of the wetlands in Evaluation Area 6 are *Flood flow Alteration, Nutrient Attenuation, and Wildlife Habitat*. This area lies within the mapped 100 year floodplain associated with Limit Brook so the pond and wetland areas are clearly important flood storage areas. The pond, with its constricted outlet and narrow, densely vegetated swale, act as an effective water quality treatment feature. Together they are able to intercept and treat runoff from the expanse of managed turf

surrounding them prior to releasing it to more natural wetlands downstream. These more natural areas hold the greater wildlife value, with numerous food sources, cover, and connectivity to off-site habitat areas. This wetland complex also supports Shoreline Stabilization and Production Export.

Evaluation Area 7

This Evaluation Area consists of the 4 isolated excavated ponds located in the throughout the course. Like the ponds discussed in Areas 5 and 6, these ponds were excavated during construction of the golf course to create water features. Unlike the ponds along the course of Limit Brook however, these ponds are hydrologically isolated features. Only a very narrow fringe of emergent wetland exists around their nearly circular perimeter and this is subject to regular mowing. Species in this fringe wetland include Purple Loosestrife, Reed Canary Grass, Soft Rush, and common meadow species such as asters and goldenrods. The ponds have been classified as permanently flooded unconsolidated bottom wetlands created by excavation (PUBHx).

Functions/Values

The function and value of these ponds is limited by their small size, isolated hydrology, and setting surrounded by managed golf course turf. Their primary function is *Groundwater Recharge/Discharge*. A secondary function is very limited Wildlife Habitat for species such as eastern painted turtles, green frogs, mallards and Canada geese which have been observed utilizing the ponds and their margins.

Evaluation Area 8

This is a small, isolated depression located at the edge of a fairway in the southwest corner of the project site. This area may have been created or adapted to function as a detention pond as there are several pipes entering the area. Soil are sandy and it does not appear to hold water for significant periods of time but also does not have an obvious outlet. Vegetation, while sparse, includes sensitive fern, Purple Loosestrife, and various weedy species. This area may be classified as an intermittently flooded, excavated, wet meadow (PEM2Jx)

Functions/Values

The primary functions of this wetland are *Groundwater Recharge* and *Sediment/Toxicant Retention*. Both these functions are derived from the fact that the area receives runoff from the surrounding golf course and in infiltrates it through a sandy substrate. This provides groundwater recharge and prevents sediment and from entering the Merrimack River which lies close by.

VERNAL POOLS

A vernal pool investigation was conducted in the spring of 2020. Wetland areas were investigated for the presence of suitable ponding and evidence of vernal pool breeding activity, primarily through counting of egg masses. The topography of the site and character of the wetlands did not suggest extensive vernal pool habitat. The permanently flooded ponds on the site likely support fish populations and certainly do support large populations of predatory frogs. These type of areas a very rarely suitable for vernal pool breeding activity and none was identified in these areas. The majority of the forested and emergent wetlands on the site lack depressions with adequate depth and seasonal hydrology.

Only one area of vernal pool breeding was noted on the property. This was located in the north end of the forested wetland that crosses through the Mercury Systems property. Its location is depicted on the Wetland Overview Figure and on the plans. Wood Frog chorusing was heard throughout the wetland

which was flooded on March 26 but no egg masses were found. A total of 14 wood frog egg masses were identified in a single area at the northern end of this wetland during a follow up survey of on April 4, 2020.

The current flooding of this wetland is being maintained by a beaver dam at its outlet so it is not clear that this entire forested wetland represents suitable stable habitat for vernal pool breeding. Without the impoundment the wetland would only be saturated, as can be seen in the 2012 photo that is used in the Wetland Resources Overview figure contained in the Figures Section. The area where egg masses were identified may in fact be the only location where a suitable pool exists without the beaver impoundment.

RARE, THREATENED, & ENDANGERED SPECIES

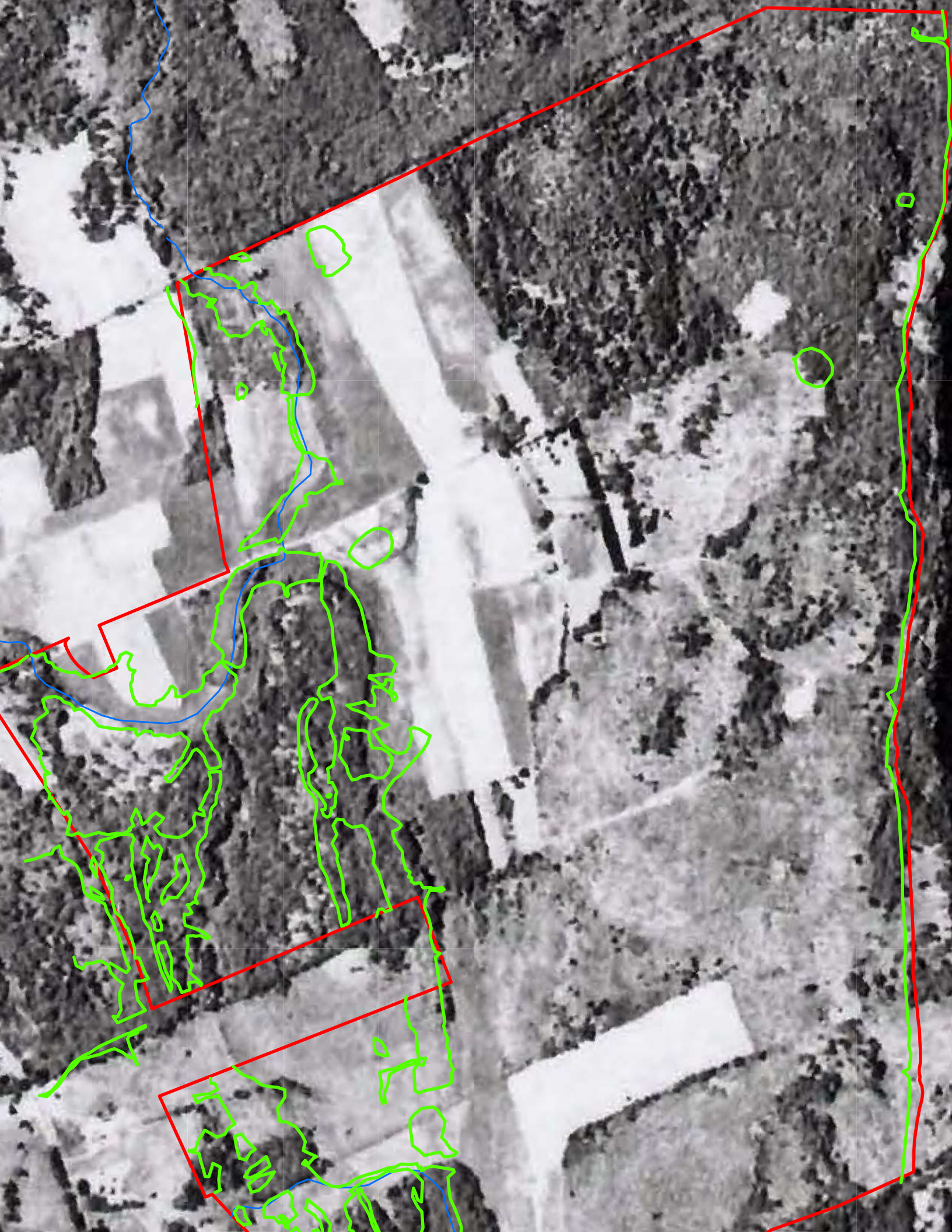
Overall, wildlife potential on the site is limited by the fact that the majority of the property consists of a manicured golf course landscape. The forested areas in the eastern portion of the site, with its wetlands and the course of Limit Brook, provide habitat for songbirds, small mammals, amphibians, and turtles. The Merrimack River and its bank also represent a significant wildlife corridor.

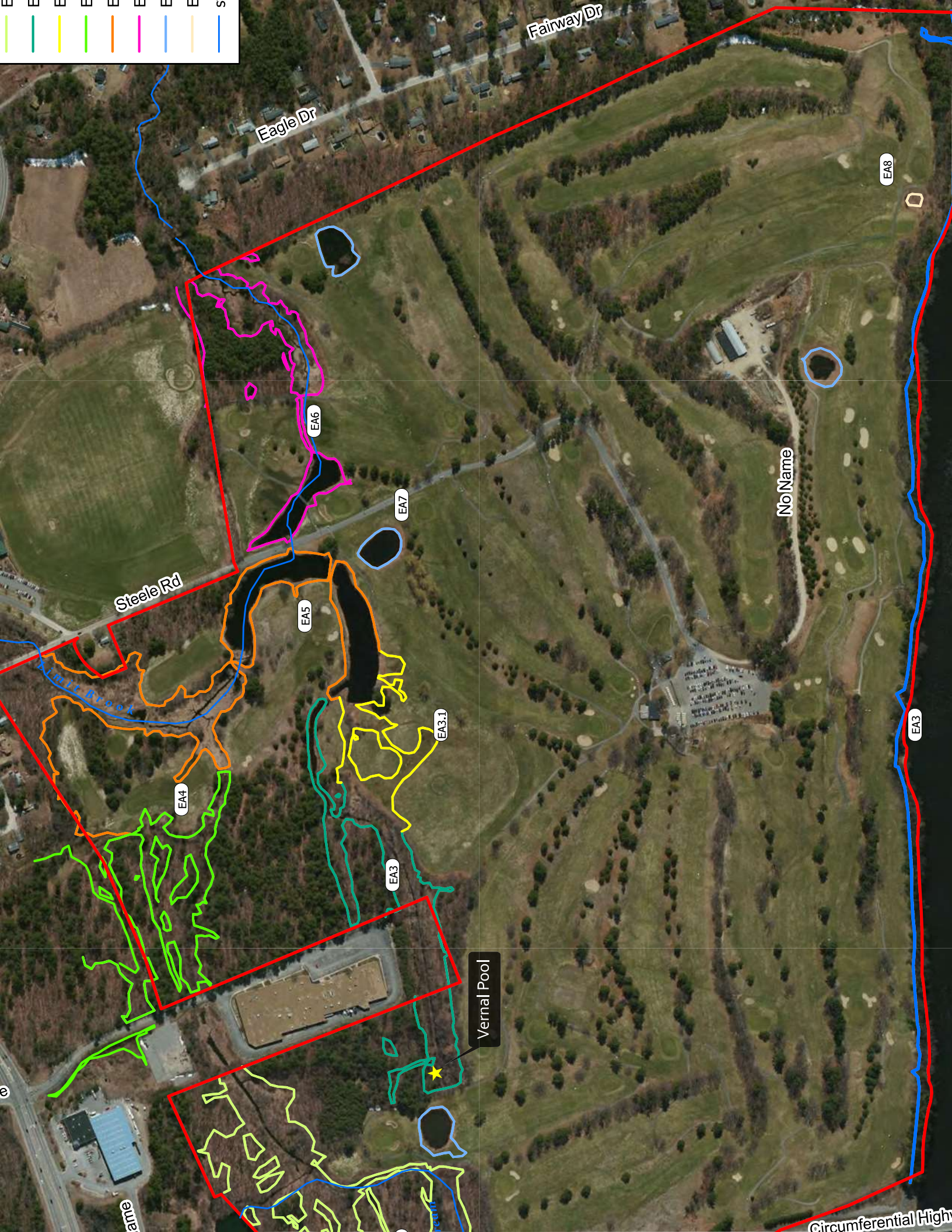
A review request was submitted to New Hampshire Natural Heritage Bureau for the presence of known species of concern on or near the site. Two animal species were identified as potentially occurring on the site, Perseus Dusky Wing (*Erynnis persius persius*) which is a butterfly associated with Wild Lupine, and Eastern Box Turtle (*Terrapene carolina*). The record of Perseus Dusky Wing dates back to 1975. We will be coordinating with NH Fish and Game on the presence or absence of suitable habitat for this species as well as measures to protect Eastern Box turtle. We expect that certain mitigating design features will be incorporated into the project to prevent mortality during construction or operation of the site.

The Natural Heritage Bureau also identified the potential presence of two threatened plant species River Birch (*Betula nigra*) and Wild Lupine (*Lupinus perennis ssp. Perennis*), and one endangered species Arrow-Head Rattlebox (*Crotalaria sagittalis*). River Birch could be expected to exist along the bank of the Merrimack River but was determined to be absent from the site in 2007. This will be confirmed with another survey this season. There is very limited suitable habitat on the site for the other two species. We have received guidance from NHB on conducting searches for these species and will be doing this during the appropriate times this season.

ATTACHMENTS

1. 1952 Aerial Photo/Wetlands
2. Wetland Evaluation Areas Figure
3. Natural Heritage Bureau report
4. Wetland Photographs





Fairway Dr

Eagle Dr

Steele Rd

No Name

Vernal Pool

ame

Circumferential Highway

EA8

EA3

EA7

EA6

EA5

EA3.1

EA4

EA3

CONFIDENTIAL – NH Dept. of Environmental Services review

Memo

NH NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

To: Luke Hurley, Gove Environmental Services, Inc.
8 Continental Drive
Exeter, NH 03833

From: Amy Lamb, NH Natural Heritage Bureau

Date: 04/02/2020 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau
NHB File ID: NHB20-0672 Town: Hudson Location: Tax Maps: 234-5 & 239-1

Description: The project involves redevelopment of the Green Meadow Golf Course for industrial/Warehouse uses. Two access roads are proposed to gain access from Lowell Road. The remainder of the development will be situated within the limits of the current golf course.

cc: Melissa Doperalski, Certified Wildlife Biologist, NH Fish & Game Dept.; Kim Tuttle Wildlife Biologist, NH Fish & Game Dept.; Ridgely Mauck, P.E., Program Supervisor, NHDES Alteration of Terrain Bureau; Craig Rennie, CWS, CWB, Inland Wetland Supervisor, NHDES Wetlands Bureau

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

Comments: Please refer to project area map and overview context map below (pages 3 and 4).

NHB recommends the following:

River Birch:

Survey entire Merrimack River bank for river birch (*Betula nigra*). This tree species can be identified by bark and twigs, so identification can occur at any time. Mature catkins are present from the end of May – June.

Flag trees and take GPS points at any locations where found.

Email digital information (survey report, diagnostic information used to confirm the species if found, and GPS points) to Amy.Lamb@dnctr.nh.gov, 603-892-5162.

Arrow-head rattlebox:

Survey dry sandy areas in the project site, including but not limited to, along the edges of the manicured fairways and along the forested edge of the riverbank, for arrow-head rattlebox (*Crotalaria sagittalis*). This species is a State Endangered native plant, and the only record in NH is in close proximity to the site.

Flag and take GPS points at any locations where found. Contact Amy Lamb immediately if any plants are located. Amy.Lamb@dnctr.nh.gov, 603-892-5162.

Persius Dusky Wing & Wild Lupine:

A State-Endangered invertebrate species, Persius Dusky Wing, has been documented near the project area. This species has an obligate relationship with the State-Threatened plant species wild lupine (*Lupinus perennis* ssp. *perennis*). Although the NHB database does not have a corresponding wild lupine record in the immediate vicinity, the nature of this symbiotic relationship implies that lupine was also present in the vicinity at one time.

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

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL – NH Dept. of Environmental Services review

Memo

NH NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

Additionally, the Persius Dusky Wing database record states that the species was observed on a lupine plant (page 5). The overview map (second map; page 4) shows other nearby wild lupine records that are in the NHB database.

Survey “old field” dry sandy areas in the project site, including but not limited to, along the edges of the manicured fairways and along the forested edge of the riverbank, for wild lupine (*Lupinus perennis* ssp. *perennis*). This species generally flowers from mid-May to the first week in July (5/15 – 7/7).

Flag and take GPS points at any locations where found. Contact Amy Lamb immediately if any plants are located.

Please email Melissa Doperalski at NH Fish & Game Department the survey results, as this information will be considered when discussing the Persius Dusky Wing.

Eastern Box Turtle:

Contact Melissa Doperalski, Certified Wildlife Biologist, Nongame and Endangered Species Program, NH Fish & Game Department about protected wildlife species. Melissa.Doperalski@wildlife.nh.gov, 603-271-1738.

Invertebrate Species

	State ¹	Federal	Notes
Persius Dusky Wing (<i>Erynnis persius persius</i>)*	E	--	Contact Melissa Doperalski, (603) 271-1738.

Plant species

	State ¹	Federal	Notes
arrow-head rattlebox (<i>Crotalaria sagittalis</i>)*	E	--	
river birch (<i>Betula nigra</i>)*	T	--	The population could be deleteriously affected by any project activities that alter the hydrology of its habitat, by increased sedimentation, and by increased nutrients/pollutants in stormwater runoff.
wild lupine (<i>Lupinus perennis</i> ssp. <i>perennis</i>)	T	--	

Vertebrate species

	State ¹	Federal	Notes
Eastern Box Turtle (<i>Terrapene carolina</i>)	E	--	Contact Melissa Doperalski, (603) 271-1738.

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

Please contact Melissa Doperalski, NH Fish & Game Department, *Nongame Program* (603) 271-1738.

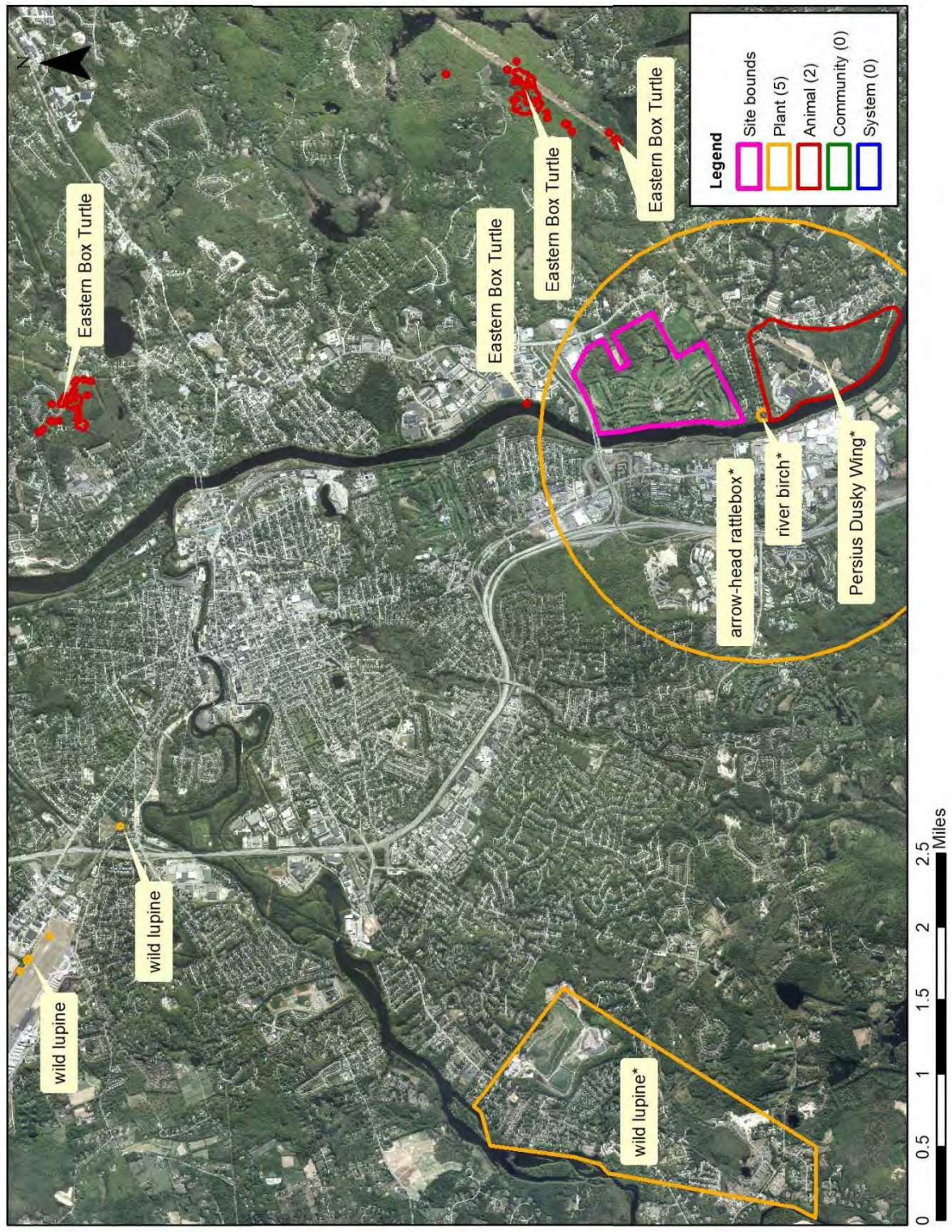
A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed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

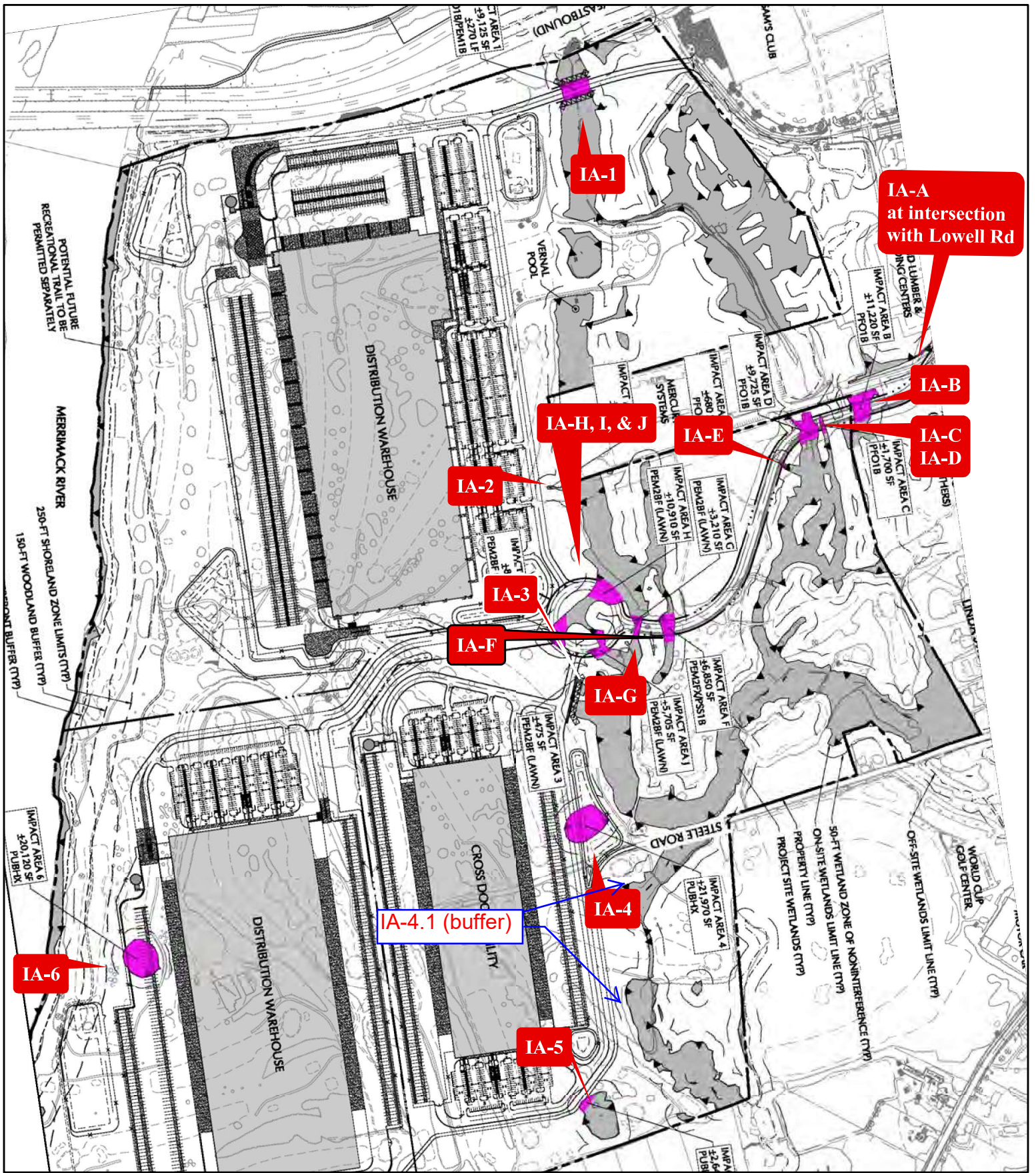
Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB20-0672





0 250 500 1,000 Feet

Impact Photo Location-Direction

Hudson Logistics Center
Steel Road
Hudson, NH



Gove Environmental Services, Inc.
8 Continental Drive, Bldg 2 Unit H, Exeter NH 03833 603.778.0644



Impact Area 1



Impact Area 2



Impact Area 3



Impact Area 4



Impact Area 4.1 (buffer only)



Impact Area 4.1 (buffer only)



Impact Area 5



Impact Area 6



Impact Area A



Impact Area B



Impact Area C



Impact Area D



Impact Area F



Impact Area F



Impact Area G



Impact Area H, I, & J

SITE DATA SHEET

PLAN NAME: Hudson Logistics Center

PLAN TYPE: (Site Plan, Subdivision, or other) Other

LEGAL DESCRIPTION: Map 234, Lots 5, 34, and 35 and Map 239, Lot 1

DATE: April 21, 2020

Location by Street: Lowell and Steele Roads

Zoning: G-1 and B

Proposed Land Use: Distribution and Logistics Buildings and new Subdivision Road

Existing Use: Greenmeadow Golf Course, Commercial, Unimproved Land

Total Site Area: S.F.: 17,385,667 Acres: 399.12

Total Wetland Area (SF): 39.9 +/- acres

Permanent Wetland Impact Area (SF): 69,449 SF

Permanent Wetland Buffer Impact Area (SF): 225,713 SF

Temporary Wetland Impact Area (SF): To be determined.

Temporary Wetland Buffer Impact Area (SF): To be determined.

Flood Zone Reference: Town of Hudson, NH, F.I.R.M. Community Panels #33011C056D and 33011C06587, Dated September 24, 2019

Proposed Mitigation: The Property provides significant opportunity for on-site mitigation which will be developed and decided through the Conservation Commission and Planning Board's review process after Hillwood's completion of its stormwater drainage report.

(For Town Use Only)

Data Sheets Checked By: _____ Date: _____

WETLAND CONDITIONAL USE PERMIT CHECKLIST

Yes	No	NA	QUESTIONS/INFORMATION NEEDED	HCC Comments
NARRATIVE REPORT				
Existing Conditions				
X	<input type="radio"/>	<input type="radio"/>	<p>Has a DES Dredge and Fill Permit been issued for any part of this site? If yes, provide number, date, and description.</p> <p><i>Yes, accepted complete on 5/7/20 DES File # 2020-00956</i></p>	
X	<input type="radio"/>	<input type="radio"/>	<p>Is there evidence of altered wetlands or surface waters on site?</p> <p><i>Wetlands were historically altered and created pre-jurisdiction during construction of the golf course.</i></p>	
X	<input type="radio"/>	<input type="radio"/>	<p>All prime and other wetlands in the vicinity, plus any wetlands/watersheds past the immediate vicinity affected by this project.</p> <p><i>The Merrimack River is a Prime Wetland in the City of Nashua. No 100-foot Buffer is associated with this Prime Wetland. The project will have no effect on the Prime Wetland. Also see Natural Resource Report for more details on wetland associated with the site.</i></p>	
X	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> • Description of each wetland and associated values <p><i>The Natural Resource Report enclosed with the CUP application contains detail description and functional analysis of all the wetlands on the property.</i></p>	
X	<input type="radio"/>	<input type="radio"/>	<p>Wetland mapping results – Including the flagging date and technique plus the name, company and qualifications of the wetland scientist</p> <p><i>Brendan Quigley, NHCWS #249 of Gove Environmental Services, Inc. flagged all the wetlands associated with the project in 2017 and 2019/2020. More detail is provided in the attached Natural Resources Report. The wetlands appear on the figure within that report and the plans. The Wetland Impact Plan provides an overview of all the wetlands, the project and the proposed impacts.</i></p>	
X	<input type="radio"/>	<input type="radio"/>	<p>Was property surveyed? If yes, the date of survey. (Please attach the survey plan)</p> <p><i>The wetland flags were surveyed by Hayner /Swanson, Inc. between November 2017 and April 2020.</i></p>	
National Wetland Inventory				
X	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> • Vegetative cover types <p><i>These are provided on the plans and detailed in the Natural Resources Report.</i></p>	
X	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> • Existence of vernal pools and associated habitat <p><i>There is one Vernal Pool on the site. It's described in the National Resources Report and its location is indicated on the project plans.</i></p>	

<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<ul style="list-style-type: none"> Unique geological and cultural features <i>None.</i> 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> NH Natural Heritage inventory – For list of rare and endangered species, contact the NH Division of Forests and Lands (603)271-3623 <i>The Natural Heritage review report is included and discussed in the Natural Resources Report.</i> 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Wildlife and fauna species, including estimated number and locations (large projects) <i>Please see Natural Resources Report.</i> 	

<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Public or private wells located within the vicinity 	
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<ul style="list-style-type: none"> Monitoring well(s) located on site 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Current land use and zoning district <i>The site is currently occupied by two operating 18-hole golf courses (Green Meadow Golf Club). The property is zoned General -1.</i> 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Photos of existing area (please use color photos) <i>Photos of the impact areas and general area have been included in the Natural Resources Report.</i> 	

Proposed Project Description

<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Entire project and associated activities <i>Photos of the impact areas and general area have been included in the Natural Resources Report.</i> 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Time table of project and anticipated phasing <i>Construction is expected to begin in the Fall of 2020 and take approximately 1 year. The project will be constructed in a single phase.</i> 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Land use <i>The current land use is Commercial Outdoor Recreation (Golf Course) The proposed land use is Industrial (Warehouse/Distribution).</i> 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Grading plan <i>An overall grading plan can be found in Sheet GG100 of the plan set. Detailed grading plans can be found in sheets GG101-GG129.</i> 	

Impact to Wetlands and/or Buffers

<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Depending on size and proposed impacts, a report from a biologist may be appropriate 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Removing, filling, dredging, or altering (Area square ft. and locations) 	

			<i>The project proposes a total direct wetland impact of 69,449 square feet and a buffer impact of 225,713. The Wetland Impact Plan provides the location and size of all direct wetland impacts (magenta) and Buffer Impacts (blue). The plan also contains a summary table.</i>	
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Intercepting or diverging of ground or surface water (Locations and size)	
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Change in run-off characteristics 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Delineation of drainage area contributing to each discharge point <i>See Stormwater Management Report.</i>	
Yes	No	NA	Questions/Information Needed	<u>HCC COMMENTS</u>
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Estimated water quality characteristics of runoff at each point of discharge for both pre- and post-development <i>See Stormwater Management Report.</i>	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Erosion control practices <i>A detailed Construction Phasing, Soil Erosion & Sediment Control plan has been developed for this project. It can be found in the site plans beginning on sheet CE100.</i>	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	If using rip-rap, attach documentation explaining why other erosion control methods are not feasible <ul style="list-style-type: none"> <i>Rip-rap has been used for emergency spoil ways from the various stormwater basins. The proposed use is a common use of this product and will only be engaged in storms larger than the 5 year design storm.</i> 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	How storm water runoff will be handled <ul style="list-style-type: none"> <i>The proposed stormwater management system has been designed in accordance with the Town of Hudson current and soon to be adopted requirements, the New Hampshire Stormwater Manual, and the New Hampshire Department of Environmental Services. The system incorporates elevated levels of stormwater quality, maintains or decreases the existing peak rate of runoff for all storm events analyzed, and provides above the required groundwater recharge volumes. BMP's include extensive use of infiltration. More detail can be found on the project plans and Stormwater Report prepared by LANGAN Engineering & Environmental Services, Inc.</i> 	
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	If backyards or lots include a buffer area, buffer restriction wording shall be included in each deed (A physical marker may be requested to designate buffer boundaries at site)	
Mitigation				
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Square footage of mitigation – wetland and upland areas	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Wetland or upland plants identified to replace any losses <i>Will be identified.</i>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Restoration plan for planting and vegetation 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Conservation easements, including location and aesthetic, wildlife and vegetative values Mitigation includes two areas are proposed conservatuion easement	

<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> If easement is on or added to the site(s), a copy of the legal document shall be given to the HCC (HCC conservation easement markers may also be required along the easement) <p><i>Not yet prepared, to be discussed with Conservation Commission</i></p>	
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CONCEPTUAL SITE PLAN/DRAWING

<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Locus map depicting project site and vicinity within approximately ½ mile and also on a larger scale	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	All prime and other wetlands in the vicinity	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Wetland(s) impacted (identified as prime or other) and the wetland boundaries with 50', buffer areas highlighted in color <i>Impacts (magenta) and buffer Impacts (blue) have been depicted on the Wetland Impact Plan</i>	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Assessor's sheet(s), lot(s), and property account number(s)	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Existing and proposed structures	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Square footage listed for temporary and permanent impact	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Erosion control plan (Suggested: Biodegradable silt fences so area won't be disturbed again and no hay to avoid invasive species)	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Topographical map with contours	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Storm water treatment swales and basins highlighted in color if in buffer area	
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Conservation and utility easements <i>TBD.</i>	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Grading plan	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Culvert, arch, bridge - sizes, material, etc.	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Vegetative cover types	
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Vernal pools	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Existing and proposed stone walls, tree lines, and unusually large, rare or beautiful trees, and other notable site features	



TOWN OF HUDSON

Engineering Department



12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-816-1291

TO: Conservation Commission

FROM: Elvis Dhima, P.E., Town Engineer

DATE: May 19, 2020

RE: Hudson Logistic Center – Public Input to Present

Please find below all the public input we have received so far

Submitted on: Monday, May 11, 2020 - 1:58pm

Submitted by:

Chris Thatcher

6038094705

clthatch@gmail.com

Question/Comments Submitted:

Christopher Thatcher <clthatch@gmail.com>

1:57 PM (1 minute ago)

to smalizia, Brian, rcoutu, nmartin, mmcgrath, dmorin, kroy, planning, info, robert.scott, victoria.sheehan, governorsununu, info, info, info, kimberly.rice

My name is Chris Thatcher. I am writing in regards to the Hudson Logistics Center Project that is proposed to be developed on the property currently known as Green Meadow Golf Course in Hudson, NH.

My family and I moved to Hudson from Nashua to get away from over development, inadequate space, noise and high home prices. We were fortunate that at the time we purchased our home, the housing market was low, allowing us to afford a home with great neighbors in a safe and beautiful neighborhood. We loved the small town feel of Hudson, the access to farms, the community and the open space, yet close enough to stores that it was not a hassle or inconvenience. However, lately there has been such a push for development everywhere including Hudson. New gas stations, new malls (I miss Pano's...) etc. I fear that this project is not only very short sighted, but another step in the demise of Hudson as the type of small-town, open space community which is so desirable to many people.

I would also implore the board to reconsider the Logistics and Distribution project and the impact it will have, not just on the community but the environment. Please consider what is in the best interest of our town and not what is in the best interest of big business and money. There is more to this town than increasing the tax base and helping the interests of Amazon (let's not kids

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ourselves, we know who is going to utilize this facility) and big business. The claims of the benefit to the community are limited and over-exaggerated at best, as it is in many instances like this. These are indirect jobs, there is no promise of people moving to Hudson and these will most likely be low paying hourly jobs which will only benefit the big business. Moreover, consider the extra strain on emergency services and maintenance of the roads and utilities, and the possible tax benefits quickly shrink.

Please consider something which would benefit the community, such as a public park with sports fields, paths, a boat launch and community gardens. Something which the future generations will benefit from. The town could easily lease out the club house location to be renovated or rebuilt and bring in something like a brew pub, negotiate to bring in a Common Man Restaurant or a La Belle Winery Restaurant. This desirable location business would be very good and with a public park surrounding it, it would bring in a lot of extra people. The land already has the paths from the golf course so minimal costs associated with that aspect would also help. You could also build a small complex which could house an ice cream shop and a restaurant instead to draw more business.

While Hudson does have Benson Park, and it is a beautiful and historical part of Hudson, and we love going there, the town would greatly benefit from another park. Benson's often gets very crowded and has limited parking. Building a public park at the golf course would increase business in Hudson and raise home values in a positive manner while also creating a positive image for the town. I also think it is disgusting that the company building this is trying to play on the emotions of the town by posting pictures of Benson's Park on their website.

Consider also the idea that this could be used as a fair ground, used for fairs, festivals, events etc. not just for Hudson but all the area.

Please think long term and not short term. Let's not make the same mistakes and missed opportunities as other towns around us to maintain and not lose our open green space.

In my experience companies like this want buildings like this because building new is cheaper than renovating. But this company will make millions on this project, why can't they spend a little extra to purchase some of the many vacant commercial properties in Nashua and build there? There are lots of other places for this monstrosity to be built.

I would also implore and ask that any meetings be postponed until after the stay at home order is lifted and public meetings may be attended by everyone who wishes. This is too important and has too much of an impact on our community to push through without proper review and input.

I am also including the pre-written letter recommended by the Hudson Alliance for Responsible Development below, as I agree with much of what it says.

Although there are legitimate economic benefits (jobs, tax revenue etc) explained in the proposal of this giant enterprise, there are also significant and numerous consequences for our town if our leaders permit this project to move forward. The essential question, do the benefits outweigh the consequences?

One last comment; Just because something CAN be done does not mean it SHOULD be done.

Letter from the Hudson Alliance for Responsible Development:

First consider the residents most immediately impacted as a result of this project. The proposal is asking for three enormous distribution warehouses that take up 2.5 million square feet of space. This is excessive, dangerous, and irresponsible. It would destroy these neighborhoods permanently, their property value and permanently put the health, safety and quality of life in jeopardy. The Hudson Logistics Center webpage (www.hudsonlogisticscenter.com) states that there will be 150-200 tractor trailers and 35-50 box trucks traveling to and from the center every day. There are about 20 homes on Fairway and Eagle Drive with no separation between their backyards and the Green Meadow property; you can see the golf course very clearly from their backyards. They, as well as our entire neighborhood will be flooded with noise and sight pollution from this 24/7 operation. And beyond the abutters, there are hundreds of homes and neighbors thickly settled in South Hudson. All would be adversely and permanently impacted by the enormous scale of this project. The developer has claimed they will build a "buffer" to help with this, but the fact is that some shrubs and a few trees will not help their cause, and this is not an acceptable solution.

Secondly, consider the environmental impact to air, water, and wildlife. The emissions from the trucks and tractor trailers will impact air quality. According to the United States Environmental Protection Agency, "air pollution emitted from transportation contributes to smog, and to poor air quality, which has negative impacts on the health and welfare of citizens. The transportation sector also contributes to emissions of air toxics, which are compounds that are known or suspected to cause cancer or other serious health and environmental effects. Examples of mobile source air toxics include benzene, formaldehyde, and diesel particulate matter." Given this information, one can see how irresponsible and dangerous it is to develop a 2.5 million square foot distribution facility with hundreds of tractor trailers and dozens of box trucks travelling in and out and idling in the backyards of our homes where our children live, play, and breathe. There are a significant number of wetlands that will be impacted by this project and this project about the Merrimack River. Back in 2007, when a different development was proposed, there were 10-12 areas that needed to be granted a wetlands special exemption. A proposed interchange system to and from the Sagamore Bridge that crossed over a wetland area and some of the proposed parking lots were within wetland buffer areas as well. This previous development would have taken a phased approach over 10-15 years, the first phase including a 1.1 million square feet of retail space, cinema, restaurants, an ice-skating rink, and a riverfront park. The second phase would have in total brought the development to 2 million square feet of mixed used purpose. Let's fast forward to the current proposal, which is 2.5 million square feet entirely made up of distribution warehouse buildings and parking lots. As such, this project will certainly have an even greater impact on wetlands. The Merrimack River is one of our region's greatest assets, this project will compromise the protection the natural wetlands have in buffering from pollutants.

Thirdly, the impact on traffic will be significant. This proposed development can only make existing traffic congestion worse, to a scale that our town has never known. Hillwood has claimed they did a traffic study to evaluate the impact that the Hudson Logistics Center may have on roadways. When exactly was this traffic study conducted? How accurate and reliable have past traffic studies, completed for other Hillwood projects, been? Are other Hillwood towns happy with the due diligence and planning by Hillwood? My own preliminary research tells me, no, towns are not satisfied with Hillwood projects and this should be a glaring concern for Hudson Town leaders.

Lastly, our state has asked its residents to stay home during the COVID-19 pandemic. The Town of Hudson has planned a meeting taking place at the Community Center on May 27th to discuss this proposal and there will be an opportunity for the public to share their thoughts. Our Governor has modified the Stay At Home Order to be in effect until May 31st. The timing of when this is happening is unfortunate and disappointing. This would be the largest development that Hudson has ever seen. And yet, many of us are continuing to take every precaution possible to protect the most vulnerable in our communities and families from COVID-19. For that reason, this meeting is not essential and should not be an exception to the stay at home order.

I implore your office to take immediate action to contact the Town of Hudson Administrator and demand that he re-schedule the meeting until after the stay at home order has been lifted. I also ask that you also express concern over the timing of this proposal, encouraging the Town of Hudson decision makers to take time to properly conduct due diligence on a project of this magnitude and consequence.

Sincerely,

Chris & Rebekah Thatcher

15 Parkhurst Drive, Hudson NH.

Submitted on: Thursday, May 7, 2020 - 8:44am

Submitted by:

Lauren DiPilato

781-514-8913

Lauren.dipilato@gmail.com

Question/Comments Submitted:

Hi, I live near the green meadows golf course., on the wetlands of Limit brook. I am deeply concerned about the impact to wildlife in the area that the proposed "logistics" center will have. I have seen either blue-spotted or Jefferson salamanders- which are very vulnerable to pollution-, sandpipers that I still cannot identify, lady slipper orchids, at least four different owl species, and numerous warblers rest near the stream and wetlands.

Is there going to be a thorough review of impact to environment here by a third party? Very concerned!!

Submitted on: Thursday, May 7, 2020 - 3:09pm

Submitted by:

Lindsay Benson

6178956627

lindsayabenson@gmail.com

Question/Comments Submitted:

I am writing in regards to the proposed Hudson Logistics Center that would be developed on the current property known as Green Meadow golf course in Hudson, NH. I would like this to be submitted as public input for the May 20th hearing.

I'll start on a positive note with the proposed benefits of having this giant enterprise in our town: It would create tax revenue for the town and create jobs.

Now, please allow me to express my concerns. I live in the neighborhood that abuts Green Meadow golf course. While we understand the motivation for the landowners to sell and that this land is zoned for commercial development, building three distribution warehouses that takes up 2.5 million square feet of space feels excessive, dangerous, and irresponsible.

The Hudson Logistics webpage states that there will be 150-200 tractor trailers and 35-50 box trucks traveling to and from the center every day. There are about 20 homes on Fairway and Eagle Drive with no separation between their backyards and the Green Meadow property; you can see the golf course very clearly from their backyards. They, as well as our entire neighborhood will be flooded with noise and sight pollution from this 24/7 operation. The developer has claimed they will build some sort of buffer to help with this, but the fact is that some shrubs and a few trees will not help. I encourage any decision makers and leaders of our town who will be sharing their opinion on this matter to please drive through our neighborhood to see for themselves. Real solutions to this obvious problem should be demanded from the developer.

I'm also concerned with the emissions from the trucks and tractor trailers and how that will impact our air quality. According to the United States Environmental Protection Agency, "air pollution emitted from transportation contributes to smog, and to poor air quality, which has negative impacts on the health and welfare of citizens. Pollutants that contribute to poor air quality include particulate matter (PM), nitrogen oxides (NOx), and volatile organic compounds (VOCs)....The transportation sector also contributes to emissions of air toxics, which are compounds that are known or suspected to cause cancer or other serious health and environmental effects. Examples of mobile source air toxics include benzene, formaldehyde, and diesel particulate matter." Given this information, one can see how irresponsible and dangerous it is to develop a 2.5 million square foot distribution facility with hundreds of tractor trailers and dozens of box trucks travelling in and out and idling in the backyards of our homes where our children live and play.

This project also impacts wetlands. Back in 2007, when a different development was proposed, there were 10-12 areas that needed to be granted a wetlands special exemption. There was a proposed interchange system to and from the Sagamore Bridge that crossed over a wetland area and some of the proposed parking lots were within wetland buffer areas as well. This previous development would have taken a phased approach over 10-15 years, the first phase including a 1.1 million SF of retail space, cinema, restaurants, an ice skating rink, and a riverfront park. The second phase eventually would have brought the total to 2 million square feet of mixed used purpose. This current proposal is 2.5 million square feet of JUST distribution warehouse buildings and parking lots. As such, I'm assuming this project will have even MORE of an impact on wetlands. I would appreciate the Conservation Committee sharing with residents their, opinions, findings and studies on how this development would impact wetlands as well as the animal population that lives on this land. I have to imagine it would be their hope to lobby for a different usage of this beautiful riverfront property.

The final concern that I will mention in my letter today is traffic. I've lived here for 8 years and over and over again town leadership and residents all agree that traffic is the biggest challenge that

Hudson faces. This proposed development will only make it worse. Hillwood has claimed they recently completed a traffic study to evaluate the impact that the Hudson Logistics Center may have on roadways. I'd like to know WHEN that traffic study was done, because if it was done during the time frame of the stay at home order during this Global Pandemic, I request that they do this study again when traffic gets back to a relatively more normal flow. They have also stated they would work with the town to "optimize the signal timing at four intersections." I'd love to hear from our town leaders as to whether they really believe that the solutions they've proposed to ease traffic would actually help considering the increased flow of trucks, trailers, and the employees coming to and from the center. When the trailers and trucks need fuel, will they drive through the traffic light at the Sagamore bridge and go to Haffner's, causing even more traffic congestion there on top of what already exists? This also doesn't just impact traffic coming to and from the Sagamore Bridge. Dracut Road, Pelham Road, River/Frost Road. Many roads will all be impacted by the increase in traffic, causing more air and sound pollution and congestion for Hudson neighborhoods and residents.

My understanding is that there will be a special meeting taking place at the Community Center on May 20th to discuss this proposal and give the opportunity to the public to share their thoughts. The timing of when this is happening is unfortunate and disappointing. Many of us are continuing to take every precaution possible to protect the most vulnerable in our communities and families from Covid-19. For those who are not willing to attend this meeting, I hope that they will write to town leaders, the planning and zoning boards, the conservation committee, and state representatives to share their thoughts on the proposed Hudson Logistics Center.

Thank you,
Lindsay Benson
13 Par Lane
617-895-6627

Submitted on: Wednesday, May 6, 2020 - 1:34pm

Submitted by:

Scott Wade

6039307422

scottjwade@comcast.net

Question/Comments Submitted:

As an abutter to Green Meadow, I have concerns about the proposed project. I can't find an email address to send this to you so I hope this works. It has been received by the town planner.

May 6, 2020

Brian Groth
Town Planner
12 School Street
Hudson, NH 03051

RE: Green Meadows Proposed Development

Brian,

My name is Scott Wade and for the last twenty years, I have owned 1 Fairway Drive here in Hudson. I have invested well over \$150,000 in improving my home with the intention of this being my forever home until I retire and wish to spend the winters in a warmer climate. However, my plan has always been wanting to keep this beautiful home. That changed recently. This new proposed plan to build a massive distribution center right in my backyard has me rethinking my plans.

I have several concerns:

Quality of life

Sound and Sight

First and foremost, this will be a quality of life issue. Today, as I look out my backyard, I can hear the faint noise of cars on the highway. Frankly, the birds make more noise than the cars off in the distance. When the golf course is open, you can hear the chatter of players but nothing like what could be coming. A year or so from now we will hear the constant, unrelenting sounds of trucks coming and going, their backup alarms going off as they approach a loading dock, doors opening, and closing, cars, and forklifts all day and night. It has been mentioned that there would be upwards of 300 trucks every single day.

Before any of that occurs are the many months of actual construction, we would need to live through. Thousands of people, cars, trucks, construction vehicles every day. The constant noise from all of it. Will there be blasting? We are the Granite State after all. What kind of issues will blasting cause? Do we run the risk of having our foundations or inground pools cracked? I'm not sure if anyone has well water but if they do and that gets ruined, that could be a disaster for that home.

Once this construction is complete, there will be three buildings totaling approximately 2.6 million square feet. Two of the three will be 1 million square feet each. Simple math says that's 1000 feet wide and 1000 feet long. Eclipsing most any building around here. Close would be the Pheasant Lane Mall in Nashua that is just less than a million square feet. In a Union Leader article entitled "Green Meadow golf course could face bulldozer in Hudson" on May 2, 2020, Justin Dunn, Hillwood's vice president of development said, "...the proposed buildings would be 40 to 45 feet high." (Lessard, 2020)

Try to imagine going from the peace and quiet of a golf course to a year or so from now living next to an industrial complex with a massive, bustling, four-story building in your backyard. It's unconscionable.

Air Pollution

This should be on everyone's mind when it comes to this project as it will be here now and forever unless every car and truck becomes an electric vehicle. For now, the tractor-trailers are diesel-fueled. With nearly 300 of them coming and going from this property, air pollution will

become much worse. Would these vehicles, as they are being loaded and unloaded, continue to idle? Doing so would just allow them to continue to emit harmful elements into the air. From the New Hampshire Department of Environmental Services Environmental Fact Sheet (ARD-44, 2014) they state:

“Diesel emissions adversely affect the environment by interfering with climate, the physiology of plants, animal species and entire ecosystems, as well as human property in the form of agricultural crops and man-made structures.... From a public health point of view, diesel emissions can aggravate or lead to heart and lung disease, cancer, asthma, and other health problems.” (New Hampshire Department of Environmental Services, 2014)²

From this same document, they list the various pollutants emitted from diesel engines (Carbon monoxide (CO), Carbon dioxide (CO₂), and Particulate emissions (PM) among others.

“In 2012, the International Agency for Research on Cancer (IARC), part of the World Health Organization (WHO), revised the classification of diesel engines exhaust to Group 1 (definite) carcinogen for humans, based on sufficient evidence that exposure is associated with an increased risk for lung cancer” (New Hampshire Department of Environmental Services, 2014)³

In another publication: Storing Harm: The Health and Community Impacts of Goods Movement Warehousing and Logistics by THE Impact Project Policy Brief Series in January 2012 the following is stated:

“Particulate emissions from diesel vehicles and equipment contribute to health problems that include cardiovascular problems, cancer, asthma, decreased lung function and capacity, reproductive health problems, and premature death.” (THE Impact Project Policy Brief Series, 2012)⁴

The emissions that one tractor-trailer emits is an issue but 300 of them? Just the sheer volume of them will be a disaster to the air we breathe Adding some trees and bushes to help mitigate sight and sound issues just isn't enough. Something will need to be done to reduce the pollution this facility will cause and the potentially harmful health issues it could create. This issue will affect us all.

Traffic

The developer mentions that traffic will be limited to just trucks coming on going off of the highway at exit 2 and then two right-hand turns and they will be off the main roads and into their development. But where are all of the workers to build and then actually work at the facilities coming from? Will they all use the highway? Or will they clog up Lowell Road, River Road, Dracut Road, and Wason? This is thousands of people coming to the development. They won't all come off the highway.

I'm sure, as we all do, these trucks and extra cars will need to get gas or diesel. The nearest place for gasoline is at Sam's Club on Lowell Road but membership is required to get gasoline there and there is no diesel offered. The next place for both would be Haffner's. Further up Lowell Road, across from Market Basket. Doing so does not take all of this extra traffic off the main roads. It makes it much worse.

More personal to me is the paper street I live next to. A piece of land between myself and my neighbor at 2 Eagle Drive. This land could be used to extend Muldoon Street into the golf course. Does the developer have any intention of asking for that be opened up to their traffic? I cannot imagine what that would do to our neighborhood. Hundreds of cars could access that to enter or leave the complex and into our neighborhood. This would be a disaster and it shouldn't be allowed. Not even for an emergency access road. I have experience with that as I owned a commercial property that was next to one in Nashua and people would ram the gate, drive around it, and over our property just to access Tinker Road.

Property Values

I can't help but see the destruction of home values. Today I looked at Zillow.com just to see what they think my home is worth. They have it at \$495,000. For tax purposes, the town has me at \$432,000. As I said, I have invested well over \$150,000 into improvements in my home. How many tens of thousands of dollars per home do we need to lose in value due to this monstrosity to justify the low paying jobs and effects on the environment it will create? Dozens of families will be affected. Many of my neighbors, myself included, are wondering if after this is built will they ever be able to sell their homes at a price that isn't severely discounted due to having this facility

behind us or in our neighborhood.

In a study of Atlanta area commercial development (industrial, office and retail) by Associate Professor Jonathan A. Wiley, Ph.D. from Georgia University in April 2015 he found the following:

1. Sites targeted for new industrial development exists in neighborhoods where values are relatively lower and already experiencing a downward trend in advance of the project completion. (My comment: This wasn't true for Hudson before to Covid-19) (Jonathan A. Wiley, 2015)⁵
2. Industrial is one of the least desirable land uses...a localized contraction in house prices appears during the predevelopment period... (Jonathan A. Wiley, 2015)⁶
3. At the .5-mile radius, property values are lower by 5 percent, compared to 3.5 percent at the .75-mile radius and 2.5 percent for the 1-mile radius. The downward trend that begins in the predevelopment period is most acute for the properties closest to the development site. (Jonathan A. Wiley, 2015)⁷

This project will affect all that surrounds it and for miles away.

Conclusion

While I'm all for business and creating jobs, doing so at the expense of your residents' quality of life is a mistake. The pollution both environmental and sound is not worth the extra tax dollars this property would generate. Please do not allow this project to move forward.

Sincerely,

Scott J. Wade

I have some other random thoughts/questions about this project:

- How will this project affect the wildlife that lives on the golf course?
- Has the developer ever built one of these massive centers so close to an existing residential neighborhood? If so, where? What was the effect on those property values? What was the decibel noise increase? Did they measure air pollution before and after the construction? Is any of it verifiable?
- What would be the acceptable level of noise for this type of facility? What does the town ordinances say for such things?
- How will they control all of the dust that will be kicked up during construction?

Works Cited

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Other works of interest:

Distribution Centers and Nearby Neighborhoods

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What Amazon Does to Poor Cities, The Atlantic

<https://www.theatlantic.com/business/archive/2018/02/amazon-warehouses-poor-cities/552020/>