



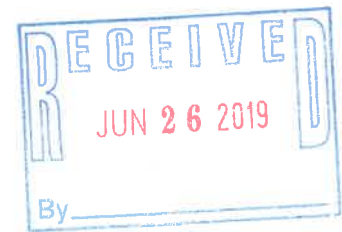
**Civil
Site Planning
Environmental
Engineering**

133 Court Street
Portsmouth, NH
03801-4413

June 25, 2019

Peter Britz, Environmental Planner
City of Portsmouth Municipal Complex
Planning Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801

**Re: Request for Conservation Commission Work Session
Assessor's Map 201, Lot 9
Sagamore Avenue and Wentworth House Road
Altus Project #P5010**



Advanced copy via email to: plbritz@ch.cityofportsmouth.com

Dear Peter:

Thank you for taking the time and meeting with the design team for Michael Bean's proposed development at the intersection of Sagamore Avenue and Wentworth House Road. Your insight was very helpful. We request that the project is placed on the July 10th Conservation Commission meeting agenda as a work session item.

As discussed, the lot has a small wetland system that falls under the City's Inland Wetland Protection District's Ordinance. The 100-foot buffer nearly encompasses the entire lot. Thus, there are no viable alternatives to develop the parcel without some sort of encroachment into the buffer. We believe that the conceptual site plans that we have developed balance the competing design objectives, protecting the wetlands, reducing the visible impact of the parking lot from the roadway and providing a reasonable return on the property.

Enclosed are 10 copies of the following documents:

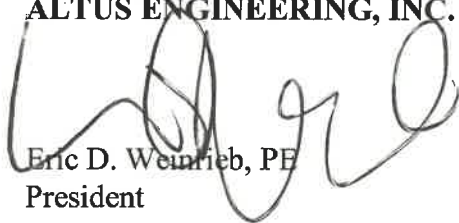
- Existing Conditions Survey plans, sheets 1 of 2 and 2 of 2
- Conceptual Site Plan (developed by McHenry Architecture)
- Revised Conceptual Site Plan (revised by Altus)
- December 2016 Wetland and Buffer Evaluation by Michael Cuomo

Peter Britz, Environmental Planner
June 25, 2019
Page 2

We look forward to meeting with the Conservation Commission and getting their feedback before we finalize the design. Please let me know if you need anything additional prior to the meeting.

Sincerely,

ALTUS ENGINEERING, INC.

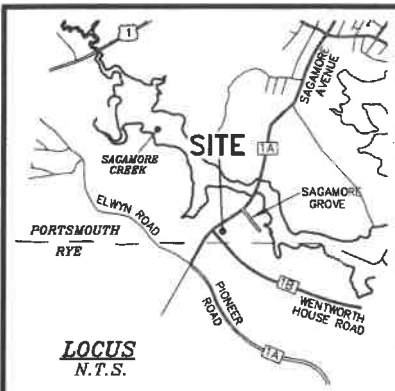
A handwritten signature in black ink, appearing to read 'Eric D. Weinrieb', is written over the printed name and title.

Eric D. Weinrieb, PE
President

wde/5010 Con Com works session ltr

Enclosure

Ecopy: John Bosen, Esq.
Michael Bean, Bean Group
Mark Gianniny, McHenry Architecture
Dan Ray, Jewett Construction



LEGEND:	
-----	STONE WALL
○	IRON ROD FOUND
●	IRON ROD SET
○	IRON PIPE FOUND
□	BOUND as DESCRIBED
⊙	DRILL HOLE
PSNH	PUBLIC SERVICE CO. OF NH
VZ	VERIZON
110-5	TAX SHEET - LOT NUMBER
Ⓐ	SEE SIGN TABLE
RCRD	ROCKINGHAM COUNTY REGISTRY OF DEEDS
EOP	EDGE OF PAVEMENT
ETW	EDGE OF TRAVELLED WAY
VGC	VERTICAL FACED GRANITE CURB
⊙	BOLLARD
	REFLECTOR
—	SIGN
—	DOUBLE POST SIGN
⊙	UTILITY POLE
⊙	UTILITY POLE W/TRANSFORMER
☆	LIGHT POLE
⊙	UTILITY POLE WITH ARM & LIGHT
⊙	GUY
⊙	ELECTRIC METER
⊙	HORIZONTAL PROPANE TANK
⊙	WATER GATE VALVE
⊙	WATER SHUT OFF VALVE
⊙	HYDRANT
⊙	CATCH BASIN
—	TREE LINE/BRUSH LINE
—	CONIFEROUS TREE
—	WATER LINE
—	DRAIN LINE
—	UNDERGROUND UTILITIES
—	OVERHEAD WIRES
—	CEMENT CONCRETE
—	RIP RAP
x12.5	SPOT GRADE

NOTES:

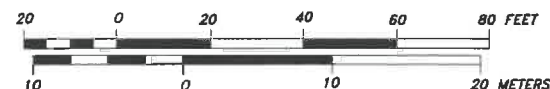
- OWNER OF RECORD..... LUCKY THIRTEEN PROPERTIES, LLC
ADDRESS..... PO BOX 4780, PORTSMOUTH, NH 03802
DEED REFERENCE..... 5668/1925
TAX SHEET / LOT..... 201-9
PARCEL AREA 59,243 S.F. (1.360 ACRES)
- ZONED:..... MRB
MINIMUM LOT AREA 7,500 S.F.
FRONTAGE..... 100'
FRONT YARD SETBACK..... 5'
SIDE YARD SETBACK..... 10'
REAR YARD SETBACK..... 15'
- THE RELATIVE ERROR OF CLOSURE WAS LESS THAN 1 FOOT IN 15,000 FEET.
- THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE CATCH BASINS, MANHOLES, WATER GATES ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY COMPANIES AND GOVERNMENTAL AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, SAID AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG-SAFE @ 1-888-DIG-SAFE.
- ON SITE CONTROL ESTABLISHED USING SURVEY GRADE GPS UNITS.
HORIZONTAL DATUM: NAD 1983 (2011)
VERTICAL DATUM: NAVD 1988
PRIMARY BM: CITY CONTROL POINT "ALBA"
- WETLANDS DELINEATION 12/2015 BY MICHAEL CUOMO, NHCWS# 4,
6 YORK POND RD, YORK, ME 03909.
- LOCATION OF "WARRANT HIGHWAY EASEMENT" PER RCRD BOOK 3123, PAGE 2896, DATED OCTOBER 18, 1995 & SHOWN ON "PLAN OF WENTWORTH ROAD (ROUTE 1-B), PORTSMOUTH, HIGHWAY EASEMENT". SAID PLAN IS NOT RECORDED & CAN NOT BE LOCATED BY NHDOT. SEE SAID DEED FOR OTHER RIGHTS GRANTED TO THE STATE OF NH.
- THE SUBJECT TRACT LIES IN ZONE X (UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON FLOOD INSURANCE RATE MAP NO. 33015C0286E, EFFECTIVE DATE MAY 17, 2005, BY FEMA.

REFERENCE PLANS:

- PLAN OF LAND, 1150 SAGAMORE AVENUE, PORTSMOUTH, N.H., RYE CORNER GAS, LLC, DATED 4/8/2015, RCRD PLAN C-38865.
- PLAN OF LAND FOR NC WENTWORTH, LLC, WENTWORTH ROAD, NEW CASTLE, N.H., REVISED TO 8/14/2000, RCRD PLAN C-28285.
- LAND IN PORTSMOUTH, N.H., SADIE P. GOUSE TO FRANCES L. PENDERGAST, DATED 7/1954, RCRD PLAN 02283.
- PLAN OF LAND, PORTSMOUTH, N.H., SADIE P. GOUSE TO JOHN S. DIMOCK, DATED 6/1950, FILE NO. 109, PLAN NO. 1-420, BY JOHN W. DURGIN, CE, NOT RECORDED.
- PLAN OF LAND, PORTSMOUTH, N.H., SADIE P. GOUSE TO LEONARD & EMILY OSTERMAN, DATED 3/1946, FILE NO. 109, PLAN NO. 1-295, BY JOHN W. DURGIN, CE, NOT RECORDED.

ABUTTERS LIST

MAP-LOT	OWNER OF RECORD	DEED REF.
201-2	GOSSELIN LIVING TRUST ARMAND E. GOSSELIN AND FRANCES M. GOSSELIN, TRUSTEES 960 SAGAMORE AVE, PORTSMOUTH, NH 03801	3469/2151
201-8	WALTER J. ALLEN 1 SAGAMORE GRV, PORTSMOUTH, NH 03801	2296/878
201-10	BARBARA A. KUCHTEY PO BOX 252, NEW CASTLE, NH 03854	2705/2238
201-22	WENTWORTH-SAGAMORE, LLC 2 INTERNATIONAL DR, SUITE 301, PORTSMOUTH, NH 03801	
201-26	CITY OF PORTSMOUTH C/O CONSERVATION COMMISSION PO BOX 6697, PORTSMOUTH, NH 03802	
223-25	SEACOAST MENTAL HEALTH CTR 1145 SAGAMORE AVE, PORTSMOUTH, NH 03801	
223-25-B	CITY OF PORTSMOUTH 1 JUNKINS AVE, PORTSMOUTH, NH 03801	
224-19	JUSTIN P. NADEAU & MICHELLE FIRMBACH NADEAU 507 STATE ST, PORTSMOUTH, NH 03801	



SEE SHEET 2 FOR PLANIMETRIC INFORMATION

SURVEYOR:
James Verra and Associates, Inc.
LAND SURVEYORS

101 SHATTUCK WAY - SUITE 8
NEWINGTON, N.H. 03801- 7876
603-436-3557
JOB NO: 23655
PLAN NO: 23655

ENGINEER:
ALTUS
ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

ISSUED FOR:
ENGINEERING DESIGN

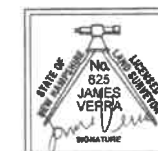
ISSUE DATE:
DECEMBER 20, 2016

REVISIONS
NO. DESCRIPTION BY DATE
1 ENGINEERING DESIGN JV 12/20/16
2 ADD SET MONUMENTS JV 5/18/17

DRAWN BY: JCS
APPROVED BY: JV
DRAWING FILE: 23655.DWG

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

OWNER:
LUCKY THIRTEEN PROPERTIES, LLC
PO BOX 4780
PORTSMOUTH, NH 03802
ASSESSOR'S PARCEL 201-9

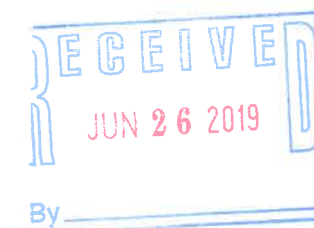


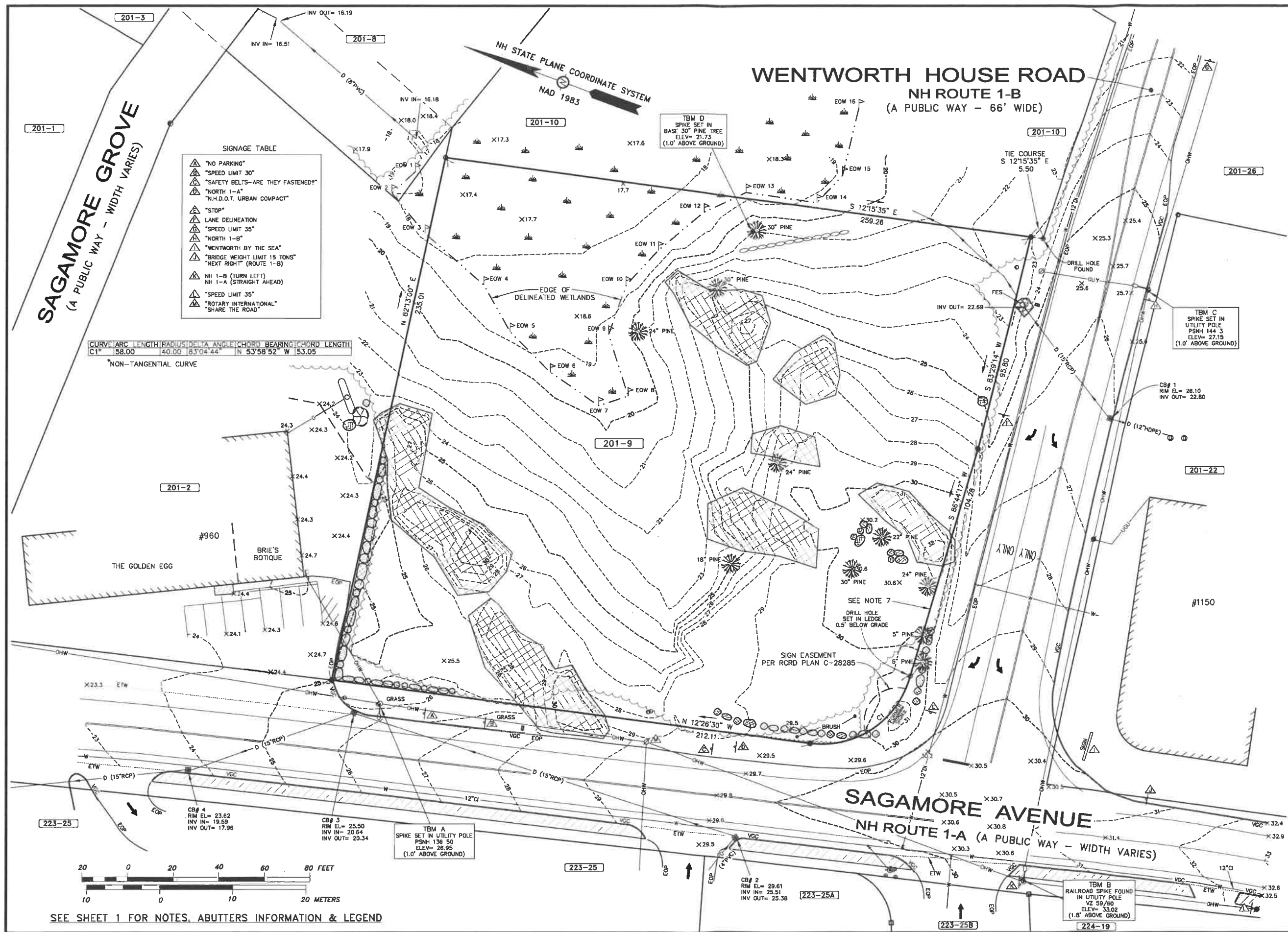
PROJECT:
PROPOSED SITE DEVELOPMENT PLANS
SAGAMORE AVENUE & WENTWORTH HOUSE ROAD
PORTSMOUTH, N.H.
ASSESSOR'S PARCEL 201-9

TITLE:
EXISTING CONDITIONS PLAN

SHEET NUMBER:
1 OF 2

P4783





SURVEYOR:
James Verra and Associates, Inc.
LAND SURVEYORS

101 SHATTUCK WAY - SUITE 8
NEWINGTON, N.H. 03801- 7876
603-436-3557
JOB NO: 23655
PLAN NO: 23655

ENGINEER:
ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

ISSUED FOR:
ENGINEERING DESIGN
ISSUE DATE:
DECEMBER 20, 2016

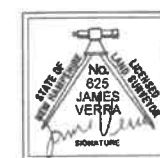
REVISIONS

NO.	DESCRIPTION	BY	DATE
1	ENGINEERING DESIGN	JV	12/20/16
2	ADD SET MONUMENTS	JV	5/18/17

DRAWN BY: JCS
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SCALE:
22" x 34" - 1" = 20'
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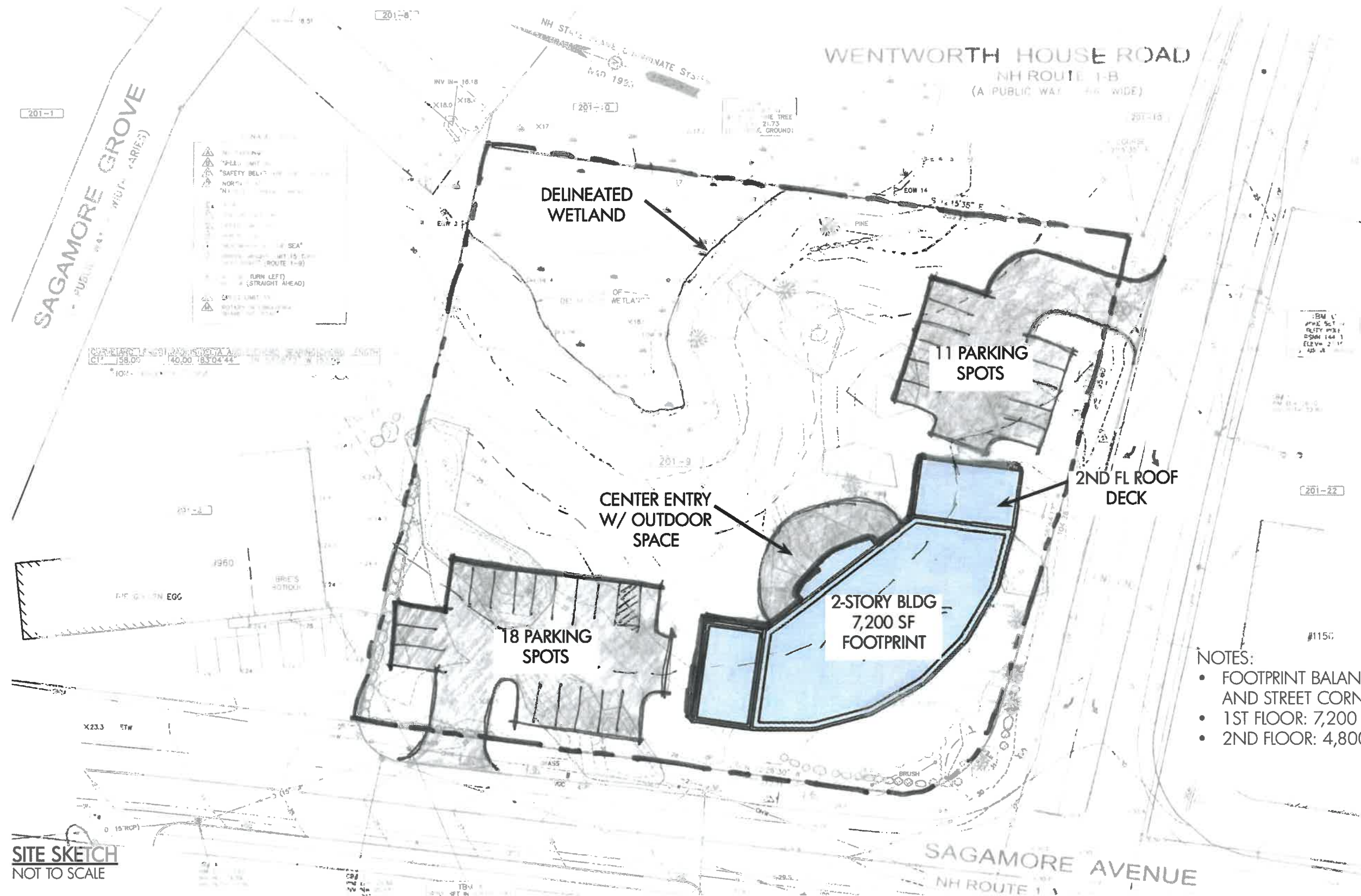
OWNER:
LUCKY THIRTEEN PROPERTIES, LLC
PO BOX 4780
PORTSMOUTH, NH 03802
ASSESSOR'S PARCEL
201-9



PROJECT:
PROPOSED SITE DEVELOPMENT PLANS
SAGAMORE AVENUE & WENTWORTH HOUSE ROAD
PORTSMOUTH, N.H.
ASSESSOR'S PARCEL
201-9

TITLE:
EXISTING CONDITIONS PLAN

SHEET NUMBER:
2 OF 2



BEAN GROUP OFFICE
Portsmouth, NH
6/24/2019



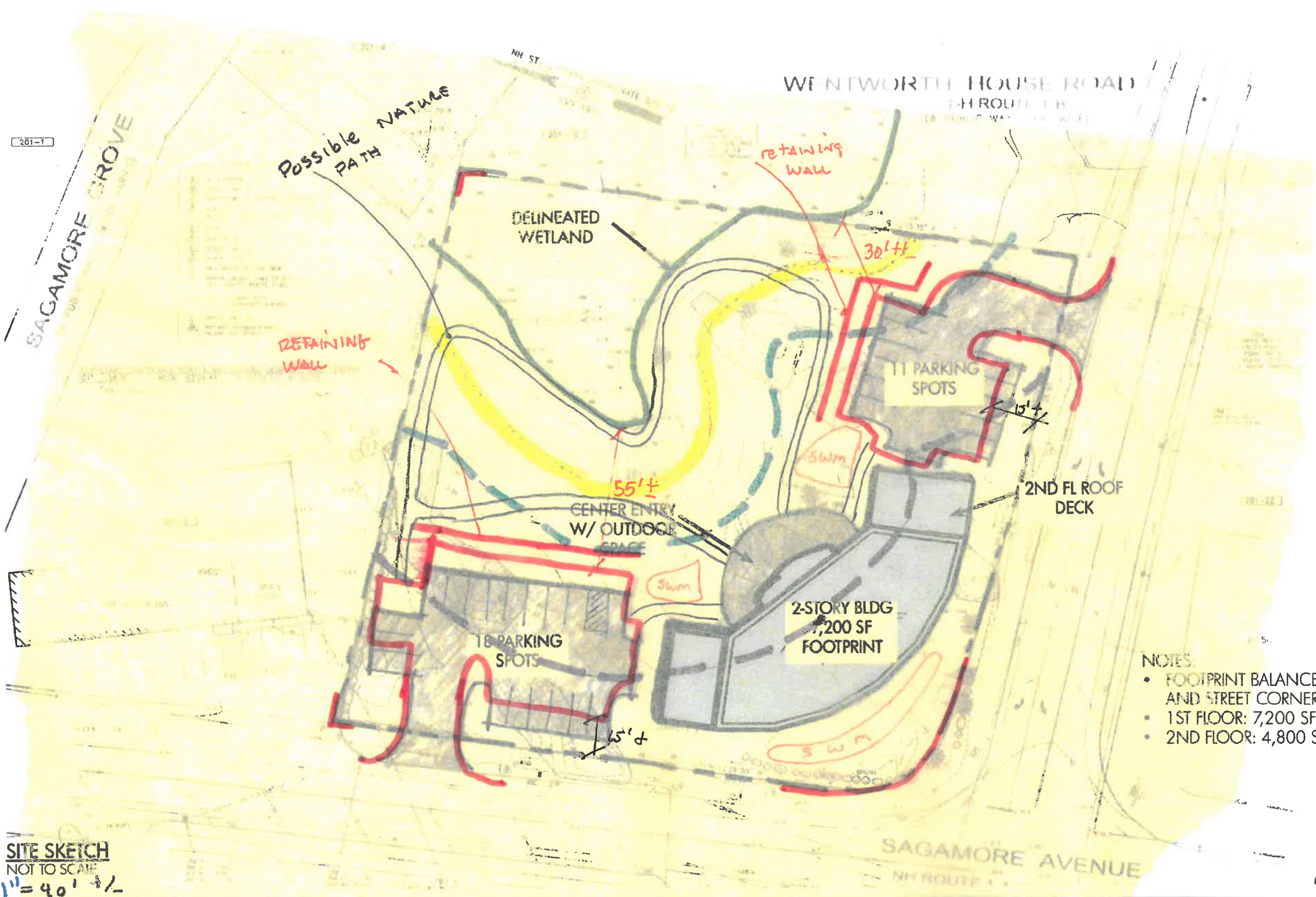
McHENRY
ARCHITECTURE

4 Market Street
Portsmouth, NH 03801



design in context





- NOTES:
- FOOTPRINT BALANCED ON LOT AND STREET CORNER.
 - 1ST FLOOR: 7,200 SF
 - 2ND FLOOR: 4,800 SF

SITE SKETCH
NOT TO SCALE
1" = 40' ±

6/25/19
CONCEPT

Michael Cuomo, Soil Scientist

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(207) 363-4532
mcuomosoil@gmail.com

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WETLAND AND BUFFER EVALUATION
using the
Highway Methodology Workbook Supplement

**960 Sagamore Road
and
Wentworth Road**

Tax map 201, Lot 9

Prepared for:

Altus Engineering, Inc.
133 Court Street
Portsmouth, NH

Prepared by:



Michael Cuomo
27 December 2016



Michael Cuomo, Soil Scientist

6 York Pond Road, York, Maine 03909

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mcuomosoil@gmail.com

PURPOSE

This report uses *The Highway Methodology Workbook Supplement* (hereafter referred to as the 'Highway Method') to assess the wetlands and buffers at this site. This information is required by City of Portsmouth zoning as part of the Conditional Use Permit application for impact within the wetland buffer. No direct wetland impact is proposed.

SITE

The 'Sagamore Studios' project site is located at the intersection of Wentworth and Sagamore Roads in Portsmouth, NH. This wooded 1.44 acre lot is vacant. A portion of the existing conditions plan is attached at the rear of this report for reference.

WETLAND in the LANDSCAPE

One wetland exists on this site and continues off site to the east. The entire wetland, including the portion off-site, is estimated to be 1/2 acre (about 20,000 square feet) in size. This wetland is regulated by the City because it is greater than 10,000 square feet. It requires a 100 foot buffer, per local zoning.

The wetland receives water from natural subsurface and surface flows, including rain water and snow melt. It is supplemented by flow from a culvert under Wentworth Road. The wetland is not associated with any natural surface water body. Water ponds to shallow depth and for medium duration in this wetland. The wetland does not have the physical characteristics associated with a vernal pool.

The wetland probably extended further to the north and east but was filled at some time in the past when the area was developed. This is inferred by the straight wetland-upland boundaries along these margins of the wetland. The wetland may have flowed north in a small channel to Sagamore Creek prior to development of the Sagamore Grove neighborhood. This is inferred by the presence of a 8" diameter culvert pipe which now flows from the wetland, beneath

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map 201, lots 8 and 3. Two catch basins on these abutting lots identify the apparent route of this pipe.

The wetland has been modified by human activity as described above. The long lasting evidence of this disturbance is reflected in the significant population of non-native invasive plant species which are displacing native plants. Native wildlife is adapted to native plants, so invasive plants generally have reduced wildlife habitat value and disrupt native ecosystems. Invasive shrubs are also found in the uplands on this site. Invasive plants are noted below with an asterisk (*).

VEGETATION AND SOIL

Common plant species in the wetland are listed below by strata.

Trees:

American elm (*Ulmus americana*)
red maple (*Acer rubrum*)
American ash (*Fraxinus americana*)

Shrubs:

glossy buckthorn (*Rhamnus frangula*)*
common winterberry holly (*Ilex verticillata*)
American cranberrybush (*Viburnum trilobum*)
northern arrow-wood (*Viburnum recognitum*)
multiflora rose (*Rosa multiflora*)*

Herbs:

broad-leaf cattail (*Typha latifolia*)
purple loose-strife (*Lythrum salicaria*)*
sensitive fern (*Onoclea sensibilis*)
fireweed (*Epilobium* sp.)
buttercup (*Ranunculus* sp.)
soft rush (*Juncus effusus*)

* Invasive plants

The soils in the wetland are poorly drained fine textured sediments of glacio-marine origin. This is the Scitico soil series. The soil is typically saturated to the surface for less

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than 9 months of the average year. The soils have increasing clay content with depth and absorb water slowly. Though deep to bedrock, these soils have shallow effective rooting depth.

Using the *Classification of Wetlands and Deepwater Habitats of the United States*, developed by Cowardin and others, this wetland is labeled 'PEM1' with a 'PFO1' fringe. This indicates the core of the wetland is a freshwater marsh with persistent emergent plants. The edge is a forested freshwater swamp dominated by deciduous trees.

Additional invasive plants noted in the uplands are bittersweet (*Celastrus scandens*), honeysuckle (*Lonicera sp.*), barberry (*Berberis sp.*), Japanese knotweed (*Polygonum cuspidatum*), and burning bush (*Euonymus atropurpureus*).

The soils in the upland are dominated by shallow and moderately deep to bedrock medium textured glacial till. This would be the Chatfield and Hollis soil series. There are a number of bedrock outcroppings at the surface.

HIGHWAY METHOD

The wetland and buffer were evaluated using the Highway Method on 8 December 2016 by Michael Cuomo, NH Wetland Scientist #4. The results are summarized on the worksheet attached at the rear of this report and described in detail below.

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

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those areas which are off-site and can not be controlled by the applicant.

SUMMARY OF HIGHWAY METHOD RESULTS

The Principal Function served by the wetland is Nutrient Removal.

Nutrient Removal is defined in the Highway Method as "...the effectiveness of the wetland as a trap for nutrients in the runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels...to prevent ill effects of nutrients entering aquifers or surface waters ..." This wetland performs Nutrient Removal relatively well because of it's ability to trap sediments, the fine textured soil, dense emergent vegetation, and it's cyclical wetting and drying.

The second most important wetland function is Sediment/Toxicant Retention, which "...reduces or prevents degradation of water quality." This wetland performs Sediment/Toxicant Retention relatively well because of it's ability to trap sediments, dense emergent vegetation, and the constricted outlet.

The third most important wetland function is Wildlife Habitat "...the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge." In this case the function is related to the density of wetland vegetation and the wetland as a refuge for small animals in an otherwise developed area along Sagamore Creek.

The wetland performs the Floodflow Alteration function to a limited degree. "This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of flood waters." Positive indicators of this function are dense vegetation, constricted outlet, and topography.

Production Export is "...the effectiveness of the wetland to

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produce food or usable products for humans or other living organisms." Wetlands closely associated with waterbodies perform this function best. There is no waterbody associated with this wetland so the function is performed to a limited degree.

Fish and Shellfish Habitat is "...the effectiveness of wetlands, embayments, tidal flats, vegetated shallows, and other environments in supporting marine resources such as fish, shellfish, marine mammals, and sea turtles." The wetland does not support this function because it lacks aquatic habitat.

Sediment/Shoreline Stabilization is "...the effectiveness of a wetland to stabilize streambanks and shorelines against erosion." The wetland is not associated with a waterbody so does not perform this function.

Visual Quality/Aesthetics "...considers the visual and aesthetic quality or usefulness of a wetland." This wetland has no exceptional visual features and is not easily accessible or visible from public places, so the function is performed to a very limited degree.

Recreation "...considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, and other active or passive recreational activities." Because of the small size, lack of public access, lack of a waterbody, and surrounding development, this wetland does not provide recreational opportunities.

Educational/Scientific Value is "...the suitability of the wetland as a site for an outdoor classroom or as a location for scientific study or research." The disturbed nature, lack of public access, and lack of wetland diversity mean this wetland performs this function to a very limited degree.

Uniqueness/Heritage "...may include archeological sites, critical

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habitat for endangered species, overall health and appearance, it's role in the ecosystem of the area..." The disturbed nature of the wetland and the common occurrence of this wetland type in the area means the wetland does not perform this function. Inquiry to NH Natural Heritage Bureau revealed no endangered species habitat.

Endangered Species Habitat "...considers the suitability of the wetland to support threatened or endangered species." The disturbed nature of the wetland and the common occurrence of this wetland type in the area means the wetland does not perform this function. Inquiry to NH Natural Heritage Bureau revealed no endangered species habitat.

Groundwater Recharge/Discharge is "...the potential for the wetland to serve as a groundwater recharge and/or discharge area...the fundamental interaction between wetlands and aquifers...." Very slow soil permeability and soil transmissivity indicate the wetland does not perform this function.

CONCLUSIONS

All wetlands have value, even those such as this one that are degraded. There is widespread agreement among professionals that degraded wetlands in urban environments can have higher importance than may be reflected in wetland evaluation methods because they offer refuge for small wildlife, provide screening and green space, and are remnant wetlands in urban environments where many wetlands have historically been filled. This degraded wetland also has increased value due to it's physical proximity to Sagamore Creek.

Using the Highway Method as a framework for the functional assessment of this wetland, Nutrient Removal is the principle wetland function.

The wetland performs three other functions: Sediment/Toxicant Retention, Wildlife Habitat, and Floodflow Alteration.

Michael Cuomo, Soil Scientist

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The wetland does not perform, or performs to a very limited degree the remaining functions the Highway Method considers: Groundwater Recharge/Discharge, Sediment/Shoreline Stabilization, Production Export, Fish & Shellfish Habitat, Endangered Species Habitat, Visual Quality/Aesthetics, Education/Scientific Value, Recreation, and Uniqueness/Heritage.

The wetland has been partially degraded by historical filling of part of the wetland off the subject property. What may be the historical outflow has been culverted and now runs under the yards of abutting properties and under Sagamore Grove in a system of pipes and receives untreated stormwater through catch-basins. The wetland has a number of undesirable invasive plants, a sign of past disturbance, human induced nutrient enrichment, and sediment deposition. Surrounding land uses, medium density residential and commercial development, partially degrade the 100 foot buffer around the wetlands. Much of the off-site wetland buffer contains structures, parking pavement and lawns. The on-site buffer contains invasive shrubs as well as native plants.

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Michael Cuomo, Soil Scientist

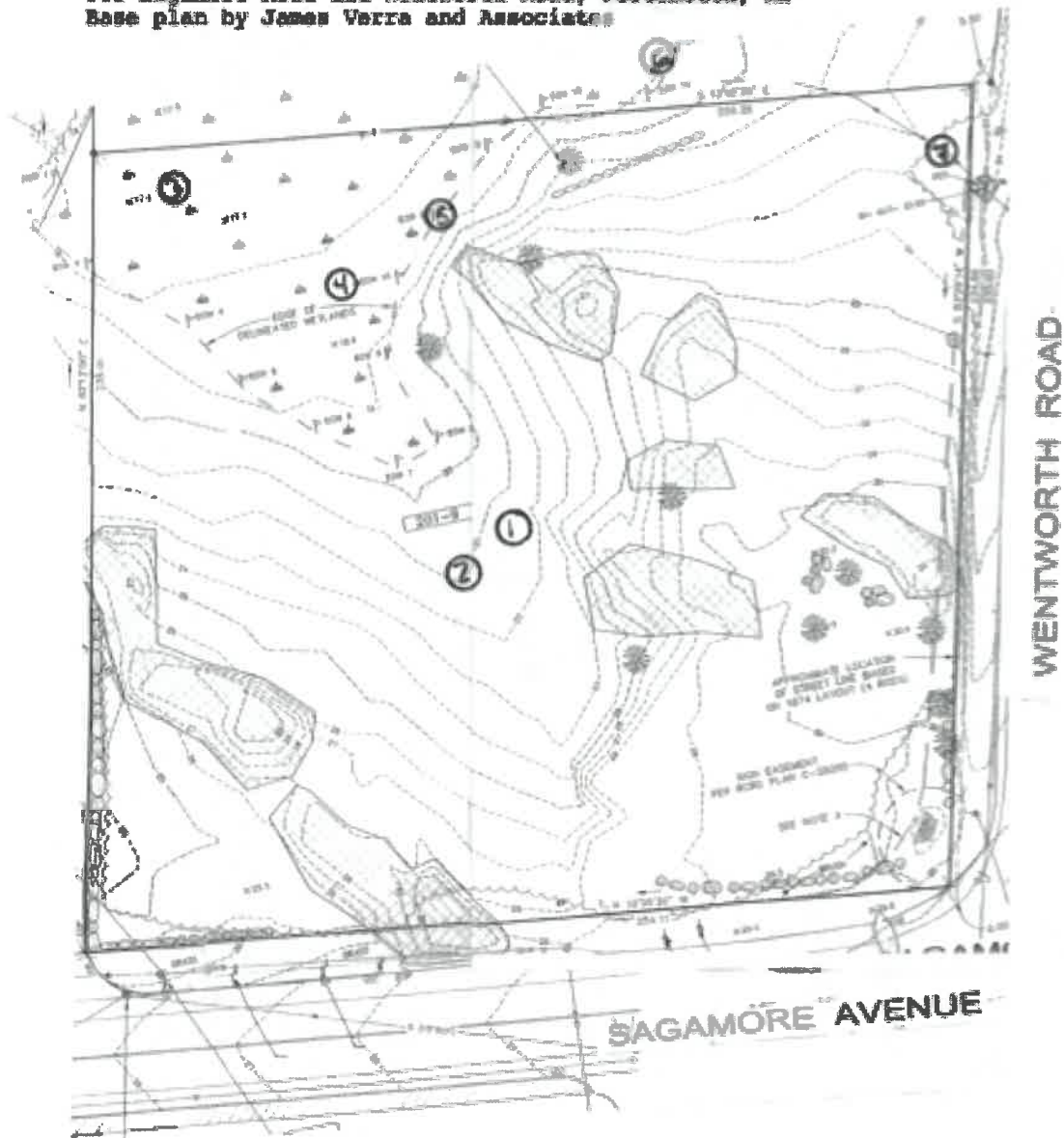
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Portion of PRELIMINARY EXISTING CONDITIONS PLAN
with photo locations added

960 Sagamore Road and Wentworth Road, Portsmouth, NH
Base plan by James Verra and Associates



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Sagamore Studios photo 1: Bittersweet on buckthorn

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Sagamore Studios photo 2: Multiflora rose and bittersweet

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Sagamore Studios photo 3: Purple loose-strife

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Sagamore Studios photo 4: Forested wetland edge

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Sagamore Studios photo 5: Buckthorn along wetland-upland boundary

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Sagamore Studios photo 6: View of wetland

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Sagamore Studios photo 7: Upland near culvert discharge alongside Wentworth Road

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NEW HAMPSHIRE NATURAL HERITAGE BUREAU NHB DATACHECK RESULTS LETTER

To: Michael Cuomo
6 York Pond Road
York, ME 03909

From: NH Natural Heritage Bureau

Date: 12/20/2016 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau of request submitted 12/13/2016

NHB File ID: NHB16-3737

Applicant: Eric Wierzb

Location: Portsmouth
Tax Map: 201/9

Project

Description: Commercial bldg proposed for vacant lot. No wetland impact.
Wetland buffer (City requirement) impact

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

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 12/13/2016, and cannot be used for any other project.

Michael Cuomo, Soil Scientist

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NEW HAMPSHIRE NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

MAP OF PROJECT BOUNDARIES FOR: NHB16-3737

NHB16-3737



Department of Resources and Economic Development
Division of Forests and Lands
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WETLAND FUNCTION-VALUE ASSESSMENT

PROJECT NAME: SOGAMAZZ STUDIES WETLAND I.D. 1 of 1

PROJECT LOCATION: W. FORTY 200 + SOGAMAZZ AV. DATE: 8/26/16 NO SNOW

APPROXIMATE AREA OF WETLAND: 1/2 Acre IS WETLAND PART OF A WILDLIFE CORRIDOR? N OR A HABITAT ISLAND? Y

ADJACENT LAND USE? Residential/Commercial DISTANCE TO NEAREST ROADWAY OR OTHER DEVELOPMENT 50 ft

DOMINANT WETLAND SYSTEMS PRESENT: POM and P01 CONTIGUOUS UNDEVELOPED BUFFER ZONE PRESENT? No

IS THE WETLAND A SEPARATE HYDRAULIC SYSTEM? Y IF NOT, WHERE DOES THE WETLAND LIE IN THE DRAINAGE BASIN? Isolated

OF TRIBUTARIES INTO THE WETLAND? 0 AQUATIC DIVERSITY/ABUNDANCE None VEGETATIVE DIVERSITY/ABUNDANCE Low

WILDLIFE DIVERSITY/ABUNDANCE Low ANTICIPATED IMPACTS Buffer only WETLAND AREA IMPACTED: 0

TREES	SHRUBS	HERBS	WILDLIFE	COMMENTS
<p><u>LONIS AMERICANA</u></p> <p><u>Q. R. RUBRA</u></p> <p><u>FRAXINUS AMERICANA</u></p>	<p><u>AMORPHOFRAXINUS</u></p> <p><u>ILEX</u></p> <p><u>V. VITICOLA</u></p> <p><u>V. B. RUBRA</u></p> <p><u>TRICHOCLADUM</u></p> <p><u>V. B. RUBRA</u></p> <p><u>TRICHOCLADUM</u></p>	<p><u>ORISIA</u></p> <p><u>SENECIOIDES</u></p> <p><u>LYTHRUM</u></p> <p><u>SALEPORA</u></p> <p><u>TYPA</u></p> <p><u>LOTIPOLIA</u></p> <p><u>ERIGLOM</u></p> <p><u>SP.</u></p> <p><u>POREMONIS</u></p> <p><u>SP.</u></p>		

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FUNCTION	Occurrence		Rationale Numbers	Principal Valuable Function(s)	Comments
	Y	N			
Groundwater Recharge/Discharge		X	NO 6 YES 10		SEE REPORT
Floodflow Alteration	YES		NO - YES 2, 8, 15, 18		
Sediment/Shoreline Stabilization		X			
Sediment/Terrace Retention	YES		NO - YES 4, 5, 7		
Nutrient Removal	YES		NO - YES 3, 4, 8, 9, 11, 14		
Production Export (Nutrient)		X	NO - YES 2, 7		
Fish & Shellfish Habitat		X	NO 1, 2 YES -		
Wildlife Habitat	YES		NO - YES 11, 13, 21		
Endangered Species Habitat		X	NO - YES -		
Visual Quality/Aesthetics		X	NO - YES -		
Educational/Scientific Value		X	NO - YES -		
Recreation ((Non)Consumptive)	X		YES 5, 12 NO 1, 2, 5		
Uniqueness/Harmony	X		YES -		