PRELIMINARY PLANNING BOARD APPLICATION PACKET

FOR

SAND POND WOODS SAND POND ROAD BALDWIN, MAINE

VAN HERTEL SR.

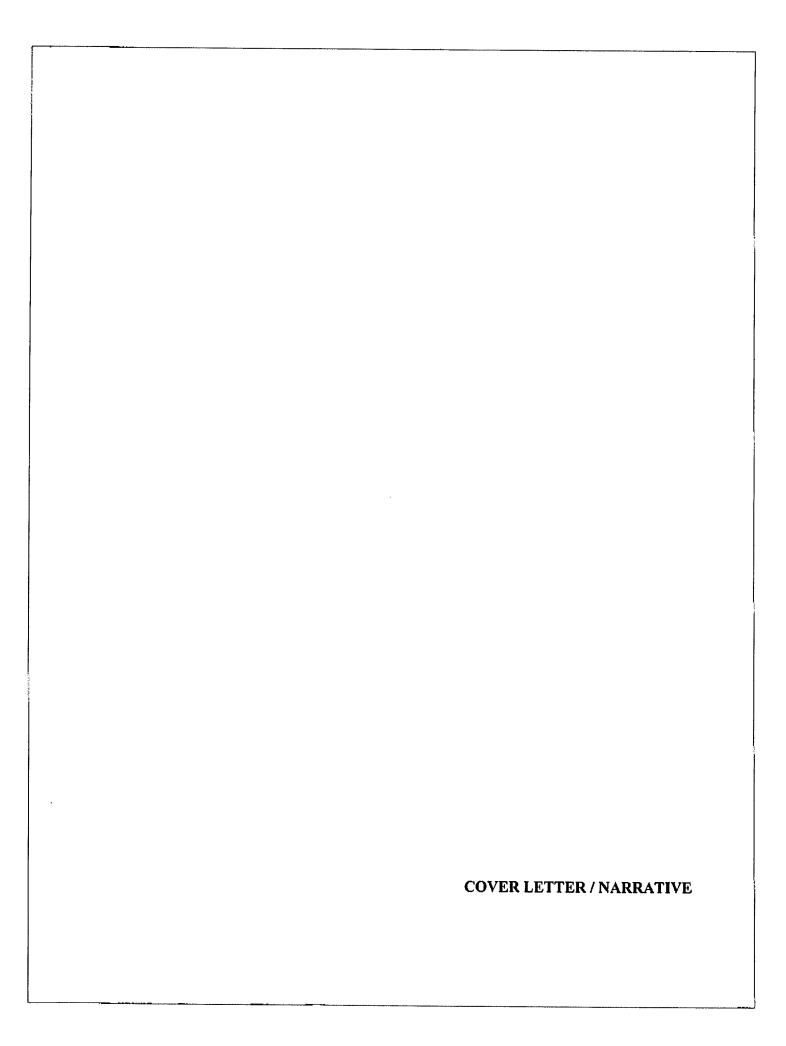
JULY 2020

Prepared By:

Berry Huff McDonald Milligan, Inc. Engineers Surveyors Planners 28 State Street Gorham, ME 04038 207-839-2771 FAX 207-839-8250 wthompson@bh2m.com

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Berry, Huff, McDonald, Milligan Inc.

Engineers, Surveyors

28 State Street, Gorham, Maine 04038 207 839-2771

July 28, 2020

WILLIAM A. THOMPSON ROBERT C. LIBBY, Jr. WALTER E. PELKEY ANDREW S. MORRELL STEVEN J. BLAKE

Wes Sunderland Baldwin Code Enforcement 534 Pequawket Trail Baldwin, Maine 04091

Re: Preliminary Plan

Sand Pond Woods

Dear Wes;

On behalf of the applicant, Van Hertel Sr., we are submitting our Preliminary Design for this 6-lot residential subdivision.

We introduced this project at the November 14, 2019 Planning Board meeting and the Planning Board conducted a site walk on December 7, 2019.

Based on comments from these two meetings, we have revised our design and this submission follows the requirements for Preliminary review for a major subdivision.

The following outlines our design elements:

- 1. Project has been reduced from 7 lots to 6 lots. No driveway access will be from Route 11 / East Sebago Road.
- 2. All minimum lot areas exceed the 2-acres required.
- 3. All lots have a minimum of 200-feet road frontage.
- 4. Subdivision plan includes ground topography, forested wetlands, stream with 75' foot setback and medium intensity soil mapping.
- 5. Soil test pits completed for each lot showing suitable area for a subsurface sewage disposal system.
- 6. We are proposing shared driveways to the extent possible. Lot 6 will access thru a 60-foot wide driveway easement from Sand Pond Road.
- 7. Trip generation numbers are shown on the plan.
- 8. This project does not fall in a lake watershed. All surface water is in Saco River Watershed.
- 9. There is no FEMA 100 year flood zone on this site.
- 10. Submission includes this site superimposed onto the USGS Map of this area.
- 11. Sand and Gravel Aquifer map showing this site.

www.bh2m.com Excellence Since 1978

- 12. Wildlife Habitat Map is attached.
- 13. Fire protection is addressed in three ways:
 - a. Existing fire pond is located 2000' south of Sand Pond Road
 - b. Existing dry hydrant system just east of the intersection of Sand Pond road along Route 113
 - c. Existing fire department just west of Sand Pond Road along Route 113.

We look forward to presenting this project at the next available planning board meeting. Please find enclosed:

- 1. Two full size copies of the subdivision plan
- 2. Seven copies 11"x 17"

Wille a Myren

3. Application and supporting exhibits

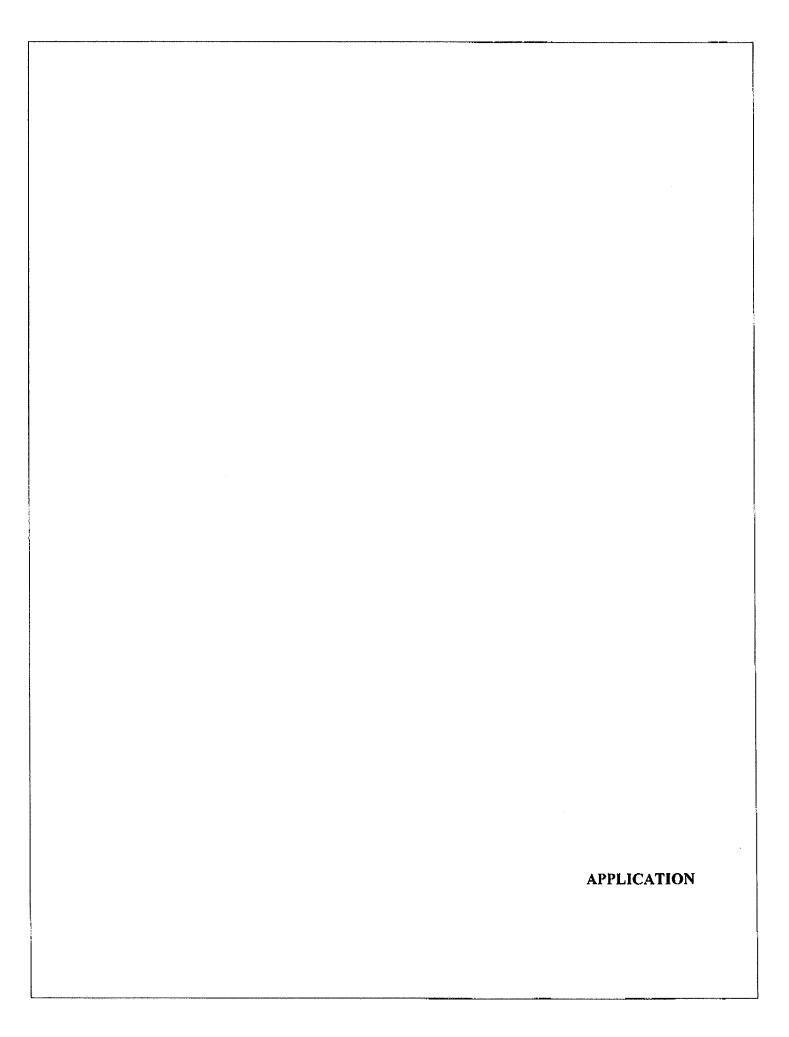
Sincerely,

William A. Thompson

Project Manager

encl.

cc: V. Hertel Sr.



Sand Pond Woods

Article 7 – Preliminary Plan for Major Subdivision

7.2 Submission

- A. *Application Form*Complete application attached.
- B. Location Map. The location map shall be drawn at a size adequate to show the relationship of the proposed subdivision to the adjacent properties, and to allow the Board to locate the subdivision within the municipality. The location map shall show:
 - 1. Existing subdivisions in the proximity of the proposed subdivision.
 - 2. Locations and names of existing and proposed streets.
 - 3. Boundaries and designations of zoning districts.
 - 4. An outline of the proposed subdivision and any remaining portion of the owner's property if the preliminary plan submitted covers only a portion of the owner's entire contiguous holding.

Location Map shows the relationship with surrounding street, river and ponds.

- 1. Proposed subdivisions shown
- 2. Existing streets shown
- 3. Entire project area is in Rural District
- 4. The proposed subdivision outline is shown
- C. Preliminary Plan. The preliminary plan shall be submitted in three copies of one or more maps or drawings which may be printed or reproduced on paper, with all dimensions shown in feet or decimals of a foot. The preliminary plan shall be drawn to a scale of not more than one hundred feet to the inch. Plans for subdivisions containing more than one hundred acres may be drawn at a scale of not more than two hundred feet to the inch provided al necessary detail can easily be read. In addition, one copy of the plan(s) reduced to a size of 8 ½ by 11 inches or 11 by 17 inches, and all accompanying information shall be mailed to the town clerk for distribution to each of the Board members no less than 10 days prior to the meeting.

Preliminary plan shown and dimensions in feet and decimals of a foot. Plan drawing at 30-feet to the inch

A plan reduced to 11"x 17" has been mailed and sent electronically to Town no less than 10 days prior to the meeting.

D. Application Requirements. The application for preliminary plan approval shall include the following information. The Board may require additional information to be submitted, where it finds necessary in order to determine whether the criteria of Title 30 A.M.R.S.A., §4404 are met.

Application Requirements. Application includes the following:

- 1. Proposed name of the subdivision and the name of the municipality in which it is located, plus the Assessor's Map and Lot numbers. Proposed project name – Sand PondWoods Municipality – Baldwin Assessors Map 1, Lot 94
- 2. Verification of right, title or interest in the property Parcel Deed Book 35546, Page 194
- 3. A standard boundary survey of the parcel, giving complete descriptive data by bearings and distances, made and certified by a professional land surveyor. The corners of the parcel shall be located on the ground and marked by monuments.
 - Standard Boundary Survey completed and stamped by Robert C. Libby Jr, PLS #2190
- 4. A copy of the most recently recorded deed for the parcel. A copy of all deed restrictions, easements, right of way, or other encumbrances currently affecting the property. Recorded parcel deed Book 35546 Page 194 is attached to submission

packet.

- 5. A copy of any deed restrictions intended to cover all or part of the lots or dwellings in the subdivision.
 - No deed restrictions are proposed at this time.
- 6. An indication of the type of sewage disposal to be used in the subdivision. Sewage disposal shall include an individual system on each lot.
 - a. When sewage disposal is to be accomplished by subsurface waste water disposal systems, test pit analyses, prepared by a Licensed Site Evaluator or Certified Soil Scientist shall be provided. A map showing the location of all test pits due on the site shall be submitted.
 - Licensed Site Evaluator Alexander Finamore, LSE #391 conducted test pits. All test pits are shown on site plan.
- 7. An indication of the type of water supply system(s) to be used in the subdivision.
 - a. When water is to be supplied by private wells, evidence of adequate ground water supply and quality shall be submitted by a well driller or a hydrogeologist familiar with the area. Drilled wells will be installed for each lot. A letter has been

- 8. The date the plan was prepared, north point, and graphic map scale. Plan shows date of preparation including all revision dates.
- 9. The names and addresses of the record owner, applicant, and individual or company who prepared the plan and adjourning property owners. Plan includes record owner and applicant to be Van Hertel SR., BH2M Engineers as plan preparer and shows all adjoining property owners.
- 10. A high intensity soil survey by a Certified Soil Scientist. Wetland areas shall be identified on the survey, regardless of size.
 We would request a wavier on completing a High Intensity Soil Survey based on the evidence of medium intensity soils showing all Windsor A & Augres A Soils (well drained). The only mapped wetland area is along the stream on of Lot 6 on the subject parcel.
- 11. The number of acres within the proposed subdivision, location of property lines, existing buildings, vegetative cover type, and other essential existing physical features.

 Total acresses of proposed subdivision is 34.65 percesses noted in plan.
 - Total acreage of proposed subdivision is 34.65 acres as noted in plan note 6. No existing buildings. Site is lightly wooded.
- 12. The location of all rivers, streams and brooks within or adjacent to the proposed subdivision. If any of the proposed subdivision is located in the direct watershed of a great pond, the application shall indicate which great pond.
 - All rivers, streams and brooks on and adjacent to project are shown on plans. This project is not in a watershed of a great pond. Project watershed is the Saco River.
- 13. Contour lines at the interval specified by the Board, showing elevations in relation to Mean Sea Level.Contour interval is 2 feet. Site is flat with little grade change on all building areas.
- 14. The zoning district in which the proposed subdivision is located and the location of any zoning boundaries affecting the subdivision.

 Project is in Rural Zone and is noted in plan note 7.
- 15. The location and size of existing and proposed sewers, water mains, culverts, and drainage ways on or adjacent to the property to be subdivided.
 - There are no existing or proposed sewers, watermains on this project. We have an existing stream shown running north/south thru Lot 6. All proposed driveways shall have a 15 inch culvert at the entrance.
- 16. The location, names, and present widths of existing streets, highways, easements, building lines, parks and other open spaces o or adjacent to the subdivision.

- Names and width of all existing streets are shown on plan. There are no existing or proposed easements on this site.
- 17. The width and location of any streets, public improvements or open space shown upon the official map and the comprehensive plan, if any, within the subdivision.
 - No new streets or open space are proposed for this project.
- 18. *The proposed lot lines with approximate dimensions and lot areas.* Proposed lot lines are shown with dimensions and lot areas.
- 19. All parcels of land proposed to be dedicated to public use and the donations of such dedication.
 - No land area is proposed to be dedicated to public use.
- 20. The location of any open space to be preserved and a description of proposed ownership, improvement and management.

 No open space is proposed.
- 21. The area on each lot where existing forest cover will be permitted to be removed and converted to lawn, structures or other corer and any proposed restrictions to be placed on clearing existing vegetation.

 No zoning restricts the amount of forest cover that each lot owner can convert to lawn. Generally, each lot owner will leave vegetation along side and rear lot lines.
- 22. If any portion of the subdivision is in a flood-prone area, the boundaries of any flood hazard areas and the 100 year flood elevation, as depicted on the municipality's Flood Insurance Rate Map, shall be delineated on the plan.
 - No portion of this project falls within a 100 year flood zone. FEMA map is attached to application packet.
- 23. A hydrogeologic assessment prepared by a Certified Geologist or Registered Professional Engineer, experienced in hydrogeology, when the subdivision is not served by public sewer and
 - a. Any part of the subdivision is located over a sand and gravel aquifer, as shown on a map entitled "Hydrogeologic Data for Significant Sand and Gravel Aquifers" by the Maine Geological Survey, 1985 or
 - b. The subdivision has an average density of more than one dwelling unit per 100,000 square feet.

We are requesting a waiver from a hydrogeologic assessment.

- a. We do fall within an aquifer mapped area however.
- b. This subdivision has an average density as shown:

 $\frac{34.65 \text{ acres x } 43,560 \text{ s.f.}}{7}$ = 215,622 sf/lot Pensity exceeds 100,000 s.f. per lot In addition, there are no areas shallow to bedrock soils and this project is not a cluster subdivision. All lots exceed the minimum 2 acre zone. Lots 1 thru 6 are 90,509 s.f. to 484,781 s.f. Lot 7 is 12 acres in size.

24. An estimate of the amount and type of vehicular traffic to be generated on a daily basis and at peak hours. Trip generation rates used shall be taken from Trip Generation Manual 1991 edition, published by the Institute of Transportation Engineers. Trip generation rates from other sources may be used if the applicant demonstrates that these sources better reflect local conditions.

Trip generation is 10 trips per day per lot.

7 lots x 10 trips = 70 trips per day

This is noted on plan note 12.

25. For subdivision involving 40 or more parking spaces or projected to generate more than 400 vehicle trips per day, a traffic impact analysis, prepared by a Registered Professional Engineer with experience in traffic engineering, shall be submitted. The analysis shall indicate the expected average daily vehicular trips, peak-hour volumes, access conditions at the site, distribution of traffic, types of vehicles expected, effect upon the level of service of the street giving access to the site and neighboring streets which may be affected, and recommended improvements to maintain the desired level of serve on the affected streets.

This project will not involve 40 or more parking spaces generating 400 vehicle trips per day.

26. Areas within or adjacent to the proposed subdivision which have been identified as high or moderate value wildlife habitat by the Maine Department of Inland Fisheries and Wildlife or within the comprehensive plan. If any portion of the subdivision is located within an area designated as a unique natural area by the comprehensive plan or the Maine Natural Areas Program the plan shall indicate appropriate measures for the preservation of the values which qualify the site for such designation.

This project is not a high or moderate value wildlife habitat. We have resource map as part of this application packet.

27. If the proposed subdivision is in the direct watershed of a great pond, and qualifies for the simplified review procedure for phosphorus control, the plan shall indicate the location and dimensions of vegetative buffer strips or infiltration systems and the application shall include a long-term maintenance plan for all phosphorus control measures.

This project is not within a direct watershed of a great pond.

Marquis Well & Pump

The Water Specialists

(207) 490-5944 Cell 459-0720

Date:

7-28-20

Addressee:

Van / Bill

Location:

Sand Pond rd

Baldwin

Using the State of Maine online data bases there is adequate water via well points or drilled wells.

https://www.maine.gov/dacf/mgs/pubs/digital/well.htm

https://www.maine.gov/dacf/mgs/pubs/digital/aquifers.htm

Randy Marquis Marquis Well & Pump 1 Alpine Drive Sanford, ME 04073

For	Town Use Only
Date Application Re	ceived
Re	ceived By:
Fe	e Paid: \$

Town of Baldwin, Maine.Application for Conditional Use Permit

The Land Use Ordinance of the Town of Baldwin allows the Planning Board to grant a Conditional Use Permit for those uses listed specifically as Conditional Uses in Article 6, District Regulations of the code. Before granting a permit, the Board must find that the standards contained in Articled 8, Conditional Uses have been met. It is your obligation to submit the necessary materials to allow the Planning Board to determine if those standards have been met. Three copies of the complete application and supporting materials and the applicable fee shall be submitted to the Code Enforcement Officer.

Section A: Basic Information (to be completed by all applicants)

1.	Applicant's Legal Name	Van Hertel SR.
2.	Applicant's Mailing Address .	P.O. BOX 1602 Alton N. H.
3.	Phone number where applicant can be reached during business hours	_G03-G51-BG03
4.	Are you the owner of record of the property for which the Conditional Use Permit sought?	yes (provide copy of title and go to Question 8) no (answer Questions 5, 6, and 7)
5.	To apply for a conditional Use Permit, you	Warranty Dord
	must have legal right, title, or interest in the property. Please indicate your interest in the	BK 35546 Pg 194
	property and attach written evidence of this interest.	
6.	Property Owner's Name	Van Hertel SR.
7.	Property Owner's Address	Same as Applicant
		-
8.	Location of property for which the permit is sought	SAND POND ROAD + RIE II
9.	Indicate the Map and Lot number for the property from the Town's assessment records	Map # Lot # 94
10.	Indicate Zoning District in which the property is located (check as many as apply)	Natural Resource Protection Village Commercial Rural
11.	List the use for which a Conditional Use Permit is being sought. Please refer to Article 6, District Regulations. The proposed use must be specifically listed as conditional use in the district in which it is located.	SUB-DIVISION

Town of Baldwin, Maine

Application for Conditional Use Permit (continued – page #2)

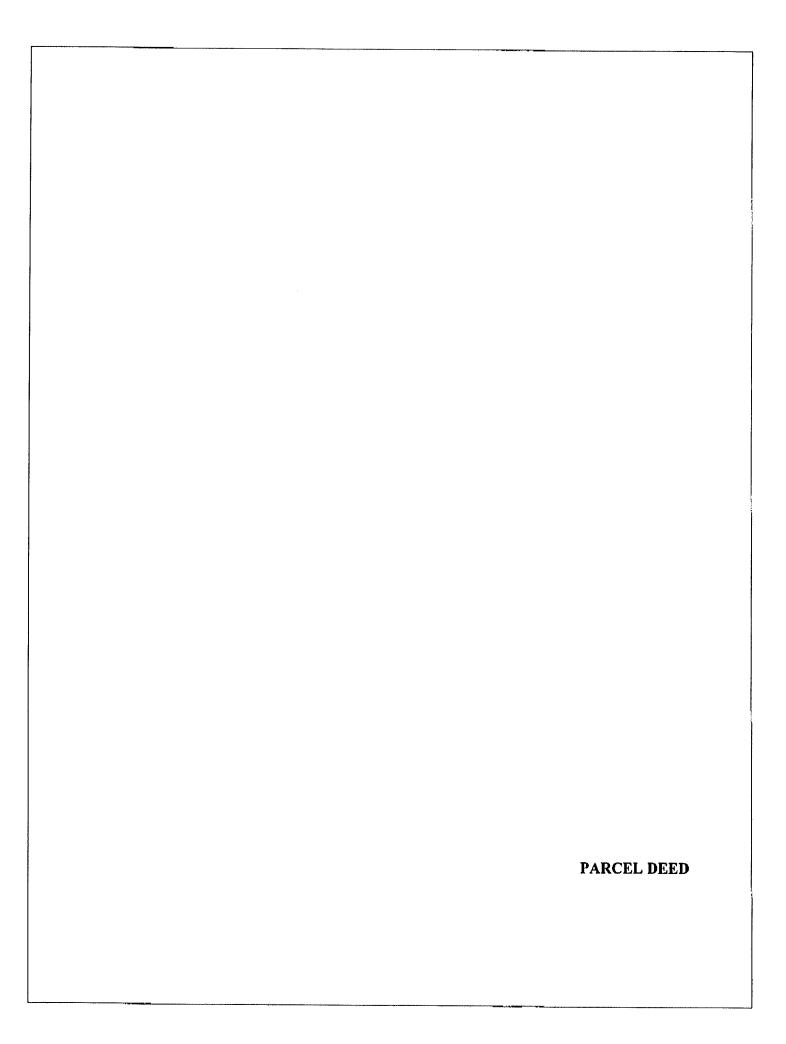
12. Attach the following information to this application as outlined in Article 8 Conditional Uses. For each item, please indicate by checking that item that it has been included with your application. _____a. A location map showing the location of the property with respect to roadways and major natural features. This map should allow the Board to locate the parcel in the field and on the Town's zoning and tax maps. 🗶 b. A written description of the proposed use of the property. This statement shall describe the exact nature of the proposed use. c. An accurate, scale drawing of the lot showing the location of any existing or proposed buildings, structures, and natural features, Driveways and parking areas. Section B: Standards for a conditional Use Permit (the full text appears in Article 8.3) The Planning Bard shall consider impact: X_a . The size of the proposed use compared with surrounding uses. 💢 b. The intensity of the proposed use, including amount and type of traffic to be generated, hours of operation, expanse of pavement, and similar measures of intensity of use, compared with surrounding uses. c. The potential generation of noise, dust, odor, vibration, glare, smoke, litter and other nuisances. 🗶 d. Unusual physical characteristics of the site, including size of the lot, shape of the lot, topography, and soils, which may tend to aggravate adverse impacts upon surrounding properties. e. The degree to which landscaping, fencing, and other design elements have been incorporated to mitigate adverse impacts on surrounding properties. 2. The Planning Board shall consider facilities: _a. The ability of traffic to safely move into and out of the site at the proposed location. __b. The presence of facilities to assure the safety of pedestrians passing by or through the site. _c. The capacity of the street network to accommodate the proposed use. _d. The capacity of the storm drainage system to accommodate the proposed use. _e. the ability of the Town to provide necessary fire protection services to the site and development. 3. The Planning Board shall consider natural characteristics: X_a. The natural characteristics of the site, including topography, drainage, and relationship to ground and surface waters and flood plains, shall not be such that the proposed use when placed on the site will cause undue harm to the environment or to neighboring properties. Section C: Shoreland Standards Section to be completed only if any portion of the property is located within 250 feet of the normal high water mark of ingalls Pond, Sand Pond, Southeast Pond, Adams Pond, or the Saco River or within 75 feet of any stream. For each standard, attach a written statement demonstrating how the proposed use compiles with that standard. For each item, please indicate by checking that item that it has been included with your application. Each standard must be addressed in your submission. _a. Will not result in unreasonable damage to spawning grounds, fish, aquatic life, birds and other wildlife habitat. _b. Will reasonably conserve shoreland vegetation. _c. Will reasonably conserve visual points of access to waters as viewed from public facilities. d. Will conserve actual points of public access to waters.

e. Will reasonably conserve natural beauty.

f. Will reasonably avoid problems associated with floodplain development or use.

Section D: (to be completed by applicant) I/We Van Harry 5R, certify that I/We are the legal applicants for the conditional use permit by this application, that I/We are the owners of the property covered by this application or have the property owner's consent to the filing of this application and have legal interest in the property and that the information contained in this application and supporting materials is accurate and true. I/We further certify that I/We have the standards for granting of Conditional Use Permits contained in Land Use Ordinance. Signature of Applicant Van Hortel SR 11-7-19 Signature of Applicant Permit Fee: \$ 150,00 Signature of CEO Date Received Official Use: Planning Board. Date Received by Planning Board: Received By: Date of Public Hearing: Conditional Use Permit about: PERMIT DENIED Date: _____ Explanation: ____ PERMIT APPROVED Date: _____Conditions of Permit (if any) _____ Planning Board Signatures: 1.

4.______5.____



Sand Pond

WARRANTY DEED Maine Statutory Short Form

KNOW ALL MEN BY THESE PRESENTS, that VAN E. HERTEL, JR., of 5 Shady Creek Lane, Scarborough, Maine, 04074, for consideration paid, grants to VAN E. HERTEL, SR., of 617 Four Bays Drive, Nokomis, Florida 34275, with WARRANTY COVENANTS, the land in the Town of Baldwin, County of Cumberland, and State of Maine, described as follows:

SEE EXHIBIT A. ATTACHED HERETO

IN WITNESS WHEREOF, Van E. Hertel, Jr. has caused this instrument to be executed and delivered this 21st day of March, 2019.

Signed, Sealed and Delivered in the Presence of

State of Maine

County of York, SS.

Van E. Hertel, Jr.

March 21, 2019

Then personally appeared the above named Van E. Hertel, Jr. and acknowledged the foregoing instrument to be his free act and deed.

Before me,

Motary Public/Attorney at Law

Printed name: Jane L trankland



EXHIBIT A.

A certain lot or parcel of land located on the easterly sideline of Sand Pond Road, so-called, and on the northwesterly sideline of Route 11, also known as East Sebago Road, in the Town of Baldwin, County of Cumberland and State of Maine; said parcel being more particularly described as follows:

Beginning at the intersection of the easterly sideline of said Sand Pond Road and the northwesterly sideline of said Route 11 as shown on aforesaid plan; thence N 00°-53'-32" W along the easterly sideline of said Sand Pond Road a distance of 339.43 feet to a point; thence N 05°-31'-22" W along the easterly sideline of said Sand Pond Road a distance of 197.15 feet to a point; thence N 15°-17'-00" W along the easterly sideline of said Sand Pond Road a distance of 272.14 feet to a point; thence N 38*-59'-59" W along the easterly sideline of said Sand Pond Road a distance of 276.11 feet to a point; thence N 34'-07'-58" W along the easterly sideline of said Sand Pond Road a distance of 114.91 feet to a point; thence N 15'-45'-22" W along the easterly sideline of said Sand Pond Road a distance of 46.09 feet to a point and land now or formerly of Mildred P. Jackson; thence N 71'-30'-03" E along the land of said Jackson a distance of 1597.66 feet to a capped iron rod found (PLS #1303); thence N 18'-32'-46" W along the land of said Jackson a distance of 1222.71 feet to a 1" iron pipe found and land now or formerly of Sand Pond Realty Trust; thence N 71°-28'-49" E along the land of said Sand Pond Realty Trust a distance of 222.10 feet to a point and remaining land of Van Hertel, Jr.; thence \$ 40"-42'-39" E along the remaining land of Van Hertel, Jr. a distance of 151.12 feet to a point; thence S 56'-51'-13" E along the remaining land of Van Hertel, Jr. a distance of 296.45 feet to a point; thence S 66*-37'-20" E along the remaining land of Van Hertel, Jr. a distance of 113.78 feet to a point; thence S 63*-41'-13" E along the remaining land of Van Hertel, Jr. a distance of 106.85 feet to a point; thence S 81°-35'-20" E along the remaining land of Van Hertel, Jr. a distance of 122.44 feet to a point and the northwesterly sideline of said Route 11; thence S 22'-22'-13" W along the northwesterly sideline of said Route 11 a distance of 271.52 feet to a point; thence S 26*-49'-35" W along the northwesterly sideline of said Route 11 a distance of 827.57 feet to a point; thence in a general southwesterly direction along the northwesterly sideline of said Route 11 and along a circular curve to the right, circumscribed by a radius of 1754.00 feet, an arc length of 415.44 feet to a point; said point being S 33*-36'-42" W a tie distance of 414.47 feet from said previous point; thence S 40*-23'-49" W along the northwesterly sideline of said Route 11 a distance of 756.40 feet to a point; thence S 38*-00'-01" W along the northwesterly sideline of said Route 11 a distance of 749.98 feet to the point of beginning.

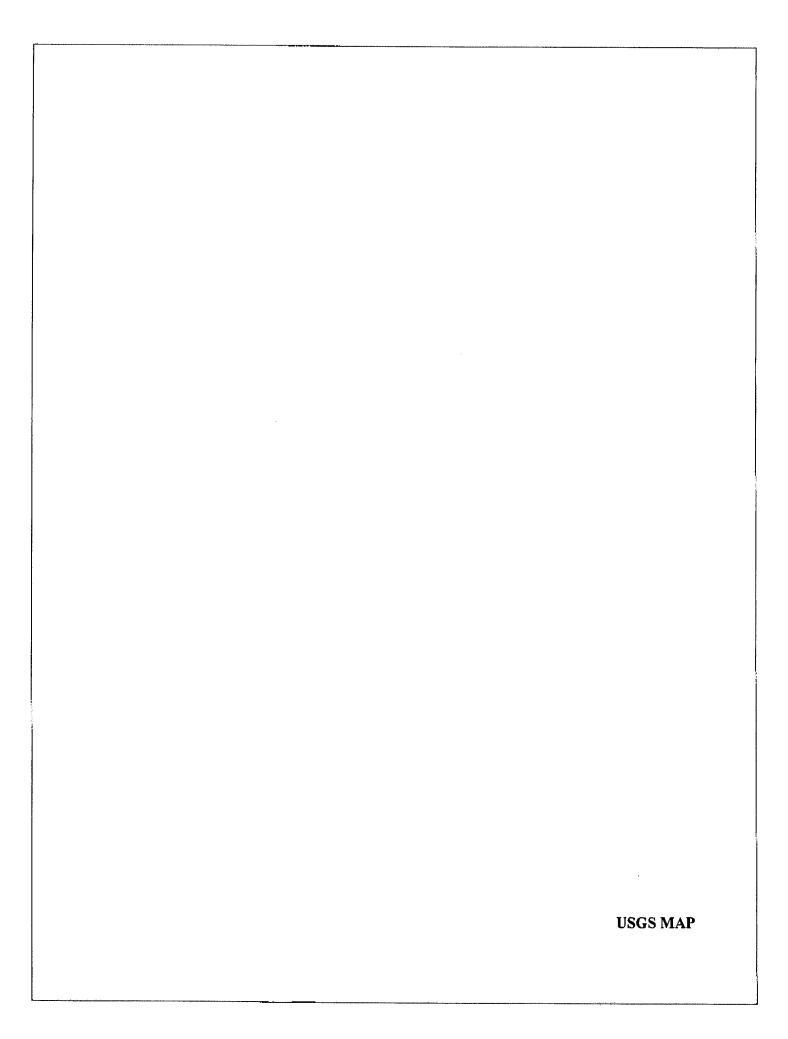
The above described parcel contains 1,509,423 s.f. (34.65 acres). All bearings refer to magnetic north as observed in 2018.

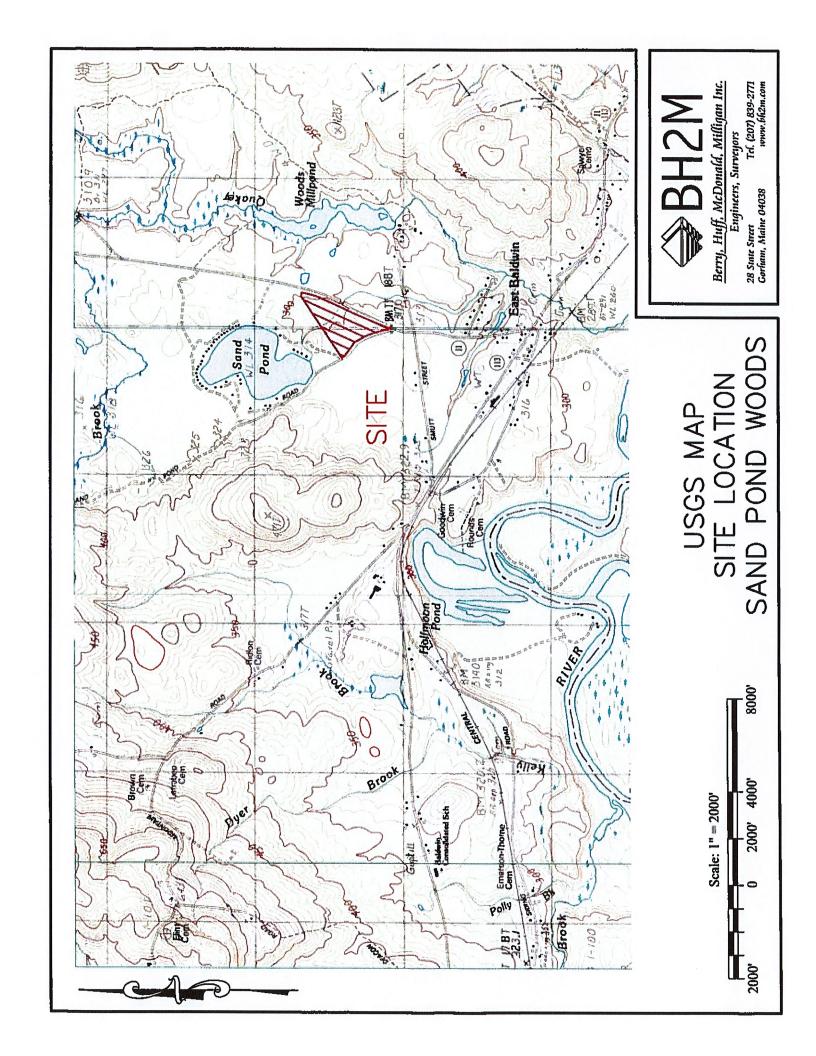
The above described parcel is subject to a certain 50-foot wide right of way known as Allaire Camp Road for ingress and egress and the installation of utilities located on the northwesterly

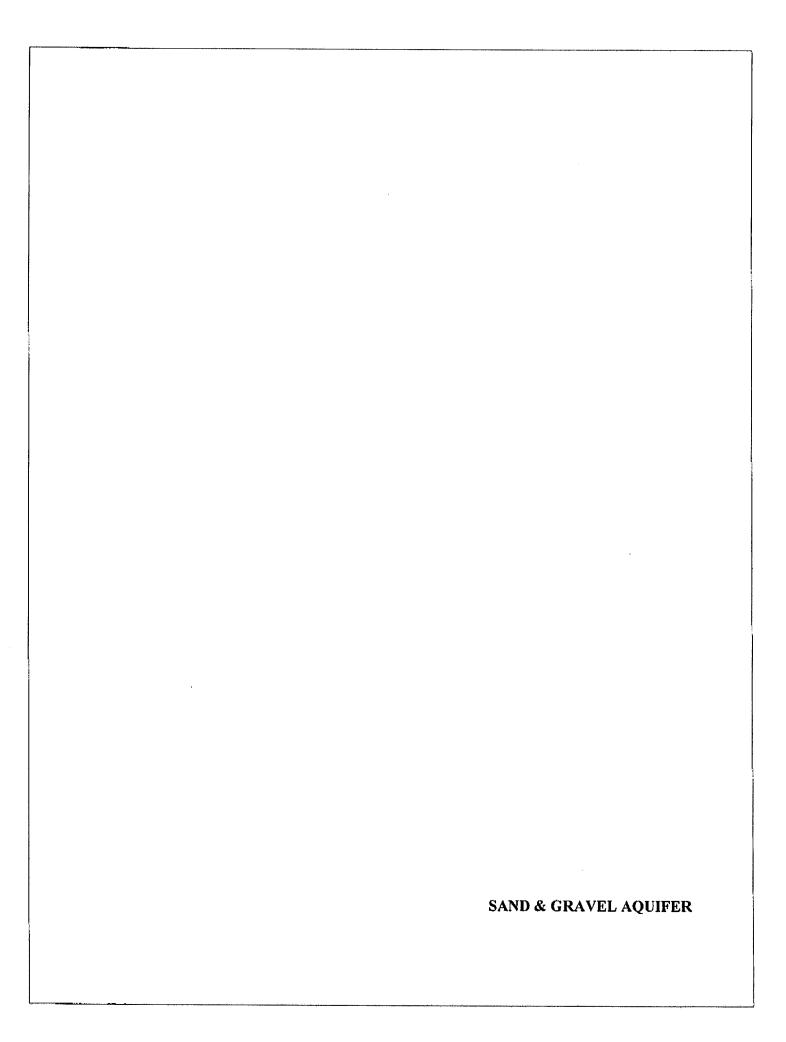
sideline of said Route 11 and along the northeasterly sideline of the above described parcel and shown on the aforesaid plan for a more particular description.

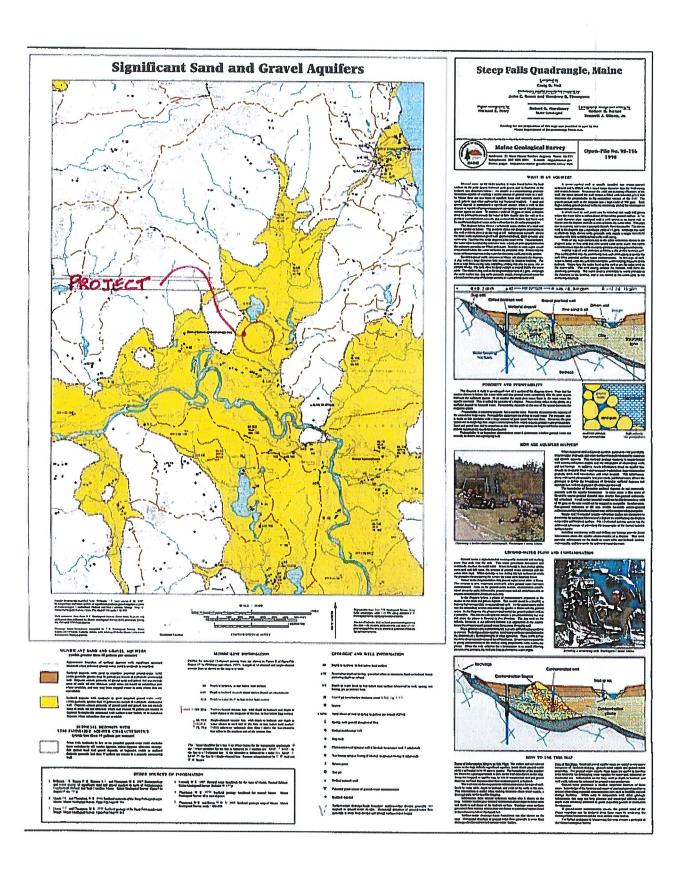
Meaning and intending to describe and convey a portion of the same premises conveyed to Van E. Hertel, Jr., by Warranty Deed of Jonathan Simonds, dated January 25, 2018, and recorded in the Cumberland County Registry of Deeds at Book 34619, Page 47.

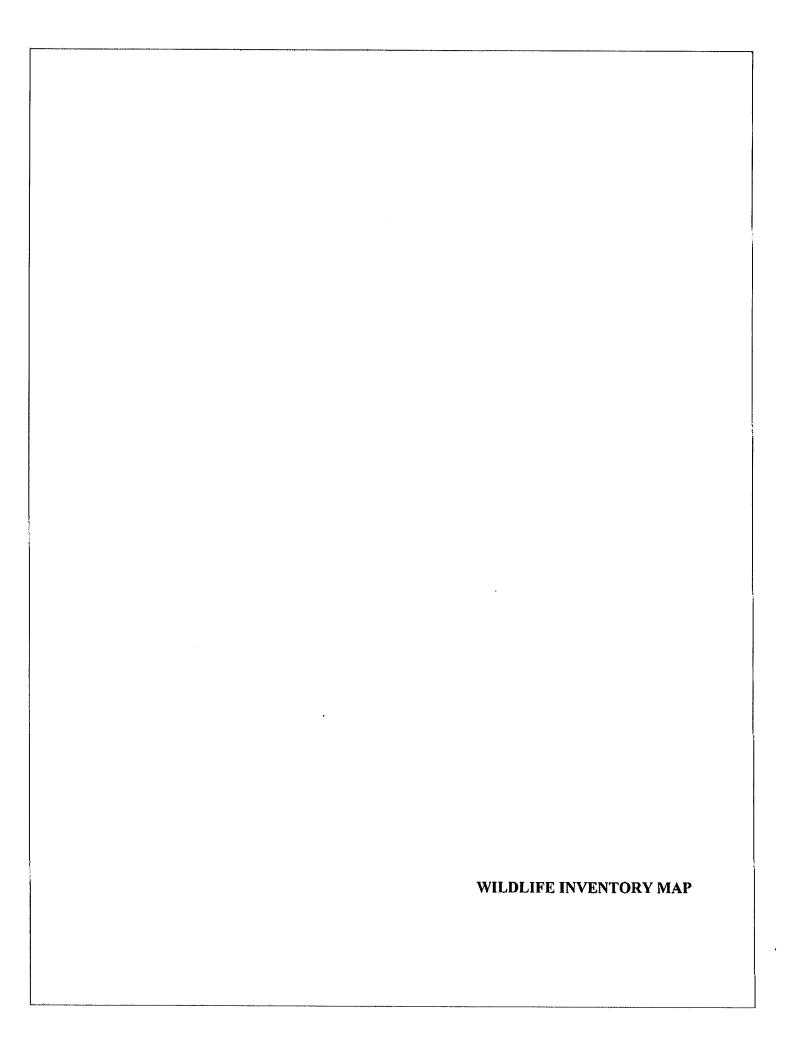
Received Recorded Resister of Deeds Mar 29:2019 11:34:58A Cumberland County Nancy A. Lane

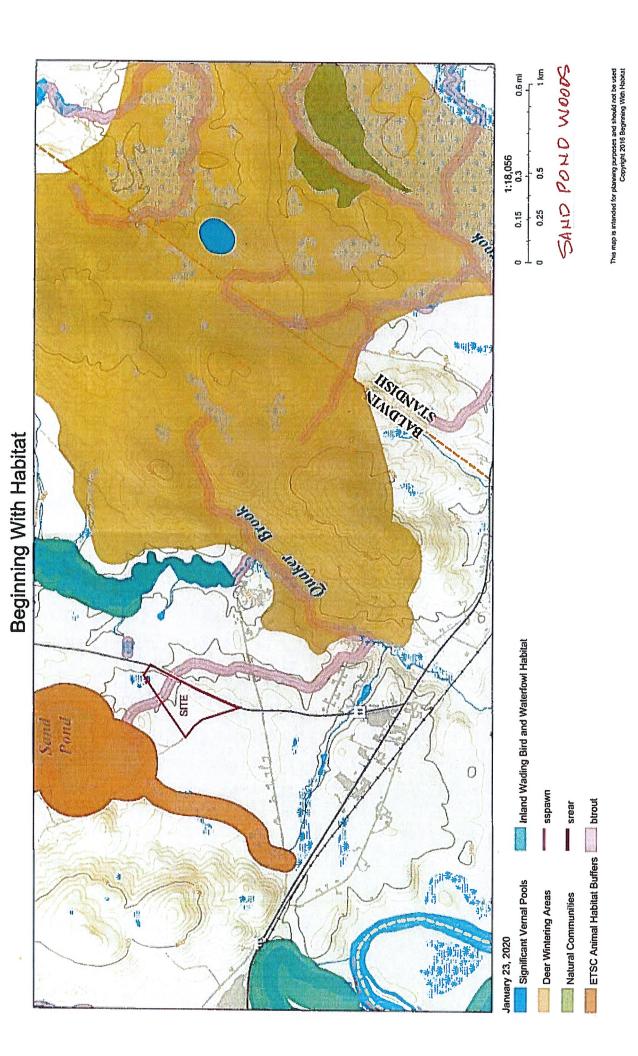


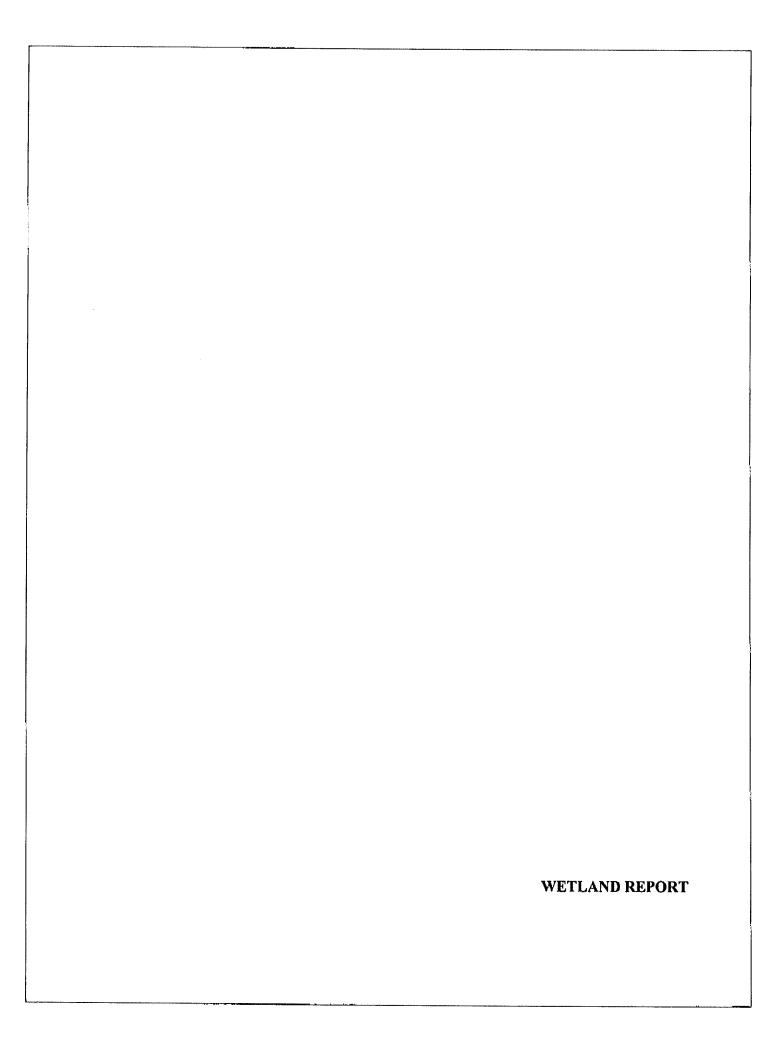














To: Bill Thompson BH2M, Inc.

28 State Street Corham, ME 04038

From: Alexander A. Finamore, CWS, LSE

Mainely Soils, LLC

Date: October 2, 2018

Re: Van Hertel Jr. Property, Baldwin, ME – Wetland Delineation

Memorandum

At the request of BH2M, Inc (the "Client"), Mainely Soils conducted on-site wetland and waterbody delineations and preliminary vernal pool surveys on three adjacent parcels, approximately 63, 51, and 35 acres in size located along Route 11 in Baldwin, Maine. The property owner proposes to subdivide the lots as allowed by town ordinance. These field investigations were performed to provide baseline environmental data to inform the proposed development of the site. The natural resources assessments described in this memorandum were completed in September 2018. In addition to describing the identified resources this report describes the existing conditions within the study area, and the methodologies employed for the assessments.

PROJECT DESCRIPTION

The project site is located within a zone of Residential development along the Route 11 and Freemont Avenue corridors in the Town of Baldwin. The proposed development site is currently undeveloped forested land that has been logged in the past 2 years. Surrounding land use of the site is residential. Access to the proposed subdivision is proposed to be from Freemont Avenue, Route 11, Sand Pond Road, and Fire Lane 11. In total, the wetland and waterbody delineation survey area encompassed approximately 149 acres, identified by the Town of Baldwin as Tax Map 1, LOTS 93 AND 94.

SITE DESCRIPTION

The Study Area occurs in the Sebago-Ossipee Hills & Plains biophysical region of Maine (Schlawin & Cutko, 2014). The Sebago-Ossipee Hills & Plains biophysical region is characterized by variable topography, ranging from plains to low hills of low relief along Atlantic coast. Interior areas are high hills to semi-mountainous, parts of which were glaciated. Vegetation is characterized by tall, cold-deciduous broadleaf forests that have a high proportion of mesophytic species. Bedrock geology is varied and complex, consisting of sedimentary, igneous, and metamorphic rocks. Forest vegetation includes oak-hickory, white-red-jack pine, maple-beech-birch, and aspen-birch cover types. The survey area is located within the Saco River watershed (Hydrologic Unit Classification (HUC) 8 identification 01060002).

The Natural Resource Conservation Service soil survey mapping identifies native soils at the site as being formed within very deep glaciofluvial materials on outwash terraces, outwash plains, outwash deltas, kames, kame terraces, and eskers (Windsor, Deerfield, and Au Gres series) (Web Soil Survey, 2018). The Windsor series is an excessively drained soil map unit, Deerfield is moderately well drained, Au Gres is somewhat poorly drained. Soils within the site are generally flat plains with a slight depressions associated with the floodplain of an unnamed perennial tributary to Quaker Brook.

Study Methodology

Mainely Soils conducted wetland delineation field work within the survey area in September, 2018. The boundary of wetlands were delineated in accordance with the Army Corps of Engineers 1987 Wetland Delineation Manual (1987)

Van Hertel Jr. Property, Baldwin, ME – Wetland Delineation Memorandum Page 2 of 5 October 2, 2018

Manual) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) (Regional Supplement, 2012). All wetland delineations were conducted using the Routine Determination Methods, which requires that a wetland contain a dominance of hydrophytic vegetation, hydric soils, and evidence of hydrology in order to be considered a wetland. Wetland boundaries were located and demarcated using pink day-glow flagging, with each flag labeled with the corresponding alphabetic wetland identification code and a flag number (i.e. A1-1). Wetland flag locations were recorded in the field using a Trimble® GPS unit capable of sub meter accuracy, post processed, and transferred and incorporated onto project mapping.

Six distinct wetland areas were delineated throughout the study area. Additional field notes were also taken to record the classification of each wetland in accordance with the Classification of Wetlands and Deepwater Habitats of the United States, general site characteristics, unique qualities observed during the site assessment, and other considerations relevant to investigation findings and the future completion of a wetlands functions and values assessment in accordance with the Highway Methodology Workbook: Supplement. Representative photographs of each wetland were taken, field sketches were labeled of the wetland boundary on an aerial photograph-based map, and notes were recorded on the flagging sequence for each wetland.

Mainely Soils also surveyed the site for streams, in accordance with the State of Maine Natural Resources Protection Act stream criteria and definitions. Two perennial streams were delineated on the study area that have also been mapped as blue lines on the Steep Falls USGS quadrangle.

Vernal pools are small (usually less than one acre), seasonal wetlands that lack perennial inlet or outlet streams and have no permanent fish populations (Calhoun and deMaynadier 2004). Vernal pools are valuable wetland wildlife habitat because of their potentially high biological productivity and use as breeding habitat by specialized animal communities. The characteristics of vernal pools including size, duration of flooding, substrate type and vegetative community are directly affected by a variety of factors such as landscape setting, surficial geology, soil type, and surrounding vegetation (Maine Audubon Society 1999).

As onsite investigations took place in August outside of the vernal pool indicator breeding season, a preliminary Vernal pool survey was conducted within the Study Area to identify and potential pool locations. Three potential pool locations were identified.

Study Results

Using the methodologies described above, a a wetland delineation was performed in September 24, 25, and 27, 2018. A description of the identified resources follows. Supporting attachments include Representative Photographs (Attachment 1). Wetland Delineation Data Forms can be provided upon request.

Wetlands at the project site consisted of six distinct features. All six wetlands were palustrine forested seasonally saturated/flooded wetland dominated by deciduous trees (PFOIE)(Cowardin et al, 1979) located in a depressional landscape. Portions of Wetland A1 and A5 were located within floodplains of perennial streams S1 and S2 delineated onsite. Dominant wetland vegetation consists of red maple (Acer rubrum), yellow birch (Betula alleghaniensis), green ash (Fraxinus pennsylvanica), balsam fir (Abies balsamea), white pine (Pinus strobus), eastern hemlock (Tsuga canadensis), cinnamon fern (Osmunda cinnamomea), interrupted fern (Osmunda claytoniana), jewelweed (Impatiens capensis), sensitive fern (Onoclea sensibilis), fringed sedge (Carex crinita), and goldthread (Coptis trifolia). The soils within the wetland had a thick, mucky organic surface overlaying a depleted sandy substratum meeting hydric soil criteria A2: Histic Epipedon. Evidence of wetland hydrology included small pockets of water, water stained leaves, and saturation to the soil surface at the time of field investigations in September, 2018.

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Two streams were delineated within the Study Area. Stream S1 was a perennial stream flowing in an easterly direction south of Freemont Avenue within Wetland A1. The stream was approximately 6–8 feet wide with approximately 8 inches of flowing water and a sandy substrate and 18 inch vertical banks. Stream S1 originated within Wetland A1 onsite and flowed off site into Quaker Brook Stream S2 was a perennial stream flowing in a southeasterly direction approximately 4–6 feet wide with 6 inches of flowing water and a sandy substrate and 12 inch vertical banks. Stream S2 drained Sand Pond into Quaker Brook.

Three potential vernal pool locations were identified onsite during field investigations, however, it is recommended that a formal vernal pool survey be completed during the indicator species breeding season as several areas had the potential to contain standing water and support vernal pool species breeding.

Summary

The information contained in this memorandum was collected in order to provide detailed, on-site information regarding wetland and waterbody resources. This information is intended to be used for project planning purposes and to support permitting needs. Six forested wetlands were delineated on the site and were identified as Wetlands A1, A2, A3, A4, A5, and A6. The wetland features were located within sandy soils in slight depressional swales. The wetlands generally exhibited seasonally saturated/flooded hydroperiods, and provided groundwater discharge, floodflow alteration, wildlife habitat, and stormwater/water quality maintenance functions. Two perennial streams and were identified on the site. Three potential vernal pools were identified.

Wetlands are regulated by the U.S. Army Corps of Engineers under the federal Clean Water Act, and by the Maine Department of Environmental Protection under the Maine Natural Resources Protection Act (NRPA). The State of Maine further differentiates wetlands under NRPA by regulating certain wetlands as "wetlands of special significance" (WOSS). If the small pond is determined to be over 20,000 square feet in size, wetlands associated with it may be a WOSS along with those wetlands within 25 feet of the perennial stream under NRPA, although all wetlands are still subject to NRPA jurisdiction as non-WOSS wetlands. Impacts to wetlands resulting from proposed project development require that permits first be obtained from the MDEP and the USACE before proceeding with construction, and where applicable, municipal governing bodies. Consultation with these agencies early in the project design process is encouraged.

Wetlands within the survey area may be further regulated under municipal ordinances, such as Shoreland Zone, Site Plan Review, or other local ordinances. The Town of Baldwin shoreland zoning map identifies both streams delineated onsite as having a 75' Stream Protection Buffer measured from High Water Line. Additionally, the wetlands onsite were identified on the Shortland Zone map with a 250' Resource Protection Buffer.

References:

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe.1979. Classification of Wetlands and Deepwater Habitat in the United States. U.S. Fish and Wildlife Service. FWS/OBD-79/31 103pp.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- U.S. Army Corps of Engineers (USACE). 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region. ERDC/EL TR-12-01. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

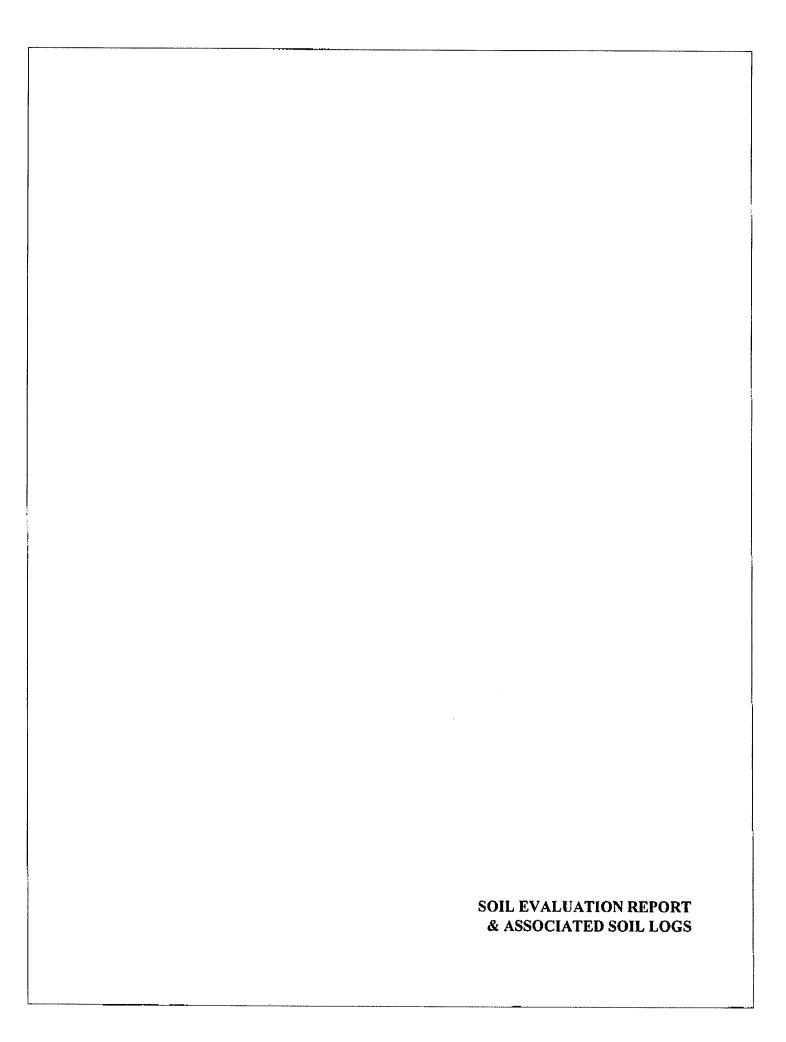
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Schlawin, J. Cutko, A. Maine Natural Areas Program. 2014. A Conservation Vision for Maine Using Ecological Systems.

Web Soil Survey. 2018. U.S. Department of Agriculture – Natural Resources Conservation Service. http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

Attachments:

1. Representative Site Photographs



November 14, 2019



Bill Thompson BH2M, Inc 28 State Street Gorham, ME 04038

RE: Soil Evaluation for Subsurface Wastewater Disposal Systems Sand Pond Road Subdivision, Baldwin, Maine

Dear Mr. Thompson:

On November 8, 2019, fourteen test pits were dug and assessed on 14 proposed residential house lots within the proposed subdivisions located on the east and west sides of Sand Pond Road in Baldwin by Alexander Finamore, LSE #391. Each test pit was located by with a submeter accuracy Trimble Geo handheld GPS unit and marked in the field with an orange flag. The GPS data has provided to you by email for incorporation into project mapping. All of the test pits were located in deep sandy glacial outwash soils and contained suitable soils to support a 'First Time System' according to the Maine Subsurface Waste Water Disposal Rules. Please find the soil profile descriptions of the test pits attached.

If you have any questions, please feel free to email me at: mainelysoils@gmail.com or call 207-650-4313.

Sincerely,

Alexander A. Finamore, LSE #391

SAND POND WOODS FORM F Detailed Description of Subsurface Conditions at Project Site Project Name: Applicant Name: Project Location (municipality): Sand Pond Road Subdivision Van E. Hertel, Sr SOR, DESCRIPTION AND CLASSIFICATION SOIL DESCRIPTION AND CLASSIFICATION Exploration Symbol: Test Pri Borro Exploration Symbol TP-6 on of Organia Harriage Consule territory Motising NAME SERVED Cofor Texture Modifies SANDY LOAM FRIANCE DARK BROWN SANDY LOAM FREARLE DARK BROWN PINE SAND GRAY LOAMY SAND LOAMY SAND BROWN LOOSE ERAVELY LOOSE IGHT YELLOWISH BROWN MEDIUM SAND LIGHT YELDWISH PALE BROWN LIMIT OF EXCAVATION . 18" LIMIT OF EXCAVATION . 40" 0__ _38"_ ×40° bedrock Boll Beries / phase name Sall Series / phase name Dramage Class Hydrologia Grou tologic Group Dramage Cie Bol Classification: So & Clamatica Bots 5 Profile Sol Condition
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SAND POND WOODS FORM SOIL PROFILE/CLASSIFICATION INFORMATION Detailed Description of Subsurface Conditions at Project Sill Project Name: Project Location (municipality): Sand Fond Road Subdivision Van E. Hertel, Br. SOIL DESCRIPTION AND CLAUMFICATION BOR, DESCRIPTION AND CLASSIFICATION TP-9 Test Pit Boring Exploration Symbol TP-10 Tool Pit Mottling SANDY LOAM FREARLE DARK BROWN NONE OBSERVED SANDY LOAM FRIABLE NONE OBJERVED LOANY SAND BLOWISH BROWN MEDIUM SAND BROWN EROWN LOOSE LIGHT YELLOWISH GRAVELLY MEDIUM SAND LIMIT OF EXCAVATION . 36" LIMIT OF EXCAVATION . 36" OF trystric non-trydric <u>≯36°</u> Đ >36" Soll Series / phone memo: Bell Seine / Phone Come reiraga Çini tychologic Orou Hydrologic Oroup Self Classification Prefix Sol Condition SOL DESCRIPTION AND CLASSIFICATION TP-11 Boring Toot Pit Exploration Symbol TP-12 Test Pt Boring Mottling Metting SANDY LOAM FREADLE DARK BROWN SANDY LOAM FRIARIE DARK BROWN MONE OBSERVED PINE SAND CD AV LOAMY SAND REDOLSH SROWN MEDIUM SAND BROWN LOOSE BROWN MEDIUM SAND BROWN LIMIT OF DICAVATION - 36" LIMIT OF EXCAVATION - 40 ₽**40**° Ø >34" ioil Series / phase name; Bail Beries / phose name Orainege Cless hanologia Group Drainege Class Hydrologia Group Pre Sie Soil Classification. Profile Bol Conditio Professional Endorsements (as applicable) Date: Üc# apr 2:

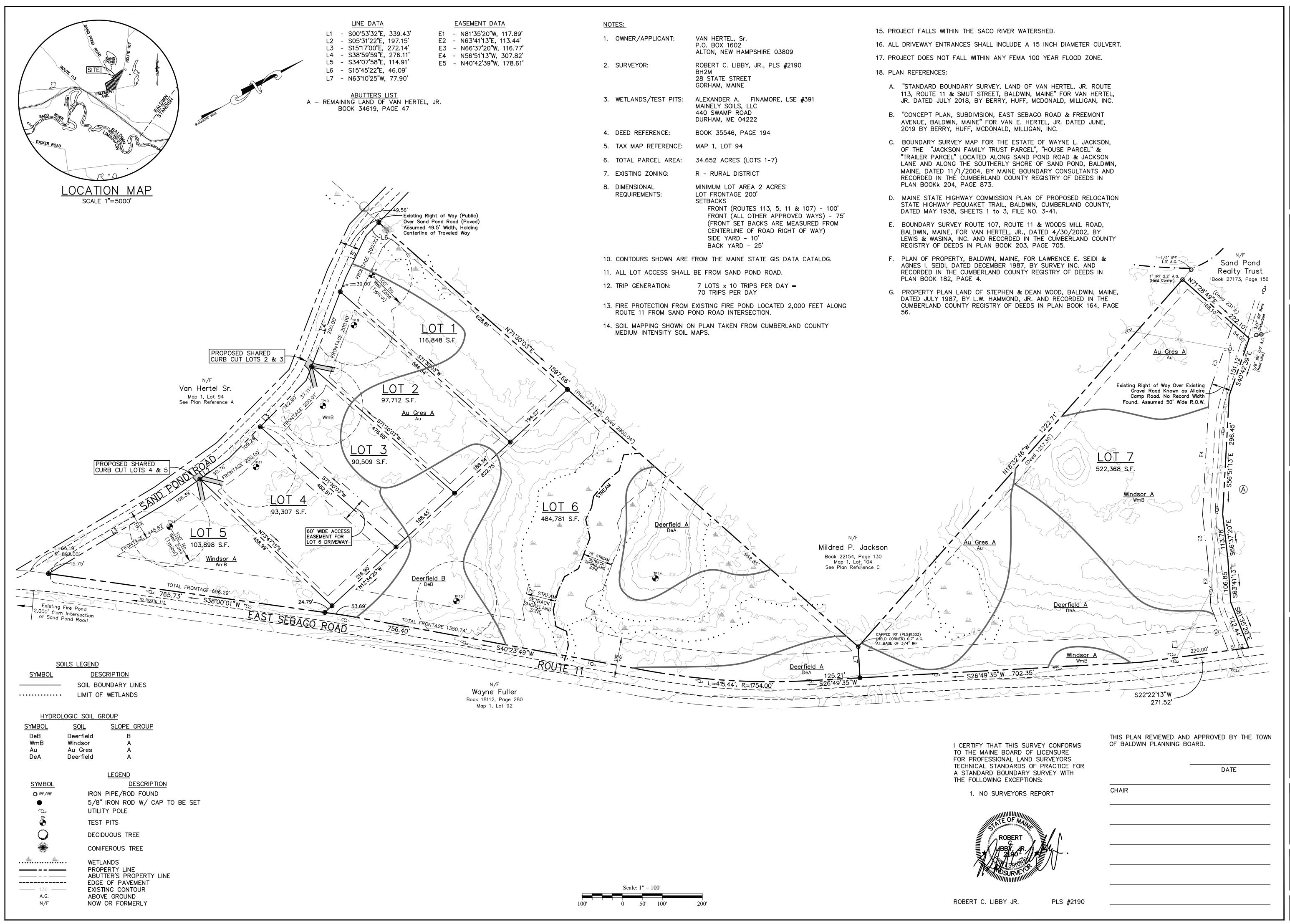
11/8/19

Alexander A. Finamore

SAND POND WOODS FORM F **BOIL PROFILE/CLASSIFICATION INFORMATION** Detailed Conception of Subscripton Conditions at Project Sites Project Location (municipality); Project Name: Applicant Name: Sand Pand Road Subdivision Van E. Hertel, Sr. Baldwin HOM, OTHER PROPERTY AND CLARAFICATION OR, DESCRIPTION AND CLASSIFICATION Exploration Symbol: Tool Pit Borry TP-14 Exploration Symbol 17-13 Test Ptt DARK BROWN SAMEN LOAM FRIABLE DARK BROWN NCKE CALSERVED SAMOY SOAN CASURYED LOANY SAND MONE HAT WOM LOAMY SAND 10012 REALY MANO TEHT YELOWAN GRAVELY MICCOURTAND 100SE LIGHT VELLOWISH PALE SACIVIN LIMIT OF EXCAVATION - 36" LIMIT OF EXCAVATION - 40 <u> 140°</u> ·36° Sof Series / phese nerve Hydrologia Gra On hear Ch Старири Ом indepla Provid Profits Sall Condition

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PEVISION

11/25/19 Combined Proposed Lots 6 & 7

1/28/20 Revised per Site Walk Comments

7/21/20 Revised to Show Lot 7

7/28/20 Submitted for Public Hearing

Berry, Huff, McDonald, Milli Engineers, Surveyors 28 State Street

FOR Van E. Hertel, Sr. P.O. Box 1602 Alton, N.H. 03809

SAND FOND WOODS

PRELIMINARY SUBDIVISION

DESIGNED	DATE
W. Thompson	Sept., 2019
DRAWN	SCALE
Dept.	1" = 100'
CHECKED	JOB. NO.
R. Libby Jr.	19138

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