

**TOWN OF TUFTONBORO
PLANNING BOARD
October 3, 2019
MINUTES**

Members Present: Matt Young, Chairman, Tony Triolo, Vice-Chairman, Bill Marcussen, Selectmen's Representative, Laureen Hadley, Kate Nesbit, Gary Qua, Members.

Member Absent: John Cameron, Member.

Staff Present: Lee Ann Hendrickson, Administrative Secretary.

Other Present: Justin Pasay, DTC, Planning Board Counsel.

Chairman Young opened the meeting at 7:01 PM at the Tuftonboro Elementary School.

I. Public Comment

None.

II. Consideration of Minutes

September 19, 2019

It was moved by Tony Triolo and seconded by Gary Qua to table the September 19, 2019 Tuftonboro Planning Board minutes. All members voted in favor. The motion passed.

III. Scheduled Appointments/Public Hearings

David Winchester, Donald Winchester and John Winchester and C&R NH Realty Trust, LLC

Tax Map #40-2-1

10-Lot Subdivision

Public Hearing continued from September 5, 2019

Matt Young stated the Board has received quite a bit of information including a letter from LRPC regarding Regional Impact and Horizons Engineering's review of the application (third party engineering review). He asked Scott Frankiewicz if he has had the opportunity to review the information.

Scott Frankiewicz replied yes however, he does not have any plan revisions to submit to the Board. He stated all the issues noted by Horizons Engineering are addressable and reviewed his responses to those issues, see attached.

Matt Young stated he walked the island with Tyler Phillips, Horizons Engineering; noting there was question of a vernal pool.

Tom Sokoloski TES Environmental Consultants, LLC, stated he reviewed all the wetlands on the property; noting such did not meet the qualifications of being a vernal pool; noting the State has specific standards for such. He stated the hydrology in the area is not sufficient to have a vernal pool; noting his certification on the plan attests to such.

Randy Owen stated previously the electric easement was split on each lot (5' on one lot and 5' on the other lot) however, at the request of NHEC, the easement is now proposed to be located on only 4 or 5 of the lots instead of all ten lots. Referencing the ownership and maintenance of the existing cable, he stated NHEC owns and maintains such. Relative to the proposed underground vaults and cables on the island, he stated he is responsible for the installation of such; noting NHEC would inspect such following the completion of the

installation. He stated per State regulations, that once the line becomes energized NHEC is then responsible for the maintenance of the line and has ownership of the line. He submitted an email from Mark Taylor, NHEC, dated 10/3/19 which outlines the general installation requirements for underground utilities.

Matt Young asked Mr. Owen if he would have any objection to entering into a maintenance agreement so that the Town is held harmless and spells out what he just stated with regard to ownership and maintenance.

Randy Owen replied he would have no issue with such.

Tyler Phillips, Horizons Engineering, reviewed his report/letter to the Board, dated October 2, 2019, see attached.

Referencing page 8 of Mr. Phillips' letter, specifically the use of mulch instead of grass as a form of stabilization, Randy Owen stated he concurs with the recommendation.

Gary Qua stated the Board would like to request the installation of state of the art septic systems.

Tyler Phillips reviewed two recommended types of septic systems; clean solutions and Enviro system, see page 5 of his report.

Gary Qua stated if the applicant agreed to a maintenance agreement, such would provide flexibility and address concerns of the Board. He questioned whether the agreement would be included in the deeds.

Randy Owen replied yes, or through covenants.

Tyler Phillips noted the Presby systems being installed today are even better than systems installed a couple of months ago because as of September 1st the new manufacturers are requiring users to double the size of their system.

Seth Kessels, Camp Belknap, read a statement he prepared, see attached (dated October 3, 2019).

Cynthia Balcius, Stoney Ridge Environmental, noted the date of Tom Sokoloski's report is 11/2/18 and stated the report refers to small isolated depressions. She stated such raised a red flag for her to the possibility of vernal pools however, she has not been on site and looked at the wetlands at any time. She stated Horizons Engineering's report noted a depression and water stained leaves present on the island; noting Mr. Sokoloski stated this evening that he doesn't feel it's a vernal pool because the water depth isn't sufficient for such. In order to absolutely eliminate an area as a possibility of a vernal pool, a vernal pool assessment must be completed during the breeding season. She stated currently right now the NHDES rules that are posted on their website states that a vernal pool assessment must be completed during the breeding season in order to eliminate and/or identify a vernal pool. She noted the vernal pool breeding season starts mid-April and runs through May; noting the only true indicator of a vernal pool is the vernal pool breeding season.

Tom Sokoloski stated in the course of the wetland delineation he was on site during a rain storm at the end of a very wet fall and water levels were higher than normal at that time of year and if there are no areas of water that can be detained to a depth of 6"-12" or more, the vernal pool breeding habitat is absent regardless of whether the survey is conducted in November or April. He stated it has been his experience that if there is no capability of detaining water at 6"-12" there is no vernal pool habitat.

Matt Young asked Ms. Balcius if she would agree with Mr. Sokoloki's comments regarding the detention of water at 6"-12".

Cynthia Balcius disagreed stating vernal pools are so variable. She stated NHDES and NH Fish & Game felt that it was so variable and so important that they created the vernal pool assessment rules and identified that it is only to be done during the breeding season.

Tom Sokoloski stated the NHDES rules are not currently in effect until mid-December 2019.

Matt Young stated he witnessed the depression; noting there is no possibility of the depression holding 6"-12" of water but rather, only an ability to hold 2"-3".

Tyler Phillips stated he is not a wetland scientist however, knows what vernal pools look like. He stated water could only go up to a maximum depth of 4" and that there is no way the area/depression could contain more than 4" of water ever. He noted that Mr. Sokoloski's testimony addressed his concerns.

Jim Rines stated Horizons Engineering has gone through everything noted in his report and the inconsistencies noted in his July report has been mostly addressed. He stated the review by Horizons Engineering is thorough. He stated parking should be addressed.

Matt Young opened the meeting for public comment.

Bob Bahr, 88 Chase Point Road, stated both the LRPC and Horizons Engineering reports brought up issues with parking. He stated he knows other island property owners that have deeded parking spaces on the mainland. He stated it would be nice if the developer acquired property for parking so that the Town parking is not used. He stated he doesn't feel it is appropriate Town taxpayers to fund parking for a subdivision.

George Hackl stated there will be 12 different houses putting effluent into the lake will diminish the lake and he worries about such. He stated he is not moved to say that such a development of this size should occur.

Matt Young stated the Board received a lot of information and therefore will be reviewing individual aspects; power, water quality, lot dimensions, traffic/parking impact, impact fees and RSA 674:41. He stated the Board received comments from Ron Albert and Ellen Laase (the latter provided through Lakes Region Planning Commission); noting both correspondence addressed/questioned RSA 674:41.

Power

Matt Young stated power is provided by NH Electric Coop; noting there is an easement over a property on the main land (Starble property). He stated the line is energized and has seen the line; noting such is sometimes buried, and sometimes not (located in a shallow area of water between Farm Island and the main land). He stated the applicant will be required to bury the utilities per the Subdivision Regulations; noting he has concerns of ownership (where ownership starts and ends) and liability (specifically regarding liability of the line where it crosses the water) and concerns that a maintenance agreement is needed outlining who is responsible for damage or repair.

Gary Qua stated he agrees with Mr. Young regarding liability therefore there has to be an agreement to protect all parties (applicant, Town and general public).

Kate Nesbit agreed with Mr. Young and Mr. Qua; noting the Board needs to safeguard the Town and its citizens. She questioned prop damage as a result of the shallowness of the water.

Matt Young stated it is obvious that props have hit the line and noted the line is substantial and appeared to have no damage to it. He stated the disturbance created to either dredge the line in or pour concrete over the line far outweighs the gain.

Gary Qua questioned signage; stating such would be appropriate.

Matt Young stated it is listed as non-navigable in that area.

With regard to liability and maintenance of this power distribution system, Bill Marcussen stated he doesn't see how this situation is different from any other power distribution system in the Town. He stated NHEC provides the power, maintains the lines and although it is true that an underwater line has some risk associated with it, the Town has overhead lines that get knocked down when someone runs into a utility

pole. He stated he is concerned that the Board would require in this subdivision an extraordinary requirement with respect to liability and maintenance on power lines that aren't substantially different from any other subdivision in the Town of Tuftonboro.

Matt Young stated the line runs under water.

Bill Marcussen stated he doesn't see the difference and asked if there is a higher risk to the public's safety than from other distribution systems. He stated it seems the Board is setting up things that are an exception to what is done in the normal course of the distribution to the Town.

Matt Young stated the NHEC may treat the failure of that line which runs under water differently and having minimal protection would alleviate the Town from liability.

Bill Marcussen questioned whether the Board foresees future subdivisions requiring a similar agreement.

Cindy Johnson, Haverhill Acres, stated that although the power line has been there a long time, it is a risk. She stated the area is shallow and it is dangerous. She stated the State will no longer place "non-navigable" signs in that area.

Randy Owen stated the Public Utility Commission writes the rules relative to the underwater cable; noting they specify the shielding on the cable. He stated as soon as the cable is energized NHEC owns the line, transformers, etc. He stated the Town doesn't have to be concerned about such.

Matt Young asked Mr. Owen if he would have any objections to a maintenance agreement and release of liability with the property owners on the island.

Randy Owen stated he doesn't think so. He stated the Public Utilities Commission specifies that once a cable, under water or underground is energized the power company owns it. He stated there are already parameters that specify such.

Matt Young stated he would request a maintenance agreement that clearly defines such.

Randy Owen stated he would solidify such.

Maureen Forbes asked if there was no electricity present, would the power company install it at this state because if it were to fail, would NHEC repair/replace the line.

Seth Kessels stated he believes the Public Utilities Commission oversees investment owned utilities such as Eversource and is not sure if they fully regulate cooperative owned utility companies such as NH Electric Coop.

Matt Young stated he feels a maintenance agreement would have to be a condition of approval.

Barry Ennis stated he thinks every island on the lake has an underground cable going to it and there doesn't seem to be an issue as to who is responsible for it.

Parking/Traffic

Matt Young stated Tuftonboro has a lot of island residents, some are year round, and most are not. He stated from his experience without question the majority of island residents do not trailer their boats up to the lake. He stated he spoke to people who sell island properties and asked "in the past two years how do people access those island properties". He stated he was informed that the people come from all over the lake (yacht clubs and marinas from Wolfeboro, Gilford and surrounding areas). He stated he was informed that some people were interested in slips at Pier 19 however, there were no slips available. He noted there are 56 slips at Pier 19 and that number is more than likely not going to change and therefore, he doesn't see there being a large increase in traffic at that location.

Bill Marcussen stated there are times during the season when the 19 Mile Bay public parking lot is full however, people tend to park along the road right-of-way because it's closer than the lot. He stated the Town always has a strong demand for parking passes for the lot which tells him there is some interest by island residents whether it be for their own use or for guests. He stated more island residents suggests there might be more demand for that lot however, anecdotally it is generally not full. He stated the lot is not overflowing today.

Matt Young stated that in the past when the Board has been dealing with other subdivisions larger than this subdivision and that includes larger uses of roadways and parking lots, the Board has not requested a traffic study. He stated he feels that the demand for traffic for ten seasonal lots on an island will be substantially less.

Bill Marcussen noted two issues; provision for parking and impact on traffic. He stated it is hard to imagine this small subdivision having a huge impact on traffic. He questioned whether the Board is aware of a requiring a traffic study for other subdivisions because of impact on traffic.

Tony Triolo stated he is not aware of any instance the Board has required such. He stated he doesn't see a significant increase in traffic flow.

Matt Young stated he doesn't recall the Board requiring a traffic study.

Gary Qua stated the Board recently approved a 23-lot subdivision and there were no concerns from anybody about traffic impact. He stated he has gone in and out of the lot 6 times since July and noted he drives by the parking lot frequently and has found that maybe weekends and the fourth of July is busy. He stated Route 109 is a State highway and is built for large amounts of traffic; noting the road is wide and parking is allowed on the sides of the road; noting the Board doesn't have jurisdiction over the latter. He stated he doesn't see a lot of cars in the lot therefore, doesn't see the need for a traffic study.

Kate Nesbit stated she agrees with everything being said.

George Hackl stated one house doesn't equate to only 1, 2 or 3 cars and island properties will have guests and could amount to ten cars.

Matt Young stated such could be true for all existing island homes. He stated the parking lot at Pier 19 is not overrun.

George Hackl stated the Town is on the verge of being overcrowded.

Karen Simus, Haverhill Acres Road, stated she understands the Board is saying the lot hasn't been busy and agrees with such however, that is only since the store has been closed. She asked if signage could be placed along the sides of the road.

Matt Young agreed that the parking on the side of the road is far more dangerous. He stated the Chief of Police informed him after the last meeting that the parking is outside of his jurisdiction and there is nothing he can do with regard to enforcement. He stated the State rebuilt that portion of the road and he is unaware as to how much the State owns.

Karen Simus stated the bigger concern is that parking is occurring on both sides which impacts visibility.

Bill Marcussen stated the State controls every aspect of use on State highways; parking/no parking areas, signage, driveways, etc. He stated that if parking is not prohibited then it is allowed.

Karen Simus asked if the Town could ask the State to look at the issue.

Matt Young stated such would be a question better suited for a Selectmen's meeting.

Suzanne Brunelle, Devine Millimet, representing Camp Belknap, stated Horizons Engineering's report states two spaces per residential dwelling unit is required; noting such is the Board's regulation. She asked the Board how many times they have waived that requirement in prior subdivisions. She stated the term traffic is too broad of a term and asked how the Board would address the requirement for two parking spaces.

George Leclair asked if the Board has considered the impact on existing parking if the State decides to put up signs for no parking and there is no parking at the store.

Water Quality

Matt Young stated Tyler Phillips spoke about how island properties will have a smaller impact; noting he agreed with such because island properties do not have driveways, the lots are smaller and most tend not to have lawns. He stated Mr. Phillips makes some excellent points as to how to limit the deterioration of water quality. With regard to septic systems, he stated the proposed septic system is going to be some of the most advanced systems out there.

Gary Qua stated the new septic systems are extremely state of the art. He stated not having paved roads is a big deal. He stated mulching or placing wood chips along the 12' wide access path will stop erosion. He stated there are more issues with perched beaches and lawns. He stated he doesn't see an impact due to the seasonal usage.

Matt Young stated moving forward, the Board should consistently institute maintenance of septic systems.

Gary Qua recommended endorsing a petition warrant article in the future. He stated there is low impact to water pollution.

Tony Triolo stated he has more concerns for the aging septic systems in 19 Mile Bay.

The Board agreed there is no impact to water quality.

A member of the public stated Horizons Engineering mentioned that the introduction of sand is more likely to be an environmental concern. She asked if there is a possibility of beaches being constructed.

Matt Young stated installing a beach would require a permit from DES. He stated he thinks it's likely there will be conditions by both the State and the Board that require the entry/access point be restored as well as the implementation of erosion control measures.

Randy Owen stated he is agreeable to such conditions if imposed.

George Hackl asked how the Board ensures over a long period of time that the septic systems are maintained properly. He asked if a cistern could be installed.

Tyler Phillips stated a property owner has to exhaust all options before the State will consider a tight tank. He stated disposal options have to be approved by the State and noted that if a septic system has failed the State may allow for such. He stated any septic system has the potential to fail however, notes that two things help ensure the longevity of the system – some form of requirement to ensure the tanks are checked and/or pumped on a frequent basis and installing an Enviro-septic system.

Peggy Culverwell stated it makes her sad at the destruction of the island through the removal of trees, huge houses, docks and boats that will pollute the lake.

Bill Marcussen stated impact on water quality is soil disturbance; noting there are BMPs for restoring disturbed areas during the construction process. He stated the design and installation of the septic systems

are state of the art systems and the maintenance of those systems ensure that they will continue to perform as well as expected over time.

Lot Dimensions

Matt Young stated that with regard to lot dimension, Horizons Engineering noted some issues with a few of the lots. He stated the Board does see these issues time to time on applications and likes to have the issues resolved. He stated he'd like the applicant to resolve the issues noted in the report.

Bill Marcussen stated a condition of approval could include the resolution of such or adjustments to the dimensions could be made prior to approval.

Matt Young stated he is comfortable with a having a condition to include State Subdivision approval however, would also like to see the dimensions of the lots resolved.

Gary Qua, Bill Marcussen and Tony Triolo agreed with Mr. Young.

Scott Frankiewicz stated there are three lots in question; noting there is no problem with fixing the lot dimensions of those lots.

Seth Kassels, Camp Belknap, stated Horizons Engineering report states the slope analysis of the proposed lots with DES is determined that the composite slopes may populate the need for larger lots. He stated if the Board makes a condition to include DES approval then according to Horizons Engineering's report, the State could require the applicant to change the lot sizes on that slope. He stated slope determination is determined by the State so they have the right to change to the lot line based on their analysis. He asked Tyler Phillips if such is correct.

Tyler Phillips stated the State would not change the lot line however, may require the applicant to revise the configuration of the lots because it doesn't meet the requirements. He reviewed how NHDES reviews slope and noted that he actually analyzed each lot individually.

Seth Kassels confirmed that reconfiguration of the lots could still happen.

Matt Young stated a condition of approval would include State Subdivision approval.

Impact Fees

Matt Young stated an impact fee can be imposed by a Town if it's found that a project will have an impact on the Town and it's supported by evidence that improvements are required. He stated to his knowledge an impact fee has never been required and feels that the Board needs to determine if an impact fee needs to be assessed. He stated he spoke to the Road Agent and reviewed the potential impact to the boat ramp at Pier 19 because more than likely the construction barge and equipment would access via that boat ramp. He stated the Board needs to determine if something needs to be done to the parking lot.

Randy Owen stated a barge cannot be brought in through that boat ramp.

Bill Marcussen stated because there are some unknowns associated with the impact as it relates to parking, it would make sense to have an impact fee to address such if it should become necessary to increase the size of the parking lot.

Matt Young stated the regulations require two parking spaces per dwelling unit and asked how the applicant would address such and whether the applicant would request a waiver to use the Town parking lot.

Randy Owen stated he feels people are going to buy boat slips; noting that with the cost of building a house and septic system that no one is going to want that kind of investment without a boat slip. He stated he has a list of available slips.

Member of the public asked questioned deliveries throughout the construction phase.

Matt Young stated typically deliveries coincide with the barge schedule.

Justin Pasay, Planning Board Counsel, stated the Board is talking about off site exactions and off-site improvements. He stated the Planning Board does have the authority under the Subdivision Regulations to assess what amounts to an off-site exaction for capital improvements. He stated the Zoning Ordinance requires two off street parking spaces per dwelling unit; noting such is unique with regard to the fact that it is an island property being considered. He stated the applicant states they are going to satisfy the parking requirement through the use of the Town parking lot. He stated the discussion the Board should consider is whether or not, by the evidence provided, the requirement has been satisfied and whether or not the evidence suggests the need for some type of improvement to the parking lot in order to accommodate the use. He stated the Board is required to make findings based on evidence therefore, he recommended retrieving a cost estimate before an off-site exaction is imposed.

Ann Hackl stated she's not certain why a public parking lot financed by the taxpayers could be allowed to satisfy the requirements for parking.

Relative to granting a waiver for the parking spaces, Jim Rines stated the Board doesn't have the authority to waive zoning; noting only the ZBA can relieve zoning requirements and a variance would be required.

Sarah Bolle questioned dock space; noting only 3-4 are available at any time and asked where the guests would go.

Matt Young stated the question has been raised as to whether the parking lot meets the requirements of the parking spaces. He stated it seems unreasonable that the lot would not fulfill the requirement. He stated the Town has approved subdivisions on islands before and has never required an applicant to prove they have two parking spaces.

Bill Marcussen stated it is not unreasonable to anticipate the use of the public lot particularly if there is a provision to expand the lot so that it is not overloaded as a result of the increase in use.

Kate Nesbit stated it will not be known for years if there is a significant change and impact to the use of the parking lot. She questioned whether money could be escrowed that would cover the cost of expansion of the parking lot.

Justin Pasay stated if the Board found the data and evidence before them required an assessment of an off-site exaction, the Board would determine the amount and then require the applicant to pay the proportionate share. He stated the Town's treasurer would deposit the money in a fund and over time (six years) the assessment would be made as to whether the capital improvements were needed. He stated if a capital improvement was not required the money would be returned to the applicant.

Gary Qua stated the parking lot is used by townspeople who own property on islands in the Town.

Tony Triolo stated the lot is already being used by existing island lot owners and can't see the reasoning to put money aside.

Matt Young stated the proper procedure would be to have a motion to have the Road Agent investigate potential costs for the expansion of the lot.

Jim Rines noted wetlands are located in the area of the parking lot and questioned whether it could be expanded. He stated the parking requirement has to be addressed because it is not waivable.

Referencing Route 109, Fran Laase stated the new road went through wetlands and in exchange for such (mitigation) the Town put the balance of the acreage surrounding the parking lot into a conservation

easement. He stated such would nullify any thoughts for expansion. He stated siltation, turbidity and debris will end up in the lake from the construction and whatever decision the Board makes will affect the Town beach.

Cindy Pratt stated it has already been discussed that there will be slips for boats therefore one of the cars will be parked at the location of the boat slip which reduces the number of cars to ten that would be using the Town's parking lot. She stated there are no available slips at Pier 19; noting the slips will be from other locations around the lake.

Member of the public asked if there are any restrictions on the permit for the parking lot.

Barry Ennis stated the parking lot is Town parking for Town residents. He stated the extra tax revenue can accommodate any improvements and issues that may come up.

Randy Owen stated the land is in current use therefore there will be a huge infusion of tax revenue when the land is removed from current use.

Matt Young noted such does not have a lot of bearing on the application. He questioned whether a boat would meet the requirements for parking due to the lake being a public waterway (whether boat parking at a dock would fulfill the requirement for two parking spaces. He requested the applicant address the issue. He stated the Board received two letters from Ron Albert and Ellen Laase (the latter provided by Lakes Region Planning Commission as the question was posed to them via email) pursuant to RSA 674:41; noting a court had found that without 150' of road frontage a lot owner couldn't subdivide. He stated the Town adopted Section 16.2.5.C (and proceeded to read such); noting such was reviewed by Planning Board counsel and Horizons Engineering and it was determined that the burden has been met as a result of such.

Ellen Laase stated Farm Island is in the Island Conservation District and feels that by changing from Island Conservation to residential changes the intent of the Master Plan as to the purpose of the District.

Matt Young stated the Board goes by a table of uses to determine what is allowed in a district. He stated a single family dwelling is a permitted use in the Island Conservation District.

Ellen Laase confirmed the Board doesn't look at intent; noting the intent of the Master Plan is to maintain water quality, provide habitat, etc.

Matt Young stated the Board has discussed water quality at five meeting and noted the use is permitted in the zoning district.

Randy Owen asked if a boy's camp with 60-80 kids is a permitted use in a residential district.

Matt Young replied yes, but requires a special exception.

Randy Owen asked if Camp Belknap obtained a special exception.

Matt Young stated he doesn't believe so.

Randy Owen asked if they went to the wetlands bureau when they built an impervious surface.

Matt Young replied not that he is aware of.

Randy Owen asked if they abided by wetland permitting to have a landing.

Matt Young stated he doesn't know the specifics of such.

Dana Hamill asked if wetlands could be crossed.

Matt Young stated he doesn't believe there are wetland crossings required.

Tyler Phillips stated he reviewed such and noted all of the lots have an upland area that would allow for access from the lake. He stated all wetlands in Tuftonboro are part of their own zoning district; noting the Town adopted a Wetlands Overlay District.

Ron Albert, 19 Winnishores Road, stated there hasn't been one word about wildlife this evening. He stated the loon population is much challenged and the subdivision could impact the loon population on the lake. He questioned mitigation for such and requested the Board consider such.

Tim Sullivan stated there have been two groups of experts, NH Fish & Game and Loon Preservation Committee, who have looked at the island and determined there are no active loon nests. He stated that when a wetlands or shoreland permit is applied for NHDES will determine if there is impact to the species.

Matt Young stated the Board received a lot of information and reports; noting there are issues that need to be addressed by the applicant and requested a motion for continuance.

It was moved by Kate Nesbit and seconded by Tony Triolo to continue the David Winchester, Donald Winchester and John Winchester and C&R NH Realty Trust, LLC application and public hearing to October 17, 2019; location to be determined.

Jim Rines stated the date and location has to be specified otherwise the application has to be re-noticed.

It was moved by Kate Nesbit and seconded by Tony Triolo to continue the David Winchester, Donald Winchester and John Winchester and C&R NH Realty Trust, LLC application and public hearing to October 17, 2019 at the Town House, 247 Middle Road. All members voted in favor. The motion passed.

IV. Action Items

N/A

V. Discussion Items

N/A

VI. Informational Items

N/A

VII. Other Business

N/A

VIII. Public Comment

None.

It was moved by Tony Triolo and seconded by Gary Qua to adjourn the October 3, 2019 Tuftonboro Planning Board meeting. All members voted in favor.

There being no further business before the Board, the meeting adjourned at 9:35 PM.

Respectfully Submitted,

Lee Ann Hendrickson

Lee Ann Hendrickson

Farm Island Subdivision

October 3, 2019 @ 7pm

September 5, 2019 @ 7 pm

July 18, 2019 @ 7 pm

August 1, 2019 @ 7 pm

Attending:

Myself – Scott R Frankiewicz – New Hampshire Land Consultants

Randy Owen & Cindy Pratt – Applicants (would like to read letters into the record)

Tom Sokoloski, wetland & soil scientist – TES Environmental Consultants (will present his findings)

Owner:

David, Donald and John Winchester

Applicant:

C & R NH Realty Trust, LLC

Cindy Pratt & Randy Owen

UPDATE:

Received the Engineering review from Horizon Eng on 10-2-19

Received the Lakes Region Planning Commission rev. on 10- 1-19

We reviewed the reviews and feel all items are able to be addressed with minor revisions to the plans.

Lot 2-6 depth, depending on where you consider the frontage the meets or doesn't meet the requirement. We are prepared to revise the lotlines slightly to meet that requirement from all points on the lot.

The engineer revised raised some minor **lot area** concerns and we will be able to address those by minor lot line revisions.

Lot 2-9 well radius. We will be able to move the well slightly back on the property to keep the well radius from going over the reference line (property line)

The frontage on lot 2 was noted as being short of the 150' required. After reviewing it with the method required by Tuftonboro, we need to added 2' to the frontage, which will be done.

50' setback to wetlands, we were showing 50' building setback to all wetlands where the town of Tuftonboro does not have that setback. In most areas we will eliminate that building setback and adhere to the 50' & 75' setbacks as required by the Town and NHDES.

We will maintain the 50' wetland and shoreland setback on lots 2-9 & 2-10, the loon nesting area, and make that a no-build area and will note that on the plans.

Wetland area: to be addressed by Tom Sokoloski

Septic systems will be state approved systems, type will be determined by home owner at the time of design.

The engineer addressed by noted no concerns in reference to Septic systems, Fertilizer, Ground disturbance, Impervious areas, Beaches, Pesticides, Tree cutting as these will be controlled by state and federal permitting

The engineer addressed electrical, traffic, Fire protection

UPDATES on 9-5-19:

Overall area has been adjusted to 13.40 acres, 583,576 sq. ft. (fmrly 13.58 acres and 13.3 (Doucet). The area is slightly different than the plan prepared by Doucet Survey prepared for the 2-lot subdivision in 2010, the Doucet plan obtained the areas from aerial photography (note #10) and our areas are based actual ground survey of the entire 2600'+ shoreline.

ERROR: On the plans submitted on sheet 2 of 5, the area was incorreced noted under lot information, this will be corrected to 13.40, it currently notes 13.58 acre (lot old area)

Lot count has been reduced from 12 lots to 10 lots due to a couple factors, First, the applicant has reworked the lots to better represent their ultimate plans with the land and we increased the lot sizes appropriately to meet NHDES minimum lot size requirements, as well as, the minor adjustment of the reference line effected lot sizing slightly.

ERROR: On the plans submitted on sheet 3 of 5, lot #2 shows an additional proposed house, this will be removed as the existing cottage is on this lot and this should not have been shown.

Lot areas range from 48,084 sq. ft. (1.10 acres) Lot #2-5 to 91,543 sq. ft. (2.12 acres) Lot #2 which has the existing house and shed on it. All lots meet NHDES lot size requirements depending on slopes on the lots, only 3 lots are under 53k sq. ft. and 7 lots are 53k+.

Frontages range from 150' (lot #2,2-3) to 423' (Lot #2-4). Lot #2 has less than 150' shown on the tie line but the actual frontage is 150'+ and the lot spreads out as you go in to the lot from the lake and the well is shown towards the back of the lot near the existing cabin.

Easements, existing (note #12) and proposed (note #22), have been further researched and are shown and/or noted on the plans. The existing easement in favor of NHEC (fmrly White Mtn Power) is shown on the plans, as well as a proposed easement along the lot lines for access to service all lots. All easements are referred to in the notes. NHEC has an easement on land (tax map 40 Lot 3-1) where the power connects to the island.

Test pits/soils have been updated and perc test data added to all test pits (sheet 3 of 5)

The shoreline data has been supplemented and we are showing all elevations referenced to NAVD 88. Full lake elevation, adjusted to NAVD 88 is 503.82' (504.32' NGVD29). Difference between NAVD88 and NGVD 29 is 0.50'.

TBM's now show both NAVD 88 & NGVD 29 elevations.

ERROR: On the plans submitted "TBM A" shows the elevation for NAVD88 to be 516.32', this will be adjusted to 516.22'.

Floodplain elevation, as published by FEMA, is 506.00' (NAVD88). The floodplain is shown and noted on the plans. All lots are impacted by the floodplain, matter of fact all lots that have frontage on the lake are impacted by the floodplain.

Electric, the system has been tested by NH Electric Coop. and a letter, dated August 27, 2019, from the company has been submitted. The line has been inspected, tested and they determined it is in good working condition.

Fish & Game has performed a sitewalk and published a letter stating they found no evidence of nesting loons or bald eagles. The letter did note a couple areas of potential loon nesting areas, one on the parcel the subdivision is proposed and one in the area that Camp Belknap youth access the island. A note has been added to the plans in

this area. A note has also been added to the general notes (note #21) to put any contractor on notice that a potential loon nesting area is adjacent to lots 2-8 & 2-9 and they should use caution in those areas during construction of the lots. The area is also protected by a minimum of a 50' setback to wetland surrounding the potential nesting area.

Regional impact? Minutes from the last meeting noted the Planning Board would seek legal opinion regarding regional impact or not. Was this done?

NHDES approvals:

Shoreland impact within 250' of reference line, any dock installation, septic system permits will be required for development of the lots

State subdivision approval typically takes 30-60

Other items to address: 3rd party review, Continuance past the 65-day clock

Other items to consider: fertilization of lawns, amount of area allowed to be cut per lot....these can be addressed by notes if you desire.

Existing Conditions:

Survey was performed by: Brown Engineering and Surveying & New Hampshire Land Consultants

Design prepared by: New Hampshire Land Consultants

Environmental provided by: TES Environmental Consultants

Zoning District: Islands Conservation District
Lot size: 1-acres
Frontage: 150'

Current use: Single family dwelling

Existing lot size: Currently the island has two lots, one owned by the Winchester family (13.40) and the second lot owned by YMCA Camp Belknap (7.5 acres)
13.40 acres, mostly upland with wetlands, as shown on plans, adjacent to the waters edge in various locations around parcel

Existing structures: Cottage on site with a few outbuildings including a shed, outhouse and boathouse

Existing Utilities:

Water: A waterline run from the lake to the house that is no longer in use

Electric: A series of poles are located on the island from the waters edge on the south side of the island to the cottage, the system has been tested by NH Electric Coop. and a letter from the company has been submitted. The line has been inspected and tested and they determined it is in good working condition.

Sewer: the cottage currently has an outhouse and a grey water leachfield

Proposed conditions:

Restoration of the cottage on-site to be equipped with a state approved well and septic system

10-lot residential subdivision, with no internal road proposed

Lots range from 1.1-acre to acres with 1-acre of upland on all lots

All lots have 150' to 350' of frontage along the water where 150' is required

Test pits & perc test were performed on all parcels with seasonal highwater tables ranging from 16" to 32"

A potential well location and 75' protective well radii are shown

A 4,000 sq ft suitable septic area is shown on all lots

30' x 40' potential house locations are shown and actual location will be determined when the parcels are developed and NHDES shoreland and septic permits are applied for.

NHDES lot loading: all lots will meet loading requirements for 4-bedroom homes.

Parking: There is public parking located very close to the public dock and there are many slips available throughout the area for purchase or rent.

Required permits:

NHDES State subdivision approval: pending submittal, I always wait until the town has accepted the application. (to be submitted)

NHDES shoreland permit: Individual shoreland permits will be submitted on a lot by lot basis

NHDES AOT: Not required due to staying under 50,000 sq ft of contiguous impact with shoreland protection. All requirements of Env-Wq 1503.12 will be followed. All lot impacts will be remain on individual lots and material will not be transported across lot lines.

Army Corp. of Engineers approval – no request for a federal permits (wetlands, floodplain).

Flood zone: Per FEMA 33003C0620D Dated: 3-19-2013 shows the island to be in Zone X, Not within the 100 year flood zone.

Natural Heritage Preservation Act: (Sec 106 review) Sec 106 applies only if a federal agency is carrying out the project, approving it or funding it. No federal agency involvement or approvals are required.

Natural Heritage Bureau review: We performed the NHB review and there are no know potential impacts of endangered species. Report has been submitted to the town for record.

Docks: all docks for the proposed parcels, if desired will be required to follow the permitting process through NHDES. Each parcel has a location they access the water without impacting wetlands.



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Project 19185

October 2, 2019

Tuftonboro Planning Board
Attn. Mr. Matt Young Chairman
Town of Tuftonboro
240 Middle Road
PO Box 98
Center Tuftonboro, NH 03816

Subject: Review of 1 Farm Island Subdivision Plan (Map 40/Lot 2-1)

Dear Chairman Young,

The purpose of this letter is to present the findings of Horizons Engineering, Inc.'s peer review of a proposed 10 lot subdivision of a 13.4 acre parcel identified as Tuftonboro Tax Map 40, Lot 2-1 located on Farm Island in Tuftonboro New Hampshire. The lot lies within the Town's Island Conservation Zone and portions of the lot fall within the Town's Wetland Conservation Overlay District. Horizons was contracted to perform a survey and engineering review of the application for conformance with Town and New Hampshire Department of Environmental Services standards and review additional material submitted to the planning board during the July 18th and August 1, 2019 meetings.

Horizons obtained and reviewed the following data and documents as part of its review:

- Zoning Ordinance, Town of Tuftonboro New Hampshire, dated March 2017 (including amendment to Section 12.5.3, dated 2018)
- Town of Tuftonboro Subdivision Regulations, dated December 15, 2011
- Town of Tuftonboro Meeting Minutes, dated July 18, 2019
- White Mountain Survey & Engineering, Inc. Letter and associated attachments to YMCA Camp Belknap, dated July 8, 2019
- Stoney Ridge Environmental, LLC letter and associated attachments to YMCA Camp Belknap, dated July 11, 2019
- Francis W. Lasse and Ellen Lasse letter and associated attachments to Tuftonboro Planning Board, dated July 18, 2019
- Eileen McNamara Article to Concord Monitor dated July 14, 2019
- Anonymous cover letter to Tuftonboro Planning Board, dated July 18, 2019 and copy of petition by "Friends of Farm Island"
- New Hampshire Preservation Alliance letter to Tuftonboro Planning Board, dated July 18, 2019
- Seth Kassels Farm Island Talking Points, dated July 18, 2019

PAGE 1

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- Lake Winnepesaukee Association letter to Tuftonboro Planning Board, dated July 17, 2019
- Victoria Bunker, Inc. Report titled Summary of Archeological Effort, dated July 2019
- TES Environmental Consultants, LLC. Letter to Mr. Randy Owen, dated July 27th, 2019
- Letter from Lenore J. Clark to Tuftonboro Planning Board dated July 31, 2019
- Town of Tuftonboro Planning Board Meeting Minutes, dated August 1, 2019
- 5 sheet plan set titled Proposed Subdivision Plan for David, Donald and John Winchester, Tax Map 40-Lot 2-1, 1 Farm Island, Tuftonboro, NH, by NH Land Consultants, latest revision dated August 26, 2019.
- Auto CADD file of Project plans provided by applicant's agent
- Letter from the New Hampshire Electric Coop Dated August 27th
- Town of Tuftonboro Planning Board meeting minutes dated September 5th, 2019
- Town of Tuftonboro Notice of Regional Impact, dated September 12, 2019

Additionally, Horizons participated in a site visit of Farm Island on September 30, 2019 with the applicant and Chairman of the Tuftonboro Planning Board.

Based upon our review of the foregoing documents we offer the following comments for the Planning Board's consideration:

1. Lot Dimensions

a. Lot Depth

- Tuftonboro's Zoning Ordinance (see table in Sec. 4.2) requires that lots be a minimum of 200' deep and defines lot depth (Zoning Ordinance Sec. 1.1.29) as the horizontal distance between the front lot line and the rear lot line. Lots 2-6 and 2-10 are configured in a manner which makes determination of a rear lot line (and therefore compliance with the Tuftonboro Zoning Ordinance (ZO)) uncertain. Lot 2-10 would typically be measured from a single point at the rear of this triangular lot and using this approach the lot meets depth requirements. Lot 2-6 is less certain when one measures from the northerly back line pin, perpendicular to the back line, to the front of the lot. **Using this typical approach we find that proposed lot 2-6 has less than 200' of depth and should be reconfigured.**

b. Lot Frontage

- Tuftonboro ZO (see table in Sec. 4.2) requires 150' of lot frontage. The ZO (Sec 1.1.22) defines shore lot frontage as that measured in 50 foot chords. **Lot 2's frontage does not appear to meet this requirement and should be reconfigured.**



- c. Lot size
 - i. Tuftonboro ZO (see table in Sec. 4.2) requires that lots in the Island Conservation Zone contain a minimum of 1 acre of land exclusive of land steeper than 25% and (per ZO12.5.3.B) wetlands. Although in our review we computed a difference in the area of land which would count towards minimum lot sizes, we do not find that wetlands areas nor land over 25% would render any lot insufficient to meet the ZO's minimum lot size requirement with respect to these landcover features.
- d. A summary of survey review results and comments can be found in **Appendix A**.

2. NH Subdivision Approval

- a. Soil based lot size
 - i. State Subdivision approval is needed for creation of lots less than 5 acres to provide reasonable assurance that the soils on a proposed lot can support the anticipated septic load. The intent of this process is to lessen the risk that a lot is created and later, during the completion of a septic design (which is a separate process which is typically carried out by the individual lot owner), the lot owner finds that the lot does not have suitable soils or area for effluent disposal. Accordingly, in NH Subdivision Rules the NH DES specifies (in Env-Wq 1000, Table 1005-1) that lots must have a minimum area of soils exclusive of very poorly drained soils. Soils are grouped according to their drainage class (with Group 1 being very well drained and Group 6 being very poorly drained) and are to be determined based upon the Natural Resource Conservation Service (NRCS) soils map and confirmed with an onsite test pit. The applicant has stated in note 18 on the plans that all soils on the lots to be created are Group 3 soils and that the intended septic loading will be based upon 4 bedrooms.

Another metric in the DES Table is slope with steeper slopes requiring larger lots to accommodate the same septic loading. While the applicant has made a general statement on the plans regarding lot slope (indicating that the majority of the lot slope is A slope 0-8%) but has inconsistently noted the soil type on the plan as a C slope 8-15%; a closer review of the slopes of the lot using the topography contained on the plans indicates that for certain lots, over 40% of the lot contains slopes steeper than 8%.



Horizons completed a slope analysis of the proposed lots and in conjunction with the DES table, **has determined that the composite slopes on lots 2-5, 2-6, and 2-10 may prompt the need for larger lots** than are presently proposed (please refer to **Appendix B**). DES will ultimately review the applicant's application for State Subdivision and make a determination, however we feel that whether the DES uses default NRCS slopes or more detailed slope information described above, several of the lots may need to be larger than currently proposed.

b. Well Radius

- i. A 75' protective well radius has been shown for each lot. This is required by DES and per Env-Wq 1005.05 the well radius must be wholly contained on the proposed lot. **We observe that the well radius on lot 2-9 is not contained on the lot. We recommend that this be addressed.**

3. Water Quality

There appears to be significant interest and concern by residents regarding the effects of the proposed subdivision on water quality. Most of this interest seems to relate to nutrients and other non-point source pollution (NPS- non-point source pollution is that originating from diffused sources or human or animal activities as opposed to point source pollution in which pipes or discrete pathways deliver pollutants to receiving waters). This concern over the potential contributions of NPS pollutants is understandable given that the subdivision is surrounded by water, however we question whether the risk of NPS pollutant generation and delivery is any greater than a lot located on shore which may front on a lake or tributary to the lake. This does not diminish the concerns over potential impacts to water quality, but rather puts them in perspective with other types of development for which residents may be more familiar.

Contributions of sediments, phosphorus, and nitrogen are often identified as leading to eutrophication or accelerated enrichment and aging of a waterbody. Algal blooms are often symptomatic of an increase in the availability of nutrients and some blue-green alga can lead to negative health affects in humans and other mammals if such algae is ingested. In Lake Winnepesaukee much of the focus has been on limiting inputs of phosphorus and sediments which can contain loosely bonded phosphorus. To properly characterize the risk of contributing excess phosphorus or sediment loads one must look at both the potential source



and likelihood/pathway of delivery to a receiving water. Generally, impervious surfaces such as roadways, parking lots and rooftops are implicated as being both a collector of pollutants as well as generating the increased stormwater runoff needed to deliver the pollutants to a receiving water. Further, it is the intensity with which roadways and parking lots are used which positively correlates with increased pollutant generation. Where the project in question will presumably have no roads or parking areas, the concentration of pollutants and delivery mechanisms are unlikely to be present where they could otherwise create potential impacts to water quality. In an island setting, the sources of anthropogenic (human caused) phosphorus contributions are often associated with fertilizers, septic systems, erosion during construction, and beach construction/replenishment. In an effort to address the various water quality concerns we offer the following observations and a few suggestions.

a. Septic systems

- i. Testimony provided by the applicant's agent at the July 18, 2019 indicate that the applicant will be installing "enviro-septic advanced systems (clean solutions)". Clean Solutions systems utilize aerobic treatment in a tank before the treated water is released to the ground in a leach field system. Such systems have excellent removal of nitrogen and BOD, require a smaller leach field system (creating less tree cutting and land disturbance than typical leach field systems) and require a homeowner to have a maintenance agreement which ensures that systems continue to operate with a high level of treatment rather than one which declines over time. Phosphorus removal in Clean Solutions tanks is likely on par with other systems as much of the phosphorus removal occurs in the soils which underlie the leach field, not due enhanced removal in an aerated septic tank. The installation of such systems would reduce concerns of other nutrients and oxygen demanding substances reaching the lake, although it is important to remember that the reduction of phosphorus in commercially available cleaning products has had as much or more of an impact in lowering phosphorus content in wastewater than the removal of phosphorus by any conventional or enhanced septic system. Still, due to the reduced footprint and mandatory maintenance agreement, if the use of Clean Solutions systems is a condition of a subdivision approval we would consider this use to be Best Available Technology and offer no further comment on the potential pollutant contributions from such systems.



If such a system will not be used and instead an Enviro system will be used we would consider such a system as acceptable and generally to have far less pollutant contributions than many of the aging stone and pipe systems currently in existence on many waterfront lots elsewhere in the community. In fact, as a result of the recent purchase of the company who manufactures Enviro systems, new Enviro systems installed after September 1, 2019 will be required to be sized to have almost twice the amount of leaching area as Enviro systems installed just one year ago. This additional leaching area and exposure to the phosphorus binding soils can be considered to improve treatment and increase the longevity of a septic leach field system.

Other factors that may lessen concerns about pollution from these modern day systems include:

- that they have to meet 75' setbacks from water or wetlands; and
- perc rates were slow enough for DES not to require increased setbacks (125') to surface waters; and
- conversion to year round use/loading is highly unlikely on an island; and
- septic system evaluations are performed at the time of sale of the property.

From this, and although lacking the base data used in the model by Lake Winnepesaukee Association in their July 17th letter, we feel that **the applicant has minimized the risk of phosphorus contributions to the lake from septic systems.**

b. Fertilizer

- i. The island and proposed lots will be regulated at the time of development by the DES Surface Water Quality Protection Act (formerly the DES Comprehensive Shoreland Protection Act) Rules and associated Shoreland Permit. These Rules:
 - prohibit use of fertilizer within 25' of the shoreline and require that slow release nitrogen fertilizer be used elsewhere within the Zone; and

- restrict the volume of trees which may be cut within the Waterfront Buffer (all areas within 50' of the water or Reference Line); and
- prohibit placement of homes within the Waterfront Buffer; and
- require that at least 25% of the land area within the Woodland Buffer (between 50' and 150' from the water) remain in a natural state.

The improper use of fertilizer near shore is perhaps one of the most direct means of concentrated delivery of phosphorus to a water body. This is due to both the concentrated nature of the nutrients in a fertilizer, its proximity to the receiving water and associated short travel distance, and accompanying lack of pollutant attenuation in underlying soils. Since prohibitions on use of phosphorus are difficult to enforce directly, it is instead the preservation of native vegetation adapted to native soils and pH which can lessen the need for fertilizer and therefore tends to reduce fertilizer related nutrient inputs. **Close adherence to Shoreland Rules regarding preservation of native vegetation, and restoration of disturbed earth surfaces with comparable native vegetation should result in settings in which additions of nutrients are not needed.**

c. Ground Disturbance

- i. The contribution of sediments and associated phosphorus can be significant during construction and may be several orders of magnitude higher than contributions from a site when work is complete and the site has been stabilized and erosion is minimal. Given what we know about the timing and extent of anticipated ground disturbance at the site it appears as though a DES Alteration of Terrain permit will not be needed. This conclusion is based upon the presumption that earth disturbance associated with the common infrastructure (such as underground electric or any grading not presented on the plans) does not exceed 50,000 square feet when any of this common infrastructure work occurs within the Shoreland Zone. Individual lot development subsequent to this common earth disturbance would not be subject to AoT rules related to stormwater management and erosion control unless such contiguous disturbance crosses the 50,000 square foot threshold in the Shoreland Zone (or 100,000 square feet if completely outside of the Shoreland Zone).



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It is presumed that most of the earth disturbance associated with individual lot development will be initiated at the presumed access along the lake frontage. While Shoreland Rules would typically limit such disturbance to be a 6' wide path in the Waterfront Buffer, the Rules accommodate island lot owners with a temporary 12' wide access into the interior of the lot. If improperly managed either during construction or even when construction is completed, such an access is perhaps the greatest potential source of sediments and phosphorus from this type of island lot development. Thankfully the threats of water quality from such an access path are quite easily addressed with simple cost effective measures. *During construction the access path should have waterbars or other features that are established and maintained to prevent runoff from travelling down the road to the lake.* Typical erosion controls will be required by the Shoreland permit needed by lot owners to develop the lot and these should be in addition to the recommended dispersion of runoff from the access path. After construction is complete the path is required to be returned to a pervious surface (as required by Section V.a.2.D.viii of the Shoreland Rules). Unfortunately, this is often never done or done so poorly that it functions as a failing gravel road contributing sediment directly to the lake. An enhanced and cost effective measure would be for the Town to *require that lot owners apply a minimum of 6" thick layer of mulch to the path and its sideslopes and place a 2' tall berm of mulch at the path's termination with the lake.* This material could easily be wood chips and other biomass derived from the clearing of those portions of the lot necessary for lot development and thus enable the reuse of material that might otherwise be hauled away. Additionally, use of this native material will lessen the likelihood of importing invasive species in hay bales or other tree diseases in mulch materials that might otherwise be imported from the mainland. *The use of grass as a form of stabilization on the access or anywhere on the lot should be avoided if the use of mulch is feasible.* The effect that mulch can have on preventing water quality impacts from a developed lot cannot be overstated as mulch serves to prevent erosion, capture and absorb precipitation so as to minimize runoff (especially from disturbed or mixed soils with a restrictive layer as discovered onsite by others), and capture and assimilate many forms of organic and inorganic pollutants.



As has been raised by others, the project will likely be required to obtain coverage under the EPA National Pollution Discharge Elimination System (NPDES) Construction General Permit (CGP) as this subdivision represents a “common plan of development” which will collectively result in an aggregate area of disturbance which will exceed 1 acre (43,560 square feet). Compliance with the permit will require not only an erosion control plan, but importantly, inspections of erosion control measures on a regular basis. Inspections by a qualified person (as required by the EPA CGP) will help ensure that the erosion control plan is followed and adjusted as needed to address unanticipated circumstances, but also that Shoreland permit conditions and erosion controls are followed. Since records of the inspections must be made and kept and available to agencies upon request, any complaints of non-compliance to the town, DES or EPA can easily be investigated. Each inspection report must be signed by the inspector under penalty of significant fines and imprisonment.

d. Impervious surfaces

- i. Although regulated by the Shoreland Rules, the Town’s ZO prohibits greater than 20% lot coverage by impervious surfaces. It is unlikely that individual lot development on an island would result in greater than 20% lot coverage by such surfaces. Further, since the island will lack vehicular traffic, the majority of such surfaces will tend to be roofs which will likely only capture airborne deposited sources of phosphorus (leaves and pollen). These phosphorus containing materials and the distance of the roofs to the lake mean that such materials are less likely to be carried from such surfaces as those airborne sources directly into the lake. Thus, as currently proposed we do not expect water quality threats to arise from the impervious surfaces anticipated on this development.
- ii. For the reasons above related to differing land vs island development patterns and our familiarity with various pollutant loading models we respectfully disagree with the level of phosphorus load contributions associated with low density residential development estimated by the Lake Winnepesaukee Association in their July 17, 2019 letter to the Planning Board.



e. Beaches

- i. The majority of the shoreline within the proposed subdivision appears too steep to offer opportunities for the development of a beach. Those few areas with gradual shoreline topography tend to be wetlands where it is presumed that the DES Wetlands Bureau or the Town through its Wetland Conservation Overlay District would deny an application for the requisite Special Exception needed to perform such construction within a Wetland. We do not see the construction of beaches (perched or otherwise) to be a likely feature of this subdivision.

f. Pesticides

- i. The regulation on the use of herbicides/pesticides is pre-empted by state statute (RSA 430:49), meaning the town cannot restrict usage of these products. However, within 50 feet of the Lake a Special Permit must be obtained from the NH Division of Agriculture, Markets and Food, and herbicide/pesticide products must be applied by a registered commercial applicator. These applicators must comply with various requirements regarding application near waters and preventing spray drift. As with fertilizers, preventing unauthorized use of such materials within the Shoreland Zone is difficult to enforce and may be better addressed by ensuring restoration of areas required by Shoreland permits is completed with native vegetation (as required by the Shoreland Rules) as such vegetation can be more resilient to local nuisance insects and diseases and lessen the need for herbicides and pesticides.

4. Tree Cutting

- a. As noted above, tree cutting is restricted in those areas of the property which lie within 150' of the SWQPA Reference line. Further inland trees can be cut without restrictions except that due to this cutting being associated with land conversion:
 - one must obtain a standard wetland permit (DES Forestry Notifications are not applicable) if they will cross or impact wetlands as part of the cutting; and
 - any removal of stumps or grubbing of the ground prior to an affected lot's sale would add to the earth disturbance associated with the installation of underground electric and count towards the applicants 50,000 square foot earth disturbance threshold which prompts the need for a DES Alteration of Terrain permit.



5. Wetlands

- a. Areas of wetlands on the site are considered by ZO Section 12.3 to be in their own zoning district as an overlay zone. This means that such land areas carry the greater level of protection afforded in either the underlying Island Conservation District or the Wetland Conservation District. We did not formally review the delineations of wetlands on the site, but did note on the site visit a small slightly depressed area in the vicinity of proposed lot 2-4 with dark stained leaves, no inlet or outlet, which might exhibit characteristics of a vernal pool during the appropriate spring assessment period. The area was not flagged as a wetland however and its perched position in the landscape may not offer boundary conditions suitable for retaining sufficient water depth to host indicator organisms. We are unable to conclude if this warrants further field evaluation, but feel that **this matter should be addressed by the wetland scientist who performed the wetland delineation.**
- b. Although more of a housekeeping issue, **the plans should contain the wetland certification required by ZO Sec 12.3.2 and 12.3.4.**
- c. There is testimony by the applicant's agent that the potential loon nesting area near proposed lot 2-8 is a wetland and that there is a 50 foot wetland setback. It is unclear if this is a self-imposed setback that that applicant is proposing or if this is referencing the 50 foot Shoreland setback (referred to as the Waterfront Buffer) in which primary structures are prohibited, but accessory structures are allowed. Given that the 50' setback shown on the plans extends further beyond the wetlands which exist along the shoreline and appear associated with an isolated wetland on lot 2-8 we presume that this is a self-imposed wetland setback. **The applicant should state what they are prohibiting within this and all 50' wetland setbacks** as it may allay concerns of both those interested in loon habitat as well as those concerned about impacting wetlands and water quality.

6. Parking

- a. The ZO (Sec 6.2) requires 2 spaces per residential dwelling unit. Testimony from applicant's agent indicates that future Farm Island residents may park in the existing town lot located off Rte. 109 near the town beach. More recent testimony by the applicant appears to indicate that parking is available along the



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side of Rte. 109. We cannot comment on the unique usage patterns of island residents in this 19 Mile Bay locale, nor the current utilization of the public parking lot. We do believe that utilizing a state Right of Way to satisfy parking requirements is not acceptable. If the parking requirements for this development are to be met in the public lot we estimate such area to occupy 20% of the total lot space available. If the town feels that this is a disproportionate share of who the town intended the lot to serve, *the town is within its rights (per sec 2.3.7.A.6. & 3.3.4.D.5 of the Tuftonboro Subdivision Regulations) to ask for compensation for future expansion of the existing lot.*

7. Traffic

- a. We do not anticipate that this 10 lot subdivision on an island will create any discernable impact on the capacity or serviceability of the roadways used to access the lake/Island. This is in part due to the number of lots being created, in part due to the lesser number of round trips per day made by those on islands, and in part because almost all public roads in the vicinity of the island and associated lake access points are state highways. These highways have higher capacities than town or private roadways which may be utilized by other similar sized subdivisions in town and for which this traffic impact language may have been intended.

8. Electric service

- a. Horizons did not perform a review of the functionality of the underwater electrical line providing service to the island, but did read that the line was energized and found to be functional. We also understand that all electrical lines on the island will be underground and installed prior to offering lots for sale or that a bond for such installation will be put in place.

Since it is our understanding that the applicant or future lot owners would likely be responsible for any replacement of the existing underwater line and future underground service on the island we *recommend that all responsibilities and liabilities be clearly defined in a maintenance agreement.* While bonding for a yet-to-be-needed replacement of the underwater line may not be appropriate, the *Town should be held harmless of all financial and safety liabilities and such statement should be recorded on the subdivision plan or other durable document that can survive any dissolution of a homeowners association or other revocable legal instrument.*



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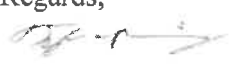
- b. Concerns have been raised about the potential wetlands impact of needing to bury a new underwater electrical line. It is unclear as to when such replacement may be needed, nor the rigor of the Wetland Rules at the time that the replacement would be permitted, however directional drilling (with greater shore impacts, but less lake bed impacts) may be an approach which has more appeal at the point in time in which such a replacement is contemplated.


9. Fire Protection

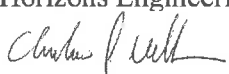
- a. The Town of Tuftonboro's Subdivision regulations require (per Sec. 4.4.11) consultation with the Tuftonboro Fire Department to ensure an adequate water supply exists for fire suppression. Addendum D of the Subdivision regulations includes requirements for dry hydrants. Since the Town's Fire department has a fire boat which may be used to supplement land-based initial attack of a fire located on a shorefront lot located on mainland, it is not known how the Fire department addresses fire suppression on islands where the only means of attack is from a fire boat. **We did not see in the record that the applicant has performed the requisite coordination with the Fire Department and suggest that this be done.**

We appreciate the opportunity to assist the Board in the review of this application and stand ready to serve the Board and answer questions as they arise.

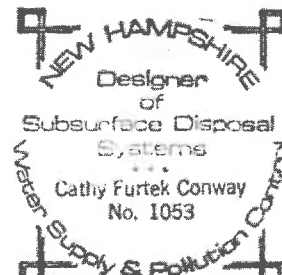
Regards,


Tyler Phillips, CPESC, CFM, NH Septic Designer
Senior Project Manager
Horizons Engineering, Inc.


Cathy Conway, P.E., NH Septic Designer
Office Manager
Horizons Engineering, Inc.


Andrew Nadeau, LLS
President
Horizons Engineering, Inc.
Attachments

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APPENDIX A

Farm Island Peer Review
Appendix A –Survey and Plan Conformity Summary
October 3, 2019

A review of the plans and Auto CADD files associated with the proposed Farm Island Subdivision identified several apparent inconsistencies. All but those in bold below (which have been raised in Horizons October 2, 2019 review letter to the town) seem non-material to the subdivision's conformity to local ordinance and regulations, but should be reviewed for completeness and addressed by the applicant to avoid confusion by future lot owners.

Datum

- Ref. line is shown as 503.84, Mean High Water is shown to be 503.82 on plan note.

Topography

- Granit Bare Earth DEM LiDAR data, dated 2015 shows the plans topography to generally be very accurate with exception of approx. 2,000 SF decrease in Lot #2-8 determined by the LiDAR Bare Earth DEM location of ref. line of elevation 503.84 (NAVD88).

Lot Dimensions

- Lot #2 - Southerly dimension is shown as 503.14' appears to actually be 484.79' from rebar to rebar and then the additional 18.35' +/- from rebar to ref. line.
- Lot #2-8 – Southerly dimension between Doucet rebar found and rebar to be set shown as [S 89° 43' 19" W, 37.00'] appears to actually be [S 89° 40' 34" W 81.60'].
- Lot #2-10 - Unsure where bearing [S 47° 02' 11" E] came from. Seems bearing of [N 47° 02' 11" W] should be used or none at all and the dimension shown as 13.20' +/-a tie to the ref. line.

Detailed review notes for dimensions of all lots can be provided upon request.

Lot Area

- Lot #2-6 – Actual calculated upland area appears to be approx. 300 SF less than shown on plan.

Lot Frontage

- Lot #2 – Per Zoning Ordinance section **1.1.22 Frontage: "shall be measured in in fifty foot (50) chords."** The frontage appears to be approx. 2' short of this. However actual frontage on the ref. line appears to be 150'.

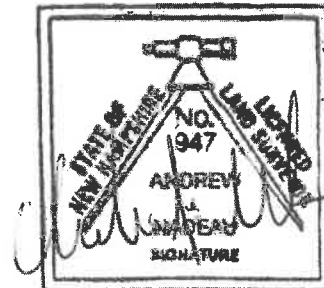
Lot Depth

Lot #2-6 - With the assumption the easterly 184.15' line be considered the rear lot line. Lot depth could be determined to be under 200' making the lot non-compliant with Town Zoning. An average of the southerly side being 239.52' and a 147.29' measurement made perpendicular to the rear lot line from rebar to be set to ref. line equals a 190.90' average depth.

Plan notes and certification

- Plan reference is indexed at the Carroll County Registry of Deeds as Book 226 Page 34, however plan was recorded with Page 24 hand-written on plan even though there is another plan indexed at the Registry as Book 226 Page 24. This could cause confusion in the future and should be addressed by the applicant and Registry.
- The plan does not explicitly state how wetland delineation locations were recovered from the field. This leaves the accuracy of the size and location of wetlands open to conjecture.
- Lots are not consecutively numbered as required by subdivision regulation section 3.3.2 F. Renumbering of lots should be completed prior to recordation to aid in maintaining the town's tax map and lot numbering convention.

END



APPENDIX B

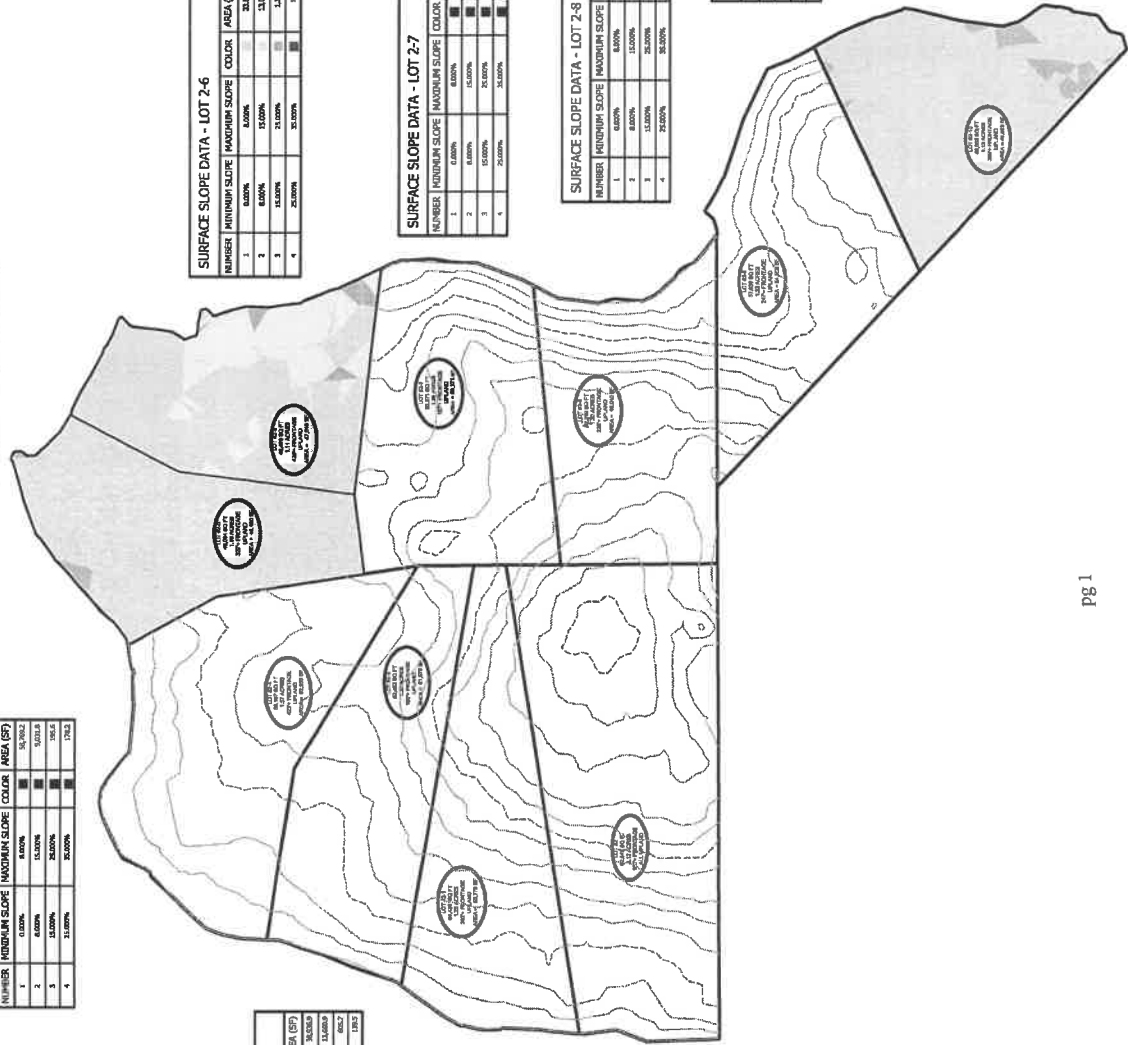
SURFACE SLOPE DATA - LOT 2-5			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (SF)
1	0.000%	8.000%	34,749.2
2	8.000%	15.000%	6,861.1
3	15.000%	20.000%	683.2
4	20.000%	35.000%	64.1

SURFACE SLOPE DATA - LOT 2-4			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (SF)
1	0.000%	8.000%	51,700.2
2	8.000%	15.000%	5,033.8
3	15.000%	20.000%	196.6
4	20.000%	35.000%	170.2

SURFACE SLOPE DATA - LOT 2-3			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (SF)
1	0.000%	8.000%	38,830.9
2	8.000%	15.000%	5,688.9
3	15.000%	20.000%	682.2
4	20.000%	35.000%	138.3

SURFACE SLOPE DATA - LOT 2-1			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (SF)
1	0.000%	8.000%	33,682.8
2	8.000%	15.000%	20,363.5
3	15.000%	20.000%	8,364.5
4	20.000%	35.000%	14.2

SURFACE SLOPE DATA - LOT 2			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (SF)
1	0.000%	8.000%	94,697.2
2	8.000%	15.000%	34,295.7
3	15.000%	20.000%	4,068.1
4	20.000%	35.000%	25.2



SURFACE SLOPE DATA - LOT 2-6			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (SF)
1	0.000%	8.000%	33,834.4
2	8.000%	15.000%	13,877.3
3	15.000%	20.000%	1,386.4
4	20.000%	35.000%	117.2

SURFACE SLOPE DATA - LOT 2-7			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (SF)
1	0.000%	8.000%	26,242.2
2	8.000%	15.000%	13,858.8
3	15.000%	20.000%	5,324.7
4	20.000%	35.000%	174.2

SURFACE SLOPE DATA - LOT 2-8			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (SF)
1	0.000%	8.000%	26,242.2
2	8.000%	15.000%	13,858.8
3	15.000%	20.000%	5,324.7
4	20.000%	35.000%	145.2

SURFACE SLOPE DATA - LOT 2-9			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (SF)
1	0.000%	8.000%	25,000.7
2	8.000%	15.000%	8,000.3
3	15.000%	20.000%	4,000.1
4	20.000%	35.000%	25.2

SURFACE SLOPE DATA - LOT 2-10			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	AREA (SF)
1	0.000%	8.000%	24,000.4
2	8.000%	15.000%	8,000.1
3	15.000%	20.000%	4,000.1
4	20.000%	35.000%	11.2

Farm Island Peer Review
Appendix B-NH Subdivision- Slope and Lot Area Analysis
October 2, 2019

	area (sf)	% of total lot area	NHDES Min. Lot Size (sf)	Area (sf)
slope 0-8%	54,067.2	58.4	48,000	28,043.5
slope 8-15%	34,250.7	37.0	53,000	19,615.6
slope 15-25%	4,066.9	4.4	62,000	2,724.7
slope 25-35%	105.7	0.1	72,000	82.2
total	92,490.5	99.9	Minimum lot size per NHDES requirements =	50,466.0 sf

Lot 2-6
Soil Group 3
Total Area (sf) =
48,496

	area (sf)	% of total lot area	NHDES Min. Lot Size (sf)	Area (sf)
slope 0-8%	32,662.6	60.0	48,000	28,799.8
slope 8-15%	20,303.3	37.3	53,000	19,767.0
slope 15-25%	1,364.5	2.5	62,000	1,554.0
slope 25-35%	14.2	0.0	72,000	18.8
total	54,344.6	99.8	Minimum lot size per NHDES requirements =	50,139.6 sf

Lot 2-7
Soil Group 3
Total Area (sf) =
60,371

	area (sf)	% of total lot area	NHDES Min. Lot Size (sf)	Area (sf)
slope 0-8%	38,936.9	72.8	48,000	34,958.2
slope 8-15%	13,680.9	25.6	53,000	13,542.6
slope 15-25%	605.7	1.1	62,000	702.4
slope 25-35%	139.5	0.3	72,000	187.9
total	53,343.0	99.8	Minimum lot size per NHDES requirements =	49,391.1 sf

Lot 2-8
Soil Group 3
Total Area (sf) =
52,259

	area (sf)	% of total lot area	NHDES Min. Lot Size (sf)	Area (sf)
slope 0-8%	58,769.2	86.2	48,000	41,964.3
slope 8-15%	9,031.8	13.2	53,000	7,019.2
slope 15-25%	195.6	0.3	62,000	177.8
slope 25-35%	178.2	0.3	72,000	188.1
total	68,174.8	100.0	Minimum lot size per NHDES requirements =	48,749.4 sf

Lot 2-9
Soil Group 3
Total Area (sf) =
57,636

	area (sf)	% of total lot area	NHDES Min. Lot Size (sf)	Area (sf)
slope 0-8%	38,740.3	80.6	48,000	38,672.6
slope 8-15%	8,560.1	17.8	53,000	9,435.3
slope 15-25%	650.2	1.4	62,000	838.4
slope 25-35%	68.4	0.1	72,000	102.4
total	48,019.0	99.9	Minimum lot size per NHDES requirements =	49,048.7 sf

Lot 2-10
Soil Group 3
Total Area (sf) =
49,063

	area (sf)	% of total lot area	NHDES Min. Lot Size (sf)	Area (sf)
slope 0-8%	33,854.6	69.8	48,000	33,508.3
slope 8-15%	13,097.5	27.0	53,000	14,313.9
slope 15-25%	1,909.4	2.7	62,000	1,674.0
slope 25-35%	117.0	0.2	72,000	173.7
total	48,378.5	99.8	Minimum lot size per NHDES requirements =	49,670.0 sf

	area (sf)	% of total lot area	NHDES Min. Lot Size (sf)	Area (sf)
slope 0-8%	38,529.5	63.8	48,000	30,634.2
slope 8-15%	15,950.8	26.4	53,000	14,003.3
slope 15-25%	5,594.7	9.2	62,000	5,684.0
slope 25-35%	176.8	0.3	72,000	210.9
total	60,191.8	99.7	Minimum lot size per NHDES requirements =	50,532.4 sf

	area (sf)	% of total lot area	NHDES Min. Lot Size (sf)	Area (sf)
slope 0-8%	28,342.5	54.2	48,000	25,032.6
slope 8-15%	15,062.9	28.8	53,000	15,276.5
slope 15-25%	8,244.0	15.8	62,000	9,780.7
slope 25-35%	545.1	1.0	72,000	751.0
total	52,194.5	99.9	Minimum lot size per NHDES requirements =	51,840.8 sf

	area (sf)	% of total lot area	NHDES Min. Lot Size (sf)	Area (sf)
slope 0-8%	32,451.7	56.3	48,000	27,026.2
slope 8-15%	19,805.8	34.4	53,000	18,212.7
slope 15-25%	4,311.0	7.5	62,000	4,637.4
slope 25-35%	31.2	0.1	72,000	39.0
total	56,599.7	98.2	Minimum lot size per NHDES requirements =	49,915.3 sf

	area (sf)	% of total lot area	NHDES Min. Lot Size (sf)	Area (sf)
slope 0-8%	25,860.4	52.7	48,000	25,300.1
slope 8-15%	20,024.8	40.8	53,000	21,631.7
slope 15-25%	3,060.9	6.2	62,000	3,688.0
slope 25-35%	12.2	0.0	72,000	17.9
total	48,958.3	99.8	Minimum lot size per NHDES requirements =	50,817.7 sf

10/03/19

Tuftonboro Planning Board – Thank you for your time on this project. I appreciate the care and attention of detail you are placing on this project and all the time you are volunteering. I would like to provide the recommendation to the planning board tonight, that this project still has significant technical items to resolve prior to the planning board considering any type of approval for the project. I believe this based upon the third-party engineers review that was submitted into public record today. Thank you for allowing me to Elaborate on the issues:

LOT SIZE NOT IN COMPLIANCE

-Section 1.a & 1.b – identifies that lot sizes need to be adjusted for at least three lots, this needs to be corrected.

NHDES REVIEW

Before even granting conditional approval to the subdivision, have the applicant have a preliminary scoping meeting with DES. I request this because Horizons Engineering has documented significant concerns around storm water management and there is a significant potential that after DES reviews this, it could create material changes to the design and material changes to the plan should have the opportunity for public comment through the planning process. More specifically Horizon recommends the following DES items:

-Section 2.a of Horizon identifies that due to the composite slopes on lots 2-5, 2-6 & 2-10 that this may prompt larger lots. In a preliminary meeting this can be discussed and determined and then presented for your review.

-Section 3.a –Horizons recommends the Clean Solutions system, be required but is this what the state wants? Have the applicant to work with the state and get the state to identify what the solution should be and present it in the planning process as it has an impact on the size of the leachfield. We did something similar to this when permitting our new leachfield system at Belknap.

-Section 3.c. – discusses the shoreland rules allowing access for construction, this has been identified as the highest potential for water quality issues, it would seem appropriate that these locations be identified on the drawing prior to planning approval.

-Section 3.e – recommends DES wetlands Bureau review – it seems sense to have their preliminary review done to identify if this impacts any lot lines

TREE CUTTING & LAND MANAGEMENT

-Section 3.b.i – recommends that the volume of trees within the 50' waterfront buffer be restricted. It also discusses that at a minimum 25% of the natural buffer remain in place from the 50' to 150'. This is a lot of tree cutting. I recognize these are the rules, but if tree cutting is not managed right and trees are not inventoried and cataloged, it easily can become even more deforestation. We don't want to have a dispute on tree cutting occur down the line. In a proactive manner, I recommend that the planning board not approve this without an approved tree cutting plan and a compliance plan where there is a payment structure in place for third party monitoring and a compliance bond put in place.

In addition, Horizons identifies that special attention be made. More specifically

10/03/19

Section 3.b.i – recommends close adherence to shoreland rules and protecting native species and not allowing soil disruption

-Section 3.c – highly recommends no grass be allowed to be planted.

Before any type of approval, including a conditional approval the planning board should require the developer to work with the town to create an appropriate fee and bond to cover the third-party review of the subdivision and a compliance bond.

ELECTRICAL

-Section 8a – discusses the town making sure that the liability of the town be protected. That is appropriate course of business. But it still does not address the safety of the water. We cannot be laissez-faire about this. Get a third-party electrical engineering review that the engineer takes the liability and ensures it is safe or recommends improvements to make sure it is safe.

FIRE

Section 9a – Identifies that the applicant is required per subdivision regulations to have a review done by the Fire Department. Please make sure this is done before any type of approval.

CLOSING

I recognize that this may be the last undeveloped island on the lake. We further remind you that the LRPC's 2015 – 2020 Lakes Region Plan states that: "Water quality is the defining issue in the region and requires continual attention."

In addition, the Tuftonboro subdivision regulations state "The Subdivision shall preserve such natural/existing features, wetlands, watercourses, steep slopes, stone walls, large or unique tree and/or habitats, and scenic views". We have all, also discussed the Town's Master Site Plan guidelines. We are under the strong belief that this project as proposed does not meet the overarching goals of development on the lake and that by allowing this Subdivision to be approved, it will accelerate the path to the Lake becoming unsuitable for public use.

Furthermore, it is our understanding that there is no town on the lake that has documented regulations for Subdivisions on an island. We also recognize that the town is basing all of its decisions on a subdivision regulation designed for the mainland. We recommend that prior to approving the largest island subdivision on lake Winnepesaukee and maybe the state since the 1970's that the town develop guidelines for Island subdivisions prior to approval of this project.