April 6, 2016

Martha’s Vineyard Commission
Attention: Paul Foley
The Stone Building
33 New York Avenue
Oak Bluffs, Massachusetts 02557

Re: DRI 464-M-2- Lagoon Ridge Form B Subdivision and letter to Paul Foley with attached memo from David Danielson, dated February 4, 2016 and February 2, 2016 respectively

Dear Commissioners:

I am writing this letter to offer my views regarding the referenced items. I understand that there is a scheduled public hearing on this matter on April 14, 2016; and therefore, my comments would be welcomed in letter format. You should note that I am not a wastewater specialist nor a planner of developments. I am, however, a resident of Oak Bluffs with property that abuts the proposed Lagoon Ridge Development. In addition to comments regarding Mr. Danielson's letter and memo which address the DRI's Form B Conditions, I feel compelled to address two additional issues that I believe should cause the MVC to conduct further reviews of DRI 464-M-2. These issues relate to Alternative Septic Systems and the condition of the Lagoon Pond.

Danielson’s Definitive Answers

After reading the documents referenced above, I can only conclude that the “Definitive Plan Checklist”, dated February 2, 2016 provided by Mr. Danielson which, by its very title, should be definitive seems to create more questions than are answered. The answers that are provided, which I suspect are a requirement of the “Form C Definitive Plan”, are often qualified and are not definitive, some conditions are not answered at all, and some answers even raise entirely new issues that reflect on the entire project.

Although the following is by no means a comprehensive review of all of the "definitive" answers, I call your attention to some answers regarding the Form B Conditions that I believe could impact the project as a whole. The Conditions as set out by the MVC in the Form B Preliminary Plan that I am addressing in this letter pertain to: the Phased Development Plan Condition; Affordable Housing to Habitat MV Condition; Protecting Affordability of Affordable Units Condition; and the Wastewater Conditions.
Please refer to the decision of the MVC as it relates to DRI 464-M-2 Lagoon Ridge Form B Subdivision and Mr. Danielson's February 2, 2016 Checklist when considering the comments offered below.

**The Phased Development Plan, Form B Condition - 2.3**

In asking for a “definitive” phased development plan in the manner that it did, the MVC rightfully recognized that a step-by-step process must be defined. Such a plan is necessary for numerous reasons including the proper oversight of environmental issues and also to further assess the viability of the project. Mr. Danielson simply does not provide a phased development plan and delays the production of this extremely important Condition which should be paramount to the continued review by the MVC.

In his answer, he says the "plan" will be completed and submitted to the MVC long before the issuance of any building permit; yet his website, Lagoon Ridge.com, declares that work on roads and infrastructure will begin this Spring (that’s now) and housing construction will begin later this year. The answer to this Condition does not comport to what is being presented to the public. If Mr. Danielson's website is accurate, it would seem that some oversight should be in place prior to the upheaval of forested land that is part of the watershed for the reportedly dying Lagoon Pond.

**Affordable Housing to Habitat MV, Form B Conditions - 2.3, 6.1, and 6.2,**

The answer to the question regarding the two (2) lots with 3 affordable dwellings for a total of six (6) bedrooms has not been resolved. It appears that the Habitat MV leadership has not embraced Mr. Danielson’s offer (Answer 6.1), and Mr. Danielson has changed the nature of this Condition to include other unnamed affordable housing groups (Answer 6.2). In as much as a "detailed offer" should have also been included as an answer to Condition 6.2 and was not, this Condition remains unanswered.

**Protect the Affordability, Form B Condition - 6.3**

I’m not sure if Mr. Danielson or I misunderstood the spirit of Condition 6.3, and I’m not sure if it is adequately addressed. However, I read this Condition as meaning there should be a definite plan to try to keep the affordable housing affordable. At a minimum, there should be the lessening of the financial burden of the affordable housing homeowners with respect to the expected total association fees. The proposed plan by Danielson with respect to the fees for the treatment facility is no different for the affordable housing homeowners than it is for all other homeowners, because it is solely based on the number of bedrooms per unit.
**Wastewater Form B Conditions 7.1 to 7.8**

7.3 and 7.4  The Condition calls for “110.4 kg N/acre/year for 32.47 acres. The answers to 7.3 and 7.4 refer to "19 mg/ml" and "14 mg/ml" respectively. It can’t be determined whether or not the Condition is answered without an appropriate conversion. Also the "mg/m/l" reference may be a typo because it is seen as "mg/L" in other sources.

7.5  The “outside” engineer that is alluded to should be named, his credentials verified, his affiliation to the project should be disclosed and his experience with the chosen alternative septic system stated.

7.6  The applicant has not provided an operation and maintenance manual as required by this Condition. Later in his memo at section "E", he explains that four different alternative septic systems are being considered and suggests that the Amphidrome alternative wastewater system is the primary system (one of four) which is under review at his request by the Oak Bluffs Board of Health. However, Mr. Danielson has not yet offered an Amphidrome Operations and Maintenance manual for review. It would seem that the selection by the developer would have been completed and reviewed in anticipation of the Form C Definitive Plan. An operation and maintenance manual should have been made available for MVC’s review to satisfy the Form C, Definitive Plan.

In essence, because no alternative system has been selected and put forth it is impossible for the MVC to form any opinion as to whether or not the chosen system is adequate for the conditions of the fragile Lagoon Pond area. And importantly, once a system has been designated, its particular efficacy must be thoroughly reviewed with an eye towards regional impact and not just the needs of the developer and Oak Bluffs. All alternative septic systems appear to be complex and certainly are not "flush and forget" solutions.

7.6  "Monthly testing for the first two years."

This Condition does not address the likelihood that only a few houses will be on line in the early years of the project. The Condition should include provisions for independent testing each time a house is added to insure that necessary adjustments are made. The tests that are to be made should be clearly defined, and the laboratory that conducts the analysis should be named. The testing should
cover all of the normal parameters for wastewater analysis and should test for many more contaminants than just total Nitrogen effluent levels.

7.8

“Maintenance Cost Plan”

Nothing is offered at this time to satisfy this Condition.

7.8

“Maintenance Cost in Perpetuity”

The fact that this Condition is skirted is particularly bothersome. The Condition calls for a plan for paying the costs into perpetuity; it doesn't require that specific costs be defined, but merely asks for the logical step of a plan. The "plan" for payment of the costs should be the same regardless of which one of the four systems are chosen.

The avoidance of a definitive answer further raises the question...who pays the bills of operating and maintaining the system when it repeatedly fails - forever? The legal quagmire that is looming should be made clear to the town and future homeowners.

Mr. Danielson offers what he considers to be one possible solution to "perpetuity" which is to have the town of Oak Bluffs assume the cost .... that equates to the people of Oak Bluffs paying for Lagoon Ridge’s septic problems. I won't bother you with the rhetorical questions that could be asked regarding that solution.

7.8

“Regulate the cost of services to Affordable Houses”

There is no “regulation” in this answer, because the affordable house owners are put on par with all the other owners based solely on the number of bedrooms.

The comments regarding the Definitive Conditions for the items detailed above make it clear that in many instances there are no required definitive answers. Beyond the lack of definitive answers, many other scenarios arise.... for example:

Scenario 1. No houses are built other than the three (3) Affordable Housing homes... Who pays for the required maintenance, testing, etc. of the alternative septic system when only affordable houses are occupied?

Scenario 2. Lots in Section “A” are sold and built... Do they help with the alternative system maintenance cost in Sections “B” and “C”? 

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Scenario 3. The roads are built and the alternative wastewater system is in place, but no houses are built. Who pays the yearly fees? Is there an escrow account? Who funds the account? For how long?

Scenario 4. Same as 3. What effect does the lack of no use or little use have on the system? How long can a system like this remain idle?

Scenario 5. The affordable houses and elders homes on fixed incomes are built. No others are built. Who pays for the maintenance, etc.?

Scenario 6. Low use from only a few houses in Area “C”. Will the transfer pumps in “B” freeze?

Scenario 7. The alternative system fails to meet the specs it is designed for. Who pays for a new system? Is there an escrow account to cover this?

Scenario 8. The system is failing, but scheduled testing is months away. Who realizes this in the interim? Do nitrogen and other wastes continue to flow into the watershed while a failure is unrecognized or a solution is sought? Is a penalty assessed for prolonged abuse?

Scenario 9. The eventual homeowners are mostly seasonal residents with the elderly housing (6-8) being snow birds. What is the effect on the system?

Scenario 10. Several homes are summer rentals with guests being less caring for the health of the system and, therefore, flush grease, paints, paper and solids. Who pays for the repairs which are caused by the rental properties?

Scenario 11. The affordable houses are built in section "C" at a point furthest from Barnes Rd. who pays for snow removal, grass cutting along the roads?

Scenario 12. Lots are sold but only a few houses are built. Do the lot owners with no houses pay for the monthly expenses of alternate septic system despite not having a home on the system?

Scenario 13. The elders in the elderly housing homes begin to find it necessary to leave the island. Are their heirs prohibited from living in the homes? Will a new buyer have to be an elder?
Please note that these scenarios may seem like worst case situations presented to make a point, but they are part of the reality associated with housing on Martha’s Vineyard. For example, developments which have been existence for over 30 years still have vacant lots, and the nature of real estate on Martha’s Vineyard is such that seasonal and rental properties are the norm.

**Amphidrome Wastewater Treatment System**

Whether or nor Mr. Danielson puts forth the clustered Amphidrome system is yet to be seen, but after a review of the Amphidrome system and similar systems online, it quickly becomes apparent that much thought will be necessary to determine such a system’s applicability in the at-risk Lagoon Pond watershed.

I will not belabor the point for the need to properly vet a system, such as Amphidrome, but will highlight only a few points made by others which should cause the MVC to take a closer look at the suitability of a clustered alternative septic system at Lagoon Ridge. The Commission has some experience with alternative systems since it is reported that it has required the installation of at least 15 systems since 2006, but few, if any, are clustered systems like the one proposed at Lagoon Ridge.

It is becoming established by many that alternative systems are not the panacea that they were hoped to be because they often fail, are complex and have high maintenance costs. A September 7, 2015 article in the Vineyard Gazette indicates that 10 to 50 of the 150 systems in use in Edgartown are not in compliance. But if the Lagoon Ridge clustered system is out of compliance that means a total effect of 21 separate systems will be failed at one time with a centralized detrimental impact. In the same article, the Edgartown health agent states that such systems absolutely contribute to the solution, but his experience also shows that "they fall short of the mark".

Some additional comments seen online regarding alternative waste water systems are:

- The Amphidrome system is sophisticated and requires a trained operator to monitor the system and insure the pump cycle times, aeration periods and backwash settings are set to site specific conditions. Source: EPA document.

- It will be necessary for homeowners to have a qualified maintenance organization operate and maintain the system. Source: EPA document.
- Susan Rask, an environmental health specialist of Barnstable County, has reported that (AT) systems are not a long-term solution to the Cape’s nitrogen problem; first, because of what she describes as “extremely variable water quality performance”, and second, because of the extensive management associated with their use. Source: Barnstable County document.

- Another study in Barnstable County where the nitrogen limit was 19 mg/L, as opposed to the 14 mg/L detailed by Danielson, found that only 60 to 69% of the systems were in compliance. A different study reported that only 7% of the examined facilities always met the nitrogen permit requirement. Source: Barnstable County.

- Another Barnstable study on the economic analysis of alternative systems states:

  "The installation of an I/A on-septic treatment system is often viewed as an easy, readily available and relatively inexpensive solution for remediating wastewater problems. It is important to recognize that I/A systems have significant ongoing operation and maintenance costs. When these costs are considered, it becomes clear that the I/A systems are not inexpensive in the long term, and impose significant management burdens on both the homeowner and the town to ensure that they are operated reliably to meet nitrogen reduction requirements. Source: Barnstable County document."

- The common assumption that multifamily units perform better than single family units is called into question by a Barnstable County study.

- A analysis relating to performance of alternative systems by Herbert Gram in Connecticut reports that a high percentage of the time, alternative systems are “out of spec”. Source: On site wastewater management in Ct.

- A Connecticut study also reports ...."ATS are complex systems with numerous mechanical and electrical components that may fail. The work they are supposed to do involves biochemical reactions that are influenced by thousands of variables."

In addition to questioning the advisability of clustered alternative septic system at Lagoon Ridge, the MVC should determine whether Oak Bluffs is prepared for the specific issues relating alternative systems. For example:

- Is there an ordinance specifically designed for clustered alternative septic systems?
- Are there defined monetary penalties for non-compliance regarding clustered alternative systems?
- Are the monetary penalties proportional to the number of homes on the system?
- Are there hearing procedures in place specifically designed for clustered alternative septic systems?
- Is there a defined liability for the owners and operators regarding clustered alternative systems?
- Are there permit requirements specific to clustered alternative systems?
- Will there be an agreement with Oak Bluffs and the MVC regarding mandatory oversight pertaining to monitoring, maintenance, repair, etc?
- Is there a mandatory requirement for an escrow account to address the failures that will occur?
- Will the owners and operators be demanded to take out insurance policies against failures?
- Is there an estimate of cost for at least 20 years?
- Are inspections mandated and performed by the owners with results going to the town?
- Will the owner be required to pay for all associated inspections?
- Will such ordinances spell out inspection and laboratory analysis procedures?
- Is there a mandate for additional land to be made available to be used when the system fails completely and a second system is required?

**Lagoon Pond and Wastewater**

The following comments are offered based on literature available for reading on the MVC's website.

The DRI 464-M-2 Form B for Lagoon Ridge was approved on October 23, 2014, and it would seem that the Commission's criteria regarding wastewater quality for DRI reviews at that time was the Interim MVC Policy for DRI Review which was amended on February 15, 2007. The title of the DRI policy using the word "Interim", by its very nature, suggests that the issues of wastewater are known to be changing. It is not known if the Commission relied on the 2007 Interim Policy, but if it did, the Commission should consider the suitability of applying these standards to a project not yet built in 2016.

This potential issue of outdated standards becomes more critical, in light of the reality that almost immediately after the DRI 464-M-2 Form B's approval, many enlightening news articles regarding the dire conditions of our island ponds including the Lagoon Pond were published. In fact, these articles and other readings relating to proposed wastewater issues are prominently featured on the MVC website. The MVC, itself, within its own "Island Plan" at Section 10 discusses the necessary changes to the way wastewater is viewed. And approximately one
month after approving the DRI Form B for Lagoon Ridge the Commission met to hear from the Cape Cod Commission's Executive Director, Paul Niedzwiecki who presented his views on Water Quality planning relating to wastewater. Obviously, the subject of wastewater has come to the forefront of public's and the Commission's attention and surely, it cannot be disputed that the Lagoon Pond is a severely threatened body of water directly impacted by the area of land encompassing the Lagoon Ridge Development.

The general theme of the writings from the MVC and others is that remedial action is necessary for the Lagoon Pond. Remediation normally involves an attempt to fix what is presently wrong and to prohibit any further effects that will be detrimental. In essence, with regard to the Lagoon Pond, it is time to attempt to fix the existing problem and not to add to the dilemma during the process. Not one additional drop of nitrogen, phosphorus, or other environmentally unfriendly substances should be allowed. I believe 25 additional dwelling units, regardless of good intentions to lessen their environmental impact, will only exacerbate the problem with the Lagoon Pond, thus contributing to the cause of its death. The Martha's Vineyard Magazine article from the summer of 2015 asks the poignant question that should ring clear to all of us ..."Is It Too Late For The Lagoon?"

Thank you for taking the time to read this letter, but as lengthy as it is, it merely highlights some of what should be considered to be the issues regarding the proposed Lagoon Ridge Development.

Respectfully submitted,

Alan T. Robillard