

June 21, 2018

Medway Conservation Commission
Medway Town Hall
155 Village Street
Medway, MA 02053

**Re: Response to Comments from Conservation Agent, Commission Members and EcoTec
Timber Crest Estates Development, Medway, MA (DEP File #216-914)**

I. Introduction

Goddard Consulting, LLC is pleased to submit this letter in response to the comments received regarding the Notice of Intent for the Timber Crest Estates residential development in Medway, MA. Responses are provided for the following comment sources:

- 1) May 10, 2018 letter from Conservation Agent Bridget Graziano
- 2) April 6, 2018 letter from Art Allen of EcoTec, Inc. to the Commission.

Project team (Goddard Consulting, Outback Engineering, Attorney Matthew Watsky, Applicant Mounir Tayara) responses to comments are in bold.

The following new and/or revised documents and materials are being submitted with this response letter:

From Outback Engineering

1. Sedimentation & Erosion Control Plans for SWPPP
2. Tree Canopy Enhancement Plan (6/14/18)

From Goddard Consulting

1. Wetland Restoration Plan (6/5/18)
2. Stream Bed Restoration Plan (6/5/18)
3. Amphibian Protection Plan (6/5/18)
4. Vernal Pool Survey Report (5/24/18)
5. Vernal Pool Habitat Map (5/30/18)
6. Revised WPA Form 3 (6/5/18)

II. New Comments from Conservation Agent, May 10, 2018

[Comment #NC-1.1]

1. **Burden of Proof** 310 CMR 10.03(1)(a)3

(1) Burden of Proof.

(a) Any person who files a Notice of Intent to perform any work within an Area Subject to Protection under M.G.L. c. 131, § 40 or within the Buffer Zone has the burden of demonstrating to the issuing authority:

1. that the area is not significant to the protection of any of the interests identified in M.G.L. c. 131, § 40; or
2. that the proposed work within a resource area will contribute to the protection of the interests identified in M.G.L. c. 131, § 40 by complying with the general performance standards established by 310 CMR 10.00 for that area.
3. that proposed work within the buffer zone will contribute to the protection of the interests identified in M.G.L. c. 131, § 40, except that proposed work which lies both within the riverfront area and within all or a portion of the buffer zone to another resource area shall comply with the performance standards for riverfront areas at 310 CMR 10.58. For minor activities as specified in 310 CMR 10.02(2)b.1. within the riverfront area or the buffer zone to another resource area, the Department has determined that additional conditions are not necessary to contribute to the protection of the interests identified in M.G.L. c. 131, § 40.

• Scientific literature, Guidance Documents from government agencies, professional organizations and Universities, local professional Associations, PRC, Agent and Commission Member expertise indicate many of these proposed activities will result in impacts to the resource area (not buffer). These conclusions have also been codified in recent Mass DEP decisions. These include, but not limited to, canopy, shade, temperature, habitat, migration, sedimentation, changes in hydrology, etc. To date, applicant has noted “no impacts will occur”. The burden of proof is on the applicant to provide a rebuttal with sufficiently supported scientific evidence to overcome these concerns. To date no such rebuttal has been provided.

RESPONSE #NC-1.1 Goddard Consulting 6/21/18

The project has been carefully designed - and revised multiple times - to avoid direct impacts to the wetland resource areas. The stormwater design incorporates the use of enhanced erosion control barrier methods that will ensure that there is no increase in sedimentation or changes in hydrology of the nearby wetlands and streams. The use of a culvert (at crossing 1), concrete arch bridge (at crossing 3) and wildlife crossing structure (on Road F between vernal pools CVP 7840 and CVP 1540) will ensure safe migratory movements of small animals at resource area and buffer zone alteration locations.

Indirect impacts near resource areas may include an increase in sunlight exposure to small portions of the resource areas due to reduced tree canopy. The majority of the proposed

buffer zone alterations in proximity to resource areas are either north or west of BVW and vernal pools, therefore any changes in quantity or intensity of light reaching the resource areas would be minimal. In locations where the buffer zone alteration is south of a BVW or vernal pool, the project proposes to revegetate the outer periphery of the limit of disturbance with native trees, such that any increases in sunlight exposure to the resource areas will be temporary in nature. Further, it is not clear that increased sunlight to a wetland or vernal pool would cause negative consequences. Increased sunlight would allow the rapid growth of newly exposed understory and herbaceous species within and adjacent to the resource areas. Some of these newly exposed species, such as highbush blueberry or winterberry, provide the benefit of some shading on the wetlands while also serving as a valuable food source for wildlife. The project will include an Invasive Species Monitoring Plan (ISMP) to ensure that any resultant rapid re-growth of the understory and herbaceous species is limited to native species. Increases in sunlight exposure therefore has the potential to provide a benefit to the resource areas and local wildlife by increasing the diversity of plant species present within the resource areas.

A recent study conducted at Yale University (Skelly et al. 2014¹) concluded that removal of moderate proportions of the tree canopy surrounding vernal pools actually led to an increase in diversity of breeding amphibian species. The increased sunlight due to the experimental canopy removal treatments slightly raised the mean water temperature of the adjacent vernal pools, and provided more favorable breeding conditions to three species that are considered “canopy intolerant:” gray treefrog, spring peeper and green frog. All of these species are likely present within the Timber Crest Estates project site or immediate vicinity, and the Skelly et al. study suggests that if the project does in fact create a condition where there is increased sunlight reaching the vernal pools, these local native species may actually benefit. The study also concluded that the “canopy tolerant” species (wood frogs and spotted salamanders; known to breed in the onsite vernal pools) were not harmed by the canopy removal treatments.

[Comment #NC-1.2]

- The burden of proof is on the applicant to show sufficient evaluations of alternatives to demonstrate to the satisfaction of the Commission that alternatives with less impacts are not feasible. The use of this Regulation is within the Commission’s discretion. To date, the applicant has not supplied sufficient information to show that there are no other reasonable alternatives to the proposal and that adverse impacts are being minimized. The proposed project will impact wetlands through the construction of roadways, addition of fill in close proximity to wetlands and within wetlands, development within self-imposed 15’ buffer zone with no buffer zone to wetlands resources, and proposed crossings. These activities in close proximity to the resource areas will result in damage to the resource area itself, including but not limited to, loss of canopy, temperature changes, sedimentation, changes in hydrology, limitations on migration and loss of critical habitat. To date the Applicant has only suggested no impacts will occur and has not provided a

¹ Skelly, David K., S.R. Bolden and L.K. Freidenburg. 2014. Experimental canopy removal enhances diversity of vernal pond amphibians. *Ecological Applications*, 24(2), pp. 340-345.

satisfactory scientific rebuttal of the Commission's concerns. The burden of proof is on the applicant to provide a scientific and engineering supported assessment with sufficient detail and support to satisfy the Commission's concerns with regard to impacts to the resource areas.

RESPONSE #NC-1.2 Goddard Consulting 6/21/18

The Applicant has presented multiple alternative project designs, each of which progressively has reduced resource area impacts and, in some cases, eliminated major wetland alterations completely. The Applicant acquired multiple properties in order to accomplish these substantial reductions in wetland alteration. The Applicant has determined that there are no further alternative project designs that could further reduce the required resource area alterations. As discussed above in response #NC1.1, the project has been designed so that it will not result in damage to the resource areas, and that any potential indirect effects on the resource areas due to increases in sunlight exposure may actually benefit the resource areas by increasing plant and amphibian diversity.

[Comment #NC-2.1]

2. The applicant is required to meet the two state performances standards which at this time have not been met, these are listed below. Information submitted to the Commission cannot simply state, "work is not proposed to impact the wetland resource on site BVW and VPH", this is not sufficient evidence to overcome the performances standards. The Agent referenced the following performances standards 310 CMR 10.53(1) at the April 12 and 26, 2018 hearings. It should be noted that the Commission requires that the applicant comply with 310 CMR 10.03(1)(a)3 when providing responses to concern for alteration of wetlands resources protected under the Act. The definitions are provided to show that the Commission reference to alteration of wetland resources is specifically referenced as an alteration in the definition of alter.

RESPONSE #NC-2.1 Goddard Consulting 6/21/18

Response provided by Matthew Watsky, Esq.

Goddard Consulting has provided its responses to demonstrate that the proposed work within the Buffer Zone will cause no adverse effects to the adjacent Resource Area. The critical provisions of 10.53(1) setting the regulatory standard of review are its provisions as follows:

The potential for adverse impacts to Resource Areas from work in the Buffer Zone may increase with the extent of the work and the proximity to the Resource Area. The Issuing Authority may consider the characteristics of the Buffer Zone, such as the presence of steep slopes, that may increase the potential for adverse impacts on Resource Areas.

The purpose of preconstruction review of work in the Buffer Zone is to ensure that adjacent Resource Areas are not adversely affected during or after completion of the work.

Goddard has demonstrated that the project will not result in adverse effects to the Resource Areas.

Contrary to the most recent comments suggesting otherwise, the provisions of 10.53(1) do not set a higher standard for work in Buffer Zone that is adjacent to a vegetated wetland than 10.55 sets for work within the wetland and that actually regulates work in Bordering Vegetated Wetland. The question is not whether work in Buffer Zone will “Alter” any condition within the adjacent Resource Area. The term “alter” is used throughout the DEP Regulations in the context of determining whether an activity triggers jurisdiction. If proposed work will Alter an area subject to jurisdiction or is likely to do so due to its proposed close proximity within Buffer Zone, then the activity is subject to preconstruction review. There is no dispute that the proposed work is subject to review. The question is whether proposed work will cause an impermissible adverse effect due to sedimentation from steep slopes, changes in drainage patterns or other similar changes in the site conditions as a result from the Buffer Zone work. Goddard’s reports and the detailed engineering plans demonstrate that though the work in the Buffer Zone is properly subject to regulation, it is designed and can be conditioned to carry out the regulatory purpose, to wit: “The purpose of preconstruction review of work in the Buffer Zone is to ensure that adjacent Resource Areas are not adversely affected during or after completion of the work.” (10.53(1) (final sentence). The materials presented to the Commission amply demonstrate the project as revised and as now proposed meets this standard.

[Comment #NC-2.2]

- Two state performance standards that apply here are; 310 CMR 10.53(1) and 310 CMR 10.03(1)(a)3. Which were referenced at the April 12 and 26, 2018 meetings.
 - o 310 CMR 10.53 (1) If the Issuing Authority determines that a Resource Area is significant to an interest identified in M.G.L. c. 131, § 40 for which no presumption is stated in the Preamble to the applicable section, the Issuing Authority shall impose such conditions as are necessary to contribute to the protection of such interests. For work in the Buffer Zone subject to review under 310 CMR 10.02(2)(b)3., the Issuing Authority shall impose conditions to protect the interests of the Act identified for the adjacent Resource Area. The potential for adverse impacts to Resource Areas from work in the Buffer Zone may increase with the extent of the work and the proximity to the Resource Area. The Issuing Authority may consider the characteristics of the Buffer Zone, such as the presence of steep slopes that may increase the potential for adverse impacts on Resource Areas. Conditions may include limitations on the scope and location of work in the Buffer Zone as necessary to avoid alteration of Resource Areas. The Issuing Authority may require erosion and sedimentation controls during construction, a clear limit of work, and the preservation of natural vegetation adjacent to the Resource Area and/or other measures commensurate with the scope and location of the work within the Buffer Zone to protect the interests of M.G.L. c. 131, § 40. Where a Buffer Zone has already been developed, the

Issuing Authority may consider the extent of existing development in its review of subsequent proposed work and, where prior development is extensive, may consider measures such as the restoration of natural vegetation adjacent to a Resource Area to protect the interest of M.G.L. c. 131, § 40. The purpose of preconstruction review of work in the Buffer Zone is to ensure that adjacent Resource Areas are not adversely affected during or after completion of the work.

and

310 CMR 10.

(1) Burden of Proof.

(a) Any person who files a Notice of Intent to perform any work within an Area Subject to Protection under M.G.L. c. 131, § 40 or within the Buffer Zone has the burden of demonstrating to the issuing authority:

1. that the area is not significant to the protection of any of the interests identified in M.G.L. c. 131, § 40; or

2. that the proposed work within a resource area will contribute to the protection of the interests identified in M.G.L. c. 131, § 40 by complying with the general performance standards established by 310 CMR 10.00 for that area.

3. that proposed work within the buffer zone will contribute to the protection of the interests identified in M.G.L. c. 131, § 40, except that proposed work which lies both within the riverfront area and within all or a portion of the buffer zone to another resource area shall comply with the performance standards for riverfront areas at 310 CMR 10.58. For minor activities as specified in 310 CMR 10.02(2)b.1. within the riverfront area or the buffer zone to another resource area, the Department has determined that additional conditions are not necessary to contribute to the protection of the interests identified in M.G.L. c. 131, § 40.

- Definitions that apply in this standards referenced above are 310 CMR 10.04 (alteration) and (significant)

- 310 CMR 10.04 recognizes that alteration when defining “alter” as “chang[ing] the conditions of any area Subject to Protection under the WPA . It provides examples of alterations including “the changing of water temperature...”.

Alter – means to change the condition of any Area Subject to Protection under M.G.L. c. 131, § 40. Examples of alterations include, but are not limited to, the following:

(a) the changing of pre-existing drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns and flood retention areas;

(b) the lowering of the water level or water table;

- (c) the destruction of vegetation;
- (d) the changing of water temperature, biochemical oxygen demand (BOD), and other physical, biological or chemical characteristics of the receiving water.

Significant - means plays a role. A resource area is significant to an interest identified in M.G.L. c. 131, § 40 when it plays a role in the provision or protection, as appropriate, of that interest.

RESPONSE #NC-2.2 Goddard Consulting 6/21/18

See above response to NC 2.1.

[Comment #NC-2.3]

- The WPA recognizes that Buffer Zone play an important role in protecting the resource area, as noted under 310 CMR 10.53(1) and 310 CMR 10.02(2)(b)3.

RESPONSE #NC-2.3 Goddard Consulting 6/21/18

See above response to NC 2.1

[Comment #NC-2.4]

- The edge effect can be referred to as EI, Edge Influence. Harper et al. (2005) Table 1 defines edge effects, “Edge influence (EI) defined as the effect of processes (both abiotic and biotic) at the edge that result in a detectable difference in composition, structure, or function near the edge, as compared with the ecosystem on either side of the edge”. This effect will impact the BVW/VHP cause and alteration which was not accounted for in the calculations of BVW alteration (310 CMR 10.55(4) for the VHP Wildlife Habitat Evaluation (310 CMR 10.60).

RESPONSE #NC-2.4 Goddard Consulting 6/21/18

The Harper et al 2005 paper provides only a theoretical background for attempting to develop a unifying theory of Edge Influence (EI). The paper provides no discussion of whether EI is positive or negative and relies on a meta-analysis of 44 studies published related to the EI on forest structure and composition (many of which were conducted in boreal or tropical regions and are thus not comparable to habitat conditions in Medway, MA). There is no discussion in the paper of the EI on upland/wetland ecotones, which is where it could have provided relevance to the Timber Crest Estates project impacts near BVW. Therefore this paper has little or no relevance to the assessment of potential indirect impacts to resource areas or a Wildlife Habitat Evaluation of the Timber Crest Estates project. Also, see Responses #NC-1.1 and NC-1.2.

[Comment #NC-2.5]

- Based on the regulations it is requested that the applicant provide a vegetated buffer zone in order to meet 310 CMR 10.53(1) or provide a preponderance of evidence how all areas where work is within 15 of BVW or VHP (especially work up to the 0 line) will not alter the wetland resource, such as edge influence, invasive species encroachment from increase of light changing the plant composition, increase in soil temperature, increase in

water temperature, change in hydrology, alteration of wildlife habitat, loss of pollution prevention, sedimentation, flood control, etc. under 310 CMR 10.03 (1)(a)3.

RESPONSE #NC-2.5 Goddard Consulting 6/21/18

As shown on the May 31, 2018 revised Grading & Drainage Plans submitted to the Commission in response to TetraTech's Stormwater comments, changes were made to the alignment of Road E, Infiltration Basin #6, and roadside grading to pull proposed work limits further from the wetlands to minimize potential edge effects as described in the Commission's comment (changes were also made to many of the lots and future house locations even though they are not part of the current NOI proposal). On the entire 169-acre project site, less than 1.8% of the 0-15' buffer to the bordering vegetated wetlands is now proposed to be disturbed, including anticipated impacts from future house construction. There is no longer any work proposed at the 0' line; roadway, drainage and infrastructure work is proposed within the 15' buffer to BVW at the following areas:

- **3 small areas along Roads C, D and E (only areas on the west side subdivision)**
- **At the retaining walls between stations 2+0 and 5+0, and at station 20+0 Road F**
- **At the proposed bridge at Wetland Crossing #3, Road F**
- **At Detention Basins #8A and #10 and Water Quality Swale #2 along Road F**
- **At wetland replication area #3 (work is required at the 0 ft. line to connect hydrological connections to the existing wetlands).**
- **At the common driveway for lots 71-74 off Fairway Lane**
- **In the vicinity of Wetland Crossings #2, #4 and #5 where horizontal directional drilling will be used to otherwise eliminate all wetland alteration.**

This wider buffer will better protect the functions of the wetlands.

See also Responses #NC-1.1 and NC-1.2.

[Comment #NC-2.6]

- The Commission at the April 12, 2018 meeting agreed that proposed clearing of mature trees, which included a mix of deciduous and evergreen trees, native shrubs and groundcover, was likely to adversely affect the functions of the BVW through loss of shading, changes in temperature, as well as changes in the plant community (i.e., the reduction of shade tolerant plants and the introduction of non-native species) within the 15 of BVW/VHP.

RESPONSE #NC-2.6 Goddard Consulting 6/21/18

See Responses #NC-1.1 and NC-1.2.

[Comment #NC-2.7]

- o The Commission at the April 12, 2018 meeting requested the applicant provide work to reduce work/roadways/drainage by providing a wider, undisturbed buffer along the edge of the BVW, or an analysis that demonstrated that proposed tree and understory clearing would not have an "edge effect" on the BVW.

RESPONSE #NC-2.7 Goddard Consulting 6/21/18

See Responses #NC-1.1, NC-1.2 and NC-2.4.

[Comment #NC-2.8]

o Please provide the amount of Buffer Zone that currently exists on the site and the amount of permanent impacts proposed within the Buffer Zone. This includes work from 15'-100 and 0-15'.

RESPONSE #NC-2.8 Goddard Consulting 6/21/18

The proposed work within the buffer zone to BVW is outlined below.

	Total area on site, Ac.	Estimated Area to be Altered, Ac.	Estimated Area to be Altered, %
100' Buffer	49.93	22.8	45.7%
15'-100' Buffer	38.99	22.6	58.0
0'-15' Buffer	10.94	0.20 *	1.8

*** Note: 0.17 Ac. is attributed to work related to the roadways, utilities and drainage basins, while 0.03 Ac. (or approximately 1,500 s.f.) is attributed to work for future house construction on the 143 lots.**

[Comment #NC-2.9]

o The applicant should remove the reference of a “no alteration zone” as this is not part of any laws/regulations or requirements of the Conservation Commission. In fact this proposed 15' no alteration zone line is not upheld by the applicant as a no alteration zone. There are multiple locations where the project extends into the “15 no alteration area”. The Commission requested at the April 12, 2018 hearing to work to get all work outside the 15' buffer zone, as proposed on plans as “no alteration zone.”

RESPONSE #NC-2.9 Goddard Consulting 6/21/18

The reference to a no alteration zone has been changed; the line is now labeled as “15' Wetland Buffer”. See response to #NC-2.5.

[Comment #NC-3]

3. While the Commission appreciates applicant's efforts to reduce impacts to resource areas, the project is not subject to Medway zoning regulations and alternatives with less impact may include but are not limited to, apartments, duplexes, condominiums, clusters, moving structures closer to the road and each other, etc... MCC understands setbacks shown on plans do not apply. Based on discussions with counsel and experts, the shape and locations of the roadways is likely driven by the location of proposed units. The number, type, and locations of lots and structures are not part of this filing. These lots and structures shown on the plans for reference are not and will not be approved under this filing. Any and all depictions of the

number, type, and location of lots, or structures (buildings) must include notations on the plans that the number type, shape and location of lots and buildings are not part of the project and are not approved under this filing. Applicant shall not rely on these items for future approvals. No future reference to these items may be made in future filings with the acceptance of allocation of impervious surface for drainage calculations in the stormwater calculations. Future material changes may also require re- evaluation of stormwater calculations. Any reference to these items may only be related to the aggregate impervious surface for drainage calculations.

RESPONSE #NC-3 Goddard Consulting 6/21/18

As stated previously, the applicant has incorporated extensive mitigating measures to reduce wetland impacts since the Comprehensive Permit was issued by the Zoning Board in 2017 (refer to prior response letters). As now constituted, the project has further reduced work within the 15' buffer zone from what was approved by the Zoning Board and is in compliance with applicable DEP regulations for work within the buffer zone. The project went through full review and approval by the ZBA. The ZBA found the Project design concept – single family houses on small lots, rather than large apartment buildings or duplexes – consistent with the local needs in Medway. As DEP precedent makes clear, the wetlands permitting process does not empower the issuing authority to “assume the role of a superagency for land use planning so as to second guess decisions made by the local Planning Board or Zoning Board of Appeals.” *In the Matter of Roger LeBlanc*, 16 DEPR 1 (2009). Based on all of the extensive mitigating measures now incorporated, we are hopeful that the Commission will agree that the project is worthy of an approval with reasonable conditions.

[Comment #NC-4]

4. The lots, setbacks, and structures, buildings and limits of clearing/work shown on these plans are not part of this submittal. This has been confirmed with multiple discussions with the Applicant. This project includes only the roadways and related stormwater features. While MCC suspects the roadway location is heavily influenced by Applicant's depiction of lots, these lots are either submitted or approved under this application. These lots and structures shown on the plans for reference are not and will not be approved under this filing. Any and all depictions of the number, type, and location of lots, or structures (buildings) must include notations on the plans that the number type, shape and location of lots and buildings are not part of the project and are not approved under this filing. Applicant shall not rely on these items for future approvals. No future reference to these items may be made in future filings with the acceptance of allocation of impervious surface for drainage calculations in the stormwater calculations. Future material changes may also require re-evaluation of stormwater calculations. Any reference to these items may only be related to the aggregate impervious surface for drainage calculations. To a large extent, the number of lots and structures are irrelevant to this filing (aside from stormwater calculations) and a submission to MCC in general. What is material

to MCC, is the amount and location of work/disturbance in/near resource areas and their resulting habitats. MCC will review each individual location, as filed, and condition the filing to protect resource areas. Lots may be referred to as a matter of convenience to allow clear communications of locations on applicant provided plans. Of particular interest in this project under 40B is that zoning, lot shape, size, setback, structure type and location does not likely apply. MCC does not require the removal/elimination of lots. The number of lots is a decision the applicant must make with respect to project design and feasibility as the project is conditioned to protect the interests of the act. The Applicant may or may not decide a lot or number of lots is not viable based on the conditioning required by the Commission.

RESPONSE #NC-4 Goddard Consulting 6/21/18

While the applicant agrees that this NOI does not propose work on any individual lot, the lot lines, and number and shape of lots have been set by the ZBA. The Applicant will file the appropriate applications for approval of work on the lots separate from this NOI.

[Comment #NC-5.1]

5. Wildlife Habitat Evaluation (WHE) by Goddard Consulting, dated September 7, 2017 is not sufficient and does not take into account the impacts of the entire project. There is no mitigation for the proposed alteration of wildlife habitat and the Commission does not agree this is confined to the area triggering the WHE. The applicant is required to meet 310 CMR 10.60 (1), (2) and (3). Mitigation was not offered as defined under 310 CMR 10.60(3). The applicant did note that they have met the stream crossing standards under 310 CMR 10.54(4)(a)6 and the performance standards under 310 CMR 10.55(4)b, the Commission is working to review those standards, however, these should not be used in 310 CMR 10.60 (3).
- MA Wildlife Habitat Protection Guidance for Inland Wetlands March 2006 by DEP – page 12 discussing providing and evaluation on the entire surrounding wetland onsite and offsite in order to establish the relationship to the onsite habitat continuity and connectivity. Areas beyond 100 buffer zone will alter Wildlife habitat functions as it affects all the available upland habitat for the vernal pools.

RESPONSE #NC-5.1 Goddard Consulting 6/21/18

The MassDEP document “Wildlife Habitat Protection Guidance for Inland Wetlands” dated March 2006 clearly states that areas subject to WHE are limited to resource areas. On p. 12 of the document, Section E. “What Should be Evaluated?” it states, “The impact area for a wildlife habitat evaluation is that portion of resource areas that will be altered by the proposed activity (both permanent and temporary). There may be more than one impact area in an individual project” (underline added for emphasis).

It goes on to state “Information about the entire surrounding wetland/ riparian system on the site (and offsite to the extent needed to characterize the relationship of the site to the

surrounding habitat) will be necessary to evaluate issues of wildlife habitat use, continuity, and connectivity. (Again, underline added for emphasis). There is no mention of a requirement for conducting WHE on uplands surrounding the resource areas.

The Wildlife Habitat Evaluation submitted with the NOI (dated September 7, 2017) was conducted on seven Impact Areas where wetland resource areas were proposed to be altered based on the original submitted plans. The project has since been redesigned multiple times to eliminate five of the impact areas (Road I Wetland Crossings #2a, 2b, 2c; Water/Sewer Line installations at Wetland Crossings 4 and 5). Only two of the impact areas remain (Crossings #1 and #3). The impacts to both of these areas have been further reduced, so that the current project proposes less resource area impact than that which was originally evaluated. In both cases, the conclusion was made that the project avoids, minimizes and mitigates adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce the site's capacity to provide important wildlife habitat functions.

Mitigation for Crossing #3 is described in the document "Wetland Restoration Plan," dated 6/5/18.

[Comment #NC-5.2]

- Additionally, the Massachusetts Stormwater Management Standards require the following;

Massachusetts Stormwater Management Standard Volume 1 chapter 1 page 18 notes that the Wildlife Habitat evaluation must be completed to show the stormwater discharge will not impact any certified vernal pools and the proposed stormwater BMP's meet the performance standards.

RESPONSE #NC-5.2 Goddard Consulting 6/21/18

From the MA Stormwater Handbook, Table CA 2: Standard 6 (p.18):

"3. Stormwater BMPs must be set back 100' from a certified vernal pool and comply with 310 CMR 10.60². Proponents must perform a habitat evaluation and demonstrate that the stormwater BMPs meet the performance standard of having no adverse impact on the habitat functions of a certified vernal pool."

The Stormwater design has been peer-reviewed and determined to be in compliance with MassDEP Stormwater Management Standards.

There is no proposed alteration to Vernal Pool Habitat therefore the project complies with 310 CMR 10.60.

² Wildlife Habitat – <http://www.mass.gov/eea/docs/dep/service/regulations/310cmr10a.pdf>

A Wildlife Habitat Evaluation was performed on all areas of proposed resource area alteration (consisting of two Impact Areas in the final design – Crossings #1 and #3). Since all Stormwater BMPs are located greater than 100 feet from any vernal pools, and none are located within Vernal Pool Habitat, they comply with Stormwater Standard 6 and therefore should be presumed to have no adverse impact on the habitat functions of the vernal pools.

[Comment #NC-5.3]

- At the January 11, 2018 meeting the Commission and its Agent requested the VP surveys taken at the Vernal Pools on site this was never provided to the Commission.

RESPONSE #NC-5.3 Goddard Consulting 6/21/18

See “Vernal Pool Survey Report,” prepared by Goddard Consulting, dated May 24, 2018.

[Comment #NC-5.4]

- Please note that DEP in its decisions under the Wetlands Protection Act Regulations 310 CMR 10.00 has in fact quoted what are defined as “vernal pool clusters” – Sudbury DEP #301-1068 SOOC.

RESPONSE #NC-5.4 Goddard Consulting 6/21/18

Goddard Consulting identified and surveyed eight vernal pools within the project site. See Vernal Pool Survey Report referenced in Response #NC5.3. We agree that four of the vernal pools in the northeast portions of the site are located in the same general area and thus may constitute a “vernal pool cluster,” however this is of no regulatory significance based on our interpretation of 310 CMR 10.00. There is no proposed alteration to Vernal Pool Habitat therefore the project complies with 310 CMR 10.60.

[Comment #NC-5.5]

- It is requested that the Wildlife Habitat Evaluation be amended to meet the requirements under 310 CMR 10.60 (1-3) as noted within the MA Wildlife Habitat Protection Guidance for Inlands Wetlands by MADEP dated March 2006

RESPONSE #NC-5.5 Goddard Consulting 6/21/18

There is no proposed alteration to Vernal Pool Habitat therefore the project complies with 310 CMR 10.60. See also response #NC-5.1. See “Vernal Pool Habitat Map,” dated 5/30/18.

[Comment #NC-5.6]

- It is requested that the Wildlife Habitat Evaluation incorporates the Stormwater Management Standards requirement under Volume 1 Chapter 1 Page 18, as referred to above #2

RESPONSE #NC-5.6 Goddard Consulting 6/21/18

See Response #NC-5.2.

[Comment #NC-5.7]

- It was requested at the applicant provide any information collected on the vernal pools on site during the vernal pool study

RESPONSE #NC-5.7 Goddard Consulting 6/21/18

See “Vernal Pool Survey Report,” prepared by Goddard Consulting, dated May 24, 2018.

[Comment #NC-5.8]

- Wildlife Habitat Evaluation by Goddard Consulting, date September 7, 2017 for Crossing #3 may be identifying snag found in the field (unclear) in the WPA form, however, these are not identified in any type of mitigation in the proposal for the loss of these snags within the letter provide by Goddard Consulting. The snags were identified at the April 19, 2018 site visit and mitigation was discussed but not formally in writing. Mitigation should be offered under 310 CMR 10.60 (3) for the loss.

RESPONSE #NC-5.8 Goddard Consulting 6/21/18

See the document “Wetland Restoration Plan”, dated June 5, 2018. At Crossing #3 the narrative calls for the careful removal of any large dead trees or other important wildlife habitat features identified by the supervising wetland scientist to be stockpiled and later incorporated into the undisturbed adjacent BVW.

[Comment #NC-5.9]

- Page 4 of 8 does not note the standing water present for breeding of amphibians, as CVP #7839 is directly adjacent to the crossing and therefore should be included in the Wildlife Habitat Evaluation

RESPONSE #NC-5.9 Goddard Consulting 6/21/18

The Impact Areas described in the WHE are limited to portions of impacted resource areas (see Response #NC-5.1). CVP #7839 is not within the Impact Area for Crossing 3, (it is over 100 feet away) therefore it was not included in the evaluation. It was the opinion of the wildlife biologist that any standing water that may be present at least part of the growing season within the impact area is suitable for non-breeding amphibians (foraging, re-hydration) but not breeding amphibians.

[Comment #NC-5.10]

- Page 4 of 8 does not identify the snag over the stream

RESPONSE #NC-5.10 Goddard Consulting 6/21/18

Near the top of Page 4 for Impact Area “Crossing 3”, “*Number (or density) of standing dead trees...*” two standing dead trees are indicated, 12-18 dbh” (1) and 18-24” dbh (1). These two important habitat features are also listed in the accompanying narrative for Impact

Area “Crossing 3.” These standing dead trees would constitute the “snag over the stream” referenced in the comment.

[Comment #NC-5.11]

- Page 7 notes that there is not contiguous upland forest habitat at least 50 acres this entire site is approximately 170 acres, please show how this does not apply in the Wildlife Habitat Evaluation

RESPONSE #NC-5.11 Goddard Consulting 6/21/18

Near the top of Page 7 for Impact Area “Crossing 3”, the form asks: “For upland resource areas is the impact area part of contiguous forested habitat at least ... 50 acres in size.”

Impact Area 3 is not an “upland resource area” therefore all of the boxes in this section were checked “NO”. In fact, a more appropriate response would be “Not Applicable” since Impact Area 3 is not an “upland resource area.”

[Comment #NC-5.12]

- Crossing #3 Wildlife Evaluation does not offer mitigation for the loss of snag, important upland and wetland food plants, small mammal burrows, dense herbaceous cover, large woody debris on ground for small mammals, amphibians, and reptiles, loss of rocks, crevices, fallen logs, or hummocks, standing water present for part of growing season for use by non-breeding amphibians and small turtles. Mitigation only proposed to assist with passage which is a stream crossing standards and not part of the requirements under 310 CMR 10.60. Additionally, wetland mitigation required under 310 CMR 10.55 (4)b is not part of the same requirements under 310 CMR 10.60(3). If these were all meant to be the same section, the regulations would have been drafted as such.

RESPONSE #NC-5.12 Goddard Consulting 6/21/18

The Wetland Restoration Plan provides details as to how to stockpile any observed important wildlife habitat features from the Impact Area, and then incorporate them into the adjacent wetland areas.

[Comment #NC-6]

6. Due to continued discussions on wetlands resources impacts resulting from the loss of buffer zone the Commission requests the following to provide a clear review of impacts to wetland resources and buffer zones.

- total percentage of wetland resources on the project site (this includes all parcels)
- total percentage of buffer zone on the project site (this includes all parcels)
- total percentage of buffer zone alteration within 15' - 100' on the project site (this includes all parcels)
- total percentage of buffer zone alteration within 0- 15' on the project site (this includes all parcels)
- total percentage of areas altered near the 0- 15' buffer zone of a Vernal Pool Habitat/BVW on the project site (this includes all parcels)

RESPONSE #NC-6 Goddard Consulting 6/21/18

Refer to Response #NC-2.8 above for some of the requested information. In addition, please note the total project site area is 169.25 Ac., of which approximately 85.6 Ac. is wetland resource area (50.6% of the site). Regarding the last bullet requesting a breakdown of area within 15' of a vernal pool habitat/BVW, we are not proposing any work within vernal pool habitat. Please note, there is no buffer zone to VP habitat under the state's Wetlands Protection Act regulations.

III. Letter from Conservation Agent Bridget Graziano dated January 10, 2018

Comment #2.1 MCC January 10, 2018

It is the opinion of the Agent that that 310 CMR 10.53(e) is not an entitlement to a wetlands crossing but a regulation allowing the Commission to consider a wetlands crossing that may exceed the 5,000 square feet, so that the 5,000 square feet max under 10.55 (4) does not in fact cause a taking of a property.

310 CMR 10.53 specifically states "...the Commission may issue an Order of Conditions and impose such conditions.... In determining whether to exercise its discretion to approve the limited project, listed in 310 CMR 10.53, the issuing authority shall consider the following factors; magnitude of the alteration and the significance of the project to the interests of the Act, the availability of reasonable alternatives to the proposed activity, the extent to which the adverse impacts are minimized, and the extent to which mitigation measures, including restoration and replication, are provided to contribute to the protection of the interests of the Act."

Conservation Commissions are not required to give approval to all projects in which wetlands will be crossed with a new roadway or driveway to provide access and may require the applicant to evaluate the reasonableness of alternatives including reconfiguration of the project to minimize to the greatest extent possible disruption of wetlands.

The use of this Regulation is within the Commission's discretion. The applicant has not supplied sufficient information to show that there are no other reasonable alternatives to the proposal and that adverse impacts are being minimized. The proposed project still under Alternative 4 show impacts to wetlands through the construction of roadways, addition of fill in close proximity to wetlands and within wetlands, development within 15' buffer zone with no buffer zone to wetlands resources, and proposed crossings for which the applicant has not provided sufficient evidence showing that the proposed crossing will not impact the hydrology of the wetland resource. There continues to be fragmentation of wildlife habitat at Crossing #2 and #3.

At this time the information provided in the record does not support the conclusion that all possible alternatives were considered that avoided or minimized adverse impacts.

RESPONSE #2.1 Goddard Consulting 3/29/18

With the acquisition of 13 Fairway Lane to allow design of an alternative access with no wetlands loss, and redesigning Wetlands Crossing #3 from a solid fill to a bridge crossing, the Applicant's team has redesigned the project and reduced the proposed BVW alteration from over 5,000 s.f to 2,935 s.f. Although the Applicant reserves the right to seek approval of the project under 10.53 if that becomes necessary, we request review and approval under 310 CMR 10.55(4)(b).

MCC response #2.1 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

The Commission understands the request of the applicant has been amended from 310 CMR 10.53 limited project to 310 CMR 10.55 (4) (b) Bordering Vegetated Wetland. However, the Commission reserves their right to consider this a limited project since it is written on all the submitted plans that the owner of record for this subdivision is Henry Wickett. Mr. Wickett is the applicant and property owner of the project known as Cider Mill IV DEP #216-0440 where 2,450 square feet of Bordering Vegetated Wetland was disturbed for which these parcels of land were directly adjacent to the parcels of land for this proposed project where Henry Wickett is the list owner at 102 Winthrop Street, 21R Fairway and 0 Woodland Road. Therefore, the proposed 3,408 square feet now proposed for this property puts the total number over 5,000 square feet therefore if project would now require a permit under 310 CMR 10.53 (3)(e) due to the amount of wetlands alterations. Currently the project cannot be permitted as currently designed without the use of the Limited Project Provision. To date, Applicant has not overcome the burden of proof to demonstrate with a sufficient level of detail that the project can be permitted without the Limited Project provision.

RESPONSE #2.1 Goddard Consulting 6/21/18

Under 10.55(4)(b), the 5,000 SF limit on area of permissible wetlands lost are applicable to each Notice of Intent. The Regulation sets no limit per person, per lot, or per development. Orders of Conditions are recorded in the line of title to a particular parcel. The conditions imposed in such Orders are applicable only to the property within that line of title. The Order approving the work in the Cider Mill project, 216-0440, imposes no continuing condition limiting future wetlands alteration to land in the line of title to that Order. But, even if the Cider Mill Order had a continuing condition, the current project is proposed on property that is not within the line of title to the Cider Mill project. The current NOI is presented as a project with less than 5,000 SF of wetlands loss, and full replication that is eligible for approval under 10.55. The provisions of 10.53(3)(e) are not relevant to this application and will not be further addressed.

Comment #2.2 MCC January 10, 2018

Erosion controls not addressed – the current erosion controls are not sufficient and need to be amended.

RESPONSE #2.2 Goddard Consulting 3/29/18

Additional erosion controls have been added to the plans, and a draft Stormwater Pollution Prevention Plan has been prepared which includes a detailed Erosion and Sediment Control Plan.

MCC response #2.2 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

Please provide the following;

- Removal of straw wattle proposal from detail sheet. Wattles are not currently considered acceptable.

Response: Straw wattle detail has been removed.

- Use of 12” biodegradable compost socks and siltation fencing

Response: The erosion control details for compost socks and siltation fencing has been revised on Sheet 47 based on Jim Pavlik’s meeting with Bridget Graziano on May 21, 2018.

- Siltation fencing should not be proposed in sensitive areas such as wetlands replication and crossings

Response: The erosion control details for compost socks and siltation fencing has been revised on Sheet 47 based on Jim Pavlik’s meeting with Bridget Graziano on May 21, 2018.

- Provide plan for protection of stream and BVW during construction of crossings. How will the work be performed and how will the resource areas be protected? The newest plan dated March 15, 2018 does not specify the construction process for the bridge and the protection of the wetlands resource during this process

Response: The notes associated with the bridge detail have been updated to provide more information, and the silt fence details revised based on Jim Pavlik’s meeting with Bridget Graziano on May 21, 2018. See “Wetland Restoration Plan” for Crossing #3.

- Sensitive areas should be identified and erosion control amended to reflect the sensitivity of these locations

Response: Notes have been added to reflect erosion control measures at sensitive areas around VP’s and within 50’ of BVW.

- Propose erosion controls from stockpiles, recommend straw bales for large piles or seeding of piles not used for a period of time

Response: Additional details and notes have been added to the Sedimentation & Erosion Control Plans that are part of the Stormwater Pollution Prevention Plan. Refer to the SWPPP also for other construction period operation and maintenance requirements that the site contractor must follow, including containing and seeding stockpiles.

- Propose 8” biodegradable compost socks surrounding all stormwater systems completed with unstable soil/land surrounding

Response: The SEC plan in the SWPPP shows 8” compost socks to be provided upgradient of drainage basins that may receive runoff from upgradient areas, until stabilized.

- Proposed siltation sacks within all constructed cb’s

Response: The details show silt sacks are to be provided in all CB's during construction.

- Construction entrances detail

Response: The SEC plan in the SWPPP shows construction entrance details.

- Separate phased construction plan based on providing protection of VPH locations

Response: See "Amphibian Protection Plan."

- Several of these items may change and additional comments may arise following the resolution of other items in the filing. MCC reserves the right to comment further on this and all other items.

Response: No further response required.

RESPONSE #2.2 Goddard Consulting 6/21/18

Refer to individual bullets above followed by responses.

Comment #2.3 MCC January 10, 2018

Horizontal Directional Drilling (HDD) - the applicant has addressed the comments provided by the Agent and Peer Review Consultant (Art Allen of Eco Tec) on the utility crossings through wetland resources by proposing horizontal directional drilling. This is an improvement and minimization of wetlands alterations from the original plan Alternative 3 submitted in the NOI package to the Commission on September 11, 2017. However, this can be minimized further to avoid the wetland 75 sq ft alteration by moving the drilling to the east or avoiding the wetland in its entirety. In addition, this alternative must be accompanied by a Frac Out Plan or Contingency Plan of sufficient scope and detail to satisfy the Commission's concerns regarding this task. The Commission will need to review and approve this plan prior to accepting this alternative. Specifically, but not limited to, operational plan, phasing plan, location of equipment, storage, mud settling, procedures for drilling fluid escaping to the surface, supplies to be stored for this emergency, clean up and disposal plan if there is a spill within jurisdictional areas. This will also be required when filing a 401 Water Quality Certification.

RESPONSE #2.3 Goddard Consulting 3/29/18

Additional details on the HDD methodology have been incorporated into the applicable grading plans for wetland crossings 2, 4 and 5, including elimination of the 75 s.f. of alteration planned at Wetland Crossing #4 by moving the work limit further back from the wetlands. The SWPPP's Sedimentation & Erosion Control Plan includes additional details on the HDD staging areas showing the areas where drill rig and support vehicles will need to be laid out. HDD involves a drill rig, set up on one side of the wetland, that augers a pilot hole under the wetland that is held open with a bentonite slurry. When the auger reaches the other side of the wetland (the auger is closely controlled via automated computer system), it exits through another trench to grade. A casing pipe is then pulled back through the pilot hole as the auger is retracted to the drill rig. Water and sewer pipes can then be installed within the casing pipe and the ends connected to manholes and the remaining subsurface lines to complete the mains. As requested, a "Sample Fraction Mitigation Plan for Directional Drilling" (i.e. "Frac Out Plan") is attached for the Commission's review; we would like to propose that the Commission could approve this work, subject to a condition

requiring a detailed, site-specific Frac Out Plan to be submitted to the Commission prior to the work commencing.

MCC response #2.3 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

Our office continues to review the proposed Horizontal Directional Drilling (HDD). The following concerns need to be addressed and were discussed at the April 12, 2018 hearing;

- Please provide a Frac Out Plan, only a generic one was provided. The Commission will not have the opportunity to comment on the frac out plan if provided after the Order is issued and therefore will not have the ability to provide the appropriate condition to protect the interests of the Act during the Drilling.

Response: As was discussed at the last hearing, we proposed and understood Chairman Travalini was in agreement that the Commission could condition the HDD drilling and Frac-Out details to be submitted to the Commission for review prior to anticipated commencement of construction (say 30 days); if there are significant changes in the scope or limits of work, then an amended Order of Conditions could be required before work could commence. Refer also to Response #CC-4.

- Please provide how you plan to ensure there will be no impact to the CVP with the proposed underground drilling. How will the CVP #7840 will protected during HDD and what is the response if there is a blowout underground and it is migrating toward the CVP. Drilling proposed close to CVP #7840 and under the wetland (BVW) itself.

Response: Based on our discussions with HDD contractor, the chance of a frac-out are relatively low based on their experience. Please note CVP #7840 is upgradient from Wetland Crossing #2 where HDD is proposed to avoid wetland alteration; it is extremely unlikely to be negatively impacted from the installation.

- Geotechnical borings are requested along with other information requested by the Commissioners, see Brian Snow's comments within the Commission comment section.

Response: Test pits for drainage purposes were excavated in the vicinity of the 3 HDD crossings, and no standing water or ledge was encountered to depths of approximately 9 ft. at all 3 locations (see TP's 5A/B, 9A/B and 12A/B on sheet 50). This depth corresponds to similar depths for the proposed sewer lines at Wetland Crossings #2, #4 and #5; additional soil explorations may be required by the HDD contractor as part of their detailed drilling and frac-out plans, and will be conducted if necessary prior to commencing the work (see response to first bullet above).

- Submit a dewatering plan is submitted to our office for all work for installation of utilities and for work during the proposed project. This plan can be generic to the site.

Response: Dewatering details have been provided on the SEC plans.

RESPONSE #2.3 Goddard Consulting 6/21/18

Refer to individual bullets above followed by responses.

Comment #2.4 MCC January 10, 2018

Roadway Width Reduction- It is understood that the applicant met with Fire Chief to work to reduce the roadway size which is a start to reducing impacts however this does not address all of our concerns with regards to wetland impacts for crossing #2.

The project proposes multiple crossings and fill location for the construction of the roadway which in my opinion does not meet the criteria for “magnitude of the alteration and the significance of the project to the interests of the Act, the availability of reasonable alternatives to the proposed activity, the extent to which adverse impacts are minimized...”. The applicant must provide additional alternative that will further reduce impacts and meet the performances standards of 310 CMR 10.53 (1) and (3).

RESPONSE #2.4 Goddard Consulting 3/29/18

A significant plan change has been made based on the acquisition of an easement on 13 Fairway Lane which became available after the submittal of the Notice of Intent. This property will provide an emergency access to connect cul de sac Road H (off Road F) to Fairway Lane, such that Road I and the emergency access road at wetland crossing #2 has been eliminated and replaced with a common driveway for access to 4 lots and only water/sewer utility installations at crossing #2.

In addition, a bridge is now proposed at Wetland Crossing #3 to span the majority of the BVW and all of the intermittent stream bank. With these changes (see also response to comment 2.3), wetland alteration has been significantly reduced to 3,408 s.f.

MCC response #2.4 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

The Commission acknowledges the purchase of 13 Fairway Lane to comply with 310 CMR 10.53 (3) (e). The applicant has met this burden. Please note that the applicant is now requesting the project be considered under 310 CMR 10.55 (4). While the Commission appreciates applicant’s efforts to reduce impacts to resource areas, the project is not subject to Medway zoning regulations and alternatives with less impact may include but are not limited to, apartments, duplexes, condominiums, clusters, moving structures closer to the road and each other, etc... MCC understands setbacks shown on plans do not apply. Based on discussions with counsel and experts, the shape and locations of the roadways is likely driven by the location of proposed units. The number, type, and locations of lots and structures are not part of this filing. These lots and structures shown on the plans for reference are not and will not be approved under this filing. Any and all depictions of the number, type, and location of lots, or structures (buildings) must include notations on the plans that the number type, shape and location of lots

and buildings are not part of the project and are not approved under this filing. Applicant shall not rely on these items for future approvals. No future reference to these items may be made in future filings with the acceptance of allocation of impervious surface for drainage calculations in the stormwater calculations. Future material changes may also require re-evaluation of stormwater calculations. Any reference to these items may only be related to the aggregate impervious surface for drainage calculations.

Please review # 2, 3, and 4.

RESPONSE #2.4 Goddard Consulting 6/21/18

See above responses to items to NC 3 and Letter 2.1 above.

Comment #2.5 MCC January 10, 2018 -DONE

Emergency Access Crossing #2 - closure of Road F at the crossing, this will most likely require a new traffic study and modification with the ZBA.

RESPONSE #2.5 Goddard Consulting 3/29/18

The applicant has submitted a notice of project change with the ZBA.

MCC response dated April 24, 2018

ZBA has forwarded the decision.

Comment #2.6 MCC January 10, 2018

The applicant has not addressed the Agents and Peer Review Consultants (PRC) concerns noted the October 26, 2017 public hearing, requesting the applicant to address locations on the proposed plan where it is clear that wetland resource alteration will take place during and post construction due to the nature of the construction directly adjacent to the Bordering Vegetated Wetland (BVW) line and within the certified vernal pool habitat. At the October hearing, PRC mentioned, approximately 31 areas where the proposed work was taking place was at the wetland resource line (0 feet from wetland). I have counted 38 locations. Specifically, it is noted that there is grading within a wetlands resources (alteration/fill) that has not been accounted for within this application, see Sheet 21 of 50 from August 25, 2017 plan set. It is requested that all locations noted be discussed and information provided to the Commission how these 38 locations of construction at the BVW line will not impact the BVW pre/post construction and during construction.

The proposed roadway, stormwater management systems, and eventually proposed units, driveways, lawns, and other structures are (0-15) feet from BVW. The access roadway and units completely encircles the BVW containing Certified Vernal Pool CVP #7696, CVP #7840, CVP #1540, and CVP #7839. The loss of shade associated with the removal of the entirety of the mature canopy within the buffer zone will alter both BVW and certified vernal pool habitat due to increased soil and water temperatures and decreased moisture.

RESPONSE #2.6 Goddard Consulting 3/29/18

No work is proposed within any vernal pool habitat as defined under the state Wetlands Protection regulations. In addition, many of the areas identified as having work in close proximity to the wetlands have been adjusted so that work limits are further from the wetlands; this was done by using 2:1 slopes in some locations, using additional retaining walls, and by using the bridge and eliminating Road I as discussed previously. Additional erosion control measures have been incorporated to ensure wetlands are not impacted, such as by requiring the use of double silt fence with 7-day site stabilization measures. As such, there are no impacts to wetlands in these areas. As discussed previously, by eliminating Road I, a significant amount of upland shade trees will now be retained around the certified vernal pools.

MCC response #2.6 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

Please review #1 and 2

- Vernal Pool Habitat locations where work is located at the BVW/VHP line are listed below;
 - o Proposed Detention Pond 8a directly at the BVW/VHP line for CVP #1540. Along this road is grading outside the erosion control line, this needs to be amended to account for the grading.
 - o Proposed Cul de Sac is directly adjacent to CVP #7839
 - o Crossing #3 has grading directly adjacent to the VHP
 - o Road F at cb #9A directly adjacent to CVP #1540 work proposed for grading for road less than 15'
 - o Proposed Cul de Sac at lots 136 and 137 adjacent to CVP #7839 is less than 15' from BVW/VHP
 - o Road E proposed retaining wall 22; from CERTIFIED VP habitat BVW, LOW 8' from CVP habitat
- Bordering Vegetated Wetlands locations where work is proposed at the BVW line are listed below;
 - o Proposed Infiltration Based #6 less than 15' from BVW with proposed stockpile locations not protecting the stormwater management system from sedimentation.
 - o Proposed Road C at FE-2 road is at BVW line.
 - o Proposed Road E at cb #6b road is at BVW line
 - o Proposed Road C station 14+00 is less than 15' from BVW
 - o Proposed Road E between station 2+00 and 1+00 road is at BVW line
 - o Proposed Road E between station 6+00 road is at BVW line
 - o Road E cul de sac less than 5'
 - o Proposed Infiltration Basin #5 is less than 15' from BVW
 - o Proposed Road E at 13 Ohlson Circle less than 5' (not at crossing)
 - o Proposed Cul de Sac at lots 136 and 137 adjacent to CVP #7839 is less than 15'
 - o Proposed infiltration basin #8 is at the BVW line
 - o Proposed Road F at cb #7B is at the BVW line through station 3+00
 - o Proposed grading for road at Lot #181 is less than 15'

- o Proposed Infiltration Basin #9 is at BVW line
- o Proposed Road at cb 9A and south to lot #128 is less than 15'
- o Proposed Dry Detention Basin #10 is 0' less than 15'
- o Proposed Road F at station 22+00 is less than 5'
- o Proposed Water Quality Swale #2 and road between Lot 108 and 109 is 0-less than 15'
- o Proposed road between Lot 121 and 122 for grading is less than 15'
- o Proposed road grading at Lot 147 is less than 15'
- o Proposed access road on 13 Fairway Lane and grading, drainage is less than 15'
- o Road I 165 Holliston Street has LOW (road) at 0 feet from BVW with grading, this is the 226 linear feet of retaining wall

RESPONSE #2.6 Goddard Consulting 6/21/18

Work limits within many of these areas have been revised to provide greater buffers to the BVW and VP's. Refer to Response #NC-2.5 above for information on the changes made to the site layout to remove the majority of the work outside the 15 ft. buffer. Please refer to the "Tree Canopy Enhancement Plan" dated June 14, 2018 showing trees to be planted and amphibian barriers to be installed along Road F as mitigation for work near some of the VP's.

Comment #2.7- MCC January 10, 2018

Alternative Analysis – The applicant has not supplied alternatives that reduce impacts mentioned at the hearing of October 26, 2017 and in comments supplied by the Agent and Peer Review Consultant, Art Allen. It is recommended that the applicant provide alternative which reduce impacts to wetland resources further. There is not sufficient information provided to show that the proposed project cannot be reduced further to avoid wetland resource impacts with a hybrid of the alternatives presented. Based on a review of the condominium plans (in alternative 1) it seems there is less impact on this plan for lawn, impervious surface and stormwater.

RESPONSE #2.7 Goddard Consulting 3/29/18

The plans now submitted have significantly further reduced wetland impacts by eliminating Road I at wetland crossing #2 and by incorporating a bridge at crossing #3 (see also Response #2.4). This significant plan revision also results in less buffer zone impacts, impervious surface and stormwater runoff than other alternatives where it includes the lowest number of homes (143 vs. as many as 188 when duplexes were considered).

MCC response #2.7 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

Agreed.

Comment #2.8- MCC January 10, 2018

Reduction of lots – the applicant has not made an effort to reduce impacts to wetland resources through the reduction of lots. See Arts Comments #9 (1-8-18 comments).

RESPONSE #2.8 Goddard Consulting 3/29/18

Based on the addition of an easement on 13 Fairway Lane and the elimination of Road I, 4 lots have been eliminated from the project (Lots 76-79). As such there is less than 3,500 s.f. of wetland alteration (see also Response #2.4). No other lots are planned to be eliminated.

MCC response #2.8 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

See comments #3 and 4.

RESPONSE #2.8 Goddard Consulting 6/21/18

See Responses #NC-3 and NC-4.

Comment #2.9 MCC January 10, 2018

Stream crossing details need to be provided, not only how these are proposed for during construction with cross sections showing openness ratio, 1.2 x bank full and all stream crossing standards where applicable. At the October 26, 2017 meeting the Commission requested a Peer Review and this still needs to be reviewed and approved.

RESPONSE #2.9 Goddard Consulting 3/29/18

Additional details and notes have been added to the plans in response to Tetra Tech's February 6, 2018 review comments. Refer to Outback Engineering's response letter for further information.

MCC response #2.9 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018) Tetra Tech the Town Consulting Engineer has been requested to review.

RESPONSE #2.9 Goddard Consulting 6/21/18

Refer to Outback Engineering's May 31, 2018 response letter to TT's stormwater comments. A subsequent response letter is also to be submitted.

Comment #2.10 MCC January 10, 2018

It is recommended the Commission have the applicant review and explain the grade changes with respect to the roadway and house construction. Please provide the percentage of slope in critical locations where the proposed project is less than 15' from BVW.

RESPONSE #2.10 Goddard Consulting 3/29/18

Although the Commission previously requested that we not include house lot construction in this submittal, we can provide a general explanation of how lots will be graded. Generally, many of the house lots within the 100' buffer zone will have walkout basements. The individual lots will be carefully designed with tops of foundations of the homes a couple of feet above the road grades so that driveways will slope from the garages down to the roads, and side yards will be sloped down to the back yards to provide walkout basements; this means back yards will generally meet existing grades with only minor

grading required. Silt fence will be provided at all of the rear yards within the 100-ft. buffer zone to prevent alteration to wetlands.

MCC response #2.10 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

Please review comments # 1, 2, 3 and 4.

RESPONSE #2.10 Goddard Consulting 6/21/18
See Responses #NC-1.1 through NC-4.

Comment #2.11 MCC January 10, 2018

Stormwater Management System peer review is suspended and requires authorization to re- start for review of proposed plans.

RESPONSE #2.11 Goddard Consulting 3/29/18

Additional stormwater system changes have been made to the plans in response to Tetra Tech's February 6, 2018 review comments. Refer to Outback Engineering's response letter for further information.

MCC response #2.11 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018) Tetra Tech the Town Consulting Engineer has been requested to review and is planning to attend the May 10 24, 2018 meeting.

RESPONSE #2.11 Goddard Consulting 6/21/18
No further comment.

Comment #2.12 MCC January 10, 2018

Note that Alternative 1 and 2 were never presented to the Commission until revised application package submitted for Timber Crest Estates, LLC on December 20, 2017.

RESPONSE #2.12 Goddard Consulting 3/29/18
No comment needed.

MCC response #2.12 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018) No response note for the record.

Comment #2.13 MCC January 10, 2018

Under 310 CMR 10.60 Conservation Commission must determine that a project triggering a wildlife habitat evaluation has no adverse effects on wildlife habitat. Adverse effects on wildlife habitat mean the alteration of any habitat characteristic listed in 310 CMR 10.60(2), insofar as such alteration will, following two growing seasons of project completion and thereafter (or, if a project would eliminate trees, upon the maturity of replanted saplings) substantially reduce its capacity to provide the important wildlife habitat functions listed in 310 CMR 10.60(2). For Vernal Pool Habitat 10.60 (2) c. states that:

The topography, soil structure, plant community composition and structure, and hydrologic regime of vernal pool habitat can provide the following important wildlife habitat functions:

1. Food, shelter, migratory and breeding areas, and overwintering areas for amphibians;
2. Food for other wildlife.

It is not clear that the vernal pool habitat will not be impacted by the proposed project due to direct alteration of BVW within 100' of a vernal pool. The applicant must provide evidence that the vernal pool habitat will not be impacted through the grading, wetlands and habitat fragmentation, loss of canopy (shelter), hydrology, etc.

NOTE: The vernal pools present at the site meet the criteria used to define vernal pool clusters including the presence of two or more vernal pools, good connectivity between pools with few obstacles to amphibian migration, and their location within 200-400 feet of each other to protect migratory and dispersal distances for juvenile and adult pool breeding amphibians.

The applicant has not provided evidence that the development of a large portion of the available upland in close proximity to vernal pools and the construction of a roadway and walls completely surrounding certified vernal pool (in total 4) and their Vernal Pool Habitat will not highly degrade the vernal pool habitat, effectively severing it from its surrounding habitat and other nearby vernal pools.

It should be noted that 0-R Woodland Road and portions of the adjacent parcels are identified on the CAPS mapping (Conservation Assessment and Prioritization System). See Map. This system assesses the ecologically integrity of the lands and waters subsequently identifying and prioritizing land for habitat and biodiversity.

It is requested that the applicant provide any documentation completed for the review of vernal pools, specifically, documentation of evidence supporting whether or not the potential vernal pools could be certified.

RESPONSE #2.13 Goddard Consulting 3/29/18

The project has been designed so that no work will take place within “Vernal Pool Habitat.” Therefore, the project will not alter the topography, soil structure, plant community composition and structure, or hydrologic regime of any of the vernal pools.

Regarding the concept of “vernal pool clusters,” Attorney Watsky received the following email from Nancy Lin, from MassDEP Wetlands and Waterways Program:

Hi Matt –

The website that you referenced is MassDEP’s Vulnerable Wetlands mapping project that was developed through an EPA Wetlands Program Development grant as a stormwater management planning tool for the pilot communities identified in the webpage (Milford, Bellingham, Franklin,

Canton, Sharon and Walpole). It is meant to help other communities by outlining a cost effective sub-watershed approach to meeting EPA mandated TMDL requirements and MS4 stormwater standards.

We do not consider this web page to specifically address the regulatory permitting requirements of the Wetlands Protection Act but the GIS maps provided serves to help municipal officials visually identify impaired water hotspots and advantageous sites to locate stormwater retrofits and treatment and infiltration BMPs. By providing such a tool communities can better protect their water resources, including wetlands, and also aid in meeting their TMDL and MS4 requirements.

Nancy Lin, PWS
MassDEP, Wetlands and Waterways Program

Regarding providing evidence that the development of a large portion of the available upland in close proximity to vernal pools and the construction of a roadway and walls completely surrounding certified vernal pool (in total 4) and their Vernal Pool Habitat will not highly degrade the vernal pool habitat, effectively severing it from its surrounding habitat and other nearby vernal pools.: the project has been designed so that no work will take place within “Vernal Pool Habitat.” Therefore, the project will not alter the topography, soil structure, plant community composition and structure, or hydrologic regime of any of the vernal pools.

We agree that the onsite areas mapped by the CAPS program (see Figures 1 & 2 below) contain valuable habitat for a variety of wildlife. Most, if not all of, the mapped area will remain undeveloped.

Figure 1 - CAPS map of project vicinity.

Figure 2 - USGS map with project boundaries, for comparison with CAPS Map.

The applicant has agreed, under the ZBA process, to treat any uncertified vernal pools as if they are certified.

MCC response #2.13 dated May 3, 2018 (clarified from original comment letter dated April 24, 2018)

See review comments 1, 2, and 5.

RESPONSE #2.13 Goddard Consulting 6/21/18

See Vernal Pool Habitat Map, prepared by Goddard Consulting, dated 5/30/18.

To reiterate, the project has been designed so that no work will take place within “Vernal Pool Habitat.” Therefore, the project will not alter the topography, soil structure, plant community composition and structure, or hydrologic regime of any of the vernal pools.

See Responses #NC1.1 and NC1.2.

See also, “Vernal Pool Survey Report,” prepared by Goddard Consulting, dated May 24, 2018.

Comment #2.14 MCC January 10, 2018

Wetlands Replication – the applicant has not provided evidence the locations identified for wetlands replication will function similarly to the area that will be lost and also function as replacement wildlife habitat.

RESPONSE #2.14 Goddard Consulting 3/29/18

The number of wetland replication areas has been reduced from two to one. The area proposed for replicating the BVW alteration associated with Crossing #3 was identified by the Commission’s peer reviewer Art Allen of EcoTec as a recommended location. This area is immediately adjacent to a wetland bordering on the same intermittent stream and BVW system where the alteration will take place. This replication area is very similar in vegetative composition, structure and hydrology to the area being altered.

MCC response #2.14 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

Review this area with Art, it is not clear that this site besides its locations is favorable from Art. It was discussed that there may be alternative locations off of Fairway Lane now that this area of development has been reduced. Should the wetlands replication area be moved to the 4 lot driveway off of Fairway Lane. Discuss this at the May 24, 2018 meeting.

RESPONSE #2.14 Goddard Consulting 6/21/18

To be discussed at 6/21/18 hearing.

IV. Undated Memo from Conservation Agent Bridget Graziano

Comment #3.1 – MCC January 10, 2018

Update on filing with ACOE for 404 under the Clean Water Act and with DEP 401 Water Quality Permit.

RESPONSE #3.1 Goddard Consulting 3/29/18

With the reduction in BVW alteration to below 3,500 s.f., a 401 WQC application will no longer be required. The applicant intends to file a 404 WQC application with the Army Corps of Engineers as soon as an Order of Conditions has been issued for the project.

MCC response #3.1 dated May 3, 2018 (clarified from original comment letter dated April 24, 2018) Agreed Clean Water 404 is required and applicant acknowledges this will be filed.

RESPONSE #3.1 Goddard Consulting 6/21/18

The new MA General Permit has been issued by the Army Corps of Engineers as of April 17, 2018. We believe that the Timber Crest Estates Project, as currently designed, qualifies for a “Self-Verification” filing under Section 404 of the Clean Water Act.

Comment #3.2 –MCC January 10, 2018

Update on filing for filing of an ENF (for certificate) to file for the 401 WQC, this will include MEPA filing.

RESPONSE #3.2 Goddard Consulting 3/29/18

Based on the reduction in wetland impacts discussed above, an ENF is no longer required.

MCC response #3.2 dated May 3, 2018 (clarified from original comment letter dated April 24, 2018) Agreed

RESPONSE #3.2 Goddard Consulting 6/21/18

No further comment.

Comment #3.3- MCC January 10, 2018

Title History for properties under the ownership of Henry Wickett specifically relating to properties surrounding the Wickett Properties of 21-R Fairway Lane, 0 –R Woodland Road, and 11 Woodland Road.

RESPONSE #3.3 Goddard Consulting 3/29/18

Title examinations for 21-R Fairway Lane, 0-R Woodland Road, 11 Woodland Road, and, 13 Fairway Lane.

A summary letter from Attorney Thomas Filipek that summarized the history for 11, 13, and 15 Fairway Lane showing that Mr. Wickett has never had ownership interest in those lots.

MCC response #3.3 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

This is under review.

RESPONSE #3.3 Goddard Consulting 6/21/18

No additional comment.

Comment #3.4- MCC January 10, 2018

Provide information on 310 CMR 10.53(3)(e) as it relates to “...The issuing authority may require the applicant to utilize access over an adjacent parcel of land currently or formally owned by the applicant, or in which the applicant has, or can obtain an ownership interest.” This include but is not limited to all surrounding parcels with uplands access and the access through 153-R Holliston Street for which a portion was given away, that had access to Holliston Street. See attached ANR Plan.

RESPONSE #3.4 Goddard Consulting 3/29/18

As expressed above, with the proposed redesign reducing the BVW alteration to less than 5,000 s.f, we request approval of the project pursuant to 310 CMR 10.55.

Assuming approval is granted under 10.55, further detailed review of the criteria in 10.53 is not relevant. We do, however, reserve the right to seek approval under 10.53 in the event of a denial or excessively stringent conditions imposed under 10.55. For the record, in December of 2014, Mr. Wickett purchased 102 Winthrop Street which eliminated the need for a major crossing from the East side to the West of the proposed development. This purchase created upland access to the West side.

On January of 2015, Timber Crest estates acquired what has become 153-R Holliston Street. This acquisition connected uplands that otherwise would need a significant crossing. A condition of the sale was to not include access through 153 Holliston Street and based on that, a new ANR plan was approved by the Medway Planning Board and recorded in Plan book 636 page 75. The access previously shown on ANR plan book 455 page 199 recorded on Mar 20, 1998 was combined to 153 Holliston Street (Lot 1) and was never offered for sale. Please refer to the plans included in this submission.

On August of 2016 Timber Crest LLC acquired ownership of 165 Holliston Street. This acquisition allowed the applicant to eliminate significant wetland fill to get to Fern Path for access.

In March of 2018 the applicant acquired an easement through 13 Fairway Lane which eliminated Crossing #2.

MCC response #3.4 dated May 3, 2018 (clarified from original comment letter dated April 24, 2018) The applicant has requested filing under 310 CMR 10.55(4)

RESPONSE #3.4 Goddard Consulting 6/21/18

No further comment needed.

Comment #3.5- MCC January 10, 2018

Provide copy of sewer easement for the properties of 0-R woodland Road, 11 Fairway Lane, 13 Fairway Lane, and 15 Fairway Lane. Agent noted at meeting, this properties were not listed in the NOI or abutter notifications were not provided, the property owners did not sign this NOI application, and finally wetlands on these properties have not been delineated or reviewed by our Peer Review Consultant.

RESPONSE #3.5 Goddard Consulting 3/29/18

The proposed sewer connection will be removed from the current NOI and a new NOI will be filed and proper notifications to the abutters will be made.

MCC response #3.5 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018) Compiled and received.

Comment #3.6-MCC January 10, 2018

Provide minutes, comments letter, or site the ZBA comprehensive permit decision/condition where the ZBA required a specific means of egress from the site.

RESPONSE #3.6 Goddard Consulting 3/29/18

During the ZBA approval process, comments from the Medway Conservation Commission were examined by the Board and the proposed crossings to insure egress for safety was approved by the Medway Zoning Board of Appeals and the Town of Medway Fire Chief.

MCC response #3.6 dated May 3, 2018 (clarified from original comment letter dated April 24, 2018) Ok.

Comment #3.7- MCC January 10, 2018

Provide a set of alternatives for the proposed project by reducing impacts discussed at the meeting/hearing.

RESPONSE #3.7 Goddard Consulting 3/29/18

Refer to Responses #2.4 and 2.7.

MCC response #3.7 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018) Received.

Comment #3.8 –MCC January 10, 2018

Provide a BVW alteration amount based on feedback from meeting and outcome of meeting with Dan Wells (scheduled for 1/19/18), portions of this project will need to use 310 CMR 10.55 (4) since they do not meet criteria under 310 CMR 10.53(3)(e) and were not specifically, quantified under this filing. It is the opinion of the Agent based on the information supplied that the proposed project will result in alteration to BVW that have not been quantified especially, in extremely close proximity to BVW (at 0 feet and between 0-15 feet).

RESPONSE #3.8 Goddard Consulting 3/29/18

Where shown on the plans, we have provided silt fence at the project work limits. Unless and until there is actual alteration of BVW, we cannot assume that wetlands will be impacted outside of the work limits. Refer to Response #2.4.

MCC response #3.8 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

Please review comments 1 and 2.

RESPONSE #3.8 Goddard Consulting 6/21/18

See responses #NC-1.1, #NC-1.2 and #NC-2.1 to NC-2.9.

Comment #3.9 – MCC January 10, 2018

Provide additional information of Horizontal Directional Drilling, it was noted there is no construction summary for how this work is performed, specifically, whether soil testing has been performed to locate ledge or geo-technical borings completed so this is not discovered in the field at the last minute. Additionally, Agent mentioned providing Frac Out Plan which will need to be submitted. It should be noted any turns within the line will require pits dug on either side, please show this will not be performed within wetland locations or if it will, where and mitigation for this. Overall not enough information was submitted to the Commission on 12.20.17 to make a decision/finding. Relocate east end of drilling in area #4 to avoid direct wetland impacts.

RESPONSE #3.9 Goddard Consulting 3/29/18

Refer to Response #2.3.

MCC response #3.9 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

The Commission requested a frac out plan at the April 12, 2018 meeting and other information as noted in comment 2.3 and within the Commission comments below.

RESPONSE #3.9 Goddard Consulting 6/21/18

Refer to Response #2.3.

Comment #3.10 –MCC January 10, 2018

Provide information to the Commission on how the Vernal Pool Habitat will not be affected by this project pre/during/post construction. Simply the erection of the siltation fence proposed in the project will alter this habitat. Additionally, it should be noted, that it has not been discussed at this time during hearings but the applicant has not addressed any Time of Year Restrictions (TOY.)

RESPONSE #3.10 Goddard Consulting 3/29/18

There will be a restriction of no onsite construction activity after 5:00 pm during the peak amphibian migratory season (March 1 to April 15).

MCC response #3.10 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

Please provide the following;

- Phased construction proposal taking into account the Time of Year. It is recommended to work within areas away from Vernal Pool Habitat during breeding seasons for the species found at the pools (providing the commission with the species found at each pools would assist in this determination). A blanket time frame does not seem to be backed up by the breeding for the species present at the site.
- Provide amended erosion controls for locations where vernal pool species would migrate. Please review the literature noted at the April 12, 2018 meeting, Best Development Practices – Conserving Pool-Breeding Amphibians in Residential and

Commercial Development in the Northeastern United States by Aram JK Calhoun PhD and Michael W. Klemens, PhD. See Page 21, Use erosion and sediment control best management practices to reduce erosion. Stagger silt fencing with 20 foot breaks to avoid disrupting amphibian movements or consider using erosion control berms. Use combinations of silt fencing and hay bales to reduce barrier effects. Re-seed and stabilize disturbed areas immediately; permanent stabilization for revegetated areas means that each area maintains at least 85% cover. Remove silt fencing as quickly as possible and no later than 30 days following final stabilization. Minimize use of silt fencing within 750 feet of vernal pools. Erosion control berms can be leveled and used as mulch or removed upon final stabilization.

- Silt fencing should be used to exclude amphibians from active construction areas. Construction activities should, ideally, occur outside of peak amphibian movement periods (which include early spring breeding and late summer dispersal).

RESPONSE #3.10 Goddard Consulting 6/21/18

As was discussed between Jim Pavlik and Bridget Graziano on May 21, 2018, providing breaks in the silt fence is not advisable. See “Amphibian Protection Plan.”

Comment #3.11 –MCC January 10, 2018

Provide evidence and research showing that the proposed fill in BVW and directly adjacent to (extremely close proximity) to vernal pools and vernal pool habitat will not alter habitat.

- Work for the entire residential portion of the project is in close proximity to vernal pool habitat. Vernal pool habitat includes all areas within 100 feet of the mean annual boundaries of vernal pools that is also within an Area Subject to Protection Under M.G.L. c. 131, § 40. These areas are essential breeding habitat, and provide other extremely important wildlife habitat functions during non-breeding season, for a variety of amphibian species and other wildlife species. The project does not meet the provisions of 10.60 because its impairment of Wildlife Habitat, specifically vernal pool habitat, is not acknowledged in the Wildlife Habitat Assessment.

RESPONSE #3.11 Goddard Consulting 3/29/18

Where shown on the plans, we have provided silt fence at the project work limits. There is no alteration of Vernal Pool Habitat proposed.

MCC response #3.11 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

See review comments 1, 2, 5 and 6.

RESPONSE #3.11 Goddard Consulting 6/21/18

See responses to NC-1, NC-2, NC-5 AND NC-6.

Comment #3.12 - MCC January 10, 2018

Provide facts showing that the complete development of all available upland in close proximity to vernal pools and the construction of a roadway and walls completely surrounding vernal pool

and its Vernal Pool Habitat will not degrade the vernal pool habitat, effectively severing it from its surrounding habitat and the habitat surrounding two other nearby vernal pools.

RESPONSE #3.12 Goddard Consulting 3/29/18

The elimination of Crossing #2 and four house lots will greatly reduce the amount of clearing and fragmentation of upland habitat in the vicinity of the vernal pools.

MCC response #3.12 dated May 10, 2018 (clarified from original comment letter dated April 24, 2018)

Please see comments 1-6.

RESPONSE #3.12 Goddard Consulting 6/21/18

See responses to NC-1 to NC-6.

Comment #3.13- MCC January 10, 2018

Provide more clarity on fill and grade changes, there are some topographic lines and some grades for top of roadway but it is not clear on what all the grades will be. The Commission will need to review the grades on the slopes near the wetlands and vernal pools.

RESPONSE #3.13 Goddard Consulting 3/29/18

Outback Engineering's plans include detailed grading plans for the roadways and drainage systems, and road profiles showing finished and existing grades. Silt fence work limits are also clearly shown.

MCC response #3.13 dated May 3, 2018 (clarified from original comment letter dated April 24, 2018)

Review locations with the Commission and the affects to the wetland resources from these grade changes. Please review comments 1 and 2.

RESPONSE #3.13 Goddard Consulting 6/21/18

OE. See responses to NC-1 and NC-2.

Comment #3.14 – MCC January 10, 2018

Provide the linear feet for retaining walls with are located within 0-15 of BVW, the Commission needs to be able to review locations were retaining wall will be erected near wetlands or vernal pools.

RESPONSE #3.14 Goddard Consulting 3/29/18

On the West side, there is approximately 80 l.f. of retaining walls within 15' of the intermittent stream (no BVW) for the emergency access road to Ohlson Circle; no other retaining walls are needed for the roadway.

On the East side, there is a total of approximately 226 l.f. of walls within 15' of BVW along Road F near station 3+0 and for the bridge crossing; no other retaining walls within 15' of BVW are needed for the roadways.

MCC response #3.14 dated May10, 2018 (clarified from original comment letter dated April 24, 2018)

Please review comments 1 and 2.

RESPONSE #3.14 Goddard Consulting 6/21/18

See responses to NC-1 and NC-2.

Comment #3.15 –MCC January 10, 2018

Fire Chief is willing to review and comment on alternatives.

RESPONSE #3.15 Goddard Consulting 3/29/18

We understand the Fire Chief has provided input on the latest plan changes including the 15' emergency access across 13 Fairway Lane (refer to Fire Dept. letter to ZBA dated March 7, 2018).

MCC response #3.15 dated May 3, 2018 (clarified from original comment letter dated April 24, 2018 ok.

V. Additional comments (“AC”) not covered above provided at the April 12, 2018 meeting (verbal) in written form May 10, 2018 (clarified at applicants request from April 24, 2018 letter)

[Comment #AC-1]

Operation and Maintenance Plans and Long Term Pollution Prevention Plan require updating per Stormwater Management Regulations

RESPONSE #AC-1 Goddard Consulting 6/21/18

The requirement for providing a construction period O&M plan for controlling sediment and erosion and pollution prevention per Standard 8 of the DEP Stormwater Management Regulations has been met by providing a SWPPP that was submitted previously and since revised as requested herein. The Long-Term Stormwater O&M Plan and Pollution Prevention Plan is being updated in accordance with Standards 4 and 9, and shall be submitted under separate cover.

[Comment #AC-2]

VERNAL POOL IMPACTS

The Project should be designed to meet the Best Development Practices – Conserving Pool-Breeding Amphibians in Residential and Commercial Development in the Northeastern United States by Aram JK Calhoun PhD and Michael W. Klemens, PhD.

Please provide the following;

- dust and noise control plan
- Erosion control plan for working near VPH. See comment #3. 10
- reduction of fragmentation
- provide upland protection and habitat

RESPONSE #AC-2 Goddard Consulting 6/21/18

The “Best Development Practices” document is a guidance document, not a regulatory document applicable to projects filed under the MA WPA. The project has been designed to avoid impacts to Vernal Pool Habitat, and complies with 310 CMR 10.60. The WPA does not require compliance with this document. An “Amphibian Protection Plan” has been provided.

VI. Commission Member Comments from hearing of April 12, 2018

[Comment #CC-1]

1. The project as proposed includes Permanent Disturbance of Wetlands totaling 3,408 crossing #3 only) square feet (sf) based on the project narrative. The total (temporary and permanent) disturbance is unknown and not presented. Based on an initial review of previous projects by Henry Wickett, a previous contiguous project disturbed 2,400 sf. This results in a segmented project totaling 5,808 sf or more. Based on our review, Crossing #1 is not accounted for in the total. A project redesign below 2,600 sf or a limited project is required to address this segmentation.

RESPONSE #CC-1 Goddard Consulting 6/21/18

The project is not segmented as stated in the comment – refer to response #2.1.

As now shown on the May 31, 2018 revised plans, the proposed wetland alteration has been further reduced by incorporating the use of a precast concrete arch to span the intermittent stream at Road F, Wetland Crossing #3. Total BVW alteration at this crossing is now 2,942 s.f., including 1,207 s.f. permanent fill, 898 s.f. temporary alteration for work area between the retaining walls and silt fence, and 837 s.f. to be shaded under the open arch bridge.

[Comment #CC-2]

2. The plans lack labelling of roadways and significant links between plans in order to easily follow project progression through the plan sets. The same item is referred with different labels, making review impossible. Please label the larger plans to correspond with the roadway names as subsequent pages. Please maintain the same reference name to each item throughout. Line sets and formats are not defined in many places

and are difficult to follow. Plans with undefined line types/indicators cannot be approved. Plans note the same item with different labels (Road F bridge in one location and crossing # in another).

RESPONSE #CC-2 Goddard Consulting 6/21/18

The May 31, 2018 revised plans have been updated to uniformly label locations and features on the site.

[Comment #CC-3]

3. The plans show a 15 foot "No Disturb" buffer on wetland resources and proceeds to violate the No Disturb in multiple locations. While 15 feet is not likely to provide the fullest protections possible for resource areas, as a minimal protection measure of the resource area, ALL disturbances should be removed from this 15 foot No Disturb to ensure direct impacts to the resource area do not occur. The plan as submitted is insufficient to demonstrate NO impacts to resource areas during construction or following completion.

RESPONSE #CC-3 Goddard Consulting 6/21/18

The majority of work has been removed for the 15' buffer zone. Refer to Responses to #NC-2.5 and NC-2.8.

[Comment #CC-4]

4. The design, layout, extent of work, work plan/phasing of horizontal drilling is insufficient for the Commission to make a determination of potential resource area impacts. A geotechnical analysis of the subsurface is necessary to determine the viability of the proposed installation as it relates to potential disturbance of the resource area. Sieve analysis of geologic units penetrated by drilling and a geologic cross section showing the location of the drilling and utility is recommended. A detail plan showing each staging area with sedimentation barriers, slurry pits, etc.. is required. An operational plan, description of drilling methodologies, sequencing and frac plan specific to the site is required. Drilling activities should be placed more than 25 feet from resource areas. Based on our current review, further detail of this process is necessary for crossings #2, 4, & 5.

RESPONSE #CC-4 Goddard Consulting 6/21/18

Necessary information will be prepared by an HDD contractor prior to construction, who will need to set up the drilling program based on his specific equipment; at this time, we have shown work limits and a general layout of the HDD work area is provided on the Grading and Drainage Plans (see May 31, 2018 revised plans) and on the Sedimentation and Erosion Control Plans in the SWPPP (see June 2018 revised plans). Refer to Response #2.3 also.

[Comment #CC-5]

5. Scientific literature consistently notes the surrounding upland areas as necessary to support vernal pool viability. This area is documented as including more than 600 feet from the vernal pool boundary. The project as proposed destroys a significant percentage of vernal pool habitat which will result in the destruction and or degradation of the vernal pool resource area inhabitants. The Commission requires applicant to evaluate the Best Management Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States document as it relates to project and demonstrates the resource area will be adequately protect by the project design in accordance with this and other industry standards/best management practices. The Commission also notes 304 CMR 11.05 (1)(d) limits cutting of trees to no more than 50% of the trees within 50 feet of the vernal pool as an indicator of the protections required for the resource area. Discharges to the vernal pool areas are also regulated by 314 CMR 4 and 314 CMR 9. Vernal pools are regulated as outstanding resource waters. The project as submitted does not address potential impacts to the resource area or any mitigation. In accordance with Best Management Practices.

RESPONSE #CC-5 Goddard Consulting 6/21/18

See Response #AC-2. The project is not subject to the jurisdiction of 304 CMR 11.05. The Stormwater Design is compliant with DEP Stormwater Standards. See Responses #NC-1.1 and NC-1.2.

[Comment #CC-6]

6. The Commission requires a more specific and detailed erosion control plan. Based on our review of the submitted plans, the erosion control plan, limit of work and details are not specific nor do they limit the extent of impacts to the maximum extent practicable. Further and more careful detail is required.

RESPONSE #CC-6 Goddard Consulting 6/21/18

The Sedimentation & Erosion Control Plans provided in the SWPPP was updated based on discussions with the Conservation Agent on May 21, 2018, and show work limits, sediment traps, silt fence, soil stockpiles and other necessary erosion control details. In conjunction with the protocols called out in the SWPPP, there is sufficient information for a contractor to conduct the work without impact to the wetlands. Also, See Amphibian Protection Plan.

[Comment #CC-7]

7. The stockpile areas as noted are not labeled as to their purpose and do not appear to represent an appropriate scale relative to their purpose. The stockpiles are not placed strategically to limit impacts to resource areas. Additionally, more detail is required to document sedimentation controls of stockpiles. Based on the location and scope of the project more stockpiling is necessary within jurisdictional areas than is presented.

RESPONSE #CC-7 Goddard Consulting 6/21/18

Refer to Response #CC-6.

[Comment #CC-8]

8. No evaluation of cuts and fills within jurisdictional areas is presented. The extent of impacts to resource areas cannot be demonstrated without an evaluation of cuts and fills in buffer areas, including appropriate conditions.

RESPONSE #CC-8 Goddard Consulting 6/21/18

The bridge crossing detail for Wetland Crossing #3 shows limits of excavations within the BVW. Road profile plans, typical road cross sections and details for the drainage basins are also provided showing limits of cuts and fills; in conjunction with the Grading and Drainage Plans showing work limits within resource areas and the 100' buffer zone, there is ample information provided for the Commission to assess impacts. These are all provided as part of standard engineering practices for subdivision projects of this type. We also have prepared a cut and fill volume calculation for the entire roadway network, not just what's within jurisdictional areas (see attached calcs with narrative dated June 20, 2018). If there is other specific information that the Commission feels is necessary to assess impacts, please advise.

[Comment #CC-9]

9. An evaluation of bridge span crossings is required for all crossings.

RESPONSE #CC-9 Goddard Consulting 6/21/18

We have provided several revisions to the bridge span crossings since our initial submittal in September 2017 to the point where we have eliminated 1 road crossing altogether and upgraded the span over Wetland Crossing #3 from a simple 3-sided box culvert to what is now proposed as a 67-ft. clear span concrete arch. The 2 remaining spans over the 2 intermittent streams are in compliance with the DEP Stream Crossing Guidelines and other applicable wetland regulations.

[Comment #CC-10]

10. Sufficient project phasing/timing has not been provided to ensure resource areas are adequately protected.

RESPONSE #CC-10 Goddard Consulting 6/21/18

Response: Refer to Sheet 41 of the Conservation Permitting Plans as well as Amphibian Protection Plan.

[Comment #CC-11]

11. The resource areas on 13 Fairway Lane have yet to be verified.

RESPONSE #CC-11 Goddard Consulting 6/21/18

During the NOI process for 11, 13, 15, 17 Fairway Lane (DEP File #216-0919), EcoTec has determined the resource area lines to be accurate.

[Comment #CC-12]

12. Sheet 33 shows 3,408 sf disturbance for crossing #3. Sheet 40 does not show sf disturbance of crossing #1. It appears Crossing #1 was not included in accounting. Crossing #3 and #4 not shown in detail. Crossing #2 not shown in detail.

RESPONSE #CC-12 Goddard Consulting 6/21/18

Refer to Sheet 22 and Sheet 23 (May 31, 2018 revised plans) for an accounting of wetland resource area alteration at Wetland Crossing #1 and Wetland Crossing #3, respectively. Cross section details and construction notes for the 2 proposed spans at Wetland Crossings #1 and #3 are provided on Sheet 42 of the May 31, 2018 revised plans. Crossing #1 has no BVW present, and only 70 l.f. of intermittent stream Bank and 270 s.f. of Land Under Water is to be impacted. Crossing #3 is proposed with total BVW alteration at 2,942 s.f., including 1,207 s.f. permanent fill, 898 s.f. temporary alteration for work area between the retaining walls and silt fence, and 837 s.f. to be shaded under the open arch bridge; there is no alteration of bank proposed by using the spanned arch, and 417 s.f. of Land Under Water to be shaded under the arch.

Profiles and construction notes for the 3 utility Wetland Crossings #2, #4, and #5 are shown on Sheets 38 and 39 of the March 15, 2018 revised plans; the Sedimentation & Erosion Control Plans in the SWPPP provide additional details on the HDD staging areas. There is no proposed wetland resource area alteration associated with these 3 utility crossings.

[Comment #CC-13]

13. Concerns about the installation and maintenance of the proposed bridge at crossing #3. This needs to be discussed how this will be maintained and likely require a Memorandum of Understanding between the Owner/Developer and the Town of Medway. It is not clear whether this will require a Chapter 85 permit with the State.

RESPONSE #CC-13 Goddard Consulting 6/21/18

The precast concrete arch (ConTech T88 BEBO bridge) will be designed in accordance to MADOT standards; as noted on the Bridge Detail on Sheet 42 (see May 31, 2018 revised plans), ConTech will provide detailed structural engineered plans for the footings and arch bridge with a load rating such that any vehicle that legally travels on Mass. roads can pass over this bridge with no concerns. The precast bridge is considered a buried structure which extends the life with minimal maintenance required. The life of the precast structure is 75-100 years per ConTech. Other permits from the Zoning Board and state shall be obtained after the issuance of an Order of Conditions.

VII. Comments from Art Allen of EcoTec, April 6, 2018

Most of the comments from Mr. Allen have been fully addressed and closed. The following comments require new responses:

[Comment #AE-2]

2. The impacts to Bordering Vegetated Wetland (“BVW”) associated with the utility easements A (#5) and B (#4) have been largely eliminated through the use of underground directional drilling. Direct wetland alteration of 75 square feet is still proposed at the east end of impact area #4. This impact could also be avoided by moving the start of directional drilling slightly to the east. *The proposed directional drilling impact to wetland has been eliminated. I further note that no access to the proposed staging and stockpile area for drilling and utility installation, located between wetland crossings 4 and 5, has been shown. This access needs to be detailed on plans as this area is constrained by wetlands, not all of which have been delineated or confirmed. The Sample Fraction Mitigation Plan is boilerplate and is not specific to the project although the information within it is applicable to this type of project.*

RESPONSE #AE-2 Goddard Consulting 6/21/18

A temporary gravel access road around BVW to get to the upland area between Wetland Crossings #4 and #5 is shown on Grading sheet 20. As was discussed at the last hearing, the project team proposed (and understood that Chairman Travalini was in agreement) that the Commission could condition the HDD drilling and Frac-Out details to be submitted to the Commission for review prior to anticipated commencement of construction (say 30 days); if there were significant changes in the scope or limits of work, then an amended Order of Conditions could be required before work could commence.

[Comment #AE-8]

8. In my first report, I commented about the extent of buffer zone alterations proposed, particularly within 15 feet of wetlands. I also commented about the quality and significance of buffers across the project site and recommended that the first 15 feet of the buffer be protected to the maximum extent practicable. The proponent’s response to this comment was to simply state the extent of revisions made, during the ZBA process, to move the work away from wetlands. In my opinion this response is inadequate. I list below, by plan sheet number, additional revisions which could be made to preserve the inner buffer, particularly associated with proposed house lots. In my experience, house lot buffers, and adjacent wetlands, suffer the most from development both in the short and long terms. Also, in my experience, the smaller the buffers, the greater the wetland impacts. As I noted previously, the Wetlands Protection Act Regulations [at 310 CMR 10.53(1)] affords discretion to the Commission when permitting and conditioning work in the buffer zone. *Four lots were eliminated from the project associated with the elimination of Road “I”. Although this is a step in the right direction, a number of lot work limits remain within the 15-foot wetland offset. Although the lots will be filed*

separately, this extent of encroachment may not be permissible for the reasons stated above. In addition, proposed roadway work limits remain within the 15-foot wetland offset at Road D, E and F in addition to infiltration basin #8 and #14 grading within the 15-foot offset. In my opinion these discretionary encroachments should not be allowed as they could be largely eliminated by a further reduction in lots and associated roadway and drainage re-configuration.

RESPONSE #AE-8 Goddard Consulting 6/21/18

Refer to Response #NC-2.5 for a list of additional mitigation that has been incorporated into the 5/31/18 revised plans to further reduce work within the 15' buffer zone. Approximately 0.2 acres, in total, is now proposed to be altered for roads, drainage basins, and related infrastructure and including future work on individual house lots within the 15' buffer zone; this amounts to approximately 1.8% of the entire 0-15' buffer zone on the project site.

[Comment #AE-9]

9. *The project plans have been revised to show an access road over 13 Fairway Lane. This road is within the 15-foot wetland offset and it is not clear whether this additional work has been included in the revised Notice of Intent or whether inclusion of this work is even within the scope of the original Notice of Intent that was advertised and notified to the public. This work may either need to be filed as a separate Notice of Intent or the current Notice of Intent may have to be re-advertised and notified.*

RESPONSE #AE-9 Goddard Consulting 6/21/18

An NOI was filed and it is currently under review by the Commission (DEP File #216-0919).

[Comment #AE-10]

10. *The revised Notice of Intent Form 3 states that 70 linear feet of Bank, 2,935 square feet of Bordering Vegetated Wetland and 457 square feet of Land Under Water will be altered. The plans indicate that 3,408 square feet of Bordering Vegetated Wetland will be altered and 674 square feet of Land Under Water will be altered. Bank alteration is consistent. The discrepancies must be rectified as it appears that Form 3 under-represents the amount of alteration. In addition, the revised Form 3 was not signed or dated and a list of property owners was not attached.*

RESPONSE #AE-10 Goddard Consulting 6/21/18

A revised WPA Form 3 has been submitted (dated 6/5/18). This includes final resource area impact amounts, and a list and signatures of all property owners. This information is current as of 6/21/18.