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February 12, 2015

Town of Foxborough Conservation Commission
Attention: Ms. Jane Sears Pierce, Conservation Manager
40 South Street
Foxborough, MA 02035

RE: Peer Review
Forge Estates of Foxborough
204 East Street
Foxborough, Massachusetts

Dear Conservation Commission Members and Ms. Pierce:

On behalf of our client, Deer Hill Development LLC, Coneco Engineers & Scientists, Inc. (Coneco) is pleased to submit the enclosed supporting documentation for the Notice of Intent, located at 204 East Street. These documents address the comments from BSC Group contained in their peer review letter dated December 19, 2014.

The following section contains our responses to the comments contained in the aforementioned December 19, 2014 letter. As an aid to the reader the entire text of each comment is included in plain text followed by the Coneco responses *italicized*.

PROPOSED OPEN SPACE RESIDENTIAL DEVELOPMENT COMMENTS

1. As required by the Town of Foxborough Notice of Intent Application Checklist, the NOI should include a "Detailed mitigation plan for activities in the buffer zone to prevent long term, indirect impacts to adjacent resource areas".

   The work within the 100-Foot Buffer Zone to the Bank and BVW located on-site is limited to the roadway construction and stormwater management system. As such, no work associated with any of the lots or lot construction will occur with the buffer zone. The isolated wetland crossing, a portion of the roadway, the stormwater grass swale and detention basin, and the flood compensatory storage areas, and wetland replication area are located with the buffer zone. As such, a detailed mitigation plan specifically for the activities in the buffer zone is not appropriate for this site, as indirect impacts are not anticipated.

   However, the Applicant has prepared a Long Term Pollution Prevention Plan, Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan, and Operation and Maintenance Plan for Forge Estates, as documented in the Stormwater Management Report. These documents detail how the stormwater structures and roadway will be maintained to prevent any long term impacts. The Notice of Intent outlines the monitoring protocol for the wetland replication area and flood compensatory storage areas to ensure proper stabilization following the completion of construction as they have been designed as the mitigation for the proposed project. Upon completion of construction all areas within the buffer zone will be stabilized and monitored.

2. The Applicant has requested that the Commission review this project as a Limited Project per 310 CMR 10.53(3)(e), which allows for (in part) "The construction and maintenance of a new roadway or driveway….where reasonable alternative means of access from a public way to an upland area of the same owner is unavailable." This limited project provision requires, however, that the Applicant "utilize access over an adjacent parcel of land currently or formerly owned by the applicant, or in which the applicant has, or can obtain an ownership interest." The NOI includes letters provided to direct abutters only 16 days prior to the submission of the project filing intended to explore alternative access options for the project. The Applicant should clarify if there has been any correspondence regarding alternative access options for the project beyond the correspondence provided within these letter. BSC recommends that more information be provided to demonstrate that off-site access alternatives have been exhausted. BSC agrees that this project may qualify as a Limited Project, however it is our opinion that because the project site is situated within an ACEC, additional scrutiny is warranted by the Commission during project review. An adequate demonstration of Project Alternatives, through an Alternatives Analysis (See comment below) will satisfy this requirement.

   The January 7, 2015 letter to the Foxborough Conservation Commission, prepared by Daniel R. Seigenberg provided additional information and clarification of the alternative access options for the proposed project. Based upon several attempts with abutting property owners, alternate access is not viable. See attached letter and correspondence. Further information on alternatives is provided in the following responses.

3. The proposed project is located entirely within the Canoe River Aquifer, Snake River, Watson Pond, and Lake Sabatia ACEC. The project involves approximately 29,215 (0.67 acres) of temporary and permanent impact to the 200-foot Riverfront Area. To demonstrate compliance with the performance Standards set forth for new development within RFA, the Applicant must demonstrate No Significant Adverse Impact per 310 CMR 10.58 (4)(d). This performance standard allows the Commission the authority to alter up to 5000 square feet or 10% of the Riverfront Area within the lot, whichever is greater. The total square footage of RFA on the lot remains unclear as the project site is a combination of 3 lots. The Applicant should clarify the amount of RFA impacts on each lot to determine whether this project complies with this Performance Standard for new development.

   It is standard practice for MassDEP to review Riverfront Area impacts for a project in their entirety to prevent segmentation. For example, MassDEP would not permit one project to alter 5,000 square feet or 10% of the Riverfront Area on each lot, but rather a total of 5,000 square feet or 10% for the entire project. As such, the Applicant has presented the impacts for this project in their entirety. Refer to the response to Comment #7 for the revised impact assessment.

4. Lucas Environmental, LLC (LEC) re-established wetland flagging in the field as part of this permit application. In doing so, LEC identified a discrepancy from the approved Superseding Order of Resource Area Delineation (SORAD) (issued September 25, 2009 – DEP File #157-467) and current field conditions. This discrepancy is called out within the Application's Project Narrative. It appears that the wetland boundary from the SORAD, and the newly identified wetland boundary are each identified on the project plan set. A single wetland

resource area boundary clearly identified on the project site plans should be depicted to facilitate administrative review of the project.

The Lucas Environmental, LLC abbreviation is LE. One wetland boundary has been presented to the Conservation Commission. Although LE noted discrepancies, the project plans and impacts have been prepared based upon the approved SORAD wetland line and not any further work performed by LE. The landscaping plan displayed the observed wetland line but has been replaced with the proper line found in the SORAD. All other plan sheets showed the SORAD delineation.

5. In addition to the above comment, the Applicant should clarify whether the resource area and impact calculations provided are based upon the SORAD or their field observations. If the calculations are not based on the SORAD, the Applicant should provide further documentation supporting the use of their field observations as well as plans showing their field observed delineations compared to the SORAD.

   The resource area impact calculations provided were based on the resource area delineations approved in the SORAD.

6. Given the sensitivity of the subject property with regard to ecological resources (e.g. wetland resources, ACEC, nearby Certified Vernal Pool), it is important that the Applicant demonstrates that the project has exhausted alternative design options to reduce, minimize, and mitigate impacts to the environment to the maximum extent practicable. This can be accomplished through a detailed Project Alternatives Analysis. It is BSC's opinion that the Applicant has failed to meet this requirement through the Alternatives Analysis presented within this NOI. BSC recommends that the Applicant provide a revised Alternatives Analysis that adequately demonstrates that the project has evaluated Practicable and Substantially Equivalent Economic Alternatives. This is accomplished through the following:

   - A Practicable Alternative per 310 CMR 10.58(4)(1) must evaluate project costs, existing technology, the proposed use, and logistics. It BSC's opinion that this application has failed to meet this requirement. Have other properties in the town of Foxborough been evaluated for a similar development in size and scope? It appears that the purchase of abutting land for access is not cost prohibitive to the applicant. Has this option been adequately exhausted? Additionally, without a bridge design, it is unclear whether the most effective design/engineering technology is being applied for circumstances associated with the proposed wetland crossing.

     The Applicant respectfully disagrees with the comment that the application has failed to meet this requirement, however, an assessment of off-site properties has been included with this response letter. The Applicant has prepared further details for the Alternatives Analysis following the bulleted comments. The proposed crossing will be a prefabricated span. The disturbance will be limited to the areas proposed on the plan and described in more detail in response 19.

   - A Scope of Alternatives per 310 CMR 10.58(4)(2) requires that the alternatives under consideration shall be commensurate with the type and size of the project. As such, it is BSC's opinion that a more developed scope of alternatives should be documented

for the Preferred Alternative (Section 5.4, Alternative 4: Open Space Design). The inclusion of a larger "conventional subdivision design" within the Alternatives Analysis (Section 5.2, Alternative 2: Conventional Subdivision) fails to meet the intent of this requirement. As a residential subdivision, the economic viability of the project should be weighed against the alternatives evaluated for the preferred design.

The Applicant has prepared a reasonable Alternatives Analysis commensurate with the type and size of the project. The only work within Riverfront Area is related to the roadway crossing and associated stormwater management, therefore alternatives should focus on the other feasible locations for access to the site and stormwater. The Applicant has prepared further details for the Alternatives Analysis following the bulleted comments.

- An Evaluation of Alternatives per 310 CMR 10.58(4)(3) requires the Applicant demonstrate that there are no practicable and substantially equivalent economic alternatives for the project. This is accomplished through a demonstration that alternative project locations and alternative design configurations have been evaluated. It is BSC's opinion that the NOI Application has failed to meet this requirement.

  The Applicant respectfully disagrees with the comment that the application has failed to meet this requirement, however, the following information provides additional information related to the Alternatives Analysis.

The Applicant has presented four alternatives in the NOI: 1) No-Build, 2) Conventional Subdivision), 3) Off-Site Access Locations, and 4) Open Space Design (Preferred Alternative). Additional information has been presented regarding Alternative 3 via the January 7, 2015 Seigneberg letter to the Foxborough Conservation Commission, noted under response to Comment 2 (see attached). The Applicant has also evaluated several additional alternatives for the project: 5) Lot 12 Revision, 6) Reduced Subdivision Development, 7) Alternate Crossing Location (Conservation Commission Request), and 8) Off-Site Project Locations.

Alternative 5 – Lot 12 Revision

In order to reduce impacts to the Riverfront Area, the Applicant examined the feasibility of adjusting lots along the western side of the proposed subdivision roadway. This alternative is identical to the Preferred Alternative except for the proposed construction of a retaining wall at the southern edge of the limit of work. The retaining wall is identified on the project plans. By installing the retaining wall, all work previously proposed within the Riverfront Area for Lot 12 has been eliminated. No structure or grading is currently proposed within this area. Although this does not affect the roadway alignment, it does reduce impacts with the resource area.

Alternative 6 – Reduced Subdivision Development

Coneco has evaluated reduced development of the site, however this is not commensurate with the required Alternatives Analysis. Based upon the Subdivision Rules and Regulations, a

20-foot roadway width is required for proposed subdivisions with 1-5 lots. A 22-foot roadway is required for proposed subdivisions with 6-12 lots. Proposed subdivisions with greater than 12 lots requires a roadway width of 24 feet. The project currently proposed includes a 12-lot subdivision with a roadway width of 20 feet, which will require approval from the Planning Board. Whether the project proposes one lot or 12, the roadway width and configuration would remain the same, therefore the impacts would also remain the unchanged. Comparatively, the environmental impacts from the roadway would be identical regardless of the size of the subdivision.

Alternative 7 – Alternate Crossing Location (Con Com Request)

The Conservation Commission requested the Applicant specifically examine an alternate location that placed the access roadway through an area of the site that is currently cleared. At this request, the Applicant has examined this option.

Two colorized figures have been provided to aide in the understanding of the impacts to the resource areas (Sheets 3 & 4 of 4; Sheets 1 & 2 show the Preferred Alternative). The Riverfront Disturbance Areas figure shows the temporary and permanent disturbance within the Inner and Outer Riparian Zones, as well as to the Bank/MAHW and Land Under Water Bodies and Waterways (LUWW). The Wetland/Floodplain Disturbance Areas figure shows the impacts within the isolated wetland, floodplain, and 25-Foot No Touch Buffer Zone and 100-Foot Buffer Zone/AURA. The following tables summarize the calculations, also shown on each figure.

ALTERNATIVE 7 – ALTERNATE CROSSING LOCATION
RIVERFRONT AREA IMPACT TABLE[1]

Resource Area	Impacts (square feet)		
	Temporary	Permanent	Total
Bank/MAHW	0 l.f.	95 l.f.	95 l.f.
LUWW	0	946	946
Inner Riparian Zone[2]	0	6,888	6,888
Outer Riparian Zone[2]	0	4,730	4,730
Total Riverfront Area[2]	0	11,618	11,618

[1]**Impact Calculations provided by Coneco.**
[2]**Excludes detention basin construction, flood compensatory storage, and wetland replication per 310 CMR 10.58(4)(d)1.**

ALTERNATIVE 7 – ALTERNATE CROSSING LOCATION WETLAND/FLOOPLAIN AREA IMPACT TABLE[1]			
Resource Area	**Impacts (square feet)[2]**		
	Temporary	**Permanent**	**Total**
Bordering Vegetated Wetlands	0	5,360	5,360
Isolated Vegetated Wetlands	0	0	0
BLSF[3]	0	0-1500 sf (0-6000 cf)	0-1500 sf (0-6000 cf)
AURA/100-Foot Buffer Zone	0	12,888	12,888
25-Foot Buffer Zone	0	2,574	2,574

[1]Impact Calculations provided by Coneco.
[2]Mitigation Area Impacts are not determined. Impacts assessed are the minimum proposed but will likely be significantly greater with the inclusion of the mitigation areas.
[3]Area varies based on an estimation of the number of footings that would be required to support the proposed span.

The permanent impacts to the Riverfront Area will be comparable to the Preferred Alternative, however the temporary impacts will be reduced. The Applicant has examined this option and determined that it is not viable due to proposed impacts to the BVW, LUWW, and Bank/MAHW.

The impacts to the BVW would exceed the allowable threshold per 310 CMR 10.55(4) with greater than 5,000 square feet proposed. Furthermore, almost 1,000 square feet of impact is proposed to the LUWW and almost 100 linear feet of the Bank. The thresholds for work within the ACEC are heavily scrutinized and alterations to BVW are not typically authorized, particularly if there is an alternative presented with less environmental impact. Per 310 CMR 10.55(4)(e) "Any proposed work shall not destroy or otherwise impair any portion of a Bordering Vegetated Wetland that is within an Area of Critical Environmental Concern…"

The Applicant's Preferred Alternative proposes significantly less impact to the resource areas and as such, the Applicant has not explored mitigation options and compliance with the MA Stream Crossing Guidelines for this alternative, although this would significantly increase the assessed impacts within the buffer zones and AURA.

The Commission should note that the Applicant also explored a variation to this alternative in which a curved roadway crossing was examined through the grass/field area along the river. It was determined to be cost prohibitive as a curved span is very costly in comparison to a more traditional linear span. A river crossing and impact to Bank, LUWW, and wetlands would still be required.

Alternative 8 – Off-Site Project Locations

A thorough review of potential off-site locations for development has been performed. Refer to the attached market analysis for details. Based upon this assessment, there are no similar properties for this development that are available.

7. We recommend that the Applicant provide a plan explicitly showing the proposed resource area impacts.

   Two colorized figures have been provided to aide in the understanding of the impacts to the resource areas (Sheets 1 & 2 of 4; Sheets 3 & 4 show the Alternative Crossing Location). The Riverfront Disturbance Areas figure shows the temporary and permanent disturbance within the Inner and Outer Riparian Zones. The Wetland/Floodplain Disturbance Areas figure shows the impacts within the isolated wetland, floodplain, and 25-Foot No Touch Buffer Zone and 100-Foot Buffer Zone/AURA. Please note that there were errors in the original calculations that have been revised and updated per the design revisions, most notably the Lot 12 work has been removed from the Riverfront Area via construction of a proposed retaining wall. The following tables summarize the revised calculations, also shown on each figure.

PREFERRED ALTERNATIVE RIVERFRONT AREA IMPACT TABLE[1]			
Resource Area	**Impacts (square feet)**		
	Temporary	**Permanent**	**Total**
Bank/MAHW	0 l.f.	0 l.f.	0 l.f.
LUWW	0	0	0
Inner Riparian Zone	2,524	7,481	10,005
Outer Riparian Zone[2]	1,459	3,720	5,179
Total Riverfront Area	3,983	11,201	15,184

[1]**Impact Calculations provided by Coneco.**
[2]**Excludes detention basin construction, flood compensatory storage, and wetland replication per 310 CMR 10.58(4)(d)1.**

PREFERRED ALTERNATIVE WETLAND/FLOOPLAIN AREA IMPACT TABLE[1]			
Resource Area	**Impacts (square feet)**		
	Temporary	**Permanent**	**Total**
Bordering Vegetated Wetlands	0	0	0
Isolated Vegetated Wetlands	0	719	719
BLSF	0	2,237 sf (2,237 cf)	2,237 sf (2,237 cf)
AURA/100-Foot Buffer Zone	0	15,902	15,902
25-Foot Buffer Zone	0	6,388	6,388

[1]**Impact Calculations provided by Coneco.**

The total Riverfront Area on the site is 138,150 square feet. Therefore, a total of 8.11% of the total Riverfront Area will be permanently impacted, which is permittable under 310 CMR 10.58(4)(d). The total is increased to 10.99% if temporary impacts are included, however 2.88% of the Riverfront Area that is disturbed will be restored upon completion of construction.

8. Section 4.2 of the NOI describes construction sequencing for the wetland crossing that references staging a crane either on the existing cart path or a "suitable upland area". It is our opinion that the cart path, even if temporarily stabilized as proposed, is not large enough to stage a crane for construction of the crossing. Therefore, we recommend that the Applicant submit a temporary crane staging plan showing from where the crane will operate, what temporary grading is required, and how the upland area will be temporarily and permanently stabilized to prevent impacts to adjacent resource areas.

   The exact location of the crane placement will be the responsibility of the contractor/crane operator. This is due to the potential complexities and safety concerns of a pick for the placement of the bridge spans. The contractor will be responsible for the appropriate staging and placement of the bridge as well as the contractor may elect to place the crane in East Street to ensure a stable base. The applicant is more than willing to discuss a special condition with the Commission requiring the contractor to submit a plan or get sign off from the Agent prior to the establishment of the crane location.

9. BSC commends the Applicant's willingness to preserve, in perpetuity, approximately eight acres of land situated within the southwestern half of the subject property as part of this Project. According to the NOI, this area was selected because of its non-fragmented expanse of upland area within the Critical Terrestrial Habitat of the off-site Certified Vernal Pool. BSC agrees with this open space approach, and recommends that the Conservation Commission recognize this mitigation measure in their review of the Project.

   No response required.

10. BSC is supportive of the proposed Wetland Mitigation Plan. We do however suggest that the area be enlarged to greater than 2:1 impact to replication ratio. It appears the area of proposed mitigation is suitable for enlargement. A total of 3 red maple trees, 3 highbush blueberry shrubs, and 3 silky dogwood shrubs are proposed for planting within the mitigation area. The total number of mitigation plantings should be increased, especially for shrubs. A densely vegetated area will increase the likelihood of invasive species resiliency within the mitigation area.

    The Applicant is amenable to increasing the density of the wetland replication area in order to reduce establishment of invasive species. Table 3 of the NOI has been amended as follows:

TABLE 3
REPLICATION AREA PLANTING SCHEDULE

Common Name	Scientific Name	Status	Size	Quantity (1,112 s.f.)
Trees				
Red Maple	*Acer rubrum*	FAC	2-3" caliper	8
Shrubs				
Highbush Blueberry	*Vaccinium corymbosum*	FACW	18-24" height	15
Silky Dogwood	*Swida amomum*	FACW	18-24" height	15
Ground Cover				
New England Wetland Seed Mix (or equivalent)		Varies	1 lb./2,500 s.f.	1.0 lbs.

11. It appears that the access roadway and bridge will be constructed prior to the wetland mitigation area. As such, it remains unclear how the contractor will access the proposed mitigation area with heavy machinery without entering wetland resource areas and causing further disturbance.

    The construction sequence will be such that any work requiring heavy machinery will be done at a time to minimize the impacts to the buffer zones. Any planting that is done after the heavy machinery will be performed by hand.

12. While a monitoring plan has been established for the mitigation area, we recommend the Commission require that a successful mitigation area will be free of invasive species after an established amount of time (e.g. 5 years).

    Two years of monitoring is standard practice for wetland replication as outlined in the Massachusetts Inland Wetland Replication Guidelines and is more than appropriate for a project of this scale. If the project meets the monitoring protocol requirements within the first two years, additional monitoring is not required, however, if invasive species establish or 75% vegetation cover is not observed, additional monitoring would be necessary until compliance is reached. As such, the Applicant is willing to conduct three years of monitoring to ensure invasive species do not become established.

13. Erosion and Sedimentation Control is the only listed Best Management Practice (BMP) identified for the Project. An Erosion and Sedimentation Control Plan is not provided within the Project Plan Sheets. At a minimum, the Conservation Commission should require an Erosion and Sedimentation Control Plan as part of a Project Specific Order of Conditions. Because of the proximity of proposed project activities to sensitive wetland resource areas, it is recommended that frequent compliance monitoring, inspections, and reporting occur as a Permit Requirement.

    The erosion control plan is incorporated with the grading and drainage plans that were previously submitted (sheets10 & 11). A stabilized construction entrance is now shown on these plans as well as a detail provided with the plan revised plan set.

14. The NOI does not identify a dewatering practice for the project. The proximity of project activities, most notably the installation or construction of bridge footings to sensitive wetland resource areas (most notably the Canoe River) will likely require a significant amount of dewatering. The steep topography within this location will make dewatering far enough away from wetland resource areas a challenge. Additionally, without a bridge design, it remains unclear how the contractor will prevent the bridge footing trench from caving in on itself, a problem frequently encountered when digging trenches within close proximity to a wetland boundary. BSC recommends a Dewatering Plan be created for the project.

    A dewatering basin detail has been added to the plan set (shown on sheets 22 & 23). The location/size of this will determined in the field based on the flow rate of the groundwater encountered. The basin will be positioned in the location of the proposed detention basin. If the basin required for this is excessive in size the contractor may elect to bring in a frac tank and dewater the tank at an appropriate rate.

15. Section 7.1 of the NOI states that Freshwater Wetlands impacts will be limited to vegetation removal. However, it is our opinion that installing the proposed crossing over this wetland will result in a permanent impact due to shading. While the proposed crossing includes a 5-foot wide open median, we do not believe that this will provide sufficient light to maintain current wetland functionality.

    Without conducting a shading analysis of the bridge span, we cannot conclusively determine if there will be a permanent impact due to shading. However, the proposed bridge span will cover approximately 719 square feet of the isolated wetland (originally calculated as 676 in

the NOI, however a calculation error was made and has been updated in this response). The Applicant has committed to 1,112 square feet of wetland replication (1.3:1 ratio) to account for any permanent loss to the isolated wetland.

16. Limits of the BLSF should be shown on the plans based upon the actual elevations documented in the appropriate FEMA Flood Study that includes this portion of the Canoe River. Without this information, we are unable to determine if the full impacts to BLSF and, therefore, the appropriate mitigation have been provided.

    The BLSF was shown on the originally submitted plan set on the Proposed Grading, Drainage, & Erosion Control Plan, Sheet 1 (page 10 of 22). The elevations shown with this delineation are consistent with the elevations (EL 178-174) determined in the above referenced FEMA Flood study. A firmette showing the area in question has been provided with this response letter for ease of reference.

17. The proposed rip-rap slope above the compensatory flood storage and wetland replication area does not appear to be in conformance with the requirements of the Bylaw within the 25-foot buffer/no activity zone. The Bylaw defines this zone as "A no-disturb zone of continuous cover of vegetation…".

    The rip-rap slope has been changed to a geoweb vegetated slope protection. Table 5 below contains the proposed plantings for the re-establishment of a forested community within this area. A detail of this has been provided with the revised plan set. The restoration of the slope will be conducted following the specifications provided in the Notice of Intent Application for the wetland mitigation in Section 6.0 – Mitigation Measures.

TABLE 5
SLOPE PLANTING SCHEDULE

Common Name	Scientific Name	Status	Size	Quantity
Trees				
White Pine	*Pinus strobus*	FACU	2-3" caliper	4
Red Oak	*Quercus rubra*	FACU-	2-3" caliper	4
White Oak	*Quercus alba*	FACU-	2-3" caliper	4
American Beech	*Fagus grandifolia*	FACU	2-3" caliper	4
Shrubs				
Northern Bush Honeysuckle	*Diervilla lonicera*	UPL	18-24" height	8
Gray Dogwood	*Cornus racemosa*	FAC	18-24" height	8
Alternate-leaved Dogwood	*Cornus alternifolia*	UPL	18-24" height	8
Witch hazel	*Hamamelis virginiana*	FAC-	18-24" height	8
Ground Cover				
New England Conservation/Wildlife Seed Mix (or equivalent)		Varies	1 lb./1,750 s.f.	3

18. No details of the proposed wetland crossing or the associated abutments have been provided. As different types of bridge systems require different types of abutments and will require different construction staging and installation impacts, it is our opinion that the actual temporary and permanent resource area impacts cannot be calculated without specific information on the bridge system to be used.

    The final bridge design is being performed by a licensed structural engineer and final plans will be provided to the Town when available. The impacts as shown are the maximum impacts that will occur during the construction of the bridge.

19. While no permanent fill is proposed within the limits of vegetated wetlands (bordering and isolated), it is BSC's concern that the proposed bridge footings cannot be built without a direct and permanent impact to these wetland resource areas. Better detail regarding bridge design and how it will be constructed is necessary.

    A variety of construction methods may be used in the construction of the crossing (pilings, sheeting, etc.) that will ensure that the permitted impacts will not be exceeded. The proposed impacts are based on placement of sheeting prior to excavation of the footings .

20. The pipe outlets from Rain Garden 7 and the underground infiltration system discharge onto the rip-rap slope approximately 4-feet above the compensatory flood storage and wetland replication area. We recommend that these pipe outlets discharge to a level spreader to promote low velocity sheet flow and protect the compensatory flood storage and wetland replication area from erosion.

    A level spreader has been designed and placed at this location to promote low velocity sheet flow and prevent scouring.

21. The Applicant should clarify if the proposed rain gardens will be vegetated. The general Rain Garden Cross-Section shown on Sheet 20 of the Site Plans shows a vegetated area, while the specific rain garden details on Sheet 22 appear to be surfaced with stone.

    All rain gardens will be planted. The details in the revised plan set have been modified to make this clear.

22. The forebay detail provided on Sheet 21 of the Site Plans does not represent the forebays shown on the Proposed Grading, Drainage, & Erosion Control Plan. Details and sizing calculations for the proposed forebays should be provided.

    The forebay detail has been modified to show the design proposed. Calculations for each forebay are included in this submission.

23. While the Applicant has performed numerous soil test pits on site, test pits do not appear to have been performed in the location of all proposed stormwater infiltration BMP's as required by Volume 3, Chapter 1 of the Handbook. Additional information is required to document and confirm compliance with the requirements of Stormwater Standard 3, specifically pertaining to soil types and separation to seasonal high groundwater.

    The remaining testing has been completed and results have been attached. The previous testing was used as representative for the in situ conditions on the site for the purpose of the design.

24. As the Project discharges stormwater within a critical area, Stormwater Standard 6 is applicable. Therefore, 44% TSS removal must be achieved prior to discharge to an infiltration BMP. Based on the information provided, this does not appear to be the case for the proposed rain gardens. The Applicant should clarify how the Project will comply with this requirement.

    The low impact design of the drainage system is established in a way that the system is a cascading system, which ties the majority of the street into multiple rain gardens, swales, check dams, and detention basin. In viewing the entirety of the system, the TSS removal rate will be greatly increased from a traditional design and in our opinion meets the intent of the requirement.

25. Under Stormwater Standard 6, proprietary separators such as Stormceptors are only to be used as pretreatment for an approved treatment BMP (see Tables CA 1 thru 4 in Volume 1, Chapter 1 of the Handbook). Based upon this requirement, the use of a Stormceptor as treatment for the segment of the stormwater management system closest to East Street is not in conformance to Standard 6.

    Prior to discharge the facility will run through perforated piping (Structural BMP, Volume 2 Chapter 2) to allow for the 80% TSS removal.

26. The proposed conditions HydroCAD calculations include exfiltration from the roadside swales (Ponds 1, 3, 9, and 10). As swales do not qualify as infiltration BMP's (see Volume 2, Chapter 2 of the Handbook), it is our opinion that including exfiltration from swales is *(not)* appropriate. The Applicant should update the HydroCAD calculations accordingly.

    The swales and check dams are being utilized for peak rate attenuation and the entirety of the swales are not modeled with exfiltration; the areas that exfiltration is included are those which are equipped with check dams. We feel that this is correctly modeled for the application. We have also analyzed the site removing exfiltration from the check dams and still reduce the post development runoff rates.

27. The Stormwater Report and HydroCAD calculations include underground infiltration systems on each lot that will collect and infiltrate runoff from the house roofs. However, the locations of these systems are not shown on the Site Plans. As the Stormwater Handbook Volume 3, Chapter 1 requires soil test pits at the location of all infiltration BMP's, the locations of these systems should be provided as well as test pit information documenting soil types and separation to seasonal high groundwater.

    The current footprint of the houses will require 8-cultec 330 units to contain the 100 year storm. The exact location and sizing was not provided, as the footprint, location, and orientation of the houses could change when the individual lots are purchased.

28. The Applicant should submit calculations showing that all infiltration BMP's will drain within 72-hours in compliance with Volume 3, Chapter 1 of the Handbook.

    All infiltration BMP's will drain within the 72 hour window as required by the Stormwater Handbook. These Drawdown calculations for the infiltration BMPs have been included in this response.

29. The Applicant should submit sizing calculations for the Stormceptors in accordance with the DEP's Standard Method to Convert Required Water Quality Volume to a Discharge Rate for Sizing Flow Based Manufactured Proprietary Stormwater Treatment Practices.

    These calculations have been provided in this response package.

30. If the Applicant intends to submit the subdivision road for acceptance as a public street, the Town of Foxborough DPW should review and accept the Long Term Pollution Prevention and Operation and Maintenance Plans as the ultimate responsible party.

    We anticipate the Town accepting the road as a public way and address any additional comments the Town DPW may have regarding the LTPPP or O&M Plan.

31. The Operation and Maintenance Plan includes duplicate items for street sweeping under quarterly and annual maintenance. We recommend that street sweeping be performed quarterly and the annual item be removed.

    The reference to street sweeping has been removed from the annual section of the Operations and Maintenance Plan.

This section addresses the additional comments raised by Conservation Commission members and the agent during the previous public hearing the site walk that have not been addressed in the response to BSC comments above.

1. The Commission requested a Vegetation Removal Plan at the public hearing.

   To construct the roadway and associated drainage all vegetation inside of the erosion control lines shown on the Grading and Drainage Plans (sheets 10 & 11) will be removed. It is assumed that the contractor will perform the site clearing at the beginning of the project prior after the erosion control measures are installed.

2. The Commission requested a Snow Removal Plan at the public hearing.

   Snow removal will be limited to the swales and prevented from being placed in the rain gardens.

3. The Commission requested the Applicant determine if the Canoe River is designated as a coldwater fishery.

   The Canoe River is not currently designated a coldwater fishery based upon a review of the MassGIS datalayer for the Massachusetts Division of Fisheries and Wildlife (MADFW) Coldwater Fisheries Resources, updated August 2014.

4. The Commission requested a status update regarding the Planning Board's preliminary review of the proposed roadway location.

   The proposed roadway location has received preliminary approval from the Planning Board.

5. The Commission requested the Applicant examine shared septic systems for the project development, in lieu of individual Title V systems.

   A shared system for this development would need to be placed in an area that is currently proposed as Open Space. Based on site constraints the assumed location of this shared system would be located closer to the resource areas than the majority of the individual systems.

6. The Commission requested the Applicant to examine options to replace or improve the existing East Street culvert as potential mitigation.

   The Applicant will consider this option and look into potential options for the culvert.

7. The Commission requested the Applicant conduct a wildlife habitat evaluation.

   Lucas Environmental conducted a Wildlife Habitat Evaluation on January 2, 2015 and determined that only a Simplified Wildlife Habitat Evaluation (Appendix A) was warranted. No wildlife features or other important characteristics were observed that require a Detailed Wildlife Habitat Evaluation (Appendix B). A report can be prepared if necessary.

If there are any questions or comments or should the Commission require any additional information please do not hesitate to contact me at 508-697-3191 extension 110 or at soates@coneco.com.

Very truly yours,
Coneco Engineers & Scientists, Inc.

Shane M. Oates
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Cc: MassDEP SERO, Wetland & Waterways
Lucas Environmental, LLC – Christopher Lucas
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