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Town of Hampton
Inland Wetlands and Watercourses Agency
164 Main Street
Hampton, CT 06247

RE: Proposed Wetlands Crossings – Stonehurst At Hampton Valley, LLC, 39 Drain Street, IWWA-WP0120-01, Hampton, Connecticut.

Dear Chairman, Bonneksen and Commission Members:

In response to a letter dated June 6, 2020 to the applicants designated agent Mr. Greg Glaude, L.S. of Killingly Engineering Associates, I offer the following responses for the Commission's consideration:

Q #1: Is there an alternative material /product that could be installed, rather than Pressure Treated Posts and Rails to construction the Guide Rails for each of the watercourse crossings?

A: Up until 2003, the most common preservative used for pressure treated (PT) wood was chromated copper arsenate (CCA), a compound using arsenic as its primary rot protectant. Over years, the industry, in cooperation with government recommendations, phased out the use of CCA for all wood pressure treatment. New preservatives with either copper or chromium as the primary preservative replaced CCA, and that changed the safety dynamic dramatically. Unlike arsenic, which is absorbed into and retained by the body (explaining its toxicity) Today's PT products are not absorbed efficiently by the body so the exposures from touching or working with these products are safe.

Yes, plants can absorb these preservatives, but tests have shown that the amount of preservative leached from today's PT wood products is so low that it is virtually undetectable. According to the Environmental Protection Agency (EPA) the primary toxicity concern raised so far in the effect of the new preservatives is limited to lower plant life such as algae, which is not considered a significant environmental concern by regulatory agencies.

Q #2: Details for establishing a "permanent vegetative cover" identify the application of 10-10-10 fertilizer (300 lbs/1000 sq. ft) and agricultural ground limestone (2 tons/acre or 100lbs/1000 sq. ft). These chemicals would be added to the topsoil to grow grass seed. Please select an alternative wetland conservation ground cover or wetland conservation ground cover mix that is commonly identified within local wetlands and upland areas and does not require chemical soil additives to thrive.

A: Unvegetated areas bordering the wetlands and watercourses will be planted with a New England Erosion Control / Restoration seed mix for moist sites (or equivalent) at 1,250 sq.ft/lb or as recommended by manufacturer and covered with a thin layer of straw mulch. This seed mix (or approved equivalent) is available at New England Wetland Plants, Inc (413-548-8000). A specification for the seed mixture has been added to sheet 3 of the plans.

Q #3: The removal of invasive species will not be eliminated by use of chemicals, as discussed between John Valente, WEO and Greg Glaude, L.S. Please add this note to the Detail Sheet.

A: The requested note has been added to the detail sheet as note 18 of the development schedule/sequence of operations.

Q #4: Please identify the total length of the gravel access path, please identify the total cubic square feet of disturbance that will occur to construct the gravel access path, removed tree stumps, boulders/large rocks, and pull-offs (pull-overs). Please separate estimates that are unrelated, but necessary, for the construction of the gravel access path. (Please calculate gravel access path at 8' and 10' wide w/shoulders)

A: The total length of the proposed path is 1,700 linear feet and approximately 43,500 square feet of area will be disturbed as a result of grading, tree and/or boulder removal and pull off areas. It should be noted that the removal of trees will be limited as much of the proposed path will be constructed along a previously utilized logging trail. If we conservatively assume that none of the existing soils are suitable to be utilized as a base, approximately 420 cubic yards of gravel base material will be required for an 8' wide path and 525 cubic yards for a 10' wide path. The volumes assume and 8" depth of processed gravel and allow and additional 20% factor for compaction.

Q #5: The Detail Sheet identifies "All Materials and methods of construction shall conform to State of Connecticut, Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 and supplements thereto". The Detail Sheet is void of construction notes that identify the Stream Crossing Best Management Practices, as were discussed by Ian Cole during the Public Hearings; culvert alignment, gradient, placement of pipe below grade, and fill pipie to achieve a natural bottom. Please provide construction details that identify the Stream Crossing Best Management Practices that include establishing a habitat that is in harmony with the finfish activity that Ian Cole identified during the Public Hearings.

A: Please refer to the email correspondence between Town Staff, John Valente and Senior Fisheries Habitat Biologists, Mr. Brian Murphy at CTDEEP fisheries division. As memorialized in the email correspondence on June 9 2020, Mr. Murphy who is in charge implementing and enforcement of the State's fisheries habitat conservation and enhancement program, reviewed the wetland crossings for the Stonehurst application. Mr. Murphy concludes the crossings are acceptable and states "The proposed 3 crossing designs looks fine; I have no concerns or comments."

Q #6: Please establish an annual maintenance schedule to void the culverts of debris and include this schedule on the Detail Sheet.

The Project will inspect the culverts in the spring time to evaluate and establish an annual maintenance schedule. This schedule has been noted on sheet 4 of the plans, note #19 of the development schedule/sequence of operations.

Q#7: Please clarify, for the record, the depth that each culvert will be placed below grade. During the Public Hearing the depth was identified as 8 inches; the detail sheet identifies 12 inches. Please describe the measures that will be taken in the event that countersinking is not possible at some point along the length of the pipe, i.e.: ledge impedes the digging.

A: The proposed culverts will be embedded 8- inches below grade to preserve stream bottom continuity. The proposed crossing occurs in outwash sandy soils that are absent of ground conditions that could potentially encounter ledge or bedrock material. According to field observations and information provided by the Natural Resources Conservation Service soil survey soil conditions consist of excessively well drained Hinckley sands and gravels that occur in stratified outwash deposits. These parent material conditions are absent of ledge or bedrock material.

Q #8: Are there alternative measures that could be taken to reduce the amount of wetland or watercourse disturbance? Would the applicant consider bridging the watercourse or using open -bottom culverts in place of the proposed culvert design in at least one of the watercourse crossings?

A: In response to concerns from the Commission, Town Staff and the public, the applicant has reduced the amount of wetland disturbance by 700 sq. ft or nearly 20%, by reducing the traveled width of the proposed path from a and originally proposed standard width of 12' down to 8'. This reduction reduced wetland disturbances to a total of +/- 3,300 Sq. ft. Alternative crossings such as bridging and pre-cast open bottom culverts were considered but were rejected, as in both crossing methods an increase in wetland disturbance would be required, exceeding the overall impacts as proposed in the current crossing design. A bridge would require a substructure to support the bridge that would result in more wetland and stream bank disturbance as well as more grading, clearing and overall ground disturbance in the upland review area to facilitate construction. Likewise, an open bottom culvert would take up more physical space in the ground and again require a bigger excavation to install. The proposed embedded culverts achieve open bottom conditions which exceeds the regulatory requirements for the proposed activities.

Please do not hesitate to contact us at itcole@gmail.com; (860) 514-5642 or nthibeault@killinglyengineering.com (860) 779-7299 if you have any questions or need any additional information.

Sincerely,

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