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DEPARTMENT OF PUBLIC SERVICES
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December 14, 2016

Mr. Andy Port, Director
Office of Planning and Development
City Hall
60 Pleasant Street
Newburyport, MA 01950

Subject: **Evergreen OSRD Drainage Revisions – Dated 12-7-16**
ENGINEERING REVIEW COMMENTS

Dear Andy and Members of the Planning Board:

Our prior comments dated October 18, 2016, still apply. In general, our highest priority is to protect the public water supply and the best way to protect the water supply is not to build a new residential subdivision. The comments herein are with the assumption that the project will move forward to construction and, therefore, we have to minimize adverse impacts, foreseen or unforeseen, as best we can.

With that said we have reviewed the subject revisions and provide the following comments:

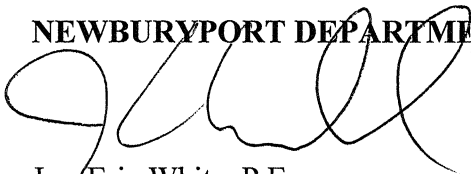
- 1) This Project is very unique in that it does not have a drainage outlet and it all collects within the isolated land subject to flooding (ILSF). The DEP requirement to ensure that the post-development runoff rates are equal to or less than the pre-existing runoff rates will still apply but will be handled in a slightly different manner than a typical project. There are no downstream flooding concerns but rather onsite flooding concerns and, equally important, concerns that additional runoff will alter the natural systems that exist within the ILSF – wetland systems, wildlife habitat, and vegetation, to name a few. This may affect the layout of the roads and lots because additional and/or larger BMPs may be needed.
- 2) While some proposed BMPs provide some detention of runoff, in general the revised drainage concept does not provide detention of the runoff prior to discharge into the ILSF. It is therefore assumed that the ILSF will be used for detention until it infiltrates into the groundwater. In addition to the concerns noted in #1 above, the Applicant will need to show how the ILSF will be utilized to handle the additional runoff volumes in the post-development conditions and what the new flood boundary will be.

- 3) If the Applicant utilizes the ILSF as detention (i.e. detention systems are not provided prior to discharge into the ILSF) then the ILSF shall be fully drained within 72 hours (as applicable) in order to utilize the volume for subsequent storm events. If the site contains naturally-occurring standing water (unlike the manmade lined ponds) then these areas must be excluded in all volume calculations. If the ILSF area cannot drain within 72 hours then the roads and homes should be placed much further away from the ILSF boundary by a sufficient distance to prevent flooding from back-to-back storm events or onsite flood storage mitigation shall be provided.
- 4) The development should handle even the most intense storm events and consideration should be made towards the fact that when it comes to climate change and weather, there are no longer any norms for which to follow.
- 5) The BMPs being proposed are quite effective and on a typical project this design would be exceptional. However, because the runoff does not have the ability of going downstream and being diluted into another body of water we have to deal with the runoff staying onsite and entering our water supply. We would like to see other types of treatment that does not solely rely on vegetation. During periods of drought – or the opposite extreme of extended wet periods – the plants are no longer effective or will die off. The Applicant should address this possibility and look into alternatives that can filter the pollutants out of the water.

If you have any questions regarding these comments, please contact me.

Sincerely,

NEWBURYPORT DEPARTMENT OF PUBLIC SERVICES



Jon-Eric White, P.E.
City Engineer

CC: Tony Furnari, DPS Director
Kate Newhall-Smith, Planner