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Engineering Department

INTERDEPARTMENTAL COMMUNICATION

To: Planning Department

Date: October 14, 2011

From: Engineering Department

Subject: Review of Duggan's Way – 314 Arlington St - Definitive Subdivision Plan

We have reviewed the plans for the above mentioned project titled "Definitive Subdivision Plan, Duggan Farm, Residential Compound" dated August 22, 2011 and have the following comments:

1. The Definitive Plan has been proposed as a Residential Compound which will require a number of waivers from sections 8 and 9 of the Subdivision Rules and Regulations.
2. The Fire Department should comment on the accessibility of a fire truck. Based on our templates the common driveway is adequate for an SU-30 vehicle.
3. The proposed street name "Duggan Way" will need to be changed in order to make it distinct for the emergency 911 system. The town already has a Duggan Road. The proposed name will need to be approved by the Fire and Police Departments.
4. The engineer should add a note stating that the binder should be exposed to one winter season before the application of the wearing course.
5. The engineer should add a detail for the wheelchair ramps that are proposed.
6. The site is located in Groundwater Protection Zones 3 and 4. The proposed drainage does not comply with the Acton standards of gas trap catch basins and clay lined retention ponds however the proposed design is a Low Impact Development (LID) design in accordance with the design standards for a Residential Compound. The proposed volumes and flow rates are not increased from the existing volumes and rates.
7. The engineer proposes 12ft which is consistent with the common driveway standards as required by the Residential Compound regulations.
8. The engineer proposes a culvert to handle the runoff coming from the adjacent property. They estimate 0.19 acres of the adjacent property will drain to this culvert. This number is

consistent with what we estimated using the Acton GIS system. We request that the engineer include on their post development watershed plan the estimated watershed area for this culvert. The engineer should ensure that this culvert will avoid puddling the adjacent property.

9. The detail for the rain gardens shows 331 cubic feet of storage per rain garden which for four rain gardens would be 1,324 cubic feet. The drainage report assumes a total of 2,022 cubic feet of storage. The drainage report estimates 308 cubic feet of storage for the 1.5ft deep rain garden but the detail shows 133 cubic feet for 1ft of depth. The engineer should clarify where the 175 cubic feet of storage and 6 inches of depth comes from.
10. The engineer proposes to direct runoff to the rain gardens via grass swales which will then outlet to the drainage ditch along the property line. The drainage report models the entire property to be directed into these rain gardens before they enter the drainage ditch however the site is not graded this way.
11. The engineer should provide construction standards for the rain gardens.
12. All the drainage components (rain gardens, swales, etc) should be located within easements. There should be an agreement informing the owners that they are responsible for the maintenance of the system. They should be provided with a log to track repairs, inspections and maintenance of the system.
13. There should also be a maintenance agreement between the owners for the road as well. The agreement should contain the standard private way language that clearly state that the town will not be responsible for maintaining the road or plowing.
14. The engineer should show that there is at least a 2' separation to the seasonal high groundwater level.
15. The centerline of the street should be monumented at all points of curvature and tangency using magnetized masonry nails in the final course of pavement. The engineer should add a note that no permanent monuments shall be installed until all construction is completed.
16. The engineer should add a grass strip along Arlington Street between the street and the proposed sidewalk if possible. If the sidewalk must be located adjacent to the street we suggest using the high style curb to give a separation between the street and the sidewalk.
17. The engineer should show spot grades along Arlington St. We want to ensure that no puddles will be created after the new driveway and sidewalks are installed. The applicant will have to mitigate the situation if a puddle is created along the street.
18. The temporary construction entrance should be graded such that the water on Arlington St does not enter on to the site and vice versa.
19. Temporary sediment basins will be needed to control runoff during construction until the drainage system is installed.

20. Any street signs should be MUTCD compliant and explicitly state that the road is a private way.
21. The applicant will be responsible for providing an as-built plan that will be certified by a PE/PLS.