



TOWN OF ACTON
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Engineering Department

INTERDEPARTMENTAL COMMUNICATION

To: Board of Selectmen

Date: April 11, 2014

From: Engineering Department

Subject: 848 Main Street – Acorn Deck House Company – SPSP #448

We have reviewed the plans titled “Site Plan for Acorn Deck House CO, 848-852 Main Street, Acton MA 01720” dated February 18th, 2014 for the above mentioned site plan special permit and have the following comments:

1. The site is located in Zone 3 of the Groundwater Protection Overlay district. The proposed drainage system doesn't meet the following standards of the Groundwater Protection Zone 3:
 - a. The first inch of every storm event shall be directed into vegetated clay-lined retention ponds, retained for at least 3 days and exposed to sunlight. (Section 4.3.6.3 of the Acton Zoning Bylaw)
 - b. Drainage facilities designed to prevent leaks and equipped with emergency slide gates or similar provisions in the event of an emergency (Section 4.3.6.4 of the Acton Zoning Bylaw)
 - c. Sections 4.3.5.2 and 4.3.5.3 of the Acton Zoning Bylaw regarding separation to the maximum groundwater elevation. The locations of any field test to determine the maximum groundwater elevations, as required by section 3.9.4 of the Site Plan Special Permit Regulations, has not been provided.
 - d. A note forbidding the use of fill containing hazardous material and requiring the hauling of earth to and from the site to the hours between 9 a.m. and 4 p.m.
2. The post-development runoff rate increases from pre-development for all storm events according to the calculations provided by the applicant. The site is divided between four subcatchment areas. Subcatchments 1 and 3 have increased the amount of impervious surfaces while providing no additional detention. Subcatchment 2 remains unchanged from pre to post-development. The runoff in Subcatchment 4 is reduced post-development by infiltrating the roof runoff into the infiltration trench and directing the remaining runoff to

Subcatchment 3. Combined, the overall runoff increases from pre- to post-development. Overall the increase is negligible, however considering the other issues with the drainage design the applicant may want to address runoff totals.

10-year Storm, Runoff Totals

Subcatchment Area	Pre-Development Rate (cfs)	Post-Development Rate (cfs)	Net
1	2.479	3.648	+ 1.169
2	4.532	4.532	0
3	2.025	2.806	+ 0.781
4	5.046	3.110	- 1.936
Total			= + 0.014

3. CN number for gravel in soil group A should be 76, not 84.
4. Fire hydrant locations should be shown on the maps.
5. A note should state that a SU-30 Fire Truck may maneuver on the site.
6. There is no note stating to which datum the existing and proposed elevations are referenced to.
7. The drain manholes should have shaped inverts.
8. The application should contain an operation and maintenance plan for the drainage system.
9. The applicant should have two temporary benchmarks, in addition from the starting benchmark, that won't be disturbed during construction shown on the plan.
10. The applicant will be required to provide an as-built plan certified by a PE/PLS showing compliance with the approved plan and design.