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Jody Kablack
Sudbury Planning Director
278 Old Sudbury Road
Sudbury, MA 01776

Re: Mahoney Farms – Phase III Modification Conditions

Jody:

In order to resolve the outstanding issues regarding the Phase III modification conditions for Mahoney Farms, I am requesting to be placed on the agenda for the October 9th Planning Board meeting. In particular, we will be seeking to modify SRC Special Permit Condition 6/SW Permit Condition 4, which requires two inspection ports per roof drain infiltrator. We will also be seeking relief from SW Permit Condition 6, which requires a minimum of 2 feet of separation between the bottom of the roof drain infiltrators and the seasonal high water table. I have attached a copy of my July 22, 2013 letter discussing these issues.

We will have our engineer at the meeting to answer questions regarding the technical details.

Sincerely,

Martin E. Loisel, Jr.
Permitting/Development Manager
Capital Group Properties



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PROJ NO: MAHONEY FARMS

FILE NO: 140

MAIL TO: _____

FAX TO: _____

CC: _____

July 22, 2013

Jody Kablack
Sudbury Planning Director
278 Old Sudbury Road
Sudbury, MA 01776

Re: Mahoney Farms – Phase III Modification Conditions

Jody:

This letter is in response to your request for written clarification of the outstanding issues at Mahoney Farms. Your initial comments and questions are in bold type.

- **SRC Special Permit Condition 5/SW Permit Condition 2 – Does the expanded basin accommodate the 100 year, 24 hour storm?**

Yes, the basin was expanded per the revised plans, except for the modifications to the outlet structure, which will be completed once the entire site is stabilized. An easement plan has been recorded which covers the expanded pond area, and a copy has been provided.

- **SRC Special Permit Condition 6/SW Permit Condition 4 – Are there 2 inspection ports for each roof drain?**

No. The infiltrator units are approximately 4 feet long and are designed for a single inspection port in the center of the unit. Adding another inspection port 18 inches away will serve no practical purpose, and will most likely damage the unit and allow dirt to enter the chamber, due to the difficulty in sealing an inspection port in this area.

- **SRC Special Permit Condition 7/SW Permit Condition 5 – Are the roof drains functioning properly? The information submitted on the depth of standing water in the pipes does not fully answer this question, and further calls into question the functionality of the structures. If they are not functioning properly, some other method must be designed.**

The drywells were inspected on June 6, 2013 with the results reported to the board. Seventeen of the drywells were fully dewatered and were functioning properly. The remaining fourteen drywells had some level of standing water observed, and had limited functionality. These drywells do provide some level of recharge, as evidenced by the observed depth to water drawn down to some depth below the top of structure. The cause of the standing water in a majority of these units appeared to be influenced by

groundwater, and during the dry period of the year, as groundwater levels drop, the capacity of these drywells should increase.

All of the drywells have been equipped with an overflow directed to pervious vegetated areas, and were not connected directly into the drainage system. Infiltration will occur through these pervious surfaces providing some additional level of recharge. This is a common Low Impact Development technique to promote infiltration as described in the Sudbury Stormwater Regulations, Appendix D, Item 9.

Under Stormwater Standard #3, MassDEP recognizes that it may be difficult to infiltrate the entire recharge volume on certain sites due to soil conditions. On sites with type C soils proponents are required to infiltrate the required recharge volume only to the maximum extent practical. The site design is considered to have provided groundwater recharge to the maximum extent practical where the applicant has made all reasonable efforts to meet the standard through drywells and disconnected roof drainage.

The stormwater calculations related to controlling peak rate of runoff did not account for the drywells in the model. The functionality of the drywells does not have an impact on the performance of the stormwater detention basins or potential downstream flooding impacts.

- **SRC Special Permit Condition 8 – Is the landscaping installed as shown on the approved plan?**

The landscaping was not installed exactly as shown on the landscape plan, but plenty of screening has been provided and is shown on the as-built plan. Viburnum shrubs have also been planted around the outlet structure near Nobscot Road.

- **SW Permit Condition 6 - Is there a minimum separation of 2 feet from the bottom of the roof drains to seasonal high groundwater?**

Those drywells located in the areas of cut, or near the on-site wetlands do not appear to have a separation to groundwater. The drywells were installed in the approximate locations shown on the approved drawings.

- **I have a general question which is what is the depth of the roof drains? Some have 2 feet or more of standing water in them.**

Attached is a summary with the measured depth to stone.

Bill Depietri and I would like to meet at your office, along with Mike Sullivan, to discuss these issues. Bill is away this week, but will be available next week. Let me know what day and time works best for you.

Sincerely,



Martin E. Loiselle, Jr.
Permitting/Development Manager
Capital Group Properties

Mahoney Farms, Sudbury, MA
Drywell Summary, Units 1-20

Observation Date: 6/6/2013

Unit #	Location (Front / Rear)	Depth of Water	Depth to Bottom Stone
1	F	5"	34"
1	R	2"	14"
3	R	20"	51"
4	F	DRY	42"
4	R	28"	53
6	F	DRY	50"
6	R	20"	39"
7	F	DRY	37"
7	R	17"	30"
8	F	DRY	66"
8	R	23"	34"
9	R	17"	45"
10	F	DRY	46"
10	R	DRY	35"
11	F	DRY	24"
11	R	30"	40"
13	F	DRY	45"
13	R	25"	44"
14	F	DRY	43"
14	R	DRY	36"
15	R	DRY	30"
16	F	12"	53"
16	R	11"	37"
17	F	DRY	39"
17	R	DRY	59"
18	F	DRY	42"
18	R	DRY	61"
19	F	DRY	32"
19	R	22"	39"
20	F	DRY	44"
20	R	15"	30"