

APPROVED

Attendance: Commissioners Baskin, Bishop, Curro, Davis, Moore, Velie, Weil,  
Associates: Foster, King, McVay, Sanders, Office of Community Development: Glenn Clancy  
Attendees for some or part of the meeting: Gordon Low, David Rota, contractor for the Lows  
Rich and Robin Levandov. Chair of Board of Cemetery Commissioners: Ellen O'Brien  
Cushman; Vicki Hibbard, , FAR: Ellen Mass,

Minutes of March 21, 2006 approval continued  
Minutes of April 4, 2006 approved as amended.

Belmont Cemetery: Extension of Order of Conditions DEP#106-0041 Set to expire May 9, 2006. Existing Order of Conditions was issued for hand digging for survey markers in the buffer zone. Baskin moved to issue a two year extension, Curro seconded, unanimously approved. Jeff Collins, who did Walden Woods project, is Director of Extension Service for Mass Audubon Society and is writing a maintenance plan for three meadows for the McLean Land Management committee for \$1200. Ellen thought Commission might be interested in his services for Rock Meadow. There was a discussion of location of Vernal Pools in relation to cemetery limits and plans: one Certified Vernal Pool southwest of Pine Allee and another, the location of which seemed unclear since Town maps appear to be inaccurate.

37 Larch Circle: Landscaping. Vicki Hibbard presented proposals for landscaping for the Sodini property. Landscape improvements include work where the willow tree fell, some screening of the DCR land and a patio behind the line of the house. Photos were shown of the concrete retaining wall that is the bank of the pond in this area. The brick patio will be removed, expanded and replaced with bluestone. Patio is 28 ft to 36 ft to edge of pond and 57 ft at the farthest point. Patio according to zoning is not a structure and therefore needs no building permit. Overall square footage of "hardscape" is 121 sq ft, the equivalent of small shed. Owner had 10x12ft foundation removed so 120 sq ft of impervious material has been removed. Installation will be in stone dust for semi-permeability. Plantings will include arborvitae, Japanese maple, hollies. Conditions will include straw bales or wattles, covering excavate and removing it from the site. Lawn will be regraded and replaced. Siltation protection should protect against sediments entering the pond. Streamlining the project cannot apply because the work is closer than 50 ft to the resource. The Commission recommended that the Sodinis file a Request for Determination (RDA). No fee with RDA but advertisement is required five days prior to the hearing. Tentative dates for hearing are May 17, 2006 and May 23, 2006.

The Woodlands at Belmont Hill: Representatives were not in attendance. Extension of Orders of Conditions: McLean town house development; DEP#106-0012 (wetlands crossing is in, utilities are in, vegetation needs to be installed.) Expires June 3 and needs extension. Commission issued an extension to December 11, 2006 to fall in line with expiration of the other orders. Other Orders will be addressed at June Meeting: DEP#106-0027, DEP# 106-0028, DEP#106-0029.

McLean Water Main Installation: DEP# 106-0031, Certificate of Compliance. Davis has visited site and observed work. Certificate of Compliance approved.

FAR/Alewife trail project: Abbreviated Notice of Intent withdrawn. Favorable responses received from Cambridge, application completed but withdrawn. DCR has concerns with competing paths, and is worried about appeals. FAR hopes that pathway will be a defined but natural limited use path. FAR will continue to stay involved on the issue. Uplands Forum/Benefit and art show is planned for May 30 from 6:30 to 10:00PM at Temple Beth El.

Open Space Plan: Sanders has been working on draft in three parts: Table of Contents includes items which may or may not need updating, Wildlife Appraisal: species that deserve some planning attention, (Alewife, Blueback Herring, e.g.) and the Plan itself. Jay Szklut is calling meeting Wed May 11<sup>th</sup> 8:15 AM with Karl Haglund and Stew Sanders for Planning board to assume responsibility for updating plan. Jay organized an update graph to clarify what needs to be done. Foster distributed a sheet with her input toward the Open Space Plan. Sanders suggested different goals for mowing depending on what species should be favored. Baskin suggested this might be better placed in the Rock Meadow Management Plan. Sanders has kept a log of wildlife since 1977 that he would like maintained. Weil as Co-Chair will attend the meeting along with Sanders.

30 Howells Road: hearing continued at 8:45 PM. David Rota, general contractor for project representing Gordon Low who had called him from the Orlando Airport, having been delayed. (He arrived to attend the last portion of the meeting.) The professional engineer who stamped the calculations in the submittal, Joel Williams, was requested to attend but had a previous conflict and cannot attend. A difference in this plan over previous submittal is lot configuration shown in Mod.4, with redesigned driveway. Commission has continuing concerns about non-point source runoff analysis. New roof area is predicted to produce 258 cubic feet of runoff in a one inch storm to be stored in the basement of demolished house. Combined new roof and new driveway impervious surfaces are predicted to produce 446 cubic feet of runoff. Proponent says that storage is being created for entire project including the current construction rather than just for changes in impervious cover. Engineer Joel Williams, Registered Professional Engineer stamped the discharge analysis figures but not the schematic of the design. Mr. Rota stated that to the best of his knowledge, Mr. Low and Mr. Williams designed the Storm Water Storage schematic which shows two sections of the basement with two levels as exist today; with a step up from one elevation of current basement to the other. Lower level has an area of 20ft x 14ft. Sump pump would pump water from the garage into the basement system. When water table is higher than invert at 93 ft, sump pump will go on. It was pointed out that sump pumps can fail. The pump would be in the house. Elevation of floor of new garage is at 93 ft. Old cellar is 92.8ft and north basement is a foot lower.

Perimeter drains around new building would lead by gravity to storage containment area in former cellar hole. Plenty of cubic feet of storage and if elevation of storage area exceeds 93 ft, check valve will prevent backwater into garage. Sump pump in garage will pump into upper pipe which leads down into sump pit. Original area of 294 sq ft in north basement becomes 294 cubic feet for storing a foot in depth. Basement floor will be broken up and filled in space for drainage. There is 117cu ft + 24cu ft = 141 cu ft of storage combining both basements to depth/height of 96 ft, below the lowest invert.

Soil conditions under existing cellar need to be considered at zero infiltration since no soil studies have been done. Storage area will be confined within existing foundation. About 10 inches of the top of existing cellar wall would be removed. Slab elevation of garage is 96ft, with footing at lower invert. Once water in cellar storage reaches 96 ft the water would flow out of the storage and flow across the property, screened and discharged at the highest elevation possible at the location of the existing garage/driveway. In the cellar hole/storage 60% volume will be crushed rock from cellar debris and 40% of the volume of storage for water with Geotextile fabric on top under a foot of soil and grass on top. Curro does not dispute amount of water coming in, but exfiltration of water from the basement is unknown. Ineffective if storage fills and cannot empty. How quickly this will drain depends on soils. No percolation tests have been done. No soil borings have been done. To be accurate, borings should be done under, or near, the existing house. Current sump pump already pumps overflow into Howells Road. Where is the water table in this area? All the water from the roof would go into this drainage system.

Baskin inquired about the frost line in relation to slope and construction. Davis asked what will guarantee no mosquito breeding: geotextile filter on outflow. Sump pump with back-up pump and battery back-up was recommended by McVay. If Commission requested, the contractor could put filter fabric covered drainage holes at different elevations in the front wall of cellar to increase drainage. Curro questioned numbers: total area of 3,096sq ft is from footprint plus overhangs. Driveway is 2,260sq ft impervious and does not go into cellar hole storage but into center of landscaped area. Baskin comments: likes the concept but noted lack of information in the design: plot of inflow and outflow, soil analysis, and other details.

Public hearing had been extended on the condition that the Lows hire a Massachusetts registered professional engineer to design the non-point source runoff management system. Rota replied that the engineer would not stamp a drawing without calculations. Curro stated that the schematic is not a design and should have been brought to level where engineer was comfortable stamping it. Weil would have liked cross-sectional drawings, gradings, and connections to house.

Mr. Levandov: Page one of NOI states that abutters agree, however, Mr. Levandov states that they have not agreed with the new driveway design. Mr. Levandov reiterated that the Commission requested peak flow information especially of concern to him because of the ledge and sheet flow into his property, that a professional engineer study entire situation and design the runoff system. Mr. Levandov stated that the engineer who stamped the submission was only moonlighting and did not do calculations. Mr. Levandov states the Mass Dept of Licensure requires that an engineer must be involved in the calculations in order to approve them with his stamp. Mr. Levandov cites the many 100 year floods we have had in the past 10 years. Winn's Brook frequently overflows its bank and floods his property. To build house will require removing ledge which will change topography and possibly the water flow on site. Mr. Levandov requests again the peak water flow estimates and professional design. (It was decided that peak flow figures had been requested at previous meeting by Nicole Hayes from Sanford Ecological.) Curro submits that the stamp is invalid because the engineer did not include his area of expertise with the stamp. The other assumption is that the engineer has put his "stamp" on the line by "approving" calculations that he may or may not have done. Baskin stated that if that were the only problem then it could be amended.

Weil noted from the minutes that the Commission specifically requested a design for non-point source discharge that was designed by a Massachusetts registered engineer. Mr. Rota defended the professionalism of the design and the engineer with whom he has a personal relationship; he is a civil engineer in the Town of Billerica. Mr. Rota requests a ruling this evening. Moore stated concern about Mr. Low's non-compliance. Baskin: "do we have enough information to approve a project? It is very rare that the Commission turns a project down but there are big gaps in the plans, the estimates, and infiltration." Mr. Rota requested if a positive decision is made to issue conditions he would meet with his professional engineers. Mr. Rota states that Mr. Levandov has had access to these drawings and approved them but has now changed his mind. Mr. Rota would accept a requirement to produce the engineer at a meeting. Baskin noted information is lacking in the report and on the schematic. The Commission requested a non-point source runoff management design. Mr. Rota states that it is not a requirement. Baskin countered that it is a requirement to control non point source runoff under the Wetlands Protection Act regulations. Furthermore, according to the new Mega Manual from DEP, flow reduction is a primary goal to reduce non point source runoff. Foster suggested granting approval for the start of excavating, subject to conditions. McVay stated that the applicant answered a lot of questions that came up tonight, suggested that the engineered design be submitted to Glenn and Kathy for approval. Velie stated that until conditions of site have been studied that a design cannot be approved. Mr. Rota is eager to try to experiment with the property to achieve the best design to satisfy the board, will produce the document prior to demolition of the home. Mr. Rota stated that Joel Williams did review the calculations although he did not do them himself. Davis repeated that the Commission has requested the professional design for the past two months therefore how can Commission base decision on promises to follow through?

King asked Glenn Clancy for his opinion. Glenn shared observations: Mr. Rota offered more tonight than Mr. Low has offered the CC in the past three months. If Mr. Low had offered this information earlier, perhaps the decisions would have been made. As an engineer, he has concerns about the design without a site plan. From the point of view of the Commission, is the design going to work? Baskin: needs to know infiltration rate, depth to bedrock, high water table elevation would affect the success of the design. Inlets and outlets would be helpful too. Clancy stated: don't discount effect of catastrophic events on other properties, keep perspective. What degree storm event should an applicant have to address? Could be conditional on design documents, on performance standards: to drain in certain time, two feet or more between bedrock and the bottom, but the Commission shouldn't design it for the applicant. Mr. Rota, with a positive ruling, would do percolation tests, pit or borings. Baskin had spoken to DEP's Tom Maguire who stated that percolation tests are needed for design. Mr. Rota: all calculations based on invert on lowest slab. If house demolished with percolation tests inadequate, he states he can excavate more. Glenn: responded that that is hypothetical since ledge condition and unsuitable soils may exist. What are the proposals if unfavorable site conditions are found to exist and the system will not operate as planned?

Mr Rota: He would examine storm drains or a resource to channel water to. Baskin: suggested use of basement storage as reservoir for irrigation source, use one foot section stacks of plastic cups that snap together, wrapped in high density polyethylene, strong enough to support a truck but would provide 90% storage volume.

Mr. Levandov: repeated that DEP requires a percolation test. Inquired about peak flow versus runoff. At the last meeting was there a request for peak flow and quality/quantity issue? Baskin stated that peak flows might be in the Stormwater Management Policy and that that thought didn't get carried forward when DEP stated that the single family home would not be subject to the Stormwater Management policy. Peak rate of discharge is not supposed to increase after development. Overflow could be a "point source" as could a downspout depending on interpretation.

Baskin stated that the choices are: condition an approval with performance standards, design the system for the Lows, or find submission incomplete. Curro presented three somewhat different options: approve with conditions, deny or approve. However, there are too many gaps so that Commission would be designing the system. Davis: agrees. Information was not submitted. It is uncomfortable trying to approve a plan that may or may not work. Weil: has many notes on information needed either as conditions or requirements before proceeding: design drawings, percolation test, peak flow, slope, permeability tests, alternative if first design doesn't drain, back-up design. Baskin stated: If we give approval and performance standards not met, Commission can issue cease and desist. Mr. Rota: Would Glenn be able to approve engineering design without an additional meeting? Glenn would not agree to that. The request is coming from the CC, not the Town. Bishop expressed frustration that plans were not presented when first requested months ago and concern that requiring Town to monitor closely the performance standards in case cease and desist is necessary would put undue strain on Office of Community Development resources.

The objective is to control non-point source runoff. The applicant proposed using the existing basement structure to provide a storage/infiltration solution. Because of the size of this existing basement, the proposed solution results in storage for a 1 inch storm, assuming infiltration and no ground water seepage into the basement, according to the proponent, the proposed solution results in a factor of safety of 3.6. The following items are required:

1. Percolation test,
2. Determination of soil characteristics,
3. Depth to bedrock,
4. Calculate exfiltration rate,
5. Present plan view of system with inflow and outflow on site plan, plan and cross section views of system,
6. High groundwater elevation,
7. Design must be in compliance with the design parameters of Stormwater Policy Volume 2,
8. A Massachusetts Professional Engineer must design the system and stamp the design,
9. Grading, and slope after construction.
10. A contingency with sprinkler or back-up pumps to empty cellar storage before rains in case cellar doesn't drain must also be designed
11. Demonstration of how plan meets performance standards of Volume 2: i.e. drains in required amount of time (72 hours), has two feet or more between bedrock and the bottom of storage, etc.;

12. Back-up plan in case system is not expected to perform as intended because of unfavorable soils conditions or other cause.

Discussion ensued on continuing until May 17 or May 23, 2006 (depending on whether Sodinis file a Request for Determination). Ten-day appeal period starts when Order of Conditions is issued. Glenn's experience with engineers is that designs are more apt to take months instead of weeks.

Straw vote for putting together an Order of Conditions and approving this method only got one vote in support. Curro would support denying project, a difficult site, uncomfortable approving a Notice of Intent with conditions because does not want to set conditions. Velie needs more information. Moore would like to send it forward, but for Commission to design specifications is a problem. Mr. Low inquired if he submits a design from a registered Massachusetts professional engineer that addresses concerns including soil conditions, ledge, percolation tests, would the project be approved? Baskin moved continuance of the hearing with the expectation that complete design drawings and documentation from a Massachusetts professional engineer with the conditions listed. Moore seconded. Vote on this resulted in five in favor, two opposed.

At 11:40 PM, hearing was continued until June 6, 2006.

Rock Meadow: May 21<sup>st</sup> volunteers available for Rock meadow from Miriam Weil. Nancy Davis will communicate with Miriam.

Rock Meadow: consent given for New England Wildflower field trip in July.

Meeting adjourned at 11:45 PM Next meeting to be decided. May 17 or 23<sup>rd</sup> depending on advertising for Sodini/Larch Circle project. Next regular meeting Tuesday June 6, 2006.  
Submitted by C.Bishop