

**TRAFFIC STUDY
CONTROL DOCUMENT LIST**

UPDATED 11-18-11

Document 16. Email from resident Mark Skillings re: comments on the Traffic Study Peer Review received 11-2-11

Document 17. Email from resident John Bergeron re: 15 Great Road, Traffic Study received 11-14-11 6:56 p.m.

Documents 18-23 (posted on website under Traffic Study Peer Review Proposals)

Document 18. FST - Peer Traffic Study Proposal

Document 19. Green International - Peer Traffic Study Proposal

Document 20. MDM -Peer Traffic Study Proposal

Document 21. Nitsch_Engineering.-_Peer_Traffic_Study_Proposal

Document 22. PSC - Peer Traffic Study Proposal

Document 23. VHB - Peer Traffic Study Proposal

Document 24. ZBA Subcommittee RFP Report to the Board dated November 17, 2011

Document 25. Vote by the Board to contract VHB to conduct the Peer Review of Traffic Impact & Access Study

Document 26. List of issues from Apple D'Or abutters dated 11/16/11

Document 27. Letter from Concord Public Works dated November 17, 2011

Michelle Cobleigh

From: Mark Skillings [mark.skillings@techmcg.com]
Sent: Wednesday, November 02, 2011 4:38 PM
To: Michelle Cobleigh
Cc: Keith Bergman
Subject: Traffic study peer review

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Hello Michelle, I may have already missed the deadline but I understood that input would be accepted from abutters re: the 15 Great Road Traffic study. Assuming the ZBA and/or the Peer Reviewer can accept input I would like to have the following three points considered (I was at the presentation and am aware of the significant number of technical and procedural concerns with the study so I will not waste anyone's time to repeat them here).

The 3 specific additional issues I have that I think should be addressed in the peer review that I have not heard raised are:

1. Impact on Grist Mill Road – while the engineer reported existing traffic at one spot on Grist Mill he did NOT provide any specifics around additional traffic that would be created if he was granted access to Grist Mill. While the conversation seems to have shifted towards emergency and gated access only, at the time the study was conducted it was Omnis full intent to use one or more lots on Grist Mill as an unrestricted access point. Therefore, unless Omni has or is willing to unconditionally and irrevocably cede access to Grist Mill then I believe the study should be rejected or as a minimum redone to include these considerations and also to compare sight lines and stopping distances to standards at the proposed access site(s)
2. The speed used by the engineer represent average, de rated speeds. And these were below posted speeds for the area. Since accidents occur at actual speeds, the higher of actual observed speeds OR the posted limits (whichever is higher) should be used for all calculations. Nobody is worried about the area under the curve that is travelling at 35mph, but the cars under the area of the curve that are travelling at 50-60mph are the real threat here. So instead of being able to use a sightline and stopping distance calculation of a single number, the engineer should be required to provide a curve of speed versus sight line and speed versus stopping distance so the town can see full well how many times every day the standard WILL NOT BE MET and therefore can see the real risk profile of the proposed project. Specifically, how many times every day a situation will arise where the standard safe stopping distance cannot be achieved and thus the risk of a severe accident exists
3. Lastly, the engineer used only traffic accident data from the Littleton PD records. Given the proximity of the Acton town line at Nagog Road and the Nagog traffic signal, statistics from that stretch should also be included as they too will impact and be impacted by the proposed entry point for 15 Great Road

Please forward to the ZBA members,

Thanks as always for your time

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Michelle Cobleigh

From: John Bergeron [john_bergeron@verizon.net]
Sent: Monday, November 14, 2011 6:56 PM
To: cheryl@cowleyassoc.com; Michelle Cobleigh
Subject: Notes and concerned from the 15 Great Road Traffic Study.

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Sorry about that last e-mail. Let me try this again ...

Cheryl and Michelle -

Please find my attached comments regarding the 15 Great Road Traffic Study. After reviewing the applicants study and the application of the standards please ask the independent evaluator is familiar with the following items of concern:

1. The report seems to ignore Acton. No mention of signal at Nagog or the presence of huge amount of retail/commercial at Nagog Park.
2. The Intersection Sight Distance is well below the required minimum and the Stopping Sight Distance barely meets the requirement. This condition is potentially more of a problem than stated since the design speed used (85th percentile) is below the posted speed limit. This means that the sight distance calculations were done using speeds lower than the posted speed limit. The 85th percentile speed is typically used to capture speeds in excess of the posted speed limit as opposed to below it. Any sight/stopping distances be calculated based on the posted speed limit.
3. A plan of the site was not included in the traffic report. A plan showing the site and its driveways should be submitted showing the calculated sight/stopping distances.
4. It is unclear from the report if the sight/stopping distance issues are only related to vegetation rather than vertical roadway geometry. This was ignored - what should have been a significant issue. This should be documented better and a clear program of improvements laid out that addresses the substandard condition and documents the post improvement condition and demonstrate how it will meet the standard, preferably at the posted speed.
5. Ignoring the back drive in the analysis does present a conservative view of the Great Road impacts however it ignores potential impacts at Grist Mill. This is important as background volume on Great Road makes project impact small in comparison but Grist Mill is the opposite, it has very low volume and any increase can be significant in comparison to low background.

All the required pieces appear to be there but it is clearly a shallow analysis. In my opinion the third party evaluator should complete a deep dive on the sight distance issue.

John P. Bergeron
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92 Grist Mill Road.

John P. Bergeron
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November 17, 2011

RFP- Report to the Board

At The ZBA hearing of October 20, 2011, the Board created a subcommittee to prepare a RFP for PEER REVIEW of Traffic Impact & Access Study for 15 Great Road, LLC, a 40B comprehensive permit project. The committee consisted of 2 ZBA members; Cheryl Cowley-Hollinger, Bill Farnsworth and the Board's 40B consultant Ed Marchant.

The subcommittee met the morning of October 27 to draft a RFP for the Peer Review. We reviewed documents from town counsel, the Westford RFP for Traffic Consultant, traffic study submitted by the Planning Board member Richard Crowley, and other material submitted to the Board. We took into consideration comments from the ZBA members, abutter's attorney Dan Hill, the Planning Board and the applicant.

The RFP was drafted to best fit the desires of the Town of Littleton and the particular project -- 15 Great Road c. 40B comprehensive permit.

The RFP was sent out with the reply to be submitted no later than noon, Thursday, November 10, 2011.

6 RFP proposals were received.

- o Fay, Spofford & Thorndike (FST)
- o Green International
- o Nitsch Engineering
- o Professional Services Corp. (PSC)
- o MDM Transportation Consultants
- o VHB

The subcommittee met the morning of Tuesday, November 15 to review the proposals.

We reviewed each in regards to the criteria which was set forth in the Request for Proposals. This included, but was not limited to:

- ✓ Person designated to be in charge, credentials, experiences with similar projects
- ✓ Scope of work proposed as compared to that which was outlined in the RFP
- ✓ Time for review and reports to the Board
- ✓ Cost; \$ per hour of persons and total estimated for the project.

The following is our recommendation to the Board:

1. We discounted Green International and Professional Services Corp. because we were not fully satisfied with the proposal not meeting the criteria and cost proposed. *No Ptoe*
2. VHB, MDM and FST with equal recommendations and in that order.
3. Nitsch Engineering with "favorable consideration" (in other words, 4th on the list)

(m) Bill
(S) charge

VHB

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Apple D'Or 15 Great Road Top Issues

Bruce Miller, Tom Furlong, JR Teto, Pete King, John Bergeron
11/11/11

Draft Rev. 11/16/11

Apple D'Or Priorities (in order)

1. No Apartment complex access to Grist Mill
2. Building 3 removal (< 200 units)
3. 150' buffer between lot line and closest infrastructure. – OK to discuss.
4. Build the new single family homes to mirror lot size in existing Apple D'Or neighborhood (> 1 acre, > 2500 sq ft.)
5. No other access to Westford / Other from new lots
6. Landscaping / Buffer – berm to be installed with 6' white pines on top on 15' centers.
7. Building Height < top of 90 Grist Mill Road (Furlong)'
8. Move the pool to center of complex – near Nagog.
9. Move the Trash collection areas away from Grist Mill
10. Street lighting – similar to those of Grist Mill for neighborhood.
11. All this in writing so if events change or land is resold the agreement is binding.

List is specific to Apple D'Or. Issues to be pursued per normal process not limited to : Safety , traffic study on Great Road, Zoning, Issues, heritage or other

Draft Rev. 11/16/11



CONCORD PUBLIC WORKS

Water/Sewer Division
135 Keyes Road
Concord, Massachusetts, 01742

TEL: 978-318- 3250 FAX: 978-318- 3204

November 17, 2011

Maren Toohill
Littleton Planning Administrator/Permit Coordinator
Shattuck Street Municipal Building
PO Box 1305
Littleton, MA 01460



RE: 15 Great Road Littleton, MA
Comprehensive Permit Application Comments

Dear Members of the Board:

On behalf of the Town of Concord, I would like to offer the following information in response to the Comprehensive Permit Application proposed 40B project located at 15 Great Road in Littleton, MA. The Town has one primary concern and reservation about the level of development proposed by this project because of its proximity less than 500 feet northerly of Nagog Pond, which is part of the Town of Concord's public water supply system. Approximately half of the proposed development (including more than half of the onsite WWTP leaching field) is within the watershed for Concord's Nagog Pond. For your reference, please find the attached map which references the 15 Great Road development with the Nagog Pond Watershed/subbasin.

Since 1884, Nagog Pond has been and continues to be an important water supply resource for the Town of Concord. Over the past 100 years, Concord has invested a considerable amount of resources into the development and continued protection of this valuable resource.

Nagog Pond is a protected water supply resource for the Town of Concord and is classified by the State as a Great Pond. Nagog Pond is a 284 acre pond on the Littleton-Acton border directly adjacent to the south side of Route 2A/119. It has been categorized in the Massachusetts Landscape Inventory as a "distinctive landscape".

The critical concerns with development of the site at 15 Great Road relate to

- a.) Potential impacts resulting from the construction/silt management on-site and along Route 2A/119 during construction.
- b.) Potential impacts from the on-site waste water disposal system, where it is located on-site at a point relatively close to Nagog Pond and within a Zone B to the Nagog Pond drinking water supply.

- c.) Nagog Pond Watershed protection with regards to hazardous materials storage onsite (especially at the WWTP and Club House).
- d.) Limiting the presence of attractive nuisances and groundwater discharge/catch basins/outfalls within the watershed.

The Town of Concord believes regular groundwater monitoring may be necessary to assure that the quality of groundwater reaching Nagog Pond is not compromised and that any stormwater management system is adequately maintained to assure that any surface water does not pollute or otherwise impact Nagog Pond.

While the Planning Board is evaluating the developments Comprehensive Permit Application, the Town of Concord asks that special consideration be paid to the following items along with the attached comments from Concord's Engineering Department:

1. Concord requests the submission of all information/calculations for the stormwater mitigation for the project. This submission should include appropriate details, calculations and back-up information to ensure the Project meets MA DEP Water Quality Standards.
2. Concord requests the submission of all information regarding onsite discharges (i.e. treated wastewater and/or storm water infiltration) and withdrawals (i.e. private drinking water/irrigation) for comment.
3. Concord requests that the developer evaluate alternative locations for the WWTP and leaching field which are located outside of the Nagog Pond Watershed (see attached map).
4. Concord requests the opportunity to comment on the design for the WWTP/facility and Emergency Response Plan to ensure the incorporation of controls to prevent a significant release that would directly impact Nagog Pond or the groundwater reaching Nagog Pond.
5. Concord requests that the bounds of the Nagog Pond Watershed/subbasin/Zone B be included on any and all plans just as any wetland delineation would be included.

If you have any questions please do not hesitate to contact Water and Sewer Division Superintendent, Alan Cathcart or myself at 978-318-3250.

Sincerely,



Melissa Simoncini

Environmental and Regulatory Coordinator

Cc: Keith Bergman, Littleton Town Administrator
Littleton Zoning Board of Appeals
Marcia Rasmussen, Concord Planning Department

Enclosures (2)

**CONCORD PUBLIC WORKS
ENGINEERING DIVISION**

**Tel: 978 - 318 - 3210
Fax: 978 - 318 - 3245**

**133 Keyes Road
Concord, MA 01742**



DATE: 11/17/11

MEMORANDUM

TO: Alan Cathcart, Water & Sewer Superintendent
VIA: Melissa Simoncini, Environmental and Regulatory Coordinator
VIA: Bill Renault, P.E., Town Engineer
FROM: Chris Olbrot, P.E., Public Works Engineer
SUBJECT: 40B Development at 15 Great Road, Littleton

CPW has completed a cursory review of the above mentioned project. It is anticipated that a full site design will be submitted in the future, including stormwater design calculations, at which time this office can provide specific comments with regards to site design and stormwater mitigation. The comments below are based upon a review of the limited items at this preliminary stage:

1. It appears more than half of the site falls within the Nagog Pond Sub-basin. We recommend that the applicant's design meets or exceeds the amount (volume) of stormwater infiltration within this sub basin with regards to pre and post construction conditions. This basin should be clearly shown on the plan set, and the calculations showing the infiltration rates specifically to the basin should be provided for review. These "basin recharge" calculations shall not be a substitute to demonstrate compliance with regards to groundwater recharge for the site as a whole, as outlined in item #2.
2. The project proponent shall utilize all of the MA-Stormwater Standards in the design of site Best Management Practices for stormwater mitigation. No waivers from these standards should be permitted.
3. The project proponent is urged to utilize Low Impact Development techniques. It appears that the conceptual design is a standard closed drainage system utilizing catch basins, manholes and treatment structures that eventually outlet to "Stormwater Management Basins" (SMBs) throughout the site. It is recommended that these SMBs are designed to be "Infiltration Basins" as defined in the MA-Stormwater Handbook (Handbook). Additionally, these SMBs shall be designed with pre-treatment sediment forebays in conjunction with deep sump hooded catchbasins, and proprietary pretreatment structures. No waivers from the design guidelines in the Handbook should be permitted.
4. Hardscape design should be minimized. Design considerations such as reduced pavement width, pervious pavement parking lots, sidewalk locations limited to one side of the road, etc. should be incorporated into the design. Additionally, all rooftop runoff should be detached from the closed drainage system and infiltrated nearby via drywells, or other infiltration/detention systems.
5. Soil exploration and percolation tests should be required at the locations for the SMBs as well as other locations designed to infiltrate stormwater. High groundwater elevations shall be determined as defined in 310 CMR 15.00, Title V or other approved method.

6. It appears that the location of two of the SDBs is in close proximity to an existing pond and other resource area (i.e. BVW). It is unclear if this is a feasible design, based on the Town's Wetland Bylaws and Conservation Commission's policies. It is recommended that all resource areas that are jurisdictional under the Wetlands Protection Act, should maintain a minimum of a 25' "No Disturb" zone around its entire perimeter.
7. It is recommended that the site be prohibited to utilize pesticides and herbicides, specifically within the area designated as "Zone B" to the surface water body, Nagog Pond.

15 Great Road Littleton MA

October 2011

