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James Freas
Acting Director

PUBLIC HEARING/WORKING SESSION MEMORANDUM

DATE: October 24, 2014

TO: Land Use Committee of the Board of Aldermen

FROM: James Freas, Acting Director of Planning and Development
Alexandra Ananth, Chief Planner for Current Planning
Stephen Pantalone, Senior Planner

CC: Petitioner

In response to questions raised at the Land Use Committee public hearing, and/or staff technical reviews, the Planning Department is providing the following information for the upcoming public hearing/working session. This information is supplemental to staff analysis previously provided at the public hearing.

PETITION #102-06 (11) and #102-06 (12) **Kesseler Woods**

Request to amend the existing special permit via Board Order #102-06(9) for the Kesseler Woods Residential Development project and waivers for deviations from certain design and dimensional controls. Request to amend Ordinance Z-37, which adopted a change of zoning from Single Residence 3 to Multi Residence 3, to account for the modified Kesseler Woods project proposal.

The Land Use Committee (the "Committee") held a public hearing on September 23, 2014, which was held open so that the petitioner could respond to questions/concerns that were raised in the Planning Department Memorandum and at the public hearing. The petitioner's responses were summarized in a memorandum dated October 16, 2014 (**ATTACHMENT A**). Overall, the Planning Department finds the petitioner's responses are complete, and provides the following comments.

Revised Site Plan

The petitioner will submit a revised site plan and revised architectural drawings prior to the next working session. The petitioner submitted a letter on October 23, 2014 to the Planning Department noting the changes to the site plan (**ATTACHMENT B)**, as listed below. The Planning Department believes that the petitioner has adequately addressed the issues of massing and design.

- Elevators and stair towers relocated to the North side of the building, which allows the exits at grade to be on the rear of the building
- Changes to some of the unit sizes, though no change to the unit mix (24 1BR and 56 2BR)

- Changes to the roof lines by varying the eave and ridge elevations, and using different pitches on different parts of the building
- Eyebrow dormers eliminated to allow the bay windows to carry through the eave line and serve as a dormer to further break up the roof line
- Greater articulation of the façade with colors and trim bands
- The windows at the cultured stone base have been detailed differently than those in the stucco finished cement fiber siding
- The rhythm and grouping of windows has been refined to establish a hierarchy and to relate to the interior functions
- A majority of the balconies were eliminated
- Vehicle entrance to the garage was relocated at the same wall
- Relocated the sewer line
- Added putting green and play structure to the rear of the building, re-graded the area and added some tree wells to save existing trees
- Addressed comments of the traffic peer reviewer regarding sight lines at the entrance
- Added stone walls at the entrance and incorporated the site identification signs

Peer Review of Transportation Study

The City engaged McMahon Associates to conduct a peer review of the Traffic Impact Assessment Study ("TIAS") prepared by MDM Transportation Associates ("MDM") for the petitioner in July of 2014. The peer review did not raise any concerns with the TIAS that would materially impact the project (**ATTACHMENT C)**. The petitioner provided responses to each of the comments in the peer review (**ATTACHMENT D)**. The Planning Department is generally satisfied with the TIAS and believes that it has been sufficiently reviewed. As indicated in the TIAS, this project will not significantly impact existing traffic in the area. The Planning Department understands the traffic issues that affect this neighborhood and recognize the need for long term planning throughout the City and neighboring cities to improve the existing conditions. Both MDM and McMahon Associates will be available at next Tuesday's public hearing to answer any questions.

Inflow and Infiltration

The City's policy is to require a mitigation payment for inflow and infiltration ("I&I") on development projects with greater than 100 bedrooms. Based on the standard calculation used by the City, which assumes a price of $8.40/gallon and 110 gallons per bedroom with an I&I ratio of 8:1, the mitigation payment would be approximately $1,005,000 dollars. However, the Department of Public Works is comfortable reducing the gallons per bedroom to 60.9 gallons due to the use of low flow fixtures, which is consistent with recently approved projects. The reduction in gallons per bedroom would decrease the payment to $556,577 at the 8:1 ratio.

The petitioner believes that a mitigation payment of this amount is infeasible, and has suggested an alternate calculation using 46 gallons per bedroom with a ratio of 2:1 that results in a substantially lower payment of $105,000. The petitioner's calculation of gallons per bedroom per day is based on data from its existing residential projects, and the 2:1 ratio is based on the I&I payment from another recent project in Newton.

The Planning Department and the Department of Public Works believe that I&I is a significant issue for the City and the State, and that requesting sufficient mitigation is important regardless of what has been approved in the past, particularly in the subject area which has known sewer constraints and capacity issues. In terms of the figure used for gallons per bedroom, the Department of Public Works believes the petitioner's proposed rate is very aggressive, and the petitioner has not provided data (as of the date of this memo) to justify such a reduced rate. Therefore, the Planning Department and Department of Public Works continue to recommend a mitigation payment based on 60.9 gallons per bedroom with a ratio of 8:1.

Engineering Memorandum

Except for the issue of I&I, the comments and concerns in Engineering Memorandum can be addressed through the standard building permit process.

Draft Construction Management Plan, including Blasting Plan

The petitioner made minor revisions to the construction management plan that was reviewed during the 2006 special permit (**ATTACHMENT E)**. The Planning Department does not have any particular concerns with the revisions, as the original plan provided sufficient safe guards for the City and abutting properties. The draft construction management plan will be reviewed by the Department of Inspectional Services prior to issuance of a building permit.

The petitioner also submitted a blasting plan prepared by their engineering firm Stantec Consulting (**ATTACHMENT F)**, which was taken from the blasting section of the construction management plan from the 2006 special permit, with minor revisions. The blasting plan is comprehensive and meets all applicable standards. The petitioner has installed ground water monitoring wells on the site and determined that the ground water elevation is approximately six feet below the lowest level of rock excavation required by the project. Considering the safeguards in the construction and blasting plans, the reviews of the blasting plan completed in 2006 by Haley and Aldrich and Woodard and Curran, and the more recent monitoring wells, it does not appear that this project will impact the groundwater flow on the site or abutting properties.

Road Improvements at Lagrange/Corey/Vine

The petitioner has proposed road design improvements at the intersection of LaGrange Street, Corey Street and Vine Street (**ATTACHMENT G**), which experiences significant traffic volumes during peak times. The petitioner views the proposed improvements as a public benefit, but not as mitigation, as the TIAS indicates that this project will not materially impact the existing conditions of the intersection. The Transportation Division reviewed the initial design and believes that the design will create a safer intersection for vehicles (**ATTACHMENT H**). The petitioner has indicated that they are willing to pay for the road improvement within the scope of work that they've proposed.

Public Foot Path

The petitioner has agreed to contribute $75,000 toward the planning, design, and maintenance of a public foot path, as agreed upon in the 2006 special permit.

Conservation Commission Jurisdiction

The City's Conservation Agent conducted a site visit with the petitioner and agreed that the scope of work is outside the jurisdiction of the Conservation Commission, with the exception of a potential new sewer connection. The Conservation Agent did not raise any particular concerns about the potential sewer connection, as any impacts can be easily addressed through the standard building permit process.

Tree Preservation Ordinance

The petitioner has counted the number trees to be removed and they are certain that the total caliper inches to be removed by the project will significantly exceed the caliper inches to be planted. The process for tree removal is guided by the Tree Preservation Ordinance, which requires a payment to the City when there is a net loss in caliper inches, though that payment may be reduced upon appeal to the Mayor. Under the Tree Preservation Ordinance, the petitioner would seek such a waiver to reduce the payment to the amount agreed upon in the 2006 special permit ($261,000). The Planning Department agrees with this approach considering the amount of existing and proposed landscaping and the topographical challenges of the site.

Square Footage of Affordable Units in Comparison to Market Rate Units

The petitioner indicated that the size of the affordable units are well above the Massachusetts Department of Housing and Community Development requirements and are only modestly smaller than the other market rate units on the same floors. The Planning Department continues to believe that the affordable units should be of equal size to the market rate units and distributed equally within each floor of the development. However, considering the modest difference in the square footage on a floor by floor basis, the Planning Department does not believe that this issue materially changes the project, as the affordable unit sizes are generous in comparison to state standards.

Inclusionary Housing Plan

The petitioner submitted an Inclusionary Housing Plan as required by the Newton Zoning Ordinance. The plan, which was reviewed by the Interim Housing Programs Manager, contains standard language and does not raise any particular concerns. The Inclusionary Housing Plan including an Affirmative Fair Housing Marketing Plan and other details on the affordable units in the project will be reviewed further and a full application submitted to the state prior to the issuance of a building permit, in order to register the affordable units on the Subsidized Housing Inventory.

Contribution to the City's Subsidized Housing Inventory

The affordable units in the project will count towards the City's subsidized housing inventory. However, the market rate units will not count, as the project does not meet the affordability requirements for a Chapter 40B rental project, which requires 25% of the total units to be affordable to households earning up to 80% of Area Median Income, or conversely, 20% of the total units affordable to households earning up to 50% of Area Median Income).

Freestanding Sign

The petitioner will provide additional details on the proposed freestanding sign prior to applying for a building permit. The petitioner has confirmed that the area of the freestanding sign will not exceed the maximum 35 square feet. The Planning Department has no particular concerns with this approach as the sign is a minor piece of this project.

Light Trespass on Lagrange Street

The photometric plan indicates minor light trespass (0.1) into the roadway on Lagrange Street. The petitioner believes that it is important to have sufficient lighting at the entrance and that the amount of trespass is minimal. The Planning Department agrees with the petitioner.

Recommendation

The petitioner has responded to each of the questions raised at the public hearing, in the Planning Department Memorandum, and in reports from other departments. The remaining issues of greatest concern relate to mitigation payments/public improvements relative to four separate issues: calculation of I/I, the payment to the Tree Replacement Fund, roadway improvements at Lagrange, Corey and Vine Streets, and the public pathway on the site. The Planning Department recommends the following, in order of priority:

1) I&I payment that is consistent with the Department of Public Works policy (approximately $556,577);
2) Tree replacement payment equal to the 2006 agreed upon amount ($261,928);
3) Contribution for the public foot path equal to the amount agreed upon in the 2006 special permit ($75,000);
4) Contribution for roadway improvements at Lagrange/Corey/Vine for the scope of work suggested by the petitioner (up to $225,000).

The Planning Department considers the payment for I&I a top priority for the city, and if necessary, other contributions should be reduced/eliminated before a significant reduction in I&I.

The Planning Department believes that the petitioner has addressed all outstanding issues, and therefore recommends approval, with conditions that address the various mitigation payments/public improvement contributions.

Attachment A – Petitioner Response
Attachment B – Narrative of Changes to the Site Plan and Architectural Drawings
Attachment C – Peer Review of Traffic Study
Attachment D – Response to Peer Review of Traffic Study
Attachment E – Draft Construction Management Plan
Attachment F – Draft Blasting Plan
Attachment G – Road Improvements at Lagrange/Corey/Vine
Attachment H – Letter from Transportation Director on Design of Road Improvements
Attachment I – Sustainability Features of the Project

Petitioner's Response dated October 16, 2014

DATE:	September 26, 2014
TO:	Chestnut Hill Realty Development LLC/ Kesseler Development, LLC
FROM:	Dan Sexton, Senior Planner
MEETING DATE:	September 23, 2014
RE:	Kesseler Woods - Land Use Committee Public Hearing Notes
CC:	Ouida Young, Law Department Alexandra Ananth, Chief Planner for Current Planning John Daghlian, Engineering Division Bill Paille, Director of Transportation Linda Finucane, Clerk of Land Use Committee

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Petitions: #102-06(11) and #102-06(12) **LaGrange Street**

A petition requesting to amend the existing special permit via Board Order #102-06(9) for the Kesseler Woods Residential Development project and waivers for deviations from certain design and dimensional controls. This petition is also seeking to amend Ordinance Z-37, which adopted a change of zoning from Single Residence 3 to Multi-Residence 3, to account for the modified Kesseler Woods project proposal.

- The **City's Law Department** should prepare a brief history of the acquisition, legal agreements and documents (i.e. Cooperative Bidding Agreement (and subsequent amendments), Conservation Restrictions, Easement Agreements, and etc.), and development of Kesseler Woods by Cornerstone Corporation. The **Law Department** should clarify what impact, if any, the petitioner's amended special permit petition has on the previous legal agreements and documents.

  ***Petitioner's Response**: The Law Department will provide the response to this note. The petitioner is working with Cornerstone and the Law and Planning Department to assure that if the zoning relief is timely granted to the satisfaction of Chestnut Hill Realty and it proceeds to purchase the property, that the city's legal rights are addressed. It is the Petitioner's intention that before any such closing when Chestnut Hill Realty buys the property from Cornerstone, the city will have extinguished its legal rights related to purchasing the property in the Cooperative Bidding Agreement (the right to purchase the land for Cornerstone's costs); (ii) the Development Covenants Agreement (the right of First Refusal), and (iii) the Easement*

Agreement (the Residual Area Conveyance). The city will maintain all of its existing property interests in the Conservation Restriction and the Easement Agreement and will, of course, have all its rights under the Special Permit.

- The **petitioner** should respond to the concerns raised by the City's Engineering Division of Public Works, Land Use Committee and members of the public regarding on-site drainage infiltration, especially after blasting, and the placement and impact of utility services.

  ***Petitioner's Response**: The Petitioner has with this Memo provided to the Planning Department a mark-up of the Construction Management Plan (CMP). Such CMP maintains all the applicable commitments made by Cornerstone except where indicated on the redline of the CMP. The Petitioner expects that at the continued public hearing of the Land Use Committee there will be substantive presentation and discussion regarding the blasting protocols.*

  The Petitioner intends to carry forward the same level of controls over its blasting applicable to its project as is reflected in the Cornerstone special permit and Construction Management Plan.

  Because of the specific questions posed regarding the effects of blasting, CHR has prepared the detailed response contained in the Blasting Response document attached.

  Regarding drainage infiltration, the complete storm water report has been provided to the city and the Petitioner is able to respond to the comments of the Engineering Department in its Memorandum dated September 19, 2014.

  Regarding the impact of utility services, the Petitioner contests the imposition of an 8:1 sewer "I/I" mitigation payment. The Cornerstone special permit did not impose any such "I/I" requirement and that project had a substantially equivalent number of proposed bedrooms. The Petitioner intends to have further discussion about the "I/I" payment request with the Planning Department and the Aldermen, in conjunction with other project related mitigation including traffic improvements in LaGrange Street and, consistent with the city's treatment of Cornerstone, a waiver of full payment of the tree replacement deficit for the project.

- The **petitioner** should provide a draft construction management plan, which includes, but is not limited to, information regarding blasting (pre and post blasting surveys), tree protection, erosion controls, traffic management, air quality, noise, contractor parking and staging, and hours of operation.

  ***Petitioner's Response**: See mark up of Construction Management Plan attached.*

- Once received, the **petitioner** should respond to the comments and concerns raised, if any, by the City's consultant peer reviewing the project's Traffic Impact Assessment.

  ***Petitioner's Response**: The Peer Review report was received on October 8, 2004. The report will be discussed at a planned meeting on October 16, 2014.*

- The **petitioner** should respond to the concerns raised by the Land Use Committee and members of the public regarding traffic along LaGrange Street, specifically the speed of traffic, sight distances, and capacity. In this response, the **petitioner** should clarify how the development will impact the movement of pedestrians and vehicles entering and exiting the site and in the surrounding area.

  ***Petitioner's Response**: This will be discussed at a meeting with Bill Paille, MDM Transportation, the Planning Department, the Peer Reviewer and Chestnut Hill Realty on October 16, 2014.*

- The City's **Planning Department** should clarify what percentage of inclusionary units are necessary to count all the rental units toward the City's 10% affordable unit threshold.

  ***Petitioner's Response**: The Planning Department will respond. The Petitioner notes that the Development Covenants Agreement and the Cooperative Bidding Agreement contemplated that the development be permitted through a special permit as opposed to some other form of development permitting vehicle.*

- The **petitioner** should clarify the potential impacts of the proposed development on the Newton School District.

  ***Petitioner's Response**: The Petitioner has commissioned a Fiscal Impact study which projects that the school enrollment student estimate from the project is 8 students, much lower than the 20 students projected from the Cornerstone 62-unit condominium project. The biggest reason for this estimated decrease is that the project is now exclusively one and two bedroom units with no lofts or other architectural features which would allow for the creation of "extra bedrooms."*

- The **petitioner** should respond to the Land Use Committee's concerns of the building's mass, exterior design, and form, and its visibility during the winter. The **petitioner** should also clarify how the project will be made sustainable, and whether a certain level of certification is being sought.

  ***Petitioner's Response**: The Petitioner believes strongly that the building layout, configuration, height and massing, in conjunction with the existing land and vegetation to remain, as supplemented by significant new plantings, will provide an effective shield of the building from the residential neighbors. Having said that, the Petitioner will continue to work with the Planning Department on selection of materials and façade elements to respond to this comment. The Petitioner has done photo simulations of views from 4 of the closest Rangeley Road abutters.*

  The Petitioner has prepared the Sustainable Project Features Memorandum attached.

- The **petitioner** should respond to concerns raised by the Land Use Committee regarding the disparity of inclusionary unit sizes and the configuration of these units within the building. The **petitioner** should also identify the locations for the accessible units, at least 15% of which

should be inclusionary units. The **petitioner** should also provide an updated Inclusionary Housing Plan.

***Petitioner's Response**: All of the apartments at The Residences at Kesseler Woods will have the same quality finishes and appliances. All of the apartment homes will have granite countertops, Energy Star appliances and in-unit washers and dryers All of the residents at The Residences at Kesseler Woods will be able to use the many amenities such as a Wi-Fi café, business center, exercise facility, theatre and community room. All residents will be able to use the shuttle service and will have at least one covered parking space.*

The 12 affordable units are all larger than required by the City of Newton ordinance.

The four (4) one-bedroom affordable units are split between the first and second floors. They are 913 square feet, which is 30% larger than the required 700 square feet. They are only 56 square feet smaller than the market rate one-bedroom unit on the same floor.

They are bigger than all of the affordable one-bedroom units approved at Riverside.

The eight (8) two bedroom units are good sized units at 1007 and 1097 square feet and are also spread evenly between the first and second floors. Once again they are larger than the required 900 square feet. The larger two bedroom affordable unit is only 168 feet smaller than a two-bedroom market rate apartment on the same floor.

Four of the two-bedroom units are also located on the desirable back of the building so they will have a beautiful woodland view.

The floor plans will show the accessible units and the updated Inclusionary Housing Plan is attached.

- The **petitioner** should provide programming information for the proposed shuttle service, linking this site to the Hancock Village project in the Town of Brookline. The **petitioner** should also respond to the question raised by members of the public as to whether residents in the surrounding neighborhood will be able to use this service.

  ***Petitioner's Response**: The current Hancock Village shuttle program provides a 13 passenger shuttle bus on a continuous loop between Hancock Village and the Reservoir Station T-Stop near the junction of Chestnut Hill Ave and Beacon St in Brookline. The shuttle runs weekdays between 6:15 a.m.-10:15 a.m. and again 4p.m.-8p.m. This services is currently being used daily by approximately 50-60 Hancock Village units. The best route will be determined to incorporate the Residences at Kesseler Woods into the current shuttle services. This will be a services available to residents only and not to the general public.*

- The **petitioner** should respond to the concerns raised by the Land Use Committee regarding the configuration and functionality of the proposed indoor parking facilities.

***Petitioner's Response**: The layout of the covered parking as efficient as possible so that as many as possible parking spaces can be accommodated. This reduces the amount of spaces that are needed to be accommodated outside and thus reduces pavement. Further the design consciously adds angles to the building so that the building is not one long mass. This adds structural columns in specific locations. Working with these design parameters, some of the covered parking stalls are 1/2 foot smaller than conforming spaces at the location of these columns. Further some of the 2 bedroom units will have tandem parking spaces for efficient space usage. No active or centralized parking management will be needed to support this limited number of units to be served by tandem parking spaces, if such unit has 2 vehicles.*

- The **petitioner** should clarify how the project design will facilitate the public's future access to foot paths throughout the conservation and undeveloped portions of the site. The **petitioner** should also clarify whether they or Cornerstone will be providing the $75,000 contribution to the City for the planning, design, development, and maintenance of foot paths.

  ***Petitioner's Response**: Chestnut Hill Realty will accept the condition to pay $75,000 to the city toward planning, design, development and maintenance of publicly accessible foot paths on the Easement land. The city is responsible to determine how it can provide public access to the easement from the land already subject to the easement. The multi family housing building will not be the location of public access.*

- The **petitioner** expressed a willingness to install certain traffic improvements at the intersection of LaGrange/Corey/Vine Streets. The details and timing of these improvements should be provided to the City for review.

  ***Petitioner's Response**: We expect this to be discussed with the city's traffic peer reviewer and with staff when the meeting occurs following issuance of the peer review report.*

- The **petitioner** needs to provide a breakdown of the building's proposed exterior materials and treatments. The **petitioner** should consider making use of natural materials on the exterior of the building, and materials that would wear well over many years.

  ***Petitioner's Response**: The Petitioner will consult with the Planning Department regarding selection of final materials and treatments, including the use of natural materials at the October 16 meeting with the architect present. We note that the original Cornerstone project underwent formal design review only for the Kesseler Way subdivision homes, not for the condominium building.*

- The petitioner should provide a plan, with details, for all exterior signage to be installed on the site.

  ***Petitioner's Response**: A detailed Sign Plan will be included in the revised plan set prior to the continuation of the public hearing..*

- The **petitioner** should evaluate the placement of exterior lighting fixtures to eliminate off-site light

spillage. This should be presented on a revised photometric plan.

***Petitioner's Response**: The Lighting design is intended to project less than 1 foot candle on the outdoor parking areas, for which a waiver is being requested. Further, the lighting design is intended to cast no light spillover on any abutting properties. A small amount of light spillover is designed onto LaGrange Street at the site entrance as a safety enhancement for vehicular and pedestrian cross and entering/exiting traffic.*

- The **petitioner** should submit a revised "Tree Removal Plan" and "Planting Plan," which clearly lists the total caliper inches of trees to be removed and planted. The **petitioner** must file a tree removal application with the City's Tree Warden in order to confirm compliance with the City's Tree Preservation Ordinance.

  ***Petitioner's Response**: The tree removal application is complete and ready to be filed with the Tree Warden. The Petitioner may not file the Tree Removal Application with the Tree Warden until further discussions take place regarding the intended request for a waiver of some component of the payment for the tree replacement deficit, to be discussed further in conjunction with the "I/I and the traffic mitigation.*

- The **petitioner** should respond to the concerns raised by the City's Conservation Agent, on behalf of the Conservation Commission, regarding the project's potential impacts on the jurisdictional wetland resource areas as it relates to the proposed sewer connection.

  ***Petitioner's Response**: We note that the location of the connection point of the sewer extension to the city's existing sewer line in LaGrange Street may involve work in the wetlands Buffer Zone. All city requirements will be followed regarding this utility connection. We note that at the time of the Cornerstone permitting, the Conservation Commission agent wrote a memo dated March 28, 2006 that: "as long as all proper erosion and sedimentation control procedures are followed for the installation of the new sewer line in LaGrange Street, the developer will not have to file a Notice of Intent with the Conservation Commission."*

Attachments:

1. Preliminary Construction Management Plan mark up (October 16, 2014)
2. Blasting Response (October 16, 2014)
3. Inclusionary Housing Plan updated October 1, 2014.
4. Sustainable Project Features Memo dated October 16, 2014.

ATTACHMENT B

Narrative of Changes to Site Plan and Building Design

Kesseler Woods

The changes from the previous design are as follows.

Building

- The significant interior change was the moving of the elevators and stair towers to the North side of the building which allows the exits at grade to be on the rear of the building.
- The unit sizes are being adjusted to conform to this revision to the core shell. (There is no change to the unit mix of 24/BRs and 56 2 BRs)
- The roof lines were broken up by varying the eave and ridge elevations as well as using different pitches on different parts of the building. The eyebrow dormers were eliminated to allow the bay windows to carry through the eave line and serve as a dormer to break up the roof line.
- The façade has been articulated further with colors and trim bands. The windows at the cultured stone base have been detailed differently than those in the stucco finished cement fiber siding.
- The rhythm and grouping of windows has been refined to establish a hierarchy and to relate to the interior functions.
- A majority of the balconies were eliminated.

Site

- Vehicle entrance to the garage was relocated at same wall
- Relocated sewer line (over the culvert is where we show it; we can't connect before the culvert and utilize the existing pipe going through it).
- Added putting green and play structure to the rear of the building, re-graded the area and added some tree wells to save existing trees.
- Addressed comments of the traffic peer reviewer regarding sight lines at the entrance.
- Added stone walls at the entrance; incorporated the site identification signs in these.

ATTACHMENT C

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

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October 8, 2014

Daniel Sexton
Senior Planner
City of Newton
1000 Commonwealth Ave.
Newton, MA 02459

RE: Kesseler Woods Peer Review
Newton, Massachusetts

Dear Mr. Sexton:

McMahon has completed a peer review of the Kesseler Woods Residential Development in Newton, MA. The Kesseler Woods Residential Development calls of the construction an 80 unit residential building to be accessed via one new site driveway on Lagrange Street. McMahon has reviewed the following documents prepared by MDM Transportation Consultants, Inc. and Stantec for the proposed Kesseler Woods Residential Development:

- Traffic Impact Assessment Study (TIAS) and attachments, dated July 23, 2014 (MDM)
- Conceptual Intersection Improvements Plan for Lagrange Street/Vine Street, dated August 2014 (MDM)
- Sheets L-001 and L-702 from the Special Permit Drawing Set, revised August 29, 2014 (Stantec)

The TIAS prepared by MDM presented a review of the proposed project and its impacts on traffic operations within the study area. A site visit was conducted by McMahon on Thursday, September 25, 2014 to review the proposed site access and to verify existing conditions reported within the TIAS. McMahon offers the following comments and suggestions (numbered in each segment below) regarding the reviewed documents prepared as part of the Kesseler Woods Residential Development.

Study Area

The TIAS included a study area of the major roadways and intersections in the vicinity of the project site including the following intersections: Lagrange at Vine Street/Corey Street, Lagrange Street at Rangeley Road, Lagrange Street at Broadlawn Park and Lagrange Street at the proposed site drive. McMahon generally finds this study area to be acceptable and appropriate for a project of this size and nature but offers the following comment:

1. The rotary at the intersection of Hammond Pond Parkway, West Roxbury Parkway, Newton Street, Hammond Street and Lagrange Street is located in close proximity to the proposed project. Although the Kesseler Woods Residential Development alone may not significantly impact the traffic operations at the rotary, it may have an effect on rotary operations in combination with other proposed projects in the area. Further consideration should be given to the potential impacts of the rotary operations in the future.

Existing Traffic & Safety Characteristics

Roadways & Intersections

Descriptions of existing study area roadways and intersections were provided in the TIAS prepared by MDM. Based on a review of the TIAS and site visit, McMahon finds the description of the existing roadways and intersections to be accurate.

Existing Traffic Data

As documented in the TIAS, traffic volume data was collected at the study area intersections during the weekday morning and weekday afternoon peak periods. Turning movement counts were conducted on Tuesday, May 6, 2014 (7:00 AM - 9:00 AM and 4:00 PM - 6:00 PM), Friday, May 9, 2014 (7:00 AM - 9:00 AM), Thursday, June 5, 2014 (4:45 PM - 5:45 PM) and Friday June 6, 2014 (7:00 AM - 8:00 AM). Typically, the combination of traffic volumes on the roadways and trips generated by the proposed project would be expected to be the highest during the weekday morning and weekday afternoon time periods. Therefore, McMahon finds the analysis of the weekday morning and weekday afternoon peak periods to be satisfactory to measure the impacts of the proposed project, but offers the following comments:

2. Collection of traffic volume data on a Friday for this type of development is atypical and may not capture a representative traffic volume set. It would be preferred to have all traffic volume data collected on a typical Tuesday, Wednesday or Thursday.

3. A significant traffic volume imbalance is noted between the intersection of Lagrange Street and Vine Street/Corey Street and the intersection of Lagrange Street and Broadlawn Park in the westbound direction during the weekday morning peak hour. This discrepancy should be clarified.

Traffic volume and speed data were also collected along Lagrange Street for a 48-hour period from Tuesday May 6, 2014 to Wednesday, May 7, 2014. McMahon finds the collection of daily volume and speed data through the use of an automatic traffic recorder (ATR) to be appropriate.

The TIAS notes that traffic volumes collected during the month of May and June are typically higher than those collected during the average month. The existing traffic volumes were not seasonally adjusted downward, presenting a conservative analysis which McMahon finds acceptable. The TIAS referenced MassDOT permanent count station data located in Quincy,

Abington and Weymouth. This data was used to identify seasonal adjustment factors for collected traffic volumes.

4. The proponent should review permanent count station data in closer proximity to the proposed project site to obtain a more locally representative data set.

5. The volumes summarized in the historical traffic comparison in Table 2 have been seasonally adjusted based on the traffic volume data at the permanent count stations in Quincy, Abington and Weymouth. The traffic volume comparison should be seasonally adjusted to reflect more local data.

Intersection Crash History

Crash history included in the TIAS reviewed and summarized motor vehicle crash data for MassDOT data from 2009 to 2011 and Newton police data from 2011 to 2013. The calculated crash rates at each of the study area intersections are below the statewide and District 6 average crash rates, indicating that no significant safety deficiencies appear to be present, as presented in the TIAS. McMahon finds this safety analysis to be acceptable.

Measured Travel Speeds

Travel speeds along Lagrange Street were measured using an automatic traffic recorder. The data presented in the TIAS appears to be representative of conditions observed in the field.

Sight Line Evaluation

An evaluation of sight lines at the proposed project site driveway was conducted. Both stopping sight distance (SSD) and intersection sight distance (ISD) were evaluated in the TIAS. Available SSD was measured and was noted in Table 5 of the TIAS. McMahon's field visit verified the available sight distance measurements reported in Table 5.

Calculations for the required SSD for the posted speed limit, average travel speed and 85th percentile speeds along Lagrange Street were provided in the attachments of the TIAS. The calculations utilized approach grades of 5% and 4% for the eastbound and westbound approaches, respectively. McMahon verified these calculations and confirmed the grade measurements in the field.

Based on the ATR data, more than 250 vehicles are shown to travel over 40 miles per hour over the course of a day. The required SSD for vehicle speeds of 40 mph to 45 mph is approximately 285 feet to 340 feet, utilizing the calculation methodology noted in the attachments of the TIAS.

6. The available sight distance measurements noted in the TIAS are approximately 290 feet and 300 feet, which does not meet the minimum required sight distance for the vehicles traveling faster than 40 miles per hour. Where possible, the modifications to the site should be further evaluated to provide maximum sight distance possible.

The TIAS also included an evaluation of the available ISD, summarized in Table 6.

7. The values summarized in Table 6 only note SSD (not ISD), despite the title of the table. The measurements taken appear to reflect the geometry of an ISD measurement but the reported values do not. The statement noting that the available ISD exceeds the recommended minimum sight line requirements is inaccurate. Table 6 should be updated to reflect minimum ISD values for left-turning and right-turning vehicles for the proposed site driveway as determined by AASHTO.

8. Values for the available ISD from the proposed site driveway, "assumes clearing of on-site vegetation and re-grading. " Due to the existing site conditions, this value is difficult to determine accurately. Sight distance triangles should be depicted on the proposed site plan in order to accurately identify the appropriate grading and landscaping required to achieve the minimum ISD recommended by AASHTO.

9. McMahon agrees that the landscaping proposed as part of the project should be maintained at a height of 2 feet or less within the driveway sight lines. Additionally, existing and proposed signage and utility poles should be placed to maximize available sight distance. Under the current site plan, the proposed Kesseler Woods entry sign may limit available visibility to the west. The entry sign, as depicted in the site details plan, should be placed outside of the sight lines or reconfigured to provide clear sight lines through/underneath the sign.

<u>Alternative Modes of Transportation</u>

The TIAS included a description of alternative modes of transportation near the proposed project site including MBTA Bus Route 37, MBTA Bus Route 51 and Chestnut Hill Realty (CHR) Shuttle Service. The report notes that 25% of residents in the immediate study area (U.S. Census Tract 3739) use modes of transportation other than single occupancy vehicles. No reduction in site trips was taken for trips via public transportation. McMahon finds this acceptable, considering the lack of available pedestrian connections to the two bus routes noted in the study and offers the following comments:

10. The proposed project site is located at the intersection of three separate U.S. Census Tracts. The majority of the Census Tract identified for comparison in the TIAS included in the study is located much more conveniently to public transportation than the project site. In order to obtain a more accurate representation of alternative mode use, adjacent tracts would need to be investigated. However, since no credit was taken for the number of trips taken by public transit, this is not necessary.

11. The proponent should provide additional information regarding the specific programing of the CHR Shuttle Service at Kesseler Woods.

12. McMahon has noted that the project proposes a new crosswalk across Lagrange Street just east of the project site driveway. The location of the crosswalk should be considered

carefully due to the limited visibility created by the horizontal and vertical curves within the study area. Additional information should be provided including pedestrian visibility and required modifications to existing infrastructure necessary to ensure the safe and efficient pedestrian access.

13. In order to promote pedestrian access to the project site, the construction of sidewalks should be reviewed and implemented along Lagrange Street connecting to the existing Town of Brookline sidewalks in the east and to the intersection of Vine Street/Corey Street in the west. All sidewalks and ramps should be ADA compliant.

14. The proponent should coordinate with the appropriate City of Newton entities to verify how school buses will service the proposed residential development. The proponent should identify measures to ensure safe access for children between the proposed residences and schools/school buses.

Projected Future Traffic Conditions

Background Growth

Traffic volumes were projected to the future year of 2019 to reflect a five-year planning horizon. McMahon finds this acceptable.

Included in the future year project is an overall background growth rate of one percent per year and traffic to be generated by other specific developments identified by the City Planning Staff. Five specific projects were identified by the proponent as having potential impact on the study area intersections including the Center 128 Office Park, 135 Wells Avenue 40B Residential Development, Chestnut Hill Shopping Center, Chestnut Hill Square Residential Development and Residences of South Brookline. The Center 128 Office Park and 135 Wells Avenue 40B Residential Development were noted to have negligible impact on Lagrange Street. Due to the location of these projects, McMahon agrees with this assumption, but offers the following comments concerning the remaining background growth assumptions:

15. The TIAS refers to the MassDOT permanent count stations to verify background growth. As noted previously, there are a number of permanent count stations located in closer proximity to the proposed project site reflecting local conditions that should be reviewed. Use of local data is important due to the recent growth and development experienced within the City of Newton.

16. Due to their close proximity to the Kesseler Woods Residential Development, specific trip generation/distribution information from the original traffic impact studies for the Chestnut Hill Shopping Center, Chestnut Hill Square Residential Development and Residences of South Brookline projects should be provided to verify the potential impacts on Lagrange Street.

17. The Chestnut Hill Shopping Center was said to be included in the one percent background growth rate due to its partial occupancy during the time of the counts. The proponent should identify the amount of unoccupied space at the time of the counts and quantify the remaining number of trips expected to travel along Lagrange Street. If this value exceeds the one percent background growth in either direction of travel on Lagrange Street, the generated traffic should be added in addition to the one percent background growth rate.

Trip Generation

Trip generation estimates for the proposed Kesseler Woods Residential Development were calculated for the weekday morning and weekday afternoon peak hours utilizing ITE's *Trip Generation Manual, 9th Edition*. Land Use Code 220 (Apartments) was utilized for the trip generation calculations based on the peak hour of adjacent street traffic. This methodology is considered to be acceptable by industry standards.

Trip Distribution

The site-generated traffic was distributed to study area intersections and roadways based on U.S. Census Journey to Work data. This methodology is considered to be acceptable, however McMahon offers the following comments:

18. The Journey to Work data utilized in the TIAS is from the 2000 U.S. Census. The U.S. Census Bureau provides more recent journey to work data, collected through the American Community Survey that should be utilized for the trip distribution calculations.

19. Trip distribution calculations provided in the attachments note the "Residence Town Name" as Middleton, MA. This table should be updated to reflect Newton as the town of residence. Additionally, the adjacent Town of Brookline should be included in the calculation for a better representation of potential trip distribution. All traffic volume networks and capacity analysis should be updated to account for the updated Journey to Work data.

Operations Analysis

Capacity analysis was competed at the study area intersections under the Existing, No-Build and Build traffic volume conditions utilizing methodology found in the 2010 Highway Capacity Manual. Overall, McMahon finds that the analysis was conducted appropriately using the correct peak hour factors and heavy vehicle percentages. The capacity analysis at the intersection of Lagrange Street and Vine Street/Corey Street was noted to be very conservative. A delay study was conducted to observe delay and compare to the capacity analysis results. Conflicting pedestrian volumes and roadway grade percentages were not included in the Synchro capacity analysis. However, due to the limited pedestrian activity, the results of the capacity analysis are not expected to change significantly. The following comments are offered regarding the capacity analysis:

20. It is important to be able to quantify the project impacts at the study area intersections. Due to the conservative nature of the capacity analysis conducted at the intersection of Lagrange Street and Vine Street/Corey Street, it is difficult to quantify the impacts associated with the proposed development at this location in the future. Therefore, the capacity analysis model should be calibrated to match traffic operations observed as part of the delay study and carried through the future conditions. Additional information including a gap study and additional field observations may be required to achieve this.

21. The level-of-service summary for the proposed site driveway indicates that the exiting movement from the site driveway is expected to operate at LOS C with 25 seconds of delay during the weekday afternoon peak hour. The capacity analysis worksheets show a LOS D for this movement. The results of the capacity analysis should be clarified so that the worksheets match the summary.

22. Capacity analysis should be conducted and summarized for the proposed improvements at the intersection of Lagrange Street and Vine Street/Corey Street under the future year conditions.

Site Access and Circulation

On-site circulation of a ladder truck was provided in the attachments of the TIAS. McMahon offers the following comments.

23. The design vehicle is shown to extend beyond the edge of the circulatory road around the rear of the building. The materials used for the roadway and edging should be mountable or the roadway should be reconfigured in order to ensure full access to the rear of the building.

24. The Autoturn exhibits should be shared with the Newton Fire Department to ensure that an appropriate design vehicle was used in the analysis and that they approve of the proposed circulation. The design vehicle used in the Autoturn analysis is shown to cross over into the opposite direction of travel upon entrance to and egress from the proposed project site. The Newton Fire Department should be comfortable with this access. The corner radii of the proposed driveway may need to be altered to accommodate turning movements within the lane of travel.

25. If school buses are to circulate within the project site, a detailed description of the proposed access as well as on-site Autoturn analysis should be provided.

Intersection of Lagrange Street and Vine Street/Corey Street

The proposed conceptual improvements at the intersection of Lagrange Street and Vine Street/Corey Street include the reconfiguration of the Vine Street and Corey Street approaches. Upon preliminary review, the improvements should provide more organized traffic control at this location.

26. Additional information regarding traffic operations and capacity analysis should be provided for the identified improvements.

Conclusions and Recommendations

The TIAS summarized recommendations for access related improvements including driveway design to accommodate passenger cars, delivery traffic and emergency vehicles, pedestrian connectivity and proposed landscaping and structures to maximize sight distance for the proposed site driveway. The TIAS also notes that CHR plans to consider the inclusion of Kesseler Woods in their existing shuttle service. McMahon agrees with these recommendations and suggests the following additional recommendations.

27. A Transportation Demand Management (TDM) plan should be implemented as part of the development to encourage carpooling, bicycle use and pedestrian activity. Specific information regarding the TDM, including the proposed CHR shuttle program, should be provided for review.

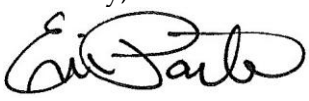
28. The City of Newton should require that all plantings, grading and structures be constructed to maximize the available sight distance at the proposed site driveway and not just to meet the stopping sight distance minimums.

29. The proponent should review and implement the construction of sidewalks along Lagrange Street from the proposed project driveway to the existing Town of Brookline sidewalks in the east and to the intersection of Lagrange Street and Corey Street /Vine Street to the west. All sidewalks and ramps should be ADA compliant.

30. The improvements at the intersection of Lagrange Street and Vine Street/Corey Street should be included in the Kesseler Woods Residential Development as proposed by the proponent. Additional information including capacity analysis, preliminary design plans, and proposed pedestrian access should be provided for review.

If you have any questions about any of the material presented in this letter, please do not hesitate to contact me.

Sincerely,



Erin Pacileo, P.E.
Project Manager

ATTACHMENT D

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

PRINCIPALS
Robert J. Michaud, P.E.
Ronald D. Desrosiers, P.E., PTOE
Daniel J. Mills, P.E., PTOE

MEMORANDUM

DATE: October 17, 2014

TO: Mr. Marc Levin
Chestnut Hill Realty
300 Independence Drive
Chestnut Hill, MA 02467

FROM: Robert J. Michaud, P.E. – Managing Principal
Courtney E. Jones, P.E. – Senior Transportation Engineer

RE: **Response to Peer Review Comments**
Kesseler Woods Residential Development
Newton, Massachusetts

MDM Transportation Consultants, Inc. (MDM) has prepared the following response to transportation-related peer review comments for the above-referenced project, as issued in a letter by the City's peer review consultant, McMahon Associates, dated October 8, 2014. To facilitate review, specific comments are paraphrased with corresponding responses.

Study Area

Comment 1: *"Although the Kesseler Woods Residential Development alone may not significantly impact the traffic operations at the* [Horace James Circle] *rotary, it may have an effect on rotary operations in combination with other proposed projects in the area. Further consideration should be given to potential impacts of the rotary operations in the future."*

Response: As documented in the July 2014 TIA, the proposed residential development is not expected to have any material impact on rotary operations, with one (1) additional vehicle trip or less generated every 2 minutes along the Lagrange Street approach to the rotary – a level of traffic increase that falls well within daily fluctuation in traffic at that location. Accordingly, there is no useful purpose to evaluating project impacts at this location, which MDM also notes is located within the Town of Brookline.

Roadways & Intersections

Comment 2: *"Based on a review of the TIAS and site visit, McMahon finds the description of the existing roadways and intersections to be accurate."*

Response: No response required.

Existing Traffic Data

Comment 3: *"...McMahon finds the analysis of the weekday morning and weekday afternoon peak periods to be satisfactory to measure the impacts of the proposed project..."*

Response: The July 2014 TIA quantifies project impacts which do not result in any notable change to traffic flow on Lagrange Street or study intersections relative to No Build conditions; ample capacity is available at study intersections to accommodate modest traffic increases. No further response required.

Comment 4: *"It would be preferred to have all traffic volume data collected on a typical Tuesday, Wednesday or Thursday."*

Response: Automatic traffic recorder (ATR) data were collected on a Wednesday and Thursday in May 2014 and provide the basis for ensuring that traffic volumes used for analysis on Lagrange Street represent typical weekday traffic flow conditions. Likewise, intersection count data were conducted on either a Tuesday or a Thursday, with limited exception. The only Friday data collected included weekday morning data for Rangeley Road and Broadlawn Park, which represent low volume residential side-streets which were confirmed to have volume data that is consistent with the prior (2004) Kesseler Woods traffic study. Manually collected data (TMCs), including the limited data collected a Friday AM period, present volumes on Lagrange Street that are highly consistent with Wednesday/Thursday ATR data and accordingly are appropriate for analysis. These data are also representative to above-average traffic conditions and were not adjusted (reduced) to average season conditions as a conservative measure.

Applicant will provide a supplemental weekday AM period count at Lagrange Street/Broadlawn Park in October 2014 to further support the above finding. The supplemental count data will be collected and summarized via separate correspondence prior to the scheduled October 28 hearing.

Comment 5: *"A significant traffic volume imbalance is noted between the intersection of Lagrange Street and Vine Street/Corey Street and the intersection of Lagrange Street and Broadlawn Park in the westbound direction during the weekday morning peak hour."*

Response: The segment of Lagrange Street between the subject locations is intersected by the access to Chestnut Hill Village – a 323-unit residential condominium community which explains the imbalance in volumes during the weekday AM period.

Comment 6: *"McMahon finds the collection of daily volume and speed data through the use of automatic traffic recorder (ATR) to be appropriate."*

Response: ATR data are highly consistent with manual TMCs conducted at study intersections in May and June 2014 and appropriately reflect typical weekday travel conditions along Lagrange Street. No further response required.

Comment 7: *"The Proponent should review permanent count station data in closer proximity to the proposed project site to obtain a more locally representative data set."*

Response: MDM has identified two (2) permanent count stations located along I-95/Route 128 in Newton and Weston that have complete monthly data for 2012 and/or 2013. These count station data confirm that May and June are above-average travel months, consistent with the seasonal analysis presented in the TIA. The supplemental seasonal adjustment calculations are provided in the **Attachments.**

MDM has revised TIA **Table 2** to reflect seasonal adjustment factors from the more local permanent count stations. As shown in **Revised Table 2**, application of the revised seasonal adjustment factors results in no material change to the finding originally presented in the TIA that average daily and peak hour traffic volumes along Lagrange Street in the study area observed in 2014 are consistent with the average traffic volumes observed in 2004 resulting in a less than 1 percent per year growth rate over the last 10 years. A decrease in daily and peak hour traffic in the study area occurred during the 2006 and 2008 count years, but returned back to 2004 traffic levels by 2014.

TIA TABLE 2 (Revised)
HISTORICAL TRAFFIC VOLUME COMPARISON[1]

	Traffic Volume			
Time Period	2004[2]	2006[3]	2008[4]	2014
Lagrange Street (near Brookline Town Line)				
Daily (24-Hour)	12,721	11,713	n/a[5]	12,379
Lagrange Street at Corey Street/Vine Street				
Weekday Morning Peak Hour	1,253	n/a	872	1,286
Weekday Evening Peak Hour	1,273	n/a	1,173	1,372

[1]Seasonal corrections applied to observed (raw) data to represent average monthly conditions. See **Attachments** for calculations.
[2]Source: *Kesseler Woods-Phase II, Proposed 62-Unit Condominium Development, Newton, Massachusetts,* prepared by Conley Associates, dated November 30, 2004.
[3]Source: *Kesseler Woods Outstanding Issues,* prepared by Conley Associates, dated June 2, 2006.
[4]Source: *Kesseler Woods Condominium Updated,* prepared by Conley Associates, dated June 23, 2008.
[5]n/a = not available

Intersection Crash History

Comment 8: *"The calculated crash rates at each of the study area intersections are below the statewide and District 6 average crash rates, indicating that no significant safety deficiencies appear to be presented...McMahon finds this safety analysis to be acceptable."*

Response: No response required.

Measured Travel Speeds

Comment 9: *"Travel speeds along Lagrange Street were measured using an automatic traffic recorder. The data presented in the TIAS appears to be representative of conditions observed in the field."*

Response: No response required.

Sight Line Evaluation

Comment: *"McMahon's field visit verified the available sight distance measurements reported in Table 5."*

Response: No response required.

Comment 10: *"The available sight distance measurements noted in the TIAS are approximately 290 feet and 300 feet, which does not meet the minimum required sight distance for the vehicles traveling faster than 40 miles per hour."*

Response: The location of the proposed driveway is identical to that approved by the City for Kesseler Woods in 2008 and in accordance with industry practice provides sight lines that exceed minimum recommended SSD and ISD criteria for the recorded 85th percentile travel speeds on Lagrange Street. In fact, the available SSD and ISD satisfy minimum AASHTO criteria for the recorded 95th percentile travel speeds along Lagrange Street. This issue was discussed during a site visit with the City's Director of Transportation and City planning staff on October 16, 2014. While some vehicles may travel at speeds greater than 40 mph, the sight line analysis was properly evaluated using the posted speed limit and 85th percentile travel speeds.

Comment 11: *"Table 6 should be updated to reflect minimum ISD values for left-turning and right-turning vehicles for the proposed site driveway as determined by AASHTO."*

Response: **Table 6** of the July 2014 TIA correctly presents the *minimum* ISD values which are defined by AASHTO as *"at least equal to the appropriate stopping sight distance (SSD) for the major road"*. Accordingly, the *minimum* ISD criteria are met for the driveway. As a point of reference, *ideal* ISD for an 85th percentile travel is 410 feet.

Comment 12: *"Sight triangles should be depicted on the proposed site plan in order to accurately identify the appropriate grading and landscaping required to achieve the minimum ISD recommended by AASHTO."*

Response: The Applicant will revise the site plan as necessary to achieve ISD sight triangles that are clear of any grading, vegetation or on-site obstructions (i.e., signage) that exists at an elevation greater than 3.5 feet above roadway grade.

Comment 13: *"...existing and proposed signage and utility poles should be placed to maximize available sight distance. Under the current site plan, the proposed Kesseler Woods entry sign may limit available visibility to the west."*

Response: The Applicant will revise the site plan to achieve ISD sight triangles that are clear of any grading, vegetation or on-site obstructions (i.e., signage) that exists at an elevation greater than 3.5 feet above roadway grade.

Alternative Modes of Transportation

Comment 14: *"The majority of the Census Tract identified for comparison in the TIAS included in the study is located much more conveniently to public transportation than the project site. In order to obtain a more accurate representation of alternative mode use, adjacent tracts would need to be investigated. However, since no credit was taken for the number of trips taken by public transit, this is not necessary."*

Response: No credit for use of public and/or Applicant-sponsored transit modes is taken in the analysis, which presents a conservative analysis scenario. No further response required.

Comment 15: *"The proponent should provide additional information regarding the specific programming of the CHR Shuttle Service at Kesseler Woods."*

Response: Shuttle service to Hancock Village is currently provided between 6AM and 9AM and 4:30PM to 7:30PM approximately every 20 minutes on weekdays. The Proponent is willing to expand this service to Kesseler Woods residents, which may modify the headways to 30 minutes for existing service or an additional shuttle which will be evaluated based on actual demands for the service. The determination of need for an additional shuttle or modification of the headways for existing service will be evaluated following building occupancy and actual resident demand.

Comment 16: *"The location of the crosswalk* [just east of the project site driveway] *should be considered carefully due to the limited visibility created by the horizontal and vertical curves within the study area. Additional information should be provided including pedestrian visibility and required modifications to existing infrastructure necessary to ensure the safe and efficient pedestrian access."*

Response: The proposed crosswalk design will be designed to comply with applicable ADA standards and in accordance with industry standards for sight lines to ensure sufficient sight lines for oncoming vehicles. The proposed crosswalk design includes MUTCD-compliant signage at the crosswalk (W11-2, W16-7P) and advanced warning signs (W11-2, W16-9P) to enhance driver awareness of potential pedestrian activity.

Background Growth

Comment 17: *"Traffic volumes were projected to the future year of 2019 to reflect a five-year planning horizon. McMahon finds this acceptable. As noted previously, there are a number of permanent count stations located in closer proximity to the proposed project site reflecting local conditions that should be reviewed [to validate growth rates]."*

Response: The July 2014 TIA uses a 1 percent per year growth rate which exceeds localized growth trends along Lagrange Street (as per available date from 2004 to 2014 for study intersections) and rates used in other area studies which reflect a 0.5 percent per year growth. Available MassDOT permanent count stations with at least 5 years of data (the appropriate basis for determining regional growth trends) are also considered in the July 2014 TIA which also confirm that the 1 percent annualized growth trend is appropriate and conservative.

Comment 18: *"Due to their close proximity to the Kesseler Woods Residential Development, specific trip generation/distribution information from the original traffic impact studies for the Chestnut Hill Shopping Center, Chestnut Hill Square Residential Development and Residences of South Brookline projects should be provided to verify the potential impacts on Lagrange Street."*

Response: As requested, additional supporting materials from their respective traffic studies that were used as the basis for the trip tracings through the Kesseler Woods study area roadway networks are included in the **Attachments.**

Traffic associated with the remaining build-out of Chestnut Hill Shopping Center ("The Street") was assumed to be reasonably accounted for in the conservative 1 percent per year background growth rate used in the July 2014 TIA as described in more detail in the following response.

Comment 19: *"The proponent should identify the amount of unoccupied space* [at the Chestnut Hill Shopping Center] *at the time of the counts and quantify the remaining number of trips expected to travel along Lagrange Street. "*

Response: Based on prior discussions with the City around the time the counts were conducted, the remaining approved build-out of Chestnut Hill Shopping Center included a 64,000± sf commercial building with first floor retail, second floor restaurant/office space and third floor offices. Based on discussion with City planning staff, an unknown amount of the commercial space was occupied at the time the counts were conducted. It was assumed in the July 2014 TIA that any infill of vacant space in the commercial building would be reasonably accounted for in the conservative background growth rate of 1 percent per year.

At the request of McMahon, MDM has since received response from the Chestnut Hill Shopping Center Proponent indicating that the majority of the building was occupied at the time the counts were conducted. Based on industry-standard trip rates published by ITE and the trip distribution patterns for Chestnut Hill Square (a similar, adjacent approved use), the infill of vacant space in the 64,000 sf Chestnut Hill Shopping Center commercial building is estimated to generate less than 5 vehicle trips during the weekday morning and weekday evening peak hours through the study area – an amount that is imperceptible to the average motorist and falls well within the 1 percent per year background growth rate. Therefore, the background growth assumptions and analysis results as presented in the July 2014 TIA remain valid.

Trip Generation

Comment 20: *"Trip generation estimates for the proposed Kesseler Woods Residential Development were calculated for the weekday morning and weekday afternoon peak hours utilizing ITE's Trip Generation Manual, 9th Edition. Land Use Code 220 (Apartments) was utilized for the trip generation calculations based on the peak hour of adjacent street traffic. This methodology is considered to be acceptable by industry standards."*

Response: No response required.

Trip Distribution

Comment 21: *"The US Census Bureau provides more recent journey to work data, collected through the American Community Survey that should be utilized for the trip distribution calculations."*

Response: MDM has reviewed the journey to work data provided in the TIA and notes that the analysis was in fact based on the more recent 2006-2013 American Community Survey (ACS) data and that the note indicating use of 2000 US Census data was a typographical error. Therefore, the trip distribution patterns presented in the TIA and based on US Census journey to work data for Newton remain valid.

Comment 22: *"Trip distribution calculations provided in the attachments note the "Residence Town Name" as Middleton, MA. This table should be updated to reflect Newton as the town of residence. Additionally, the Town of Brookline should be included in the calculation for a better representation of potential trip distribution."*

Response: MDM has reviewed the journey to work data provided in the TIA and notes that the analysis was in fact conducted for a residence city of Newton and that the "Middleton, MA" residence name was a typographical error. Therefore, the trip distribution patterns presented in the TIA and based on US Census journey to work data for Newton remain valid.

As requested, MDM has also estimated trip distribution patterns based on journey to work data for Brookline residents since the site borders the Town of Brookline. The resulting trip distribution patterns indicate a slight shift (10%) in traffic volumes from the west to the east of the site which results in a potential shift of up to 4 entering trips and 3 exiting trips – an amount that will not have any material impact on intersection operations all of which have been demonstrated to operate below capacity at LOS D or better operations.

Operations Analysis

Comment 23: *"...the capacity analysis model* [for the Lagrange Street and Vine Street/Corey Street intersection] *should be calibrated to match traffic operations observed as part of the delay study and carried through the future conditions."*

Response: The Proponent's traffic impact at this intersection is less than 1 percent of intersection volume and as such falls well within daily traffic fluctuations that occur. Despite this modest traffic volume which will not materially change operations relative to No-Build conditions, the Proponent has discussed potential operational and safety improvements with the City and has prepared a conceptual improvement plans as documented in a technical memorandum dated September 2014. Accordingly, there is no useful purpose served by calibrating the model in this instance as the Proponent is proposing improvements at this location that shows enhanced (LOS D or better) operations once improved. For reference, a copy of MDM's conceptual intersection improvements memorandum and a preliminary review letter issued by the City of Newton's Director of Transportation supporting the proposed improvements are provided in the **Attachments.**

Comment 24: *"The level-of-service summary for the proposed site driveway indicates that the exiting movement from the site driveway is expected to operate at LOS C with 25 seconds of delay during the weekday afternoon peak hour. The capacity analysis worksheets show a LOS D for this movement. The results of the capacity analysis should be clarified so that the worksheets match the summary."*

Response: The capacity analysis software (Synchro®) calculates intersection delay to the nearest tenth of a second and assigns the Highway Capacity Manual (HCM) level of service designation (LOS) for that specific delay (25.1 seconds) which is technically reported as a LOS D. When summarizing the capacity analysis results reported in the July 2014, MDM rounded the Synchro-calculated delay to the nearest whole second (25.0 seconds) and reported the HCM level of service designation for the rounded delay which is LOS C. Regardless of this minor discrepancy, the site driveway is expected to have ample capacity to support the proposed project.

Comment 25: *"Capacity analysis should be conducted and summarized for the proposed improvements at the intersection of Lagrange Street and Vine Street/Corey Street under the future year conditions. "*

Response: The Proponent has opted to advance safety and operational improvements at Corey Street/Vine Street despite the finding that its modest traffic volumes do not independently warranted action. The Proponent submitted a technical memorandum documenting the proposed conceptual intersection improvements to the City in September 2014 which has been preliminarily reviewed by the City's Director of Transportation. The technical memorandum includes a discussion of intersection capacity under improved conditions which indicates ample capacity to support project-related traffic increases at this location. For reference, a copy of MDM's conceptual intersection improvements memorandum and a preliminary review letter issued by the City of Newton's Director of Transportation supporting the proposed improvements are provided in the **Attachments.**

<u>Site Access and Circulation</u>

Comment 26: *"The design vehicle is shown to extend beyond the edge of the circulatory road around the rear of the building. The materials used for the roadway and edging should be mountable or the roadway should be reconfigured in order to ensure full access to the rear of the building."*

Response: The Proponent's site civil engineer, Stantec, has met with Newton Fire Department to discuss emergency access at the site including a detailed AutoTurn® analysis. The Newton Fire Department has approved of the AutoTurn® analysis. The Fire Department-approved plan is provided in the **Attachment** for reference.

Comment 27: *"The AutoTurn exhibit should be shared with the Newton Fire Department to ensure that an appropriate design vehicle was used in the analysis and that they approve of the proposed circulation. The design vehicle used in the AutoTurn analysis is shown to cross over into the opposite direction of travel upon entrance to and egress from the proposed project site."*

Response: The Proponent's site civil engineer, Stantec, has met with Newton Fire Department to discuss emergency access at the site including a detailed AutoTurn® analysis. The Newton Fire Department has approved of the AutoTurn® analysis. The Fire Department-approved plan is provided in the **Attachment** for reference.

Comment 28: *"If school buses are to circulate within the project site, a detailed description of the proposed access as well as on-site AutoTurn analysis should be provided."*

Response: As shown in the AutoTurn® analysis approved by the Newton Fire Department included in the **Attachments**, a school bus will be able to adequately maneuver in and around the site should the City decide to provide a school bus stop on-site.

Intersection of Lagrange Street and Vine Street/Corey Street

Comment 29: *"Upon preliminary review, the improvements should provide more organized traffic control at this location."*

Response: No response required.

Comment 30: *"Additional information regarding traffic operations and capacity analysis should be provided for the identified improvements."*

Response: Refer to response to Comment No. 25.

Conclusions and Recommendations

Comment 31: *"A Transportation Demand Management (TDM) plan should be implemented as part of the development to encourage carpooling, bicycle use and pedestrian activity."*

Response: As discussed in the July 2014 TIA, the Proponent plans to implement multiple TDM elements at the site including the following:

- Implement pedestrian and crosswalk connections to the on-site building and existing sidewalk along Lagrange Street.
- Implement intersection improvements at the Lagrange Street/Corey Street/Vine Street intersection including completion of the pedestrian connection between the site and the existing Massachusetts Bay Transportation Authority (MBTA) bus stop along Corey Street at the Boston City line.

- The Proponent plans to include, based on demand, the proposed Kesseler Woods residential development in their existing shuttle service that transports Hancock Village residents between Independence Drive and Reservoir Station (Clevelend Circle) during the weekday morning and weekday evening commuter periods. The inclusion of Kesseler Woods in this shuttle service would provide the added benefit of Kesseler Woods resident access to two Zipcar vehicles provided at Hancock Village.

Comment 32: *"The City of Newton should require that all plantings, grading and structures be constructed to maximize the available sight distance at the proposed site driveway and not just to meet the stopping sight distance minimums."*

Response: The Applicant will revise the site plan to achieve ISD sight triangles that are clear of any grading, vegetation or on-site obstructions (i.e., signage) that exists at an elevation greater than 3.5 feet above roadway grade to maximize sight lines to the extent feasible to ensure minimum criteria are met or exceeded.

Comment 33: *"The proponent should review and implement the construction of sidewalks along Lagrange Street from the proposed project driveway to the existing Town of Brookline sidewalks in the east and to the intersection of Lagrange Street and Corey Street/Vine Street to the west. All sidewalks and ramps should be ADA compliant."*

Response: The Proponent will extend the sidewalk on the north side of Lagrange Street that currently terminates near the Brookline municipal boundary to the Site and will provide an ADA compliant pedestrian crossing from the site driveway to the existing sidewalk on the south side of Lagrange Street. No further sidewalk improvements are proposed or warranted.

Comment 34: *"The improvements at the intersection of Lagrange Street and Vine Street/Corey Street should be included in the Kesseler Woods Residential Development as proposed by the proponent. Additional information including capacity analysis, preliminary design plans, and proposed pedestrian access should be provided for review."*

Response: Refer to response to Comment No. 25; requested information is provided in the **Attachments**.

PRELIMINARY
KESSELER WOODS ~~CONDOMINIUMS~~
CONSTRUCTION MANAGEMENT PLAN

~~Cornerstone Corporation~~Chestnut Hill Realty
~~September 11~~October 16, ~~2006~~2014

During construction, the following provisions will apply. As currently envisioned the proposed project may require a timeline of up to 20 months from project start up to completion. *Prior* to the commencement of any site work, as defined in the Special Permit, a Final Construction Management Plan ("FCMP") will be filed for review ~~and approval~~ by the Director of Planning and Development, City Engineer, City Traffic Engineer, Health and Human Services Department, Fire Department, and Commissioner of Inspectional Services. The Commissioner of Inspectional Services shall be authorized to approve the FCMP, after consultation with these other departments.

CONSTRUCTION ADMINISTRATION

Contact Person: The Petitioner will designate a contact person to serve as liaison during the construction process. The name and telephone number of the contact person will be provided to the Commissioner of Inspectional Services, Ward 8 Aldermen, and City Engineer prior to the commencement of any construction activity. ~~The contact person will be the same as the contact person for the Neighborhood Liaison Committees established in the Special Permit.~~

Communications: The Applicant with the assistance of the Neighborhood Liaison Committee will establish a system of periodic updates on construction progress for distribution to the neighborhood and other interested parties The purpose of those communications is-to advise of the schedule and progress of construction, any construction activities that may impact the neighborhood, any changes in plans, or any other construction-related matter that may be of interest. All *neighbors* and other parties who request being added to that designated distribution group will receive all Neighborhood Liaison Committee letters and emails from the Neighborhood Liaison representative.

Hours of Construction: The hours of construction will be 7:00 a.m. until 6:00 p.m. Monday through Friday. When work is performed on Saturdays, it will be between 8:00 a.m. and 5:00 p.m. Any on site *drilling,* rock crushing, and/or blasting will not begin before 8:00 a.m. on weekdays and 9:00 a.m. on Saturdays. There will be no exterior construction on Sunday. Interior work may occur at other times when ~~a~~the building is fully enclosed. Exterior construction work may be permitted at other times, due to exigent circumstances, with the advance approval of the Commissioner of Inspectional Services, and the Neighborhood Liaison Committee will be notified by the Petitioner no less than 48 hours in advance of any such change in construction hours. There will be no construction during legal holidays ~~or on Rosh Hashanah (First Day) and Yom Kippur~~.

Hours of Construction Delivery: Deliveries to the property will be limited to the hours between 7:00 a.m. — 6:00 pm. Monday through Friday and 8:00 a.~~rn~~m. - 5:00 p.m. on Saturdays, unless specifically authorized by the Commissioner of Inspectional Services due to exigent circumstances. The Petitioner will advise the contractors and subcontractors to minimize the number of deliveries during peak access / egress hours, in order to reduce the

congestion on site and the adjacent streets and to minimize conflicts between the delivery trucks. The ~~contractorswill~~contractors will also minimize truck deliveries at times when school-aged children may be walking to or from school or school bus stops.
Truck Route: Truck traffic associated with the construction will travel to and from the site using LaGrange Street via the VFW Parkway and Hammond Pond Parkway as the primary ~~route~~routes. No trucks will travel on Newton or Brookline Street, Rangeley Road, Vine Street and Broadlawn Park.

Trash and debris removal: All trash and debris removal, including emptying, removal or installation of dumpsters or other trash containers, which relates to the construction of the project, will occur within the hours prescribed for external construction. Details on proposed debris removal will be included in the FCMP.

Security: It is recognized the site is generally surrounded by wooded areas with limited access from adjacent roadways and neighborhood areas to the north. Security requirements will be determined by the owner-controlled contractor ~~in consultation with the owner~~ and will include the use of some or all of the following including; access gates, perimeter fencing in locations as necessary at the contractor's discretion, the use of manned patrols and night watchman as may be periodically required by construction. Details on proposed security measures will be included in the FCMP

EXTERMINATOR

A professional exterminator with experience on construction projects will be engaged to inspect and take any necessary measures prior to and during ~~each phase of~~ construction to ensure that the excavation of the site does not result in pest problems to the neighborhood. The exterminator's work may include a baiting / trapping program prior to the start of a phase of construction. The exterminator will consult with and notify the Newton Health Department on its plans. Details on proposed extermination methods will be reviewed with the Health Department prior to implementation.

NOISE AND DUST CONTROL

Tree Removal: Details on proposed methods of tree removal will be provided in the FCMP. The Petitioner will either remove all wood material for off-site disposal, or ensure that on-site chipping complies with the City's Noise Control Ordinance.

Street Cleaning and Repair: During construction, the Contractor will provide a stabilized construction entrance and truck washing station on-site, in accordance with City requirements, to minimize the spread of mud on local streets and roads. During construction, the Contractor will provide street cleaning of LaGrange Street, as necessary and as directed by the Commissioner of Public Works, to remove mud or construction debris from the ~~street~~segment of LaGrange Street which may need cleaning due to Project's construction vehicles. In addition, prior to the issuance of any Final Certificates of Occupancy, if deemed necessary by the Commissioner of Public Works due to significant amount of construction traffic entering and exiting the site, the Petitioner shall be required to resurface LaGrange Street, which shall include milling the roadway surface and installing 1 1/2 Type I-I bituminous concrete, curbline to curbline, from the existing sewer manhole near Byron Road to the Brookline town line. Such work shall be completed prior to the issuance of any Final

Certificates of Occupancy. Catch Basins in Lagrange Street in the vicinity of the work will be cleaned as necessary and filter fabric/silt sacs will be installed as directed by the City Engineer.

Dust: The Contractor will take appropriate steps to minimize dust generation during grading of the site, excavation and construction (including, but not limited to, wetting down materials when appropriate), stone mats as appropriate, and will require covers to be placed over any open trucks transporting debris or fill and from the property. Dust levels at the property limits will be set to a maximum level of 150 micrograms per cubic meter of air (PM10, breathable particulate matter), based on National Ambient Air Quality Standards set by the Environmental Protection Agency (EPA). Levels will be measured and recorded continuously during
earthwork construction at three locations at the property line near the closest residences to construction activities, and dust producing construction activities will be stopped and then modified if any exceedances are recorded. The City Health Department will be notified in the event of any exceedances, and told of steps to be taken to reduce dust levels to below the safe levels. A detailed Dust Control Plan that includes the applicable provisions of the Special Permit will be submitted as part of or in conjunction with the FCMP.
Noise: The contractor will comply with the requirements of the Noise Control Ordinance for the City of Newton and the Noise Control Plan to be submitted by the Petitioner pursuant to the requirements of the Special Permit.

In addition, project specifications will require maintaining maximum noise levels not to exceed 86dB(A) at the nearest site property lines to the residential abutters. The contractor will install noise level measurement meters to monitor noise levels in compliance with the Noise Control Ordinance. The contractor will also install appropriate signage to prevent construction vehicles from running for a period longer than five minutes when not being operated, per the Noise Control Ordinance.

Records of readings, if they exceed any noise specification, will be reported to appropriate Newton departments, along with steps being taken to reduce the noise levels. A detailed Noise Control Plan will be submitted as part of or in conjunction with the FCMP.

Rock Crushing: Crushed rock from on-site rock crushing may be used by Petitioner for any purpose on or off-site in Petitioner's reasonable discretion and provided that such rock-crushing is otherwise in compliance with applicable laws and the Special Permit. Details as to the extent of rock crushing anticipated on-site will be provided in the FCMP. The Liaison Committee will be kept informed as to the extent of anticipated and completed on-site rock crushing.

BLASTING

All blasting and drilling for the driveway, utility trenches, service trenches and / or structures, whenever they are built, will be carried out in accordance with federal, state and local blasting permit law and regulations, including the Board of Aldermen's Standard Blasting Conditions. Further, Chestnut Hill Realty and its geotechnical blasting consultant, Stantec Consulting Services, Inc. has reviewed as well as the more stringent controls set forth in the memo from Haley & Aldrich to Cornerstone Corporation (the previous Developer) dated May 8, 2006;

(copy attached). As noted in the Blasting Plan Addendum dated October 14, 2014 to this CMP prepared by Stantec, the Petitioner agrees that the blasting and drilling will be carried out in accordance with the Haley & Aldrich standards and in accordance with the conditions contained therein as well as the following conditions:

1. *Petitioner's Blasting Consultant* - The Petitioner's geotechnical blasting consultant, ~~Haley & Aldrich,~~ Stantec Consulting Services, Inc. will oversee blasting for the Petitioner ("Consultant"). The Consultant will review the qualifications of the blasting contractor, and review the blasting plan prepared by the blasting contractor, check the calibration of the seismograph monitors provided by the Blasting contractor, approve the location and installation of the seismograph monitors, and, if required by the Newton Fire Department, will determine the blasts limits throughout the blast period and will consult with the Newton Fire Department on an as-needed basis throughout the blasting period.
2. *Independent Blasting Consultant* — The Petitioner will pay for a qualified independent geotechnical blasting consultant ("Newton Blasting Consultant") to provide technical support to the Fire Department; this Independent Blasting Consultant will be selected by, the Petitioner in consultation with the Fire Department and will check the calibration of the seismograph, monitors, and, if required by the Newton Fire Department, will determine the blast limits throughout the blast period and will consult with the Newton Fire Department on an as needed basis throughout the blasting period.
3. *Selection of the Blasting Contractor* - A blasting contractor, acceptable to both the Petitioner and the Newton Fire Department, will be selected after review of the qualifications of such contractor by the Petitioner's Consultant and the Newton Blasting Consultant.
4. *Blasting Plan* - The Blasting Contractor will submit a blasting plan for review and approval by the City's Health and Human Services Department and Fire Department, ~~and by~~with input from the Newton Blasting Consultant. The Blasting plan must include the recommendations provided by Haley & Aldrich, in its memo to Cornerstone Corporation of May 2, 2006 revised May 8, 2006; a list of proposed blasting agents; and Material Safety Data Sheets for those agents. The Blasting Contractor will not use Ammonium Nitrate Fuel Oil as an explosive blasting agent, or any explosive or detonators containing Perchlorate. In addition, the Blasting Contractor will make every effort to select materials that will minimize any adverse environmental impacts. The contractor will identify in the blasting plan the measure that will be taken in order to minimize groundwater disruption.
5. *Pre-Blast Survey* A pre-blast survey will be done in accordance with State law for the interior and exterior of all structures for properties ~~or~~ that abut the site or are within ~~400~~300 feet of the blasting area.
6. *Insurance Coverage* - The blasting contractor will carry $3,000,000 in comprehensive liability insurance for damage to structures caused by underground explosion and collapse hazard [Cf $2m required in City's Standard Blasting Conditions]. A

certificate will be submitted to the Newton Fire Department by the contractor documenting that the required coverage will be in force for the duration of the blasting at the site. If there is a general contractor or developer associated with the blasting, each will carry a minimum of $1,000,000 in comprehensive liability insurance.

7. *Permit and Blasting Limits* The blasting limits identified by Haley & Aldrich in their memo of May 2, 2006 as revised May 8, 2006 and confirmed in the Stantec Blasting Plan attached will be observed. However, if based upon the recommendations of the Newton Blasting Consultant, the Newton Fire Department concludes that a lower limit is necessary to protect the site and the abutting residential neighbors, that lower limit will be in effect.

8. *Notification* - Not less than 72 hours prior to the commencement of any blasting, the Petitioner will deliver by hand written notification to all properties that were entitled to a pre-blast survey under subparagraph 5. Such notification will state when the blasting period will begin, will include an explanation of the warning procedures for blasting including soundings. A system of audible warning signals must also be established in the blasting plan. The Petitioner will send another letter notifying the same patties that the blasting has been completed.

9. *Road Closures*- Any necessary closures of Lagrange Street or adjacent streets will be kept to a minimum and will be coordinated with the Police Department, Fire Department, Department of Public Works, and Inspectional Services Department. Blasting that may result in road closures will be done at off-peak hours only after 9:00 a.m. and before 3:00 p.m. To the extent that any road closures will occur in Brookline, such closures will also be coordinated with the Brookline Police Department and Department of Public Works.

10. The Petitioner's contractor will coordinate hours of blasting to prevent conflicts with school-aged pedestrians walking to and from Newton, Brookline, and Boston schools and designated school bus stops, particularly during the hours of 7:00-9:00 a.m., 2:00-3:00 p.m. and 4:00-6:00 p.m. on days when school is in session.

EROSION CONTROL

Measures: All catch basins should have geotextile bags or silt sacks installed for the duration of construction. Prior to the start of excavation or earth removal, other necessary erosion control measures will be in place. These will consist of silt fences, hay bales or whatever other means may be needed to properly control erosion. Erosion control measures to deal with surface water runoff from the construction site will be strategically located as required by the construction work and may change from time to time. Temporary erosion control measures will be removed only after permanent measures are fully established. Details of

temporary and final erosion control measures will be included in the FCMP.

Tree Protection Plan: A Tree Protection Plan detailing the methodology to be used for the protection of all mature trees to be preserved, within the areas of construction, will be submitted for review and approval by the Tree Warden ~~with the Tree Removal Application~~ and in conjunction with the FCMP. The proposed Tree Protection Plan will include the

following:

1. Install an appropriate fence of 12-inches for every inch of trunk diameter (DBH). The DBH divided by 2 out from the tree trunk.
2. If working inside the drip line of the tree, cut the roots prior to digging with a sharp hand saw 12-24 inches from the edge of excavation.
3. Clean wood chips can be installed to help improve growing conditions for the remaining root system at a rate of 4-8 inches deep.
4. Subsurface fertilize all trees to be impacted by the construction to improve and promote plant vigor.

Drainage Infrastructure: All drainage infrastructures will be installed and functioning with the catch basins set at binder grade prior to the installation of the binder course of asphalt. The catch basins will not be raised to finish grade any sooner than one week prior to the installation of the finish course of asphalt.

Inspection of Existing Pipes: Prior to the commencement of any site work the contractor will retain a qualified contractor that specializes in Closed Circuit Television (CCTV) inspections of the underground pipes within LaGrange Street and any City of Newton easements that abut this project. The CCTV inspection will be performed on the utility pipes determined by the City Engineer. Pre & Post construction inspections will be witnessed by a representative of the Department of Public Works. The video tapes will be given to the City Engineer at the end of each inspection.

CONSTRUCTION STAGING AREAS

Staging Areas: Staging areas will be designated prior to the start of work including the location of the material staging areas, the location of on-site temporary construction trailers, the locations of on--site truck delivery holding areas, the location of on-site truck washing stations, and the general location of temporary construction dumpsters, and the location of hay bales and other methods of erosion control during construction. As construction continues in different phases, these locations will shift as necessary.

Site Office Trailers: It is anticipated that several office trailers will be required for construction management. These will be located on the property and will be clearly marked with the name of the contractor.

Storage Trailers /Containers: During the course of construction there will be a need to maintain storage trailers / containers on-site for storage of materials, tools and /or equipment. These will also be located within the perimeter, will be kept secured, and will be removed from the property as soon as they are no longer needed.

Open Storage Areas: Materials will be stored on the property ~~construction~~ during the course of construction. In order to avoid cluttering the site, due to limited available space, materials will be delivered to the property on an as-needed basis. Material storage area(s) will be clearly defined and will be secured. The contractor will make every effort to locate the material storage area(s) as far away from the abutting residential properties as possible.

A detailed site plan, showing the location of all the above staging areas and on-site contractor and subcontractor parking areas, for each phase of construction, will be included within the FCMP.

Delivery Truck Holding .Areas:

On-site: On days when the construction activities require multiple truck deliveries, such as for
the removal of excess material, the placement of large quantities of concrete, structural steel deliveries, asphalt paving etc., these deliveries will be carefully scheduled so that there is always adequate onsite area for the holding of the trucks until they can be unloaded. No trucks will be permitted to stand on LaGrange Street (unless actively managed by a police detail at the Petitioner's expense) or on the neighborhood streets.
Off site: In the event that adequate on *site* area for the holding of trucks is not available, an off site holding area will be arranged for, in advance, from which the trucks can be directed to the site by radio as onsite space allows. Any such offsite truck hold areas will be coordinated with and subject to the approval of the Commissioner of Inspectional Services and the Planning Director. The locations of the approved off-site truck holding areas will be included in the FCMP.

TRAFFIC AND PARKING

The contractor will coordinate hours of construction and truck deliveries to minimize conflicts with school age children walking to and from school or school bus stops, especially between 7:00-9:00 am and 2:00 — 4:00 pm.

1. To the extent adequate parking is not available on the property, the Contractor will make arrangements for offsite parking. Any off site parking areas will be coordinated with and subject to the approval of the Commissioner of Inspectional Services and the Planning Director. The locations of the approved off-site parking areas will be included in the FCMP.
2. At no time will parking for those working on this project be permitted on neighborhood streets. Provisions to this effect will be included in all contracts and subcontracts on this project.
3. The Contractor/Petitioner will remove snow from the site driveway, loop road, hammerheads, and surface parking areas at its sole expense. Such snow removal will be done in a timely manner to the reasonable satisfaction of the Fire Department in order to ensure passable access for emergency vehicles throughout the construction period,
4. Police details will be employed as necessary in consultation with the Newton and, as needed, Brookline, Police Departments, the Newton and, as needed, Brookline, DPW, and the Inspectional Services Department. A Traffic Management Plan will be prepared by the selected contractor and submitted with the FCMP for review and approval by the Director of Planning and Development and the City Traffic Engineer. This plan will include adequate warning and construction signs that will be in place prior to construction activity. The type of signage will be MUTCD (Manual on

Uniform Traffic Control Devices) approved and conform to the City's Construction Standards. The location of such signage will be approved by the City Traffic Engineer prior to any construction activity. Details on traffic mitigation for the installation of utilities within LaGrange Street will be provided in the Traffic Management Plan.

5. Adequate warning and construction signs will be put in place prior to any construction activity. The type of signage will conform to the City's Construction Standards and location of such signage will need the approval of the City Traffic Engineer.

FIRE AND EMERGENCY

Installation of Fire Hydrants: The Contractor will install at least one (1) hydrant and will conduct all necessary flow tests to assure that the ~~hydrant~~hydrants are fully operational prior to commencing any construction involving wood framing of structures and/or the installation of exterior wood cladding at or above the ground level on site. The contractor ~~to~~shall coordinate the flow tests so that a representative from either the Fire Department or the Utilities Division of the Department of Public Works is available to witness such tests. The contractor will file a report with the results of said test to both departments.

Emergency Access Driveway: Prior to commencing any construction involving wood framing of structures and/or the installation of exterior wood cladding at or above the ground level on site, or construction of any non-wood structural system above the ground floor, the contractor will construct an internal road system to provide a means of access for Fire Department equipment and other emergency vehicles. This roadway will be finished with a hard, all weather surface that is designed to adequately support the heaviest piece of Fire Department equipment. The Contractor will assure that this access way is kept clear of obstructions to allow access by emergency vehicles throughout the construction process.

[Insert]

Stantec Addendum to Haley & Aldrich

Standards (May 8, 2006)

Summary Report: Litéra® Change-Pro TDC 7.0.0.365 Document Comparison done on 10/15/2014 7:24:15 PM	
Style Name: KL Standard	
Original DMS:dm://BOS/3413736/1	
Modified DMS: dm://BOS/3413736/3	
Changes:	
Add	34
~~Delete~~	28
~~Move From~~	0
Move To	0
Table Insert	0
~~Table Delete~~	0
Embedded Graphics (Visio, ChemDraw, Images etc.)	0
Embedded Excel	0
Format Changes	0
Total Changes:	62

Stantec

Memo

To:	Mr. Chris Rodgers Chestnut Hill Realty PO Box 396 300 Independence Drive Chestnut Hill, MA 02467	From:	Trey Dykstra, PE Stantec Consulting 5 Dartmouth Drive Suite 101 Auburn, NH 03032
File:	21081167	Date:	October 14, 2014

Reference: Residences at Kesseler Woods, Blasting Plan

Dear Mr. Rodgers

This memo presents the Blasting Plan for the proposed Residences at Kesseler Woods located in Newton, Massachusetts. The attached Blasting Plan was developed from the following two documents prepared by Haley & Aldrich (H&A):

- Letter to Cornerstone Corporation, dated May 2, 2006 and revised May 8, 2006.
- Preliminary Kesseler Woods Condominiums Construction Management Plan, dated September 11, 2006.

The construction management plan prepared by H&A contained recommendations for blasting at the site including such items as pre-blast surveys, insurance coverage, notifications, hours of operations, etc. The construction management plan also references the letter dated May 8, 2006 which included recommendations for vibration limits, overpressure limits, warning signals, controls for flyrock, etc. Some items were contained in both documents. Stantec reviewed both documents and agreed with the recommendations made. The recommendations from the H&A documents were then combined into the attached blasting plan. No substantive changes were made to the recommendations. Stantec added an introduction to the blasting plan and a table that summarized information about the bedrock depth, quality, and excavation depth into the bedrock based on the test boring program that was conducted in August and September of 2014.

Please contact us at the numbers below if you have questions.

STANTEC CONSULTING SERVICES, INC.

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Attachment: Blasting Plan

c. Theo Kindermans, Stantec

THE RESIDENCES AT KESSELER WOODS
NEWTON, MASSACHUSETTS

BLASTING PLAN
OCTOBER 7, 2014

The Site for the proposed Residences at Kesseler Woods contains numerous bedrock outcrops consisting of the Roxbury Conglomerate or "Puddingstone." These deposits consisted of gravel, sands, and muds which were bonded together under pressure to form the Roxbury Conglomerate.

A total of 26 borings were drilled at the Site in August/September 2014 (11 within the proposed building footprint, six along the proposed access road, and nine groundwater observation wells around the perimeter of the Site). Rock coring was performed in borings to confirm depth and quality of bedrock and the cores were measured for percent recovery and rock quality designation (RQD). For all building and roadway borings, rock recovery ranged between 42 and 100 percent. The RQDs ranged from 0 percent to 95 percent indicating very poor to excellent rock mass quality. The rock becomes more competent with depth and is location dependent. At the center of the site where the highest site elevations are present, rock mass is of better quality. Moving east towards the residences on Rangeley Road, bedrock is increasingly weathered and competent bedrock is encountered at greater depths. Table 1 presents the bedrock information obtained from the roadway and building borings where rock excavation will occur.

All blasting and drilling for the driveway, utility trenches, service trenches and/or structures, whenever they are built, will be carried out in accordance with applicable federal, state and local blasting permit laws and regulations, including the Board of Aldermen's Standard Blasting Conditions as well as the more stringent controls set forth in this document and the following conditions:

1. *Petitioner's Blasting Consultant* - The Petitioner's geotechnical blasting consultant, Stantec Consulting Services, Inc. ("Consultant") will oversee blasting for the Petitioner. The Consultant will review the qualifications of the blasting contractor, and review the blasting plan prepared by the Blasting Contractor, check the calibration of the seismograph monitors (provided by the Blasting Contractor), and approve the location and installation of the seismograph monitors. If required by the Newton Fire Department, the Consultant will determine the blasts limits throughout the blast period. The Consultant will coordinate with the Newton Fire Department on an as-needed basis throughout the blasting period.

2. *Independent Blasting Consultant* - The Petitioner will pay for a qualified independent geotechnical blasting consultant ("Newton Blasting Consultant") to provide technical support to the Fire Department. This Independent Blasting Consultant will be selected by the Fire Department to check the calibration of the seismograph, monitors, and, if required by the Newton Fire Department will determine the blast limits throughout the blast period. The Newton Blasting Consultant will consult with the Newton Fire Department on an as needed basis throughout the blasting period.

3. *Selection of the Blasting Contractor* - A Blasting Contractor, acceptable to both the Petitioner and the Newton Fire Department, will be selected after review of the qualifications of such contractor by the Petitioner's Consultant and the Newton Blasting Consultant.

4. *Blasting Plan* - The Blasting Contractor will submit a Blasting Plan for review and approval by the City's Health and Human Services Department and Fire Department, and by the Newton Blasting Consultant. The Blasting Plan must include a list of proposed blasting agents; and Material Safety Data Sheets (MSDS) for those agents. The Blasting Contractor will not use Ammonium Nitrate Fuel Oil as an explosive blasting agent, or any explosive or detonators containing Perchlorate. In addition, the Blasting Contractor will make every effort to select

materials that will minimize any adverse environmental impacts. The contractor will identify in the blasting plan the measures that will be taken in order to minimize groundwater disruption.

The Blasting Plan shall be provided by the Blasting Contractor a minimum of 30 days prior to blasting at the site, detailing the planned procedures to be used at the site limits closest to the nearest residences, and also detailing procedures to be used at the deepest rock cut areas in the central portion of the site. The Blasting Plan should also contain a Blast Site Security Plan showing the locations of sentries to be provided prior to each blast round to keep unauthorized personnel from entering the blast area, and the means of communication from the blaster to the sentry to ensure the area is clear prior to detonation.

The Blasting Plan shall include the details of the test blast program consisting of at least three blasts detonated at least 300 feet from the closest residence. The Blasting Plan will be used to assess the planned procedures and to adjust the scaled distance relationships at the site.

5. *Pre-Blast Survey* - A pre-blast survey will be done in accordance with State law for the interior and exterior of all structures for properties that abut the site or are within 400 feet of the blasting area. It should be noted that 400 feet is a significantly greater distance than the 250 feet required by Massachusetts regulations (527 CMR 13.00).

6. *Initial Blasting* - Initial blasting at the site shall be conducted at a location at least 300 ft from the nearest residence, using a scaled distance no less than 75 ft/lbs so that site-specific scaled distance relationships can be determined and charge weights per delay can be adjusted as blasting approaches closer to residences.

7. *Fly Rock Control* - The following controls should be in place to reduce the potential for fly rock:

   a. Blasting mats should be used to fully cover the blast area for every blast;

   b. Drillers logs should be kept for all blast holes drilled, documenting open joints, seams, and other anomalies; and the logs should be reviewed by the blaster prior to each blast;

   c. Ammonium Nitrate Fuel Oil (ANFO) should not be used on the project; and

   d. A videotape should be taken of each blast round detonated to identify issues so they can be corrected prior to the next round of blasting.

8. *Insurance Coverage* - The Blasting Contractor shall carry $3,000,000 in comprehensive liability insurance for damage to structures caused by underground explosion and collapse hazard. A certificate will be submitted to the Newton Fire Department by the Blasting Contractor documenting that the required coverage will be in force for the duration of the blasting at the site. If there is a General Contractor or Developer associated with the blasting, each will carry a minimum of $1,000,000 in comprehensive liability insurance.

9. *Permit and Blasting Limits* – The blasting limits identified below must be observed. However, if based upon the recommendations of the Newton Blasting Consultant, the Newton Fire Department concludes that a lower limit is necessary to protect the site and the abutting residential neighbors, that lower limit will be in effect.

   a. Maximum blast induced ground vibrations at the nearest adjacent above ground structure to blasting should be kept below the U.S. Bureau of Mines recommended Safe Limits, as indicated on Figure 1. These limits are based on the frequency and peak particle velocity of the blast vibrations and are safe limits for preventing cosmetic damage to residential structures;

   b. Maximum air blast overpressures should be kept below 0.013 psi at above-ground

structures in the area. This will minimize the possibility of window damage and also minimize annoyance due to rattling of windows and walls; and

c. At roadway and parking areas, permanent rock cuts slopes over 10 feet high should be blasted utilizing perimeter control procedures such as presplitting, cushion blasting (or trim blasting) or line drilling.

10. *Vibration Monitoring* - Blast vibration monitoring should be performed and reported for each round by the Newton Blasting Consultant as follows:

    a. At the two closest residences on Rangeley Road;

    b. At the two closest residences along Lagrange Street (including Broadlawn Park and Broadlawn Drive); and

    c. At one other agreed upon location.

    Monitoring reports should be kept on file at the site for review by the Fire Department and blasting contractor. The Fire Department and blasting contractor should be notified immediately if any vibrations exceed the regulatory limits.

11. *Nosie and Dust Control* – Noise and dust from the drilling operations should be minimized through the use of appropriate mufflers and the use of water or other fluid to control dust at its source.

12. *Notification and Warning Systems* - Not less than 72 hours prior to the commencement of any blasting, the Petitioner will deliver by hand written notification to all properties that were entitled to a pre-blast survey under subparagraph 5. Such notification will state when the blasting period will begin and will include an explanation of the warning procedures for blasting including blast alarms. The Petitioner will send another letter notifying the same parties when the blasting has been completed. A system of audible warning signals/alarms must also be established in the Blasting Plan that will be used by the Blasting Contractor to warn personnel at the site and nearby residents prior to each blast. The warning signals should be audible at least 600 feet from the blast area and be used prior to each blast.

13. *Hours of Operation for Blasting* - Blasting should be limited to between the hours of 9:00 am to 4:00 pm, Monday through Friday, to minimize disturbance to the residents near the site.

14. *Road Closures* - Any necessary closures of Lagrange Street or adjacent streets will be kept to a minimum and will be coordinated with the Newton Police Department, Newton Fire Department, Newton Department of Public Works, and Newton Inspectional Services Department. Blasting that may result in road closures will be done at off-peak hours only (e.g. after 9:00 a.m. and before 3:00 p.m.). To the extent that any road closures will occur in Brookline, such closures will also be coordinated with the Brookline Police Department and Brookline Department of Public Works.

15. The Petitioner's General Contractor will coordinate hours of blasting to prevent conflicts with school-aged pedestrians walking to and from Newton, Brookline, and Boston schools and designated school bus stops, particularly during the hours of 7:00 am to9:00 a.m.; 2:00 pm to3:00 p.m. and from 4:00 p.m. to 6:00 p.m. on days when school is in session.

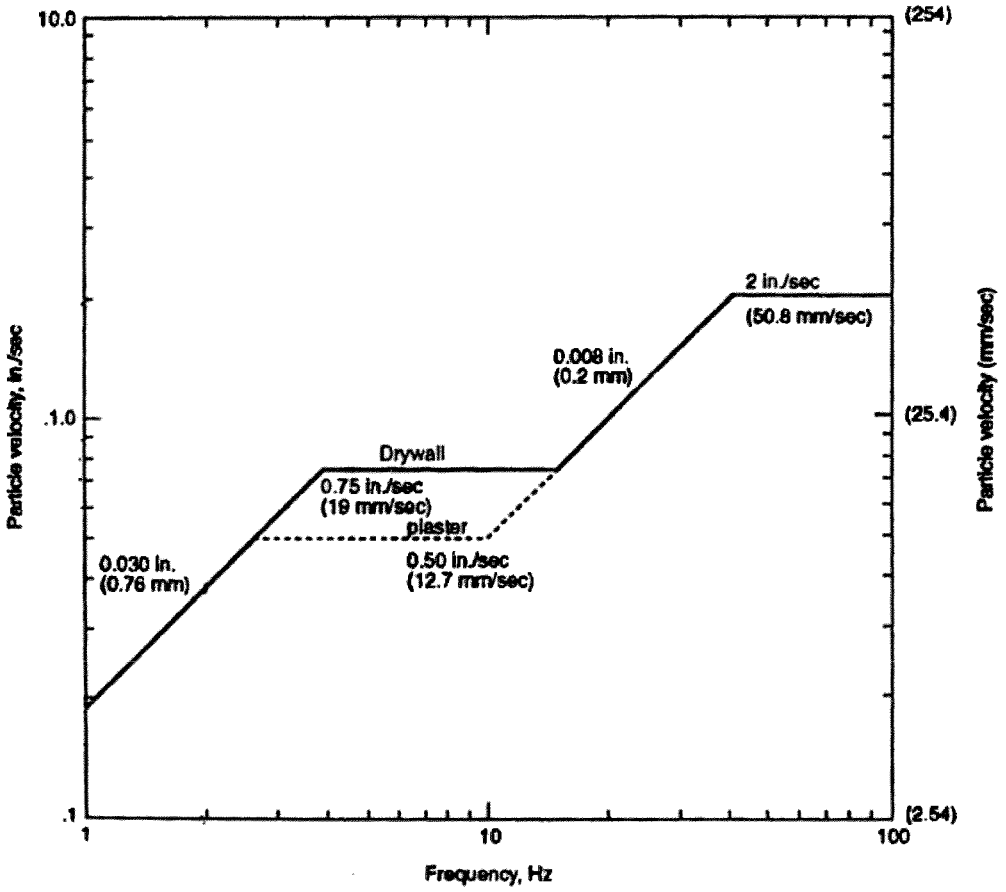

Figure 1 - Particle Velocity Vs Frequency
United States Bureau of Mines (1980)

THE RESIDENCES AT KESSELER WOODS
NEWTON, MASSACHUSETTS

BLASTING PLAN
OCTOBER 3, 2014

The Site for the proposed Residences at Kesseler Woods contains numerous bedrock outcrops consisting of the Roxbury Conglomerate or "Puddingstone." These deposits consisted of gravel, sands, and muds which were bonded together under pressure to form the Roxbury Conglomerate.

A total of 26 borings were drilled at the Site in August/September 2014 (11 within the proposed building footprint, six along the proposed access road, and nine groundwater observation wells around the perimeter of the Site). Rock coring was performed in borings to confirm depth and quality of bedrock and the cores were measured for percent recovery and rock quality designation (RQD). For all building and roadway borings, rock recovery ranged between 42 and 100 percent. The RQDs ranged from 0 percent to 95 percent indicating very poor to excellent rock mass quality. The rock becomes more competent with depth and is location dependent. At the center of the site where the highest site elevations are present, rock mass is of better quality. Moving east towards the residences on Rangeley Road, bedrock is increasingly weathered and competent bedrock is encountered at greater depths. Table 1 presents the bedrock information obtained from the roadway and building borings where rock excavation will occur.

All blasting and drilling for the driveway, utility trenches, service trenches and/or structures, whenever they are built, will be carried out in accordance with applicable federal, state and local blasting permit laws and regulations, including the Board of Aldermen's Standard Blasting Conditions as well as the more stringent controls set forth in this document and the following conditions:

1. *Petitioner's Blasting Consultant* - The Petitioner's geotechnical blasting consultant, Stantec Consulting Services, Inc. ("Consultant") will oversee blasting for the Petitioner. The Consultant will review the qualifications of the blasting contractor, and review the blasting plan prepared by the Blasting Contractor, check the calibration of the seismograph monitors (provided by the Blasting Contractor), and approve the location and installation of the seismograph monitors. If required by the Newton Fire Department, the Consultant will determine the blasts limits throughout the blast period. The Consultant will coordinate with the Newton Fire Department on an as-needed basis throughout the blasting period.

2. *Independent Blasting Consultant* - The Petitioner will pay for a qualified independent geotechnical blasting consultant ("Newton Blasting Consultant") to provide technical support to the Fire Department. This Independent Blasting Consultant will be selected by the Fire Department to check the calibration of the seismograph, monitors, and, if required by the Newton Fire Department will determine the blast limits throughout the blast period. The Newton Blasting Consultant will consult with the Newton Fire Department on an as needed basis throughout the blasting period.

3. *Selection of the Blasting Contractor* - A Blasting Contractor, acceptable to both the Petitioner and the Newton Fire Department, will be selected after review of the qualifications of such contractor by the Petitioner's Consultant and the Newton Blasting Consultant.

4. *Blasting Plan* - The Blasting Contractor will submit a Blasting Plan for review and approval by the City's Health and Human Services Department and Fire Department, and by the Newton Blasting Consultant. The Blasting Plan must include a list of proposed blasting agents; and Material Safety Data Sheets (MSDS) for those agents. The Blasting Contractor will not use Ammonium Nitrate Fuel Oil as an explosive blasting agent, or any explosive or detonators containing Perchlorate. In addition, the Blasting Contractor will make every effort to select

materials that will minimize any adverse environmental impacts. The contractor will identify in the blasting plan the measures that will be taken in order to minimize groundwater disruption.

The Blasting Plan shall be provided by the Blasting Contractor a minimum of 30 days prior to blasting at the site, detailing the planned procedures to be used at the site limits closest to the nearest residences, and also detailing procedures to be used at the deepest rock cut areas in the central portion of the site. The Blasting Plan should also contain a Blast Site Security Plan showing the locations of sentries to be provided prior to each blast round to keep unauthorized personnel from entering the blast area, and the means of communication from the blaster to the sentry to ensure the area is clear prior to detonation.

The Blasting Plan shall include the details of the test blast program consisting of at least three blasts detonated at least 300 feet from the closest residence. The Blasting Plan will be used to assess the planned procedures and to adjust the scaled distance relationships at the site.

5. *Pre-Blast Survey* - A pre-blast survey will be done in accordance with State law for the interior and exterior of all structures for properties that abut the site or are within 400 feet of the blasting area. It should be noted that 400 feet is a significantly greater distance than the 250 feet required by Massachusetts regulations (527 CMR 13.00).

6. *Initial Blasting* - Initial blasting at the site shall be conducted at a location at least 300 ft from the nearest residence, using a scaled distance no less than 75 ft/lbs. so that site-specific scaled distance relationships can be determined and charge weights per delay can be adjusted as blasting approaches closer to residences.

7. *Fly Rock Control* - The following controls should be in place to reduce the potential for fly rock:

   a. Blasting mats should be used to fully cover the blast area for every blast;

   b. Drillers logs should be kept for all blast holes drilled, documenting open joints, seams, and other anomalies; and the logs should be reviewed by the blaster prior to each blast;

   c. Ammonium Nitrate Fuel Oil (ANFO) should not be used on the project; and

   d. A videotape should be taken of each blast round detonated to identify issues so they can be corrected prior to the next round of blasting.

8. *Insurance Coverage* - The Blasting Contractor shall carry $3,000,000 in comprehensive liability insurance for damage to structures caused by underground explosion and collapse hazard. A certificate will be submitted to the Newton Fire Department by the Blasting Contractor documenting that the required coverage will be in force for the duration of the blasting at the site. If there is a General Contractor or Developer associated with the blasting, each will carry a minimum of $1,000,000 in comprehensive liability insurance.

9. *Permit and Blasting Limits* – The blasting limits identified below must be observed. However, if based upon the recommendations of the Newton Blasting Consultant, the Newton Fire Department concludes that a lower limit is necessary to protect the site and the abutting residential neighbors, that lower limit will be in effect.

   a. Maximum blast induced ground vibrations at the nearest adjacent above ground structure to blasting should be kept below the U.S. Bureau of Mines recommended Safe Limits, as indicated on Figure 1. These limits are based on the frequency and peak particle velocity of the blast vibrations and are safe limits for preventing cosmetic damage to residential structures;

b. Maximum air blast overpressures should be kept below 0.013 psi at above-ground structures in the area. This will minimize the possibility of window damage and also minimize annoyance due to rattling of windows and walls;

c. At roadway and parking areas, permanent rock cuts slopes over 10 feet high should be blasted utilizing perimeter control procedures such as presplitting, cushion blasting (or trim blasting) or line drilling.

10. *Vibration Monitoring* - Blast vibration monitoring should be performed and reported for each round by the Newton Blasting Consultant as follows:

    a. At the two closest residences on Rangeley Road;

    b. At the two closest residences along Lagrange Street (including Broadlawn Park and Broadlawn Drive); and

    c. At one other agreed upon location.

    Monitoring reports should be kept on file at the site for review by the Fire Department and blasting contractor. The Fire Department and blasting contractor should be notified immediately if any vibrations exceed the regulatory limits.

11. *Nosie and Dust Control* – Noise and dust from the drilling operations should be minimized through the use of appropriate mufflers and the use of water or other fluid to control dust at its source.

12. *Notification and Warning Systems* - Not less than 72 hours prior to the commencement of any blasting, the Petitioner will deliver by hand written notification to all properties that were entitled to a pre-blast survey under subparagraph 5. Such notification will state when the blasting period will begin and will include an explanation of the warning procedures for blasting including blast alarms. The Petitioner will send another letter notifying the same parties when the blasting has been completed. A system of audible warning signals/alarms must also be established in the Blasting Plan that will be used by the Blasting Contractor to warn personnel at the site and nearby residents prior to each blast. The warning signals should be audible at least 600 feet from the blast area and be used prior to each blast.

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15. The Petitioner's General Contractor will coordinate hours of blasting to prevent conflicts with school-aged pedestrians walking to and from Newton, Brookline, and Boston schools and designated school bus stops, particularly during the hours of 7:00 am to9:00 a.m.; 2:00 pm to3:00 p.m. and from 4:00 p.m. to 6:00 p.m. on days when school is in session.

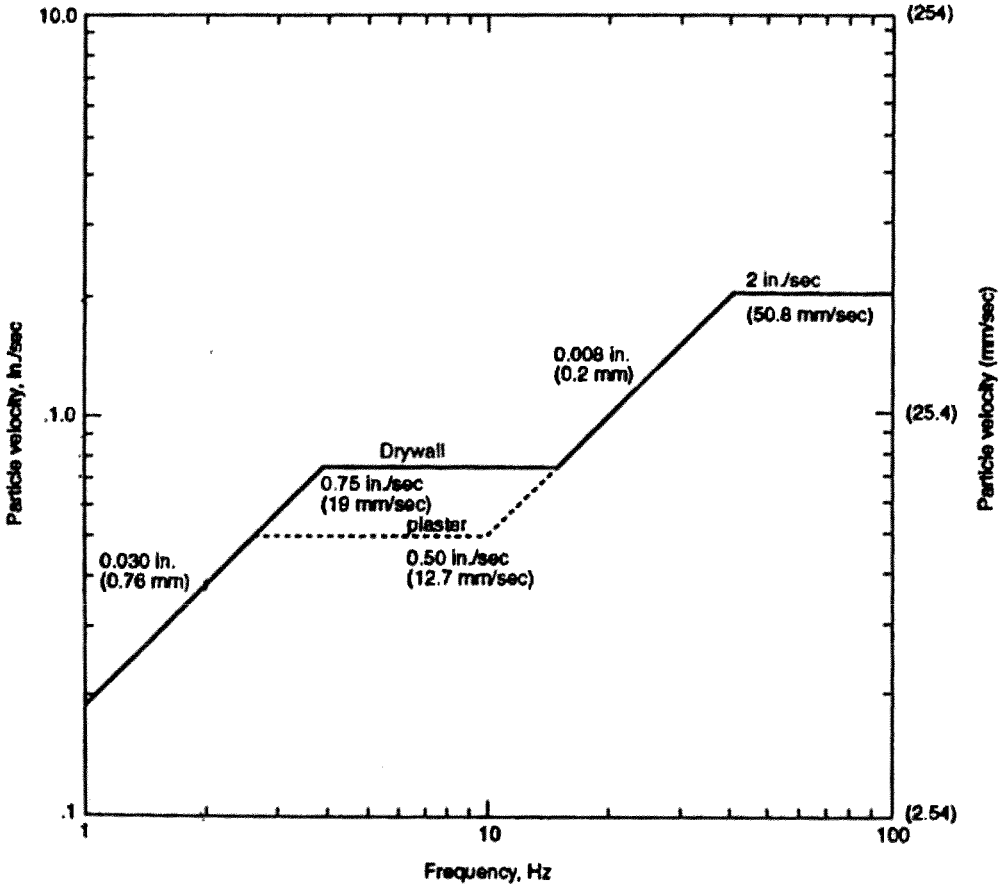


Figure 1 - Particle Velocity Vs Frequency
United States Bureau of Mines (1980)

TABLE 1 - BEDROCK RESULTS

Boring	Ground Surface Elevation (feet)	Proposed Excavation Elevation (feet)	Refusal Conditions / Top of Bedrock		Bedrock Excavation Depth (feet)	Rock Core Results			
			Depth (feet)	Elevation		Core Run	Depth (feet)	Recovery (%)	RQD (%)
Roadway Borings									
R-1	194	184	4.5	189.5	5.5	C-1	4.5' to 6.5'	98	21
						C-2	6.5'-11.5'	100	53
						C-3	11.5'-15.5'	88	41
R-2	192	186	1	191	5	C-1	1'-6'	100	36
						C-2	6'-10'	100	88
R-3	196	186	4	192	6	C-1	4'-9'	100	68
						C-2	9'-14'	98	87
R-4	199	189	1	198	9	C-1	1'-6'	100	38
						C-2	6'-11'	100	57
						C-3	11'-16'	100	83
R-5	178	184 (fill)	2.8	175.2	None	C-1	3' to 8'	75	15
R-6	185	184 (till)	4.8	180.2	None	No Core			
Building Borings									
B-1	186	183	1	185	2	C-1	1'-6'	83	0
						C-2	6.5'-10'	87	13
B-2	185	183 (till)	3.7	181.3	None	C-1	4'-9'	95	18
B-3	180	183 (fill)	3.8	176.2	None	C-1	3.8'-8.8'	100	90
B-4	202	183	0	202	19	C-1	0'-5'	88	65
						C-2	5'-10'	100	92
						C-3	10'-13'	100	83
						C-4	13'-18'	98	82
						C-5	18'-23'	97	95
B-5	192	183	2	190	7	C-1	2.5'-7.5'	100	50
						C-2	7.5'-12.5'	90	47
B-6	198	183	0	198	15	C-1	0'-5'	90	30
						C-2	5'-10'	92	48
						C-3	10'-15'	100	76
						C-4	15'-20'	98	60
B-7	214	183	0	214	21	C-1	0'-5'	100	70
						C-2	5'-10'	98	63
						C-3	10'-15'	98	75
						C-4	15'-20'	98	75
						C-5	20'-25'	98	60
						C-6	25'-30'	97	72
B-8	190	183 (till)	10	180	None	C-1	10'-15'	98	87
B-9	206	183	1.8	204.2	21.2	C-1	2.5'-7.5'	83	18
						C-2	7.5'-12.5'	60	6
						C-3	12.5'-17.5'	100	50
						C-4	17.5'-22.5'	100	52
						C-5	22.5'-25'	100	33
B-10	195	183	4	191	8	C-1	4'-9'	42	0
B-11	194	183 (till)	10	184	None	C-1	11'-16'	100	87

BLASTING RESPONSE
October 16, 2014

CHR conducted a detailed review of (i) the Cornerstone Blasting Plans; (ii) the Haley & Aldrich special blasting standards prepared for Cornerstone; and (iii) the Peer Review of the Cornerstone/Haley & Aldrich plans done for the City by Woodard & Curran during the earlier permitting of this project in 2006. As noted in the CHR mark up of the Construction Management Plan, CHR intends to follow the standards and protocols spelled out in these plans with only the modifications noted in the Stantec Addendum to the CMP.

I. General Blasting Standards

It is noteworthy that Woodard & Curran's peer review of these plans, which CHR is following except as noted, approves of the blasting methodologies. Their Peer Review memo provides as follows:

> We have received and reviewed the above referenced document and offer the following:
>
> The approach proposed by Haley & Aldrich intends to meet or in most cases exceed the governing standards for permits and approvals by the blasting control agencies. It is also intends to closely monitor and observe the results of production blasting done in accordance with these standards. If there are problems detected by and of the observation methods, or by home owners, then the procedure is to halt production, convene, the experts redesign blasting methods to prevent further unacceptable impacts from the blasting.
>
> It appears to us at this point that the approach described coupled with a performance based blasting requirements in the order of approval is the most realistic and prudent means to mitigate potentially unforeseen outcomes. It would be in the best interest of the City to incorporate a degree of flexibility in how the City implements the performance standards in order to minimize the rock removal period.

II. Groundwater Impacts

The second area addressed is the blasting impacts on groundwater flow. A peer review was also done on this by Woodard & Curran dated May 11, 2006 and a subsequent memo dated May 24, 2006 from Haley & Aldrich was written and incorporates the peer review comments. Of note, Woodard & Curran concurs with Haley and Aldrich that the blasting will not have an effect on the groundwater. From the Woodard & Curran memo:

Based on our review of the blasting assessment report, the local topography and our experience in the area, it does not seem likely that there will be a significant impact on groundwater movement as a result of this work. The greatest potential impact would occur if a large fracture existed in the rock that provided a substantial conduit for groundwater to recharge the wetlands. Blasting could cause this fracture to close and therefore block the natural flow of groundwater to the wetland. However, this is not very likely due to the blast monitoring controls described in the report by Haley & Aldrich. Furthermore, there does not appear to be any surficial expression of such a mega-fracture extending from the hill into the wetlands that could be the prime (ground) water feeder to sustain the wetlands. Instead, the topography suggests that these wetlands are in a bowl surrounded by highlands, so it would be reasonable to think that surface water drainage is a prime contributor to sustaining the wetness of these wetlands.

One of the recommendations was to install groundwater monitoring wells when the work begins. CHR has gone ahead and installed these wells and took a reading of the elevation of the groundwater. Here are the readings for the three wells that are along the property line of the closest neighbors::

Well Location	GS Elevation (feet)	Water Elevation (feet)	Comments
OW-1	195	178.2	proposed roadway grade is 186 to 187
OW-2	184	169.8	proposed roadway grade is 189
OW-3	176	154.7	

The lowest elevation of rock excavation is the garage of the building and that is at elevation 185. Using this number the groundwater is over 6.5' below the lowest elevation of disturbance. Because of the fact that the limits of blasting will be above the groundwater table, CHR's geotechnical consultants have concluded that Woodard & Curran's peer review conclusion is accurate. The experts would only expect to see the possibility of changes in groundwater flow direction and velocity when there is blasting directly in or beneath the water table. Here, with the benefit of the groundwater wells having been installed by CHR, there is further information to support the conclusion that groundwater impacts from blasting are not expected. Notwithstanding all of this, the Construction Management Plan still contains safeguards and monitoring.

III. Wetlands and Surface Water Impacts

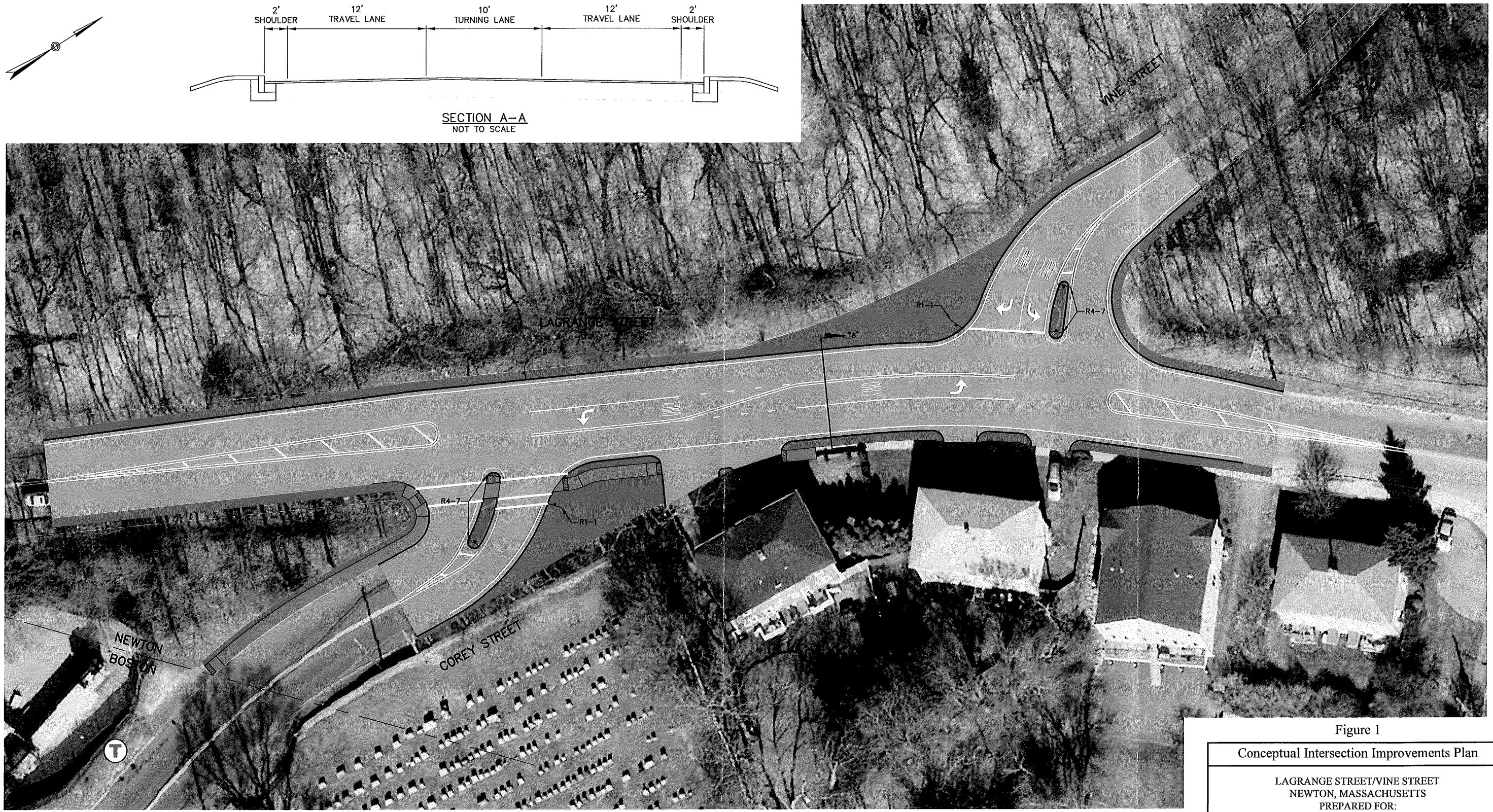
The recharging of the wetlands was brought up as a potential issue since it was indentified that the existing surface flow is the way the wetlands are recharged. This is addressed by a storm

water collection and cleaning system for the disturbed areas which then discharges clean water back into the wetlands. CHR is keeping this same design.

There was also a concern of increased surface water flow towards the Brookline neighbors. From the Haley & Aldrich memo:

> As noted above, the major contributor to any water flow towards abutters residences from this site would be overland surface flow. We also note that the existing topography does not direct surface water to the abutting residential properties on Rangely ROad, but instead generally flows parallel to the property line, the Brookline Town line, and no surface changes are proposed anywhere along that line.

CHR is also not disturbing the existing grade along the property line and has taken the additional step of dropping the proposed roadway grades lower than the embankments so that the road is depressed and all water is contained in the onsite storm water collection system and cannot flow towards the Brookline abutters.



NOTES

1. THIS PLAN INTENDED FOR DISCUSSION PURPOSES ONLY; IT IS NOT FOR CONSTRUCTION.
2. FINAL DESIGN IS SUBJECT TO FIELD SURVEY BY OTHERS.
3. PROPERTY LINES AND ACCESS LINE LOCATIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO DEED AND TITLE RECORDS.
4. BASE PLAN SOURCE: STANTEC & DIGITIZED MASSGIS PLAN.

LEGEND

MBTA BUS 37

PROPOSED SIGNS

R1–1 R3–7L R4–7

SCALE
0 10 20 40 60 FEET

Figure 1

Conceptual Intersection Improvements Plan

LAGRANGE STREET/VINE STREET
NEWTON, MASSACHUSETTS
PREPARED FOR:
CHESTNUT HILL REALTY
300 INDEPENDENCE DRIVE
CHESTNUT HILL, MASSACHUSETTS 01803

MDM TRANSPORTATION CONSULTANTS, INC.
PLANNERS & ENGINEERS
28 Lord Road, Suite 280
Marlborough, MA 01752
Tel: (508) 303-0370
Fax: (508) 303-0371

DATE: August 2014 | SCALE: As Noted
PROJECT No. 765 | File: 765 Conceptual Plan with Crosswalks (Color).dwg | Sheet 1 of 1

ATTACHMENT G

ATTACHMENT H

City of Newton

DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION
110 Crafts Street
Newton, MA 02460

Setti D. Warren
Mayor

DATE: September 23, 2014

TO: James Frease, Interim Director of Planning

FROM: William G. Paille, P.E.,Director of Transportation

RE: **Kessler Woods Development – Lagrange & Vine Improvements**

I have performed a preliminary review of the Traffic Impact Assessment prepared by MDM, dated July 23, 2014 and concur with their conclusions that in general, the impact of this development (i.e. projected traffic volumes) to traffic flow along Lagrange Street is negligible and as a result, no changes to traffic operations are required. However, traffic flow remains unimpeded at the intersection with Vine/Corey and thus difficult for drivers to enter/exit this intersection, including Kessler Woods residents.

I was contacted by Mr. Robert Michaud, P.E., Managing Principal for MDM Transportation Consultants, Inc. in August and we met at the site on September 5, 2014 to review a conceptual design for specific geometric and traffic management improvements at the intersection of Lagrange and Vine Streets in the City of Newton. After a review of the conceptual plan, I believe these improvements will facilitate traffic and create a safer and more efficient environment for all approaches including residents of Kessler Woods. Refer to attached plan titled "Conceptual Intersection Improvements Plan – Lagrange Street/Vine Street" by MDM Transportation Consultants, Inc., dated August 2014. It is my understanding that MDM presented this conceptual plan at a neighborhood meeting held on September 10, 2014.

The City supports the conceptual improvements at the referenced intersection, and recommends this project be advanced to the preliminary design phase as soon as possible. The City is prepared to coordinate with the design consultant with regard to sharing this design with the appropriate committees and review bodies in order to seek the necessary approvals to implement this project.

Cc: Dave Turocy, DPW Commissioner

Telephone: (617) 796-1491 • Fax: (617) 552-7983 • wpaille@newtonma.gov

ATTACHMENT I

TO: Newton Planning Department

FROM: Chestnut Hill Realty

DATE: October 16, 2014

RE: **Kesseler Woods Sustainable Project Features and LEED-related criteria**

We cannot determine finally at his juncture whether the project will be LEED Certifiable. We are working through the criteria and process now. We intend to meet or exceed the Stretch Code. The following are some of the sustainability items that CHR intends to incorporate into this building as a matter of practice.

- Energy Conservation:
  - Individual on demand gas fired hot water boilers in each unit or a high efficiency central boiler that provide domestic hot water and heating hot water to the individual unit. These boilers are sub-metered for individual use.
  - Each unit is individually metered for electricity use
  - Energy Star appliances that include refrigerator, dishwasher, washing machine
  - LED light fixtures in common areas with motion sensors.
  - LED exterior lighting
  - Closed cell spray foam insulation
  - Weather stripping all exterior doors and unit entry doors
  - Enhanced compartmentalization between units
  - HVAC Startup balancing
- Water Efficiency:
  - Low flow toilets that use .8/gallon per flush
  - Low flow faucets and shower heads
  - Irrigation abatement sub meter

- Misc
  - IAQ- corridor ventilation system
  - Low VOC paint and materials
  - Recycling program building wide
  - Shuttle van from Hancock Village property.