



BEALS + THOMAS

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November 22, 2016,

Ms. Martha A. Morrison, Chair, Topsfield Planning Board
c/o Ms. Donna Rich, Topsfield Planning Board Coordinator
Town of Topsfield
Town Hall, 8 West Common Street
Topsfield, Massachusetts 01983

Via: Email to morrismh@bc.edu, drich@topsfield-ma.gov
and First Class Mail

Reference: Independent Peer Review
Rolling Green Elderly Housing Development
470 Boston Street
Topsfield, Massachusetts
B+T Project No. 2814.00

Dear Ms. Morrison and Members of the Board:

Beals and Thomas, Inc. (B+T) is pleased to assist the Town of Topsfield Planning Board (the Board) with the review of the proposed Rolling Green Elderly Housing Development (the Project) at 470 Boston Street in Topsfield, Massachusetts (the Site).

B+T is assisting the Board with review services relative to the requirements of an Elderly Housing Special Permit, which requires Site Plan Approval and a Stormwater Management Permit which are being requested by the Applicant. We understand that the Project proposes an age-restricted community of 30 residences in 15 duplex style buildings with associated site improvements including a stormwater management system.

We received the following documentation, which served as the basis for our independent peer review:

- *Rolling Green – An Age Restricted Residential Community Located at 470 Boston Street, Topsfield, Massachusetts, Applications for: Special Permit, Site Plan Review, Stormwater & Erosion Control Permit*, dated October 20, 2016, prepared by Sakis Development Company (60 page PDF)
- *Elderly Housing Development – 470 Boston Street, Topsfield, Massachusetts, Drainage Report*, dated October 13, 2016, prepared by Allen & Major Associates, Inc. (552 page PDF)
- *Site Development Plans for Over 55 Residential Development, 470 Boston Street, Topsfield, MA*, dated October 13, 2016, prepared by Allen & Major Associates, Inc. (48 sheets)

We have reviewed the documentation submitted by the Applicant with respect to the requirements of the Town of Topsfield Bylaws including Section 3.16 (Elderly Housing District), Article IX (Site Plan Review), and the Stormwater Management and Erosion Control; the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook (the Handbook); and the Environmental Protection Agency's (EPA) 2012 Construction General Permit (CGP).

The Applicant has requested a series of waivers from the Topsfield Rules and Regulations Governing the Subdivision of Land (the Regulations). Specifically, the Applicant is requesting waivers from constructing the Project access drive in strict accordance with the Regulations relative to subdivision roadway requirements. The Applicant considers that access to the Project should be considered as a private driveway and not a public roadway. Whereas the Site is not proposed to be subdivided and will remain a contiguous lot under the jurisdiction of a home owner's association; we concur with the position of the Applicant regarding the majority of the waivers requested. A summary of the waivers requested and justification for each is included herein. However, we defer to the Board for the determination of the appropriateness of all waivers requested

Introduction:

The Site is identified as Topsfield Assessor's Map 7, Lot 3 and is zoned within the Business Park (BP) District. A portion of the Site is also identified as Ipswich Assessor's Map 49, Lots 1 & 2. The Site is approximately 710,785 SF (16.3 acres), approximately 13.2 acres of which are in Topsfield, with 9.45 acres of buildable upland proposed to be disturbed as part of the Project. The Site is currently partially wooded with the balance previously cleared for the development of a single family home and garage that will both be razed as part of the Project. The Site driveway immediately adjacent to Boston Street (Route 1) was previously reviewed, approved and constructed in accordance with the requirements of MassDOT and is proposed to remain in its current configuration. The northern portions of the Site are comprised of bordering vegetated wetlands and the Site generally slopes from south to north. For the most part, the work is proposed outside the limits of the 100-ft Buffer Zone.

The proposed Project consists of the construction of 15 age-restricted duplex style buildings for a total of 30 residences. The Project will be accessed by a 22-ft wide ring road that will utilize the existing curb cut on Route 1. A secondary, gated 20-ft wide gravel access driveway is proposed south of the existing entrance for emergency access and egress. The Project proposes to be served by a municipal water connection and multiple on-site private wastewater soil absorption systems. The Project also proposes associated site work, grading and private utility connections including an extensive stormwater management system.



Aerial photograph of the Site and surrounding land uses

Site Visit:

We visited the Site on November 14, 2016 to gain familiarity with surrounding land use patterns and evaluated the existing conditions with regard to the proposed development. We have included photographs herein that were obtained during the site visit to help illustrate the existing conditions and to provide context for our comments.



The existing driveway at Boston Street and a view of the driveway to the west into the site



Boston Street at the existing driveway viewed to the north and south, respectively



Characterizations of the typical upland vegetation and northern resource area, respectively



The existing home and garage structures to be razed, respectively

Waiver Comments:

The following is a summary of the waivers being requested by the Applicant relative to Article 5 – Design and Construction Standards of the Bylaws.

1. 5.1.2 Streets, Cross Sections: The Applicant is requesting a waiver to reduce the pavement width from 26-ft to 22-ft. We concur that the reduced pavement width is a benefit from a stormwater management and vegetated wetland impact perspective. It is our opinion that the proposed 22-ft pavement width will provide for safe travel for this application with limited traffic.
2. 5.1.3 Alignment, Grade, Dead End and Intersections: The Applicant is requesting a waiver from the dimensional and geometric requirements of the Bylaw. We concur with the Applicant that the driveway alignment as proposed will provide for safe travel to a limited number of dwelling units.
3. 5.1.4 Dead End Streets: The Applicant is requesting a waiver to have a dead end street in excess of 650-ft. The Project will not become an accepted Town subdivision roadway. We concur with the Applicant that the driveway alignment as proposed will provide for safe access as supported by Chief Giovannacci's memorandum dated June 7, 2016.
4. 5.3 Curbing: The Applicant is requesting a waiver from providing granite curbs at intersections. The Project will not become an accepted Town subdivision roadway. We concur with the Applicant that whereas the driveway will be operated and maintained as a private access drive, the use of Cape Cod berm throughout the Project appears appropriate.
5. 5.4.2 Sidewalks: The Applicant is requesting a waiver from providing a continuous sidewalk on one side of the driveway in accordance with the regulations and to utilize the meandering sidewalk as proposed. The Project will not become an accepted Town subdivision roadway. Whereas there is no sidewalk access on Route 1, we concur that the waiver from a formal sidewalk network appears to be reasonable. However, we recommend that the Applicant evaluate the addition of sidewalk along proposed units 1 thru 6 to provide access to the mailbox area for those who utilize the inner sidewalk loop.
6. 5.5.2 Grass Strips: The Applicant is requesting a waiver from providing a grass strip and will have the walkways directly abut the driveway. We concur with the Applicant that in this application the elimination of the grass strip would be appropriate in the context of the development.

7. 5.5.3 Grass Strip Tree Planting: The Applicant is requesting a waiver from providing grass strip tree plantings. In conjunction with Waiver Comment #6 above, we concur with the elimination of the grass strip, and therefore, the associated plantings. The Applicant appears to be providing adequate plantings within the dwelling yards to mirror the intent of the Bylaw.
8. 5.10 Street Lighting: The Applicant is requesting a waiver from providing a formal street lighting system. The site lighting provided via individual dwelling lamp posts appears to be appropriate for the interior context of the development proposed. Although we recognize that Route 1 does not have street lighting in this area, we request the Applicant to consider providing street lighting or reflective markings at the Route 1 curb cut, in consultation with the Topsfield DPW and MassDOT.
9. 5.12.1.b Utility Locations: The Applicant is requesting a waiver from the utility layouts required by the Bylaw. The reduced pavement width and elimination of the grass strip will require a consolidation of the utility installations within the roadway as proposed. It is our opinion that the proposed layout of the utilities is appropriate.
10. 5.12.3.e Drainage: The Applicant is requesting a waiver for the use of HDPE pipe in lieu of the required RCP. We concur with the Applicant that the use of HDPE has become increasing more common and is appropriate for use within a private development controlled and maintained by a home owner's association.
11. 5.12.3.m Drainage Manholes: The Applicant is requesting a waiver to have drainage manholes spaced on the order of 350-ft as opposed to the 300-ft maximum required. It is our opinion that the drainage structure spacing proposed is appropriate for use within a private development controlled and maintained by a home owner's association.
12. 5.13.1 Utility Easements: The Applicant is requesting a waiver from providing 30-ft wide utility easements. The Applicant should provide further information regarding the demarcation point of the public water system vs the private condominium service main. This should be reviewed with DPW to determine whether the Town will require an easement for water main operation and maintenance on the Project Site.
13. 5.13.2 Drainage Easements: The Applicant is requesting a waiver from providing drainage easements. The stormwater management system will be privately controlled and maintained by the home owner's association; therefore, drainage easements will not be required.
14. 5.14 Monuments: The Applicant is requesting a waiver from providing right-of-way and property line monuments. The Project will not be further subdivided and a defined right-of-way is not being provided; therefore, monuments will not be required.

15. 5.20 Tree Planting: The Applicant is requesting a waiver from providing two (2) trees per lot. The Project will not be further subdivided; therefore, a two (2) tree per lot requirement is not applicable. The arrangement and number of tree plantings being proposed appears to mirror the intent of the Bylaw.
16. 5.21 As-built Plans: The Applicant is requesting a waiver from providing an as-built plan. Though not a formal subdivision that will be accepted by the Town, it is our opinion that it would be appropriate for the Applicant to provide an as-built plan to document conformance with the approved design, permits and associated conditions, and to facilitate future property and utility maintenance.

General Comments:

1. Section 5.1.4 of the Bylaws references the need for secondary access to dead end streets. The Project proposes a secondary emergency access drive that will require a curb cut from Boston Street (Route 1) that will be subject to review and approval under the jurisdiction of MassDOT. We acknowledge the memorandum from Topsfield Fire Chief Giovannacci relative to being comfortable without a secondary means of access to the project if the dwellings include sprinkler systems. We recommend that conformance with Chief Giovannacci's requirement for sprinklers in compliance with NFPA 13 be made a condition of the decision if the Project is approved.
2. Section 3.16.C.1.q of the Bylaws requires a buffer zone of no less than 25-feet for all side and rear boundaries of the Site within the Elderly Housing District. We acknowledge the inclusion of this buffer zone within the plans; however, the provided project narrative references that a 27-foot buffer zone will be provided. We request that the Applicant clarify the noted discrepancy relative to the depth of the buffer zone being provided.
3. Section 3.16.C.1.s of the Bylaws requires that an eligibility plan for the Elderly Housing Development be supplied to the Board. It does not appear such a plan has been provided to date. We recommend that conformance with the referenced section of the Bylaws be made a condition of the decision if the Project is approved.
4. The Applicant proposes to reuse in part the existing water service connection previously installed for the Site; however, documentation relative to its age or relative condition have not been provided. We recommend that the Topsfield Department of Public Works confirm the appropriateness of the reuse of this water service connection.

5. The Project proposes multiple soil absorption systems (SASs) to serve the wastewater disposal needs of the proposed development. We acknowledge the SASs design details provided; however, review of the wastewater disposal systems is outside of our review scope for the Planning Board. We recommend that review and approval of the wastewater disposal systems be confirmed by the Topsfield Board of Health.
6. The Applicant proposes that a single post with a fixed banner style sign that will be externally lit be installed on Boston Street; however, specifics of the sign have not been provided. We recommend that conformance with the Bylaws relative to any proposed signage be made a condition of the decision if the Project is approved.
7. We acknowledge the inclusion of architectural floor plans within the plan set; however, inconsistencies appear between the plans. The second floor plans for both the A and B unit types appear to be same as the first floor plans for each respective unit. We request that the Applicant clarify the design intent for the noted unit styles and revise the plans as applicable.

Stormwater Management Comments:

1. The outlet from the proposed infiltration basin (Pond D-1) is defined as a 15-in HDPE pipe on Drainage Plan C-4B; however, is modeled as an 8-in by 4-in box culvert within the HydroCAD modeling. We request that the Applicant clarify the design intent of infiltration basin outlet and revise the documentation as applicable.
2. Standard 3 of the Handbook requires a mounding analysis for infiltrative best management practices (BMPs) when separation to groundwater is less than four (4) vertical feet. The Applicant acknowledges only a two (2) foot vertical separation exists, but states that these BMPs are not attenuated systems and the mounding analysis is not required. However, for both systems, the inflow rate is greater than the outflow rate, indicating that some level of attenuation is occurring within each system. We request that the Applicant clarify the design intent of these BMPs relative to the required mounding analysis and provide the noted calculations as applicable.
3. The locations and parameters used to model Ponds D-2 and D-3 is unclear. We request that the Applicant document and verify the parameters used in the modeling of these Ponds.
4. Inconsistencies exist within MA DEP recharge and water quality volume calculations provided. The pervious areas utilized for watersheds P-2 and P-9 are inconsistent between the HydroCAD modeling provided and the calculation table. Watershed R-17 is not included within the calculations nor does it appear on the Proposed Watershed Plan. It is also unclear how the recharge and water quality volumes being provided were calculated. We request that the Applicant clarify the noted discrepancies and revise the documentation as applicable.

5. Inconsistencies exist between the plan set and the Pipe Listing (Node) table provided within the HydroCAD modeling. These inconsistencies include:
 - a. The slope and diameter on Node D-1
 - b. The out-invert and slope of Node UIS-7
 - c. The out-invert of Node UIS-9

We request that the Applicant clarify the noted inconsistencies and revise the documentation provided as applicable.

6. Inconsistencies exist between the Exiting Watershed Plan and the HydroCAD modeling provided in the Drainage Report. These inconsistencies include:
 - a. Ground cover type and CN used for Subcatchment E4
 - b. HSGs and CN used for Subcatchment E3
 - c. CN used for Subcatchment E2

We request that the Applicant clarify the noted inconsistencies and revise the documentation provided as applicable.

7. Inconsistencies exist between the Pipe Sizing Table from the Drainage Report and the drainage plans provided. These inconsistencies include:
 - a. The length of the pipe between WQU-1 and UIS-1
 - b. The slope, lower invert and upper rim elevations for the pipe length between CB-5 and DMH-4
 - c. A duplicate entry exists for the pipe length between CB-6 and DMH-4
 - d. The diameter and lower invert elevation for the pipe length between Roofs 4, 5 & 6 and DMH-9
 - e. The length, upper invert and rim elevations for the pipe length between DCB-9 and CB-2

We request that the Applicant clarify the noted inconsistencies and revise the documentation provided as applicable.

8. A drawdown calculation has not been provided for the infiltration basin. We request that the Applicant document that the noted BMP drains within the required 72 hours.
9. Relative to the narrative provided for Standard #3 of the Handbook, the Drainage Report provided defines SCS-420B soil as being hydrologic soil group (HSG) C. The Exiting Watershed Plan provided defines the same soil type as HSG A. We request that the Applicant clarify the noted inconsistency and revise the documents as applicable.

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We respectfully request that the Applicant provide a narrative response and revise the documents accordingly to address the above noted items in order to establish the Administrative Record.

We will be available at the Public Hearing, when scheduled, to present the results of our review and be available for discussion regarding the comments listed herein.

We appreciate the opportunity to assist the Town of Topsfield with the review of this Project. Please do not hesitate to contact our office with any questions.

Very truly yours,

BEALS AND THOMAS, INC.



Matthew Cote, PE
Senior Civil Engineer

MC/RPK/ars/281400LT001