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November 10, 2015

Ms. Martha A. Morrison, Chair, Topsfield Planning Board
c/o Ms. Roberta Knight, Purchasing and Community Development Coordinator
Town of Topsfield
Town Hall, 8 West Common Street
Topsfield, MA 01983

Via: Email to: rknight@topsfield-ma.gov and First Class Mail

Reference: Definitive Subdivision Plan of Land Peer Review
57 Perkins Row
Topsfield, Massachusetts
B+T Project No. 2613.00

Dear Ms. Morrison and Members of the Planning Board:

Beals and Thomas, Inc. (B+T) is pleased to assist the Town of Topsfield Planning Board (the Board) with the peer review of the Definitive Subdivision Plan of Land for the proposed subdivision development at 57 Perkins Row (the Site). The Applicant proposes to develop a five lot residential subdivision (the Project) on the ±8.2-acre property. The Board has been asked to approve the Definitive Subdivision Plan Application Package in accordance with Article 4, Section 4.3 of the Rules and Regulations Governing the Subdivision of Land in the Town of Topsfield.

The Applicant has also submitted documentation to the Town of Topsfield Conservation Commission (the Commission) regarding a Notice of Intent (NOI) filing for the Project. On behalf of the Commission, B+T has reviewed the NOI submission, in particular with regard to the stormwater management system proposed for the Project. B+T issued a letter dated September 16, 2015 to the Commission which presented the results of our review of the NOI documentation submitted by the Applicant. Subsequently, B+T issued a letter dated October 21, 2015 to the Commission and the Board which presented our supplemental review of the documentation provided. Please refer to the referenced letters for a summary of our comments related to the stormwater management system proposed for the Project.

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We received the following documentation which served as the basis for our supplemental review:

- Submittal letter to Topsfield Planning Board regarding *Definitive Subdivision Plan, 57 Perkins Row, Topsfield, MA*, dated June 16, 2015, prepared by McCann & McCann, P.C., (18 pages including attachments)
- *Revised Form B Application*, dated June 16, 2015, prepared by McCann & McCann, P.C., (1 page)
- *Definitive Subdivision Plan of Land, 57 Perkins Row, Topsfield, MA, Environmental Impact Statement*, dated June 16, 2015, prepared by the Morin-Cameron Group, Inc. (60 pages)
- *Stormwater Management Summary, Site Development at 57 Perkins Row, Topsfield, Massachusetts*, dated June 16, 2015, prepared by the Morin-Cameron Group, Inc. (123 pages)
- *Definitive Subdivision Plan of Land at 57 Perkins Row, Topsfield, Massachusetts (Assessor's Map 58, Lot 25)*, dated June 16, 2015, prepared by the Morin-Cameron Group, Inc. (10 sheets)

We have reviewed the documentation submitted by the Applicant with respect to the requirements of the Rules and Regulations Governing the Subdivision of Land in the Town of Topsfield (the Regulations); the Stormwater and Erosion Control Regulations, Town of Topsfield Planning Board; 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 is requesting waivers from multiple requirements of the Regulations and has provided a list on the cover sheet of the plan set. The Applicant's submission package includes correspondence from the Highway Superintendent, David M. Bond, supporting the granting of several of the waivers. The waivers requested by the Applicant include:

- Pavement width: We understand that the Highway Superintendent is in agreement with the reduction in the pavement width from 26 ft to 24 ft. We do not object to this waiver.
- Modify Typical Cross Section: We understand that the Highway Superintendent is in agreement with the modified cross section as it relates to minimizing the impact at the wetland crossing. We do not object to this waiver.
- Pavement Structure: We understand that the permeable paver island in the cul-de-sac has been removed as a result of comments received from Town personnel and that this waiver request is no longer applicable.
- Grass Strip: We understand that in conjunction with the modification to the cross section, the Highway Superintendent is in agreement with the removal of the grass strip between the sidewalk and the paved roadway. We do not object to this waiver.

- No light poles: We understand that the Highway Superintendent is in agreement that street lighting is not necessary for this project. We do not object to this waiver.
- Drainage pipe: The use of HPDE and DI drainage pipe is a common engineering practice and we do not object to use of these pipe materials in lieu of RCP. We recommend that the Highway Superintendent confirm the appropriateness of this waiver request.
- Side slopes: We do not object to the use of a 3:1 slope or wall in lieu of a 4:1 side slope.
- Vertical stopping sight distance: We understand that the Applicant has reduced the design speed of the road and that this waiver request is no longer applicable. We further understand that the Highway Superintendent is in agreement with the design speed reduction.
- Cul-de-sac R.O.W. radius – No island: We understand that the Highway Superintendent is in agreement with the reduction in R.O.W. radius as long as the pavement radius is full width as proposed. We do not object to this waiver.

Introduction:

The Site is identified as Assessor's Map 58, Lot 25 and is zoned within the Inner Residential and Agricultural District (IRA). The Site is approximately 356,838 SF (8.19 acres). The Site is currently wooded and includes an existing single family residence at 57 Perkins Row, which is proposed to be demolished as part of the Project. The northern portion of the Site is comprised of bordering vegetated wetlands adjacent to Perkins Row and the southern portion of the site is bordered by vegetated wetlands associated with the Ipswich River. The site is surrounded to the north east and west by residential uses.

The proposed Project consists of the construction of a five (5) lot subdivision including a \pm 630-ft dead end cul-de-sac roadway. The Project includes the extension of an 8-in water main approximately \pm 850-ft in Perkins Row from its current terminus to the subdivision. Though not explicitly detailed on the plans, we understand that the water main extension will be a condition of approval and closely coordinated and approved by Town personnel, including any requirements to install additional hydrants and/or service laterals to adjacent properties. The subdivision will be served by underground electric, telephone and cable conduits. Each lot will be served by individual drywells for stormwater management and wastewater soil absorption systems. Stormwater management for the subdivision roadway will be directed to a constructed pocket wetland and the project includes wetland replication associated with the wetland crossing. The subdivision roadway will cross the wetland in the location of the existing driveway via modular block retaining walls and a culvert system.



Aerial photograph of the Site and surrounding land uses

Site Visit:

We visited the Site on November 9, 2015 with Town personnel and representatives of the Applicant to gain familiarity with the surrounding land use patterns and to evaluate 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 provide context for our comments.



Existing driveway and proposed location of new roadway at Perkins Row.

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Perkins Row at the proposed subdivision roadway viewed to northwest



Perkins Row at the proposed subdivision roadway viewed to southeast

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The existing wetland on the west of the driveway viewed to the southwest



The existing wetland on the east of the driveway viewed to the northeast

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The existing hydraulic crossing of the driveway viewed to the south



The existing dwelling viewed to the north

General Comments:

1. The plan view detail on the Road Plan & Profile (Sheet 5 of 10) depicts two (2) proposed hydrants that are separated by over 650 linear feet. Section 5.12.2.d of the Regulations requires hydrant spacing to not be greater than 500 ft. Additionally, hydrants will be required along the alignment of the water main extension in Perkins Row, though none are identified. We request that the Applicant clarify the design intent of the hydrant spacing, coordinate the hydrant locations with the Topsfield Fire Department, and revise the drawings accordingly.
2. Water service laterals to the proposed lots are not depicted on the plans. We request that the Applicant clarify the design intent of the water service laterals and identify if they will be installed during roadway construction or deferred to individual lot development.
3. B+T acknowledges the inclusion of the Electrical Conduit Trench Detail; however, a detail for the telephone and cable conduits has not been provided. The Typical Road Cross Section on the Road Layout & Cross Sections (Sheet 6 of 10) depicts these utilities proposed in a common corridor. We request that the Applicant clarify the design intent for the telephone and cable utilities and revise the drawings as applicable.
4. Section 5.20.1 of the Regulations requires that shade street trees be planted at a minimum of two (2) per lot. The plan view detail on the Road Plan & Profile (Sheet 5 of 10) does not depict trees on Lot 3. We request that the Applicant clarify the design intent of the shade trees to be provided and revise the drawings accordingly.
5. The Site Plan (Sheet 4 of 10) depicts an approximate limit of clearing. Based on this limit, the assumption is that all vegetation within that limit would be removed. The Site currently contains several mature trees within the limit of clearing. We request that the Applicant evaluate the option of protecting select mature trees to remain during site development and identify them on the plans as applicable.
6. The Construction Details sheet (Sheet 8 of 10) depicts details for both Cape Cod berm and sloped granite curb; however, the site plans do not depict the limits of each type of curbing. We request that the Applicant clarify the design intent of the proposed curbing and revise the drawings as applicable.
7. The Bituminous Concrete Sidewalk Detail depicted on the Construction Details (Sheet 8 of 10) requires a 6-in gravel base. Section 5.4.3.c of the Regulations requires an 8-in gravel base except at driveways where it shall be 12-in. The proposed driveway for Lot 1 will cross the sidewalk. We request that the Applicant clarify the design intent of the sidewalk and revise the drawings accordingly.

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8. The erosion and sedimentation control notes on the Site Plan (Sheet 4 of 10) contain a reference to the "*Middleton Conservation Commission*." We request that the Applicant clarify the discrepancy and revise the drawings for clarity of the Administrative Record.

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

We will be available at the Public Hearing on November 17, 2015 to present the results of our review and be available for questions.

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.



Richard P. Kosian, PE
Executive Vice President



Matthew Cote, PE
Senior Civil Engineer

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