

PLANNING BOARD
Town of Ayer
1 Main Street, Ayer, MA 01432
Tel: (978) 772-8220 ext. 144 | Fax: (978) 772-3017 |
Planning@Ayer.MA.US

June 28, 2022

****6:15 PM****

Open Session Meeting of the Ayer Planning Board
Agenda

Meeting in person at Ayer Town Hall, One Main Street, Ayer, MA

6:15 PM

Call to Order

General Business

Approve Agenda

Covenant/Bond Releases – none

Continued discussion, Pleasant Street Extension Guardrail

**Public Meeting, Stratton Hill Preliminary Subdivision Plan,
35 lots off of Wright Road**

Town Planner Update

- Discussion of June 23 site visit to Ayer Solar II site
- Development projects update

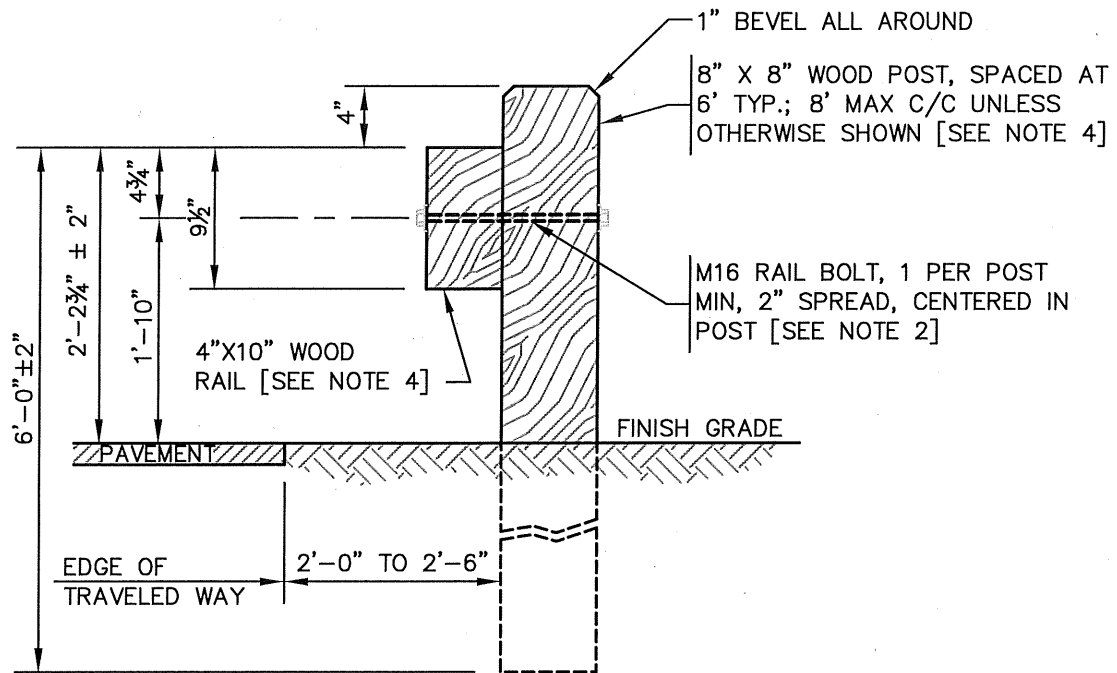
Meeting Minutes – June 14, 2022

Administrative Announcements

Old Business / New Business

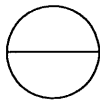
Adjourn

*All meetings are held at Town Hall unless posted otherwise. Order of agenda items may change without notice. Amendments may be made to the agenda to include any emergency or time sensitive material that was unforeseen at the time the agenda was posted. All meetings are subject to video recording.



NOTES:

- [1] ALL NUTS, BOLTS & WASHERS ARE TO BE HIGH STRENGTH GALVANIZED STEEL.
- [2] ALL SPLICES ARE TO BE MADE AT POST; FOUR (4) BOLTS EACH SPLICE.
- [3] BACK-UP PLATE IS TO BE PLACED BEHIND RAIL ELEMENTS AT NON SPLICE LOCATIONS (INTERMEDIATE POSTS).
- [4] WOOD AND WOOD TREATMENT SHALL COMPLY WITH MASSACHUSETTS HIGHWAY DEPARTMENT SPECIFICATIONS AND STANDARDS.
- [5] TERMINAL SECTIONS SHALL BE IN ACCORDANCE WITH MASSACHUSETTS HIGHWAY DEPARTMENT SPECIFICATIONS AND STANDARDS.



WOOD GUARDRAIL

TYPICAL CROSS SECTION
NOT TO SCALE

GPR

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RILEY JAYNE FARM LLC
12 LAWTON ROAD
SHIRLEY, MA 01464

JOB: 111099B

BY: KI | CHK: NMP

DATE: 06/16/22

**CONSTRUCTION
DETAIL**

DETAIL

Robert L. Collins
Attorney At Law.
P. O. Box 2081
Westford, Massachusetts 01886

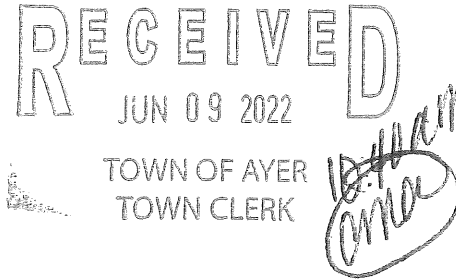
Telephone (978) 448-3511
Facsimile (978) 448-8511

1 June 2022

Groton Office:
204 Gay Road
Groton, Massachusetts 01450

The Ayer Planning Board
Town Hall
1 Main Street
Ayer, MA 01432

RE: Fox Meadow Realty Corporation
Moulton Construction Corporation
LOCUS: "Stratton Hill" Subdivision, Wright Road



Dear Board Members:

I represent Fox Meadow Realty Corporation and Moulton Construction Corporation, owner and developer, respectively, of the property situated on Wright Road commonly referred to as the "Stratton Hill" subdivision.

The plans and application for preliminary plan approval which accompany this letter utilize the current by-law provisions to create a limited development approach for this site. I wish to outline the existing conditions, the proposed development, and alternate scenarios for this site for the Board's consideration.

EXISTING CONDITIONS

This property is situated on Wright Road and is the remaining portion of the 720 acre± former Lone Star/ San Vel site my client purchased 24 years ago, augmented by additional parcels my client purchased along the Westerly shore of Long Pond. The site is crossed by two utility easements; one is held by New England Power Company, the other is held by A T & T. My client owns the underlying fee to the land occupied by these easements.

The site was the subject of a definitive subdivision submission in 2005; the "Stratton Hill" subdivision was endorsed by the Board on June 9, 2005, and appears of record with the Middlesex South District Registry of Deeds as Plan 829 of 2005.

The 2005 Stratton Hill plan created 35 lots occupying approximately 60 acres. Most of these are one acre lots, several lots are slightly larger. The plan

also created seven open space parcels comprised in the aggregate of approximately 110 acres.

All of the lots created by the 2005 plan meet current zoning dimensional requirements, and have been assessed and taxed as building lots since fiscal 2006.

Subsequent to definitive subdivision approval, my client obtained MEPA approval, a Conservation Management Permit issued by the Division of Fisheries and Wildlife, and a sewer extension permit from Mass D.E.P.

Work commenced on the site in 2006, with site work being performed on the area occupied by the lots, the subdivision road being roughed in, a portion of the utilities being installed, and portions of the stormwater management system being constructed.

PROPOSED DEVELOPMENT OVERVIEW

The preliminary subdivision plan submitted with this letter utilizes the recently adopted Open Space Residential Development provisions of the zoning by-law to effectuate a much more environmentally and aesthetically sensitive development on this site.

The plan reduces lot sizes, allowing for thirty five lots to occupy approximately 18.8 acres (rather than the 60 acres used in the 2005 plan); the remaining acreage allows for the open space to be increased to 131.9 acres. A visual buffer of woodland vegetation separates the new development from Wright Road. The open space incorporates all of the shoreline of Long Pond owned by my client. The subdivision road is shortened considerably, thus reducing runoff.

Public access to the open space acreage is enhanced by the new design by incorporating the land between Long Pond and the subdivision road. An area for parking is also provided. The portion of the former subdivision road (which had been roughed in) beyond the development area serves as an easily navigated trail.

As part of this proposal, four affordable housing units will be created; these could be either sale or rental units, which would add to the town's affordable housing stock.

OPEN SPACE RESIDENTIAL DEVELOPMENT

The preamble to Section 10.1, Open Space Residential Development, sets forth the purposes and intent of the provision, to encourage compact development designs in order to preserve land aimed at reducing impacts to the environmental resources of the town, thus protecting forests, water resources, wildlife habitats, and other environmentally sensitive areas.

The provisions of this section encourage flexibility in the design of a development in order to effectuate the goals set forth in Section 10.1.1.

While this zoning provision was not in effect in 2005, the approved subdivision plan represented a limited development approach to this site. The approved plan did not seek to maximize density; rather, it limited the size of the development to thirty five lots occupying less than fifty percent of the acreage.

The current plan does a much better job of addressing the goals of this zoning provision. Lot sizes are substantially reduced, and occupy a much smaller area, thus limiting disturbance and allowing the open space to be increased to approximately 131.9 acres. All of the lots created by the plan occupy area previously disturbed by the site work associated with the 2005 plan.

This open space augments the 437 acres previously gifted by my clients to the Massachusetts Audubon Society, thus creating a large swath of protected land containing a variety of unique isolated ecosystems, landforms, and wildlife habitats. The design also eliminates lots on the easterly side of the subdivision road to the south of the powerline easement, protecting the portion of the westerly shoreline of Long Pond my client owns, thus enhancing the utility of what will be publicly owned land.

ALTERNATIVE DESIGN STUDIES

The proposed development of this site represents a limited development approach to the site, resulting in overall density which is a fraction of what could otherwise occur. The principal aim of this development is to preserve the majority of the acreage in Ayer in order to augment the 437 acre wildlife sanctuary which lies adjacent to this site.

My client has taken that goal one step further in purchasing additional acreage along the shoreline of Long Pond, not to develop, but to add to the land to be permanently protected so as to enhance the future enjoyment of the open space by the public.

While in my mind the design of the proposed development speaks to those goals, it is a worthwhile effort to consider different ways the site could be developed.

A. Conventional Zoning

If one were to maximize the number of lots meeting conventional zoning requirements within the development area shown on the 2005 plan, 44 lots ranging in size from 40,013 square feet to 50,311 square feet could be created.

B. Open Space Residential Development

The density calculation afforded under the Open Space Residential Development By-law would allow 87 lots ranging in size from 10,000 square feet to 40,000 square feet if one were to limit the development area to the envelope of the developed area shown on the 2005 plan. If one were to consider the entire site for development, one could achieve 102 lots.

C. Chapter 40B Density

If one were to instead view the site as a location for a development permitted under Chapter 40B, one could theoretically achieve 140 units within the development envelope of the 2005 plan.

D. 2005 Subdivision

The subdivision plan approved in 2005 provides an interesting comparison, but also provides an interesting case study of Chapter 40A Section 6. The zoning freeze afforded by that Chapter lapsed about nine years ago. The tolling of the freeze did not eliminate or negate the approval of the 2005 plan; rather, the protection expired for lots not meeting the dimensional requirements in place now. Interestingly, all of the lots shown on the 2005 plan meet (and in some cases exceed) current zoning requirements.

I have studied the matter, and consulted with Mark Bobrowski, Esq. of Concord and Melissa Robbins, Esq. of Westford. As the Board is undoubtedly aware, Mark Bobrowski authored the definitive volume regarding Massachusetts zoning, Handbook of Massachusetts Land Use and Zoning Law. Attorney Robbins teaches land use and zoning at New England School of Law, and also is widely consulted as an authority on Chapter 40B developments.

The three of us reached the same conclusion, that the 2005 plan remains valid, and that the lots shown on that plan could be developed if the subdivision road were to be constructed. It is worthwhile to point out that the subdivision road as designed in 2005 meets the current design requirements under the subdivision regulations.

It is thus worthwhile to compare that plan with what is being proposed. While the number of lots remain the same, the disturbed area is reduced by 37.58 acres on the current plan. The length of the subdivision road is also reduced, from 5583 feet to 4300 feet. The open space on the 2005 plan is 97 acres, on the current plan 131.9 acres is permanently protected. The current plan protects the westerly shoreline on Long Pond; the 2005 plan had lots situated in this area.

I respectfully submit that a review of alternate design studies for this site leads to the inescapable conclusion that the proposed development is more environmentally sound and more sensitive to the existing Wright Road neighborhood than any of the alternatives.

WAIVERS

VI (H) Landscape Plan

This section requires the submission of a landscape plan showing, inter alia, trees on the site which are more than 12" in diameter. The site is heavily treed, and most of it will remain in its natural state subsequent to development. It is also my client's intent to retain the existing woodland vegetation to the extent possible within the development area. We will provide a landscape plan with the definitive plan showing street trees where the existing vegetation needs to be augmented, the area within the boulevard entrance to the site, and the previously disturbed area which was to be occupied by the westerly subdivision road, but respectfully request a waiver from this section at the preliminary plan stage.

VI (P) Signage and Road Striping

This section requires striping on the subdivision road; we respectfully request a waiver.

VI (F).2 Test Hole Data

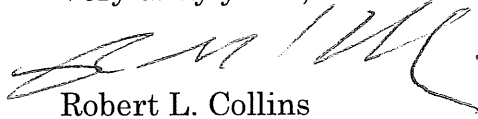
This section requires the submission of test hole data at 200 foot intervals along the subdivision road. This information was provided and reviewed in 2005; we have submitted data for the areas occupied by the drainage system.

SUBMISSION MATERIALS

In addition to the plans, drainage calculations, conservation analysis, a traffic analysis performed by Vanasse & Associates, Inc., alternate design plans, a copy of the 2005 plan, and aerial photographs of the site are enclosed.

I look forward to discussing this plan with the Board at the public hearing. Thanking the Board for its time and consideration, I remain

Very truly yours,

A handwritten signature in black ink, appearing to read 'R. L. Collins', written in a cursive style.

Robert L. Collins

Town of Ayer

Office of the Town Planner



Town of Ayer | Ayer Town Hall | 1 Main Street, 3rd Floor | Ayer, MA 01432 | 978-772-8218 | www.ayer.ma.us

Staff Report #1: Plan Acceptance, Open Public Meeting

STRATTON HILL PRELIMINARY SUBDIVISION PLAN

Prepared by Mark Archambault, AICP, Ayer Town Planner

Date: Friday, June 24 for the **Tuesday, June 28, 2022 Planning Board meeting**

Site Location / Zoning District(s): Access from Wright Road / Residence A-1

Assessor's Map and Parcel Numbers: Map 6, Lot 55 (largest piece)

Tract or Parcel Size Undergoing Development: Approximately 151 acres

Type of Application: Preliminary Subdivision Plan under Section 10.1 (OSRD) of the Ayer Zoning Bylaw

Other Permits needed (*most of these will occur concurrently with the Definitive Plan application*):

- Due to the presence of wetlands in the development proportion of the site, **Notices of Intent** will need to be filed with the Conservation Commission for individual lots, leading to **Orders of Conditions**.
- A **Site Plan** must be approved according to the provisions of **Section 9.6** of the AZB, 'Land Clearing and Grading', which can also be submitted concurrently with the Definitive Plan application. The provisions of that section will need to be met in the Definitive Plan.
- Stormwater Management Permit and NPDES Construction General Permit
- Driveway / Access Permit * Final permits or letters as may be needed for the MEPA / MESA processes

Landowner and Applicant: Fox Meadow Realty Corp. / **Engineer or Surveyor:** Dillis and Roy

EXECUTIVE SUMMARY AND PLANNER RECOMMENDATION FOR JUNE 28, 2022 MEETING

I believe the Preliminary Subdivision Plan application package is complete and ready for Acceptance by the Planning Board. However, I ask the PB to refer to the checklist in the June 28 meeting packet, as there are several items that may require brief discussion before the Board makes a motion to ACCEPT the application for consideration.

In this first staff report, I will not cover *all* the issues relevant to the subdivision but will focus on: 1. The Board's purview in terms of a Preliminary Plan application, 2. Waivers from the Subdivision Regulations to discuss with the applicant, 3. The concurrent Conservation Analysis process (*verbal at meeting*) 4. Peer Review studies for Traffic Impacts and Mitigation and Engineering Review, 6. Initial design observations. Due to the complexity of the issues related thereto, I recommend that deep discussion of the MEPA / MESA process take place at a later meeting.

Project Description and Planner's and Interdepartmental Review

- a. **Project Proposal**: This project proposes a Preliminary Subdivision Plan under Section 10.1 of the Ayer Zoning Bylaw, Open Space Residential Development; and Ayer Subdivision Regulations.
- b. **The Subdivision by the Numbers**: Note - some of these numbers are subject to verification and correction:
- **Total Tract Area**: **151 acres**
 - **Area of lots**: 18.8 acres
 - **Total disturbed area**: 18.8 acres + area of road: TBD
 - **Total Open Space provided**: 131.9 acres (87% of tract is open space, 50% required)
 - **Area of Jurisdictional Wetland**: 6.1 acres
 - **Area of Steep Slopes (> 20%)**: 43.9 acres
 - **Percentage of tract that is steep slopes and wetlands**: 28.2%
 - **Number of House Lots**: **35**
 - **Range of Lot Sizes**: Between a quarter and three-quarters of an acre

I. RECOMMENDED PROCESS FOR THE JUNE 28 MEETING:

Step One: Planning Board Chair and/or Town Planner describe the process and order for the conduct of the meeting (*applies to subsequent meetings as well*).

Step Two: Planning Board considers **Plan Acceptance** to open Subdivision Public Meeting.

Step Three: Applicant provides their presentation on the Preliminary Plan.

Step Four: Town Planner gives his initial presentation to the Planning Board and Public.

Step Five: Questions and comments from the Planning Board.

Step Six: Questions and comments from the Abutters & Public.

Step Seven: The Planning Board should next **consider the issue of which Peer Review Studies** to consider, at least taking up the issue of a traffic study due to the lead time needed to get it going.

Step Eight: The Planning Board should then consider **Waivers** from the Subdivision Regulations. Some of these may require more than one meeting to consider. It is important to note that the PB cannot **vote** on waivers at the Preliminary Plan stage, but rather, by the end of the Preliminary Plan stage, should provide the applicant with a 'sense of the Board' on whether it is favorably inclined or leaning against later granting the specific waivers. This will be necessary for the applicant in preparing the Def. Plan.

Step Nine: The Planning Board should then discuss 'big picture' issues related to subdivision layout, driveways, open space, stormwater utilities in relation to the open space, potential trail access, street trees and landscaping.

II. THE PRELIMINARY SUBDIVISION PLAN PROCESS:

A) Preliminary Plans under Massachusetts law:

Under Massachusetts Planning Law, Preliminary Plans are intended as an optional first step in working out the basic design features of a subdivision, at which the Planning Board works with the applicant to help ensure that the design being anticipated meets the requirements of the Town's zoning bylaw, subdivision regulations, and other pertinent regulatory requirements. It also affords an early opportunity to determine the number of lots that will result (via a 'Yield Plan' or similar process). Basic engineering and stormwater management considerations can be discussed, but Preliminary Plans do not require final resolution of all engineering details.

The Preliminary Plan process also is intended to better define the basic parameters of the subdivision, such as the road length and design, required waivers and the PB's initial assessment of such, the configuration of the open space, the approximate location of stormwater management basins, peer review studies (i.e. traffic, engineering, etc.), and any state level permits that may be needed under MEPA / MESA, etc.

By the end of the Preliminary Plan review process, the PB must decide to 'approve, approve with modifications or deny' the Preliminary Plan. **It must be noted that in the end, Planning Boards must approve subdivision plans that meet the requirements of the applicable zoning bylaws and subdivision regulations.** Subdivision approvals are not discretionary like Special Permits and Variances.

An important motive for applicants to go through the Preliminary Plan process is the zoning protection such affords them. *"Submittal of a preliminary plan, followed within seven months by a definitive plan, 'freezes' the zoning in effect with regard to the land shown on the plan for a period of eight years from the date of the endorsement of the definitive plan."* – Attorney Mark Bobrowski in 'Handbook of Massachusetts Land Use and Planning Law'.

It must also be emphasized that the Planning Board's decision on a Preliminary Plan is non-binding on both the Board and applicant, though good faith negotiations and deliberations would suggest that the Definitive Plan be as close in design to the Preliminary Plan eventually approved by the Planning Board. No construction of a subdivision can commence until the Planning Board approves a Definitive Subdivision Plan.

B) Timeline for Action: MGL Chapter 41, Section 81S states that the Planning Board has **45 days** from the date of submission of a Preliminary Plan application to render a decision. The application was submitted to the Town Clerk and Planning Dept. on June 9. 45 days would require PB action by July 24, which would only allow for two (2) PB meetings on June 28 and July 12 to consider the Plan.

Given this short time period, the applicant's attorney has indicated a willingness to provide an up-front extension to the PB to go a bit beyond the PB meeting on August 23. That should allow enough time to accommodate the Conservation Commission's submittal of conservation recommendations to the PB and for the PB to render a decision on the Preliminary Plan.

C) Yield Plan Requirements under Section 10.1.4 of the Ayer Zoning Bylaw.

10.1.4 Maximum Number of Dwelling Units

*The maximum number of residential units in an OSRD is determined through submission of a “Yield Plan”, which is essentially a plan meeting most of the standards of a Preliminary Subdivision Plan according to Ayer’s Rules and Regulations Governing the Subdivision of Land, with some additional information as described below. The Yield Plan shall show the maximum number of lots and/or dwelling units (“base lot / unit yield”) that could be placed upon the site in a **conventional subdivision**, in full conformance with all applicable provisions of the Ayer Zoning Bylaw, Subdivision Regulations, state and local Health laws and regulations, the Massachusetts Wetlands Protection Act, local Wetlands Protection Bylaw and other applicable requirements.*

The Yield Plan and Preliminary Subdivision Plan may be submitted at the time of Preliminary Plan application, or, in cases when a Preliminary Subdivision Plan is not submitted, the Yield Plan shall be submitted with the Definitive Subdivision Plan application. In cases where a proposed development does not involve subdivision of the original tract of land in an OSRD application, a Yield Plan shall still be required.

No land that is unusable for building due to being subject to an easement, or otherwise legally restricted, shall be included as land available for development. The applicant shall have the burden of proof to demonstrate that the maximum number of lots and dwelling units resulting from the design and preliminary engineering specifications shown on the Yield Plan is feasible. / Submittal Requirements follow, then...

The Planning Board shall review the Yield Plan and make a Finding as to the base lot yield and/or dwelling units upon accepting a Preliminary Plan for consideration, or at the first meeting of the Public Hearing in cases where a Preliminary Plan is not submitted. The Planning Board shall provide its findings on lot and/or unit yield in writing to the applicant.

To be counted towards the base lot yield, a proposed building lot must meet applicable lot area, frontage and other dimensional requirements, and have enough non-wetland area, based on the information required by Section 10.1.4 A, to accommodate a dwelling while meeting all dimensional requirements.

Town Planner comments: The Yield Plan submitted by the applicant’s engineer shows reduced size lots rather than conventional lots that meet the underlying zoning of 40,000 sq.ft. lots with 150 feet of frontage. Though the current Preliminary Plan application can be considered a ‘limited development’ where the applicant is proposing a greatly reduced number of lots compared to what is possible if the entire tract were subdivided to the maximum extent possible, it would definitely be useful to the PB to have a realistic Yield Plan as a point of comparison. I believe that this can be accomplished by simply showing lots that conform to the underlying zoning along the subdivision road. **I recommend that the PB discuss this at its June 28 meeting.** One issue for the Board to consider is whether such lots should be shown along the prior subdivision road or the road as it is now proposed in 2022.

III. INITIAL TOWN PLANNER COMMENTS AND ITEMS FOR DISCUSSION:

A) Summary of Prior History:

- November 2, 2002 (or July 2003?): Plan for Definitive Plan submitted to Ayer PB
- **March 25, 2004:** Ayer Planning Board approves Definitive Subdivision Plan for Stratton Hill
- June 10, 2004: Subdivision Covenants signed
- **June 15, 2004:** Letter from Mass Division of Conservation and Recreation (DCR) stating that the project needs to file an Environmental Notification Form for work within an ACEC
- December 20, 2004: MRPC signs off on Environmental Impact Report
- **June 27, 2005:** Definitive Plan recorded at the South Middlesex Registry of Deeds (Book 02005, Plan 829)
- July 27, 2021: Planning Board opens public hearing for revised Definitive Subdivision Plan
- January 20, 2022: Applicant officially withdraws Def. Plan without prejudice. PB moves to accept.

In order to better understand the history of this subdivision, I include the Planning Board's decision of March 25, 2004, the Covenant document and two letters from Attorney Collins to the PB dated March 1 and 9, 2004, respectively, in the meeting packet which may help to better understand what transpired then.

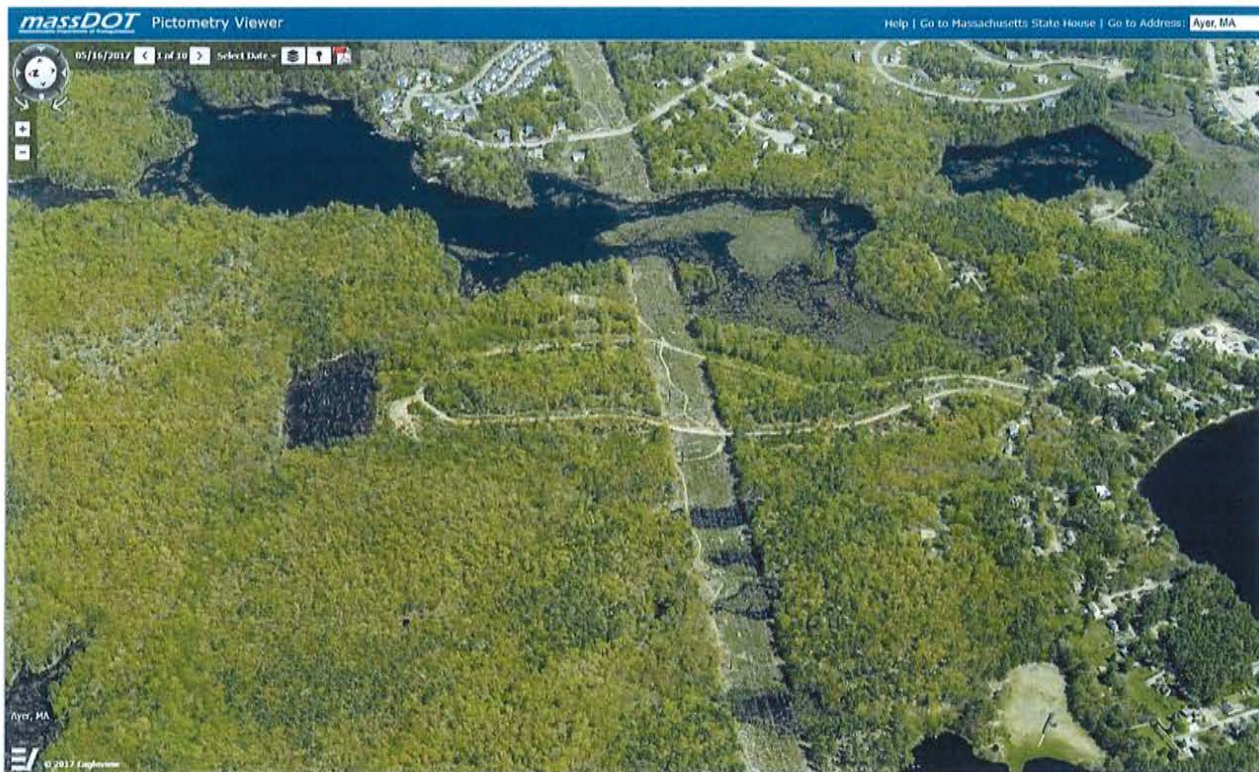
B) Initial review of the 2022 Preliminary Plan:

The current Stratton Hill subdivision plan is a rebirth of the original plan which was submitted to the Planning Board in 2003/2004 and approved by the Board in 2004. It appears the applicant is making use of the original plans and submission documents to the maximum extent feasible, but this time taking advantage of the Open Space Residential Development (OSRD) bylaw, which did not exist at the time of the original project.

The applicant has improved on the original design in 2004 (and first update in 2021) by pulling the subdivision road further to the south, making use of smaller lots and providing a much greater amount of open space. However, I am still concerned with the impacts on avian and general biodiversity of a large subdivision in this area, especially the section north of the powerlines. **I would much prefer that the development envelope and house lots remain entirely south of the powerlines.** The powerlines form a more or less natural demarcation between more intensively used land to the south and the wilder areas to the north. Studies have shown that the mere proximity of human dwellings to large intact mature forest tracts can negatively impact nesting bird and other wildlife species, especially neo-tropical migrants like thrushes, warblers, vireos, tanagers, etc. Think of this as the 'ecological spillover effect'. **If development must take place north of the powerlines, I recommend that the Planning Board consider mitigation measures that would reduce human impacts on that important forested area.**

Despite this, I believe that the newly designed Preliminary Plan is an improvement over the Definitive Plan submitted to the Planning Board in 2021, which was withdrawn in January 2022. **One very positive improvement is that is now appears that all areas that would need to be disturbed during construction are within the area that has already been disturbed during the earthwork that took place following the 2004 approval.** That means that no additional areas of mature forest would need to be disturbed. This shows that the applicant is trying to minimize environmental impacts as much as possible with a yield of 35 lots.

Another design issue is the fact that the subdivision road has only one point of entry / egress. This will require further discussion.



This image shows the large forest tract north (*to the left in above image*) of the powerline easement.

Waiver Requests from the Ayer Subdivision Regulations:

I asked Town Counsel about the timing of Planning Board action on waivers. She stated that though the applicant should identify needed waivers at the Preliminary Plan stage, that the Planning Board cannot *act* on the waivers at this early stage. **Rather, the Planning Board should, when ready, give the applicant an indication of how it is inclined to vote later during the Definitive Plan process.** It must be noted that like everything else for Preliminary Plans, such indication of the sense of the Board is not binding.

The applicant has identified three (3) items from the Ayer Subdivision Regulations that will require waivers. **The applicant has not, however, included the maximum length of a dead-end road as an issue requiring a waiver.** This may be due to their belief that the prior approved subdivision road (2004) is vested and therefore does not require a waiver. **Because a great deal hinges on this issue, most importantly whether the road and lots can extend north of the powerline easement, a determination as to the status of the prior approved subdivision road and the applicability of the waiver for dead-end road length may be required before the PB can act on this Preliminary Plan.**

An additional waiver that may be necessary if the existing subdivision road roughed in after the 2004 subdivision approval is deemed *not* vested has to do with the configuration of the turn-around at the end of the road. Section VII. B. 4 of the Ayer Subdivision Regulations states that: b) *Dead-end streets shall be provided at the closed end with a turn-around having an outside paved road diameter of at least eighty feet with a property line diameter of at least one-hundred feet.*"

1. Section VI. H. Landscaping Plan: “A waiver is requested for the Landscaping Plan requirement stated under Section VI – h.”

Planner’s note: *The Board should ask the applicant about the scope of this waiver as it sounds from their narrative that they may be planning to submit such with the Definitive Plan application.*

2. Section VI. A.1(p): Signage and Road Striping Plan: “A waiver is requested for the Signage and Road Striping Plan requirement stated under Section VI-(p). All information that would be found on the above-mentioned plan can be observed within the attached Plan Set on other provided sheets”.

Planner’s note: *I defer to the DPW for their recommendation on whether this request should be granted.*

3. Section VI. F.2 Test Hole Data: “A waiver is requested for the requirement of test hole data at all proposed streets, along the centerline at two hundred-foot intervals, and at cut sections and areas of questionable foundation material. Test hole data is provided for all stormwater management areas.

Planner’s note: *I defer to the DPW for their recommendation on whether this request should be granted.*

4. Configuration of dead-end road turn-around: Section VII. B. 4 of the Ayer Subdivision Regulations states that: b) *Dead-end streets shall be provided at the closed end with a turn-around having an outside paved road diameter of at least eighty feet with a property line diameter of at least one-hundred feet.*” See detailed discussion below. **Note:** the applicant has not identified this as a needed waiver.

5. Length of subdivision road: I believe a waiver request from Section VII.B.4.a of the Subdivision Regulations is needed for a subdivision road with one entry / egress (**dead-end streets**) longer than 650 feet. If this waiver is not granted, the resulting subdivision would need to stay south of the powerline easement crossing the tract. **Note:** the applicant has not identified this as a needed waiver.

Planner’s note: If the applicant is insistent that the subdivision road approved in 2004 is indeed vested, the Planning Board should consult with Town Counsel before deciding on applicability and its inclination on the waivers. **I also cannot find any record of the applicant having sought or the Planning Board granting a waiver from the maximum dead end road length of 500 feet then specified in the Subdivision Regulations.** The ‘2004 Planning Board’ should have addressed this, and if they did not, I wonder if that has implications for the status of the prior approved subdivision road.

Additional consideration of these last two items:

The main issue is whether or not the proposed loop road at Stratton Hill can be considered a dead-end street under the Ayer Subdivision Regulations, and/or other sources.

There is no single, universally used and accepted definition of dead-end streets. Groups such as the American Society of State Highway and Transportation Officials (AASHTO), do not provide one, and the thousands of local regulatory jurisdictions in the country characterize the concept in different ways, such as tying the term cul-de-sac to dead-end street, or making a distinction between a street that simply ends, and one that has a designed terminus of some sort, such as a circle or hammerhead. It should also be noted that there are numerous and greatly varying engineering/design standards for dead-end streets, even if there is no one widely accepted definition in the formal sense. **There is, however, a commonality among the definitions that does exist: basically, a dead-end street is one with one way in and the same way out.**

So, with these thoughts in mind, a few definitions and relevant excerpts that do exist are offered for illustrative purposes:

THE ILLUSTRATED BOOK OF DEVELOPMENT DEFINITIONS, Moskowitz and Lindbloom, 1999

A dead-end street is a street that has only a single common ingress and egress.

LAW INSIDER DICTIONARY

Dead-end road means any road that has only one point of vehicular ingress/egress, including cul-de-sac and *looped or circular* roads.

Dead-end stub road means a road which is terminated at the boundary line of a parcel or lot, but which will be extended at a later date to provide access to abutting land.

OXFORD ENGLISH DICTIONARY, 2021

A dead-end street or road is one that is closed at one end.

Despite the fact that the Ayer Regulations do not specifically incorporate the design option of a looped road, a persuasive case can be made that the proposed road requires a waiver. The PB could cite the more generic definitions of dead-end streets, where there is one way in and one way out. The PB could also mention the fact that the looped road design is at least as safe and functional as a turnaround in terms of public safety and emergency vehicles.

The Board should be careful in setting precedent by allowing a subdivision road that exceeds the dead-end road length specified in the Subdivision Regulations by such a large margin. If inclined to support such a waiver, the Board could reference the fact that the road layout stays entirely within the areas previously disturbed when work began in 2006 on the previously approved subdivision. The layout of the new plan also reduces the building envelope and areas of disturbance compared to the plan presented to the Board in 2021. By reducing lot sizes, the area in private, individual lots becomes 18.8 acres, a considerable decrease from previous iterations of the plan.

This redesign, in turn, increases the amount of common open space, in addition to which the disturbed area north of the power line is also reduced, which lessens impact upon the designated overlay for the Area of Critical Environmental Concern (ACEC) and related designations cited in the MA Environmental Policy Act (MEPA) in the environmental review for the site.

There is also the environmental issue involving the looped road design, which reduces the amount of paved area and runoff when compared to a turnaround with an 80' circular paved area.

Peer Review Studies:

Traffic Impact and Mitigation: Once fully built-out, hundreds of daily automobile trips will be generated by the Stratton Hill subdivision, on a street system that dates to the old “camp days” a century ago. Since single family homes generate an average of 10 + vehicle trips per day according to the Institute of Traffic Engineers, an additional 384 vehicle trips per day * can be anticipated from the Stratton Hill subdivision when fully built out. There are approximately 65 existing homes along Wright Road, with more in the immediate area. Therefore, the subdivision will increase traffic volumes on Wright Road and the surrounding road network including Snake Hill Road, Calvin Street and Oak Ridge Drive, and Sandy Pond Road. The subdivision’s proximity to Sandy Pond Beach, and the use of the causeway along Snake Hill Road by fishermen and people launching car top boats raise public safety issues that need to be considered.

Update June 2022: The applicant had **Vanasse and Associates, Inc.**, prepare a Transportation Impact Assessment for the subdivision. **Please see the Executive Summary of Vanasse’s report in the packet.** This traffic report provides the typical information included in such studies such as existing traffic volumes, accident data, background traffic growth, site generated traffic volumes and trip distribution and assignment. The traffic counts and turning movement studies were conducted in September, 2021.

However, the Vanasse study does not address many of the additional concerns as described in my **draft Request for Proposals (RFP)** such as impacts to the wider road network, safety issues related to the Town Beach and the causeway between Flannagan’s and Sandy Pond, off-site improvements, etc. I ask the Board to review the latest iteration of my draft RFP included in the packet. If directed by the Board, I can send out the RFP within a week of the June 28 meeting, which would enable the hiring of a peer review consultant to both review the Vanasse study and determine if additional traffic counts should be conducted in the summer months when traffic on the road network is apt to be at its highest.

*from ‘Traffic Impact Assessment’ prepared for Moulton Construction Corporation, by Vanasse & Associates, Inc. December 2021

Engineering: In the past, the Ayer DPW has served as advisor to the Planning Board on the technical and engineering aspects of subdivision design. However, for this subdivision, that arrangement will not be possible due to a temporary staff shortage at DPW. I am in the process of preparing an RFP for Peer Review of engineering issues with the assistance of the DPW Superintendent. Now that we have an application before us, I will complete the RFP and distribute it in order for the Planning Board to have such technical assistance for the Definitive Plan stage of the project.

Stormwater Management Basins and Low-Impact Devt.: Though the Ayer Zoning Bylaw and Subdivision Regulations permit stormwater management facilities to be located in the ‘extra’ open space above and beyond the minimum of 50% of the tract area, Mass. Fish and Wildlife, as the potential holder of a Conservation Restriction for the property, requires that stormwater basins and other infrastructure not be located within the open space subject to such restriction. Since the amount of open space being provided is well in excess of 50%, the applicant should rearrange the open space so as to accommodate this.

Interdepartmental Comments: (forthcoming in time for the July 12, 2022 PB meeting)

Fire Department:

Building Commissioner:

Conservation Commission:

Police Department:

Board of Health:

Dept. of Public Works:

IV. Recommendations for June 28, 2022 PB meeting

Recommended Planning Board Action: The Town Planner recommends that the Planning Board first **Accept the Preliminary Plan application for consideration.**

I then recommend the Planning Board proceed to opening presentations by the applicant, Town Planner and then follow the recommended steps as outlines in the recommended process on page 2 of this report.

By the end of this meeting, the Planning Board and applicant should come to agreement on the issues that require further examination or discussion, potentially including (*not intended as a full list, as it may be adjusted at the meeting*):

1. Decision on how a **revised Yield Plan** should be prepared.
2. **Identification of all applicable waiver requests**, and if agreement on such is not reached (*road length especially*), then...
3. **Direct Town Planner to consult with Town Counsel** regarding legal issues regarding the road status and other issues.
4. Briefly touch on **traffic study and RFP for Peer Review consultant.**
5. Identify **key design issues** that will need resolution, including stormwater basins in the open space, the sole entrance / exit point into the subdivision, landscaping,
6. Identify any other issues that should be discussed at the July 12 Planning Board meeting.
7. **Set site walk** date and time.

I may have more recommendations as the Preliminary Plan progresses through the review process.

Stratton Hill Prelim. Plan Checklist

June, 2022

C. Approval of the Preliminary Plan by the Planning Board does not constitute approval of a subdivision but acts to facilitate the procedure in securing approval of the Definitive Plan. In addition, such approval does not in any way authorize the owner to proceed with construction of roadways and/or other work in the subdivision. The Preliminary Plan may not be recorded by the applicant at the Registry of Deeds or Land Court.

D. Other provisions applicable to the Preliminary Plan process include the following:

(1) The approval of a preliminary subdivision is nonbinding upon the Planning Board and is promulgated to provide a written record of the Board's guidance to the applicant prior to submission of a definitive plan. The applicant assumes all risk for changes due to new information submitted during the process for approval of the definitive subdivision.

(2) Nonresidential subdivisions shall require the submission of preliminary plans in accordance with this section.

(3) Applicants are encouraged to meet informally with the Town Planner to discuss the content of their intended filing, prior to submitting preliminary plans to determine the extent to which the Board feels a preliminary plan is advisable.

(5) Required Submissions

✓ (a) An original complete application with all necessary signatures.

✓ (b) Seven (7) full-size prints of a plan prepared in accordance with Subsection D of this section (below) as well as an electronically submitted PDF version.

✓ (c) Five (5) reduced sized (11" x 17") plan sets.

✓ (d) Thirteen (13) photocopies of the application materials including narrative and supporting studies and documents.

✓ (e) The required fees.

✓ (f) Written identification of all anticipated waiver requirements. *Discussion needed on two.*

E. The application fee for a preliminary subdivision plan is found in Appendix B.

(1) Any amount remaining in the 53G account from the consulting fee will normally be retained in anticipation of a subsequent definitive plan. It will be returned only upon written request.

(2) When an application is rejected as incomplete or denied based on observed flaws and a reapplication is submitted, the Board will consider, at its discretion, waiving a portion of the reapplication fee.

F. Requirements for Preliminary Subdivision Plans

(1) All preliminary plans submitted for approval under this section shall show:

✓ (a) The title "Preliminary Plan."

- ✓ (b) Name of the subdivision.
- ✓ (c) North point *correct though?*
- ✓ (d) Date of survey
- ✓ (e) A vicinity map at a scale of one-inch equals 800 feet.
- ✓ (f) Scale
- ✓ (g) Legend
- ✓ (h) The name(s) of the record owner(s).
- ✓ (i) The name of the applicant, if different from the record owner.
- ✓ (j) The name of the designer, engineer or surveyor.
- ✓ (k) The names of all abutters, as determined from the most recent tax list. *
- ✓ (l) Existing and proposed lines of streets, ways, easements (including rights-of-way, covenants or other restrictions) and any public areas, in a general manner.
- ✓ (m) The proposed stormwater management system, including adjacent existing natural waterways, in a general, conceptual design manner.
- ✓ (n) Existing and proposed boundary lines.
- ✓ (o) Approximate areas and dimensions of all lots shown. For the purpose of this item, "area" is "lot area" as defined in the Ayer Zoning Bylaw. To facilitate this calculation on properties containing bodies of water or other areas excluded by the Bylaw from lot area calculations, applicants are encouraged to show gross area and the area of any bodies of water, in addition to the lot area.
- ✓ (p) The names, approximate location and widths of adjacent streets.
- ✓ (q) The topography of the land in a general manner, shown at a minimum of 5' contour intervals. The plan shall further include existing walls, fences, monuments, buildings, wooded areas, outcroppings, ditches, water bodies and natural waterways.
- ✓ (r) The zoning classification of the land, including any zoning boundaries.
- ✓ (s) Wetland boundaries as flagged by a professional Wetland Scientist, or approximate wetland boundaries as shown by MassGIS or other from other sources.

- (2) No street may be labeled a "public way" unless accompanied by such evidence, based on a review of the Town's records that will demonstrate that the way is legal by means of town meeting vote or other official municipal actions. The use of the phrase "public way" on maps or plans, whether or not such plans have been filed at a Registry, does not by itself constitute adequate evidence.

* We have from prior Def. Plan (2021) submittals
will need new, revised list for new Def. Plan.



- G. All plans shall be drawn to a minimum scale of one-inch equals 40 feet
- H. Any way known to be a private way shall be clearly labeled as such.
- I. Incomplete Applications
 - (1) Incomplete applications will be rejected. The Town Planner, under delegation from the Board, shall generally act as the determinant of completeness at the time of submission. The application fee will not be refunded. The consulting fee will be returned upon request, minus costs already incurred. If the applicant does not request the return of the consulting fee, the Board will assume the applicant intends to refile and apply the fee to the reapplication.
 - (2) For an application submitted by certified mail, the determination that an application is incomplete will be made no later than the first regularly scheduled meeting to occur seven or more days after receipt.
- J. Approval or Disapproval of Preliminary Plans
 - (1) To the extent that can be determined from the data submitted, the plans must satisfy all design standards applicable to definitive subdivisions. The Board may approve the preliminary plan, with or without modifications, according to the provisions of MGL c. 41, § 81S.
 - (2) The Board may, as part of such decision, identify specific issues that must be addressed in the definitive, including specific questions to be answered as part of the community impact statement. In the case of a nonresidential subdivision, or a residential subdivision exceeding 20 lots, these requirements may include the scope of a traffic study.

Definitive Plan

A. General provisions for Definitive Subdivisions

When a definitive plan of a subdivision is submitted to the Planning Board, a copy shall also be filed with the Board of Health, which shall report to the Planning Board, in writing, its approval or disapproval of the plan within forty-five days after the plan is filed. In the event of disapproval, the BOH shall make specific findings as to the reasons why the proposed subdivision might be injurious to public health and may make recommendations for mitigating the negative findings. When the definitive plan shows that no public sewer is to be installed to serve any lot thereon, approval by the BOH shall not be deemed to be approval of a permit for the construction and use on any lot of an individual sewage treatment system, nor shall approval by the BOH of a definitive plan for a subdivision be deemed to be an application for a permit to construct or use an individual sewage system. All plans, usages and other activities shall be in compliance with the Ayer Zoning Bylaw and other applicable Town bylaws. No approval under these rules or the Subdivision Control Law shall imply the approval of or support for any variance or special permit under the Ayer Zoning Bylaw, even if such variance or special permit is necessary for overall project approval.

Transportation Impact Assessment

Proposed Residential Development
Wright Road
Ayer, Massachusetts

Prepared for:

Moulton Construction Corporation
Croton, Massachusetts

December 2021

Prepared by:

 **Vanasse &
Associates inc**
Transportation Engineers & Planners

35 New England Business Center Drive
Suite 140
Andover, MA 01810

EXECUTIVE SUMMARY

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to evaluate potential traffic impacts associated with the proposed residential development to be located off of Wright Road in Ayer, Massachusetts (the "Project"). This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing and future traffic conditions, both with and without the Project.

PROJECT DESCRIPTION

The Project will entail the construction of 35 single-family homes. The Project site encompasses approximately 168 acres of land in the Town of Ayer that is bounded by areas of open and wooded space to the north, Wright Road to the south, Lower Long Pond and wetlands to the east, and residential properties and areas of open and wooded space to the west. Currently, the site consists of areas of open and wooded space. A major portion of the site will be permanently designated as Open Space as defined in the Ayer Zoning Bylaw.¹

Access to the Project site will be provided by way of a new roadway (Stratton Hill Road) that will intersect the north side of Wright Road approximately 30 feet east of Standish Avenue. Off-street parking will be provided for a minimum of two (2) vehicles per unit in individual driveways and garages.

¹The space on a lot unoccupied by buildings or structures, and not devoted to streets, driveways, off-street parking, or loading spaces and expressed as a percentage of the total lot area. Open space shall be unobstructed to the sky by man-made objects. Walks, above-ground or temporary swimming pools, and terraced areas may be part of a lot's open space. Open space within a cluster or open space development is prohibited from development.

EXISTING CONDITIONS

A comprehensive field inventory of traffic conditions on the study area roadways was conducted in September 2021.

Existing Traffic Volumes

In order to establish base traffic-volume conditions within the study area, manual turning movement counts (TMCs) were completed on Tuesday, September 28, 2021. The TMCs were conducted during the weekday morning (7:00 to 9:00 AM) and weekday evening (4:00 to 6:00 PM) peak periods, which represent the peak periods for residential traffic. In order to develop 2021 Existing traffic-volume conditions, the data collected required adjustments due to the effects of the COVID-19 pandemic. Based on the evaluation of the existing permanent count station, the 2021 weekday morning and evening peak-hour traffic volumes were increased by 15.0 percent.

Motor Vehicle Crash Data

Motor vehicle crash data was acquired from the Massachusetts Department of Transportation (MassDOT) Safety Management/Traffic Operations Unit for the most recent five-year period available (2014 through 2018) in order to examine motor vehicle crash trends occurring within the study area. A total of three crashes were identified at the study area intersections. The two crashes at the intersection of Sandy Pond Road and Snake Hill Road were property damage only and occurred due to factors such as vehicle travel speed and wet surface conditions. The intersection of Snake Hill Road and Wright Road experienced one property damage only crash involving a light truck on a wet roadway surface. Although the intersection of Snake Hill Road and Wright Road was shown to have a crash rate higher than the average for MassDOT District 3, no safety deficiencies were noted with respect to the geometric or operational aspects of the intersection.

FUTURE CONDITIONS

Traffic volumes within the study area were projected to 2028, which reflects a seven-year planning horizon consistent with State traffic study guidelines.

Background Traffic Growth

Based on traffic-volume data compiled by MassDOT from permanent count stations, it was determined that traffic volumes within the study area have fluctuated over the past several years. In order to provide a prudent planning condition for the Project, a slightly higher 1.5 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

Specific Development by Others

The Town of Ayer was contacted in order to determine if there are any planned or approved specific development projects within the area that would have an impact on future traffic volumes at the study intersections. Based on these discussions, no future projects were identified in the immediate area of the Project site.

Planned Roadway Improvements

The Town of Ayer and MassDOT was contacted to determine if there were any planned roadway improvements in the area that would have an impact on future traffic operations. Based on these discussions, no planned roadway improvement projects that would affect the study area were identified.

No-Build Traffic Volumes

The 2028 No-Build weekday morning and evening peak-hour traffic-volume networks were developed by applying the 1 percent per year compounded annual background traffic growth rate to the 2021 existing condition peak-hour traffic volumes.

Site-Generated Traffic Volumes

The proposal entails construction of 35 single-family homes. In order to develop the anticipated traffic characteristics of the Project, trip-generation statistics published by the Institute of Transportation Engineers (ITE)² were reviewed. The ITE Land Use Code (LUC) 210, *Single-Family Detached Housing* was used to develop the traffic characteristics of the proposal. The proposed Project is expected to generate approximately 384 vehicle trips on an average weekday (two-way, 24-hour volume), with 29 vehicle trips (8 entering and 21 exiting) expected during the weekday morning peak hour and 37 vehicle trips (23 entering and 14 exiting) expected during the weekday evening peak hour.

Trip Distribution and Assignment

The directional distribution of generated trips to and from the Project site was determined based on a review of Journey-to-Work data obtained from the U.S. Census for persons residing in Ayer and then refined based on existing traffic patterns within the study area. In summary, 60 percent of the trips are expected to arrive and depart the study area to/from the east, 35 percent of the trips are expected to arrive and depart the study area to/from the west, and 5 percent of the trips are expected to arrive and depart the study area to/from the south.

TRAFFIC OPERATIONS ANALYSIS

In order to assess the impact of the proposed Project on the roadway network, traffic operations analyses were performed at the study intersections under 2021 Existing, 2028 No-Build, and 2028 Build conditions. The addition of site-related traffic will not result in a significant impact on overall operations at the study area intersections.

RECOMMENDATIONS

The following improvements have been recommended as a part of this evaluation and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

²*Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.

Project Access

Access and egress to the Project site will be provided by way of a new roadway (Stratton Hill Road) that will intersect the north side of Wright Road approximately 30 feet east of Standish Avenue. The following recommendations are offered with respect to Project access, internal circulation, and parking:

- The Project site roadway and internal circulating drives should be 24 feet in width where two-way traffic is to be conveyed and designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle as defined by the Ayer Fire Department.
- Vehicles exiting the Project site should be placed under STOP-sign control with a marked STOP-line provided.
- All signs and pavement markings to be installed within the Project site should conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).³
- Americans with Disabilities Act (ADA)-compliant wheelchair ramps should be provided at all pedestrian crossings internal to the Project site and for crossing the Project site roadway.
- Signs and landscaping to be installed as a part of the Project within intersection sight triangle areas of the Project site driveways should be designed and maintained so as not to restrict lines of sight.
- Snow windrows within the sight triangle areas of the Project site driveways and at intersections within the Project site should be promptly removed where such accumulations would impede sightlines.

CONCLUSIONS

The proposed Project will not result in a significant impact on overall operations. With the implementation of the above recommendations, safe and efficient access will be provided to the planned development and the proposed development can be constructed with minimal impact to the area.

³*Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to evaluate potential traffic impacts associated with the proposed residential development to be located off of Wright Road in Ayer, Massachusetts (the "Project"). This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing and future traffic conditions, both with and without the Project.

PROJECT DESCRIPTION

The Project will entail the construction of 35 single-family homes. The Project site encompasses approximately 168 acres of land in Town of Ayer that is bounded by areas of open and wooded space to the north, Wright Road to the south, Lower Long Pond and wetlands to the east, and residential properties and areas of open and wooded space to the west. Currently, the site consists of areas of open and wooded space. A major portion of the site will be permanently designated as Open Space as defined in the Ayer Zoning Bylaw.⁴ Figure 1 depicts the Project site location in relation to the existing roadway network.

Access to the Project site will be provided by way of a new roadway (Stratton Hill Road) that will intersect the north side of Wright Road approximately 30 feet east of Standish Avenue. Off-street parking will be provided for a minimum of two (2) vehicles per unit in individual driveways and garages.

STUDY METHODOLOGY

This study was prepared in consultation with the Town of Ayer and in accordance with the Massachusetts Department of Transportation (MassDOT) Guidelines for *Transportation Impact Assessment (TIA) Guideline*; and the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports; and was conducted in three distinct stages. The first stage involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics; pedestrian facilities; observations of traffic flow; review of safety characteristics along area roadways; and collection of daily and peak-period traffic counts. In the

⁴Ibid 1.

second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future traffic demands due to expected traffic growth independent of the Project. A seven-year time horizon was selected for analyses consistent with State guidelines for the preparation of TIAs. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity, traffic safety, and site access issues. The third stage of the study presents and evaluates measures to address traffic and safety issues, if any, identified in stage two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of traffic conditions on the study area roadways was conducted in September 2021. The field investigation consisted of an inventory of existing roadway geometrics, pedestrian facilities, traffic volumes, and operating characteristics, as well as posted speed limits and land use information for the roadways that provide access to the Project including Snake Hill Road, Sandy Pond Road, and Wright Road as well as the intersections which are expected to accommodate the majority of Project-related traffic. The study area for the Project is listed below and graphically depicted in Figure 1.

1. Sandy Pond Road at Snake Hill Road
2. Snake Hill Road at Wright Road

The following describes the study area roadways and intersections:

GEOMETRY

Roadways

Sandy Pond Road

Wright Road is a two-lane urban minor arterial roadway separated by a painted double-yellow centerline, is under Town of Ayer jurisdiction and traverses the study area in a general east-west orientation. The posted speed limit along Sandy Pond Road is 35 miles per hour (mph). Illumination is provided on Sandy Pond Road via streetlights mounted on wood poles. Land use along the corridor generally includes Sandy Pond and residential properties.

Snake Hill Road

Snake Hill Road is a two-way local roadway under Town of Ayer jurisdiction that traverses the study area in a general north-south orientation with no centerline. Illumination is provided intermittently on Snake Hill Road. The posted speed limit along Snake Hill Road is 25 mph from Sandy Pond Road to Wright Road and 15 mph north of Wright Road. Land use within the study area consists of Flannagan Pond, Sandy Pond, and residential properties.

Wright Road

Wright Road is a two-way local roadway under Town of Ayer jurisdiction that traverses the study area in a general east-west orientation with no centerline. Illumination is provided intermittently on Wright Road. The posted speed limit is 25 mph on Wright Road. Land use within the study area consists of residential properties and areas of wooded space.

Intersections

Figure 2 summarizes existing lane use and travel lane widths at the study area intersections as observed in September 2021.

EXISTING TRAFFIC VOLUMES

In order to establish base traffic-volume conditions within the study area, manual turning movement counts (TMCs) were completed on Tuesday, September 28, 2021. The TMCs were conducted during the weekday morning (7:00 to 9:00 AM) and weekday evening (4:00 to 6:00 PM) peak periods, which represent the peak periods for residential traffic.

Seasonal Adjustment

In order to account for seasonal fluctuations in traffic, the MassDOT Continuous Count Station No. 34 data were used to adjust the traffic volumes for seasonal fluctuations. Based on this data, it was determined that September traffic volumes are representative of average-month conditions and therefore, no further seasonal adjustment was made.

COVID-19 Adjustment

In order to account for the impact on traffic volumes and trip patterns resulting from COVID-19 pandemic, traffic-volume data from the MassDOT Continuous Count Station Nos. 34 and 4090 located on Interstate 495 (I-495) were reviewed.⁵ These count stations have data available for a few months in 2019 and 2021 which allows for a comparison of the traffic trend and data from pre- and post-COVID-19 pandemic conditions. Therefore, the nearest available traffic-volume data collected at this count station in August and September 2021 was compared to August and September 2019 traffic volumes that were collected at the same location. The 2019 traffic volumes were expanded to 2021 (same year condition) by applying a background traffic growth rate of 1.5 percent per year (discussion follows) in order to allow for a comparison of the data. Based on this pre- and post-COVID-19 traffic data comparison, the 2021 traffic-volume data that was collected as a part of this assessment were adjusted upward by an average of 15.0 percent, in order to account for the reduced traffic volumes resulting from the phased “Reopening Massachusetts” plan.

The 2021 Existing traffic volumes are graphically depicted on Figure 3. A review of the peak-period traffic counts indicates that the weekday morning peak hour generally occurs between 7:00 and 8:00 AM with the weekday evening peak hour generally occurring between 4:00 and 5:00 PM.

⁵MassDOT traffic volumes for the Commonwealth of Massachusetts; 2021.

DRAFT Scope of Work for Traffic Impact and Mitigation Study

For the 35-lot Stratton Hill Definitive Subdivision Plan at Wright Road, Ayer, Mass.

Subdivision Plan submitted by Fox Meadow Realty Corp.

DRAFT 5.5 of October 15, 2021

Request for Proposal

Preface and Review of Applicant's Traffic Study:

The applicant has hired VHB to conduct their own traffic study, but it is not clear if their study will address all the topics and concerns listed in this Request for Proposals as outlined herein. To the extent that the applicant's traffic study does not address any of the items below, the Town of Ayer Planning Board would like its own consultant to either coordinate such with the applicant's engineer or obtain the data and/or conduct the analyses and make recommendations on such as outlined below. Review of VHB's traffic study is therefore an integral part of this project.

Reconnaissance & Data Gathering

- A. Review the Definitive Subdivision Application and Plans submitted to the Ayer Planning Board with a focus on how the traffic generated from the additional thirty-five (35) single-family lots, all taking access from Wright Road, will affect overall traffic on the local road network including Wright Road, Snake Hill Road, Calvin Street, Oak Ridge Drive, Groton-Harvard Road, Central Avenue and Sandy Pond Road.
- B. Conduct a site visit to gain a better understanding of how the proposed development fits into the local road network and to identify the best locations for the traffic counters per list below. The Consultant shall make the final decision as to the best locations for Automated Traffic Recorders (ATRs) as discussed below.
- C. Prior to initiating work the Consultant will consult with local officials to review permitting procedures, submission requirements and design standards:
 - Traffic volumes
 - Roadway geometrics
 - Traffic operating parameters
 - Speed limits
 - Sight distance measurements
 - Pedestrian and bicycle facilities
 - Public transportation services
- D. Obtain manual turning-movement and vehicle classification counts for a two-hour weekday morning period (7:00 to 9:00 AM), a two-hour weekday evening period (4:00 to 6:00 PM), and a three-hour Saturday midday period (11:00 AM to 2:00 PM) at the following intersections:
 - Wright Road at Standish Avenue
 - Wright Road at Snake Hill Road
 - Snake Hill Road at Calvin Street

- Snake Hill Road at Sandy Pond Road

Obtain a 48-hour weekday and Saturday automatic traffic recorder count on Wright Road. A speed study on Wright Road should also be conducted.

Existing traffic volumes will be seasonally adjusted to average-month conditions, if necessary, in accordance with Massachusetts Department of Transportation (MassDOT) requirements and will be further adjusted following MassDOT's guidance for the use of traffic counts conducted during the COVID-19 pandemic and the Governor's phased "Reopening Massachusetts" strategy.

- E. Obtain motor vehicle crash data for the study area roadways and intersections for the most recent five-year period available from the local police department records. Detailed crash rate calculations will be performed for each of the study intersections. In addition, a review of the MassDOT high crash location database will also be undertaken for the study area.
- F. Estimate future **No-Build traffic volumes** from historic traffic counts and from information on recently approved or proposed projects. Increases in background traffic growth will then be established and applied to the existing traffic-flow networks to develop the base future No-Build analysis networks. The future conditions horizon year shall be established as a 7-year projection from the base year (existing condition) in accordance with MassDOT guidelines.
- G. Assess volume-to-capacity ratios, level of service, and vehicle queuing for existing and future conditions at the study area intersections and project driveway(s). The traffic analysis will be based on the existing street system and any planned roadway improvements. The following analysis conditions will be examined:
 - Existing conditions – 2021
 - Future conditions without the proposed project (No-Build condition) – 2028
 - Future conditions with the proposed project (Build condition) – 2028 unmitigated
 - Future conditions with the proposed project (Build condition) – 2028 mitigated

Analysis and Evaluation

- A. Perform a trip generation and distribution study as it pertains to Wright Road and the impact of the additional traffic from this subdivision on the specified road network. Determine how traffic from the subdivision and the Wright Road neighborhood is likely to split / distribute at key intersections, including Snake Hill Road at Calvin Street, Snake Hill Road and Central Avenue (to the west) and Sandy Pond Road (to the east) south towards the Carlton Rotary from that point, and Oak Ridge Drive at Groton-Harvard Road.

The Planning Department will advise the Consultant on the full development potential within the study area.

- B. Public safety & maintenance considerations:

1. Evaluate the safety of the proposed subdivision road (Stratton Hill Road) at its intersection with Wright Road. Review compliance with the requirements of the Ayer Fire and Police Departments for emergency vehicle access, as well as municipal maintenance vehicles and equipment.

2. Review sight distance data for both passenger cars and trucks entering and exiting the proposed subdivision road based on AASHTO standards. Recommendations will be made as necessary to provide required lines of sight.
3. Evaluate pedestrian safety for the road network area identified as for the traffic counts above, given the proximity to the Sandy Pond Beach and fishing and car-top boat launch spots along the Sandy Pond causeway on Snake Hill Road.
4. Given the amount of daily truck and equipment traffic anticipated during the period of construction, consider road quality, maintenance and safety issues that may arise during the period of construction for Wright Road and the adjacent road network. Identify the applicant's fair-share of any mitigation measures that may be required to accommodate these impacts.
5. Though somewhat removed from the locus of the proposed subdivision, the intersection of Oak Ridge Drive and Groton-Harvard Road will likely see substantial through traffic from the subdivision, warranting an assessment of sight distances and other safety considerations at that intersection.

Potential Mitigation Measures

A. Wright Road – Physical Conditions and Recommended Road Improvements:

Wright Road is in poor condition, and the increased traffic generated by the Stratton Hill subdivision will likely exacerbate this. **1.** How will traffic generated from the subdivision likely impact the road surface, and what improvements to Wright Road should be made, if any, to increase its ability to handle the increased traffic volumes Provide graphic sketches for bringing Wright Road up to the maximum improvement level possible under the Subdivision Regulations, within the physical limitations of the right-of-way. **2.** Provide cost estimates at a broadly conceptual level.

B. Spot Upgrades on Street Network in Project Vicinity:

Identify concepts for any offsite roadway improvements, as well as other mitigation measures, that might be justified because of traffic impacts from the proposed Stratton Hill subdivision to Wright Road and to the adjacent road network, as indicated in the preceding narrative and suggested traffic count locations. Provide general cost indicators for such improvements.

C. Lower Intensity Improvements:

Identify and provide graphic sketches for other potential improvements that might enhance public safety without major road construction, such as signs, pavement markings, sight distance maintenance measures, traffic calming measures, or actions of a similar nature, referred to as "lower intensity improvements." Provide general cost indicators for lower intensity improvements.

Meetings and Deliverables

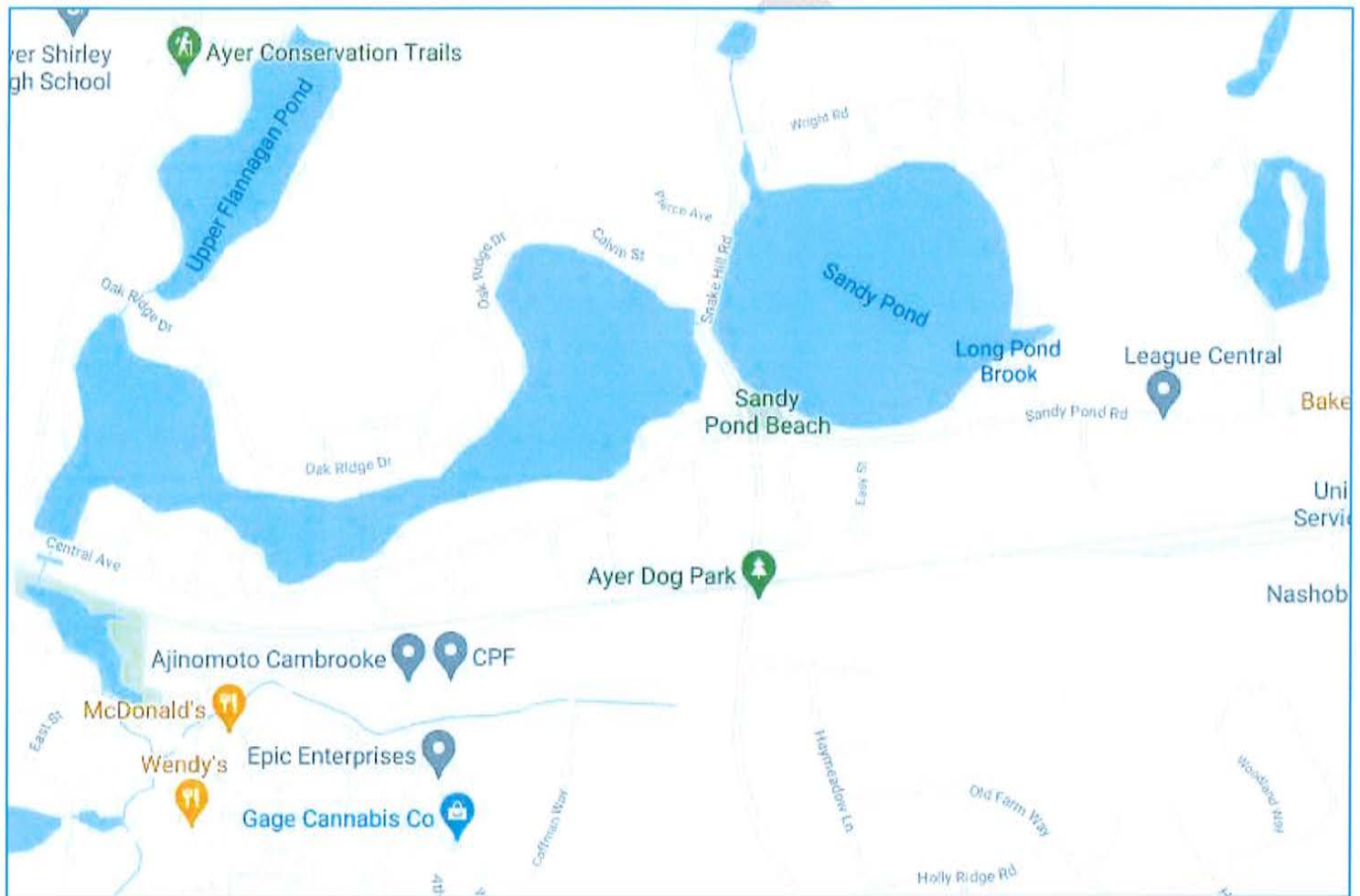
- A. Participate in one (1) coordination meeting with the Ayer Town Planner, the Ayer Superintendent of Public Works, the Town Engineer, the Police Chief, the Fire Chief (to discuss the project and fine-tune the Scope of Work accordingly).

- B. Attend up to three (3) Planning Board meetings, if necessary, to present initial findings and obtain feedback from the applicant, the Planning Board, and any other Town of Ayer officials in attendance.
- C. Provide one (1) version of the final memorandum that includes resolutions for the questions and issues from the review and Planning Board meetings.

Wright Road in Ayer: Town-maintained Road. 30' wide ROW, ___' paved width.

More details about Wright Road and recent infrastructure improvements thereto can be inserted here.

Locus: in Ayer, Massachusetts



Note: I will mark the above map to better show Stratton Hill Road and call key intersections and approximate locations for ATRs. The subdivision will be in the upper right hand corner off Wright Road.

1

Robert L. Collins
Attorney At Law
2 Prescott Street, Forge Village
P. O. Box 2081
Westford, Massachusetts 01886

Telephone (978) 692-3363

Facsimile (978) 692-0296

oy ✓ 1 March 2004

The Ayer Planning Board
Town Hall
Main Street
Ayer, MA 01432

RE: Stratton Hills
Conditions of Approval

Dear Board Members:

I am taking this opportunity to set forth the various things that have been discussed and agreed to with regard to this development. The only significant changes from my letter of 18 November 2003 are in sections 2, 3(d), and 3(f).

As indicated previously, we acknowledge that much of this is beyond the parameters of the Board's statutory authority; the applicant has offered and agrees to these conditions in the form set forth here.

1.) CONSERVATION PARCELS

The landowner shall convey to the Town of Ayer by a deed in trust in a form satisfactory to Town Counsel the conservation/open space parcels shown on the plan within thirty (30) days of approval of the Definitive Subdivision Plan and the other municipal and/or state approvals necessary for the construction thereof. This deed in trust shall stipulate that these parcels are to remain in a natural condition and are not to be committed to other municipal uses in the future, except for the possible location of municipal wells, municipal water storage tanks, and the construction, maintenance, and/or replacement of such portions of the subdivision utilities and stormwater drainage system as are located on these parcels.

2.) HOMEOWNER'S ASSOCIATION

The landowner shall establish a homeowner's association comprised of the lot owners within the subdivision. This association shall be obligated to maintain the drainage structures, retention basins, fencing around the retention basins, and shall be responsible for the cost of flushing the flushing hydrant on a quarterly basis, which hydrant is to be installed by the applicant at the end of Wright Road. All maintenance

is to be at the direction of the Ayer Department of Public Works. The applicant shall further establish easements running in favor of the Town of Ayer for such maintenance in the event the Association defaults in its obligations. The easement shall be in a form satisfactory to Town Counsel.

3.) OFF SITE IMPROVEMENTS

The applicant shall install the following off-site infrastructure improvements:

1.) Replacement of the Standish Ave., sewer lift station pumps with pumps sized to accommodate the additional flow generated by this subdivision, and to make such further improvements to this lift station as are requested by the Superintendent of Public Works.

b.) Reconstruction and repaving of the portion of Wright Road closest to the subdivision as are shown on the road improvement plan submitted to the Board. In addition, the applicant shall repair any damaged sections of the remaining portion of Wright Road which has been damaged by the applicant's construction activity as directed by the Superintendent of Public Works.

c.) The installation of a cape-cod style asphalt berm along the Quigley road frontage on Standish Ave., to the second Quigley driveway cut on Standish Ave.

d.) The installation of a water booster station at the entrance to the subdivision, or, if deemed advisable by the Department of Public Works, at or near the intersection of Wright Road and Snake Hill Road, with specifications set by the Superintendent of Public Works.

e.) The construction of a gravel surfaced emergency access way as shown on the attached plan with gates installed at the border of the Cowley property. We have reached an agreement with Mr. & Mrs. Cowley relative to this, and the resulting route is shorter (and thus more direct) than what was previously shown.

f.) The applicant shall pay to the Town of Ayer a sum not to exceed \$30,000.00 determined by the Superintendent of Public Works necessary for the reconstruction of the dam which is the outflow for Long Pond; this amount shall not include reconstruction which would be necessitated by the Sandy Pond III subdivision.

4.) BONDING AND BUILDING PERMIT ISSUANCE

a.) The applicant shall install the portion of the surface water drainage system for the portion of the subdivision located between Wright Road and the powerline easement, and it shall

1 March 2004

be operational in the opinion of the Superintendent of Public Works prior to any building permits being issued for the subdivision.

b.) The off-site improvements referenced in section 3 above as paragraphs a.), c.), d.), e.) and f.) shall be completed prior to any building permits being issued for the subdivision. The off-site improvements referenced in section 3 above as paragraph b.) shall be bonded, in which case building permits may be issued; the applicant may elect to perform these improvements prior to building permit issuance, thus eliminating the necessity of bonding.

I believe this list covers everything we have discussed during the public hearings.

I feel compelled to address the issue of the cross country water main, which is no longer proposed. I sent the letter the Board will find attached* to C&F Builders (through its legal representative). They have expressed no interest in this proposal. ** TO FOLLOW UNDER SEPARATE COVER*

While my client has also had discussions with Mr. Cowley on this subject, there are environmental concerns relative to bringing a water main across his property.

While both Mr. Moulton and I are disappointed by this, I believe the proposal set forth in this letter is a rational compromise which will achieve the same result.

I also feel compelled to reiterate the benefits presented by this plan to the Town and to the neighborhood which are in addition to those set forth above:

- Limited Density

This plan proposes less than half the density for this site than would be otherwise allowed.

- Conservation Land

Over 60% of this site is to be donated to the Town of Ayer as permanently protected open space which everyone in the community can enjoy. This open space lies adjacent to an additional 387 acres of land in Groton which is also to be permanently protected. Together these two parcels will comprise one of the largest tracts of publicly held land locally.

The Ayer Planning Board

Page 4

1 March 2004

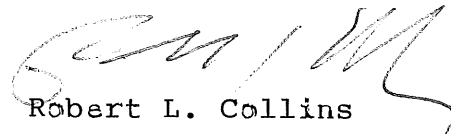
- Sensitivity to Existing Neighborhood

The design of this development employs swaths of land adjacent to the existing properties on Wright Road which will serve as a significant visual buffer. In addition, most of the infrastructure improvements set forth above will serve the neighborhood as well as this development, and will correct existing infrastructure problems.

My client and I believe that this proposal is a well thought out, limited development approach to this site which will be a credit to the Town.

Thanking the Board for its consideration on this matter, I remain

Very truly yours,



Robert L. Collins

RLC/jel

Enclosure

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✓ 9 March 2004

The Ayer Planning Board
 Town Hall
 Main Street
 Ayer, MA 01432

RE: "Stratton Hills"
 Wright Road

Dear Board Members:

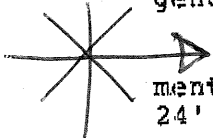
As a follow-up to our conversation last week, may I offer the following:

(1) There should be an additional condition as follows:
 "The applicant agrees to have a survey done of the existing town property adjacent to this locus which is shown as Parcel 2 on Assessors Map 15."

(2) We have discussed the issue of construction vehicle access with Mr. & Mrs. Cowley. They are concerned that this could damage their driveway and the cart path beyond it; there is a considerable difference between a seldom used emergency access and daily usage. They are thus unwilling to allow construction traffic.

In an attempt to allay the fears some Board members (and Wright Road residents) might have on this subject, I can tell you that Mr. Moulton runs an extremely "laid back" operation; homes are likely to be completed at the pace of perhaps four or five per year. Large equipment is rarely moved from a site once work has commenced, and there tend to be only about six employee vehicles visiting a work site on a daily basis. Deliveries are made at a rate generally averaging two per month. There thus isn't all that much activity.

(3) We have provided a copy of the plan showing the emergency access across the Cowley site to the Fire Chief.

 (4) The only waiver which would be needed for this development involves the road specifications. We are proposing a 24' wide pavement, with a Cape Cod berm on either side.

The Ayer Planning Board
Page 2
9 March 2004

While it appears that we discussed detention basin fencing on several occasions, I recall that Mike Madigan had strong feelings on this subject - that safety considerations outweighed aesthetic considerations.

We thus want to leave this issue for the Board to decide.

Perhaps a condition on this subject could be worded as follows:

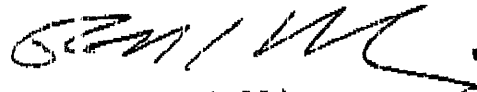
"To the extent that fencing is needed around detention basins, the applicant shall take measures to minimize the visual impact through landscaping, the maintenance of existing woodland vegetation, and color choice of the fencing."

(5) Finally, a sentence should be added to the condition regarding the land donation of Parcels A through G, reading "This land is to be conveyed to the Town prior to any building permits being issued for this site, with a temporary license being reserved for the completion of the drainage system."

When I re-read my letter, it occurred to me that I has left out this provision.

I look forward to our continued discussions regarding this site.

Very truly yours,



Robert L. Collins

RLC/jel

*Copied To:
Chris Ryan
8/24/07*

TOWN OF AYER
PLANNING BOARD

oy
At a meeting of the Ayer Planning Board held on 25 March 2004, it was moved, seconded and

VOTED: To approve the definitive subdivision entitled "Stratton Hills" prepared for Fox Meadow Realty Corporation by R. Wilson and Associates, Land Surveyors and Civil Engineers, with the following conditions:

- 1.) The landowner shall convey to the Town of Ayer the open space parcels shown on said plan as parcels A through G inclusive by a Deed in Trust which stipulates that these parcels are to remain in a natural condition for the enjoyment of the citizens of the Town of Ayer. This deed shall stipulate that these parcels are not to be committed to other municipal uses in the future except for the location of a municipal well site and/or municipal water storage facility, and for the construction, maintenance, and/or replacement of such municipal utilities and stormwater drainage system as are located on these parcels. This conveyance is to occur prior to any building permits being issued for lots within this subdivision.

- 2.) A.) The landowner shall establish a homeowner's association comprised of the lot owners within the subdivision. This association shall be obligated to a.) maintain the stormwater drainage system serving the subdivision; b.) install and maintain fencing around the retention basins (as directed by the Ayer Conservation Commission as to style and color of such fencing), and c.) be responsible for the cost of flushing the flushing hydrant located at the end of Wright Road on a quarterly basis. The maintenance responsibilities are to be fulfilled at the direction of the Ayer Department of Public Works, which may, at its discretion, instead require that the association pay the cost of such maintenance to the Department (which shall then undertake this maintenance).

- B.) The landowner shall further establish such easements running in favor of the Town of Ayer so that it may undertake necessary maintenance required in the event of default of the association in its obligations.

Any areas of the Quigley property damaged by this installation shall be loamed and seeded.

d.) The installation of a water booster station and the entrance to the subdivision, or at such other location deemed advisable by the Ayer Superintendent of Public Works.

e.) The construction of a gravel surfaced emergency access way as shown on the plans submitted to the Board with gates installed at either end.

The obligations set forth in sections a.), c.), d.), and e.) above shall be completed to the satisfaction of the Ayer Superintendent of Public Works prior to any building permits being issued for lots within the subdivision; those set forth in section b.) above may be bonded as part of the subdivision bond.

8.) The landowner has offered and agreed to all of the above conditions.

9.) The Board voted to approve a waiver of the Subdivision Regulations to allow the subdivision road to have a pavement width of twenty-four (24') feet with a cape cod berm on each side.

Present and Voting in the affirmative were:

William Olffe

Peter K. Johnston

Patricia A. Walsh

Elizabeth Hughes

James V. Zucker

Filed with the Ayer Town Clerk on: July 20, 2004

Decision effective on Aug 10, 2004 unless appealed.

Ann G. Callahan


STRATTON HILLS
SUBDIVISION COVENANT

54
Fox Meadow Realty Corporation, owner of certain premises situated in Ayer, Middlesex, Massachusetts, shown as Lots 1 through 35 inclusive on a definitive subdivision plan entitled "Stratton Hills" which said plan is duly recorded herewith together with a Decision executed by the Ayer Planning Board,

does hereby agree not to convey any of the said Lots 1 through 35 inclusive nor seek building permits for any of the said lots until the subdivision improvements are completed to the satisfaction of the Ayer Planning Board, or a bond has been posted as surety for the completion of said subdivision improvements in an amount agreed to by the Ayer Planning Board, and the said Ayer Planning Board executes a release from this covenant for all or a portion of the lots within said subdivision.

In Witness Whereof the said Fox Meadow Realty Corporation has caused this Covenant to be executed and its Seal to be affixed hereto by

✓ Dated: 10 June 2004

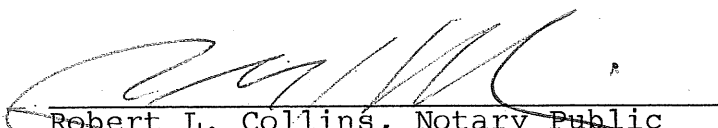

David C. Moulton,
its officer duly authorized

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss.

✓ 10 June 2004

Then appeared David C. Moulton, who presented satisfactory evidence of his identity in the form of a current United States Passport, and who acknowledged that he executed the foregoing voluntarily as the free act and deed of the said Fox Meadow Realty Corporation, before me


Robert L. Collins, Notary Public
My commission expires on: 12/19/08

