



ENGINEERING SUCCESS **TOGETHER**

August 12, 2015

Mr. Alan Rubenstein, Chairman
Board of Appeals
Town of Sherborn
19 Washington Street
Sherborn, Massachusetts 01770

Re: The Fields at Sherborn - Comprehensive Permit Application
Traffic Peer Review Update

Dear Mr. Rubenstein:

BETA Group, Inc. (BETA) has reviewed supplemental traffic information for *The Fields at Sherborn*. This letter is provided to update BETA's findings, comments and recommendations based on the Traffic Impact Statement.

COMPILED REVIEW LETTER KEY

BETA reviewed this project previously and provided review comments in a letter to the Board dated June 30, 2015 (*original in italics comments*). MDM Transportation Consultants, Inc. (MDM) provided responses (responses in standard text) and BETA has provided comments on the status of each (*status in bold italics*).

INTRODUCTION

The proposed development consists of 36 new residential units in 10 buildings located in the area of 247 Washington Street opposite Knollcrest Farm Lane in Sherborn, Massachusetts. This section of Washington Street is a two lane road classified as an Urban Other Principal Arterial and is approximately 26 feet wide with no sidewalks.

GENERAL COMMENT

- T1. *Back-up information for speed data, trip generation calculations, trip distribution calculations, and analysis results were not provided at the time of review. Provide this information to confirm report findings.* MDM: The technical attachments to the traffic impact statement have been provided to the Town for posting on the municipal website and have been transmitted to BETA as of July 1, 2015. **BETA2: Information provided – issue resolved.**

SIGHT DISTANCE

A stopping sight and intersection sight distance analysis of the proposed site driveway intersection with Washington Street was performed. This analysis concluded that the measured distance is greater than 700 feet in both directions, which exceeds the American Association of State Highway and Transportation Officials (AASHTO) standard requirements for both the stopping and intersection sight distances based on the 85th percentile speeds. Based on field review it appears that the existing tree line would not impede a driver's sight distance exiting the proposed driveway.

- T2. *Indicate on plan where the intersection sight distance lines were measured. It appears that large trees in front of the property will remain and a modular wall is proposed on the corners of the driveway. Verify the height of the modular wall and that it will not impede the intersection sight distance.* MDM: Sight line measurements were conducted at two driveway locations: the roadway travel edge in the case of stopping sight distance (SSD) and at a driver's eye position at a vehicle stopped position 8 feet back of travel way for intersection sight distance (ISD). A summary of the measured sight lines from these positions is illustrated in the attached Exhibit 1. Measurement of the ISD from the 8-foot distance from travel way represents the likely stopped position exiting the driveway and provides sufficient visibility to oncoming vehicles without having to remove mature vegetation. The resulting sight lines are also located beyond the view line of the proposed wall at the driveway. *BETA2: Explanation provided – issue resolved.*
- T3. *Sight distance issues should be considered and coordinated with final Landscaping Plans.* MDM: Proposed vegetation within the driveway sight lines as measured from the 8-foot position behind travel way will be designed to have a mature growth height not to exceed 3 feet from the driveway grade and will be noted accordingly on the site landscape plan (by others). *BETA2: Recommend condition that, as part of the operation and maintenance plan, landscaping is to be inspected biannually and trimmed if necessary to provide adequate site distance.*

TRAFFIC OPERATIONS/GROWTH

Automatic Traffic Recorder (ATR) data was collected for a period in December 2014. The collected traffic volumes were appropriately adjusted for seasonality since December traffic volumes are typically 5% lower than average month conditions.

- T4. *Identify the peak hours of Washington Street.* MDM: Response: Automatic Traffic Recorder (ATR) data collected over a 3-day weekday period in December 2014 indicates a morning peak hour of 6:45 to 7:45 AM and an evening peak hour of 4:45 to 5:45 PM. These peak hours are consistent with commuter travel. *BETA2: Information provided – issue resolved.*
- T5. *It is unclear the length of time and day(s) of week of the collection of ATR data. It is standard to collect ATR data for a 48-hour time period between Tuesday-Thursday. Verify the day(s) and time of the data collection.* MDM: The provided technical attachments to the TIS include the ATR count sheets which include Tuesday December 16, Wednesday December 17 and Thursday December 18, 2014. The ATR was conducted along the Site frontage during this time period. *BETA2: Information clarified – issue resolved.*
- T6. *Traffic volumes were not projected to reflect a future 7-year planning horizon which is typically included in a TIS. This projection includes an annual growth rate as well as any proposed trips generated for planned developments in the area. Provide this data and analysis.* MDM: Review of historical count data for area roadways published by MassDOT indicates a flat or slightly declining growth rate for the latest available 7 year period. Likewise, review of approved projects in Sherborn indicates only one area development project (a 48-unit residential development at 59 Whitney Street, aka "Whitney Farm") which would have inconsequential impacts to Route 16 in the site vicinity. Accordingly, existing observed traffic conditions present a reasonable basis for analyzing the relative (and rather limited) traffic impact of the Fields 40B development along Washington Street. *BETA2: Explanation provided – issue resolved.*

TRIP GENERATION/DISTRIBUTION

The proponent estimated trip generation based on the Institute of Transportation Engineers (ITE) data for Land Use Code (LUC) 230 – Residential Condominium/Townhouse and distributed on the area roadways based on existing splits. BETA finds this approach acceptable.

ANALYSIS

All approaches at the intersection of Washington Street and the project driveway operate at level-of-service (LOS) C or better during the Existing Conditions. During the Build Condition, Washington Street would continue to operate at a LOS A during both the morning and evening peak periods. It should be noted that the Knollcrest Farm Lane approach would degrade from a LOS C to LOS D during both peak periods. The change in LOS accounts for a delay of an additional 5-6 seconds during the peak periods. However, LOS D is still considered an acceptable LOS. The proposed driveway would operate at a LOS B and LOS C during the morning and afternoon peak periods, respectively.

SITE PLAN

The proposed plan indicates a 22 foot wide access drive with a turnaround area near the rear of the site to provide vehicular access to the 10 units. The site plan does not indicate any proposed pedestrian walkways around site.

- T7. *The proposed driveway is slightly offset from Knollcrest Farm Lane. Consideration should be given to lining up the proposed driveway with Knollcrest Farm Lane for safety purposes and as is standard engineering practice.* MDM: The proposed driveway is less than 20 feet offset from Knollcrest Farm Lane and is effectively located so as to allow certain on-site design features that would otherwise be impacted by direct alignment to that private road. The proposed alignment does not present any safety concerns, as adequate sight lines are available at the intersection with Washington Street and little if any cross-traffic is expected between these small-scale residential developments. *BETA2: Explanation provided – issue resolved.*
- T8. *No signage or pavement markings plan was provided for review. Provide a stop sign and stop line at end of driveway at Washington Street.* MDM: The Applicant will modify the final site plans to include the requested pavement markings and signs, which shall conform to guidelines published in the latest edition of the *Manual on Uniform Traffic Control Devices*. *BETA2: Review of this issue will be included as part of the site plan review.*
- T9. *Provide and AutoTURN plan to verify that there is an adequate turning radius for emergency vehicles maneuvering around the site.* MDM: An Autoturn® vehicle turn analysis is presented in Exhibit 2 for the Town's largest responding vehicle (Engine 3, an aerial ladder truck), demonstrating that adequate roadway layout and curb radii are available to accommodate vehicle maneuvers. *BETA2: Information provided – issue resolved.*
- T10. *Provide accommodations for pedestrian safety on site.* MDM: Given the limited number of proposed residential units, relatively low traffic generation characteristics of the project and the lack of public sidewalks along Washington Street, the Applicant sees no useful purpose to provide sidewalks within the development. The site plan also provides ample maneuvering area for a school bus should the school department chose to use the property as a stop/turnaround. *BETA2: Recommend the Board discuss this issue as part of the site plan review.*

MITIGATION

Off-site mitigation has not been proposed for the project. Although this project will be impacting Washington Street, the impacts are expected to be less than 20 vehicle trips during the highest peak hour.

SUMMARY

In general, the Traffic Impact Statement was prepared according to industry standards and provided the backup data confirms the findings, the project is not proposing detrimental impacts as it relates to traffic generation.

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,
BETA Group, Inc.



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cc: Jeanne Guthrie
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