



March 16, 2022

Mr. Gregory Rondeau, Chairman
Franklin Planning Board
355 East Central Street
Franklin, MA 02038

Re: Proposed Mixed Use Development
230 East Central Street
Traffic Peer Review

Dear Mr. Rondeau:

BETA Group, Inc. (BETA) has reviewed the revised documents for the traffic related comments for TAJ Estates of Franklin II – 230 East Central Street (Route 140) located in Franklin, Massachusetts. This letter is provided to outline findings, comments, and recommendations.

BASIS OF REVIEW

BETA received the following items:

- E-mail entitled RE: Taj Estates Franklin II, dated March 16, 2022, prepared by Guerriere & Halnon, Inc. of Franklin, MA.
- Response to Traffic Peer Review, dated February 18, 2022, prepared by Vanasse & Associates, Inc., Andover, MA
- Plans (12 sheets) entitled: Taj Estates of Franklin II Site Plan & Special Permit dated November 11, 2021, revised 02/17/22, prepared by Guerriere & Halnon, Inc. of Franklin, MA.
- Traffic Impact Assessment (TIA), dated January 19, 2022, prepared by Vanasse & Associates, Inc., Andover, MA
- Plans (12 sheets) entitled: Taj Estates of Franklin II Site Plan & Special Permit dated November 11, 2021, revised 01/28/22, prepared by Guerriere & Halnon, Inc. of Franklin, MA.

COMPILED REVIEW LETTER KEY

BETA reviewed this project previously and provided review comments in a letter to the Board dated February 14, 2022 (original comments in standard text), Vanasse & Associates, Inc. (VAI) or Guerriere & Halnon, Inc. (GHI) provided responses (responses in italic text), and BETA has provided response comments (status in standard bold text).

PROJECT DESCRIPTION

The project site includes one parcel with a total area of approximately 1.005 acres located at 230 East Central Street in the Town of Franklin (the "Site"). The Site is located within the Commercial I Zoning District. Lots to the east and west of the Site are also within the Commercial I district, lots to the north of the parcel are within the Commercial II district, and lots to the south are within the Single-Family IV district. The area abutting the Site to the west is an undeveloped private road, connecting East Central Street to Hill Ave.

The TIA assessed the impact of a three-story building with 35 multifamily residential units and 900 square feet of office space on the ground floor. Subsequent to the study, a revised site plan was provided which consists of a mixed-use development with 825 square feet of commercial, thirty-one one-bedroom and two two-bedroom residential units. The change in commercial square feet and residential units is negligible related to traffic.

Access to the site will be provided via one new two-way driveway that will intersect the south side of East Central Street (Route 140) approximately 10 feet from the existing driveway which will be closed.

The project will include 53 total parking spaces.

FINDINGS, COMMENTS AND RECOMMENDATIONS

The study area includes the following intersections in the vicinity of the site:

- East Central Street (Route 140) at King Street/Chestnut Street (signalized)
- East Central Street (Route 140) at Horace Mann Plaza/CVS driveway (signalized)
- East Central Street (Route 140) at Site driveway

The study area was found to be adequate, and the study methodology follows MassDOT Transportation Impact Assessment (TIA) guidelines.

Manual turning movement counts (TMCs) were collected on Tuesday, March 5, 2020, from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. These time periods were chosen because they are representative of the peak generator times of the proposed development and roadways. The data collection dates occurred prior to the decrease in traffic patterns related to COVID-19. BETA concurs with the traffic data collection time periods.

T1. Typically, traffic volume data is collected via automatic traffic recorder (ATR) on the roadway(s) adjacent to a proposed site. Clarify if that data was collected and provide if available. VAI: An ATR count was performed on Route 140, west of Lewis Street, on January 5th and 6th, 2022 (Wednesday through Thursday, inclusive). The traffic count data is attached and includes vehicle travel speed data as well. A comparison of the peak-hour data as measured at the Project site in 2022 to the peak-hour traffic volumes that form the basis of the January 2022 TIA (derived from 2020 pre-COVID traffic volumes) indicates that the measured traffic volumes are lower than peak-hour traffic volumes that were used in the January 2022 TIA even with consideration of the seasonality of the count data. BETA 2: Information provided. No further comment.

Historical permanent count station data from I-495 were reviewed to determine the need for seasonal adjustment. Traffic volumes in March were found to be below average-month conditions, therefore, the volumes were increased by 7 percent. The adjustment information referenced 2017 data.

T2. Confirm that the 2017 counting station data is the most recent available to determine the seasonal adjustment. VAI: Traffic volume data for 2019 (pre-COVID) was obtained from the same MassDOT permanent count station (Station No. 3180). A review of the 2019 count data confirmed the seasonal adjustment that was used in the January 2022 TIA (1.07). BETA 2: Information provided. No further comment.

The 2020 traffic volumes were adjusted to 2022 by applying a 1 percent per year growth rate which BETA finds acceptable.

Crash data were obtained from the MassDOT database for the most recent five-year period from 2015 to 2019. The highest crash rate, quantified as crashes per million entering vehicles, for the signalized intersections was found to be 0.56 MEV which is lower than both the 0.89 MEV district average and 0.78 MEV statewide average crash rates for signalized intersections. The unsignalized intersection of Route 140 at the existing 230 East Central Street experienced a crash rate of 0.25 MEV over the five-year period. This is lower than both the 0.61 MEV district average and 0.57 MEV statewide average crash rates for unsignalized intersections.

- T3. It is noted that the crashes at the existing site driveway are significantly below the statewide and district averages. Has the crash data for the site intersection been more closely analyzed to determine if any safety improvements could be incorporated at the driveway to create a safer intersection? VAI: A review of the eight (8) motor vehicle crashes occurring at the existing driveway that serves the Project site does not indicate any discernable crash pattern or trend that is subject to correction. That being said, four (4) of the eight crashes appear to involve a vehicle exiting a driveway, either the existing driveway that serves the Project site or the driveways that serve the Rockland Trust Bank that is opposite the Project site. As documented in the January 2022 TIA, lines of sight at the Project site driveway exceed 650 feet in both directions, both approaching the driveway and for motorists exiting the driveway. Implementation of the recommendations that are provided in the January 2022 TIA, including the installation of a STOP-sign and marked STOP-line for motorists exiting the Project site and maintenance of sight lines, will serve to provide appropriate measures for the driveway to operate in a safe manner. BETA 2: Information provided. No further comment.

The proponent found that based on the Highway Safety Improvement Program (HSIP) eligible database, none of the study area intersections were found to be HSIP clusters. BETA reviewed the database and verified that no HSIP clusters were within the study area.

Background development-related traffic growth that may increase traffic within the study area was identified. The Chestnut Senior Village and the Central Square Mixed-Use Development proposed at 340 East Central Street were identified as new developments. The Chestnut Senior Village trips were considered as part of the overall background traffic growth and the Central Square Mixed-Use Development trips were directly applied to the future volumes. BETA finds this approach acceptable.

- T4. Provide the backup data for the Central Square Mixed-Use Development trips applied to the future conditions for reference. VAI: The project-generated traffic volume networks for the Central Square Mixed-Use Development are attached. BETA 2: Information provided. No further comment.

MassDOT permanent count station data indicated that traffic volumes have fluctuated over a 10-year period with an overall average traffic growth rate of 0.57 percent growth rate. No-Build traffic volumes were determined by applying a 1 percent per year growth rate over a seven-year period to 2029 to account for traffic growth, the Chestnut Senior Village, and other unforeseen developments. This growth rate is consistent with studies prepared for recent developments in Franklin.

The project-generated traffic volumes were determined by utilizing trip-generation statistics published by the Institute of Transportation Engineers (ITE) for Land Use Code (LUC) 220 Multifamily Housing (Low-Rise), and 712 Small Office Building. The land uses are appropriate.

The project site is estimated to generate a total of 315 new trips on an average weekday with 36 (9 entering, 27 exiting) during the weekday morning peak hour, and 38 (23 entering, 15 exiting) during the weekday afternoon peak hour.

The new trips were distributed based on Journey-to-Work data and then refined by existing traffic patterns. The provided distributions are acceptable and consistent with the Central Square Mixed-Use Development.

Traffic operations analysis was performed with Synchro software based on the Highway Capacity Manual methodologies. The Project was not found to change most of overall Level of Service (LOS) when compared to the No-Build conditions. However, the intersection of East Central Street at King Street/Chestnut St would degrade from a LOS E to LOS F during the weekend evening. The No-Build LOS E would operate with a delay very close to a LOS F, but this development puts the delay into the LOS F category.

Traffic signal timing adjustments were included for the intersection of East Central Street at King Street/Chestnut St to improve the Build signal operations. These adjustments would improve the intersection operations during the Build weekday evening peak from LOS F to LOS E. However, these are not anticipated to be included as part of the proponent's off-site mitigation.

T5. Provide the weekday morning Build w/Mitigation data sheets that are missing from the Appendix for review. VAI: The 2029 Build with Mitigation capacity analysis worksheets are attached. BETA 2: Information provided. No further comment.

T6. Off-site mitigation was not included by the proponent. BETA recommends that the proponent provide funds to perform a traffic monitoring program post-development which will determine the timing improvements needed to the study area traffic signals. VAI: The Project proponent will provide a \$5,000 contribution to the Town to be used to monitor traffic volumes and operating conditions at the Route 140/King Street/Chestnut Street intersection post-development of the Project. The funds will be deposited with the Town as a condition of the issuance of a Building Permit for the Project. BETA 2: The funds proposed by the proponent are sufficient to analyze and implement revised timings for the inter Route 140/King Street/Chestnut Street section of Route 140 at King Street/Chestnut Street. No further comment.

Vehicle speeds were measured via ATR along East Central Street on January 4 and 5, 2022. The posted speed limit on East Central Street is 40 miles per hour (mph). The 85th percentile speeds were measured at 34 mph, which are acceptable for a posted 40 mph roadway.

The available stopping sight distance (SSD) at the site driveway was measured and found to exceed the minimum required SSD based on the 40-mph posted speed limit.

SITE PLAN

T7. Revise leader arrow to point directly to the HC parking sign. GHI: The arrow towards the handicap spaces was revised accordingly. BETA 2: Plan revised. No further comment.

T8. Has consideration been given to providing an accessible parking space within the garage area? It is unclear on the plans what type of access, other than a stairwell, is provided within the garage. GHI: Currently all handicap parking is outside. Should handicap spaces be provided within the garage, accessibility will be coordinated with the architect. BETA 2: Information provided. No further comment.

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

Very truly yours,

BETA Group, Inc.



Jaklyn Centracchio, PE, PTOE
Project Manager

cc: Amy Love, Town Planner

Job No: 4830 - 80