



February 14, 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) conducted a review of traffic related items provided by the applicant for the proposed project entitled 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:

- 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.

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.

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.

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?

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.

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.
- 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.

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.
- 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.

Mr. Gregory Rondeau, Chairman

February 14, 2022

Page 4 of 4

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