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November 10, 2021

Mr. Jamie Ponte
Commissioner
Department of Public Infrastructure
1105 Shawmut Avenue
New Bedford, Massachusetts 02746

Subject: Peer Review of Traffic Memorandum
Proposed Marijuana Dispensary
366 Hathaway Road
New Bedford, MA

Dear Mr. Ponte:

In accordance with your request, we have undertaken a peer review of the traffic analysis materials prepared for the proposed Marijuana Dispensary to be located at 366 Hathaway Rd, New Bedford, MA 02740. The current proposal includes the reconstruction of an existing building to a 4,292 square-foot marijuana dispensary (medical and/or adult use retail sales). Access will be provided via a driveway opposite to the Route 140 Southbound ramps, where 23 parking spaces will be provided.

We have received a copy of the following documents from your office pertaining to our peer review:

- Traffic Memorandum (hereafter referred to as the Study) – Memorandum Regarding the Proposed Marijuana Dispensary, 366 Hathaway Road, New Bedford, MA, prepared by MDM Transportation Consultants, Inc. dated October 20, 2021.

Traffic Impact Study Methodology

The analysis and documentation submitted by the project proponent were generally prepared in accordance with accepted industry procedures and standards including the 2014 MassDOT Transportation Impact Assessment (TIA) Guidelines. We offer the following comments:

Overview

The project proponent gives an overview of the Study and summarizes the findings.

1. The project proponent should add a study location i.d. to the Hathaway Road at Self-storage Driveway intersection on Figure 1 - Site Location.

2. The project proponent should clarify that mainline traffic along Hathaway Road will continue to operate as LOS A during the peak hours at the unsignalized intersections.

Project Description

The project proponent describes existing and proposed land use.

3. The project proponent should show proposed bike parking, dimensions, and roadway geometry on Figure 2 - Preliminary Site Plan.

4. The project proponent should include AutoTURN drawings to show the routing for the design, delivery, emergency response, and trash removal vehicles.

5. The project proponent should provide the distance between the existing self-storage driveway and the proposed access drive.

6. The project proponent should describe where delivery vehicles will park, and what their impact will be on traffic flow.

7. The project proponent describes the facility as "medical and/or adult use retail sales". The project proponent should confirm whether this facility is governed by ADA 208.2.1, which would require that 10% of parking spaces be accessible; the current design provides accessible parking at 4.3% of spaces.

Baseline Traffic & Safety Characteristics

8. The project proponent should include transit information (MassDOT TIA Guidelines, 3.II.I).

9. The project proponent should also conduct a multi-modal network and pedestrian and bicycle facilities review (MassDOT TIA Guidelines 5.I.B).

Baseline Traffic Data

The project proponent describes studied intersections, data collection, COVID-19 adjustments, and seasonal adjustment factors. Backup is included in the attachments.

Intersection Crash History

10. The project proponent should show crashes involving non-motorized modes (pedestrians and bicycles) in Table 1 – Intersection Crash Summary.

11. The project proponent should provide collision diagrams and narratives for all study area intersections with more than 3 crashes per year. (MassDOT TIA Guidelines 3.III.F). As example, the intersection of Hathaway Road at Shawmut Avenue has a crash rate that is

56% higher than the district average. It is unclear if these collisions are all occurring immediately at the intersection or occur as a result of existing driveway access within the vicinity of the intersection.

12. The project proponent should confirm that the crash data queried for intersections extended as far back as the calculated 95th percentile queues for each approach.

13. Angle crashes account for a majority of the crashes at the unsignalized intersections (52% at Rockdale, 64% at SB ramps, and 56% at NB ramps). The project proponent should identify how the development will not exacerbate these conditions.

Projected Future Traffic Conditions

Background Growth

The project proponent describes their growth process of 1% per year compounded over 7 years and includes referenced continuous count station data in the attachments. No exception is taken with this section.

2028 No-Build Traffic Volumes

Volume figures are provided. No exception is taken with this section.

Trip Generation

14. The ITE Trip Generation Manual provides a warning regarding sample sizes of less than 10. This applies to pages 540-543, 545, and 546 of the ITE TGM11, as included in the attachments of the study. The project proponent should collect peak hour turning movement counts at similar sites within the State of Massachusetts to confirm that ITE LUC 882 accurately represents Recreational Marijuana Dispensary activity for the proposed site in New Bedford. The site generated traffic volume should be updated as needed.

15. The project proponent should include an assessment of the mode split assumptions for this development and identify potential for pedestrian, bicycle, and transit improvements. (MassDOT TIA Guidelines 3.IV.C.1)

Trip Distribution

16. The project proponent describes and illustrates the volumes as distributed through the network. Distribution percentages are assumed for the six (6) origin/ destination points within the network. The percentages assumed do not seem to correspond with the peak hour volumes in the existing conditions scenario. The project proponent should provide calculations or methodology showing how these percentages were developed or a narrative detailing the assumptions.

17. The project proponent should consider encouraging exiting vehicles bound for Hathaway Road westbound to use the shared driveway by adding signage on the property and restricting left turns out of the proposed driveway.

18. The project proponent should consider modifying Figure 9 – Trip Distribution to illustrate the percentages of trips arriving and departing from the two site driveways.

19. The applicant should consider restricting the proposed driveway to right turns only for exiting traffic. This will simplify the movements at this new intersection requiring vehicles bound for Route 140 southbound to exit via the shared driveway and then take a left onto the on-ramp.

2028 Build Condition Traffic Volumes

Build volume figures are included. No exception is taken with this section.

Traffic Operations Analysis

Analysis Methodology

Methodology is described. No exception is taken with this section.

Model Calibration

Methodology is described, and backup calculations are included. No exception is taken with this section.

Analysis Results

20. The project proponent should include queue results and available storage capacity for all analyzed intersections in existing, no-build, and build conditions. (MassDOT TIA Guidelines, 5.I.B.7)

21. It is recommended that the peak hour factor (PHF) be revised to 0.92 for future year traffic volumes in an urban environment.

Conclusions and Recommendations

Access/Site Improvements

22. The project proponent should measure and graphically illustrate the available sight distance at the proposed driveways. “Document the available intersection sight distance at proposed site driveway(s). Sight distance measurements must be in conformance with the latest edition of the AASHTO manual, A Policy on Geometric Design of Highways and Streets.” (MassDOT TIA Guidelines, 5.I.G)

23. The project proponent should consider conducting a MUTCD Warrant Analysis. These intersections may meet Warrant 3, Peak Hour, and Warrant 7, Crash Experience.

Pedestrian and Bicycle Accommodations

No exception is taken with this section.

Off-Site Improvements

24. Project proponent should elaborate on the proposed bicycle accommodations. Were bicycle counts conducted? What impacts would these proposed improvements have on the roadway geometry?

25. Project proponent should provide a concept plan to illustrate the proposed geometry with left turn bays as described.

26. Project proponent should provide a concept plan to illustrate the alignment of the interchange ramps in relationship to the driveways of the development.

Grand Opening

27. Project proponent should elaborate on customer processing time and address the following questions:

    a. What is the typical time to service a customer at this facility?

    b. How many employee vehicles will be parking in the parking lot?

    c. Do the number of proposed parking spaces satisfy this need?

28. It is recommended that the project proponent be responsible for providing police officers to control traffic as needed during the opening of this new facility, and subsequently as required by the Department of Public Infrastructure (DPI).

Attachments

29. The following maps should be included in the Attachments as recommended by MassDOT TIA Guidelines, Section 5.I.A.

    a. Site plotted centrally on the USGS map

    b. Site plotted in accordance with the MassDOT Road Inventory Maps

    c. Zoning map

30. The following additional information should be included in the Attachments as recommended by MassDOT TIA Guidelines, Section 5.II.

    a. Bicycle Counts

    b. Transit Service Existing Conditions Data

    c. Plotted intersection sight distance analyses

    d. Collision Diagrams (See Item #16 above)

    e. Speed Data

Traffic Volume Data

31. The project proponent should confirm whether pedestrian counts were taken. The backup sheets from MDM Transportation Consultants, Inc. show pedestrian counts of 0 for all time periods.

Seasonal/Yearly Growth Data

No exception is taken with this section.

Pandemic Adjustment Data

No exception is taken with this section.

Crash Data

See section above regarding Crashes.

Delay Study Results

No exception is taken with this section.

Capacity Analysis

32. Vehicle extension at the intersection of Shawmut Avenue at Hathaway Road should be set to 2 seconds for all phases, it is currently shown as 3 seconds for Phase 1 and Phase 7.

33. Existing and No-Build Synchro operational analysis has been conducted for the scenario as described in the 'Off-Site Improvements – Update Pavement Markings' section, including left turn bays for Hathaway Road. The project proponent should document in the study that this reflects existing operational conditions.

Summary

Based on our review of the Proposed Marijuana Dispensary Traffic Memorandum, we find that the study has generally been prepared in accordance with accepted industry standards and procedures. We do however recommend the proponent address the concerns listed above.

We appreciate the opportunity to provide the City of New Bedford with these peer review services. We anticipate providing review of the project proponent's responses to these comments in accordance with our task order contract. Please do not hesitate to call if you have any questions relative to our review of the traffic-related issues associated with the proposed redevelopment.

Sincerely,

Lisa Sherman, PE, PTOE, PMP
Project Manager
CDM Smith Inc.