

AMORY ENGINEERS, P.C.

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June 17, 2022

Rockland Zoning Board of Appeals
Town Offices
242 Union Street
Rockland, MA 02370

Subject: **1015 Hingham Street – As-Built Plan**

Dear Zoning Board Members:

This is to advise that we have reviewed the Interim Final As-Built Plan and transmittal letter, both dated June 15, 2022 and prepared by Bracken Engineering, Inc. We also visited the site this morning. The purpose of our review and site visit was to determine whether 1) all of the proposed improvements were completed and 2) the conditions of approval have been satisfied. We note that the Bracken Engineering, Inc. letter¹ identified nine items that have not been completed and/or need to be addressed. Based on our site visit we agree that the items listed in the Bracken letter are the items that have not been completed. Should these items not be completed before the Board closes the public hearing on the Rockland Old Exit 14, Inc. case, these items should be conditions of approval.

At the Chairman's request we also measured the sight distance at the driveway off Hingham Street. We measured the sight distance to the west (traffic heading eastbound) to be about 315 feet, which is the intersection with Commerce Road. We note that the traffic Memorandum², dated May 29, 2020, prepared by MDM Transportation Consultants, Inc., indicated that the required sight distance in that direction is 360 feet and MDM reported that the available sight distance was greater than 500 feet, which it is clearly less than. Based on the required sight distance, the sight distance is currently inadequate as it is restricted by utility poles and vegetation. We believe that the utility poles were installed for the construction of the subject property. Photos of the site from today's visit are attached.

Should you have any question, please give us a call.

Very truly yours,

AMORY ENGINEERS, P.C.

By:



Patrick G. Brennan, P.E.



PGB

¹ Copy of letter attached.

² Excerpts from memorandum attached.

MAIN OFFICE:

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Buzzards Bay, MA 02532
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**NANTUCKET OFFICE:**

19 Old South Road
Nantucket, MA 02554
TEL: (508) 325-0044
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June 15, 2022

Email: zoning@rockland-ma.gov

Robert Rosa, Chairman
Rockland Board of Appeals
242 Union Street
Rockland, MA 02370

**RE: 1015 Hingham Street, Rockland, MA Special Permit Application
Rockland Old Exit14, Inc. (DBA Green Rock Cannabis)**

Dear Chairman Rosa,

Please find accompanying this letter an "Interim" As-Built plan for the above referenced project. After reviewing the plan and the site, the following items need to be addressed prior to certifying full compliance with the approved plans:

1. Fence needs to be installed along easterly lot line abutting 1099 Hingham Street;
2. Trench drains at driveway entrances need to be modified to comply with plan;
3. Wet swale in front of site between road and wall needs to be vegetated per plan;
4. Outlet control structure needs to be completed per plan;
5. Area behind building needs to be planted with conservation seed mix;
6. Plantings need to be verified by Botanist;
7. Curb stops need to be installed on side of building;
8. Proposed ground sign needs to be installed east of the Hingham Street entrance; and
9. Directional pavement markings and signs need to be installed.

Should you have any questions regarding this project or require any further information please contact the undersigned at either 508-833-0070 or don@brackeneng.com.

Sincerely,

BRACKEN ENGINEERING, INC.

A handwritten signature in black ink, appearing to read 'Donald F. Bracken, Jr.', written over a horizontal line.

Donald F. Bracken, Jr., P.E.
President

MEMORANDUM

DATE: May 29, 2020

TO: Jim Rader, President
Rader Properties, Inc.
80 Washington Street, J-40
Norwell, MA 02061

FROM: Robert J. Michaud, P.E. – Managing Principal
Daniel A. Dumais, P.E. – Senior Project Manager



RE: Proposed Retail Development
1015 Hingham Street, Rockland, Massachusetts

MDM Transportation Consultants, Inc. (MDM) has conducted this traffic memorandum (TM) for a proposed retail development to be located at 1015 Hingham Street (Route 228) in Rockland, Massachusetts. The location of the site relative to the adjacent roadway network is shown in **Figure 1**. This TM provides a primary summary of the baseline traffic conditions at the Site and adjacent roadways/ intersections, evaluates projected trip generation, reviews site access/egress, provides an operational analysis of project impact and provides a conceptual access/egress plan for context with the adjacent traffic signal and driveways.

Key findings of the assessment are as follows:

- *Measured Travel Speeds.* The 85th percentile travel speed along Hingham Street adjacent to the Site was observed to be 39 mph for both the eastbound and westbound travel directions. The speed study results indicate that the 85th percentile speeds are slightly lower but generally consistent with the regulatory speed limits. Therefore, the sight line requirement criteria set by the American Association of State Highway and Transportation Officials (AASHTO) based on the observed regulatory (posted) speed limits were utilized in this assessment.
- *Adequate Sight Lines.* The existing available sight lines exceed AASHTO's recommended Stopping Sight distance (SSD) criteria for the regulatory speed limits along Hingham Street. Likewise, the available Intersection Sight Distance (ISD) looking east and west from the proposed site driveway along Hingham Street will exceed the recommended sight line requirements from AASHTO. MDM recommends that any new plantings (shrubs, bushes) or physical landscape features to be located within driveway sight lines should also be maintained at a height of 2 feet or less above the adjacent existing roadway grade to ensure unobstructed lines of sight.

Sight Line Evaluation

An evaluation of sight lines was conducted at the proposed site driveway location to ensure that minimum recommended sight lines are available to safely exit onto Hingham Street. The evaluation documents existing sight lines for vehicles as they relate to Hingham Street with comparison to recommended guidelines for the regulatory speed limit.

The American Association of State Highway and Transportation Officials' (AASHTO) standards² reference two types of sight distance which are relevant at the proposed site driveway intersection on Hingham Street: stopping sight distance (SSD) and intersection sight distance (ISD). Sight lines for critical vehicle movements at the proposed site driveway intersection with Hingham Street were compared to minimum SSD and ISD for the regulatory and observed travel speeds along Hingham Street in the Site vicinity.

Stopping Sight Distance

Sight distance is the length of roadway visible to the motorist to a fixed object. The minimum sight distance available on a roadway should be sufficiently long enough to enable a below-average operator, traveling at or near a regulatory speed limit, to stop safely before reaching a stationary object in its path, in this case, a vehicle exiting the site driveways onto Hingham Street. The SSD criteria are defined by AASHTO based on design and operating speeds, anticipated driver behavior and vehicle performance, as well as physical roadway conditions. SSD includes the length of roadway traveled during the perception and reaction time of a driver to an object, and the distance traveled during brake application on wet level pavement. Adjustment factors are applied to account for roadway grades where applicable.

SSD was estimated in the field using AASHTO standards for driver's eye (3.5 feet) and object height equivalent to the taillight height of a passenger car (2.0 feet) for the eastbound and westbound Hingham Street approaches to the intersection. **Table 3** presents a summary of the available SSD for the Hingham Street segment approaches to the proposed site driveway and AASHTO's recommended SSD for the regulatory speed limits.

² A policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO), 2018.

TABLE 3
STOPPING SIGHT DISTANCE SUMMARY
HINGHAM STREET APPROACH TO PROPOSED SITE DRIVEWAY

Approach/ Travel Direction	Available SSD	AASHTO Recommended ¹	
		Regulatory Speed Limit ²	Criteria Satisfied
Eastbound	500+ Feet	360	Yes
Westbound	500+ Feet	305	Yes

¹Recommended sight distance based on AASHTO, A Policy on Geometric Design of Highways and Streets. Based on driver height of eye of 3.5 feet to object height of 2.0 feet and adjustments for roadway grade.

²Regulatory Speed Limit is 45 mph EB and 40 mph WB.

As summarized in **Table 3** analysis results indicate that the existing available sight lines exceed AASHTO's recommended SSD criteria for the proposed site driveway based on the regulatory travel speeds along Hingham Street.

Intersection Sight Distance

Clear sight lines provide sufficient sight distance for a stopped driver on a minor-road approach to depart from the intersection and enter or cross the major road. As stated under AASHTO's Intersection Sight Distance (ISD) considerations, "...If the available sight distance for an entering ...vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to avoid collisions...To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road." AASHTO's ISD criteria are defined into several "cases". For the proposed unsignalized site driveway location, which is proposed to be under STOP sign control with left and right egress movements, the ISD in question relates to the ability to turn left or right from the proposed driveway at its intersection with Hingham Street.

Available ISD was estimated in the field using AASHTO standards for driver's eye (3.5 feet), object height (3.5 feet) and decision point (between 8 and 14.5 feet from the edge of the travel way) for the westbound direction along Hingham Street. **Table 4** presents a summary of the available ISD for the departure from the proposed site driveways and AASHTO's minimum and ideal ISD recommendations.













































