

**KRATTENMAKER O'CONNOR & INGBER P.C.**

ATTORNEYS AT LAW

ONE MCKINLEY SQUARE  
BOSTON, MASSACHUSETTS 02109  
TELEPHONE (617) 523-1010  
FAX (617) 523-1009

August 25, 2020

CHARLES G. KRATTENMAKER, JR.  
MARY WINSTANLEY O'CONNOR  
KENNETH INGBER

OF COUNSEL: RAYMOND SAYEG

**VIA EMAIL AND FIRST-CLASS MAIL**

Jennifer Raitt, Director  
Department of Planning and Community  
Development  
Town of Arlington  
730 Massachusetts Avenue  
Arlington, MA 02476

Re: Special Permit Application of Eskar, LLC, 23 Broadway, Arlington, MA

Dear Director Raitt:

On behalf of Eskar, LLC (hereinafter referred to as "Eskar"), I am providing the additional information requested by Erin Zwirko, Assistant Director, in her email of June 18, 2020. These materials supplement the application previously filed with your office.

1. Site Plan

Enclosed is a site plan which includes, among other information, information as to where the customer bicycle parking will be located, the twelve (12) designated spaces for use by Eskar customers and how the traffic will flow in the parking lot. I also enclose an existing site conditions plan.

2. Floor Plan

Enlarged floor plan, which indicates, among other things, how the customer check-in is separated from the sales floor, the flow of patrons through the space and the employee inside bicycle parking.

3. Sign Rendering/Plan

Enclosed is the sign elevation for the exterior wall sign, which is placed in context with the Broadway side of the façade.

**KRATTENMAKER O'CONNOR & INGBER P.C.**

Jennifer Raitt, Director  
August 25, 2020  
Page 2

4. LEED

Enclosed is a letter from AEPMI Design & Building Consultants, which references the sustainable methods in the design, construction and operation of the space to be occupied by Eskar. Also enclosed is the LEED scoresheet.

5. Traffic Impact Report

The Transportation Impact Assessment prepared by Vanasse & Associates, Inc. is one hundred forty (140) pages and will be sent in a separate email to you.

The report references, *inter alia*, traffic counts, customer parking, other tenant parking, the flow of traffic in the parking lot, the location of accessible parking, proposed locations for ride-share pickup and drop off and the adequacy of available parking in the area.

6. Transportation Demand Management Plan

Enclosed is Eskar's proposed transportation demand management plan.

7. Arlington Police Department

Michael Hunnewell made contact with Captain James Curran of the Arlington Police Department to discuss the preopening, post-opening, security and traffic management.

Captain Curran advised him that any meeting on these issues would not occur until a month prior to opening at which time Captain Curran would visit the site for a tour of the space and to discuss these issue.

8. Parking Spaces

I enclose a letter agreement dated June 24, 2020 between the applicant and the owner of 23 Broadway, agreeing to lease to Eskar twelve (12) of the sixteen (16) parking spaces onsite.

9. Memorandum

Enclosed is the memorandum required in connection with the relief requested.

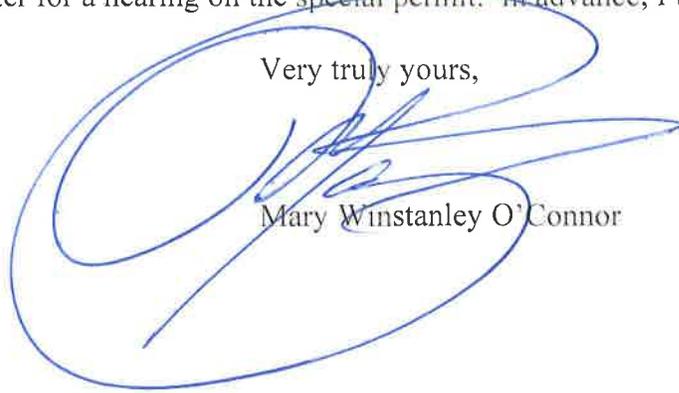
These materials supplement the previous submission, which included the Dimensional and Parking Information Sheet, application for special permit, lease and photographs.

**KRATTENMAKER O'CONNOR & INGBER P.C.**

Jennifer Raitt, Director  
August 25, 2020  
Page 3

Please schedule this matter for a hearing on the special permit. In advance, I thank you.

Very truly yours,



Mary Winstanley O'Connor

MWO/ccg  
Enclosures  
6934

cc: Michael Aldi  
Michael Hunnewell



TOWN OF ARLINGTON  
REDEVELOPMENT BOARD

Application for Special Permit In Accordance with Environmental Design  
Review Procedures (Section 3.4 of the Zoning Bylaw)

Docket No. \_\_\_\_\_

1. Property Address 23 Broadway  
Name of Record Owner(s) Kentury Ventures, LLC Phone (617) 821-5677  
Address of Owner 21 Broadway, Arlington, MA 02474  
Street City, State, Zip

2. Name of Applicant(s) (if different than above) Eskar Arlington, LLC  
Address 9 Wildwood Road, Middleton, MA 09149 Phone (617) 833-8795  
Status Relative to Property (occupant, purchaser, etc.) Tenant

3. Location of Property 23 Broadway, Arlington, MA  
Assessor's Block Plan, Block, Lot No.

4. Deed recorded in the Registry of deeds, Book 69019, Page 117;  
-or- registered in Land Registration Office, Cert. No. \_\_\_\_\_, in Book \_\_\_\_\_, Page \_\_\_\_\_.

5. Present Use of Property (include # of dwelling units, if any) Formerly used as credit union/bank

6. Proposed Use of Property (include # of dwelling units, if any) cannabis dispensary

7. Permit applied for in accordance with See attached  
the following Zoning Bylaw section(s) \_\_\_\_\_  
\_\_\_\_\_ section(s) title(s)  
\_\_\_\_\_

8. Please attach a statement that describes your project and provide any additional information that may aid the ARB in understanding the permits you request. Include any reasons that you feel you should be granted the requested permission.

(In the statement below, strike out the words that do not apply)

The applicant states that Eskar Arlington, LLC is the owner -or- occupant -or- purchaser under agreement of the property in Arlington located at 23 Broadway which is the subject of this application; and that unfavorable action -or- no unfavorable action has been taken by the Zoning Board of Appeals on a similar application regarding this property within the last two years. The applicant expressly agrees to comply with any and all conditions and qualifications imposed upon this permission, either by the Zoning Bylaw or by the Redevelopment Board, should the permit be granted.

Signature of Applicant(s) Michael F. Aldi  
Manager  
9 Wildwood Road, Middleton, MA 01949  
Address

Michael R. Hunnewell  
Manager (617) 833-8795  
Phone

ATTACHMENT TO APPLICATION FOR SPECIAL PERMIT

- 7. Section 3.4.2(4) Marijuana establishments
- Section 8.3 Standards for marijuana uses
- Section 6.1.5 Parking Reduction in Business District
- Section 6.1.6 Off-street Loading Space requirements
- Section 6.1.12(H)(1) Convert long-term bicycle parking spaces to short term
- Section 6.2.1 Sign review and approval

TOWN OF ARLINGTON  
 Dimensional and Parking Information  
 for Application to  
 The Arlington Redevelopment Board

Docket No. \_\_\_\_\_

Property Location 19-23 Broadway

Zoning District B-2A

Owner: Kentury Ventures, LLC

Address: 21 Broadway, Arlington, MA 02474

Present Use/Occupancy: No. of Dwelling Units:  
Offices and former banking facility

Uses and their gross square feet:  
10,850

Proposed Use/Occupancy: No. of Dwelling Units:  
Office and retail cannabis dispensary

Uses and their gross square feet:  
Office - 7,612; Cannabis dispensary - 3,238

	Present Conditions	Proposed Conditions	Min. or Max. Required by Zoning for Proposed Use
Lot Size	10,890	10,890	min. -
Frontage	110.82	110.82	min. 50
Floor Area Ratio	.99	.99	max. 1.0
Lot Coverage (%), where applicable			max.
Lot Area per Dwelling Unit (square feet)			min.
Front Yard Depth (feet)	0	0	min. 0
Side Yard Width (feet) right side	0	0	min. 0
left side	55.52	55.52	min. 0
Rear Yard Depth (feet)	22.91	22.91	min. 15.35
Height			min.
Stories	3	3	stories 3
Feet	34' 6"	34' 6"	feet 35
Open Space (% of G.F.A.)	2	2	min. 10
Landscaped (square feet)	182	182	(s.f.) 1,088
Usable (square feet)	0	0	(s.f.) 0
Parking Spaces (No.)	16	16	min. 15 for office use 11 for retail
Parking Area Setbacks (feet), where applicable	0	0	min. 0
Loading Spaces (No.)	0	0	min. 1
Type of Construction	Brick exterior poured concrete foundation		
Distance to Nearest Building			min.



Town of Arlington Redevelopment Board  
 Application for Special Permit in accordance with  
 Environmental Design Review (Section 3.4)

Required Submittals Checklist

Two full sets of materials and one electronic copy are required. A model may be requested. Review the ARB's Rules and Regulations, which can be found at [arlingtonma.gov/arb](http://arlingtonma.gov/arb), for the full list of required submittals.

- Dimensional and Parking Information Form (see attached)
- Site plan of proposal
- Model, if required
- Drawing of existing conditions
- Drawing of proposed structure
- Proposed landscaping. May be incorporated into site plan
- Photographs
- Impact statement
- Application and plans for sign permits
- Stormwater management plan (for stormwater management during construction for projects with new construction)

FOR OFFICE USE ONLY

- Special Permit Granted Date: \_\_\_\_\_
- Received evidence of filing with Registry of Deeds Date: \_\_\_\_\_
- Notified Building Inspector of Special Permit filing Date: \_\_\_\_\_

COMMONWEALTH OF MASSACHUSETTS

MIDDLESEX, SS.

ARLINGTON REDEVELOPMENT BOARD  
Docket No.

\*\*\*\*\*

**IN RE:**

Special Permit Application of Eskar  
Arlington, LLC,

Applicant.

\*\*\*\*\*

**ENVIRONMENTAL IMPACT STATEMENT OF ESKAR ARLINGTON, LLC  
AND STATEMENT AS TO SATISFACTION OF SPECIAL PERMIT CRITERIA**

On June 24, 2019, Eskar, LLC, a Massachusetts limited liability company, entered into a host community agreement (hereinafter referred to as “HCA”) with the Town of Arlington to operate a marijuana retail establishment for the sale of marijuana and marijuana products at the property known and numbered as 19-23 Broadway, Unit 1F, Arlington, MA. The host community agreement was subsequently assigned by Eskar, LLC to Eskar Arlington, LLC (hereinafter referred to as the “Applicant”, “Town”, “Property” and “Facility”, respectively).

The Applicant was selected to receive the HCA from among a number of other applicants by the Select Board after an extensive public hearing process.

The Applicant was awarded its first retail HCA for a facility it is intending to open in Northbridge, Massachusetts.

The Applicant's Vice President, Michael Aldi, one of the principals, has over a decade of experience in owning and operating various successful bar and restaurant establishments in Massachusetts.

The Applicant's principals have extensive experience in employee training on the handling of alcohol and have updated their training to meet the regulatory requirements for marijuana handling and sales. All prospective employees will be required to submit to background checks, training and continuing education.

The Applicant is expected to create over thirty (30) new jobs in the Town. Diversity in hiring is important to the Applicant and it intends to employ several initiatives, including interviewing minority applicants for every open position, performing a gender pay gap audit once a year and providing a mentor-protégé program for underprivileged people looking to enter the cannabis industry.

The Applicant has submitted to the Town in support of the HCA a business plan, which details, among other things, employee training and hiring protocols. A copy of the business plan was previously provided to the Board. The business plan also includes a detailed security plan and a traffic and parking plan. A detailed traffic study has been prepared by Vanasse & Associates, Inc. and is submitted herewith.

The HCA requires the Applicant to make quarterly community impact payments, so-called, to the Town in an amount equal to three percent (3%) of the gross sales of all marijuana and marijuana-infused products at the Facility. This will likely be a significant source of revenue for the Town.

The Property is located in the B-2A – Major Business District. Article 5, Section 5.5.1(c).

Given that the Town has selected the Applicant as an operator and entered an HCA with the Applicant, the Applicant seeks a special permit for the use proposed, which is permitted by special permit in a B-2A zoning district. The Applicant also seeks approval for its exterior signage, which is included with the application materials.

The Applicant suggests, as detailed hereinbelow that it satisfies: (a) those environmental impact criteria referenced in the Arlington Zoning By-law, which apply; and (b) the special permit criteria set out in Article 3, Section 3.3.3 of the By-law.

### **ENVIRONMENTAL DESIGN REVIEW STANDARDS AND IMPACT STATEMENT**

The special permit requested is one for which a special permit is required and is within the jurisdiction of the Board. Article 3, Section 3.4.2. The signage approval requested comports with Article 6, Section 6.2.1, et seq.

Most of the environmental design review standards set out at Article 3, Section 3.4.4 primarily apply to the development of a proposed site. The Property is existing and the Applicant is intending to remodel the Facility, previously occupied by the New England Teamsters Credit Union, as detailed in the floor plan submitted.

- Preservation of Landscape, Relation of Building to Environment, Open Space, Surface Water Drainage, Utility Service, Microclimate and Sustainable Building and Site Design – This request is for a use permit in an existing building. There will be only minor changes to the exterior landscape of the grounds and/or the exterior of the building.
- Advertising Features – The proposed outdoor signage submitted for approval is in conformance with the Arlington Zoning Bylaw. The Applicant states that the signage proposed does not detract from the use and enjoyment of the Building and/or the surrounding properties in this B-2A zoning district. The sign will have a stainless steel background plate anchored five feet above the sidewalk level on the existing brick exterior wall. The word “Eskar” as depicted on the attached plan will be raised halo lit illuminated metal lettering. The sign is 2’3” in width, 8’8” in length and will have a total signage area of 19.5 square feet.

Article 6, Section 6.2.5(D)(10) requires that all wall signs in the business district be no more than forty square feet in area and no more than twenty-five feet in height.

- Special Features – There are no exterior “special features”.
- Circulation – The Property has seventeen (17) parking spaces. Presently, entrance to the Property is from a drive entrance off of Broadway and visitors to the Property exit from the parking area onto Sunnyside Avenue, which intersects with Broadway. This allows for orderly circulation, safe use of the parking lot and no conflicts between vehicles seeking to enter or exit the parking lot.

The Applicant is required to have three short-term and one long-term bicycle parking spaces. The Applicant is proposing six bicycle parking spaces.

- Safety – The Applicant states that all open and enclosed spaces on the Property are accessible to fire, police and other emergency personnel and equipment.

The interior of the Facility will be outfitted with video surveillance equipment as detailed in the safety and security plan submitted to the Select Board. A copy of the safety and security plan was previously submitted to the Board.

- Heritage – There will be no removal or disruption of historic, traditional or significant uses, structures or architectural elements. The Applicant also suggests that the proposed signage comports with the architecture in the area.

The Applicant respectfully suggests that there will be no negative or adverse impact resulting from the approval of the special permit for the use of the Facility as a marijuana retailer.

### **Special Permit Criteria**

The Board is required to grant the special permit requested provided it finds that the adverse effects, if any, of the proposed use will not outweigh its beneficial impacts to the Town or neighborhood, in view of the characteristics of the site and of the proposal in relation to the site. In making such a decision, the Board is required to include findings that the criteria set forth below for a special permit are met.

The Applicant states that it satisfies the criteria set out in Article 3, Section 3.3.3 of the Bylaw for the grant of a special permit.

1. The use requested, a marijuana retail shop, is listed as a use permitted with a special permit in the use regulations for the B-2A zoning district. Article 5, §5.5.3. The B-2A Zoning District is defined as the "Major Business District" in the Town. The B-2A District is located along, among other streets, Broadway. This district generally contains retail and service uses that serve the needs of a large neighborhood area. Article 5, §5.5.1(c).
2. The requested use is essential or desirable to the public convenience or welfare. In 2016, the registered voters in Massachusetts voted to legalize the sale of recreational marijuana in Massachusetts. Arlington registered voters approved the question. It is desirable to provide this service to residents in accordance with the expressed intent of the electorate and legislature in a regulated environment. Moreover, the proposed use will provide income to be added to the tax revenue by the requirement that the Applicant remit an amount equal to three percent (3%) of gross sales to the Town.
3. The requested use will not overload any public water, drainage or sewer system or any other municipal system to such an extent that the requested use or any development use in the immediate area of the Town will be unduly subjected to hazards affecting health, safety or the general welfare. The use proposed will replace a banking use formerly on the Property. There will be no additional requirements placed on municipal systems and there will be no development of the Property which will unduly subject residents to hazards affecting health, safety or the general welfare.
4. Special regulations. The proposed site of the Facility is not within: (a) 500 feet of a K-12 public or private school; (b) 300 feet of Town of Arlington playgrounds or recreational facilities; and/or (c) 200 feet of a Town of Arlington Public Library.
5. The requested use will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health, morals or welfare. The use is a permitted use in the B-2A zoning district. The Applicant intends only to make minor changes to the exterior of the Property as detailed on the plans.

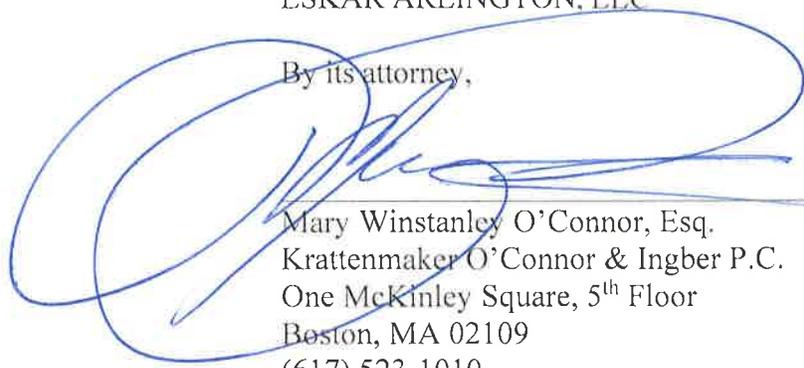
The interior of the Facility will have a more organic and historic feel. The interior will not be linoleum floors and floodlights, but will be wood and steel with complimentary lighting. See the interior plan for the Facility which is attached. The proposed use is subject to detailed security protocols and regulations and the Applicant is required to work closely with Town law enforcement.

6. The requested use will not, by its addition to this neighborhood, cause an excess of the particular use that could be detrimental to the character of said neighborhood. The Select Board, in selecting the Applicant among a number of others to receive a host agreement, concluded, among other things, that the proposed site was most appropriate due to the surrounding businesses. Further, there are no other marijuana establishments in the area.

The Applicant maintains that it satisfies all of the criteria for the grant of a special permit to operate a marijuana retail establishment at this Property and requests that the Board approve the special permit. The Applicant also maintains that the proposed signage complies with the Town's signage bylaw and requests approval of the proposed sign.

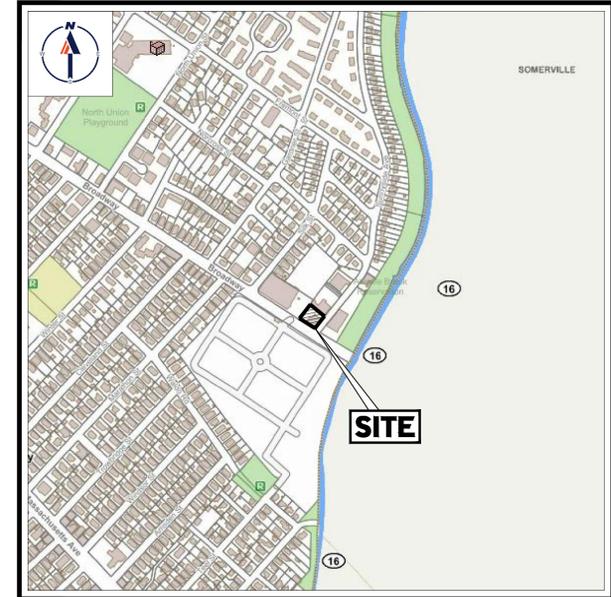
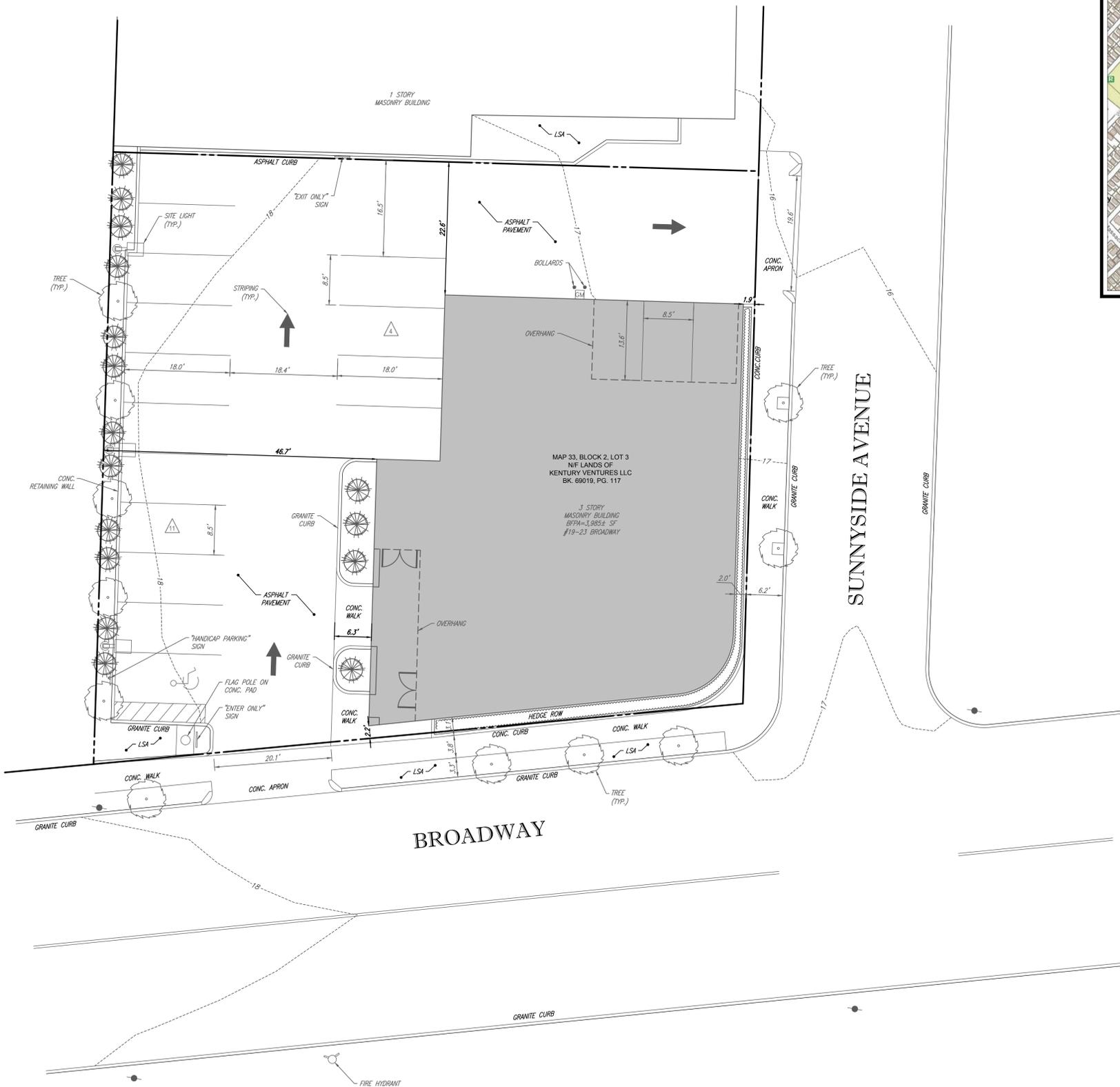
ESKAR ARLINGTON, LLC

By its attorney,

A large, stylized handwritten signature in blue ink, written over a horizontal line. The signature is highly cursive and loops around itself.

Mary Winstanley O'Connor, Esq.  
Krattenmaker O'Connor & Ingber P.C.  
One McKinley Square, 5<sup>th</sup> Floor  
Boston, MA 02109  
(617) 523-1010

Dated: 8/25/2020



**LOCUS MAP**  
SCALE: 1" = 500'  
SOURCE: ARLINGTON GIS

**BOHLER**  
SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

**REVISIONS**

REV	DATE	COMMENT	DRAWN BY	CHECKED BY

**811**  
Know what's below.  
Call before you dig.  
ALWAYS CALL 811  
It's fast. It's free. It's the law.

**PERMIT SET**

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT: W201195  
DRAWN BY: NPD  
CHECKED BY: RMM  
DATE: 08/19/2020  
CAD ID: W201195-CVL-0

**PROPOSED SITE PLAN DOCUMENTS**

FOR

**ESKAR**

PROPOSED DEVELOPMENT  
MAP #33, BLOCK #2, LOT #3  
23 BROADWAY  
TOWN OF ARLINGTON  
MIDDLESEX COUNTY,  
MASSACHUSETTS

**BOHLER**  
352 TURNPIKE ROAD  
SOUTHBOROUGH, MA 01772  
Phone: (508) 480-9900  
[www.BohlerEngineering.com](http://www.BohlerEngineering.com)

**J.G. SWERLING**  
PROFESSIONAL ENGINEER  
MASSACHUSETTS LICENSE No. 41697  
NEW HAMPSHIRE LICENSE No. 14695  
MAINE LICENSE No. 13819  
CONNECTICUT LICENSE No. 38785  
RHODE ISLAND LICENSE No. 11425

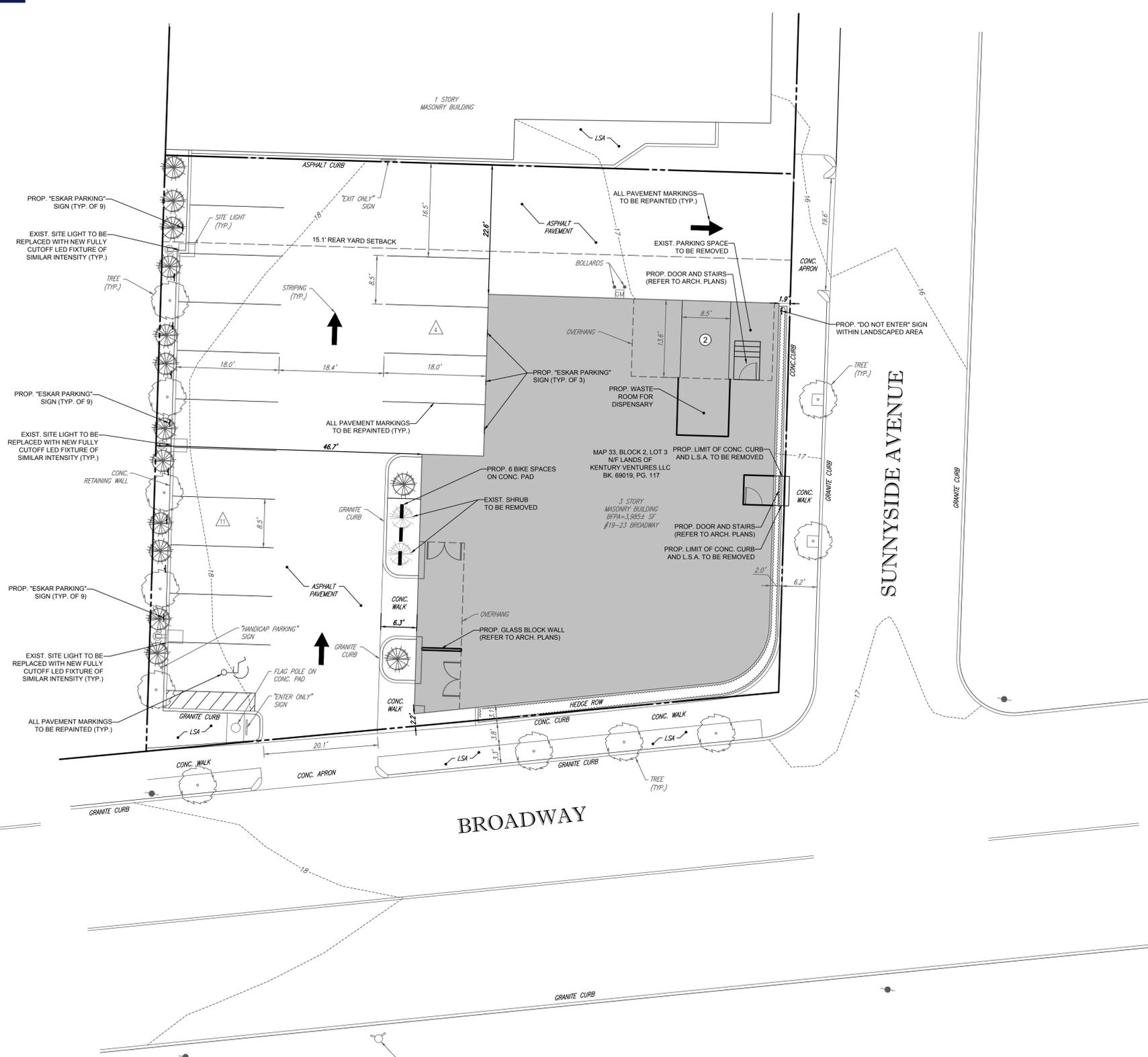
**EXISTING CONDITIONS PLAN**

SHEET NUMBER:  
**1**

- EXISTING CONDITIONS PLAN NOTES**
- PROPERTY LINE INFORMATION DEPICTED ON THIS PLAN IS TAKEN FROM "ZONING SITE PLAN", PREPARED BY WOO & WILLIAMS, DATED 03/10/89 AND IS NOT THE RESULT OF AN ACTUAL FIELD SURVEY.
  - TOPOGRAPHIC INFORMATION DEPICTED ON THIS PLAN IS BASED ON ARLINGTON GIS AND IS NOT THE RESULT OF AN ACTUAL FIELD SURVEY.
  - BUILDING LOCATIONS DEPICTED ON THIS PLAN IS TAKEN FROM "ZONING SITE PLAN", PREPARED BY WOO & WILLIAMS, DATED MARCH 10, 1989 AND IS NOT THE RESULT OF AN ACTUAL FIELD SURVEY.
  - THE PERMANENT STRUCTURES DEPICTED HEREIN ARE APPROXIMATELY LOCATED ON THE GROUND AS SHOWN.
  - PLAN CONTENTS ARE THE RESULT OF A COMPILATION OF THE ABOVE REFERENCES SOURCES AND VARIOUS RECORD AND NON-RECORD INFORMATION, AS WELL AS A VISUAL OBSERVATION CONDUCTED BY BOHLER ON AUGUST 17, 2020. THIS PLAN IS NOT THE RESULT OF AN ACTUAL FIELD SURVEY.
  - THE PURPOSE OF THIS PLAN IS TO DEPICT THE SITE IN A GENERAL NATURE AND INDICATE THE PROPOSED CHANGE IN USE ONLY.

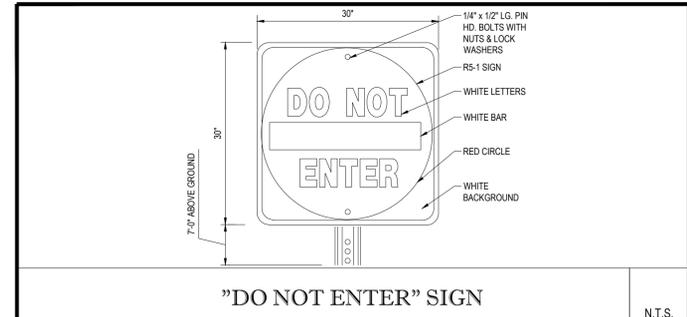


I:\BOHLER\NET\SHARES\MAP\PROJECTS\2020\2020118\DRAWINGS\PLAN\SET\REV\W201188-CVL-0-LAYOUT-EX-COND.

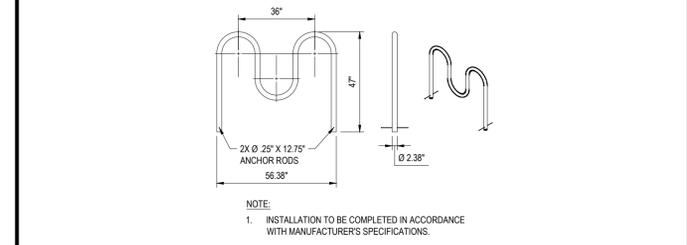


ZONING ANALYSIS TABLE			
ZONING DISTRICT	- MAJOR BUSINESS (B2A) ZONING DISTRICT - RETAIL DISPENSARY REQUIRES A SPECIAL PERMIT		
ZONE CRITERIA	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	N/S	10,890 SF	NO CHANGE
MINIMUM LOT FRONTAGE	50 FT	110.85 FT	NO CHANGE
MAX. BUILDING COVERAGE	N/S	36.6%	NO CHANGE
MIN. FRONT SETBACK	0 FT	1.9 FT	NO CHANGE
MIN. SIDE SETBACK	0 FT	46.7 FT	NO CHANGE
MIN. REAR SETBACK	15.1 FT (1)	22.6 FT	NO CHANGE
MAX. BUILDING HEIGHT	35 FT	29.5 FT	NO CHANGE
MIN. OPEN SPACE	10%	10%	NO CHANGE
PARKING SPACES	10 SPACES	18 SPACES	17 SPACES
PARKING CRITERIA (9x18)	RETAIL: 1 SPACE / 300 SF GFA 3,965 SF / 300 SF = 13.2 = 14 SPACES		
ACCESSIBLE PARKING SPACES	1 SPACE	1 SPACE	NO CHANGE
ACCESSIBLE PARKING CRITERIA (STANDARD SPACE- 8'x18' W/ 5' ACCESS AISLE) (VAN ACCESSIBLE SPACE- 8'x18' W/ 8' ACCESS AISLE)	1 - 25 TOTAL PARKING SPACES = 1 ACCESSIBLE SPACE (VAN ACCESSIBLE SPACES- 1 / 6 SPACES (MINIMUM 1 PER LOT))		

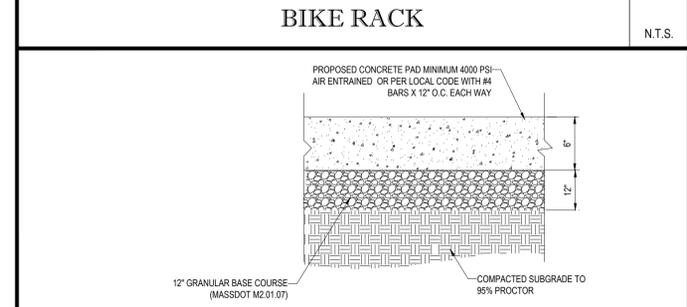
N/S - NOT SPECIFIED  
 (1) - 10 FT + (L/10) = 10 FT + (51.1 FT/10) = 15.1 FT  
 L = LENGTH OF A WALL PARALLEL TO LOT LINE



"DO NOT ENTER" SIGN N.T.S.



BIKE RACK N.T.S.



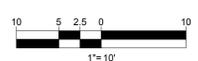
CONCRETE PAD DETAIL N.T.S.

**ALL EXISTING TREES, SHRUBS, AND LANDSCAPED AREAS SHALL BE PRUNED/CLEANED UP**

**SITE PLAN NOTES**

- PROPERTY LINE INFORMATION DEPICTED ON THIS PLAN IS TAKEN FROM "ZONING SITE PLAN", PREPARED BY WOO & WILLIAMS, DATED 03/10/89 AND IS NOT THE RESULT OF AN ACTUAL FIELD SURVEY.
- TOPOGRAPHIC INFORMATION DEPICTED ON THIS PLAN IS BASED ON ARLINGTON GIS AND IS NOT THE RESULT OF AN ACTUAL FIELD SURVEY.
- BUILDING LOCATIONS DEPICTED ON THIS PLAN IS TAKEN FROM "ZONING SITE PLAN", PREPARED BY WOO & WILLIAMS, DATED MARCH 10, 1989 AND IS NOT THE RESULT OF AN ACTUAL FIELD SURVEY.
- THE PERMANENT STRUCTURES DEPICTED HEREIN ARE APPROXIMATELY LOCATED ON THE GROUND AS SHOWN.
- PLAN CONTENTS ARE THE RESULT OF A COMPILATION OF THE ABOVE REFERENCES SOURCES AND VARIOUS RECORD AND NON-RECORD INFORMATION, AS WELL AS A VISUAL OBSERVATION CONDUCTED BY BOHLER ON AUGUST 17, 2020. THIS PLAN IS NOT THE RESULT OF AN ACTUAL FIELD SURVEY.
- THE PURPOSE OF THIS PLAN IS TO DEPICT THE SITE IN A GENERAL NATURE AND INDICATE THE PROPOSED CHANGE IN USE ONLY.

**ALL EXISTING PAVEMENT MARKINGS SHALL BE REPAINTED**



**BOHLER**  
 SITE CIVIL AND CONSULTING ENGINEERING  
 PROGRAM MANAGEMENT  
 LANDSCAPE ARCHITECTURE  
 SUSTAINABLE DESIGN  
 PERMITTING SERVICES  
 TRANSPORTATION SERVICES

**REVISIONS**

REV	DATE	COMMENT	DRAWN BY	CHECKED BY

**811**  
 Know what's below.  
 Call before you dig.  
 ALWAYS CALL 811  
 It's fast. It's free. It's the law.

**PERMIT SET**

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: W201195  
 DRAWN BY: NPD  
 CHECKED BY: RMM  
 DATE: 08/19/2020  
 CAD ID: W201195-CVL-0

**PROPOSED SITE PLAN DOCUMENTS**

FOR

**ESKAR**

PROPOSED DEVELOPMENT  
 MAP #33, BLOCK #2, LOT #3  
 23 BROADWAY  
 TOWN OF ARLINGTON  
 MIDDLESEX COUNTY,  
 MASSACHUSETTS

**BOHLER**

352 TURNPIKE ROAD  
 SOUTHBOROUGH, MA 01772  
 Phone: (508) 480-9900

www.BohlerEngineering.com

**J.G. SWERLING**

PROFESSIONAL ENGINEER  
 MASSACHUSETTS LICENSE No. 41697  
 NEW HAMPSHIRE LICENSE No. 14695  
 MAINE LICENSE No. 13816  
 CONNECTICUT LICENSE No. 38785  
 RHODE ISLAND LICENSE No. 11425

SHEET TITLE:

**SITE PLAN**

SHEET NUMBER:

**2**

ORG. DATE - 08/19/2020

I:\BOHLER\NET\SHARES\MAP\PROJECTS\2020\2020118\DRAWINGS\PLAN SETS\REV\W20118B-CVL-0-LAYOUT: SITE PLAN







# LEED v4 for ID+C: Retail

## Project Checklist

Arlington Cannabis R  
29-Jun-20

Y ? N

Y	?	N	2	Credit	Integrative Process	2
---	---	---	---	--------	---------------------	---

<b>8</b>	<b>8</b>	<b>20</b>	<b>Location and Transportation</b>			<b>18</b>
----------	----------	-----------	------------------------------------	--	--	-----------

Y	?	N	18	Credit	LEED for Neighborhood Development Location	18
Y	?	N	8	Credit	Surrounding Density and Diverse Uses	8
Y	?	N	7	Credit	Access to Quality Transit	7
Y	?	N	1	Credit	Bicycle Facilities	1
Y	?	N	2	Credit	Reduced Parking Footprint	2

NOTES: Eskar will encourage the use of the two-way bus stop located within 200 feet of the customer entrance. Employees will be reimbursed for use of public transportation. The bus schedule will be made available to customers and employees within the establishment. Eskar will make bicycle storage racks available for both customers and employees.

<b>0</b>	<b>0</b>	<b>0</b>	<b>Water Efficiency</b>			<b>12</b>
----------	----------	----------	-------------------------	--	--	-----------

Y	?	N		Prereq	Indoor Water Use Reduction	Required
Y	?	N		Credit	Indoor Water Use Reduction	12

<b>0</b>	<b>0</b>	<b>38</b>	<b>Energy and Atmosphere</b>			<b>38</b>
----------	----------	-----------	------------------------------	--	--	-----------

Y	?	N		Prereq	Fundamental Commissioning and Verification	Required
Y	?	N		Prereq	Minimum Energy Performance	Required
Y	?	N		Prereq	Fundamental Refrigerant Management	Required
Y	?	N	5	Credit	Enhanced Commissioning	5
Y	?	N	25	Credit	Optimize Energy Performance	25
Y	?	N	2	Credit	Advanced Energy Metering	2
Y	?	N	3	Credit	Renewable Energy Production	3
Y	?	N	1	Credit	Enhanced Refrigerant Management	1
Y	?	N	2	Credit	Green Power and Carbon Offsets	2

<b>5</b>	<b>9</b>	<b>0</b>	<b>Materials and Resources</b>			<b>14</b>
----------	----------	----------	--------------------------------	--	--	-----------

Y	?	N		Prereq	Storage and Collection of Recyclables	Required
Y	?	N		Prereq	Construction and Demolition Waste Management Planning	Required
Y	?	N	1	Credit	Long-Term Commitment	1
Y	?	N	5	Credit	Interiors Life-Cycle Impact Reduction	5
Y	?	N	2	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
Y	?	N	2	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2

<b>5</b>	<b>7</b>	<b>4</b>	<b>Indoor Environmental Quality</b>			<b>16</b>
----------	----------	----------	-------------------------------------	--	--	-----------

Y	?	N		Prereq	Minimum Indoor Air Quality Performance	Required
Y	?	N		Prereq	Environmental Tobacco Smoke Control	Required
Y	?	N	3	Credit	Enhanced Indoor Air Quality Strategies	3
Y	?	N	3	Credit	Low-Emitting Materials	3
Y	?	N	1	Credit	Construction Indoor Air Quality Management Plan	1
Y	?	N	2	Credit	Indoor Air Quality Assessment	2
Y	?	N	1	Credit	Thermal Comfort	1
Y	?	N	2	Credit	Interior Lighting	2
Y	?	N	3	Credit	Daylight	3
Y	?	N	1	Credit	Quality Views	1

NOTES: Low-Emitting materials including adhesives, paints, wall coverings will be specified. All new lighting fixtures will be energy efficient LED.

<b>0</b>	<b>0</b>	<b>6</b>	<b>Innovation</b>			<b>6</b>
----------	----------	----------	-------------------	--	--	----------

Y	?	N	5	Credit	Innovation	5
Y	?	N	1	Credit	LEED Accredited Professional	1

<b>0</b>	<b>4</b>	<b>0</b>	<b>Regional Priority</b>			<b>4</b>
----------	----------	----------	--------------------------	--	--	----------

Y	?	N	1	Credit	Regional Priority: Specific Credit	1
Y	?	N	1	Credit	Regional Priority: Specific Credit	1
Y	?	N	1	Credit	Regional Priority: Specific Credit	1
Y	?	N	1	Credit	Regional Priority: Specific Credit	1

<b>18</b>	<b>28</b>	<b>70</b>	<b>TOTALS</b>			<b>Possible Points: 110</b>
-----------	-----------	-----------	---------------	--	--	-----------------------------

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80+

# Transportation Impact Assessment

Proposed Retail Marijuana Dispensary  
21 Broadway  
Arlington, Massachusetts

*Prepared for:*

Eskar Arlington LLC  
Arlington, Massachusetts

July 2020

*Prepared by:*

 **Vanasse &  
Associates inc**  
Transportation Engineers & Planners

35 New England Business Center Drive  
Suite 140  
Andover, MA 01810

# CONTENTS

---

EXECUTIVE SUMMARY .....	1
INTRODUCTION .....	7
Project Description.....	7
Study Methodology.....	7
EXISTING CONDITIONS.....	9
Geometry.....	9
Existing Traffic Volumes.....	10
Motor Vehicle Crash Data .....	11
FUTURE CONDITIONS.....	14
Future Traffic Growth.....	14
No-Build Traffic Volumes .....	15
Trip Distribution and Assignment.....	16
Future Traffic Volumes - Build Condition.....	17
Sight Distance Evaluation.....	18
TRAFFIC OPERATIONS ANALYSIS.....	19
Methodology .....	19
Analysis Results.....	22
PARKING.....	25
CONCLUSIONS AND RECOMMENDATIONS .....	27

## FIGURES

---

No.	Title
1	Site Location and Study Map
2	Existing Intersection Lane Use, Travel Lane Width, and Pedestrian Facilities
3	2020 Existing Weekday Peak-Hour Traffic Volumes
4	2027 No-Build Weekday Peak-Hour Traffic Volumes
5	Trip Distribution Map
6	Site-Generated Weekday Peak-Hour Traffic Volumes
7	2027 Build Weekday Peak-Hour Traffic Volumes
8	Parking Analysis Saturday, June 6, 2020

## TABLES

---

No.	Title
1	Motor Vehicle Crash Data Summary
2	Trip Generation Summary
3	Trip-Distribution Summary
4	Peak Hour Traffic Volume Increases
5	Sight Distance Measurements
6	Level-of-Service Criteria for Signalized Intersections
7	Level-of-Service Criteria for Unsignalized Intersections
8	Signalized Intersection Level-Of-Service and Vehicle Queue Summary
9	Unsignalized Intersection Level-Of-Service and Vehicle Queue Summary
10	Parking Demand Observations

## **EXECUTIVE SUMMARY**

---

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to evaluate potential traffic impacts associated with the proposed marijuana dispensary to be located at 21 Broadway, in Arlington, Massachusetts (the “Project”). This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing and future traffic conditions, both with and without the Project.

### **PROJECT DESCRIPTION**

The development entails the construction of a 3,000± square foot (sf) marijuana dispensary to be located at 21 Broadway in Arlington, Massachusetts. The Project site encompasses approximately 11,000± sf of land that is bounded by commercial properties to the north and west, Sunnyside Avenue to the east, and Broadway to the south. The Project site currently contains 7,600± sf of office space and a vacant 3,000± sf bank which will be renovated to accommodate the Project. The remaining office space will remain unaltered. The existing site provides a total of approximately 16 parking spaces, of which 12 spaces are allocated for the dispensary. Access to the Project will continue to be served by way of one (1) entrance-only driveway along Broadway and one (1) exit-only driveway onto Sunnyside Avenue.

### **EXISTING CONDITIONS**

A comprehensive field inventory of traffic conditions on the study area roadways was conducted in June 2020. The field investigation consisted of an inventory of existing roadway geometrics, traffic volumes, and operating characteristics, as well as posted speed limits and land use information within the study area. The study area for the Project contains the major roadways that provide access to the Project: Broadway and Sunnyside Avenue, as well as the intersections which are expected to accommodate the majority of Project-related traffic.

## **Existing Traffic Volumes**

In order to determine existing traffic-volume demands and flow patterns within the study area, manual turning movement counts (TMCs) and vehicle classification counts were conducted on Thursday, June 11, 2020, during the weekday evening (4:00-6:00 PM) and on Saturday, June 13, 2020, during the Saturday midday (11:00 AM-2:00 PM) peak periods at the Broadway at Sunnyside Avenue intersection. In order to account for the reduction in traffic volumes caused by the travel restrictions enacted due to COVID-19, TMCs conducted at the Route 16 at Broadway intersection conducted on Tuesday, October 16, 2016, during the weekday evening peak periods were seasonally adjusted and grown to represent theoretical average-month 2020 traffic volumes. Based on this comparison, the TMCs conducted in June 2020 were found to be approximately 48.8% lower than anticipated. The June 2020 counts were increased by a factor of 2.05 to provide a conservative estimate of roadway operating conditions. Historic Saturday midday peak period TMCs were not available at the Route 16 at Broadway intersection.

Additionally, traffic volumes for full occupancy of the existing office space were generated using information available from the Institute of Transportation Engineers (ITE)<sup>1</sup> for the appropriate land use and were assigned onto the study area roadway network based on the existing traffic patterns within the study area.

A review of the peak-period traffic counts indicates that the weekday evening peak hour generally occurs between 4:30 and 5:30 PM with the Saturday midday peak hour generally occurring between 12:45 and 1:45 PM.

## **Motor Vehicle Crash Data**

Motor vehicle crash data was acquired from the Massachusetts Department of Transportation (MassDOT) Safety Management/Traffic Operations Unit for the most recent five-year period available (2013 through 2017) in order to examine motor vehicle crash trends occurring within the study area. The intersection of Route 16 at Broadway experienced the highest frequency of accidents over the five-year review period with a total of 50 accidents reported at the intersection, averaging 10.0 accidents per year. The majority of accidents involved property damage only (32 out of 50), occurred on dry pavement (42 out of 50), during daylight (26 out of 50), and involved angle type collisions (31 out of 50). The intersection of Route 16 at Broadway was found to have a motor vehicle crash rate above the MassDOT average for the District in which the Project is located (District 4). No fatalities were reported at any of the study area intersections over the five year period reviewed. In addition, the Highway Safety Improvement Program (HSIP) database was reviewed. The intersection of Route 16 at Broadway is listed as a HSIP cluster in the most recent (2015-2017) HSIP cluster listing. The Broadway at Sunnyside Avenue intersection is not listed as an HSIP location and has a crash rate below the MassDOT average.

## **FUTURE CONDITIONS**

Traffic volumes within the study area were projected to 2027, which reflects a seven-year planning horizon consistent with state traffic study guidelines. The future condition traffic-volume projections incorporated identified specific developments by others expected to be complete by 2027, as well as general background traffic growth as a result of development external to the study area and presently unforeseen projects. Anticipated project-generated traffic added to these future conditions reflect 2027 Build conditions with the Project.

---

<sup>1</sup>*Trip Generation*, 10<sup>th</sup> Edition; Institute of Transportation Engineers; Washington, DC; 2017.

## **Background Traffic Growth**

Traffic-volume data compiled by MassDOT from permanent count stations and historic traffic counts in the area were reviewed in order to determine general background traffic growth trends. Based on this data, it was determined that traffic volumes within the study area have fluctuated over the past several years. In order to be consistent with previous traffic studies in the area, a 0.5 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

## **Specific Development by Others**

The Town of Arlington and the City of Somerville were contacted in order to determine if there are any planned or approved specific development projects within the area that would have an impact on future traffic volumes at the study intersections. Based on these discussions, three (3) projects were identified in the immediate area of the project site, including a Mixed-Use Development at 11 Sunnyside Avenue, a Proposed Residential Development at 34 North Street, and a Hotel at 1154 Broadway.

As mentioned, the Project site formerly accommodated a 3,000 sf bank which is currently vacant. Traffic volumes associated with the reoccupation of the vacant 3,000 sf bank have been generated using information available from the ITE<sup>2</sup> for the appropriate land use and were assigned onto the study area roadway network.

## **Planned Roadway Improvements**

The Town of Arlington Engineering Department was contacted in order to determine if there were any planned roadway improvement projects expected to be completed within the study area. Based on these discussions, no improvements are planned beyond general maintenance.

## **No-Build Traffic Volumes**

The 2027 No-Build weekday morning and evening peak-hour traffic-volume networks were developed by applying the 0.5 percent per year compounded annual background traffic growth rate to the 2020 Existing peak-hour traffic volumes and then adding the traffic volumes associated with the identified specific development projects by others.

## **Site-Generated Traffic Volumes**

The proposed project entails the construction of a 3,000 sf marijuana dispensary. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the Institute of Transportation Engineers (ITE)<sup>3</sup> for a similar land use as that proposed were used. The ITE Land Use Code (LUC) *LUC 882, Marijuana Dispensary* was used to develop the traffic characteristics of the proposed 3,000 sf marijuana dispensary.

The proposed 3,000 sf marijuana dispensary will generate approximately 66 vehicle trips (33 entering and 33 exiting) during the weekday evening peak-hour and 109 vehicle trips (51 entering and 58 exiting) during the Saturday midday peak-hour. It should be noted that the typical opening traffic flow volumes can be higher for the first few months after opening.

---

<sup>2</sup>*Ibid*

<sup>3</sup>*Ibid 1.*

## **Trip Distribution and Assignment**

The directional distribution of the site-generated trips to and from the proposed development were determined based on a review of existing travel patterns at the study area intersections. In summary, 80 percent will arrive and depart the site to/from Broadway to the east, and 20 percent will arrive and depart the site to/from Broadway to the west.

## **TRAFFIC OPERATIONS ANALYSIS**

In order to assess the impact of the proposed marijuana dispensary on the roadway network, traffic operations analyses were performed at the study intersections under 2020 Existing, 2027 No-Build and 2027 Build conditions. The addition of site-related traffic will result in a measurable, but not a significant, impact on overall operations at the study area intersections.

## **PARKING**

In order to determine the availability of public parking in the vicinity of the Project site, a parking demand survey was performed on-street along Broadway between the Somerville City Line and Cleveland Street. On-street parking is provided along Broadway adjacent to the site and consists of approximately 62 spaces. The on-street parking is unmetered and designed for shorter stays and is restricted to one-hour parking only. The overall peak parking demand period in the vicinity of the project was found to occur between 2:30-3:30 PM peak period with 56 available parking spaces. Based upon this data it can be concluded that there is sufficient availability of on-street parking spaces in the area in addition to the 12 spaces on-site.

## **RECOMMENDATIONS**

A transportation improvement program has been developed that is designed to provide safe and efficient access to the Project and address the unique characteristics of marijuana dispensaries study. The following improvements have been recommended as a part of this evaluation.

### **Project Access**

Access to the Project will continue to be provided by way of one (1) entrance-only driveway along Broadway and one (1) exit-only driveway onto Sunnyside Avenue. The following recommendations are offered with respect to the design and operation of the Project site driveway:

- The exit driveway onto Sunnyside Avenue should be placed under STOP-sign (Manual of Uniform Traffic Control Designation R1-1) control, with a painted STOP-bar included. Do not enter signs should be installed facing Sunnyside Avenue.
- Pavement markings reinforcing the one-way operation of the Project driveway should be painted within the Project site.
- Illumination should be provided at the driveways.

- All signs and other pavement markings to be installed within the Development site shall conform to the applicable standards of the current Manual on Uniform Traffic Devices (MUTCD).<sup>4</sup>
- Signs and landscaping adjacent to the Project site driveway intersections should be designed and maintained so as not to restrict lines of sight.

### **Transportation Demand Management (TDM) Plan**

As is the case with many developments, a major focus of the traffic mitigation plan focuses on the reduction of single-occupant vehicles arriving and departing to and from the site. This is predominantly accomplished by developing a comprehensive Transportation Demand Management (TDM) strategy. The proponent is committed to supporting a balanced multimodal transportation plan to serve the employees and patrons of the site. The major features of this TDM plan that support this commitment are as follows:

- ***Designation of a Transportation Coordinator*** - The transportation coordinator oversees all transportation issues including managing the TDM measures, parking, loading, and service. The marijuana dispensary will have a transportation coordinator.
- ***Provision of Transit Schedules*** - Links to the MBTA website will be included on the marijuana dispensary website. In addition, the project proponent will post information regarding public transportation services, maps, schedules, and fare information in a central location.
- ***Bicycling Resources*** - Secured bicycle spaces will be provided outside the building for patrons.
- ***Ride Share Accommodations*** – Accommodations will be provided to encourage the use of ride-sharing to facilitate drop-offs and pick-ups. Three (3) designated uber/lyft/taxi spaces will be provided directly in front of the site. In addition, drop-off and pick-up activity can circulate through the site from Broadway to Sunnyside Avenue.

The project proponent will investigate the implementation of these traffic reduction strategies and will work with the Town to implement such programs.

### **Parking**

A total of 16 parking spaces are provided on the site of which 12 spaces are allocated for the proposed marijuana dispensary. The on-street parking supply along Broadway between the Somerville City Line and Cleveland Street is 62 spaces, most of which are vacant. In order to enhance compliance where on-street parking regulations, the Project proponent will provide new signage updating and formalizing the existing on-street parking regulations along Broadway between the Somerville City Line and Cleveland Street. Specific area parking includes:

- Three (3) uber/lyft/taxi reserved spaces in front of the building.
- 52 regulated 1-hour spaces along Broadway between the Somerville City Line and Cleveland Street.

Overall, there is adequate parking in the area to support the Project.

---

<sup>4</sup>Manual on Uniform Traffic Control Devices (MUTCD); Federal Highway Administration; Washington, D.C.; 2009

## OPENING CONDITIONS OPERATIONS PLAN - CUSTOMER MANAGEMENT LOGISTICS

For retail marijuana dispensaries it is essential for a well thought out opening plan developed in consultation with local public safety officials. Elements of the plan include:

- **Additional Staff:** There will be additional security/concierge specifically focused on managing the customers, both internally and on the street along Broadway. These additional staff members will serve as concierge and will not replace the required security and check-in personnel, as required by the Massachusetts Cannabis Control Commission (CCC) regulations.
- **Appointment Only:** For the first month of operation, the Project proponent will require sales be by appointment only to reduce any peak traffic issues. During the initial 6 to 12 months of operation there will be additional staff to monitor lines as concierge/security to maintain order in the public way.
- **Coordinate with Arlington Police:** In advance of its opening day the Project proponent will coordinate with the Arlington Police to arrange for the appropriate detail, discuss any proposed logistics for customer management and share any industry information the police may find useful.

## CONCLUSIONS

The proposed Project will result in a measurable impact but will not have a significant impact on overall operations. With the implementation of the above recommendations, safe and efficient access will be provided to the planned development and the proposed development can be constructed with minimal impact to the area as designed.

# **INTRODUCTION**

---

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to evaluate the potential traffic impacts associated with the proposed marijuana dispensary to be located at 21 Broadway, in Arlington, Massachusetts (the “Project”). This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing and future traffic conditions, both with and without the Project.

## **PROJECT DESCRIPTION**

The development entails the construction of a 3,000± square foot (sf) marijuana dispensary to be located at 21 Broadway in Arlington, Massachusetts. The Project site encompasses approximately 11,000± sf of land that is bounded by commercial properties to the north and west, Sunnyside Avenue to the east, and Broadway to the south. The Project site currently contains 7,600± sf of office space and a vacant 3,000± sf bank which will be renovated to accommodate the Project. The remaining office space will remain unaltered. The existing site provides a total of approximately 16 parking spaces, of which 12 spaces are allocated for the dispensary. Access to the Project will continue to be served by way of one (1) entrance-only driveway along Broadway and one (1) exit-only driveway onto Sunnyside Avenue.

## **STUDY METHODOLOGY**

This study was prepared in consultation with the Town of Arlington and City of Somerville officials and in accordance with the Massachusetts Department of Transportation (MassDOT) Guidelines for *Transportation Impact Assessment (TIA) Guideline*; and the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports; and was conducted in three distinct stages.

The first stage involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics; pedestrian facilities; observations of traffic flow; review of safety characteristics along area roadways and collection of peak period traffic counts.

In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future traffic demands due to expected traffic growth independent of the Project. A seven-year time horizon was selected for analyses consistent with state guidelines for the preparation of TIAs. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity, traffic safety, and site access issues.

The third stage of the study presents and evaluates measures to address traffic and safety issues, if any, identified in stage two of the study.

## **EXISTING CONDITIONS**

---

A comprehensive field inventory of existing conditions within the study area was conducted in June 2020. The field investigation consisted of an inventory of existing roadway geometrics, pedestrian facilities, traffic volumes, and operating characteristics, as well as posted speed limits and land use information for the major roadways that provide access to the Project: Broadway and Sunnyside Avenue, as well as the intersections which are expected to accommodate the majority of Project-related traffic. The study area for the Project is listed below and graphically depicted in Figure 1.

1. Alewife Brook Parkway (Route 16) at Broadway
2. Broadway at Sunnyside Avenue
3. Broadway at the Project Site Driveway
4. Sunnyside Avenue at the Project Site Driveway

The following describes the study area roadways and intersections:

### **GEOMETRY**

#### **Roadways**

##### **Broadway**

Broadway is an urban principal arterial under local jurisdiction. Broadway generally runs in an east-west direction and provides one travel lane in each direction. Within the study area, Broadway generally provides two 11 to 12-foot wide travel lanes separated by a double-yellow centerline with no marked shoulders and parking provided intermittently along both sides. Sidewalks are provided along both sides of Broadway within the study area, with illumination provided by way of streetlights mounted on wood poles. The posted speed limit along Broadway is 25 miles per hour (mph). Land use within the study area consists of the Saint Paul's Cemetery and residential and commercial properties.

##### **Sunnyside Avenue**

Sunnyside Avenue is a local access roadway under local jurisdiction. Sunnyside Avenue generally runs in a north-south direction and provides one travel lane in each direction. Within the study area, Sunnyside Avenue generally provides a 26± foot wide traveled-way with no marked centerline or shoulders provided and on-street parking permitted along both sides of the roadway. Sidewalks are provided along both sides of Sunnyside Avenue within the study area, with illumination provided by way of streetlights mounted on



**Figure 1**  
Site Location Map



wood poles. A posted speed limit is not provided along Sunnyside Avenue and, as such, the statutory speed limit is 25 mph. Land use within the study area consists of residential and commercial properties.

### **Intersections**

Figure 2 summarizes existing lane use and travel lane widths at the study area intersections as observed in June 2020.

### **EXISTING TRAFFIC VOLUMES**

In order to determine existing traffic-volume demands and flow patterns within the study area, manual turning movement counts (TMCs) and vehicle classification counts were conducted on Thursday, June 11, 2020, during the weekday evening (4:00-6:00 PM) and on Saturday, June 13, 2020, during the Saturday midday (11:00 AM-2:00 PM) peak periods at the Broadway at Sunnyside Avenue intersection. In order to account for the reduction in traffic volumes caused by the travel restrictions enacted due to COVID-19, TMCs conducted at the Route 16 at Broadway intersection conducted on Tuesday, October 16, 2016, during the weekday evening peak periods were researched and seasonally adjusted and increased to represent theoretical average-month 2020 traffic volumes. Based on this comparison, the TMCs conducted in June 2020 were found to be approximately 48.8% lower than anticipated. The June 2020 counts were increased by a factor of 2.05 to provide a conservative estimate of roadway operating conditions. Historic Saturday midday peak period TMCs were not available at the Route 16 at Broadway intersection.

Additionally, traffic volumes for full occupancy of the existing office use were generated using information available from the Institute of Transportation Engineers (ITE)<sup>5</sup> for the appropriate land use and were assigned onto the study area roadway network based on the existing traffic patterns within the study area. The 2020 Existing weekday evening and Saturday midday peak-hour traffic volumes are graphically depicted on Figure 3.

A review of the peak-period traffic counts indicates that the weekday evening peak hour generally occurs between 4:30 and 5:30 PM with the Saturday midday peak hour generally occurring between 12:45 and 1:45 PM.

### **PEDESTRIAN AND BICYCLE FACILITIES**

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in June 2020. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study area roadways and at the study area intersections. As detailed on Figure 2, sidewalks exist on one or both sides of all study area roadways. Within the study area, painted crosswalks are provided at the Route 16 at Broadway intersection.

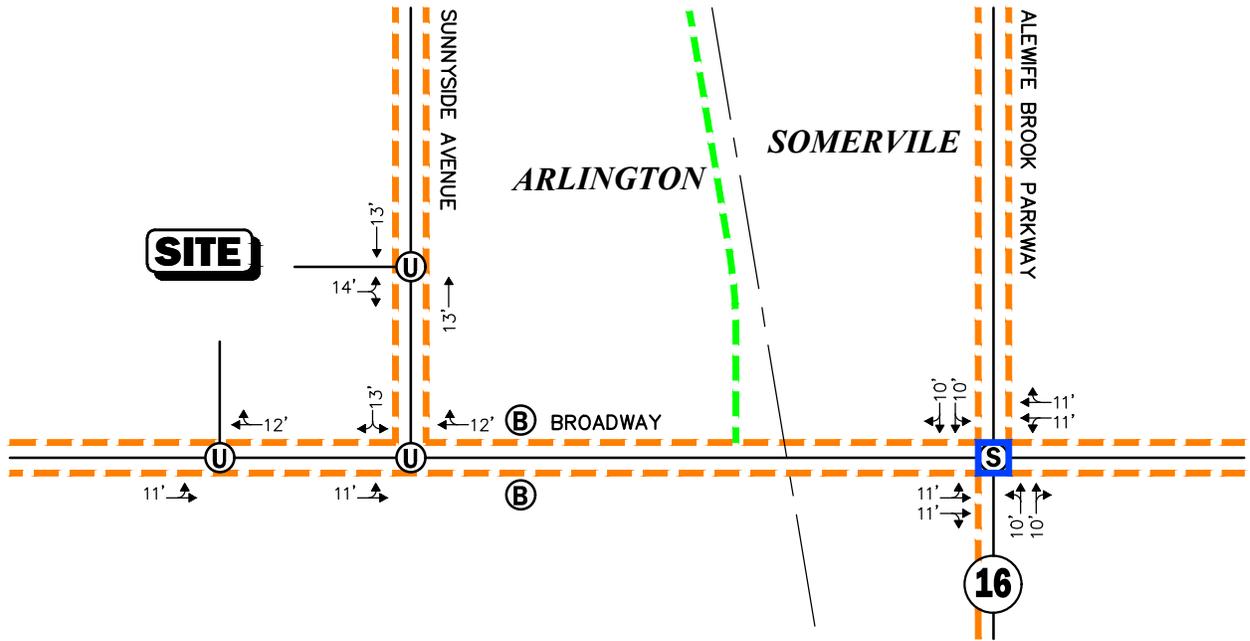
The Alewife Greenway Bike Path traverses the study area in a general north-south direction adjacent to the Project site to the east. This trail provides a connection to the Mystic Valley Parkway to the north and the Minuteman Bikeway to the south.

---

<sup>5</sup>*Ibid 1*

**Legend:**

- Ⓢ Signalized Intersection
- Ⓤ Unsignalized Intersection
- Ⓟ Bus Stop
- Sidewalk
- Crosswalk
- Shared-Use Path
- xx' ↔ Lane Use and Travel Lane Width



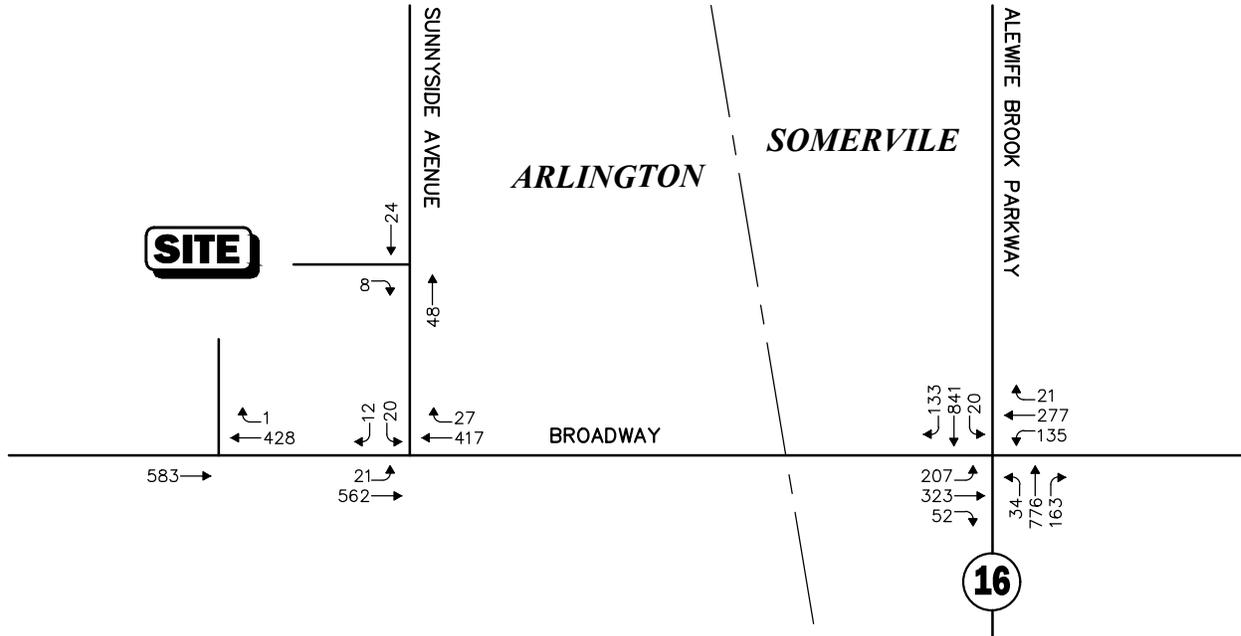
Not To Scale



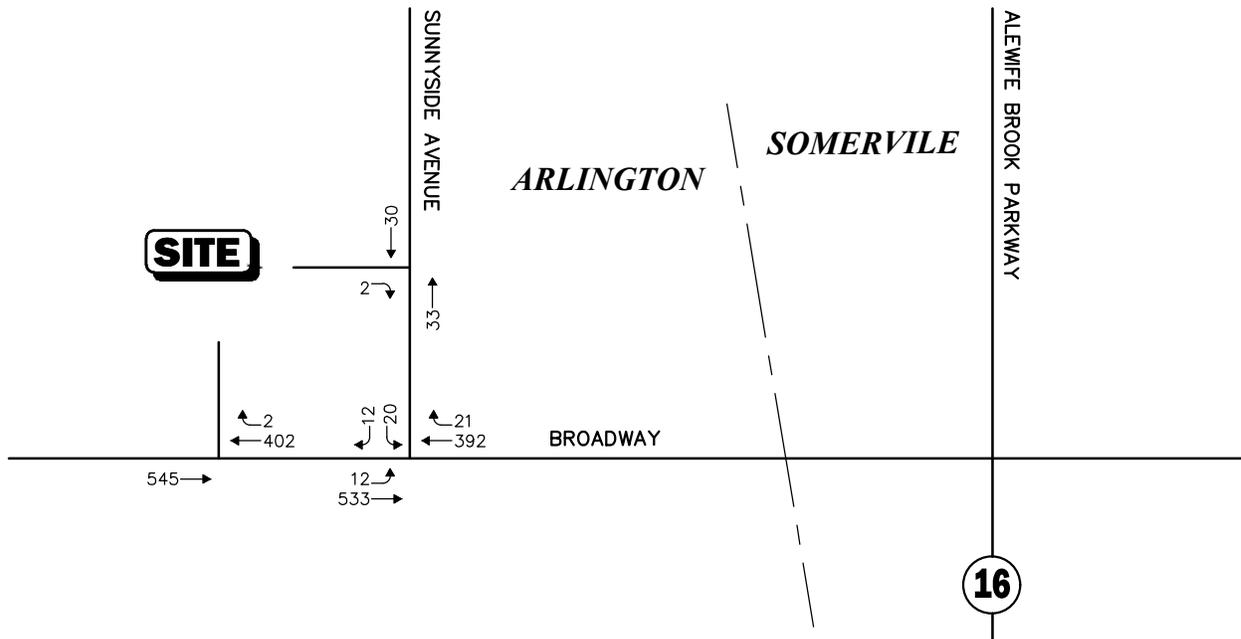
**Figure 2**

**Existing Intersection Lane Use, Travel Lane Width and Pedestrian Facilities**

WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM)



SATURDAY MIDDAY PEAK HOUR (12:00 - 1:00 PM)



Not To Scale



Figure 3

2020 Existing Peak Hour Traffic Volumes

## **PUBLIC TRANSPORTATION**

Public transportation services are provided within the study area by the Massachusetts Bay Transit Authority (MBTA) for Bus service. Within the study area, the MBTA operates the following service:

- ***Route 87 – Clarendon Hill or Arlington Center - Lechmere Station*** – Route 87 stops at the Broadway at Sunnyside Avenue intersection, adjacent to the project site. Route 87 provides a connection to Arlington Center, Clarendon Hill, Teele Square, Davis Station (MBTA Subway Red Line), Union Square, and Lechmere Station (MBTA Subway Green Line). MBTA bus service operates Monday through Friday from approximately 5:07 AM to 1:40 AM, on Saturday from 5:15 AM to 1:35 AM, and on Sunday from 6:00 AM to 1:33 AM, with 30-minute-or-less headways on weekdays and Saturdays and 60-minute-or-less headways on Sundays. One-way fares for adults are \$2.00 (\$1.70 with a Charlie Card), a \$0.85 fare for students with valid ID, and \$0.85 fare for senior citizens (65 years of age or older) and persons with disabilities. All MBTA buses are handicapped and wheelchair accessible.

## **MOTOR VEHICLE CRASH DATA**

Motor vehicle crash data was acquired from the Massachusetts Department of Transportation (MassDOT) Safety Management/Traffic Operations Unit for the most recent five-year period available (2013 through 2017) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, and severity, and is presented in Table 1.

**Table 1**  
**MOTOR VEHICLE CRASH DATA SUMMARY<sup>a</sup>**

Scenario	Alewife Brook Parkway at Broadway (Signalized)	Main Street at Clarks Road (Unsignalized)
<i>Year:</i>		
2013	8	0
2014	7	2
2015	6	2
2016	16	0
<u>2017</u>	<u>13</u>	<u>0</u>
Total	50	4
Average <sup>b</sup>	10.00	0.80
Crash Rate <sup>c</sup>	0.83	0.19
Significant <sup>d</sup>	Yes	No
<i>Type:</i>		
Angle	31	1
Rear-End	7	1
Head-On	3	0
Sideswipe	5	1
Fixed Object	3	0
Pedestrian/Bicyclist	1	0
<u>Unknown/Other</u>	<u>0</u>	<u>1</u>
Total	50	4
<i>Time of Day:</i>		
Weekday (Monday through Friday)	32	3
Saturday	12	0
<u>Sunday</u>	<u>6</u>	<u>1</u>
Total	50	4
<i>Lighting Conditions:</i>		
Daylight	26	1
Dawn/Dusk	1	1
Dark (lit)	22	1
Dark (unlit)	1	0
<u>Unknown</u>	<u>0</u>	<u>1</u>
Total	50	4
<i>Pavement Conditions</i>		
Dry	42	2
Wet	5	0
Snow	1	0
Ice	2	0
Slush	0	1
<u>Unknown(Other)</u>	<u>0</u>	<u>1</u>
Total	50	4
<i>Severity:</i>		
Property Only	32	2
Injury Accident	17	1
Fatal Accident	0	0
Hit and Run	0	0
<u>Not Reported (Other)</u>	<u>1</u>	<u>1</u>
Total	50	4

<sup>a</sup>Source: MassDOT, 2013 through 2017.

<sup>b</sup>Average crashes over a five-year period.

<sup>c</sup>Crash rate per million entering vehicles (MEV).

<sup>d</sup>Signalized intersections are significant if the rate is >0.73 crashes per MEV. Unsignalized intersections are significant if the rate is >0.57 crashes per MEV.

As summarized in Table 1, the intersection of Route 16 at Broadway experienced the highest frequency of accidents over the five-year review period with a total of 50 accidents reported at the intersection, averaging 10.0 accidents per year. The majority of accidents involved property damage only (32 out of 50), occurred on dry pavement (42 out of 50), during daylight (26 out of 50), and involved angle type collisions (31 out of 50). The intersection of Route 16 at Broadway was found to have a motor vehicle crash rate above the MassDOT average for the District in which the Project is located (District 4). No fatalities were reported at any of the study area intersections over the five year period reviewed. In addition, the Highway Safety Improvement Program (HSIP) database was reviewed. The intersection of Route 16 at Broadway is listed as a HSIP cluster in the most recent (2015-2017) HSIP cluster listing. The Broadway at Sunnyside Avenue intersection is not listed as a HSIP location and has a crash rate below the MassDOT average.

## **FUTURE CONDITIONS**

---

Traffic volumes in the study area were projected to the year 2027, which reflects a seven-year planning horizon consistent with State Traffic Study Guidelines. Independent of the Project, traffic volumes on the roadway network in the year 2027 under No-Build conditions include all existing traffic and new traffic resulting from background traffic growth. Anticipated Project-generated traffic volumes superimposed upon this 2027 No-Build traffic network reflect the 2027 Build conditions with the Project.

### **FUTURE TRAFFIC GROWTH**

Future traffic growth is a function of the expected land development in the immediate area and the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This procedure produces a more realistic estimate of growth for local traffic. However, the drawback of this procedure is that the potential growth in population and development external to the study area would not be accounted for in the traffic projections.

To provide a conservative analysis framework, both procedures were used, the salient components of which are described below.

### **GENERAL BACKGROUND TRAFFIC GROWTH**

Traffic-volume data compiled by MassDOT from permanent count stations and historic traffic counts in the area were reviewed in order to determine general background traffic growth trends. Based on this data, it was determined that traffic volumes within the study area have fluctuated over the past several years. In order to be consistent with previous traffic studies in the area, a 0.5 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

## **SPECIFIC DEVELOPMENT BY OTHERS**

The Planning Departments of the Town of Arlington and the City of Somerville were contacted in order to determine if there were any projects planned within the study area that would have an impact on future traffic volumes at the study intersections. Based on these discussions, the following projects were identified:

- ***Proposed Mixed-Use Development – 10 Sunnyside Avenue*** - This project entails the potential development of approximately 25 residential units and 10,000 sf of medical-dental offices. This project will be located at 10 Sunnyside Avenue in Arlington, Massachusetts. Traffic volumes associated with this project were obtained using trip-generation information available from the ITE. This is based upon information provided by the Town Planning Department and the actual program may be different.
- ***Proposed Residential Development – Clarendon Hill*** - This project entails the replacement of 216 existing residential units with 591 residential units. This project will be located at 34 North Street in Somerville, Massachusetts. The Site Generated volumes were obtained from the respective traffic study.
- ***Proposed Hotel – Broadway Hotel*** – This project entails the development of a 75-room hotel. This project will be located at 1154 Broadway in Somerville, Massachusetts. The Site Generated volumes were obtained from the respective traffic study.

As mentioned, the Project site formerly housed a 3,000 sf bank which is currently vacant. Traffic volumes associated with the reoccupation of the vacant 3,000 sf bank development have been generated using information available from the ITE<sup>6</sup> for the appropriate land use and were assigned onto the study area roadway network.

No other developments were identified at this time that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate.

## **ROADWAY IMPROVEMENT PROJECTS**

The Town of Arlington Engineering Department was contacted in order to determine if there were any planned roadway improvement projects expected to be completed within the study area. Based on these discussions, no improvements are planned beyond general maintenance.

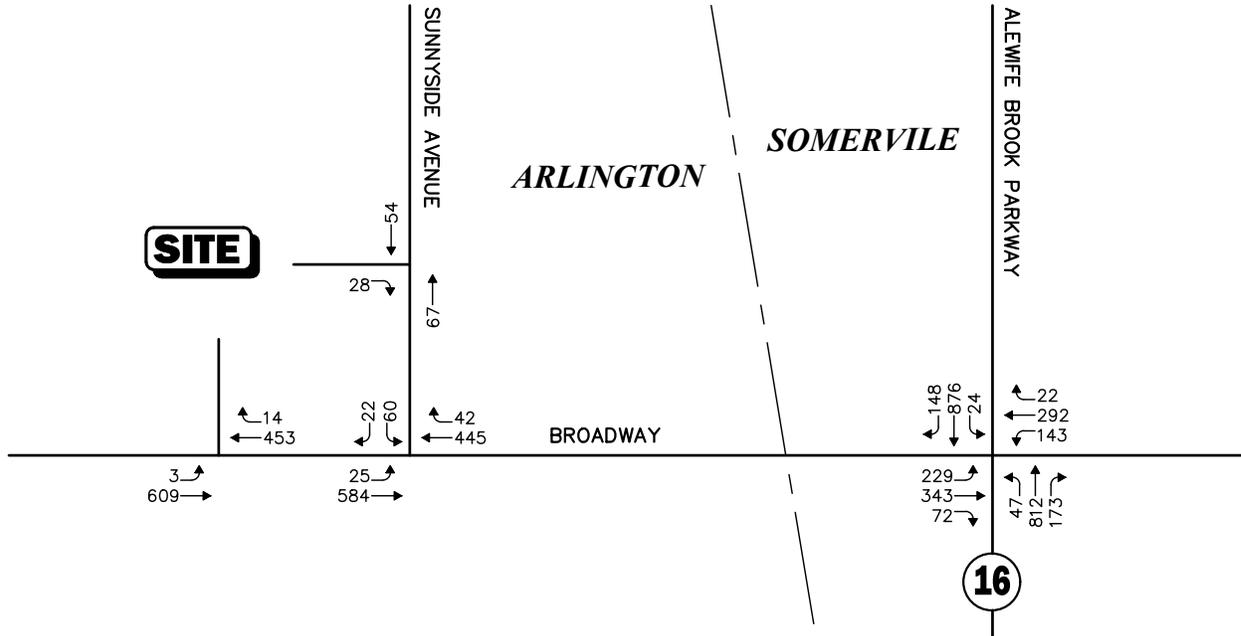
## **NO-BUILD TRAFFIC VOLUMES**

The 2027 No-Build peak-hour traffic-volume networks were developed by applying the 0.5 percent per year compounded annual background traffic growth rate to the 2020 Existing peak-hour traffic volumes and then adding the traffic volumes associated with the identified specific development projects by others. The resulting 2027 No-Build weekday evening and Saturday midday peak-hour traffic volume networks are shown on Figure 4.

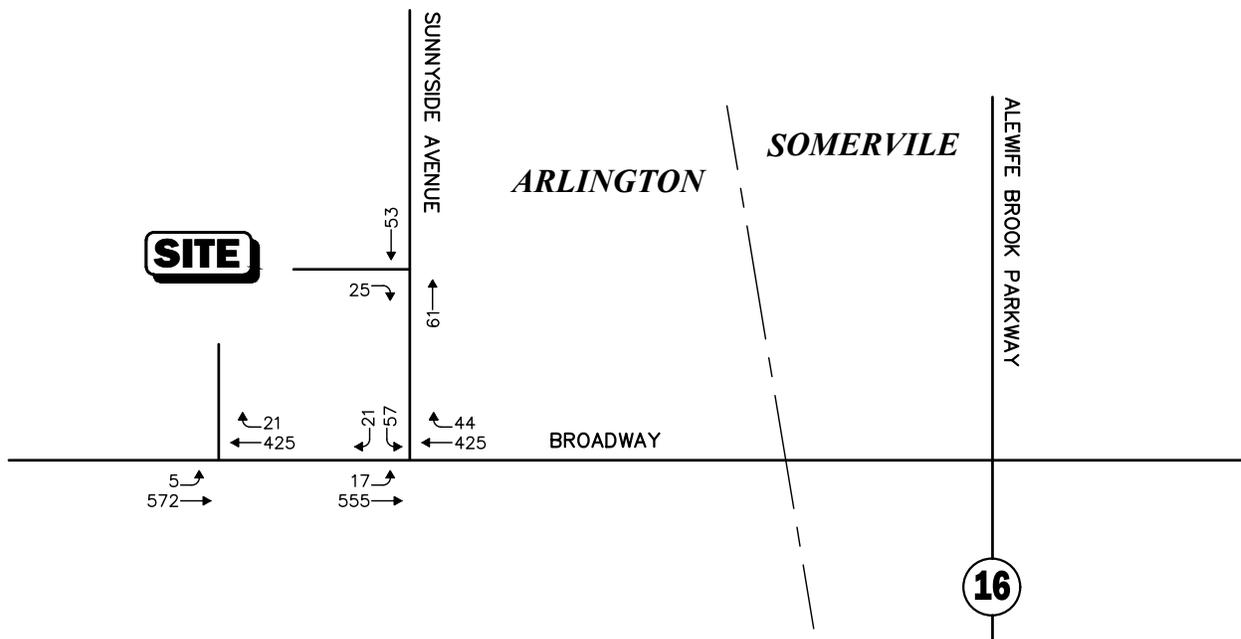
---

<sup>6</sup>*Ibid 1*

WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM)



SATURDAY MIDDAY PEAK HOUR (12:00 - 1:00 PM)



Not To Scale



Figure 4

2027 No Build Peak Hour Traffic Volumes

## **PROJECT-GENERATED TRAFFIC**

The proposed project entails the construction of a 3,000 sf marijuana dispensary. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the ITE<sup>7</sup> for a similar land use as that proposed were used. The ITE Land Use Code (LUC) *LUC 882, Marijuana Dispensary* was used to develop the traffic characteristics of the proposed Project.

Trip generation calculations were performed for a typical weekday, a typical Saturday, as well as the weekday evening and Saturday midday peak hours, the critical time periods for project-related traffic activity. A summary of the expected vehicle trip-generation is summarized in Table 2.

**Table 2**  
**TRIP GENERATION SUMMARY**

<u>Time Period/Direction</u>	<u>Proposed Marijuana Dispensary (3,000 sf)<sup>a</sup></u>
Average Weekday	760
<i>Weekday Evening Peak Hour</i>	
Entering	33
<u>Exiting</u>	<u>33</u>
Total	66
Average Saturday	778
<i>Saturday Midday Peak Hour</i>	
Entering	51
<u>Exiting</u>	<u>58</u>
Total	109

<sup>a</sup>Based on ITE LUC 221, Multifamily Housing (Mid-Rise)

As shown in Table 2, the proposed 3,000 sf marijuana dispensary will generate approximately 66 vehicle trips (33 entering and 33 exiting) during the weekday evening peak-hour and 109 vehicle trips (51 entering and 58 exiting) during the Saturday midday peak-hour. It should be noted that the typical opening traffic flow volumes can be higher for the first few months after opening.

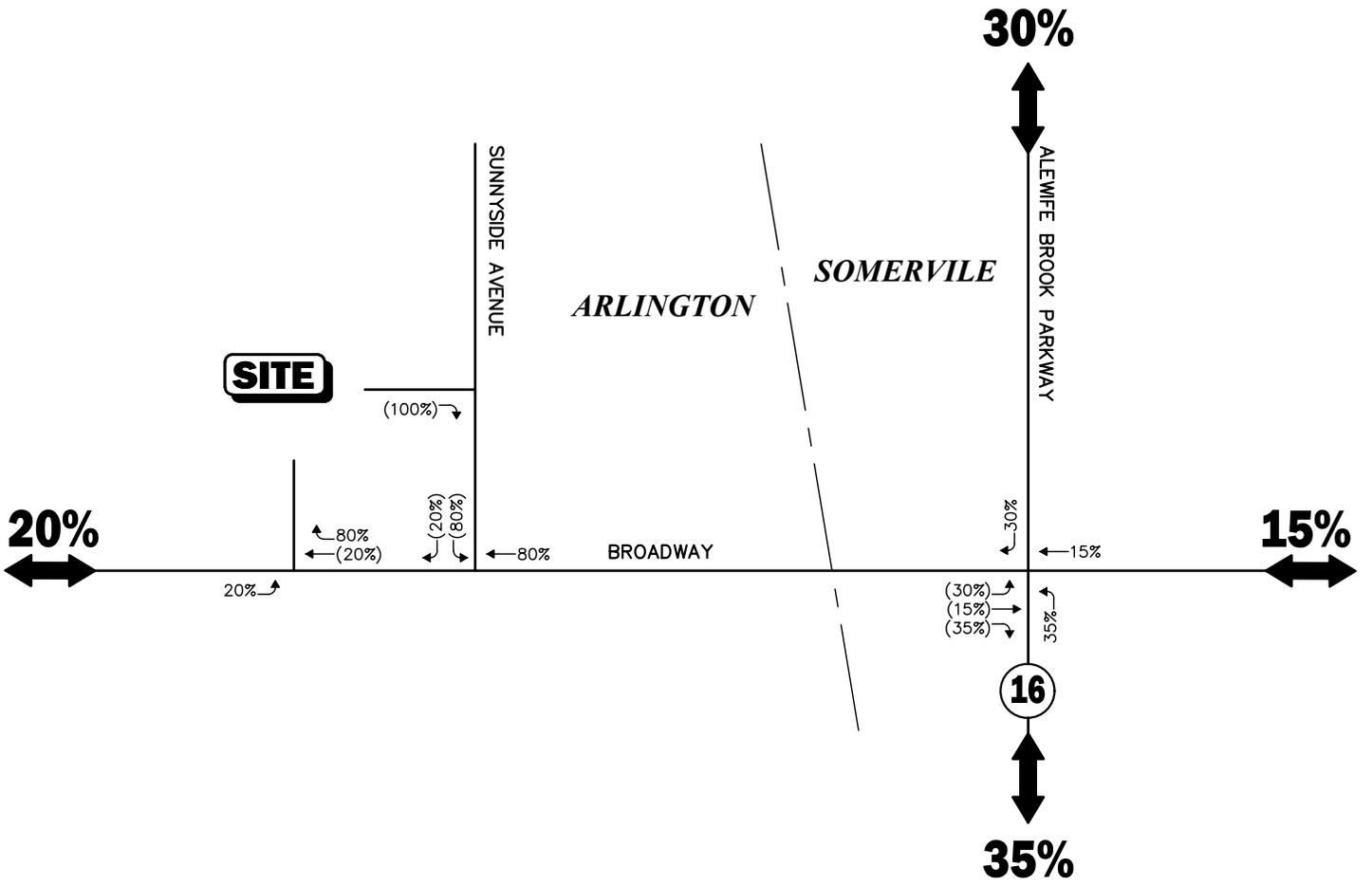
## **TRIP DISTRIBUTION AND ASSIGNMENT**

The directional distribution of the site-generated trips to and from the proposed development were determined based on a review of existing travel patterns at the study area intersections. The general trip-distribution for the proposal is summarized in Table 3 and graphically depicted on Figure 5. The weekday evening and Saturday midday peak-hour traffic volumes expected to be generated by the marijuana dispensary were assigned on the study area roadway network as shown on Figure 6.

<sup>7</sup>*Ibid 1*

**Legend:**

- XX Entering Trips
- (XX) Exiting Trips



Not To Scale

Figure 5

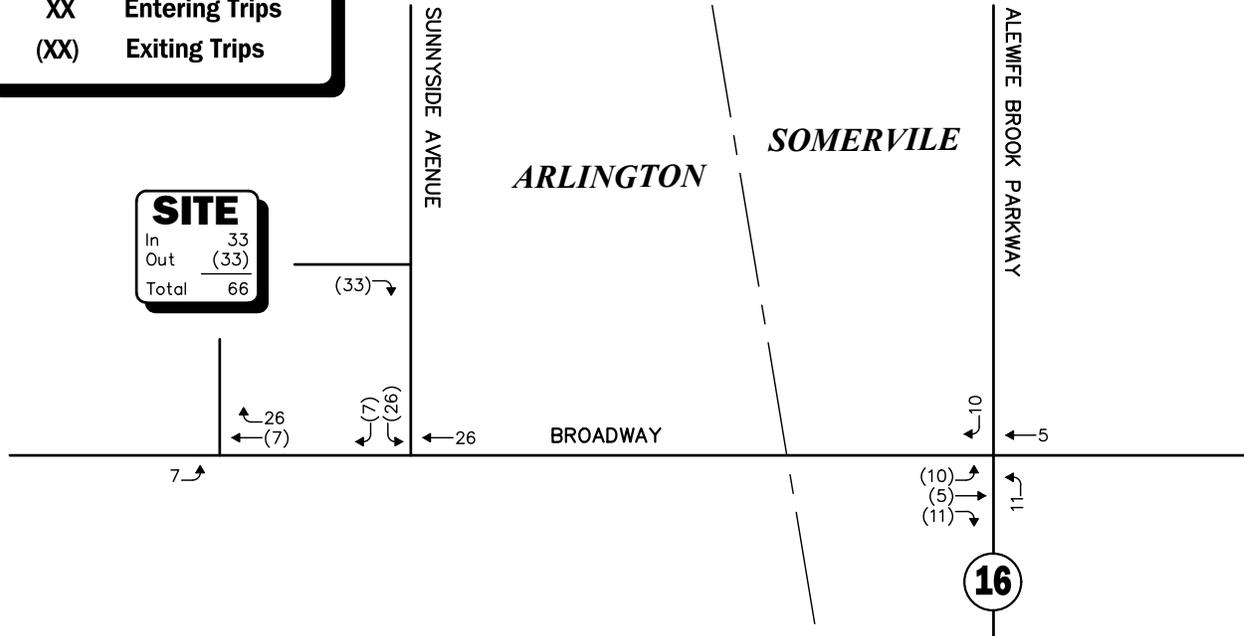
Trip Distribution Map



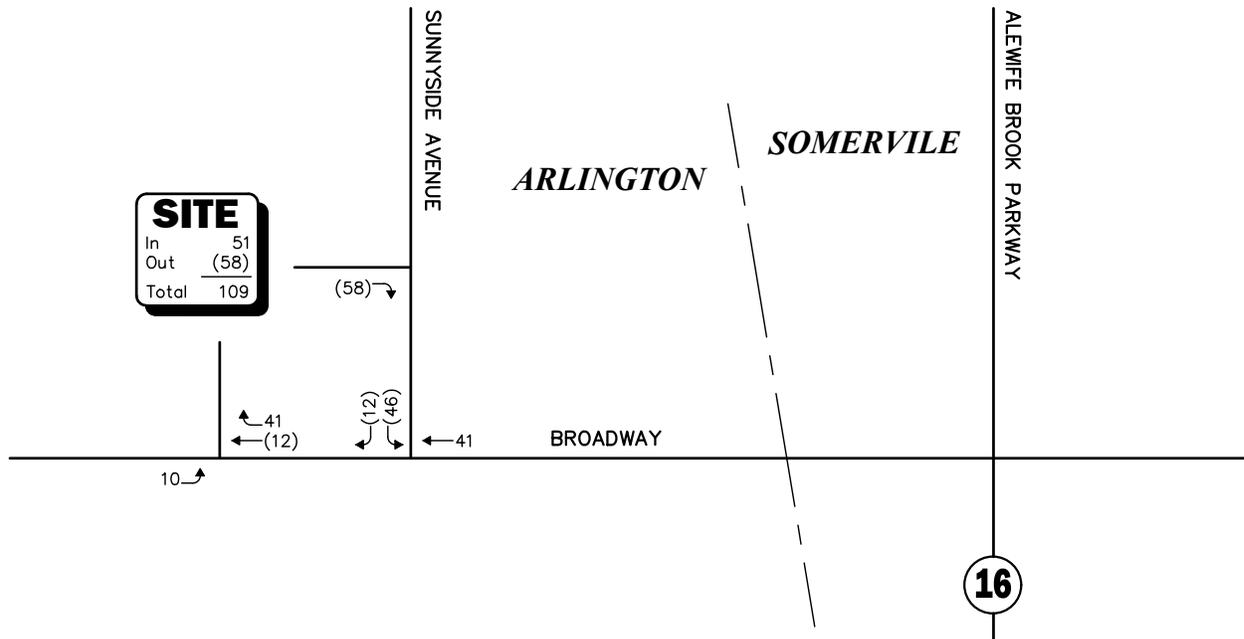
WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM)

**Legend:**

XX Entering Trips  
 (XX) Exiting Trips



SATURDAY MIDDAY PEAK HOUR (12:00 - 1:00 PM)



Not To Scale

Figure 6



Project Generated Peak Hour Traffic Volumes

**Table 3**  
**TRIP-DISTRIBUTION SUMMARY**

Roadway	Direction (To/From)	Percentage (To/From)
Broadway	East	15%
Broadway	West	20%
Alewife Brook Parkway	North	30%
Alewife Brook Parkway	South	35%
<b>TOTAL</b>		<b>100%</b>

**FUTURE TRAFFIC VOLUMES - BUILD CONDITION**

The 2027 Build condition networks consist of the 2027 No-Build traffic volumes, with the proposed 3,000 sf marijuana dispensary site-generated traffic replacing the potential 3,000 sf bank site-generated traffic. The 2027 Build weekday evening and Saturday midday peak-hour traffic volume networks are graphically depicted on Figure 7.

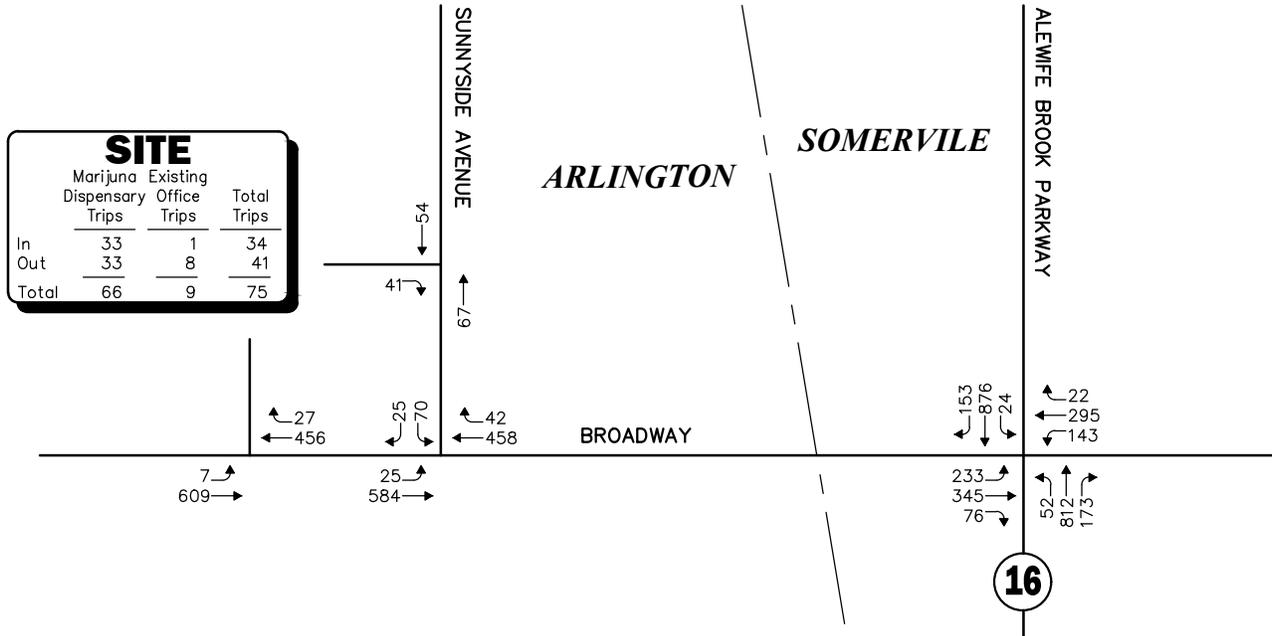
A summary of peak-hour projected traffic-volume increases external to the study area that is the subject of this assessment is shown in Table 4. These volumes are based on the expected increases from the Project.

**Table 4**  
**PEAK HOUR TRAFFIC-VOLUME INCREASES**

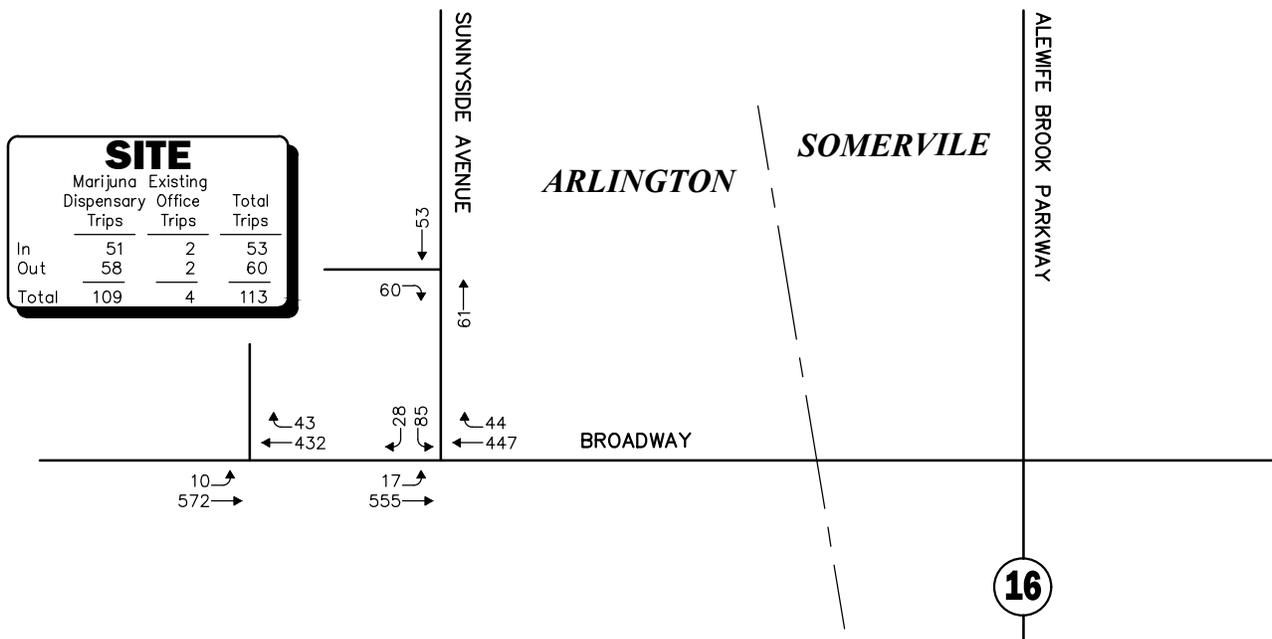
Location/Peak Hour	2027 No-Build	2027 Build	Traffic Volume Increase Over No-Build	Percent Increase Over No-Build
<i>Broadway, east of Alewife Brook Parkway:</i>				
Weekday Evening	997	1,002	5	0.5%
<i>Broadway, east of Sunnyside Avenue:</i>				
Saturday Midday	1,041	1,131	90	8.6%
<i>Broadway, west of the Project Site Driveway:</i>				
Weekday Evening	1,065	1,072	7	0.7%
Saturday Midday	1,002	1,014	12	1.2%
<i>Alewife Brook Parkway, north of Broadway:</i>				
Weekday Evening	2,111	2,120	9	0.4%
<i>Alewife Brook Parkway, south of Broadway:</i>				
Weekday Evening	2,123	2,132	9	0.4%

As shown in Table 4, in comparison to future No-Build conditions, project-related traffic increases are projected to range between 5 to 9 vehicles during the weekday evening peak-hour, with traffic percent increases ranging from 0.4 percent to 0.7 percent; and are anticipated to be 1.2 percent or less during the Saturday midday peak-hour.

WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM)



SATURDAY MIDDAY PEAK HOUR (12:00 - 1:00 PM)



Not To Scale



Figure 7

2027 Build Peak Hour Traffic Volumes

**SIGHT DISTANCE EVALUATION**

Sight distance measurements were performed at the Project site driveway intersection with Sunnyside Avenue in accordance with American Association of State Highway and Transportation Officials (AASHTO)<sup>8</sup> requirements. In brief, Stopping Sight Distance (SSD) is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. In accordance with AASHTO and MassDOT standards, at a minimum, sufficient stopping sight distances must be provided at an intersection. Table 5 presents the measured sight distances at the site driveway.

**Table 5  
SIGHT DISTANCE MEASUREMENTS<sup>a</sup>**

Intersection/Sight Distance Measurement	Required Minimum (Feet) <sup>a</sup>			
	25 MPH	30 MPH	35 MPH	Measured
<b><i>Sunnyside Avenue at the Project Site Driveway</i></b>				
Looking to the north from the Project Site Driveway	155	200	250	500+
Looking to the south from the Project Site Driveway	155	200	250	110 <sup>b</sup>

<sup>a</sup>Recommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets*, 7<sup>th</sup> Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018.

<sup>b</sup>Clear line of sight provided to Broadway.

As can be seen in Table 5, the available lines of sight for motorists exiting onto Sunnyside Avenue in both directions exceed the recommended minimum sight distance to function in a safe manner based on the appropriate approach speeds.

<sup>8</sup>*A Policy on Geometric Design of Highway and Streets*, 7<sup>th</sup> Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

# **TRAFFIC OPERATIONS ANALYSIS**

---

Measuring existing and future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity, and vehicle queue analyses were conducted under Existing, No-Build, and Build traffic volume conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

## **METHODOLOGY**

### **Levels of Service**

A primary result of capacity analyses is the assignment of level-of-service to traffic facilities under various traffic-flow conditions.<sup>9</sup> The concept of level-of-service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with level-of-service (LOS) A representing the best-operating conditions and LOS F representing congested or constrained operating conditions.

Since the level-of-service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year.

---

<sup>9</sup>The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010.

## Signalized Intersections

The six levels of service for signalized intersections may be described as follows:

- *LOS A* describes operations with very low control delay; most vehicles do not stop at all.
- *LOS B* describes operations with relatively low control delay. However, more vehicles stop than *LOS A*.
- *LOS C* describes operations with higher control delays. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
- *LOS D* describes operations with control delay in the range where the influence of congestion becomes more noticeable. Many vehicles stop, and individual cycle failures are noticeable.
- *LOS E* describes operations with high control delay values. Individual cycle failures are frequent occurrences.
- *LOS F* describes operations with high control delay values that often occur with over-saturation. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Levels of service for signalized intersections were calculated using the Percentile Delay Method implemented as a part of the Synchro™ 10 software as required by MassDOT. The Percentile Delay Method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on “percentile” delay. Level-of-service designations are based on the criterion of percentile delay per vehicle and is a measure of: i) driver discomfort; ii) motorist frustration; and iii) fuel consumption; and includes a uniform delay based on percentile volumes using a Poisson arrival pattern, an initial queue move-up time, and a queue interaction delay that accounts for delays resulting from queues extending from adjacent intersections. Table 6 summarizes the relationship between level-of-service and percentile delay and uses the same numerical delay thresholds as the HCM method. The tabulated percentile delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to entire intersections.

**Table 6**  
**LEVEL-OF-SERVICE CRITERIA**  
**FOR SIGNALIZED INTERSECTIONS**

Level of Service	Percentile Delay Per Vehicle (Seconds)
A	≤10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	>80.0

## Unsignalized Intersections

The six levels of service for unsignalized intersections may be described as follows:

- *LOS A* represents a condition with little or no control delay to minor street traffic.
- *LOS B* represents a condition with short control delays to minor street traffic.
- *LOS C* represents a condition with average control delays to minor street traffic.
- *LOS D* represents a condition with long control delays to minor street traffic.
- *LOS E* represents operating conditions at or near capacity level, with very long control delays to minor street traffic.
- *LOS F* represents a condition where minor street demand volume exceeds the capacity of an approach lane, with extreme control delays resulting.

The levels of service of unsignalized intersections are determined by the application of a procedure described in the 2010 *Highway Capacity Manual*.<sup>10</sup> Level of service is measured in terms of average control delay. Mathematically, control delay is a function of the capacity and degree of saturation of the lane group and/or approach under study and is a quantification of motorist delay associated with traffic control devices such as traffic signals and STOP signs. Control delay includes the effects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. Definitions for level of service at unsignalized intersections are also given in the 2010 *Highway Capacity Manual*. Table 7 summarizes the relationship between level of service and average control delay for two-way stop-controlled and all-way stop-controlled intersections.

**Table 7**  
**LEVEL-OF-SERVICE CRITERIA FOR**  
**UNSIGNALIZED INTERSECTIONS<sup>a</sup>**

Level-of-Service by Volume-to-Capacity Ratio		Average Control Delay (Seconds Per Vehicle)
$v/c \leq 1.0$	$v/c > 1.0$	
A	F	$\leq 10.0$
B	F	10.1 to 15.0
C	F	15.1 to 25.0
D	F	25.1 to 35.0
E	F	35.1 to 50.0
F	F	>50.0

<sup>a</sup>Source: *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010; page 19-2.

<sup>10</sup>*Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010.

## **ANALYSIS RESULTS**

Level-of-service and vehicle queue analyses were conducted for 2020 Existing, 2027 No-Build and 2027 Build conditions for the intersections within the study area. The results of the intersection capacity and vehicle queue analyses are summarized for the signalized intersection in Table 8 and for the unsignalized intersections in Table 9 with the detailed analysis results presented in the Appendix. The following is a summary of the level-of-service and delay analyses for the intersections within the study area:

### **Signalized Intersections**

#### **Route 16 at Broadway**

Under all conditions, this signalized intersection will operate at an overall LOS F during weekday evening peak hour. The project impact on queues and delays are projected to be minimal.

### **Unsignalized Intersections**

#### **Broadway at Sunnyside Avenue**

Under 2020 Existing conditions, the critical movements at this unsignalized intersection operate at LOS C during the weekday evening and Saturday midday peak hours. Under 2027 No-Build conditions, the critical movements are expected to operate at LOS D during the weekday evening and Saturday midday peak hours. Under 2027 Build conditions, the critical movements are expected to degrade to LOS E during the weekday evening peak-hour and to remain at LOS D during the Saturday midday peak-hour. Vehicle queues at this intersection were shown to range from 0 to 3 vehicles during the peak periods.

#### **Broadway at the Project Site Driveway**

Under all conditions, the critical movements at this intersection are expected to operate at LOS A with negligible vehicle queuing during the weekday evening and Saturday midday peak hours.

#### **Sunnyside Avenue at the Project Site Driveway**

Under all conditions, the critical movements at this intersection are expected to operate at LOS A with negligible vehicle queuing during the weekday evening and Saturday midday peak hours.

**Table 8**  
**SIGNALIZED INTERSECTION LEVEL-OF-SERVICE SUMMARY**

Signalized Intersection/Peak Hour	2020 Existing				2027 No-Build				2027 Build			
	V/C <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Queue <sup>d</sup> Avg/95 <sup>th</sup>	V/C	Delay	LOS	Queue Avg/95 <sup>th</sup>	V/C	Delay	LOS	Queue Avg/95 <sup>th</sup>
<b>Route 16 at Broadway</b>												
<i>Weekday Evening:</i>												
Broadway EB LT	4.46	>80.0	F	386/495	4.93	>80.0	F	431/544	5.02	>80.0	F	440/553
Broadway EB TH RT	1.20	>80.0	F	458/626	1.33	>80.0	F	543/713	1.35	>80.0	F	554/726
Broadway WB LT TH RT	1.11	>80.0	F	235/348	1.19	>80.0	F	262/377	1.20	>80.0	F	265/381
Route 16 NB LT TH RT	1.11	>80.0	F	523/661	1.33	>80.0	F	634/773	1.37	>80.0	F	650/788
Route 16 SB LT TH RT	1.02	73.7	E	521/660	1.15	>80.0	F	610/750	1.16	>80.0	F	616/756
<b>Overall</b>	--	<b>&gt;80.0</b>	<b>F</b>	--	--	<b>&gt;80.0</b>	<b>F</b>	--	--	<b>&gt;80.0</b>	<b>F</b>	--

<sup>a</sup>Volume-to-capacity ratio.

<sup>b</sup>Control (signal) delay per vehicle in seconds.

<sup>c</sup>Level-of-Service.

<sup>d</sup>Queue length in feet.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

**Table 9**  
**UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY**

Unsignalized Intersection/ Peak Hour/Movement	2020 Existing				2027 No-Build				2027 Build			
	Demand <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Queue 95 <sup>th</sup> Percentile	Demand	Delay	LOS	Queue 95 <sup>th</sup> Percentile	Demand	Delay	LOS	Queue 95 <sup>th</sup> Percentile
<b><i>Broadway at Sunnyside Avenue</i></b>												
Weekday Evening:												
Broadway EB LT TH	583	0.3	A	0	609	0.4	A	0	609	0.4	A	0
Broadway WB TH RT	444	0.0	A	0	487	0.0	A	0	500	0.0	A	0
Sunnyside Ave SB LT RT	32	20.6	C	1	82	31.1	D	2	95	35.1	E	3
Saturday Midday:												
Broadway EB LT TH	545	0.2	A	0	572	0.3	A	0	572	0.3	A	0
Broadway WB TH RT	413	0.0	A	0	469	0.0	A	0	491	0.0	A	0
Sunnyside Ave SB LT RT	32	19.0	C	1	78	26.4	D	2	113	34.7	D	3
<b><i>Broadway at the Project Site Driveway</i></b>												
Weekday Evening:												
Broadway EB LT TH	583	0.0	A	0	612	0.0	A	0	616	0.1	A	0
Broadway WB TH RT	429	0.0	A	0	467	0.0	A	0	483	0.0	A	0
Saturday Midday:												
Broadway EB LT TH	545	0.0	A	0	577	0.1	A	0	582	0.1	A	0
Broadway WB TH RT	404	0.0	A	0	446	0.0	A	0	475	0.0	A	0
<b><i>Sunnyside Avenue at the Project Site Driveway</i></b>												
Weekday Evening:												
Project Site Driveway EB LT RT	8	8.5	A	0	28	8.7	A	0	41	8.7	A	0
Sunnyside Avenue NB TH	48	0.0	A	0	67	0.0	A	0	67	0.0	A	0
Sunnyside Avenue SB TH	24	0.0	A	0	54	0.0	A	0	54	0.0	A	0
Saturday Midday:												
Project Site Driveway EB LT RT	2	8.5	A	0	25	8.7	A	0	60	8.8	A	0
Sunnyside Avenue NB TH	33	0.0	A	0	61	0.0	A	0	61	0.0	A	0
Sunnyside Avenue SB TH	30	0.0	A	0	53	0.0	A	0	53	0.0	A	0

<sup>a</sup>Volume-to-capacity ratio.

<sup>b</sup>Control (signal) delay per vehicle in seconds.

<sup>c</sup>Level-of-Service.

<sup>d</sup>Queue length in vehicles.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

## **PARKING**

---

In order to determine the availability of public parking in the vicinity of the Project site, a parking demand survey was performed on the on-street parking spaces along Broadway between the Somerville City Line and Cleveland Street. Based upon the field survey a total of approximately 62 parking spaces are available in the immediate vicinity of the site.

### **PARKING SUPPLY**

#### **On Street**

On-street parking is provided along Broadway adjacent to the site and consists of approximately 62 spaces. The on-street parking is unmetered and designed for shorter stays and is restricted to one-hour parking only.

### **PARKING DEMAND OBSERVATION**

In order to ascertain the availability of parking demand, a survey of on-street parking spaces adjacent to the site was completed on Saturday, June 2, 2020 between the hours of 11:00 AM and 5:00 PM. The parking demand observations were performed in 30-minute intervals and consisted of an inventory of vacant spaces available within each parking area during the observation periods. A summary of the vacant spaces is presented on Figure 8 and Table 10.

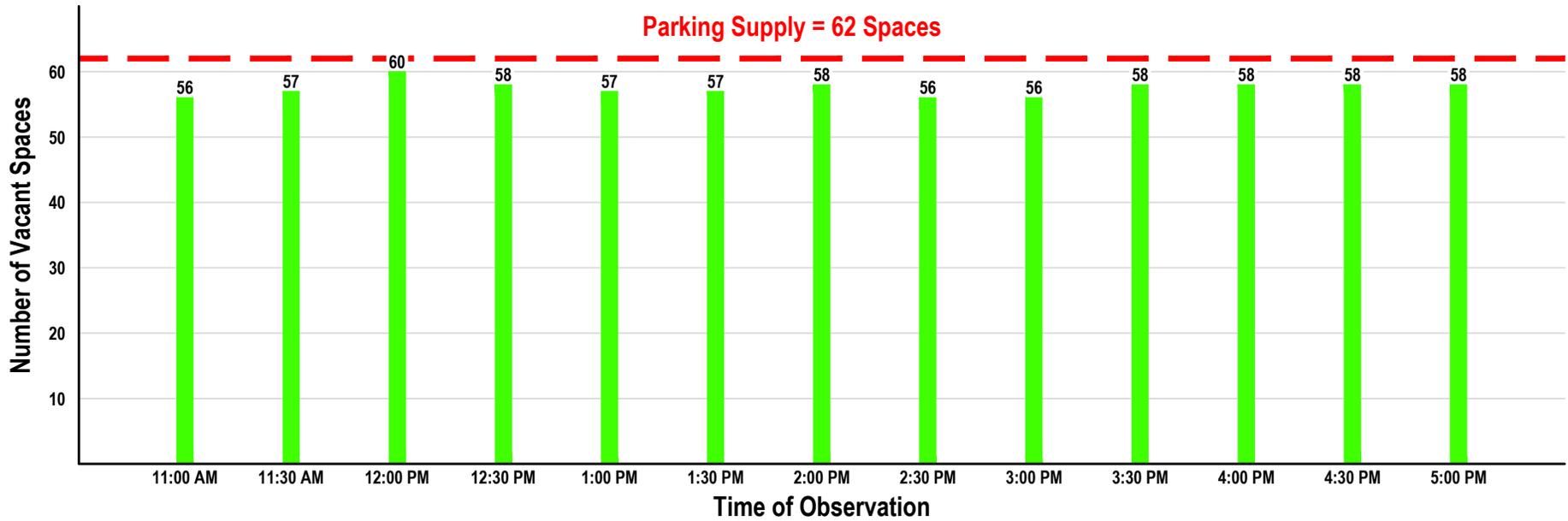


Figure 8

Parking Analysis  
Saturday, June 6, 2020

**Table 10**  
**PARKING DEMAND OBSERVATIONS**

---

Saturday Start Time	Vacant Space observation
11:00 AM	56
11:30 AM	57
12:00 PM	60
12:30 PM	58
1:00 PM	57
1:30 PM	57
2:00 PM	58
2:30 PM	56
3:00 PM	56
3:30 PM	58
4:00 PM	58
4:30 PM	58
5:00 PM	58
<b>Parking Capacity</b>	<b>62</b>

---

<sup>a</sup>Based on counts conducted by VAI, Saturday, June 6, 2020.

As can be seen in Table 10, the overall peak parking demand period in the vicinity of the project was found to occur between 2:30– 3:30 PM peak period with 56 available parking spaces. Based upon this data it can be concluded that there is sufficient availability of parking spaces in the area and there is additional parking available outside this immediate area. It is acknowledged that the parking survey was conducted during the COVID-19 impact period but overall it is our opinion that adequate area parking does exist.

## **CONCLUSIONS AND RECOMMENDATIONS**

---

VAI has prepared this TIA in order to evaluate potential traffic impacts associated with the proposed marijuana dispensary located at 21 Broadway in Arlington, Massachusetts (the “Project”). This study was prepared in accordance with the Massachusetts Department of Transportation (MassDOT) Guidelines for *Transportation Impact Assessment (TIA) Guideline*; and was conducted pursuant to the standards of the Traffic Engineering and Transportation Planning Professions for the preparation of such reports. Based on the results of this study, the following can be concluded:

- Based on trip-generation statistics published by the ITE, the proposed marijuana dispensary will generate approximately 66 vehicle trips (33 entering and 33 exiting) during the weekday evening peak hour and 109 vehicle trips (51 entering and 58 exiting) during the Saturday midday peak hour.
- Project-related traffic increases in the area are expected to be between 0.4 percent to 0.7 percent during the weekday evening peak-hour.
- The analysis has indicated that the Project will result in minimal impact on motorist delays at the study intersections, as compared to future No-Build conditions.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with the implementation of the following recommendations.

### **RECOMMENDATIONS**

A transportation improvement program has been developed that is designed to provide safe and efficient access to the Project and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The following improvements have been recommended as a part of this evaluation.

## Project Access

Access to the Project will continue to be provided by way of one (1) entrance-only driveway along Broadway and one (1) exit-only driveway onto Sunnyside Avenue. The following recommendations are offered with respect to the design and operation of the Project site driveway:

- The exit driveway onto Sunnyside Avenue should be placed under STOP-sign (Manual of Uniform Traffic Control Designation R1-1) control, with a painted STOP-bar included. Do not enter signs should be installed facing Sunnyside Avenue.
- Pavement markings reinforcing the one-way operation of the Project driveway should be painted within the Project site.
- Illumination should be provided at the driveways.
- All signs and other pavement markings to be installed within the Development site shall conform to the applicable standards of the current Manual on Uniform Traffic Devices (MUTCD).<sup>11</sup>
- Signs and landscaping adjacent to the Project site driveway intersections should be designed and maintained so as not to restrict lines of sight.

## Transportation Demand Management (TDM) Plan

As is the case with many developments, a major focus of the traffic mitigation plan focuses on the reduction of single-occupant vehicles arriving and departing to and from the site. This is predominantly accomplished by developing a comprehensive Transportation Demand Management (TDM) strategy. The proponent is committed to supporting a balanced multimodal transportation plan to serve the employees and patrons of the site. The major features of this TDM plan that support this commitment are as follows:

- ***Designation of a Transportation Coordinator*** - The transportation coordinator oversees all transportation issues including managing the TDM measures, parking, loading, and service. The marijuana dispensary will have a transportation coordinator.
- ***Provision of Transit Schedules*** - Links to the MBTA website will be included on the marijuana dispensary website. In addition, the project proponent will post information regarding public transportation services, maps, schedules, and fare information in a central location.
- ***Bicycling Resources*** - Secured bicycle spaces will be provided outside the building for patrons.
- ***Ride Share Accommodations*** – Accommodations will be provided to encourage the use of ride-sharing to facilitate drop-offs and pick-ups. Three (3) designated uber/lyft/taxi spaces will be provided directly in front of the site. In addition, drop-off and pick-up activity can circulate through the site from Broadway to Sunnyside Avenue.

The project proponent will investigate the implementation of these traffic reduction strategies and will work with the Town to implement such programs.

---

<sup>11</sup>*Ibid 4.*

## Parking

A total of 16 parking spaces are provided on the site of which 12 spaces are allocated for the proposed marijuana dispensary. The on-street parking supply along Broadway between the Somerville City Line and Cleveland Street is 62 spaces, most of which are vacant. In order to enhance compliance where on-street parking regulations, the Project proponent will provide new signage updating and formalizing the existing on-street parking regulations along Broadway between the Somerville City Line and Cleveland Street. Specific area parking includes:

- Three (3) uber/lyft/taxi reserved spaces in front of the building.
- 52 regulated 1-hour spaces along Broadway between the Somerville City Line and Cleveland Street.

Overall, there is adequate parking in the area to support the Project.

## OPENING CONDITIONS OPERATIONS PLAN - CUSTOMER MANAGEMENT LOGISTICS

For retail marijuana dispensaries it is essential for a well thought out opening plan developed in consultation with local public safety officials. Elements of the plan include:

- **Additional Staff:** There will be additional security/concierge specifically focused on managing the customers, both internally and on the street along Broadway. These additional staff members will serve as concierge and will not replace the required security and check-in personnel, as required by the Massachusetts Cannabis Control Commission (CCC) regulations.
- **Appointment Only:** For the first month of operation, the Project proponent will require sales be by appointment only to reduce any peak traffic issues. During the initial 6 to 12 months of operation there will be additional staff to monitor lines as concierge/security to maintain order in the public way.
- **Coordinate with Arlington Police:** In advance of its opening day the Project proponent will coordinate with the Arlington Police to arrange for the appropriate detail, discuss any proposed logistics for customer management and share any industry information the police may find useful.

## CONCLUSIONS

The proposed Project will result in a measurable impact but will not have a significant impact on overall operations. With the implementation of the above recommendations, safe and efficient access will be provided to the planned development and the proposed development can be constructed with minimal impact to the area as designed.

## APPENDIX

---

MANUAL TURNING MOVEMENT COUNT DATA  
COVID-19 ADJUSTMENT CALCULATIONS  
PUBLIC TRANSPORTATION SCHEDULES  
MASSDOT CRASH RATE WORKSHEETS AND HIGH CRASH LOCATION MAPPING  
GENERAL BACKGROUND TRAFFIC GROWTH  
BACKGROUND DEVELOPMENT TRAFFIC-VOLUME NETWORKS  
TRIP-GENERATION CALCULATIONS  
CAPACITY ANALYSIS WORKSHEETS

MANUAL TURNING MOVEMENT COUNT DATA

---

**Accurate Counts**  
978-664-2565

N/S Street : Alewife Brook Parkway  
E/W Street: Broadway  
City/State : Somerville, MA  
Weather : Cloudy

File Name : 18610001  
Site Code : 18610001  
Start Date : 10/18/2016  
Page No : 1

Groups Printed- Cars - Trucks

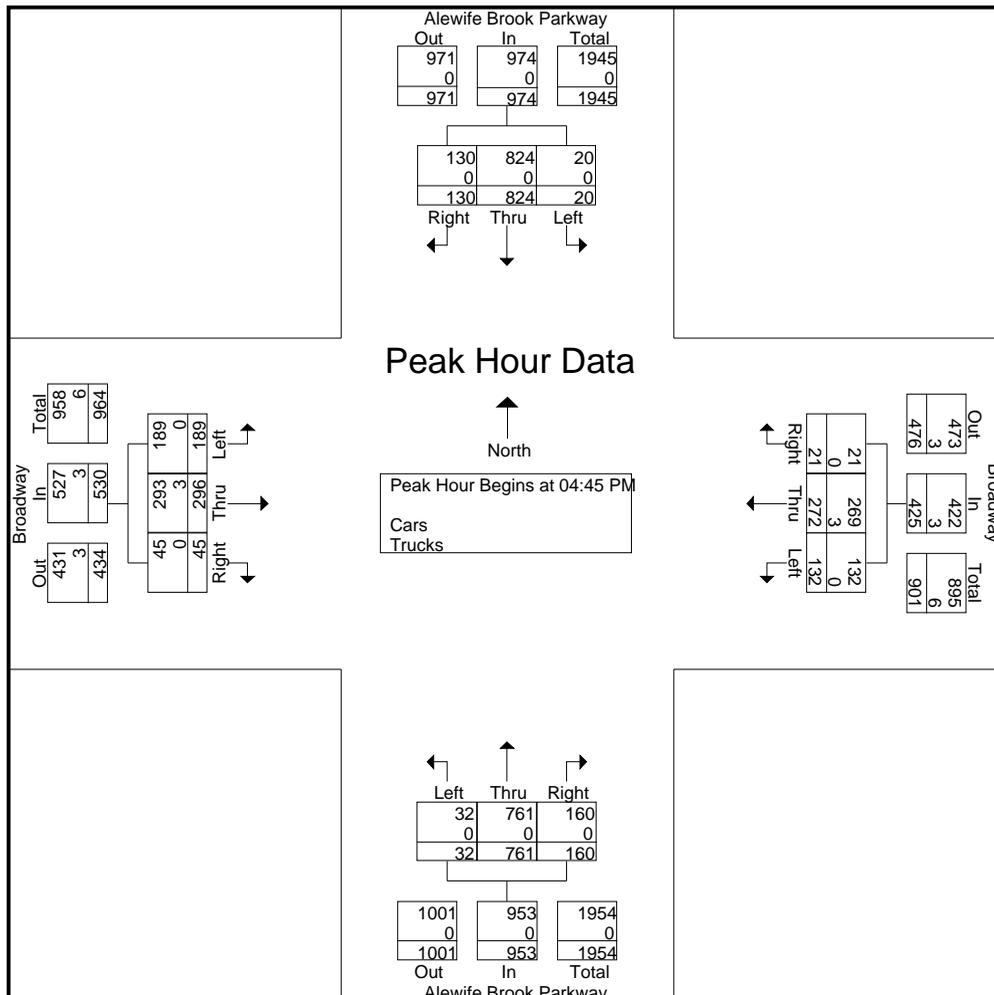
Start Time	Alewife Brook Parkway From North			Broadway From East			Alewife Brook Parkway From South			Broadway From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	3	187	28	36	57	8	8	224	45	40	56	13	705
04:15 PM	3	196	23	31	65	4	5	220	42	53	58	8	708
04:30 PM	7	206	26	28	52	8	6	172	32	53	76	13	679
04:45 PM	5	217	22	39	66	5	5	193	41	34	65	12	704
Total	18	806	99	134	240	25	24	809	160	180	255	46	2796
05:00 PM	7	188	40	30	68	7	11	190	36	42	71	16	706
05:15 PM	2	228	35	39	67	5	10	196	43	62	81	11	779
05:30 PM	6	191	33	24	71	4	6	182	40	51	79	6	693
05:45 PM	8	182	22	37	63	7	8	190	32	37	72	13	671
Total	23	789	130	130	269	23	35	758	151	192	303	46	2849
Grand Total	41	1595	229	264	509	48	59	1567	311	372	558	92	5645
Apprch %	2.2	85.5	12.3	32.2	62	5.8	3	80.9	16.1	36.4	54.6	9	
Total %	0.7	28.3	4.1	4.7	9	0.9	1	27.8	5.5	6.6	9.9	1.6	
Cars	41	1595	229	264	504	48	59	1567	311	372	550	92	5632
% Cars	100	100	100	100	99	100	100	100	100	100	98.6	100	99.8
Trucks	0	0	0	0	5	0	0	0	0	0	8	0	13
% Trucks	0	0	0	0	1	0	0	0	0	0	1.4	0	0.2

**Accurate Counts**  
978-664-2565

File Name : 18610001  
Site Code : 18610001  
Start Date : 10/18/2016  
Page No : 2

N/S Street : Alewife Brook Parkway  
E/W Street: Broadway  
City/State : Somerville, MA  
Weather : Cloudy

Start Time	Alewife Brook Parkway From North				Broadway From East				Alewife Brook Parkway From South				Broadway From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	5	217	22	244	<b>39</b>	66	5	110	5	193	41	239	34	65	12	111	704
05:00 PM	<b>7</b>	188	<b>40</b>	235	30	68	<b>7</b>	105	<b>11</b>	190	36	237	42	71	<b>16</b>	129	706
05:15 PM	2	<b>228</b>	35	<b>265</b>	39	67	5	<b>111</b>	10	<b>196</b>	<b>43</b>	<b>249</b>	<b>62</b>	<b>81</b>	11	<b>154</b>	<b>779</b>
05:30 PM	6	191	33	230	24	<b>71</b>	4	99	6	182	40	228	51	79	6	136	693
Total Volume	20	824	130	974	132	272	21	425	32	761	160	953	189	296	45	530	2882
% App. Total	2.1	84.6	13.3		31.1	64	4.9		3.4	79.9	16.8		35.7	55.8	8.5		
PHF	.714	.904	.813	.919	.846	.958	.750	.957	.727	.971	.930	.957	.762	.914	.703	.860	.925
Cars	20	824	130	974	132	269	21	422	32	761	160	953	189	293	45	527	2876
% Cars	100	100	100	100	100	98.9	100	99.3	100	100	100	100	100	99.0	100	99.4	99.8
Trucks	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
% Trucks	0	0	0	0	0	1.1	0	0.7	0	0	0	0	0	1.0	0	0.6	0.2



**Accurate Counts**  
978-664-2565

File Name : 18610001  
Site Code : 18610001  
Start Date : 10/18/2016  
Page No : 3

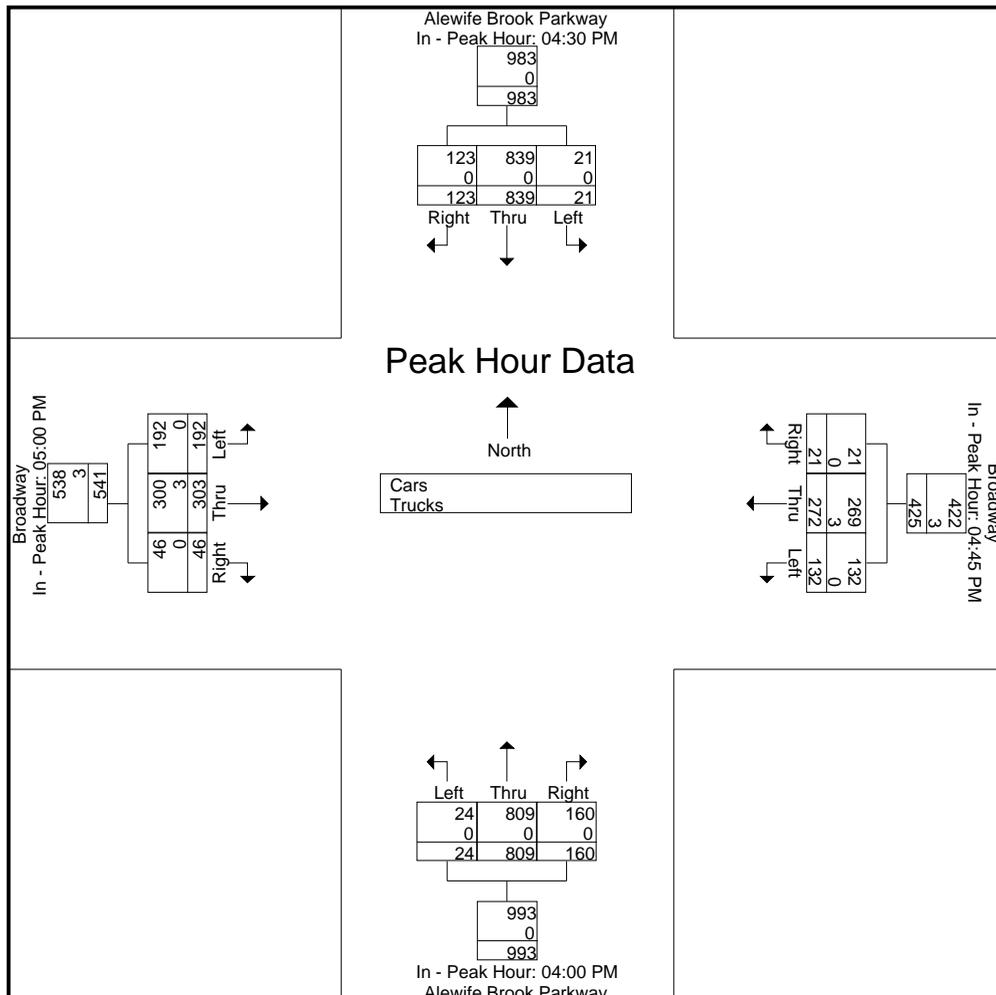
N/S Street : Alewife Brook Parkway  
E/W Street: Broadway  
City/State : Somerville, MA  
Weather : Cloudy

Start Time	Alewife Brook Parkway From North				Broadway From East				Alewife Brook Parkway From South				Broadway From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				04:00 PM				05:00 PM			
+0 mins.	7	206	26	239	39	66	5	110	8	224	45	277	42	71	16	129
+15 mins.	5	217	22	244	30	68	7	105	5	220	42	267	62	81	11	154
+30 mins.	7	188	40	235	39	67	5	111	6	172	32	210	51	79	6	136
+45 mins.	2	228	35	265	24	71	4	99	5	193	41	239	37	72	13	122
Total Volume	21	839	123	983	132	272	21	425	24	809	160	993	192	303	46	541
% App. Total	2.1	85.4	12.5		31.1	64	4.9		2.4	81.5	16.1		35.5	56	8.5	
PHF	.750	.920	.769	.927	.846	.958	.750	.957	.750	.903	.889	.896	.774	.935	.719	.878
Cars	21	839	123	983	132	269	21	422	24	809	160	993	192	300	46	538
% Cars	100	100	100	100	100	98.9	100	99.3	100	100	100	100	100	99	100	99.4
Trucks	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3
% Trucks	0	0	0	0	0	1.1	0	0.7	0	0	0	0	0	1	0	0.6



# Accurate Counts

978-664-2565

N/S Street : Alewife Brook Parkway

E/W Street: Broadway

City/State : Somerville, MA

Weather : Cloudy

File Name : 18610001

Site Code : 18610001

Start Date : 10/18/2016

Page No : 4

## Groups Printed- Cars

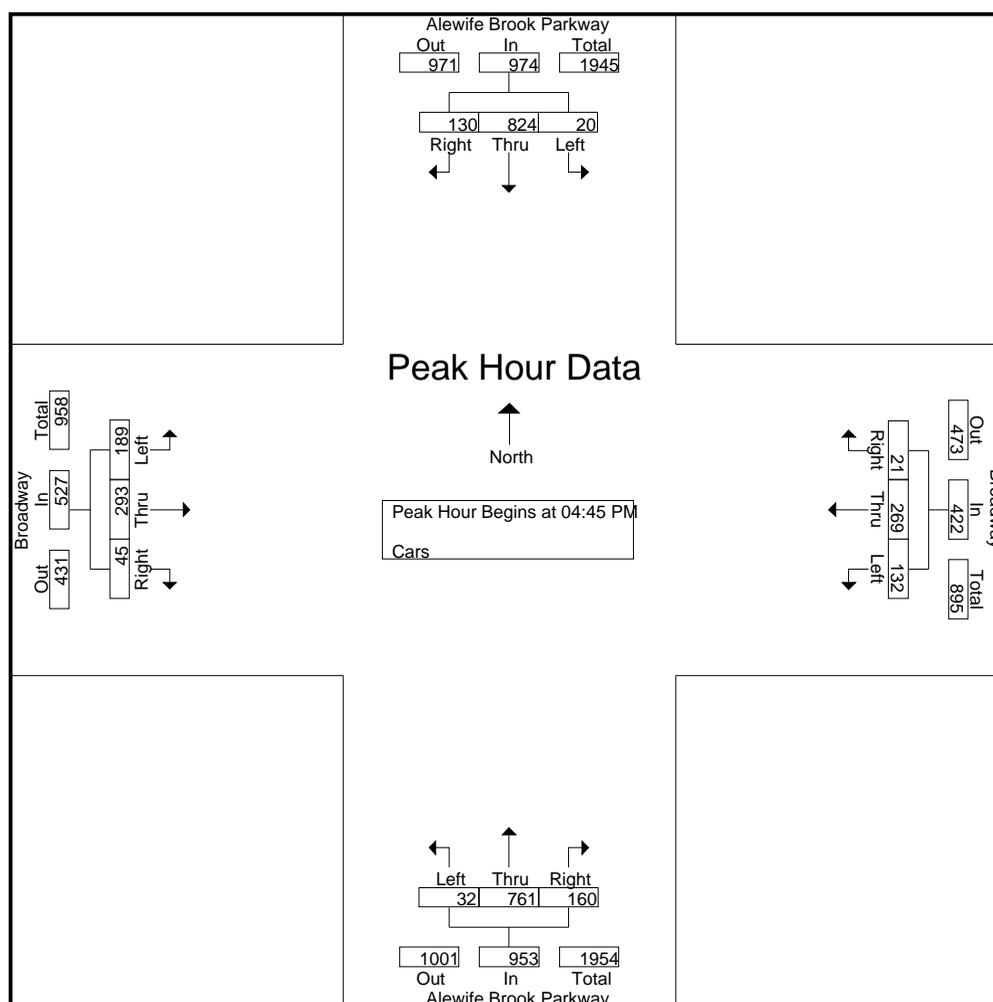
Start Time	Alewife Brook Parkway From North			Broadway From East			Alewife Brook Parkway From South			Broadway From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	3	187	28	36	56	8	8	224	45	40	53	13	701
04:15 PM	3	196	23	31	65	4	5	220	42	53	57	8	707
04:30 PM	7	206	26	28	51	8	6	172	32	53	76	13	678
04:45 PM	5	217	22	39	66	5	5	193	41	34	64	12	703
Total	18	806	99	134	238	25	24	809	160	180	250	46	2789
05:00 PM	7	188	40	30	67	7	11	190	36	42	70	16	704
05:15 PM	2	228	35	39	66	5	10	196	43	62	80	11	777
05:30 PM	6	191	33	24	70	4	6	182	40	51	79	6	692
05:45 PM	8	182	22	37	63	7	8	190	32	37	71	13	670
Total	23	789	130	130	266	23	35	758	151	192	300	46	2843
Grand Total	41	1595	229	264	504	48	59	1567	311	372	550	92	5632
Apprch %	2.2	85.5	12.3	32.4	61.8	5.9	3	80.9	16.1	36.7	54.2	9.1	
Total %	0.7	28.3	4.1	4.7	8.9	0.9	1	27.8	5.5	6.6	9.8	1.6	

**Accurate Counts**  
978-664-2565

File Name : 18610001  
Site Code : 18610001  
Start Date : 10/18/2016  
Page No : 5

N/S Street : Alewife Brook Parkway  
E/W Street: Broadway  
City/State : Somerville, MA  
Weather : Cloudy

Start Time	Alewife Brook Parkway From North				Broadway From East				Alewife Brook Parkway From South				Broadway From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	5	217	22	244	<b>39</b>	66	5	<b>110</b>	5	193	41	239	34	64	12	110	703
05:00 PM	<b>7</b>	188	<b>40</b>	235	30	67	<b>7</b>	104	<b>11</b>	190	36	237	42	70	<b>16</b>	128	704
05:15 PM	2	<b>228</b>	35	<b>265</b>	39	66	5	110	10	<b>196</b>	<b>43</b>	<b>249</b>	<b>62</b>	<b>80</b>	11	<b>153</b>	<b>777</b>
05:30 PM	6	191	33	230	24	<b>70</b>	4	98	6	182	40	228	51	79	6	136	692
Total Volume	20	824	130	974	132	269	21	422	32	761	160	953	189	293	45	527	2876
% App. Total	2.1	84.6	13.3		31.3	63.7	5		3.4	79.9	16.8		35.9	55.6	8.5		
PHF	.714	.904	.813	.919	.846	.961	.750	.959	.727	.971	.930	.957	.762	.916	.703	.861	.925



# Accurate Counts

978-664-2565

N/S Street : Alewife Brook Parkway

E/W Street: Broadway

City/State : Somerville, MA

Weather : Cloudy

File Name : 18610001

Site Code : 18610001

Start Date : 10/18/2016

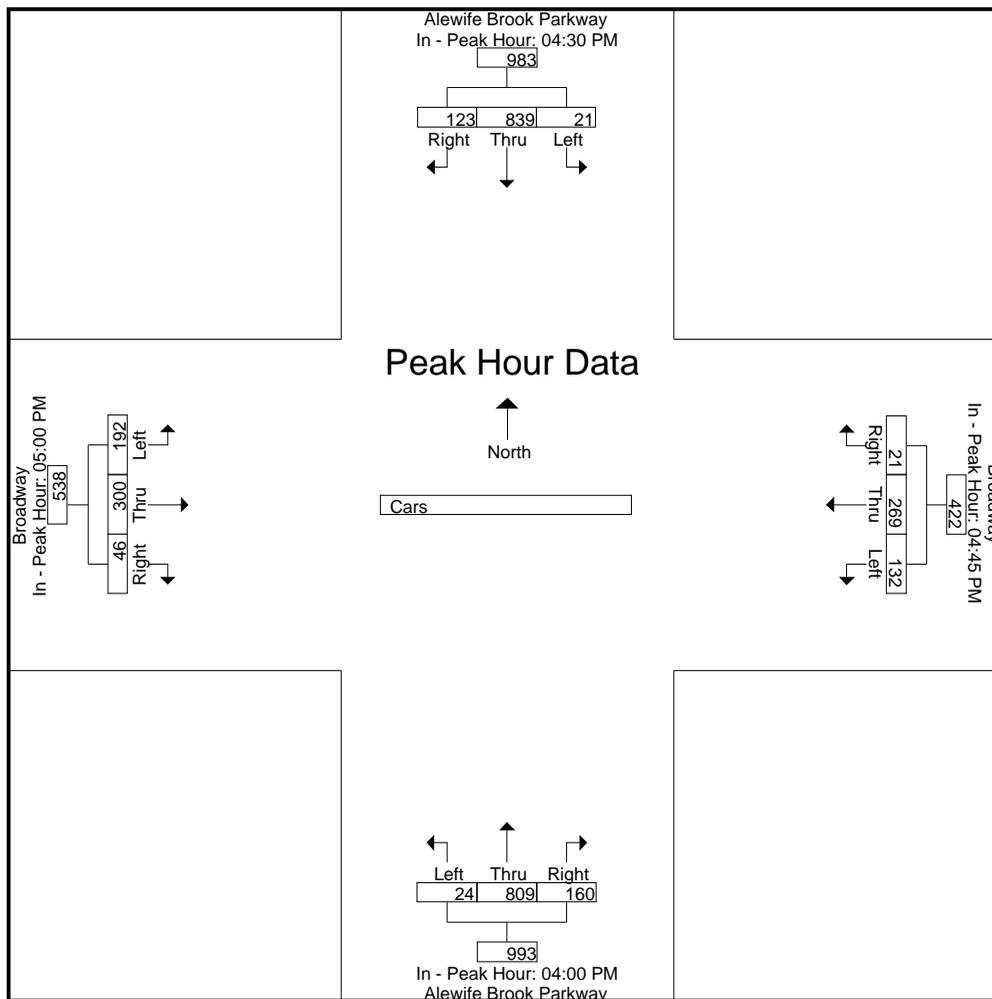
Page No : 6

Start Time	Alewife Brook Parkway From North				Broadway From East				Alewife Brook Parkway From South				Broadway From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				04:00 PM				05:00 PM			
+0 mins.	7	206	26	239	39	66	5	110	8	224	45	277	42	70	16	128
+15 mins.	5	217	22	244	30	67	7	104	5	220	42	267	62	80	11	153
+30 mins.	7	188	40	235	39	66	5	110	6	172	32	210	51	79	6	136
+45 mins.	2	228	35	265	24	70	4	98	5	193	41	239	37	71	13	121
Total Volume	21	839	123	983	132	269	21	422	24	809	160	993	192	300	46	538
% App. Total	2.1	85.4	12.5		31.3	63.7	5		2.4	81.5	16.1		35.7	55.8	8.6	
PHF	.750	.920	.769	.927	.846	.961	.750	.959	.750	.903	.889	.896	.774	.938	.719	.879



**Accurate Counts**  
978-664-2565

N/S Street : Alewife Brook Parkway  
E/W Street: Broadway  
City/State : Somerville, MA  
Weather : Cloudy

File Name : 18610001  
Site Code : 18610001  
Start Date : 10/18/2016  
Page No : 7

Groups Printed- Trucks

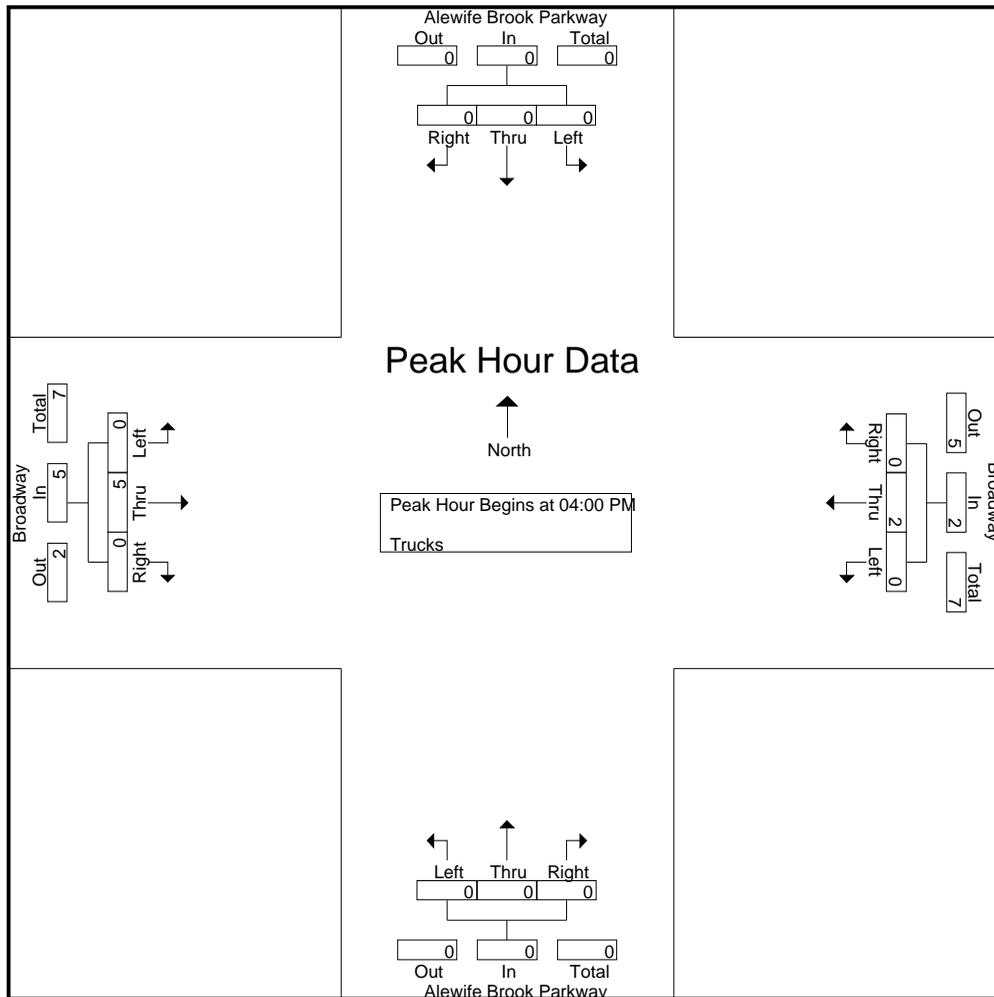
Start Time	Alewife Brook Parkway From North			Broadway From East			Alewife Brook Parkway From South			Broadway From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	0	0	1	0	0	0	0	0	3	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
04:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
<b>Total</b>	0	0	0	0	2	0	0	0	0	0	5	0	7
05:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
05:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
05:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
<b>Total</b>	0	0	0	0	3	0	0	0	0	0	3	0	6
<b>Grand Total</b>	0	0	0	0	5	0	0	0	0	0	8	0	13
Apprch %	0	0	0	0	100	0	0	0	0	0	100	0	
Total %	0	0	0	0	38.5	0	0	0	0	0	61.5	0	

**Accurate Counts**  
978-664-2565

N/S Street : Alewife Brook Parkway  
E/W Street: Broadway  
City/State : Somerville, MA  
Weather : Cloudy

File Name : 18610001  
Site Code : 18610001  
Start Date : 10/18/2016  
Page No : 8

Start Time	Alewife Brook Parkway From North				Broadway From East				Alewife Brook Parkway From South				Broadway From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	5	0	5	7
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.417	.000	.417	.438



**Accurate Counts**  
978-664-2565

N/S Street : Alewife Brook Parkway  
E/W Street: Broadway  
City/State : Somerville, MA  
Weather : Cloudy

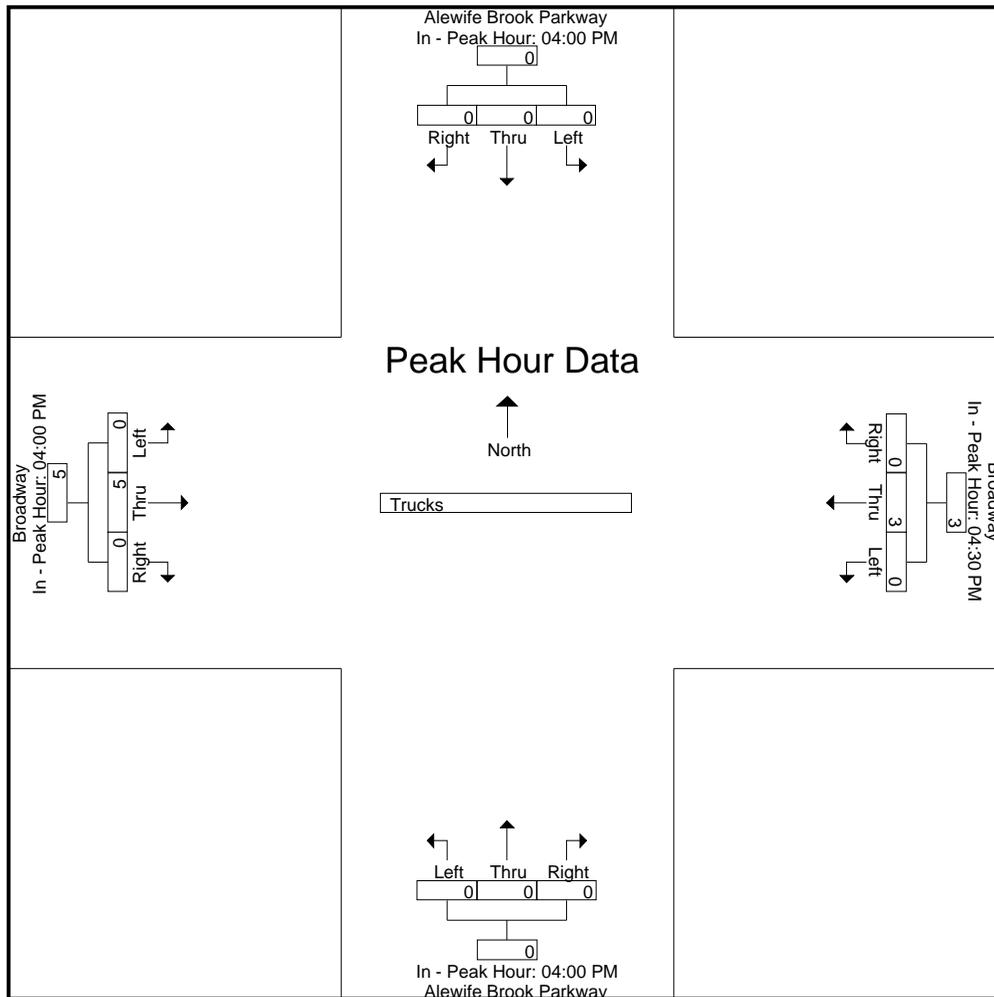
File Name : 18610001  
Site Code : 18610001  
Start Date : 10/18/2016  
Page No : 9

Start Time	Alewife Brook Parkway From North				Broadway From East				Alewife Brook Parkway From South				Broadway From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	5	0	5
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.417	.000	.417



**Accurate Counts**  
978-664-2565

N/S Street : Alewife Brook Parkway  
E/W Street: Broadway  
City/State : Somerville, MA  
Weather : Cloudy

File Name : 18610001  
Site Code : 18610001  
Start Date : 10/18/2016  
Page No : 10

Groups Printed- Bikes Peds

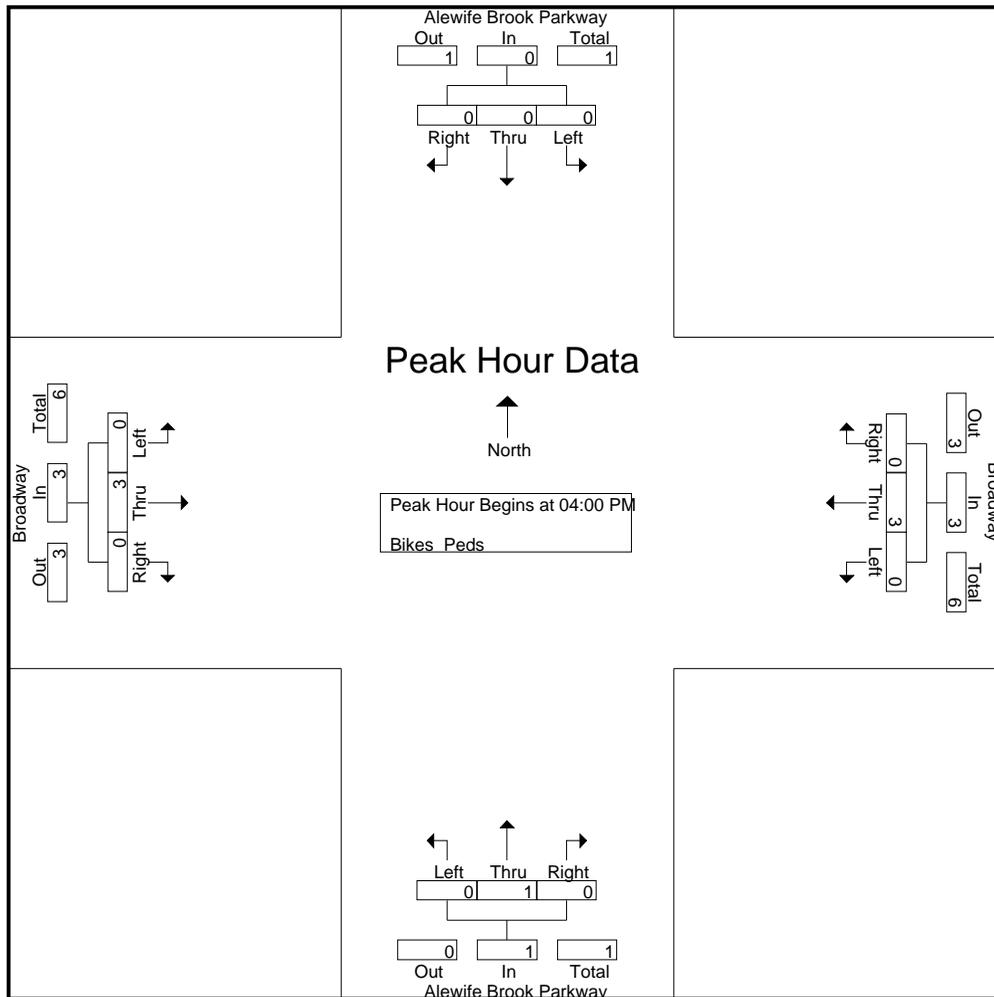
Start Time	Alewife Brook Parkway From North				Broadway From East				Alewife Brook Parkway From South				Broadway From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:00 PM	0	0	0	7	0	1	0	3	0	1	0	8	0	1	0	1	19	3	22
04:15 PM	0	0	0	7	0	2	0	3	0	0	0	9	0	1	0	2	21	3	24
04:30 PM	0	0	0	11	0	0	0	2	0	0	0	3	0	1	0	4	20	1	21
04:45 PM	0	0	0	3	0	0	0	1	0	0	0	6	0	0	0	2	12	0	12
<b>Total</b>	0	0	0	28	0	3	0	9	0	1	0	26	0	3	0	9	72	7	79
05:00 PM	0	0	0	8	0	0	0	2	0	0	0	3	0	1	0	1	14	1	15
05:15 PM	0	0	0	6	0	0	0	1	0	0	0	5	0	1	0	1	13	1	14
05:30 PM	0	0	0	9	0	0	0	5	0	0	0	10	0	0	0	1	25	0	25
05:45 PM	0	0	0	7	0	1	0	0	0	0	0	6	0	2	0	2	15	3	18
<b>Total</b>	0	0	0	30	0	1	0	8	0	0	0	24	0	4	0	5	67	5	72
<b>Grand Total</b>	0	0	0	58	0	4	0	17	0	1	0	50	0	7	0	14	139	12	151
Apprch %	0	0	0		0	100	0		0	100	0		0	100	0				
Total %	0	0	0		0	33.3	0		0	8.3	0		0	58.3	0		92.1	7.9	

**Accurate Counts**  
978-664-2565

N/S Street : Alewife Brook Parkway  
E/W Street: Broadway  
City/State : Somerville, MA  
Weather : Cloudy

File Name : 18610001  
Site Code : 18610001  
Start Date : 10/18/2016  
Page No : 11

Start Time	Alewife Brook Parkway From North				Broadway From East				Alewife Brook Parkway From South				Broadway From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
04:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	3	0	3	0	1	0	1	0	3	0	3	7
% App. Total	0	0	0		0	100	0		0	100	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.250	.000	.250	.000	.750	.000	.750	.583



**Accurate Counts**  
978-664-2565

N/S Street : Alewife Brook Parkway  
E/W Street: Broadway  
City/State : Somerville, MA  
Weather : Cloudy

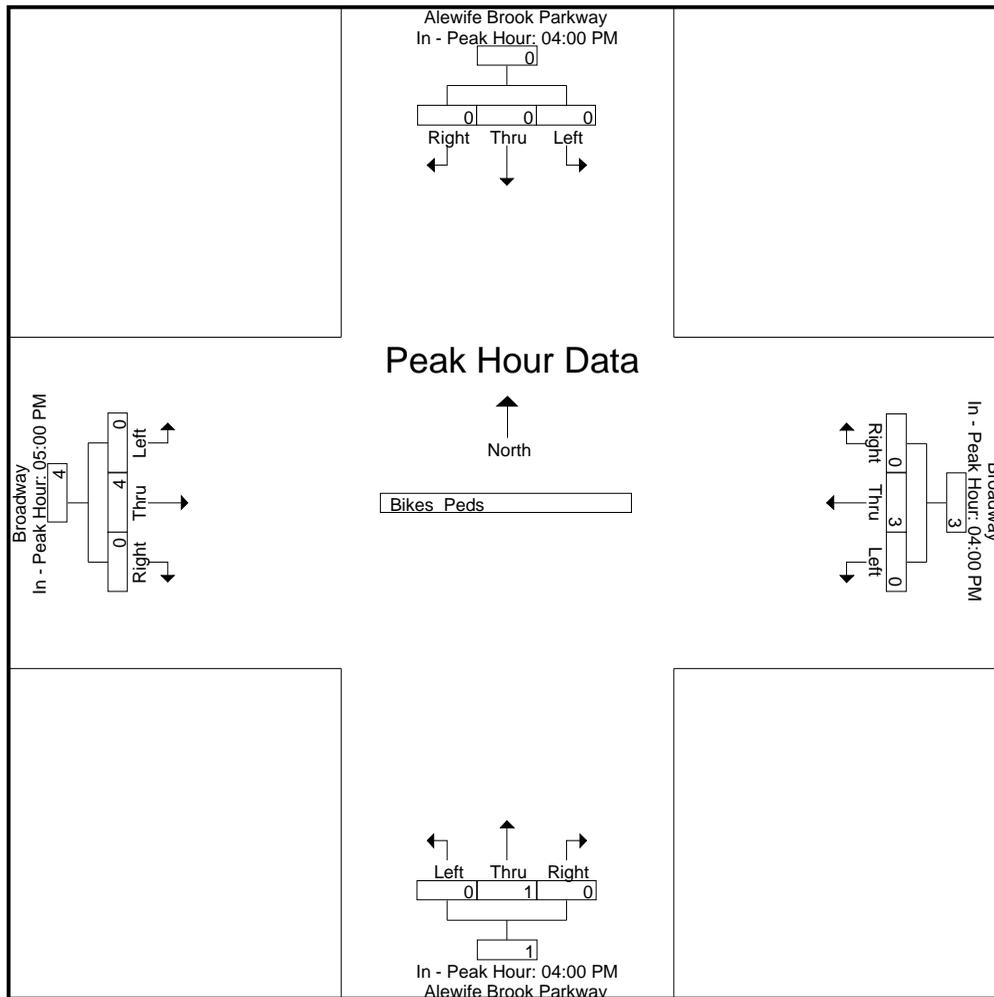
File Name : 18610001  
Site Code : 18610001  
Start Date : 10/18/2016  
Page No : 12

Start Time	Alewife Brook Parkway From North				Broadway From East				Alewife Brook Parkway From South				Broadway From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total Volume	0	0	0	0	0	3	0	3	0	1	0	1	0	4	0	4
% App. Total	0	0	0		0	100	0		0	100	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.250	.000	.250	.000	.500	.000	.500



# Accurate Counts

978-664-2565

File Name : 86410001

Site Code : 86410001

Start Date : 6/11/2020

Page No : 1

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear

### Groups Printed- Cars - Trucks

Start Time	Sunnyside Ave From North		Broadway From East		Broadway From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	1	1	41	4	4	57	108
04:15 PM	3	2	42	0	2	65	114
04:30 PM	1	1	55	4	3	74	138
04:45 PM	3	1	43	3	1	65	116
<b>Total</b>	<b>8</b>	<b>5</b>	<b>181</b>	<b>11</b>	<b>10</b>	<b>261</b>	<b>476</b>
05:00 PM	0	2	45	2	5	60	114
05:15 PM	3	1	43	4	1	75	127
05:30 PM	0	1	50	1	0	54	106
05:45 PM	2	0	45	2	0	47	96
<b>Total</b>	<b>5</b>	<b>4</b>	<b>183</b>	<b>9</b>	<b>6</b>	<b>236</b>	<b>443</b>
<b>Grand Total</b>	<b>13</b>	<b>9</b>	<b>364</b>	<b>20</b>	<b>16</b>	<b>497</b>	<b>919</b>
Apprch %	59.1	40.9	94.8	5.2	3.1	96.9	
Total %	1.4	1	39.6	2.2	1.7	54.1	
Cars	13	9	358	20	16	489	905
% Cars	100	100	98.4	100	100	98.4	98.5
Trucks	0	0	6	0	0	8	14
% Trucks	0	0	1.6	0	0	1.6	1.5

Start Time	Sunnyside Ave From North			Broadway From East			Broadway From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	1	1	2	55	4	59	3	74	77	138
04:45 PM	3	1	4	43	3	46	1	65	66	116
05:00 PM	0	2	2	45	2	47	5	60	65	114
05:15 PM	3	1	4	43	4	47	1	75	76	127
<b>Total Volume</b>	<b>7</b>	<b>5</b>	<b>12</b>	<b>186</b>	<b>13</b>	<b>199</b>	<b>10</b>	<b>274</b>	<b>284</b>	<b>495</b>
% App. Total	58.3	41.7		93.5	6.5		3.5	96.5		
PHF	.583	.625	.750	.845	.813	.843	.500	.913	.922	.897
Cars	7	5	12	183	13	196	10	270	280	488
% Cars	100	100	100	98.4	100	98.5	100	98.5	98.6	98.6
Trucks	0	0	0	3	0	3	0	4	4	7
% Trucks	0	0	0	1.6	0	1.5	0	1.5	1.4	1.4

# Accurate Counts

978-664-2565

File Name : 86410001

Site Code : 86410001

Start Date : 6/11/2020

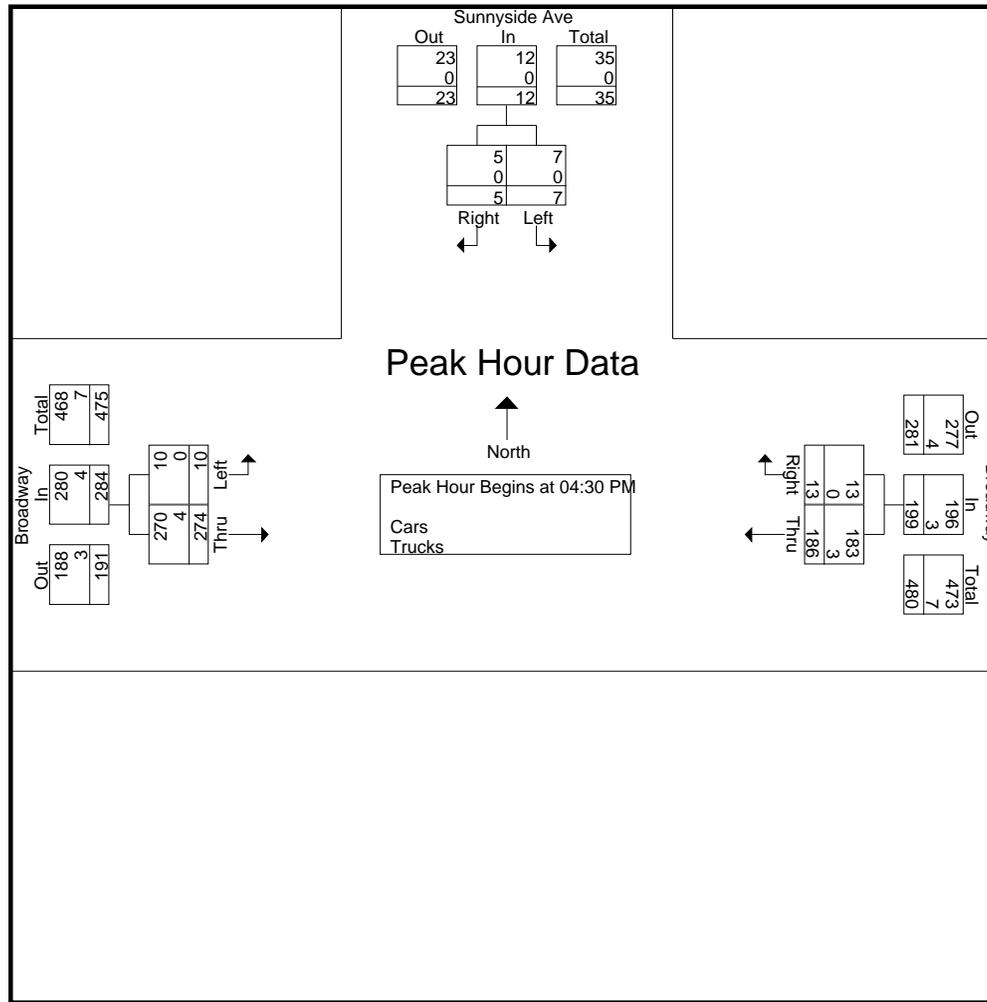
Page No : 2

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

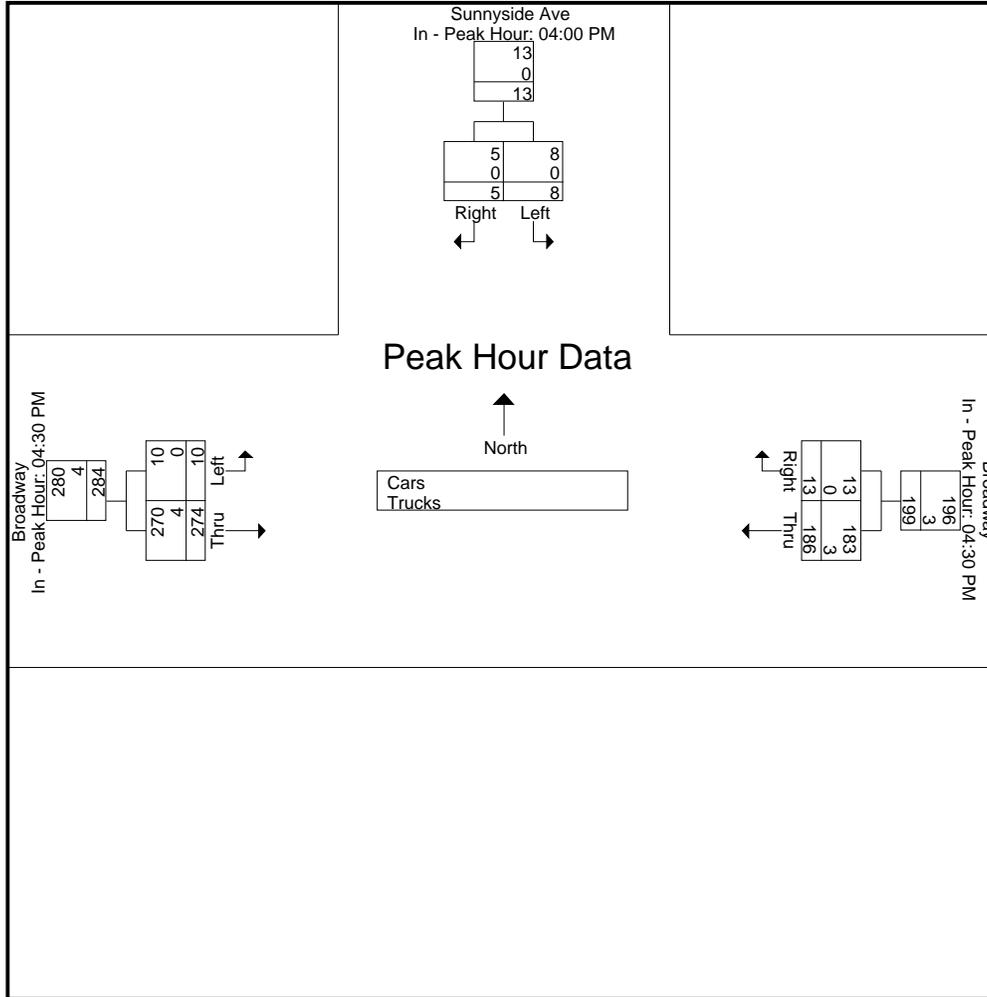
Weather : Clear



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM			04:30 PM			04:30 PM		
+0 mins.	1	1	2	<b>55</b>	<b>4</b>	<b>59</b>	3	74	<b>77</b>
+15 mins.	<b>3</b>	<b>2</b>	<b>5</b>	43	3	46	1	65	66
+30 mins.	1	1	2	45	2	47	<b>5</b>	60	65
+45 mins.	3	1	4	43	4	47	1	<b>75</b>	76
Total Volume	8	5	13	186	13	199	10	274	284
% App. Total	61.5	38.5		93.5	6.5		3.5	96.5	
PHF	.667	.625	.650	.845	.813	.843	.500	.913	.922
Cars	8	5	13	183	13	196	10	270	280
% Cars	100	100	100	98.4	100	98.5	100	98.5	98.6
Trucks	0	0	0	3	0	3	0	4	4



### Accurate Counts

978-664-2565

File Name : 86410001

Site Code : 86410001

Start Date : 6/11/2020

Page No : 4

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear

#### Groups Printed- Cars

Start Time	Sunnyside Ave From North		Broadway From East		Broadway From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	1	1	40	4	4	57	107
04:15 PM	3	2	42	0	2	63	112
04:30 PM	1	1	55	4	3	73	137
04:45 PM	3	1	41	3	1	65	114
<b>Total</b>	<b>8</b>	<b>5</b>	<b>178</b>	<b>11</b>	<b>10</b>	<b>258</b>	<b>470</b>
05:00 PM	0	2	44	2	5	59	112
05:15 PM	3	1	43	4	1	73	125
05:30 PM	0	1	49	1	0	53	104
05:45 PM	2	0	44	2	0	46	94
<b>Total</b>	<b>5</b>	<b>4</b>	<b>180</b>	<b>9</b>	<b>6</b>	<b>231</b>	<b>435</b>
<b>Grand Total</b>	<b>13</b>	<b>9</b>	<b>358</b>	<b>20</b>	<b>16</b>	<b>489</b>	<b>905</b>
Apprch %	59.1	40.9	94.7	5.3	3.2	96.8	
Total %	1.4	1	39.6	2.2	1.8	54	

Start Time	Sunnyside Ave From North			Broadway From East			Broadway From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	1	1	2	55	4	59	3	73	76	137
04:45 PM	3	1	4	41	3	44	1	65	66	114
05:00 PM	0	2	2	44	2	46	5	59	64	112
05:15 PM	3	1	4	43	4	47	1	73	74	125
<b>Total Volume</b>	<b>7</b>	<b>5</b>	<b>12</b>	<b>183</b>	<b>13</b>	<b>196</b>	<b>10</b>	<b>270</b>	<b>280</b>	<b>488</b>
% App. Total	58.3	41.7		93.4	6.6		3.6	96.4		
PHF	.583	.625	.750	.832	.813	.831	.500	.925	.921	.891

# Accurate Counts

978-664-2565

File Name : 86410001

Site Code : 86410001

Start Date : 6/11/2020

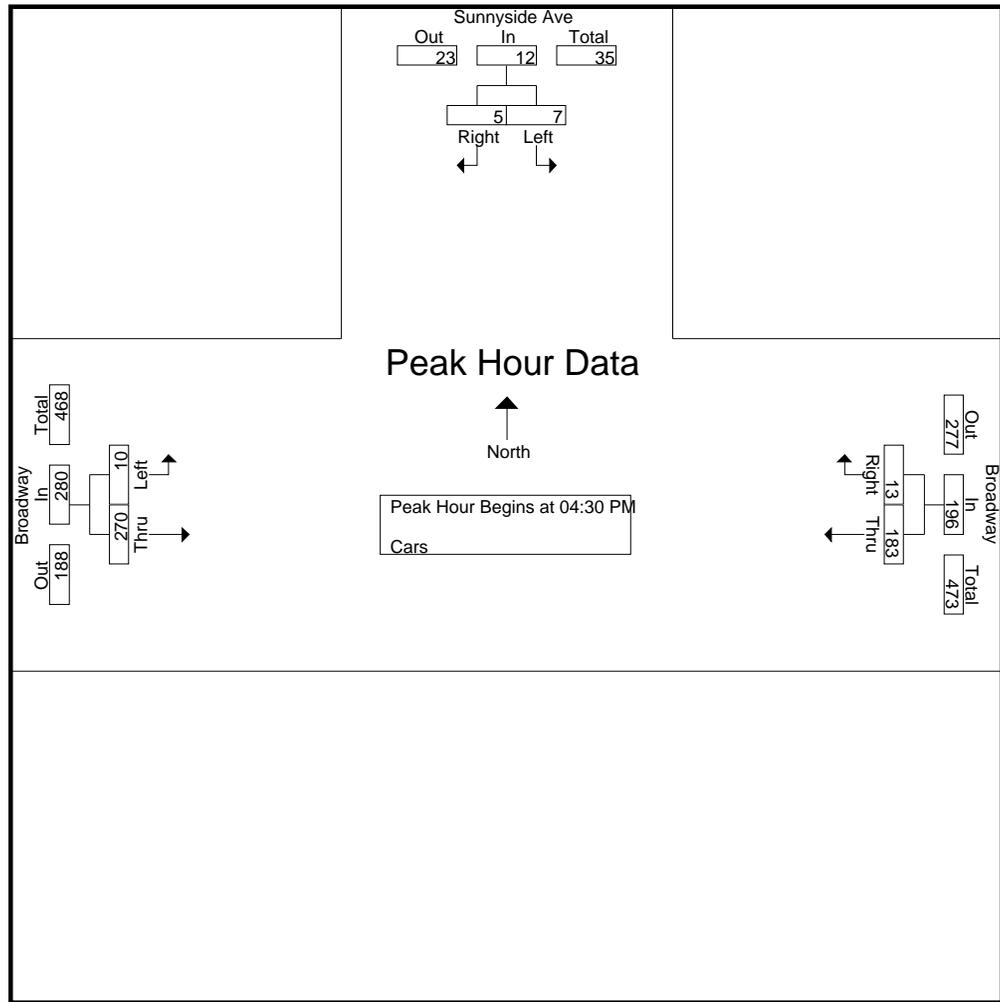
Page No : 5

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

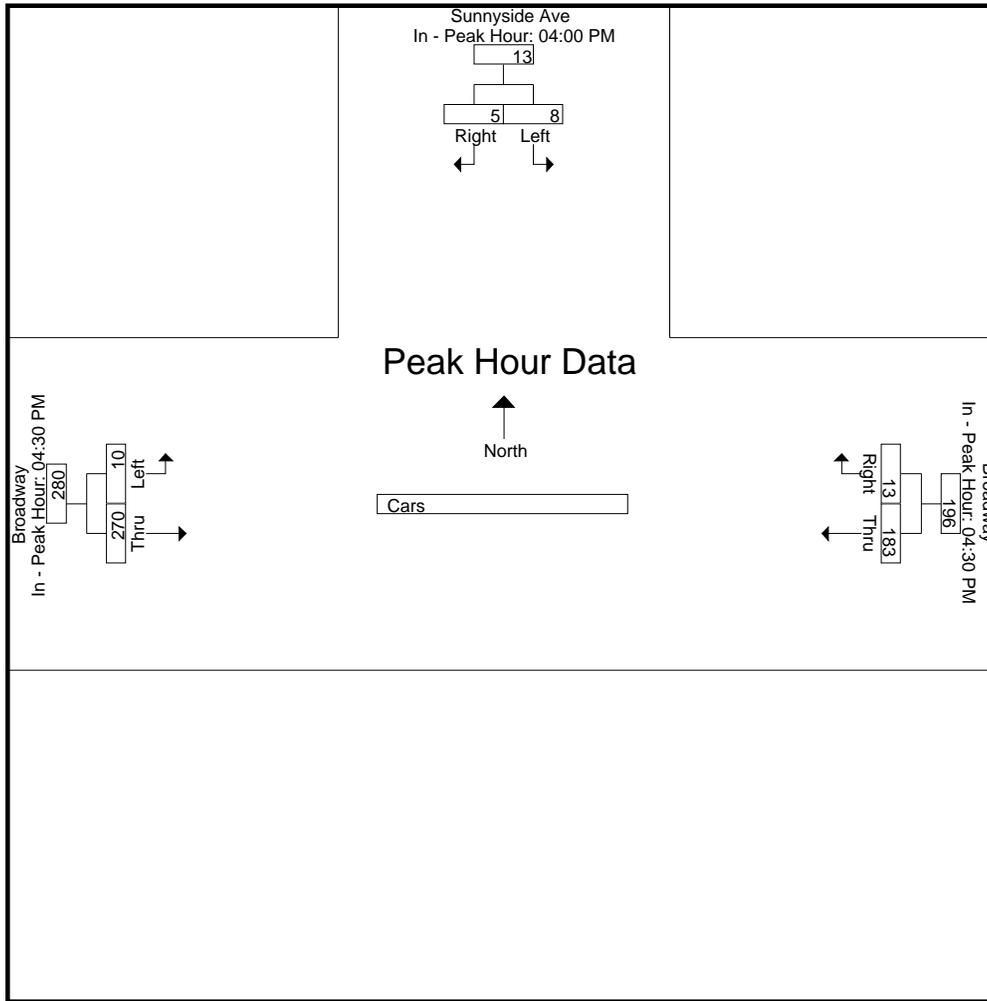
Peak Hour for Each Approach Begins at:

	04:00 PM			04:30 PM			04:30 PM		
+0 mins.	1	1	2	55	4	59	3	73	76
+15 mins.	3	2	5	41	3	44	1	65	66
+30 mins.	1	1	2	44	2	46	5	59	64
+45 mins.	3	1	4	43	4	47	1	73	74
Total Volume	8	5	13	183	13	196	10	270	280
% App. Total	61.5	38.5		93.4	6.6		3.6	96.4	
PHF	.667	.625	.650	.832	.813	.831	.500	.925	.921

Accurate Counts  
978-664-2565

File Name : 86410001  
Site Code : 86410001  
Start Date : 6/11/2020  
Page No : 6

N/S Street : Sunnyside Avenue  
E/W Street : Broadway  
City/State : Arlington, MA  
Weather : Clear



# Accurate Counts

978-664-2565

File Name : 86410001

Site Code : 86410001

Start Date : 6/11/2020

Page No : 7

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear

## Groups Printed- Trucks

Start Time	Sunnyside Ave From North		Broadway From East		Broadway From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	0	0	1	0	0	0	1
04:15 PM	0	0	0	0	0	2	2
04:30 PM	0	0	0	0	0	1	1
04:45 PM	0	0	2	0	0	0	2
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>6</b>
05:00 PM	0	0	1	0	0	1	2
05:15 PM	0	0	0	0	0	2	2
05:30 PM	0	0	1	0	0	1	2
05:45 PM	0	0	1	0	0	1	2
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>8</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>14</b>
Apprch %	0	0	100	0	0	100	
Total %	0	0	42.9	0	0	57.1	

Start Time	Sunnyside Ave From North			Broadway From East			Broadway From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	2	0	2	0	0	0	2
05:00 PM	0	0	0	1	0	1	0	1	1	2
05:15 PM	0	0	0	0	0	0	0	2	2	2
05:30 PM	0	0	0	1	0	1	0	1	1	2
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>8</b>
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.500	.000	.500	.000	.500	.500	1.00

# Accurate Counts

978-664-2565

File Name : 86410001

Site Code : 86410001

Start Date : 6/11/2020

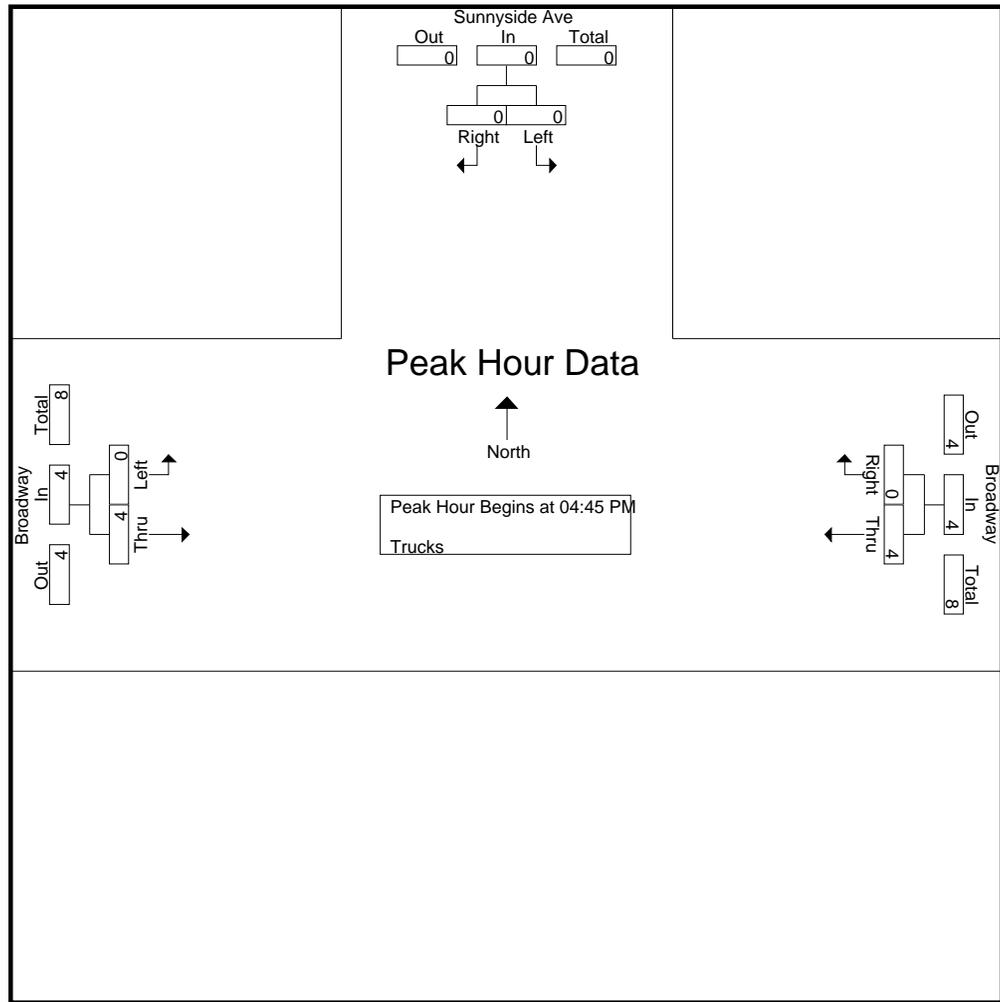
Page No : 8

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

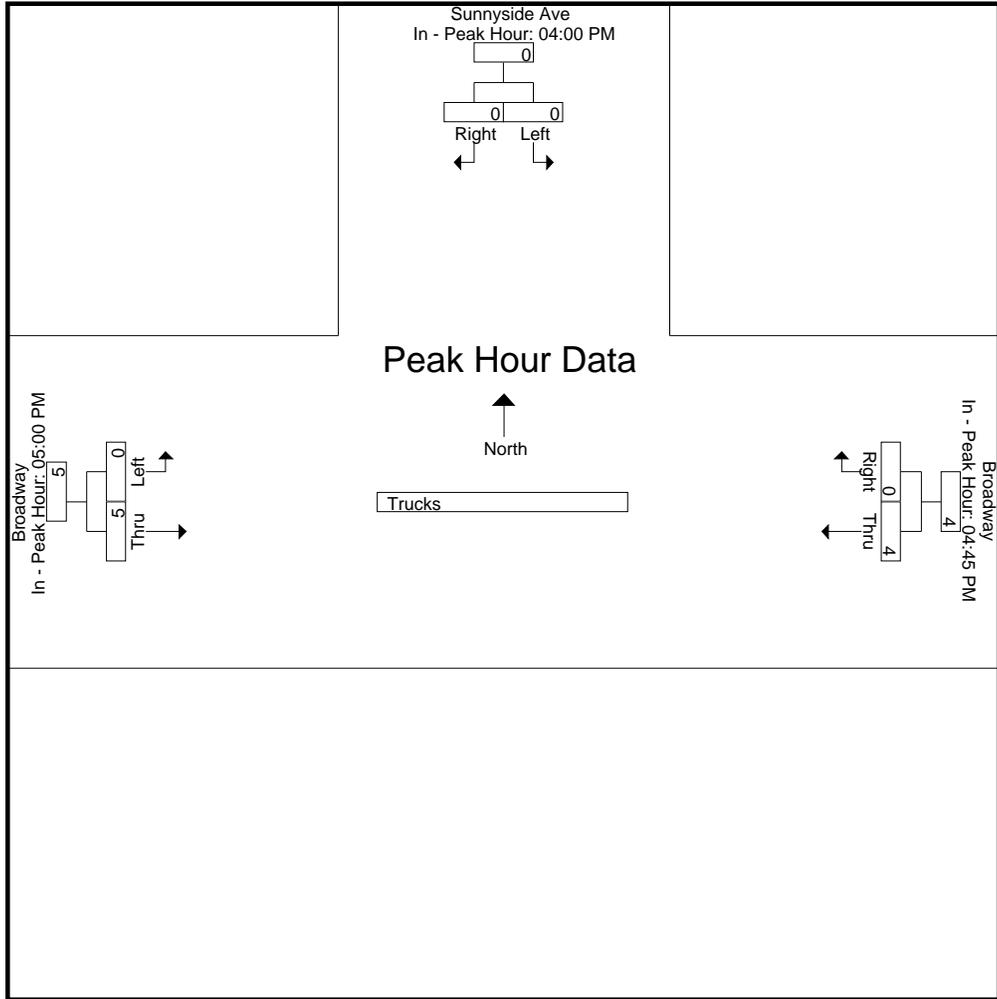
Peak Hour for Each Approach Begins at:

	04:00 PM			04:45 PM			05:00 PM		
+0 mins.	0	0	0	<b>2</b>	0	<b>2</b>	0	1	1
+15 mins.	0	0	0	1	0	1	0	<b>2</b>	<b>2</b>
+30 mins.	0	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	1	0	1	0	1	1
Total Volume	0	0	0	4	0	4	0	5	5
% App. Total	0	0	0	100	0	100	0	100	100
PHF	.000	.000	.000	.500	.000	.500	.000	.625	.625

Accurate Counts  
978-664-2565

File Name : 86410001  
Site Code : 86410001  
Start Date : 6/11/2020  
Page No : 9

N/S Street : Sunnyside Avenue  
E/W Street : Broadway  
City/State : Arlington, MA  
Weather : Clear



# Accurate Counts

978-664-2565

File Name : 86410001

Site Code : 86410001

Start Date : 6/11/2020

Page No : 10

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear

### Groups Printed- Bikes Peds

Start Time	Sunnyside Ave From North			Broadway From East			Broadway From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds			
04:00 PM	0	0	3	1	0	0	0	0	1	4	1	5
04:15 PM	0	0	4	1	0	0	0	2	0	4	3	7
04:30 PM	0	0	5	0	0	0	0	2	0	5	2	7
04:45 PM	0	0	1	3	0	0	0	0	0	1	3	4
<b>Total</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>14</b>	<b>9</b>	<b>23</b>
05:00 PM	1	0	4	0	0	0	0	1	0	4	2	6
05:15 PM	0	0	2	1	0	0	0	3	0	2	4	6
05:30 PM	0	0	6	0	0	0	0	0	0	6	0	6
05:45 PM	0	0	4	0	1	0	0	2	0	4	3	7
<b>Total</b>	<b>1</b>	<b>0</b>	<b>16</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>16</b>	<b>9</b>	<b>25</b>
<b>Grand Total</b>	<b>1</b>	<b>0</b>	<b>29</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>30</b>	<b>18</b>	<b>48</b>
Apprch %	100	0		85.7	14.3		0	100				
Total %	5.6	0		33.3	5.6		0	55.6		62.5	37.5	

Start Time	Sunnyside Ave From North			Broadway From East			Broadway From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	0	2	2	2
04:45 PM	0	0	0	3	0	3	0	0	0	3
05:00 PM	1	0	1	0	0	0	0	1	1	2
05:15 PM	0	0	0	1	0	1	0	3	3	4
<b>Total Volume</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>11</b>
% App. Total	100	0		100	0		0	100		
PHF	.250	.000	.250	.333	.000	.333	.000	.500	.500	.688

# Accurate Counts

978-664-2565

File Name : 86410001

Site Code : 86410001

Start Date : 6/11/2020

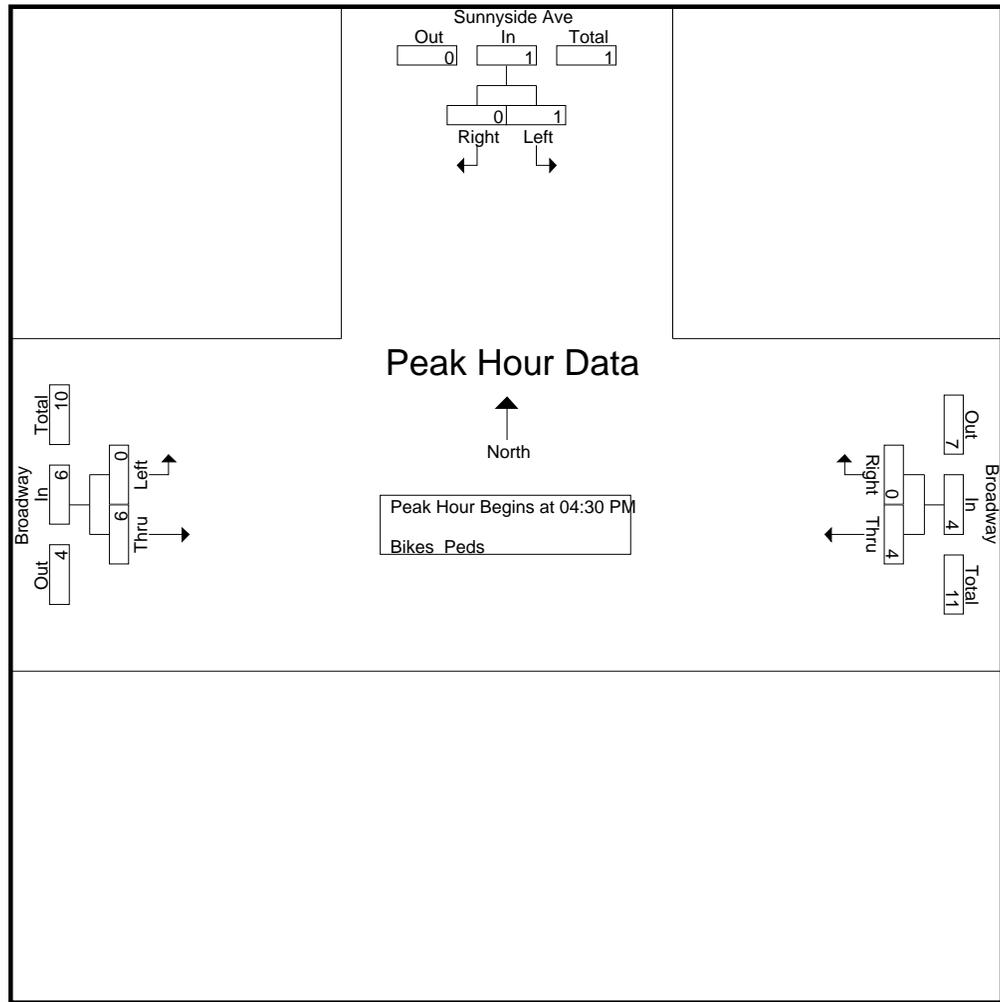
Page No : 11

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

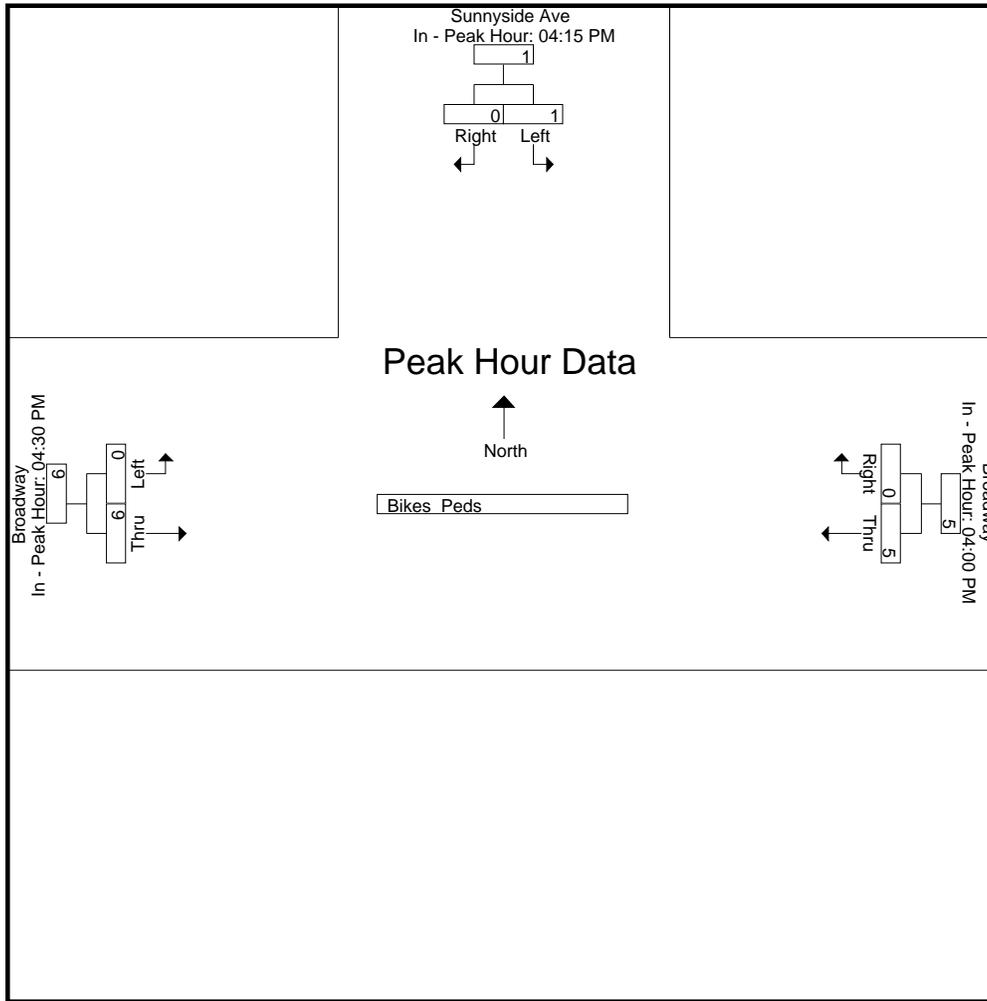
Peak Hour for Each Approach Begins at:

	04:15 PM			04:00 PM			04:30 PM		
+0 mins.	0	0	0	1	0	1	0	2	2
+15 mins.	0	0	0	1	0	1	0	0	0
+30 mins.	0	0	0	0	0	0	0	1	1
+45 mins.	1	0	1	3	0	3	0	3	3
Total Volume	1	0	1	5	0	5	0	6	6
% App. Total	100	0		100	0		0	100	
PHF	.250	.000	.250	.417	.000	.417	.000	.500	.500

Accurate Counts  
978-664-2565

File Name : 86410001  
Site Code : 86410001  
Start Date : 6/11/2020  
Page No : 12

N/S Street : Sunnyside Avenue  
E/W Street : Broadway  
City/State : Arlington, MA  
Weather : Clear



# Accurate Counts

978-664-2565

File Name : 864100S1

Site Code : 864100S1

Start Date : 6/13/2020

Page No : 1

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear

### Groups Printed- Cars - Trucks

Start Time	Sunnyside Ave From North		Broadway From East		Broadway From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
11:00 AM	2	1	50	3	2	49	107
11:15 AM	4	2	54	0	2	50	112
11:30 AM	1	1	45	2	2	56	107
11:45 AM	4	0	43	2	1	58	108
<b>Total</b>	<b>11</b>	<b>4</b>	<b>192</b>	<b>7</b>	<b>7</b>	<b>213</b>	<b>434</b>
12:00 PM	0	0	47	0	2	56	105
12:15 PM	3	2	57	0	0	54	116
12:30 PM	1	2	35	0	2	51	91
12:45 PM	1	4	43	4	1	75	128
<b>Total</b>	<b>5</b>	<b>8</b>	<b>182</b>	<b>4</b>	<b>5</b>	<b>236</b>	<b>440</b>
01:00 PM	4	2	47	1	2	54	110
01:15 PM	3	0	44	5	3	55	110
01:30 PM	1	0	56	0	0	76	133
01:45 PM	5	4	42	2	1	48	102
<b>Total</b>	<b>13</b>	<b>6</b>	<b>189</b>	<b>8</b>	<b>6</b>	<b>233</b>	<b>455</b>
<b>Grand Total</b>	<b>29</b>	<b>18</b>	<b>563</b>	<b>19</b>	<b>18</b>	<b>682</b>	<b>1329</b>
Apprch %	61.7	38.3	96.7	3.3	2.6	97.4	
Total %	2.2	1.4	42.4	1.4	1.4	51.3	
Cars	29	18	536	19	18	657	1277
% Cars	100	100	95.2	100	100	96.3	96.1
Trucks	0	0	27	0	0	25	52
% Trucks	0	0	4.8	0	0	3.7	3.9

Start Time	Sunnyside Ave From North			Broadway From East			Broadway From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:45 PM										
12:45 PM	1	4	5	43	4	47	1	75	76	128
01:00 PM	4	2	6	47	1	48	2	54	56	110
01:15 PM	3	0	3	44	5	49	3	55	58	110
01:30 PM	1	0	1	56	0	56	0	76	76	133
<b>Total Volume</b>	<b>9</b>	<b>6</b>	<b>15</b>	<b>190</b>	<b>10</b>	<b>200</b>	<b>6</b>	<b>260</b>	<b>266</b>	<b>481</b>
<b>% App. Total</b>	<b>60</b>	<b>40</b>		<b>95</b>	<b>5</b>		<b>2.3</b>	<b>97.7</b>		
PHF	.563	.375	.625	.848	.500	.893	.500	.855	.875	.904
Cars	9	6	15	177	10	187	6	253	259	461
% Cars	100	100	100	93.2	100	93.5	100	97.3	97.4	95.8
Trucks	0	0	0	13	0	13	0	7	7	20
% Trucks	0	0	0	6.8	0	6.5	0	2.7	2.6	4.2

# Accurate Counts

978-664-2565

File Name : 864100S1

Site Code : 864100S1

Start Date : 6/13/2020

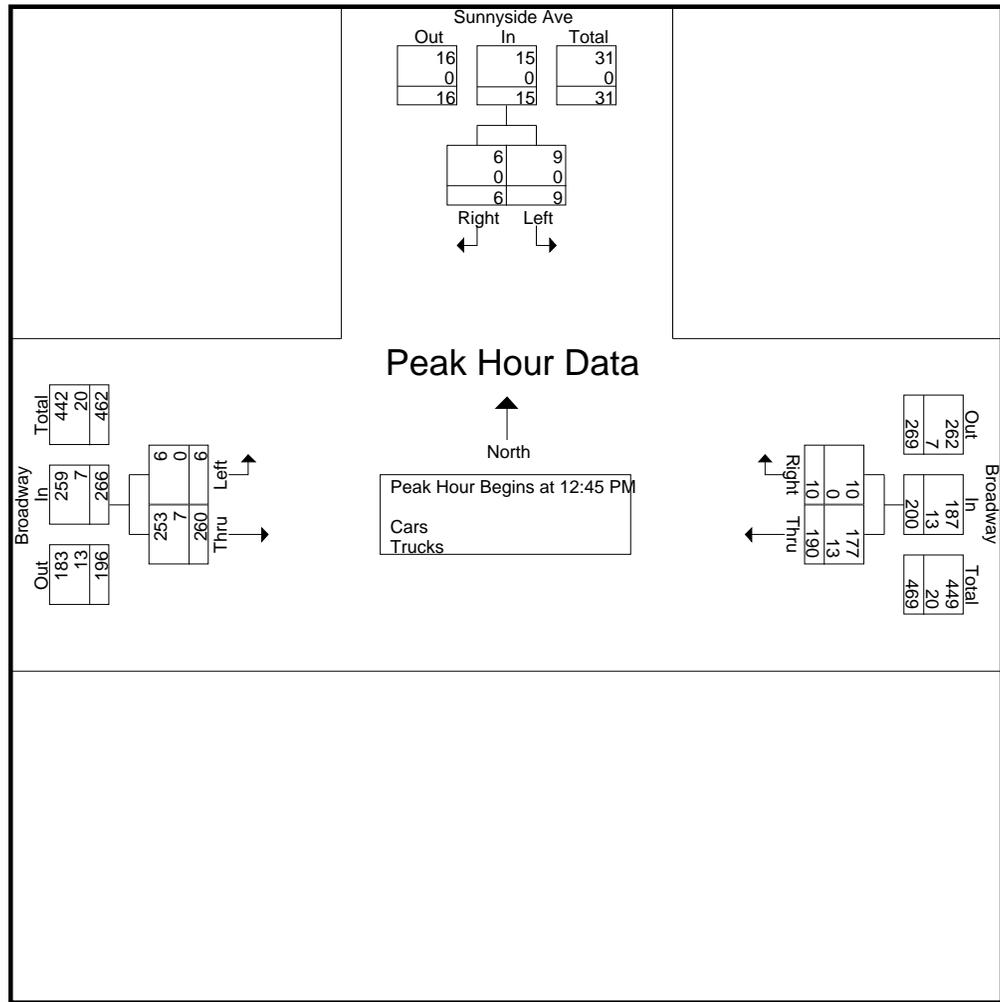
Page No : 2

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

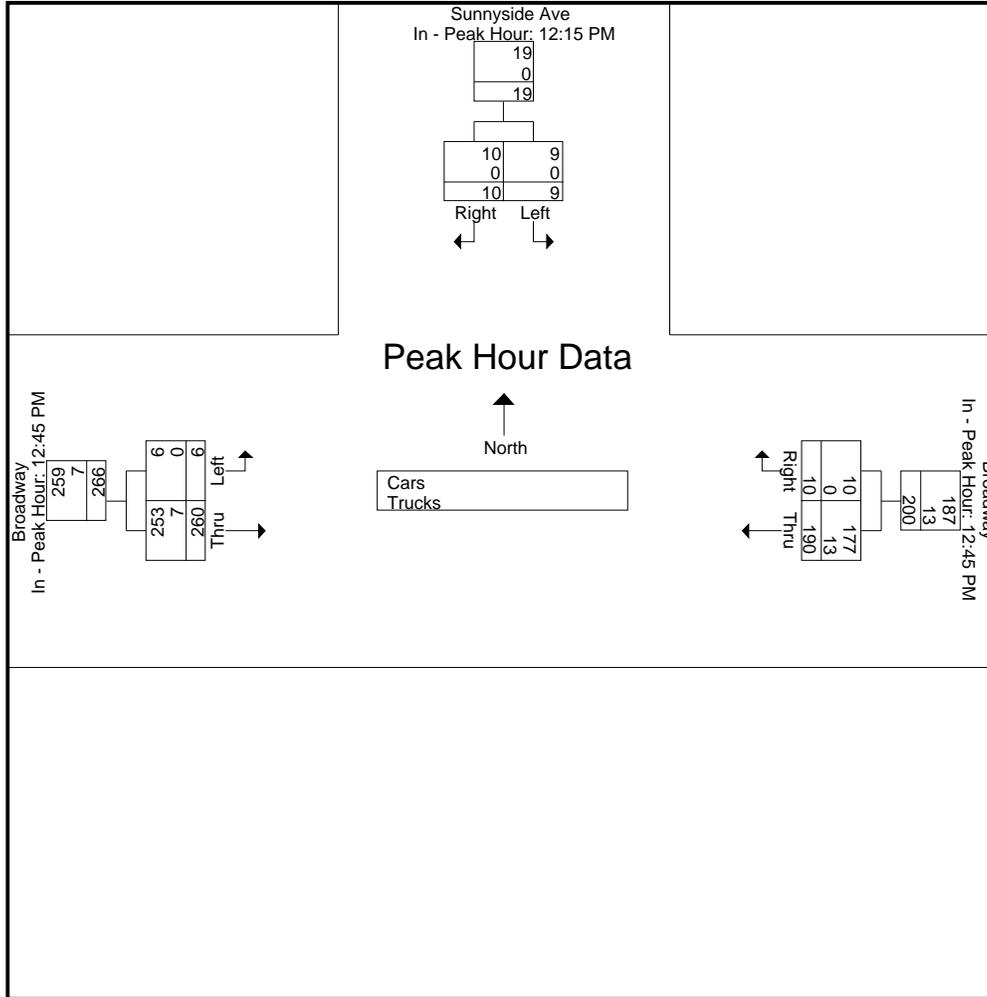
Weather : Clear



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:15 PM			12:45 PM			12:45 PM		
+0 mins.	3	2	5	43	4	47	1	75	<b>76</b>
+15 mins.	1	2	3	47	1	48	2	54	56
+30 mins.	1	4	5	44	5	49	3	55	58
+45 mins.	4	2	6	56	0	56	0	76	76
Total Volume	9	10	19	190	10	200	6	260	266
% App. Total	47.4	52.6		95	5		2.3	97.7	
PHF	.563	.625	.792	.848	.500	.893	.500	.855	.875
Cars	9	10	19	177	10	187	6	253	259
% Cars	100	100	100	93.2	100	93.5	100	97.3	97.4
Trucks	0	0	0	13	0	13	0	7	7



# Accurate Counts

978-664-2565

File Name : 864100S1

Site Code : 864100S1

Start Date : 6/13/2020

Page No : 4

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear

## Groups Printed- Cars

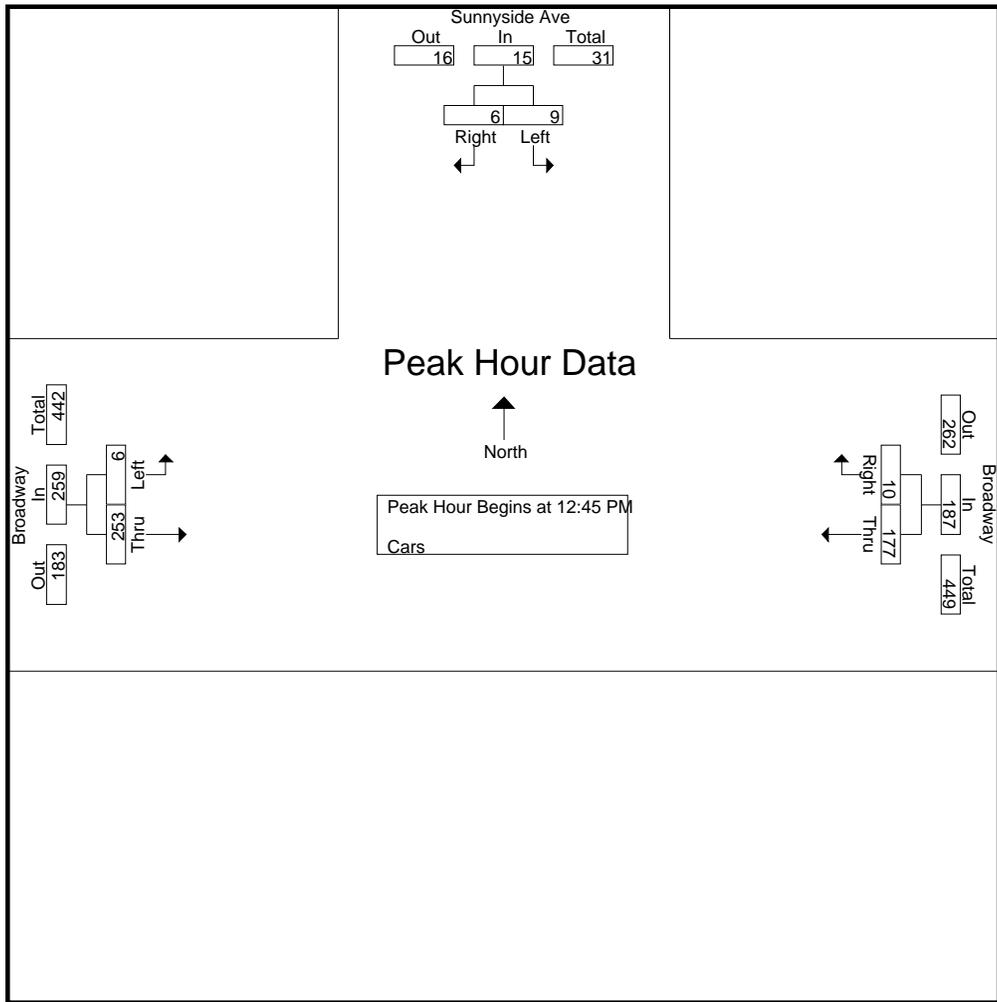
Start Time	Sunnyside Ave From North		Broadway From East		Broadway From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
11:00 AM	2	1	47	3	2	47	102
11:15 AM	4	2	53	0	2	50	111
11:30 AM	1	1	44	2	2	52	102
11:45 AM	4	0	42	2	1	56	105
<b>Total</b>	<b>11</b>	<b>4</b>	<b>186</b>	<b>7</b>	<b>7</b>	<b>205</b>	<b>420</b>
12:00 PM	0	0	46	0	2	53	101
12:15 PM	3	2	54	0	0	49	108
12:30 PM	1	2	34	0	2	51	90
12:45 PM	1	4	37	4	1	73	120
<b>Total</b>	<b>5</b>	<b>8</b>	<b>171</b>	<b>4</b>	<b>5</b>	<b>226</b>	<b>419</b>
01:00 PM	4	2	47	1	2	53	109
01:15 PM	3	0	40	5	3	54	105
01:30 PM	1	0	53	0	0	73	127
01:45 PM	5	4	39	2	1	46	97
<b>Total</b>	<b>13</b>	<b>6</b>	<b>179</b>	<b>8</b>	<b>6</b>	<b>226</b>	<b>438</b>
<b>Grand Total</b>	<b>29</b>	<b>18</b>	<b>536</b>	<b>19</b>	<b>18</b>	<b>657</b>	<b>1277</b>
Apprch %	61.7	38.3	96.6	3.4	2.7	97.3	
Total %	2.3	1.4	42	1.5	1.4	51.4	

Start Time	Sunnyside Ave From North			Broadway From East			Broadway From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:45 PM										
12:45 PM	1	4	5	37	4	41	1	73	74	120
01:00 PM	4	2	6	47	1	48	2	53	55	109
01:15 PM	3	0	3	40	5	45	3	54	57	105
01:30 PM	1	0	1	53	0	53	0	73	73	127
Total Volume	9	6	15	177	10	187	6	253	259	461
% App. Total	60	40		94.7	5.3		2.3	97.7		
PHF	.563	.375	.625	.835	.500	.882	.500	.866	.875	.907

**Accurate Counts**  
978-664-2565

File Name : 864100S1  
Site Code : 864100S1  
Start Date : 6/13/2020  
Page No : 5

N/S Street : Sunnyside Avenue  
E/W Street : Broadway  
City/State : Arlington, MA  
Weather : Clear



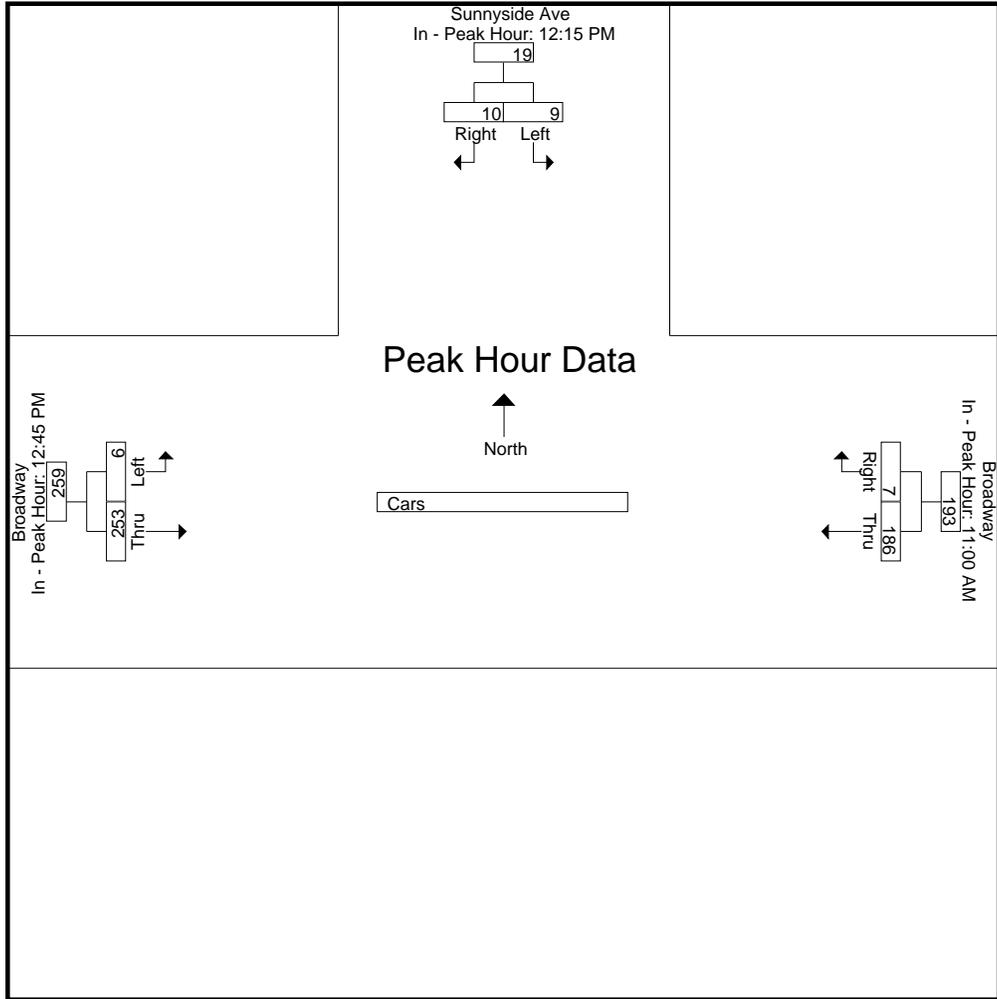
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	12:15 PM			11:00 AM			12:45 PM		
+0 mins.	3	2	5	47	3	50	1	73	74
+15 mins.	1	2	3	53	0	53	2	53	55
+30 mins.	1	4	5	44	2	46	3	54	57
+45 mins.	4	2	6	42	2	44	0	73	73
Total Volume	9	10	19	186	7	193	6	253	259
% App. Total	47.4	52.6		96.4	3.6		2.3	97.7	
PHF	.563	.625	.792	.877	.583	.910	.500	.866	.875

Accurate Counts  
978-664-2565

File Name : 864100S1  
Site Code : 864100S1  
Start Date : 6/13/2020  
Page No : 6

N/S Street : Sunnyside Avenue  
E/W Street : Broadway  
City/State : Arlington, MA  
Weather : Clear



# Accurate Counts

978-664-2565

File Name : 864100S1

Site Code : 864100S1

Start Date : 6/13/2020

Page No : 7

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear

## Groups Printed- Trucks

Start Time	Sunnyside Ave From North		Broadway From East		Broadway From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
11:00 AM	0	0	3	0	0	2	5
11:15 AM	0	0	1	0	0	0	1
11:30 AM	0	0	1	0	0	4	5
11:45 AM	0	0	1	0	0	2	3
<b>Total</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>14</b>
12:00 PM	0	0	1	0	0	3	4
12:15 PM	0	0	3	0	0	5	8
12:30 PM	0	0	1	0	0	0	1
12:45 PM	0	0	6	0	0	2	8
<b>Total</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>21</b>
01:00 PM	0	0	0	0	0	1	1
01:15 PM	0	0	4	0	0	1	5
01:30 PM	0	0	3	0	0	3	6
01:45 PM	0	0	3	0	0	2	5
<b>Total</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>17</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>52</b>
Apprch %	0	0	100	0	0	100	
Total %	0	0	51.9	0	0	48.1	

Start Time	Sunnyside Ave From North			Broadway From East			Broadway From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:00 PM										
12:00 PM	0	0	0	1	0	1	0	3	3	4
12:15 PM	0	0	0	3	0	3	0	5	5	8
12:30 PM	0	0	0	1	0	1	0	0	0	1
12:45 PM	0	0	0	6	0	6	0	2	2	8
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>10</b>	<b>10</b>	<b>21</b>
<b>% App. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>100</b>	<b>100</b>	<b>100</b>
PHF	.000	.000	.000	.458	.000	.458	.000	.500	.500	.656

# Accurate Counts

978-664-2565

File Name : 864100S1

Site Code : 864100S1

Start Date : 6/13/2020

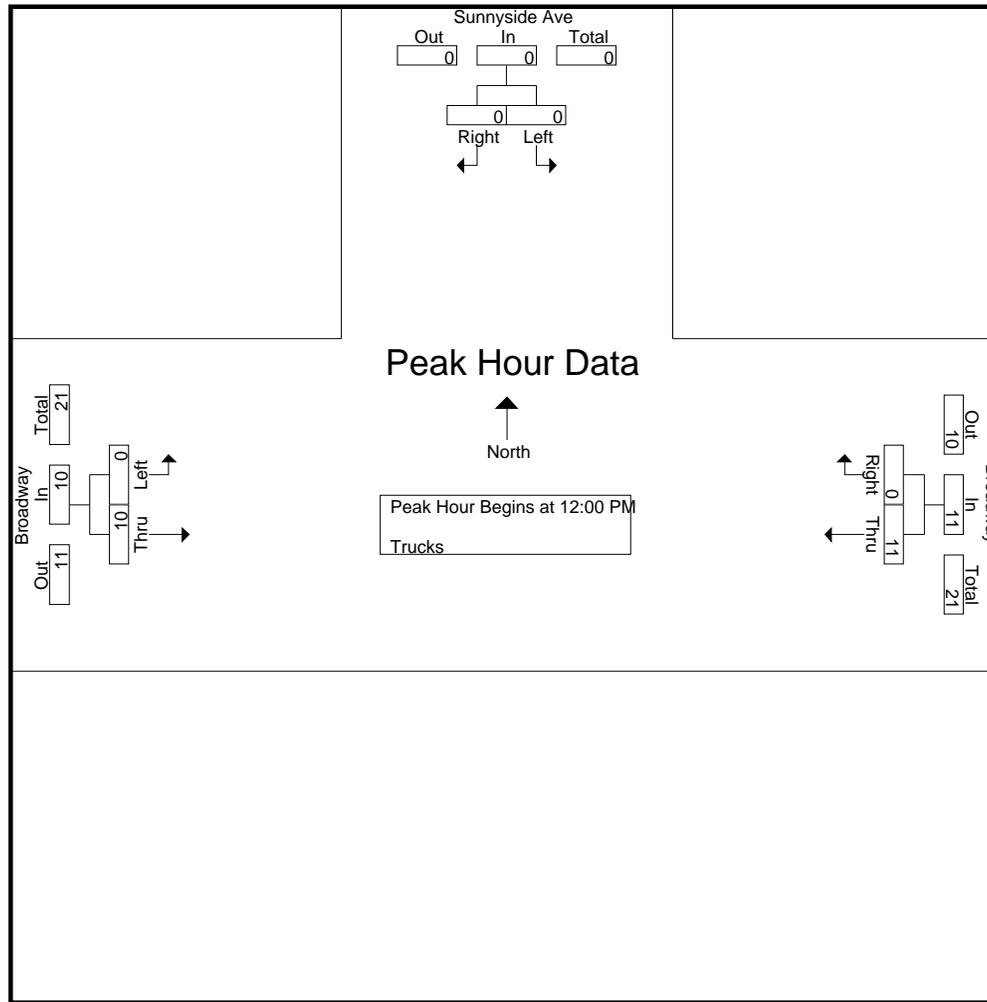
Page No : 8

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

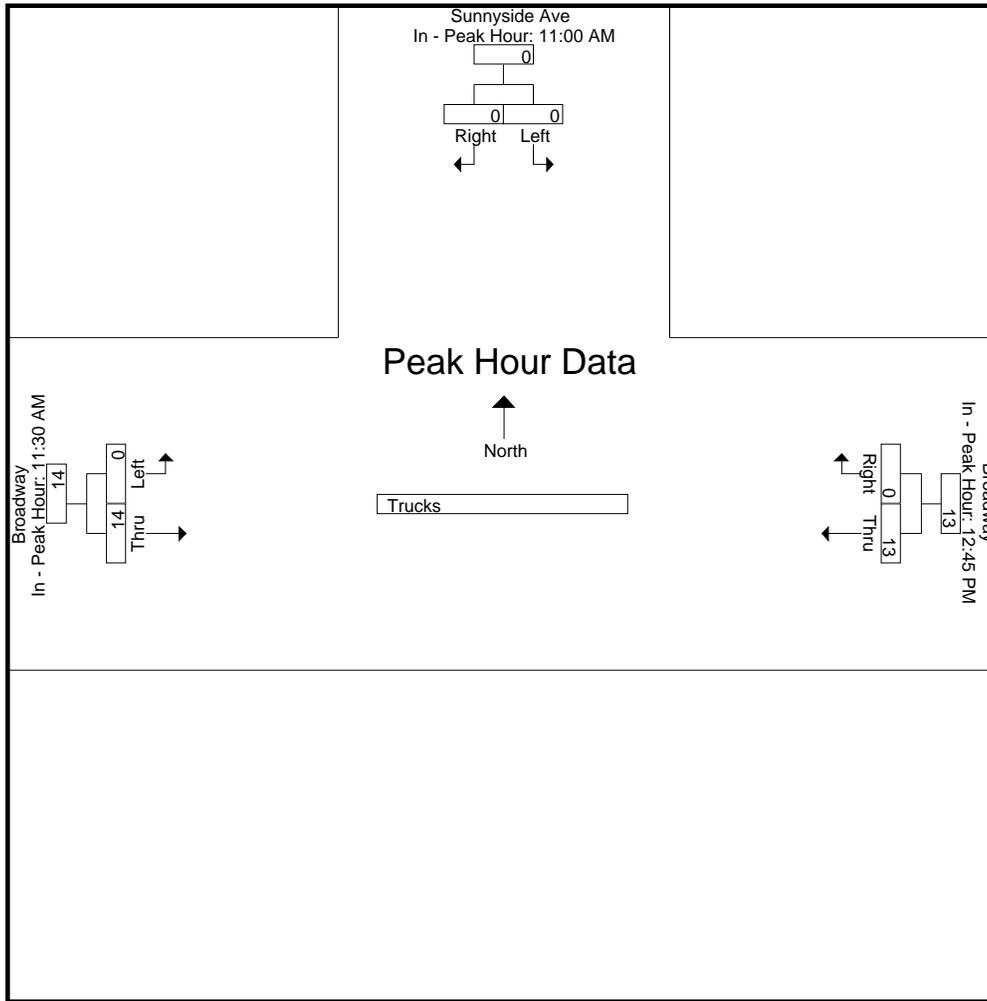
Peak Hour for Each Approach Begins at:

	11:00 AM			12:45 PM			11:30 AM		
+0 mins.	0	0	0	6	0	6	0	4	4
+15 mins.	0	0	0	0	0	0	0	2	2
+30 mins.	0	0	0	4	0	4	0	3	3
+45 mins.	0	0	0	3	0	3	0	5	5
Total Volume	0	0	0	13	0	13	0	14	14
% App. Total	0	0	0	100	0	100	0	100	100
PHF	.000	.000	.000	.542	.000	.542	.000	.700	.700

Accurate Counts  
978-664-2565

File Name : 864100S1  
Site Code : 864100S1  
Start Date : 6/13/2020  
Page No : 9

N/S Street : Sunnyside Avenue  
E/W Street : Broadway  
City/State : Arlington, MA  
Weather : Clear



# Accurate Counts

978-664-2565

File Name : 864100S1

Site Code : 864100S1

Start Date : 6/13/2020

Page No : 10

N/S Street : Sunnyside Avenue

E/W Street : Broadway

City/State : Arlington, MA

Weather : Clear

### Groups Printed- Bikes Peds

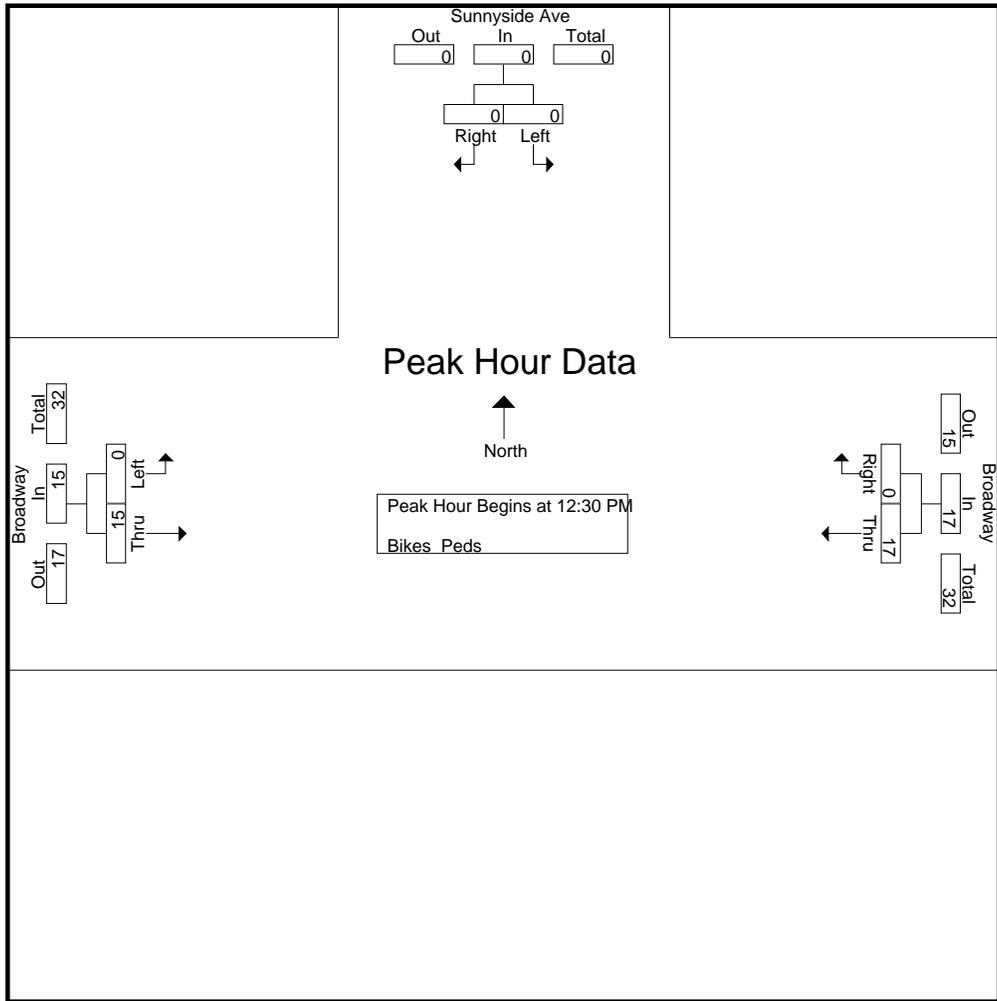
Start Time	Sunnyside Ave From North			Broadway From East			Broadway From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds			
11:00 AM	0	0	5	5	0	0	0	3	0	5	8	13
11:15 AM	0	1	7	1	0	0	0	1	0	7	3	10
11:30 AM	0	0	7	1	0	0	0	3	0	7	4	11
11:45 AM	0	0	8	2	0	0	0	2	0	8	4	12
<b>Total</b>	0	1	27	9	0	0	0	9	0	27	19	46
12:00 PM	0	0	5	2	0	0	0	6	1	6	8	14
12:15 PM	0	0	3	1	0	0	0	5	0	3	6	9
12:30 PM	0	0	8	6	0	2	0	1	0	10	7	17
12:45 PM	0	0	3	1	0	0	0	5	1	4	6	10
<b>Total</b>	0	0	19	10	0	2	0	17	2	23	27	50
01:00 PM	0	0	5	6	0	0	0	5	0	5	11	16
01:15 PM	0	0	3	4	0	1	0	4	1	5	8	13
01:30 PM	0	0	3	3	0	0	0	3	0	3	6	9
01:45 PM	0	0	1	4	0	0	0	2	0	1	6	7
<b>Total</b>	0	0	12	17	0	1	0	14	1	14	31	45
<b>Grand Total</b>	0	1	58	36	0	3	0	40	3	64	77	141
Apprch %	0	100		100	0		0	100				
Total %	0	1.3		46.8	0		0	51.9		45.4	54.6	

Start Time	Sunnyside Ave From North			Broadway From East			Broadway From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:30 PM										
12:30 PM	0	0	0	6	0	6	0	1	1	7
12:45 PM	0	0	0	1	0	1	0	5	5	6
01:00 PM	0	0	0	6	0	6	0	5	5	11
01:15 PM	0	0	0	4	0	4	0	4	4	8
<b>Total Volume</b>	0	0	0	17	0	17	0	15	15	32
<b>% App. Total</b>	0	0		100	0		0	100		
PHF	.000	.000	.000	.708	.000	.708	.000	.750	.750	.727

**Accurate Counts**  
978-664-2565

File Name : 864100S1  
Site Code : 864100S1  
Start Date : 6/13/2020  
Page No : 11

N/S Street : Sunnyside Avenue  
E/W Street : Broadway  
City/State : Arlington, MA  
Weather : Clear



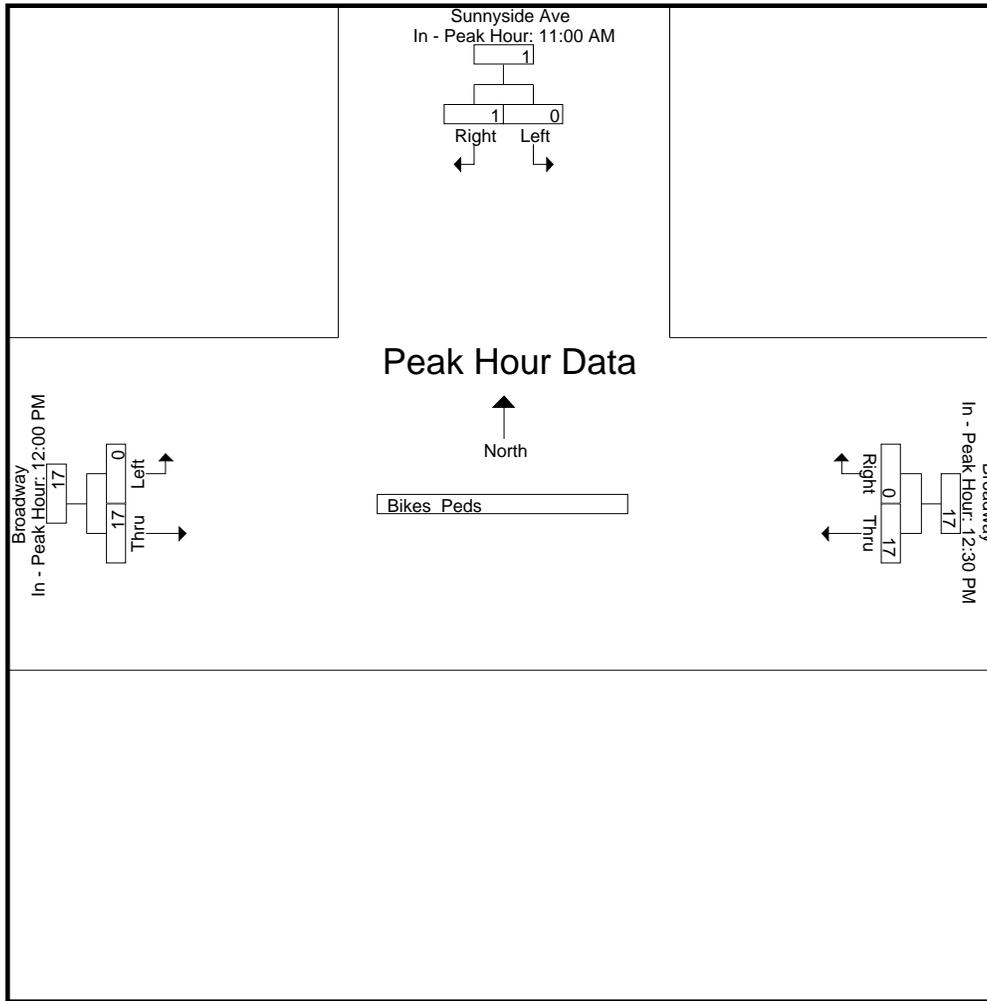
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	11:00 AM			12:30 PM			12:00 PM		
+0 mins.	0	0	0	6	0	6	0	6	6
+15 mins.	0	1	1	1	0	1	0	5	5
+30 mins.	0	0	0	6	0	6	0	1	1
+45 mins.	0	0	0	4	0	4	0	5	5
Total Volume	0	1	1	17	0	17	0	17	17
% App. Total	0	100		100	0		0	100	
PHF	.000	.250	.250	.708	.000	.708	.000	.708	.708

Accurate Counts  
978-664-2565

File Name : 864100S1  
Site Code : 864100S1  
Start Date : 6/13/2020  
Page No : 12

N/S Street : Sunnyside Avenue  
E/W Street : Broadway  
City/State : Arlington, MA  
Weather : Clear



## COVID-19 ADJUSTMENT CALCULATIONS

---

## Route 16 at Broadway Volumes

Growth; 4 Years at 0.5% = 1.02

Seasonal Adjustment = 1.00 (Above Average Month Conditions)

Entering from the West:

$$EB\ LT = 189 \times 1.02 \times 1.00 = 192.8 \approx 193$$

$$EB\ TH = 296 \times 1.02 \times 1.00 = 301.9 \approx 302$$

$$EB\ RT = 45 \times 1.02 \times 1.00 = 45.9 \approx 46$$

$$Subtotal = 193 + 302 + 46 = 541$$

Exiting to the West:

$$SB\ RT = 130 \times 1.02 \times 1.00 = 132.6 \approx 133$$

$$WB\ TH = 272 \times 1.02 \times 1.00 = 277.4 \approx 277$$

$$NB\ LT = 32 \times 1.02 \times 1.00 = 32.64 \approx 33$$

$$Subtotal = 133 + 277 + 33 = 443$$

$$Total = 541 + 443 = 984$$

## Broadway at Sunnyside Avenue Volumes

Exiting to the East:

$$EB\ TH = 274$$

$$SB\ LT = 7$$

$$Subtotal = 274 + 7 = 281$$

Entering from the East:

$$WB\ TH = 186$$

$$WB\ RT = 13$$

$$Subtotal = 186 + 13 = 199$$

$$Total = 281 + 199 = 480$$

$$Covid-19\ Growth\ Factor = \frac{984}{480} = 2.05$$

Massachusetts Highway Department  
Statewide Traffic Data Collection  
2019 Weekday Seasonal Factors

Factor Group	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Axle Factor
R1	1.22	1.14	1.12	1.06	1.00	0.96	0.87	0.85	0.96	0.99	1.04	1.12	0.85
R2	0.95	0.96	0.98	0.97	0.97	0.93	0.97	0.94	0.96	0.90	0.92	0.93	0.96
R3	1.15	1.06	1.07	1.00	0.89	0.88	0.89	0.89	0.95	0.92	1.02	1.01	0.97
R4-R7	1.09	1.09	1.11	1.02	0.96	0.92	0.89	0.89	0.99	0.98	1.09	1.13	0.98
U1-Boston	1.03	1.01	0.98	0.94	0.94	0.92	0.95	0.93	0.94	0.94	0.97	1.04	0.96
U1-Essex	1.09	1.06	1.03	0.99	0.94	0.90	0.88	0.86	0.93	0.94	0.99	1.06	0.93
U1-Southeast	1.06	1.05	1.01	0.97	0.95	0.93	0.93	0.90	0.94	0.94	0.98	1.04	0.98
U1-West	1.19	1.14	1.09	0.95	0.92	0.89	0.89	0.86	0.91	0.95	0.97	1.07	0.84
U1-Worcester	1.02	1.04	0.97	0.94	0.93	0.91	0.95	0.91	0.93	0.92	0.95	1.10	0.88
U2	1.01	1.00	0.94	0.93	0.91	0.89	0.93	0.90	0.90	0.91	0.94	1.02	0.99
U3	1.06	1.03	0.98	0.94	0.93	0.91	0.95	0.91	0.92	0.93	0.97	1.00	0.98
U4-U7	1.01	1.00	0.95	0.92	0.88	0.86	0.92	0.91	0.92	0.94	0.99	1.04	0.99
Rec - East	1.04	1.16	1.12	0.98	0.92	0.88	0.77	0.81	0.94	1.02	1.08	1.12	0.99
Rec - West	1.30	1.23	1.32	1.18	0.95	0.82	0.70	0.69	0.97	0.96	1.16	1.15	0.98

Round off:

0-999 = 10

>1000 = 100

U = Urban

R = Rural

1 - Interstate

2 - Freeway and Expressway

3 - Other Principal Arterial

4 - Minor Arterial

5 - Major Collector

6 - Minor Collector

7 - Local Road and Street

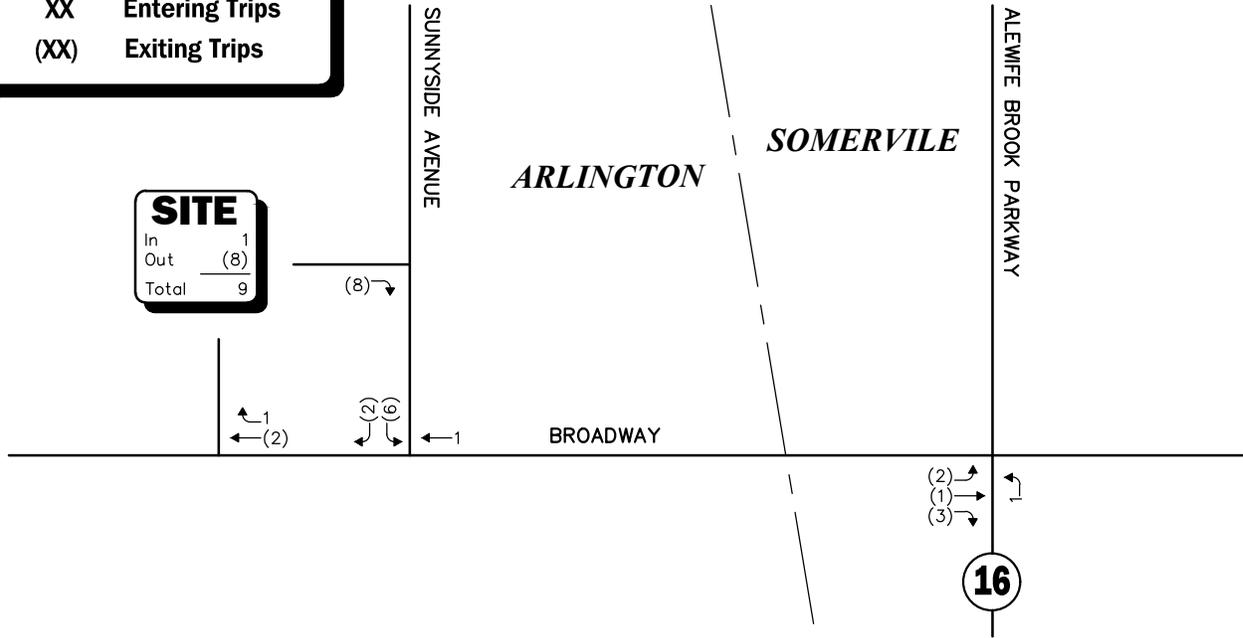
**Recreational - East Group** - Cape Cod (all towns) including the town of Plymouth south of Route 3A (stations 7014,7079,7080,7090,7091,7092,7093,7094,7095,7096,7097,7108 and 7178), Martha's Vineyard and Nantucket.

**Recreational - West Group** - Continuous Stations 2 and 189 including stations 1066,1067,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1113, 1114,1116,2196,2197 and 2198.

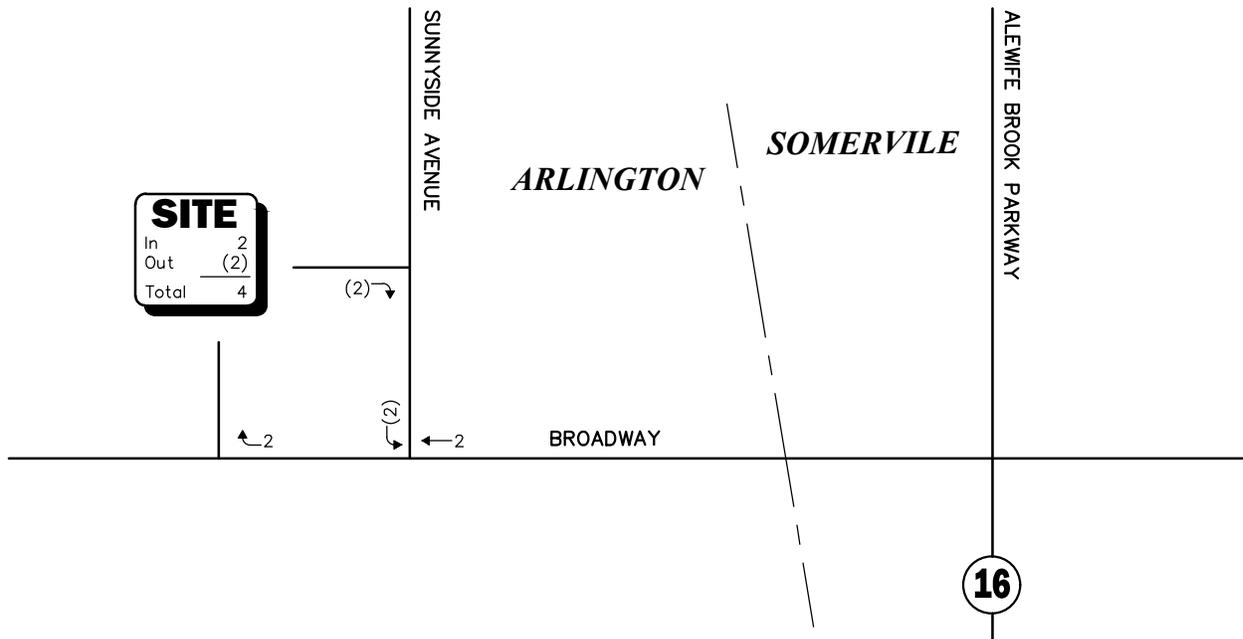
WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM)

**Legend:**

XX Entering Trips  
 (XX) Exiting Trips



SATURDAY MIDDAY PEAK HOUR (12:00 - 1:00 PM)



Not To Scale



Figure A-1

Existing Office Backfill  
 Peak Hour Traffic Volumes

**Institute of Transportation Engineers (ITE)**  
**Trip Generation, 10th Edition**  
**Land Use Code (LUC) 710 - General Office Building**

Average Vehicle Trips Ends vs: 1,000 Square Feet Gross Floor Area  
Independent Variable (X): 7.612

**AVERAGE WEEKDAY DAILY**

$T = 9.74 * (X)$   
 $T = 9.74 * 7.612$   
 $T = 74.14$   
 $T = 74$  vehicle trips  
with 50% ( 37 vpd) entering and 50% ( 37 vpd) exiting.

**WEEKDAY EVENING PEAK HOUR**

$T = 1.15 * (X)$   
 $T = 1.15 * 7.612$   
 $T = 8.75$   
 $T = 9$  vehicle trips  
with 16% ( 1 vph) entering and 84% ( 8 vph) exiting.

**SATURDAY DAILY**

$T = 2.21 * (X)$   
 $T = 2.21 * 7.612$   
 $T = 16.82$   
 $T = 18$  vehicle trips  
with 50% ( 9 vpd) entering and 50% ( 9 vpd) exiting.

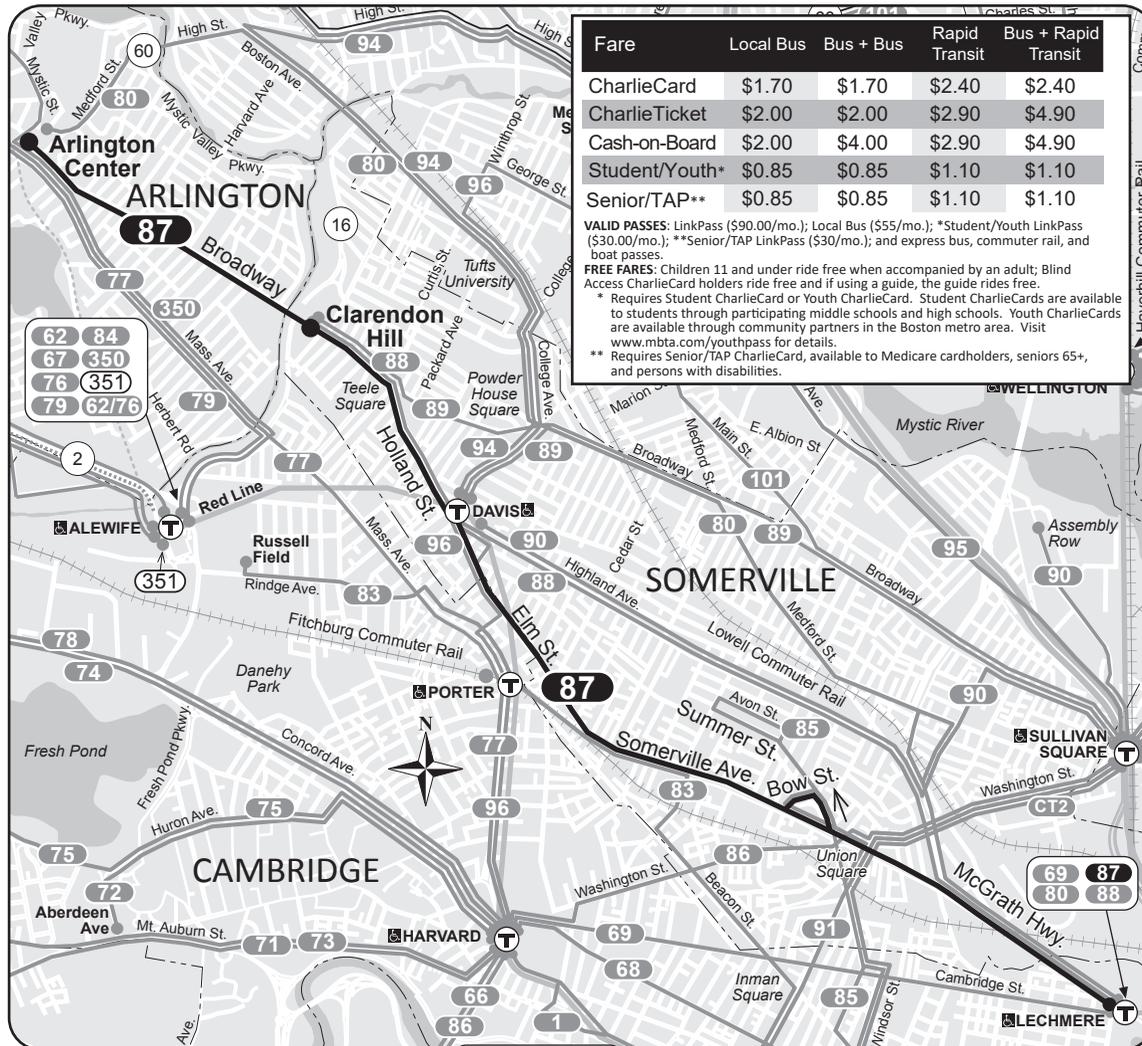
**SATURDAY MIDDAY PEAK HOUR OF GENERATOR**

$T = 0.53 * (X)$   
 $T = 0.53 * 7.612$   
 $T = 4.03$   
 $T = 4$  vehicle trips  
with 54% ( 2 vpd) entering and 46% ( 2 vpd) exiting.

**PUBLIC TRANSPORTATION SCHEDULES**

---

## Route 87 Arlington Center or Clarendon Hill - Lechmere Station



Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	\$1.70	\$1.70	\$2.40	\$2.40
CharlieTicket	\$2.00	\$2.00	\$2.90	\$4.90
Cash-on-Board	\$2.00	\$4.00	\$2.90	\$4.90
Student/Youth*	\$0.85	\$0.85	\$1.10	\$1.10
Senior/TAP**	\$0.85	\$0.85	\$1.10	\$1.10

**VALID PASSES:** LinkPass (\$90.00/mo.); Local Bus (\$55/mo.); \*Student/Youth LinkPass (\$30.00/mo.); \*\*Senior/TAP LinkPass (\$30/mo.); and express bus, commuter rail, and boat passes.

**FREE FARES:** Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.

\* Requires Student CharlieCard or Youth CharlieCard. Student CharlieCards are available to students through participating middle schools and high schools. Youth CharlieCards are available through community partners in the Boston metro area. Visit [www.mbta.com/youthpass](http://www.mbta.com/youthpass) for details.

\*\* Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

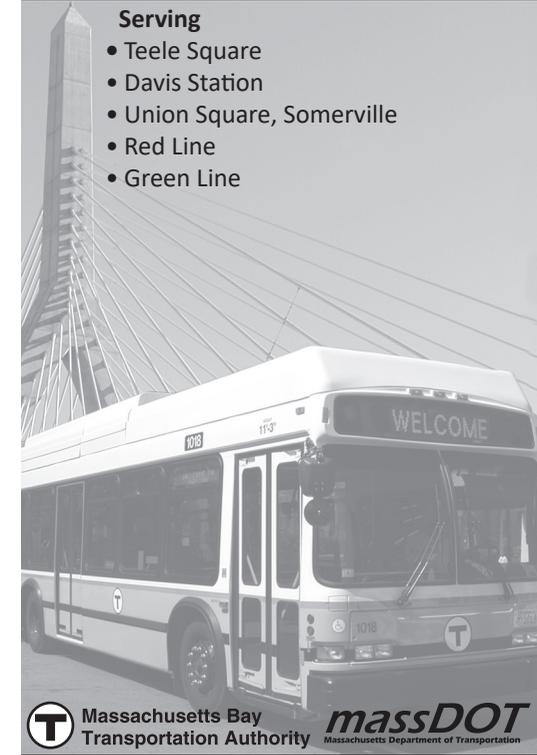
# 87

Effective June 21, 2020

## Arlington Center or Clarendon Hill - Lechmere Station

**Serving**

- Teele Square
- Davis Station
- Union Square, Somerville
- Red Line
- Green Line



**T** Massachusetts Bay Transportation Authority **massDOT**  
Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100  
(TTY) 617-222-5146 • [www.mbta.com](http://www.mbta.com)

**87**

**Weekday**

Inbound				Outbound			
Leave Arlington Center	Lv/Arrive Clarendon Hill	Arrive Davis Station	Arrive Lechmere Station	Leave Lechmere Station	Arrive Davis Station	Arrive Clarendon Hill	Arrive Arlington Center
.....	5:07A	5:10A	5:24A	5:29A	5:40A	5:45A	.....
.....	5:26	5:29	5:43	5:52	6:03	6:08	6:14A
.....	5:49	5:52	6:06	6:23	6:34	6:39	6:45
.....	6:08	6:11	6:25	6:34	6:45	6:50	6:56
6:17A	6:24	6:27	6:50	6:54	7:10	7:16	7:22
6:33	6:40	6:43	7:06	7:13	7:30	7:39	7:47
6:49	6:57	7:01	7:24	7:31	7:49	7:58	8:06
7:06	7:14	7:18	7:48	7:50	8:08	8:17	8:25
7:19	7:27	7:33	8:10	8:09	8:27	8:36	8:44
7:34	7:43	7:50	8:27	8:29	8:47	8:56	9:03
7:53	8:02	8:09	8:46	8:49	9:06	9:14	9:21
8:12	8:21	8:28	9:04	9:16	9:34	9:42	9:49
8:31	8:40	8:47	9:24	9:43	10:01	10:09	10:16
8:50	8:59	9:03	9:36	10:09	10:27	10:35	10:42
9:10	9:17	9:21	9:49	10:38	10:56	11:04	11:11
9:32	9:37	9:40	10:08	11:07	11:25	11:33	11:40
9:56	10:01	10:04	10:32	11:40	11:58	<b>12:06P</b>	<b>12:13P</b>
10:19	10:24	10:27	10:55				
10:45	10:50	10:53	11:21	<b>12:10P</b>	<b>12:28P</b>	<b>12:36</b>	<b>12:43</b>
11:15	11:20	11:23	11:51	<b>12:35</b>	<b>12:53</b>	<b>1:01</b>	<b>1:08</b>
11:45	11:50	11:53	<b>12:21P</b>	<b>1:05</b>	<b>1:23</b>	<b>1:31</b>	<b>1:38</b>
				<b>1:35</b>	<b>1:53</b>	<b>2:01</b>	<b>2:08</b>
<b>12:20P</b>	<b>12:25P</b>	<b>12:28P</b>	<b>12:56</b>	<b>2:05</b>	<b>2:23</b>	<b>2:31</b>	<b>2:38</b>
<b>12:50</b>	<b>12:55</b>	<b>12:58</b>	<b>1:26</b>	<b>2:34</b>	<b>2:55</b>	<b>3:05</b>	<b>3:12</b>
<b>1:20</b>	<b>1:25</b>	<b>1:28</b>	<b>1:56</b>	<b>2:58</b>	<b>3:19</b>	<b>3:29</b>	<b>3:36</b>
<b>1:50</b>	<b>1:55</b>	<b>1:58</b>	<b>2:26</b>	<b>3:17</b>	<b>3:38</b>	<b>3:48</b>	<b>3:55</b>
<b>2:15</b>	<b>2:20</b>	<b>2:23</b>	<b>2:50</b>	<b>3:36</b>	<b>3:57</b>	<b>4:07</b>	<b>4:14</b>
<b>2:34</b>	<b>2:39</b>	<b>2:43</b>	<b>3:09</b>	<b>3:56</b>	<b>4:17</b>	<b>4:27</b>	<b>4:34</b>
<b>2:53</b>	<b>2:58</b>	<b>3:02</b>	<b>3:28</b>	<b>4:21</b>	<b>4:42</b>	<b>4:55</b>	<b>5:02</b>
<b>3:15</b>	<b>3:20</b>	<b>3:24</b>	<b>3:50</b>	<b>4:42</b>	<b>5:04</b>	<b>5:17</b>	<b>5:24</b>
<b>3:39</b>	<b>3:44</b>	<b>3:48</b>	<b>4:14</b>	<b>5:04</b>	<b>5:26</b>	<b>5:39</b>	<b>5:46</b>
<b>3:59</b>	<b>4:04</b>	<b>4:08</b>	<b>4:34</b>	<b>5:26</b>	<b>5:48</b>	<b>6:01</b>	<b>6:08</b>
<b>4:19</b>	<b>4:24</b>	<b>4:28</b>	<b>4:54</b>	<b>5:52</b>	<b>6:14</b>	<b>6:27</b>	<b>6:34</b>
<b>4:39</b>	<b>4:44</b>	<b>4:48</b>	<b>5:18</b>	<b>6:21</b>	<b>6:43</b>	<b>6:53</b>	<b>7:00</b>
<b>5:07</b>	<b>5:12</b>	<b>5:17</b>	<b>5:47</b>	<b>6:41</b>	<b>7:00</b>	<b>7:10</b>	<b>7:17</b>
<b>5:35</b>	<b>5:40</b>	<b>5:45</b>	<b>6:15</b>	<b>7:03</b>	<b>7:21</b>	<b>7:31</b>	<b>7:38</b>
<b>5:57</b>	<b>6:02</b>	<b>6:07</b>	<b>6:35</b>	<b>7:29</b>	<b>7:43</b>	<b>7:52</b>	<b>7:59</b>
<b>6:22</b>	<b>6:27</b>	<b>6:31</b>	<b>6:54</b>	<b>7:57</b>	<b>8:13</b>	<b>8:21</b>	.....
<b>6:45</b>	<b>6:50</b>	<b>6:54</b>	<b>7:17</b>	<b>8:25</b>	<b>8:41</b>	<b>8:49</b>	.....
<b>7:20</b>	<b>7:25</b>	<b>7:29</b>	<b>7:52</b>	<b>8:55</b>	<b>9:11</b>	<b>9:19</b>	.....
<b>7:50</b>	<b>7:55</b>	<b>7:58</b>	<b>8:21</b>	<b>9:25</b>	<b>9:40</b>	<b>9:47</b>	.....
.....	<b>8:25</b>	<b>8:28</b>	<b>8:46</b>	<b>9:55</b>	<b>10:09</b>	<b>10:16</b>	.....
.....	<b>8:55</b>	<b>8:58</b>	<b>9:16</b>	<b>10:25</b>	<b>10:39</b>	<b>10:46</b>	.....
.....	<b>9:25</b>	<b>9:28</b>	<b>9:46</b>	<b>10:55</b>	<b>11:06</b>	<b>11:13</b>	.....
.....	<b>9:55</b>	<b>9:58</b>	<b>10:16</b>	<b>11:25</b>	<b>11:36</b>	<b>11:43</b>	.....
.....	<b>10:25</b>	<b>10:28</b>	<b>10:46</b>	<b>11:55</b>	<b>12:06A</b>	<b>12:13A</b>	.....
.....	<b>10:55</b>	<b>10:58</b>	<b>11:16</b>	<b>12:25A</b>	<b>12:36</b>	<b>12:43</b>	.....
.....	<b>11:25</b>	<b>11:28</b>	<b>11:42</b>	<b>12:55</b>	<b>1:06</b>	<b>1:13</b>	.....
.....	<b>12:00M</b>	<b>12:02A</b>	<b>12:16A</b>	w 1:22	<b>1:33</b>	<b>1:40</b>	.....
.....	<b>12:30</b>	<b>12:32</b>	<b>12:46</b>				
.....	<b>1:00</b>	<b>1:02</b>	<b>1:16</b>				

**87**

**Saturday**

Inbound				Outbound			
Leave Arlington Center	Lv/Arrive Clarendon Hill	Arrive Davis Station	Arrive Lechmere Station	Leave Lechmere Station	Arrive Davis Station	Arrive Clarendon Hill	Arrive Arlington Center
.....	5:15A	5:18A	5:29A	5:38A	5:50A	5:54A	5:58A
.....	5:45	5:48	5:59	6:10	6:22	6:26	6:30
6:10A	6:15	6:18	6:33	6:40	6:54	6:58	7:02
6:40	6:45	6:48	7:03	7:10	7:24	7:28	7:32
7:10	7:15	7:18	7:33	7:40	7:54	7:58	8:02
7:40	7:45	7:48	8:03	8:10	8:24	8:28	8:33
8:10	8:15	8:18	8:38	8:41	8:57	9:02	9:07
8:40	8:45	8:48	9:08	9:11	9:27	9:32	9:37
9:10	9:15	9:19	9:38	9:35	9:54	10:00	10:05
9:40	9:45	9:49	10:13	10:00	10:19	10:25	10:30
10:10	10:15	10:19	10:43	10:20	10:40	10:46	10:52
10:35	10:40	10:44	11:08	10:50	11:10	11:16	11:22
11:07	11:12	11:16	11:42	11:16	11:36	11:42	11:48
11:35	11:41	11:45	<b>12:14P</b>	11:42	12:02	12:08P	12:14P
<b>12:00N</b>	<b>12:06P</b>	<b>12:10P</b>	<b>12:39P</b>	<b>12:07P</b>	<b>12:27P</b>	<b>12:33P</b>	<b>12:39P</b>
<b>12:25P</b>	<b>12:31</b>	<b>12:35</b>	<b>1:03</b>	<b>12:32</b>	<b>12:52</b>	<b>12:58</b>	<b>1:04</b>
<b>12:50</b>	<b>12:56</b>	<b>1:00</b>	<b>1:27</b>	<b>12:57</b>	<b>1:17</b>	<b>1:23</b>	<b>1:29</b>
<b>1:15</b>	<b>1:20</b>	<b>1:23</b>	<b>1:50</b>	<b>1:22</b>	<b>1:42</b>	<b>1:48</b>	<b>1:54</b>
<b>1:41</b>	<b>1:46</b>	<b>1:49</b>	<b>2:16</b>	<b>1:47</b>	<b>2:07</b>	<b>2:13</b>	<b>2:19</b>
<b>2:06</b>	<b>2:11</b>	<b>2:14</b>	<b>2:41</b>	<b>2:12</b>	<b>2:32</b>	<b>2:38</b>	<b>2:44</b>
<b>2:31</b>	<b>2:36</b>	<b>2:39</b>	<b>3:06</b>	<b>2:37</b>	<b>2:57</b>	<b>3:03</b>	<b>3:09</b>
<b>2:56</b>	<b>3:01</b>	<b>3:04</b>	<b>3:31</b>	<b>3:02</b>	<b>3:22</b>	<b>3:28</b>	<b>3:34</b>
<b>3:21</b>	<b>3:26</b>	<b>3:29</b>	<b>3:56</b>	<b>3:27</b>	<b>3:47</b>	<b>3:53</b>	<b>3:59</b>
<b>3:46</b>	<b>3:51</b>	<b>3:54</b>	<b>4:21</b>	<b>3:52</b>	<b>4:12</b>	<b>4:18</b>	<b>4:24</b>
<b>4:11</b>	<b>4:16</b>	<b>4:19</b>	<b>4:46</b>	<b>4:17</b>	<b>4:37</b>	<b>4:43</b>	<b>4:49</b>
<b>4:36</b>	<b>4:41</b>	<b>4:44</b>	<b>5:11</b>	<b>4:42</b>	<b>5:02</b>	<b>5:08</b>	<b>5:14</b>
<b>5:01</b>	<b>5:06</b>	<b>5:09</b>	<b>5:35</b>	<b>5:07</b>	<b>5:27</b>	<b>5:33</b>	<b>5:39</b>
<b>5:26</b>	<b>5:31</b>	<b>5:34</b>	<b>6:00</b>	<b>5:32</b>	<b>5:51</b>	<b>5:57</b>	<b>6:03</b>
<b>5:51</b>	<b>5:56</b>	<b>5:59</b>	<b>6:25</b>	<b>5:55</b>	<b>6:14</b>	<b>6:20</b>	<b>6:26</b>
<b>6:16</b>	<b>6:21</b>	<b>6:24</b>	<b>6:50</b>	<b>6:18</b>	<b>6:37</b>	<b>6:43</b>	<b>6:49</b>
<b>6:45</b>	<b>6:50</b>	<b>6:53</b>	<b>7:17</b>	<b>6:47</b>	<b>7:06</b>	<b>7:12</b>	<b>7:18</b>
<b>7:22</b>	<b>7:26</b>	<b>7:29</b>	<b>7:52</b>	<b>7:22</b>	<b>7:41</b>	<b>7:47</b>	<b>7:53</b>
<b>7:57</b>	<b>8:01</b>	<b>8:04</b>	<b>8:27</b>	<b>8:05</b>	<b>8:23</b>	<b>8:29</b>	.....
.....	<b>8:40</b>	<b>8:43</b>	<b>9:00</b>	<b>8:50</b>	<b>9:07</b>	<b>9:13</b>	.....
.....	<b>9:20</b>	<b>9:23</b>	<b>9:39</b>	<b>9:30</b>	<b>9:46</b>	<b>9:52</b>	.....
.....	<b>9:57</b>	<b>10:00</b>	<b>10:16</b>	<b>10:05</b>	<b>10:21</b>	<b>10:27</b>	.....
.....	<b>10:32</b>	<b>10:35</b>	<b>10:51</b>	<b>10:40</b>	<b>10:55</b>	<b>11:01</b>	.....
.....	<b>11:07</b>	<b>11:10</b>	<b>11:24</b>	<b>11:15</b>	<b>11:28</b>	<b>11:34</b>	.....
.....	<b>11:40</b>	<b>11:43</b>	<b>11:57</b>	<b>11:50</b>	<b>12:03A</b>	<b>12:08A</b>	.....
.....	<b>12:20A</b>	<b>12:23A</b>	<b>12:35A</b>	<b>12:30A</b>	<b>12:40</b>	<b>12:45</b>	.....
.....	<b>12:55</b>	<b>12:58</b>	<b>1:10</b>	w 1:20	<b>1:30</b>	<b>1:35</b>	.....

Route 87  
Arlington Ctr or Clarendon Hill - Lechmere Sta.

**87**

**Sunday**

Inbound			Outbound		
Leave Clarendon Hill	Arrive Davis Station	Arrive Lechmere Station	Leave Lechmere Station	Arrive Davis Station	Arrive Clarendon Hill
6:00A	6:03A	6:16A	6:38A	6:51A	6:57A
7:00	7:03	7:16	7:38	7:51	7:57
8:00	8:03	8:16	8:38	8:51	8:57
8:55	8:58	9:11	9:34	9:47	9:53
9:28	9:32	9:49	10:14	10:30	10:37
10:05	10:09	10:26	10:54	11:12	11:19
10:45	10:49	11:08	11:34	11:53	12:00N
11:25	11:29	11:53			
<b>12:05P</b>	<b>12:09P</b>	<b>12:33P</b>	<b>12:14P</b>	<b>12:33P</b>	<b>12:40P</b>
<b>12:45</b>	<b>12:49</b>	<b>1:13</b>	<b>1:34</b>	<b>1:53</b>	<b>2:00</b>
<b>1:25</b>	<b>1:29</b>	<b>1:53</b>	<b>2:14</b>	<b>2:33</b>	<b>2:40</b>
<b>2:05</b>	<b>2:08</b>	<b>2:30</b>	<b>2:54</b>	<b>3:13</b>	<b>3:20</b>
<b>2:45</b>	<b>2:48</b>	<b>3:10</b>	<b>3:34</b>	<b>3:53</b>	<b>4:00</b>
<b>3:25</b>	<b>3:28</b>	<b>3:50</b>	<b>4:13</b>	<b>4:33</b>	<b>4:40</b>
<b>4:05</b>	<b>4:08</b>	<b>4:30</b>	<b>4:53</b>	<b>5:13</b>	<b>5:20</b>
<b>4:45</b>	<b>4:48</b>	<b>5:10</b>	<b>5:34</b>	<b>5:54</b>	<b>6:01</b>
<b>5:25</b>	<b>5:28</b>	<b>5:50</b>	<b>6:14</b>	<b>6:31</b>	<b>6:38</b>
<b>6:05</b>	<b>6:08</b>	<b>6:30</b>	<b>6:55</b>	<b>7:12</b>	<b>7:19</b>
<b>6:45</b>	<b>6:48</b>	<b>7:10</b>	<b>7:36</b>	<b>7:50</b>	<b>7:57</b>
<b>7:25</b>	<b>7:28</b>	<b>7:43</b>	<b>8:16</b>	<b>8:30</b>	<b>8:37</b>
<b>8:05</b>	<b>8:08</b>	<b>8:23</b>	<b>8:55</b>	<b>9:09</b>	<b>9:16</b>
<b>8:45</b>	<b>8:48</b>	<b>9:03</b>	<b>9:35</b>	<b>9:49</b>	<b>9:56</b>
<b>9:25</b>	<b>9:28</b>	<b>9:45</b>	<b>10:15</b>	<b>10:28</b>	<b>10:32</b>
<b>10:05</b>	<b>10:08</b>	<b>10:22</b>	<b>10:50</b>	<b>11:03</b>	<b>11:07</b>
<b>10:45</b>	<b>10:48</b>	<b>11:02</b>	<b>11:30</b>	<b>11:43</b>	<b>11:47</b>
<b>11:20</b>	<b>11:23</b>	<b>11:37</b>	<b>12:00M</b>	<b>12:11A</b>	<b>12:15A</b>
<b>11:55</b>	<b>11:58</b>	<b>12:12A</b>	<b>12:35A</b>	<b>12:46</b>	<b>12:50</b>
<b>12:25A</b>	<b>12:28A</b>	<b>12:42</b>	w 1:18	<b>1:29</b>	<b>1:33</b>
<b>12:55</b>	<b>12:58</b>	<b>1:12</b>			

w- Waits for last trolley to arrive at Lechmere Station.

All buses are accessible to persons with disabilities

Fares on map side.

**Spring & Summer 2020 Holidays**  
4/20: see Weekday; 5/25: see Sunday  
7/3: see Saturday; 7/4: see Sunday

MASSDOT CRASH RATE WORKSHEETS AND HIGH CRASH LOCATION MAPPING

## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN :           Somerville                COUNT DATE :           Nov-16          

DISTRICT :           4                UNSIGNALIZED :       SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET :           Alewife Brook Parkway          

MINOR STREET(S) :           Broadway          

**INTERSECTION  
 DIAGRAM**  
 (Label Approaches)



**PEAK HOUR VOLUMES**

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :	972	994	576	433		<b>2,975</b>

" K " FACTOR :       INTERSECTION ADT ( **V** ) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES :       # OF YEARS :       AVERAGE # OF CRASHES PER YEAR ( **A** ) :

**CRASH RATE CALCULATION :**            RATE =  $\frac{(A * 1,000,000)}{(V * 365)}$

Comments :           Above Statewide and District Crash Rates          

Project Title & Date:           Proposed Marijuana Dispensary

## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN :           Arlington                COUNT DATE :           Jun-20          

DISTRICT :           4                UNSIGNALIZED :       SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET :           Broadway          

MINOR STREET(S) :           Sunnyside Avenue          

**INTERSECTION  
 DIAGRAM**  
 (Label Approaches)



**PEAK HOUR VOLUMES**

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	SB	EB	WB			
PEAK HOURLY VOLUMES (PM) :	24	583	443			<b>1,050</b>

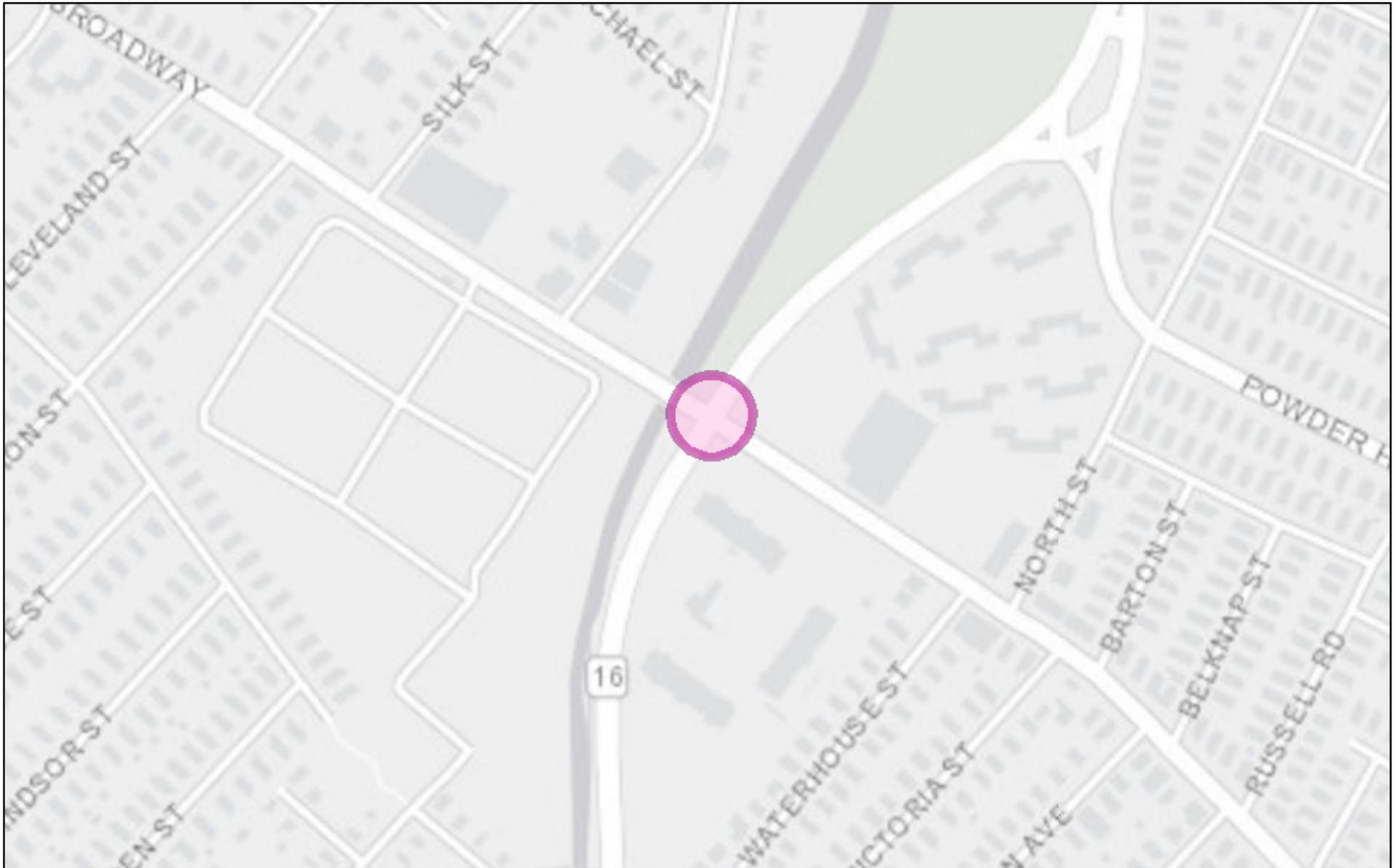
" K " FACTOR :       INTERSECTION ADT ( **V** ) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES :       # OF YEARS :       AVERAGE # OF CRASHES PER YEAR ( **A** ) :

**CRASH RATE CALCULATION :**            RATE =  $\frac{(A * 1,000,000)}{(V * 365)}$

Comments :           Below Statewide and District Crash Rates            
 Project Title & Date:           Proposed Marijuana Dispensary

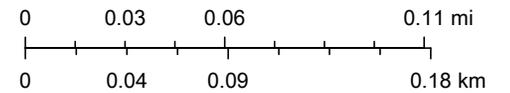
# GeoDOT Map



6/23/2020, 10:25:55 AM

 2015-2017 HSIP Cluster

1:4,514



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user

MassDOT

GENERAL BACKGROUND TRAFFIC GROWTH

**34 North Street  
Clarendon Hill Redevelopment  
Somerville, Massachusetts**

**Traffic Impact & Access Study**

**Prepared For:**  
Gate Residential



**Prepared by:**  
Design Consultants, Inc.

March 2017  
Revised September 2019

## C. FUTURE NO-BUILD CONDITIONS

### C1. 2026 No-Build Traffic Volumes

Traffic volumes in the study area were projected to the year 2026, which reflects a seven-year planning horizon from the existing year 2019, consistent with the *MassDOT Guidelines*. The traffic conditions for the year 2026 were examined under No-Build conditions independent of the proposed Project, including all existing traffic and new traffic.

Traffic growth on the local roadway network results from multiple factors, most notably land development in the immediate area and growth in the surrounding region. Two techniques are typically used in combination to estimate this growth. The first technique identifies planned and permitted developments in the vicinity of the study area and assigns estimated traffic generated by the proposed developments to the study area network. The second technique applies an annual percentage increase in traffic growth to all traffic volumes under study. This practice accounts for traffic growth due to regional developments beyond the study area or developments that may be proposed but are not yet permitted. Both methods were used and summed together with the existing traffic counts to define the “No-Build” traffic volumes for this study. The “No-Build” traffic volumes for this study are shown in Figure C1.1.

#### **Background Developments**

DCI has coordinated with the Planning Board of the City of Somerville and the Central Transportation Planning Staff to determine if there are any upcoming projects in the area will have an impact on the traffic network. There is one proposed project, a hotel at 1154 Broadway, which will add vehicle-trips to the study area. A figure of these trips is attached in Appendix D.

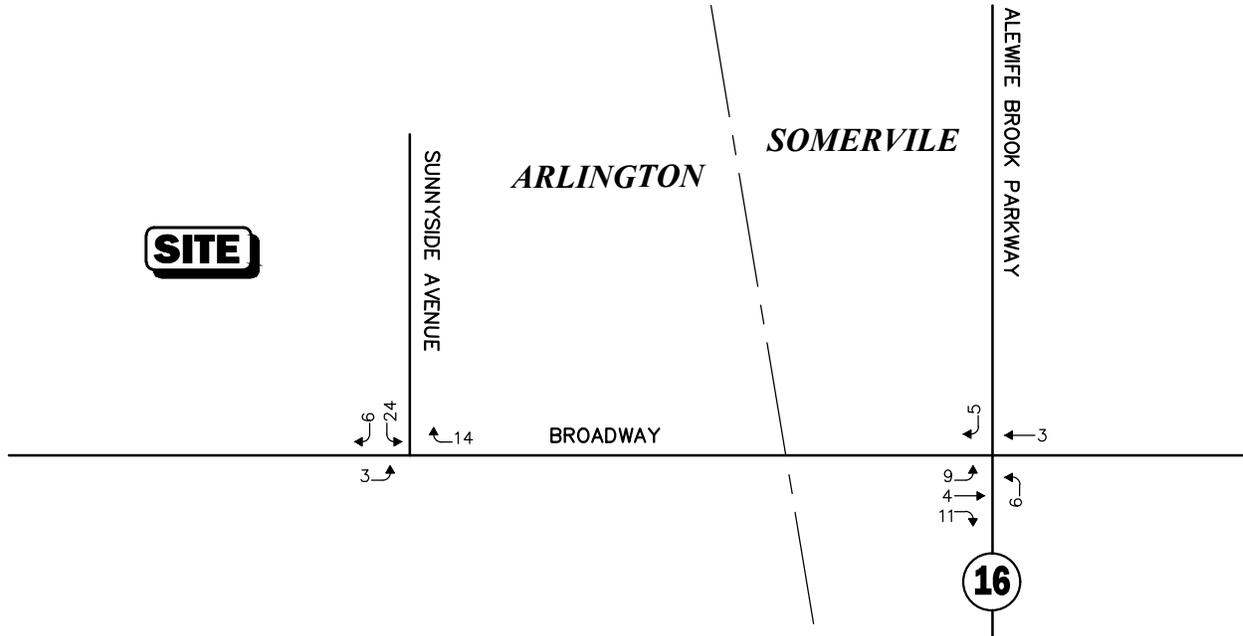
#### **Regional Growth Rate**

Based on discussions with the City of Somerville, an annual traffic growth rate of 0.25 percent for the area of Somerville that the Project site is located was provided. Due to the location of the Project and the lack of rapid transit in the immediate area, it is expected that vehicular traffic in this area of Somerville will increase in the future. Therefore, a 0.25 percent annual growth rate was applied to project all existing volumes to a seven year design horizon, to the year 2026.

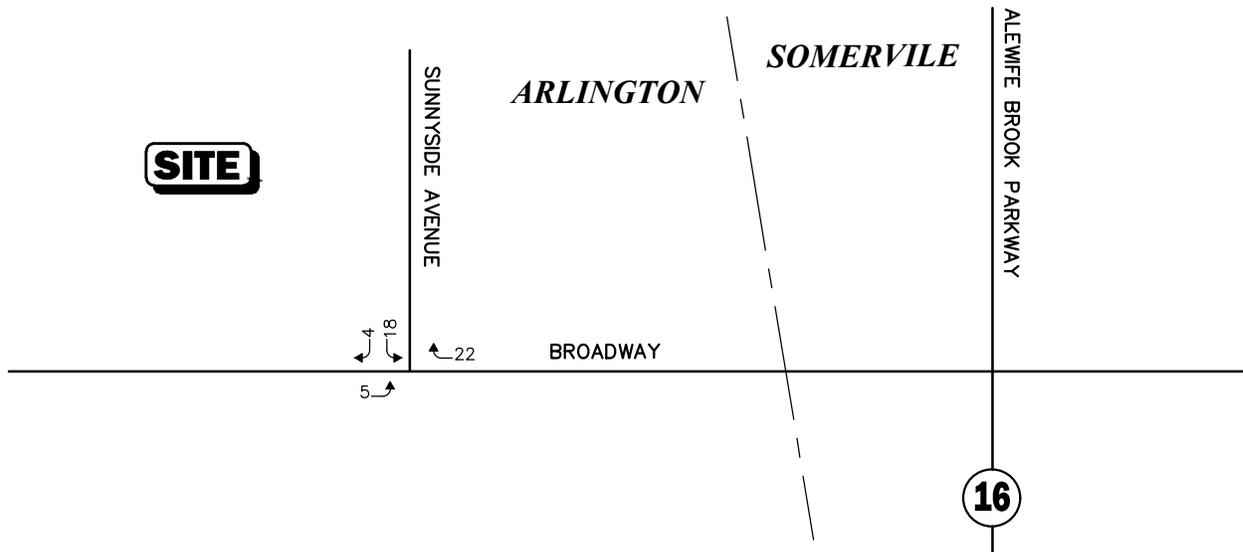
**BACKGROUND DEVELOPMENT TRAFFIC-VOLUME NETWORKS**

---

WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM)



SATURDAY MIDDAY PEAK HOUR (12:00 - 1:00 PM)



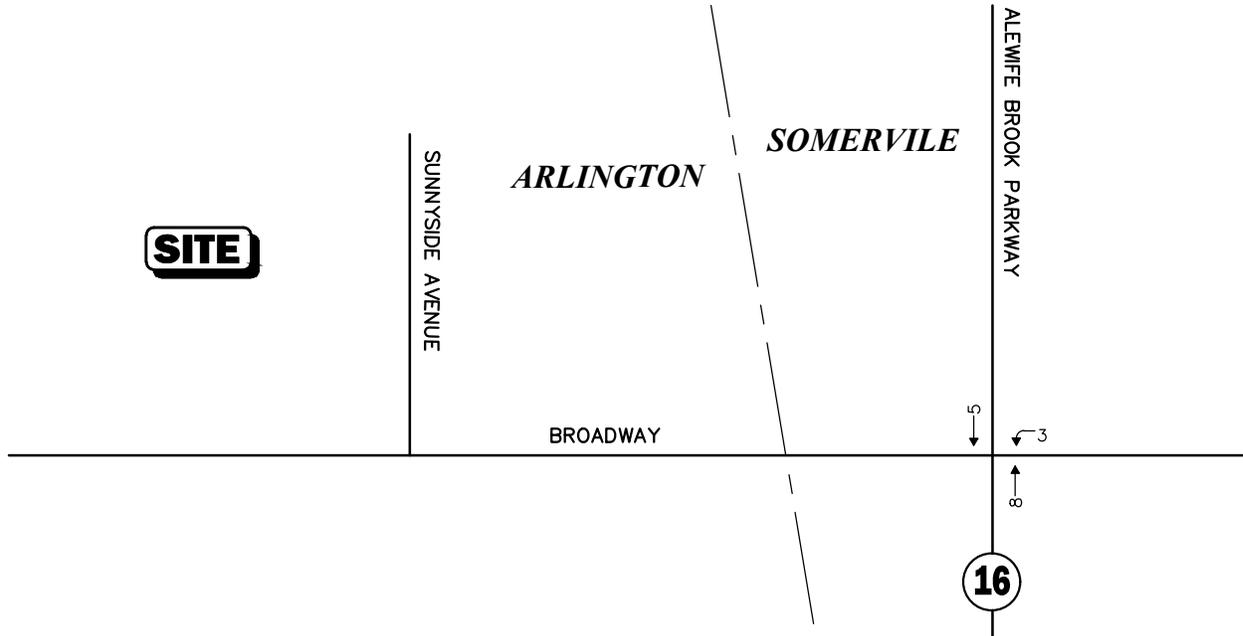
Not To Scale



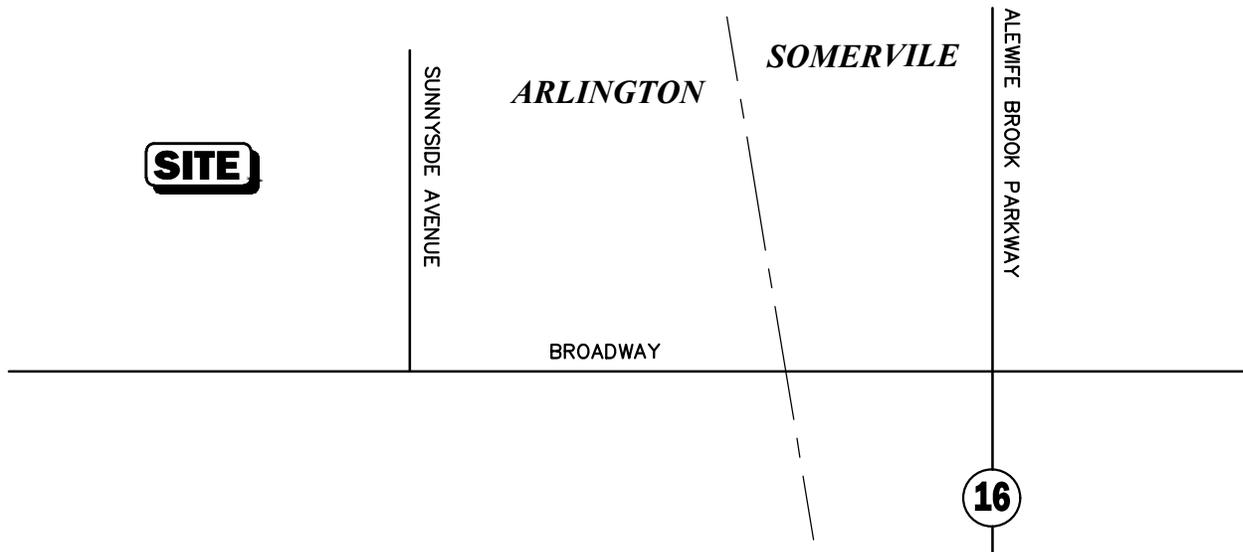
Figure A-2

10 Sunnyside Avenue  
Mixed-Use Development  
Peak Hour Traffic Volumes

WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM)



SATURDAY MIDDAY PEAK HOUR (12:00 - 1:00 PM)



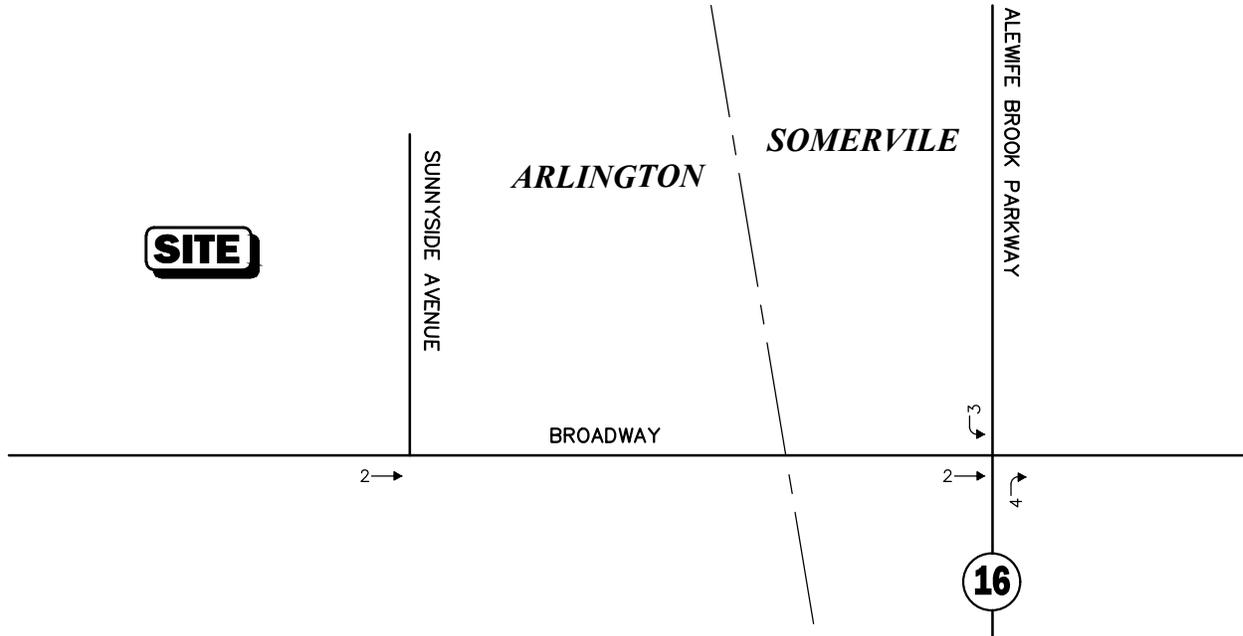
 Not To Scale



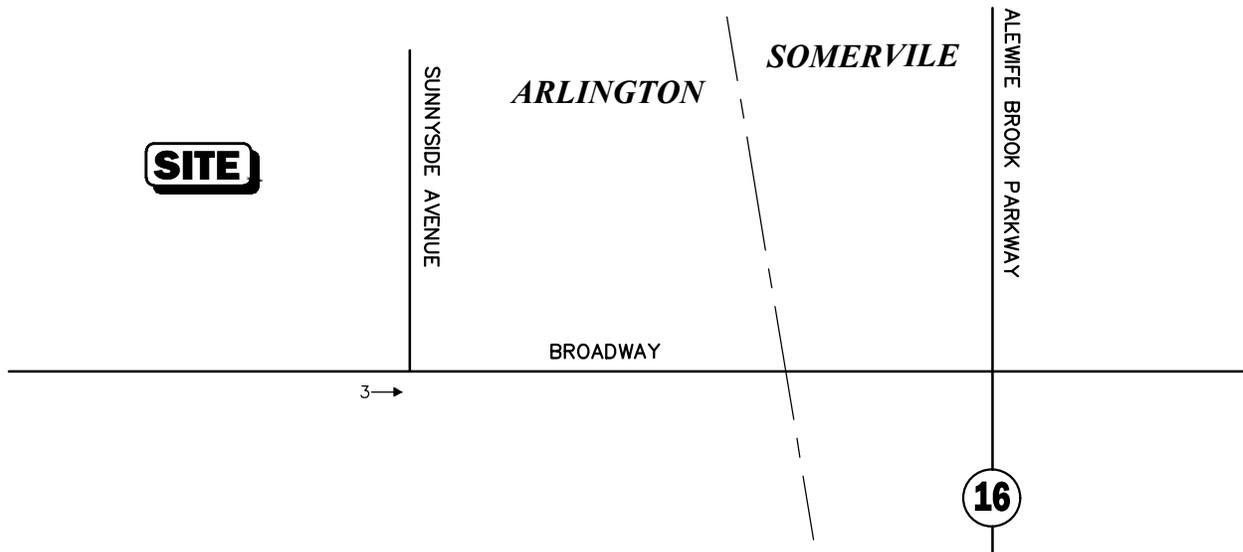
Figure A-3

Clarendon Hill  
Peak Hour Traffic Volumes

WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM)



SATURDAY MIDDAY PEAK HOUR (12:00 - 1:00 PM)



 Not To Scale



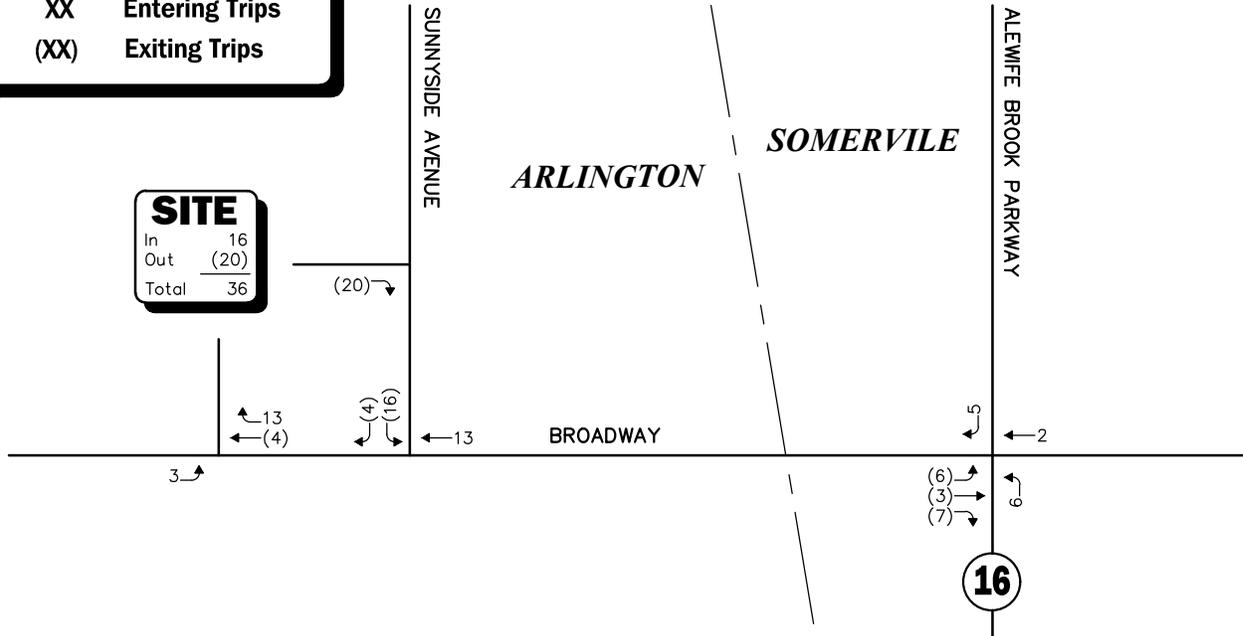
Figure A-4

Broadway Hotel  
Peak Hour Traffic Volumes

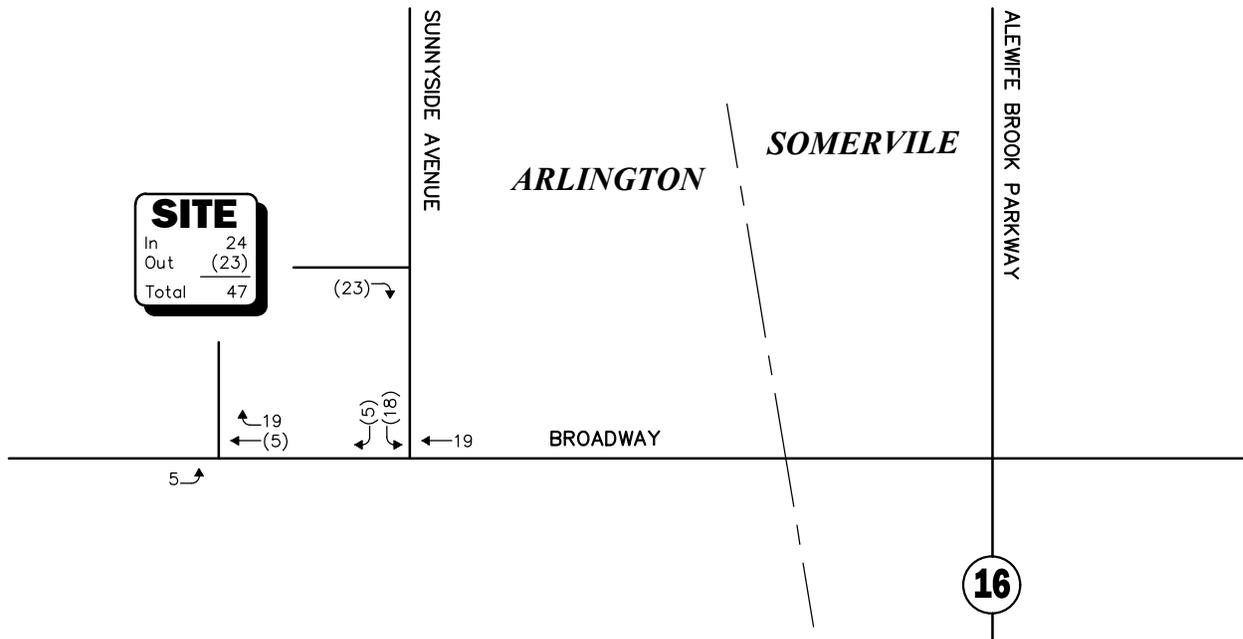
WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM)

**Legend:**

XX Entering Trips  
 (XX) Exiting Trips



SATURDAY MIDDAY PEAK HOUR (12:00 - 1:00 PM)



Not To Scale



Figure A-5

Existing Bank Reoccupancy  
 Peak Hour Traffic Volumes

**Institute of Transportation Engineers (ITE)**  
**Trip Generation, 10th Edition**  
**Land Use Code (LUC) 911 - Walk-In Bank**

Average Vehicle Trips Ends vs: 1,000 Square Feet Gross Floor Area  
 Independent Variable (X): 3.000

**AVERAGE WEEKDAY DAILY**

$$\frac{\text{ITE LUC 911 Weekday Daily Trip Rate}}{\text{ITE LUC 911 Weekday Evening Trip Rate}} = \frac{\text{ITE LUC 912 Weekday Daily Trip Rate}}{\text{ITE LUC 912 Weekday Evening Trip Rate}}$$

$$\frac{(Y)}{12.13} = \frac{100.030}{20.45} \quad Y = 59.33$$

$$T = Y * 3.000$$

$$T = 178$$

T = 178 vehicle trips

with 50% ( 89 vph) entering and 50% ( 89 vph) exiting.

**WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC**

$$T = 12.13 * (X)$$

$$T = 12.13 * 3.000$$

$$T = 36.39$$

T = 36 vehicle trips

with 44% ( 16 vph) entering and 56% ( 20 vph) exiting.

**SATURDAY MIDDAY PEAK HOUR OF GENERATOR**

$$\frac{\text{ITE LUC 911 Saturday Midday Trip Rate}}{\text{ITE LUC 911 Weekday Evening Trip Rate}} = \frac{\text{ITE LUC 912 Saturday Midday Trip Rate}}{\text{ITE LUC 912 Weekday Evening Trip Rate}}$$

$$\frac{(Y)}{12.13} = \frac{26.35}{20.45} \quad Y = 15.63$$

$$T = Y * 3.000$$

$$T = 46.89$$

T = 47 vehicle trips

with 51% ( 24 vph) entering and 49% ( 23 vph) exiting.

## TRIP-GENERATION CALCULATIONS

---

**Institute of Transportation Engineers (ITE)**  
**Trip Generation, 10th Edition**  
**Land Use Code (LUC) 882 - Marijuana Dispensary**

Average Vehicle Trips Ends vs: 1,000 sf of GFA  
Independent Variable (X): 3

**AVERAGE WEEKDAY DAILY**

$T = 252.7 * (X)$   
 $T = 252.7 * 3$   
 $T = 758.10$   
 $T = 760.00$   
 $T = 760$  vehicle trips  
with 50% ( 380 vpd) entering and 50% ( 380 vpd) exiting.

**WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC**

$T = 21.83 * (X)$   
 $T = 21.83 * 3$   
 $T = 65.49$   
 $T = 66$  vehicle trips  
with 50% ( 33 vph) entering and 50% ( 33 vph) exiting.

**SATURDAY DAILY**

$T = 259.31 * (X)$   
 $T = 259.31 * 3$   
 $T = 777.93$   
 $T = 778$  vehicle trips  
with 50% ( 389 vpd) entering and 50% ( 389 vpd) exiting.

**SATURDAY MIDDAY PEAK HOUR OF GENERATOR**

$T = 36.43 * (X)$   
 $T = 36.43 * 3$   
 $T = 109.29$   
 $T = 109$  vehicle trips  
with 47% ( 51 vph) entering and 53% ( 58 vph) exiting.

## CAPACITY ANALYSIS WORKSHEETS

---

Route 16 at Broadway

Broadway at Sunnyside Avenue

Broadway at the Project Site Driveway

Sunnyside Avenue at the Project Site Driveway

Route 16 at Broadway

---

2020 Existing Weekday Evening Peak Hour  
1: Alewife Brook Parkway & Broadway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	207	323	52	135	277	21	34	776	163	20	841	133
Future Volume (vph)	207	323	52	135	277	21	34	776	163	20	841	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	0		125	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.979			0.993			0.975			0.980	
Flt Protected	0.950				0.985			0.998			0.999	
Satd. Flow (prot)	1745	1783	0	0	3392	0	0	3279	0	0	3299	0
Flt Permitted	0.160				0.717			0.708			0.817	
Satd. Flow (perm)	294	1783	0	0	2469	0	0	2326	0	0	2698	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			3			21			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		175			307			364			295	
Travel Time (s)		4.0			7.0			8.3			6.7	
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.96	0.96	0.96	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	241	376	60	141	289	22	35	808	170	22	914	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	241	436	0	0	452	0	0	1013	0	0	1081	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA										

2020 Existing Weekday Evening Peak Hour  
 1: Alewife Brook Parkway & Broadway

---

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	

2020 Existing Weekday Evening Peak Hour  
1: Alewife Brook Parkway & Broadway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	31.0	31.0		26.0	26.0		56.0	56.0		56.0	56.0	
Total Split (%)	23.1%	23.1%		19.4%	19.4%		41.8%	41.8%		41.8%	41.8%	
Maximum Green (s)	25.0	25.0		20.0	20.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)	6.0	4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	25.0	27.0			22.0			52.0			52.0	
Actuated g/C Ratio	0.19	0.20			0.16			0.39			0.39	
v/c Ratio	4.46	1.20			1.11			1.11			1.02	
Control Delay	1613.3	158.8			128.3			101.5			73.7	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	1613.3	158.8			128.3			101.5			73.7	
LOS	F	F			F			F			E	
Approach Delay		676.6			128.3			101.5			73.7	
Approach LOS		F			F			F			E	
Queue Length 50th (ft)	~386	~458			~235			~523			~521	
Queue Length 95th (ft)	#495	#626			#348			#661			#660	
Internal Link Dist (ft)		95			227			284			215	
Turn Bay Length (ft)												
Base Capacity (vph)	54	363			407			915			1056	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	4.46	1.20			1.11			1.11			1.02	

Intersection Summary

Area Type:	Other
Cycle Length:	134
Actuated Cycle Length:	134
Natural Cycle:	105
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	4.46
Intersection Signal Delay:	216.7
Intersection LOS:	F
Intersection Capacity Utilization:	94.4%
ICU Level of Service:	F
Analysis Period (min):	15

2020 Existing Weekday Evening Peak Hour  
 1: Alewife Brook Parkway & Broadway

---

Lane Group	Ø9
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	21.0
Total Split (s)	21.0
Total Split (%)	16%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	13.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	64
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
<b>Intersection Summary</b>	

## 2020 Existing Weekday Evening Peak Hour 1: Alewife Brook Parkway & Broadway

~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Splits and Phases: 1: Alewife Brook Parkway & Broadway

 Ø2	 Ø4	 Ø8	 Ø9
56 s	31 s	26 s	21 s
 Ø6			
56 s			

2027 No Build Weekday Evening Peak Hour  
1: Alewife Brook Parkway & Broadway

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	229	343	72	143	292	22	47	812	173	24	876	148
Future Volume (vph)	229	343	72	143	292	22	47	812	173	24	876	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	0		125	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Fr <sub>t</sub>		0.974			0.993			0.975			0.979	
Fl <sub>t</sub> Protected	0.950				0.985			0.998			0.999	
Satd. Flow (prot)	1745	1774	0	0	3392	0	0	3279	0	0	3295	0
Fl <sub>t</sub> Permitted	0.160				0.703			0.627			0.764	
Satd. Flow (perm)	294	1774	0	0	2421	0	0	2060	0	0	2520	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			3			20			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		175			307			364			295	
Travel Time (s)		4.0			7.0			8.3			6.7	
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.96	0.96	0.96	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	266	399	84	149	304	23	49	846	180	26	952	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	266	483	0	0	476	0	0	1075	0	0	1139	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	

2027 No Build Weekday Evening Peak Hour  
 1: Alewife Brook Parkway & Broadway

---

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	

2027 No Build Weekday Evening Peak Hour  
 1: Alewife Brook Parkway & Broadway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	31.0	31.0		26.0	26.0		56.0	56.0		56.0	56.0	
Total Split (%)	23.1%	23.1%		19.4%	19.4%		41.8%	41.8%		41.8%	41.8%	
Maximum Green (s)	25.0	25.0		20.0	20.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)	6.0	4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	25.0	27.0			22.0			52.0			52.0	
Actuated g/C Ratio	0.19	0.20			0.16			0.39			0.39	
v/c Ratio	4.93	1.33			1.19			1.33			1.15	
Control Delay	1819.5	207.4			156.1			188.9			118.2	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	1819.5	207.4			156.1			188.9			118.2	
LOS	F	F			F			F			F	
Approach Delay		779.9			156.1			188.9			118.2	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	~431	~543			~262			~634			~610	
Queue Length 95th (ft)	#544	#713			#377			#773			#750	
Internal Link Dist (ft)		95			227			284			215	
Turn Bay Length (ft)												
Base Capacity (vph)	54	363			399			811			987	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	4.93	1.33			1.19			1.33			1.15	

Intersection Summary

Area Type:	Other
Cycle Length:	134
Actuated Cycle Length:	134
Natural Cycle:	105
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	4.93
Intersection Signal Delay:	289.6
Intersection LOS:	F
Intersection Capacity Utilization:	107.6%
ICU Level of Service:	G
Analysis Period (min):	15

2027 No Build Weekday Evening Peak Hour  
 1: Alewife Brook Parkway & Broadway

---

Lane Group	Ø9
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	21.0
Total Split (s)	21.0
Total Split (%)	16%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	13.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	64
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
<b>Intersection Summary</b>	

# 2027 No Build Weekday Evening Peak Hour

## 1: Alewife Brook Parkway & Broadway

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Alewife Brook Parkway & Broadway

 Ø2	 Ø4	 Ø8	 Ø9
56 s	31 s	26 s	21 s
 Ø6			
56 s			

2027 Build Weekday Evening Peak Hour  
1: Alewife Brook Parkway & Broadway

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	233	345	76	143	295	22	52	812	173	24	876	153
Future Volume (vph)	233	345	76	143	295	22	52	812	173	24	876	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	0		125	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Fr <sub>t</sub>		0.973			0.993			0.975			0.978	
Fl <sub>t</sub> Protected	0.950				0.985			0.998			0.999	
Satd. Flow (prot)	1745	1773	0	0	3392	0	0	3279	0	0	3292	0
Fl <sub>t</sub> Permitted	0.160				0.702			0.609			0.762	
Satd. Flow (perm)	294	1773	0	0	2417	0	0	2001	0	0	2511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			3			20			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		175			307			364			295	
Travel Time (s)		4.0			7.0			8.3			6.7	
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.96	0.96	0.96	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	271	401	88	149	307	23	54	846	180	26	952	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	271	489	0	0	479	0	0	1080	0	0	1144	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	

2027 Build Weekday Evening Peak Hour  
 1: Alewife Brook Parkway & Broadway

---

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	

2027 Build Weekday Evening Peak Hour  
 1: Alewife Brook Parkway & Broadway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	31.0	31.0		26.0	26.0		56.0	56.0		56.0	56.0	
Total Split (%)	23.1%	23.1%		19.4%	19.4%		41.8%	41.8%		41.8%	41.8%	
Maximum Green (s)	25.0	25.0		20.0	20.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0			-2.0			-2.0			-2.0	
Total Lost Time (s)	6.0	4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	25.0	27.0			22.0			52.0			52.0	
Actuated g/C Ratio	0.19	0.20			0.16			0.39			0.39	
v/c Ratio	5.02	1.35			1.20			1.37			1.16	
Control Delay	1860.8	215.4			158.8			207.9			121.5	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	1860.8	215.4			158.8			207.9			121.5	
LOS	F	F			F			F			F	
Approach Delay		802.1			158.8			207.9			121.5	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	~440	~554			~265			~650			~616	
Queue Length 95th (ft)	#553	#726			#381			#788			#756	
Internal Link Dist (ft)		95			227			284			215	
Turn Bay Length (ft)												
Base Capacity (vph)	54	362			399			788			984	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	5.02	1.35			1.20			1.37			1.16	

Intersection Summary

Area Type:	Other
Cycle Length:	134
Actuated Cycle Length:	134
Natural Cycle:	135
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	5.02
Intersection Signal Delay:	302.9
Intersection LOS:	F
Intersection Capacity Utilization:	108.4%
ICU Level of Service:	G
Analysis Period (min):	15

2027 Build Weekday Evening Peak Hour  
 1: Alewife Brook Parkway & Broadway

---

Lane Group	Ø9
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	21.0
Total Split (s)	21.0
Total Split (%)	16%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	13.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	64
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

# 2027 Build Weekday Evening Peak Hour

## 1: Alewife Brook Parkway & Broadway

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Alewife Brook Parkway & Broadway

 Ø2 56 s	 Ø4 31 s	 Ø8 26 s	 Ø9 21 s
 Ø6 56 s			

Broadway at Sunnyside Avenue

---

2020 Existing Weekday Evening Peak Hour  
2: Broadway & Sunnyside Avenue

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	21	562	417	27	20	12
Future Vol, veh/h	21	562	417	27	20	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	84	84	75	75
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	23	611	496	32	27	16

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	528	0	-	0	1169 512
Stage 1	-	-	-	-	512 -
Stage 2	-	-	-	-	657 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1049	-	-	-	215 566
Stage 1	-	-	-	-	606 -
Stage 2	-	-	-	-	519 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1049	-	-	-	208 566
Mov Cap-2 Maneuver	-	-	-	-	208 -
Stage 1	-	-	-	-	586 -
Stage 2	-	-	-	-	519 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	20.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1049	-	-	-	273
HCM Lane V/C Ratio	0.022	-	-	-	0.156
HCM Control Delay (s)	8.5	0	-	-	20.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

2020 Existing Saturday Midday Peak Hour  
2: Broadway & Sunnyside Avenue

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	12	533	392	21	20	12
Future Vol, veh/h	12	533	392	21	20	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	89	89	63	63
Heavy Vehicles, %	0	3	7	0	0	0
Mvmt Flow	14	606	440	24	32	19

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	464	0	-	0	1086 452
Stage 1	-	-	-	-	452 -
Stage 2	-	-	-	-	634 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1108	-	-	-	242 612
Stage 1	-	-	-	-	645 -
Stage 2	-	-	-	-	532 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1108	-	-	-	237 612
Mov Cap-2 Maneuver	-	-	-	-	237 -
Stage 1	-	-	-	-	633 -
Stage 2	-	-	-	-	532 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	19
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1108	-	-	-	308
HCM Lane V/C Ratio	0.012	-	-	-	0.165
HCM Control Delay (s)	8.3	0	-	-	19
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

2027 No Build Weekday Evening Peak Hour  
2: Broadway & Sunnyside Avenue

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	25	584	445	42	60	22
Future Vol, veh/h	25	584	445	42	60	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	84	84	92	92
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	27	635	530	50	65	24

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	580	0	-	0	1244 555
Stage 1	-	-	-	-	555 -
Stage 2	-	-	-	-	689 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1004	-	-	-	194 535
Stage 1	-	-	-	-	579 -
Stage 2	-	-	-	-	502 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1004	-	-	-	186 535
Mov Cap-2 Maneuver	-	-	-	-	186 -
Stage 1	-	-	-	-	555 -
Stage 2	-	-	-	-	502 -

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	31.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1004	-	-	-	225
HCM Lane V/C Ratio	0.027	-	-	-	0.396
HCM Control Delay (s)	8.7	0	-	-	31.1
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.8

2027 No Build Saturday Midday Peak Hour  
 2: Broadway & Sunnyside Avenue

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	17	555	425	44	57	21
Future Vol, veh/h	17	555	425	44	57	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	89	89	92	92
Heavy Vehicles, %	0	3	7	0	0	0
Mvmt Flow	19	631	478	49	62	23

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	527	0	-	0	1172 503
Stage 1	-	-	-	-	503 -
Stage 2	-	-	-	-	669 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1050	-	-	-	215 573
Stage 1	-	-	-	-	612 -
Stage 2	-	-	-	-	513 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1050	-	-	-	209 573
Mov Cap-2 Maneuver	-	-	-	-	209 -
Stage 1	-	-	-	-	595 -
Stage 2	-	-	-	-	513 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	26.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1050	-	-	-	252
HCM Lane V/C Ratio	0.018	-	-	-	0.336
HCM Control Delay (s)	8.5	0	-	-	26.4
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4

2027 Build Weekday Evening Peak Hour  
2: Broadway & Sunnyside Avenue

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	25	584	458	42	70	25
Future Vol, veh/h	25	584	458	42	70	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	84	84	92	92
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	27	635	545	50	76	27

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	595	0	-	0	1259 570
Stage 1	-	-	-	-	570 -
Stage 2	-	-	-	-	689 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	991	-	-	-	190 525
Stage 1	-	-	-	-	570 -
Stage 2	-	-	-	-	502 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	991	-	-	-	182 525
Mov Cap-2 Maneuver	-	-	-	-	182 -
Stage 1	-	-	-	-	546 -
Stage 2	-	-	-	-	502 -

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	35.1
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	991	-	-	-	220
HCM Lane V/C Ratio	0.027	-	-	-	0.469
HCM Control Delay (s)	8.7	0	-	-	35.1
HCM Lane LOS	A	A	-	-	E
HCM 95th %tile Q(veh)	0.1	-	-	-	2.3

2027 Build Saturday Midday Peak Hour  
2: Broadway & Sunnyside Avenue

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	17	555	447	44	85	28
Future Vol, veh/h	17	555	447	44	85	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	89	89	92	92
Heavy Vehicles, %	0	3	7	0	0	0
Mvmt Flow	19	631	502	49	92	30

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	551	0	-	0	1196 527
Stage 1	-	-	-	-	527 -
Stage 2	-	-	-	-	669 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1029	-	-	-	208 555
Stage 1	-	-	-	-	596 -
Stage 2	-	-	-	-	513 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1029	-	-	-	202 555
Mov Cap-2 Maneuver	-	-	-	-	202 -
Stage 1	-	-	-	-	579 -
Stage 2	-	-	-	-	513 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	34.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1029	-	-	-	240
HCM Lane V/C Ratio	0.019	-	-	-	0.512
HCM Control Delay (s)	8.6	0	-	-	34.7
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	2.7

Broadway at the Project Site Driveway

---

2020 Existing Weekday Evening Peak Hour  
 3: Broadway & Site Driveway

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	583	428	1	0	0
Future Vol, veh/h	0	583	428	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	634	465	1	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	466	0	-	0	1100
Stage 1	-	-	-	-	466
Stage 2	-	-	-	-	634
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1095	-	-	-	235
Stage 1	-	-	-	-	632
Stage 2	-	-	-	-	529
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1095	-	-	-	235
Mov Cap-2 Maneuver	-	-	-	-	235
Stage 1	-	-	-	-	632
Stage 2	-	-	-	-	529

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1095	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

2020 Existing Saturday Midday Peak Hour  
3: Broadway & Site Driveway

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	545	402	2	0	0
Future Vol, veh/h	0	545	402	2	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	592	437	2	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	439	0	-	0	1030 438
Stage 1	-	-	-	-	438 -
Stage 2	-	-	-	-	592 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1121	-	-	-	259 619
Stage 1	-	-	-	-	651 -
Stage 2	-	-	-	-	553 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1121	-	-	-	259 619
Mov Cap-2 Maneuver	-	-	-	-	259 -
Stage 1	-	-	-	-	651 -
Stage 2	-	-	-	-	553 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1121	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

2027 No Build Weekday Evening Peak Hour  
 3: Broadway & Site Driveway

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	3	609	453	14	0	0
Future Vol, veh/h	3	609	453	14	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	662	492	15	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	507	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1058	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1058	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1058	-	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.4	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

2027 No Build Saturday Midday Peak Hour  
 3: Broadway & Site Driveway

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	5	572	425	21	0	0
Future Vol, veh/h	5	572	425	21	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	622	462	23	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	485	0	-	0	1106 474
Stage 1	-	-	-	-	474 -
Stage 2	-	-	-	-	632 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1078	-	-	-	233 590
Stage 1	-	-	-	-	626 -
Stage 2	-	-	-	-	530 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1078	-	-	-	231 590
Mov Cap-2 Maneuver	-	-	-	-	231 -
Stage 1	-	-	-	-	622 -
Stage 2	-	-	-	-	530 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1078	-	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-	-
HCM Control Delay (s)	8.4	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

2027 Build Weekday Evening Peak Hour  
 3: Broadway & Site Driveway

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	7	609	456	27	0	0
Future Vol, veh/h	7	609	456	27	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	662	496	29	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	525	0	-	0	1189 511
Stage 1	-	-	-	-	511 -
Stage 2	-	-	-	-	678 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1042	-	-	-	208 563
Stage 1	-	-	-	-	602 -
Stage 2	-	-	-	-	504 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1042	-	-	-	206 563
Mov Cap-2 Maneuver	-	-	-	-	206 -
Stage 1	-	-	-	-	595 -
Stage 2	-	-	-	-	504 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1042	-	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-	-
HCM Control Delay (s)	8.5	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

2027 Build Saturday Midday Peak Hour  
 3: Broadway & Site Driveway

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	10	572	432	43	0	0
Future Vol, veh/h	10	572	432	43	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	622	470	47	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	517	0	-	0	1138 494
Stage 1	-	-	-	-	494 -
Stage 2	-	-	-	-	644 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1049	-	-	-	223 575
Stage 1	-	-	-	-	613 -
Stage 2	-	-	-	-	523 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1049	-	-	-	219 575
Mov Cap-2 Maneuver	-	-	-	-	219 -
Stage 1	-	-	-	-	603 -
Stage 2	-	-	-	-	523 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1049	-	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-	-
HCM Control Delay (s)	8.5	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Sunnyside Avenue at the Project Site Driveway

---

2020 Existing Weekday Evening Peak Hour  
4: Sunnyside Avenue & Site Driveway

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Traffic Vol, veh/h	0	8	0	48	24	0
Future Vol, veh/h	0	8	0	48	24	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	0	52	26	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	78	26	-	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	52	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	925	1050	0	-	-	0
Stage 1	997	-	0	-	-	0
Stage 2	970	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	925	1050	-	-	-	-
Mov Cap-2 Maneuver	925	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	970	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 1050	-
HCM Lane V/C Ratio	- 0.008	-
HCM Control Delay (s)	- 8.5	-
HCM Lane LOS	- A	-
HCM 95th %tile Q(veh)	- 0	-

2020 Existing Saturday Midday Peak Hour  
4: Sunnyside Avenue & Site Driveway

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Traffic Vol, veh/h	0	2	0	33	30	0
Future Vol, veh/h	0	2	0	33	30	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	0	36	33	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	69	33	-	0	-	0
Stage 1	33	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	936	1041	0	-	-	0
Stage 1	989	-	0	-	-	0
Stage 2	986	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	936	1041	-	-	-	-
Mov Cap-2 Maneuver	936	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	986	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 1041	-
HCM Lane V/C Ratio	- 0.002	-
HCM Control Delay (s)	- 8.5	-
HCM Lane LOS	- A	-
HCM 95th %tile Q(veh)	- 0	-

2027 No Build Weekday Evening Peak Hour  
4: Sunnyside Avenue & Site Driveway

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Traffic Vol, veh/h	0	28	0	67	54	0
Future Vol, veh/h	0	28	0	67	54	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	30	0	73	59	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	132	59	-	0	-	0
Stage 1	59	-	-	-	-	-
Stage 2	73	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	862	1007	0	-	-	0
Stage 1	964	-	0	-	-	0
Stage 2	950	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	862	1007	-	-	-	-
Mov Cap-2 Maneuver	862	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	950	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 1007	-
HCM Lane V/C Ratio	- 0.03	-
HCM Control Delay (s)	- 8.7	-
HCM Lane LOS	- A	-
HCM 95th %tile Q(veh)	- 0.1	-

2027 No Build Saturday Midday Peak Hour  
 4: Sunnyside Avenue & Site Driveway

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Traffic Vol, veh/h	0	25	0	61	53	0
Future Vol, veh/h	0	25	0	61	53	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	27	0	66	58	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	124	58	-	0	-	0
Stage 1	58	-	-	-	-	-
Stage 2	66	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	871	1008	0	-	-	0
Stage 1	965	-	0	-	-	0
Stage 2	957	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	871	1008	-	-	-	-
Mov Cap-2 Maneuver	871	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	957	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 1008	-
HCM Lane V/C Ratio	- 0.027	-
HCM Control Delay (s)	- 8.7	-
HCM Lane LOS	- A	-
HCM 95th %tile Q(veh)	- 0.1	-

2027 Build Weekday Evening Peak Hour  
 4: Sunnyside Avenue & Site Driveway

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Traffic Vol, veh/h	0	41	0	67	54	0
Future Vol, veh/h	0	41	0	67	54	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	45	0	73	59	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	132	59	-	0	-	0
Stage 1	59	-	-	-	-	-
Stage 2	73	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	862	1007	0	-	-	0
Stage 1	964	-	0	-	-	0
Stage 2	950	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	862	1007	-	-	-	-
Mov Cap-2 Maneuver	862	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	950	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 1007	-
HCM Lane V/C Ratio	- 0.044	-
HCM Control Delay (s)	- 8.7	-
HCM Lane LOS	- A	-
HCM 95th %tile Q(veh)	- 0.1	-

2027 Build Saturday Midday Peak Hour  
4: Sunnyside Avenue & Site Driveway

Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Traffic Vol, veh/h	0	60	0	61	53	0
Future Vol, veh/h	0	60	0	61	53	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	65	0	66	58	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	124	58	-	0	-	0
Stage 1	58	-	-	-	-	-
Stage 2	66	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	871	1008	0	-	-	0
Stage 1	965	-	0	-	-	0
Stage 2	957	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	871	1008	-	-	-	-
Mov Cap-2 Maneuver	871	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	957	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 1008	-
HCM Lane V/C Ratio	- 0.065	-
HCM Control Delay (s)	- 8.8	-
HCM Lane LOS	- A	-
HCM 95th %tile Q(veh)	- 0.2	-

**ESKAR, LLC**  
**PROPOSED TRANSPORTATION DEMAND MANAGEMENT PLAN**

Eskar, LLC proposes the following transportation demand management plan practices:

1. Onsite interior space provided for employee bicycle parking.
2. Additional onsite customer bike parking. See the site plan.
3. Subsidized employee public transit passes.
4. Temporary parking attendants during the initial opening phase to direct traffic into and out of the parking lot and to manage any exterior queues that may form.
5. Request that Town designate two parking spots on Broadway abutting the property as limited to ride-share vehicles only.
6. Publish public transportation information on the company website and in-store for customers.
7. Online sales of products, which will assist in parking space turnover.

**Eskar Arlington, LLC**  
9 Wildwood Road  
Middleton, Massachusetts 01949

June 24, 2020

Kentury Ventures, LLC  
21 Broadway  
Arlington, Massachusetts 02474  
Attention: Jimmy Chen

**RE: Parking at 23 Broadway, Arlington, MA (the "Leased Premises")  
Lease dated June 14, 2019 (the "Lease") between Kentury Ventures, LLC (the  
"Landlord") and Eskar Arlington, LLC, as assignee of Eskar, LLC (the "Tenant")**

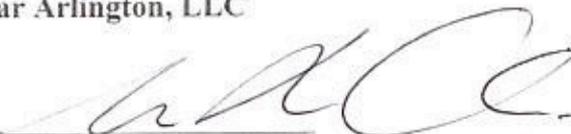
Dear Jimmy:

This letter will confirm that the Landlord has agreed to lease additional 8 parking spaces to Tenant in separate lease terms. There will be total of 12 parking spaces in addition to the previous 4 parking spaces included in the original 1<sup>st</sup> floor lease.

Please confirm the Landlord's agreement with the foregoing where set forth below.

Thank you.

**Eskar Arlington, LLC**

By:   
Michael Aldi  
Its: Manager

ACCEPTED AND AGREED:

**Kentury Ventures, LLC**

By:   
Its:



# EXHIBIT 1

**HOST COMMUNITY AGREEMENT FOR ADULT-USE  
RETAIL BETWEEN  
THE TOWN OF ARLINGTON  
AND ESKAR, LLC**

---

THIS HOST COMMUNITY AGREEMENT ("Agreement") is entered into pursuant to M.G.L. c.44, §53A this 24<sup>th</sup> day of June, 2019 by and between Eskar, LLC, a Massachusetts Limited Liability Corporation with a principal office address of 15 Forbes, Apt 2, Boston MA ("OPERATOR") and the TOWN OF ARLINGTON, a Massachusetts municipal corporation with a principal address of 730 Mass Ave., Arlington, MA 02476 ("TOWN").

WHEREAS, OPERATOR seeks to operate a Marijuana Retailer Establishment ("MRE"), as defined in M.G.L. c 94G, Section 1, for retail sales of marijuana and marijuana products in the TOWN at 19-23 Broadway, Unit 1F, ,Arlington, MA Massachusetts Avenue (the "Facility");

WHEREAS, OPERATOR and TOWN agree that if a Final License to operate is granted to OPERATOR by the Cannabis Control Commission ("CCC") the OPERATOR'S MRE, will impact TOWN Resources in ways unique to such businesses and will draw upon TOWN resources such as TOWN law enforcement, public health, inspectional, fire protection services as well as TOWN rights-of-way in a manner not shared by the general public and shall cause additional unanticipated impacts upon the TOWN; and

NOW, THEREFORE, in consideration of the above, OPERATOR offers and the TOWN accepts the following Agreement terms in accordance with M.G.L. ch.44 §53A:

1. OPERATOR shall pay to the TOWN 3% of the gross revenue received by OPERATOR from retail sales at the Facility accruing from the date of commencement of sales by OPERATOR in the TOWN ("Sales Commencement Date"). The initial payment to the TOWN shall be made on the first day of the seventh month after the

Sales Commencement Date ("Initial Payment Date"), and shall reflect gross revenue for the first quarter of sales. Thereafter payments shall be made every six months, and shall reflect the subsequent six month's sales, with the final three months payment remaining unpaid until three months after the termination of this Agreement. OPERATOR shall notify the TOWN when OPERATOR commences retail sales within the TOWN. OPERATOR's records maintained pursuant to 935 CMR 500.105(8) will be available to the TOWN upon request to verify OPERATOR's payment amounts. The TOWN may notify OPERATOR to delay the initial payment, in which case the initial payment shall be made as specified by the TOWN; however, the timing of subsequent payments shall be made as if the initial payment had been on the Initial Payment Date.

2. The purpose of this Agreement is to assist the TOWN in addressing any public health, safety and other effects or impacts the MRE may have on the TOWN. The TOWN shall use the above-referenced payments in its sole discretion consistent with the purpose of the Agreement.
3. OPERATOR agrees that it is required to obtain all local permits required pursuant to Massachusetts Law and the TOWN's Zoning Bylaws and Regulations. Provided the TOWN acts in accordance with the procedures set forth in G.L. c.44, §53G, OPERATOR shall be required to pay the reasonable costs for the employment by the TOWN's boards and/or officials of outside consultants, including without limitation, engineers, architects, scientists and attorneys required to review the application for such local permits required to operate the MRE.
4. At all times during the Term of this Agreement, property, both real and personal, owned or operated by OPERATOR shall be treated as taxable, and all applicable real estate and personal property taxes for that property shall be paid either directly by OPERATOR or by its landlord, and neither OPERATOR nor its landlord shall object or otherwise challenge the

taxability of such property and shall not seek a non-profit exemption from paying such taxes. Notwithstanding the foregoing, (i) if real or personal property owned, leased or operated by OPERATOR is determined to be non-taxable or partially non-taxable, or (ii) if the value of such property is abated with the effect of reducing or eliminating the tax which would otherwise be paid if assessed at fair cash value as defined in G.L. c. 59, §38, or (iii) if OPERATOR is determined to be entitled or subject to exemption with the effect of reducing or eliminating the tax which would otherwise be due if not so exempted, then OPERATOR shall pay to the TOWN an amount which when added to the taxes, if any, paid on such property, shall be equal to the taxes which would have been payable on such property at fair cash value and at the otherwise applicable tax rate, if there had been no abatement or exemption; this payment shall be in addition to the payments made by OPERATOR under Section 1 of this Agreement.

5. OPERATOR acknowledges that the TOWN has imposed a local sales tax upon the sale or transfer of marijuana or marijuana products by a marijuana retailer operating within the TOWN, pursuant to the provisions of G.L. c.64N. Accordingly OPERATOR, as required by applicable law, shall remit to the Massachusetts Department of Revenue the excise tax rate determined by the Commonwealth of Massachusetts for the sale of adult-use marijuana and adult-use marijuana-infused products, currently at 3.0% of gross annual sales. Pursuant to G.L. c.64N, §3, the excise taxes received by the Department of Revenue "shall at least quarterly be distributed, credited and paid [to the Town] by the state treasurer". Nothing herein shall limit the ability of the TOWN to adjust the local sales tax in the future, should the law be amended to allow for an increase in such allowable sales tax.
6. OPERATOR shall work with the Arlington Police Department in determining the placement of exterior security cameras, so that at least two cameras are located to provide an unobstructed view in each direction of the public way(s) on which the

MRE is located. OPERATOR will maintain a cooperative relationship with the Arlington Police Department, including but not limited to periodic meetings to review operational concerns, cooperation in investigations, and communication to Arlington Police Department of any suspicious activities on the site.

7. OPERATOR shall work with the Police Department to implement a comprehensive diversion prevention plan to prevent diversion, such plan to be in place prior to the commencement of operations at the Facility. Such plan shall include, but is not limited to:
  - a. training OPERATOR employees to be aware of, observe, and report any unusual behavior in authorized visitors or other OPERATOR employees that may indicate the potential for diversion; and
  - b. utilizing seed-to-sale tracking software to closely track all inventory at the Facility.
8. OPERATOR shall inform and advise the TOWN's Board of Health and Police Department of the results of all inspections, notices to cure, violations, and any other adverse findings by the CCC or other State regulatory authority.
9. Except for senior management positions, OPERATOR commits to hiring local, qualified employees to the extent consistent with law. In addition to the direct hiring, OPERATOR will work in a good faith, legal and non-discriminatory manner to hire local vendors, suppliers, contractors and builders from the Arlington area where possible.
10. The OPERATOR shall submit at least annual financial records to the TOWN on or before January 15 of each calendar year, with a certification of the Gross Sales for the respective year. The OPERATOR shall also submit to the TOWN copies of any

additional financial records that the OPERATOR is required to submit to the CCC.

11. The OPERATOR shall maintain its books, financial records, and other compilations of data pertaining to the requirements of this Agreement in accordance with standard accounting practices and any applicable regulations or guidelines of the CCC. All records shall be kept for a period of at least seven (7) years.
12. The term of this Agreement shall be for five (5) years from the date the MRE first opens to the public ("Term"). All payments required hereunder shall remain in effect for the duration of the term. At the conclusion of the term of this Agreement the parties shall renegotiate a new HCA in accordance with the current prevailing regulations and laws as they may be amended or replaced.
13. This Agreement shall terminate at the time that either of the following occur:
  - a. the TOWN notifies OPERATOR of the TOWN's termination of this Agreement for "cause", which shall be defined as a failure of the OPERATOR to adhere to the terms of this Agreement or Massachusetts and local laws, ordinances and regulations which is not cured within ten (10) days after written notice thereof;  
or
  - b. OPERATOR ceases to operate a MRE in the TOWN; OPERATOR shall provide notice to the City of the date of commencement of operations at least fourteen (14) days prior to such date.
14. In the event the OPERATOR longer does business in the TOWN or in any way loses or has its license revoked by the CCC, this Agreement shall become null and void; however the Company will be responsible for the prorated portion of the quarterly payment due under Section 1 above.
15. The obligations of OPERATOR and the TOWN recited herein are specifically

contingent upon the issuance by CCC to OPERATOR of a Final License for the operation of a MRE in the TOWN, and OPERATOR obtaining all required approvals from the TOWN for the OPERATOR to serve customers both from the New Location in Town.

16. OPERATOR shall not assign, sublet or otherwise transfer this Agreement, in whole or in part, without the prior written consent of the TOWN and shall not assign any of the moneys payable under this Agreement, except with the written consent of the TOWN, provided, however, that a pledge or assignment of assets, profits or receivables required in connection with financing the business by OPERATOR shall not be considered an assignment for the purposes of this paragraph.
17. This Agreement is binding upon the parties hereto, their successors, assigns and legal representatives. Neither the TOWN nor OPERATOR shall assign or transfer any interest in the Agreement without the written consent of the other.
18. OPERATOR shall comply with all laws, rules, regulations and orders applicable to the operation of an MRE, such provisions being incorporated herein by reference, and shall be responsible for obtaining all necessary licenses, permits, and approvals required for the operation of an MRE.
19. Any and all notices, or other communications required or permitted under this Agreement, shall be in writing and delivered by hand or mailed postage prepaid, return receipt requested, by registered or certified mail or by other reputable delivery service, to the parties at the addresses set forth on Page 1 or furnished from time to time in writing hereafter by one party to the other party. Any such notice or correspondence shall be deemed given when so delivered by hand, if so mailed, when deposited with the U.S. Postal Service, or if sent by private overnight or other

delivery service, when deposited with such delivery service.

20. If any term or condition of this Agreement or any application thereof shall to any extent be held invalid, illegal or unenforceable by the court of competent jurisdiction, the validity, legality, and enforceability of the remaining terms and conditions of this Agreement shall not be deemed affected thereby unless one or both parties would be substantially or materially prejudiced.
21. This Agreement shall be governed by, construed and enforced in accordance with the laws of the Commonwealth of Massachusetts and OPERATOR submits to the jurisdiction of the Trial Court for Middlesex County for the adjudication of disputes arising out of this Agreement.
22. This Agreement, including all documents incorporated herein by reference, constitutes the entire integrated Agreement between the parties with respect to the matters described. This Agreement supersedes all prior agreements, negotiations and representations, either written or oral, and it shall not be modified or amended except by a written document executed by the parties hereto.

TOWN OF ARLINGTON

ESKAR, LLC

By: 

Its: *Town Manager*

Dated: *June 26, 2019*

By: *Michael Hunnewell*

Its: *President*



Dated: *6/24/2019*

# EXHIBIT 2



CCC State Submission

Business Plan

# CONTENTS

---

Executive Summary .....	3
Products and Services .....	4
Team.....	5
Michael R. Hunnewell: Sales, Operations.....	5
Michael Aldi: Real Estate Holdings, Capital Management.....	5
Market Overview .....	6
North American Cannabis Market.....	6
Massachusetts Market Analysis .....	8
Mobilization Plan .....	11
Pre-Permit Rollout .....	11
Post-HCA Rollout .....	11
Store #1: Northbridge Overview .....	12
Northbridge.....	12
Proposed Hours of Operation Based on Town Zoning Laws: .....	12
Architectural Drawings .....	13
Population density .....	15
Stages of the Permitting Process.....	16
Financials .....	18
Store #2: Arlington Overview .....	20
Arlington .....	20
Proposed Hours Of Operation .....	20
Architectural Drawings .....	21
Stages of Permit Process .....	22
Population Density.....	24
Financials .....	25
Contact: .....	28

## EXECUTIVE SUMMARY

---

Eskar Arlington LLC and Eskar Northbridge LLC (herein collectively as "Eskar") is founded by Mr. Michael Hunnewell, a local Massachusetts resident with an education in biology and economics and over 15 years of experience running business development groups in high tech enterprises. Mr. Hunnewell ventured into this new and exciting field early to rezone over 26 acres of land in Northbridge, MA for cannabis production and sale. This is now one of the largest cannabis zones in the state. Just getting started, he has assembled a team of the brightest experts in cannabis cultivation, supply chain management, strain genetics, commercial real estate, and local government relations to create a small network of cannabis dispensaries across the state. Michael Aldi, the owner and operator of several high-end restaurants throughout the Greater Boston Area is a core team member assembled to tackle this task.

Currently, Eskar has been awarded a Host Community Agreement (HCA) for a retail permit in the towns of Northbridge, MA and Arlington, MA for Retail Marijuana Establishment locations. Looking ahead, the company has also identified other potential locations for their final recreational dispensary around the greater Boston area.

## PRODUCTS AND SERVICES

---

Eskar will provide various types of cannabis including; buds, oils, and various edible products. In order to reduce overhead costs, Eskar will focus on adult-use products only and will not at this time seek a license as Medical Marijuana Treatment Center. Unlike many of the commercial firms in the market already, Eskar doesn't plan to establish a large cultivation facility in the beginning. Instead, the retail stores will sell the bulk of their products from a variety of growers and vendors in the market. This is a radical departure compared to the traditional firms in the market today. Many of the large firms are vertically integrated, mostly selling the product they grow themselves. This severely limits the variety of options for the customer. This approach is effective in the early years of legalization since there are very few alternatives for the customer to go to. However, as time goes by, the consumer will become much more educated and have more options for stores to purchase their products from. Eskar plans to use product diversity as a selling point to the consumer.

## TEAM

---

### MICHAEL R. HUNNEWELL: SALES, OPERATIONS

---

Michael Hunnewell has over 10 years of government contracting expertise and over 15 years of experience in high tech, cutting-edge industries. In 2018 Mr. Hunnewell was able to rezone 26 acres of residential land in Northbridge, MA to industrial for cannabis use, making this one of the single largest pieces of cannabis real estate in the Commonwealth of Massachusetts. Prior to his work founding Eskar, Mr. Hunnewell worked in defense & aerospace, acquiring individual government contracts of over \$4M each alongside commercial orders earning over \$1M each. Mr. Hunnewell tripled shareholder value over a 3-year period for his firm while also opening up global distribution channels to increase sales. From his time in the defense sector, Mr. Hunnewell has garnered extensive experience in handling sensitive information and products. Metamagnetics, Mr. Hunnewell's previous employer, holds a SECRET level organization clearance and recently spent over \$100K in 2019 alone updating their security protocols. Mr. Hunnewell has also worked diligently with the firm's supplier group to make sure Metamagnetics was in compliance with defense manufacturing standards (i.e. ISO9000) and the firm is now an approved supplier to some of the largest defense firms in the world including Lockheed Martin and Raytheon. Mr. Hunnewell received his B.A. in biology from Boston College and his MBA from Northeastern University with a concentration in innovation for high tech industries. He attended graduate school on academic scholarship.

### MICHAEL ALDI: REAL ESTATE HOLDINGS, CAPITAL MANAGEMENT

---

Michael Aldi has over a decade of experience in both the real estate and hospitality industry. In his role as Eskar LLC's head of Real Estate Development and Investor Relations, Mr. Aldi is responsible for all the company's capital raising initiatives and site selection activities. Mr. Aldi is responsible for managing the preparation of complex financial forecasts in addition to conducting in-depth market research for the team's prospective locations. Mr. Aldi has experience in all facets of site selection, lease negotiation, general contracting/construction management, and capital structuring/financing. Mr. Aldi also has experience underwriting structuring opportunities for his family's portfolio of hospitality and real estate investments. Mike graduated from Suffolk University, with a B.A. in Communications and a Minor in Business Management.

## MARKET OVERVIEW

### NORTH AMERICAN CANNABIS MARKET

Although the federal government still considers the use of cannabis a criminal offence, more than half the states in the US have legalized marijuana in some form. Most states sell cannabis for medicinal purposes only, often broadly defined. However, states like Alaska, California, Colorado, Maine, Nevada, Massachusetts, Oregon, and Washington have gone further, legalizing the adult-use. Legal cannabis is more expensive than the black-market variety, but it is better value; three times more potent and only about 50% more expensive<sup>1</sup>.

Legal cannabis sales reached almost \$10 billion in North America in 2017, in a new report from cannabis industry analysts.<sup>2</sup> This represents an unprecedented 33% increase over 2016. The report further predicts the entire legal cannabis market to reach \$24.5 billion in sales – a 28% annual growth rate by 2021 – as more states legalize cannabis for adult-use and existing markets mature.

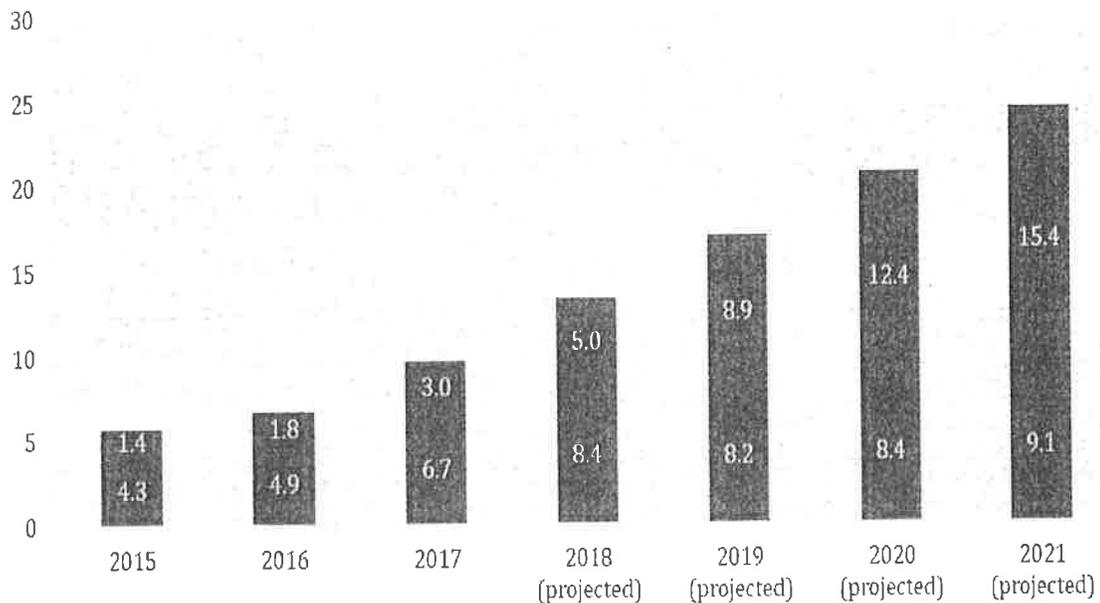


FIGURE 1. MEDICAL AND ADULT-USE CANNABIS SALES FORECAST,

<sup>1</sup> <http://www.economist.com/blogs/graphicdetail/2016/02/daily-chart-10>

<sup>2</sup> Arcview Market Research in partnership with BDS Analytics



overall market projection for legal adult-use and medical sales in North America to \$24.5 billion by 2021. That would bring the compound annual growth rate (CAGR) to 28%.

## MASSACHUSETTS MARKET ANALYSIS

Total cannabis spending worldwide is expected to hit \$57B by 2027, of which 67% of the market will come from recreational purchases.<sup>3</sup> In the U.S., firms are racing to establish themselves in the market with deep pockets from financial backing. The legal cannabis industry raised more than \$1 billion in funding in 2016, and *Marijuana Business Daily* estimated that there were 21,000–33,000 legal cannabis businesses operating in the U.S. last year.<sup>4</sup> Legalization in Massachusetts will open the door to 6.8 million people with a state GDP of \$507B.

In 2016, Massachusetts residents voted to legalize recreational cannabis. While cannabis is technically legal at the moment, recreational sales have been slow due to the severe delay in issuing permits for retail stores. Many local town governments/municipalities have voted to either ban or place a moratorium on recreation marijuana sales. This has led to less than 10 stores being open across the entire state in May 2019. This creates an opportunity for firms still looking to enter the market like Eskar. Those who can obtain the permit may be the only retailer within miles for customers, even in denser cities near Boston.



<sup>3</sup> <https://www.foESKARes.com/sites/thomaspellechia/2018/03/01/double-digit-billions-puts-north-america-in-the-worldwide-cannabis-market-lead/#24341c866510>

<sup>4</sup> <https://www.fungglobalretailtech.com/research/deep-dive-us-cannabis-economy-fast-growing-industry-facing-regulatory-concerns/>

FIGURE 3: MAP OF MASSACHUSETTS OUTLINING ZONING LAWS ON RECREATIONAL CANNABIS SALES BY TOWN. AS OF OCTOBER 31<sup>ST</sup>, 2018

2.4M voters in the state of Massachusetts voted in favor of legalization. If we assume those voters will become cannabis consumers, we start to understand just how large this market is. If these voters spend \$100 a month, well below the Colorado average, the Massachusetts market is estimated around \$2.8B. If the average consumer spends \$175 a month, the market balloons to \$5B.

To help speed the implementation of recreational cannabis across the state, the Cannabis Control Commission (CCC) released guidelines and regulations for local municipalities to implement in their respective towns. One of the guidelines was to regulate the number of cannabis stores each town should have. The CCC reaffirmed the statutory requirement that the number of cannabis stores should be "20% the number of liquor stores." This puts tremendous leverage in cannabis retailer's hands. Below is a table of the average number of customers a liquor store has in various states across the US.

**LIQUOR STORE DENSITY COMPARISON**

**OTA STATE LIQUOR RETAIL DATA**

State	Population	Quota Per Capita	Stores	Pop Per Store
Alaska	731,449	1/3000	101	7242
Arizona	6,553,255	varies locally	1466	4470
Arkansas	2,949,131	1/4000	318	9274
California	38,041,430	1/2500	13806	2755
Florida	19,317,568	1/7500	1367	14131
Indiana	6,537,334	1/3500	359	18210
Kentucky	4,380,415	1/2300	914	4793
<b>Massachusetts</b>	<b>6,646,144</b>	<b>1/2000</b>	<b>1900</b>	<b>3498</b>
Michigan	9,883,360	1/3000	1581	6251
Montana	1,005,141	1/1500	96	10470
New Jersey	8,864,590	1/3000	2260	3922
New Mexico	2,085,538	1/2000	95	21953
Ohio	11,544,225	varies locally	837	13792
Pennsylvania	12,763,536	1/3000	600	21273
South Dakota	833,354	1/1500	75	11111
Utah	2,855,287	1/4925	144	19828
Washington	6,897,012	1/1200	1400	4926
Wyoming	576,412	1/3000	100	5764
<b>Average</b>				<b>10204</b>

FIGURE 4: ABOVE IS A TABLE OF THE AVERAGE CUSTOMER BASE FOR A LIQUOR STORE BY STATE. DATA PROVIDED BY MARATHON STRATEGIES.

Per the chart, the average population per liquor store in Massachusetts is 3,498. Due to the 20% store limit for cannabis shops, we can assume the average cannabis retail location will have access to a population of 20,000 people. This doesn't even take into consideration the fact that many towns across the state have ban cannabis sales in their town. Combined with an influx of tourists from other states nearby where cannabis is illegal, the population could climb to 40,000. With online delivery illegal right now, the retail locations hold the majority of access to the market. This is why Eskar's focus will be on gaining retail permits.

## MOBILIZATION PLAN

---

### PRE-PERMIT ROLLOUT

---

Eskar is well under way to attain all of the prerequisites for retail permits in Massachusetts. It estimates that by April 2020 it will have approval by the Massachusetts Cannabis Control for its first retail dispensary, approval for the processing permit, and their 2<sup>nd</sup> & 3<sup>rd</sup> retail locations should be complete by June 2020.

Before Eskar can apply for their permits they must complete the following steps:

1. Control of real estate for its intended use
2. Confirm property meets the town zoning requirements
  - a. Achieve variances if the property fails the zoning requirements
3. Confirm location has the support of the local municipality
4. Letter of Intent from property manager where the firm seeks to operate
5. Host community forum
6. Sign Community Host Agreement
7. Finish confirmation of compliance with local zoning (Special permit if needed)
8. Finish state submission packet

Steps 1-4 don't necessarily happen in chronological order. It should also be noted Step 6 is the most critical step in this process. The host community agreement (HCA) is a document in which the town and marijuana business outline the terms and payments the business needs to uphold if it wishes to operate in the town. This may be in the form of a 3% sales tax, which goes directly to the town, or an agreement to operate within certain business hours. Upon signing the document, the business may start the permitting process with the state for their license. The town will not sign more HCAs than it plans to issue permits. This means once an HCA is obtained, the business has a high probability of obtaining a permit.

### POST-HCA ROLLOUT

---

As permits are approved by the Cannabis Control Commission, Eskar will then begin the detail, design, and engineering for the retail locations. The engineering and design timeline will take 90 days to prepare all the required documents for permitting. The permitting approval process for towns like of Northbridge and Boston is estimated to take another 90 days once the permit applications are submitted. Arlington's special permit process is different from most towns in

Massachusetts. However, the town has provided guidance stating Eskar should expect to wait about 1 year before opening its door if it is selected to move forward with the permitting process.

**STORE #1: NORTHBRIDGE OVERVIEW**

---

**NORTHBRIDGE**

---

Northbridge has an HCA for a 5,000 sq ft property at 200 Commerce Drive, Northbridge, MA. The population of Northbridge is 17,000, but the location is along Providence Highway, a major thru road where other towns travel to Northbridge's shopping center located just down the street from the site. A local traffic study estimates the roadway sees an estimated 15,000 people a day. The new building will have at least 20 designated spaces along with on street parking up and down the roadway. The property owner of the industrial park has also been approved for several additional expansion and plans to add additional stores to the lot making the area a major destination for locals. Northbridge also abuts Sutton, a town which has voted to ban cannabis sales. The town will be issuing only 2 retail permits of which. The other retail firm was approved for an HCA at the beginning of March 2019. They will be located on the opposite side of town and will therefore pull from a different client base.

**PROPOSED HOURS OF OPERATION BASED ON TOWN ZONING LAWS:**

---

- Monday: 8am-10pm
- Tuesday: 8am-10pm
- Wednesday: 8am-10pm
- Thursday: 8am-10pm
- Friday: 8am-10pm
- Saturday: 8am-10pm
- Sunday: 10am-10pm

# ARCHITECTURAL DRAWINGS

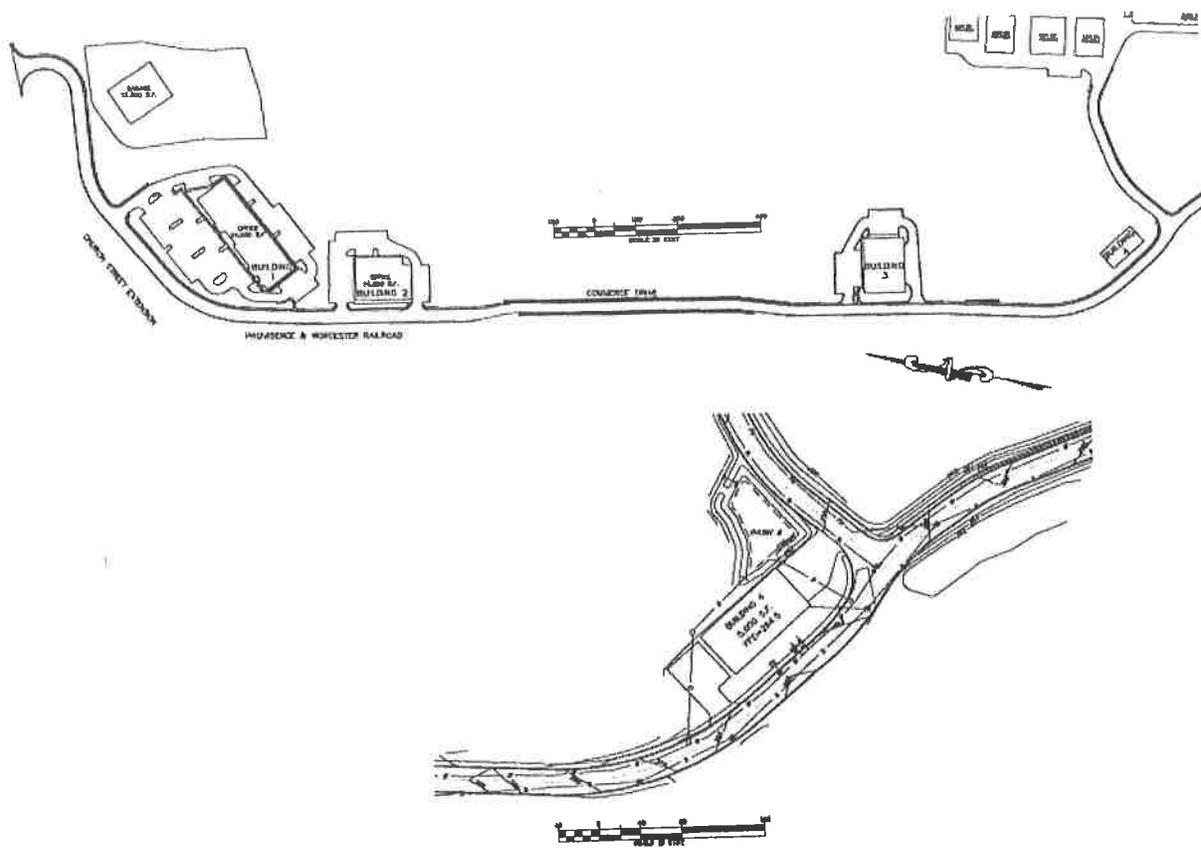


FIGURE 5: LOCATION OF THE RECREATIONAL MARIJUANA FACILITY (BUILDING 4) IN THE OSTERMAN COMMERCE PARK.

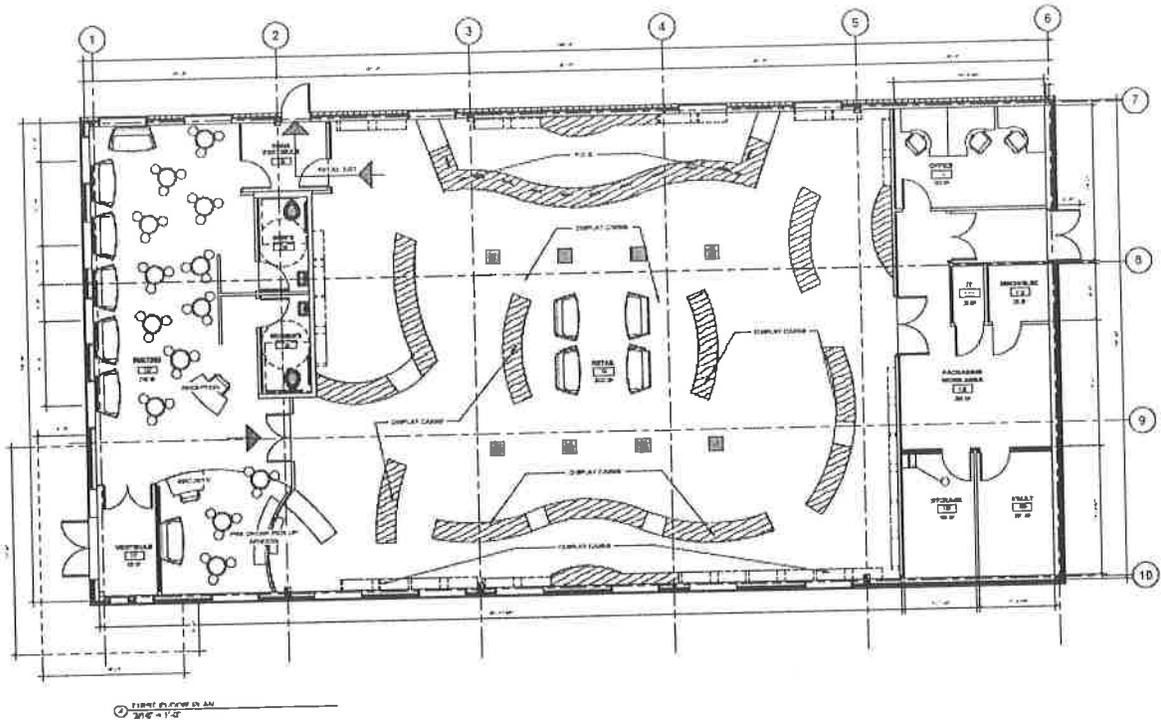
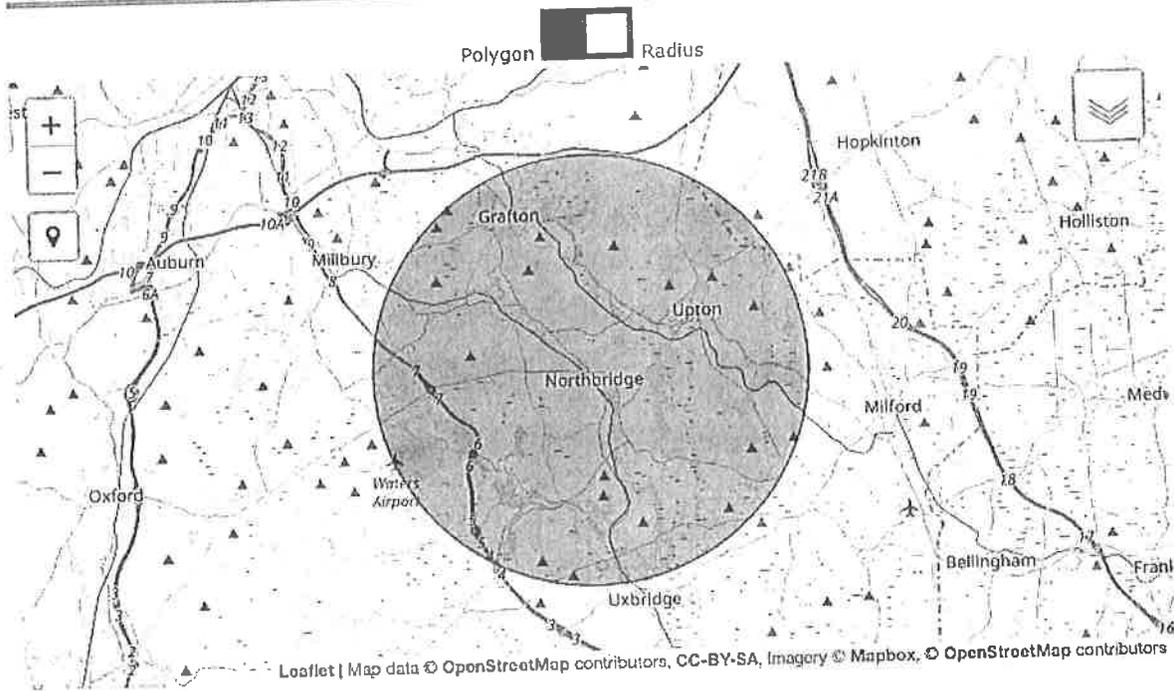


FIGURE 6: STORE LAYOUT OF NORTHBRIDGE FACILITY. 3,000 SQ FEET OF RETAIL SPACE WITH A LARGE DEDICATED BACKOFFICE AND STORAGE FOR STAFF TO MANAGE OPERATIONS BOTH AT THE NORTHBRIDGE AND ARLINGTON SITE.

# POPULATION DENSITY

## Population Inside a Area Search Map



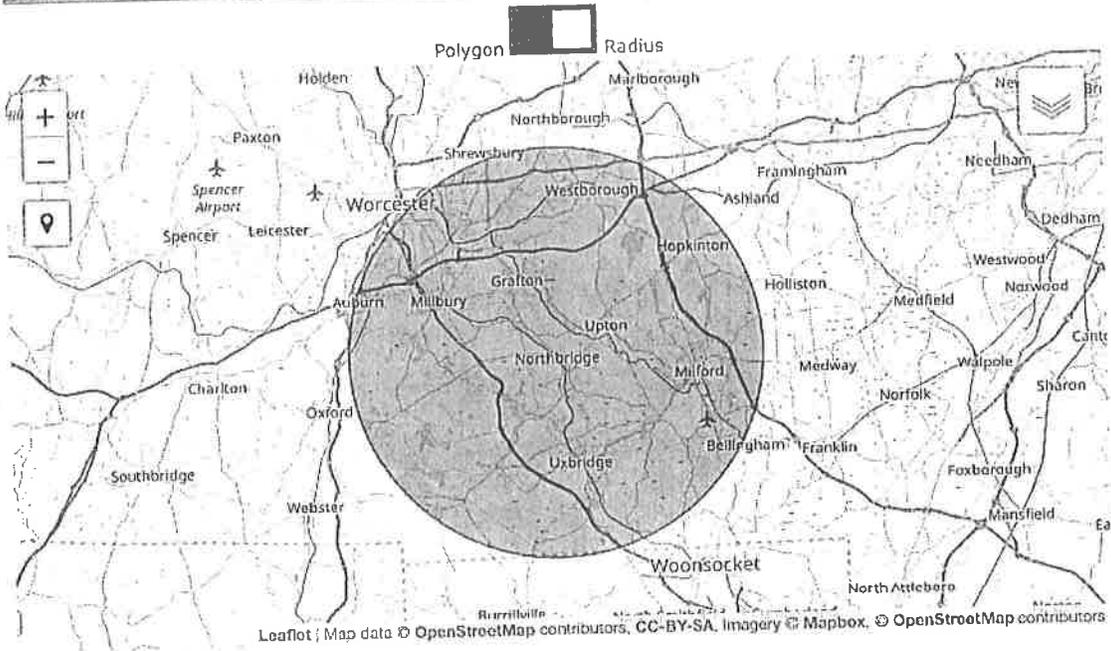
### Input

Add Radius manually : Radius  km OR  miles Location :

### Output

The estimated population in the defined area is 39,356

## Population Inside a Area Search Map



### Input

Add Radius manually : Radius  km OR  miles Location :

### Output

The estimated population in the defined area is 203,352

## STAGES OF THE PERMITTING PROCESS

Part of Process	Completed
Control of Property	X
Confirmed Approved Zoning	X
Local Municipality Approval	X
Signed LOI	X
Host Community Forum	X
Sign Community Host Agreement	X
Obtain Special Permit	

State Application Complete	
----------------------------	--

# FINANCIALS

## Northbridge Profit & Loss Forecast (6 Years)

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
	Total	% of Income	Total	% of Income	Total	% of Income	Total	% of Income	Total	% of Income	Total	% of Income
<b>Income</b>												
Flowers	-		4,896,000	51.0%	5,042,880	51.0%	5,194,166	51.0%	5,349,991	51.0%	5,510,491	51.0%
Concentrates	-		2,736,000	28.5%	2,818,680	28.5%	2,902,622	28.5%	2,989,701	28.5%	3,079,392	28.5%
Edibles	-		1,200,000	12.5%	1,236,000	12.5%	1,273,080	12.5%	1,311,272	12.5%	1,350,611	12.5%
Topicals	-		768,000	8.0%	791,640	8.0%	818,771	8.0%	839,214	8.0%	864,391	8.0%
Gross Sales	-		<b>9,600,000</b>	<b>100.0%</b>	<b>9,888,000</b>	<b>100.0%</b>	<b>10,184,640</b>	<b>100.0%</b>	<b>10,490,179</b>	<b>100.0%</b>	<b>10,804,885</b>	<b>100.0%</b>
Discounts (10-15%)	-		(960,000)	-10.0%	(988,800)	-10.0%	(1,018,464)	-10.0%	(1,049,018)	-10.0%	(1,080,488)	-10.0%
Net Sales	-		<b>8,640,000</b>		<b>8,899,200</b>		<b>9,166,176</b>		<b>9,441,161</b>		<b>9,724,396</b>	
<b>Cost of Goods Sold</b>												
Flowers	-		2,232,360	23.3%	2,299,269	23.3%	2,368,247	23.3%	2,439,295	23.3%	2,512,473	23.3%
Concentrates	-		1,485,305	15.5%	1,529,864	15.5%	1,575,760	15.5%	1,623,033	15.5%	1,671,724	15.5%
Edibles	-		531,829	5.4%	537,483	5.4%	553,608	5.4%	570,216	5.4%	587,323	5.4%
Topicals	-		441,600	4.6%	454,848	4.6%	468,493	4.6%	482,548	4.6%	497,625	4.6%
Accessories	-		5,000		5,150		5,305		5,464		5,628	
Accessories	-		290,000	3.0%	298,700	3.0%	307,661	3.0%	316,891	3.0%	326,398	3.0%
COGS OH Allocation	-		4,976,034	51.8%	5,120,165	51.8%	5,273,778	51.8%	5,431,983	51.8%	5,594,962	51.8%
Total Cost of Goods Sold	-		<b>4,976,034</b>	<b>51.8%</b>	<b>5,120,165</b>	<b>51.8%</b>	<b>5,273,778</b>	<b>51.8%</b>	<b>5,431,983</b>	<b>51.8%</b>	<b>5,594,962</b>	<b>51.8%</b>
Total Cost of Goods Sold	-		<b>3,663,966</b>	<b>38.2%</b>	<b>3,779,035</b>	<b>38.2%</b>	<b>3,892,406</b>	<b>38.2%</b>	<b>4,009,178</b>	<b>38.2%</b>	<b>4,129,454</b>	<b>38.2%</b>
<b>Gross Profit</b>												
<b>Expenses</b>												
<b>Fixed Expenses</b>												
Overhead expense allocation to COGS	-		(290,000)	-3.0%	(295,600)	-3.0%	(301,716)	-3.0%	(307,750)	-2.9%	(313,905)	-2.9%
<b>Insurance Expenses</b>												
Health	-		-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Liability	-		40,000	0.4%	40,800	0.4%	41,616	0.4%	42,448	0.4%	43,297	0.4%
Workers Comp	-		15,000	0.2%	15,300	0.2%	15,600	0.2%	15,918	0.2%	16,236	0.2%
Total Insurance Expense	-		<b>55,000</b>	<b>0.6%</b>	<b>56,100</b>	<b>0.6%</b>	<b>57,216</b>	<b>0.6%</b>	<b>58,366</b>	<b>0.6%</b>	<b>59,534</b>	<b>0.6%</b>
<b>Payroll Expenses</b>												
Disposatory Team	91,667		550,000	5.7%	566,500	5.7%	583,495	5.7%	601,000	5.7%	619,030	5.7%
Discretionary Bonus	-		10,000	0.1%	10,300	0.1%	10,609	0.1%	10,927	0.1%	11,255	0.1%
Dispensary Management	37,500		225,000	2.3%	231,750	2.3%	238,703	2.3%	245,864	2.3%	253,239	2.3%
Payroll Taxes	10,333		62,800	0.7%	64,684	0.7%	66,625	0.7%	68,623	0.7%	70,679	0.7%
Management Fee	150,000		150,000	1.6%	154,500	1.6%	159,135	1.6%	163,909	1.6%	168,826	1.6%
Total Payroll Expenses	289,500		<b>997,800</b>	<b>10.4%</b>	<b>1,027,734</b>	<b>10.4%</b>	<b>1,059,560</b>	<b>10.4%</b>	<b>1,098,233</b>	<b>10.4%</b>	<b>1,133,033</b>	<b>10.4%</b>
Rent Expense	65,000		65,000	0.7%	66,950	0.7%	68,959	0.7%	71,027	0.7%	73,156	0.7%
CAM/ Real Estate Taxes	32,060		32,060	0.2%	32,722	0.2%	33,403	0.2%	34,106	0.2%	34,829	0.2%
Total Rent Expenses	87,060		<b>87,060</b>	<b>0.9%</b>	<b>89,672</b>	<b>0.9%</b>	<b>92,362</b>	<b>0.9%</b>	<b>95,133</b>	<b>0.9%</b>	<b>97,987</b>	<b>0.9%</b>
<b>Utilities</b>												
Cable	1,000		6,000	0.1%	6,180	0.1%	6,365	0.1%	6,556	0.1%	6,753	0.1%
Electric	2,500		15,000	0.2%	15,450	0.2%	15,914	0.2%	16,391	0.2%	16,883	0.2%
Gas	2,500		15,000	0.2%	15,450	0.2%	15,914	0.2%	16,391	0.2%	16,883	0.2%
Water	1,667		10,000	0.1%	10,300	0.1%	10,609	0.1%	10,927	0.1%	11,255	0.1%
Total Utilities	7,667		<b>46,000</b>	<b>0.5%</b>	<b>47,380</b>	<b>0.5%</b>	<b>48,801</b>	<b>0.5%</b>	<b>50,265</b>	<b>0.5%</b>	<b>51,773</b>	<b>0.5%</b>
Total Fixed Expenses	384,127		<b>895,660</b>	<b>9.3%</b>	<b>925,086</b>	<b>9.4%</b>	<b>955,255</b>	<b>9.4%</b>	<b>986,337</b>	<b>9.4%</b>	<b>1,018,431</b>	<b>9.4%</b>
<b>Variable Expenses</b>												
Advertising/PR	35,000		25,000	0.3%	25,750	0.3%	26,523	0.3%	27,318	0.3%	28,138	0.3%
Bank Service Charges	-		5,000	0.1%	5,150	0.1%	5,305	0.1%	5,464	0.1%	5,628	0.1%
Counter Supplies	-		-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Cleaning	2,000		25,000	0.3%	25,750	0.3%	26,523	0.3%	27,318	0.3%	28,138	0.3%
CPUI & Internet	15,000		5,000	0.1%	5,150	0.1%	5,305	0.1%	5,464	0.1%	5,628	0.1%
Charitable Contributions	-		10,000	0.1%	10,300	0.1%	10,609	0.1%	10,927	0.1%	11,255	0.1%
Dues & Subscriptions	2,000		2,000	0.0%	2,060	0.0%	2,122	0.0%	2,185	0.0%	2,251	0.0%
Equipment Rental	-		-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Legal & Accounting	50,000		10,000	0.1%	10,300	0.1%	10,609	0.1%	10,927	0.1%	11,255	0.1%
Licenses & Permits	5,000		5,000	0.1%	5,150	0.1%	5,305	0.1%	5,464	0.1%	5,628	0.1%
Office Supplies	6,000		6,000	0.1%	6,180	0.1%	6,365	0.1%	6,556	0.1%	6,753	0.1%
Payroll Fees	400		2,400	0.0%	2,472	0.0%	2,548	0.0%	2,623	0.0%	2,701	0.0%
Printing & Production	15,000		15,000	0.2%	15,450	0.2%	15,914	0.2%	16,391	0.2%	16,883	0.2%
Professional Fees	30,000		10,000	0.1%	10,300	0.1%	10,609	0.1%	10,927	0.1%	11,255	0.1%
Repairs & Maintenance	-		20,000	0.2%	20,600	0.2%	21,218	0.2%	21,855	0.2%	22,510	0.2%
Supplies/Packaging	-		-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Security	20,000		60,000	0.6%	61,800	0.6%	63,654	0.6%	65,564	0.6%	67,531	0.6%
Training	15,000		5,000	0.1%	5,150	0.1%	5,305	0.1%	5,464	0.1%	5,628	0.1%
Trash Removal	5,000		15,000	0.2%	15,450	0.2%	15,914	0.2%	16,391	0.2%	16,883	0.2%
Uniforms	7,000		3,000	0.1%	3,150	0.1%	3,305	0.1%	3,464	0.1%	3,628	0.1%
Total Variable Expenses	263,400		<b>225,400</b>	<b>2.3%</b>	<b>232,162</b>	<b>2.3%</b>	<b>239,127</b>	<b>2.3%</b>	<b>246,301</b>	<b>2.3%</b>	<b>253,690</b>	<b>2.3%</b>
Total Expenses	587,627		<b>1,121,060</b>	<b>11.7%</b>	<b>1,157,248</b>	<b>11.7%</b>	<b>1,194,382</b>	<b>11.7%</b>	<b>1,232,638</b>	<b>11.8%</b>	<b>1,271,121</b>	<b>11.8%</b>
<b>Net Operating Income</b>	<b>(587,627)</b>		<b>2,543,706</b>	<b>26.5%</b>	<b>3,021,117</b>	<b>26.5%</b>	<b>3,699,844</b>	<b>26.5%</b>	<b>4,411,927</b>	<b>26.5%</b>	<b>5,253,433</b>	<b>26.4%</b>
Federal tax (21%)	-		769,433		793,597		817,405		841,927		867,185	
Mass excise tax (10%)	-		864,000		889,920		916,618		944,116		972,440	
Mass sales tax (7%)	-		604,800		622,944		641,632		660,881		680,708	
Mass health community tax (3%)	-		259,200		266,976		274,985		283,235		291,732	
Sales Taxes Collected (20%)	-		(1,728,000)		(1,770,840)		(1,813,255)		(1,858,222)		(1,904,879)	
Business Income Tax	-		769,433		793,597		817,405		841,927		867,185	
Free Cash AFTER TAX for Distribution	(587,627)		<b>1,773,273</b>	<b>18%</b>	<b>1,828,195</b>	<b>18%</b>	<b>1,980,639</b>	<b>18%</b>	<b>1,934,611</b>	<b>18%</b>	<b>1,990,57</b>	<b>18%</b>

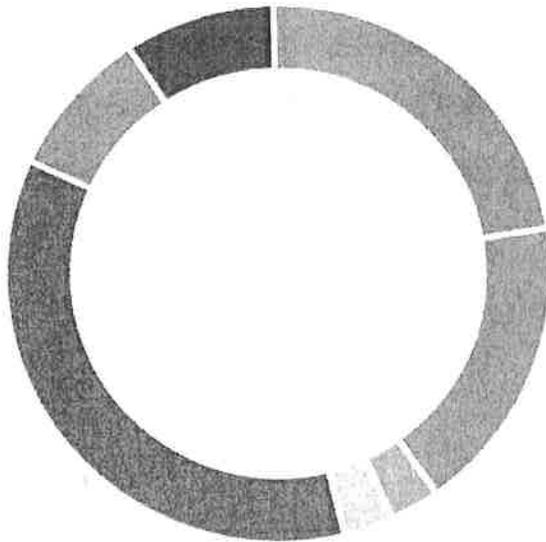
5 year cash return  
Original Investment 8,819,245  
Gain 1,500,500  
IRR 7.8%

## SOURCES AND USES

Funding Sources		
Investor Group Capital	\$	1,500,000
<b>Total Sources</b>	<b>\$</b>	<b>1,500,000</b>

Uses		
1. Build-out	\$	380,000
2. Furniture, Fixtures & Equip.	\$	300,000
3. Soft Costs/ Licenses	\$	50,000
4. Professional Fees	\$	50,000
5. Operating Capital/Payroll	\$	600,000
6. Management Fee	\$	150,000
7. Contingency	\$	150,000*
<b>Total Uses</b>	<b>\$</b>	<b>1,680,000</b>
Original	\$	1,500,000

\*Encompasses construction contingency as well as unforeseen apex



- 1. Build-out
- 2. Furniture, Fixtures & Equip.
- 3. Soft Costs/ Licenses
- 4. Professional Fees
- 5. Operating Capital/Payroll
- 6. Management Fee
- 7. Contingency

## STORE #2: ARLINGTON OVERVIEW

---

### ARLINGTON

---

Arlington has an HCA for a 3,000 sq ft property at 21 Broadway in Arlington, MA. Located just outside the city of Boston, the population of Arlington is 42,000. 21 Broadway is conveniently located on the Somerville town line. Currently only 2 stores are approved to operate in the town, but the town will allow one more vendor to open once they find a proper location. The other approved firm is located at Arlington Heights on the other side of town.

### PROPOSED HOURS OF OPERATION

---

\*Arlington special permits do not propose set hours like other towns. The final proposed hours of the business will not be decided until permitting with the town is complete. These hours are based on hours taken from the liquor stores in the town.

Monday: 9am-9pm  
Tuesday: 9am-9pm  
Wednesday: 9am-9pm  
Thursday: 9am-9pm  
Friday: 9am-9pm  
Saturday: 9am-9pm  
Sunday: 10am-7pm

# ARCHITECTURAL DRAWINGS

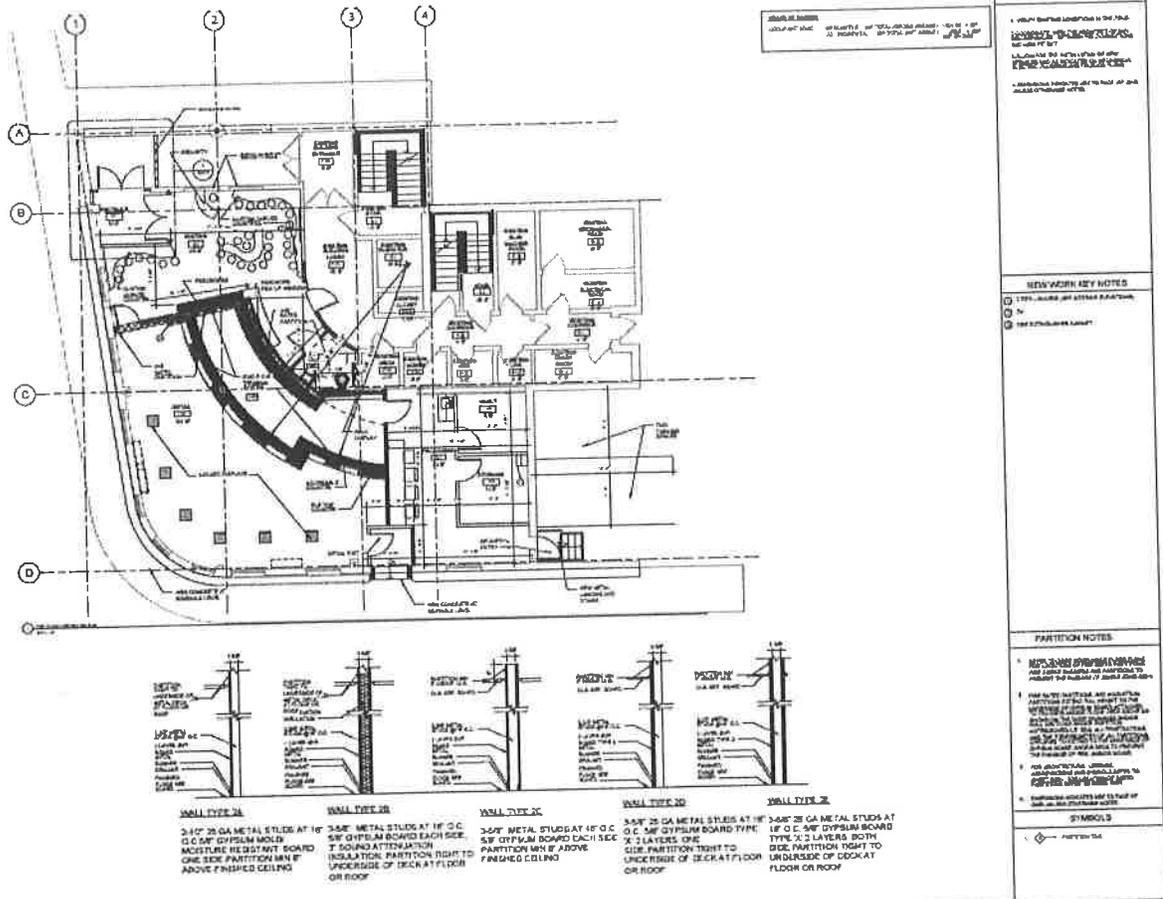


FIGURE 7: FLOOR DESIGN FOR ARLINGTON STORE. THOUGH THE SPACE IS A LITTLE OVER 2,000 SQ. FT. THE HOLDING ROOM ALLOWS THE MAXIMUM CAPACITY TO FOR THE STORE TO INCREASE TO OVER 80 PEOPLE. THIS HELPS PREVENT LONG LINES OUTSIDE THE BUILDING AND IMPROVES THE CUSTOMER EXPERIENCE.

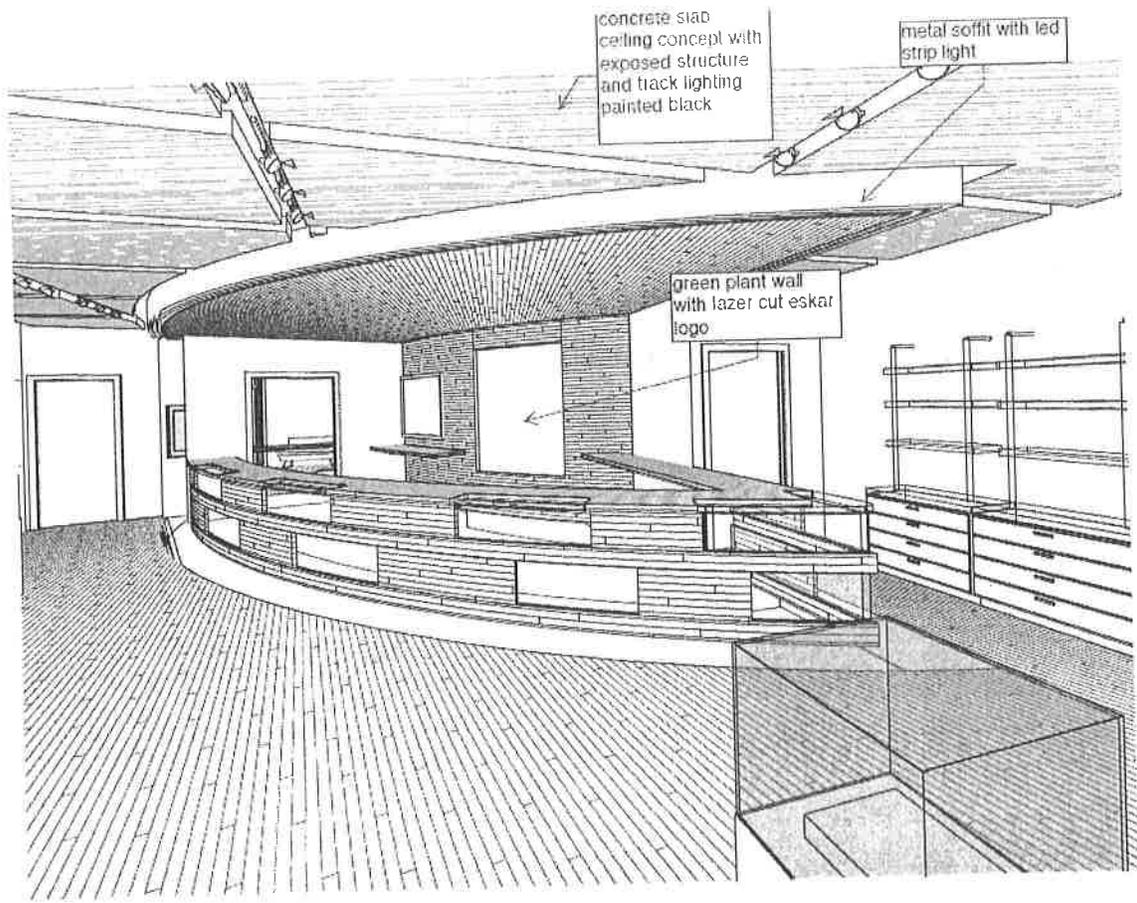


FIGURE 8: EXAMPLE OF STORE DESIGN. WOOD PANELING WILL COVER THE WALLS AND FLOOR GIVING THE STORE A MORE ORGANIC FEEL. THE CEILING WILL BE A CONCRETE SLAB DESIGN WHICH COMPLIMENTS THE WOOD PANELING.

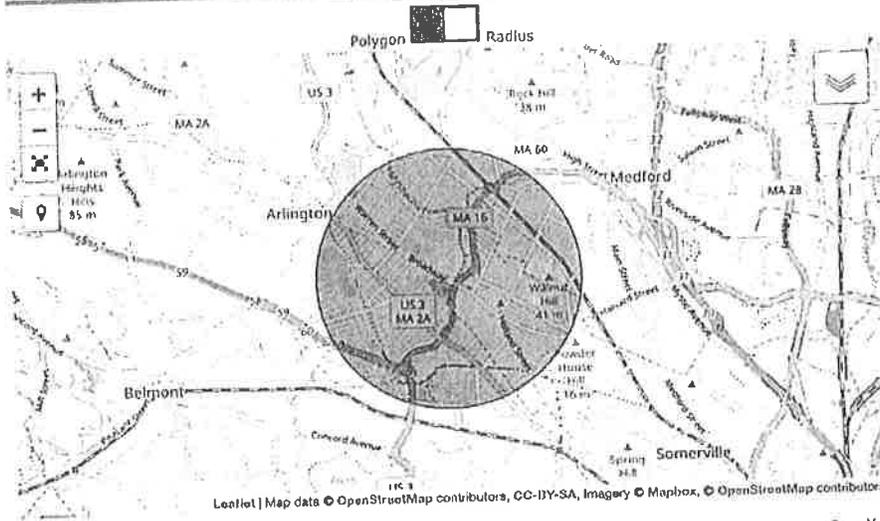
### STAGES OF PERMIT PROCESS

Part of Process	Completed
Control of Property	X
Confirmed Approved Zoning	X
Local Municipality Approval	X
Signed LOI	X
Host Community Forum	X
Sign Community Host Agreement	X
Obtain Special Permit	

State Application Complete	
----------------------------	--

# POPULATION DENSITY

## Population Inside a Area Search Map



### 1 | PCI DSS Best Practices

Recommended for: CIOs, CSOs, IT managers, compliance managers and PCI auditors Tufin

### 2 | Get Earth & 360° View Maps Now - Enter Location For Earth Maps.

Enter Any Location. Get the MyEarthMap App. Get Earth & Satellite 360° Maps Now. myearthmaps.net

### Input

Add Radius manually : Radius 1.6093 km OR 1.00 miles Location : Search...

### Output

The estimated population in the defined area is 61,250

# FINANCIALS

Profit & Loss Forecast (5 Years)

	Year 1		Year 2		Year 3		Year 4		Year 5	
	Total	% of Income	Total	% of Income	Total	% of Income	Total	% of Income	Total	% of Income
<b>Income</b>										
Flowers	\$ 9,408,512	64.0%	\$ 9,690,767	64.0%	\$ 9,981,490	64.0%	\$ 10,290,035	64.0%	\$ 10,589,363	64.0%
Concentrates	\$ 1,495,712	26.5%	\$ 1,462,583	26.5%	\$ 1,432,961	26.5%	\$ 1,426,950	26.5%	\$ 1,384,658	26.5%
Edibles	\$ 1,249,568	8.5%	\$ 1,287,055	8.5%	\$ 1,325,667	8.5%	\$ 1,365,137	8.5%	\$ 1,406,300	8.5%
Topicals	\$ 147,008	1.0%	\$ 151,118	1.0%	\$ 155,961	1.0%	\$ 160,640	1.0%	\$ 165,459	1.0%
	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%
<b>Gross Sales</b>	\$ 14,700,800	100.0%	\$ 15,141,824	100.0%	\$ 15,596,079	100.0%	\$ 16,063,761	100.0%	\$ 16,545,880	100.0%
Discounts (10-15%)			(1,470,000)	-10.0%	(1,514,142)	-10.0%	(1,559,608)	-10.0%	(1,606,366)	-10.0%
<b>Net Sales</b>			\$ 13,230,720		\$ 13,627,642		\$ 14,036,471		\$ 14,455,565	
<b>Cost of Goods Sold</b>			\$ 4,317,945	29.1%	\$ 4,447,484	29.1%	\$ 4,510,968	29.4%	\$ 4,718,335	29.4%
Flowers	\$ -		\$ 2,132,799	14.5%	\$ 2,197,803	14.5%	\$ 2,263,738	14.5%	\$ 2,331,650	14.5%
Concentrates	\$ -		\$ 512,428	3.5%	\$ 527,801	3.5%	\$ 543,635	3.5%	\$ 559,944	3.5%
Edibles	\$ -		\$ 66,154	0.5%	\$ 68,138	0.5%	\$ 70,182	0.5%	\$ 72,288	0.5%
Topicals	\$ -		\$ 7,500	0.1%	\$ 7,725	0.1%	\$ 7,957	0.1%	\$ 8,195	0.1%
Accessories	\$ -		\$ (430,000)	-2.9%	\$ (438,600)	-2.9%	\$ (447,322)	-2.9%	\$ (456,319)	-2.8%
CGGS OH Allocation	\$ -		\$ 6,697,817	44.9%	\$ 6,810,351	45.0%	\$ 7,019,048	45.0%	\$ 7,234,093	45.0%
<b>Total Cost of Goods Sold</b>	\$ -		\$ 6,607,817	44.9%	\$ 6,810,351	45.0%	\$ 7,019,048	45.0%	\$ 7,234,093	45.0%
<b>Total Cost of Goods Sold</b>	\$ -		\$ 6,607,817	44.9%	\$ 6,810,351	45.0%	\$ 7,019,048	45.0%	\$ 7,234,093	45.0%
<b>Gross Profit</b>	\$ -		\$ 8,092,983	55.1%	\$ 8,231,473	55.0%	\$ 8,577,051	55.0%	\$ 8,820,868	55.0%
<b>Expenses</b>										
<b>Fixed Expenses</b>										
Overhead expense allocation to COGS			(130,000)	-2.9%	(138,600)	-2.9%	(147,322)	-2.9%	(156,319)	-2.8%
<b>Insurance Expense</b>										
Health	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%
Liability	\$ 40,000	0.3%	\$ 40,800	0.3%	\$ 41,610	0.3%	\$ 42,448	0.3%	\$ 43,297	0.3%
Workers Comp	\$ 20,000	0.1%	\$ 20,400	0.1%	\$ 20,800	0.1%	\$ 21,221	0.1%	\$ 21,649	0.1%
<b>Total Insurance Expense</b>	\$ 60,000	0.4%	\$ 61,200	0.4%	\$ 62,424	0.4%	\$ 63,672	0.4%	\$ 64,946	0.4%
<b>Payroll Expenses</b>										
Disposatory Team	\$ 116,667	0.8%	\$ 121,000	0.8%	\$ 124,620	0.8%	\$ 128,509	0.8%	\$ 132,516	0.8%
Disposatory Bonus	\$ 20,000	0.1%	\$ 20,600	0.1%	\$ 21,210	0.1%	\$ 21,855	0.1%	\$ 22,510	0.1%
Disposatory Management	\$ 350,000	2.4%	\$ 360,500	2.4%	\$ 371,315	2.4%	\$ 382,454	2.4%	\$ 393,928	2.4%
Payroll Taxes	\$ 58,333	0.4%	\$ 60,168	0.4%	\$ 62,043	0.4%	\$ 63,957	0.4%	\$ 65,910	0.4%
Management Fee	\$ 14,006	0.1%	\$ 14,406	0.1%	\$ 14,813	0.1%	\$ 15,227	0.1%	\$ 15,646	0.1%
<b>Total Payroll Expenses</b>	\$ 173,000	1.2%	\$ 180,250	1.2%	\$ 188,688	1.2%	\$ 197,277	1.2%	\$ 206,020	1.2%
<b>Rent Expense</b>	\$ 90,000	0.6%	\$ 92,700	0.6%	\$ 95,484	0.6%	\$ 98,345	0.6%	\$ 101,296	0.6%
CAM/ Real Estate Taxes	\$ 22,000	0.2%	\$ 22,722	0.2%	\$ 23,463	0.2%	\$ 24,226	0.2%	\$ 25,010	0.2%
<b>Total Rent Expense</b>	\$ 112,000	0.8%	\$ 115,422	0.8%	\$ 118,947	0.8%	\$ 122,571	0.8%	\$ 126,306	0.8%
<b>Utilities</b>										
Cable	\$ 1,000	0.0%	\$ 1,000	0.0%	\$ 1,000	0.0%	\$ 1,000	0.0%	\$ 1,000	0.0%
Elastic	\$ 2,500	0.0%	\$ 2,500	0.0%	\$ 2,500	0.0%	\$ 2,500	0.0%	\$ 2,500	0.0%
Gas	\$ 2,500	0.0%	\$ 2,500	0.0%	\$ 2,500	0.0%	\$ 2,500	0.0%	\$ 2,500	0.0%
Water	\$ 1,667	0.0%	\$ 1,667	0.0%	\$ 1,667	0.0%	\$ 1,667	0.0%	\$ 1,667	0.0%
<b>Total Utilities</b>	\$ 7,667	0.0%	\$ 7,667	0.0%	\$ 7,667	0.0%	\$ 7,667	0.0%	\$ 7,667	0.0%
<b>Total Fixed Expenses</b>	\$ 483,727	3.6%	\$ 497,920	3.6%	\$ 512,611	3.6%	\$ 527,814	3.6%	\$ 543,432	3.6%
<b>Variable Expenses</b>										
Advertising/PR	\$ 35,000	0.2%	\$ 35,750	0.2%	\$ 36,525	0.2%	\$ 37,318	0.2%	\$ 38,128	0.2%
Bank Service Charges	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%
Counter Supplies/packaging	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%
Cleaning	\$ 3,000	0.0%	\$ 3,000	0.0%	\$ 3,000	0.0%	\$ 3,000	0.0%	\$ 3,000	0.0%
CPU & Internet	\$ 20,000	0.1%	\$ 20,000	0.1%	\$ 20,000	0.1%	\$ 20,000	0.1%	\$ 20,000	0.1%
Contributions	\$ 2,000	0.0%	\$ 2,000	0.0%	\$ 2,000	0.0%	\$ 2,000	0.0%	\$ 2,000	0.0%
Dues & Subscriptions	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%
Equipment Rental	\$ 60,000	0.4%	\$ 61,500	0.4%	\$ 63,000	0.4%	\$ 64,500	0.4%	\$ 66,000	0.4%
Legal & Accounting	\$ 5,000	0.0%	\$ 5,100	0.0%	\$ 5,200	0.0%	\$ 5,300	0.0%	\$ 5,400	0.0%
Licenses & Permits	\$ 10,000	0.0%	\$ 10,000	0.0%	\$ 10,000	0.0%	\$ 10,000	0.0%	\$ 10,000	0.0%
Office Supplies	\$ 1,000	0.0%	\$ 1,000	0.0%	\$ 1,000	0.0%	\$ 1,000	0.0%	\$ 1,000	0.0%
Payroll Fees	\$ 12,000	0.1%	\$ 12,360	0.1%	\$ 12,720	0.1%	\$ 13,080	0.1%	\$ 13,440	0.1%
Printing & Production	\$ 30,000	0.2%	\$ 30,750	0.2%	\$ 31,500	0.2%	\$ 32,250	0.2%	\$ 33,000	0.2%
Professional Fees	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%
Repairs & Maintenance	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%
Supplies	\$ 30,000	0.2%	\$ 30,750	0.2%	\$ 31,500	0.2%	\$ 32,250	0.2%	\$ 33,000	0.2%
Security	\$ 20,000	0.1%	\$ 20,000	0.1%	\$ 20,000	0.1%	\$ 20,000	0.1%	\$ 20,000	0.1%
Training	\$ 10,000	0.0%	\$ 10,000	0.0%	\$ 10,000	0.0%	\$ 10,000	0.0%	\$ 10,000	0.0%
Trash Removal	\$ 3,000	0.0%	\$ 3,000	0.0%	\$ 3,000	0.0%	\$ 3,000	0.0%	\$ 3,000	0.0%
Uniforms	\$ 20,000	0.1%	\$ 20,000	0.1%	\$ 20,000	0.1%	\$ 20,000	0.1%	\$ 20,000	0.1%
<b>Total Variable Expenses</b>	\$ 146,000	1.1%	\$ 148,250	1.1%	\$ 150,500	1.1%	\$ 152,750	1.1%	\$ 155,000	1.1%
<b>Total Expenses</b>	\$ 629,727	4.3%	\$ 646,170	4.3%	\$ 663,111	4.3%	\$ 680,564	4.3%	\$ 698,432	4.3%
<b>Net Operating Income</b>	\$ 7,461,000	50.7%	\$ 7,536,700	50.7%	\$ 7,617,400	50.7%	\$ 7,700,800	50.7%	\$ 7,787,133	50.7%
Federal tax (21%)	\$ -		\$ 1,699,527	11.3%	\$ 1,749,609	11.3%	\$ 1,801,177	11.3%	\$ 1,854,272	11.3%
Mass State income tax (8%)	\$ -		\$ 647,439	4.3%	\$ 666,518	4.3%	\$ 686,162	4.3%	\$ 706,389	4.3%
Mass excise tax (10%)	\$ -		\$ 1,323,072	8.8%	\$ 1,362,764	8.8%	\$ 1,403,647	8.8%	\$ 1,445,750	8.8%
Mass sales tax (7%)	\$ -		\$ 926,130	6.2%	\$ 953,935	6.2%	\$ 982,553	6.2%	\$ 1,012,030	6.2%
Mass local community tax (1%)	\$ -		\$ 396,922	2.7%	\$ 408,929	2.7%	\$ 421,094	2.7%	\$ 433,727	2.7%
Sales Taxes Collected (20%)	\$ -		\$ (2,648,148)	-17.7%	\$ (2,725,528)	-17.8%	\$ (2,807,284)	-17.8%	\$ (2,892,258)	-17.8%
<b>Business Income Tax</b>	\$ -		\$ 2,348,965	15.3%	\$ 2,416,127	15.5%	\$ 2,487,331	15.5%	\$ 2,562,662	15.5%
<b>Free Cash AFTER TAX for Distribution</b>	\$ 7,461,000		\$ 4,349,458	29.0%	\$ 4,073,189	26.5%	\$ 4,666,463	29.0%	\$ 4,731,430	29.0%

5 year cash return \$ 22,234,167  
Original Investment 1,900,000  
Gain 20,474,167

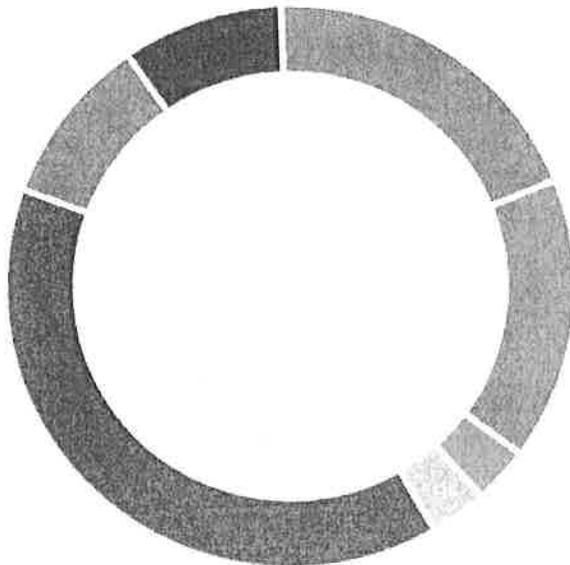
IRR 135%

## SOURCES AND USES

Funding Sources	
Investor Group Capital	\$ 1,800,000
<b>Total Sources</b>	<b>\$ 1,800,000</b>

Uses	
1. Build-out	\$ 300,000
2. Furniture, Fixtures & Equip.	\$ 250,000
3. Soft Costs/ Licenses	\$ 50,000
4. Professional Fees	\$ 50,000
5. Operating Capital/Payroll	\$ 600,000
6. Management Fee	\$ 150,000
7. Contingency	\$ 140,000 *
<b>Total Uses</b>	<b>\$ 1,540,000</b>

\*Encompasses construction contingency as well as unforeseen opex



- 1. Build-out
- 2. Furniture, Fixtures & Equip.
- 3. Soft Costs/ Licenses
- 4. Professional Fees
- 5. Operating Capital/Payroll
- 6. Management Fee
- 7. Contingency



## CONTACT:

---

Michael Hunnewell

President

Eskar Arlington LLC and Eskar Northbridge LLC

mike.r.hunnewell@gmail.com

781-697-9323

## Section 3, Question 4

### Business Plan

# Contents

Executive Summary.....	3
Products and Services .....	3
Team .....	5
Michael R. Hunnewell: Sales, Operations .....	5
Michael Aldi: Real Estate Holdings, Capital Management.....	5
Raymond Bershtein: Legal Counsel .....	5
Nicolas Zitelli: Product and Genetics (Consultant) .....	6
Sheldon Aberman: Engineering (Consultant) .....	6
Market Overview .....	7
North American Cannabis Market .....	7
Massachusetts Market Analysis.....	9
Consumer Behavior.....	12
Mobilization Plan .....	15
Pre-Permit Rollout .....	15
Post-HCA Rollout.....	15
Typical Retail Permitting Requirements: (See Permitting Process Section for full Outline)	16
Retail Timeline .....	16
Retail Hiring Plan:.....	16
Employee Training .....	17
Inventory Management .....	17
Arlington Overview .....	19
Arlington .....	19
Stages of Permit Process.....	19
Population Density.....	19
Financials.....	20
Appendix: State Permitting Guidelines.....	21
Establishing a Massachusetts Cannabis License .....	21
Types of License .....	21
Community Forum/Outreach .....	22
Contact:.....	24

# Executive Summary

In 2016 Massachusetts voted "Yes" on Article 4 paving the way for recreational cannabis in the state and setting the stage for an estimated \$2B+ industry. As of December 1st, 2018 only 2 recreational dispensaries have opened. Complex legislation, lack of viable real estate, and other high barriers to entry have drastically hindered the ability for both large and small firms to open cannabis businesses across the state. That being said, those who do gain access to a cannabis permit will benefit greatly. To put it in perspective, according to a report by Marathon Strategies, as of 2014 there were 1,900 liquor stores across the commonwealth. The Massachusetts Cannabis Control Commission has recommended each town have only 1 cannabis store for every 5 liquor stores and many towns have already outright banned the sale of cannabis altogether. Instead of having an average customer base of 3,498 people per store like the alcohol industry, the average cannabis store will have an average customer base between 15,000 to 20,000.

Eskar LLC was created to capitalize on such an opportunity. The company is founded by Mr. Michael Hunnewell, a local Massachusetts resident with an education in biology and over 15 years of experience in high tech enterprises. Mr. Hunnewell ventured into this new and exciting field early to rezone over 26 acres of land in Northbridge, MA for cannabis production and sale. This is now one of the largest cannabis zones in the state. Just getting started, he has assembled a team of the brightest experts in cannabis cultivation, supply chain management, strain genetics, commercial real estate, and local government relations to create a small network of cannabis dispensaries across the state. Mr. Hunnewell's team includes several high profile personnel. Nicholas Zitelli, the Chief Cannabis Officer for High Times Holdings; Gregg Nolan of The Nolan Group, who's group brought the Wynn Casino to Boston along with several of the first cannabis licenses to the state; and Michael Aldi, one of the most influential property managers in the city of Boston and North Shore area. These are just a few of the core team members assembled to tackle this task.

Currently, Eskar has been awarded a Host Community Agreement (HCA) for a retail permit in the town of Northbridge, MA. Looking ahead, the company has also identified other potential locations for their final 2 recreational dispensaries around the greater Boston area. This summary focuses on establishing a retail location in Arlington, Massachusetts.

## Products and Services

Eskar will provide various types of cannabis including; buds, oils, and various edible products. In order to reduce overhead costs, Eskar will focus on recreational products only. Unlike many of the commercial firms in the market already, Eskar doesn't plan to establish a large cultivation facility. Instead, the retail stores will sell the bulk of their products from a variety of growers and vendors in the market. This is a radical departure compared to the traditional firms in the market today. Many of the large firms are vertically integrated, mostly selling the product they grow themselves. This severely limits the variety of options for the customer. This approach is effective in the early years of legalization since there are very few alternatives for the customer to go to. However, as time goes by, the consumer will become much more educated and have more options for stores to

purchase their products from. Eskar plans to use product diversity as a selling point to the consumer.

# Team

## **Michael R. Hunnewell: Sales, Operations**

Michael Hunnewell has over 10 years of government contracting expertise and over 15 years experience in high tech, cutting-edge industries. In 2018 Mr. Hunnewell was able to rezone 26 acres of residential land in Northbridge, MA to industrial for cannabis use, making this one of the single largest pieces of cannabis real estate in the Commonwealth of Massachusetts. Prior to his work founding Eskar, Mr. Hunnewell worked in defense & aerospace, acquiring individual government contracts of over \$4M each alongside commercial orders earning over \$1M each. Mr. Hunnewell tripled shareholder value over a 3-year period for his firm while also opening up global distribution channels to increase sales. From his time in the defense sector, Mr. Hunnewell has garnered extensive experience in handling sensitive information and products. Metamagnetics, Mr. Hunnewell's previous employer, holds a SECRET level organization clearance and recently spent over \$100K in 2019 alone updating their security protocols. Mr. Hunnewell has also worked diligently with the firm's supplier group to make sure Metamagnetics was in compliance with defense manufacturing standards (i.e. ISO9000) and the firm is now an approved supplier to some of the largest defense firms in the world including Lockheed Martin and Raytheon. Mr. Hunnewell received his B.A. in biology from Boston College and his MBA from Northeastern University with a concentration in innovation for high tech industries. He attended graduate school on academic scholarship.

## **Michael Aldi: Real Estate Holdings, Capital Management**

Michael Aldi has over a decade of experience in both the real estate and hospitality industry. In his role as Eskar LLC's head of Real Estate Development and Investor Relations, Mr. Aldi is responsible for all the company's capital raising initiatives and site selection activities. Mr. Aldi is responsible for managing the preparation of complex financial forecasts in addition to conducting in-depth market research for the team's prospective locations. Mr. Aldi has experience in all facets of site selection, lease negotiation, general contracting/construction management, and capital structuring/financing. Mr. Aldi also has experience underwriting structuring opportunities for his family's portfolio of hospitality and real estate investments. Mike graduated from Suffolk University, with a B.A. in Communications and a Minor in Business Management.

## **Raymond Bershtein: Legal Counsel**

Raymond Bershtein's law practice extends to real estate, banking, general business matters, municipal tax liens, finance, health care transactions, trusts and estates and philanthropic governance and administration. Ray represents institutional and individual clients across the real estate spectrum. His considerable real estate experience includes the acquisition, development, permitting, financing, leasing and disposition of retail, office, residential, medical and industrial projects on behalf of developers, investors, owners, tenants and lenders. He has substantial experience negotiating, restructuring, and when necessary litigating issues related to indebtedness

incurred in connection with distressed real estate and other businesses. These responsibilities have included the analysis and implementation of a variety of strategies designed to maximize recovery in litigation, arbitration, bankruptcy, regulatory, and other proceedings. Ray advises a variety of entities, families and entrepreneurs regarding business formation, acquisition, disposition, capitalization, dispute resolution, ownership, employment, succession and related issues. Ray also serves as trustee for a number of clients.

### **Nicolas Zitelli: Product and Genetics (Consultant)**

Nicholas Zitelli is an owner, Director, and Chief Cannabis Officer of High Times Holdings (formerly Trans-High Corporation), parent company for all High Times brands, including media and event platforms. High Times was founded in 1974 and is the longest running and most well-known media company in the world that is solely dedicated to covering all and any of the bases regarding marijuana. Mr. Zitelli is very well versed on local medicinal, adult use marijuana policies, and compliance issues in the states of California, Colorado, Michigan, and Washington, leading to several appointments to consult with state officials on marijuana legislation, implementation, and compliance strategies.

### **Sheldon Aberman: Engineering (Consultant)**

In 2011, Mr. Aberman's hydroponic distribution company, Amerinada, merged with R&M Supply making his firm one of the largest manufacturers and distributors of hydroponic equipment in the United States. This company has distribution operations in 5 states and over 150 employees. Mr. Aberman went on to design thousands of cultivation and manufacturing facilities around the world, ensuring compliance with local ordinances and government legislation, earning him a reputation as one of the world's foremost experts on commercial cannabis cultivation and manufacturing implementation. In September of 2014, Mr. Aberman joined the Canadian Cannabis Corporation (OTC: CCAN) as their CIO in charge of design, implementation, and operations of their 312,000 sq. ft. cultivation center just outside of Toronto, Ontario, Canada.

# Market Overview

## North American Cannabis Market

Although the federal government still considers the use of cannabis a criminal offence, more than half the states in the US have legalized marijuana in some form. Most states sell cannabis for medicinal purposes only, often broadly defined. However, states like Alaska, California, Colorado, Maine, Nevada, Massachusetts, Oregon, and Washington have gone further, legalizing the recreational use. Legal cannabis is more expensive than the black-market variety, but it is better value; three times more potent and only about 50% more expensive<sup>1</sup>.

Legal cannabis sales reached almost \$10 billion in North America in 2017, in a new report from cannabis industry analysts.<sup>2</sup> This represents an unprecedented 33% increase over 2016. The report further predicts the entire legal cannabis market to reach \$24.5 billion in sales – a 28% annual growth rate by 2021 – as more states legalize cannabis for recreational use and existing markets mature.

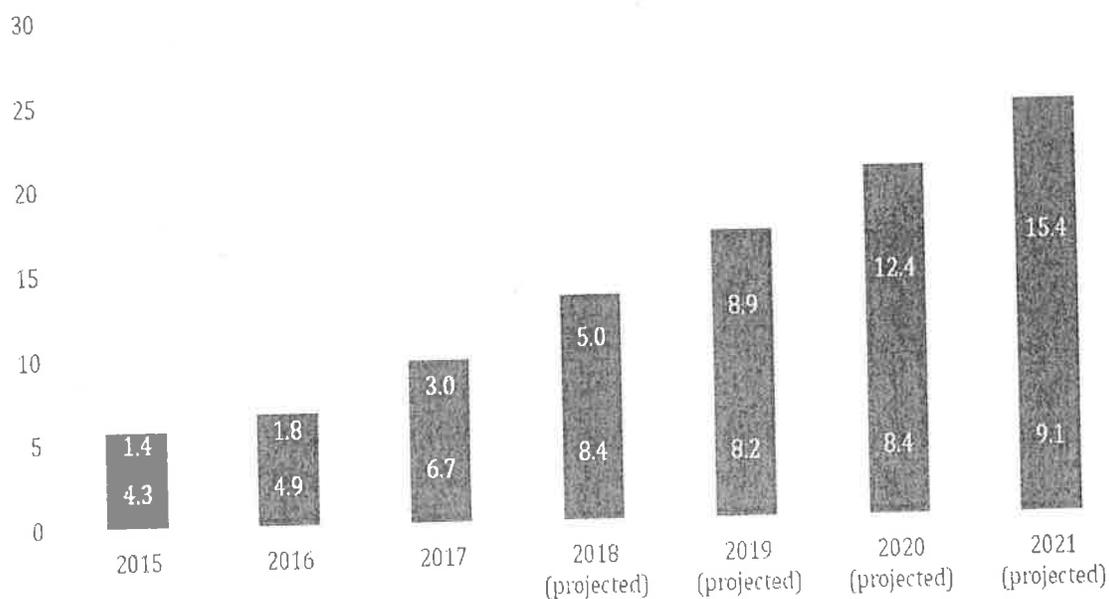


Figure 1. Medical and recreational cannabis sales forecast, billion \$

60% of the U.S. population lives within states that have legalized some form of cannabis use and sales, illustrating the rising acceptance of cannabis nationwide and highlighting the industry's immense potential for future growth. On November 9, 2016 three new states approved cannabis

<sup>1</sup> <http://www.economist.com/blogs/graphicdetail/2016/02/daily-chart-10>

<sup>2</sup> Arcview Market Research in partnership with BDS Analytics



## Massachusetts Market Analysis

Total cannabis spending worldwide is expected to hit \$57B by 2027, of which 67% of the market will come from recreational purchases.<sup>3</sup> In the U.S., firms are racing to establish themselves in the market with deep pockets from financial backing. The legal cannabis industry raised more than \$1 billion in funding in 2016, and *Marijuana Business Daily* estimated that there were 21,000–33,000 legal cannabis businesses operating in the U.S. last year.<sup>4</sup> Legalization in Massachusetts will open the door to 6.8 million people with a state GDP of \$507B.

In 2016, Massachusetts residents voted to legalize recreational cannabis. While cannabis is technically legal at the moment, recreational sales have been slow due to the severe delay in issuing permits for retail stores. Many local town governments/municipalities have voted to either ban or place a moratorium on recreation marijuana sales. This has led to less than 10 stores being open across the entire state in May 2019. This creates an opportunity for firms still looking to enter the market like Eskar. Those who can obtain the permit may be the only retailer within miles for customers, even in denser cities near Boston.

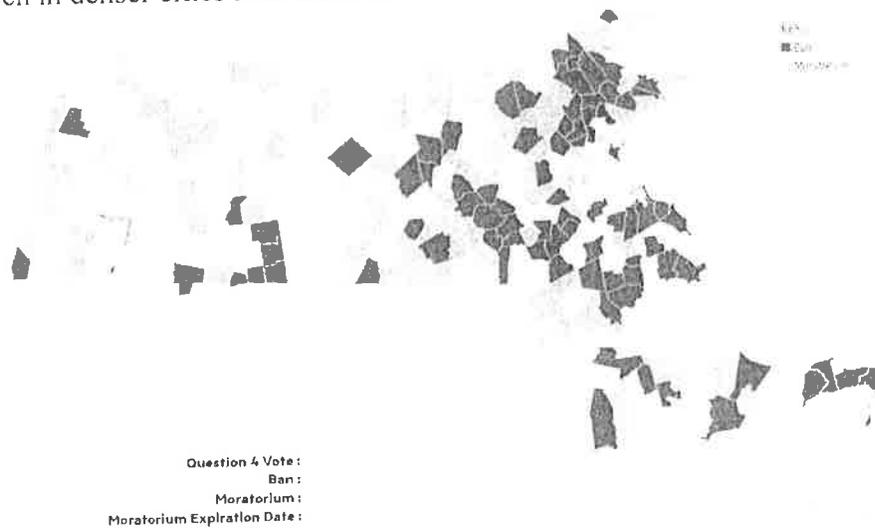


Figure 3 Map of Massachusetts outlining zoning laws on recreational cannabis sales by town. As of October 31st, 2018

2.4M voters in the state of Massachusetts voted in favor of legalization. If we assume those voters will become cannabis consumers, we start to understand just how large this market is. If these voters spend \$100 a month, well below the Colorado average, the Massachusetts market is estimated around \$2.8B. If the average consumer spends \$175 a month, the market balloons to \$5B.

<sup>3</sup> <https://www.foESKARes.com/sites/thomaspellechia/2018/03/01/double-digit-billions-puts-north-america-in-the-worldwide-cannabis-market-lead/#24341c866510>

<sup>4</sup> <https://www.funglobalretailtech.com/research/deep-dive-us-cannabis-economy-fast-growing-industry-facing-regulatory-concerns/>

To help speed the implementation of recreational cannabis across the state, the Cannabis Control Commission (CCC) released guidelines and regulations for local municipalities to implement in their respective towns. One of the guidelines was to regulate the number of cannabis stores each town should have. The CCC recommended the number of cannabis stores should be “20% the number of liquor stores.” This puts tremendous leverage in cannabis retailer’s hands. Below is a table of the average number of customers a liquor store has in various states across the US.

**LIQUOR STORE DENSITY COMPARISON**

---

**TOTAL STATE LIQUOR RETAIL DATA**

State	Population	Quota Per Capita	Stores	Pop Per Store
Alaska	731,449	1/3000	101	7242
Arizona	6,553,255	varies locally	1466	4470
Arkansas	2,949,131	1/4000	318	9274
California	38,041,430	1/2500	13806	2755
Florida	19,317,568	1/7500	1367	14131
Indiana	6,537,334	1/3500	359	18210
Kentucky	4,380,415	1/2300	914	4793
Massachusetts	6,646,144	1/2000	1900	3498
Michigan	9,883,360	1/3000	1581	6251
Montana	1,005,141	1/1500	96	10470
New Jersey	8,864,590	1/3000	2260	3922
New Mexico	2,085,538	1/2000	95	21953
Ohio	11,544,225	varies locally	837	13792
Pennsylvania	12,763,536	1/3000	600	21273
South Dakota	833,354	1/1500	75	11111
Utah	2,855,287	1/4925	144	19828
Washington	6,897,012	1/1200	1400	4926
Wyoming	576,412	1/3000	100	5764
<b>Average</b>				<b>10204</b>

Figure 4: Above is a table of the average customer base for a liquor store by state. Data provided by Marathon Strategies.

Per the chart, the average population per liquor store in Massachusetts is 3,498. Due to the 20% store limit for cannabis shops, we can assume the average cannabis retail location will have access to a population of 20,000 people. This doesn’t even take into consideration the fact that many towns across the state have band cannabis sales in their town. Combined with an influx of tourists from other states nearby where cannabis is illegal, the population could climb to 40,000. With online delivery illegal right now, the retail locations hold the majority of access to the market. This is why Eskar’s focus will be on gaining retail permits.

Due to the extreme supply and demand dynamics in the state, there is a risk of a major boom followed by a crash in profitability for those looking to cultivate marijuana. In the first year or so of the market, there will be an extremely limited number of vendors allowed to grow. As more firms are approved by the state, the price per pound of dried cannabis will quickly begin to fall. When recreational cannabis first started selling in Colorado in 2013, the price per pound was around \$3,000. 5 years later, the price has dropped to around \$1,000 per pound. We can see similar effects have happened in other states like Washington.

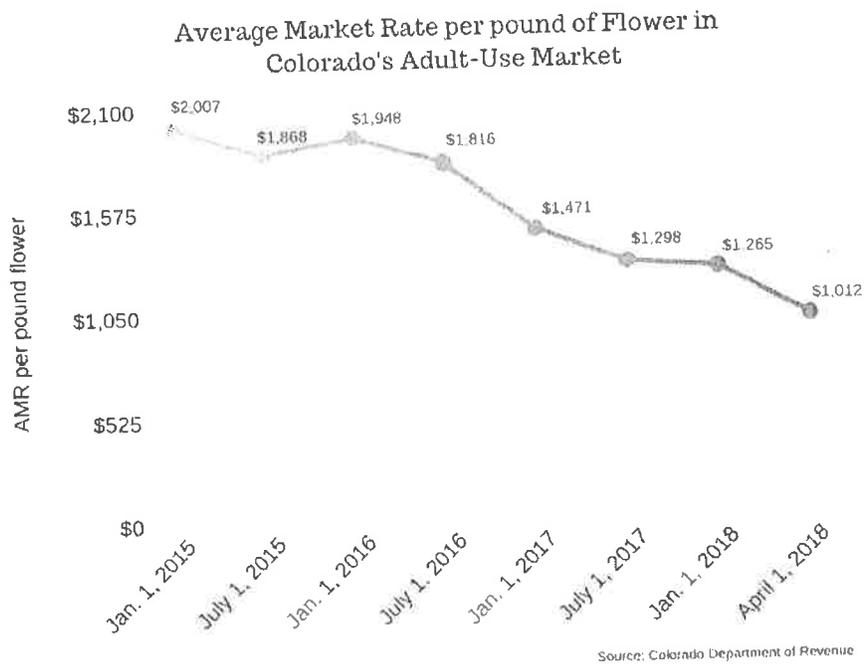


Figure 5: Graph of the price per pound of commercial cannabis in the state of Colorado over a 3 year period

### Weed prices have dropped in Washington state

Average price per gram, July 2014 to September 2017

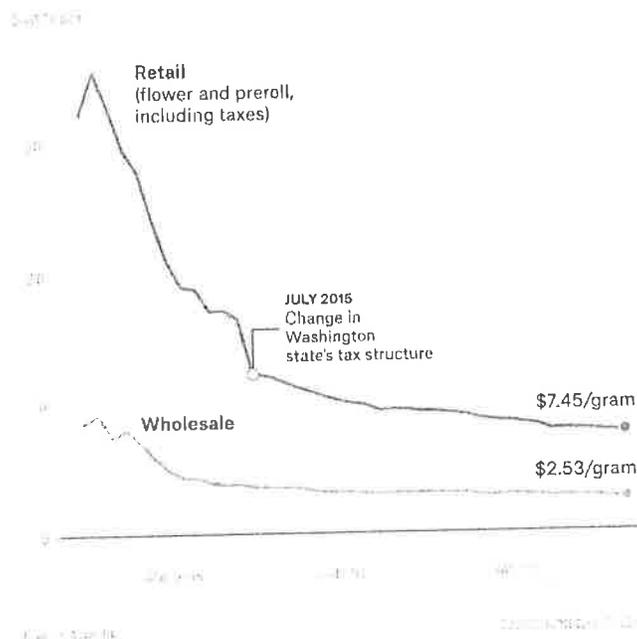


Figure 6: Washington State data on price per gram of cannabis from 2014 to 2017.

This effect will strictly depend on how tightly Massachusetts looks to regulate the market. In the event the state takes a very loose policy on regulation, it highlights two critical action items for smaller operations hoping to be successful in cannabis wholesale. One, if the firm is looking to grow, it is imperative to get the cultivation operation up and running as soon as possible to quickly recoup the initial high start-up costs needed to enter the market. Profitability may be 2X more in the first few years compared to 3 years or more after the first marijuana cultivator is approved. Two, growers will want to stay in the premium market to avoid the inevitable race to the bottom in pricing. High end products have proven to be more price inelastic to supply and demand shifts. Larger firms who have already established in, and even outside the state, will eventually move in and commoditize the product. Eskar has no interest in competing in this white space and will take several initiatives to shield themselves from this sector of the market. The potential market crash also reemphasizes the need to establish retail. By establishing retail, the firm will be able to protect themselves from market crashes and even benefit from the lower wholesale prices. In the short term, it also means Eskar will not be pursuing a large cultivation facility.

### Consumer Behavior

Colorado, who's market surpassed \$1.5B in 2016, has been able to provide a significant amount of data on consumer behavior in the cannabis industry. This helps us gain a better understanding of

the total potential market value. As seen in the graph below, over half of the consumer cannabis population in Colorado spends \$200 or more a month. It should be noted, the data doesn't show just how much the consumer spends in the "\$50 or less" or the "more than \$300" category. With this understanding, Eskar estimates the average consumer spends about \$175 a month.

### Amount Spent Monthly on Cannabis

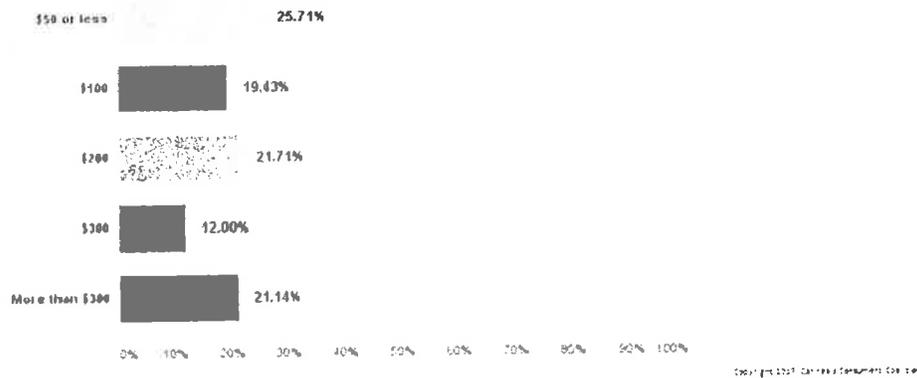


Figure 7: State data from Colorado showing the average spend rate of a cannabis consumer.

This is a critical metric for projecting future retail sales in Massachusetts. So, what is the average cannabis consumer buying? For one, we are seeing a significant shift away from traditional flower products. With the rise of vape products and better consistency of THC dosage in edibles, the average cannabis user is shifting away from tradition consumption methods. This trend is reflected in the chart below.

### It's not just 'bud' anymore

Monthly pre-tax retail sales in Washington state by product type, July 2014 to September 2017

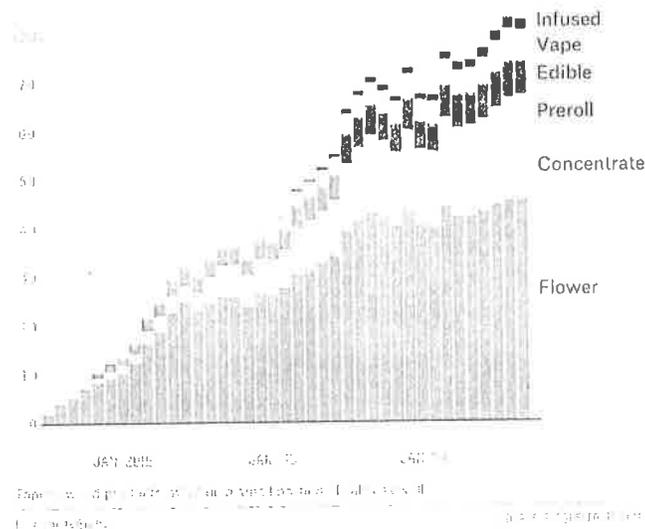
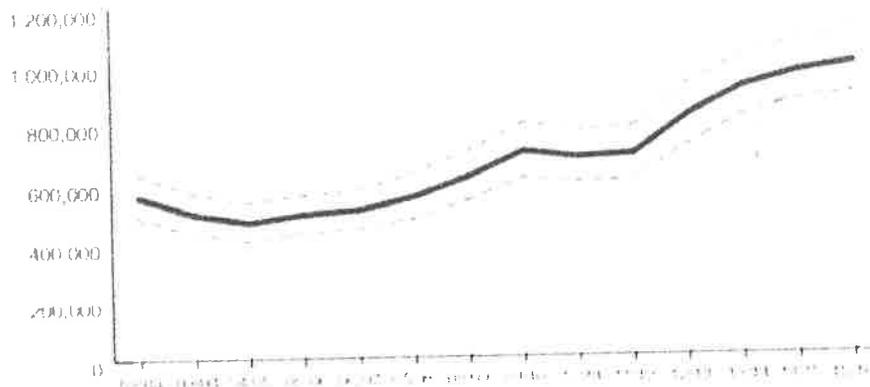


Figure 8: Graph of consumer preference of cannabis products. Notice the shift away from flower to other products like edibles.

## Appendix Figure 1: Colorado Past-Year and Past-Month Adult Marijuana Consumers



Source: SAMHSA NSDUH 2002-03, 2015-16 Population Estimates

Figure 9: Colorado data on the number of cannabis users over the years. Recreational use became legal in 2012.

Along with user preference changing compared to the “traditional” mold, we can also expect to see more users entering the market as legalization continues. We have seen in states where recreational cannabis has been legal for several years now, the percentage of consumers in those states continue to increase. This gives Eskar confidence in extrapolating the number of cannabis consumers in the market based on voters’ numbers. All this lays the ground work for a consumer base that is hungry for product and will continue to grow in numbers for years to come. Even the crash of wholesale prices will continue to fuel retail sales as more consumers leave the black market for legal competitive products.

# Mobilization Plan

## Pre-Permit Rollout

Eskar is well under way to attain all of the prerequisites for retail permits in Massachusetts. It estimates that by April 2020 it will have approval by the Massachusetts Cannabis Control for its first retail dispensary, approval for the processing permit, and their 2<sup>nd</sup> & 3<sup>rd</sup> retail locations should be complete by June 2020.

Before Eskar can apply for their permits they must complete the following steps:

1. Control of real estate for its intended use
2. Confirm property meets the town zoning requirements
  - a. Achieve variances if the property fails the zoning requirements
3. Confirm location has the support of the local municipality
4. Letter of Intent from property manager where the firm seeks to operate
5. Host community forum
6. Sign Community Host Agreement
7. Finish confirmation of compliance with local zoning (Special permit if needed)
8. Finish state submission packet

Steps 1-4 don't necessarily happen in chronological order. It should also be noted Step 6 is the most critical step in this process. The host community agreement (HCA) is a document in which the town and marijuana business outline the terms and payments the business needs to uphold if it wishes to operate in the town. This may be in the form of a 3% sales tax, which goes directly to the town, or an agreement to operate within certain business hours. Upon signing the document, the business may start the permitting process with the state for their license. The town will not sign more HCAs than it plans to issue permits. This means once an HCA is obtained, the business has a high probability of obtaining a permit.

The Massachusetts Cannabis Control Commission (MCCC) caps the number of retail permits (locations) for any business entity at 3. Firms may have a 9.9% equity stake in additional retail firms beyond their 3 stores, but it may not have "control" of those additional firms. The definition of control is being hotly debated right now. In March of 2019, the Boston Globe published an article highlighting several firms violating the "3 Permit Rule." Worse, the firms in question were bragging to investors how they have tried to exploit loopholes in the law. This has caused the state licensing authority to highly scrutinize future permits. Eskar hopes to gain its second permit in Arlington leaving the potential for one more store somewhere in the commonwealth.

## Post-HCA Rollout

As permits are approved by the Cannabis Control Commission, Eskar will then begin the detail, design, and engineering for the retail locations. The engineering and design timeline will take 90 days to prepare all the required documents for permitting. The permitting approval process for

towns like of Northbridge and Boston is estimated to take another 90 days once the permit applications are submitted. Arlington's special permit process is different from most towns in Massachusetts. However, the town has provided guidance stating Eskar should expect to wait about 1 year before opening its door if it is selected to move forward with the permitting process.

Typical Retail Permitting Requirements: (See Permitting Process Section for full Outline)

- Final Engineered Construction Documents (CD's)
- Final Architectural and Engineering CD's
- Dry Utility Coordination (Electrical, Telephone, Natural Gas)
- Administrative Code Compliance Review (By Municipality)
- Calculation of Permit, Review, and Impact Fees

Retail Timeline

- Detail Engineering Complete: Month 3
- Permit Applications Submitted: Month 4
- Permit Applications Approved: Month 6
- Begin Construction: Month 7
- Complete Construction: Month 9
- Hardware & Software Systems Installed: Month 10
- Security Systems Installed: June Month 11
- C/O: Month 11
- Store Open for Business: Month 12

Retail Hiring Plan:

Eskar will begin the recruiting process for critical retail personnel in May 2020. We expect a 60 days recruitment process and 30 days for the Cannabis Control Commission to conduct background checks. As long as personnel receive their licenses to work in the facility, they will start full time in June 2020. As Eskar doesn't plan to have the certificate of occupancy for the facility until May 1, 2020 personnel will meet offsite where they will go through extensive onboarding and management training that includes the following subject matter:

Onboarding

- Distribute on boarding package and Employee Handbook
- Review Employee Policies & Procedures with Employees
- Employee Sign off of Policies & Procedures and Employee Handbook
- HR Paperwork

Employee Training

- Safety & Health
- CCC Compliance
- Role & Responsibilities
- Management Training
- Security Protocols

- Leadership Training (where applicable)
- Diversity
- Workplace Harassment policy

#### Employee Training

Eskar's team has experience implementing staff training programs necessary to mitigate the risk of sale of alcohol to minors as well as best practices for the avoidance of legal issues related to violations of Massachusetts State Liquor Laws. Mr. Aldi will be able to leverage this experience as well as his strong track record of compliance in order to enforce the similar guidelines necessary to regulate the sale of retail cannabis.

All dispensary employees will go through a comprehensive training. The program incorporates the Commonwealth of Massachusetts requirements and regulations including background checks, as well as new-hire training and continuing education protocol.

The training program will include the following:

Legal - We will distribute a worksheet regarding the state of the law as well as include a section in our manual and SOP's addressing the law, compliance, and law enforcement interaction.

Processing and Storage - This will outline the procedures regarding how medicine will be received, handled, and stored safely.

Accounting and Cash Procedures - This will include training on the Point of Sale, how to manage cash, accounting, and banking procedures.

Inventory Control Plan – This will spell out how Pharm House will address inventory and includes protocols to ensure operational consistency and proper compliance with the Commonwealth of Massachusetts.

Emergency Procedures - Will provide the specific protocols in case of medical, police or other emergencies to ensure rapid response involving the appropriate personnel and/or outside authorities.

Security - Patient, worker, and neighborhood security is our highest priority. As discussed more fully in our Security Plan, we institute state-of-the-art security procedures to take advantage of the security industry's best practices and most up-to-date technology. This will ensure that our dispensary facility operates at the highest level of legal compliance and security preparedness

#### Inventory Management

Eskar's attached business plan is the result of working directly with leaders in the Cannabis cultivation and distribution network nationally. All cost of goods sold (COGS) information was derived through consultation with members of the team at Revolutionary Clinics, who are leaders in the Medical cannabis space in Massachusetts.

Additionally, advisors and members of the Eskar team include real estate, legal, economic, and investment professionals, who manage all capital raising, cash-flow/economic modeling, and investor relation initiatives. Our analyst has conducted demographic and market demand studies in order to determine initial demand and procurement needs by product type. Based on our team's relationship with current operators in the cannabis industry, our analytics leverage the data already available from markets in the western U.S. that have been operating for several years.

In order to comply with all inventory tracking issues, Eskar has already begun exploring software options to aid in point-of-sale entries that integrate with the tracking of inventory and compliance with METRC. The strongest technology platform identified is called TREEZ.

TREEZ is an enterprise quality retail management software powering the leading dispensaries in the United States. As a trusted provider for the industry's most reputable cannabis businesses, TREEZ is used to manage over \$1B in sales transactions annually. This platform is created in order to help ensure constant compliance with state Track-and-Trace systems such as the METRC, essentially offering "seed-to-sale" traceability that Auto-updates to reflect current state regulations, keeping Eskar compliant.

In order to manage inventory, Eskar's team will be able to leverage current technologies in order to employ an inventory scanning and logging program that efficiently catalogues each inventory item in real-time upon delivery. This system will also link to point-of-sale terminals, creating one continuous tracking loop. Given that Mr. Aldi has extensive experience in procurement and inventory management within the bar/restaurant industry, he will be able to leverage these best practices used in his restaurants in order to streamline the management of cannabis inventory and sales.

# Arlington Overview

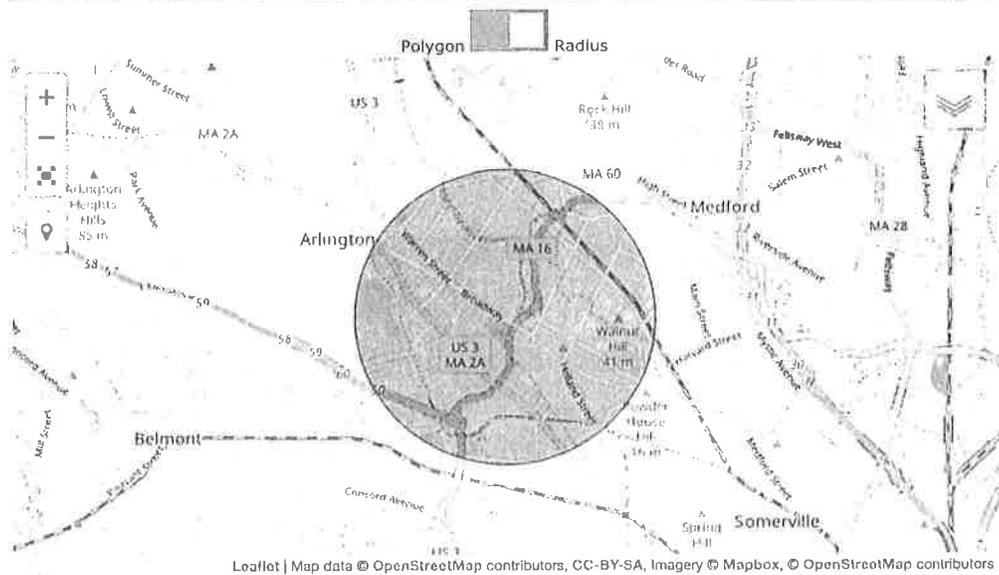
## Arlington

### Stages of Permit Process

Part of Process	Completed
Control of Property	X
Confirmed Approved Zoning	X
Local Municipality Approval	X
Signed LOI	
Host Community Forum	
Sign Community Host Agreement	
Obtain Special Permit	
State Application Complete	

### Population Density

#### Population Inside a Area Search Map



Leaflet | Map data © OpenStreetMap contributors, CC-BY-SA, Imagery © Mapbox, © OpenStreetMap contributors

#### 1 | PCI DSS Best Practices

Recommended for: CIOs, CSOs, IT managers, compliance managers and PCI auditors Tufin

#### 2 | Get Earth & 360° View Maps Now - Enter Location For Earth Maps.

Enter Any Location. Get the MyEarthMap App. Get Earth & Satellite 360° Maps Now. [myearthmaps.net](http://myearthmaps.net)



#### Input

Add Radius manually : Radius 1.6092 km OR 1.00 miles Location : Search...

#### Output

The estimated population in the defined area is 61,250

# Financials

## Profit & Loss Forecast (5 Years)

	Year 1		Year 2		Year 3		Year 4		Year 5	
	Total	% of Income	Total	% of Income	Total	% of Income	Total	% of Income	Total	% of Income
<b>Income</b>										
Flowers	\$ 6,272,000	64.0%	\$ 6,460,160	64.0%	\$ 6,653,965	64.0%	\$ 6,853,584	64.0%	\$ 7,059,191	64.0%
Concentrates	\$ 2,597,000	26.5%	\$ 2,674,910	26.5%	\$ 2,755,157	26.5%	\$ 2,837,812	26.5%	\$ 2,922,946	26.5%
Edibles	\$ 833,000	8.5%	\$ 857,990	8.5%	\$ 883,730	8.5%	\$ 910,242	8.5%	\$ 937,549	8.5%
Topicals	\$ 98,000	1.0%	\$ 100,940	1.0%	\$ 103,968	1.0%	\$ 107,087	1.0%	\$ 110,300	1.0%
	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%
<b>Total Sales</b>	<b>\$ 9,800,000</b>	<b>100.0%</b>	<b>\$ 10,094,000</b>	<b>100.0%</b>	<b>\$ 10,396,820</b>	<b>100.0%</b>	<b>\$ 10,708,725</b>	<b>100.0%</b>	<b>\$ 11,029,986</b>	<b>100.0%</b>
<b>Total Income</b>	<b>\$ 9,800,000</b>	<b>100.0%</b>	<b>\$ 10,094,000</b>	<b>100.0%</b>	<b>\$ 10,396,820</b>	<b>100.0%</b>	<b>\$ 10,708,725</b>	<b>100.0%</b>	<b>\$ 11,029,986</b>	<b>100.0%</b>
<b>Cost of Goods Sold</b>										
Flowers	\$ 2,473,706	25.2%	\$ 2,547,917	25.2%	\$ 2,624,355	25.2%	\$ 2,703,085	25.2%	\$ 2,784,178	25.2%
Concentrates	\$ 967,750	9.9%	\$ 996,783	9.9%	\$ 1,026,686	9.9%	\$ 1,057,487	9.9%	\$ 1,089,211	9.9%
Edibles	\$ 416,500	4.3%	\$ 428,995	4.3%	\$ 441,865	4.3%	\$ 455,121	4.3%	\$ 468,774	4.3%
Topicals	\$ 45,733	0.5%	\$ 47,105	0.5%	\$ 48,518	0.5%	\$ 49,974	0.5%	\$ 51,473	0.5%
	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%
<b>Total Cost of Goods Sold</b>	<b>\$ 3,903,689</b>	<b>39.8%</b>	<b>\$ 4,020,800</b>	<b>39.8%</b>	<b>\$ 4,141,424</b>	<b>39.8%</b>	<b>\$ 4,265,667</b>	<b>39.8%</b>	<b>\$ 4,393,637</b>	<b>39.8%</b>
<b>Gross Profit</b>	<b>\$ 5,896,311</b>	<b>60.2%</b>	<b>\$ 6,073,200</b>	<b>60.2%</b>	<b>\$ 6,255,396</b>	<b>60.2%</b>	<b>\$ 6,443,058</b>	<b>60.2%</b>	<b>\$ 6,636,350</b>	<b>60.2%</b>
<b>Expenses</b>										
<b>Fixed Expenses</b>										
Credit Card Fees		0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%
<b>Insurance Expense</b>										
Health	\$ 10,000	0.1%	\$ 10,200	0.1%	\$ 10,404	0.1%	\$ 10,612	0.1%	\$ 10,824	0.1%
Liability	\$ 20,000	0.2%	\$ 20,400	0.2%	\$ 20,808	0.2%	\$ 21,224	0.2%	\$ 21,649	0.2%
Workers Comp	\$ 20,000	0.2%	\$ 20,400	0.2%	\$ 20,808	0.2%	\$ 21,224	0.2%	\$ 21,649	0.2%
<b>Total Insurance Expense</b>	<b>\$ 50,000</b>	<b>0.5%</b>	<b>\$ 51,000</b>	<b>0.5%</b>	<b>\$ 52,020</b>	<b>0.5%</b>	<b>\$ 53,060</b>	<b>0.5%</b>	<b>\$ 54,122</b>	<b>0.5%</b>
<b>Payroll Expenses</b>										
Counter Staff/Cashiers	\$ 240,000	2.4%	\$ 247,200	2.4%	\$ 254,616	2.4%	\$ 262,254	2.4%	\$ 270,122	2.4%
Bonus	\$ 10,000	0.1%	\$ 10,300	0.1%	\$ 10,609	0.1%	\$ 10,927	0.1%	\$ 11,255	0.1%
Management	\$ 260,000	2.7%	\$ 267,800	2.7%	\$ 275,834	2.7%	\$ 284,109	2.7%	\$ 292,632	2.7%
Stock Room Staff/ BOH	\$ 80,000	0.8%	\$ 82,400	0.8%	\$ 84,872	0.8%	\$ 87,418	0.8%	\$ 90,041	0.8%
Payroll Taxes	\$ 30,000	0.3%	\$ 30,900	0.3%	\$ 31,827	0.3%	\$ 32,782	0.3%	\$ 33,765	0.3%
Management Fee	\$ 150,000	1.5%	\$ 154,500	1.5%	\$ 159,135	1.5%	\$ 163,909	1.5%	\$ 168,826	1.5%
<b>Total Payroll Expenses</b>	<b>\$ 770,000</b>	<b>7.9%</b>	<b>\$ 793,100</b>	<b>7.9%</b>	<b>\$ 816,893</b>	<b>7.9%</b>	<b>\$ 841,400</b>	<b>7.9%</b>	<b>\$ 866,642</b>	<b>7.9%</b>
Rent Expense	\$ 90,000	0.9%	\$ 92,700	0.9%	\$ 95,481	0.9%	\$ 98,345	0.9%	\$ 101,296	0.9%
Percentage Rent	\$ 161,700		\$ 166,551		\$ 171,548		\$ 176,694		\$ 181,995	
CAM/ Real Estate Taxes	\$ 22,060	0.2%	\$ 22,722	0.2%	\$ 23,403	0.2%	\$ 24,106	0.2%	\$ 24,829	0.2%
<b>Total Rent Expense</b>	<b>\$ 112,060</b>	<b>1.1%</b>	<b>\$ 115,422</b>	<b>1.1%</b>	<b>\$ 118,884</b>	<b>1.1%</b>	<b>\$ 122,451</b>	<b>1.1%</b>	<b>\$ 126,125</b>	<b>1.1%</b>
<b>Utilities</b>										
Cable	\$ 6,000	0.1%	\$ 6,180	0.1%	\$ 6,365	0.1%	\$ 6,556	0.1%	\$ 6,753	0.1%
Electric	\$ 15,000	0.2%	\$ 15,450	0.2%	\$ 15,914	0.2%	\$ 16,391	0.2%	\$ 16,883	0.2%
Gas	\$ 15,000	0.2%	\$ 15,450	0.2%	\$ 15,914	0.2%	\$ 16,391	0.2%	\$ 16,883	0.2%
Water	\$ 10,000	0.1%	\$ 10,300	0.1%	\$ 10,609	0.1%	\$ 10,927	0.1%	\$ 11,255	0.1%
<b>Total Utilities</b>	<b>\$ 46,000</b>	<b>0.5%</b>	<b>\$ 47,380</b>	<b>0.5%</b>	<b>\$ 48,801</b>	<b>0.5%</b>	<b>\$ 50,265</b>	<b>0.5%</b>	<b>\$ 51,773</b>	<b>0.5%</b>
<b>Total Fixed Expenses</b>	<b>\$ 978,060</b>	<b>10.0%</b>	<b>\$ 1,006,902</b>	<b>10.0%</b>	<b>\$ 1,036,599</b>	<b>10.0%</b>	<b>\$ 1,067,177</b>	<b>10.0%</b>	<b>\$ 1,098,661</b>	<b>10.0%</b>
<b>Variable Expenses</b>										
Advertising/PR	\$ 25,000	0.3%	\$ 25,750	0.3%	\$ 26,523	0.3%	\$ 27,318	0.3%	\$ 28,138	0.3%
Bank Service Charges	\$ 500	0.0%	\$ 515	0.0%	\$ 530	0.0%	\$ 546	0.0%	\$ 563	0.0%
Counter Supplies/packaging	\$ 200,000	2.0%	\$ 206,000	2.0%	\$ 212,180	2.0%	\$ 218,545	2.0%	\$ 225,102	2.0%
Cleaning	\$ 42,000	0.4%	\$ 43,260	0.4%	\$ 44,558	0.4%	\$ 45,895	0.4%	\$ 47,271	0.4%
CPU & Internet	\$ 22,000	0.2%	\$ 22,660	0.2%	\$ 23,340	0.2%	\$ 24,040	0.2%	\$ 24,761	0.2%
Contributions	\$ 2,000	0.0%	\$ 2,060	0.0%	\$ 2,122	0.0%	\$ 2,185	0.0%	\$ 2,251	0.0%
Dues & Subscriptions	\$ 2,000	0.0%	\$ 2,060	0.0%	\$ 2,122	0.0%	\$ 2,185	0.0%	\$ 2,251	0.0%
Equipment Rental	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%	\$ -	0.0%
Legal & Accounting	\$ 20,000	0.2%	\$ 20,600	0.2%	\$ 21,218	0.2%	\$ 21,855	0.2%	\$ 22,510	0.2%
Licenses & Permits	\$ 5,000	0.1%	\$ 5,150	0.1%	\$ 5,305	0.1%	\$ 5,464	0.1%	\$ 5,628	0.1%
Office Supplies	\$ 12,000	0.1%	\$ 12,360	0.1%	\$ 12,731	0.1%	\$ 13,113	0.1%	\$ 13,506	0.1%
Payroll Fees	\$ 5,000	0.1%	\$ 5,150	0.1%	\$ 5,305	0.1%	\$ 5,464	0.1%	\$ 5,628	0.1%
Printing & Production	\$ 12,000	0.1%	\$ 12,360	0.1%	\$ 12,731	0.1%	\$ 13,113	0.1%	\$ 13,506	0.1%
Professional Fees	\$ 15,000	0.2%	\$ 15,450	0.2%	\$ 15,914	0.2%	\$ 16,391	0.2%	\$ 16,883	0.2%
Repairs & Maintenance	\$ 15,000	0.2%	\$ 15,450	0.2%	\$ 15,914	0.2%	\$ 16,391	0.2%	\$ 16,883	0.2%
Supplies	\$ 25,000	0.3%	\$ 25,750	0.3%	\$ 26,523	0.3%	\$ 27,318	0.3%	\$ 28,138	0.3%
Security	\$ 160,000	1.6%	\$ 164,800	1.6%	\$ 169,744	1.6%	\$ 174,836	1.6%	\$ 180,081	1.6%
Training	\$ 10,000	0.1%	\$ 10,300	0.1%	\$ 10,609	0.1%	\$ 10,927	0.1%	\$ 11,255	0.1%
Trash Removal	\$ 15,000	0.2%	\$ 15,450	0.2%	\$ 15,914	0.2%	\$ 16,391	0.2%	\$ 16,883	0.2%
Uniforms	\$ 10,000	0.1%	\$ 10,300	0.1%	\$ 10,609	0.1%	\$ 10,927	0.1%	\$ 11,255	0.1%
<b>Total Variable Expenses</b>	<b>\$ 597,500</b>	<b>6.1%</b>	<b>\$ 615,425</b>	<b>6.1%</b>	<b>\$ 633,888</b>	<b>6.1%</b>	<b>\$ 652,904</b>	<b>6.1%</b>	<b>\$ 672,492</b>	<b>6.1%</b>
<b>Total Expenses</b>	<b>\$ 1,575,560</b>	<b>16.1%</b>	<b>\$ 1,622,327</b>	<b>16.1%</b>	<b>\$ 1,670,487</b>	<b>16.1%</b>	<b>\$ 1,720,081</b>	<b>16.1%</b>	<b>\$ 1,771,153</b>	<b>16.1%</b>
<b>Net Operating Income</b>	<b>\$ 4,320,751</b>	<b>44.1%</b>	<b>\$ 4,450,873</b>	<b>44.1%</b>	<b>\$ 4,581,910</b>	<b>44.1%</b>	<b>\$ 4,722,977</b>	<b>44.1%</b>	<b>\$ 4,865,197</b>	<b>44.1%</b>
<b>Tax rate 20%</b>										
<b>Business Income Tax</b>	<b>\$ 864,150</b>		<b>\$ 890,175</b>		<b>\$ 916,982</b>		<b>\$ 944,595</b>		<b>\$ 973,039</b>	
<b>Free Cash AFTER TAX for Distribution</b>	<b>\$ 3,456,601</b>	<b>35%</b>	<b>\$ 3,560,699</b>	<b>35%</b>	<b>\$ 3,667,928</b>	<b>35%</b>	<b>\$ 3,778,382</b>	<b>35%</b>	<b>\$ 3,892,158</b>	<b>35%</b>

# Appendix: State Permitting Guidelines

It's fair to say a majority of the risk investing in a cannabis venture in Massachusetts is surviving the permitting process. Per the evidence presented in the market overview section, there will be a highly restricted market for cannabis retail locations. If a business can get a permit, one can predict with confidence, the venture will be extremely profitable. That being said, the permitting process is extremely complex and difficult to navigate. It is important to dedicate a section of the business plan to this process.

## Establishing a Massachusetts Cannabis License

### Types of License

Before applying for a license, the applicant needs to check with the local municipalities on the individual rules established in the town they are looking to establish their business. Note, many of the towns and municipalities have established moratoriums, a temporary ban on the use and sale of cannabis. An outright permanent ban is more complicated and less understood. The commission for now will not issue licenses in areas where the municipality has issued a ban. It should be noted the state permits the local municipalities to keep the moratorium in place "for a reasonable time." An establishment must be at least 500 ft from a school, though a bylaw or ordinance can be established for exceptions. Licenses in Massachusetts are good for one year at a time and must be renewed before they expire. The following licenses available are:

- **Cultivator**
  - License is based on square footage
  - License tier (size of facility) can be changed if output needs to be increased or reduced.
- **Craft Marijuana Cooperative**
- **Microbusiness**
- **Product Manufacturing**
  - An entity authorized to obtain, manufacture, process and package marijuana and marijuana products, to deliver marijuana and marijuana products to Marijuana
- **Testing**
- **Retail**
- **Transporter**
- **Research**

There are three major submission packets required. You cannot start the submission process until at least one of the three packets are submitted. The three sections include the Intent packet, Background Check packet, and the Management and Operations packet. A more detailed process is outlined and is as follows:

**1. Create an account on the CCC website**

1.1. <https://mass-cannabis-control.com/>

**2. Submit Intent Packet**

2.1. Individual and entities involved in the submission

2.2. Funding sources

2.3. Proposed locations of the building

2.4. Host agreement and outreach forms

2.4.1. The agreement may include a community impact fee of up to 3% of gross sales to be paid to the host community, as long as the fee is reasonably related to real costs imposed on the municipality due to the establishment or RMD operating there. The agreement may not be effective for longer than five years.

2.5. Social and economic impact analysis

**3. Submit Background Check Profile**

3.1. Names and information of all people listed in the intent packet submission

**4. Submit Management and Operations Profile**

4.1. Business Registration

4.2. Business Plan

4.3. Operating Policies and Procedure

**5. Pay Application Fee**

A more detailed process can be found here:

<https://mass-cannabis-control.com/wp-content/uploads/2018/04/Guidance-for-Marijuana-Establishment-Licensure-Applicants.pdf>

Once submitted the commission has 60 days to deny or approve the applicant. Please note beyond this, all members involved in the cannabis industry, must create a registered agent process.

Community Forum/Outreach

The community outreach must be filed 6 months prior to the submission of the intent package. An applicant must ensure that the meeting notice includes the time, place, and subject matter of the meeting and the proposed address of the marijuana establishment.

The notice must be:

- Published in the local newspaper
- Filed with the town or city clerk, the planning board, the contracting authority for the municipality, and local licensing authority for adult use of Cannabis, if applicable

- Mailed to abutters of the proposed address of the Marijuana Establishment, owners of land directly opposite on any public or private street or way, and to the abutters within 300 feet of the property line

*The following template is provided to assist applicants seeking to be licensed as a Marijuana Establishment under 935 CMR 500.000, which establishes the regulatory requirements for adult use marijuana in the Commonwealth. This template is not legal advice. If you have questions regarding the legal requirements for licensure in the Commonwealth, you are encouraged to consult an attorney.*

*Notice is hereby given that a Community Outreach Meeting for a proposed Marijuana Establishment is scheduled for (insert date) at (insert time) at (insert location). The proposed (type(s) of Marijuana Establishment) is anticipated to be located at (insert address of proposed Marijuana Establishment). There will be an opportunity for the public to ask questions.*

The follow issues should be addressed in the meeting:

- Location of the proposed Marijuana Establishment.
- What type(s) of Marijuana Establishment will be sited at the location?
- Is the proposed Marijuana Establishment allowed under current zoning bylaws/ordinances or is a zoning amendment required to allow it to go there?
- Is the proposed Marijuana Establishment allowed by right or does it require local zoning permitting? What permits are required?
- Is there a local licensing regulation pertaining to Marijuana Establishments?
- Is there a local Board of Health regulation pertaining to Marijuana Establishments?
- Does the proposed location comply with the 500-foot buffer zone from existing public or private school buildings (K-12)? Do local bylaws or ordinance create a smaller buffer zone?
- If the applicant is moving into an existing building or building a new one, will its premises comply with the security requirements set forth in 935 CMR 500?
- What steps will be taken by the Marijuana Establishment to prevent diversion to minors?
- Information demonstrating how the applicant intends to ensure that the location will not constitute a nuisance to the community as defined by law.
- A plan for how the Marijuana Establishment will positively impact the community. If the applicant is a marijuana retailer, be aware of whether the municipality has passed the local tax option and prepared to answer questions.
- Be familiar with the Host Community Agreement requirements and be prepared to answer questions about them.

# Contact:

Michael Hunnewell  
President  
Eskar LLC  
781-697-9323

Section 3, Question 6  
Preliminary Security Plan

## 21 Broadway, Arlington, MA Draft Security Plan

The location 21 Broadway is an old bank which most of the security systems were left behind and intact. Security walls, video recording systems, and the vault were all left behind allowing Eskar to utilize the infrastructure for their marijuana retail business. This makes the location an ideal structure to hold a retail permit as the current bank infrastructure goes above and beyond some of the state cannabis commission requirements. That being said, upon a thorough review of the site with a security consultant, Eskar will add additional infrastructure to make sure the site completes the necessary security requirements for the state and town of Arlington. The following security plan is in response to both the town of Arlington and Cannabis Control Commission 500.110 Security Requirements for Marijuana Establishments and outline initial responses to the requirements stated. Responses to requirements are in red.

1. **General Requirements.** *A Marijuana Establishment shall implement sufficient safety measures to deter and prevent unauthorized entrance into areas containing marijuana and theft of marijuana at the Marijuana Establishment. Security measures taken by the licensee to protect the premises, employees, consumers and general public shall include, but not be limited to, the following:*
  - a. *Positively identifying individuals seeking access to the premises of the Marijuana Establishment or to whom or marijuana products are being transported pursuant to 935 CMR 500.105(14) to limit access solely to individuals 21 years of age or older;*  
Before entering the sale floor, all entrants will be greeted by a security guard along with staff to check IDs. One solution being evaluated is the IDvisor Sentry and IDentiFake combo system by TokenWorks Inc. (<https://www.idscanner.com/solutions/cannabis-dispensaries-marijuana-retailers/>). The system uses state of the art facial recognition software along with a database of all 50 states to ensure fake IDs are not accepted. Staff will also be trained to spot underage persons trying to enter.
  - b. *Adopting procedures to prevent loitering and ensure that only individuals engaging in activity expressly or by necessary implication permitted by these regulations and its enabling statute are allowed to remain on the premises;*  
Staff and security will monitor the parking lot for loiterers as part of employee training. External cameras will monitor exterior of the building. If traffic becomes troublesome during first few months of opening, Eskar will work with police to mitigate both traffic and loiterers. Additionally, floor space will be designed to have a waiting area to prevent lines outside the building if it ever became an issue.
  - c. *Disposing of marijuana in accordance with 935 CMR 500.105(12) in excess of the quantity required for normal, efficient operation as established within 935 CMR 500.105;*  
Per state requirements for disposal of cannabis products, trained staff will be sure to isolate cannabis products with active THC from other products. From there the products will be destroyed in a manner that renders the active ingredients inert. Per regulations, two registered agents will witness and document the process. Eskar will also work with a third party vendor to destroy and remove products that can't be disposed on site or cannot be removed with regular waste.

- d. *Securing all entrances to the Marijuana Establishment to prevent unauthorized access*  
Eskar will be modifying 21 Broadway to establish 2 entrances to store. The vestibule where the AtM machine was situated in the old bank will become the customer access point to the building. This will assure customers entering the store will not interfere with employees of other businesses in the building. The rear entry of the building will be for Eskar employees only to allow the delivery of goods into the building. Each door will be keycode locked.
- e. *Establishing limited access areas pursuant to 935 CMR 500.110(4), which shall be accessible only to specifically authorized personnel limited to include only the minimum number of employees essential for efficient operation;*  
Along with the modification of entry points to the building, areas of the store will be sectioned off with varying level of access to personnel through the use of security doors with electronic keycode locks. For example, all staff will have access to the front door but only the manager on duty will have access to the vault by establishing security levels for each employee.
- f. *Storing all finished marijuana products in a secure, locked safe or vault in such a manner as to prevent diversion, theft and loss;*  
The old bank vault which was left on the premise after the old bank moved out will become the new vault to store marijuana goods. This will go well beyond the required security protocol for the state and is an added benefit of retrofitting an old bank for the Eskar's purpose.
- g. *Keeping all safes, vaults, and any other equipment or areas used for the production, cultivation, harvesting, processing or storage of marijuana products securely locked and protected from entry, except for the actual time required to remove or replace marijuana;*  
As stated earlier. All doors containing product will be security doors with keycard access.
- h. *Keeping all locks and security equipment in good working order;*  
Equipment will be inspected daily by floor manager along with a full security audit quarterly.
- i. *Prohibiting keys, if any, from being left in the locks or stored or placed in a location accessible to persons other than specifically authorized personnel;*  
Keycards issued to staff will required to be worn at all times and will include a photo ID of the staff member. Any lost cards must be reported immediately. Upon notification, the old card will be deactivated and a new card will be issued to the staff member.
- j. *Prohibiting accessibility of security measures, such as combination numbers, passwords or electronic or biometric security systems, to persons other than specifically authorized personnel;*  
Alarm system and video surveillance area will be kept in a separate room in the back office of the store. The room will be locked with keycard access only awarded to the floor manager and security team.
- k. *Ensuring that the outside perimeter of the Marijuana Establishment is sufficiently lit to facilitate surveillance, where applicable;*  
Outside perimeter will install security cameras to monitor the parking lots, front entry and rear entry. The parking lot will have outdoor lighting with a timer to turn on at dusk.

- i. *Ensuring that all marijuana products are kept out of plain sight and are not visible from a public place without the use of binoculars, optical aids or aircraft;*  
Product will be kept within the building. No windows will see into the store. All customers will be given a bag to conceal their purchases as they leave the premise.
- m. *Developing emergency policies and procedures for securing all product following any instance of diversion, theft or loss of marijuana, and conduct an assessment to determine whether additional safeguards are necessary;*  
Reporting and theft policies will be documented in employee handbook and will be part of training with both customer service staff and security team.
- n. *Developing sufficient additional safeguards as required by the Commission for Marijuana Establishments that present special security concerns; and*  
Additional safeguards addressed throughout plan. Eskar will meet with municipal staff to address special security concerns that may arise.
- o. *Sharing the Marijuana Establishment's security plan and procedures with law enforcement authorities and fire services and periodically updating law enforcement authorities and fire services if the plans or procedures are modified in a material way.*  
Eskar will hold quarterly meetings with the chief of police and fire during the first year of operation to review security plans and procedures. From year 2 on, the meetings will be held once a year. Time and frequency of meetings can be altered based on feedback from community.

2. **Alternate Security Provisions.**

- a. *Notwithstanding the requirements specified in 935 CMR 500.110(1), (5) and (6), if a Marijuana Establishment has provided other, specific safeguards that may be regarded as an adequate substitute for those requirements, such measures may be taken into account by the Commission in evaluating the overall required security measures.*
- b. *The applicant or licensee shall submit a request for an alternative security provision to the Commission on a form as determined and made available by the Commission. Upon receipt of the form, the Commission shall submit the request to the chief law enforcement officer in the municipality where the Marijuana Establishment is located or will be located. The Commission shall request that the chief law enforcement officer review the request and alternative security provision requested and, within 30 days,*
  - i. *certify the sufficiency of the requested alternate security provision; or*
  - ii. *provide the Commission with a statement of reasons why the alternative security provision is not sufficient in the opinion of the chief law enforcement officer.*

*The Commission shall take the chief law enforcement officer's opinion under consideration in determining whether to grant the alternative security provision, provided that it shall not be determinative. If no response is received from the chief law enforcement officer or a designee within 30 days of submitting the request to the chief law enforcement officer, the Commission shall proceed with a determination.*

*At this time Eskar does wish to request any alternate security provisions.*

- 3. **Buffer Zone.** *The property where the proposed Marijuana Establishment is to be located, at the time the license application is received by the Commission, is not located within 500 feet of a pre-existing public or private school providing education in kindergarten or any of grades one*

through 12, unless a city or town adopts an ordinance or by-law that reduces the distance requirement. The distance under 935 CMR 500.110(3) shall be measured in a straight line from the nearest point of the property line in question to the nearest point of the property line where the Marijuana Establishment is or will be located.

See appendix B

4. **Limited Access Areas**

- a. All limited access areas must be identified by the posting of a sign that shall be a minimum of 12" x 12" and which states: "Do Not Enter—Limited Access Area—Access Limited to Authorized Personnel Only" in lettering no smaller than one inch in height.
- b. All limited access areas shall be clearly described by the filing of a diagram of the registered premises, in the form and manner determined by the Commission, reflecting entrances and exits, walls, partitions, vegetation, flowering, processing, production, storage, disposal and retail sales areas.
- c. Access to limited access areas shall be restricted to employees, agents or volunteers specifically permitted by the Marijuana Establishment, agents of the Commission, state and local law enforcement and emergency personnel.
- d. Employees of the Marijuana Establishment shall visibly display an employee identification badge issued by the Marijuana Establishment at all times while at the Marijuana Establishment or transporting marijuana.
- e. All outside vendors, contractors and visitors shall obtain a visitor identification badge prior to entering a limited access area, and shall be escorted at all times by a marijuana establishment agent authorized to enter the limited access area. The visitor identification badge shall be visibly displayed at all times while the visitor is in any limited access area. All visitors must be logged in and out and that log shall be available for inspection by the Commission at all times. All visitor identification badges shall be returned to the Marijuana Establishment upon exit.

Comments to the requirements above: customers will be allocated to only one room. The back office of the store will be only accessible to staff via the keycard security system and will be label clearly at section 4 states.

5. **Security and Alarm Requirements for Marijuana Establishments Operating Enclosed Areas**

- a. A Marijuana Establishment located, in whole or in part, in a building, greenhouse or other enclosed area shall have an adequate security system to prevent and detect diversion, theft or loss of marijuana or unauthorized intrusion, utilizing commercial grade equipment which shall, at a minimum, include:
  - i. A perimeter alarm on all building entry and exit points and perimeter windows, if any;
  - ii. A failure notification system that provides an audible, text or visual notification of any failure in the surveillance system. The failure notification system shall provide an alert to designated employees of the Marijuana Establishment within five minutes after the failure, either by telephone, email or text message
  - iii. A duress alarm, panic alarm or hold-up alarm connected to local public safety or law enforcement authorities
  - iv. Video cameras in all areas that may contain marijuana, at all points of entry and exit and in any parking lot which shall be appropriate for the normal lighting

conditions of the area under surveillance. The cameras shall be directed at all safes, vaults, sales areas and areas where marijuana is cultivated, harvested, processed, prepared, stored, handled or dispensed. Cameras shall be angled so as to allow for the capture of clear and certain identification of any person entering or exiting the Marijuana Establishment or area;

- v. 24-four hour recordings from all video cameras that are available immediate viewing by the Commission upon request and that are retained for at least 90 calendar days. Recordings shall not be destroyed or altered, and shall be retained as long as necessary if the Marijuana Establishment is aware of a pending criminal, civil or administrative investigation or legal proceeding for which the recording may contain relevant information;
  - vi. The ability to immediately produce a clear, color still photo whether live or recorded;
  - vii. A date and time stamp embedded in all recordings, which shall be synchronized and set correctly at all times and shall not significantly obscure the picture;
  - viii. The ability to remain operational during a power outage; and
  - ix. A video recording that allows for the exporting of still images in an industry standard image format, including .jpg, .bmp and .gif. Exported video shall have the ability to be archived in a proprietary format that ensures authentication of the video and guarantees that no alteration of the recorded image has taken place. Exported video shall also have the ability to be saved in an industry standard file format that may be played on a standard computer operating system. All recordings shall be erased or destroyed prior to disposal.
- b. All security system equipment and recordings shall be maintained in a secure location so as to prevent theft, loss, destruction and alterations.
  - c. In addition to the requirements listed in 935 CMR 500.110(5)(a) and (b), the Marijuana Establishment shall have a back-up alarm system, with all the capabilities of the primary system, provided by a company supplying commercial grade equipment, which shall not be the same company supplying the primary security system, or shall demonstrate to the Commission's satisfaction alternate safeguards to ensure continuous operation of a security system.
  - d. Access to surveillance areas shall be limited to persons that are essential to surveillance operations, law enforcement authorities, security system service personnel and the Commission. A current list of authorized employees and service personnel that have access to the surveillance room must be available to the Commission upon request. If the surveillance room is on-site of the Marijuana Establishment it shall remain locked and shall not be used for any other function.
  - e. All security equipment shall be in good working order and shall be inspected and tested at regular intervals, not to exceed 30 calendar days from the previous inspection and test.
  - f. Trees, bushes and other foliage outside of the Marijuana Establishment shall be maintained so as to prevent a person or persons from concealing themselves from sight. It should be noted that typically installing security systems needed to meet the requirements above may cause complaints from the property owner and/or the

community nearby. Since the old bank already has most of these systems in place, Eskar sees no issues implementing these systems as they are already installed on site today.

6. **Security and Alarm Requirements for Marijuana Establishments Operating an Open Cultivation Facility**

Eskar will not be operating a cultivation facility at this time. This section of the code does not apply to the company's desired business use.

7. **Incident Reporting**

- a. *A Marijuana Establishment shall notify appropriate law enforcement authorities and the Commission of any breach of security immediately and, in no instance, more than 24 hours following discovery of the breach. Notification shall occur, but not be limited to, during the following occasions:*
  - i. *discovery of discrepancies identified during inventory;*
  - ii. *diversion, theft or loss of any marijuana product;*
  - iii. *any criminal action involving or occurring on or in the Marijuana Establishment premises;*
  - iv. *any suspicious act involving the sale, cultivation, distribution, processing or production of marijuana by any person;*
  - v. *unauthorized destruction of marijuana;*
  - vi. *any loss or unauthorized alteration of records related to marijuana;*
  - vii. *an alarm activation or other event that requires response by public safety personnel or security personnel privately engaged by the Marijuana Establishment;*
  - viii. *the failure of any security alarm system due to a loss of electrical power or mechanical malfunction that is expected to last more than eight hours; or*
  - ix. *any other breach of security.*
- b. *A Marijuana Establishment shall, within ten calendar days, provide notice to the Commission of any incident described in 935 CMR 500.110(7)(a) by submitting an incident report in the form and manner determined by the Commission which details the circumstances of the event, any corrective action taken, and confirmation that the appropriate law enforcement authorities were notified.*
- c. *All documentation related to an incident that is reportable pursuant to 935 CMR 500.110(7)(a) shall be maintained by a Marijuana Establishment for not less than one year or the duration of an open investigation, whichever is longer, and made available to the Commission and law enforcement authorities upon request.*

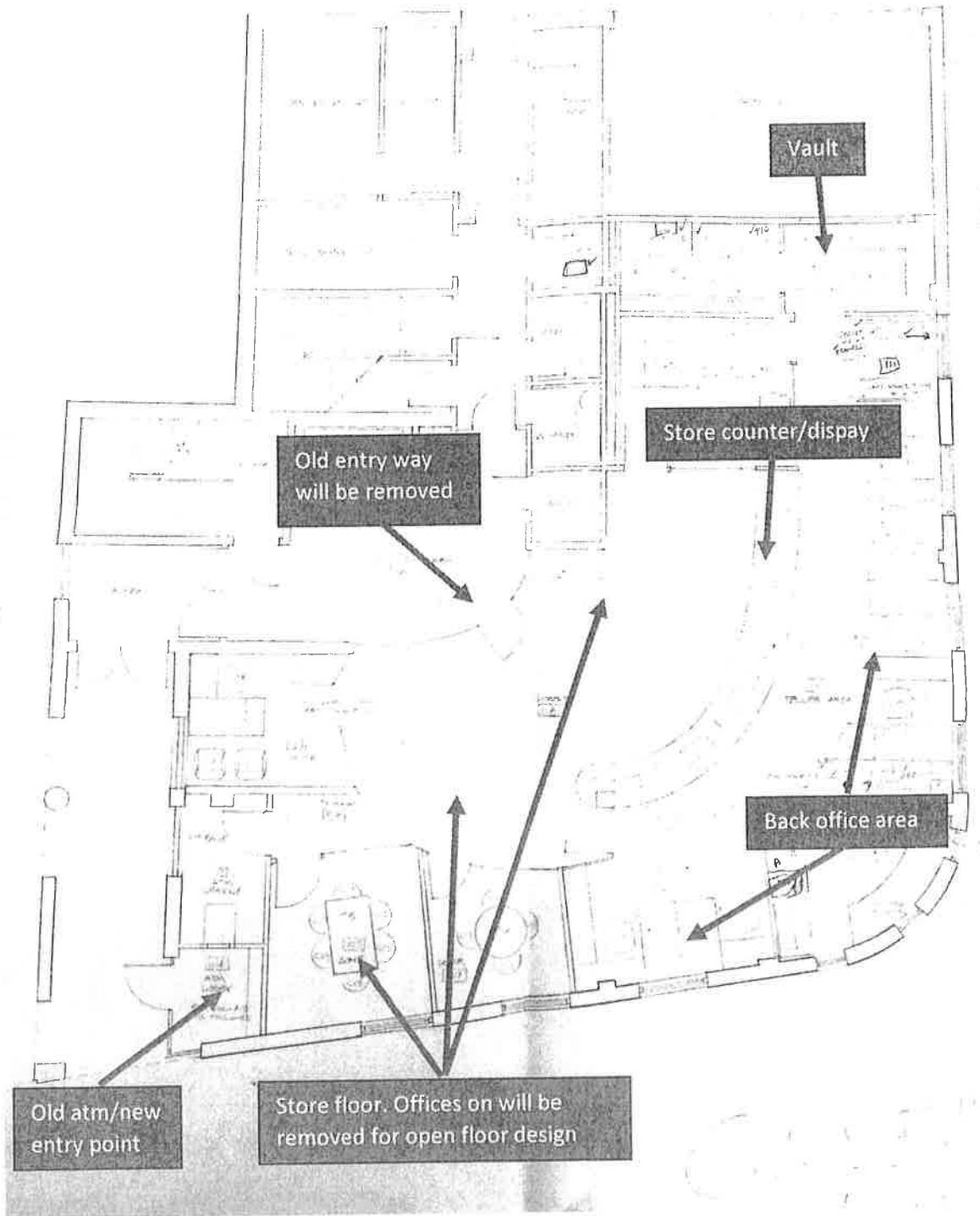
The following incident reporting requirements will be covered in the employee handbook for both customer service staff and security personnel.

8. **Security Audits**

*A Marijuana Establishment must, on an annual basis, obtain at its own expense, a security system audit by a vendor approved by the Commission. A report of such audit must be submitted, in a form and manner determined by the Commission, no later than 30 calendar days after the audit is conducted. If the audit identifies concerns related to the establishment's security system, the Marijuana Establishment must also submit a plan to mitigate those concerns within ten business days of submitting the audit.*

### Appendix A: 21 Broadway Floor Plan

Below is the old floor plan to the bank at 21 Broadway. Eskar will be working with a design team and security consultant to insure modifications are within state requirements and town code.





## Section 3, Question 7

### Preliminary Traffic Study

## 21 Broadway, Arlington, MA Traffic and Parking Plan

Traffic is a major concern for local municipalities. If Eskar is awarded a permit to open in Arlington, the traffic impact will be nowhere near the volume some of the retail establishments are seeing today. This is due to additional stores opening up over the next few months, easing the supply shortage of product available to cannabis customers. Nevertheless, traffic mitigation is a serious criterion to consider. In response to the town's submission request, Eskar has performed a brief preliminary traffic study. 21 Broadway has provided at least 4 private parking spots for Eskar employees and is in negotiations to purchase more. An aerial view of the building highlights the large parking lot supporting the building in figure 1. There also looks to be at least another 20-40 public parking spots nearby situated on both Broadway and Sunnyside Ave. Eskar hired Vanasse & Associates Inc. to perform a traffic memo. The firm has performed over 20 traffic studies for various cannabis firms across the commonwealth and came highly recommend to Eskar. The full traffic summary is attached. At 3,000 sq ft, the retail store can expect the follow traffic:

Weekday Daily	760
Weekday Morning Peak Hour	
Entering	17
<u>Exiting</u>	<u>14</u>
Total	31
Weekday Evening Peak Hour	
Entering	33
<u>Exiting</u>	<u>33</u>
Total	66
Saturday Daily	778
Weekday Evening Peak Hour	
Entering	55
<u>Exiting</u>	<u>54</u>
Total	109

Based on these numbers, Eskar is confident they can work with Vanasse and the town of Arlington to effectively handle this traffic level. If additional spaces are needed, there are plenty of properties nearby with empty lots Eskar can work with to acquire additional parking.

Figure 1: Aerial view of the building. Lease includes at least 17 spots for parking. Parking lot enters on Broadway and exits onto Sunnyside Ave.



Figure 2: Zoomed out aerial view of the property. Over 700 feet of 1 hour parking is available along Broadway alone. These spaces are vacant most of the time given a cemetery abutts the road. Also, there are large parking lots available to the other businesses nearby.



Figure 3: Image of Broadway. As you can see there is public parking on both sides of the road. One side is adjacent to a cemetery leaving plenty of open space throughout the day.

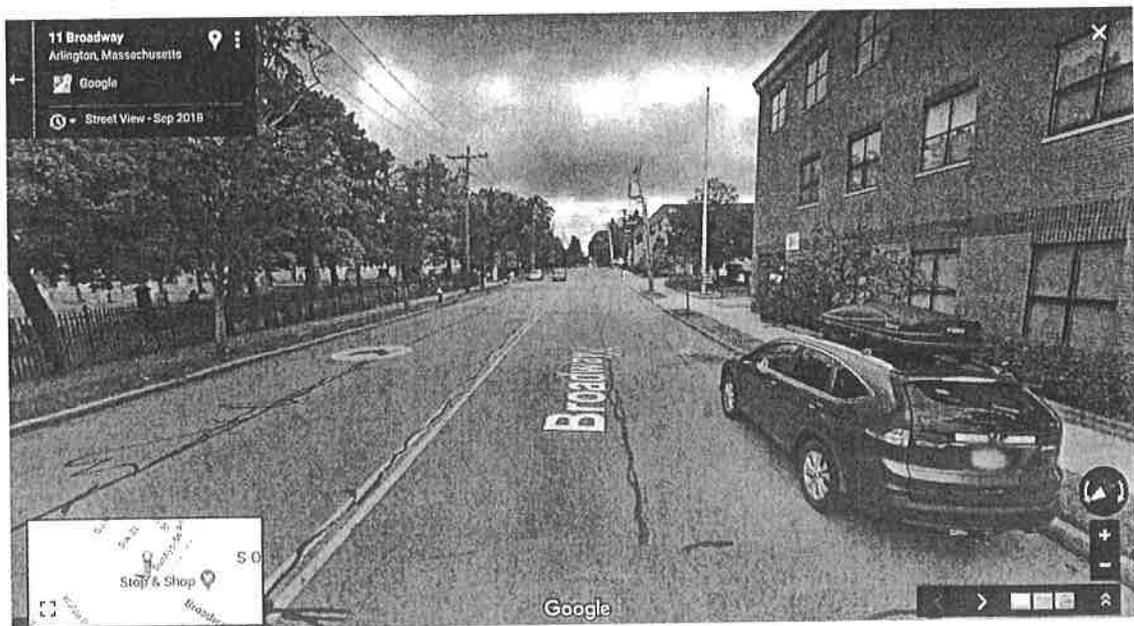


Figure 4: View of main section of the parking lot. Eskar private entrance seen on the right by the glass doors.

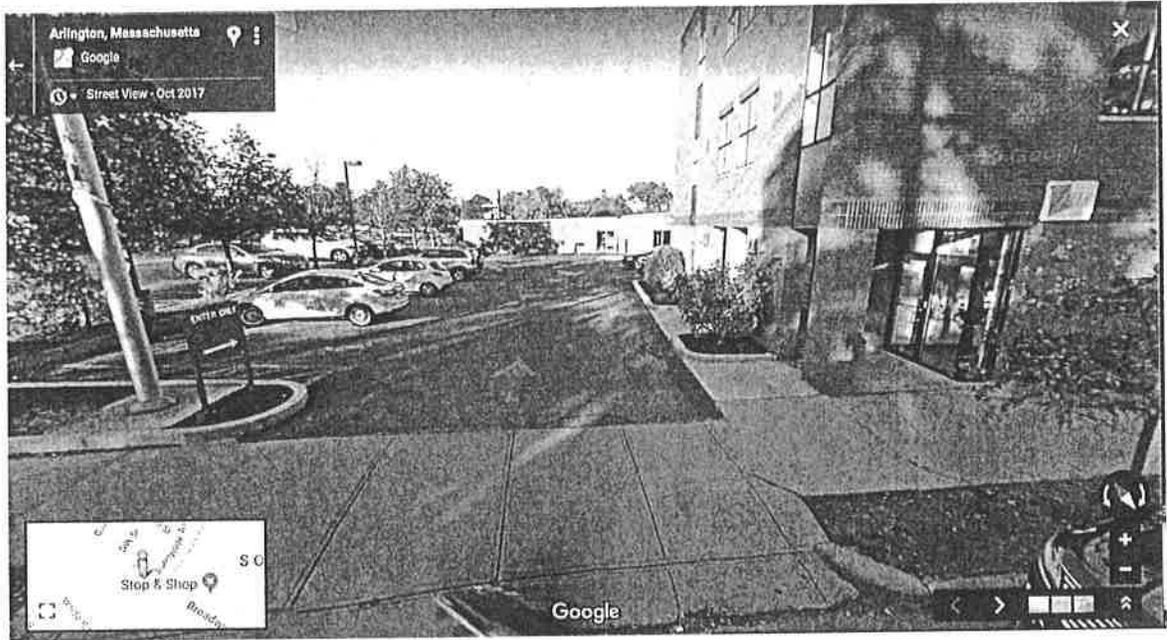


Figure 5: Backside of the building and exit out of the parking lot. Additional parking spaces can be seen on the left. These spaces are not visible in the aerial view.

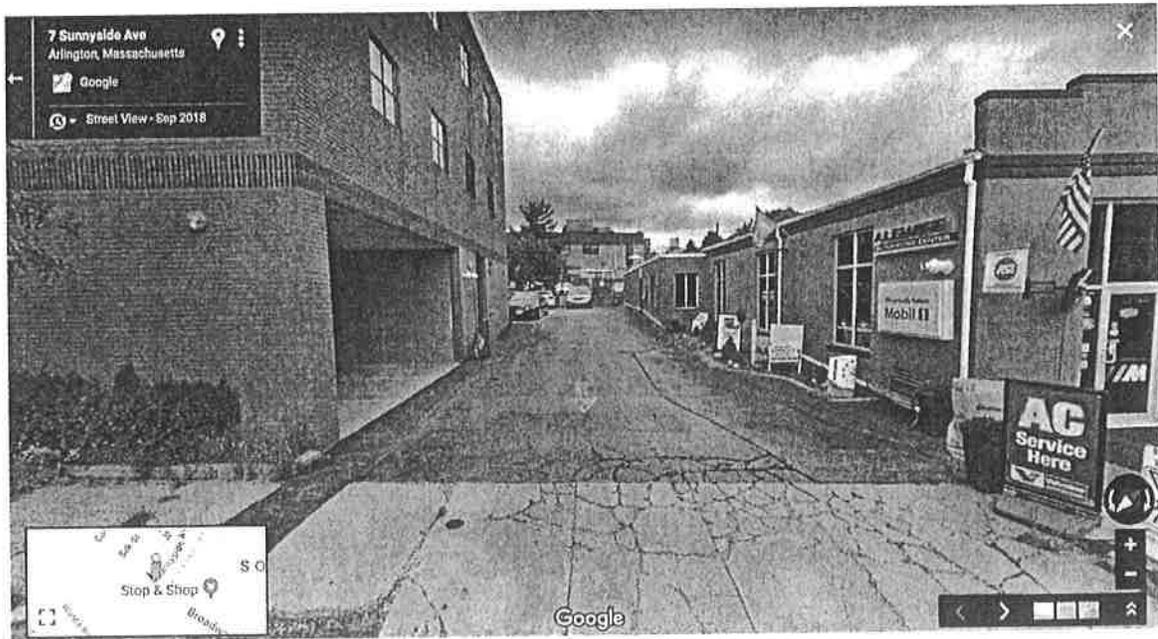
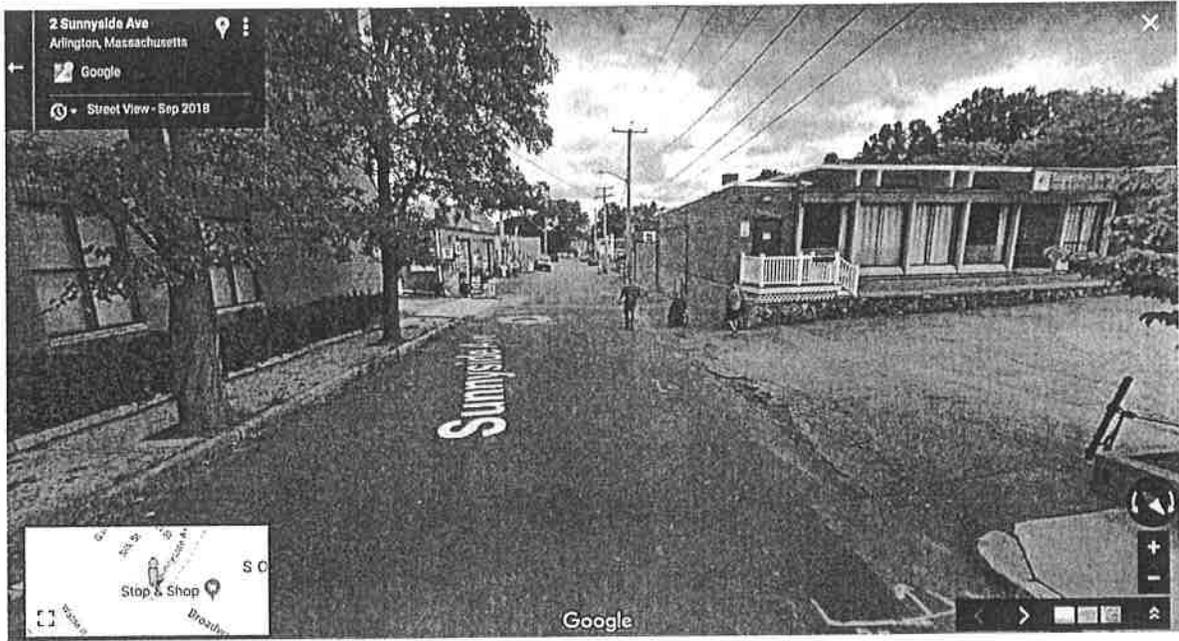


Figure 6: View of Sunnyside Ave. Additional street parking seen on the left of the image.



## MEMORANDUM

**TO:** Mr. Michael Hunnewell  
Eskar LLC  
15 Forbes Street, Apt. #2  
Boston, MA 02130

**FROM:** F. Giles Ham, P.E. *FGH*  
Vanasse & Associates, Inc.  
35 New England Business Center Drive  
Suite 140  
Andover, MA 01810  
(978) 474-8800

**DATE:** April 25, 2019

**RE:** 8264

**SUBJECT:** Proposed Marijuana Dispensary  
21 Broadway  
Arlington, Massachusetts

As requested, Vanasse & Associates, Inc. (VAI) has provided trip generation estimates for the proposed Marijuana Dispensary to be located at 21 Broadway in Arlington, Massachusetts. The proposed project will consist of a 3,000 sf retail dispensary with 20 parking spaces.

### Trip Generation

In order to develop the traffic characteristics of the proposed project, trip-generation statistics published by the Institute of Transportation Engineers (ITE)<sup>1</sup> for Land Use Code (LUC) 882 – Marijuana Dispensary was utilized.

Table 1 provides the Trip Generation estimates.

**Table 1**  
**TRIP-GENERATION\***

	3,000 sf
Weekday Daily	760
Weekday Morning Peak Hour:	
Entering	17
Exiting	14
Total	31
Weekday Evening Peak Hour:	
Entering	33
Exiting	33
Total	66
Saturday Daily	778
Weekday Evening Peak Hour:	
Entering	55
Exiting	54
Total	109

Source: *Institute of Transportation Engineers – Trip Generation 10th Edition.*

\*ITE LUC 882 – Marijuana Dispensary

<sup>1</sup>*Trip Generation*, 10th Edition; Institute of Transportation Engineers; Washington, DC; 2017.



As can be seen in Table 1, the Project is expected to generate approximately 31 new vehicle trips (17 entering and 14 exiting) during the weekday morning peak-hour and 66 new vehicle trips (33 entering and 33 exiting) during the weekday evening peak-hour. During the Saturday midday peak hour, the Project is expected to generate approximately 109 new vehicle trips (55 entering and 54 exiting). On a daily basis, the project will generate 760 trips (380 entering and 380 exiting) during weekday and 778 trips (389 entering and 389 exiting) during a typical Saturday.

A more detailed traffic analysis can be provided to the Town, as the project move through the permitting process.

cc: File



APPENDIX

TRIP GENERATION

**Institute of Transportation Engineers (ITE)  
Trip Generation, 10th Edition  
Land Use Code (LUC) 882 - Marijuana Dispensary**

Average Vehicle Trips Ends vs: 1,000 sf of GFA  
Independent Variable (X): 3

**AVERAGE WEEKDAY DAILY**

$T = 252.7 * (X)$   
 $T = 252.7 * 3$   
 $T = 758.10$   
 $T = 760.00$   
 $T = 760$  vehicle trips  
with 50% ( 380 vpd) entering and 50% ( 380 vpd) exiting.

**WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC**

$T = 10.44 * (X)$   
 $T = 10.44 * 3$   
 $T = 31.32$   
 $T = 31$  vehicle trips  
with 56% ( 17 vph) entering and 44% ( 14 vph) exiting.

**WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC**

$T = 21.83 * (X)$   
 $T = 21.83 * 3$   
 $T = 65.49$   
 $T = 66$  vehicle trips  
with 50% ( 33 vph) entering and 50% ( 33 vph) exiting

**SATURDAY DAILY**

$T = 259.31 * (X)$   
 $T = 259.31 * 3$   
 $T = 777.93$   
 $T = 778$  vehicle trips  
with 50% ( 389 vpd) entering and 50% ( 389 vpd) exiting.

**SATURDAY MIDDAY PEAK HOUR OF GENERATOR**

$T = 36.43 * (X)$   
 $T = 36.43 * 3$   
 $T = 109.29$   
 $T = 109$  vehicle trips  
with 50% ( 55 vph) entering and 50% ( 54 vph) exiting.

ESKAR, LLC.

HOST COMMUNITY AGREEMENT FOR THE SITING OF AN ADULT-USE MARIJUANA RETAILER ESTABLISHMENT IN THE TOWN OF ARLINGTON

This Host Community Agreement (the "**Agreement**") is entered into this \_\_\_\_ day of \_\_\_\_\_, 2019 (the "**Effective Date**") by and under the laws of the Town of Arlington, Massachusetts, a municipal corporation duly organized under the Laws of the Commonwealth, acting through its Board of Selectmen, with a principal address of \_\_\_\_\_ (hereinafter the "**Municipality**") and Eskar, LLC. with a principal office address of \_\_\_\_\_ (hereinafter "**Licensee**") (Municipality and Licensee, collectively the "**Parties**").

**RECITALS**

WHEREAS, Licensee intends to locate a licensed Marijuana Retailer Establishment ("**MRE**") at 19-23 Broadway, Unit 1F, Arlington, MA (hereinafter the "**Facility**") for the dispensing of adult use marijuana in accordance with M.G.L. ch. 94G and 935 CMR 500.000 et seq. ("**State Law**"), and such approvals as may be issued by the Municipality, and other applicable regulations, as may be amended ("**Local Law**"); and

WHEREAS, M.G.L. ch. 94G, § 3(d), and the regulations issued thereunder, require that Municipality and Licensee execute an agreement setting forth the conditions to have the Facility within it that must include, but not be limited to, all stipulations of responsibilities between the host community and the marijuana establishment; and

WHEREAS, the Municipality recognizes this development and Facility will benefit the Municipality and its citizens through increased economic development, offering products in a safe, licensed and secure setting; additional employment opportunities for residents, and a strengthened local tax base; and

WHEREAS, the Parties intend by this Agreement to satisfy the provisions of M.G.L. c.94G, § 3(d), applicable to the operation of a MRE in the Municipality; and

NOW THEREFORE, in consideration of the mutual promises of the Parties contained herein and other good and valuable consideration, the receipt of which is hereby acknowledged, the Parties agree as follows:

**AGREEMENT**

1. **Authorization.** The Parties respectively represent and warrant that:
  - a. Each is duly organized and existing and in good standing, has the full power, authority, and legal right to enter into and perform this Agreement, and the

execution, delivery and performance hereof and thereof (i) will not violate any judgment, order, state law, bylaw, or regulation, and (ii) do not conflict with, or constitute a default under, any agreement or instrument to which either is a party or by which either party may be bound or affected; and

- b. This Agreement has been duly authorized, executed and delivered and constitutes legal, valid and binding obligations of each party, enforceable in accordance with its terms, and there is no action, suit, or proceeding pending, or, to the knowledge of either party, threatened against or affecting wither wherein an unfavorable decision, ruling or finding would materially adversely affect the performance of any obligations hereunder, except as otherwise specifically noted in this Agreement.
2. **Local Permitting.** Licensee agrees that it is required to obtain all local permits required pursuant to Massachusetts Law and the Municipality's Bylaws and regulations. Provided the Municipality acts in accordance with the procedures set forth in G.L. c.44, §53G, Licensee shall be required to pay the reasonable costs of the employment by the Municipality's boards and/or officials of outside consultants, including without limitation, engineers, architects, scientists and attorneys required to review the application for such local permits required to operate the Facility.
  3. **Community Impact.** Licensee anticipates that the Municipality will incur additional expenses and impacts upon the Municipality's road system, law enforcement, fire protection services, inspectional services and permitting services, public health services, abuse prevention efforts, and potential additional unforeseen impacts upon the Municipality. Accordingly, in order to mitigate the financial impact upon the Municipality and use of the Municipality's resources, the Licensee agrees to make a donation or donations to the Municipality, in the amounts and under the terms provided herein (the "**Community Impact Payments**")
  4. **Host Community Payments.**
    - a. **MRE Community Impact Payments.** In the event that Licensee obtains a final license, or any other such license/or approval as may be required under State Law, for the operation of a MRE in the Municipality from the Massachusetts Cannabis Control Commission ("**CCC**"), and receives all required approvals from the Municipality to operate a MRE at the Facility, then Licensee agrees to the following:
      - i. The Licensee shall make quarterly community impact payments to the Municipality in an amount equal to three percent (3%) of the gross sales of all marijuana and marijuana-infused products at the Facility (the "**MRE Community Impact Payment**").

The initial MRE Community Impact Payment shall be due 30 days after the 90<sup>th</sup> day following commencement of operations which shall be the date that the Licensee is issued a certificate of occupancy and begins the retail sales of marijuana and/or marijuana-infused products in the Municipality (the “**Initial MRE Payment**”), and each subsequent payment shall be due on the same day of each quarter thereafter.

- b. **Timely Payment.** Licensee acknowledges that time is of the essence with respect to performance of its obligations hereunder and that late payments shall be subject to interest at the rates prescribed by G.L. c. 59, §57, provided that no interest shall be due if such default is cured within ten (10) days following written notice of default. If Licensee fails to cure such default within said ten (10) days following written notice thereof, interest shall be due from the date of the original default. These payments or benefits shall be made payable to the Municipality at the direction of the Town Manager.
  - c. **Application of Payments.** The Licensee acknowledges and agrees that the Municipality is under no obligation to use the Impact Fee made herein in any particular manner.
5. **Annual Filing.** Licensee shall notify the Municipality when it commences sales at the Facility and shall submit quarterly financial statements to the Municipality, which shall include certification of itemized gross sales, and all other information required to ascertain compliance with the terms of this Agreement if required by applicable Massachusetts law.

The Licensee shall maintain its books, financial records and any other data related to its finances and operations in accordance with standard accounting practices and any applicable regulations and guidelines promulgated by the Commonwealth of Massachusetts. All records shall be retained for a period of at least seven (7) years.
6. **Term and Termination.** The term of this Agreement shall be for five (5) years from the date the Facility first opens to the public (“Term”). All payments required hereunder shall remain in effect for the duration of the Term and shall be renewable by the Licensee for consecutive five (5) year renewal terms upon the expiration of each Term on the same terms and conditions as set forth herein.
7. **Acknowledgements.** The Municipality understands and acknowledges that Payment due pursuant to this Agreement are contingent upon the Licensee’s receipt of all state and local approvals to operate a MRE at the Facility. The Licensee acknowledges that the Municipality’s support for the Facility is contingent upon the Payment due pursuant to this Agreement.
8. **Local Property Taxes.** At all times during the Term of this Agreement, property, both real and personal, owned or operated by Licensee shall be treated as taxable, and all

applicable real estate and personal property taxes for that property shall be paid either directly by Licensee or by its landlord, and neither Licensee nor its landlord shall object or otherwise challenge the taxability of such property and shall not seek a non-profit exemption from paying such taxes. Notwithstanding the foregoing, (i) if real or personal property owned, leased or operated by Licensee is determined to be non-taxable or partially non-taxable, or (ii) if the value of such property is abated with the effect of reducing or eliminating the tax which would otherwise be paid if assessed at fair cash value as defined in M.G.L. ch. 59, §38, or (iii) if Licensee is determined to be entitled or subject to exemption with the effect of reducing or eliminating the tax which would otherwise be due if not so exempted, then Licensee shall pay to the Municipality an amount which when added to the taxes, if any, paid on such property, shall be equal to the taxes which would have been payable on such property at fair cash value and at the otherwise applicable tax rate, if there had been no abatement or exemption; this payment shall be in addition to the payments made by Licensee under Section 4 of this Agreement.

9. **Local Sales Taxes.** The Parties acknowledge that the Municipality has imposed a local sales tax upon the sale or transfer of marijuana or marijuana products by a marijuana retailer operating within the Municipality, pursuant to the provisions of G.L. c.64N. Accordingly, Licensee, as required by applicable law, shall remit to the Massachusetts Department of Revenue the excise tax rate determined by the Commonwealth of Massachusetts for the sale of adult-use marijuana and adult-use marijuana-infused products, currently at 3.0% of gross annual sales. Pursuant to G.L. c.64N, §3, the excise taxes received by the Department of Revenue “shall at least quarterly be distributed, credited and paid [to the Town] by the state treasurer”. Nothing herein shall limit the ability of the Municipality to adjust the local sales tax in the future, should the law be amended to allow for an increase in such allowable sales tax.

10. **Community Support and Additional Obligations.**

- a. Local Vendors – To the extent such practice and its implementation are consistent with federal, state, and municipal laws and regulations, Licensee shall use good faith efforts in a legal and non-discriminatory manner to give priority to qualified local businesses, suppliers, contractors, builders and vendors in the provision of goods and services called for in the construction, maintenance, and continued operation of the Facility.
- b. Employment/Salaries – Except for senior management, and to the extent such practice and its implementation are consistent with federal, state, and municipal laws and regulations, Licensee shall use good faith efforts in a legal and non-discriminatory manner to hire qualified residents of the Municipality as employees of the Facility.
- c. Approval of Manager - If requested by the Municipality, the Licensee shall provide to the Municipality, for review, the name and relevant information, including but not

limited to the information set forth in 935 CMR 500.030, of the person proposed to act as on-site manager of the Facility. The submittal shall include authorization and all fees necessary to perform a criminal history (CORI) check or similar background check. The Municipality shall consider such request for approval within thirty (30) days following submittal to determine, in consultation with the Police Chief, if the person proposed would not be qualified to act as on-site manager based on applicable Massachusetts laws and regulations. Such approval shall not be unreasonably denied, conditioned or delayed. This approval process shall also apply to any change of on-site manager.

- d. Education - Licensee shall provide staff to participate in Municipality-sponsored educational programs on public health and drug abuse prevention, and to work cooperatively with any of the Municipality's public safety departments to mitigate any potential negative impacts of the Facility. In addition, Licensee commits to the provision of educational materials related to health, safety and responsible use of the products offered at the Facility. These materials shall be readily available at the point of purchase.
  - e. The Licensee shall, at least annually, provide the Municipality with copies of all reports submitted to the CCC regarding Licensee's operations at the Facility.
  - f. The Licensee will work cooperatively with all necessary municipal departments, boards, commissions, and agencies ensure that Licensee's operations are compliant with all of the Municipality's applicable codes, rules, and regulations.
11. **Application Support.** The Municipality agrees to submit to the CCC all documentation and information required by the CCC from the Municipality for the Licensee to obtain approval to operate a MRE at the Facility. The Municipality agrees to support Licensee's application(s) for a MRE with the CCC but makes no representation or promise that it will act on any other license or permit request in any particular way other than by the Municipality's normal and regular course of conduct and in accordance with their codes, rules, and regulations and any statutory guidelines governing them.

This Agreement does not affect, limit, or control the authority of the Municipality's boards, commissions, and departments to carry out their respective powers and duties to decide upon and to issue, or deny, applicable permits and other approvals under the statutes and regulations of the Commonwealth, the General and Zoning Bylaws of the Municipality, or applicable regulations of those boards, commissions, and departments, or to enforce said statutes, Bylaws, and regulations. The Municipality, by entering into this Agreement, is not thereby required or obligated to issue such permits and approvals as may be necessary for a MRE to operate in the Municipality, or to refrain from enforcement action against the Licensee and/or the Facility for violation of the terms of said permits and approvals or said statutes, Bylaws, and regulations.

12. **Security.** Licensee shall maintain security at the Facility in accordance with a security plan presented to the Municipality and approved by the CCC. In addition, Licensee shall

at all times comply with State Law and Local Law regarding security of the Facility. Such compliance shall include, but will not be limited to: providing hours of operation; after-hours contact information and access to surveillance operations; and requiring Licensee's agents to produce their Program ID Card to law enforcement upon request.

To the extent requested by the Municipality's Police Department, and subject to the security and architectural review requirements of the CCC, the Licensee shall work with the Municipality's Police Department in determining the placement of exterior security cameras, so that at least two cameras are located to provide an unobstructed view in each direction of the public way(s) on which the facility is located.

Licensee agrees to cooperate with the Police Department, including but not limited to periodic meetings to review operational concerns, security, delivery schedule and procedures, cooperation in investigations, and communications with the Police Department of any suspicious activities at or in the immediate vicinity of the Facility, and with regard to any anti-diversion procedures.

To the extent requested by the Municipality's Police Department, the Licensee shall work with the Police Department to implement a comprehensive diversion prevention plan to prevent diversion, such plan to be in place prior to the commencement of operations at the Facility. Such plan shall include, but is not limited to, (i) training Licensee employees to be aware of, observe, and report any unusual behavior in authorized visitors or other Licensee employees that may indicate the potential for diversion; and (ii) utilizing seed-to-sale tracking software to closely track all inventory at the Facility.

13. **Governing Law.** This Agreement shall be governed and construed and enforced in accordance with the laws of the Commonwealth of Massachusetts, without regard to the principals of conflicts of law thereof.
14. **Amendments/Waiver.** Amendments or waivers of any term, condition, covenant, duty or obligation contained in this Agreement may be made only by written amendment executed by all Parties, prior to the effective date of the amendment.
15. **Severability.** If any term or condition of this Agreement or any application thereof shall to any extent be held invalid, illegal or unenforceable by the court of competent jurisdiction, the validity, legality, and enforceability of the remaining terms and conditions of this Agreement shall not be deemed affected thereby unless one or both Parties would be substantially or materially prejudiced. Elimination or reduction of any payment required hereunder shall constitute substantial or material prejudice to the Municipality. If any term or condition deemed unlawful concerns the right of the Municipality to the payment and use of any part of the Annual Payments, the parties agree that such part of the Annual Payments paid and to be paid to the Municipality hereunder shall constitute a grant or donation for the purposes set forth herein, and shall be held and used accordingly. Further, the Licensee agrees it will not challenge, in any jurisdiction, the enforceability of any provision included in this Agreement; and, the Licensee shall pay for all reasonable fees and costs incurred by the Municipality in defending and enforcing this Agreement.

16. **Successors/Assigns.** This Agreement is binding upon the Parties hereto, their successors, assigns and legal representatives. The Municipality shall not assign or transfer any interest or obligations in this Agreement without the prior written consent of the Licensee, which shall not be unreasonably delayed, conditioned, or withheld. The Licensee shall not assign, sublet or otherwise transfer any interest, its rights nor delegate its obligations under this Agreement unless in compliance with the applicable requirements, if any, of the CCC.

17. **Force Majeure.** If and to the extent that either party is prevented from performing its obligations hereunder by an event of *force majeure*, such party shall be excused from performing hereunder and shall not be liable in damages or otherwise, and the Parties shall instead negotiate in good faith with respect to appropriate modifications of the terms hereof. For purposes of this Agreement, the term *force majeure* shall mean the supervening causes described here, each of which is beyond the reasonable control of the affected party: acts of God, fire, earthquakes, floods, explosion, actions of the elements, war, terrorism, riots, mob violence, a general shortage of labor, equipment, facilities, materials, or supplies in the open market, failure of transportation, strikes, lockouts, actions of labor unions, condemnation, laws or orders of any governmental or military authorities, or any other cause similar to the foregoing, not within the control of such party obligated to perform such obligation.

18. **Entire Agreement.** This Agreement constitutes the entire integrated agreement between the Parties with respect to the matters described. This Agreement supersedes all prior agreements, negotiations and representations, either written or oral, and it shall not be modified or amended except by a written document executed by the Parties hereto.

19. **Notices.** Except as otherwise provided herein, any notices, consents, demands, requests, approvals, or other communications required or permitted under this Agreement shall be in writing and delivered by hand or mailed postage prepaid, return receipt requested, by registered or certified mail or by other reputable delivery service, and will be effective upon receipt for hand or said delivery and three days after mailing, to the other Party at the following address:

To the Municipality:

Town of Arlington

To the Licensee:

Eskar, LLC.

TBD

20. **Third-Parties.** Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either Municipality or the Licensee.

[SIGNATURE PAGE FOLLOWS]

ESKAR

IN WITNESS WHEREOF, the Parties hereto have duly executed this Host Community Agreement on the date set forth above.

**TOWN OF ARLINGTON**

**ESKAR, LLC.**

\_\_\_\_\_  
Name:  
Title:

\_\_\_\_\_  
Name:  
Title:

DRAFT



## ASSIGNMENT AND ASSUMPTION OF LEASE

**THIS ASSIGNMENT OF LEASE** (“Assignment”) is dated March 12, 2020 by and between **ESKAR LLC**, a Massachusetts limited liability company having an address of 15 Forbes Street, Apartment 2, Boston, Massachusetts 02130 (“Assignor”) and **ESKAR ARLINGTON LLC**, a Massachusetts limited liability company having an address of 9 Wildwood Road, Middleton, Massachusetts 01949 (“Assignee”).

### RECITALS

**WHEREAS**, the Assignor is the original “Tenant” under the “Commercial Lease” dated June \_\_\_\_\_, 2019 (“Lease”) by and between the Assignor and Kentury Ventures, LLC (“Landlord”) for certain premises located at 23 Broadway, Arlington, Massachusetts (the “Premises”); and,

**WHEREAS**, the Assignor wishes to assign all of its right, title and interest in and to the Lease to the Assignee, and the Assignee wishes to assume the same.

**NOW, THEREFORE**, the parties hereby agree as follows:

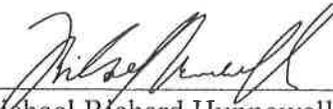
1. The Assignor hereby assigns and transfers to the Assignee all of its right, title and interest in and to the Lease.
2. The Assignee hereby assumes all of the obligations of the Assignor arising or accruing on or after the date hereof under the Lease and shall make all payments and keep and perform all conditions and covenants of the Lease in the same manner as if the Assignee were the original “Tenant” thereunder.
3. Assignee’s parent company, Eskar Holdings, LLC, hereby agrees to guarantee the obligations of Assignee as tenant under the Lease.
4. Assignee hereby represents that the Town of Arlington has agreed to the amendment of its Host Community Agreement with Assignor to replace Assignor with Assignee. Assignee has further agreed to proceed with the license application for a retail cannabis facility at the Premises with the Massachusetts Cannabis Control Commission in the name of Assignee
5. Landlord hereby consents to the assignment of the Lease by Assignor to Assignee.

[Remainder of Page Intentionally Left Blank]

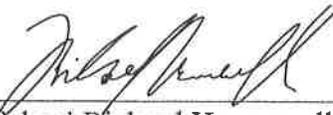
*MRH*  


IN WITNESS WHEREOF, the parties have caused this Assignment to be executed the day and year first above written.

**ASSIGNOR:  
ESKAR LLC**

By:   
Michael Richard Hunnewell  
Its: Manager

**ASSIGNEE:  
ESKAR ARLINGTON LLC**

By:   
Michael Richard Hunnewell  
Its: Manager

**GUARANTOR:**

**ESKAR HOLDINGS, LLC**

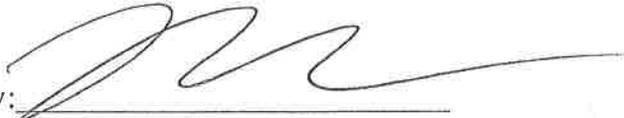
By:   
Michael Richard Hunnewell  
Its: Manager

**CONSENT TO ASSIGNMENT**



The undersigned Landlord hereby consents to the Assignment of the Lease on the express conditions set forth herein as well as in the Lease.

**LANDLORD:**  
**KENTURY VENTURES, LLC**

By:   
Xiangping Chen  
Its: Manager



# EXHIBIT 3

# EXHIBIT 4

## Security Plan

Eskar Arlington, LLC (“Eskar”) security plan is to protect the premises, provide a safe environment for patients, caregivers, staff, visitors and the general public, and to deter and prevent theft and diversion of product. Eskar recognizes and prepares for both internal and external security threats, all employees will go through security training. Security plans will be reviewed and amended as needed. Violation of security policies by Eskar agents and employees is grounds for immediate dismissal.

Pursuant to 935 CMR 500.110(1)(a)-(q), Eskar will implement sufficient safety measures to prevent unauthorized entrance into the Eskar facility and theft of marijuana from occurring. These security measures include, but are not limited to: properly identifying individuals entering the Eskar facility to limit access to those 21 years or older; preventing loitering; properly disposing of marijuana products; securing entrances and establishing limited access areas for authorized personnel; ensuring proper storage of marijuana and marijuana products; keeping locks in good condition and preventing keys to said locks from being accessible to unauthorized individuals; ensuring property lighting of the exterior of the Eskar facility; keeping marijuana products out of plain site; developing emergency procedures; and sharing Eskar’s security plan and procedures and relevant updates with law enforcement and fire services. If Eskar identifies alternate security provisions that might be regarded as adequate substitutes for any security requirements, Eskar will submit a request for acceptance of these provisions pursuant to 935 CMR 500.110(2).

Eskar will have limited access areas identified with clear signage designating the access point for authorized personnel only, pursuant to 935 CMR 500.110(4). Identification badges will be required to be worn at all times by Eskar employees while at the facility or engaged in transportation. All outside vendors, contractors and visitors shall be required to wear visitor badges prior to entering limited access areas and shall be displayed at all times. Visitors shall be logged in and out and be escorted while at the Eskar facility. The visitor log will be available for inspection by the Commission at all times. All visitor badges will be returned to Eskar upon exit. All Limited Access areas will be clearly described by the filing of a diagram of the registered premises, as determined by the Commission, reflecting, where applicable, entrances and exits, walls, partitions, vegetation, flowering, processing, production, storage, disposal and retail sales areas. Access to Limited Access areas will be restricted to employees, agents or volunteers specifically permitted by Eskar, agents of the Commission, state and local law enforcement and emergency personnel. All Eskar employees will visibly display an employee identification badge issued by Eskar at all times while Eskar’s Marijuana Establishments or transporting marijuana.

All finished marijuana products will be stored in a secure, locked safe or vault in such a manner as to prevent diversion, theft or loss, pursuant to 935 CMR 500.110(1)(f). Additionally, Eskar will prohibit keys, if any, from being left in the locks or stored or place in a location accessible to persons other than specifically authorized personnel. Eskar will also ensure that that all marijuana products are kept out of plain sight and are not visible from a public place without the use of binoculars, optical aids or aircraft.

Pursuant to 935 CMR 500.105(12)(b), all liquid waste containing marijuana or marijuana byproducts shall be disposed of in compliance with all applicable state and federal requirements. Any remaining marijuana waste shall be ground and mixed with other organic materials, as defined in 301 CMR 16.02 and in accordance with 935 CMR 500.105(12)(c)(2.b). Solid waste containing

Eskar Arlington, LLC  
Management and Operations Profile  
Operating Policies and Procedures

cannabis waste generated at our Marijuana Establishment may be ground up and mixed with solid wastes such that the resulting mixture renders the cannabis unusable for its original purpose, in compliance with 935 CMR 500.105(12)(c). A minimum of two Marijuana Establishment Agents must witness and document how the marijuana waste is disposed or otherwise handled in accordance with 935 CMR 500.105(12).

In accordance with 935 CMR 500.110(5), Eskar will have a security system to prevent and detect diversion, theft or loss of marijuana. Pursuant to 935 CMR 500.110(5)(a)-(g), Eskar's security system shall include, but is not limited to: perimeter alarms within its structures; failure notification system; a failure notification system that provides notification of any failure in the surveillance system within five minutes after failure via telephone, email or text message; duress alarm; video cameras in all areas containing marijuana; 24-hour recordings that are retained for at least 90 days, contain a date and time stamp and can be exported as still images; and the ability to remain operational during power outages as a result of a secondary power back-up or gen-set power stream. Eskar will have video cameras in all areas containing marijuana, at all points of entry and exit and in the parking lot. Eskar will have video cameras directed at all safes, vaults and sales areas. All of the cameras shall be angled to identify any person entering or exiting the establishment. Additionally, the security system will be maintained in secure locations with a back-up alarm system provided by a company different than that provided by our primary system. Back-up video storage options include the "cloud" and off-site storage of footage in compliance with section 935 CMR 500.110(5) as noted above. Back-up alarm systems include battery power or diesel-powered generator(s) in case of power failure. Access to said systems will be limited to personnel essential to security operations, law enforcement, the security Eskar and the Commission. All equipment shall be in good working order at all times. All trees, bushes, and other foliage outside the establishment shall be maintained to prevent persons from concealing themselves from sight pursuant to 935 CMR 500.110(5)(g).

In accordance with 935 CMR 500.110(7)(a)(1), an on-site secure locked safe or vault used exclusively for the purpose of securing cash shall be maintained. Video cameras shall be positioned to provide images of areas where cash is kept, handled and packaged for transport to financial institutions or DOR facilities. Eskar shall have a written process for securing cash and ensuring transfers of deposits to its financial intuitions pursuant to 935 CMR 500.110(7)(a)(3). Eskar shall use an armored transport provider that is licensed pursuant to M.G.L. c. 147 §25 and has been approved by the financial institution or DOR facility. Eskar shall ensure the use of a locked bag for the transportation of cash from its facility to a financial institution or DOR facility if approved for an alternative safety measure. Transportation of cash shall be conducted in an unmarked vehicle if approved for an alternative safety measure. If this alternative safety measure is utilized to transport cash, Eskar shall adhere to the following safety measures: two marijuana establishment agents shall be present with the vehicle at all times; the vehicle shall be equipped with real-time GPS tracking, the vehicle shall have a two-way communication with the Eskar facility; marijuana or marijuana products will be prohibited from being transported at the same time as cash is being transported for deposit; and Eskar shall seek approval of the alternative safeguard by the financial institution or DOR facility.

Any incident occurring at the Eskar facility that is a breach of security shall be immediately reported within 24 hours to law enforcement and the Commission, pursuant to 935 CMR 500.110(9). Breaches include, but are not limited to: discovery of discrepancies of inventory; diversion, theft or loss of product; criminal action involving the Eskar facility; unauthorized

Eskar Arlington, LLC  
Management and Operations Profile  
Operating Policies and Procedures

destruction of marijuana or suspicious acts involving said marijuana; loss or alteration of records; and alarm activation or failure of the security system. Incident reports shall be submitted to the Commission within 10 days of the occurrence of the act and documentation of the incident will be maintained for at least one year or throughout the duration of any related investigation.

Eskar will annually obtain a security system audit by a vendor approved by the Commission and at Eskar's expense, pursuant to 935 CMR 500.100(10). Eskar will submit said report within 30 days after the audit is completed and, if areas of concerns are identified, Eskar will submit a mitigation plan to address the issue.

### **Storage of Marijuana**

Pursuant to 935 CMR 500.105(11)(a)-(e), Eskar Arlington, LLC (“Eskar”) will provide adequate lighting, ventilation, temperature, humidity, space and equipment, in accordance with applicable provisions of 935 CMR 500.105 and 500.110. Eskar will have a separate area for storage of marijuana that is outdated, damaged, deteriorated, mislabeled, or contaminated, or whose containers or packaging have been opened or breached, unless such products are destroyed. Eskar storage areas will be kept in a clean and orderly condition, free from infestations by insects, rodents, birds and any other type of pest. The Eskar storage areas will be maintained in accordance with the security requirements of 935 CMR 500.110.

Eskar storage policy dictates that product may only be stored in areas under video surveillance. Only authorized marijuana establishment agents have access to product storage areas, product storage keys, and or access cards. Storage rooms must remain locked at all times except times needed to transfer product. Marijuana establishment agents in product rooms without authorization, or good reason, will be terminated. All product must be returned to storage at the end of processing work orders, or at the end of the business. For processing that takes more than one day, processing area and product must be locked inside an area with adequate security.

Pursuant to 935 CMR 500.105(13)(d), Eskar will transport marijuana products in a secure, locked storage compartment that is a part of the vehicle transporting the marijuana products and the storage compartment will be sufficiently secure that it cannot be easily removed. If Eskar plans to transport marijuana products to multiple other establishments in the future, it will seek the Commission’s permission to adopt reasonable alternative safeguards.