Town Of Arlington June 22, 2023
Arlington Redevelopment Board
Planning & Community Development
Town Hall
Arlington, MA 02476-4908
RE: ARB DOCKET #3752

Dear Ms. Ricker, AICP

I am writing to you today in response to the notice to abutters of a hearing sent by the Arlington Redevelopment Board (ARB) for review of the Calyx Peak of MA, Inc. Special Permit application to open a marijuana retail establishment at 251 Summer St. Arlington, MA.

I have reviewed both the original conceptual plan description presented to the Arlington Select Board on January 10, 2022 for the HCA agreement, and the current plans referenced in the special permit notice provided as part of this ARB hearing notice. The original conceptual plans were presented to the Select Board as part of the HCA application process, which lead to the conditional permission by the Select Board to proceed with the above referenced application. The conditional HCA then fostered the presently submitted plans that were referenced in the special permit notice ARB Docket #3752, provided as part of this ARB hearing notice. Please review and note that the presentation to the select board in pursuit of the HCA agreement, and the current plans have multiple significant differences. Please see below some of the significant inconsistencies and omissions between what was presented to the Select Board and what has been submitted to the ARB and is under consideration for Special Permitting. The inconsistencies are concerning as each board trusts that the presented concept for the actual finished retail establishment represents the complete and accurate plans for the final review and approval of each application. Certainly unidentified plan changes are not consistent with an open and complete presentation for the important decisions related to a special permit being reviewed or issued for the subject property.

Examples Include:

- The plan presented to the Select Board was for a single business and outlined the fact that the existing business was "charitably" considered "tired" and this new business would be new and vital with an improved infrastructure and increased tax basis. However, the current plan retains the same Auto Sales business and ADDs a new Marijuana Retail Business to the same building with the same property footprint and seeks to infringe on the Zoning Bylaw required buffer zones.
  Please reference the 1/10/22 select board meeting video @ https://youtu.be/yuQkHVRqFHg

- In addition, the currently submitted traffic study is inaccurate and non-compliant as the original submitted plans identify a traffic issue that required mitigation and as a result the design details were to include a single east side entrance to the site and a single west side exit from the site, (see attached email letter submitted to Select Board Chair John Hurd from Ed Schmults, Calyx Peak CEO). The currently submitted plans presented to the ARB and under consideration, ignore this identified traffic issue and have TWO access/egress points to the site: an east side entrance & exit driveway as well as a SECOND west side entrance & exit driveway which have been identified in the Calyx Peak sponsored Traffic Study as a traffic blocking issue. Has this change been identified by the applicant to the ARB?

- Of major concern is the fact that the intersection that is the focus of the submitted traffic study, is the 2 street intersection of Summer St, and Grove St, not the 5 street intersection(s) that is adjacent to 251 Summer St. The Summer St./Grove St intersection may capture some of the traffic on Summer St. but certainly does not capture any of the Brattle, Hemlock or Symmes Roadway traffic that directly impacts access and egress from the subject property. Please see attachment #1 of the submitted traffic study where the "Location" is identified.
- Further review of the traffic study also reveals that the base traffic count information is based on year 2012 counts that were projected to 2018 counts, which are now at best 5 years old and possibly 11 years old. Please note that the 165 Unit Symmes Project was not completed until 2014, so the many vehicles associated with these units could have not been considered in the study. In addition, the Brigham's Project which added 116 rental units & associated vehicles, shares many of these same area access roadways but was also incomplete in 2012, hence the resultant traffic related to the Brigham's development have not been recorded or considered in the report.

  Traffic Study Attachment #2 also states it is based on crash data estimates from MassDOT from years 2013-2017 which are at best 6 years old and possibly 10 years old and records and reflects only the reported accidents, per the traffic study documents.

  Traffic Study Attachment #3 is related to a traffic blocking issues and is based on a one hour time span on a single day, Thursday 12/3/20, which was during the height of the Pandemic when citizens were instructed to stay home and therefore cannot be realistically considered as accurate. Certainly a one-day, one-hour count study will not record actual traffic counts or issues that may occur on different days of the week?

  Please also note that the Auto Repair business that rented the repair bays at 251 Summer St. moved from the site in 2014 so the only traffic that entered or exited the site after 2014 until the fuel sales ended was for fuel and limited auto sales. Naturally this would likely have an impact on the traffic accident count reflected in the traffic study at the entrance and exit driveways. Please also review the Calyx Peak Select Board 1/10/22 presentation as the revenue projections reflect 153 "patients" per day but the traffic study reflects only 27 customers during weekday peak hours and 46 customers during peak Saturday hours?
- The current project plan reflects 7 parking spots for the existing Auto Sales business.
  Please advise/consider the following:

  1) how many Auto Sales employees will be onsite each day and where will they park?

  2) how many vehicles will be parked onsite as vehicles available for sale each day?
- The current plan reflects 13 parking spots for the Marijuana Retail Store business.
  Please advise/consider the following:

  1) how many Marijuana Sales, security and support personnel will be onsite each day during sales hours?

  2) Calyx Peak has stated they anticipate 150 sales per day, how many parking spaces will be available for these customers? How many spaces are required by the Zoning Bylaw to support this volume of transactions?

- The original presentation to the Select Board was for a new building, with plans indicating a structure similar to the new Calyx Peak Swampscott store, as an example. However, the issue was then left open ended as a possible re-use of the existing building. Since the present building is non-conforming without proper setbacks, it is believed if the Auto Sales business were to close, that the existing building would become a non-conforming structure on the lot and would need to be brought into conformance to be permitted for a change in use as a retail establishment, per the stated intent of Zoning Bylaw 8.1.1A? If

the Auto Sales business were to close how will the non-conforming structure and special permit be monitored and enforced? Will the Marijuana Store Special Permit be rescinded until the structure becomes conforming in the event the Auto Sales business closes?

- Zoning Bylaw 3.4.4E requires "Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties." In addition, the Town of Arlington Title V Regulations Article 15 has specific requirements for Storm Water Management that must be reviewed and evaluated for conformance. I have spoken directly with the Town Engineer and he has not been contacted by the applicant regarding this issue but does believe the location and conditions do require evaluation, compliance review and approval by the Town Engineering department.

- Review of the current plan indicates that no attention has been paid to Zoning Bylaw 5.7.3A "Screening and Buffers" between a Residential Zoned Property and a B4 district which the Town bylaw requires to have a 15' buffer zone.

- The current plan indicates a loading zone and a dumpster to be located between the rear of the building and the residential abutter. As an abutter we respectfully request an alternate location be selected for a dumpster location as per the Town of Arlington Title V Article 9 dumpster regulations note, multiple issues and concerns including character of the neighborhood, rodents, odors and the weekly emptying of the dumpster and hours of use. In addition it is believed that the required 15' buffer and screening will not allow the proper placement of a dumpster in this space as indicated. The existing building and lot size and configuration offer many alternative dumpster locations that do not pose a burden to the neighbors.

- Please review Zoning Bylaw 6.1.11.C1 for parking and loading area requirements with review and approval by the Town Engineer. There does not appear to be any reference to this requirement in the submitted documents.

Please see the attached Arlington Select Board "HOST COMMUNITY AGREEMENT PROCESS and CRITERIA" noting the additional approvals required by individual Town Boards prior to final approval.

Certainly the ARB is the authority that is entrusted to provide the guidance for implementation of the Town's "Master Plan" and the aesthetics of the views and structures that comprise the impressions and face of the Town for residents and visitors alike. This important responsibility cannot be overstated as the decisions made by the ARB can last for generations and affect property values and directly impact the lives, happiness and future of the Town's citizens.

It is critical that the procedures set in place by the Zoning Bylaws and accepted practices are followed to determine if the site and plans are compliant, acceptable and suitable for the proposed use. The Select Board may have the authority to grant an HCA, however, the ARB has the responsibility to insure that the Zoning Bylaws are complied with and evaluated to assure they support the proposed use. The Zoning Bylaws are the tried and true benchmark for evaluation prior to issuing any special permit and are truly in effect the law.

Unfortunately, the area residents & neighbors were not aware or notified of any discussion or plans about this Marijuana Retail Sales store until after the Select Board provided conditional approval of the HCA

agreement. Review of the history of the process, after the fact, reveals that all discussions including the Traffic Study right up until the Select Board 3rd application for a Calyx Peak HCA agreement, were all inclusive of a new building to be constructed on the site. The reason Calyx Peak stated that they would entertain re-use of the existing building is because at the time the construction materials supply chain was trying to recover after the Covid-19 Pandemic and had significant delays. Much has changed since the end of the pandemic and the supply chain has recovered. It would appear that if the Town of Arlington and Calyx Peak want to use this site for this new retail store, a new building should allow a Zoning Bylaw compliant aesthetically pleasing design with proper setbacks, compliant traffic plan, buffer zones and not require multiple variances, impacts and burdens to the neighbors?

Thank you for your time and understanding of the purpose of this letter. This has been our home since 1978 and we consider this to be a primary issue and concern for our happiness and the character of our neighborhood.

Sincerely,

Michael Walsh
17 Pine Avenue
Arlington, MA 02474
781-646-6209

ARLINGTON SELECT BOARD

HOST COMMUNITY AGREEMENT PROCESS & CRITERIA

I. Statement of Purpose:

The purpose of this policy is to outline the process and criteria by which Host Community Agreements ("HCAs") will be authorized by the Select Board for existing or prospective marijuana establishments. *2020 applicants are advised two (2) HCAs were awarded in 2019 towards a maximum total of three (3) permits/licenses from Arlington's Special Permit Authority.* Thus, the Select Board anticipates that selection criteria will determine not only general suitability, but the best fit for Arlington in a competitive market. The Town Manager shall negotiate specific details and execute HCAs consistent with Board findings for approved applicants.

II. Summary of Marijuana Establishment Licensing and Permitting in Arlington

The Select Board holds a limited, but important role as the first step of the lengthy process of licensing, permitting, and opening a marijuana establishment in Arlington. As part of the legalization of adult-use (recreational) marijuana sales, M.G.L. c. 94G sec. 3(d) requires each marijuana establishments (recreational and medical) intending to site within Arlington execute an HCA as a condition of state licensure.[1] While the Town Manager executes contracts and agreements for the Town, the language of c. 94G requires the Select Board's authorization to enter such agreements with each applicant.

The scope of host agreements varies by community due to differences in municipal structure and where and how local permitting and licensing has been vested in each community. However, all HCAs set forth basic financial impact-mitigation as well as other identified responsibilities of marijuana establishments.

Here, the Arlington Redevelopment Board ("ARB") and the Board of Health ("BOH") are the entities primarily responsible for ensuring that marijuana establishments meet zoning standards and requirements (including siting restrictions) and state and local health and safety regulations respectively. Accordingly, some areas which might be addressed in other communities by an HCA will be scrutinized during the special permit and license processes of the ARB and BOH, which will also impose conditions related to the time, place, and manner of marijuana establishment operations.

[1] While the Town and the Massachusetts Patient Foundation/Apothca entered an HCA for the medical dispensary on Water Street in February of 2016, it should be noted that HCAs were not a required by law at that time.

The overall process of receiving all necessary local and state approvals for a marijuana establishment applicant in Arlington proceeds approximately as follows:

1. HCA authorization, negotiation and execution with the Town;
2. Hosting a community meeting as required by state regulations;
3. Applying to the Cannabis Control Commission ("CCC") for licensure;
4. Concurrently applying for a special permit to operate a marijuana establishment and operator permit before the ARB and BOH respectively;
5. Obtaining other required approvals – building permits, certificate of occupancy, etc.
6. Final inspections to ensure regulatory compliance by the CCC, Health Department, and Inspectional Services prior to receiving final state licensure.

While applicant-specific circumstances and other factors such as priority certification with the CCC for registered marijuana dispensaries could slow or accelerate successful applicants' timelines to opening, it is likely that the series of licenses and permits required for operation would take at least 9 to 12 months from the date of HCA execution.

III. Authority & Legal Considerations

A. Select Board Authority Under c. 94G sec. 3(d)

The Select Board's authority and scope of consideration for HCAs are set forth in c. 94G sec. 3(d) which reads as follows:

"A marijuana establishment or a medical marijuana treatment center seeking to operate or continue to operate in a municipality which permits such operation shall execute an agreement with the host community setting forth the conditions to have a marijuana establishment or medical marijuana treatment center located within ***the host community which shall include, but not be limited to, all stipulations of responsibilities between the host community and the marijuana establishment or a medical marijuana treatment center. An agreement between a marijuana establishment or a medical marijuana treatment center and a host community may include a community impact fee for the host community; provided, however, that the community impact fee shall be reasonably related to the costs imposed upon the municipality by the operation of the marijuana establishment or medical marijuana treatment center and shall not amount to more than 3 percent of the gross sales*** *of the marijuana establishment or medical marijuana treatment center or be effective for longer than 5 years. Any cost to a city or town imposed by the operation of a Marijuana Establishment or medical marijuana treatment center shall be documented and considered a public record as defined by clause Twenty-sixth of section 7 of chapter 4."*

(emphasis added).

The CCC interprets c. 94G narrowly, noting that HCAs are intended to complement the substantial framework of 935 CMR 500[2], which regulates many issues of concern over retail marijuana establishments on a statewide level. Those regulations control many facets of the types of signage allowed for marijuana establishments, require criminal history background checks, prohibit delivery of recreational marijuana, and establish quality control measures such as a "seed-to-sale" tracking system.[3]

According to the CCC, examples of policy-oriented stipulations and conditions which may be set forth in an HCA include:

- Relocation notice, terms and requirements;
- Prioritizing local residents for jobs created at the establishment;
- Termination conditions and/or requirements for ceasing to operate, or relocating outside of the municipality;
- Security system minimum requirements for accessing the establishment and marijuana inventories;
- Providing police details for the purposes of traffic and crowd management during peak hours of operation;
- Obligations of municipalities to submit requested and required information to the CCC;
- Provision for cooperation on municipality-sponsored public health and drug abuse prevention educational programs; and
- Agreement for cooperation with community support, public outreach and employee outreach programs between the municipality and the establishment.

See e.g., CCC Guidance on Host Community Agreements.

With respect to financial terms of HCAs, both the law and the CCC cap financial arrangements at a community impact fee of 3% of gross revenue of total sales for any establishments.[4] Communities may agree to less, but not more.

B. Arlington Zoning Bylaw & ARB Review

While the Select Board may authorize some terms and conditions of operating a marijuana establishment through an HCA, it is important to do so within the context of the Arlington Zoning Bylaw marijuana regulations. As approved on December 5, 2018, the Arlington Zoning Bylaw sections 3.4, 5.5 and 8.3 govern the siting and operation of marijuana

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[2] A full copy of the CCC's 37-pages of regulations on adult-use and medical marijuana establishments can be found here: https://www.mass.gov/files/documents/2018/03/27/935cmr500.pdf

[3] Moreover, as noted above, Arlington's BOH has incorporated the State's marijuana regulations and enhanced them where permissible and harmonious with state law.

[4] Some communities and establishments have negotiated terms which applicants allege exceed such limits by requiring donations to certain non-profit entities or like financial commitments. The Town's Legal Department continues to advise against the inclusion of such terms as indeed some of those same communities are presently facing or may soon face litigation by unsuccessful applicants and/or Federal scrutiny on the basis that competitors agreed to terms not authorized by c. 94G sec. 3(d).

establishments. Marijuana establishments may only be sited in those districts allowing them (B2A, B3, B4, B5, and Industrial districts). In order to attain a special permit in any such district, applicants must further comply with "environmental design review" ("EDR") standards.

The purpose of EDR is "to provide individual detailed review of certain uses and structures that have a substantial impact on the character of the town and on traffic, utilities, and property values, thereby affecting the public health, safety and general welfare." Zoning Bylaw Sec. 3.4.1. The twelve (12) criteria of EDR are:

- Preservation of Landscape;
- Relation of Buildings to Environment;
- Open Space;
- Circulation;
- Surface Water Drainage;
- Utility Service;
- Advertising Features;
- Special Features;
- Safety;
- Heritage;
- Microclimate; and
- Sustainable Building and Site Design.

Furthermore, marijuana establishments are also subject to special regulations set forth in section 8.3. *See,* Attachment "B," Zoning Bylaw Section 8.3. Most germane to the Select Board's consideration, the Zoning Bylaw limits the number of special permits for marijuana establishment to a total of three (3), and prohibits placement of such establishments within the following "buffer zones":

- 500 feet of K-12 schools;
- 300 feet of Town playgrounds and recreational facilities;
- 200 feet of Town libraries; and
- 2,000 feet of another like marijuana establishment of the same kind.[5]

2020 Applicants are recommended to consult with the Department of Planning and Community Development regarding the location of current or pending retail establishments.

C. Board of Health Licensing & Enforcement

Finally, the Board of Health has promulgated its "Regulation to Ensure the Sanitary and Safe Operation of Adult-Use Marijuana Establishments and the Sale of Adult-Use Marijuana," which addresses a broad range of operational and product safety subjects including how products are displayed within stores and what kind of products can be sold. Specific prohibitions include self-service displays, "out-of-package" and/or "roll-your-own" sales, and product vending

[5] i.e. no recreational establishment within 2,000 feet of another recreational establishment or no medical dispensary within 2,000 feet of another medical dispensary.

machines. *See* Attachment "C" BOH Regulations. Additional requirements include annual community meetings to hear abutter feedback, and requiring surety bonds to cover Town costs in the event of unanticipated closure. These regulations also incorporate the 900 CMR 500 (the CCC's regulations) in order to assure consistency, continuity, and maximum enforcement authority for Health Department agents and the BOH.

IV. Select Board HCA Selection Process, Criteria and Minimum HCA Terms

Neither CCC guidance materials nor the regulations of 935 CMR 500 provide a specific process for vetting HCA applicants, especially where the limited number of special permits/licenses practically require awarding an HCA to some applicants and not others. Based upon the foregoing outline of the authorities and responsibilities, public feedback, as well as the Board's past practice to competitively select recipients for package store licenses from a pool of applicants, the Select Board adopts the following, process criteria, and minimum HCA terms and conditions set forth below:

A. Process

1. HCA Application & Preliminary Review

   Applicants will provide a complete HCA application to the Select Board Office, including but not limited to:

   a. Detailed business information, including identifying the type of business, the management team, and the names of all partners or managers with an ownership stake greater than 10%.

   b. Narrative response to an "Operating Questionnaire" designed to provide applicants the opportunity to highlight how they will meet the selection criteria approved by the Board (set forth in section C below: Selection Criteria).

   c. Regulatory compliance information, including detailing the license status of any marijuana license held throughout the Commonwealth, any violations of state or local rules and regulations within the last three (3) years relative to marijuana establishments or any Arlington bylaws, rules, or regulations;

   d. Supporting Materials, including the following:

      - A business plan;
      - A preliminary security plan;
      - A preliminary traffic and parking management plan;[6]
      - Evidence of site control; and
      - Certification of Zoning Compliance.[7]

[6] The Select Board does not require a full and finalized traffic study or security plan given that the EDR Process as well as BOH regulations will heavily examine

e. Proposed HCA with all minimum terms and conditions included; and

f. Priority application status.

A Preliminary Review Team ("PRT") consisting of the Chief of Police, the Health Director, the Planning Director, the Building Inspector, the Town Counsel, and the Town Manager or their respective designees shall review applications for completeness and provide the Board with comments, objections to applicants, or further questions for the applicants in advance of presentations to the Select Board.

The Marijuana Study Group shall also review applications to present their questions, concerns, and comments to the Select Board in advance of application presentations.

An application fee of $250 shall also be provided to the Select Board Office.

2. Presentations before the Select Board

Following PRT and Marijuana Study Group preliminary review, applicants will be invited to make a 20 minute presentation to the Select Board, further addressing the HCA Selection Criteria, their proposed HCA, and other information they wish to emphasize to the Board and the public.

B. Selection Criteria

The Board will consider the following criteria as probative of the quality of applicants experience and plan for operating in Arlington:

a. Completeness and quality of application;

b. Demonstrated direct experience in the cannabis industry or a similar industry, such sensitive retail and related commercial uses – package stores, establishments with other types of alcohol licenses or age-restricted products;

c. Relevant business experience in Arlington;

d. Relevant business experience in the Commonwealth of Massachusetts;

e. A sound preliminary business plan which evidences applicants' financial resources, proposed scale of operation, inventory sources and plans for inventory management, as well as anticipated costs and revenues;

[7] As noted above, the Zoning Bylaw allows for marijuana establishments by special permit only in certain districts, and further establishes a variety of buffer zones where establishments may not be sited without further relief from the ARB. The ARB may grant an exception to buffer zones as provided in Zoning Bylaw sec. 8.3(b)(2). However, given the likely competition for licenses, all applicants for HCAs should demonstrate site control in one of the zoned districts for marijuana establishments as well as siting outside a buffer zone *or* substantial evidence that an exception is feasible due to site specific conditions.

f. A strong employee training process and plan to ensure regulatory compliance;

g. A sound preliminary security plan including inventory;

h. A sound preliminary traffic and parking plan demonstrating basic feasibility of the site and/or intended traffic and parking mitigation measures;

i. For adult-use applicants, intention to co-locate Registered Marijuana Dispensary operations to ensure access to Arlington medical marijuana patients;

j. Commitment to youth safety, abuse prevention, and community education;

k. Commitment to diversity and local hiring; and

l. Maintenance of geographic balance in the distribution of marijuana establishments. ****2020 Applicants are advised to consult the Planning Department on the current or proposed locations of retail establishments with executed HCAs.***

The aforementioned criteria are not exhaustive, nor are any single criteria determinative. The Board shall also weigh any objections, concerns, or comments of the PRT. Applicants are encouraged to inform the Board of unique qualifications they may possess.

****Applicants should take note that to the extent the criteria overlap with those which would be applied during ARB or BOH permit and license reviews, applicants are advised that the grant of an HCA by the Select Board shall not be considered as evidence of appropriateness in such processes.*

C. Minimum HCA Terms & Conditions

Applicants are invited to provide their own HCA proposals with the following minimum requirements and restrictions:

1. A Community Impact Fee equal to 3.0% of the establishment's gross sales;
2. Annual filing of financial statements with the Town;
3. Provision of financial reporting records required by the CCC to the Town within a reasonable timeframe;
4. Maintenance of books and other financial records pertaining to the requirements of the HCA consistent with accounting standards and guidelines of the CCC;
5. Commitment to hiring local, qualified employees, and diverse employees to the extent consistent with the law;
6. Commitment to hiring local vendors, suppliers, and contractors from diverse businesses to the extent permitted by law;

7. Commitment to participation in youth health, safety, and prevention programs;
8. Cooperation with the Arlington Police Department to ensure effective security, including periodic meetings to review of security protocols and agreement on the placement of exterior security cameras and devices; and
9. If applicable, commitment to cooperate with the Town to prevent Hardship Cultivation Registration for medical marijuana patients;

In light of the CCC's Guidance, the Select Board will not accept additional financial incentives or payments to private entities as a condition of HCAs.

V. HCA Application Deadlines and Decisions

A. Application Timeline

- The first round of applications must be submitted by no later than ***12 p.m. Friday,*** _____
- The PRT and Marijuana Study Group will conduct parallel preliminary review of applications and submit their comments and questions to the Select Board;
- Applicant presentations shall be made _____

B. Application Decisions

The Select Board endeavors to make determinations on HCA applications in an efficient and transparent manner, mindful that successful applicants for an HCA will be scrutinized in detailed fashion during the lengthier state licensure, special permit, and BOH licensure processes. The Board will not formally score applications, nor will it issue written decisions.

The Board must determine which applications will be approved in an open, public meeting. If equipped with sufficient information, the Board endeavors to vote after hearing all applicant presentations with time for Board questions. In the event the Board requires additional time, applicants will be so advised.

BY EMAIL (mkrepelka@town.arlington.ma.us)

Mr. John Hurd, Select Board Chair
Select Board
Town of Arlington
c/o Marie Krepelka, Select Board Administrator
730 Mass Ave.
Arlington, MA 024756

RE: 251 Summer St
Calyx Peak of MA Inc. – Host Community Agreement – Request for Reconsideration

Dear Chair Hurd,

Calyx Peak of MA Inc. (Calyx Peak) is submitting this letter and the attached Traffic Assessment in support of our request for the Select Board to reconsider its vote relative to issuing Calyx Peak a Host Community Agreement (HCA) for its retail location at 251 Summer St.

As you may know, Calyx Peak has a long history of working with the Town of Arlington to open a retail marijuana location. As part of the town's most recent HCA process, Calyx Peak participated in two (2) Select Board meetings. During these meetings Calyx Peak listened carefully to the comments of the Board, taking into consideration anything Calyx Peak could do to reasonably address the feedback from the Board. To that end, Calyx Peak took two immediate steps; first Calyx Peak engaged with a traffic engineering firm to study the site and provide recommendations that would minimize any traffic concerns or issues related to the surrounding neighbors specifically and the community generally. Second Calyx Peak began to reach out to the community for their feedback. Calyx Peak believes these steps were critical to address feedback from the Select Board and to properly address any impacts to the community.

Calyx Peak engaged McMahon Associates (McMahon) to conduct a Traffic Assessment for 251 Summer St. As part of the Traffic Assessment Calyx Peak directed McMahon to assess the following conditions: Adjacent Roadway Network, the nearby Signalized Intersection, Traffic Volumes, Safety Analysis (Crash Data), Site Generated Traffic, Sight Distances, as well as to conduct a real time onsite Queuing Observation. Based on all the available data as well as the onsite observations McMahon provided the following conclusion:

> ***"Conclusions***
> *Based on a review of the proposed project, a conservative estimate of vehicle trips to the site would result in an increase of less than 4% on Summer Street (Route 2A) during the weekday afternoon peak hours. A review of the site access based on MassDOT records indicates no crashes occurred at the West Site Driveway and East Site Driveway between 2013 and 2017. Based on AASHTO guidelines, adequate sight distance is available looking both directions along Summer Street (Route 2A). As a result, the proposed RMD is not anticipated to have a significant impact on the safety and operations of Summer Street (Route 2A) or the surrounding roadway network."*

It should be noted that during the onsite observations it was observed that the east side driveway entrance can become blocked by traffic backing up at the light. To that end McMahon recommended and Calyx Peak has agreed that it will make the east side driveway an entrance only and the west side driveway exit only. McMahon believes structuring the entry and exit in this way will eliminate any issues with people leaving the business on the east side. Further, Calyx Peak will also work with the Planning Department and civil engineers to evaluate moving both the entrance and exit further to the west as part of the site during site plan development, should the project be approved by the Select Board to move forward. For the Board's consideration, Calyx Peak has attached the full Traffic Assessment and supporting documentation.

Additionally, as Calyx Peak has stated publicly many times, Calyx Peak wants to be an outstanding partner and good corporate citizen to the Town or Arlington, our abutters, and the community as a whole. Calyx Peak knows that seeking direct feedback from the residents is the best way to do so. In support of Calyx Peak's goal to gather feedback Calyx Peak began to reach out to residents who are very active in the community and who would be able to provide feedback of any concerns related to the proposed location and business. Calyx Peak conducted primarily phone and email outreach given the ongoing health concerns related to COVID-19.

On November 23rd, Calyx Peak set up a community outreach meeting via Zoom for residents to provide feedback about our project. The meeting information was provided to the Town, as well as directly to residents through email. Calyx Peak sent invites, reminders and Zoom meeting details via email. The Zoom meeting was open to the public and did not require registration, in order to facilitate an open meeting and lower the barriers to joining the meeting. On November 23rd, no residents attended the meeting. However, the Town did have a representative attend to observe the meeting on behalf of the Town.

Calyx Peak remains deeply committed to Arlington. Calyx Peak wants to bring a great team and a great business to the Arlington community. Calyx Peak believes it can turn the current site into a compelling and attractive retail space and play a discrete but vital role in the community.

I greatly appreciate and thank the Select Board for its time and consideration of Calyx Peak's request. Please feel free to contact me should you require any additional information.

Sincerely,



Ed Schmults
Chief Executive Officer

cc: Adam Chapdelaine, Town Manager *(by email only) (achapdelaine@town.arlington.ma.us)*

TRANSPORTATION ENGINEERS & PLANNERS

McMahon Associates
350 Myles Standish Boulevard, Suite 103
Taunton, MA 02780
P. 508.823.2245
mcmahonassociates.com

MEMORANDUM

TO: Ms. Gwen Takagawa, Calyx Peak Companies

FROM: Jeffrey T. Bandini, P.E., PTOE

DATE: December 14, 2020

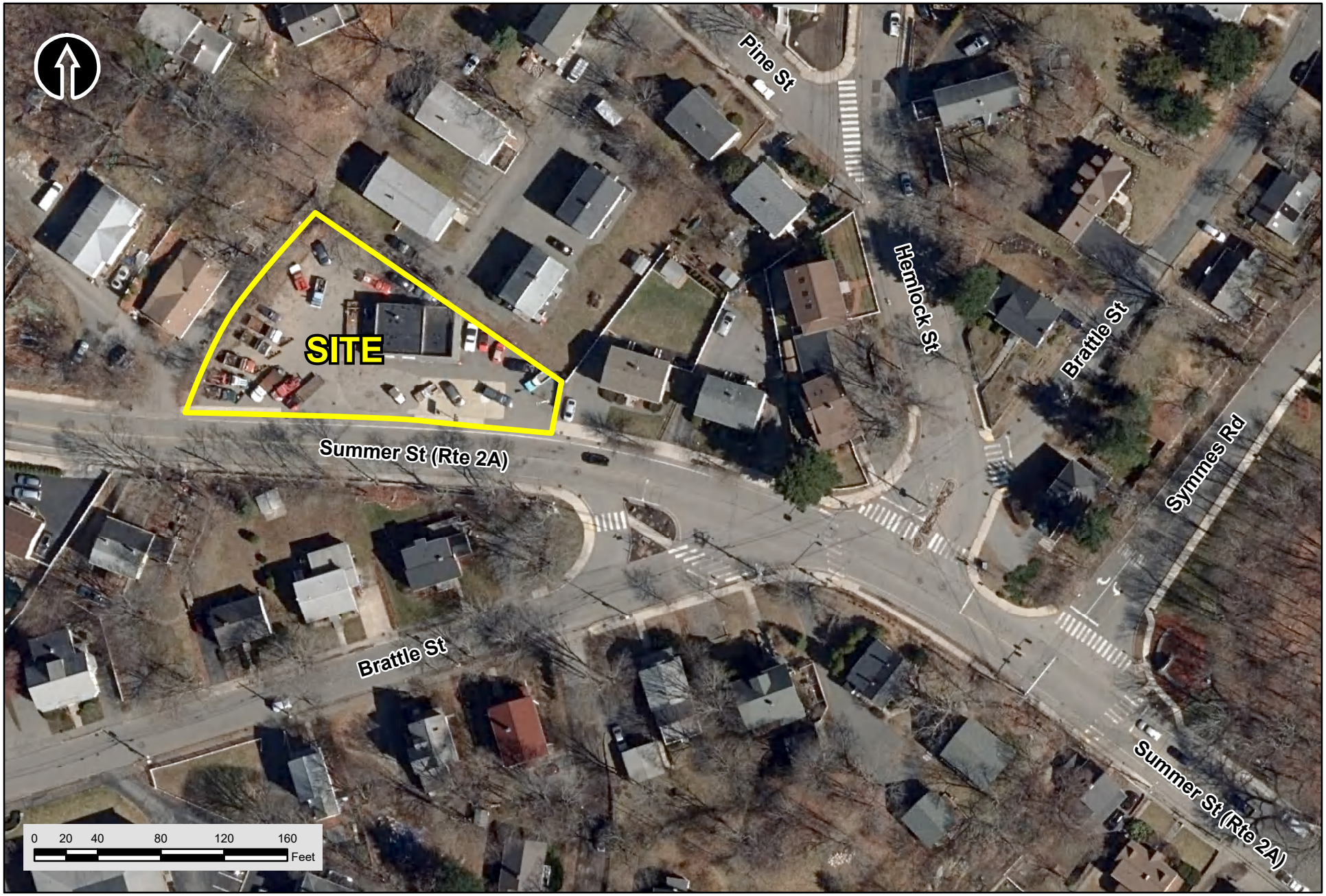
RE: 251 Summer Street (Route 2A), Arlington, MA
Retail Marijuana Dispensary

McMahon Associates has completed a traffic assessment for the proposed Retail Marijuana Dispensary (RMD) development to be located at 251 Summer Street (Route 2A) in Arlington, Massachusetts. This memorandum reviews the trip generating characteristics of the proposed project, the surrounding roadway network, and the layout of the project access.

Project Description
The existing site, located at 251 Summer Street (Route 2A), houses a commercial building occupied by an auto repair center and dealership. Based on information provided by the client, the proposed project would remove the existing structure and construct a 2,500 square foot (s.f.) RMD. Access to the site would be provided via two site driveways on the north side of Summer Street (Route 2A) generally in the same location as the existing curb cuts.

The site is bounded by Summer Street (Route 2A) to the south, and residential properties to the west, north, and east. The signalized intersection of Summer Street (Route 2A) and Brattle Street/Symmes Road is located approximately 250 feet east of the project site.

The project site location is shown in Figure 1.



McMAHON

Figure 1
Site Location Map
Retail Marijuana Dispensary
Arlington, Massachusetts

Adjacent Roadway Network
Summer Street (Route 2A) is classified by the Massachusetts Department of Transportation (MassDOT) as an urban minor arterial under Town of Arlington jurisdiction, primarily providing access to commercial and residential land uses. Summer Street (Route 2A) generally runs in the east-west direction through the Town of Arlington, and includes two vehicle travel lanes, one in each direction. Sidewalks are provided along both sides of the roadway. No bicycle facilities are provided along Summer Street (Route 2A). The posted speed limit along Summer Street (Route 2A) is 30 miles per hour in both directions in the vicinity of the project site. Massachusetts Bay Transportation Authority (MBTA) Bus Route 67 provides transit service along Summer Street (Route 2A), with a stop located at the intersection of Summer Street (Route 2A) at Brattle Street/Symmes Road.

Brattle Street is classified as an urban minor arterial under Town of Arlington jurisdiction, primarily providing access to residential properties. Brattle Street generally runs in a north-south direction and provides two vehicle travel lanes, one in each direction. Sidewalks are provided along both sides of Brattle Road and there is no posted speed limit along Brattle Street.

Symmes Road is classified as a local roadway under private jurisdiction, providing access to the Arlington 360 apartment complex and the Brightview Arlington assisted living center. Symmes Road generally runs in a north-south direction and provides two vehicle travel lanes, one in each direction. Sidewalks are provided on the east side of the roadway and no bicycle facilities are provided along Symmes Road. There is no posted speed limit along the Symmes Road.

Signalized Intersection
Summer Street (Route 2A) at Brattle/Symmes Road consists of two clustered signalized intersections operating under the same controller. The intersection includes five approaches including Summer Street (Route 2A) eastbound and westbound, Brattle Street northbound and southbound, and Symmes Road southbound. The intersections and lane configurations are outlined below:

<u>West Signal - Summer Street (Route 2A) at Brattle Street</u>

- Summer Street (Route 2A) eastbound - one multi-purpose lane and one channelized right-turn lane.
- Brattle Street northbound – one multi-purpose lane.
- Brattle Street southbound – one exclusive left-turn lane and one shared through/right-turn lane.

<u>East Signal - Summer Street (Route 2A) at Symmes Road</u>

- Summer Street (Route 2A) westbound - one multi-purpose lane.
- Symmes Road southbound – one exclusive right-turn lane and one exclusive left-turn lane.

The intersection is controlled by an actuated traffic signal with three phases for vehicular traffic, including a phase for Summer Street (Route 2A) eastbound and westbound traffic, followed by a phase for northbound and southbound traffic on Brattle Street, and then a phase for southbound Symmes Road traffic. Pedestrian movements are accommodated by a push-button activated exclusive pedestrian phase for the crosswalks which span all of the roadway approaches.

Traffic Volumes

Turning Movement Counts (TMC) were obtained from the Town of Arlington within the study area during the weekday afternoon peak period. TMCs were available for the intersection of Summer Street (Route 2A) at Brattle Street/Symmes Road (that were conducted on Thursday, April 26, 2012) and these TMCs were used in intersection crash rate calculations (see Safety Analysis section below). Additional TMCs were available for the intersection of Summer Street (Route 2A) at Grove Street (conducted on Wednesday, May 16, 2019), located approximately 1000 feet east of the project site. To convert the peak hour volumes from the TMCs to an average daily traffic (ADT) value, the peak hour volumes were divided by a K factor (proportion of daily traffic occurring during the peak hour) of 8.1%. The K factor was derived from the traffic counts received from the Town of Arlington as part of the Arlington High School study. A summary of the ADT and weekday afternoon peak hour traffic volumes on Summer Street (Route 2A) are shown in Table 1 and provided as an attachment.

Table 1: Summer Street (Route 2A) Traffic Volumes

Location	Direction	Afternoon Peak 2018[(1)]	2018 ADT[(2)] (vpd)
Summer Street (Route 2A)	Eastbound	800	9,300
	Westbound	700	8,400
	TOTAL	1,500	17,700

(1) Peak Hour volumes based on TMCs conducted on Wednesday May 16 2018 at intersection of Summer Street at Grove Street. Peak hour 4:30 PM - 5:30 PM as part of the Arlington High School Study provided by the Town of Arlington.

(2) Average Daily Traffic based on K factor of 8.10% calculated from the Arlington High School Study provided by the Town of Arlington.

As shown in Table 1, the ADT along Summer Street (Route 2A) was approximately 17,700 vehicles per day in 2018 (9,300 eastbound and 8,400 westbound). The weekday afternoon peak hour volume was estimated at approximately 1,500 vehicles in 2018.

Safety Analysis

Crash data was obtained from MassDOT for the most recent five-year period available to analyze reported crashes within the vicinity of the proposed site driveways and the signalized intersection of Summer Street (Route 2A) and Brattle Street/Symmes Road. This data includes complete yearly crash summaries for 2013 through 2017. Over the five-year period analyzed, there were no reported crashes on Summer Street (Route 2A) in the vicinity of the project site driveways.

There were twelve reported crashes at the signalized intersection of Summer Street (Route 2A) and Brattle Street/Symmes Road over the five-year period analyzed. Two of these reported crashes were angle collisions, six were rear-end collisions, three were sideswipe collisions, and one was a single vehicle crash. Of the twelve reported crashes, four resulted in personal injury, four resulted in property damage only, and four were of unknown severity. No reported crashes involved pedestrians or bicycles. Based on the entering traffic volumes for the signalized intersection, the crash rate was 0.34 crashes per million entering vehicles, which is lower than both the statewide and MassDOT District 4 crash rates. The crash summary is provided as an attachment.

Site-Generated Traffic

The Institute of Transportation Engineers (ITE) is a national research organization of transportation professionals. Their publication, *Trip Generation Manual, 10th Edition*, provides traffic generation information for various land uses compiled from studies conducted by members nationwide. Vehicle trip estimates for the proposed RMD were developed based on data presented in this publication for Land Use Code (LUC) 882 (Marijuana Dispensary). Table 2 presents the number of vehicle trips projected to be generated by the proposed 2,500 s.f. RMD.

Table 2: Trip Generation for Proposed RMD

		Weekday PM			Saturday Midday		
Description	**Size**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Marijuana Dispensary [(1)]	2,500 s.f.	27	27	54	46	46	92

(1) ITE Land Use Code 882 (Marijuana Dispensary), based on 2,500 s.f.

As shown in Table 2, the proposed RMD is estimated to result in approximately 54 vehicle trips (27 entering and 27 exiting) during the weekday afternoon peak hour, and approximately 92 new vehicle trips (46 entering and 46 exiting) during the Saturday midday peak hour. Based on the existing pedestrian accommodations, nearby bike facilities, and close proximity to MBTA bus stops, it is anticipated that a portion of patrons accessing the site would travel via alternative modes rather than by vehicle. However, to present a conservative analysis, no multi-modal credit was applied to the trip generation calculations in Table 2.

The proposed RMD would replace the existing auto repair center and dealership, which currently generates vehicle trips to the site. To present a conservative analysis, the existing vehicle trips were not subtracted from the estimated trips that would be generated by the proposed RMD.

Using the conservative estimate of vehicle trips, an additional 54 vehicle trips during the weekday afternoon peak hour would result in an increase of approximately 3.6% vehicles along Summer Street (Route 2A).

Sight Distance

A field visit was completed on Wednesday, December 2, 2020 during clear conditions to review the available sight distance at the existing site driveways, referred to as the West Site Driveway and East Site Driveway. The posted speed limit along Summer Street (Route 2A) within the vicinity of the project site is 30 mph in both directions. The American Association of State Highway and Transportation Officials' (AASHTO) publication *A Policy on Geometric Design, 2018 Edition* defines the minimum sight distance at intersections based on the required stopping sight distance (SSD) of vehicles traveling along the main roadway for a given speed. The AASHTO publication also provides a recommended intersection sight distance (ISD) for vehicles exiting the site onto the main roadway based on the speed of the roadway. Due to the existing width of the West Site Driveway, sight distance was measured from the furthest possible driver eye location to the west to present a conservative analysis with respect to the horizontal curve along Summer Street to the west of the site.

Table 3 reviews the required and measured sight distances along Summer Street (Route 2A) at the project site driveways.

Table 3: Sight Distance

Location	Direction	Posted Speed Limit (mph)	SSD Required[1]	ISD Reccomended[2]	Sight Distance Measured	Meets SSD Requirements?	Meets ISD Reccomendation?
Summer Street (Route 2A) at West Site Driveway[3]	Looking Left (East)	30	200'	330'	470'	Yes	Yes
	Looking Right (West)	30	200'	290'	290'	Yes	Yes
Summer Street (Route 2A) at East Site Driveway	Looking Left (East)	30	200'	330'	500'+	Yes	Yes
	Looking Right (West)	30	200'	290'	400'	Yes	Yes

1 AASHTO required stopping sight distance (see AASHTO Table 3-1) for posted speed limit on Summer Street (Route 2A).

2 AASHTO recommended intersection sight distance (see AASHTO Equations 9-1 and 9-2) for posted speed limit on Summer Street (Route 2A).

3 Sight distance measured from western edge of existing driveway curb cut on Summer Street (Route 2A) to present a conservative analysis with respect to the horizontal curve along Summer Street (Route 2A).

As shown in Table 3, the available sight distance along Summer Street (Route 2A) at the West Site Driveway and the East Site Driveway exceeds the AASHTO required SSD and recommended ISD for the posted speed limit of 30 mph. Based on the available sight distance at the project site driveways, vehicles should be able to make safe decisions entering and exiting the project site.

Queue Observations

Queue length observations were conducted at the eastbound Summer Street (Route 2A) approach to the signalized intersection at Brattle Street/Symmes Road. The queue length observations were performed for a one-hour period on Wednesday, December 2, 2020 during the weekday afternoon peak period between 4:30 PM and 5:30 PM, which is consistent with the peak hour from the Summer Street (Route 2A) at Grove Street traffic counts, and the anticipated weekday afternoon peak hour of the RMD. The observation consisted of measuring the vehicle queue length every one to two minutes during the peak hour, depending on vehicle arrival and movement of vehicles through the Summer Street (Route 2A) at Brattle/Symmes Road intersection. The results of the queue observations are shown in Table 4 and are provided as an attachment.

Table 4: Eastbound Summer Street (Route 2A) Approach Queue Lengths

	# of Vehicles	Queue Length (ft)[(1)]
50th Percentile	5	125
95th Percentile	8	200
Max	13	325

(1) Assumes a 25 ft vehicle length

As shown in Table 4, during 95% of the data collection, the eastbound vehicle queue along Summer Street (Route 2A) eastbound was shorter than 200 feet during the weekday afternoon peak period. Therefore, it is anticipated that the driveway would not be blocked for the majority of the time during business operations.

Conclusions

Based on a review of the proposed project, a conservative estimate of vehicle trips to the site would result in an increase of less than 4% on Summer Street (Route 2A) during the weekday afternoon peak hours. A review of the site access based on MassDOT records indicates no crashes occurred at the West Site Driveway and East Site Driveway between 2013 and 2017. Based on AASHTO guidelines, adequate sight distance is available looking both directions along Summer Street (Route 2A). As a result, the proposed RMD is not anticipated to have a significant impact on the safety and operations of Summer Street (Route 2A) or the surrounding roadway network.

Attachments:

Turning Movement Count Data
Crash Summary
Queue Length Observations

ATTACHMENT 1

Turning Movement Count Data

Table 7
Crash Data Comparison: FDR (1995–97) to MassDOT (2005–09)

Intersection	FDR 1995 to 1997				MassDOT 2005 to 2009					
	1995	1996	1997	Crash Rate	2005	2006	2007	2008	2009	Crash Rate
Brattle/Hemlock Streets at Summer Street	6	2	4	**0.65**	1	2	1	3	1	**0.25**

Traffic Volumes

MPO staff collected turning-movement counts at the intersection on April 26, 2012. The data were recorded in 15-minute intervals for the peak traffic periods in the morning, from 7:00 to 9:00 AM, and in the evening, from 4:00 to 6:00 PM. Traffic count summaries are provided in Appendix A. Traffic volumes for three different years are listed in Table 8 for three different analysis scenarios:

- 1998 FDR “Before” Existing Conditions
- 2020 FDR “Projected” Build Conditions
- 2012 “After” Conditions

As indicated in Table 8, the overall traffic volumes remained the same from the 1998 FDR to the 2012 volumes. Traffic volumes never increased to anywhere near the demand projected for 2020.

Table 8
Traffic Volume Comparison

Scenario		Brattle St. Northbound			Hemlock Street Southbound			Summer Street Eastbound			Summer Street Westbound			Total
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
AM	1998 FDR “Before”	50	28	68	170	57	27	4	550	0	72	558	0	1,584
	2020 FDR Projected”	55	31	75	188	63	30	4	607	0	79	616	0	1,748
	2012 “After”	38	22	40	113	58	33	11	575	37	45	567	50	1,589
PM	1998 FDR “Before”	36	29	74	70	26	23	17	670	0	50	530	0	1,525
	2020 FDR Projected”	39	32	82	77	29	25	19	740	0	55	585	0	1,683
	2012 “After”	33	16	48	61	19	21	17	594	38	39	582	88	1,556

Note: LT = left turn; TH = through traffic; and RT = right turn.

PDI File #: **186252 A**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **6:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
6:00 AM	22	10	0	32	8	1	0	9	4	37	0	41	82
6:15 AM	44	26	0	70	12	2	0	14	13	69	0	82	166
6:30 AM	56	27	0	83	18	2	0	20	10	70	0	80	183
6:45 AM	96	34	0	130	22	5	0	27	10	127	0	137	294
Total	218	97	0	315	60	10	0	70	37	303	0	340	725
7:00 AM	85	33	0	118	30	9	0	39	13	147	0	160	317
7:15 AM	96	58	0	154	35	7	0	42	23	156	0	179	375
7:30 AM	119	54	0	173	38	9	0	47	13	162	0	175	395
7:45 AM	134	77	0	211	46	5	0	51	31	167	0	198	460
Total	434	222	0	656	149	30	0	179	80	632	0	712	1547
8:00 AM	137	61	0	198	43	13	0	56	26	167	0	193	447
8:15 AM	116	60	0	176	39	7	0	46	22	154	0	176	398
8:30 AM	116	43	0	159	28	11	0	39	12	132	0	144	342
8:45 AM	97	52	0	149	28	4	0	32	12	119	0	131	312
Total	466	216	0	682	138	35	0	173	72	572	0	644	1499
9:00 AM	97	31	0	128	21	14	0	35	10	119	0	129	292
9:15 AM	108	29	0	137	22	7	0	29	10	91	0	101	267
9:30 AM	85	41	0	126	38	8	0	46	4	100	1	105	277
9:45 AM	80	30	0	110	27	11	0	38	11	99	0	110	258
Total	370	131	0	501	108	40	0	148	35	409	1	445	1094
Grand Total	1488	666	0	2154	455	115	0	570	224	1916	1	2141	4865
Approach %	69.1	30.9	0.0		79.8	20.2	0.0		10.5	89.5	0.0		
Total %	30.6	13.7	0.0	44.3	9.4	2.4	0.0	11.7	4.6	39.4	0.0	44.0	
Exiting Leg Total				2371				890				1604	4865
Cars	1442	652	0	2094	443	110	0	553	218	1859	1	2078	4725
% Cars	96.9	97.9	0.0	97.2	97.4	95.7	0.0	97.0	97.3	97.0	100.0	97.1	97.1
Exiting Leg Total				2302				870				1553	4725
Heavy Vehicles	46	14	0	60	12	5	0	17	6	57	0	63	140
% Heavy Vehicles	3.1	2.1	0.0	2.8	2.6	4.3	0.0	3.0	2.7	3.0	0.0	2.9	2.9
Exiting Leg Total				69				20				51	140

Peak Hour Analysis from 06:00 AM to 10:00 AM begins at:

7:30 AM	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:30 AM	119	54	0	173	38	9	0	47	13	162	0	175	395
7:45 AM	134	77	0	211	46	5	0	51	31	167	0	198	460
8:00 AM	137	61	0	198	43	13	0	56	26	167	0	193	447
8:15 AM	116	60	0	176	39	7	0	46	22	154	0	176	398
Total Volume	506	252	0	758	166	34	0	200	92	650	0	742	1700
% Approach Total	66.8	33.2	0.0		83.0	17.0	0.0		12.4	87.6	0.0		
PHF	0.923	0.818	0.000	0.898	0.902	0.654	0.000	0.893	0.742	0.973	0.000	0.937	0.924
Cars	492	248	0	740	162	34	0	196	88	633	0	721	1657
Cars %	97.2	98.4	0.0	97.6	97.6	100.0	0.0	98.0	95.7	97.4	0.0	97.2	97.5
Heavy Vehicles	14	4	0	18	4	0	0	4	4	17	0	21	43
Heavy Vehicles %	2.8	1.6	0.0	2.4	2.4	0.0	0.0	2.0	4.3	2.6	0.0	2.8	2.5
Cars Enter Leg	492	248	0	740	162	34	0	196	88	633	0	721	1657
Heavy Enter Leg	14	4	0	18	4	0	0	4	4	17	0	21	43
Total Entering Leg	506	252	0	758	166	34	0	200	92	650	0	742	1700
Cars Exiting Leg				795				336				526	1657
Heavy Exiting Leg				21				8				14	43
Total Exiting Leg				816				344				540	1700

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46 Morton Street, Framingham, MA 01702
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Email: datarequests@pdillc.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
6:00 AM	22	10	0	32	8	1	0	9	4	37	0	41	82
6:15 AM	43	26	0	69	12	2	0	14	13	69	0	82	165
6:30 AM	55	27	0	82	18	2	0	20	10	68	0	78	180
6:45 AM	95	33	0	128	20	4	0	24	10	123	0	133	285
Total	215	96	0	311	58	9	0	67	37	297	0	334	712
7:00 AM	83	33	0	116	29	7	0	36	13	142	0	155	307
7:15 AM	91	56	0	147	33	6	0	39	22	150	0	172	358
7:30 AM	113	54	0	167	36	9	0	45	13	161	0	174	386
7:45 AM	132	77	0	209	46	5	0	51	31	161	0	192	452
Total	419	220	0	639	144	27	0	171	79	614	0	693	1503
8:00 AM	133	59	0	192	43	13	0	56	23	162	0	185	433
8:15 AM	114	58	0	172	37	7	0	44	21	149	0	170	386
8:30 AM	112	42	0	154	27	11	0	38	12	131	0	143	335
8:45 AM	90	51	0	141	27	4	0	31	12	115	0	127	299
Total	449	210	0	659	134	35	0	169	68	557	0	625	1453
9:00 AM	93	31	0	124	21	14	0	35	10	115	0	125	284
9:15 AM	107	29	0	136	22	7	0	29	10	85	0	95	260
9:30 AM	85	36	0	121	37	7	0	44	4	99	1	104	269
9:45 AM	74	30	0	104	27	11	0	38	10	92	0	102	244
Total	359	126	0	485	107	39	0	146	34	391	1	426	1057
Grand Total	1442	652	0	2094	443	110	0	553	218	1859	1	2078	4725
Approach %	68.9	31.1	0.0		80.1	19.9	0.0		10.5	89.5	0.0		
Total %	30.5	13.8	0.0	44.3	9.4	2.3	0.0	11.7	4.6	39.3	0.0	44.0	
Exiting Leg Total				2302				870				1553	4725

Peak Hour Analysis from 06:00 AM to 10:00 AM begins at:

7:30 AM	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:30 AM	113	54	0	167	36	9	0	45	13	161	0	174	386
7:45 AM	132	77	0	209	46	5	0	51	31	161	0	192	452
8:00 AM	133	59	0	192	43	13	0	56	23	162	0	185	433
8:15 AM	114	58	0	172	37	7	0	44	21	149	0	170	386
Total Volume	492	248	0	740	162	34	0	196	88	633	0	721	1657
% Approach Total	66.5	33.5	0.0		82.7	17.3	0.0		12.2	87.8	0.0		
PHF	0.925	0.805	0.000	0.885	0.880	0.654	0.000	0.875	0.710	0.977	0.000	0.939	0.916
Entering Leg	492	248	0	740	162	34	0	196	88	633	0	721	1657
Exiting Leg				795				336				526	1657
Total				1535				532				1247	3314

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Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
6:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
6:45 AM	1	1	0	2	2	1	0	3	0	4	0	4	9
Total	3	1	0	4	2	1	0	3	0	6	0	6	13
7:00 AM	2	0	0	2	1	2	0	3	0	5	0	5	10
7:15 AM	5	2	0	7	2	1	0	3	1	6	0	7	17
7:30 AM	6	0	0	6	2	0	0	2	0	1	0	1	9
7:45 AM	2	0	0	2	0	0	0	0	0	6	0	6	8
Total	15	2	0	17	5	3	0	8	1	18	0	19	44
8:00 AM	4	2	0	6	0	0	0	0	3	5	0	8	14
8:15 AM	2	2	0	4	2	0	0	2	1	5	0	6	12
8:30 AM	4	1	0	5	1	0	0	1	0	1	0	1	7
8:45 AM	7	1	0	8	1	0	0	1	0	4	0	4	13
Total	17	6	0	23	4	0	0	4	4	15	0	19	46
9:00 AM	4	0	0	4	0	0	0	0	0	4	0	4	8
9:15 AM	1	0	0	1	0	0	0	0	0	6	0	6	7
9:30 AM	0	5	0	5	1	1	0	2	0	1	0	1	8
9:45 AM	6	0	0	6	0	0	0	0	1	7	0	8	14
Total	11	5	0	16	1	1	0	2	1	18	0	19	37
Grand Total	46	14	0	60	12	5	0	17	6	57	0	63	140
Approach %	76.7	23.3	0.0		70.6	29.4	0.0		9.5	90.5	0.0		
Total %	32.9	10.0	0.0	42.9	8.6	3.6	0.0	12.1	4.3	40.7	0.0	45.0	
Exiting Leg Total				69				20				51	140
Buses	11	4	0	15	3	1	0	4	2	17	0	19	38
% Buses	23.9	28.6	0.0	25.0	25.0	20.0	0.0	23.5	33.3	29.8	0.0	30.2	27.1
Exiting Leg Total				20				6				12	38
Single-Unit Trucks	28	9	0	37	8	4	0	12	4	35	0	39	88
% Single-Unit	60.9	64.3	0.0	61.7	66.7	80.0	0.0	70.6	66.7	61.4	0.0	61.9	62.9
Exiting Leg Total				43				13				32	88
Articulated Trucks	7	1	0	8	1	0	0	1	0	5	0	5	14
% Articulated	15.2	7.1	0.0	13.3	8.3	0.0	0.0	5.9	0.0	8.8	0.0	7.9	10.0
Exiting Leg Total				6				1				7	14

Peak Hour Analysis from 06:00 AM to 10:00 AM begins at:

7:15 AM	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:15 AM	5	2	0	7	2	1	0	3	1	6	0	7	17
7:30 AM	6	0	0	6	2	0	0	2	0	1	0	1	9
7:45 AM	2	0	0	2	0	0	0	0	0	6	0	6	8
8:00 AM	4	2	0	6	0	0	0	0	3	5	0	8	14
Total Volume	17	4	0	21	4	1	0	5	4	18	0	22	48
% Approach Total	81.0	19.0	0.0		80.0	20.0	0.0		18.2	81.8	0.0		
PHF	0.708	0.500	0.000	0.750	0.500	0.250	0.000	0.417	0.333	0.750	0.000	0.688	0.706
Buses	2	2	0	4	0	0	0	0	1	6	0	7	11
Buses %	11.8	50.0	0.0	19.0	0.0	0.0	0.0	0.0	25.0	33.3	0.0	31.8	22.9
Single-Unit Trucks	11	2	0	13	3	1	0	4	3	10	0	13	30
Single-Unit %	64.7	50.0	0.0	61.9	75.0	100.0	0.0	80.0	75.0	55.6	0.0	59.1	62.5
Articulated Trucks	4	0	0	4	1	0	0	1	0	2	0	2	7
Articulated %	23.5	0.0	0.0	19.0	25.0	0.0	0.0	20.0	0.0	11.1	0.0	9.1	14.6
Buses	2	2	0	4	0	0	0	0	1	6	0	7	11
Single-Unit Trucks	11	2	0	13	3	1	0	4	3	10	0	13	30
Articulated Trucks	4	0	0	4	1	0	0	1	0	2	0	2	7
Total Entering Leg	17	4	0	21	4	1	0	5	4	18	0	22	48

PDI File #: **186252 A**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **6:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
Buses				6				3				2	11
Single-Unit Trucks				13				5				12	30
Articulated Trucks				3				0				4	7
Total Exiting Leg				22				8				18	48

PDI File #: **186252 A**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **6:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
6:00 AM	21	10	0	31	7	1	0	8	3	31	0	34	73
6:15 AM	33	18	0	51	12	2	0	14	9	63	0	72	137
6:30 AM	39	19	0	58	17	1	0	18	7	60	0	67	143
6:45 AM	82	20	0	102	18	3	0	21	8	112	0	120	243
Total	175	67	0	242	54	7	0	61	27	266	0	293	596
7:00 AM	69	22	0	91	23	3	0	26	10	127	0	137	254
7:15 AM	84	50	0	134	28	6	0	34	21	128	0	149	317
7:30 AM	100	45	0	145	29	7	0	36	12	144	0	156	337
7:45 AM	125	68	0	193	45	4	0	49	28	143	0	171	413
Total	378	185	0	563	125	20	0	145	71	542	0	613	1321
8:00 AM	120	53	0	173	40	13	0	53	20	153	0	173	399
8:15 AM	108	51	0	159	34	2	0	36	20	144	0	164	359
8:30 AM	101	32	0	133	21	9	0	30	9	114	0	123	286
8:45 AM	81	40	0	121	24	1	0	25	10	108	0	118	264
Total	410	176	0	586	119	25	0	144	59	519	0	578	1308
9:00 AM	85	28	0	113	20	12	0	32	6	103	0	109	254
9:15 AM	90	25	0	115	15	3	0	18	9	77	0	86	219
9:30 AM	80	30	0	110	28	6	0	34	4	87	0	91	235
9:45 AM	61	26	0	87	19	8	0	27	6	84	0	90	204
Total	316	109	0	425	82	29	0	111	25	351	0	376	912
Grand Total	1279	537	0	1816	380	81	0	461	182	1678	0	1860	4137
Approach %	70.4	29.6	0.0		82.4	17.6	0.0		9.8	90.2	0.0		
Total %	30.9	13.0	0.0	43.9	9.2	2.0	0.0	11.1	4.4	40.6	0.0	45.0	
Exiting Leg Total				2058				719				1360	4137

Peak Hour Analysis from 06:00 AM to 10:00 AM begins at:

7:30 AM	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:30 AM	100	45	0	145	29	7	0	36	12	144	0	156	337
7:45 AM	125	68	0	193	45	4	0	49	28	143	0	171	413
8:00 AM	120	53	0	173	40	13	0	53	20	153	0	173	399
8:15 AM	108	51	0	159	34	2	0	36	20	144	0	164	359
Total Volume	453	217	0	670	148	26	0	174	80	584	0	664	1508
% Approach Total	67.6	32.4	0.0		85.1	14.9	0.0		12.0	88.0	0.0		
PHF	0.906	0.798	0.000	0.868	0.822	0.500	0.000	0.821	0.714	0.954	0.000	0.960	0.913
Entering Leg	453	217	0	670	148	26	0	174	80	584	0	664	1508
Exiting Leg				732				297				479	1508
Total				1402				471				1143	3016

PDI File #: **186252 A**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **6:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Light Goods Vehicle**

	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
6:00 AM	1	0	0	1	1	0	0	1	1	6	0	7	9
6:15 AM	9	8	0	17	0	0	0	0	4	6	0	10	27
6:30 AM	16	8	0	24	1	1	0	2	3	8	0	11	37
6:45 AM	13	13	0	26	2	1	0	3	2	10	0	12	41
Total	39	29	0	68	4	2	0	6	10	30	0	40	114
7:00 AM	13	11	0	24	6	4	0	10	3	15	0	18	52
7:15 AM	7	6	0	13	5	0	0	5	1	22	0	23	41
7:30 AM	13	9	0	22	7	2	0	9	1	17	0	18	49
7:45 AM	7	9	0	16	1	1	0	2	3	18	0	21	39
Total	40	35	0	75	19	7	0	26	8	72	0	80	181
8:00 AM	13	6	0	19	3	0	0	3	3	9	0	12	34
8:15 AM	6	6	0	12	3	5	0	8	1	5	0	6	26
8:30 AM	11	8	0	19	6	2	0	8	3	17	0	20	47
8:45 AM	9	11	0	20	3	3	0	6	2	7	0	9	35
Total	39	31	0	70	15	10	0	25	9	38	0	47	142
9:00 AM	8	3	0	11	1	2	0	3	4	12	0	16	30
9:15 AM	17	4	0	21	7	4	0	11	1	8	0	9	41
9:30 AM	5	6	0	11	9	1	0	10	0	12	1	13	34
9:45 AM	11	4	0	15	8	3	0	11	4	8	0	12	38
Total	41	17	0	58	25	10	0	35	9	40	1	50	143
Grand Total	159	112	0	271	63	29	0	92	36	180	1	217	580
Approach %	58.7	41.3	0.0		68.5	31.5	0.0		16.6	82.9	0.5		
Total %	27.4	19.3	0.0	46.7	10.9	5.0	0.0	15.9	6.2	31.0	0.2	37.4	
Exiting Leg Total				243				148				189	580

Peak Hour Analysis from 06:00 AM to 10:00 AM begins at:

6:45 AM	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
6:45 AM	13	13	0	26	2	1	0	3	2	10	0	12	41
7:00 AM	13	11	0	24	6	4	0	10	3	15	0	18	52
7:15 AM	7	6	0	13	5	0	0	5	1	22	0	23	41
7:30 AM	13	9	0	22	7	2	0	9	1	17	0	18	49
Total Volume	46	39	0	85	20	7	0	27	7	64	0	71	183
% Approach Total	54.1	45.9	0.0		74.1	25.9	0.0		9.9	90.1	0.0		
PHF	0.885	0.750	0.000	0.817	0.714	0.438	0.000	0.675	0.583	0.727	0.000	0.772	0.880
Entering Leg	46	39	0	85	20	7	0	27	7	64	0	71	183
Exiting Leg				84				46				53	183
Total				169				73				124	366

PDI File #: **186252 A**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **6:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
6:30 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
6:45 AM	0	0	0	0	2	0	0	2	0	2	0	2	4
Total	2	0	0	2	2	0	0	2	0	3	0	3	7
7:00 AM	2	0	0	2	0	1	0	1	0	0	0	0	3
7:15 AM	0	1	0	1	0	0	0	0	0	3	0	3	4
7:30 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	3	1	0	4	0	1	0	1	0	6	0	6	11
8:00 AM	1	1	0	2	0	0	0	0	1	0	0	1	3
8:15 AM	0	1	0	1	0	0	0	0	1	3	0	4	5
8:30 AM	1	1	0	2	1	0	0	1	0	1	0	1	4
8:45 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	3	3	0	6	1	0	0	1	2	5	0	7	14
9:00 AM	2	0	0	2	0	0	0	0	0	1	0	1	3
9:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	3	0	0	3	0	0	0	0	0	3	0	3	6
Grand Total	11	4	0	15	3	1	0	4	2	17	0	19	38
Approach %	73.3	26.7	0.0		75.0	25.0	0.0		10.5	89.5	0.0		
Total %	28.9	10.5	0.0	39.5	7.9	2.6	0.0	10.5	5.3	44.7	0.0	50.0	
Exiting Leg Total				20				6				12	38

Peak Hour Analysis from 06:00 AM to 10:00 AM begins at:

7:45 AM	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:00 AM	1	1	0	2	0	0	0	0	1	0	0	1	3
8:15 AM	0	1	0	1	0	0	0	0	1	3	0	4	5
8:30 AM	1	1	0	2	1	0	0	1	0	1	0	1	4
Total Volume	2	3	0	5	1	0	0	1	2	6	0	8	14
% Approach Total	40.0	60.0	0.0		100.0	0.0	0.0		25.0	75.0	0.0		
PHF	0.500	0.750	0.000	0.625	0.250	0.000	0.000	0.250	0.500	0.500	0.000	0.500	0.700
Entering Leg	2	3	0	5	1	0	0	1	2	6	0	8	14
Exiting Leg				7				5				2	14
Total				12				6				10	28

PDI File #: **186252 A**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **6:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
6:45 AM	1	1	0	2	0	1	0	1	0	2	0	2	5
Total	1	1	0	2	0	1	0	1	0	3	0	3	6
7:00 AM	0	0	0	0	1	1	0	2	0	4	0	4	6
7:15 AM	4	1	0	5	1	1	0	2	1	3	0	4	11
7:30 AM	3	0	0	3	2	0	0	2	0	0	0	0	5
7:45 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
Total	8	1	0	9	4	2	0	6	1	10	0	11	26
8:00 AM	3	1	0	4	0	0	0	0	2	4	0	6	10
8:15 AM	2	1	0	3	2	0	0	2	0	2	0	2	7
8:30 AM	2	0	0	2	0	0	0	0	0	0	0	0	2
8:45 AM	4	1	0	5	1	0	0	1	0	3	0	3	9
Total	11	3	0	14	3	0	0	3	2	9	0	11	28
9:00 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
9:15 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
9:30 AM	0	4	0	4	1	1	0	2	0	1	0	1	7
9:45 AM	5	0	0	5	0	0	0	0	1	7	0	8	13
Total	8	4	0	12	1	1	0	2	1	13	0	14	28
Grand Total	28	9	0	37	8	4	0	12	4	35	0	39	88
Approach %	75.7	24.3	0.0		66.7	33.3	0.0		10.3	89.7	0.0		
Total %	31.8	10.2	0.0	42.0	9.1	4.5	0.0	13.6	4.5	39.8	0.0	44.3	
Exiting Leg Total				43				13				32	88

Peak Hour Analysis from 06:00 AM to 10:00 AM begins at:

7:15 AM	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:15 AM	4	1	0	5	1	1	0	2	1	3	0	4	11
7:30 AM	3	0	0	3	2	0	0	2	0	0	0	0	5
7:45 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
8:00 AM	3	1	0	4	0	0	0	0	2	4	0	6	10
Total Volume	11	2	0	13	3	1	0	4	3	10	0	13	30
% Approach Total	84.6	15.4	0.0		75.0	25.0	0.0		23.1	76.9	0.0		
PHF	0.688	0.500	0.000	0.650	0.375	0.250	0.000	0.500	0.375	0.625	0.000	0.542	0.682
Entering Leg	11	2	0	13	3	1	0	4	3	10	0	13	30
Exiting Leg				13				5				12	30
Total				26				9				25	60

PDI File #: **186252 A**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **6:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:15 AM	1	0	0	1	1	0	0	1	0	0	0	0	2
7:30 AM	2	0	0	2	0	0	0	0	0	0	0	0	2
7:45 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	4	0	0	4	1	0	0	1	0	2	0	2	7
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
8:45 AM	2	0	0	2	0	0	0	0	0	0	0	0	2
Total	3	0	0	3	0	0	0	0	0	1	0	1	4
9:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
9:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
9:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	2	0	2	3
Grand Total	7	1	0	8	1	0	0	1	0	5	0	5	14
Approach %	87.5	12.5	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	50.0	7.1	0.0	57.1	7.1	0.0	0.0	7.1	0.0	35.7	0.0	35.7	
Exiting Leg Total				6				1				7	14

Peak Hour Analysis from 06:00 AM to 10:00 AM begins at:

7:00 AM	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:15 AM	1	0	0	1	1	0	0	1	0	0	0	0	2
7:30 AM	2	0	0	2	0	0	0	0	0	0	0	0	2
7:45 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total Volume	4	0	0	4	1	0	0	1	0	2	0	2	7
% Approach Total	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.250	0.000	0.000	0.250	0.000	0.500	0.000	0.500	0.875
Entering Leg	4	0	0	4	1	0	0	1	0	2	0	2	7
Exiting Leg				3				0				4	7
Total				7				1				6	14

PDI File #: **186252 A**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **6:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Summer Street (Route 2A) from East						Grove Street from South						Summer Street (Route 2A) from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	1	6	6
8:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
Total	2	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	4	6
9:00 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
9:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	3
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	1	0	0	0	1	1	0	0	0	0	1	0	3	0	0	0	3	5
Grand Total	2	1	0	0	0	3	1	0	0	0	0	1	2	14	0	0	1	17	21
Approach %	66.7	33.3	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		11.8	82.4	0.0	0.0	5.9		
Total %	9.5	4.8	0.0	0.0	0.0	14.3	4.8	0.0	0.0	0.0	0.0	4.8	9.5	66.7	0.0	0.0	4.8	81.0	
Exiting Leg Total						15						3						3	21

Peak Hour Analysis from 06:00 AM to 10:00 AM begins at:

8:30 AM	Summer Street (Route 2A) from East						Grove Street from South						Summer Street (Route 2A) from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
8:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
9:00 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
9:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	3
Total Volume	1	1	0	0	0	2	1	0	0	0	0	1	0	5	0	0	0	5	8
% Approach Total	50.0	50.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
PHF	0.250	0.250	0.000	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.625	0.000	0.000	0.000	0.625	0.667
Entering Leg	1	1	0	0	0	2	1	0	0	0	0	1	0	5	0	0	0	5	8
Exiting Leg						6						1						1	8
Total						8						2						6	16

PDI File #: **186252 A**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **6:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Summer Street (Route 2A) from East						Grove Street from South						Summer Street (Route 2A) from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	13	1	14	0	0	0	5	7	12	26
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	9	10	11
Total	0	0	0	0	0	0	0	0	0	13	2	15	0	0	0	7	17	24	39
8:00 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	1	2	4
8:30 AM	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	5	7	0	0	0	1	1	2	9
9:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	2	3
Total	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	2	3	5
Grand Total	0	0	0	0	0	0	0	0	0	16	10	26	0	0	0	9	20	29	55
Approach %	0	0	0	0	0		0	0	0	61.538	38.462		0	0	0	31.034	68.966		
Total %	0	0	0	0	0	0	0	0	0	29.091	18.182	47.273	0	0	0	16.364	36.364	52.727	
Exiting Leg Total						0						26						29	55

Peak Hour Analysis from 06:00 AM to 10:00 AM begins at:

7:30 AM	Summer Street (Route 2A) from East						Grove Street from South						Summer Street (Route 2A) from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:30 AM	0	0	0	0	0	0	0	0	0	13	1	14	0	0	0	5	7	12	26
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	9	10	11
8:00 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	1	2	4
Total Volume	0	0	0	0	0	0	0	0	0	15	4	19	0	0	0	7	17	24	43
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	78.9	21.1		0.0	0.0	0.0	29.2	70.8		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.288	1.000	0.339	0.000	0.000	0.000	0.350	0.472	0.500	0.413
Entering Leg	0	0	0	0	0	0	0	0	0	15	4	19	0	0	0	7	17	24	43
Exiting Leg						0						19						24	43
Total						0						38						48	86

PDI File #: **186252 AA**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **1:30 PM**
End Time: **5:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	81	24	0	105	33	15	0	48	7	81	1	89	242
1:45 PM	85	28	0	113	28	6	0	34	11	82	0	93	240
Total	166	52	0	218	61	21	0	82	18	163	1	182	482
2:00 PM	110	34	0	144	25	15	0	40	13	95	0	108	292
2:15 PM	107	33	0	140	36	13	0	49	12	84	0	96	285
2:30 PM	122	45	0	167	56	20	0	76	15	100	0	115	358
2:45 PM	128	30	0	158	54	14	0	68	10	134	0	144	370
Total	467	142	0	609	171	62	0	233	50	413	0	463	1305
3:00 PM	111	32	0	143	49	16	0	65	11	107	0	118	326
3:15 PM	106	30	0	136	43	14	0	57	9	119	0	128	321
3:30 PM	113	27	0	140	57	14	0	71	9	116	0	125	336
3:45 PM	114	19	0	133	40	12	0	52	11	109	0	120	305
Total	444	108	0	552	189	56	0	245	40	451	0	491	1288
4:00 PM	140	34	0	174	50	14	0	64	12	109	0	121	359
4:15 PM	104	34	0	138	61	20	0	81	8	132	0	140	359
4:30 PM	117	39	0	156	57	12	0	69	7	140	0	147	372
4:45 PM	109	34	0	143	57	14	0	71	8	118	0	126	340
Total	470	141	0	611	225	60	0	285	35	499	0	534	1430
5:00 PM	137	23	0	160	70	14	0	84	14	153	0	167	411
5:15 PM	139	32	0	171	76	18	0	94	15	169	0	184	449
Total	276	55	0	331	146	32	0	178	29	322	0	351	860
Grand Total	1823	498	0	2321	792	231	0	1023	172	1848	1	2021	5365
Approach %	78.5	21.5	0.0		77.4	22.6	0.0		8.5	91.4	0.0		
Total %	34.0	9.3	0.0	43.3	14.8	4.3	0.0	19.1	3.2	34.4	0.0	37.7	
Exiting Leg Total				2640				670				2055	5365
Cars	1782	485	0	2267	783	224	0	1007	167	1817	1	1985	5259
% Cars	97.8	97.4	0.0	97.7	98.9	97.0	0.0	98.4	97.1	98.3	100.0	98.2	98.0
Exiting Leg Total				2600				652				2007	5259
Heavy Vehicles	41	13	0	54	9	7	0	16	5	31	0	36	106
% Heavy Vehicles	2.2	2.6	0.0	2.3	1.1	3.0	0.0	1.6	2.9	1.7	0.0	1.8	2.0
Exiting Leg Total				40				18				48	106

Peak Hour Analysis from 01:30 PM to 05:30 PM begins at:

4:30 PM	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:30 PM	117	39	0	156	57	12	0	69	7	140	0	147	372
4:45 PM	109	34	0	143	57	14	0	71	8	118	0	126	340
5:00 PM	137	23	0	160	70	14	0	84	14	153	0	167	411
5:15 PM	139	32	0	171	76	18	0	94	15	169	0	184	449
Total Volume	502	128	0	630	260	58	0	318	44	580	0	624	1572
% Approach Total	79.7	20.3	0.0		81.8	18.2	0.0		7.1	92.9	0.0		
PHF	0.903	0.821	0.000	0.921	0.855	0.806	0.000	0.846	0.733	0.858	0.000	0.848	0.875
Cars	497	126	0	623	257	58	0	315	44	573	0	617	1555
Cars %	99.0	98.4	0.0	98.9	98.8	100.0	0.0	99.1	100.0	98.8	0.0	98.9	98.9
Heavy Vehicles	5	2	0	7	3	0	0	3	0	7	0	7	17
Heavy Vehicles %	1.0	1.6	0.0	1.1	1.2	0.0	0.0	0.9	0.0	1.2	0.0	1.1	1.1
Cars Enter Leg	497	126	0	623	257	58	0	315	44	573	0	617	1555
Heavy Enter Leg	5	2	0	7	3	0	0	3	0	7	0	7	17
Total Entering Leg	502	128	0	630	260	58	0	318	44	580	0	624	1572
Cars Exiting Leg				830				170				555	1555
Heavy Exiting Leg				10				2				5	17
Total Exiting Leg				840				172				560	1572

PDI File #: **186252 AA**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **1:30 PM**
End Time: **5:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	79	24	0	103	33	15	0	48	7	77	1	85	236
1:45 PM	83	27	0	110	28	6	0	34	11	79	0	90	234
Total	162	51	0	213	61	21	0	82	18	156	1	175	470
2:00 PM	104	34	0	138	24	15	0	39	12	90	0	102	279
2:15 PM	103	33	0	136	34	11	0	45	12	83	0	95	276
2:30 PM	120	43	0	163	55	20	0	75	14	99	0	113	351
2:45 PM	123	29	0	152	54	13	0	67	10	132	0	142	361
Total	450	139	0	589	167	59	0	226	48	404	0	452	1267
3:00 PM	109	31	0	140	48	16	0	64	10	104	0	114	318
3:15 PM	103	27	0	130	43	12	0	55	8	118	0	126	311
3:30 PM	110	26	0	136	57	13	0	70	8	115	0	123	329
3:45 PM	112	18	0	130	40	12	0	52	11	108	0	119	301
Total	434	102	0	536	188	53	0	241	37	445	0	482	1259
4:00 PM	138	34	0	172	49	14	0	63	12	107	0	119	354
4:15 PM	101	33	0	134	61	19	0	80	8	132	0	140	354
4:30 PM	116	39	0	155	56	12	0	68	7	138	0	145	368
4:45 PM	108	33	0	141	57	14	0	71	8	116	0	124	336
Total	463	139	0	602	223	59	0	282	35	493	0	528	1412
5:00 PM	136	22	0	158	69	14	0	83	14	153	0	167	408
5:15 PM	137	32	0	169	75	18	0	93	15	166	0	181	443
Total	273	54	0	327	144	32	0	176	29	319	0	348	851
Grand Total	1782	485	0	2267	783	224	0	1007	167	1817	1	1985	5259
Approach %	78.6	21.4	0.0		77.8	22.2	0.0		8.4	91.5	0.1		
Total %	33.9	9.2	0.0	43.1	14.9	4.3	0.0	19.1	3.2	34.6	0.0	37.7	
Exiting Leg Total				2600				652				2007	5259

Peak Hour Analysis from 01:30 PM to 05:30 PM begins at:

4:30 PM	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:30 PM	116	39	0	155	56	12	0	68	7	138	0	145	368
4:45 PM	108	33	0	141	57	14	0	71	8	116	0	124	336
5:00 PM	136	22	0	158	69	14	0	83	14	153	0	167	408
5:15 PM	137	32	0	169	75	18	0	93	15	166	0	181	443
Total Volume	497	126	0	623	257	58	0	315	44	573	0	617	1555
% Approach Total	79.8	20.2	0.0		81.6	18.4	0.0		7.1	92.9	0.0		
PHF	0.907	0.808	0.000	0.922	0.857	0.806	0.000	0.847	0.733	0.863	0.000	0.852	0.878
Entering Leg	497	126	0	623	257	58	0	315	44	573	0	617	1555
Exiting Leg				830				170				555	1555
Total				1453				485				1172	3110

PDI File #: **186252 AA**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **1:30 PM**
End Time: **5:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	2	0	0	2	0	0	0	0	0	4	0	4	6
1:45 PM	2	1	0	3	0	0	0	0	0	3	0	3	6
Total	4	1	0	5	0	0	0	0	0	7	0	7	12
2:00 PM	6	0	0	6	1	0	0	1	1	5	0	6	13
2:15 PM	4	0	0	4	2	2	0	4	0	1	0	1	9
2:30 PM	2	2	0	4	1	0	0	1	1	1	0	2	7
2:45 PM	5	1	0	6	0	1	0	1	0	2	0	2	9
Total	17	3	0	20	4	3	0	7	2	9	0	11	38
3:00 PM	2	1	0	3	1	0	0	1	1	3	0	4	8
3:15 PM	3	3	0	6	0	2	0	2	1	1	0	2	10
3:30 PM	3	1	0	4	0	1	0	1	1	1	0	2	7
3:45 PM	2	1	0	3	0	0	0	0	0	1	0	1	4
Total	10	6	0	16	1	3	0	4	3	6	0	9	29
4:00 PM	2	0	0	2	1	0	0	1	0	2	0	2	5
4:15 PM	3	1	0	4	0	1	0	1	0	0	0	0	5
4:30 PM	1	0	0	1	1	0	0	1	0	2	0	2	4
4:45 PM	1	1	0	2	0	0	0	0	0	2	0	2	4
Total	7	2	0	9	2	1	0	3	0	6	0	6	18
5:00 PM	1	1	0	2	1	0	0	1	0	0	0	0	3
5:15 PM	2	0	0	2	1	0	0	1	0	3	0	3	6
Total	3	1	0	4	2	0	0	2	0	3	0	3	9
Grand Total	41	13	0	54	9	7	0	16	5	31	0	36	106
Approach %	75.9	24.1	0.0		56.3	43.8	0.0		13.9	86.1	0.0		
Total %	38.7	12.3	0.0	50.9	8.5	6.6	0.0	15.1	4.7	29.2	0.0	34.0	
Exiting Leg Total				40				18				48	106
Buses	12	5	0	17	2	4	0	6	3	8	0	11	34
% Buses	29.3	38.5	0.0	31.5	22.2	57.1	0.0	37.5	60.0	25.8	0.0	30.6	32.1
Exiting Leg Total				10				8				16	34
Single-Unit Trucks	25	8	0	33	6	3	0	9	2	21	0	23	65
% Single-Unit	61.0	61.5	0.0	61.1	66.7	42.9	0.0	56.3	40.0	67.7	0.0	63.9	61.3
Exiting Leg Total				27				10				28	65
Articulated Trucks	4	0	0	4	1	0	0	1	0	2	0	2	7
% Articulated	9.8	0.0	0.0	7.4	11.1	0.0	0.0	6.3	0.0	6.5	0.0	5.6	6.6
Exiting Leg Total				3				0				4	7

Peak Hour Analysis from 01:30 PM to 05:30 PM begins at:

2:00 PM	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:00 PM	6	0	0	6	1	0	0	1	1	5	0	6	13
2:15 PM	4	0	0	4	2	2	0	4	0	1	0	1	9
2:30 PM	2	2	0	4	1	0	0	1	1	1	0	2	7
2:45 PM	5	1	0	6	0	1	0	1	0	2	0	2	9
Total Volume	17	3	0	20	4	3	0	7	2	9	0	11	38
% Approach Total	85.0	15.0	0.0		57.1	42.9	0.0		18.2	81.8	0.0		
PHF	0.708	0.375	0.000	0.833	0.500	0.375	0.000	0.438	0.500	0.450	0.000	0.458	0.731
Buses	7	0	0	7	2	1	0	3	0	3	0	3	13
Buses %	41.2	0.0	0.0	35.0	50.0	33.3	0.0	42.9	0.0	33.3	0.0	27.3	34.2
Single-Unit Trucks	9	3	0	12	2	2	0	4	2	6	0	8	24
Single-Unit %	52.9	100.0	0.0	60.0	50.0	66.7	0.0	57.1	100.0	66.7	0.0	72.7	63.2
Articulated Trucks	1	0	0	1	0	0	0	0	0	0	0	0	1
Articulated %	5.9	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Buses	7	0	0	7	2	1	0	3	0	3	0	3	13
Single-Unit Trucks	9	3	0	12	2	2	0	4	2	6	0	8	24
Articulated Trucks	1	0	0	1	0	0	0	0	0	0	0	0	1

PDI File #: **186252 AA**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **1:30 PM**
End Time: **5:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Summer Street (Route 2A) from East				Grove Street from South				Summer Street (Route 2A) from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
Total Entering Leg	17	3	0	20	4	3	0	7	2	9	0	11	38
Buses				5				0				8	13
Single-Unit Trucks				8				5				11	24
Articulated Trucks				0				0				1	1
Total Exiting Leg				13				5				20	38

PDI File #: **186252 AA**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **1:30 PM**
End Time: **5:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	69	19	0	88	29	13	0	42	5	71	0	76	206
1:45 PM	71	23	0	94	23	4	0	27	9	72	0	81	202
Total	140	42	0	182	52	17	0	69	14	143	0	157	408
2:00 PM	95	30	0	125	22	13	0	35	7	78	0	85	245
2:15 PM	94	27	0	121	27	11	0	38	10	74	0	84	243
2:30 PM	114	40	0	154	51	19	0	70	13	92	0	105	329
2:45 PM	112	26	0	138	48	9	0	57	7	122	0	129	324
Total	415	123	0	538	148	52	0	200	37	366	0	403	1141
3:00 PM	97	30	0	127	42	16	0	58	10	99	0	109	294
3:15 PM	92	25	0	117	35	10	0	45	7	102	0	109	271
3:30 PM	103	20	0	123	50	12	0	62	7	101	0	108	293
3:45 PM	100	18	0	118	33	11	0	44	9	92	0	101	263
Total	392	93	0	485	160	49	0	209	33	394	0	427	1121
4:00 PM	126	28	0	154	44	14	0	58	10	95	0	105	317
4:15 PM	93	27	0	120	53	16	0	69	8	116	0	124	313
4:30 PM	108	36	0	144	50	12	0	62	6	124	0	130	336
4:45 PM	98	31	0	129	51	12	0	63	7	107	0	114	306
Total	425	122	0	547	198	54	0	252	31	442	0	473	1272
5:00 PM	124	20	0	144	62	13	0	75	13	144	0	157	376
5:15 PM	124	31	0	155	72	16	0	88	12	152	0	164	407
Total	248	51	0	299	134	29	0	163	25	296	0	321	783
Grand Total	1620	431	0	2051	692	201	0	893	140	1641	0	1781	4725
Approach %	79.0	21.0	0.0		77.5	22.5	0.0		7.9	92.1	0.0		
Total %	34.3	9.1	0.0	43.4	14.6	4.3	0.0	18.9	3.0	34.7	0.0	37.7	
Exiting Leg Total				2333				571				1821	4725

Peak Hour Analysis from 01:30 PM to 05:30 PM begins at:

4:30 PM	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:30 PM	108	36	0	144	50	12	0	62	6	124	0	130	336
4:45 PM	98	31	0	129	51	12	0	63	7	107	0	114	306
5:00 PM	124	20	0	144	62	13	0	75	13	144	0	157	376
5:15 PM	124	31	0	155	72	16	0	88	12	152	0	164	407
Total Volume	454	118	0	572	235	53	0	288	38	527	0	565	1425
% Approach Total	79.4	20.6	0.0		81.6	18.4	0.0		6.7	93.3	0.0		
PHF	0.915	0.819	0.000	0.923	0.816	0.828	0.000	0.818	0.731	0.867	0.000	0.861	0.875
Entering Leg	454	118	0	572	235	53	0	288	38	527	0	565	1425
Exiting Leg				762				156				507	1425
Total				1334				444				1072	2850

PDI File #: **186252 AA**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **1:30 PM**
End Time: **5:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Light Goods Vehicle**

	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	9	4	0	13	4	2	0	6	2	6	1	9	28
1:45 PM	12	4	0	16	5	2	0	7	2	7	0	9	32
Total	21	8	0	29	9	4	0	13	4	13	1	18	60
2:00 PM	9	4	0	13	2	2	0	4	5	12	0	17	34
2:15 PM	9	6	0	15	7	0	0	7	2	9	0	11	33
2:30 PM	6	3	0	9	4	1	0	5	1	6	0	7	21
2:45 PM	11	3	0	14	6	4	0	10	3	10	0	13	37
Total	35	16	0	51	19	7	0	26	11	37	0	48	125
3:00 PM	12	1	0	13	6	0	0	6	0	4	0	4	23
3:15 PM	11	1	0	12	8	2	0	10	1	15	0	16	38
3:30 PM	6	6	0	12	7	1	0	8	1	12	0	13	33
3:45 PM	12	0	0	12	7	1	0	8	2	16	0	18	38
Total	41	8	0	49	28	4	0	32	4	47	0	51	132
4:00 PM	12	6	0	18	5	0	0	5	2	12	0	14	37
4:15 PM	8	6	0	14	8	3	0	11	0	16	0	16	41
4:30 PM	8	3	0	11	5	0	0	5	1	14	0	15	31
4:45 PM	10	2	0	12	5	2	0	7	1	8	0	9	28
Total	38	17	0	55	23	5	0	28	4	50	0	54	137
5:00 PM	11	2	0	13	6	1	0	7	1	9	0	10	30
5:15 PM	12	1	0	13	3	2	0	5	3	14	0	17	35
Total	23	3	0	26	9	3	0	12	4	23	0	27	65
Grand Total	158	52	0	210	88	23	0	111	27	170	1	198	519
Approach %	75.2	24.8	0.0		79.3	20.7	0.0		13.6	85.9	0.5		
Total %	30.4	10.0	0.0	40.5	17.0	4.4	0.0	21.4	5.2	32.8	0.2	38.2	
Exiting Leg Total				258				79				182	519

Peak Hour Analysis from 01:30 PM to 05:30 PM begins at:

3:30 PM	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
3:30 PM	6	6	0	12	7	1	0	8	1	12	0	13	33
3:45 PM	12	0	0	12	7	1	0	8	2	16	0	18	38
4:00 PM	12	6	0	18	5	0	0	5	2	12	0	14	37
4:15 PM	8	6	0	14	8	3	0	11	0	16	0	16	41
Total Volume	38	18	0	56	27	5	0	32	5	56	0	61	149
% Approach Total	67.9	32.1	0.0		84.4	15.6	0.0		8.2	91.8	0.0		
PHF	0.792	0.750	0.000	0.778	0.844	0.417	0.000	0.727	0.625	0.875	0.000	0.847	0.909
Entering Leg	38	18	0	56	27	5	0	32	5	56	0	61	149
Exiting Leg				83				23				43	149
Total				139				55				104	298

PDI File #: **186252 AA**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **1:30 PM**
End Time: **5:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	0	0	0	0	1	0	1	2
2:00 PM	4	0	0	4	1	0	0	1	0	1	0	1	6
2:15 PM	0	0	0	0	1	1	0	2	0	1	0	1	3
2:30 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
2:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	7	0	0	7	2	1	0	3	0	3	0	3	13
3:00 PM	0	1	0	1	0	0	0	0	1	1	0	2	3
3:15 PM	0	3	0	3	0	2	0	2	1	0	0	1	6
3:30 PM	1	0	0	1	0	1	0	1	1	0	0	1	3
3:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	1	5	0	6	0	3	0	3	3	2	0	5	14
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	1	0	0	1	0	0	0	0	0	1	0	1	2
5:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
5:15 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	2	0	0	2	0	0	0	0	0	1	0	1	3
Grand Total	12	5	0	17	2	4	0	6	3	8	0	11	34
Approach %	70.6	29.4	0.0		33.3	66.7	0.0		27.3	72.7	0.0		
Total %	35.3	14.7	0.0	50.0	5.9	11.8	0.0	17.6	8.8	23.5	0.0	32.4	
Exiting Leg Total				10				8				16	34

Peak Hour Analysis from 01:30 PM to 05:30 PM begins at:

3:00 PM	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
3:00 PM	0	1	0	1	0	0	0	0	1	1	0	2	3
3:15 PM	0	3	0	3	0	2	0	2	1	0	0	1	6
3:30 PM	1	0	0	1	0	1	0	1	1	0	0	1	3
3:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	1	5	0	6	0	3	0	3	3	2	0	5	14
% Approach Total	16.7	83.3	0.0		0.0	100.0	0.0		60.0	40.0	0.0		
PHF	0.250	0.417	0.000	0.500	0.000	0.375	0.000	0.375	0.750	0.500	0.000	0.625	0.583
Entering Leg	1	5	0	6	0	3	0	3	3	2	0	5	14
Exiting Leg				2				8				4	14
Total				8				11				9	28

PDI File #: **186252 AA**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **1:30 PM**
End Time: **5:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
1:45 PM	1	1	0	2	0	0	0	0	0	3	0	3	5
Total	3	1	0	4	0	0	0	0	0	4	0	4	8
2:00 PM	1	0	0	1	0	0	0	0	1	4	0	5	6
2:15 PM	4	0	0	4	1	1	0	2	0	0	0	0	6
2:30 PM	0	2	0	2	1	0	0	1	1	0	0	1	4
2:45 PM	4	1	0	5	0	1	0	1	0	2	0	2	8
Total	9	3	0	12	2	2	0	4	2	6	0	8	24
3:00 PM	2	0	0	2	1	0	0	1	0	2	0	2	5
3:15 PM	3	0	0	3	0	0	0	0	0	1	0	1	4
3:30 PM	2	1	0	3	0	0	0	0	0	1	0	1	4
3:45 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
Total	9	1	0	10	1	0	0	1	0	4	0	4	15
4:00 PM	0	0	0	0	1	0	0	1	0	2	0	2	3
4:15 PM	2	1	0	3	0	1	0	1	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:45 PM	1	1	0	2	0	0	0	0	0	1	0	1	3
Total	3	2	0	5	1	1	0	2	0	5	0	5	12
5:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
5:15 PM	1	0	0	1	1	0	0	1	0	2	0	2	4
Total	1	1	0	2	2	0	0	2	0	2	0	2	6
Grand Total	25	8	0	33	6	3	0	9	2	21	0	23	65
Approach %	75.8	24.2	0.0		66.7	33.3	0.0		8.7	91.3	0.0		
Total %	38.5	12.3	0.0	50.8	9.2	4.6	0.0	13.8	3.1	32.3	0.0	35.4	
Exiting Leg Total				27				10				28	65

Peak Hour Analysis from 01:30 PM to 05:30 PM begins at:

2:00 PM	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:00 PM	1	0	0	1	0	0	0	0	1	4	0	5	6
2:15 PM	4	0	0	4	1	1	0	2	0	0	0	0	6
2:30 PM	0	2	0	2	1	0	0	1	1	0	0	1	4
2:45 PM	4	1	0	5	0	1	0	1	0	2	0	2	8
Total Volume	9	3	0	12	2	2	0	4	2	6	0	8	24
% Approach Total	75.0	25.0	0.0		50.0	50.0	0.0		25.0	75.0	0.0		
PHF	0.563	0.375	0.000	0.600	0.500	0.500	0.000	0.500	0.500	0.375	0.000	0.400	0.750
Entering Leg	9	3	0	12	2	2	0	4	2	6	0	8	24
Exiting Leg				8				5				11	24
Total				20				9				19	48

PDI File #: **186252 AA**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **1:30 PM**
End Time: **5:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	2
2:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
4:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	0	3	1	0	0	1	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	4	0	0	4	1	0	0	1	0	2	0	2	7
Approach %	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	57.1	0.0	0.0	57.1	14.3	0.0	0.0	14.3	0.0	28.6	0.0	28.6	
Exiting Leg Total				3				0				4	7

Peak Hour Analysis from 01:30 PM to 05:30 PM begins at:

3:45 PM	Summer Street (Route 2A)				Grove Street				Summer Street (Route 2A)				
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
4:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
Total Volume	3	0	0	3	1	0	0	1	0	0	0	0	4
% Approach Total	100.0	0.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.375	0.000	0.000	0.375	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.500
Entering Leg	3	0	0	3	1	0	0	1	0	0	0	0	4
Exiting Leg				1				0				3	4
Total				4				1				3	8

PDI File #: **186252 AA**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **1:30 PM**
End Time: **5:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Bicycles (on Roadway and Crosswalks)

	Summer Street (Route 2A) from East						Grove Street from South						Summer Street (Route 2A) from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	2	3
3:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
3:30 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Total	2	0	0	0	0	2	1	0	0	0	0	1	0	1	0	0	0	1	4
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
Grand Total	2	0	0	0	0	2	2	1	0	0	0	3	1	3	0	0	0	4	9
Approach %	100.0	0.0	0.0	0.0	0.0		66.7	33.3	0.0	0.0	0.0		25.0	75.0	0.0	0.0	0.0		
Total %	22.2	0.0	0.0	0.0	0.0	22.2	22.2	11.1	0.0	0.0	0.0	33.3	11.1	33.3	0.0	0.0	0.0	44.4	
Exiting Leg Total						5						1						3	9

Peak Hour Analysis from 01:30 PM to 05:30 PM begins at:

2:15 PM	Summer Street (Route 2A) from East						Grove Street from South						Summer Street (Route 2A) from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
2:15 PM	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
3:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	0	0	1	1	0	0	0	0	1	1	1	0	0	0	2	4
% Approach Total	100.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.250	0.000	0.000	0.000	0.500	0.500
Entering Leg	1	0	0	0	0	1	1	0	0	0	0	1	1	1	0	0	0	2	4
Exiting Leg						2						1						1	4
Total						3						2						3	8

PDI File #: **186252 AA**
Location: **S: Grove Street**
Location: **E: Summer Street (Route 2A) W: Summer Street (Route 2A)**
City, State: **Arlington, MA**
Client: **Bryant Associates/ T. Brayton**
Site Code: **M17079MA**
Count Date: **Wednesday, May 16, 2018**
Start Time: **1:30 PM**
End Time: **5:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Summer Street (Route 2A) from East						Grove Street from South						Summer Street (Route 2A) from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	3
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	3
2:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	13	0	13	14
2:45 PM	0	0	0	0	0	0	0	0	0	4	6	10	0	0	0	1	0	1	11
Total	0	0	0	0	0	0	0	0	0	6	8	14	0	0	0	14	0	14	28
3:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	5	0	5	7
3:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	2
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	9	0	9	12
4:00 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	2	3	5
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	1	1	2	6
Total	0	0	0	0	0	0	0	0	0	2	5	7	0	0	0	4	3	7	14
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	1	4	5	7
5:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	4	0	4	6
Total	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	5	4	9	13
Grand Total	0	0	0	0	0	0	0	0	0	12	17	29	0	0	0	34	7	41	70
Approach %	0	0	0	0	0		0	0	0	41.379	58.621		0	0	0	82.927	17.073		
Total %	0	0	0	0	0	0	0	0	0	17.143	24.286	41.429	0	0	0	48.571	10	58.571	
Exiting Leg Total						0						29						41	70

Peak Hour Analysis from 01:30 PM to 05:30 PM begins at:

2:15 PM	Summer Street (Route 2A) from East						Grove Street from South						Summer Street (Route 2A) from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
2:15 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	13	0	13	14
2:45 PM	0	0	0	0	0	0	0	0	0	4	6	10	0	0	0	1	0	1	11
3:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	5	0	5	7
Total Volume	0	0	0	0	0	0	0	0	0	5	10	15	0	0	0	19	0	19	34
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	33.3	66.7		0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.313	0.417	0.375	0.000	0.000	0.000	0.365	0.000	0.365	0.607
Entering Leg	0	0	0	0	0	0	0	0	0	5	10	15	0	0	0	19	0	19	34
Exiting Leg						0						15						19	34
Total						0						30						38	68

ATTACHMENT 2

Crash Summary

CRASH ANALYSIS

Arlington RMD - 251 Summer Street

Arlington, MA

	Summer Street (Route 2A) at Site Driveways	Summer Street (Route 2A) at Brattle Street/Symmes Road
Year		
2013	0	7
2014	0	2
2015	0	1
2016	0	1
2017	0	1
Total	*0*	*12*
Type		
Angle	0	2
Rear-end	0	6
Sideswipe	0	3
Head-on	0	0
Pedestrian	0	0
Bicycle	0	0
Single Vehicle	0	1
Other	0	0
Unknown	0	0
Total	*0*	*12*
Severity		
Property Damage	0	4
Personal Injury	0	4
Fatality	0	0
Unknown	0	4
Total	*0*	*11*
Weather		
Clear	0	9
Cloudy	0	2
Rain	0	0
Snow	0	1
Sleet	0	0
Fog	0	0
Other	0	0
Unknown	0	0
Total	*0*	*12*
Time		
7:00 AM to 9:00 AM	0	2
9:00 AM to 4:00 PM	0	6
4:00 PM to 6:00 PM	0	1
6:00 PM to 7:00 AM	0	3
Total	**0**	**12**
Crash Rate	n/a	0.34
State Average	n/a	0.78
District 4 Average	n/a	0.73

Source: MassDOT

ATTACHMENT 3

Queue Length Observations

QUEUE OBSERVATION SHEET

McMAHON

Project: Arlington RMD
Date: 12/3/2020
Time: 4:30 PM - 5:30 PM
Intersection: Summer Street at Brattle Street
Approach: EB
Observer: EKB

Time	Queue (# of vehicles)	Queue (ft)[1]	Notes
4:30 PM	5	125	E. driveway blocked
4:32 PM	3	75	
4:34 PM	8	200	W. driveway blocked
4:35 PM	6	150	E. driveway blocked
4:37 PM	5	125	E. driveway blocked
4:38 PM	13	325	W. driveway blocked
4:40 PM	6	150	E. driveway blocked
4:41 PM	7	175	E. driveway blocked
4:43 PM	3	75	
4:44 PM	1	25	
4:46 PM	7	175	one veh was an MBTA bus
4:48 PM	4	100	E. driveway blocked
4:50 PM	4	100	E. driveway blocked
4:51 PM	3	75	
4:52 PM	6	150	E. driveway blocked
4:53 PM	2	50	
4:54 PM	3	75	
4:56 PM	2	50	
4:57 PM	3	75	
4:58 PM	6	150	E. driveway blocked
4:59 PM	7	175	E. driveway blocked
5:00 PM	1	25	
5:01 PM	5	125	E. driveway blocked
5:02 PM	6	150	E. driveway blocked
5:03 PM	4	100	E. driveway blocked
5:04 PM	1	25	
5:05 PM	4	100	E. driveway blocked
5:07 PM	4	100	E. driveway blocked
5:09 PM	7	175	E. driveway blocked
5:11 PM	6	150	E. driveway blocked
5:12 PM	3	75	
5:13 PM	6	150	E. driveway blocked
5:14 PM	2	50	
5:16 PM	6	150	E. driveway blocked
5:18 PM	5	125	E. driveway blocked
5:19 PM	7	175	E. driveway blocked
5:20 PM	7	175	E. driveway blocked
5:21 PM	7	175	E. driveway blocked
5:22 PM	0	0	
5:23 PM	6	150	E. driveway blocked
5:24 PM	4	100	E. driveway blocked
5:25 PM	4	100	E. driveway blocked
5:26 PM	2	50	
5:27 PM	7	175	E. driveway blocked
5:28 PM	1	25	
5:30 PM	8	200	E. driveway blocked

(1) Assumes a 25 ft veh length

✓BO
✓T.M.
✓T.E

T. & O. McDermottroe
251 Summer Street
Arlington, Mass. 02174

Rcd 10/21/77

Storm Drain

Board of Selectmen
Robert B. Walsh-Chairman

Sir's,

We request permission to install concrete pipe for drainage at the above address. We have recently purchased this property at a high price from an Oil Company.

We would like to utilize this piece of property, as the engineer has inspected the property and approved the work to be done.

Yours Truly,

T. & O. McDermottroe

Thomas P McDermottroe
Oliver M Dermottroe

G. Oct 24, 1977

TOWN OF ARLINGTON

MASSACHUSETTS

CONSERVATION COMMISSION

TOWN HALL

October 12, 1977

648-9751

McDermottroe Bros.
251 Summer Street
Arlington, MA 02174

Dear Sirs:

The Arlington Conservation Commission acknowledges your letter dated September 26, 1977 requesting the Commission to make a determination whether your proposed project to install a storm drain from the existing town storm drain on Summer Street approximately 120 feet of 12" reinforced concrete pipe along the existing open ditch to a suitable catch basin located at the rear of your property line is subject to the Wetlands Protection Act.

Members of the Conservation Commission visited the site on October 10, 1977.

It is the opinion of the Arlington Conservation Commission that the proposed work is not subject to a formal hearing under the Wetlands Protection Act, General Laws Chapter 131, Section 40.

If we can be of further assistance to you, please advise.

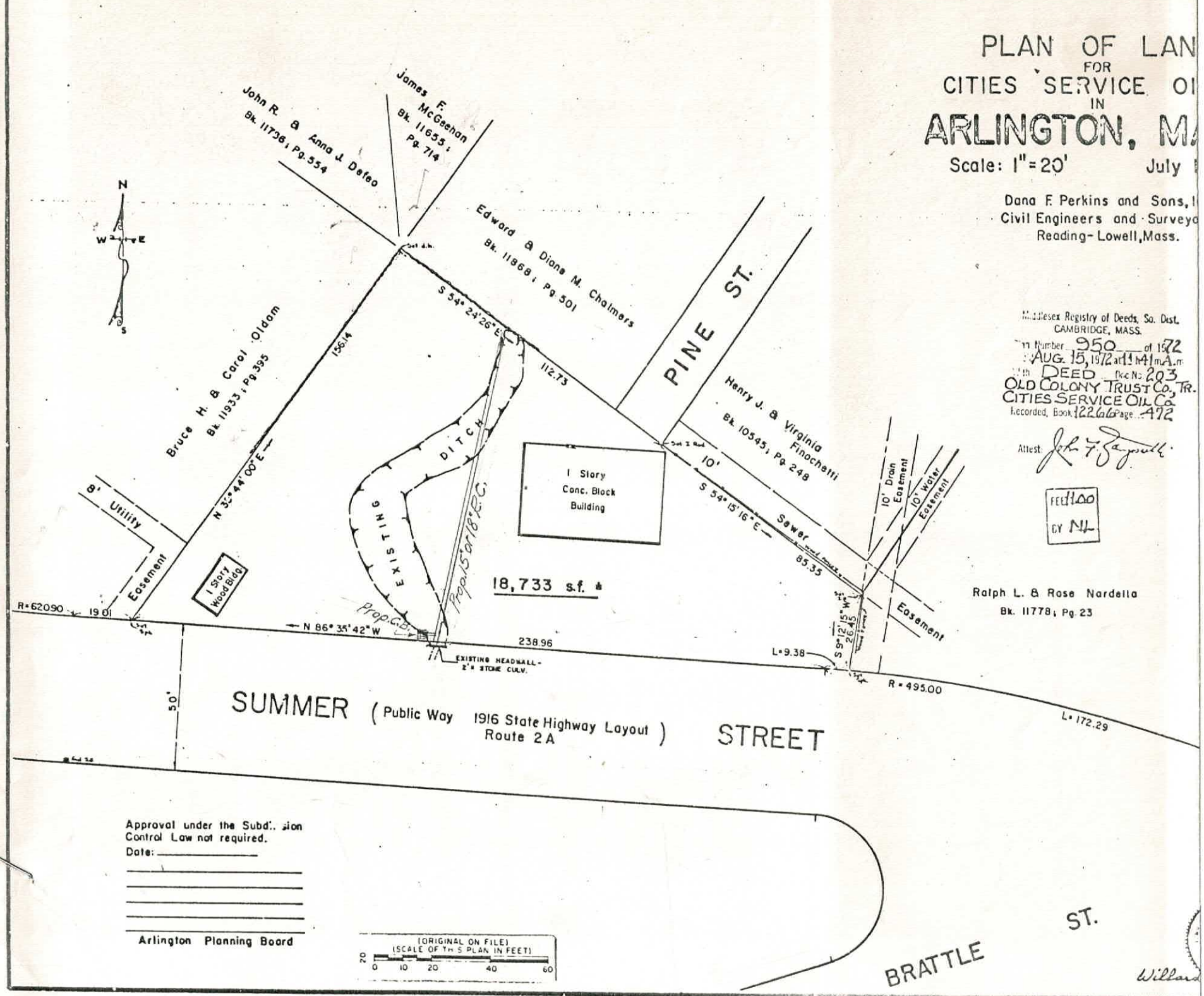
Sincerely,

Robert R. Bryant

Robert R. Bryant
Chairman

Copy

Arlington Building Inspector
Arlington Town Engineer
Mass. Dept. of Environmental Quality Engineering


PLAN OF LAN
FOR
CITIES SERVICE OI
IN
ARLINGTON, MA
Scale: 1" = 20'
July
Dana F. Perkins and Sons, I
Civil Engineers and Surveyo
Reading - Lowell, Mass.
Middlesex Registry of Deeds, So. Dist.
CAMBRIDGE, MASS.
Plan Number 950 of 1972
AUG. 15, 1972 at 11:41 m.A.m.
With DEED Doc No. 203
OLD COLONY TRUST CO., TR.
CITIES SERVICE OIL CO.
Recorded, Book 12266 Page 472
Attest: John F. Zagorski
FEE 1.00
BY NL
John R. & Anna J. Defeo
Bk. 11736; Pg. 554
James F. McGeehan
Bk. 11655; Pg. 714
Edward & Diane M. Chalmers
Bk. 11868; Pg. 501
Bruce H. & Carol Oldam
Bk. 11933; Pg. 395
Henry J. & Virginia Finochetti
Bk. 10545; Pg. 248
Ralph L. & Rose Nardella
Bk. 11778; Pg. 23
PINE ST.
N
W
E
S
S 54° 24' 26" E
112.73
156.14
N 35° 44' 00" E
8' Utility Easement
1 Story Wood Bldg.
EXISTING DITCH
Prop. 15" or 18" R.C.
Prop. C.B.
1 Story Conc. Block Building
10'
S 54° 15' 16" E
Sewer
85.35
10' Drain Easement
10' Water Easement
Easement
18,733 s.f. ±
R = 620.90
19.01
N 86° 35' 42" W
238.96
EXISTING HEADWALL - 2' x 2' STONE CULV.
L = 9.38
S 9° 12' 15" W
26.45
R = 495.00
L = 172.29
50'
SUMMER (Public Way 1916 State Highway Layout Route 2A) STREET
BRATTLE ST.
Approval under the Subdivision Control Law not required.
Date:
Arlington Planning Board
(ORIGINAL ON FILE)
(SCALE OF THIS PLAN IN FEET)
0 10 20 40 60
Willard

End

7710

Street SUMMER STREET No. 251

Petitioner Jenney Mfg. Company

Purpose license to use the parcel of land situated on the northerly side of Summer Street (#251), as shown upon plan submitted, on which a one-story building, of 2nd class construction, is situated thereon, for use as a public filling & service station, & for the storage, keeping & sale in and

Hearing 10-8-56 Action Granted (with restric-

Bldg. Permit Approved By tions.)

License Issued 10-26-56

Date Transferred To

Remarks SEE REVERSE SIDE

from underground tanks of v.i.f. of 10,000 gals. capacity,with four (4) pumps; of waste oil of 1,000 gals. capacity;of fuel oil of 500 gals. capacity;for the storage,keeping & sale in & from aboveground containers of lubricating oils,anti-freeze mixtures & other petroleum products of 1,500 gals.capacity, & to occupy & use the bldg. for the storage & keeping of two motor vehicles & the gasoline & other oils contained therein;all in accordance with the provisions of Chapter 148 of the G.L.

All previous licenses revoked.

8:00 P.M. all present

ETING OF THE BOARD OF SURVEY, MONDAY, OCTOBER 24, 1977

reet Acceptance rogram	Report of: Town Engineer Subject: Estimated cost of construction Street: Brunswick Road - from Pleasant Street to Hillsdale Road Length - 771 feet	1. M/Powers S/Sprague set hearing
	Report of: Town Engineer Subject: Estimated cost of construction Street: Menotomy Rocks Drive (Developer Street) - from Bonad Road to its end Length - 385 feet	2. M/Powers S/Sprague set hearing
Minutes to be approved.	The minutes of the meeting of Monday, October 17, 1977.	3. Be approved
	8:10 P.M. 8:10 P.M.	all present
Minutes to be approved.	BOARD OF PUBLIC WORKS The minutes of the meeting of Monday, October 17, 1977.	1. Be appd
Storm Drain Connection	Subject: Request for approval to connect. From: Thomas P. McDermottroe 251 Summer Street Location: At the property.	2. M/Powers S/Sprague Vote Be approved
Water Main	ADDENDUM Subject: Request for replacement Private Service From: Sandra K. Grindlay Location: Florence Terrace 8:15 P.M.	T.M proceed with 3. T.C. To

MEETING OF THE BOARD OF SELECTMEN (ACTING AS A BOARD OF PUBLIC WORKS)
OCTOBER 24, 1977

The meeting was called to order by the Chairman, Mr. Walsh, at 8:10 P.M. Mrs. Powers, Mrs. Spengler, and Messrs. Murray and O'Neill were present.

The minutes of the meeting held on Monday, October 17, 1977, were taken up, and on motion of Mrs. Powers, seconded by Mr. Murray, it was voted

That the minutes be and hereby are approved.

A communication was received from Thomas P. McDermottroe, 251 Summer Street, requesting permission to install a storm drain connection at 251 Summer Street. On a motion of Mrs. Powers, seconded by Mrs. Spengler, it was voted

To approve the request to install a storm drain from the existing town storm drain on Summer Street.

A communication was received from Sandra K. Grindlay, 4 Florence Terrace, requesting replacement of a private service water main on Florence Terrace. After a lengthy discussion the Town Manager outlined the alternatives involved in this particular case, which are as follows:

(1) Emergency repair to be made

(2) Replacement of water main at expense of property owners

(3) Acceptance of the street

He recommended that the Town make the repair at this time, and indicate to the residents that he could not say how permanent such a repair would be, but that under the circumstances, and in the public interest, he feels that the Town should step in because of water leakage in the service, which is causing related problems and costs to the Town. After some discussion, the Board concurred with the recommendation of the Town Manager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