

# CITY OF SOMERVILLE, MASSACHUSETTS MAYOR'S OFFICE OF STRATEGIC PLANNING & COMMUNITY DEVELOPMENT JOSEPH A. CURTATONE MAYOR

GEORGE J. PROAKIS EXECUTIVE DIRECTOR

July 8, 2021

Matthew Moore Kinvarra Capital, LLC 10 Overlook Ridge Drive #330 Malden, MA 02148

Dear Mr. Moore,

This letter is the Preliminary Decision of the Director of Mobility for the Mobility Management Plan ('MMP') submitted by Kinvarra Capital, LLC, (the 'Applicant') as required by §11.4 Mobility Management of the Somerville Zoning Ordinance for a Development Review Application. The decision is an **Approval with Conditions**. This letter details the conditions necessary for the successful implementation of your plan.

#### Background & Applicability

The Proposed Project, located at 121 Prospect Street, consists of a total of 27,880 gross square feet and 32 units. The Project currently plans to include 18 vehicle parking spaces, at a ratio of 0.56 spaces per unit. The Project also includes 32 long-term bicycle parking spaces.

The Proposed Project meets the twenty (20) or more total dwelling unit threshold to trigger Mobility Management Plan (MMP) requirements of the property owner.

#### **Mobility Division Comments**

#### Existing and Planned Multi-Modal Mobility

As noted in the MMP, the proposed development is located approximately 0.4 miles from the new Green line extension station in Union Square. Additionally, there are five MBTA bus routes within 0.5 miles of the project site, including the Route 91 bus that travels along Prospect Street. In the coming years, significant investments are planned in and around the area of Prospect St., Webster, Ave., and the Union Square neighborhood. These investments that will create more efficient and safer streets to enhance our residents' ability to get where they need to go by bus, walking, and biking, rather than



personal vehicle. Specific planned improvements on Prospect St. include the implementation of a northbound dedicated bus lane to speed bus travel directly in the vicinity of the proposed project.

The Mobility Division notes that it appears that the proposed development will close the existing curb cut along the property on Prospect St. The Mobility Division commends this proposed change and appreciates the improved pedestrian environment that this will create. The City is committed to continuing to work with this development team to design a project that helps us reach our ambitious greenhouse gas reduction goals in the Somerville Climate Forward Plan as well as the safe mobility goals in the Vision Zero Action Plan.

#### **Proposed Parking**

The Mobility Division notes that the SZO does not require the provision of any parking for residential developments within the transit area in the UR District. The Mobility Division recommends decreasing the amount of parking proposed, or providing no new parking related to this development.

The City encourages developers to construct lower amounts of parking to help achieve the City's ambitious mode shift and greenhouse gas reduction goals. Specifically, for a development of this size (between 20 and 50 residential units), the City encourages developers to construct less than or equal to 0.1 parking spaces per unit. This ratio also serves as a threshold that the City uses to exempt developments of this size from the requirement to complete a full Transportation Impact Study (TIS). The proposed development currently proposes a ratio of .56 parking spaces/unit. Extensive studies have determined a relationship between parking and automobile mode share. Given the excessive parking proposed, Mobility will be recommending various mitigation measures to help achieve mandatory mode share performance measures.

If the TDM conditions described in this letter fail to achieve the stated mode-split goals, implementing these programs will help to achieve that goal:

- Reduce the number of available parking spaces to support the mode-split commitment.
- Install more long term and short-term bicycle parking spaces.
- Increase the price of parking spaces.
- Offer ongoing transit or bike share subsidies.
- Offer more parking spaces for car share vehicles.

#### Plan Commitments

#### Programs and Services Required by SZO

For residential properties of 20 or more units, property owners must provide the following programs and services, per the SZO; Section 11.9.

- Posted information
- Distributed information
- Unbundled parking
- Car Share Vehicle Spaces

The Applicant's MMP includes the following commitments:



- To making reasonable efforts to control the percentage of trips made by automobile at fifty percent (50%) or less and to implement additional mobility management programs and services if annual monitoring and reporting identifies a shortfall in meeting this goal.
- To post and distribute mobility management information, including information pertaining to pedestrian, cycling and transit access to the Project Site.
- To construct 32 long-term bicycle parking spaces on-site that are in compliance with the SZO.

#### **Approval Conditions**

- **CONDITION #1:** Posted and distributed mobility management information must be reviewed and approved by the Director of Mobility prior to the issuance of any Certificate of Occupancy for the building.
- **CONDITION #2:** Rather than 50%, the Applicant's initial vehicle mode share commitment will be 31.7% so that it is consistent with and no more vehicle dependent than the existing commuting characteristics in Census Tracts 3512.03 and 3515. The Applicant will implement additional mobility management programs and services if annual monitoring and reporting identifies a shortfall in meeting this goal.
- CONDITION #3: In addition to the initial mode share commitment, the Applicant shall make
  reasonable efforts to control the percentage of trips made by automobile at 25% or less by
  2040 in order to meet the city's SomerVision 2040 goals. The Applicant will implement
  additional mobility management programs and services if annual monitoring and reporting
  identifies a shortfall in meeting this goal.
- **CONDITION #4:** Provision of at least two shared vehicles. These can be provided as two resident-shared vehicles, or as two public car share spaces. This is required for all property owners of a residential building with 20 or more dwelling units. Public car share spaces must be provided in the exterior of the garage to allow for public access unless a different arrangement for public access can be provided. If public car share is provided, notification of available spaces to car share service providers must be documented prior to the issuance of any Certificate of Occupancy and in annual reporting. If the Applicant meets this requirement through different means, such as shared resident vehicles or shared electric cargo bikes, the Applicant must obtain approval from the Mobility Division.
- **CONDITION #5:** At least 25% of the garage vehicle parking spaces, rounded to the nearest whole number (5 spaces) must be equipped with Level 2 Chargers when the garage opens for occupancy. The remainder of the parking spaces must be EV Ready spaces. EV Ready spaces must be equipped with Level 2 chargers as demand warrants. Documentation of EV readiness must be submitted to the Mobility Division prior to the issuance of any building permit for the site, including provisions for raceway to each parking space, adequate space in the electrical panel, and space for additional transformer capacity to accommodate the future installations.
- **CONDITION #6:** All parking shall be unbundled and sold or leased at market rate. Standard purchase or lease agreement language for unbundled and market rate parking must be approved by the Director prior to the issuance of any Certificate of Occupancy. To verify ongoing conformance, the property owner must provide either a copy of executed purchase or lease agreements or an affidavit signed by the property owner and tenant(s) verifying that this language was included and agreed to in the purchase or lease agreement.
- **CONDITION #7:** The Applicant will provide a stored value MBTA Charlie Card, with the value of a combined bus/subway pass (currently set at \$90 but subject to MBTA fare increases) to



each adult member of a new household during the first month of initial occupancy of a new household. Up to two Charlie Cards total per household are required. This requirement renews each time a new household moves in to incentivize new households to use public transportation.

- **CONDITION #8:** The Applicant shall provide a one month Bluebikes membership (currently set at \$20 but subject to Bluebikes fare increases) to each adult member of a new household during the first month of initial occupancy of a new household. Up to two one month Bluebikes memberships total per household are required. This requirement renews each time a new household moves in to incentivize new households to use the bikeshare system.
- **CONDITION #9:** The Applicant will fund the purchase of, and identify an on-site and off-street location for, a city owned 19-dock Bluebikes bike share station to be located on the Applicant's property, or a city approved location on a nearby public sidewalk or other property controlled by the Applicant. Location must be identified on building plans prior to the issuance of any building permit for the site. Station must be installed and operational prior to issuance of any Certificate of Occupancy for the site.
- CONDITION #10: Provision of on-site real time transit information is required, consisting of connected TransitScreen displays (or equivalent service), in (1) the building lobby and (2) facing the public sidewalk.

#### Monitoring and Reporting

The property owner has committed to Annual Reporting to track, assess, and report on the implementation of the Mobility Management program as required by the Director's submittal requirements, which include:

- An annual statistically valid travel survey of employees and residents
- Biennial (every other year) counts of motor vehicles entering & exiting the parking facility
- Annual reporting of vehicle and bicycle parking utilization
- An annual update on the implementation of Mobility Management programs & services

All monitoring must be conducted at the same time each year, as determined by the Certificate of Occupancy for each building. If the Certificate of Occupancy for a building is issued between September 1 and February 29, the monitoring shall take place during the months of September or October and be reported to the Mobility Division no later than November 30. If the Certificate of Occupancy for a building is issued between March 1 and August 31, monitoring shall take place during the months of April or May and be reported to the Mobility Division no later than June 30. This will ensure that the monitoring captures a realistic assessment of the performance of the project, while giving time to compile the results and report them to the City.

It is important to note that while approved Mobility Management Plans are transferable by and among private parties, this transfer is contingent upon the new owner agreeing to continue to operate in accordance with the previously approved Mobility Management plan, as conditioned. Should the property owner elect to transfer some portion or all of the development subject to this Mobility Management Plan, commitment to the previously approved Mobility Management Plan is required by the new property owner.



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I look forward to working with you in the future as you implement this plan. If you have any questions, please feel free to contact me at (617) 625-6600 or brawson@somervillema.gov.

Sincerely,

**Brad Rawson** 

**Director of Mobility** 

Mayor's Office of Strategic Planning & Community Development

City of Somerville, Massachusetts

I certify that I have read and agree to implement the Mobility Management Plan in the form approved by the Director of Mobility. I understand that failure to implement the approved plan may result in enforcement actions taken by the City of Somerville.

Agreed and accepted,

Matthew Moore

Kinvarra Capital, LLC

7.8.21



# Mobility Management Plan 121 Prospect Street Somerville, Massachusetts

#### PREPARED FOR:

Kinvarra Capital, LLC 10 Overlook Ridge Drive #330 Malden, MA 02148

#### PREPARED BY:



120 Middlesex Avenue Suite 20 Somerville, MA 617.776.3350

*In association with:* 

**Balance Architects** 

April 2021

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#### **Project Information**

## Contact Information Site Address and Project Name

121 Prospect Street, Somerville, MA

#### **Company Name**

Kinvarra Capital, LLC

#### **Company Address**

10 Overlook Ridge Drive #330

#### Company Telephone Number

978-621-4415

#### **Company Designated Contact**

Matthew Moore

#### **Company Email Address**

matt@kinvarracapital.com

#### **Project Description**

In accordance with Section 11.4.2 of the Somerville Zoning Ordinance (the "SZO"), Kinvarra Capital (the "Proponent"), respectfully submits this Mobility Management Plan to the City of Somerville for review and approval.

The Proponent proposes to redevelop a lot that is approximately 10,120 square feet (0.23 acres) of land along Prospect Street and Houghton Street with a 27,880 gross square feet (sf) residential development with one (1) building, containing 32 residential units on four (4) floors. There will be 18 vehicular parking spaces in a below-grade garage, accessed via Houghton Street.

#### **Project Programming**

The Project consists of one (1) building that will be constructed on-site. A summary of the proposed development is shown in Table 1. Specific unit mix, height, massing, and other details are shown in the Development Review Application Architectural Plan Set.



Table 1: Program Table<sup>1</sup>

	Proposed Building
Lot Size - Square Feet	10,063
Total Gross Square Feet	27,880
Height (feet)	52' - 2"
Number of Stories	4
Residential Square Feet	27,880
Residential Units	32
On-Site Parking Spaces	18
Floor-to-Area Ratio (FAR)	2.77

<sup>&</sup>lt;sup>1</sup>Data was gathered from the Development Review Application Architectural Plan Set produced by Balance Architects, dated March 5, 2021

#### Project Schedule/Phasing

The Proponent has filed for the demolition permits for the site and will look to demolish the existing building and clear the site. The Proponent will then be filing the Development Review Application (DRA) submission of all required submittal documents for the proposed building. The Proponent expects to receive a Certificate of Zoning Compliance (CZC) with a target date of July 1<sup>st</sup>, 2021 from the Planning and Zoning Division for compliant development.

#### Vehicle and Bicycle Parking

The following section summarizes the proposed vehicle and bicycle parking supply for the site. A plan for the bicycle parking can be found in the Comprehensive Site Plan.

#### Vehicle Parking

The Project will provide 18 on-site vehicular parking spaces. The total on-site parking count exceeds the parameters set forth in the SZO for a project located in an Urban Residence (UR) zone. Based on the current design, Table 3.2.17 of the SZO states that zero (0) vehicle parking spaces are required.

#### **Bicycle Parking**

The Project will provide long-term bicycle parking areas that exceeds the requirements for bicycle parking as stated in the Somerville Zoning Ordinance. Based on the current design and the site's location within 0.25 miles of a transit station in the Urban Residence (UR) district, Table 3.2.17 of the SZO states that zero (0) bicycle parking spaces are required on-site. To encourage non-vehicular transportation by the visitors and residents, there will be 32 long-term bicycle spaces provided for residents.

#### Local Transportation

There are multiple public transportation options provided by the Massachusetts Bay Transportation Authority (MBTA) within the vicinity of the Project site. A summary of the existing public transportation options is provided in the subsequent section.



#### **Existing Conditions**

Within an approximate ½-mile radius of the Project site, the MBTA services the area with five (5) separate bus routes: 69, 83, 85, 91, and CT2. Central Square, which is a stop on the MBTA Red Line, is located approximately 0.7 miles from the Project site. Additionally, there will be a future MBTA Green Line station located 0.3 miles from the Project site at Union Square station. Table 2 summarizes each of the bus routes. Table 3 summarizes the headways for each route and Tables 4 and 5 summarize the distance and walk time to each of the closest stops, as well as the average wait time. Detailed schedules and maps are attached in the Appendix.

Table 2: Boarding and Alighting Summary\*

rable 2: Boarding and Alighting Summary*							
Bus Route/Rapid	us Route/Rapid Origin/ Destination MBTA Stop Time Per		Time Period	Total Passengers	Total Passengers		
Transit Line	Origin/ Destination	IVID IA STOP	Tille Fellou	Boarding	Alighting		
69	Harvard Square to Lechmere	Cambridge Street	AM Peak	24	4		
(Inbound)	Station	at Norfolk Street	PM Peak	6	13		
(IIIbouriu)	Station	at Norion Street	Weekday	56	45		
69	Harvard Square to Lechmere	Cambridge Street	AM Peak	14	10		
(Outbound)	Station	at Prospect Street	PM Peak	7	17		
(Outbound)	Station	at i rospect street	Weekday	43	55		
83	Rindge Avenue to Central	Hampshire Street	AM Peak	24	12		
(Inbound)	Square, Cambridge	@ Cambridge	PM Peak	10	13		
(IIIbouriu)	Square, Cambridge	Street	Weekday	74	61		
83	Central Square, Cambridge	Hampshire Street	AM Peak	15	9		
(Outbound)	to Rindge Avenue	@ Inman Street	PM Peak	20	22		
(Outbound)		@ IIIIIaii Street	Weekday	78	84		
85	Spring Hill to Kendall/MIT	Cambridge Street	AM Peak	0	3		
(Inbound)		at Columbia	PM Peak	0	7		
(IIIbouriu)		Street	Weekday	3	18		
85		Webster Avenue	AM Peak	0	0		
(Outbound)	Spring Hill to Kendall/MIT	at Prospect Street	PM Peak	0	5		
(Outbound)		at Prospect Street	Weekday	0	10		
91	Sullivan Square Station to	Prospect Street at	AM Peak	N/A	N/A		
(Inbound)	Central Square	Cambridge Street	PM Peak	N/A	N/A		
(IIIbouriu)	Central Square	Cambridge Street	Weekday	N/A	N/A		
91	Sullivan Square Station to	Prospect Street at	AM Peak	N/A	N/A		
(Outbound)	Central Square	Cambridge Street	PM Peak	N/A	N/A		
(Outboullu)	Central Square	Cambridge Street	Weekday	N/A	N/A		
CT2	Sullivan Square Station to	Prospect Street at	AM Peak	6	9		
(Inbound)	Ruggles	Bennett Court	PM Peak	5	27		
(IIIbouriu)	vaggies	bennett Court	Weekday	22	62		
CT2	Cullium Causes Chatiers to	Cambridge Street	AM Peak	7	3		
CT2	Sullivan Square Station to	at Columbia	PM Peak	3	46		
(Outbound)	Ruggles	Street	Weekday	36	83		

<sup>\*</sup>Fall 2019 Data is most recent data available for this bus route N/A = Bus stop was not serviced by this route in Fall 2019



Table 3: Bus Route Headways

Bus Route	Origin/Destination	Time Period	Inbound Headways (minutes)	Outbound Headways (minutes)
69	Harvard Square to	AM Peak	10	10
03	Lechmere Station	PM Peak	20	20
83	Rindge Avenue to	AM Peak	20-25	20-25
65	Central Square	PM Peak	25	25
85	Avon Street/Central St	AM Peak	15-40	45-50
85	to Kendall Sq. Station	PM Peak	50	50
91	Sullivan Sq Station to	AM Peak	30	30
91	Magazine St at Green St	PM Peak	30	30
CT2	Ruggles Station to	AM Peak	20	35-45
CIZ	Sullivan Square Station	PM Peak	25-30	35-45

Table 4: Transit Analysis Summary - Inbound

		MBTA Bus Routes (Inbound)							
	69	83	85	91	CT2				
Distance to Closest Stop (Miles)	0.19	0.25	0.28	0.07	0.27				
Walk Travel Time to Closest Stop (Minutes)	4.75	5.00	7.15	1.67	6.90				
Average Wait Time	5 (AM Peak)	10 to 12.5 (AM Peak)	7.5 to 20 (AM Peak)	15 (AM Peak)	10 (AM Peak)				
(Minutes)	10 (PM Peak)	12.5 (PM Peak)	25 (PM Peak)	15 (PM Peak)	12.5 to 15 (PM Peak)				

Table 5: Transit Analysis Summary - Outbound

	MDTA Pus Poutes (Outhoused)								
		MBTA Bus Routes (Outbound)							
	69	83	85	91	CT2				
Distance to Closest Stop (Miles)	0.08	0.25	0.19	0.07	0.25				
Walk Travel Time to Closest Stop (Minutes)	1.90	5.00	4.75	1.67	6.20				
Average Wait Time	5 (AM Peak)	10 to 12.5 (AM Peak)	22.5 to 25 (AM Peak)	15 (AM Peak)	17.5 to 22.5 (AM Peak)				
(Minutes)	10 (PM Peak)	12.5 (PM Peak)	25 (PM Peak)	15 (PM Peak)	17.5 to 22.5 (PM Peak)				

#### Bicycle Network

With the connection of Prospect Street to Cambridge Street, Webster Avenue, and Somerville Avenue, residents who choose to use a bicycle will be connected to a robust bicycle facility network. There are designated bicycle lanes in both directions along Cambridge Street. In the eastbound direction, the bicycle lanes along Cambridge Street connect to Lechmere Station, and in the westbound direction, the bicycle lanes along Cambridge Street connect to bicycle facilities along Hampshire Street and Beacon Street. The bicycle facilities along Webster Avenue connect to Union Square, which connect to bicycle lanes in the westbound direction along Somerville Avenue and separated bicycle facilities in the eastbound direction along Somerville Avenue. These facilities connect to Porter Square, which is approximately 1.5 miles northwest of the Project site.



Additionally, there is a BlueBike station approximately 0.4 miles from the site in Union Square and a BlueBike station approximately 0.3 miles from the Project site along Cambridge Street. A map showing the location of the bicycle accommodations in Somerville near the Project site (shown in Red) is shown in Figure 1. A map showing the site in relation to the entire bicycle network in the City is attached in the Appendix.



Figure 1: Somerville Bicycle Network Map

#### Sidewalks

Pedestrian connectivity in the area is facilitated by existing sidewalks and crosswalks. As part of the existing conditions analysis, an inventory of the existing sidewalks and crosswalks was taken. There are sidewalks along both sides of Prospect Street along its entire length, connecting to the sidewalk network along various side streets and main streets such as Webster Avenue and Cambridge Street. At both the intersections with Webster Avenue and Cambridge Street, there are marked crosswalks across each approach.

#### **Transportation Assumptions**

#### **Trip Generation**

Land Use Code (LUC) 221 – Multifamily Housing (Mid-Rise) was used for this Project which is comprised of 32 residential dwelling units. The *Trip Generation Manual, 10<sup>th</sup> Edition,* published by the Institute of Transportation Engineers (ITE) in 2017 provides unadjusted vehicle-trip estimates for Weekday AM peak hour, Weekday PM peak hour, and Weekdays.



Table 6: Residential Trip Generation Calculations (Per ITE)

Land Use Code: 221	Multifamily Housing (Mid-Rise)				
	Weekday AM	Weekday PM	Weekday		
	Peak Hour	Peak Hour	Daily		
Size per#of Dwelling Units (X)	32	32	32		
Fitted Curve Favotion	Ln(T) = 0.98*	Ln(T) = 0.96*	T = 5.45(X) -		
Fitted Curve Equation	Ln(X) - 0.98	Ln(X) - 0.63	1.75		
Total Trips (T)	11	15	172		
Entering%	26%	61%	50%		
Exiting%	74%	39%	50%		
Entering Trips	3	9	86		
Exiting Trips	8	6	86		

As shown in Table 6, the proposed dwelling units are expected to generate approximately 11 trips during the Weekday AM peak hour, 15 trips during the Weekday PM peak hour, and 172 trips during a typical weekday. To account for location-specific travel mode trends, non-vehicular trips will be deducted in the subsequent section.

#### **Travel Mode Shares**

Trip Generation rates set forth by the ITE are typically based on data from suburban developments with no nearby transit service and no appreciable share of people walking or bicycling to or from the site. If a project is located in an area with transit service or a substantial share of trips made by bicycle or on foot, these non-vehicle trips should be estimated and deducted to get the predicted vehicle volume. The proposed Project is located on the border of two (2) census tracts in Somerville – Census Tract 3512.03 and Census Tract 3515. Commuting characteristics were analyzed from the 2015-2019 American Community Survey 5-Year Estimates for each of these census tracts. Based on the collected data, an average of 31.7% of residents use a vehicle, 25.2% of residents use public transportation, 14.0% of residents bike, 21.0% of residents walk, and 7.4% of residents commute via other means to work. Table 7 shows the US Census mode share data used for this Project.

Table 7: Mode Split Percentages

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MEANS OF TRANSPORTATION	Census Tract	Census Tract	Census Tract	Percentage		
TO WORK	3512.03	3515	Averages	Used		
Car, truck, or van	26.1%	37.4%	31.7%	31.7%		
Drove alone	25.5%	29.0%	27.2%	27.2%		
Carpooled:	0.6%	8.4%	4.5%	4.5%		
In 2-person carpool	0.3%	8.4%	4.4%	4.4%		
In 3-person carpool	0.2%	0.0%	0.1%	0.1%		
In 4 person carpool	0.1%	0.0%	0.1%	0.0%		
Public transportation	24.2%	26.2%	25.2%	25.2%		
Bicycle	15.4%	12.7%	14.0%	14.0%		
Walked	29.2%	14.1%	21.0%	21.0%		
Other means	5.1%	9.7%	7.4%	7.4%		



#### **Adjusted Trips**

As described above, adjustments were made to the base trips taking into account the US Census Tract data. The *ITE Trip Generation Handbook*, 3<sup>rd</sup> Edition includes an Average Vehicle Occupancy (AVO) of 1.1 for residential buildings. Based on the average modal split data above, an AVO rate of 1.145 persons per vehicle was calculated for the residential units. The number of trips were adjusted using the AVO and census tract modal split data. By applying the non-vehicular mode split to the Trip Generation calculations, the amount of expected vehicle traffic associated with the Project is reduced. The resulting adjusted vehicular traffic on the surrounding roadways was estimated and are summarized in Table 8. The US Census Journey to Work data is attached in the Appendix.

Table 8: Adjusted Residential Site Trips

rable of Adjusted Residential Site 111ps						
Weekday AM	Weekday PM	Weekday				
Peak Hour	Peak Hour	Daily				
11	15	172				
12	17	189				
4	6	60				
4	5	52				
1	3	26				
3 2		26				
•						
3	4	48				
2	2	27				
2	4	40				
1	1	14				
	Weekday AM Peak Hour  11 12 4 4 1 3	Weekday AM         Weekday PM           Peak Hour         11           12         17           4         6           4         5           1         3           3         2				

As shown in Table 8, the Project is expected to generate four (4) vehicle-trips during the Weekday AM peak hour, five (5) vehicle-trips during the Weekday PM peak hour, and 52 vehicle-trips during a typical weekday. This equates to approximately one (1) vehicle-trip every fifteen (15) minutes during the Weekday AM peak hour and one (1) vehicle-trip every twelve (12) minutes during the Weekday PM peak hour. The number of vehicle-trips are expected to decrease in the future with the opening of Union Square station along the Green Line Extension.

#### **Trip Distribution**

Trip distribution patterns were estimated for site-generated trips both to and from the Project site. Vehicle-trips to/from the site will be made by both personal vehicle and loading/deliveries or rideshare drop-off/pick-up services. These vehicle-trips are assumed to both begin and end along either Houghton Street or Prospect Street. Pedestrian and bicycle trips will originate along either Houghton Street or Prospect Street. Public transportation trips were included in pedestrian trip distribution.

The 2011-2015 5-year ACS Commuting Flows for Somerville were used to determine the vehicle trip distribution percentages. Commuting flows are defined as travel from a city/town of residence to a city/town of work. The total number of commuters in each commuting flow was reported. Commuters with Somerville residence were isolated from the data set and



percentages of workers traveling to each city/town for their place of work were calculated. Regional trips to surrounding municipalities in Massachusetts and bordering states were classified by trips to the north, south, and west. Trips to Boston, Cambridge, and within Somerville represented the largest commuting flow percentages and were classified as their own commuting flows.

The projected entering vehicle-trip distribution is shown in Figure C-102 and the projected exiting vehicle-trip distribution is shown in Figure C-103. Figures C-102 and C-103 show the vehicle-trips originating and ending along Prospect Street.

Pedestrian trip percentages were based on MBTA bus stop boarding and alighting data, and predicted trip distribution percentages due to proximity of the Project site to the planned Union Square Green Line Extension MBTA stop and are shown in Figure C-104. Bicycle trip percentages were based on percentages used for the 118 Prospect Street Mobility Management Plan due to the proximity to the Project site and similar destinations in the area. Bicycle trip distribution percentages are shown in Figure C-105.

#### **Mobility Management Commitments**

The 121 Prospect Street Project is committed to achieving the City's goal of having the percentage of trips made to the site by automobile be 50% or less, which is consistent with SomerVision. There will also be reasonable efforts made to control the percentage of trips made by automobile at 37.5% or less by 2030 and at 25% or less by 2040 in order to meet the city's SomerVision 2040 goals. To that end, the Project is recommending several programs and services to reduce single-occupancy vehicle use.

The SomerVision plan outlines a priority on non-auto transit. The City is supporting this goal by creating additional bicycle, pedestrian, and transit facilities throughout Somerville. For those accessing this area of Somerville, the multimodal infrastructure provides alternatives to the personal vehicle. The Project team has developed the Mobility Management Plan and will work with the City to implement these measures. These programs and services include:

- Marketing & Education
- On-Site Services
- Monitoring and Annual Reporting

#### Marketing and Education

A key element of all Transportation Demand Management (TDM) programs is letting potential users know that they exist. While the specific programs have yet to be determined, the Project team intends to provide information through channels such as:

- Annual Mobility Education Meeting all residents in the building will be invited to attend a Mobility Education meeting to learn about options annually.
- TDM Program information on the Project's websites and related media



- Posted Transportation Information, such as maps, schedules, locations of nearby carsharing stations, BlueBike stations, the availability of carpool/vanpool opportunities, and other information relevant to commuting options in the building lobbies.
- Posted mobility management information (to be submitted to the Director of Mobility for review and approval).
- Distributed mobility management information (to be submitted to the Director of Mobility for review and approval).
- The mobility management information that will be posted (and approved by the Director of Mobility), will also be provided to residents when they move in. The information will also be provided to residents:
  - Via yearly emails or newsletters.
  - When there are notable changes to public transportation schedules, bicycle/pedestrian infrastructure, or the availability of ride-share, car-share, or bike-share services in the area.

#### **On-Site Services**

The larger Somerville area offers transit service, bicycle infrastructure, and sidewalk coverage. However, there are additional services that the Project development proposes to offer, including:

- **Secure Bicycle Parking:** There will be 32 long-term bicycle parking spaces located on-site. Provisions for the final bicycle parking design to encourage its use are:
  - Clear wayfinding to bicycle parking,
  - 24-hour access,
  - Secure bicycle racks that meet Somerville-specific or national standards,
  - Location close to entrances

#### Monitoring and Annual Reporting

#### **Annual Travel Surveys**

The Proponent will conduct annual travel surveys of the residents of the property. These surveys will be developed through consultation with the City of Somerville to determine the number of residents utilizing public transportation and those using car-sharing services.

Following the opening of the site, the Proponent will conduct biennial counts of vehicle and bike parking occupancy. This will be done through a field inventory to be conducted during a representative weekday during the overnight period when it can reasonably be assumed that the peak parking demand for all residents and visitors would occur. A continuous 24-hour count of both the site driveway and bicycle parking areas will be conducted to capture the volume of entering and exiting trips. As part of the summary report to be provided to the City, a status summary of the Mobility Management Plan will also be provided.



#### **Status Update**

Based on the findings from the survey and the most recent set of biennial counts, the development will submit a Mobility Status update annually to the City of Somerville. The update will follow any guidelines provided by the City of Somerville and will include:

- Survey results
- Peak vehicle and bicycle parking occupancy counts
- Digital files as required
- Comparison with and review of previous trends as data is available

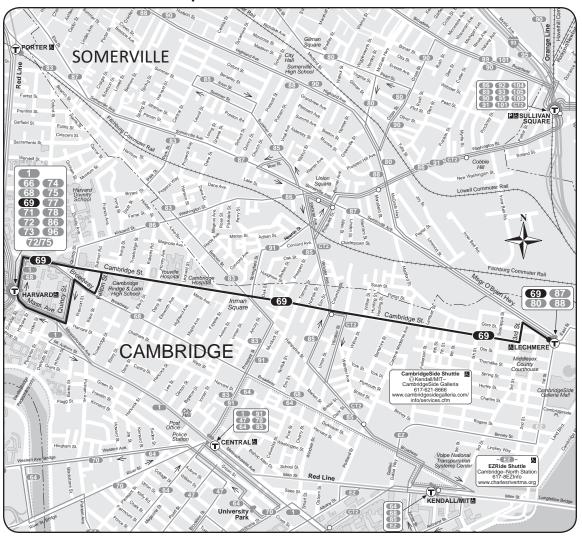


### **APPENDIX**

PUBLIC TRANSPORTATION
TRIP GENERATION
TRIP DISTRIBUTION
COMPREHENSIVE SITE PLAN AND CORRESPONDING TRAFFIC FIGURES

## **PUBLIC TRANSPORTATION**

#### **Route 69** Harvard Square - Lechmere Station



# Effective March 15, 2020 **Harvard Square-Lechmere Station** Serving Harvard University • Harvard Vanguard Medical Associates • Inman Square • Cambridge Hospital Spaulding Hospital, Cambridge • Red Line • Green Line Massachusetts Bay Transportation Authority Massachusetts Department of Fransportation Information 617-222-3200 • 1-800-392-6100 (TTY) 617-222-5146 • www.mbta.com

69		Wee	kday			69		Satu	ırday		
	Inbound		ı	Outbound			Inbound			Outbound	
Leave Harvard/ Holyoke Street	Arrive Inman Square	Arrive Lechmere Station	Leave Lechmere Station	Arrive Inman Square	Arrive Harvard/ Holyoke Street	Leave Harvard/ Holyoke Street	Arrive Inman Square	Arrive Lechmere Station	Leave Lechmere Station	Arrive Inman Square	Arrive Harvard/ Holyoke Street
5:25A 5:55 6:20 6:45 7:05 7:35 7:30 7:35 7:50 Every 9:10 9:30 9:55 10:20 10:45	5:29A 5:59 6:24 6:51 7:11 7:26 7:41 7:56 10 Mins. 9:17 9:37 10:02 10:27 10:52	5:37A 6:07 6:33 7:01 7:21 7:37 7:52 8:09 <i>Until</i> 9:27 9:47 10:12 10:37 11:02	5:40A 6:10 6:40 7:00 7:15 Every 7:55 8:10 8:25 8:40 8:55 9:12 9:30 9:55	5:46A 6:16 6:46 7:10 7:25 10 Mins. 8:05 8:20 8:35 8:50 9:05 9:22 9:40 10:05	5:52A 6:22 6:52 7:17 7:33 <i>Until</i> 8:14 8:29 8:44 8:59 9:12 9:29 9:47 10:12	5:15A 5:45 6:15 6:45 7:17 7:47 8:17 8:52 9:27 10:02 10:42 11:09 11:31 11:53	5:17A 5:47 6:17 6:47 7:19 7:49 8:20 8:55 9:30 10:05 10:45 11:13 11:35 11:57	5:25A 5:55 6:25 6:25 6:55 7:27 7:57 8:30 9:05 9:41 10:18 10:58 11:26 11:48 <b>12:10P</b>	5:30A 6:00 6:30 7:00 7:30 8:00 8:35 9:10 9:45 10:22 10:47 11:09 11:53	5:34A 6:04 6:34 7:04 7:34 8:07 8:42 9:17 9:53 10:30 10:56 11:18 11:40 12:02P	5:40A 6:10 6:40 7:10 7:40 8:14 8:49 9:24 10:01 10:38 11:04 11:26 11:48 12:10P
11:10 11:35 12:00N Every	10.32 11:17 11:42 <b>12:07P</b> <b>25 Mins.</b>	11:02 11:27 11:52 <b>12:17P</b> <i>Until</i>	10:20 10:45 11:10 11:35	10:05 10:30 10:55 11:20 11:45	10:12 10:38 11:03 11:28 11:53	12:15P	12:19P 22 Mins. 3:15 3:37	12:32P Until 3:29 3:51	12:15P Every 3:33 3:55	12:24P 22 Mins. 3:42 4:04	12:32P Until 3:50 4:12
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1:40	1:47	1:57	12:25P	12:35	12:43	4:17	4:21	4:35	4:39	4:48	4:56
2:01	2:08	2:18	12:50	1:00	1:08	4:39	4:43	4:57	5:01	5:10	5:18
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3:48	3:56	4:11	3:00	3:13	3:22	8:01	8:04	8:17	8:19	8:25	8:32
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4:28	4:36	4:51	3:40	3:53	4:02	9:11	9:14	9:25	9:29	9:35	9:42
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5:28	5:36	5:51	4:40	4:53	5:02	10:56	10:59	11:10	11:14	11:19	11:25
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6:48	6:54	7:04	7:40	7:47	7:53	1:05	1:08	1:15	w 1:20	1:24	1:30
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4/20: see Weekday; 5/25: see Sunday 7/3: see Saturday; 7/4: see Sunday

69		Sunday	
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d/ te t	Leave Harvard/ Holyoke Street	Arrive Inman Square	Arrive Lechmere Station	Leave Lechmere Station	Arrive Inman Square	Arrive Harvard Holyoke Street
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Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	\$1.70	\$1.70	\$2.40	\$2.40
CharlieTicket	\$2.00	\$2.00	\$2.90	\$4.90
Cash-on-Board	\$2.00	\$4.00	\$2.90	\$4.90
Student/Youth*	\$0.85	\$0.85	\$1.10	\$1.10
Senior/TAP**	\$0.85	\$0.85	\$1.10	\$1.10

Senior/TAP\*\* \$0.69 \$0.05 \$1.10 \$1.10

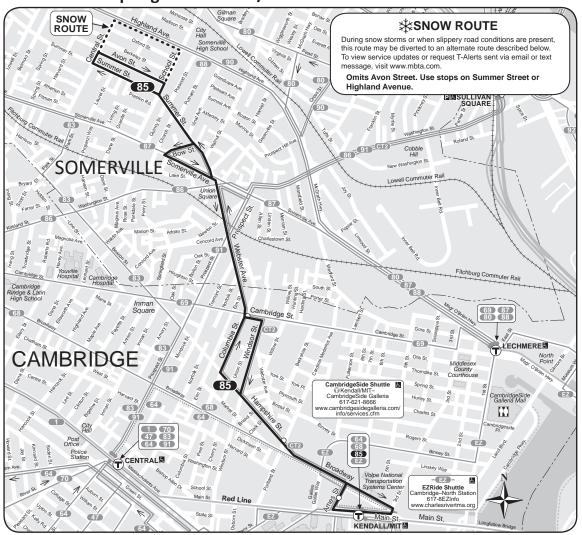
VALID PASSES: LinkPass (\$90.00/mo.); Local Bus (\$55/mo.); \*Student/Youth LinkPass (\$30.00/mo.); \*\*Senior/TAP LinkPass (\$30/mo.); and express bus, commuter rail, and boat passes.

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

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

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

#### Route 85 Spring Hill- Kendall/MIT Station



# Effective March 15, 2020 **Spring Hill-Kendall/MIT Station** Serving • Summer Street, Somerville • Somerville High School • Union Square, Somerville • One Kendall Square Cambridge Marriott • Red Line

massDOT

Massachusetts Bay
Transportation Authority

Information 617-222-3200 • 1-800-392-6100

(TTY) 617-222-5146 • www.mbta.com

85		Wee	kday		
	Inbound			Outbound	
Leave Spring Hill	Arrive Union Square	Arrive Kendall/ MIT Sta.	Leave Kendall/ MIT Sta.	Arrive Union Square	Arrive Spring Hill
5:45A	5:53A	6:02A	6:05A	6:13A	6:17A
6:25	6:33	6:43	6:45	6:53	6:57
7:05	7:13	7:23	7:25	7:32	7:39
7:45	7:53	8:04	8:15	8:22	8:29
8:20	8:30	8:43	9:00	9:07	9:14
8:35	8:45	8:58	9:45	9:52	9:59
9:20	9:28	9:39	10:25	10:31	10:38
10:05	10:13	10:24	11:02	11:08	11:15
10:40	10:48	10:59	11:42	11:48	11:55
11:20	11:28	11:39			
			12:22P	12:28P	12:35P
12:00N	12:08P	12:18P	1:02	1:08	1:15
12:40P	12:48	12:58	1:42	1:48	1:55
1:20	1:28	1:38	2:22	2:28	2:35
2:00	2:08	2:18	3:02	3:09	3:16
2:40	2:48	2:58	3:45	3:52	3:59
3:20	3:28	3:38	4:30	4:39	4:47
4:05	4:13	4:25	5:20	5:29	5:40
4:55	5:03	5:15	6:10	6:18	6:26
5:45	5:53	6:04	6:55	7:02	7:09
6:30	6:38	6:48	7:45	7:51	7:58
7:20	7:28	7:38			

No service on weekends.

Route 85 **Spring Hill-Kendall/MIT Station** 

#### All buses are accessible to persons with disabilities

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

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

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

\* Requires Student CharlieCard or Youth CharlieCards. Student CharlieCards are available

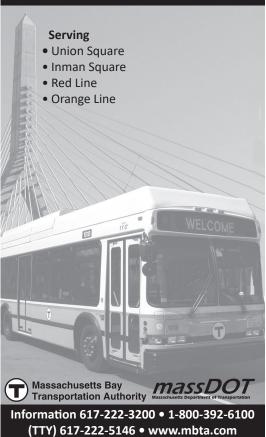
- to students through participating middle schools and high schools. Youth CharleCards are available through community partners in the Boston metro area. Visit www.mbta.com/youthpass for details.

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

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

# **Route 91** Central Square, Cambridge - Sullivan Square Station 86 91 CT2 Cobble Hill 89 93 105 90 95 109 91 101 CT2 Lowell Commuter Rail Central Square, Cambridge CENTRAL S CAMBRIDGE CENTRAL

# Effective March 15, 2020 Central Square, CambridgeSullivan Square Station



91		Wee	kday*			91		Satu	rday*			91	
	Inbound			Outbound			Inbound			Outbound			Inbound
Leave Sullivan Station	Arrive Union Square	Arrive Central Square, Cambridge	Leave Central Square, Cambridge	Arrive Union Square	Arrive Sullivan Station	Leave Sullivan Station	Arrive Union Square	Arrive Central Square, Cambridge	Leave Central Square, Cambridge	Arrive Union Square	Arrive Sullivan Station	Leave Sullivan Station	Arrive Union Square
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Central Square, Cambridge

#### es are accessible to persons with disabilities

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Sunday\*

Leave

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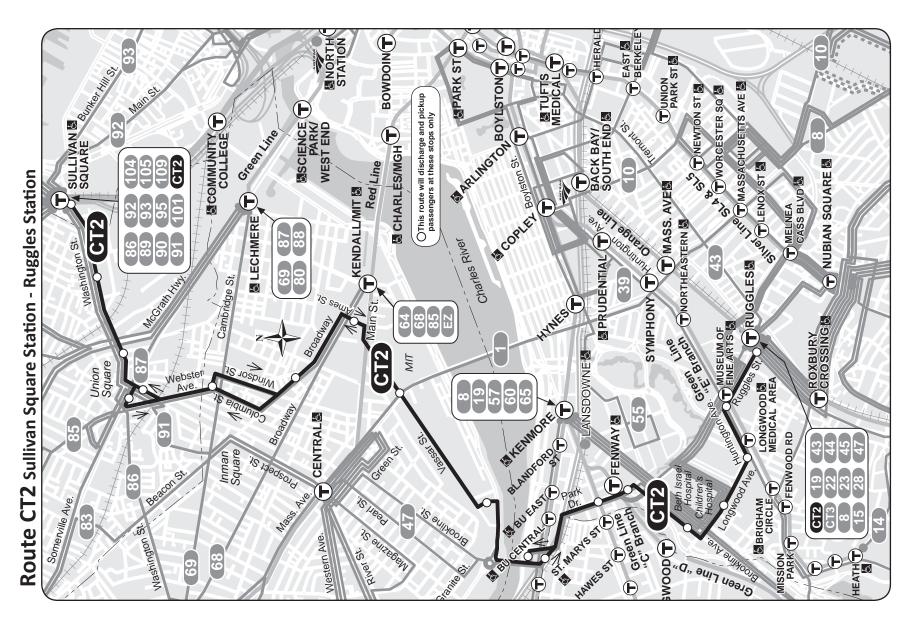
Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	\$1.70	\$1.70	\$2.40	\$2.40
CharlieTicket	\$2.00	\$2.00	\$2.90	\$4.90
Cash-on-Board	\$2.00	\$4.00	\$2.90	\$4.90
Student/Youth*	\$0.85	\$0.85	\$1.10	\$1.10
Senior/TAP**	\$0.85	\$0.85	\$1.10	\$1.10

inkPass (\$90.00/mo.); Local Bus (\$55/mo.); \*Student/Youth LinkPass \*Senior/TAP LinkPass (\$30/mo.); and express bus, commuter rail, and

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

ildren 11 and under ride free when accompanied by an adult; Blind ard holders ride free and if using a guide, the guide rides free. udent CharlieCard or Youth CharlieCard. Student CharlieCards are available through participating middle schools and high schools. Youth CharlieCards e through community partners in the Boston metro area. Visit com/youthpass for details. nior/TAP CharlieCard, available to Medicare cardholders, seniors 65+,





7:00

7:06

7:17

#### **Weekday Inbound**

#### CT2

#### **Weekday Outbound**

Leave Sullivan Station	Arrive Union Square	Arrive Ames St Kendall/MIT	Arrive Vassar/ Mass. Avenue	Arrive Vassar/ Memorial Drive	Arrive Mountfort Street	Arrive Park & Beacon Sts.	Arrive Fenway Station	Arrive Beth Israel Hospital	Arrive Children's Hospital	Arrive Huntington/ Longwood Avenue	Arrive Ruggles/ Huntington Avenue	Arrive Ruggles Station	Leave Ruggles Station	Arrive Ruggles/ Huntington Avenue	Arrive Huntington/ Longwood Avenue	Arrive Children's Hospital	Arrive Beth Israel Hospital	Arrive Fenway Station	Arrive Park & Beacon Sts.	Arrive Comm. Ave. BU Bridge	Arrive Amesbury/ Vassar Streets	Arrive Vassar/ Mass. Avenue	Arrive Ames St Kendall/MIT	Arrive Union Square	Arrive Sullivan Station
6:35A	6:42A	6:52A	6:54A	6:57A	7:00A	7:01A	7:02A	7:05A	7:08A	7:10A	7:13A	7:18A	5:55A	5:56A	5:58A	5:59A	6:00A	6:04A	6:05A	6:06A	6:08A	6:09A	6:14A	6:20A	6:29A
6:56	7:03	7:13	7:16	7:21	7:24	7:27	7:28	7:31	7:34	7:36	7:39	7:44	6:24	6:25	6:27	6:28	6:29	6:33	6:34	6:35	6:37	6:38	6:43	6:49	6:58
7:17	7:27	7:40	7:43	7:48	7:51	7:54	7:55	7:58	8:01	8:03	8:06	8:11	6:48	6:50	6:52	6:54	6:56	7:00	7:01	7:02	7:05	7:07	7:12	7:20	7:29
7:38	7:48	8:01	8:04	8:09	8:12	8:15	8:16	8:19	8:22	8:24	8:27	8:32	7:12	7:14	7:17	7:22	7:24	7:29	7:30	7:31	7:38	7:40	7:45	7:54	8:03
7:58	8:08	8:21	8:24	8:29	8:32	8:35	8:36	8:39	8:42	8:44	8:47	8:52	7:36	7:38	7:41	7:46	7:48	7:53	7:54	7:55	8:03	8:06	8:11	8:20	8:29
8:18	8:27	8:40	8:43	8:48	8:51	8:54	8:55	8:58	9:01	9:03	9:06	9:11	8:00	8:02	8:04	8:08	8:10	8:14	8:15	8:16	8:25	8:28	8:33	8:42	8:51
8:40	8:49	9:02	9:05	9:10	9:13	9:16	9:17	9:20	9:23	9:25	9:28	9:33	8:25	8:27	8:29	8:33	8:35	8:39	8:40	8:41	8:50	8:53	8:58	9:07	9:16
9:02	9:11	9:23	9:26	9:29	9:32	9:35	9:36	9:39	9:42	9:44	9:47	9:52	9:05	9:07	9:09	9:13	9:15	9:19	9:20	9:21	9:30	9:33	9:38	9:47	9:56
9:33	9:39	9:51	9:54	9:57	10:00	10:02	10:03	10:06	10:09	10:11	10:13	10:16	9:45	9:47	9:49	9:53	9:55	9:59	10:00	10:01	10:07	10:10	10:15	10:24	10:33
10:07	10:13	10:23	10:26	10:29	10:32	10:34	10:35	10:38	10:41	10:43	10:45	10:48	10:25	10:26	10:28	10:31	10:33	10:36	10:37	10:38	10:44	10:47	10:52	11:01	11:10
10:45	10:51	11:01	11:04	11:07	11:10	11:12	11:13	11:16	11:19	11:21	11:23	11:26	11:00	11:01	11:03	11:06	11:08	11:11	11:12	11:13	11:19	11:22	11:27	11:36	11:45
11:20	11:26	11:36	11:39	11:42	11:45	11:47	11:48	11:51	11:54	11:56	11:58	12:01P	11:35	11:36	11:38	11:41	11:43	11:46	11:47	11:48	11:54	11:57	12:02P	12:11P	12:20P
11:55	12:01P	12:11P	12:14P	12:17P	12:20P	12:22P	12:23P	12:26P	12:29P	12:31P	12:33P	12:36P													
													12:10P	12:11P	12:13P	12:16P	12:18P	12:21P	12:22P	12:23P	12:29P	12:32P	12:37P	12:46P	12:55P
12:35P	12:41P	12:51P	12:54P	12:57P	1:00P	1:02P	1:03P	1:06P	1:09P	1:11P	1:13	1:16	12:44	12:45	12:47	12:50	12:52	12:55	12:56	12:57	1:03	1:06	1:11	1:20	1:29
1:10	1:16	1:26	1:29	1:32	1:35	1:37	1:38	1:41	1:44	1:46	1:48	1:51	1:25	1:26	1:28	1:31	1:33	1:36	1:37	1:38	1:44	1:47	1:52	2:01	2:10
1:40	1:46	1:56	1:59	2:02	2:05	2:07	2:08	2:11	2:14	2:16	2:18	2:21	2:00	2:02	2:04	2:08	2:10	2:14	2:15	2:16	2:23	2:27	2:33	2:44	2:53 3:28
2:10 2:40	2:16 2:46	2:26 2:58	2:29 3:01	2:32 3:04	2:35 3:10	2:37 3:13	2:38 3:14	2:41 3:17	2:44 3:22	2:46 3:24	2:48 3:26	2:52 3:30	2:35 3:05	2:37 3:07	2:39 3:09	2:43 3:13	2:45 3:15	2:49 3:19	2:50 3:20	2:51 3:21	2:58 3:28	3:02 3:32	3:08 3:38	3:19 3:49	3:58
3:05	3:12	3:24	3:27	3:30	3:36	3:39	3:40	3:43	3:48	3:50	3:52	3:56	3:43	3:45	3:47	3:51	3:53	3:57	3:58	3:59	4:06	4:10	4:16	4:27	4:38
3:30	3:37	3:49	3:52	3:55	4:01	4:04	4:05	4:08	4:13	4:15	4:17	4:21	4:11	4:13	4:15	4:19	4:21	4:25	4:26	4:27	4:34	4:38	4:44	5:01	5:13
3:55	4:02	4:14	4:17	4:20	4:26	4:29	4:30	4:33	4:38	4:40	4:42	4:46	4:38	4:41	4:44	4:49	4:52	4:56	4:57	4:58	5:05	5:09	5:15	5:32	5:44
4:25	4:32	4:44	4:47	4:50	4:56	4:59	5:03	5:06	5:11	5:13	5:16	5:20	5:05	5:08	5:11	5:16	5:19	5:23	5:24	5:25	5:32	5:36	5:42	5:58	6:09
4:57	5:05	5:19	5:23	5:27	5:34	5:38	5:42	5:45	5:49	5:50	5:53	5:56	5:40	5:43	5:46	5:49	5:50	5:54	5:55	5:56	6:01	6:05	6:11	6:25	6:35
5:29	5:37	5:51	5:55	5:59	6:04	6:08	6:11	6:14	6:17	6:18	6:20	6:23	6:15	6:17	6:19	6:22	6:23	6:27	6:28	6:29	6:34	6:38	6:44	6:58	7:05
6:00	6:06	6:19	6:22	6:25	6:28	6:32	6:34	6:37	6:40	6:41	6:43	6:46	6:45	6:47	6:49	6:52	6:53	6:57	6:58	6:59	7:04	7:06	7:12	7:26	7:33
6:30	6:36	6:48	6:51	6:54	6:57	7:01	7:03	7:06	7:09	7:10	7:12	7:15													

Washington Street bridge diversion is planned to commence mid/end Spring 2020. Times shown in this are regular route. Please add additional time during the detour. Visit mbta.com or download Transit for real-time bus tracking.

7:27

7:29

7:32

In addition to the stops listed above, this route also stops in Somerville on Washington St. at Myrtle St. and at McGrath Highway. In Cambridge this route also stops at Cambridge & Columbia Streets and at One Kendall Square (Hampshire St. at Broadway)

**Route CT2 Sullivan Station-Ruggles Station** 

7:20

7:22

7:25

All buses are accessible to persons with disabilities

7:34

7:37

7:40

No service on weekends and most Holidays.

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

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

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

FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind

- Access CharlieCard holders ride free and if using a guide, the guide rides free

  \* Requires Student CharlieCard or Youth CharlieCard. Student CharlieCards are available
  to students through participating middle schools and high schools. Youth CharlieCards are available through community partners in the Boston metro area. Visit www.mbta.com/youthpass for details.
- \*\* Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+,

<b>T</b> Fares								
		+	<u> </u>	+ 🖺				
PRICE PER TRIP	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit				
CharlieCard	\$1.70	\$1.70	\$2.40	\$2.40				
CharlieTicket	\$2.00	\$2.00	\$2.90	\$4.90***				
Cash-on-Board	\$2.00	\$4.00	\$2.90	\$4.90***				
Student/Youth*	\$0.85	\$0.85	\$1.10	\$1.10				
Senior/TAP**	\$0.85	\$0.85	\$1.10	\$1.10				
UNLIMITED TRIP	PASSES							
1-Day	\$12.75	\$12.75	\$12.75	\$12.75				
7-Day	\$22.50	\$22.50	\$22.50	\$22.50				
Monthly	\$55.00	\$55.00	\$90.00	\$90.00				
Senior/TAP Monthly \$30.00/month for unlimited travel on Local Bus and Rapid Transit								

VALID PASSES: LinkPass (\$84.50/mo.); Student /Youth LinkPass\* (\$30/mo.); Senior/TAP LinkPass\* (\$30/mo.); and express bus, commuter rail, and boat passes.

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

- \* Requires Student CharlieCard or Youth CharlieCard. Student CharlieCards are available to students through participating middle schools and high schools. Youth CharlieCards are available through community partners in the Boston metro area. Visit www.mbta.com/youthpass for details.
- \*\* Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.
- \*\*\* For Silver Line SL4 or SL5 pay \$2.75. Also see "transfers."

#### TRANSFERS

If paying with a CharlieTicket or CharlieCard, discounted transfers that are available are automatic — just use the same ticket or card throughout your trip. If paying with cash onboard a vehicle, free transfers are only allowed between rapid transit lines and inside paid platform areas at gated stations.

#### SCHEDULES

Schedules are available at the following stations: Park Street, Airport, Malden, Harvard, Haymarket (Green Line Level), Back Bay and Downtown Crossing (Orange Line Level) or see station personnel. Schedules also available at the Transportation Building (10 Park Plaza), 45 High St, and online at mbta.com.

For real-time subway and bus tracking, download the Transit app on any smartphone.



#### **Schedule Change**



Effective March 15, 2020















Information 617-222-3200 • 1-800-392-6100 (TTY) 617-222-5146 • www.mbta.com

Rapid			W	/eekd	lay					Satu	ırday					Sur	nday			S
Transit Line	First Trip	AM Peak	Midday	PM Peak	Evening	Late Night	Last Trip	First Trip	AM Peak	PM Peak	Evening	Late Night	Last Trip	First Trip	AM Peak	PM Peak	Evening	Late Night	Last Trip	
Red Line Alewife Braintree	5:24AM 5:08AM		14 min 14 min	9 min 9 min	12 min 12 min	12 min 12 min					14 min 14 min		12:20AM 12:17AM	6:08AM 6:00AM		15 min 15 min	15 min 15 min	15 min 15 min	12:20AM 12:17AM	
Alewife Ashmont	5:16AM 5:16AM		14 min 14 min	9 min 9 min	12 min 12 min		w 12:27AM w 12:30AM	5:16AM 5:16AM					w 12:27AM w 12:30AM	6:00AM 6:00AM		15 min 15 min	15 min 15 min		w 12:27AM w 12:30AM	<b>G</b>
"M" Ashmont Mattapan	5:17AM 5:05AM	5 min 5 min	8 min 8 min	5 min 5 min	12 min 12 min	12 min 12 min	w 1:05AM 12:53AM	5:15AM 5:05AM	26 min 26 min	12 min 12 min	12 min 12 min	26 min 26 min	w 1:05AM 12:53AM	6:03AM 5:51AM		12 min 12 min	12 min 12 min	26 min 26 min	w 1:05AM 12:53AM	th 2
Blue Line Wonderland Orient Heights Bowdoin	5:13AM 5:14AM 5:30AM	5 min 5 min 5 min	9 min 9 min 9 min	5 min 5 min 5 min	9 min 9 min 9 min	9 min 9 min 9 min	12:28AM 12:33AM w 1:00AM	5:25AM 5:13AM 5:29AM	9 min 9 min 9 min	9 min 9 min 9 min	9 min	13 min 13 min 13 min	12:28AM 12:33AM w 1:00AM	5:58AM 6:03AM 6:21AM	13 min	9 min 9 min 9 min	9 min 9 min 9 min	13 min 13 min 13 min	12:28AM 12:33AM w 1:00AM	3 12 in
Orange Line Oak Grove Forest Hills	5:16AM 5:16AM	6 min 6 min	8 min 8 min	6 min 6 min	9 min 9 min		w 12:30AM w 12:28AM	5:16AM 5:16AM	10 min 10 min				w 12:30AM w 12:28AM	6:00AM 6:00AM					w 12:30AM w 12:28AM	ar fro
Green Line  B Boston College Park Street	5:01AM 5:45AM	6 min 6 min	8 min 8 min	6 min 6 min	7 min 7 min	9 min 9 min	12:10AM w 12:52AM	4:45AM <sup>2</sup> 5:40AM	2 11 min 11 min	7 min 7 min			12:09AM w 12:52AM	5:20AM <sup>2</sup> 6:12AM	12 min	9 min 9 min	7 min 7 min	10 min 10 min	12:10AM w 12:52AM	D We
C Cleveland Circle North Station	4:57AM <sup>1</sup> 5:48AM	6 min 6 min	9 min 9 min	7 min 7 min	7 min 7 min	10 min 10 min	12:07AM w 12:46AM	4:50AM <sup>2</sup> 5:30AM	10 min 10 min		8 min 8 min		12:10AM w 12:46AM	5:30AM <sup>2</sup> 6:06AM	12 min	11 min 11 min	9 min 9 min	12 min 12 min	12:10AM w 12:46AM	vi:
D Riverside <sup>4</sup> Government Ctr.	4:56AM 5:45AM	6 min 6 min	8 min 8 min	6 min 6 min		11 min 11 min	12:05AM w 12:49AM	4:55AM 5:38AM	13 min 13 min	9 min 9 min	8 min 8 min		12:02AM w 12:49AM	6:10AM	13 min 13 min	11 min	11 min 11 min		12:05AM w 12:49AM	5
E Lechmere Heath Street	5:00AM <sup>5</sup> 5:45AM	6 min 6 min	8 min 8 min	7 min 7 min	9 min 9 min	9 min 9 min	12:30AM 12:47AM <sup>3</sup>	5:01AM 5:39AM	11 min 11 min		11 min 11 min	11 min 11 min	12:30AM 12:47AM <sup>3</sup>	5:35AM 6:15AM	12 min 12 min	12 min 12 min	12 min 12 min	12 min 12 min	12:30AM 12:47AM <sup>3</sup>	Ri
Silver Line SL1 Logan Airport South Station	5:38AM 5:40AM				9 min 9 min	13 min 13 min	f 1:03AM w 1:02AM				11 min 11 min		f 1:15AM w 12:59AM	5:50AM 6:12AM	12 min 12 min	8 min 8 min	8 min 8 min	8 min 8 min	f 1:12AM w 1:00AM	f se
SL2 Design Center South Station	6:07AM 5:44AM		12 min 12 min	5 min 5 min		15 min 15 min	12:37AM 12:50AM				15 min 15 min		12:35AM 12:45AM	6:51AM 6:35AM	15 min 15 min	15 min 15 min	15 min 15 min	15 min 15 min	12:51AM 12:36AM	w
SL3 Chelsea Station South Station	4:55AM 4:20AM		15 min 15 min				f 1:26AM w 12:35AM	5:30AM 4:56AM	10 min 10 min	11 min 11 min	12 min 12 min	12 min 12 min	f 1:22AM w 12:55AM	6:26AM 5:53AM	13 min 13 min	15 min	15 min 15 min	15 min 15 min	f 1:25AM w 12:55AM	De
SL4 Dudley Station South Station	5:20AM 5:38AM		14 min 14 min			20 min 20 min	12:20AM 12:37AM	5:23AM 5:40AM	15 min 15 min	17 min 17 min	16 min 16 min	20 min 20 min	12:20AM 12:40AM	6:02AM 6:20AM	15 min 15 min	16 min 16 min	15 min 15 min	20 min 20 min	12:20AM 12:40AM	
SL5 Dudley Station Downtown Xing	5:15AM 5:32AM		10 min 10 min	8 min 8 min		18 min 18 min	12:51AM w 1:07AM	5:19AM 5:34AM	8 min 8 min	8 min 8 min		10 min 10 min	12:43AM w 1:00AM	6:00AM 6:16AM	10 min 10 min	9 min 9 min	9 min 9 min	9 min 9 min	12:25AM w 12:47AM	

#### Schedule Periods (approximate):

AM Rush Hour: 6:30 AM - 9:00 AM Midday: 9:00 AM - 3:30 PM PM Rush Hour: 3:30 PM - 6:30 PM Evening: 6:30 PM - 8:00 PM Late Night: 8:00 PM - CLOSE

#### **Green Line Notes:**

- 1 The first two C train AM northbound trips run through to Lechmere Station on weekdays.
- 2 The first B and second C train AM northbound trips run through to Lechmere Station on weekends.
- 3 On weekdays the 12:27 AM trip (weekends the 12:32 AM trip) from Heath St is the last connecting train to other lines downtown. The 12:37AM and 12:47AM trips (weekends the 12:47AM trip) from Heath St. runs in service to Lechmere with no guaranteed connections.
- 4 Due to two major infrastructure projects on the D Line, shuttles will replace trolley service on some weeknights and weekends through 2020. Shuttle schedules are subject to change. Shuttles may add up to 15 minutes to your travel time. Please visit mbta.com to plan your trip on the D Line, or sign up for T-Alerts for shuttle notices.
- 5 Early morning service from Lechmere to Riverside departs Lechmere at 5:00 AM.
- f After exiting Ted Williams Tunnel bus will only service World Trade Center and South Station stops.
- w Last trips wait at some stations, primarily in the Downtown area, for connecting service. Departure times are approximate.

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

## TRIP GENERATION

# Land Use: 221 Multifamily Housing (Mid-Rise)

#### Description

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors). Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (Land Use 225), and mid-rise residential with 1st-floor commercial (Land Use 231) are related land uses.

#### **Additional Data**

In prior editions of *Trip Generation Manual*, the mid-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of vehicle trip data found no clear differences in trip making patterns between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.46 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 95.7 percent of the total dwelling units were occupied.

Time-of-day distribution data for this land use are presented in Appendix A. For the eight general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:00 and 8:00 a.m. and 4:45 and 5:45 p.m., respectively.

For the four dense multi-use urban sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:15 and 5:15 p.m., respectively. For the three center city core sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 6:45 and 7:45 a.m. and 5:00 and 6:00 p.m., respectively.

For the six sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.46 residents per occupied dwelling unit.

For the five sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 95.7 percent of the units were occupied.

The average numbers of person trips per vehicle trip at the five center city core sites at which both person trip and vehicle trip data were collected were as follows:

- 1.84 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.94 during Weekday, AM Peak Hour of Generator
- 2.07 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- · 2.59 during Weekday, PM Peak Hour of Generator



The average numbers of person trips per vehicle trip at the 32 dense multi-use urban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.90 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- · 1.90 during Weekday, AM Peak Hour of Generator
- 2.00 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- · 2.08 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 13 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.56 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.88 during Weekday, AM Peak Hour of Generator
- 1.70 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.07 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Delaware, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, Ontario, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Virginia, and Wisconsin.

#### Source Numbers

168, 188, 204, 305, 306, 321, 357, 390, 436, 525, 530, 579, 638, 818, 857, 866, 901, 904, 910, 912, 918, 934, 936, 939, 944, 947, 948, 949, 959, 963, 964, 966, 967, 969, 970



# Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Owelling Units

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 27

Avg. Num. of Dwelling Units: 205

Directional Distribution: 50% entering, 50% exiting

#### Vehicle Trip Generation per Dwelling Unit

Average Rate

Range of Rates

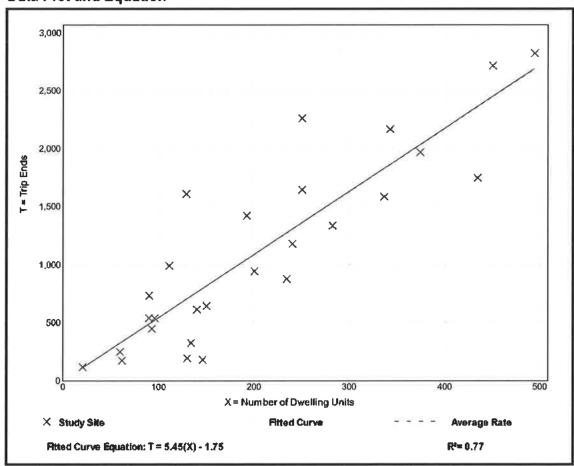
Standard Deviation

5.44

1.27 - 12.50

2.03

#### **Data Plot and Equation**





# Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic. One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 53 Avg. Num. of Dwelling Units: 207

Directional Distribution: 26% entering, 74% exiting

#### Vehicle Trip Generation per Dwelling Unit

Average Rate Range of Rates

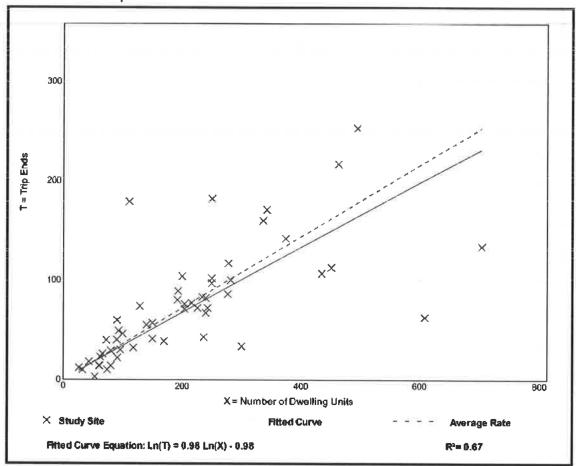
Standard Deviation

0.36

0.06 - 1.61

0.19

#### **Data Plot and Equation**





# Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 60

Avg. Num. of Dwelling Units: 208

Directional Distribution: 61% entering, 39% exiting

#### Vehicle Trip Generation per Dwelling Unit

Average Rate

Range of Rates

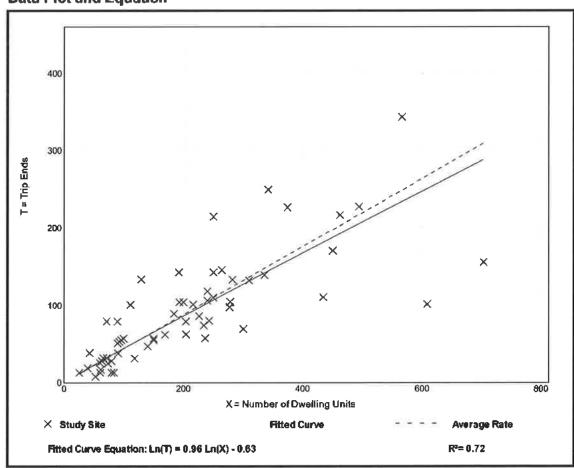
Standard Deviation

0.44

0.15 - 1.11

0.19

#### **Data Plot and Equation**





	Census Tract 351 Massachusetts	2.03, Middlesex County,	Census Tract 3515, Middlesex County, Massachusetts					
Label	Estimate	Margin of Error	Estimate	Margin of Error				
Total:	3,228	±282	1,547	±229				
Car, truck, or van:	842	±139	578	±209				
Drove alone	822	±133	448	±154				
Carpooled:	20	±20	130	±149				
In 2-person carpool	10	±14	130	±149				
In 3-person carpool	6	±10	0	±12				
In 4-person carpool	4	±8	0	±12				
In 5- or 6-person carpool	0	±12	0	±12				
In 7-or-more-person carpool Public transportation (excluding	0	±12	0	±12				
taxicab):	780	±168	405	±99				
Bus	278	±111	234	±79				
Subway or elevated rail	477	±146	171	±72				
Long-distance train or commuter			17.1					
rail	17	±19	0	±12				
Light rail, streetcar or trolley								
(carro público in Puerto Rico)	8	±13	0	±12				
Ferryboat	0	±12	0	±12				
Taxicab	20	±23	0	±12				
Motorcycle	10	±16	0	±12				
Bicycle	498	±134	196	±73				
Walked	942	±179	218	±103				
Other means	0	±12	32	±42				
Worked from home	136	±67	118	±88				

## **MEANS OF TRANSPORTATION TO WORK**



Note: The table shown ma	ay have been modified by user selections. Some information may be missing.
DATA NOTES	
TABLE ID:	B08301
SURVEY/PROGRAM:	American Community Survey
VINTAGE:	2019
DATASET:	ACSDT5Y2019
PRODUCT:	ACS 5-Year Estimates Detailed Tables
UNIVERSE:	Workers 16 years and over
FTP URL:	None
API URL:	https://api.census.gov/data/2019/acs/acs5
USER SELECTIONS	
GEOS	Census Tract 3512.03, Middlesex County, Massachusetts; Census Tract 3515, Middlesex County, Massachusetts
EXCLUDED COLUMNS	None
APPLIED FILTERS	None
APPLIED SORTS	None
WEB ADDRESS	https://data.census.gov/cedsci/table?q=b08301&g=1400000US25017351203,25017351500&tid=ACSDT5Y2019.B08301&hidePreview=true
TABLE NOTES	Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.
Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.
Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates
Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.
Workers include members of the Armed Forces and civilians who were at work last week.
2019 ACS data products include updates to several categories of the existing means of transportation question. For more information, see: Change to Means of Transportation.
The 2015-2019 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.
Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Table: ACSDT5Y2019.B08301

Explanation of Symbols: \* An "\*\*" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.

- \* An "-" entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself.
- \* An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.
- \* An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution.
- \* An "\*\*\*" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
- \* An "\*\*\*\*\*" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
- \* An "N" entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
- \* An "(X)" means that the estimate is not applicable or not available.

	CO	LU	IMN	NO	ΓES
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None

MEANS OF TRANSPORTATION TO	Census Tract	Census Tract	Census Tract	Percentage
WORK	3512.03	3515	Averages	Used
Car, truck, or van	26.1%	37.4%	31.7%	31.7%
Drove alone	25.5%	29.0%	27.2%	27.2%
Carpooled:	0.6%	8.4%	4.5%	4.5%
In 2-person carpool	0.3%	8.4%	4.4%	4.4%
In 3-person carpool	0.2%	0.0%	0.1%	0.1%
In 4 person carpool	0.1%	0.0%	0.1%	0.0%
Public transportation	24.2%	26.2%	25.2%	25.2%
Bicycle	15.4%	12.7%	14.0%	14.0%
Walked	29.2%	14.1%	21.0%	21.0%
Other means	5.1%	9.7%	7.4%	7.4%

A	Average Vehicle Occupancy (AVO)											
# Occupants	Weight	Occupants	Product									
Drove Alone	0.272	1	0.272									
Carpool (2)	0.044	2	0.088									
Carpool (3)	0.001	3	0.003									
Carpool (4)	0.000	4	0									
Sums	0.317		0.363									
AVO (Sum	of Products/Su	m of Weights)	1.145									

## TRIP DISTRIBUTION

Residence										Cor	nmuting	Flow		
State FIPS Code	County FIPS Code	Minor Civil Division FIPS Code	State Name	County Name	Minor Civil Division Name	State FIPS Code	County FIPS Code	Minor Civil Division FIPS Code	State Name	County Name	Minor Civil Division Name	Workers in Commuting Flow	Margin of Error	% of Workers
25	017	62535	Massachusetts	Middlesex County	Somerville city	006	037		California	Los Angeles County		23	37	0.05%
25	017	62535	Massachusetts	Middlesex County	Somerville city	006	073		California	San Diego County		11	17	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	009	001	73070	Connecticut	Fairfield County	Stamford town	24	28	0.05%
25	017	62535	Massachusetts	Middlesex County	Somerville city	009	003	68940	Connecticut	Hartford County	Simsbury town	46	65	0.09%
25	017	62535	Massachusetts	Middlesex County	Somerville city	009	013	44910	Connecticut	Tolland County	Mansfield town	53	66	0.11%
25	017	62535	Massachusetts	Middlesex County	Somerville city	023	005	24495	Maine	Cumberland County	Falmouth town	13	22	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	023	005	28240	Maine	Cumberland County	Gorham town	7	12	0.01%
25	017	62535	Massachusetts	Middlesex County	Somerville city	023	009	23200	Maine	Hancock County	Ellsworth city	9	14	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	001	03690	Massachusetts	Barnstable County	Barnstable Town city	22	33	0.04%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	005	02690	Massachusetts	Bristol County	Attleboro city	16	29	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	005	23000	Massachusetts	Bristol County	Fall River city	13	22	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	005	38225	Massachusetts	Bristol County	Mansfield town	13	19	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	005	49970	Massachusetts	Bristol County	Norton town	20	32	0.04%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	005	56060	Massachusetts	Bristol County	Raynham town	7	13	0.01%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	005	62430	Massachusetts	Bristol County	Somerset town	18	27	0.04%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	01465	Massachusetts	Essex County	Andover town	221	105	0.45%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	05595	Massachusetts	Essex County	Beverly city	68	50	0.14%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	07420	Massachusetts	Essex County	Boxford town	11	19	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	16250	Massachusetts	Essex County	Danvers town	144	125	0.29%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	25625	Massachusetts	Essex County	Georgetown town	24	37	0.05%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	29405	Massachusetts	Essex County	Haverhill city	7	10	0.01%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	32310	Massachusetts	Essex County	Ipswich town	15	18	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	34550	Massachusetts	Essex County	Lawrence city	132	97	0.27%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	37490	Massachusetts	Essex County	Lynn city	55	49	0.11%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	37560	Massachusetts	Essex County	Lynnfield town	17	28	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	38400	Massachusetts	Essex County	Marblehead town	22	36	0.04%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	40710	Massachusetts	Essex County	Methuen Town city	11	21	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	41095	Massachusetts	Essex County	Middleton town	20	21	0.04%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	46365	Massachusetts	Essex County	North Andover town	68	44	0.14%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	52490	Massachusetts	Essex County	Peabody city	76	76	0.16%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	57880	Massachusetts	Essex County	Rockport town	29	46	0.06%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	58405	Massachusetts	Essex County	Rowley town	12	21	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	59105	Massachusetts	Essex County	Salem city	156	82	0.32%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	60015	Massachusetts	Essex County	Saugus town	126	76	0.26%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	009	68645	Massachusetts	Essex County	Swampscott town	23	32	0.05%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	015	01325	Massachusetts	Hampshire County	Amherst town	7	11	0.01%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	00380	Massachusetts	Middlesex County	Acton town	98	67 167	0.20%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	01605	Massachusetts	Middlesex County	Arlington town	462	167	0.94%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	04615	Massachusetts	Middlesex County	Bedford town	236	131	0.48%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	05070	Massachusetts	Middlesex County	Belmont town	264	118	0.54%

25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	05805	Massachusetts	Middlesex County	Billerica town	215	76	0.44%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	07350	Massachusetts	Middlesex County	Boxborough town	63	39	0.13%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	09840	Massachusetts	Middlesex County	Burlington town	796	227	1.63%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	11000	Massachusetts	Middlesex County	Cambridge city	10,123	702	20.70%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	13135	Massachusetts	Middlesex County	Chelmsford town	154	86	0.31%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	15060	Massachusetts	Middlesex County	Concord town	312	111	0.64%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	17475	Massachusetts	Middlesex County	Dracut town	69	64	0.14%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	21990	Massachusetts	Middlesex County	Everett city	240	133	0.49%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	24925	Massachusetts	Middlesex County	Framingham town	423	222	0.86%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	27480	Massachusetts	Middlesex County	Groton town	9	16	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	30700	Massachusetts	Middlesex County	Holliston town	48	53	0.10%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	31085	Massachusetts	Middlesex County	Hopkinton town	26	33	0.05%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	31540	Massachusetts	Middlesex County	Hudson town	46	32	0.09%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	35215	Massachusetts	Middlesex County		656	161	1.34%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	35425	Massachusetts	Middlesex County	Lexington town Lincoln town		50	0.12%
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25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	35950	Massachusetts	Middlesex County	Littleton town	88	71	0.18%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	37000	Massachusetts	Middlesex County	Lowell city	281	110	0.57%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	37875	Massachusetts	Middlesex County	Malden city	286	106	0.58%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	38715	Massachusetts	Middlesex County	Marlborough city	300	148	0.61%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	39625	Massachusetts	Middlesex County	Maynard town	11	12	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	39835	Massachusetts	Middlesex County	Medford city	1,419	342	2.90%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	40115	Massachusetts	Middlesex County	Melrose city	77	42	0.16%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	43895	Massachusetts	Middlesex County	Natick town	342	177	0.70%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	45560	Massachusetts	Middlesex County	Newton city	1,032	256	2.11%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	48955	Massachusetts	Middlesex County	North Reading town	107	78	0.22%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	56130	Massachusetts	Middlesex County	Reading town	89	69	0.18%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	62535	Massachusetts	Middlesex County	Somerville city	7,391	742	15.11%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	67665	Massachusetts	Middlesex County	Stoneham town	188	95	0.38%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	68050	Massachusetts	Middlesex County	Stow town	35	39	0.07%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	68260	Massachusetts	Middlesex County	Sudbury town	47	41	0.10%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	69415	Massachusetts	Middlesex County	Tewksbury town	73	74	0.15%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	71025	Massachusetts	Middlesex County	Tyngsborough town	14	23	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	72215	Massachusetts	Middlesex County	Wakefield town	125	61	0.26%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	72600	Massachusetts	Middlesex County	Waltham city	1,158	228	2.37%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	73440	Massachusetts	Middlesex County	Watertown Town city	691	194	1.41%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	73790	Massachusetts	Middlesex County	Wayland town	57	42	0.12%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	76135	Massachusetts	Middlesex County	Westford town	170	108	0.35%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	77255	Massachusetts	Middlesex County	Weston town	84	54	0.17%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	80230	Massachusetts	Middlesex County	Wilmington town	309	96	0.63%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	80510	Massachusetts	Middlesex County	Winchester town	195	120	0.40%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	81035	Massachusetts	Middlesex County	Woburn city	670	215	1.37%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	04930	Massachusetts	Norfolk County	Bellingham town	9	18	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	07740	Massachusetts	Norfolk County	Braintree Town city	<u> </u>	53	0.10%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	09175	Massachusetts	Norfolk County	Brookline town	280	128	0.57%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	11315	Massachusetts	Norfolk County	Canton town	103	85	0.21%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	16495	Massachusetts	Norfolk County	Dedham town	54	50	0.21%
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25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	24820	Massachusetts	Norfolk County	Foxborough town	6	11	0.01%

25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	25172	Massachusetts	Norfolk County	Franklin Town city	48	50	0.10%
25 25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	41515		Norfolk County	Franklin Town city Millis town	48 8	16	0.10%
	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	41690	Massachusetts	<del>'</del>	Milton town	o 54	1	0.02%
25		<del> </del>		,	<u>,                                      </u>				Massachusetts	Norfolk County	Needham town		49	
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	44105	Massachusetts	Norfolk County		160	81	0.33%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	46050	Massachusetts	Norfolk County	Norfolk town	20	25	0.04%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	50250	Massachusetts	Norfolk County	Norwood town	58	40	0.12%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	55745	Massachusetts	Norfolk County	Quincy city	186	111	0.38%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	55955	Massachusetts	Norfolk County	Randolph town	33	49	0.07%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	60785	Massachusetts	Norfolk County	Sharon town	1	3	0.00%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	72495	Massachusetts	Norfolk County	Walpole town	17	27	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	74175	Massachusetts	Norfolk County	Wellesley town	195	92	0.40%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	78690	Massachusetts	Norfolk County	Westwood town	48	47	0.10%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	021	78972	Massachusetts	Norfolk County	Weymouth Town city	178	115	0.36%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	023	08085	Massachusetts	Plymouth County	Bridgewater town	18	27	0.04%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	023	09000	Massachusetts	Plymouth County	Brockton city	13	21	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	023	28285	Massachusetts	Plymouth County	Hanover town	52	65	0.11%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	023	28495	Massachusetts	Plymouth County	Hanson town	8	13	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	023	30210	Massachusetts	Plymouth County	Hingham town	15	21	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	023	31645	Massachusetts	Plymouth County	Hull town	25	39	0.05%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	023	33220	Massachusetts	Plymouth County	Kingston town	7	11	0.01%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	023	40850	Massachusetts	Plymouth County	Middleborough town	7	12	0.01%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	023	57775	Massachusetts	Plymouth County	Rockland town	60	63	0.12%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	025	07000	Massachusetts	Suffolk County	Boston city	15,041	905	30.75%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	025	13205	Massachusetts	Suffolk County	Chelsea city	312	151	0.64%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	025	56585	Massachusetts	Suffolk County	Revere city	26	26	0.05%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	025	81005	Massachusetts	Suffolk County	Winthrop Town city	49	50	0.10%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	027	23875	Massachusetts	Worcester County	Fitchburg city	7	12	0.01%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	027	25485	Massachusetts	Worcester County	Gardner city	17	20	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	027	28950	Massachusetts	Worcester County	Harvard town	12	19	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	027	34165	Massachusetts	Worcester County	Lancaster town	11	19	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	027	35075	Massachusetts	Worcester County	Leominster city	23	27	0.05%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	027	46820	Massachusetts	Worcester County	Northborough town	2	4	0.00%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	027	61800	Massachusetts	Worcester County	Shrewsbury town	45	54	0.09%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	027	63165	Massachusetts	Worcester County	Southborough town	25	30	0.05%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	027	73895	Massachusetts	Worcester County	Webster town	6	10	0.01%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	027	75015	Massachusetts	Worcester County	Westborough town	97	84	0.20%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	027	82000	Massachusetts	Worcester County	Worcester city	76	47	0.16%
25	017	62535	Massachusetts	Middlesex County	Somerville city	033	003	14660	New Hampshire	Carroll County	Conway town	50	81	0.10%
25	017	62535	Massachusetts	Middlesex County	Somerville city	033	003	58740	New Hampshire	Carroll County	Ossipee town	12	29	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	033	009	33860	New Hampshire	Grafton County	Hanover town	9	15	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	033	011	37140	New Hampshire	Hillsborough County	Hollis town	14	23	0.03%
25	017	62535	Massachusetts	Middlesex County	Somerville city	033	011	45140	New Hampshire	Hillsborough County	Manchester city	36	29	0.07%
25	017	62535	Massachusetts	Middlesex County	Somerville city	033	011	48020	New Hampshire	Hillsborough County	Milford town	20	34	0.04%
25	017	62535	Massachusetts	Middlesex County	Somerville city	033	011	50260	New Hampshire	Hillsborough County	Nashua city	18	22	0.04%
25	017	62535	Massachusetts	Middlesex County	Somerville city	033	015	09300	New Hampshire	Rockingham County	Candia town	20	31	0.04%
25	017	62535	Massachusetts	Middlesex County	Somerville city	033	015	17940	New Hampshire	Rockingham County	Derry town	42	57	0.09%
25	017	62535	Massachusetts	Middlesex County	Somerville city	033	015	33060	New Hampshire	Rockingham County	Hampton town	8	12	0.02%
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25	017	62535	Massachusetts	Middlesex County	Somerville city	033	015	66660	New Hampshire	Rockingham County	Salem town	9	14	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	036	047	10022	New York	Kings County	Brooklyn borough	8	13	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	036	061	44919	New York	New York County	Manhattan borough	34	30	0.07%
25	017	62535	Massachusetts	Middlesex County	Somerville city	036	093	65508	New York	Schenectady County	Schenectady city	8	12	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	044	007	41500	Rhode Island	Providence County	Lincoln town	10	15	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	044	007	59000	Rhode Island	Providence County	Providence city	7	12	0.01%
25	017	62535	Massachusetts	Middlesex County	Somerville city	048	201		Texas	Harris County		12	19	0.02%
25	017	62535	Massachusetts	Middlesex County	Somerville city	051	059		Virginia	Fairfax County		18	27	0.04%
25	017	62535	Massachusetts	Middlesex County	Somerville city				Outside of the U.S.			42	46	0.09%
25	017	62535	Massachusetts	Middlesex County	Somerville city	025	017	62535	Massachusetts	Middlesex County	Somerville city	7,391	742	32.23%

## COMPREHENSIVE SITE PLAN AND CORRESPONDING TRAFFIC FIGURES

