

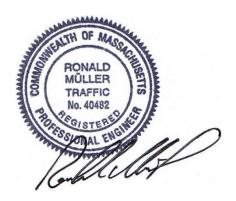
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Traffic Assessment

Elksy Senior Living Facility 1197 Washington Street Weymouth, Massachusetts

Prepared for:

Elksy Development, LLC 180 Canton Avenue Milton, MA 02186



Quality



Accuracy



Integrity



May 18, 2022

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Traffic Assessment

To: Mr. Tim Russell Reg: Elksy Senior Living Facility

Elksy Development, LLC 1197 Washington Street

180 Canton Avenue Weymouth, MA Milton, MA 02186

Date: May 18, 2022

From: Kirsten Braun, P.E., Associate Project #: 22029 Ron Müller, P.E., Principal

INTRODUCTION

Ron Müller & Associates (RMA) has conducted this Traffic Assessment for the proposed independent senior housing community to be constructed on the corner of Pleasant Street and Washington Street at 1197 Washington Street in Weymouth, Massachusetts. As proposed, the existing Lodge of Elks club on site will be razed and a three-story building containing 147 independent senior living units will be constructed. Access will be provided via two full access driveways, one on Washington Street and another on Pleasant Street. Washington Street (Route 53) adjacent to the site is under Massachusetts Department of Transportation (MassDOT) jurisdiction and a Highway Access Permit will therefore be required for the new driveway. A total of 133 parking spaces are proposed on site. The site location is shown in Figure 1.

This report has been prepared to estimate the project traffic generation, evaluate the safety of the site access points, and provide a qualitative assessment of the impacts of this traffic on the adjacent streets. As documented in this report, assuming the removal of overgrown vegetation, the proposed site driveway intersections with Pleasant Street and Washington Street exceed the minimum required sight distances and therefore safe operation can be expected. It is recommended that any proposed landscaping, signs or fencing in the vicinity of the driveways be kept low (maximum 2 feet in height from street level), or set back sufficiently so as not to impede the available sight distances.

Traffic volume increases during the weekday AM peak hour are expected in the range of three to 16 additional vehicles on Washington Street and three to seven additional vehicles on Pleasant Street. These increases represent on average about one additional vehicle every three to 20 minutes. As the Lodge of Elks club is currently generating traffic during the weekday PM peak hour, volume

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increases are expected to be negligible during this time period and well within the daily fluctuation of traffic.

Figure 1 Site Location Map



It is recommended that all internal roadways through the parking lot be a minimum of 24 feet wide. STOP signs (R1-1) and stop lines should be installed at both driveway exits. Both driveways

should be 24 feet in width, provide 30-foot corner radii, and be constructed in accordance with MassDOT Standard Detail E 107.7.0 providing a cement concrete driveway apron that allows the sidewalk to continue across the driveways without the need for wheelchair ramps.

TRAFFIC VOLUMES

Traffic volumes along Washington Street and Pleasant Street near the site were obtained from an automatic traffic recorder (ATR) count conducted in April 2022. To determine if the count data needed to be adjusted to represent annual average-month conditions consistent with state and local guidelines for traffic impact assessment, historical traffic volume data were obtained from MassDOT. Based on the nearest MassDOT permanent count station with the most complete data, located on Route 3 at the Route 18 exit (Station 6255), traffic during the month of April is approximately one percent above annual average-month conditions. Therefore, to provide a conservative assessment, the traffic volumes were not adjusted. The ATR counts and the MassDOT permanent count station data are provided in the Appendix.

Additionally, given the current traffic conditions associated with the coronavirus pandemic, historic traffic counts in the area were reviewed to determine if the counts collected needed to be adjusted to represent normal, pre-COVID traffic conditions. Using the same permanent count station mentioned above it was found that traffic in April 2019 was approximately one percent higher than April 2022. Therefore, the counts were adjusted upwardly by one percent to represent normal, pre-pandemic conditions. Table 1 summarizes the adjusted 2021 Existing traffic volumes on the study roadways.

Table 1
Existing Traffic Volume Summary

Location	Daily Volume ^a	Peak Hour Volume ^b	K-Factor ^c	Directional Distribution ^d
Pleasant Street adjacent to the Site:	15,955	AM: 1,277 PM: 1,333	8.0% 8.4%	55% NB 52% NB
Washington Street adjacent to the Site:	9,485	AM: 606 PM: 753	6.4% 7.9%	59% WB 51% EB

^a In vehicles per day.

^b In vehicles per hour.

^c Percentage of daily traffic occurring during the peak hour.

^d NB = northbound, WB = westbound, EB = eastbound.

VEHICLE SPEEDS

Vehicle speed measurements were conducted along Pleasant Street and Washington Street adjacent to the site by measuring the elapsed time for vehicles traveling a short, pre-measured distance between two checkpoints. The travel time was recorded using automatic traffic recorders and the speed is derived by dividing the elapsed time into the measured distance between checkpoints. The results of the speed measurements are summarized in Table 2.

Table 2 Observed Travel Speeds ^a

Location/Direction	Posted Speed Limit	Average Speed	85 th Percentile Speed ^b
Pleasant Street adjacent to the Site Northbound Southbound	30 30	30 31	35 34
Washington Street adjacent to the Site Eastbound Westbound	35 35	21 26	27 30

^a In miles per hour (mph).

As shown in Table 2, average travel speeds along Pleasant Street adjacent to the site are comparable to the posted speed limit of 30 miles per hour (mph) with 30 mph traveling northbound and 31 mph traveling southbound. The 85th percentile speeds were slightly higher than the posted speed limit with 35 mph traveling northbound and 34 mph traveling southbound.

Average travel speeds along Washington Street adjacent to the site were much lower than the posted speed limit of 35 mph, with 21 mph traveling eastbound and 26 mph traveling westbound. The 85th percentile speeds were comparable to the posted speed limit with 27 mph traveling eastbound and 30 mph traveling westbound. The lower travel speeds are likely attributed to the traffic signal just east of the site driveway, as vehicles were either accelerating or decelerating as they approached or departed the traffic signal.

The higher of the 85th percentile speed or the posted speed limit were used in calculation of minimum sight distance requirements at the site driveways located on Pleasant Street and Washington Street as described below.

^b Speed at, or below which 85 percent of all observed vehicles travel.

SIGHT DISTANCE

To identify potential safety concerns associated with site access and egress, sight distances have been evaluated at the proposed site driveway intersections with Pleasant Street and Washington Street to determine if the available sight distances for vehicles exiting the site meet or exceed the minimum distances required for approaching vehicles to safely stop. The available sight distances were compared with minimum requirements, as established by the American Association of State Highway and Transportation Officials (AASHTO). AASHTO is the national standard by which vehicle sight distance is calculated, measured, and reported. The Massachusetts Department of Transportation (MassDOT) and the Executive Office of Energy and Environmental Affairs (EEA) require the use of AASHTO sight distance standards when preparing traffic impact assessments and studies, as stated in their guidelines for traffic impact assessments.

Sight distance is the length of roadway ahead that is visible to the driver. Stopping Sight Distance (SSD) is the minimum distance required for a vehicle traveling at a certain speed to safely stop before reaching a stationary object in its path. The values are based on a driver perception and reaction time of 2.5 seconds and a braking distance calculated for wet, level pavements. When the roadway is either on an upgrade or downgrade, grade correction factors are applied. Stopping sight distance is measured from an eye height of 3.5 feet to an object height of 2 feet above street level, equivalent to the taillight height of a passenger car. The SSD is measured along the centerline of the traveled way of the major road.

Intersection sight distance (ISD) is provided on minor street approaches to allow the drivers of stopped vehicles a sufficient view of the major roadway to decide when to enter the major roadway. By definition, ISD is the minimum distance required for a motorist exiting a minor street to turn onto the major street, without being overtaken by an approaching vehicle reducing its speed from the design speed to 70 percent of the design speed. ISD is measured from an eye height of 3.5 feet to an object height of 3.5 feet above street level. The use of an object height equal to the driver eye height makes intersection sight distances reciprocal (i.e., if one driver can see another vehicle, then the driver of that vehicle can also see the first vehicle). When the minor street is on an upgrade that exceeds 3 percent, grade correction factors are applied.

SSD is generally more important as it represents the minimum distance required for safe stopping while ISD is based only upon acceptable speed reductions to the approaching traffic stream. However, the ISD must be equal to or greater than the minimum required SSD in order to provide safe operations at the intersection. In accordance with the AASHTO manual, "If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions. However, in some cases, this may require a major-road vehicle to stop or slow to accommodate the maneuver by a minor-road vehicle. To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road."

¹A Policy on Geometric Design of Highways and Streets; American Association of State Highway and Transportation Officials (AASHTO); 2009.

Accordingly, ISD should be at least equal to the distance required to allow a driver approaching the minor road to safely stop.

The available sight distances at the proposed site driveways on Pleasant Street and Washington Street were measured and compared to minimum requirements as established by AASHTO. The 85th percentile speeds on Pleasant Street were used over the posted speed limit of 30 mph to determine the minimum required sight distances. Since the posted speed limit of 35 mph on Washington Street is higher than the 85th percentile speeds, the posted speed limit was used to determine the minimum required sight distances. The required minimum sight distances are compared to the available distances, as shown in Table 3.

Table 3 Sight Distance Summary

	Intersection Sight Distance (feet)							
Location/Direction	Measured	Minimum Required ^a	Desirable b					
Pleasant Street at Site Driveway:								
North of intersection	364	235	335					
South of Intersection	500+	250	335					
Washington Street at Site Driveway:								
East of intersection	500+	250	390					
West of Intersection	416	250	390					

^a Values based on AASHTO SSD requirements for an 85th percentile speed of 35 mph traveling northbound and 34 mph traveling southbound on Pleasant Street and the posted speed limit of 35 mph on Washington Street.

As shown in the table, both the minimum required and desirable sight distances are exceeded at the proposed site driveway on Washington Street and safe operation of the driveway can therefore be expected. On Pleasant Street, the minimum required sight distances are exceeded looking both directions from the proposed site driveway. The desirable sight distance can be achieved with the removal of overgrown vegetation near the site driveway. Safe operation of this driveway can therefore also be expected. To ensure that maximum sight distances are maintained, it is recommended that any proposed landscaping or signs in the vicinity of the driveways be kept low (maximum two feet in height from street level), or set back sufficiently so as not to impede the available sight distances.

^b Values based on AASHTO ISD requirements for a posted speed limit of 30 mph on Pleasant Street and 35 mph on Washington Street.

TRIP GENERATION

The traffic to be generated by the proposed senior housing residential development was estimated using the 11th Edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual*². The site plan prepared by Crocker Design Group, shows 147 senior housing units being built on site. There will be a mix of studio, one bedroom and two-bedroom units. The proposed building will be three-stories tall. Accordingly, ITE Land Use Code (LUC) 252 (Senior Adult Housing - Attached) was used in estimating the traffic generation characteristics of the project, as shown in Table 4. The trip generation calculations are provided in the Appendix.

Table 4
Trip Generation Summary

Time Period	Senior Adult Housing ^a
Weekday Daily	450
Weekday AM Peak Hour Enter <u>Exit</u> Total	10 <u>19</u> 29
Weekday PM Peak Hour Enter <u>Exit</u> Total	21 <u>16</u> 37

 $^{^{\}rm a}$ ITE Land Use Code 252 (Senior Adult Housing - Attached) for 147 units.

As shown, the senior housing development is expected to generate 450 weekday daily vehicle trips, with 29 vehicle trips (10 in and 19 out) occurring during the weekday AM peak hour and 37 vehicle trips (21 in and 16 out) occurring during the weekday PM peak hour.

The site is currently occupied by the Lodge of Elks, a fraternal organization that provides event space for various occasions. Accordingly, a comparison was made between the current use and the proposed senior living facility to determine the change in traffic between the two uses. To compare the trip generation between the two uses, traffic counts were conducted at the existing site driveways on Washington Street and Pleasant Street to determine how much traffic the site currently generates. The Lodge of Elks is open Monday, Wednesday, Friday and Saturday from

² Trip Generation Manual, 11^h Edition; Institute of Transportation Engineers; Washington, DC; 2021.

3:00 PM to 11:00 PM with the busiest operating days being Thursday and Saturday. Therefore, counts were conducted on Thursday, May 5, 2022 during the weekday PM peak period (between 4:00 PM and 6:00 PM) as this is when the site and the adjacent streets generate the greatest volume of traffic. Table 5 summarizes this trip generation comparison. The traffic counts are provided in the Appendix.

Table 5
Trip Generation Comparison

Time Period	Proposed Senior Living Facility ^a	Existing Lodge of Elks Traffic Generation ^b	Change in Site Trips
Weekday AM Peak Hour Enter <u>Exit</u> Total	10 <u>19</u> 29	$\frac{0}{0}$	+10 +19 +29
Weekday PM Peak Hour Enter <u>Exit</u> Total	21 16 37	20 12 32	+1 +4 +5

^a From Table 4.

As shown, since the existing Lodge of Elks facility doesn't open until 3:00 PM, the proposed senior living facility will generate 29 additional trips (10 in and 19 out) during the weekday AM peak hour. During the weekday PM peak hour, a much smaller increase in trips is anticipated with 5 additional trips (1 in and 4 out) expected.

TRIP DISTRIBUTION

The distribution of traffic generated by the project is based on Journey-to-Work data provided by the U.S. Census Bureau for people residing in Weymouth. A summary of the Journey-to-Work data is provided in the Appendix. Accordingly, approximately 55 percent of the new site traffic is expected to/from the west on Washington Street, 10 percent is expected to/from the east on Washington Street, 10 percent is expected to/from the south on Pleasant Street and 25 percent is expected to/from the north on Pleasant Street.

^b Based on counts conducted at the existing site driveways on Washington Street and Pleasant Street on May 5, 2022.

TRAFFIC INCREASES

Traffic volume increases on Washington Street during the weekday AM peak hour are expected in the range of 3 to 16 vehicles, representing on average about one additional vehicle every four to 20 minutes. On Pleasant Street, traffic increases during the weekday AM peak hour are expected in the range of three to seven additional vehicles, representing about one additional vehicle every eight and a half to 20 minutes. Traffic increases during the weekday PM peak hour are expected to be negligible and well within the daily fluctuation of traffic.

MEPA THRESHOLDS

The site abuts and proposes to access a state highway (Route 53) and therefore will require a Highway Access Permit from MassDOT. Massachusetts Environmental Policy Act (MEPA) review of the project is required if the project requires a Highway Access Permit from MassDOT and exceeds one or more of the following review thresholds:

- Generation of 2,000 or more daily vehicle trips
- Creation of 300 or more new parking spaces
- Generation of 1,000 or more daily vehicle trips plus 150 or more parking spaces
- Creation of 5 or more acres of additional impervious surface
- Alteration of 25 or more acres of additional land
- Site is located within an Area of Critical Environmental Concern (ACEC)

As shown in Table 4, even excluding the daily volume of traffic currently generated by the Lodge of Elks club, the project will generate only 450 weekday daily vehicle trips, well below the above thresholds. The site plan shows a total of 133 parking spaces proposed on site. The transportation review thresholds are accordingly not exceeded. The total site area is less than 5 acres and the land thresholds regarding impervious surface and land alteration will accordingly not be exceeded. Finally, the site is not located within an ACEC as designated by the Secretary of Environmental Affairs. MEPA review of the project will therefore not be required.

SITE ACCESS

Access to the 147 senior housing units is proposed via two full access driveways, one on Pleasant Street and one on Washington Street. The driveways will be connected via a travel lane that circulates through the parking lot around the front of the building. It is recommended that all internal roadways be a minimum of 24 feet wide. It is further recommended that STOP signs (R1-

1) and stop lines be installed at both driveways. Since Washington Street is a state highway, the driveway should be 24 feet in width, provide 30-foot corner radii, and be constructed in accordance with MassDOT Standard Detail E 107.7.0 providing a cement concrete driveway apron that allows the sidewalk to continue across the driveway without the need for wheelchair ramps. Although not a state highway, the Pleasant Street driveway should be similarly constructed.

PARKING DEMAND

Parking demand for the site was estimated using the ITE *Parking Generation*, 5th Edition³. Based on LUC 252 for Senior Adult Housing – Attached, the ITE has found an average peak parking demand of 0.61 spaces per dwelling unit and an 85th percentile peak parking demand of 0.67 spaces per dwelling unit. Based on these studies, the proposed 147-unit senior housing facility is expected to have an average parking demand of 90 parking spaces and an 85th percentile peak parking demand of 99 spaces. The site plan proposes 133 parking spaces for the senior housing facility. This supply exceeds both the average and 85th percentile peak parking demand projections using the nationally-accepted guidelines of the ITE.

Parking demand was also estimated using empirical data supplied by Buildable Sites, LLC. Parking data were collected at 16 similar senior living facilities and parking ratios were developed. Based on the data, parking ratios ranged from 0.44 to 0.75 spaces per unit. Conservatively utilizing a parking ratio of 0.75 spaces per unit, 146 units would require 111 parking spaces. Since 133 parking spaces are proposed on site, demand can be met. The empirical parking data are included in the Appendix.

CONCLUSIONS

- The project will raze the existing Lodge of Elks club on site and a new three-story building containing 147 independent senior living units will be constructed. Access will be provided via two full access driveways, one on Washington Street and another on Pleasant Street.
- The development project is expected to generate 450 vehicle trips, with 29 vehicle trips (10 in and 19 out) occurring during the weekday AM peak hour and 37 vehicle trips (21 in and 16 out) occurring during the weekday PM peak hour.
- The site is currently occupied by the Lodge of Elks that is open Monday, Wednesday, Friday and Saturday from 3:00 PM to 11:00 PM. Since the lodge is not open during the weekday AM peak hour, all of the traffic generated by the senior living facility will be new

22029 TA 051822

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³ Parking Generation, 5th Edition; Institute of Transportation Engineers; Washington, DC; January 2019.

during this time period. However, based on traffic counts conducted at the existing driveways during the weekday PM peak period, the proposed senior living facility will generate only five trips more than the existing use.

- Traffic volume increases during the weekday AM peak hour are expected in the range of three to 16 additional vehicles on Washington Street and three to seven additional vehicles on Pleasant Street. These increases represent on average about one additional vehicle every three to 20 minutes. As the Lodge of Elks club is currently generating traffic during the weekday PM peak hour, volume increases are expected to be negligible during this time period and well within the daily fluctuation of traffic.
- It is recommended that all internal roadways through the parking lot be a minimum of 24 feet wide. STOP signs (R1-1) and stop lines should be installed at both driveway exits. Both driveways should be 24 feet in width, provide 30-foot corner radii, and be constructed in accordance with MassDOT Standard Detail E 107.7.0 providing a cement concrete driveway apron that allows the sidewalk to continue across the driveways without the need for wheelchair ramps.
- Assuming the removal of overgrown vegetation, the minimum required sight distances as well as the desired sight distances are exceeded at both site driveways on Pleasant Street and Washington Street and therefore safe operation can be expected.
- It is recommended that any proposed landscaping or signs in the vicinity of the driveway be kept low to the ground (less than two feet above street level) or set back sufficiently so as not to impede sight distances for drivers exiting the site.
- The site plan proposes 133 parking spaces for the senior living facility. This supply exceeds both average and 85th percentile peak parking demand projections using nationally-accepted guidelines.
- Empirical parking data were also collected at 16 similar senior living facilities. Based on these data, a maximum parking demand of 111 spaces is expected. Given that 133 parking spaces are proposed on site, the parking demand can be met.
- The site abuts and proposes to access a state highway (Route 53) and therefore will require a Highway Access Permit from MassDOT. MEPA review of the project however will not be required as none of the thresholds are exceeded.

Traffic Engineering and Consulting Services

APPENDIX

Traffic Count and Vehicle Speed Data Traffic Count Adjustment Data Trip Generation Calculations Journey-to-Work Data Buildable Sites Parking Data Location: Route 53 (Washington St) Location: West of Elks Driveway City/State: Weymouth, MA Direction: EB, 22029001

4/12/2022					> 12 -	> 15 -	> 18 -	> 21 -	> 24 -	> 27 -	> 30 -	> 33 -	> 36 -		
4/12/2022	0 - 3	> 3 - 6		> 9 - 12	15	18	21	24	27	30	33	36	39	> 39	
Time	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	Total
12:00 AM	0	0	0	0	1	0	3	2	3	0	4	1	0	0	14
1:00	0	0	0	0	0	0	3	3	0	0	0	0	0	1	7
2:00	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3
3:00	0	0	0	1	0	2	2	1	0	0	0	0	0	1	7
4:00	0	0	0	1	4	0	5	3	2	4	1	0	0	1	21
5:00	0	0	0	1	2	7	14	4	4	6	2	2	4	0	46
6:00	0	0	0	0	6	17	32	19	30	19	9	4	4	4	144
7:00	0	0	2	6	18	25	47	60	36	20	10	1	6	1	232
8:00	0	0	1	18	20	27	41	61	53	21	9	6	2	0	259
9:00	0	0	4	10	16	41	56	65	54	20	10	7	0	1	284
10:00	0	0	15	26	32	34	53	61	55	17	15	3	4	3	318
11:00	0	0	35	37	32	53	84	54	34	8	11	4	0	0	352
12:00 PM	0	0	2	10	24	50	77	74	54	23	12	7	2	0	335
1:00	0	0	3	10	41	37	77	64	41	29	17	8	3	1	331
2:00	0	0	17	26	49	60	80	68	45	22	8	2	1	1	379
3:00	0	0	28	18	43	52	86	71	38	17	9	1	0	1	364
4:00	0	0	18	17	39	57	95	86	34	19	7	4	2	0	378
5:00	0	0	6	16	40	27	98	67	43	27	13	1	3	2	343
6:00	0	0	0	4	13	36	61	81	47	26	6	2	3	0	279
7:00	0	0	0	0	10	22	48	65	42	13	9	0	2	2	213
8:00	0	0	0	0	6	20	31	42	32	14	2	2	1	1	151
9:00	0	0	0	0	8	15	22	25	21	6	1	2	0	0	100
10:00	0	0	0	1	3	11	15	13	12	7	2	0	0	0	64
11:00	0	0	0	0	5	7	9	6	7	4	4	0	0	2	44
Total	0	0	131	202	412	600	1041	996	687	322	161	57	37	22	4668

15th 50th 85th 95th Percentile Speed 15 20 27 31

Mean Speed (Average) 10 MPH Pace Speed 21.4 17-26 Number in Pace 2921 Percent in Pace 62.6% Number > 24 MPH 1286 Percent > 24 MPH 27.5%

22029001

Location: Route 53 (Washington St) Location: West of Elks Driveway City/State: Weymouth, MA Direction: EB,

Percent in Pace 60.7%

Percent > 24 MPH 26.7%

2502

Number > 24 MPH

Direction: EB,															
4/13/2022	0 - 3	> 3 - 6	> 6 - 9	> 9 - 12	> 12 - 15	> 15 - 18	> 18 - 21	> 21 - 24	> 24 - 27	> 27 - 30	> 30 - 33	> 33 - 36	> 36 - 39	> 39	
Time	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	Total
12:00 AM	0	0	0	0	3	3	5	0	2	0	2	0	0	0	15
1:00	0	0	0	0	1	2	3	1	0	1	1	0	1	0	10
2:00	0	0	0	0	0	0	1	2	2	0	0	0	0	0	5
3:00	0	0	0	0	1	1	0	1	1	1	0	0	1	0	6
4:00	0	0	0	0	2	4	5	3	2	3	1	0	1	1	22
5:00	0	0	0	0	5	11	8	9	9	7	2	1	0	2	54
6:00	0	0	1	4	10	16	19	30	34	18	3	3	2	4	144
7:00	0	0	0	3	18	35	43	48	37	18	17	5	3	3	230
8:00	0	0	5	5	36	35	53	67	38	30	17	5	4	0	295
9:00	0	0	1	4	14	33	61	69	56	26	10	5	3	1	283
10:00	0	0	24	20	20	47	67	46	39	26	8	1	5	1	304
11:00	0	0	19	25	30	49	77	78	30	22	9	5	2	0	346
12:00 PM	0	0	18	20	57	42	94	75	34	18	11	2	2	0	373
1:00	0	0	32	22	32	55	58	56	43	24	4	6	3	0	335
2:00	0	0	27	27	44	52	76	72	44	19	7	8	0	0	376
3:00	0	0	33	36	62	46	87	63	44	13	5	2	0	0	391
4:00	0	0	30	27	63	55	86	66	32	14	3	2	1	0	379
5:00	0	0	30	20	48	36	57	76	33	19	10	2	0	1	332
6:00	0	0	0	0	18	30	59	65	42	24	8	3	2	2	253
7:00	0	0	1	1	11	26	24	57	36	24	11	1	4	0	196
8:00	0	0	0	1	9	17	45	29	33	12	7	3	0	2	158
9:00	0	0	0	0	9	12	29	23	22	11	3	1	0	1	111
10:00	0	0	0	0	3	8	8	15	11	4	4	0	0	0	53
11:00	0	0	0	0	1	4	8	8	3	4	1	0	0	0	29
Total	0		221	215	497	619	973	959	627	338	144	55	34	18	4700
		P	ercentile	15th 14	50th 20	85th 26	95th 30								
	14	C	Speed		20	20	30								
		Speed (<i>F</i> MPH Pac		20.8 17-26											
	10 1		in Pace	2765											
			in Pace	58.8%											
	N	umber >		1216											
		ercent >		25.9%											
Grand Total	0	0	352	417	909	1219	2014	1955	1314	660	305	112	71	40	9368
Stats	0		ercentile	15th	50th	85th	95th	1900	1314	000	303	112		40	9300
Giais		F.	Speed	14	20	26	30								
	Mean	Speed (A		21.1	20	20	30								
		ореец (л ИРН Рас		17-26											
	.51		in Pace	5686											
		- 10111001		3000											

Location: Route 53 (Washington St) Location: West of Elks Driveway City/State: Weymouth, MA 22029001

Direction: WB,

4/12/2022	0 0	. 0 . 0		- 0 40	> 12 -	> 15 -	> 18 -	> 21 -	> 24 -	> 27 -	> 30 -	> 33 -	> 36 -	. 00	
	0 - 3	> 3 - 6		> 9 - 12	15	18	21	24	27	30	33	36	39	> 39	T-4-1
Time	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	Total
12:00 AM	0	0	0	0	0	0	0	0	4	4	7	2	1	1	19
1:00	0	0	0	0	0	0	0	1	2	0	5	0	0	0	8
2:00	0	0	0	0	0	0	0	1	1	1	1	1	0	1	6
3:00	0	0	0	0	0	0	0	1	2	3	1	1	2	1	11
4:00	0	0	0	0	0	0	0	0	6	7	4	3	3	0	23
5:00	0	0	0	0	0	0	8	4	19	22	12	8	4	3	80
6:00	0	0	2	4	2	2	7	20	43	44	38	16	8	1	187
7:00	0	0	2	15	10	16	12	60	76	79	45	15	4	6	340
8:00	0	0	4	12	6	7	25	46	66	72	48	7	7	2	302
9:00	0	0	2	5	5	14	23	43	80	38	27	10	3	7	257
10:00	0	0	6	6	4	12	32	47	73	56	27	7	3	0	273
11:00	0	0	18	10	22	29	57	68	70	45	26	3	2	0	350
12:00 PM	0	0	10	14	15	19	51	59	76	52	24	12	2	0	334
1:00	0	0	4	3	6	10	24	56	99	68	31	12	3	0	316
2:00	0	0	9	13	10	15	42	74	97	43	37	9	2	0	351
3:00	0	0	5	7	18	10	22	59	88	60	23	12	5	0	309
4:00	0	0	4	9	17	15	32	53	84	77	41	12	7	4	355
5:00	0	0	10	11	17	8	38	63	88	67	48	17	1	0	368
6:00	0	0	3	8	7	5	14	38	58	60	36	11	2	3	245
7:00	0	0	3	0	3	5	21	44	48	33	29	7	2	3	198
8:00	0	0	0	0	2	2	21	23	55	50	16	7	2	0	178
9:00	0	0	0	0	0	2	5	12	19	28	18	9	5	2	100
10:00	0	0	0	0	1	0	0	9	15	7	9	3	3	1	48
11:00	0	0	0	0	0	0	1	2	8	13	2	6	0	1	33
Total	0	0	82	117	145	171	435	783	1177	929	555	190	71	36	4691

15th 50th 85th 95th Percentile Speed 19 25 30 34

Mean Speed (Average) 10 MPH Pace Speed 25.9 21-30 Number in Pace 3070 Percent in Pace 65.4% Number > 24 MPH 2958 Percent > 24 MPH 63.1%

22029001

Location: Route 53 (Washington St) Location: West of Elks Driveway City/State: Weymouth, MA Direction: WB,

Number > 24 MPH 5950 Percent > 24 MPH 63.2%

Direction: WB,															
4/13/2022 Time	0 - 3 MPH	> 3 - 6 MPH	> 6 - 9 MPH	> 9 - 12 MPH	> 12 - 15 MPH	> 15 - 18 MPH	> 18 - 21	> 21 - 24 MPH	> 24 - 27 MPH	> 27 - 30 MPH	> 30 - 33 MPH	> 33 - 36 MPH	> 36 - 39 MPH	> 39	Total
12:00 AM	0	<u> </u>	0	0	0	0	MPH 0	0	2	<u> МРП</u> 5		0	1 NIPH	MPH 0	10tai 9
12.00 AW 1:00	0	0	0	0	0	0	0	2	1	2	1	2	1	1	12
2:00	0	0	0	0	0	1	0	0	0	2	1	0	1	0	5
3:00	0	0	0	0	0	0	0	0	0	1	3	1	1	1	7
4:00	0	0	0	0	0	0	0	1	6	7	5 5	1	1	0	21
5:00	0	0	0	0	0	0	3	4	18	13	10	7	5	2	62
6:00	0	0	1	0	12	4	9	25	36	48	24	16	9	4	188
7:00	0	0	0	12	9	8	18	36	68	67	42	19	10	5	294
8:00	0	0	11	15	13	13	31	36	62	61	40	14	6	0	302
9:00	0	0	2	3	7	11	35	47	88	83	39	12	3	2	332
10:00	0	0	4	8	7	7	27	52	69	44	34	15	3	3	273
11:00	0	0	4	4	12	9	33	70	80	67	38	6	4	3	330
12:00 PM	0	0	3	4	16	17	46	82	76	68	33	10	3	4	362
1:00	0	0	11	12	10	7	41	83	73	55	31	11	4	1	339
2:00	0	0	5	11	16	15	46	65	88	72	23	6	7	0	354
3:00	0	0	4	12	18	13	53	64	79	65	25	9	8	0	350
4:00	0	0	10	19	18	10	42	61	80	64	31	10	4	1	350
5:00	0	0	3	5	14	11	26	43	83	53	32	7	5	2	284
6:00	0	0	0	5	15	13	15	25	76	55	52	15	5	1	277
7:00	0	0	3	1	3	2	19	38	66	47	28	4	4	1	216
8:00	0	0	0	0	2	4	11	26	38	38	22	3	10	0	154
9:00	0	0	0	0	0	0	7	12	35	25	20	8	5	0	112
10:00	0	0	0	0	0	0	2	2	15	17	15	4	2	2	59
11:00	0	0	0	0	0	0	2	3	4	12	8	1	1	1	32
Total	0	0	61	111	172	145	466	777	1143	971	560	181	103	34	4724
		P	ercentile	15th	50th	85th	95th								
		-	Speed	19	25	30	34								
	Mean	Speed (A	•	26.0											
		л ИРН Рас		21-30											
			in Pace	3075											
		Percent	t in Pace	65.1%											
	N	umber >		2992											
		ercent >		63.3%											
Grand Total	0	0	143	228	317	316	901	1560	2320	1900	1115	371	174	70	9415
Stats		Р	ercentile	15th	50th	85th	95th								
			Speed	19	25	30	34								
	Mean	Speed (A	Average)	25.9											
		лРН Pac		21-30											
		Number	in Pace	6145											
		Percent	t in Pace	65.3%											
			04.4511	-0-0											

Location: Route 53 (Washington St) Location: West of Elks Driveway City/State: Weymouth, MA Direction: Combined

22029001

4/12/2022					> 12 -	> 15 -	> 18 -	> 21 -	> 24 -	> 27 -	> 30 -	> 33 -	> 36 -		
	0 - 3	> 3 - 6		> 9 - 12	15	18	21	24	27	30	33	36	39	> 39	
Time	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	Total
12:00 AM	0	0	0	0	1	0	3	2	7	4	11	3	1	1	33
1:00	0	0	0	0	0	0	3	4	2	0	5	0	0	1	15
2:00	0	0	0	0	0	0	2	2	1	1	1	1	0	1	9
3:00	0	0	0	1	0	2	2	2	2	3	1	1	2	2	18
4:00	0	0	0	1	4	0	5	3	8	11	5	3	3	1	44
5:00	0	0	0	1	2	7	22	8	23	28	14	10	8	3	126
6:00	0	0	2	4	8	19	39	39	73	63	47	20	12	5	331
7:00	0	0	4	21	28	41	59	120	112	99	55	16	10	7	572
8:00	0	0	5	30	26	34	66	107	119	93	57	13	9	2	561
9:00	0	0	6	15	21	55	79	108	134	58	37	17	3	8	541
10:00	0	0	21	32	36	46	85	108	128	73	42	10	7	3	591
11:00	0	0	53	47	54	82	141	122	104	53	37	7	2	0	702
12:00 PM	0	0	12	24	39	69	128	133	130	75	36	19	4	0	669
1:00	0	0	7	13	47	47	101	120	140	97	48	20	6	1	647
2:00	0	0	26	39	59	75	122	142	142	65	45	11	3	1	730
3:00	0	0	33	25	61	62	108	130	126	77	32	13	5	1	673
4:00	0	0	22	26	56	72	127	139	118	96	48	16	9	4	733
5:00	0	0	16	27	57	35	136	130	131	94	61	18	4	2	711
6:00	0	0	3	12	20	41	75	119	105	86	42	13	5	3	524
7:00	0	0	3	0	13	27	69	109	90	46	38	7	4	5	411
8:00	0	0	0	0	8	22	52	65	87	64	18	9	3	1	329
9:00	0	0	0	0	8	17	27	37	40	34	19	11	5	2	200
10:00	0	0	0	1	4	11	15	22	27	14	11	3	3	1	112
11:00	0	0	0	0	5	7	10	8	15	17	6	6	0	3	77
Total	0	0	213	319	557	771	1476	1779	1864	1251	716	247	108	58	9359
		D	orcontilo	15th	50th	95th	05th								

Percentile 15th 50th 85th 95th Speed 16 23 29 33

Mean Speed (Average) 10 MPH Pace Speed 23.7 18-27 Number in Pace 5520 Percent in Pace 59.0% Number > 24 MPH 4244 Percent > 24 MPH 45.4%

22029001

Location: Route 53 (Washington St) Location: West of Elks Driveway City/State: Weymouth, MA Direction: Combined

Percent > 24 MPH 45.0%

Direction: Com	pined														
4/13/2022	0 - 3	> 3 - 6	> 6 - 9	> 9 - 12	> 12 - 15	> 15 - 18	> 18 - 21	> 21 - 24	> 24 - 27	> 27 - 30	> 30 - 33	> 33 - 36	> 36 - 39	> 39	_
Time	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	MPH	Total
12:00 AM	0	0	0	0	3	3	5	0	4	5	3	0	1	0	24
1:00	0	0	0	0	1	2	3	3	1	3	4	2	2	1	22
2:00	0	0	0	0	0	1	1	2	2	2	1	0	1	0	10
3:00	0	0	0	0	1	1	0	1	1	2	3	1	2	1	13
4:00	0	0	0	0	2	4	5	4	8	10	6	1	2	1	43
5:00	0	0	0	0	5	11	11	13	27	20	12	8	5	4	116
6:00	0	0	2	4	22	20	28	55	70	66	27	19	11	8	332
7:00	0	0	0	15	27	43	61	84	105	85	59	24	13	8	524
8:00	0	0	16	20	49	48	84	103	100	91	57	19	10	0	597
9:00	0	0	3	7	21	44	96	116	144	109	49	17	6	3	615
10:00	0	0	28	28	27	54	94	98	108	70	42	16	8	4	577
11:00	0	0	23	29	42	58	110	148	110	89	47	11	6	3	676
12:00 PM	0	0	21	24	73	59	140	157	110	86	44	12	5	4	735
1:00	0	0	43	34	42	62	99	139	116	79	35	17	7	1	674
2:00	0	0	32	38	60	67	122	137	132	91	30	14	7	0	730
3:00	0	0	37	48	80	59	140	127	123	78	30	11	8	0	741
4:00	0	0	40	46	81	65	128	127	112	78	34	12	5	1	729
5:00	0	0	33	25	62	47	83	119	116	72	42	9	5	3	616
6:00	0	0	0	5	33	43	74	90	118	79	60	18	7	3	530
7:00	0	0	4	2	14	28	43	95	102	71	39	5	8	1	412
8:00	0	0	0	1	11	21	56	55	71	50	29	6	10	2	312
9:00	0	0	0	0	9	12	36	35	57	36	23	9	5	1	223
10:00	0	0	0	0	3	8 4	10	17	26 7	21	19	4	2	2	112
11:00 Total	0	0	0 282	0 326	1 669	764	10 1439	11 1736	1770	16 1309	9 704	236	1 137	<u>1</u> 52	9424
Total	U		ercentile	15th	50th	85th	95th	1730	1770	1309	704	230	137	52	9424
		Р	Speed	15.11	23	29	33								
	Moon	Speed (A		23.4	23	29	33								
		MPH Pac		18-27											
	101		in Pace	5363											
			t in Pace	56.9%											
	N	lumber >		4208											
		Percent >		44.6%											
Grand Total	0		495	645	1226	1535	2915	3515	3634	2560	1420	483	245	110	18783
Stats			ercentile	15th	50th	85th	95th	0010	0001	2000		.50	270		10100
2.2.0		•	Speed	16	23	29	33								
	Mean	Speed (A		23.5			30								
		MPH Pac		18-27											
			in Pace	10883											
			t in Pace	57.9%											
	N	lumber >		8452											
	-		OA MOLL	45.00/											

Location : Route 53 (Washington St) Location : West of Elks Driveway City/State: Weymouth, MA 22029001

4/12/2022	EB,		Hour T	otals	WE	3	Hour		Combined	I Totals
Time		Afternoon	Morning	Afternon	Morning	Afternoon	Morning	Afternoon		Afternoon
12:00	6	97	Wiching	7110111011	6	86	Werning	71101110011	worming	71101110011
12:15	3	80			5	81				
12:30	3	79			3	77				
12:45	2	79	14	335	5	90	19	334	33	669
1:00	1	93	• •	333	4	80				
1:15	5	97			1	70				
1:30	0	68			2	89				
1:45	1	73	7	331	1	77	8	316	15	647
2:00	1	82			1	92				
2:15	1	98			2	83				
2:30	1	97			1	91				
2:45	0	102	3	379	2	85	6	351	9	730
3:00	2	92			0	79				
3:15	1	98			4	71				
3:30	3	88			4	77				
3:45	1	86	7	364	3	82	11	309	18	673
4:00	4	99			7	93				
4:15	4	106			5	89				
4:30	5	69			1	96				
4:45	8	104	21	378	10	77	23	355	44	733
5:00	6	99			12	105				
5:15	10	79			18	88				
5:30	10	92			25	95				
5:45	20	73	46	343	25	80	80	368	126	711
6:00	18	85			41	60				
6:15	29	74			55	57				
6:30	43	63			36	65				
6:45	54	57	144	279	55	63	187	245	331	524
7:00	50	60			62	62				
7:15	67	55			74	46				
7:30	57	57			94	44				
7:45	58	41	232	213	110	46	340	198	572	411
8:00	65	49			75	45				
8:15	63	38			72	46				
8:30	67	29			79	59				
8:45	64	35	259	151	76	28	302	178	561	329
9:00	74	32			75	26				
9:15	82	27			64	25				
9:30	67	31			57	20				
9:45	61	10	284	100	61	29	257	100	541	200
10:00	75	18			51	15				
10:15	77	9			66	15				
10:30	74	20			74	11				
10:45	92	17	318	64	82	7	273	48	591	112
11:00	117	14			82	13				
11:15	75	10			89	5				
11:30	74	12			89	8				
11:45	86	8	352	44	90	7	350	33	702	77
Total	1687	2981			1856	2835			3543	5816
Percent	36.1%	63.9%			39.6%	60.4%			37.9%	62.1%

2

Location: Route 53 (Washington St) Location: West of Elks Driveway City/State: Weymouth, MA 22029001

4/13/2022	mouth, MA Ef	3	Hour To	ntals	WB		Hour T	ntals	Combined	Totals
4/13/2022 Time	Morning	Afternoon	Morning	Afternon	Morning	, Afternoon	Morning	Afternoon		Afternoon
12:00	3	98	Iviorning	7 (10111011	5	92	Worring	7 (I COTTIONT	Worming	, attornoon
12:15	5	86			2	99				
12:30	4	91			1	80				
12:45	3	98	15	373	1	91	9	362	24	735
1:00	4	90			7	86				
1:15	3	80			1	81				
1:30	3	79			3	90				
1:45	0	86	10	335	1	82	12	339	22	674
2:00	0	101			1	96				
2:15	1	97			2	93				
2:30	2	88			1	89				
2:45	2	90	5	376	1	76	5	354	10	730
3:00	4	89			2	93				
3:15	0	100			2	80				
3:30	1	95			2	90				
3:45	1	107	6	391	1	87	7	350	13	741
4:00	4	95			5	77				
4:15	8	88			1	92				
4:30	4	101			4	93				
4:45	6	95	22	379	11	88	21	350	43	729
5:00	7	90			11	71				
5:15	11	72			16	77				
5:30	10	82	F.4	000	22	74	00	00.4	440	040
5:45	26	88	54	332	13	62	62	284	116	616
6:00	15	66			35	72				
6:15	30	62			48	82				
6:30	45 54	62 63	144	253	55 50	60	188	277	332	530
6:45 7:00	51	49	144	255	77	63 61	100	277	332	550
7:15	58	56			70	46				
7:30	60	53			71	50				
7:45	61	38	230	196	76	59	294	216	524	412
8:00	57	48	250	190	75	45	234	210	324	412
8:15	69	42			89	34				
8:30	92	29			73	40				
8:45	77	39	295	158	65	35	302	154	597	312
9:00	73	24	200	100	73	40	002	104	001	012
9:15	68	35			99	32				
9:30	76	30			73	24				
9:45	66	22	283	111	87	16	332	112	615	223
10:00	72	19			61	28				
10:15	88	11			66	11				
10:30	71	8			66	11				
10:45	73	15	304	53	80	9	273	59	577	112
11:00	88	7			85	12				
11:15	106	9			76	11				
11:30	78	9			78	7				
11:45	74	4	346	29	91	2	330	32	676	61
Total	1714	2986			1835	2889			3549	5875
Percent	36.5%	63.5%			38.8%	61.2%			37.7%	62.3%
Grand Total	3401	5967			3691	5724			7092	11691
Percent	36.3%	63.7%			39.2%	60.8%			37.8%	62.2%
ADT		ADT: 9,392	Α	ADT: 9,392						

22029001

Location : Route 53 (Washington St) Location : West of Elks Driveway City/State: Weymouth, MA

Week Average EB, WB,	14	8 10	4	6 9	22 22		144 188		277 302																	204 207 154 166 106 106 58 54 36 32 4683 4708	91	10 10 11	100	91		16	10 10 10 10 10 10 10 10 10 10 10 10 10 1
WB,	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1	k	* *	k * *	k * * *	* * * *	* * * * * 0	* * * * * •	* * * * * 0	* * * * * 0	* * * * * 0	* * * * * 0	* * * * * 0	* * * * * 0
Sunday EB, M	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	* *	* * *	* * * *	* * * * 0	* * * *	* * * *	* * * * 0	* * * *	* * * *	* * * *	* * * * 00
Saturday EB, WB,	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	* *	* * *	* * * *	* * * * 0	0		0				
WB,	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	* *	* * *	* * * *	* * * * 0	* * * * 0	* * * * 0	* * * * 0	* * * * 0	* * * * 0	* * * * 0	* * * * 0
Friday EB, V	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	* *	* * *	* * * *	* * * * 0	* * * * 0	* * * * 0	* * * * 0	* * * * 0	* * * *	* * * * 0	* * * * 0
B,	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	c c	: *	. * *	: * * *	* * * * 0	: * * * 0	: * * * 0	: * * * 0	: * * * 0	: * * * 0	: * * * 0	: * * * 0
Thursday EB, M	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	* *	* * *	* * * 0	* * * 0	* * * 0	* * * 0	* * * 0	* * * 0	* * * 0	* * * 0
day WB,	6	12	2	7	21	62	188	294	302	332	273	330	362	339	354	320	320	284	277	216	154		112	112	112 59 32	74							
Wednesday EB, WB,	15	10	2	9	22	54	144	230	295	283	304	346	373	335	376	391	379	332	253	196	158)	17 5	111	111 53 29	111 53 29 4700	111 53 29 4700 9424	53 29 4700 9424 11:00	1 (3)	1 (3)			1 (3) 1 (3)
ay WB,	19	∞	9	7	23	80	187	340	302	257	273	320	334	316	351	309	355	368	242	198	178	_ :	100	100	100 48 33	- 1 94	46	1 4 11	94 11	4 1 2 2	11 11 5 5 5	4 46 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7 46 46 46 46 46 46 46 4
Tuesday EB, V	14	7	က	7	21	46	144	232	259	284	318	352	335	331	379	364	378	343	279	213	151	-	100	00 49	100 64 44	100 64 44 4668	100 64 44 4668 9359	100 64 44 4668 9359 11:00	100 64 44 4668 9359 11:00	100 64 44 4668 4668 11:00 352 2:00	100 64 44 44 4668 9359 11:00 352 2:00 379	100 64 44 44 468 9359 11:00 352 2:00 379 9359	100 64 44 44 4668 9359 11:00 352 2:00 379 9359
ıy WB,	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	_	*	* *	* * *	* * * 0	* * * 0	* * * 0	* * * 0	* * * 0	* * * 0	* * * 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Monday EB,	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	+	t	* *	. * *	* * *	* * * * 0	0		* * * * 0	. * * * 0	. * * * 0		. * * * 0 0 0 0
4/11/2022 Time	12:00 AM	1:00	2:00	3:00	4:00	2:00	9:00	7:00	8:00	00:6	10:00	11:00	12:00 PM	1:00	2:00	3:00	4:00	2:00	00:9	7:00		8:00	00:8 6:00	8:00 9:00 10:00	8:00 9:00 10:00 11:00	8:00 9:00 10:00 11:00 Total	8:00 9:00 10:00 11:00 Total Day	8:00 9:00 10:00 11:00 Total Day AM Peak	8:00 9:00 10:00 11:00 Total Day AM Peak Volume	8:00 9:00 10:00 11:00 Total Day AM Peak Volume PM Peak	8:00 9:00 10:00 11:00 Total Day AM Peak Volume PM Peak	8:00 9:00 10:00 11:00 Total Day AM Peak Volume PM Peak Volume Comb Total	8::00 9::00 10::00 11::00 Total Day AM Peak Volume PM Peak Volume Comb Total

1

Location: Pleasant Street 22029002

Location : South of Elks Driveway City/State: Weymouth, MA

Direction: SB,

	4/6/2022	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	
_	Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	Total
	12:00 AM	0	0	1	11	7	3	0	1	0	0	0	0	0	23
	1:00	0	0	3	4	4	0	0	0	0	0	0	0	0	11
	2:00	0	0	2	5	0	0	0	0	0	0	0	0	0	7
	3:00	0	0	0	2	2	3	1	0	0	0	0	0	0	8
	4:00	0	0	1	4	13	4	0	0	0	0	0	0	0	22
	5:00	1	0	7	37	35	6	1	0	0	0	0	0	0	87
	6:00	0	2	13	90	144	32	4	1	2	0	0	0	0	288
	7:00	0	2	30	225	270	52	0	0	0	0	0	0	0	579
	8:00	1	5		180		73	3	0	0	0	0	0	0	588
	9:00	0	2	45	168	208		0	0	0	0	0	0	0	461
	10:00	0	8	11	162			0	0	0	0	0	0	0	438
	11:00	1	2	8	155	186	35	1	0	0	0	0	0	0	388
	12:00 PM	1	10		161	216		2	1	0	0	0	0	0	449
	1:00	2	3	48	216	178	35	2	0	1	0	0	0	0	485
	2:00	2	5	39	199	204	45	1	0	0	0	0	0	0	495
	3:00	0	14	22	228	330	47	2	0	0	0	0	0	0	643
	4:00	0	0	14	211	308	69	9	0	0	0	0	0	0	611
	5:00	0	6	23	137	334	76	3	1	0	0	0	0	0	580
	6:00	0	2	14	151	205	47	6	1	0	0	0	0	0	426
	7:00	1	2	10	142	160	32	1	1	0	0	0	0	0	349
	8:00	2	3	6	98	105	33	0	0	0	0	0	0	0	247
	9:00	2	5	10	57	76	19	1	0	0	0	0	0	0	170
	10:00	2	5	2	48	47	4	1	0	0	0	0	0	0	109
_	11:00	0	1	4	19		7	0	0	0	0		0	0	53
_	Total	15		372	2710	3555	741	38	6	3	0	0	0	0	7517

Percentile 15th 50th 85th 95th Speed 27 30 34 37

Mean Speed (Average) 10 MPH Pace Speed 30.6 25-34 Number in Pace 6201 Percent in Pace 82.5% Number > 30 MPH 4343 Percent > 30 MPH 57.8%

2

Location: Pleasant Street
Location: South of Elks Driveway
City/State: Weymouth, MA
Direction: SB, 22029002

Direction: 5B,														
4/7/2022	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	Total
12:00 AM	0	0	3	11	11	3	1	0	0	0	0	0	0	29
1:00	0	0		3			0	0	0	0	0	0	0	11
2:00	0	0	2	4	2		0	0	0	0	0	0	0	9
3:00	0	0	0	1	2	2	0	0	0	0	0	0	0	5
4:00	0	0	0	3			0	0	0	0		0	0	13
5:00	0	0		38			1		0	0			0	99
6:00	0		10	104					0	0			0	308
7:00	7			161	198			0	0	0		0	0	594
8:00	1	3		205				0	0	0	0	0	0	602
9:00	0	2	21	186		58		0	0	0	0	0	0	482
10:00	0		10	142					0	0			0	396
11:00	0		11	131	219		6		0	0			0	412
12:00 PM	2		31	166			5	0	0	0	0	0	0	485
1:00	2	3	20	187				2	0	0	0	0	0	539
2:00	1	3	17	205				1	0	0	0	0	0	542
3:00	1	3		255	337	62	3	0	0	0	0	0	0	684
4:00	1	15	35	209	348	61	3	0	0	0	0	0	0	672
5:00	68	20	29	235					0	0	0	0	0	603
6:00	1	6	8	156	277	57	2	0	0	0	0	0	0	507
7:00	1	1	12	141	177	37	3	0	0	0	0	0	0	372
8:00	2	3	10	87	141	24		0	0	0	0	0	0	273
9:00	6	8	3	58			1	0	0	0	0	0	0	187
10:00	0	4	8	41	49		1	0	0	0	0	0	0	110
11:00	1	6		21	27		1	0		0			0	70
Total	94		390	2750			69		0	0	0	0	0	8004
		F	Percentile	15th										
			Speed	27		34	37							
		n Speed (30.3										
	10	MPH Pa	•	25-34										
			er in Pace	6429										
			nt in Pace	80.3%										
		Number >		4599										
		Percent >		57.5%										
Grand Total	109			5460		1518	107		3	0	0	0	0	15521
Stats		F	Percentile	15th			95th							
			Speed	27		34	37							
		n Speed (30.5										
	10	MPH Pa	•	25-34										
			er in Pace	12630										
		D	-+ i- D	04 40/										

Percent in Pace 81.4%

Percent > 30 MPH 57.6%

8942

Number > 30 MPH

Location: Pleasant Street 22029002 Location : South of Elks Driveway City/State: Weymouth, MA

Direction: NB,

_															
	4/6/2022	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	
	Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	Total
_	12:00 AM	0	0	0	5	8	11	2	0	0	0	0	0	0	26
	1:00	0	0	1	0	4	3	1	0	0	0	0	0	0	9
	2:00	0	0	0	2	3	1	1	0	0	0	0	0	0	7
	3:00	0	0	0	0	4	0	1	1	0	0	0	0	0	6
	4:00	0	0	0	3	5	1	2	0	0	0	0	0	0	11
	5:00	0	0	1	9	19	19	11	1	1	0	0	0	0	61
	6:00	7	11	46	71	97	49	13	0	0	0	2	1	0	297
	7:00	37	69	109	183	175	66	6	0	0	0	1	0	0	646
	8:00	11	13	63	182	199	92	7	0	0	0	1	0	0	568
	9:00	11	17	41	111	196	53	3	1	0	0	1	0	0	434
	10:00	3	3	24	94	176	72	4	0	0	0	0	0	0	376
	11:00	1	14	41	134	206	67	5	0	0	0	0	0	0	468
	12:00 PM	1	33	31	135	203	75	11	0	0	0	0	0	0	489
	1:00	0	7	27	124	181	60	10	1	0	0	0	0	0	410
	2:00	94	91	89	152	145	48	3	1	0	0	0	0	0	623
	3:00	43	39	65	192	188	49	6	0	1	0	0	0	1	584
	4:00	14	28	70	201	254	54	4	0	0	0	0	0	0	625
	5:00	23	49	91	193	247	82	8	0	0	0	0	0	0	693
	6:00	2	6	36	109	236	78	13	3	0	0	0	0	0	483
	7:00	3	17	20	85	179	58	11	2	0	0	0	0	0	375
	8:00	0	2	5	49	116	61	10	1	0	0	0	0	0	244
	9:00	0	0	3	16	96	45	7	0	0	0	0	0	0	167
	10:00	0	0	0	12	47	24	3	1	0	0	0	0	0	87
	11:00	0	0	1	11	27	20	6	2	0	1	0	0	0	68
Ξ	Total	250			2073	3011	1088	148	14	2	1	5	1	1	7757
				Porcontilo	15th	50th	95th	05th							

Percentile 15th 50th 85th 95th Speed 24 30 35 38

Mean Speed (Average) 10 MPH Pace Speed 29.6 25-34 Number in Pace 5039 Percent in Pace 65.0% Number > 30 MPH 4271 Percent > 30 MPH 55.1%

Location: Pleasant Street Location: South of Elks Driveway City/State: Weymouth, MA Direction: NB, 22029002

Number > 30 MPH

Percent > 30 MPH 54.2%

8709

Di	rection: NB,														
	4/7/2022	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	
_	Time	MPH		25 MPH	30 MPH	35 MPH	40 MPH						70 MPH	MPH	Total
	12:00 AM	0	0	0	3	14	12	0	0	0	0	0	0	0	29
	1:00	0	0	1	0	3	4	3	0	0	0	0	0	0	11
	2:00	0	0	2	2	1	3	2	0	0	0	0	0	0	10
	3:00	0	0	0	0	4	2	1	0	0	0	0	0	0	7
	4:00	0	0	0	2	11	3	1	0	0	0	0	0	0	17
	5:00	0		2	12	18	31	13	0	1	0	0	0	0	77
	6:00	1	9	42	78	101	56	7	2	1	0	0	1	0	298
	7:00	26		115	184	181	58	6	2	0	0	0	0	0	614
	8:00	12		87	136	227	91	9	1	0	1	1	0	0	603
	9:00	14	21	51	97	183	77	7	0	1	1	0	0	0	452
	10:00	5		35	120	144	82	6	2	0	0	0	1	0	399
	11:00	5	10	37	130	197	88	8	1	0	1	0	0	0	477
	12:00 PM	2		47	125	221	76	10	0	0	1	2	0	0	491
	1:00	9		59	138	202	64	5	3	0	2	0	0	1	499
	2:00	50		157	161	169	45	5	2	0	3	0	0	0	670
	3:00	40		113	193	181	78	3	1	4	1	0	1	0	654
	4:00	21	24	75	213	215	72	5	1	0	0	1	0	0	627
	5:00	53		140	183	155	69	4	1	1	0	0	0	0	668
	6:00	9		67	151	224	85	14	1	2	1	1	0	0	581
	7:00	6	9	19	129	208	82	9	3	0	0	0	0	0	465
	8:00	0	0	5	62	138	78	8	1	0	0	0	0	0	292
	9:00	0	0	5	33	118	51	5	0	0	0	0	0	0	212
	10:00	0	0	2	21	47	25	3	0	0	0	0	0	0	98
_	11:00	0		0	6	33	23	3	0	0	0	0	0	0	65
_	Total	253		1061	2179	2995	1255	137	21	10	11	5	3	1	8316
			F	Percentile	15th	50th	85th	95th							
				Speed	24	30	35	38							
			n Speed (29.6										
		10	MPH Pa	•	25-34										
				er in Pace	5135										
				nt in Pace	61.7%										
			Number >		4438										
_			Percent >		53.4%										
_	Grand Total	503		1825	4252	6006	2343	285	35	12	12	10	4	2	16073
	Stats		F	Percentile	15th	50th	85th	95th							
				Speed	24	30	35	38							
			n Speed (29.6										
		10	MPH Pa		25-34										
				r in Pace	10174										
			Percer	nt in Pace	63.3%										

5

Location: Pleasant Street 22029002 Location: South of Elks Driveway

City/State: Weymouth, MA Direction: Combined

	4/6/2022	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	
_	Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	Total
	12:00 AM	0	0	1	16	15	14	2	1	0	0	0	0	0	49
	1:00	0	0	4	4	8	3	1	0	0	0	0	0	0	20
	2:00	0	0	2	7	3	1	1	0	0	0	0	0	0	14
	3:00	0	0	0	2	6	3	2	1	0	0	0	0	0	14
	4:00	0	0	1	7	18	5	2	0	0	0	0	0	0	33
	5:00	1	0	8	46	54	25	12	1	1	0	0	0	0	148
	6:00	7	13	59	161	241	81	17	1	2	0	2	1	0	585
	7:00	37	71	139	408	445	118	6	0	0	0	1	0	0	1225
	8:00	12	18	100	362	488	165	10	0	0	0	1	0	0	1156
	9:00	11	19	86	279	404	91	3	1	0	0	1	0	0	895
	10:00	3	11	35	256	388	117	4	0	0	0	0	0	0	814
	11:00	2	16	49	289	392	102	6	0	0	0	0	0	0	856
	12:00 PM	2	43	53	296	419	111	13	1	0	0	0	0	0	938
	1:00	2	10	75	340	359	95	12	1	1	0	0	0	0	895
	2:00	96	96	128	351	349	93	4	1	0	0	0	0	0	1118
	3:00	43	53	87	420	518	96	8	0	1	0	0	0	1	1227
	4:00	14	28	84	412	562	123	13	0	0	0	0	0	0	1236
	5:00	23	55	114	330	581	158	11	1	0	0	0	0	0	1273
	6:00	2	8	50	260	441	125	19	4	0	0	0	0	0	909
	7:00	4	19	30	227	339	90	12	3	0	0	0	0	0	724
	8:00	2	5	11	147	221	94	10	1	0	0	0	0	0	491
	9:00	2	5	13	73	172	64	8	0	0	0	0	0	0	337
	10:00	2	5	2	60	94	28	4	1	0	0	0	0	0	196
	11:00	0	1	5	30	49	27	6	2	0	1	0	0	0	121
	Total	265	476	1136	4783	6566	1829	186	20	5	1	5	1	1	15274
				Percentile	15th	50th	85th	95th							

Percentile 15th 50th 85th 95th Speed 26 30 35 37

Mean Speed (Average) 10 MPH Pace Speed 30.1 25-34 Number in Pace 11240 Percent in Pace 73.6% Number > 30 MPH 8615 Percent > 30 MPH 56.4%

Location: Pleasant Street Location: South of Elks Driveway

City/State: Weymouth, MA

Direction: Combined 4/7/2022 > 40 -0 - 15 > 30 -> 35 -> 45 -> 50 -> 55 -> 60 -> 70 > 15 -> 20 -> 25 -> 65 -Time MPH 20 MPH 25 MPH 30 MPH 35 MPH 40 MPH 45 MPH 50 MPH 55 MPH 60 MPH 65 MPH 70 MPH MPH Total 12:00 AM 1:00 2:00 3:00 4:00 5:00 6:00 n 7:00 8:00 9:00 10:00 11:00 12:00 PM 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 Total Percentile 15th 50th 85th 95th Speed Mean Speed (Average) 29.9 10 MPH Pace Speed 25-34 Number in Pace Percent in Pace 70.9% Number > 30 MPH Percent > 30 MPH 55.4% **Grand Total** Stats Percentile 15th 50th 85th 95th Speed

Mean Speed (Average) 30.0 10 MPH Pace Speed 25-34 Number in Pace Percent in Pace 72.2% Number > 30 MPH Percent > 30 MPH 55.9% Location: Pleasant Street 22029002

Location: Pleasant Street
Location: South of Elks Driveway
City/State: Weymouth, MA

4/6/2022	SE	2	Hour T	otale	NE	2	Hour 1	Totale	Combine	d Totals
4/0/2022 Time	Morning	Afternoon	Morning	Afternon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	2	110	Morning	Aitemon	6	127	Morning	Aitemoon	Worning	Aitemoon
12:15	12	111			6	137				
12:30	5	112			9	111				
12:45	4	116	23	449	5	114	26	489	49	938
1:00	1	132	20	440	1	90	20	400	-10	000
1:15	4	123			1	106				
1:30	4	126			6	110				
1:45	2	104	11	485	1	104	9	410	20	895
2:00	1	116			0	104	-			
2:15	0	138			3	104				
2:30	5	113			1	198				
2:45	1	128	7	495	3	217	7	623	14	1118
3:00	2	144			2	149				
3:15	3	153			0	123				
3:30	2	176			1	164				
3:45	1	170	8	643	3	148	6	584	14	1227
4:00	3	145			4	170				
4:15	4	149			1	161				
4:30	4	148			1	150				
4:45	11	169	22	611	5	144	11	625	33	1236
5:00	7	135			5	182				
5:15	19	174			15	192				
5:30	20	156			12	168				
5:45	41	115	87	580	29	151	61	693	148	1273
6:00	38	98			37	131				
6:15	58	98			39	121				
6:30	70	128			90	123				
6:45	122	102	288	426	131	108	297	483	585	909
7:00	174	91			117	95				
7:15	150	94			140	109				
7:30	130	80			195	91				
7:45	125	84	579	349	194	80	646	375	1225	724
8:00	166	62			163	57				
8:15	146	57			145	73				
8:30	141	63			135	59				
8:45	135	65	588	247	125	55	568	244	1156	491
9:00	133	51			107	47				
9:15	112	58			117	43				
9:30	111	34			81	49				
9:45	105	27	461	170	129	28	434	167	895	337
10:00	114	39			98	17				
10:15	97	30			106	27				
10:30	109	14			88	23				
10:45	118	26	438	109	84	20	376	87	814	196
11:00	90	7			111	23				
11:15	85	17			133	19				
11:30	105	20	000	50	117	15	400	22	050	401
11:45	108	9	388	53	107	11	468	68	856	121
Total	2900	4617			2909	4848			5809	9465
Percent	38.6%	61.4%			37.5%	62.5%			38.0%	62.0%

2

Location: Pleasant Street Location: South of Elks Driveway City/State: Weymouth, MA 22029002

4/7/2022	mouth, MA SB,		Hour Tota	ale	NB,		Hour Tota	ale	Combined	Totale
Time	•	Afternoon		iis fternon		Afternoon		fternoon		Afternoon
12:00	9	120	Wierrining 7		8	117	Worming 70	Itomoon	Worming 7	titorrio ori
12:15	6	108			7	129				
12:30	8	123			10	116				
12:45	6	134	29	485	4	129	29	491	58	976
1:00	8	124			4	107				
1:15	1	148			3	121				
1:30	2	131			2	119				
1:45	0	136	11	539	2	152	11	499	22	1038
2:00	3	135			3	129				
2:15	1	142			2	127				
2:30	4	115			1	198				
2:45	1	150	9	542	4	216	10	670	19	1212
3:00	0	153			1	149				
3:15	2	158			3	150				
3:30	2	176			1	158				
3:45	1	197	5	684	2	197	7	654	12	1338
4:00	2	163			2	151				
4:15	2	178			3	166				
4:30	3	146			6	158				
4:45	6	185	13	672	6	152	17	627	30	1299
5:00	11	163			9	142				
5:15	17	146			17	150				
5:30	26	148			23	185				
5:45	45	146	99	603	28	191	77	668	176	1271
6:00	45	139			42	167				
6:15	59	110			45	153				
6:30	83	120			94	129				
6:45	121	138	308	507	117	132	298	581	606	1088
7:00	171	87			96	99				
7:15	166	99			155	164				
7:30	118	88			178	95				
7:45	139	98	594	372	185	107	614	465	1208	837
8:00	140	74			168	82				
8:15	151	73			157	83				
8:30	165	67			137	62				
8:45	146	59	602	273	141	65	603	292	1205	565
9:00	144	48			122	55				
9:15	139	52			120	67				
9:30	94	42			103	46				
9:45	105	45	482	187	107	44	452	212	934	399
10:00	92	33			92	27				
10:15	100	29			106	24				
10:30	100	22			103	21				
10:45	104	26	396	110	98	26	399	98	795	208
11:00	109	23			117	25				
11:15	96	16			109	20				
11:30	96	17			121	9				
11:45	111	14	412	70	130	11	477	65	889	135
Total	2960	5044			2994	5322			5954	10366
Percent	37.0%	63.0%			36.0%	64.0%			36.5%	63.5%
Grand Total	5860	9661			5903	10170			11763	19831
Percent	37.8%	62.2%			36.7%	63.3%			37.2%	62.8%
ADT	AD	DT: 15,797 [']	AAD ⁻	Г: 15,797 [']		•				

22029002

Location : Pleasant Street
Location : South of Elks Driveway
City/State: Weymouth, MA

4/4/2022	Monday			Tuesday		Wednesd) Ago	Thursday		Friday	\ 	Satu	Saturday	Sunday	lav Var	Week Average	erade
Time	SB. NB.	B.	SB	NB		SB. NB.	RB.	SB,	NB.	SB.	S) NB.	SB.	NB.	SB.	NB.	SB	NB.
12:00 AM	*	*		*	*	23		29	29	*	*	*	*	*	*		28
1:00	*	*		*	*	1	6	11	7	*	*	*	*	*	*	11	10
2:00	*	*		*	*	7	7	6	10	*	*	*	*	*	*	∞	80
3:00	*	*		*	*	∞	9	2	7	*	*	*	*	*	*	9	9
4:00	*	*		*	*	22	1	13	17	*	*	*	*	*	*	18	14
2:00	*	*		*	*	87	61	66	77	*	*	*	*	*	*	93	69
9:00	*	*		*	*	288	297	308	298	*	*	*	*	*	*	298	298
2:00	*	*		*	*	629	646	594	614	*	*	*	*	*	*	586	630
8:00	*	*		*	*	588	268	602	603	*	*	*	*	*	*	595	586
00:6	*	*		*	*	461	434	482	452	*	*	*	*	*	*	472	443
10:00	*	*		*	*	438	376	396	333	*	*	*	*	*	*	417	388
11:00	*	*		*	*	388	468	412	477	*	*	*	*	*	*	400	472
12:00 PM	*	*		*	*	449	489	485	491	*	*	*	*	*	*	467	490
1:00	*	*		*	*	485	410	539	499	*	*	*	*	*	*	512	454
2:00	*	*		*	*	495	623	542	029	*	*	*	*	*	*	518	646
3:00	*	*		*	*	643	584	684	654	*	*	*	*	*	*	664	619
4:00	*	*		*	*	611	625	672	627	*	*	*	*	*	*	642	626
2:00	*	*		*	*	280	693	603	899	*	*	*	*	*	*	592	089
00:9	*	*		*	*	426	483	202	281	*	*	*	*	*	*	466	532
7:00	*	*		*	*	349	375	372	465	*	*	*	*	*	*	360	420
8:00	*	*		*	*	247	244	273	292	*	*	*	*	*	*	260	268
00:6	*	*		*	*	170	167	187	212	*	*	*	*	*	*	178	190
10:00	*	*		*	*	109	87	110	86	*	*	*	*	*	*	110	92
11:00	*	*		*	*	53	89	20	65	*	*	*	*	*	*	62	99
Total	0	0		0	0	7517	7727	8004	8316	0	0	0	0	0	0	7761	8035
Day	0			0		15274		16320		0		0	(0		15796	9
AM Peak						8:00	7:00	8:00	7:00							8:00	7:00
Volume						588	646	602	614							262	630
PM Peak						3:00	2:00	3:00	2:00							3:00	2:00
Volume						643	693	684								664	
Comb Total ADT	0 ADT: 15.797	5.797	Ā	0 AADT: 15.797	797	15274		16320		0		0	C	0		15796	9
)	j :		:	:													

Traffic Engineering and Consulting Services

File Name: 22029 Elks Club E Drwy at Pleasant St PM

Site Code : 22029

E-W Street:Elks Club E Drwy N-S Street:Pleasant St Start Date : 5/5/2022

Page No : 1

Groups Printed- Cars - Trucks

		Pleas	ant St		Oroups i		ant St	uono	Elk'	s Club E	ast Drive	eway	
		From	North			From	South			From	West	•	
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
04:00 PM	188	2	0	190	0	173	0	173	0	3	0	3	366
04:15 PM	161	0	1	162	2	163	0	165	0	0	3	3	330
04:30 PM	173	0	0	173	1	181	0	182	0	2	0	2	357
04:45 PM	188	1	0	189	2	185	0	187	1	1	0	2	378
Total	710	3	1	714	5	702	0	707	1	6	3	10	1431
05:00 PM	165	0	0	165	0	187	0	187	0	1	1	2	354
05:15 PM	176	0	0	176	1	216	0	217	1	2	0	3	396
05:30 PM	164	1	0	165	0	169	0	169	0	0	0	0	334
05:45 PM	154	1	0	155	3	180	0	183	0	0	0	0	338
Total	659	2	0	661	4	752	0	756	1	3	1	5	1422
Grand Total	1369	5	1	1375	9	1454	0	1463	2	9	4	15	2853
Apprch %	99.6	0.4	0.1		0.6	99.4	0		13.3	60	26.7		
Total %	48	0.2	0	48.2	0.3	51	0	51.3	0.1	0.3	0.1	0.5	
Cars	1358	5	1	1364	9	1449	0	1458	2	9	4	15	2837
% Cars	99.2	100	100	99.2	100	99.7	0	99.7	100	100	100	100	99.4
Trucks	11	0	0	11	0	5	0	5	0	0	0	0	16
% Trucks	0.8	0	0	0.8	0	0.3	0	0.3	0	0	0	0	0.6

Traffic Engineering and Consulting Services

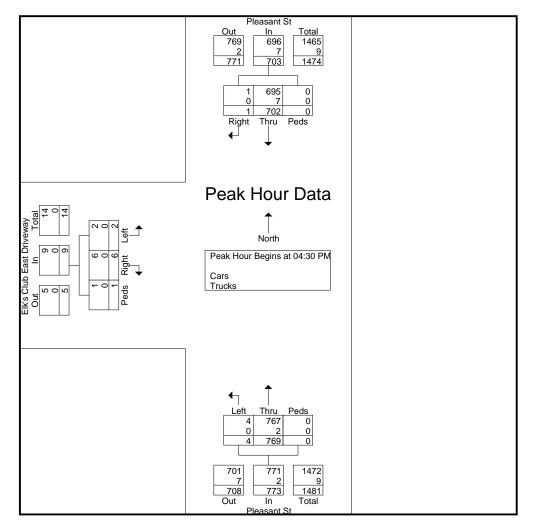
File Name: 22029 Elks Club E Drwy at Pleasant St PM

Site Code: 22029 Start Date : 5/5/2022

Page No : 2

E-W Street:Elks Club E Drwy N-S Street:Pleasant St

			ant St			Pleas	ant St		Elk'	s Club E		eway	
		From	North			From	South			From	West		
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analys	is From 04	1:00 PM t	o 05:45	PM - Peak	1 of 1								
Peak Hour for Enti	ire Interse	ction Beg	jins at 0	4:30 PM									
04:30 PM	173	0	0	173	1	181	0	182	0	2	0	2	357
04:45 PM	188	1	0	189	2	185	0	187	1	1	0	2	378
05:00 PM	165	0	0	165	0	187	0	187	0	1	1	2	354
05:15 PM	176	0	0	176	1	216	0	217	1	2	0	3	396
Total Volume	702	1	0	703	4	769	0	773	2	6	1	9	1485
% App. Total	99.9	0.1	0		0.5	99.5	0		22.2	66.7	11.1		
PHF	.934	.250	.000	.930	.500	.890	.000	.891	.500	.750	.250	.750	.938
Cars	695	1	0	696	4	767	0	771	2	6	1	9	1476
% Cars	99.0	100	0	99.0	100	99.7	0	99.7	100	100	100	100	99.4
Trucks	7	0	0	7	0	2	0	2	0	0	0	0	9
% Trucks	1.0	0	0	1.0	0	0.3	0	0.3	0	0	0	0	0.6



Traffic Engineering and Consulting Services

File Name: 22029 Elks Club N Drwy at Washington St Rte 53 PM

Site Code: 22029

E-W Street:Washington St/Rte 53 Start Date : 5/5/2022 N-S Street:Elks Club N Driveway Page No : 1

Groups Printed- Cars - Trucks

	Was	hington	Street/F	Rte 53	Elk's	Club No	orth Driv		Was	hington	Street/R	te 53	
		From	East			From	South			From	West		
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	0	87	0	87	0	0	0	0	106	0	0	106	193
04:15 PM	0	82	0	82	0	0	0	0	100	1	0	101	183
04:30 PM	0	89	0	89	0	0	0	0	102	2	0	104	193
04:45 PM	1_	81	0	82	0	1	0	1	98	1	0	99	182
Total	1	339	0	340	0	1	0	1	406	4	0	410	751
05:00 PM	1	101	0	102	0	0	0	0	100	2	0	102	204
05:15 PM	4	86	0	90	1	2	0	3	108	2	0	110	203
05:30 PM	0	89	0	89	1	1	0	2	103	4	0	107	198
05:45 PM	0	96	0	96	1	1	0	2	88	1	0	89	187
Total	5	372	0	377	3	4	0	7	399	9	0	408	792
Grand Total	6	711	0	717	3	5	0	8	805	13	0	818	1543
Apprch %	0.8	99.2	0		37.5	62.5	0		98.4	1.6	0		
Total %	0.4	46.1	0	46.5	0.2	0.3	0	0.5	52.2	0.8	0	53	
Cars	6	690	0	696	3	5	0	8	786	13	0	799	1503
% Cars	100	97	0	97.1	100	100	0	100	97.6	100	0	97.7	97.4
Trucks	0	21	0	21	0	0	0	0	19	0	0	19	40
% Trucks	0	3	0	2.9	0	0	0	0	2.4	0	0	2.3	2.6

Traffic Engineering and Consulting Services

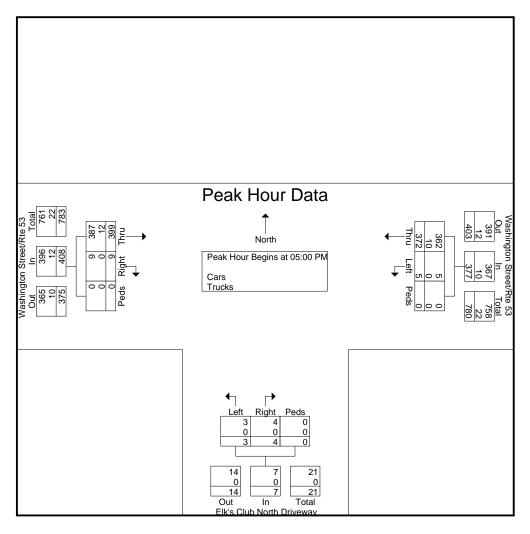
File Name: 22029 Elks Club N Drwy at Washington St Rte 53 PM

Site Code: 22029

E-W Street:Washington St/Rte 53 Start Date : 5/5/2022

N-S Street:Elks Club N Driveway Page No : 2

	Was	hington From	Street/F	Rte 53	Elk'	s Club No From	orth Dri	veway	Was	hington From	Street/F West	Rte 53	
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analys	is From 04	4:00 PM	to 05:45	PM - Peak	1 of 1	_				_			
Peak Hour for Enti	ire Interse	ction Be	gins at 0	5:00 PM									
05:00 PM	1	101	0	102	0	0	0	0	100	2	0	102	204
05:15 PM	4	86	0	90	1	2	0	3	108	2	0	110	203
05:30 PM	0	89	0	89	1	1	0	2	103	4	0	107	198
05:45 PM	0	96	0	96	1	1	0	2	88	1_	0	89	187
Total Volume	5	372	0	377	3	4	0	7	399	9	0	408	792
% App. Total	1.3	98.7	0		42.9	57.1	0		97.8	2.2	0		
PHF	.313	.921	.000	.924	.750	.500	.000	.583	.924	.563	.000	.927	.971
Cars	5	362	0	367	3	4	0	7	387	9	0	396	770
% Cars	100	97.3	0	97.3	100	100	0	100	97.0	100	0	97.1	97.2
Trucks	0	10	0	10	0	0	0	0	12	0	0	12	22
% Trucks	0	2.7	0	2.7	0	0	0	0	3.0	0	0	2.9	2.8





ADT by Day of Week by Month for 1/1/2019 - 12/31/2019 Criteria: Location ID = 6255, From 1/1/1900 To 12/31/2049 12:00:00 AM

District
Community Weymouth
County Norfolk

Factor Group U2

Location ID 6255
Direction 2-WAY
RoadBed ML

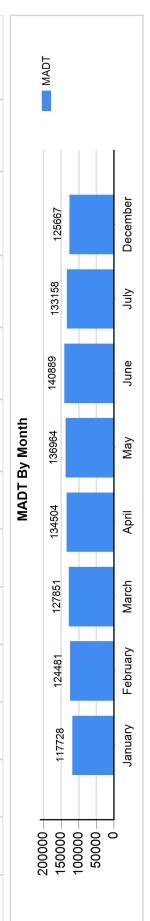
Located On PILGRIM HIGHWAY

AADT 130967

Collection Type HPMS

Functional Class (2) Freeway & Expressway

											•		•
		Ą	Average Daily Number of Vehicles	y Number	of Vehicle	S		Avg. Day	Avg. Day as % of	Avg. Weekday	Avg. Day as % of Avg. Weekday	Avg. Weekday	Avg. Day as % of Avg. Weekday
	uns	Mon	Tue	Wed	Thu	Fri	Sat	(Mon-Sun)	Year Avg.	(Mon-Thu)	(Mon-Thu)	(Mon-Fri)	(Mon-Fri)
JAN			87,159	131,427	134,598			117,728	90.45%	117,728	100.00%	117,728	100.00%
FEB	104,247	116,039	125,763	133,478	130,211	136,957	124,674	124,481	95.64%	126,373	98.50%	128,490	96.88%
MAR	105,972	118,192	134,438	136,609	138,868	139,747	121,139	127,851	98.23%	132,027	96.84%	133,571	95.72%
APR	116,566	129,734	137,131	141,597	143,375	142,324	130,806	134,504	103.34%	137,959	97.50%	138,832	96.88%
MAY	120,093	128,289	139,558	144,077	145,584	144,978	136,173	136,964	105.23%	139,377	98.27%	140,497	97.49%
NOS	123,460	142,752	142,019	146,837	145,511	147,234	138,419	140,889	108.25%	144,280	%59'.26	144,871	97.25%
JUL	122,691	145,102	147,208	148,146	106,214	135,752	126,994	133,158	102.31%	136,668	97.43%	136,484	92.26%
AUG													
SEP													
OCT													
NOV													
DEC		112,735 131,015	130,514	104,566	128,143	143,612	129,089	125,667	96.55%	123,560	101.71%	127,570	98.51%
Year	115,109	130,160	130,474	135,842	134,063	141,515	129,613	130,155		132,246	98.42%	133,505	97.49%



NOTE: VALUES ARE ROUNDED; TOTALS AND PERCENTS MAY NOT ADD UP.

Generated 4/19/2022

Page 1 of 1

mass DOT

ADT by Day of Week by Month for 1/1/2022 - 12/31/2022 Criteria: Location ID = 6255, From 1/1/1900 To 12/31/2049 12:00:00 AM

Community Weymouth County Norfolk District

Factor Group U2

Direction 2-WAY Location ID 6255

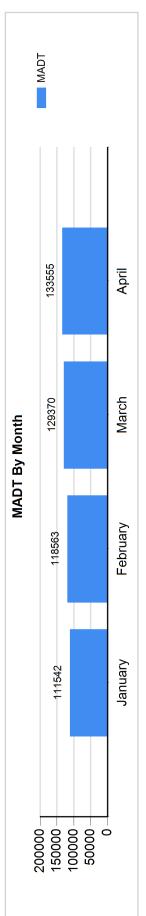
RoadBed ML

Located On PILGRIM HIGHWAY

AADT

Functional Class (2) Freeway & Expressway **Collection Type HPMS**

											Avg Day		Avg Day
		Av	erage Dail	y Number	Average Daily Number of Vehicles	Š		Avg. Day	Avg. Day as % of	Avg. Weekday	as % of Avg. Weekday	Avg. Weekday	as % of Avg. Weekday
	uns	Mon	Tue	Wed	Thu	Fri	Sat	n)	Year Avg.	$\overline{}$			(Mon-Fri)
JAN	84,647	112,818	121,041	124,252	126,700	112,874	98,467	111,542	%05'06	121,203	92.03%	119,537	93.31%
FEB	98,492	119,216	126,508	130,472	136,203	102,018	117,042	118,563	96.19%	128,100	92.56%	122,883	96.48%
MAR	111,518	127,894	132,510	134,267	135,580	141,124	122,701	129,370	104.96%	132,563	97.59%	134,275	96.35%
APR	114,606	132,530	138,253	137,649	141,392	141,067	129,396	133,555	108.35%	137,456	97.16%	138,178	96.65%
MAY													
N N													
JUL													
AUG													
SEP													
OCT													
NOV													
DEC													
Year		123,115	102,316 123,115 129,578	131,660	134,969	124,271	116,902	123,258		129,830	94.94%	128,718	92.76%

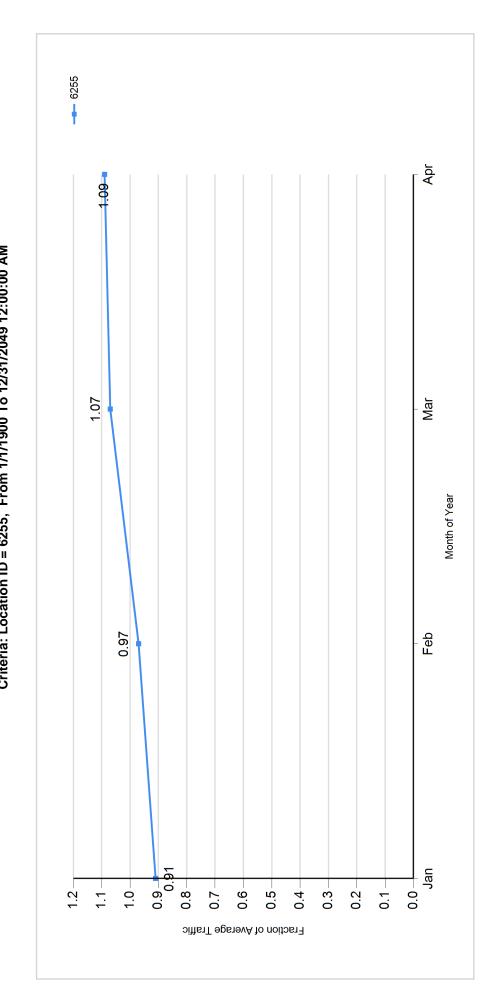


NOTE: VALUES ARE ROUNDED; TOTALS AND PERCENTS MAY NOT ADD UP.

Page 1 of 1

mass broad broad BOOT

Traffic Pattern by Month for 1/1/2022 - 12/31/2022 Criteria: Location ID = 6255, From 1/1/1900 To 12/31/2049 12:00:00 AM



Massachusetts Highway Department

Mass Son DOT

Traffic Pattern by Month for 1/1/2022 - 12/31/2022 Criteria: Location ID = 6255, From 1/1/1900 To 12/31/2049 12:00:00 AM

Factor Group	Station	Weight	Jan	Feb	Mar	Apr	May	Jun	Inc	Aug	Sep	Oct	Nov	Dec
12	6255		0.909	0.973	1.070	1.089								
	Average of Weighted Factor	Factors	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Institute of Transportation Engineers (ITE); 11th Edition Land Use Code (LUC) 252 - Senior Adult Housing - Multifamily

Average Vehicle Trips Ends vs: Dwelling Units Independent Variable (X): 147

AVERAGE WEEKDAY DAILY

```
T = 2.89 * (X) + 24.82

T = 449.65

T = 450 vehicle trips

with 50% ( 225 vpd) entering and 50% ( 225 vpd) exiting.
```

WEEKDAY AM PEAK HOUR OF ADJACENT STREET TRAFFIC

```
T = 0.19 * (X) + 0.90
T = 28.83
T = 29 	 vehicle trips
with 34% ( 10 vph) entering and 66% ( 19 vph) exiting.
```

WEEKDAY PM PEAK HOUR OF ADJACENT STREET TRAFFIC

```
T = 0.25 * (X) + 0.07

T = 36.82

T = 37 vehicle trips

with 56% ( 21 vph) entering and 44% ( 16 vph) exiting.
```

SATURDAY DAILY

```
T = 2.33 * (X) + 31.21

T = 373.72

T = 370 vehicle trips

with 50% ( 185 vpd) entering and 50% ( 185 vpd) exiting.
```

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

```
\begin{array}{l} \text{Ln T} = 0.93 \; \text{Ln (X)} - 0.81 \\ \text{Ln T} = 3.831 \\ \text{T} = 46.11 \\ \text{T} = 46 \qquad \text{vehicle trips} \\ \text{with } 54\% \, ( \  \  \, 25 \  \, \text{vph) entering and } 46\% \, ( \  \  \, 21 \  \, \text{vph) exiting.} \end{array}
```

	Residence			Workplace		
State	County	МСБ	State/U.S. Island Area/Foreign Country	County	MCD	Number
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Suffolk County	Boston city	6,610
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts Norfolk County	Norfolk County	Weymouth Town city	4,877
Massachusetts	Norfolk County	Weymouth Town city	Massachusetts	Norfolk County	Quincy city	3,244
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Plymouth County	Hingham town	1,808
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Norfolk County	Braintree Town city	1,700
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Massachusetts Plymouth County	Norwell town	646
Massachusetts	Norfolk County	Weymouth Town city	Massachusetts	Plymouth County	Rockland town	602
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Middlesex County	Cambridge city	596
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Plymouth County	Brockton city	476
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Plymouth County	Hanover town	465
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Norfolk County	Norwood town	371
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Norfolk County	Randolph town	349
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Norfolk County	Canton town	330
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Norfolk County	Stoughton town	302
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Massachusetts Middlesex County	Waltham city	290
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Plymouth County	Plymouth town	249
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts Norfolk County	Norfolk County	Dedham town	244
Massachusetts	Norfolk County	Weymouth Town city	Massachusetts	Middlesex County	Newton city	225
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Massachusetts Plymouth County	Abington town	223
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Plymouth County	Pembroke town	218
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Plymouth County	Marshfield town	175
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Norfolk County	Wellesley town	166
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Massachusetts Middlesex County	Somerville city	164
Massachusetts	Norfolk County	Norfolk County Weymouth Town city	Massachusetts	Norfolk County	Milton town	164
Massachusetts	Norfolk County	Massachusetts Norfolk County Weymouth Town city	Massachusetts Norfolk County	Norfolk County	Needham town	140

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th		To/From West on Washington Street	To/From East on Washington Street	To/From the South on Pleasant Street	To/From the North on Pleaseant Street
		4957.5	0.0	0:0	1652.5
		2438.5	0.0	0.0	2438.5
		1622.0	0.0	811.0	811.0
		180.8	180.8	0.0	1446.4
		1700.0	0.0	0.0	0:0
		0.0	646.0	0.0	0.0
		0.0	301.0	301.0	0.0
		596.0	0.0	0.0	0.0
		0.0	0.0	476.0	0:0
		0.0	465.0	0.0	0:0
		371.0	0.0	0.0	0:0
		87.3	0.0	261.8	0.0
		330.0	0.0	0.0	0.0
		151.0	0.0	151.0	0.0
		290.0	0.0	0.0	0.0
		0.0	249.0	0.0	0.0
		244.0	0.0	0.0	0:0
		225.0	0.0	0.0	0:0
		0.0	0.0	223.0	0:0
		0.0	218.0	0.0	0.0
		0.0	175.0	0.0	0.0
		166.0	0.0	0.0	0.0
		164.0	0.0	0.0	0.0
		164.0	0.0	0.0	0:0
		140.0	0.0	0.0	0.0
		13827.1	2234.8	2223.8	6348.4
	Calculated		%6.	%6 %6	26%
	מסתייתבת	2/22	70/0	77.0	0/27



Date: 3/22/22

Summary:

Builable Sites, LLC has complied a list of its recent senior living community projects to assist in determining the supply of parking spaces that will be adequate to accommodate the projected demand for the proposed senior living community at 1197-1215 Washington Street (Route 53), in Weymouth, Massachusetts. The majority of residents living in independent senior living communities do not drive or own a car; as the age range for residents is into the high-70s and low-80s. It is critical to these communities to provide adequate parking to match demand, as well as ample greenspace and open-air amenity spaces for its residents to view and utilize-in order to make the senior living community feel like a home to the residents, staff, and family.

Recommendation

As reflected in the below table of parking space counts and ratios at similar senior living facilities, the parking ratio for senior living communities (Independent Living/Assisted Living) range from 0.44 to 0.75 spaces per unit. Based upon these comparable projects, Buildable Sites recommends that Elksy Development, LLC utilize a parking ratio of 0.75 spaces per unit for the Weymouth Senior Living Project. Utilizing this ratio, 147 units would require 110 parking spaces. This ratio is typical (if not high) in the senior living sector, based on age demographic of residents that do not drive or own cars. The maximum number of staff (including 3rd party in home health care) at this community during peak work shifts hours is estimated to be 30 people, and customarily there are only 5-10 visitors at any given time. Additionally, the proposed Weymouth senior living community will provide a 14+ passenger van for transportation of community residents to local shops, medical appointments, and organized day trips. As currently designed, Elksy proposes to provide 129 parking spaces. This equates to a parking ratio of .87 spaces per unit. This amount of proposed parking exceeds the ratios for Buildable Sites' most recently completed senior living projects (see below), and is more than adequate to support the senior living community.

Senior Living Communities

s	Name	City	State	Age Group	Senior Category	Units	Parking Spots	Ratio
	Woods at Merrimack	Methuen	MA	75+	Independent Living/ In Home Health Care	140	107	76%
	Heatherwood Retirement	Tewksbury	MA	75+	Independent Living/ In Home Health Care	126	75	60%
	Sunshine Fountain Valley	Fountain Valley	CA	75+	Independent Living/ In Home Health Care	150	110	73%
	Maplebrook Terrace	Greenville	SC	75+	Independent Living/ In Home Health Care	150	105	70%
	Brightview North Andover	North Andover	MA	75+	Independent Living/Assisted Living	136	88	65%
	Brightview Wakefield	Wakefield	MA	75+	Independent Living/Assisted Living	140	101	72%
	Stonehill at Andover	Anodver	MA	75+	Independent Living/Assisted Living	96	51	53%
	The Residence at Melrose Station	Melrose	MA	75+	Independent Living/Assisted Living	96	49	51%
	The Residence at Watertown Squar	Watertown	MA	75+	Independent Living/Assisted Living	96	46	48%
	The Residence at Brookside	Avon	СТ	75+	Independent Living/Assisted Living	96	42	44%
	The Residence at South Windsor Fa	South Windsor	СТ	75+	Independent Living/Assisted Living	96	42	44%
	Atria Norwood	Norwood	NJ	75+	Assisted Living	83	48	58%
	Arbor Terrace at Morris Plains	Morris Plains	NJ	75+	Assisted Living	82	48	59%
	The Chelsea at Shrewsbury	Shrewsbury	NJ	75+	Assisted Living	85	44	52%
	The Chelsea at Greenburgh	Greenburgh	NY	75+	Assisted Living	101	65	64%
	Atria New City	New City	NY	75+	Assisted Living	76	53	70%