

MEMORANDUM

DATE September 9, 2022
 PREPARED BY Michael Dion, PE, PTOE
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 PROJECT NAME Warwick Self Storage
 SUBJECT Self-Storage Parking Analysis
 JOB NUMBER 2102362
 To: Dan Geagan

Self-Storage facilities are one of the least impactful uses of any proposed development types requiring little demand on town services while providing a useful amenity to residents and local businesses while providing significant tax revenues.

Parking Generation

Self-storage is classified as Land Use: 151 Mini-Warehouse in the *Institute of Traffic Engineers(ITE) Parking Generation Manual (5th Edition)*. Looking at Peak Period Parking Demand per 1,000 s.f. GFA, the Average Rate is listed as 0.10, for the weekday (4:00-6:00 PM) and 0.09 on the weekend (1:00-5:00 PM). **Table 1** below shows the anticipated number of occupied parking spaces during for the peak periods of parking demand.

Table 1: Peak Parking Generation

Self-Storage Parking Generation				
9/9/2022				
Land Use	ITE Land Use Code	Size (s.f.)	Parking Demand	
			PM peak Total	Saturday Peak Total
Self-Storage	151 Mini-Warehouse	122,000	12	11
Peak Parking Demand			12	11
Ref: ITE Parking Generation Manual, 5th Edition				

The ITE defines a mini-warehouse land use as a building in which a number of storage units or vaults are rented for the storage of goods. They are typically referred to as "self-storage" facilities.

The ITE was founded in 1930 and is a community of transportation professionals, including transportation engineers, transportation planners, consultants, educators, technologists, and researchers. ITE is widely regarded as the standard resource for trip and parking generation data. Attached to the end of this document is a trip generation table based on the ITE data.

In addition, attached is a parking analysis that was conducted at two comparable facilities; one in Waltham, MA and another in Newton MA. As can be seen in the report, peak hour parking demand is typically in the single digits and do not coincide with typical rush hour peaks since most of the trips occur during the weekends and evenings. Most the vehicle trips are conventional passenger vehicles, SUV's, pickup trucks, and vans from the local community.

Conclusion

Since there is little parking demand and the typical visit to a self-storage facility is around 15 minutes, parking requirements are small as well. The industry standard for parking is approximately one parking space for every 12,000 s.f. of gross building area (see the attached parking chart listing parking at sixteen (16) similar facilities). A typical parking lot need only accommodate 13 cars and a small at grade loading area. This means that only a small area of the site needs to be devoted to paved areas allowing for more greenspace and landscaping.

End of Memo



Mini-Warehouse (151)

Peak Period Parking Demand vs: 1000 Sq. Ft. GFA

On a: Weekday (Monday - Friday)

Setting/Location: General Urban/Suburban

Peak Period of Parking Demand: 4:00 - 6:00 p.m.

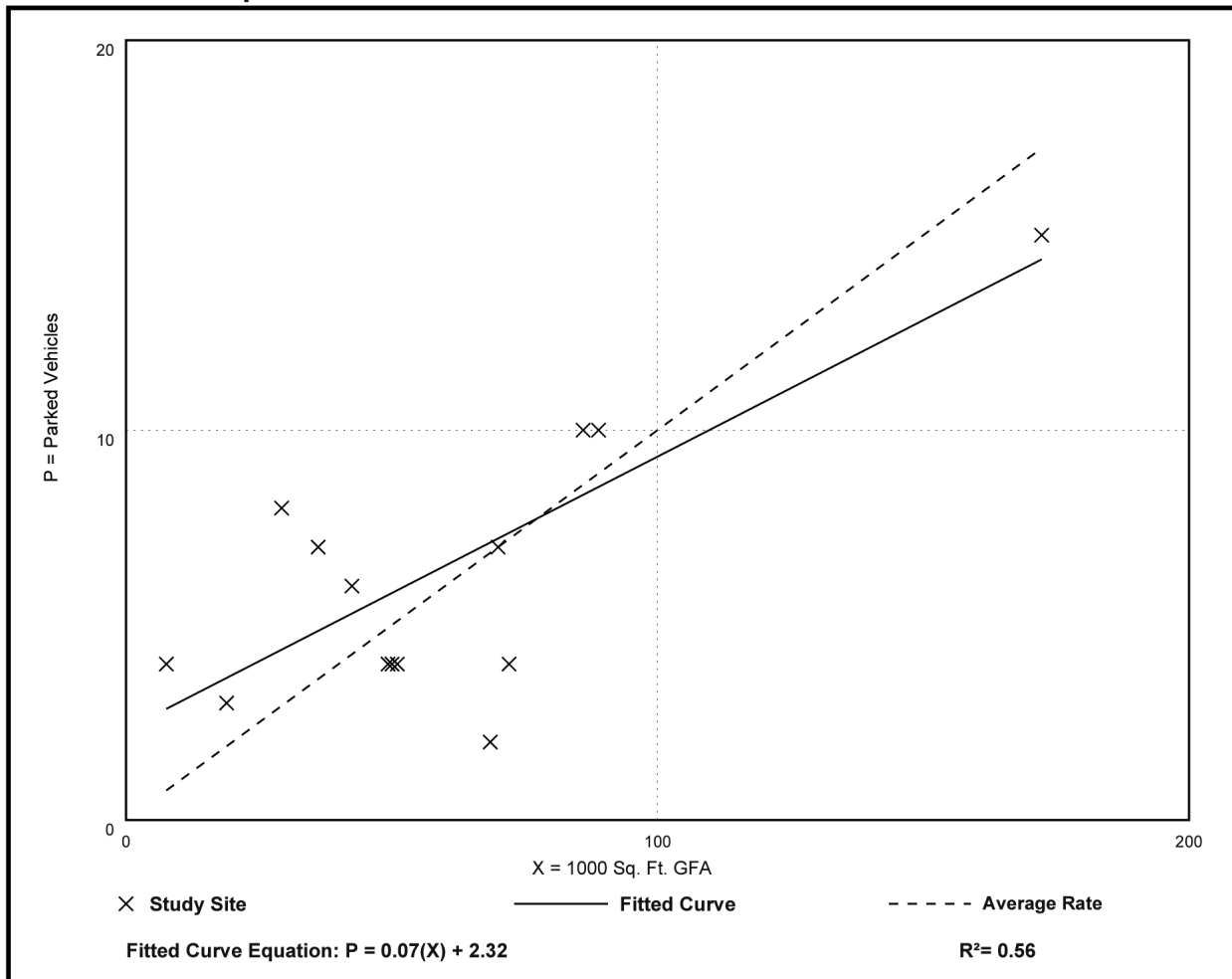
Number of Studies: 14

Avg. 1000 Sq. Ft. GFA: 60

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.10	0.03 - 0.53	0.08 / 0.25	***	0.07 (70%)

Data Plot and Equation



Mini-Warehouse (151)

Peak Period Parking Demand vs: 1000 Sq. Ft. GFA

On a: Saturday

Setting/Location: General Urban/Suburban

Peak Period of Parking Demand: 1:00 - 5:00 p.m.

Number of Studies: 3

Avg. 1000 Sq. Ft. GFA: 109

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.09	0.06 - 0.14	0.08 / 0.14	***	0.04 (44%)

Data Plot and Equation

Caution – Small Sample Size

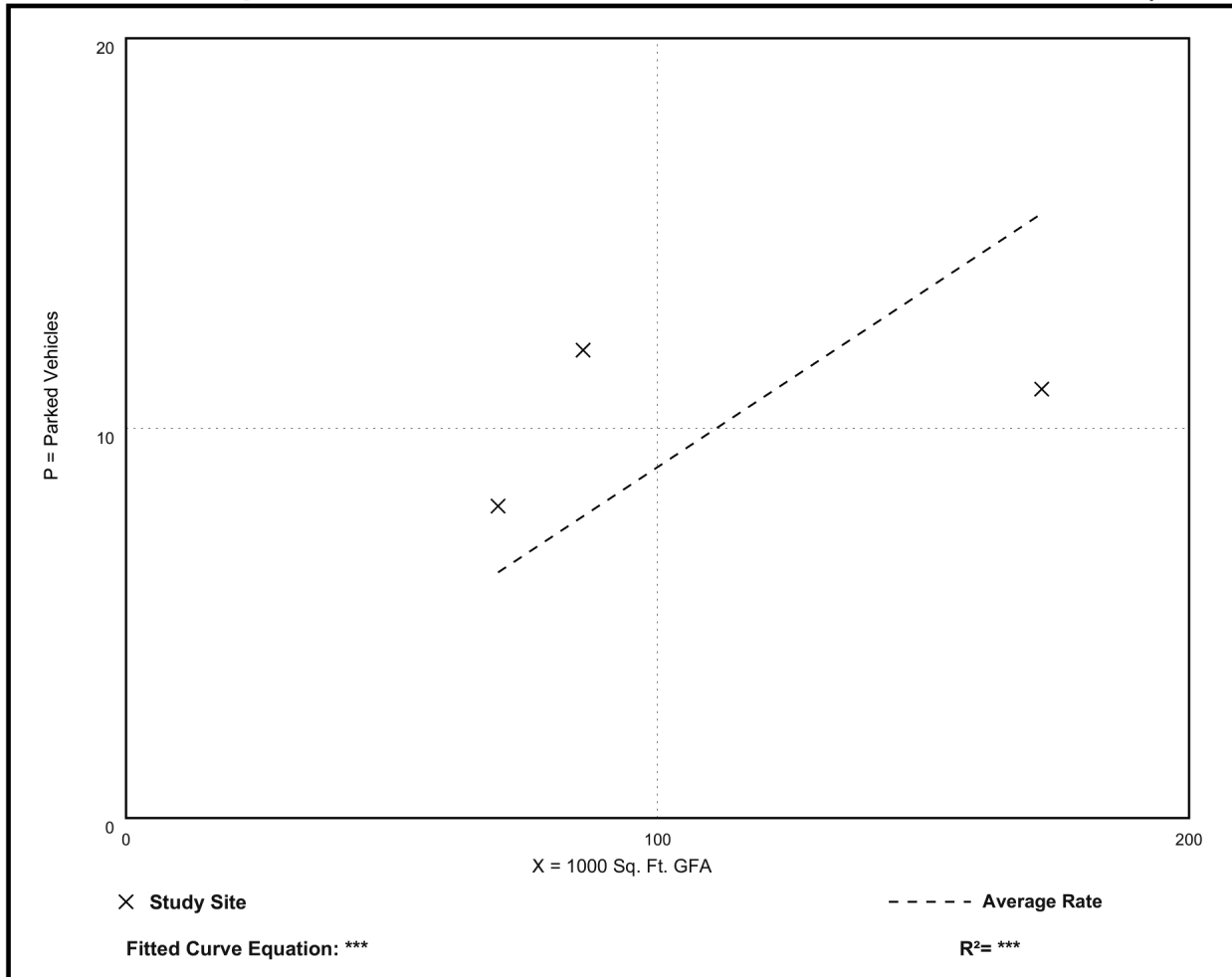


Table 2
Existing Self-Storage Facilities
Approved and constructed Parking counts and Project Data
(Constructed by Another Company)

Project Location	Land Area (acres)	Building Area (GSF)	Storage Units	Parking Spaces	Building Area per Space	Storage Units per Space	Year Facility Opened
290 Southampton Street, Boston	1.04	89,964	700	7	12,852	100	2002
1470 Main Street, Weymouth	3.10	78,432	700	11	7,130	64	2003
2-12 Goodhue Street, Salem	2.90	98,238	825	8	12,280	103	2004
327 Mystic Ave, Medford	1.30	89,646	725	5	17,929	145	2004
East Street & I95, Westwood	3.29	93,987	750	10	9,399	75	2004
156 Lincoln Street, Brighton	1.21	113,396	974	10	11,340	97	2007
260 Lexington Street, Waltham	6.00	92,112	700	10	9,211	70	2007
140 Broadway, Everett	0.95	120,494	1,053	9	13,388	117	2008
Washington Street, Woburn	1.61	132,056	1,015	10	13,206	102	2009
640 Park Ave, Cranston, RI	1.84	122,882	983	20	6,144	49	2010
945 Moody Street, Waltham	1.42	115,675	923	14	8,263	66	2012
540 Hillside Ave, Needham	1.88	123,027	985	14	8,788	70	2019
255 Newtonville Ave, Newton	1.74	113,187	1,025	11	10,290	93	2021
<i>Average Facility Data (13 facilities)</i>	<i>2.18</i>	<i>106,392</i>	<i>874</i>	<i>11</i>	<i>10,786</i>	<i>89</i>	

Table 3
Existing Self-Storage Facilities
Approved and constructed Parking counts and Project Data
(Constructed by Trunk Space)

Project Location	Land Area (acres)	Building Area (GSF)	Storage Units	Parking Spaces	Building Area per Space	Storage Units per Space	Year Facility Opened
671 Washington St, Quincy	1.53	123,004	1,075	12	10,250	90	2018
1901 Revere Parkway, Everett	1.07	124,330	1,000	46	2,703	22	2019
54 Montvale Ave, Stoneham	1.09	119,482	999	10	11,948	100	2020
7 Wheeler Road, Burlington	11.03	118,003	1,086	12	9,834	91	2021
<i>Average Facility Data (4 facilities)</i>	<i>3.68</i>	<i>121,205</i>	<i>1,040</i>	<i>20</i>	<i>8,684</i>	<i>76</i>	

Average 17 facilities (Tables 1 & 2) **2.53** **109,877** **913** **13** **10,291** **86**

To: Land Use Committee of the City of Newton Board of Aldermen

From: Lou Mercuri, Planning Horizons

Re: 255-257 Newtonville Avenue Storage Facility

Date: September 21, 2015

On behalf of the petitioner for this land use petition, Planning Horizons is submitting this report regarding the supporting customer count surveys for the proposed self storage facility location at 255-257 Newtonville Avenue in Newtonville.

Project Overview

Storage Development Partners LLC is proposing to locate a 113,187 square foot self storage facility with 1025 storage units at 255-257 Newtonville Avenue in Newtonville. This location on 75,634 square feet of land is currently occupied by an office building that would be razed to allow the storage facility to be constructed. The facility would be available to its clients from 6:00AM to 10:00PM everyday and it is expected that no more than four employees would be employed on the largest shift. Typical weekday office hours are from 9:30AM to 6:00PM. Situated in a manufacturing district, storage facilities are allowed by right in this district. However, per Section 30-19 (1)(15) of the zoning ordinance permission is being sought to grant a 36-stall parking waiver for the facility . One stall for each of the four employees and one stall for every 2500 square feet of proposed floor area are required under the ordinance. Therefore, 47 stalls are required for the project. However, 11 stalls are being provided on the site which reduces the parking requirement to a total of 36 stalls (47-11) for this development. Other forms of zoning relief are being sought under this petition; however this report focuses on the likely customer usage of the site based on the activity of similar nearby facilities.

Planning Horizons was asked to establish the likely customer/client demand for this storage facility based on peak usage at other similar storage facilities. Two nearby storage facilities were identified for this purpose. Public Storage at 945 Moody Street in Waltham and EZ Storage at 300 Needham Street in Newton were surveyed at different times and the results of these customer surveys are the main topic of this report.

Existing Conditions

The entire 75,634 square foot parcel with the existing office building will be razed and replaced with the 113,187 square foot, 3-story storage facility. The area is along the westbound side of Newtonville Avenue just west of Lewis Terrace. The Massachusetts Turnpike to the north borders the property. There is a mix of residential, industrial, and office uses in the area and the site is bordered by primarily residential properties along Newtonville Avenue. Vehicular access to the site is entirely from Newtonville Avenue.

Public Storage and EZ Storage Customer Counts Methodology and Results Methodology

Since a storage facility of this size would be entirely new to the area, the best way to assess and evaluate the potential impact of the number of customers and clients using the site is to carefully review the activity at comparable storage facilities. For this purpose, two storage facilities in the Newton area were identified and extensive usage surveys were conducted at the end of August and the beginning of September 2015. The two surveyed facilities are:

1. Public Storage, 945 Moody Street in Waltham (just past Rumford Avenue – half the site is in Newton and the other half is in Waltham), a 117,500 square foot building with 1015 storage units that was permitted in 2010.
2. EZ Storage, 300 Needham Street in Newton, a 170,000 square foot building with approximately 1400 storage units that was constructed in 2006.

Planning Horizons surveyed each of these facilities on three different occasions for a total of six one-hour constant observations for customer traffic. The goal was to identify the days and times of the week that would most closely represent the peak usage at these facilities which would closely translate to possible peak usage at the Newtonville Avenue facility.

Three surveys were conducted at each location and the overall mix was two morning weekday counts, two late afternoon weekday counts, and two counts on a Saturday, one in the morning and one at midday. The Public Storage counts on Moody Street were conducted on Friday August 29, Tuesday September 1 and Saturday September 5. The EZ Storage counts on Needham Street were conducted on Tuesday September 1, Friday September 4, and Saturday September 5. Observations were conducted from nearby parking areas so as not to conflict with the operation of the facilities. Customers were counted individually upon entering the location by vehicle and the data was recorded in 15-minute intervals.

It is important to note that storage facilities have peak periods during certain times for the year as well. These peak periods typically correspond with when college students begin or end classes and when people change residences and need to accommodate their moves. Therefore, the most widely used periods are either in May-June or between mid-August and mid-September. Our surveys captured this late summer peak period on peak “moving” days so the customer counts described below likely represent potential peak traffic at the proposed Newtonville Avenue facility at any time of the year.

Results of Customer Counts

The following charts provide the specific detail of the customer counts at both locations between August 28 and September 5:

1. Public Storage, 945 Moody Street, Waltham

Date: Friday, August 28, 2015 Time: 9:00 AM – 10:00 AM 70° , Sunny	
	# Customers entering site
9:00-9:15	2
9:15-9:30	0
9:30-9:45	2
9:45-10:00	3
TOTAL	7

Date: Tuesday, September 1, 2015 Time: 4:00 PM – 5:00 PM 85° , Sunny	
	# Customers entering site
4:00-4:15	4
4:15-4:30	3
4:30-4:45	3
4:45-5:00	1
TOTAL	11

Date: Saturday, September 5, 2015 Time: 9:00 AM – 10:00 AM 65° , Sunny	
	# Customers entering site
9:00-9:15	1
9:15-9:30	2
9:30-9:45	2
9:45-10:00	2
TOTAL	7

3-hour site average: 8.3 trips per hour

2. EZ Storage, 300 Needham Street, Newton

Date: Tuesday, September 1, 2015 Time: 9:00 AM – 10:00 AM 75° , Sunny	
	# Customers entering site
9:00-9:15	2
9:15-9:30	3
9:30-9:45	0
9:45-10:00	2
TOTAL	7

Date: Friday, September 4, 2015 Time: 4:15 PM – 5:15 PM 75° , Sunny	
	# Customers entering site
4:15-4:30	3
4:30-4:45	4
4:45-5:00	1
5:00-5:15	2
TOTAL	10

Date: Saturday, September 5, 2015 Time: 11:45 AM – 12:45 AM 75° , Sunny	
	# Customers entering site
11:45-12:00	0
12:00-12:15	2
12:15-12:30	3
12:30-12:45	3
TOTAL	8

3-hour site average: 8.3 trips per hour

The actual customer data reveals several points. First, the total number of customer trips to both sites during the six hours of observations was 50. This equates to 8.3 trips per hour or roughly one vehicle entering the site every seven minutes. If both entering and exiting trips are factored in, the projected number of two trips is 16.6 per hour or one trip every 3.6 minutes. Second, the 15-minute intervals reveal a range of between 0 and 4 entering trips during the 24 surveyed intervals. This reveals that

traffic to the storage facilities (even at peak times) is relatively small and steady regardless of the day and time.

The size of both storage facilities can be factored in to the proposed Newtonville Avenue site. Public Storage on Moody Street in Waltham is very comparable in both the total building square footage and in terms of the number of units. Public Storage is 117,500 gross square feet with 1015 storage units. The proposed facility on Newtonville Avenue would have 113,187 gross square feet with approximately 1025 storage units. Public Storage generated an average of 8.3 one-way trips to the site per hour and considering its overall size, is nearly identical to the current proposal. An upper limit estimate of 8.3 trips per hour is therefore valid.

The EZ Storage site on Needham Street in Newton is considerably larger with 170,000 gross square feet of space (vs. 113,187 square feet for the proposed site) and 1400 storage units (vs. 1025 for the proposed site). In spite of this differential, the EZ Storage site generated the same number of vehicle trips (8.3 trips per hour) as its smaller competitor on Moody Street in Waltham. This data suggests that larger storage facilities generate approximately the same levels of traffic and further studies would be needed to determine if there are reasons for this expected outcome.

Finally, the timing of the late August to Early September customer counts coincides with the perceived peak times of year for storage facilities. Therefore, the observed data points in this study likely truly reflect what might be expected at peak times at the Newtonville Avenue site.

Summary and Conclusion

The proposed storage facility at 255-257 Newtonville Avenue is a relatively low traffic generator when compared with office or residential uses of a similar scale. Our study of two comparably sized storage facilities reveals an average trip rate of 8.3 trips per hour to each site. This figure works out to one trip to the site approximately every seven minutes, even during peak periods. During off-peak hours, the number of trips to the site will be far less, or almost non-existent. By providing 11 onsite parking spaces, the needs of customers/clients can be easily met. Therefore, the parking waiver request of 36 spaces relates to a theoretical number assigned to storage facilities rather than a number related to actual need for this specific use.