

# Design Consultants, Inc.

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## MEMORANDUM

DCI JOB NO. 2012-124.10

**TO:** Terence Smith, City of Somerville

**CC:** Adam Dash, Esq., Adam Dash & Associates  
Frank Valdes, DiMella Shaffer

**FROM:** Jason S. Sobel, P.E., PTOE  
Senior Transportation Engineer

**SUBJECT:** 181-197 Washington Street  
Revised Trip Generation & Parking Summary

**DATE:** July 17, 2013

This memorandum has been prepared as a supplement to the Traffic and Parking Assessment for the proposed mixed-use development project at 181-197 Washington Street, prepared by Design Consultants, Inc. (DCI) and dated April 2013. Since the Traffic and Parking Assessment was completed, the number of proposed residential units has been reduced. In the April 2013 Traffic and Parking Assessment, the project consisted of 84 residential units. The current proposal calls for the construction of 74 residential units (five fewer units in each of the two proposed buildings). The amount of proposed commercial space has not changed since the Traffic and Parking Assessment was completed.

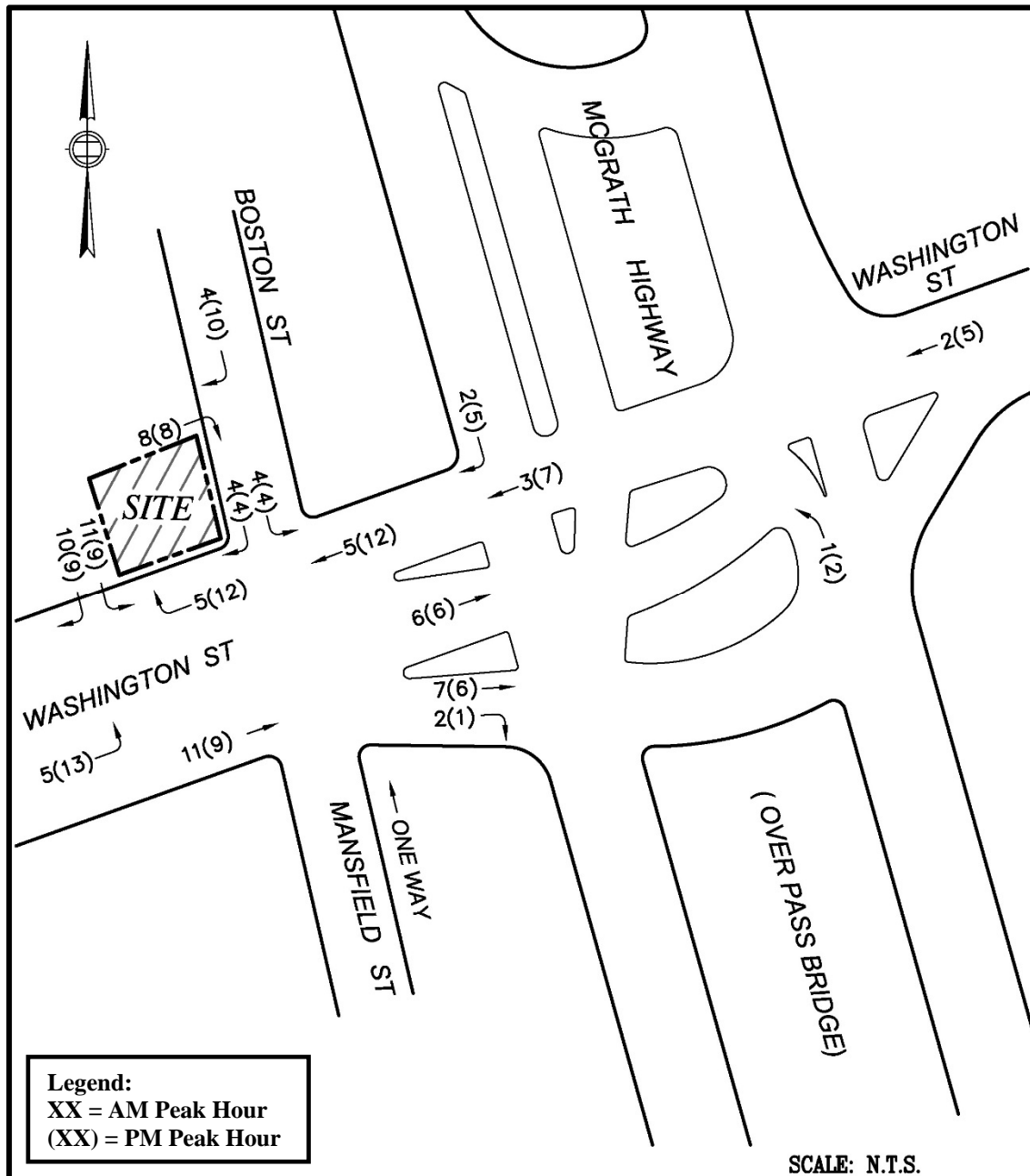
### Trip Generation

Table 1 shows the revised trip-generation estimates at the proposed project site, based on the reduced number of residential apartment units. These calculations are based on the Institute of Transportation Engineers (ITE) Trip Generation Manual (9<sup>th</sup> Edition, 2012). Detailed trip-generation calculations are in the appendix attached to this memorandum.

**Table 1: Site-Generated Vehicle-Trips**

	Weekday Morning Peak Hour (vehicle-trips)			Weekday Afternoon Peak Hour (vehicle-trips)			Daily Trips
	Enter	Exit	Total	Enter	Exit	Total	Total
74 Residential Apartment Units <sup>(1)</sup>	8	30	38	30	16	46	492
6,566 SF of Retail Space <sup>(2)</sup>	3	2	5	8	10	18	291
2,770 SF of Office Space <sup>(3)</sup>	4	0	4	1	3	4	31
Unadjusted Total	15	32	47	39	29	68	814
10% Reduction <sup>(4)</sup>	-1	-3	-4	-4	-3	-7	-81
<b>Total Site Trips</b>	<b>14</b>	<b>29</b>	<b>43</b>	<b>35</b>	<b>26</b>	<b>61</b>	<b>733</b>
<sup>(1)</sup> Based on ITE Land Use 220 - Apartment <sup>(3)</sup> Based on ITE Land use 710 – General Office Building							
<sup>(2)</sup> Based on ITE Land Use 826 – Specialty Retail <sup>(4)</sup> 10% reduction based on close proximity to existing and future public transportation							

As indicated in Table 1, the project as currently proposed is expected to generate approximately 43 vehicle-trips during the weekday morning peak hour, 61 vehicle-trips during the weekday afternoon peak hour, and 733 vehicle-trips on a daily basis. Relative to the previously proposed project (with 84 residential units), this is a **reduction of 4 vehicle-trips** in the morning peak hour, a **reduction of 6 vehicle-trips** during the afternoon peak hour, and a **reduction of 55 vehicle-trips** through the course of a typical weekday. The project-generated vehicle-trips have been distributed onto the roadway, and are displaced in the figure below.



*Project-Generated Peak Hour Vehicle-Trips  
 (Boston Street remains a one-way roadway)*

## **Off-Street Parking Requirements**

Based on the revised project proposal, the number of off-street parking spaces required to conform to the City of Somerville zoning ordinance was calculated. Similar to the April 2013 Traffic and Parking Assessment, a 20% reduction in the required number of parking spaces was applied to the affordable housing portion of the proposed project. This is permitted under Section 9.13(f) if documented evidence to support a reduction is provided. That evidence was provided in the April 2013 Traffic and Parking Assessment, and still applies to the current project. However, even if this reduction was not applied, the project would conform to the Somerville zoning ordinance. Table 2 summarizes the revised off-street parking requirements for the project.

**Table 2: 181-197 Washington Street Parking Requirements**

Land Use	Size	Zoning Requirements	Number of Spaces Required	
			with 20% reduction	without 20% reduction
Office/Retail	9,336 SF	1 parking space per 800SF	12	12
Residential – 181 Washington St (affordable housing)	35 units	1.0 parking space per unit	28	35
Residential – 197 Washington St (market rate housing)	34 units	1.0 parking space per unit	34	34
Residential – 197 Washington St (affordable housing)	5 units	1.0 parking spaces per unit	4	5
<b>Total</b>			<b>78</b>	<b>86</b>

As indicated, a total of 78 off-street parking spaces would be required on the project site with a 20% reduction for the affordable housing units. With no reduction, the project site would be required to provide 86 parking spaces. The proposed site plan provides 86 parking spaces, and therefore conforms to all requirements of the Somerville zoning ordinance, without the need for a special permit under Section 9.13(f).

The proposed parking structure, accessed from Boston Street, will contain 23 parking spaces, all exclusively for the residents of the building at 181 Washington Street. The remainder of the required parking spaces will be provided at the ground level and will be accessed from Washington Street. Based on the current parking requirements, no shared parking spaces are anticipated.

## **Conclusion**

This memorandum summarizes the reduction in vehicle-trip generation and the reduced off-street parking needs of the current proposal for the mixed-use development project at 181-197 Washington Street, relative to the original proposal. The results of the April 2013 Traffic and Parking Assessment indicated that the project would have minimal impacts on traffic operations at the surrounding study intersections. With the reduced number of vehicle-trips traveling to and from the project site as currently proposed, the already minor traffic impacts would be even further diminished. As such, it is expected that the proposed project can be accommodated by the existing transportation infrastructure.

# **Appendix**

## Trip Generation Calculations

Design Consultants, Inc.  
 July 17, 2013  
 197 & 181 Washington Street  
 Trip Generation Calculations  
 Based on ITE's Trip Generation Manual, 9th Edition (2012)

Land Use: 220, Apartment

<b>number of units:</b>	<b>74</b>
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	<b>AM Peak</b>	<b>PM Peak</b>	<b>Weekday Daily</b>
Average Rate (per num. of dwelling units)	0.51	0.62	6.65
Percent Entering	20%	65%	50%
Percent Exiting	80%	35%	50%
Total Trips	38	46	492
Entering Trips	8	30	246
Exiting Trips	30	16	246

Land Use: 826, Specialty Retail Center

<b>gross leasable area:</b>	<b>6,566</b>	<b>SF</b>
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	<b>AM Peak *</b>	<b>PM Peak</b>	<b>Weekday Daily</b>
Average Rate (per 1,000 SF)	0.70	2.71	44.32
Percent Entering	62%	44%	50%
Percent Exiting	38%	56%	50%
Total Trips	5	18	291
Entering Trips	3	8	146
Exiting Trips	2	10	145

\* Land Use 826, Specialty Retail Center does not contain any data regarding trips made during the AM peak hour of the adjacent street traffic. To estimate the trips in the AM peak hour of the adjacent street traffic, the Shopping Center (Land Use 820) land use was used. The ratio of the average rate in the AM peak hour of the adjacent street traffic (0.96) to the average rate in the PM peak hour of the adjacent street traffic (3.71) was applied to the average rate PM peak hour rate of Land Use 826. The percent entering/exiting from Land Use 820 was also used.

Land Use: 710, General Office Building

<b>gross floor area:</b>	<b>2,770</b>	<b>SF</b>
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	<b>AM Peak</b>	<b>PM Peak</b>	<b>Weekday Daily</b>
Average Rate (per num. of dwelling units)	1.56	1.49	11.03
Percent Entering	88%	17%	50%
Percent Exiting	12%	83%	50%
Total Trips	4	4	31
Entering Trips	4	1	16
Exiting Trips	0	3	15

Total Site Trips (unadjusted)

	<b>AM Peak</b>	<b>PM Peak</b>	<b>Weekday Daily</b>
Total Trips	47	68	814
Entering Trips	15	39	408
Exiting Trips	32	29	406

Total Site Trips (10% reduction)

	<b>AM Peak</b>	<b>PM Peak</b>	<b>Weekday Daily</b>
Total Trips	42	61	733
Entering Trips	14	35	367
Exiting Trips	28	26	366