

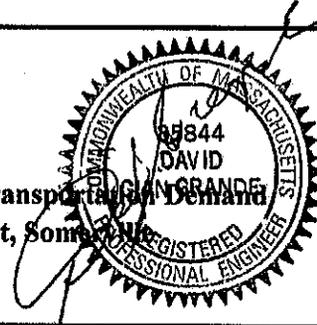
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MEMORANDUM

DCI JOB No. 2011-081

TO: Rob Simmons, Cathartes Private Investments, LLC
CC:
FROM: Tom Bertulis, M.S., P.E, PTOE
SUBJECT: Revised Trip Generation, Parking Study, and Transportation Demand Management plan for 181-197 Washington Street, Somerville
DATE: September 16, 2015



Per the change in scope for the proposed development at 181-197 Washington Street in Somerville, this memo from Design Consultants Inc. (DCI) details the revised traffic generation and parking study. The previous proposal from January 2014 called for 65 residential apartment units, approximately 6,000 SF of commercial retail space. The recent proposal calls for approximately 2,300 SF of commercial retail space, approximately 3,700 SF of space for a café, and 65 residential units.

Off-Street Parking

Per the change of the project scope, parking requirements for the Corridor Commercial District (CCD) that the project site is located in have been updated in Table 1 below:

Table 1: CCD Minimum Parking Requirements

Land Use	Number of Parking Spaces
Medium Retail	1 parking space per 800 SF
Residential	1 parking space per unit
Eating and Drinking	1 parking space per 400 SF

Source: City of Somerville Zoning Ordinances Section 9.17

Table 2 on the subsequent page summarizes the off-street parking requirements for the proposed project.

Table 2: 181-197 Washington Street Parking Requirements

Land Use	Size	Zoning Requirements	Number of Spaces Required	
			Approved	Proposed
Retail	2,349 SF	1 parking space per 800SF	7	3
Residential – 181 Washington St (affordable housing)	35 units	1.0 parking space per unit	28	28
Residential – 197 Washington St (market rate housing)	26 units	1.0 parking space per unit	26	26
Residential – 197 Washington St (affordable housing)	4 units	1.0 parking spaces per unit	4	4
Café	3,760 SF	1 parking space per 400SF	0	9
Total			65	70

The proposed development will have 65 off-street parking spaces, five less than required by zoning, as shown in the table above. This study has found that 65 off-street parking spaces will be sufficient given the analysis undertaken, the proposed TDM, and the built environment around the future development. DCI's experience with cafes in the area show that the vast majority of customers to the café do not drive and therefore the 65 parking spaces is predicted to be sufficient.

Transportation Demand Management

The project proponent's Transportation Demand Management (TDM) Plan consists of promoting alternate forms of transportation to reduce the number of single-occupancy vehicle-trips traveling to and from the project site. The 181 Washington Street building will provide for 18 bicycle lockers on their site. The 197 Washington Street building will provide 10 covered bike racks and 10 bicycle lockers. Both projects will provide 4 bike racks on Washington Street. An additional two (2) bicycle parking spaces will be provided on Washington Street for users of the retail portion of the project site, which is also in compliance with Section 9.15 of the City of Somerville zoning.

Moreover, to leverage the already high rates of biking, walking, and public transit use in Somerville, other proposed mitigation could include improving pedestrian and bicycling facilities in the area, such as installing high-visibility crosswalks on Washington Street and pedestrian wayfinding signage near the site. Other potential mitigation measures could include supporting the installation of bike boxes at the intersection of McGrath Highway and Washington Street and a bi-directional cycle track along Washington Street between Union Square and McGrath Highway that is protected with flexible-bollards.

Given the site's proximity to the future Washington Street MBTA Station, which will serve the Green Line, and Somerville's already low levels of automobile use, the 181-197 Washington Street site is the ideal location to implement TDM. The site is 850 feet to the future MBTA Green Line Washington Street Station, a three-minute walk. The site is one third of a mile to the future MBTA Green Line Union Square station, a six-minute walk. Moreover, the sustainable transport modal split in Somerville is high, as shown in the table below.

Table 3, Transportation Modal Splits In Somerville, 2009-2013

Transportation Mode (%)	Census Tract 3513 (181 Washington Street)	Census Tract 3514.03 (East Somerville)	City of Somerville
Public Transit	22.2	34.6	31.0
Bike	10.8	6.2	5.0
Walk	7.3	4.7	10.2
Other Sustainable Modes	16.6	9.6	12.4
Single Occupancy Vehicle, SOV	43.1	44.9	41.4
<i>Total</i>	<i>100</i>	<i>100</i>	<i>100</i>

SOURCE: U.S. Census, American Community Survey, 2009-2013

As can be seen in Table 3, the area around the project site has a 22.2% public transit mode share. That amount is relatively low comparing with 34.6% in east Somerville and 31% in Somerville overall. However, given that new Green Line stations will be built at Washington Street and at Union Square, the public transit mode share is expected to increase significantly. It is also noted that the project site has twice as much bike mode share as compared to the Somerville average and that bike mode share is predicted to increase.

Given the increase in the mixed-use development in conjunction with transit and biking options with that will arrive in the general vicinity of 181 Washington Street, the future prediction for the area is for a large decrease in motor vehicle use. Indeed, according to the McGrath Boulevard study conducted by MassDOT in 2014, MassDOT is conservatively expecting less than a 50% mode share of Single Occupancy Vehicle (SOV) travel in the year 2040 near 181 Washington Street. Moreover, according to DCI's experience with cafes in the vicinity of 181 Washington Street, the vast majority of people arrive by bike, foot, and public transportation.

Trip Generation

Table 4 on the page shows the comparison between revised trip-generation estimates and former trip generation estimates (from January 2014) at the proposed project site. These calculations are based on the Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition, 2012).

Table 4: Site-Generated Vehicle Trips

	2015-09-11 Trip Gen	2014-01-16 TPA
	Total	Total
Weekday Morning Peak Hour (vehicles per hour)	36	33
Weekday Afternoon Peak Hour (vehicles per hour)	69	52
Weekday Daily Totals (vehicles per day)	787	641

As indicated in Table 4 above, the project as currently proposed is expected to generate approximately 36 trips during the weekday morning peak hour, 69 vehicle-trips during the weekday afternoon peak hour, and 787 vehicle-trips on a daily basis. Compared to the trip generation in the traffic and parking assessment (TPA) study submitted in April 2014, there will be a 9% increase of site-generated trips during the weekday morning peak hour, a 33% increase during the weekday evening, and a 23% increase during the weekday daily basis. However, this increase in estimated trips is based on suburban development. It cannot be used as a blanket estimation for every project in every location. As described in the conclusion below, the built environment around the café will lead to a different type of trip generation.

Conclusion

The proposed development will have 65 off-street parking spaces, five less than required by zoning. This study has found that 65 off-street parking spaces will be sufficient given the analysis undertaken, the proposed TDM, and the built environment around the future development. DCI's experience with cafes in the area show that the vast majority of customers to the café do not drive and therefore the 65 parking spaces is predicted to be sufficient. A café is the type of land use that is promoted by the Central Commercial District (CCD) and will lead to more pedestrian engagement.

Compared to the proposed project from January 2014, the revised trip generation for 181 Washington Street will have a slight increase of the site-generated trips. The expected site-generated trip is estimated to be 36 vehicle-trips in the morning peak hour, 69 vehicle-trips during the afternoon peak hour, and 787 vehicle-trips through the course of a typical weekday, a 23% increase. However, given the increase in the mixed-use development, the sharp increase in transit and biking options, and the predicted decrease in motor vehicle trips, it is likely that the majority new trips will not be motor vehicle trips. This analysis concludes that the increased amount of site-generated trips will have a negligible traffic impact on the surrounding intersections and roadways. Consequently, no new traffic analysis is recommended for this project.