

## Design Consultants, Inc.

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### MEMORANDUM

DCI JOB NO. 2014-024

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**TO:** Terence Smith, Traffic & Parking  
City of Somerville, MA

**FROM:** Amos Fernandes, P.E., PTOE, AICP  
Transportation Manager

**SUBJECT:** **Parking Study**  
73 Concord Ave  
Somerville, MA

**DATE:** March 11, 2014

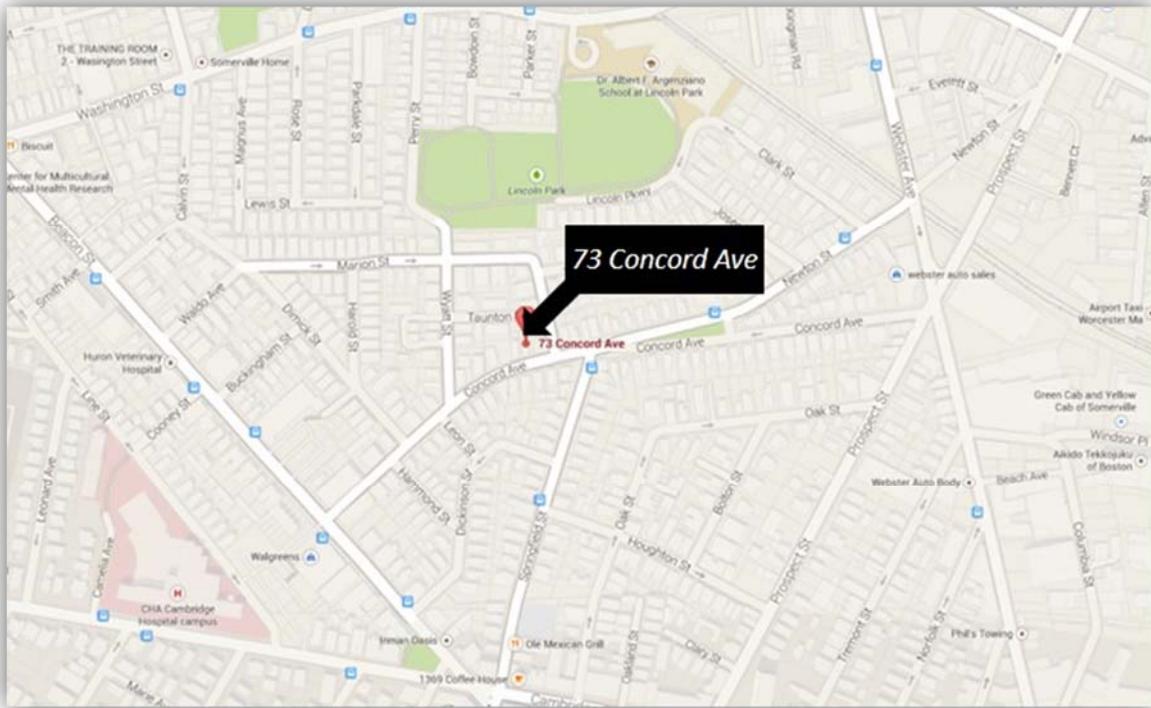
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Design Consultants, Inc. has evaluated the transportation and parking impacts of the project site at 73 Concord Avenue in Somerville, Massachusetts. It is our understanding that the site will be redeveloped from the existing single family dwelling and barn by building a new structure containing two (2) townhomes. Parking will be accommodated in the modified existing barn on-grade. DCI has conducted an on-street parking utilization study to determine the availability of on-street parking in the vicinity of the project site at 73 Concord Avenue. A project locus map of the Site is shown in Figure 1.

This memorandum serves to demonstrate that the site will not have an adverse impact on the surrounding neighborhood's on-street parking supply. The following characteristics of the Site and the surrounding area are discussed:

- Proximity to Public Transit;
- Transportation Modes and Characteristics; and
- On-Street Parking Utilization.

**Figure 1: Project Location**



*Map Source: Google Maps*

## **Transit Supply**

The Site is conveniently situated close to public transportation. The Site is approximately a mile from the Central Square Transit Station.

The Green Line Extension (GLX) project will have a proposed transit stations at Union Square less than a mile away. Union Square Station is expected to be complete by 2016. This project will extend the existing MBTA Green Line service from a relocated Lechmere Station in East Cambridge to Union Square in Somerville and College Avenue in Medford. This project is a major transportation priority of the Commonwealth and will offer a “one-seat” ride along the project corridor to downtown Boston, (eliminating the need for transfers at Lechmere Station and at Orange and Red Line stations) improving travel times within the project corridor. The new transit station will meet or exceed the Americans with Disabilities Act (ADA) standards. Mitigation measures during construction will reduce existing noise and vibration impacts from area railroads. Once completed, trains will operate every five to six minutes in the peak periods, providing fast and efficient service to downtown Boston.

## Existing Transportation Modes and Characteristics

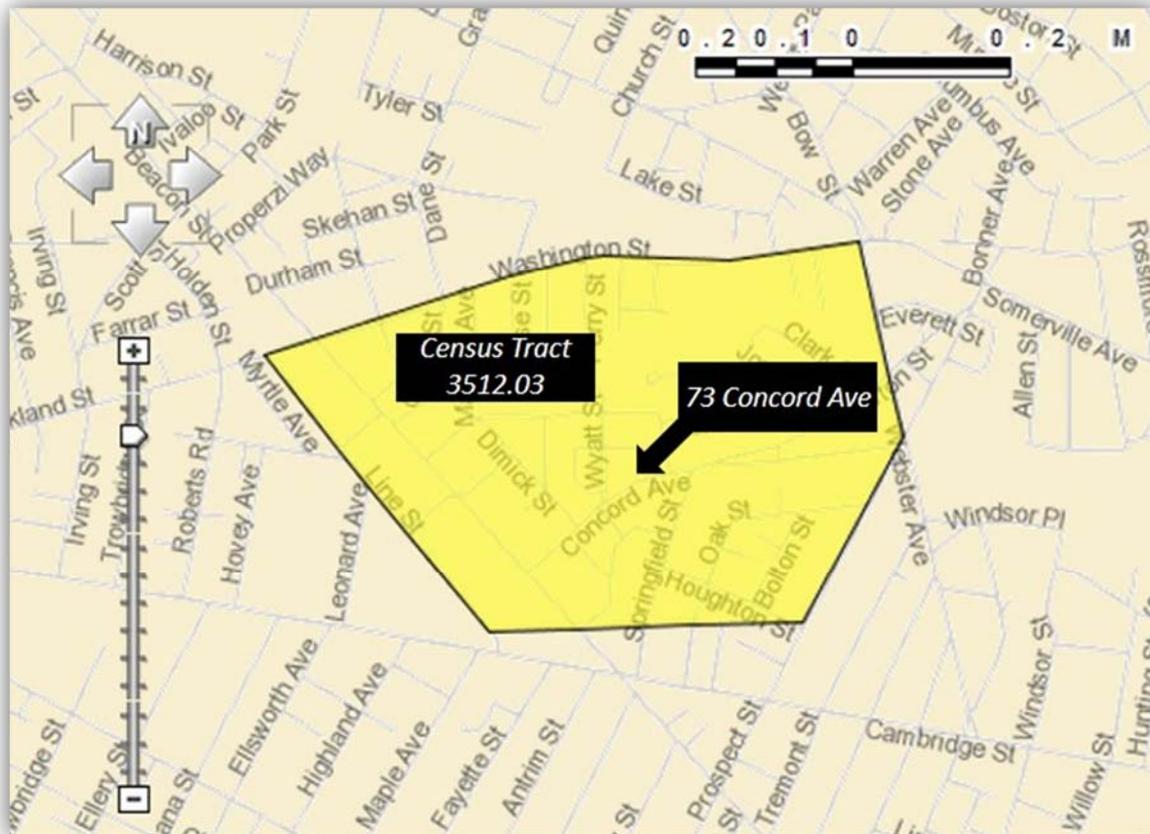
Local transportation data for the area encompassing 73 Concord Avenue was obtained and analyzed using information from the US Census Bureau and the latest American Community Survey (ACS) 5-Year Estimate (2008-2012).

The ACS is a nationwide survey that collects and produces information on demographic, social, economic, and housing characteristics about the US population every year. With respect to local transportation and the subject site, this information provides an important tool to identify unique community characteristics and allows decision makers to obtain a clear picture of their population so that scarce transportation infrastructure can be allocated efficiently and effectively.

73 Concord Avenue is located in Census Tract 3512.03. The Site within the Census Tract is shown in Figure 2. Census Tracts are small, relatively permanent statistical subdivisions of a county or equivalent entity that are updated by local participants prior to each decennial census as part of the Census Bureau's Participant Statistical Areas Program. Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people.

According to the 2008-2012 ACS data for Census Tract 3512.03, approximately 28.5% of the local population have no automobile. The vehicle ownership data for Census Tract 3512.03 is summarized in Table 1 and Figure 3.

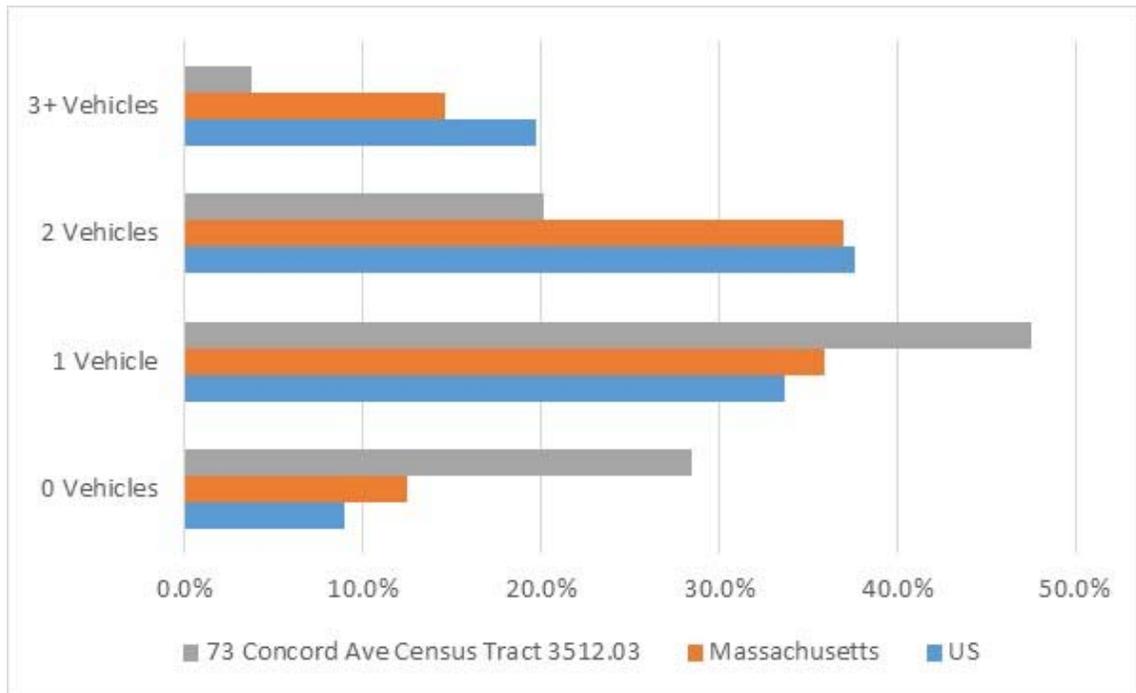
**Figure 2: 73 Concord Ave in Census Tract 3512.03**



**Table 1: Vehicle Ownership Summary (2008-2012 ASC Data)**

Automobile Ownership	US	Massachusetts	73 Concord Ave
			Census Tract 3512.03
0 Vehicles	9.0%	12.5%	28.5%
1 Vehicle	33.7%	35.9%	47.5%
2 Vehicles	37.6%	37.0%	20.2%
3+ Vehicles	19.7%	14.6%	3.8%
Total	100.0%	100.0%	100.0%

**Figure 3: Vehicle Ownership Summary (2008-2012 ASC Data)**



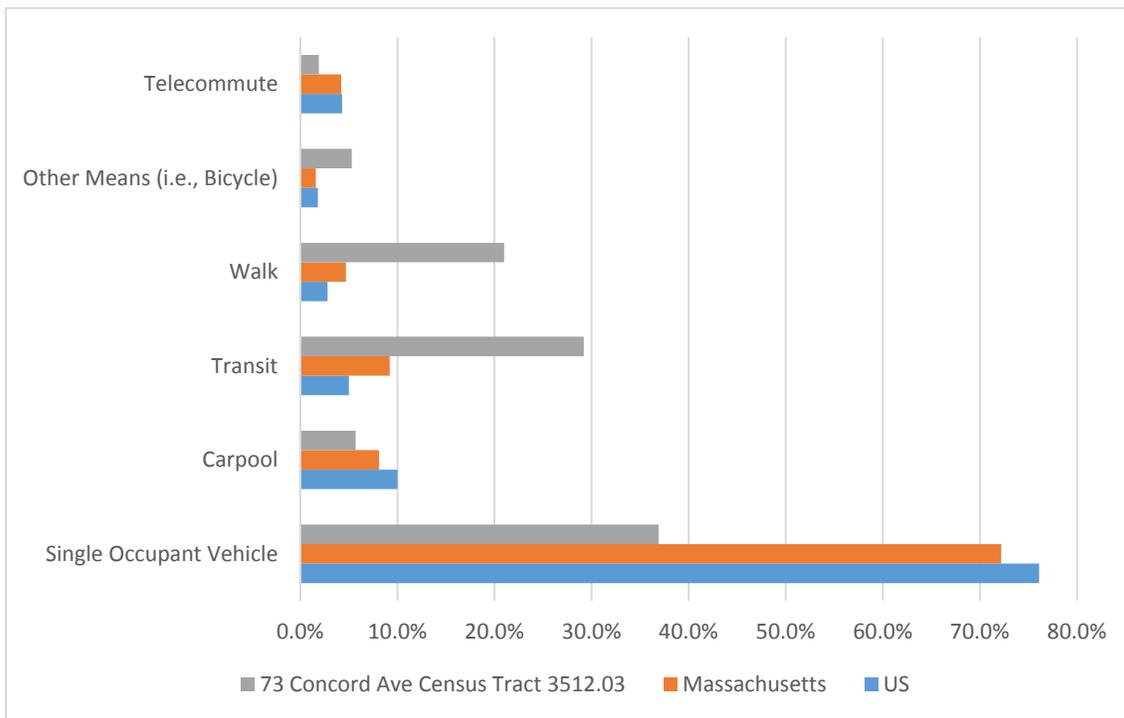
As summarized in Table 1 and illustrated in Figure 3, 73 Concord Avenue is located in an area where vehicle ownership for occupied housing units is not as prevalent compared to the State and the Nation. For the entire nation and the State of Massachusetts, 91% and 87.5% of occupied housing units have access to at least 1 automobile, respectively. For the local community that encompasses 73 Concord Avenue, 28.5% of the occupied housing units has no automobile.

In terms of mode split for the commute to work, approximately (57.4%) of the local working community find transportation to work without use of an automobile. Approximately 29.2% of the local working population use transit and 26.3% of the local working population walk or bicycle to work. Just under 2% of the local working population in the area of 73 Concord Avenue work from home. The mode split data for Census Tract 3512.03 is summarized in Table 2 and Figure 4.

**Table 2: Mode Split for the Commute to Work (2008-2012 ASC Data)**

Commuting to Work	US	Massachusetts	73 Concord Ave
			Census Tract 3512.03
Single Occupant Vehicle	76.1%	72.2%	36.9%
Carpool	10.0%	8.1%	5.7%
Transit	5.0%	9.2%	29.2%
Walk	2.8%	4.7%	21.0%
Other Means (i.e., Bicycle)	1.8%	1.6%	5.3%
Telecommute	4.3%	4.2%	1.9%
Total	100.0%	100.0%	100.0%

**Figure 4: Mode Split for the Commute to Work (2008-2012 ASC Data)**



As summarized in Table 2 and illustrated in Figure 4, 73 Concord Avenue is located in an area where the automobile as a means of transportation to work is relatively obsolete compared to the State and the Nation. For the entire nation and the State of Massachusetts, 86.1% and 80.3% of the population use the automobile for the work commute, respectively. For the local community at 73 Concord Avenue, only 42.6% use the automobile for the work commute.

## Existing On-Street Parking Utilization

The study area included all on-street parking in the vicinity of 73 Concord Avenue within 500 linear feet. DCI performed a parking survey of all available on-street parking areas to determine the existing parking utilization. The study area included the following roadways:

- Concord Ave (north leg): From 61 Concord Ave to 49 Concord Ave
- Concord Ave (south leg): From 60 Concord Ave to 46 Concord Ave
- Concord Ave: From Hammond St to 60/61 Concord Ave
- Marion St: From 34-42 Marion St to Concord Ave
- Springfield St: From Dickinson St to Concord Ave
- Wyatt St: From Taunton St to Concord Ave
- Leon St: From Concord Ave to Dickinson St
- Dimick St: From 2 Dimick St to Concord Ave

This study area is shown in Figure 3.

**Figure 3: Project Study Area**



*Map Source: Google Maps*

## On-Street Parking Inventory

DCI recorded the number of available parking spaces in the study area streets during a typical weekday and during a typical Saturday. The parking data were collected during the following time periods:

- Thursday/Friday, March 6 and 7, 2014 (12:00 – 2:00 PM & 5:00 – 7:00 PM)

- Saturday, March 8, 2014 (11:00 – 2:00 PM)

The results of the parking surveys are summarized in Table 3. Detailed tables with the complete parking survey data are contained in the attached Appendix. As indicated by the parking survey summary, an average total of 84 permit parking spaces were available during the weekday mid-day period (12:00 PM to 2:00 PM). An average of 78 permit parking spaces were available during the weekday evening period (5:00 PM to 7:00 PM). On Saturday, during the mid-day observation period (11:00 AM to 2:00 PM), an average of 66 permit parking spaces were available. The results of this parking survey indicate that there is a substantial amount of under-utilized permit parking spaces spread amongst the study area streets.

**Table 3: Parking Survey Summary**

Street	Section		Subsection	Weekday		Weekend
	From	to		Afternoon Average	Evening Average	Afternoon Average
Concord Ave (northern leg)	61 Concord Ave	49 Concord Ave	North Side	6	6	7
			South Side	0	0	0
Concord Ave. (southern leg)	60 Concord Ave	46 Concord Ave	North Side	0	0	0
			South Side	6	8	7
Concord Ave.	Hammond St.	60/61 Concord Ave (Concord Ave. Split)	North Side	9	7	8
			South Side	1	5	0
Marion St.	34-42 Marion St.	Concord Ave.	East Side	6	5	8
			West Side	2	5	8
Springfield St.	Dickinson St.	Concord Ave.	East Side	0	0	0
			West Side	4	7	7
Wyatt St	Taunton St.	Concord Ave.	East Side	3	3	5
			West Side	2	1	4
Leon St.	Concord Ave.	Dickinson St.	East Side	0	2	2
			West Side	2	2	3
Dimick St.	2 Dimick St.	Concord Ave.	East Side	1	1	2
			West Side	2	1	2
			TOTAL:	44	59	71
Permit Parking Capacity				128	128	128
Occupied Permit Parking				44	51	62
<b>Total Available Permit Parking</b>				<b>84</b>	<b>78</b>	<b>66</b>

## Conclusions

This study has examined the transportation and parking impacts of the project site at 73 Concord Avenue in Somerville, Massachusetts. The site will be redeveloped from the existing single family dwelling and barn by building a new structure containing two (2) townhomes. Parking will be accommodated in the modified existing barn on-grade. DCI has conducted an on-street parking utilization study and confirmed the availability of on-street parking in the vicinity of the project site at 73 Concord Avenue. An average total of 84 permit parking spaces were available during the weekday mid-day period (12:00 PM to 2:00 PM). An average of 78 of permit parking spaces were available during the weekday evening period (5:00 PM to 7:00 PM). On Saturday, during the mid-day observation period (11:00 AM to 2:00 PM), an average of 66 permit parking spaces were available.

73 Concord Avenue is located in an area where the automobile as a means of transportation to work is relatively obsolete compared to the State and the Nation. For the entire nation and the State of Massachusetts, 86.1% and 80.3% of the population use the automobile for the work commute, respectively. For the local community at 73 Concord Avenue, only 42.6% use the automobile for the work commute. For the entire nation and the State of Massachusetts, 91% and 87.5% of occupied housing units have access to at least 1 automobile, respectively. For the local community that encompasses 73 Concord Avenue, 28.5% of the occupied housing units has no automobile.

The Site is conveniently situated close to public transportation. The Site is approximately a mile away from the Central Square Transit Station. The Green Line Extension (GLX) project will have a proposed transit station at Union Square less than a mile away by Year 2016.

Synthesizing these site characteristics holistically, in combination with the supporting multimodal transportation infrastructure, the proposed redevelopment is expected to fit the lifestyle and goals of the local community and the City of Somerville.

# **Appendix**

## Parking Survey Data Sheets & Calculations

## Parking Survey

City: Somerville, MA

Proj. No.: \_\_\_\_\_

Street: 73 Concord Ave, Somerville, MA

Sheet No.: \_\_\_\_\_

Date: March 8, 2014

Field by: Christopher Ryan

Weather: Overcast 50's

Notes: \_\_\_\_\_

### Saturday Occupied Parking Spaces

Street	Section		Subsection	11:00 AM	12:00 PM	1:00 PM
	From	to		to 12:00 PM	to 1:00 PM	to 2:00 PM
Concord Ave (northern leg)	61 Concord Ave	49 Concord Ave	North Side	7	7	7
			South Side	0	0	0
Concord Ave. (southern leg)	60 Concord Ave	46 Concord Ave	North Side	0	0	0
			South Side	7	8	7
Concord Ave.	Hammond St.	60/61 Concord Ave (Concord Ave. Split)	North Side	8	8	7
			South Side	0	0	0
Marion St.	34-42 Marion St.	Concord Ave.	East Side	8	8	7
			West Side	7	8	8
Springfield St.	Dickinson St.	Concord Ave.	East Side	0	0	0
			West Side	7	6	7
Taunton St.	Wyatt St.	Marion St.	North Side	4	6	6
			South Side	3	3	4
Wyatt St	Taunton St.	Concord Ave.	East Side	5	5	5
			West Side	4	5	4
Leon St.	Concord Ave.	Dickinson St.	East Side	1	2	2
			West Side	3	3	4
Dimick St.	2 Dimick St.	Concord Ave.	East Side	2	2	2
			West Side	2	2	2
TOTAL:				64	69	68

**LEGEND**

	Resident Parking
	Permit Parking

## Parking Survey

City: Somerville, MA

Proj. No.: \_\_\_\_\_

Street: 73 Concord Ave, Somerville, MA

Sheet No.: 2

Date: March 6, 2014 (5-7pm) & March 7, 2014 (12-2pm)

Field by: Frantz Renard

Weather: 3/6/2014: Overcast 20's & 3/7/2014: Overcast 30's

Notes: \_\_\_\_\_

### Weekday Occupied Parking Spaces

Street	Section		Subsection	12:00 PM	12:30 PM	1:00 PM	1:30 PM	5:00 PM	6:00 PM
	From	to		to 12:30 PM	to 1:00 PM	to 1:30 PM	to 2:00 PM	to 6:00 PM	to 7:00 PM
Concord Ave (northern leg)	61 Concord Ave	49 Concord Ave	North Side	6	6	6	6	5	6
			South Side	0	0	0	0	0	0
Concord Ave. (southern leg)	60 Concord Ave	46 Concord Ave	North Side	0	0	0	0	0	0
			South Side	5	5	6	6	7	8
Concord Ave.	Hammond St.	60/61 Concord Ave (Concord Ave. Split)	North Side	8	9	10	10	7	7
			South Side	1	1	1	1	5	5
Marion St.	34-42 Marion St.	Concord Ave.	East Side	7	7	6	5	4	6
			West Side	1	2	2	3	5	5
Springfield St.	Dickinson St.	Concord Ave.	East Side	0	0	0	0	0	0
			West Side	4	4	4	5	6	8
Taunton St.* (resident parking)	Wyatt St.	Marion St.	North Side	2	1	4	4	3	4
			South Side	3	2	1	2	5	5
Wyatt St	Taunton St.	Concord Ave.	East Side	3	3	3	3	2	3
			West Side	2	2	2	1	1	1
Leon St.	Concord Ave.	Dickinson St.	East Side	0	0	0	0	1	2
			West Side	2	2	2	2	2	1
Dimick St.	2 Dimick St.	Concord Ave.	East Side	1	1	1	1	1	1
			West Side	2	2	2	2	1	1
TOTAL:				42	44	45	45	47	54

**LEGEND**

	Resident Parking
	Permit Parking

## Parking Survey

City: Somerville, MA

Proj. No.: \_\_\_\_\_

Street: 73 Concord Avenue

Sheet No.: 1

Date: 3/6/2014

Field by: Frantz Renard

Weather: Overcast 20's

Notes: \_\_\_\_\_

### Total Available Parking Spaces

Street	Section		Subsection	Total Available Spaces
	From	to		
Concord Ave (northern leg)	61 Concord Ave	49 Concord Ave	North Side	7
			South Side	0
Concord Ave. (southern leg)	60 Concord Ave	46 Concord Ave	North Side	0
			South Side	8
Concord Ave.	Hammond St.	60/61 Concord Ave (Concord Ave. Split)	North Side	17
			South Side	20
Marion St.	34-42 Marion St.	Concord Ave.	East Side	10
			West Side	16
Springfield St.	Dickinson St.	Concord Ave.	East Side	0
			West Side	9
Taunton St.	Wyatt St.	Marion St.	North Side	10
			South Side	12
Wyatt St	Taunton St.	Concord Ave.	East Side	10
			West Side	12
Leon St.	Concord Ave.	Dickinson St.	East Side	6
			West Side	7
Dimick St.	2 Dimick St.	Concord Ave.	East Side	3
			West Side	3
<b>TOTAL:</b>				<b>150</b>

**LEGEND**

	Resident Parking
	Permit Parking