Grove Hall Business District Parking Analysis

February 2014

Prepared for

- The Roxbury Great Neighborhoods Partnership
- Nuestra Comunidad Development Corporation
- Dudley Square Main Streets
- Greater Grove Hall Main Streets
- Project R.I.G.H.T., Inc
- Quincy Geneva Housing Corporation

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- Create affordable homes;
- Preserve and create open space;
- Build alternative transportation infrastructure to support walking and biking, and;
- Engage in placemaking.

The Roxbury Great Neighborhoods Partnership is comprised of Nuestra Comunidad Development Corporation, Dudley Square Main Streets, Greater Grove Hall Main Streets, Project R.I.G.H.T., Inc., and Quincy Geneva Housing Corporation. These organizations are working to promote smart growth along the Warren Street Corridor spanning from Dudley Square to Grove Hall.

The Great Neighborhoods Partners

Dudley Square:
Dudley Square Main Streets
Nuestra Comunidad Development Corporation

Grove Hall:
Grove Hall Main Streets
Project Right, Inc.
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INTRODUCTION

Grove Hall is a residential and commercial area located in the Roxbury neighborhood of Boston. Along with Dudley Square to the north, it is one of two commercial anchors for the 1.4 mile Warren Street corridor. The Roxbury Great Neighborhood Partners contracted with the Metropolitan Area Planning Council (MAPC) to perform a parking analysis for the Grove Hall study area (shown in Figure 1) to:

- Determine the existing parking availability, usage, and turnover;
- Assess whether existing parking meets the needs of the community; and,
- Provide recommendations to better utilize existing parking.

This report provides a detailed review of the existing conditions, the parking analysis, and recommendations for the Grove Hall study area.

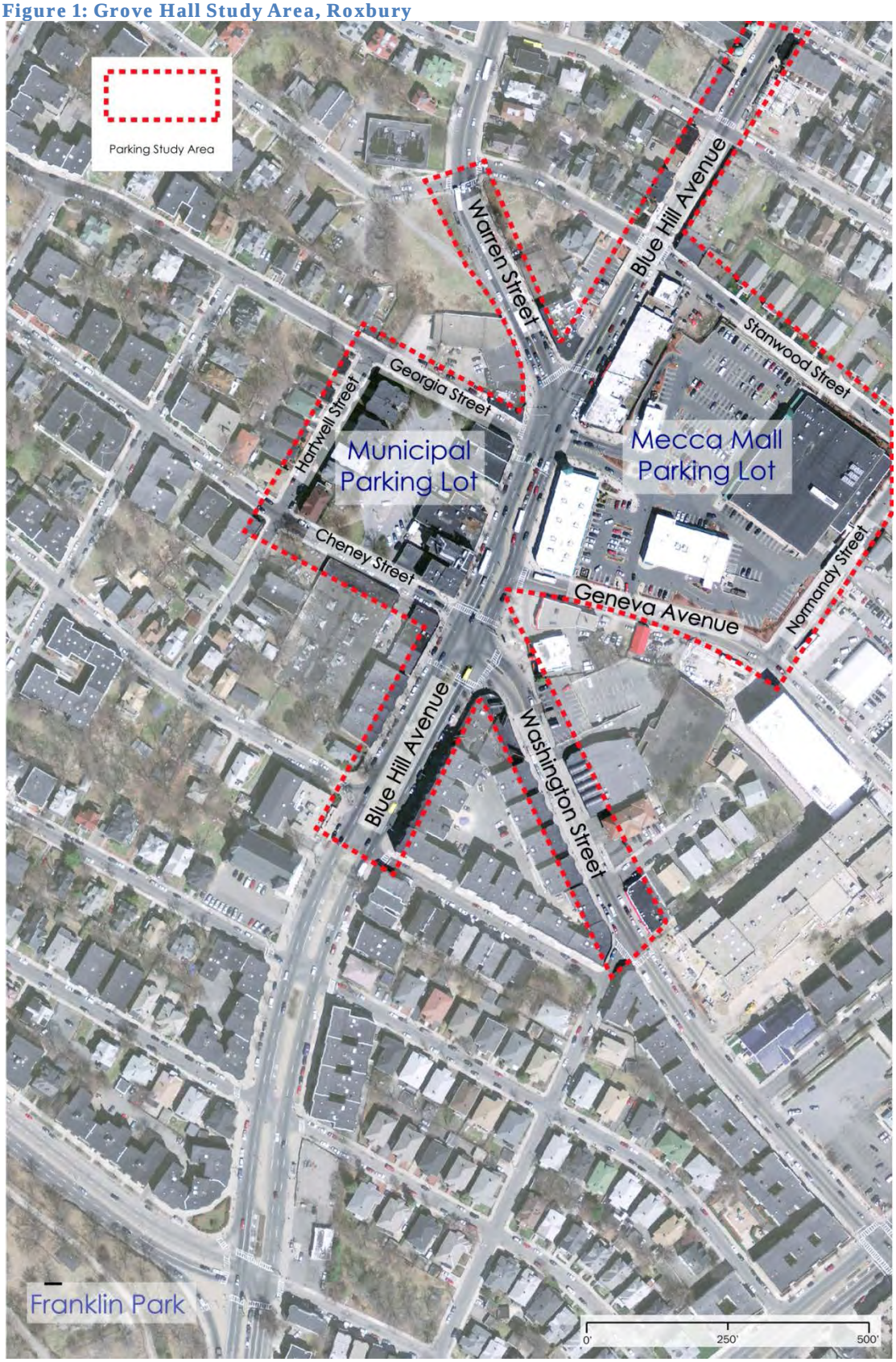
STUDY AREA

The Grove Hall study area is located at the convergence of several major roads, including Blue Hill Avenue, Geneva Avenue, Washington Street, and Warren Street. The study area extends along Blue Hill Avenue from Brunswick Street to the north to Castlegate Road to the south and includes some residential blocks to the east and west. Within the study area there is a mix of retail, commercial, and residential uses, and a combination of on- and off-street parking. The study area includes the municipal parking lot between Georgia Street and Cheney Street, the Mecca Mall parking lot, and on-street parking spaces along several side streets.

Specifically, MAPC recorded parking utilization in the study area at the following locations:

- The Mecca Mall Lot
- The Municipal Lot located between Georgia Street and Cheney Street
- Blue Hill Avenue (from Brunswick Street to Castlegate Road)
- Cheney Street (from Blue Hill Avenue to Hartwell Street)
- Geneva Avenue (from Blue Hill Avenue to Normandy Street)
- Georgia Street (from Blue Hill Avenue to Hartwell Street)
- Hartwell Street (from Georgia Street to Cheney Street)
- Normandy Street (from Blue Hill Avenue and Geneva Avenue)
- Stanwood Street (from Blue Hill Avenue to Normandy Street)
- Washington Street (from Blue Hill Avenue to Normandy Street)
- Warren Street (from Blue Hill Avenue to Crawford Street)

Figure 1: Grove Hall Study Area, Roxbury



EXISTING PARKING ANALYSIS (GENERAL)

In order to determine the existing parking conditions within the study area, MAPC staff conducted data collection on Tuesday, May 7 and Sunday, June 8, 2013, from 8:00 a.m.–6:00 p.m. The data collection effort counted the number of parking spaces occupied every half hour as well as recording how long vehicles were parked in each space to determine parking space turnover. Prior to the data collection effort, the number, type, and location of all parking spaces within the study area were documented. The study area consists of multiple types of parking, which are illustrated in Figure 2.

Available Parking Spaces by Type

The study area includes a variety of parking types. Some spaces are restricted, including 2 hour limited parking and handicap parking. Many of the on-street spaces, especially in residential areas, are unrestricted and unstriped. In addition, some parking spaces (primarily but not exclusively in the surface parking lots) are unrestricted and striped.

There are a total of 512 parking spaces available for public use within the study area, of which 262 are on-street spaces and 250 are off-street. The largest percentage of on-street spaces (45%) are unrestricted and unstriped, located primarily in the residential areas. The number and type of parking spaces in the study area by segment is shown in Table 1.

Figure 2: Parking Spaces by Type

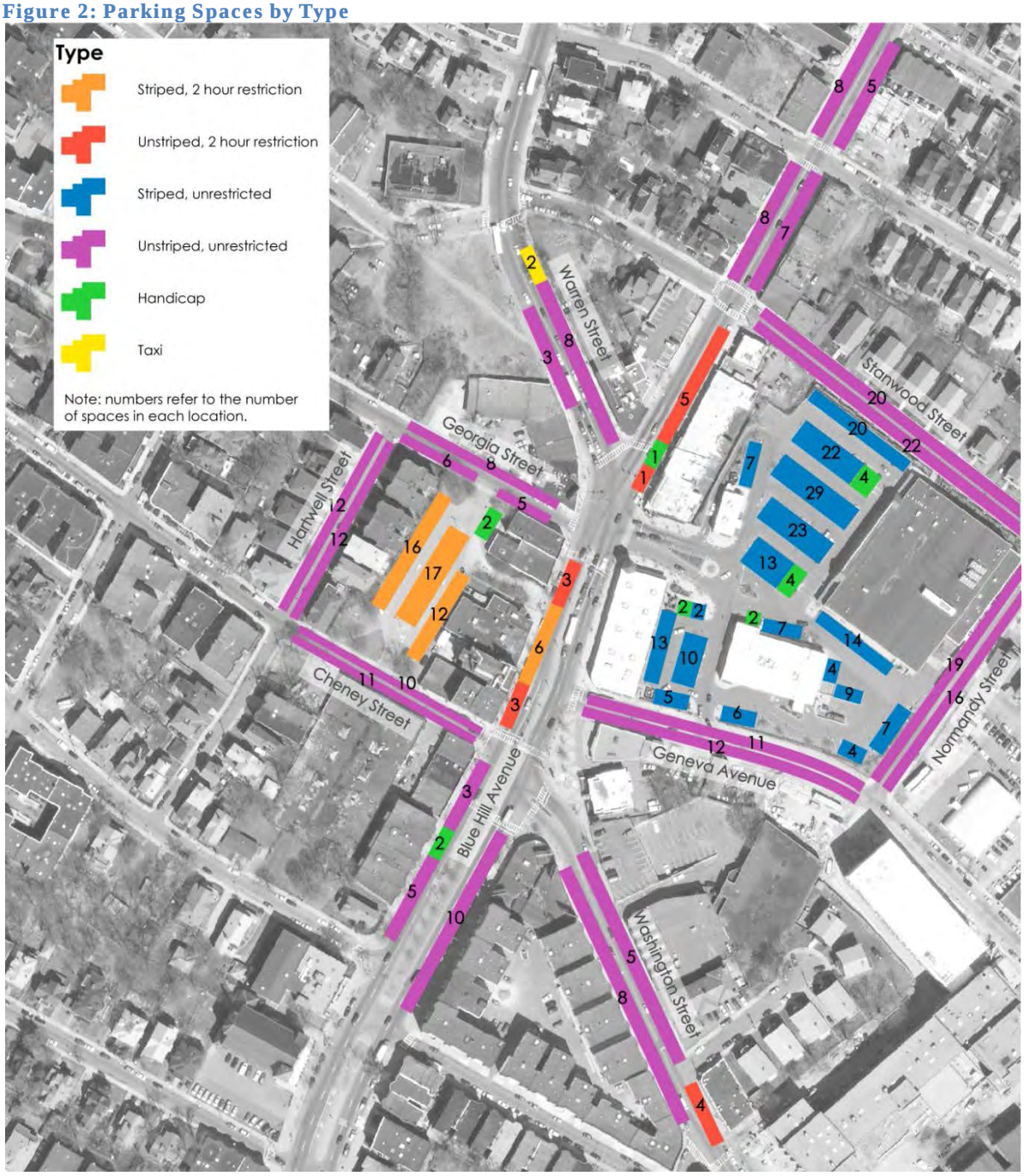


Table 1: Parking Availability by Type[1]

Location	Type of Parking					
	2 Hour Restriction, Striped	2 Hour Restriction, Unstriped	Unrestricted, Striped	Unrestricted, Unstriped	Handicap	Taxi
Mecca Mall Lot			191		12	
Municipal Lot	45				2	
Blue Hill Avenue - east (Brunswick St. to Stanwood St.)				12		
Blue Hill Avenue - east (Stanwood St. to Mecca Mall entrance)	6				1	
Blue Hill Avenue - east (Washington St. to Castlegate Rd.)				10		
Blue Hill Avenue - west (Brunswick St. to Stanwood St.)				16		
Blue Hill Avenue - west (Warren St to Cheney St.)	6	6				
Blue Hill Avenue - west (Cheney St. to Schuyler St.)				9	2	
Cheney St - north (Blue Hill Ave. to Hartwell St.)				10		
Cheney St - south (Blue Hill Ave. to Hartwell St.)				11		
Geneva Ave - south (Blue Hill Ave. to Normandy St.)				12		
Geneva Ave - north (Normandy St. to Blue Hill Ave.)				11		
Georgia St - north (Blue Hill Ave. to Hartwell St.)				8		
Georgia St - south (Blue Hill Ave to Hartwell)				11		
Hartwell St - east (Georgia St. to Cheney St.)				12		
Hartwell St - west (Georgia St. to Cheney St.)				12		
Normandy Street - west (Blue Hill Ave. to Geneva Ave.)				19		
Normandy Street - east (Blue Hill Ave. to Geneva Ave.)				16		
Stanwood Street - south (Blue Hill Ave to Normandy St)				22		
Stanwood Street - north (Blue Hill Ave. to Normandy St.)				20		
Washington Street - south (Blue Hill Ave. to Normandy St.)				8		
Washington Street - north (Normandy St. to Blue Hill Ave.)	4			5		
Warren St - east (Blue Hill Ave. to Crawford St.)				8		2
Warren St - west (Blue Hill Ave to Crawford St.)				3		
Total (512 spaces)	**61**	**6**	**191**	**235**	**17**	**2**

[1] Parking analysis performed in May and June, 2013

[2] Number of parking spaces in unstriped areas was estimated and may vary from the actual number of vehicles that can be parked in a segment.

Parking Occupancy

During the hours of the parking observations, partial license plate numbers were documented every half hour at each space within the study area to determine parking duration and parking space turnover. As Figure 3 and Table 2 illustrate, the parking occupancy for both weekday and Sunday were well below the capacity for the Grove Hall study area. Sunday had a higher parking occupancy throughout the day compared to the weekday occupancy. This may reflect parking demand from the several houses of worship in the vicinity, weekend shopping for groceries and other items, and from local residents being home on Sunday and not at work. On Sunday, the highest percentage of occupied parking spaces occurred between 2:00 and 3:00 PM (61%).On the weekday the highest percentage occurred at 4:00 PM (51%).

Figure 3: Study Area Parking Occupancy vs. Capacity

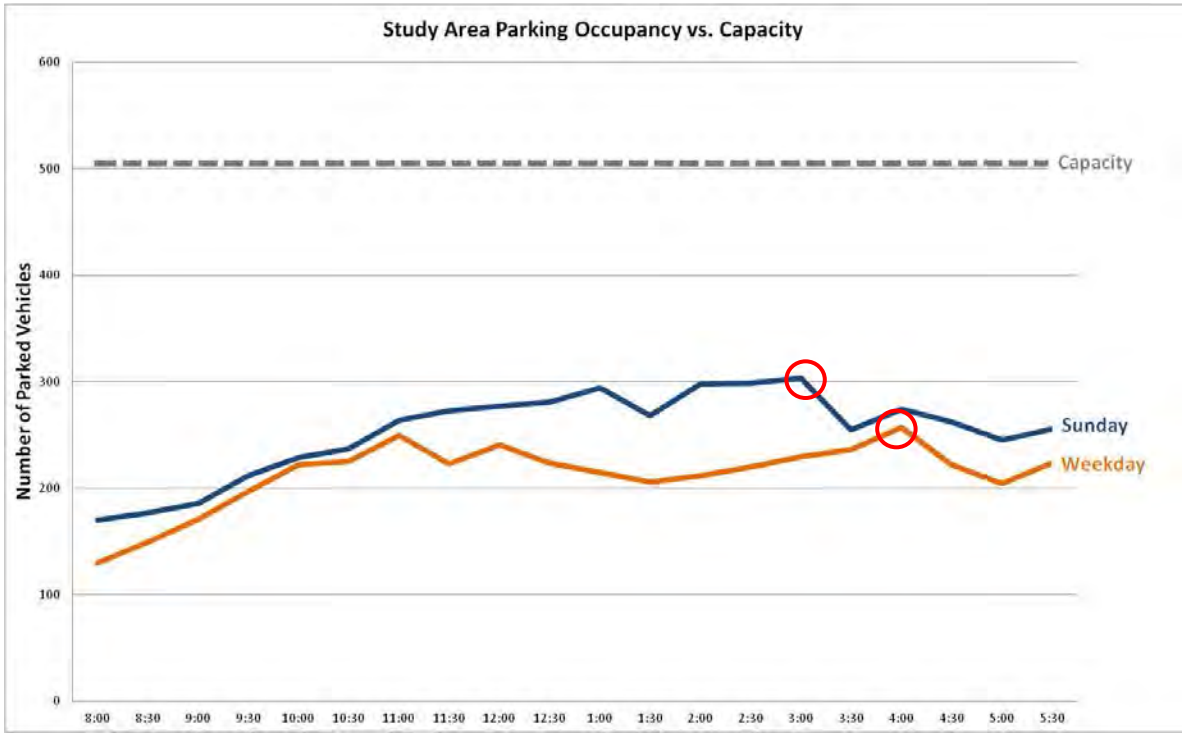


Table 2: Study Area Percent of Spaces Occupied

	Study Area Percent of Spaces Occupied									
	8:00 A.M.	8:30 A.M.	9:00 A.M.	9:30 A.M.	10:00 A.M.	10:30 A.M.	11:00 A.M.	11:30 A.M.	12:00 P.M.	12:30 P.M.
Weekday	26%	30%	34%	39%	44%	45%	50%	44%	48%	44%
Sunday	34%	36%	38%	43%	46%	48%	54%	56%	56%	57%

Table 2: Study Area Percent of Spaces Occupied

	Study Area Percent of Spaces Occupied									
	1:00 P.M.	1:30 P.M.	2:00 P.M.	2:30 P.M.	3:00 P.M.	3:30 P.M.	4:00 P.M.	4:30 P.M.	5:00 P.M.	5:30 P.M.
Weekday	43%	41%	42%	44%	46%	47%	51%	44%	40%	44%
Sunday	60%	55%	61%	61%	61%	52%	56%	53%	50%	52%

EXISTING PARKING ANALYSIS (DETAILED)

Despite the relatively small area, the different parking locations within the study area are not homogenous. As the data shows, the analysis of the overall area indicates that there is ample parking available throughout the day. By breaking down the study area into discrete sections (labeled as "categories") MAPC performed a more nuanced analysis of the area.

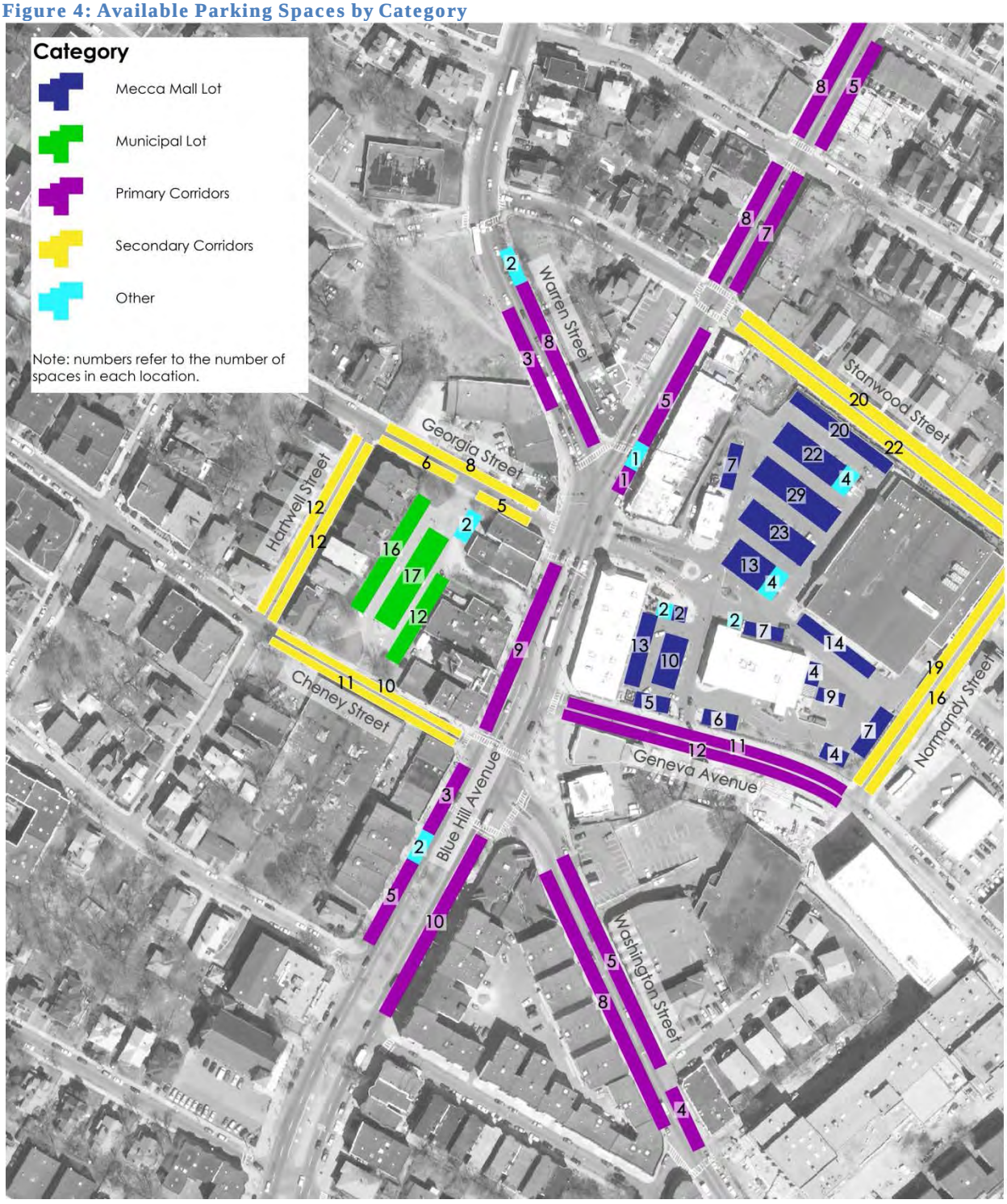
Available Parking Spaces by Category

MAPC categorized parking within the Grove Hall study area as Primary Corridors, Secondary Corridors, the Mecca Mall Lot, the Municipal lot, and Other. Figure 4 provides a breakdown of the spaces based upon the location of these categories of parking.

- **Primary Corridors** (116 parking spaces) – These on-street spaces are located along the main arterials in Grove Hall: Blue Hill Avenue, Warren Street, Geneva Avenue, and Washington Street. These roads primarily, but not exclusively, serve commercial uses along these routes and are locations where duration and turnover are important.
- **Secondary Corridors** (141 parking spaces) – These on-street spaces are located on roads off of the Primary Corridors. West of Blue Hill Avenue the Secondary Corridors include Cheney Street, Georgia Street, and Hartwell Street. East of Blue Hill Avenue the Secondary Corridors include Normandy Street and Stanwood Street.
- **Mecca Mall Lot** (191 spaces) – The Mecca Mall Lot contains the highest number of available parking spaces and serves the Mecca Mall and its associated businesses, which is anchored by a Stop and Shop Supermarket.
- **Municipal Lot** (45 spaces) – The Municipal Lot is a City of Boston-owned public parking lot located off of Blue Hill Avenue, accessed by Georgia and Cheney Street.

- **Other** (19 spaces) – Other spaces in the study area include 2 taxi spaces on Warren Street and 17 handicap parking spaces distributed throughout the study area. The majority of handicap spaces (12) are located in the Mecca Mall Lot. In addition, 2 are located in the Municipal lot, and 3 on Blue Hill Avenue. These spots are restricted to specific users, therefore MAPC classified them separately from the categories described above, which are available for general public use.

Figure 4: Available Parking Spaces by Category



Parking Occupancy

As part of the parking analysis, MAPC looked at parking occupancy for each of the five categories to determine the average daily occupancy. During the weekday observation, the Primary Corridors had the highest average occupancy at 57% of the total capacity. During the Sunday observation, the Municipal Lot had the highest average occupancy (followed closely by the Primary Corridors) at 68% of total capacity. A summary of the parking occupancy by category is shown below in Table 3.

Table 3: Average Daily Occupancy

	Weekday	Sunday
Mecca Mall Lot	45%	45%
Municipal Lot	39%	68%
Primary Corridors	57%	66%
Secondary Corridors	31%	43%
Other	36%	32%

MAPC also looked at the percent of parking occupied by time of day for each parking category. The weekday peak occupancy for Primary Corridors occurred at 4:00 P.M. with 72% of available spaces occupied, which was the highest among the categories for the weekday observation. This was followed by the Mecca Mall Lot and the Municipal Lot, which both had peak occupancies of 58% (at 4:00 P.M. and 12:30 P.M., respectively). The Secondary Corridors had a weekday peak occupancy of 40% at 5:30 P.M., which was the final observation period of the day. Because the Secondary Corridors primarily support residential uses, this peak could reflect residents returning home from work.

For each category, the peak occupancy on the Sunday observation was higher than that of the weekday observation. The highest peak occupancy on Sunday was in the Municipal Lot with 98% occupancy at 12:00 P.M., most likely due to religious services occurring at that time and businesses being open. The Primary Corridors peaked at 2:30 P.M. with a 77% occupancy rate. The Mecca Mall Lot also peaked at this time with a 64% occupancy rate. As with the weekday observation, the Secondary Corridors' peak occurred at 5:30 P.M., with a 55% occupancy rate as residents were returning home from their daily activities.

A detailed breakdown by hour is shown in Table 4 (shaded cells indicate the highest occupancy for each category for each day).

Table 4: Percent of Occupied Spaces by Time of Day

	Weekday				Sunday			
	Mecca Mall Lot	Municipal Lot	Primary Corridors	Secondary Corridors	Mecca Mall Lot	Municipal Lot	Primary Corridors	Secondary Corridors
8:00 a.m.	24%	22%	33%	26%	20%	56%	46%	38%
8:30 a.m.	30%	24%	39%	26%	21%	62%	47%	39%
9:00 a.m.	38%	27%	42%	26%	23%	69%	48%	39%
9:30 a.m.	39%	36%	55%	30%	38%	67%	52%	35%
10:00 a.m.	46%	38%	60%	33%	43%	64%	58%	35%
10:30 a.m.	43%	40%	66%	34%	42%	76%	62%	36%
11:00 a.m.	55%	44%	65%	35%	52%	87%	65%	35%
11:30 a.m.	49%	42%	58%	30%	55%	82%	66%	38%
12:00 p.m.	56%	53%	59%	29%	48%	98%	70%	43%
12:30 p.m.	48%	58%	54%	31%	52%	80%	72%	45%
1:00 p.m.	51%	56%	43%	30%	57%	78%	75%	45%
1:30 p.m.	45%	56%	52%	26%	52%	56%	73%	42%
2:00 p.m.	42%	47%	59%	29%	60%	71%	75%	45%
2:30 p.m.	43%	42%	67%	28%	64%	58%	77%	44%
3:00 p.m.	47%	40%	62%	35%	59%	69%	75%	52%
3:30 p.m.	49%	24%	67%	38%	39%	51%	76%	49%
4:00 p.m.	58%	38%	72%	33%	48%	64%	70%	52%
4:30 p.m.	50%	29%	56%	35%	48%	53%	67%	49%
5:00 p.m.	39%	24%	61%	33%	36%	53%	70%	50%
5:30 p.m.	43%	31%	61%	40%	36%	58%	72%	55%
Average Occupancy	**45%**	**39%**	**57%**	**31%**	**45%**	**68%**	**66%**	**43%**

Figure 5 and Figure 6 depict the daily occupancy for the Weekday and Sunday observations, respectively. On both observation days, occupancy for the study area remained well below the capacity.

Figure 5: Weekday Study Area Daily Occupancy

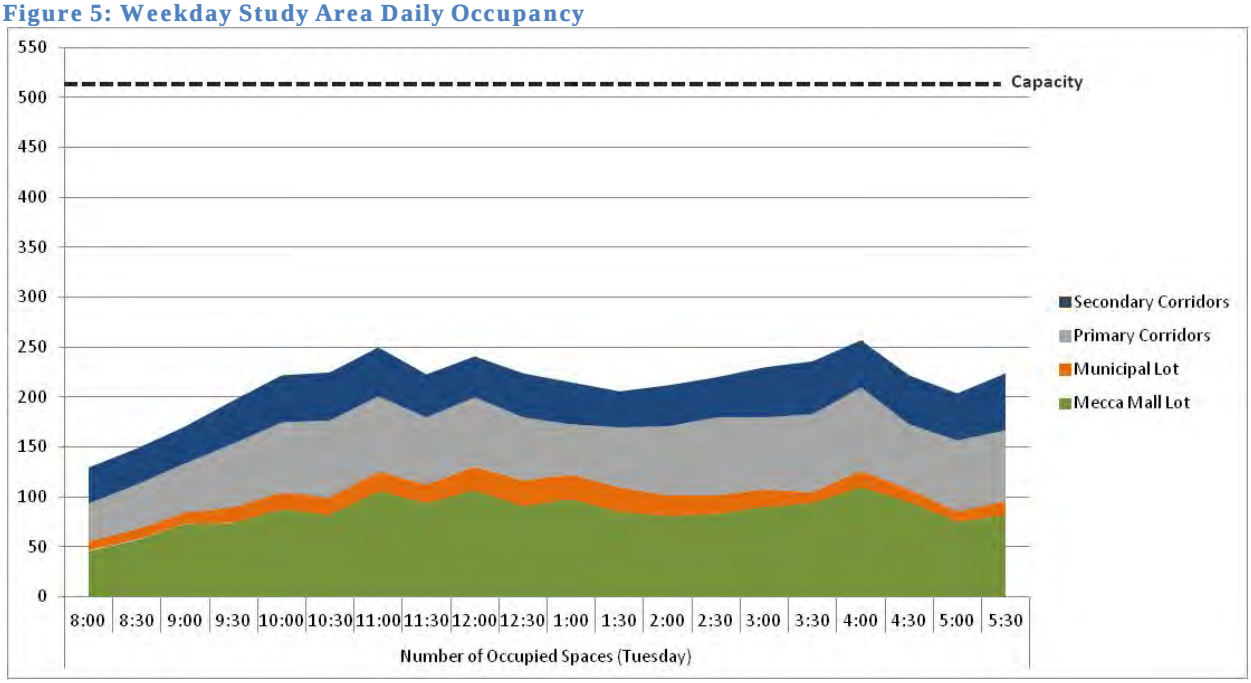
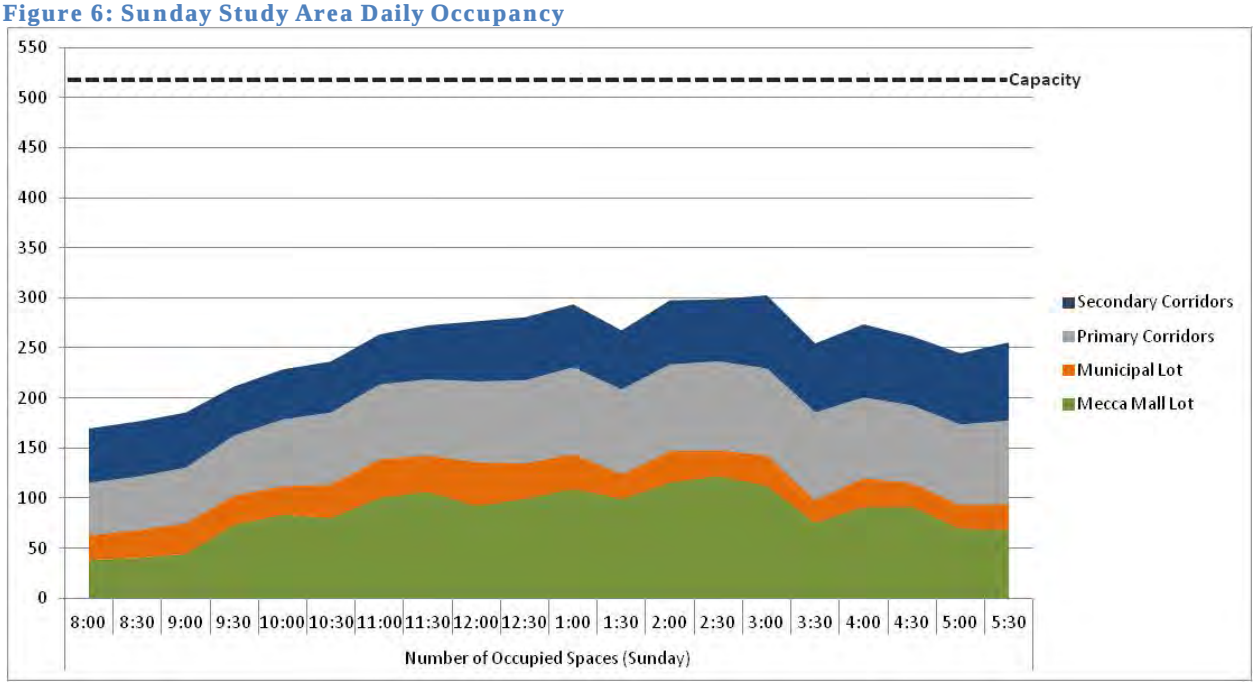


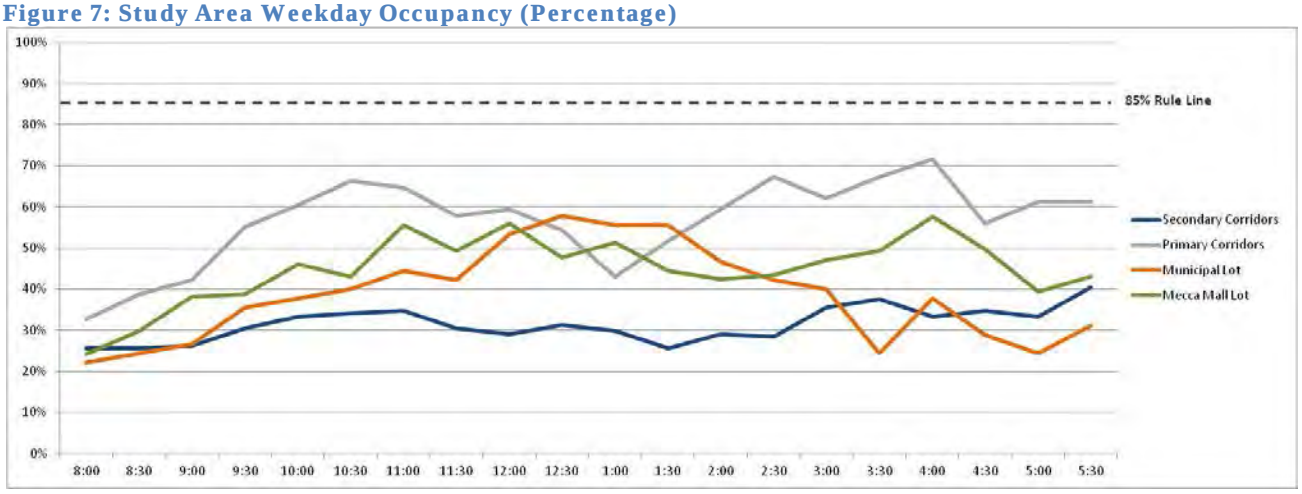
Figure 6: Sunday Study Area Daily Occupancy



Parking analyses often compare occupancy to a benchmark utilization rate. This utilization rate, typically considered 85%, represents the optimal usage whereby parking is considered "full" (and therefore efficiently used) but with enough vacant spots to accommodate turnover. Figure 7 and Figure 8 depict the study area's weekday and Sunday parking occupancy compared to the 85% rule.

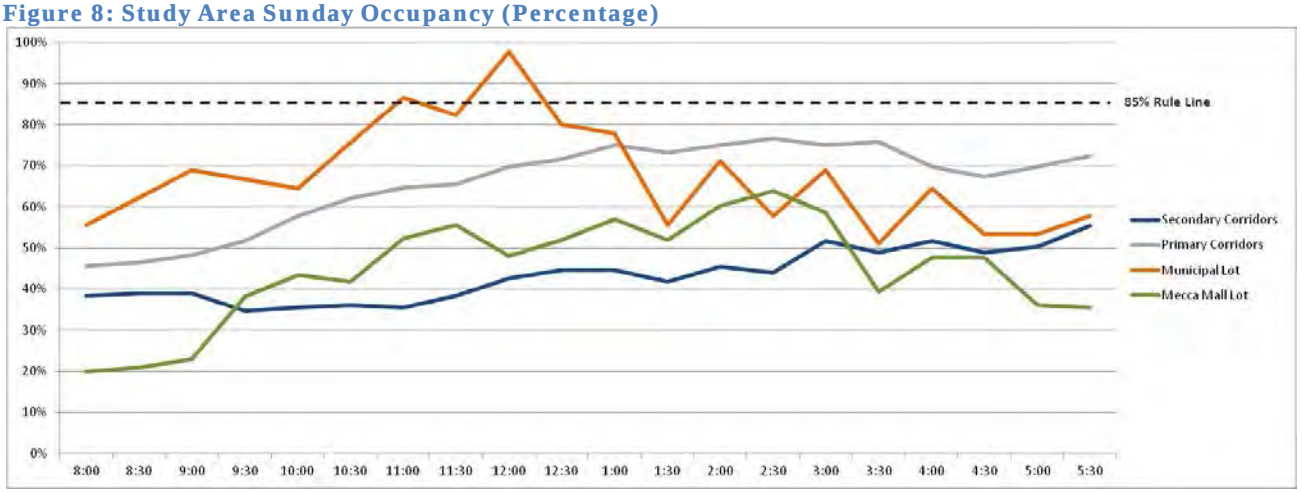
During the weekday observation, each category of parking remained well below the 85% optimal utilization rate. By the end of the observation period (6:00 P.M.) occupancy within the Secondary Corridors began to increase, most likely due to residents returning home from work; however, the occupancy at the end of the observation period was still less than half the optimal utilization.

Figure 7: Study Area Weekday Occupancy (Percentage)



Overall parking utilization on Sunday was higher than on the weekday observation. However, for most of the categories occupancy remained below the 85% rate. The only exception was the Municipal Lot, which neared full occupancy at 12:00 P.M. This most likely reflects the number of religious services occurring at that time, as well as restaurants serving lunch crowds, and the Laundromat being open. This analysis does not necessarily indicate that parking at the Municipal Lot should be expanded; instead, other solutions, such as improving parking access in other areas with low occupancy rates (e.g., the Mecca Mall Lot) should be explored.

Figure 8: Study Area Sunday Occupancy (Percentage)



Understanding peak and average parking occupancies provides insight regarding the demand for parking spaces throughout the study area. Figure 9 and Figure 10 classify parking into three groups:

1. **High average occupancy and high peak occupancy** - These are areas with parking spaces in high demand throughout the day, defined as having both average and peak occupancies of greater than 60%.
2. **Low average occupancy and low peak occupancy** - These are areas with parking spaces that are not in high demand. These areas represent potential opportunities as alternative parking spaces from areas in high demand. These areas are defined as having both average and peak occupancy below 60%.
3. **Low average occupancy but high peak occupancy** - These are areas with parking spaces that, overall, are not in high demand (defined as having an average occupancy below 60%), but have discrete periods in which they are in high demand (defined as having a peak occupancy greater than 60%). Due to high peak occupancies, these spaces may give motorists the impression that they are always in high demand when in reality they are only in high demand at certain times, for example during religious services or when residents return home from work. Promoting parking locations that are low occupancy and low peak can ease the demand during these times.

The Primary Corridors (Blue Hill Avenue, Geneva Avenue, Warren Street, and Washington Street) tended to have high average and peak occupancies, reflecting their highly visible locations and proximity to the businesses in Grove Hall. The Municipal Lot had low average and peak occupancies during the weekday observation; however, on Sunday it had both high average and high peak occupancies, due to its use as parking for the nearby religious services and businesses. Most of the Secondary Corridors (Cheney Street, Georgia Street, Hartwell Street, and Stanwood Street) had high peak occupancies on at least one side of the street on both the weekday and Sunday observations (Normandy Street had both low occupancy and low peaks during the weekday observation). The high peaks may be due to both residents returning home from work, as well as motorists parking for religious services. In many cases the Secondary Corridors had low average occupancy rates, reflecting excess capacity for part of the day. Finally, the Mecca Mall Lot had low average and peak occupancies on both the weekday and Sunday observations. With its excess capacity and large number of parking spaces, the Mecca Mall Lot has the potential to absorb some of the excess demand observed in other parts of the study area. This would require further discussion between the businesses and property owners of the Mecca Mall and any potential users of the parking lot.

Figure 9: Weekday Average and Peak Occupancy by Location

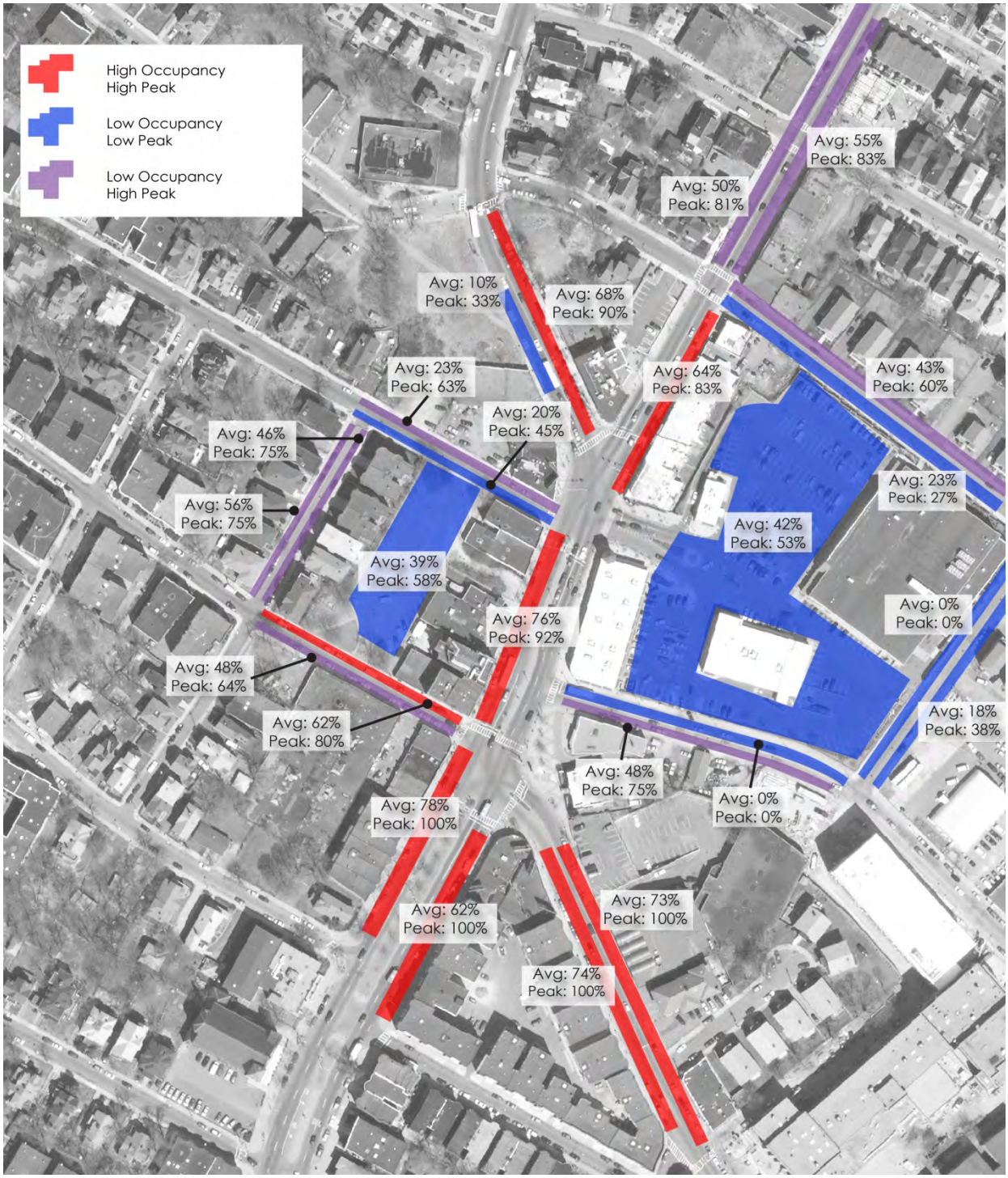


Figure 10: Sunday Average and Peak Occupancy by Location

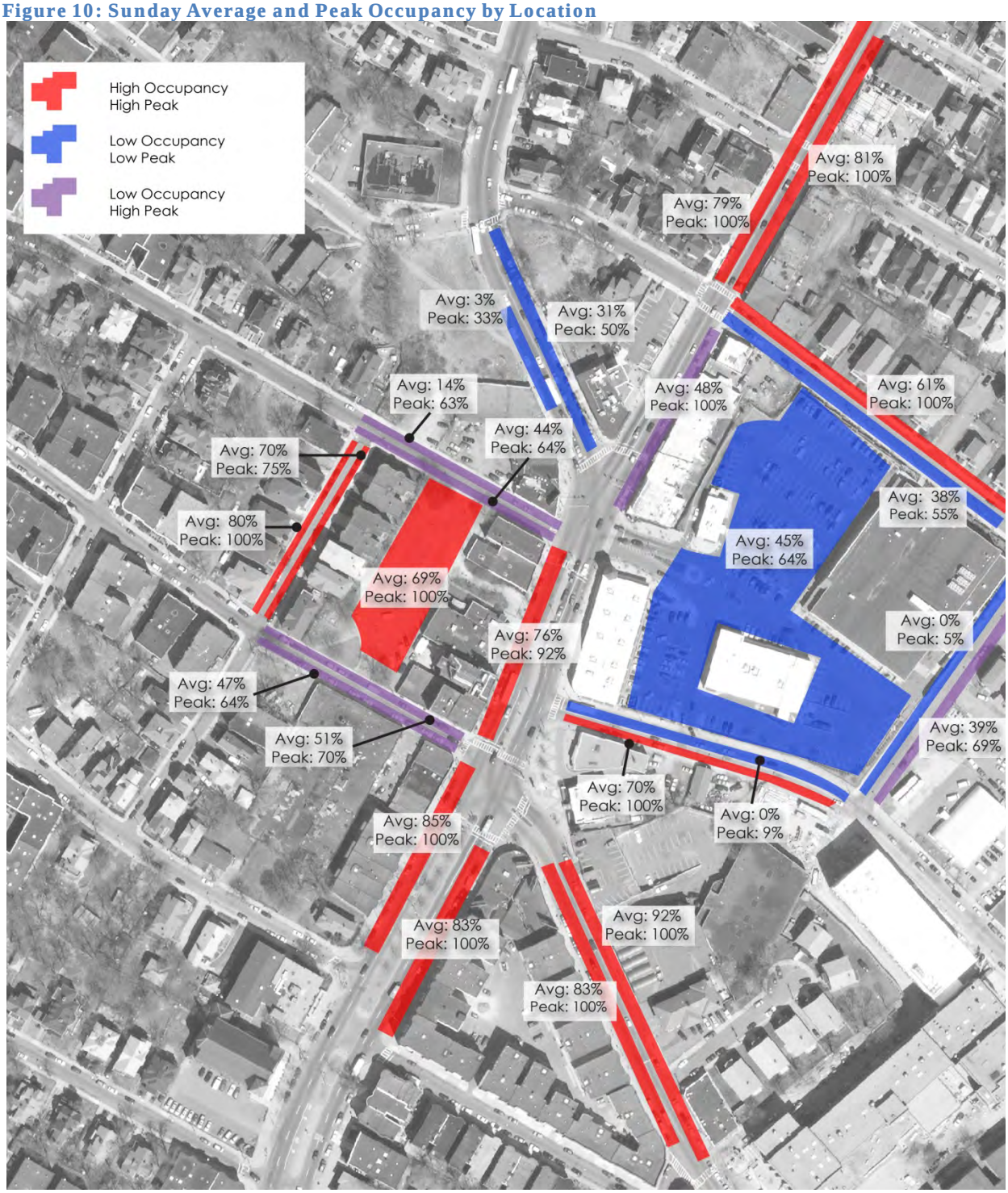


Table 5 provides a summary of average and peak occupancy for each location within the study area.

Table 5: Average and Peak Parking Occupancy by Location

Location	Weekday Occupancy		Sunday Occupancy	
	Average	Peak	Average	Peak
Mecca Mall Lot	42%	54%	45%	64%
Municipal Lot	39%	58%	69%	98%
Blue Hill Avenue - east (Brunswick St. to Stanwood St.)	55%	83%	81%	100%
Blue Hill Avenue - east (Stanwood St. to Mecca Mall entrance)	64%	83%	48%	100%
Blue Hill Avenue - east (Washington St. to Castlegate Rd.)	62%	100%	83%	100%
Blue Hill Avenue - west (Brunswick St. to Stanwood St.)	50%	81%	79%	100%
Blue Hill Avenue - west (Warren St. to Cheney St.)	76%	92%	76%	92%
Blue Hill Avenue - west (Cheney St. to Schuyler St.)	78%	100%	85%	100%
Cheney St - north (Blue Hill Ave. to Hartwell St.)	62%	80%	51%	70%
Cheney St - south (Blue Hill Ave. to Hartwell St.)	48%	64%	47%	64%
Geneva Ave - south (Blue Hill Ave. to Normandy St.)	48%	75%	70%	100%
Geneva Ave - north (Normandy St. to Blue Hill Ave.)	0%	0%	0%	9%
Georgia St - north (Blue Hill Ave. to Hartwell St.)	23%	63%	14%	63%
Georgia St - south (Blue Hill Ave. to Hartwell St.)	20%	45%	44%	64%
Hartwell St - east (Georgia St. to Cheney St.)	46%	75%	70%	75%
Hartwell St - west (Georgia St. to Cheney St.)	56%	75%	80%	100%
Normandy Street - west (Blue Hill Ave. to Geneva Ave.)	0%	0%	0%	5%
Normandy Street - east (Blue Hill Ave. to Geneva Ave.)	18%	38%	39%	69%
Stanwood Street - south (Blue Hill Ave. to Normandy St.)	23%	27%	38%	55%
Stanwood Street - north (Blue Hill Ave. to Normandy St.)	43%	60%	61%	100%
Washington Street - south (Blue Hill Ave. to Normandy St.)	74%	100%	83%	100%
Washington Street - north (Normandy St. to Blue Hill Ave.)	73%	100%	92%	100%
Warren St - east (Blue Hill Ave. to Crawford St.)	79%	100%	31%	50%
Warren St - west (Blue Hill Ave to Crawford St.)	10%	33%	3%	33%

Parking Duration

Average duration indicates how long, on average, a vehicle is parked in a particular parking space. A low average duration indicates that motorists are parking for a short period of time, either to run errands or for discrete activities (such as attending religious services) and then leave that parking space. For local businesses, a low average duration in a high demand area could indicate a high turnover, implying that new customers are continuously arriving in the area to shop. Conversely, a low average duration in a low demand area could be evidence that the neighborhood has the opportunity to keep customers in the area longer and shopping at more locations. These may also be areas where longer term parking could be accommodated to help alleviate parking pressures in high occupancy areas. Table 6 summarizes average duration in the study area.

Table 6: Average Parking Duration

Type of Parking	Weekday (hours)	Sunday (hours)
Mecca Mall Lot	0.9	0.7
Municipal Lot	1.3	1.3
Primary Corridors	1.5	2.4
Secondary Corridors	2.2	3.0
Other	0.8	0.8
Overall Average Duration	**1.2**	**1.3**

During the observations, the overall average parking duration was 1.2 hours (72 minutes) on the weekday and 1.3 hours (78 minutes) on Sunday. Parking in the Municipal Lot is restricted to two hours, as are some spaces along the Primary Corridors. Given that these spaces serve the commercial tenants in Grove Hall, low duration is important to local businesses to provide their customers with available parking. Although there was no parking enforcement in the area observed during data collection, vehicles tended to park within the 2 hour time limit. During the observations, it was noted that some vehicles did park in 2 hour spaces for much longer periods of time. These may be vehicles that belong to employees of local businesses. Duration was shortest in the Mecca Mall Lot where most cars parked for less than an hour. Duration was longest on the Secondary Corridors, most likely reflecting the residential uses in these areas and the need for residents to have on-street parking where private off-street parking is not available.

Overall, the majority of vehicles parking in the study area were parking for relatively short periods of time. Almost 80% of all spaces had vehicles parked for less than an hour during the weekday observation. On Sunday, more than 75% of all spaces had vehicles parked for less than an hour. In general, the majority of vehicles across the categories parked in a particular space for less than an hour. On Sunday in the Secondary Corridors, vehicles tended to park for longer periods of time, most likely due to residents being home on Sundays and not at work during the day. A breakdown of duration by time intervals is shown in Table 7.

Table 7: Parking Duration by Time

	Weekday			Sunday		
Type of Parking	<1 hour	1-2 hours	2+ hours	<1 hour	1-2 hours	2+ hours
Mecca Mall Lot	90%	4%	6%	94%	2%	4%
Municipal Lot	67%	21%	12%	68%	17%	15%
Primary Corridors	63%	19%	18%	42%	19%	39%
Secondary Corridors	57%	16%	28%	29%	21%	50%
Other	93%	3%	3%	89%	5%	6%
Overall Average Duration	**79%**	**10%**	**11%**	**76%**	**8%**	**16%**

Overall, turnover for parking spaces was high, and the majority of users parked within the posted time limits. In addition, parking utilization within the study area remained well below capacity throughout the day on both the weekday and Sunday observations. Parking utilization did vary, however, among the various categories and locations of parking within the study area. This can lead to issues such as frustration among drivers that there is not enough parking in a particular area, inefficient use of existing spaces, and an increase in illegally parked vehicles. The following section summarizes MAPC's observations and recommendations based upon the data collection and field observations.

PARKING OBSERVATIONS AND RECOMMENDATIONS

The previous sections summarized the data collected from the weekday and Sunday parking observations. This data tells a story about the parking utilization and duration of the spaces in Grove Hall. MAPC has taken this data and our field observations and developed several recommendations that the City of Boston, Greater Grove Hall Main Streets, the Roxbury Great Neighborhoods Partners, area businesses, churches, and area residents could undertake to improve the parking and overall connectivity in this area of Grove Hall.

Clarifying Signage

Signage in parts of the Grove Hall study area that inform drivers where they can and cannot park are confusing and may be leading to lower use of on-street parking spaces. This issue can be found in three specific locations in the study area:

1. On the southbound side of Warren Street just north of the Post Office building there is striping on the street that designates on-street parking spaces for approximately three vehicles. The sign near this location prohibits parking at a bus stop that abuts these on street spaces to the north; however, the arrows on the signs indicate that parking is prohibited both at the bus stop, as well as in the designated on-street parking spaces. Consequently, average occupancy of the southbound parking spaces on the weekday observation was 10%, whereas across the street on the northbound side of Warren Street the average occupancy level was 79%. Furthermore, 60% of the daytime observation on the northbound side of Warren Street had occupancy levels of 88-100%, above the ideal utilization rate of 85% occupancy. With businesses on the northbound side and the post office on the southbound side, parking in this area is in high demand, especially short-term high turnover parking for the post office.
2. Low utilization was noted along Normandy Street, particularly the southbound side of the street closest to the Stop and Shop. There is only one parking sign on this side of the street, a street cleaning sign, which tells drivers not to park on this side of the street on a particular day of the week during set hours. There are no other signs on the street indicating no parking during all other hours and days of the week, yet parking utilization was 0% during both observation periods.
3. Low utilization was also noted along the westbound side of Geneva Avenue closest to the Mecca Mall. This side of the street has several parking signs that could be made more consistent to provide drivers with direction as to whether or not they should park here. Near the bus stop at the corner of Blue Hill Avenue and Geneva Avenue there is a no parking sign with arrows in both directions indicating parking is not allowed on the entire stretch of Geneva Avenue from Blue Hill Avenue to Normandy Street. There is a second sign that indicates parking is not allowed, but only during snow emergencies along Geneva Avenue. Finally there is another parking sign near the corner of Geneva Avenue and Normandy Street. During our observations, very few vehicles were recorded as being parked along this stretch of Geneva Avenue. More consistent signage could help indicate to drivers whether parking is or is not allowed.

When motorists do not understand where they can and cannot park, several potential negative consequences can occur:

- Motorists continue to drive unnecessarily looking for parking, increasing congestion in Grove Hall.
- Vehicles park illegally in on-street locations. Cars were noted several times throughout the day parked in front of a hydrant or obstructing the crosswalk causing safety hazards.
- It increases the perception that there is not enough parking in the area, when available spaces are not being used.
- There is a potential loss of business, as motorists become frustrated with their inability to park in the vicinity.

To alleviate some of these issues, signs should clearly identify prohibited parking areas and areas where parking is allowed, as well as any restrictions these spaces have.

Increasing Weekday Utilization of the Municipal Lot

The Municipal Lot is located west of Blue Hill Avenue, accessible by vehicle off Georgia Street and Cheney Street. In addition, there is a pedestrian connection to the parking lot via Grove Hall Plaza along Blue Hill Avenue. Although highly utilized on the weekend, the lot's average occupancy during the weekday is only 39%, with a peak of 58% occurring at 12:30 PM. By contrast, the on-street spaces along the southbound side of Blue Hill Avenue (parallel to the Municipal Lot), have an average occupancy of 76% with a peak of 92%, above the ideal utilization rate of 85%. Increasing utilization of the Municipal Lot could provide an easy alternative for drivers looking for parking close to the businesses on Blue Hill Avenue.

In order to improve the visibility and utilization of the Municipal Lot, higher visibility signage directing motorists to the Municipal Lot could be added along Warren Street, Blue Hill Avenue, Georgia Street, and Cheney Street. There are existing small parking signs located along southbound Warren Street just before the post office, at the intersection of Warren Street and Blue Hill Avenue, and another at the intersection of Blue Hill Avenue and Georgia Street. As a driver, it can be challenging to see these signs among the other street signs in the area and easy to miss the turn for the parking lot access off Georgia Street.

Example of a higher visibility parking sign

Businesses and Greater Grove Hall Main Streets could work together to promote the Municipal Lot as an alternative to on-street parking. The lot can serve as a longer term parking option for those who may be staying for up to two hours, leaving the on-street spaces available for people making quick stops in businesses along Blue Hill Avenue. Marketing the lot could be done through a brochure about parking options in the area, or a map that could be placed in businesses directing people where to park. In addition, well-maintained lighting, trash receptacles, and landscaping could increase the comfort and perception of safety in this lot.

Allowing Shared Parking Lots

Despite its relatively compact size, parking utilization varies throughout the study area. Some areas have low averages and low peaks, some have high averages and high peaks, and some have low averages but high peaks. For example, the Municipal Lot was highly utilized on Sunday, as were the on-street spaces along Blue Hill Avenue. The Mecca Mall Lot, however, had both low averages and low peaks on both the weekday and Sunday observations despite it being the largest lot supporting many high volume businesses. This lot, which is centrally located within the Grove Hall business district, has the potential to provide parking spaces that could relieve the demand in other areas.

As a privately owned and operated parking lot, the Mecca Mall Lot should continue its primary purpose of serving the businesses of the Mecca Mall. However, its excess capacity could provide additional parking spaces for the local businesses and houses of worship in the broader area. During the weekday and weekend observations, there were a number of on-street parking spaces in front of businesses on Blue Hill Avenue that were taken up by the same vehicle for large portions of the day. This is likely the result of employees parking for long periods of time directly in front of their place of employment. This action takes up valuable parking spaces that should be used by patrons of the businesses. A small portion of the Mecca Mall Lot could be used as long-term parking for employees of businesses in the nearby area, thereby freeing up on-street parking spaces for patrons of those businesses.

Stakeholders should work with the owners of the Mecca Mall Lot to encourage this shared parking arrangement, e.g., through a pilot program to understand the effects of this policy change. In addition, the means of communicating this shared parking arrangement should be explored, for example, through signage at the lot or information at the local businesses.

Potential for Residential Parking Permits

Several residents on Georgia Street, Hartwell Street, and Cheney Street indicated that on-street parking in the immediate vicinity can be difficult due to a lack of available spaces. Furthermore, the parking analysis indicates that many of these areas contain high peak occupancies particularly in the evening hours during the week and throughout the day on Sundays. Currently, parking on the secondary corridors is unrestricted. The residents have indicated that permit parking for residents could help ameliorate this problem. The City could explore whether this is a feasible alternative.

In addition, other potential solutions include relaxing the two-hour restriction in the Municipal Lot during the evening to allow for residents to park overnight. This would need to be accompanied by additional enforcement to ensure that residents do not park during the daytime hours, as businesses rely on these spaces for their customers. The City could also add parking space striping along these residential streets to increase the efficiency of parking. Striping spaces will show drivers where each parking space is and eliminate occurrences of vehicles leaving too much space in between parked cars.

Increasing Enforcement of Parking Regulations

During the observation periods MAPC staff did not observe any parking enforcement officers in the area. Although most motorists adhered to the two-hour parking restrictions where applicable, there are other issues that could be aided through increased enforcement in the study area. For the on-street parking spaces, particularly in the residential areas, several vehicles were observed throughout the day parking in prohibited areas, such as in front of fire hydrants, driveway access points, bus stops, and obstructing crosswalks. This causes concern for public safety, pedestrian safety, and impacts the ability of buses to fully pull over to the curb to pick up and drop off passengers. A combination of striping parking spaces on the streets and parking enforcement can help alleviate these issues and create a safer environment for all users.

Assessing the Taxi Stand

The northbound side of Warren Street contains approximately two spaces for taxi stands. On both the weekday and Sunday observations, average occupancy was extremely low (25% and 0%, respectively). In addition, the majority of the time a vehicle was recorded as occupying a taxi space; it was a private car and not a taxi. The City should assess whether it is necessary to retain these spots for taxis or whether they would be better utilized for general use parking.

Increasing Alternative Modes of Transportation

There are several infrastructure improvements that could increase the use of alternative modes of transportation in Grove Hall. Improving the safety, accessibility, and comfort of pedestrians, cyclists, and bus riders can alleviate some of the parking demand pressures existing in some parts of the study area. There are a number of low to medium cost improvements that can be made to improve the experience of these users within the study area.

Pedestrian improvements include incorporating traffic calming measures, increasing signage, repairing sidewalks, and creating high visibility crosswalks. Bicycle improvements include shared lane markings, signage, and bicycle racks. Bus improvements include bus shelters, bus pull-out areas, and stops spaced farther apart to improve bus flow. In addition, enhancing public spaces, adding additional trash receptacles, and increasing public realm improvements such as banners, retail maps, etc., can greatly improve the experience for all users within the study area[3].

3. For more information on these and other recommendations in the study area, please refer to the *Grove Hall, Roxbury Street Improvements Workshop Summary and Next Steps Memorandum, July 2013.*

SUMMARY

In general, there appears to be adequate parking in the study area during the weekday and on Sunday. During observations, average occupancy across the entire study area was 43% on the weekday and 51% on Sunday, well below the 85% optimal utilization rate. Average duration was 1.2 hours (72 minutes) on the weekday and 1.3 hours (78 minutes) on Sunday, indicating a relatively high turnover of spaces.

Although the overall figures above indicate that there is ample parking in the study area, some locations do experience peaks above the 85% optimal utilization rate. This can create the perception that there is a lack of available parking in the study area, when in fact other locations consistently have excess capacity. Several strategies, such as improved signage, encouraging shared parking, and increasing wayfinding, can increase utilization in these areas and help relieve high demand in other locations.