APPENDICES

Appendix A: Parking and Goods Movement Report

Appendix B: Transit Report

Appendix C: Notes of Meeting

Appendix D: NYCDOT Web Portal Comments

APPENDIX A

Parking and Goods Movement Report

North Williamsburg Transportation Study

Parking and Goods Movement
Data Collection, Analysis and Recommendations

July 8, 2016

BFJ Planning

North Williamsburg Transportation Study

Parking and Goods Movement

Data Collection, Analysis and Recommendations

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July 8, 2016

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Introduction

In May 2016, ARUP and its sub-consultant, BFJ Planning were selected by NYC Department of Transportation (NYCDOT) to conduct part of the North Williamsburg Transportation Study[1]. The purpose of the study is to address traffic and transportation issues in Williamsburg/Greenpoint. The study area is bounded by Newtown Creek in the north and east, Flushing Ave and Broadway to the south and the East River to the West (see Figure 1-1). This report includes the two sections of the report tasked to BFJ Planning: Parking (RFP Section 1) and Goods Movement/Trucks (RFP Section 3). The Transit component (RFP Section 2) is being completed by ARUP as part of a separate report.

Section 1: Parking

The purpose of the parking analysis is to develop a comprehensive understanding of the study area's on and off-street parking needs and issues. The parking analysis assessed on-street parking along six major corridors and in two focus areas with analysis conducted for the AM, midday, PM, and Saturday midday peak hours. The report documents parking supply, demand utilization and illegal parking. Recommendations include parking management strategies for the study area, especially those areas with parking shortfalls.

Section 2: Goods Movement/Trucks

Data collection and analysis in this section was used to identify existing truck facilities and service, assess existing and future needs of the two industrial business zones (IBZs) within the study area and identify issues affecting the industry and conflicts with other uses and activities. The report documents existing truck infrastructure elements such as truck routes, signage, and truck loading and parking areas. Activity of trucks in the area was analyzed using multiple sources including the City's land use data, census data, NYCDOT traffic counts and in-person surveys. The data and analysis helped to develop recommendations that address existing industrial and commercial land use needs.

[1] Work completed under Task Order #33 North Williamsburg Transportation Study under Engineering Services Agreement project..

Section 1.0: Parking

This section provides an analysis of existing on and off-street parking in select areas of North Williamsburg.

1.1. INVENTORY OF ON-STREET PARKING FACILITIES

A. Study Area

The on-street parking component of the study addresses parking in two focus areas and along seven major corridors, as shown in Figure 1-1.

Focus Area 1 is bound by N. 12th Street, Union Avenue, Meeker Avenue, S. 1st Street and Kent Avenue in the north, east, south, and west respectively. The area contains primarily residential and commercial uses. Several blocks on the northwest corner of the study area are located in the Greenpoint/Williamsburg Industrial Business Zone.

Focus Area 2 is bound by Greenpoint Avenue, Kingsland Avenue, Norman Avenue, Bridgewater Street, Varick Street/Avenue, Frost Street and Humboldt Street to the north, east, south, and west respectively. The focus area consists of primarily residential and industrial land uses. Residential uses are concentrated south of Norman Avenue and east of Van Dam Street north of the BQE, and east of Kingsland Avenue south of the BQE. Industrial uses are concentrated in the area located in the East Williamsburg Industrial Business Zone (IBZ).

Major Corridors represent important arterial streets within the North Williamsburg study area:

- Manhattan Avenue from Commercial Street to Broadway
- McGuiness Boulevard from Freeman Street to Humboldt Street/Bayard Street
- Greenpoint Avenue from West Street to Kingsland Avenue
- Metropolitan Avenue from Union Avenue to Scott Avenue
- Grand Street from Union Avenue to Newtown Creek Bridge and Borinquen Place from Rodney Street to Union Avenue (one corridor)
- Bushwick Avenue from Metropolitan Avenue to Flushing Avenue
- Graham Avenue from Driggs Avenue to Broadway

Manhattan Avenue (north of BQE), Graham Avenue, Grand Street and Metropolitan are commercial corridors. McGuinness Boulevard and Bushwick Avenue are north-south principal arterials. Grand Street and Metropolitan Avenue are east-west principal arterials connecting industrial zones to the BQE.

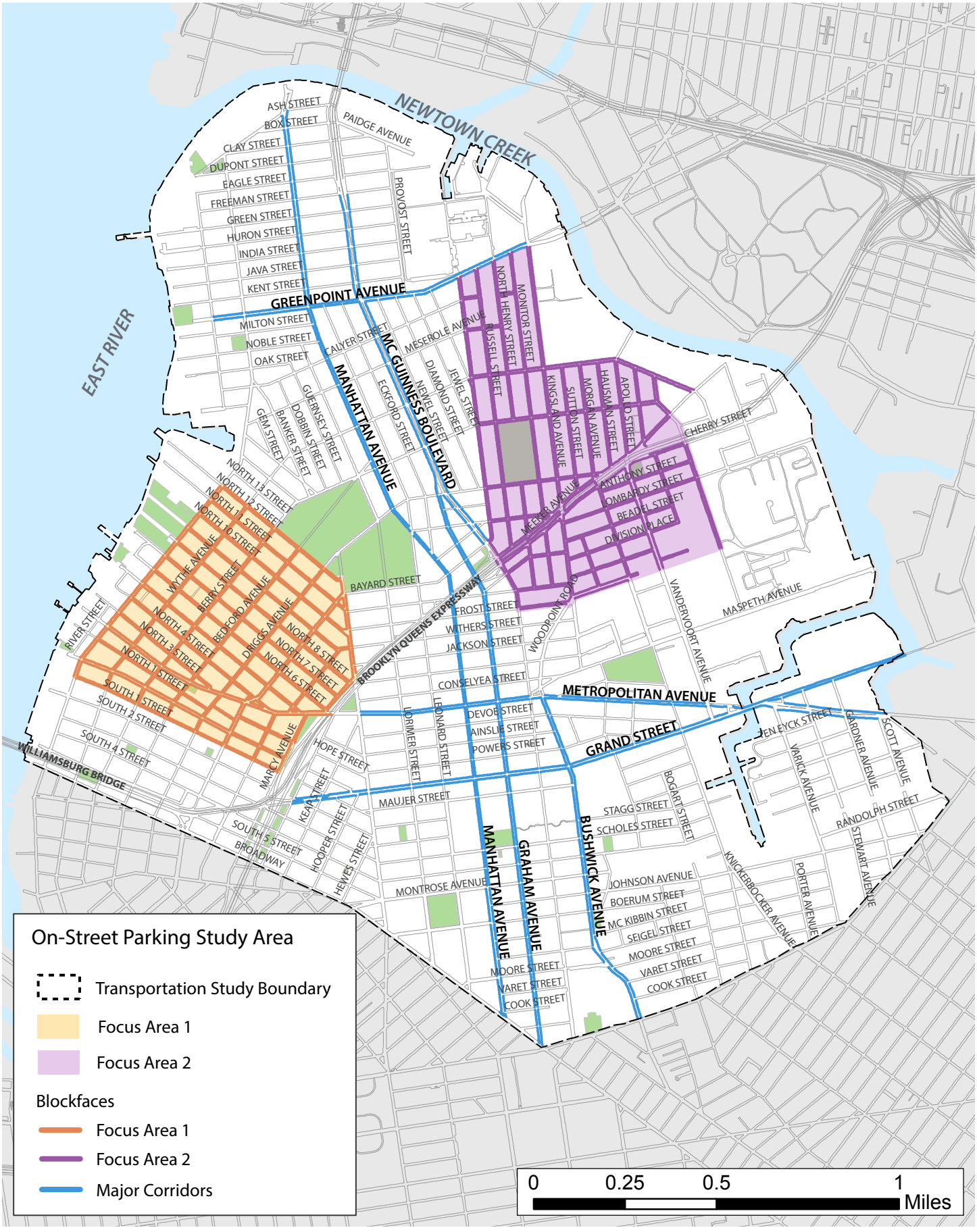

FIGURE 1.1: ON-STREET PARKING STUDY AREA

North Williamsburg Transportation Study

Source: City of New York

BFJ Planning

B. Types of Parking

Three types of curb parking arrangements are present in the study area: parallel, 90-degree, and angled parking. The majority of parking found in the study area is parallel, which is typically unmarked. Marked 90-degree spaces are found under the BQE in Focus Area 2. Angled parking spaces are located adjacent to the Cooper House and Lindsay Park housing developments.

C. Regulations

The study area contains over 300 unique parking regulation signage codes, which stipulate where and when vehicles are permitted to stop, stand, or park. For the purposes of this study, regulations have been summarized into 8 categories:

- **Unmetered Parking:** Parking is allowed at all times, except when street cleaning is in effect.
- **Metered Parking:** These segments require users to pay for parking during the times and days stated on posted regulation signage. Metered parking is typically in effect between 9am and 7pm every day except for Sunday. Users must purchase time, by 15-minute increments, from a muni-meter machine and display their receipt on their dashboard. Parking is priced at 25 cents per 15 minutes.
- **Limited Parking:** No parking or standing is allowed during the hours indicated on the regulation signage to accommodate vehicle traffic. Parking is typically allowed on these segments during nights and weekends.
- **Truck Loading and Unloading:** This regulation prohibits standing except for trucks loading and unloading. Loading regulations are typically in effect between 7am and 7pm every day except for Sunday. Truck loading regulations are typically located in front of industrial and commercial uses.
- **Authorized Vehicles:** Parking is allowed only to users with valid credentials as specified by the regulation. Authorized vehicle regulations are typically found in front of civic and religious institutions.
- **Taxi Stand:** The segment is reserved for taxis. Other vehicles are not permitted to park or stand at any time. This regulation is found along one blockface in Focus Area 2.
- **No Parking Anytime:** This category includes regulations that prohibit standing and parking at any time.
- **No Parking Temporary:** This category includes all temporary regulations that prohibit parking and standing near a construction site. Segments in this category should be reassessed when permanent regulation signage is installed.

The on-street parking regulations were verified by visiting each blockface in the focus areas and major corridors. The blockfaces were then broken into segments for each regulation. Figure 1-2 through Figure 1-5 show the parking regulation categories found within the focus areas and major corridors. A detailed summary of parking regulations by peak period can be found in Appendix Figure 3-1 to Figure 3-16. The peak period regulation maps show how the parking supply changes over time, depending on when Limited Parking, Authorized Vehicle, and Truck Loading regulations are in effect.

Focus Area 1 contains seven of the eight regulation categories. The majority of on-street parking is unmetered with street cleaning hours in effect twice a week. Muni-meters are present along Bedford Avenue between North 3rd Street and North 9th Street and Havemeyer Street from Grand Street to South 1st Street. Parking is not allowed during the day on many blockfaces along and between Kent Avenue and Berry Street to accommodate industrial related traffic. Truck loading zones are dispersed throughout the area. The focus area contains 8 blockfaces reserved for authorized vehicles located adjacent to schools and FDNY facilities. Parking is restricted along the blockfaces in the southeast corner of the focus area to accommodate traffic headed to the BQE on-ramp on Marcy Avenue and Hope Street. Nearly a dozen blockfaces were closed at the time of the study due to construction projects.

Focus Area 2 contains seven of the eight regulation categories. All of the on-street parking is unmetered with street cleaning hours in effect twice a week. Authorized vehicle parking is located on two blockfaces adjacent to the Monitor School. Truck loading zones are concentrated in the northern edges of the study area. North of the BQE, parking is restricted during the day along segments of Norman Avenue, Bridgewater and surrounding streets to facilitate industrial related traffic. South of the BQE, Parking is restricted during the day along Morgan Avenue and segments of the surrounding blocks. Many of the blockfaces located along the BQE and the Kosciusko Bridge approach are closed due to construction. Many of the blockfaces located in the eastern edge of the study area are missing regulation signage.

The Major Corridors contain all eight of the regulation categories. North of the BQE, metered parking is present along most of the Manhattan Avenue commercial corridor as well as the intersecting blockfaces on Greenpoint Avenue. The majority of unmetered parking is located along McGuinness Blvd. Truck loading zones are located on three blockfaces. Parking is restricted during the day along one segment on Manhattan Avenue. Short segments of authorized vehicle parking is located in front of several small institutions on Manhattan and Greenpoint Avenues.

South of the BQE, metered parking is present along Grand Street and Graham Avenue commercial corridors and a brief section of Metropolitan Avenue. Unmetered parking is found along the length of Manhattan Avenue and Borinquen Place. Truck loading zones are concentrated on Grand Street between Waterbury Street and Vandervoort Avenue. Parking is

restricted during the day along most of Metropolitan Avenue between Lorimer Street and Vandervoort Avenue. Parking is also restricted during the morning and evening rush hours along Bushwick Avenue. One taxi stand segment is located on Bushwich Avenue between Grand Street and Maujer Street. Authorized vehicle parking is located on two blockfaces located adjacent to schools. A total of 5 blockfaces along the Major Corridors were closed at the time of the study due to construction projects.

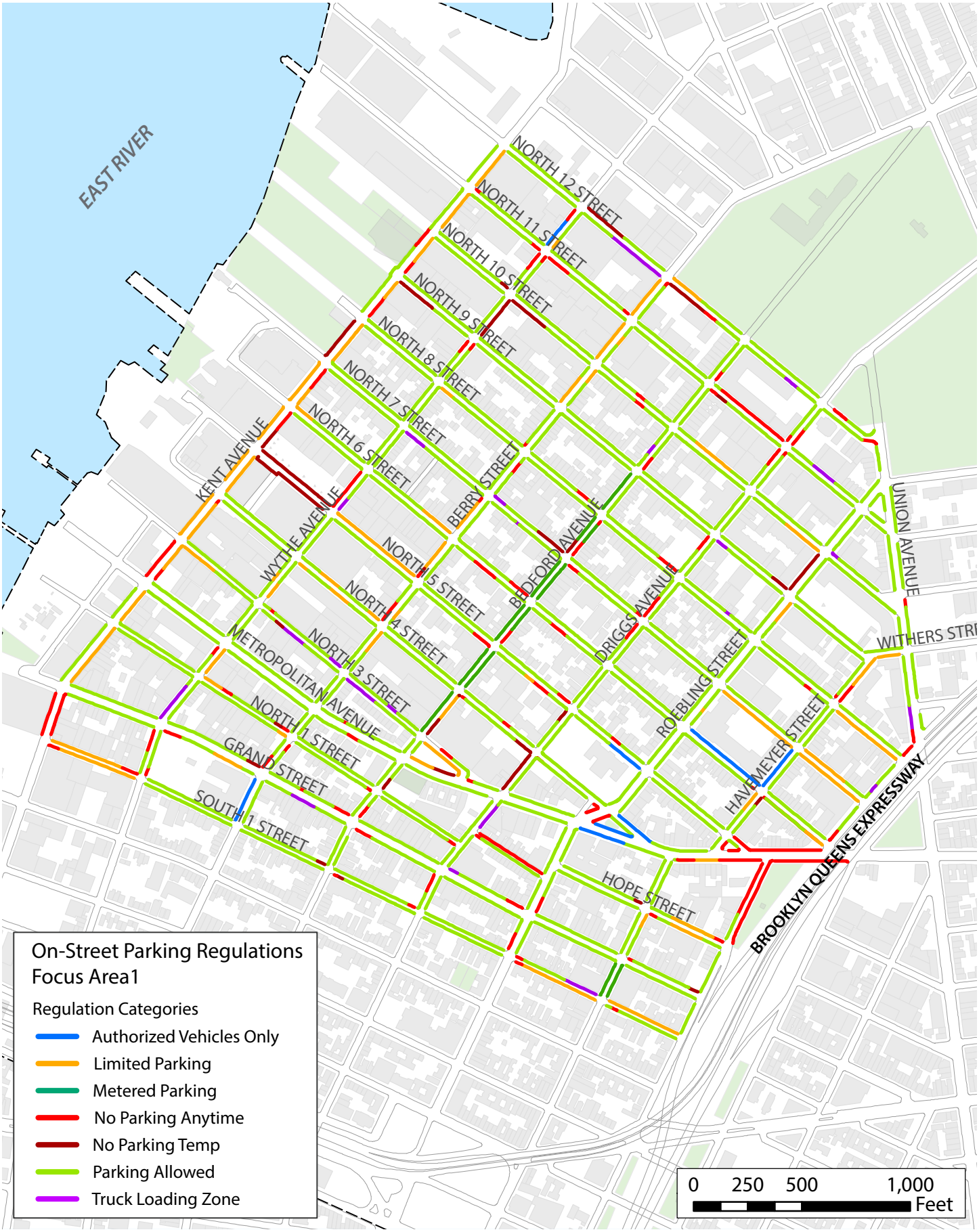

FIGURE 1.2: ON-STREET PARKING REGULATIONS - FOCUS AREA 1

North Williamsburg Transportation Study

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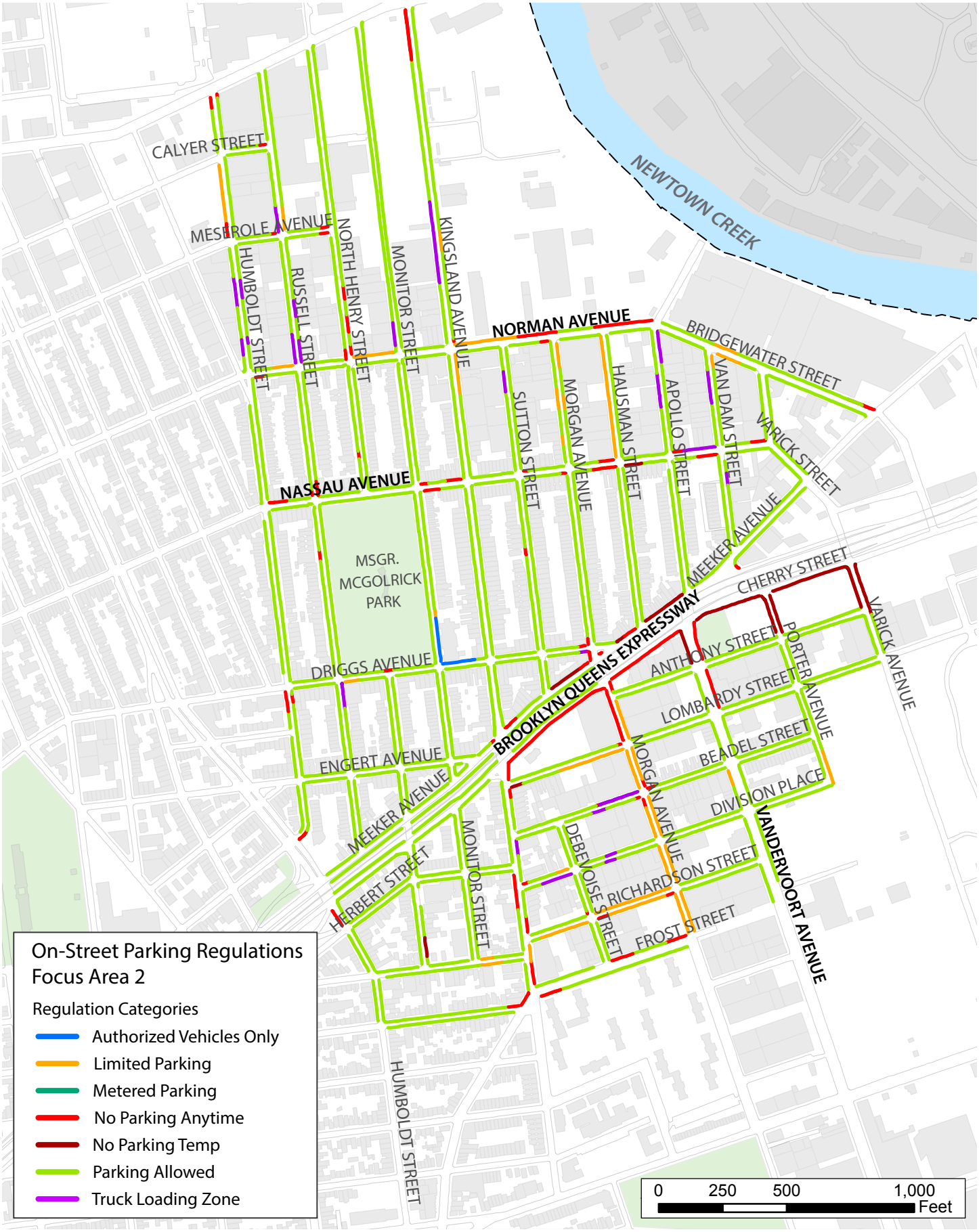

FIGURE 1.3: ON-STREET PARKING REGULATIONS - FOCUS AREA 2

North Williamsburg Transportation Study

BFJ Planning

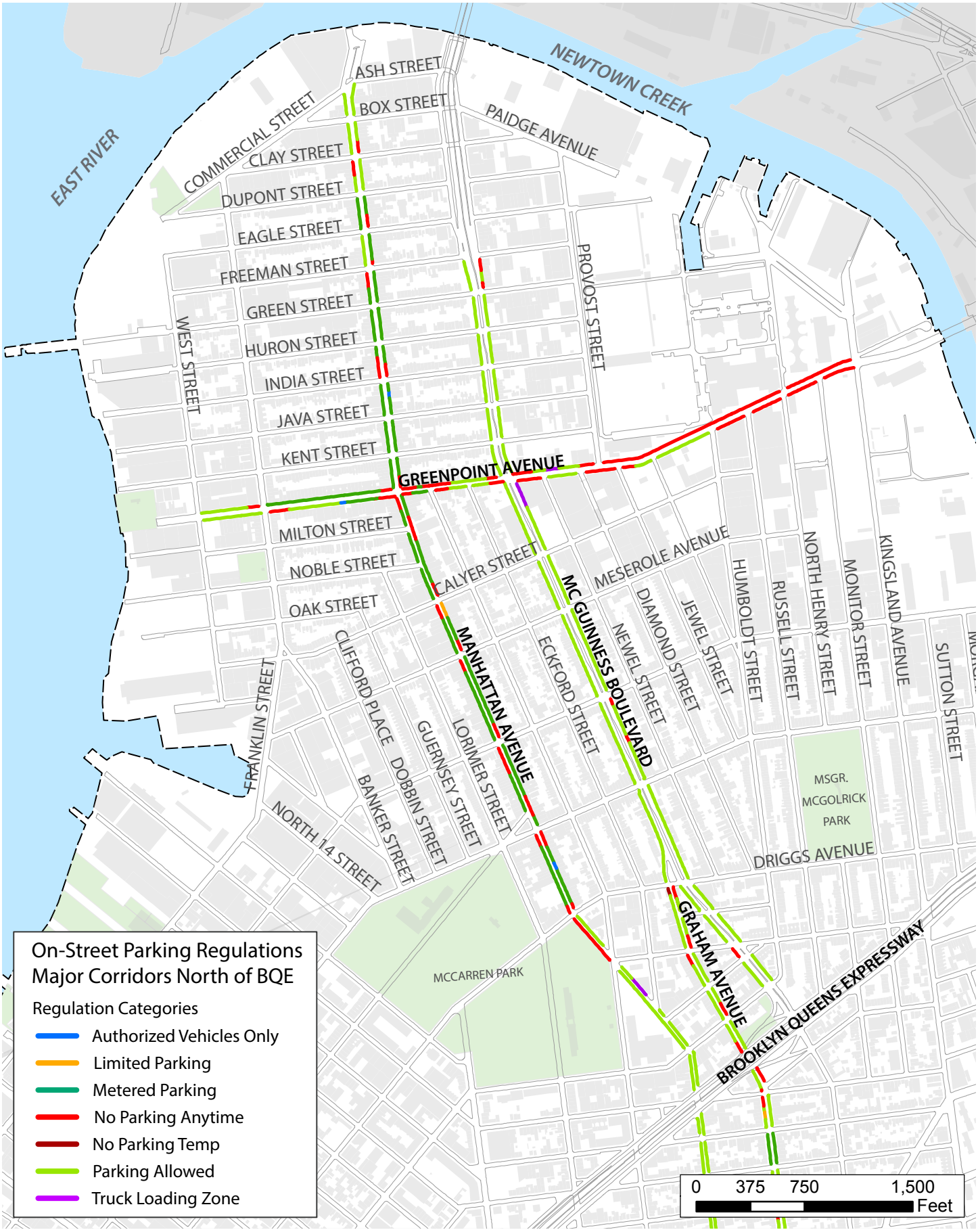

FIGURE 1.4: ON-STREET PARKING REGULATIONS - MAJOR CORRIDORS NORTH OF BQE

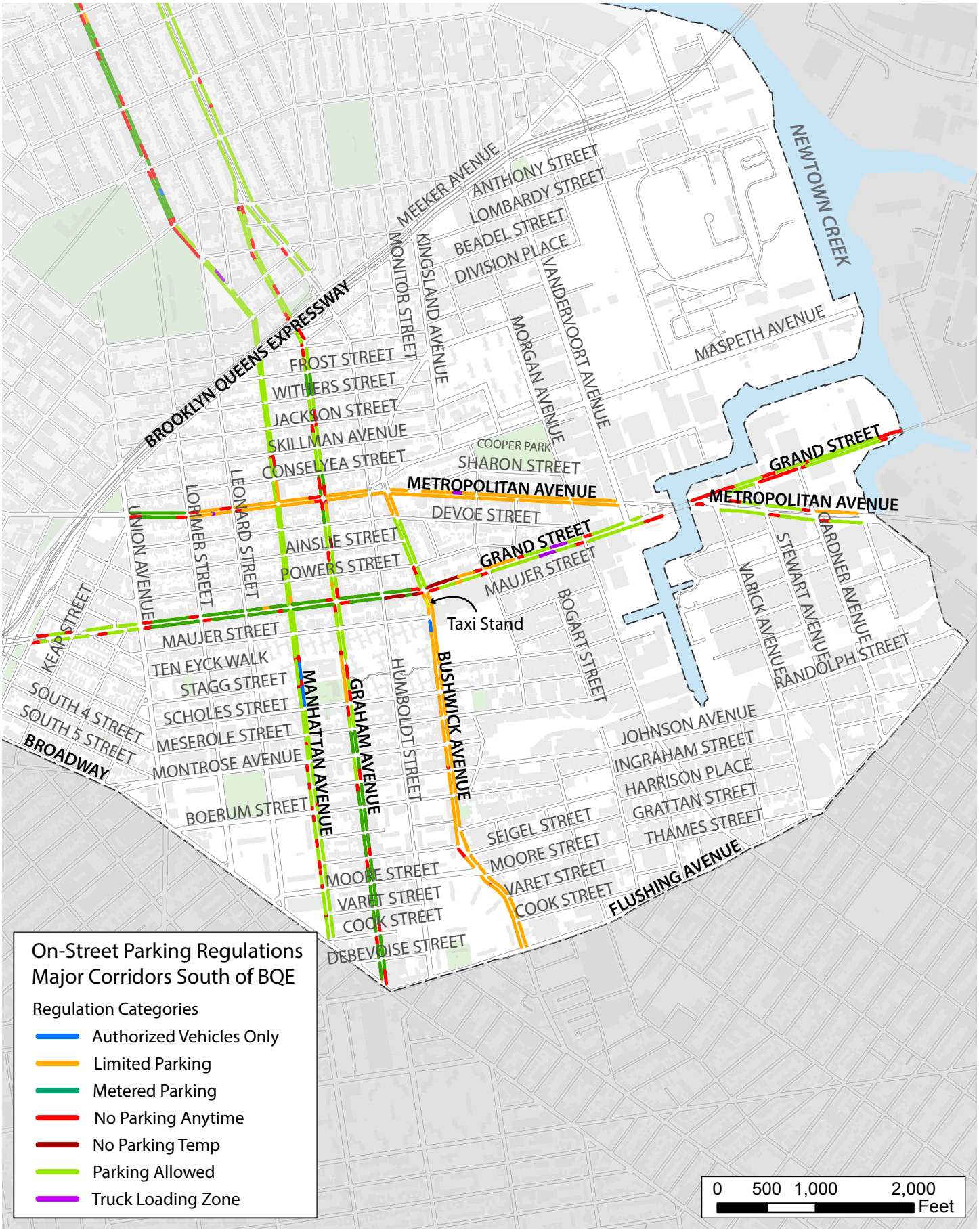

FIGURE 1.5: ON-STREET PARKING REGULATIONS MAJOR CORRIDORS SOUTH OF BQE

D. Parking Supply

The number of legal on-street parking spaces that exist on each segment was determined by measuring the length of parkable space, excluding driveways and space within 15 feet of a hydrant. Capacity, defined for this study as the maximum number of parking spaces that can be used in a given segment, was calculated assuming the average length of a parallel parked vehicle with front and back buffer is 18 feet[2].

Table 1-1 shows the number of on-street parking spaces and the percentage of parking available broken down by metered, un-metered and truck loading. Unmetered parking accounts for the largest share of parkable space. Most of the study area's metered parking is found along the Major Corridors and is present along a section of Bedford Avenue and Havemeyer Street in Focus Area 1. Truck loading curb spaces (that are not located along a driveway) represent a sliver of the parking supply in all three focus areas. On-street parking supply increases during the evening and weekend when most Limited Parking, Authorized Parking, and Truck Loading regulations are not in effect. This change is most significant in Focus Area 1 and along the major corridors, where the parking supply increases 13% and 22%, respectively, between the morning and evening peaks.

Table 1-1: Parking Supply during Peak Periods

	AM		Midday		PM		Saturday	
Focus Area 1	#	%	#	%	#	%	#	%
Unmetered	3,489	94%	3,500	95%	4,151	100%	3,957	97%
Metered	99	3%	99	3%	0	0%	99	2%
Truck Loading	107	3%	100	3%	11	0%	33	1%
Total	3,695	100%	3,699	100%	4,162	100%	4,089	100%
	AM		**Midday**		**PM**		**Saturday**	
Focus Area 2	#	%	#	%	#	%	#	%
Unmetered	3,556	98%	3,562	98%	3,842	100%	3,733	91%
Metered	0	0%	0	0%	0	0%	0	0%
Truck Loading	84	2%	84	2%	9	0%	33	1%
Total	3,640	100%	3,646	100%	3,851	100%	3,766	92%
	AM		**Midday**		**PM**		**Saturday**	
Major Corridors	#	%	#	%	#	%	#	%
Unmetered	1,635	69%	1,875	72%	2,868	100%	2,134	74%
Metered	717	30%	717	27%	0	0%	721	25%
Truck Loading	29	1%	26	1%	9	0%	18	1%
Total	2,381	100%	2,618	100%	2,877	100%	2,873	100%

[2] An average distance of 18-feet was used, as opposed to 20-feet, to reflect parking behavior and shorter average vehicles lengths observed in the study area.

1.2. INVENTORY OF OFF-STREET PARKING FACILITIES

The study area contains 20 privately managed off-street parking facilities, which come in the form of garages or surface lots. Data from the Department of Consumer Affairs (DCA) were used in conjunction with site visits to confirm the address, capacity, and parking rates. Figure 1-6 shows the location of the garages and surface lots. Table 1-2 lists capacity and parking rates.

Off-street parking facilities are required to obtain a business license through the DCA. Businesses are required to display their license number, official capacity, and parking rates near the entrance of their facility. The official capacity represents the legal number of vehicles a business can have parked at one time.

Garage parking is located on the bottom and basements floors of more recent residential developments. These facilities typically offer attendant service to maximize capacity. Garages offer short and long term parking options. The surface lots found in the study area are located on small parcels of land that are secured by gates. All lots are unattended and offer only monthly parking arrangements. Users are provided with a key or code to access the lot and are responsible for securing the gate.

The garages located in Williamsburg charge an average weighted rate of $279.00 per month for parking. This monthly rate is significantly higher than the monthly rates charged at the Propark garage on Cook Street near the south border of the study area and the surface lots. Garages in Williamsburg charge an average of $5.00 per hour and $18.00 per day.

Off-street parking is unevenly distributed throughout the study area. Focus Area 1 has the largest number of off-street parking spaces, which accounts for nearly a third of its total parking supply.

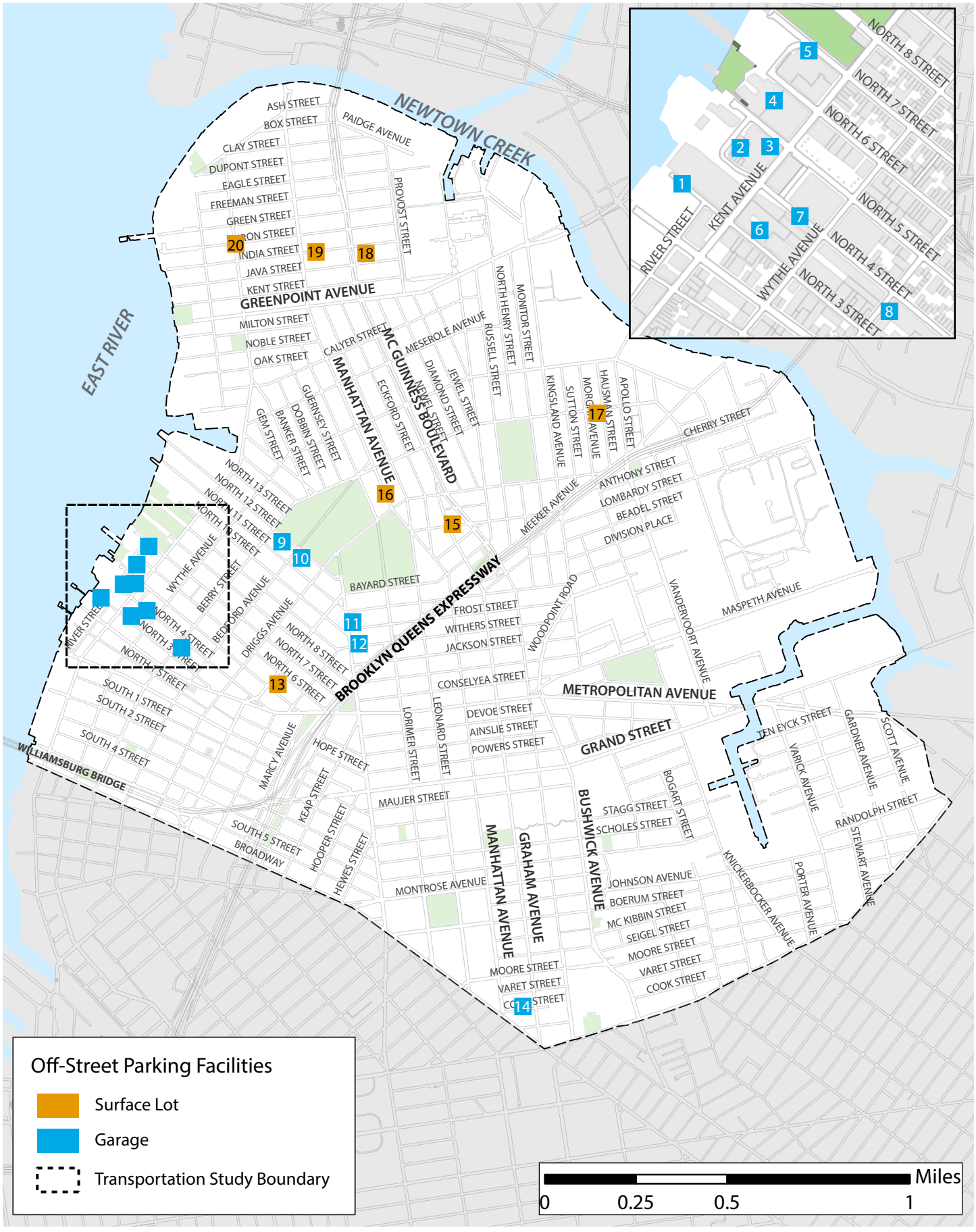

FIGURE 1.6: OFF-STREET PARKING FACILITIES

North Williamsburg Transportation Study

Source: NYC DCA

BFJ Planning

Table 1-2: Off-Street Parking Facilities

Map ID	DCA License	License Type	Cate-gory	Business Name	Primary Address	Cap-acity	Hourly	Daily	Monthly
1	1368505-DCA	Business	Garage	Quick PARK 184 Management	10 N 3RD ST	200	$4.53	$17.21	$271.80
2	2023581-DCA	Business	Garage	NORTH 4TH PLACE GARAGE CORP.	1 N 4TH PL	76	$4.53	$18.12	$300.00
3	2034907-DCA	Business	Garage	QUIK PARK LINC MANAGMENT LLC	20 N 5TH ST	174	$4.53	$17.21	$271.80
4	1386288-DCA	Business	Garage	22/34 NORTH 6TH GARAGE CORP.	22 N 6TH ST	308	$4.53	$18.12	$300.00
5	1435282-DCA	Business	Garage	34 NORTH 7TH PARKING CORP.	34 N 7TH ST	142	$4.53	$18.12	$300.00
6	2006294-DCA	Business	Garage	LAZ PARKING NEW YORK/NEW JER-SEY, LLC	175 KENT AVE	140	$4.53	$15.40	$294.45
7	2000894-DCA	Business	Garage	MP 50 NORTH LLC	51 N 4TH ST	139	$4.53	$18.12	$249.50
8	1409794-DCA	Business	Garage	QUIK Park Berry	197 BERRY ST	142	$4.53	$17.21	$271.80
9	1427222-DCA	Business	Garage	LM NORTH 12TH GARAGE, LLC	135 N 11TH ST	97	$5.43	$19.93	$317.10
10	1474717-DCA	Business	Garage	IMPARK BEDFORD AVENUE GARAGE	101 Bedford Ave	202	$6.34	$21.74	$271.80
11	1451283-DCA	Business	Garage	UNION AVE. OPERATING LLC	568 UNION AVE	65	$7.25	$21.75	$235.57
12	1451283-DCA	Business	Garage	MTP - 544 Union Ave	29 WITHERS ST	100	$7.25	$21.75	$235.57
13	1004302-DCA	Business	Surface Lot	INGENITO, FRANK	113 ROEBLING ST	6	N/A	N/A	NOT LISTED
14	1335541-DCA	Business	Garage	PROPARK AMERICA NEW YORK, LLC	21 COOK ST	94	$6.34	$18.12	$226.50
15	0699282-DCA	Business	Surface Lot	RUFRANO, ANNA	540 GRAHAM AVE	14	N/A	N/A	NOT LISTED
16	0812452-DCA	Business	Surface Lot	O.S. CARBURATORS & IGNITION SALES & SERVICES CORP.	577 MANHATTAN AVE	99	N/A	N/A	$200.00
17	1261502-DCA	Business	Surface Lot	SALVATOR, JOSEPH	284 NASSAU AVE	25	N/A	N/A	NOT LISTED
18	1297011-DCA	Business	Surface Lot	IRVING SEVRANSKY TRUST DTD 02/26/2001	210 INDIA ST	23	N/A	N/A	$180.00
19	0366601-DCA	Business	Surface Lot	TRACHTMAN, WILLIAM	152 INDIA ST	20	N/A	N/A	NOT LISTED
20	0901401-DCA	Business	Surface Lot	ABIDI, JAVED	177 FRANKLIN ST	35	N/A	N/A	NOT LISTED

1.3. PARKING UTILIZATION

This section provides an analysis of on and off-street parking utilization within the focus areas and along the major corridors.

A. On-Street Parking

Methodology and Procedure

Occupancy counts were conducted during four peak periods:

- Morning (AM) Peak Period (9am-11am)
- Midday (MD) Peak Period (12pm-2pm)
- Evening (PM) Peak Period (7pm-9pm)
- Saturday Midday Peak Period (12pm-3pm)

The AM peak period occurs after the morning rush (7am-9am), a period when offices, schools, and medical facilities may peak. The Midday peak period occurs during lunch time when retail and restaurant uses typically peak. The PM peak period occurs after the evening rush (4pm-7pm) and attempts to capture parking demand related to restaurants and residential uses. The Saturday Midday peak period occurs during the height of weekend activity.

Each segment was visited once during each peak period and the number of parked vehicles we counted broken down into the following categories:

- Parked cars
- Parked trucks
- Parked school buses
- Parked taxis
- Parked food trucks (applicable to Focus Area 1)
- Double parked vehicles
- Illegally parked vehicles

Vehicles parked in segments with Authorized Vehicle regulations were counted assuming all vehicles had legal permits. The counts were supplemented with field notes and pictures to capture unique parking situations.

Parking occupancy data were collected between May 21st and June 18th, 2016. Weekday peak hour surveys were conducted primarily on Wednesdays when street cleaning regulations are not typically in effect. Occupancy data were collected on foot or using a dashboard mounted video camera.

Survey Results

A segment's parking occupancy is expressed as a percentage reflecting the number of vehicles parked divided by the capacity. The number of vehicles parked includes double parked and illegal parked vehicles to reflect total demand. The occupancy rate is classified into the following categories:

- Less than 70% occupancy: parking is underutilized
- Between 70%-90% occupancy: parking is well utilized and drivers are able to find a space
- Greater than 90% occupancy: parking is at or over practical capacity

The following figures illustrate the results of the parking occupancy counts. Figure 1-7 through Figure 1-10 show the average weekday occupancy and Figure 1-11 through Figure 1-14 show the occupancy during the Saturday midday peak period. Additional maps showing parking occupancy results for the AM, midday, and PM peak periods are located in Appendix Figure 3-17 through Figure 3-28. 126 segments were excluded from the occupancy survey due to on-going construction and events causing obstructions to the curb. Maps showing the location of these segments can be found in Figure 3-29 through Figure 3-32 (in Appendix).

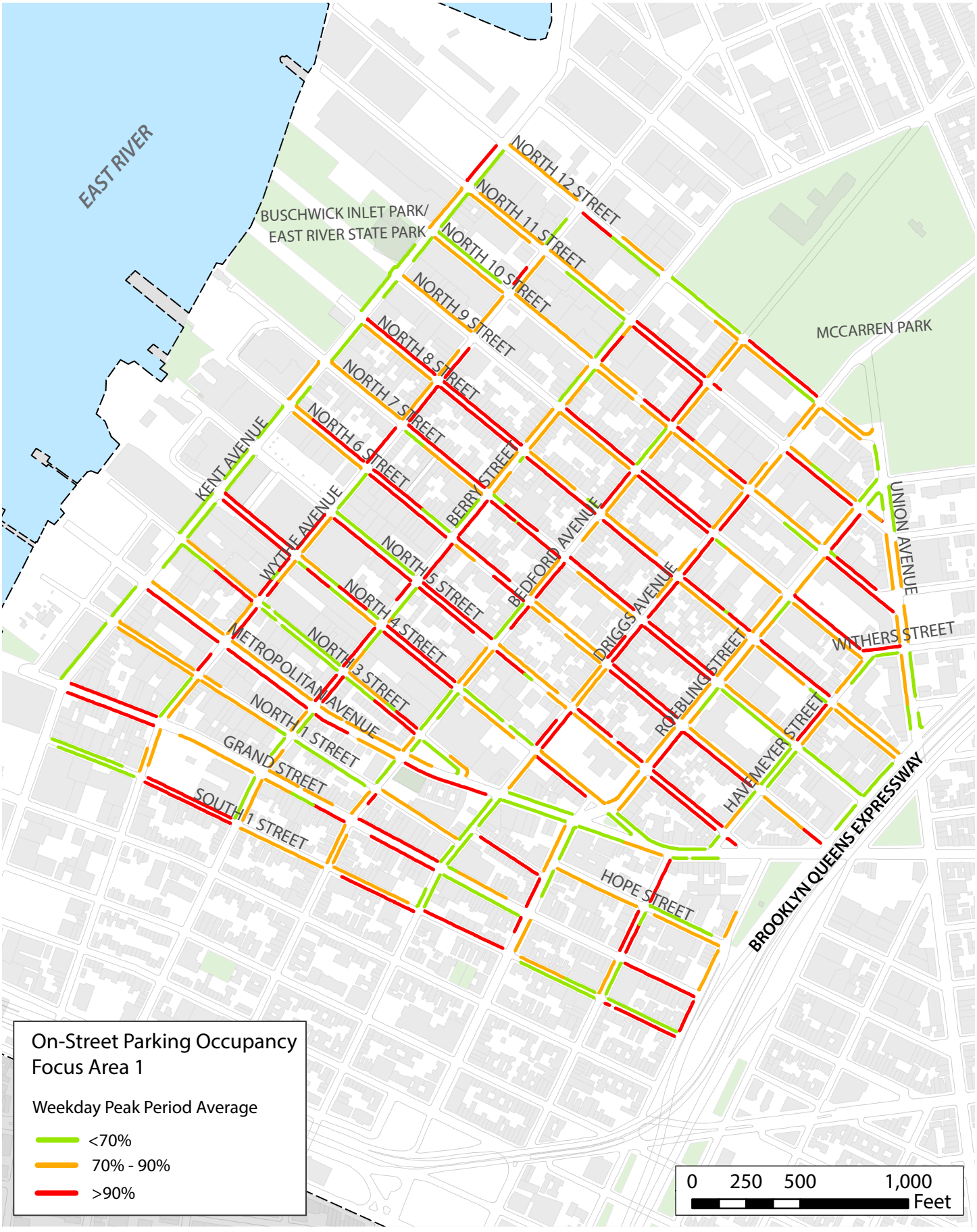

FIGURE 1.7: ON-STREET PARKING OCCUPANCY WEEKDAY AVERAGE - FOCUS AREA 1

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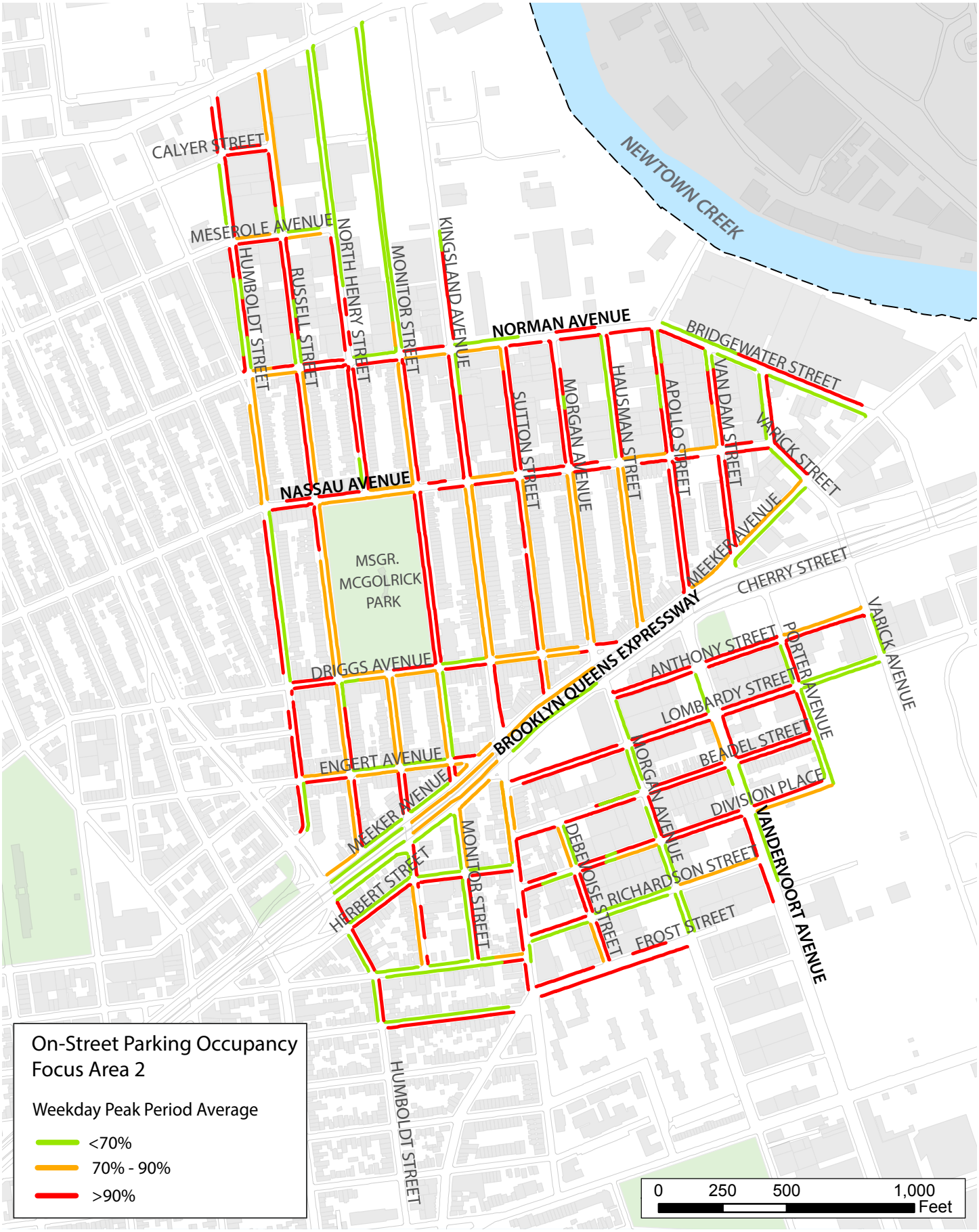

FIGURE 1.8: ON-STREET PARKING OCCUPANCY WEEKDAY AVERAGE - FOCUS AREA 2

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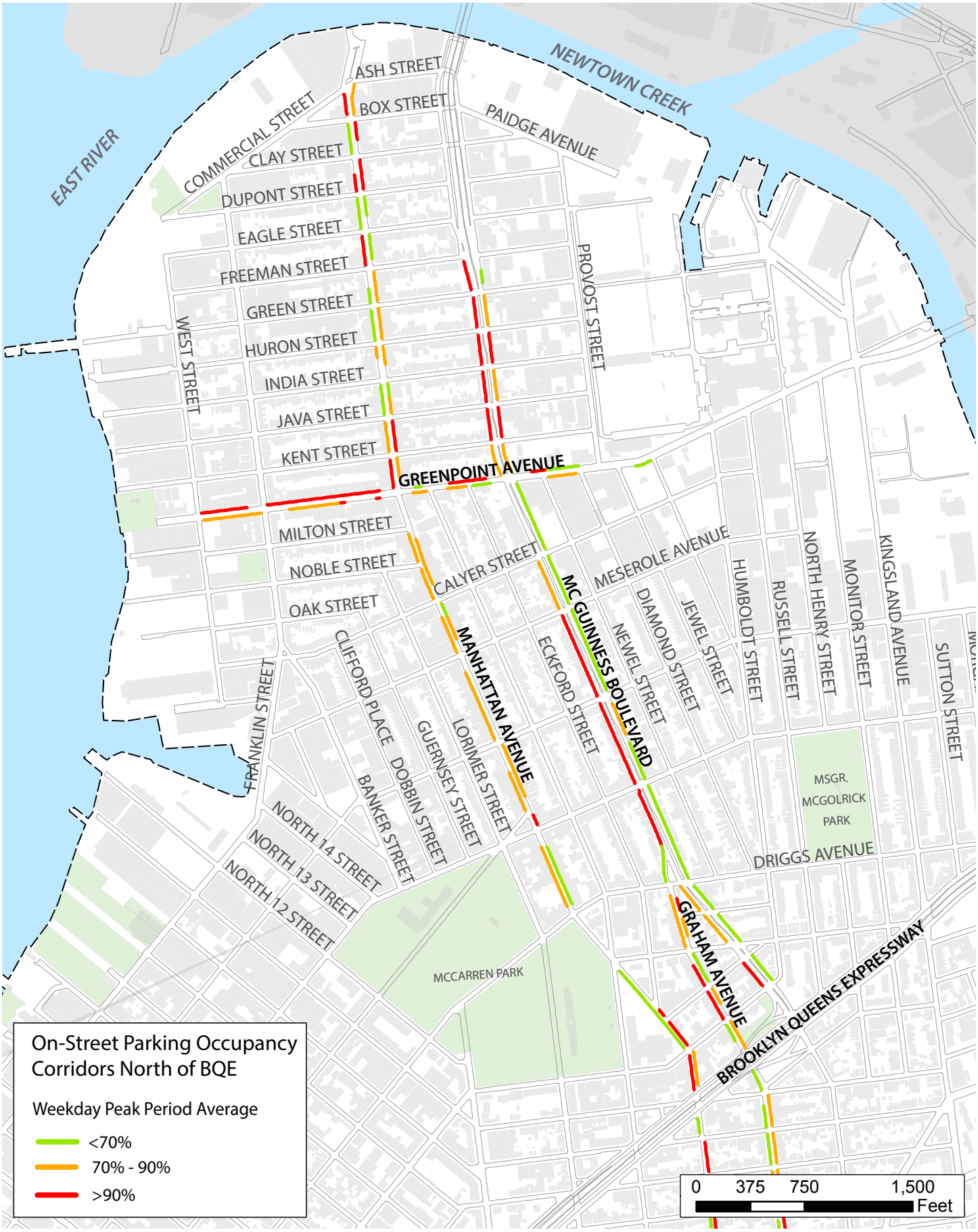

FIGURE 1.9: ON-STREET PARKING OCCUPANCY WEEKDAY AVERAGE - CORRIDORS NORTH OF BQE

North Williamsburg Transportation Study

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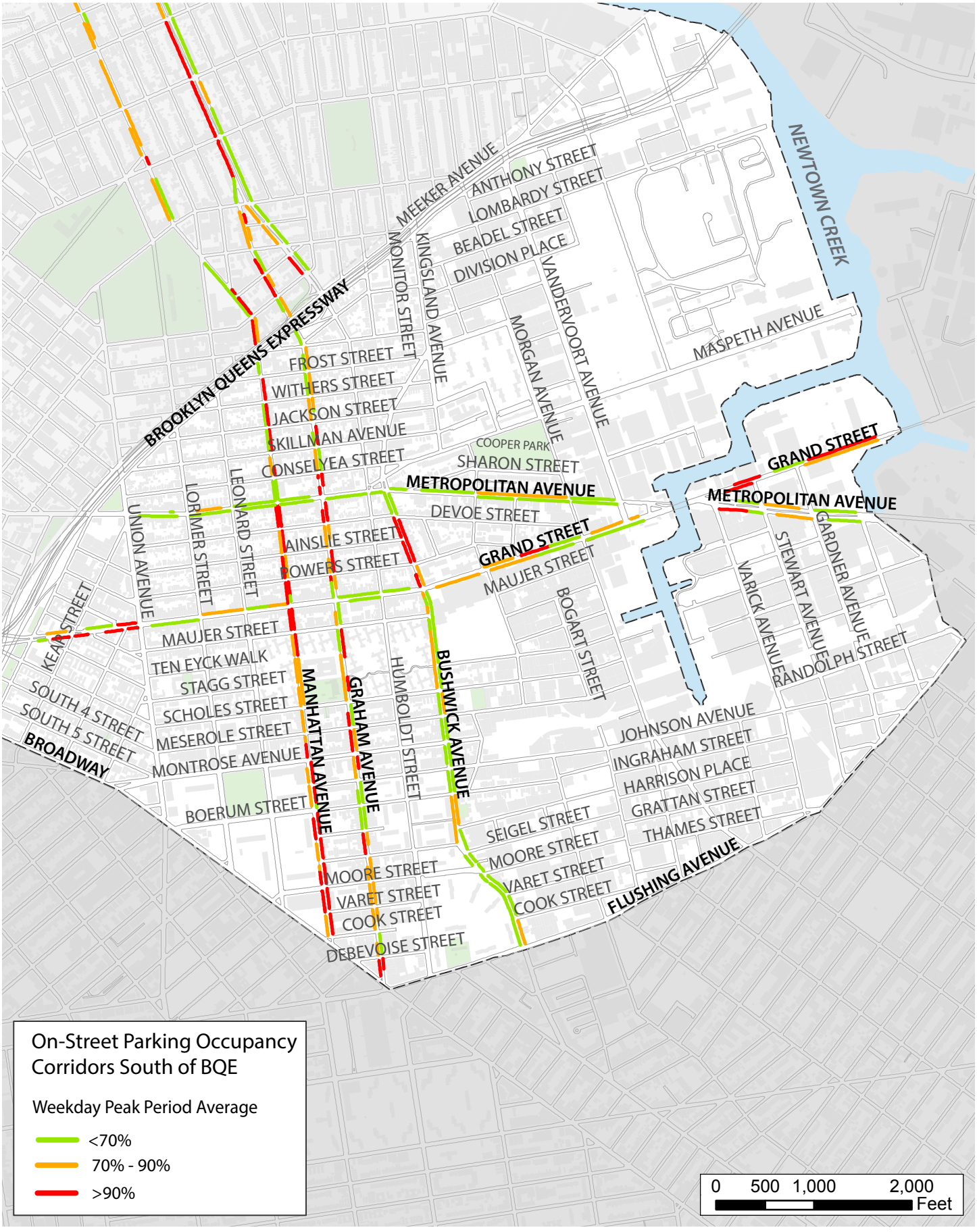

FIGURE 1.10: ON-STREET PARKING OCCUPANCY WEEKDAY AVERAGE - CORRIDORS SOUTH OF BQE

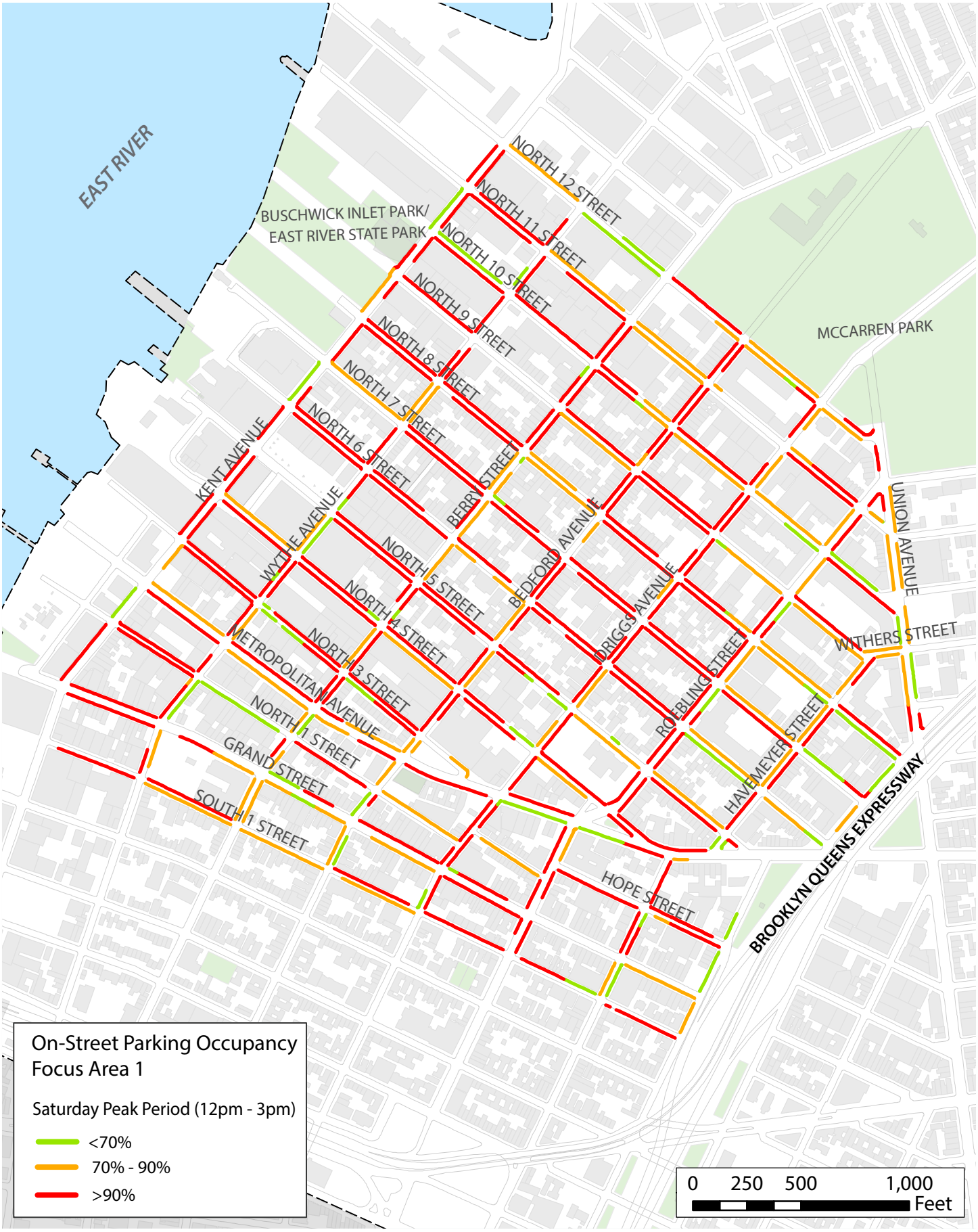

FIGURE 1.11: ON-STREET PARKING OCCUPANCY SATURDAY - FOCUS AREA 1

North Williamsburg Transportation Study

BFJ Planning

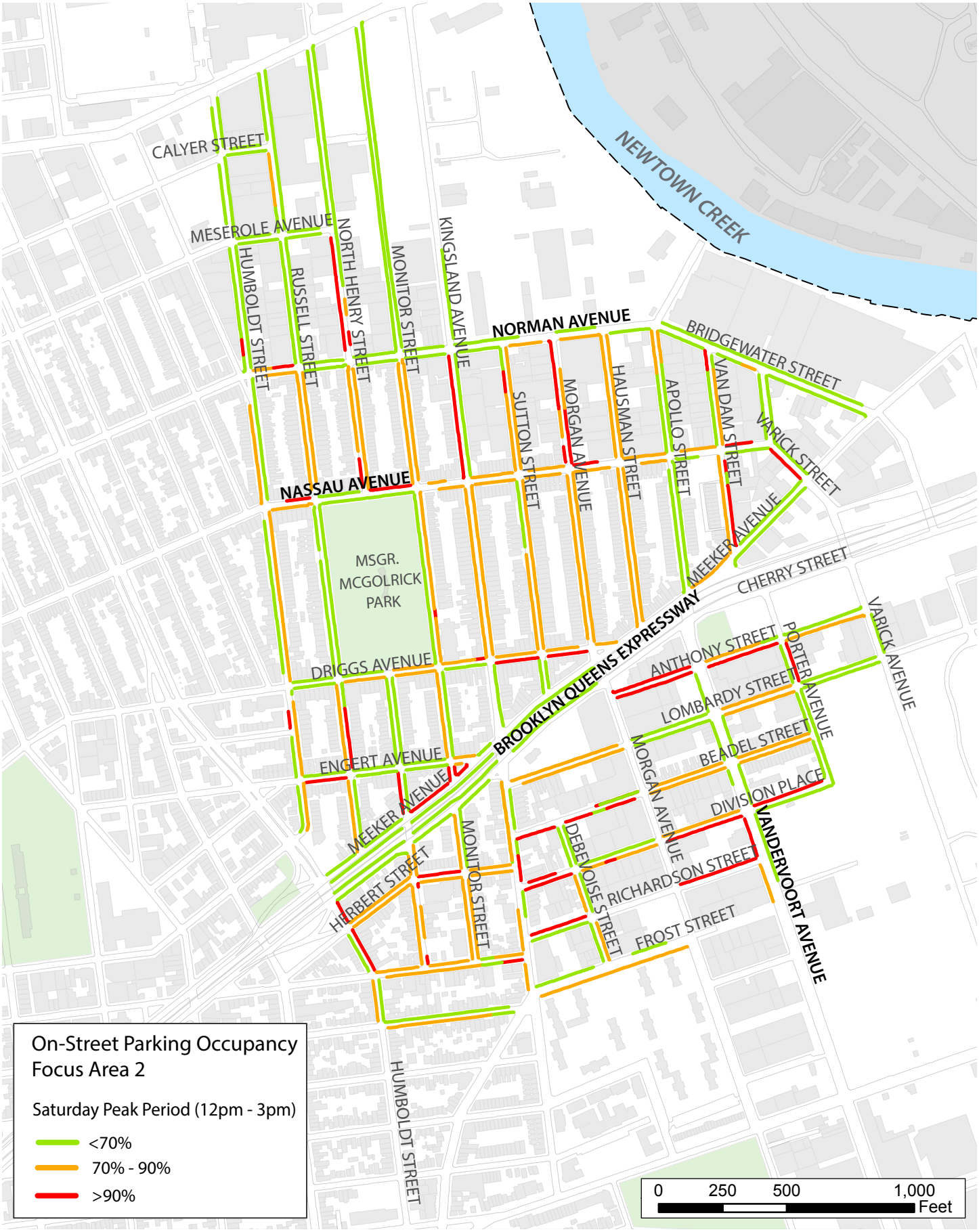

FIGURE 1.12: ON-STREET PARKING OCCUPANCY SATURDAY - FOCUS AREA 2

North Williamsburg Transportation Study

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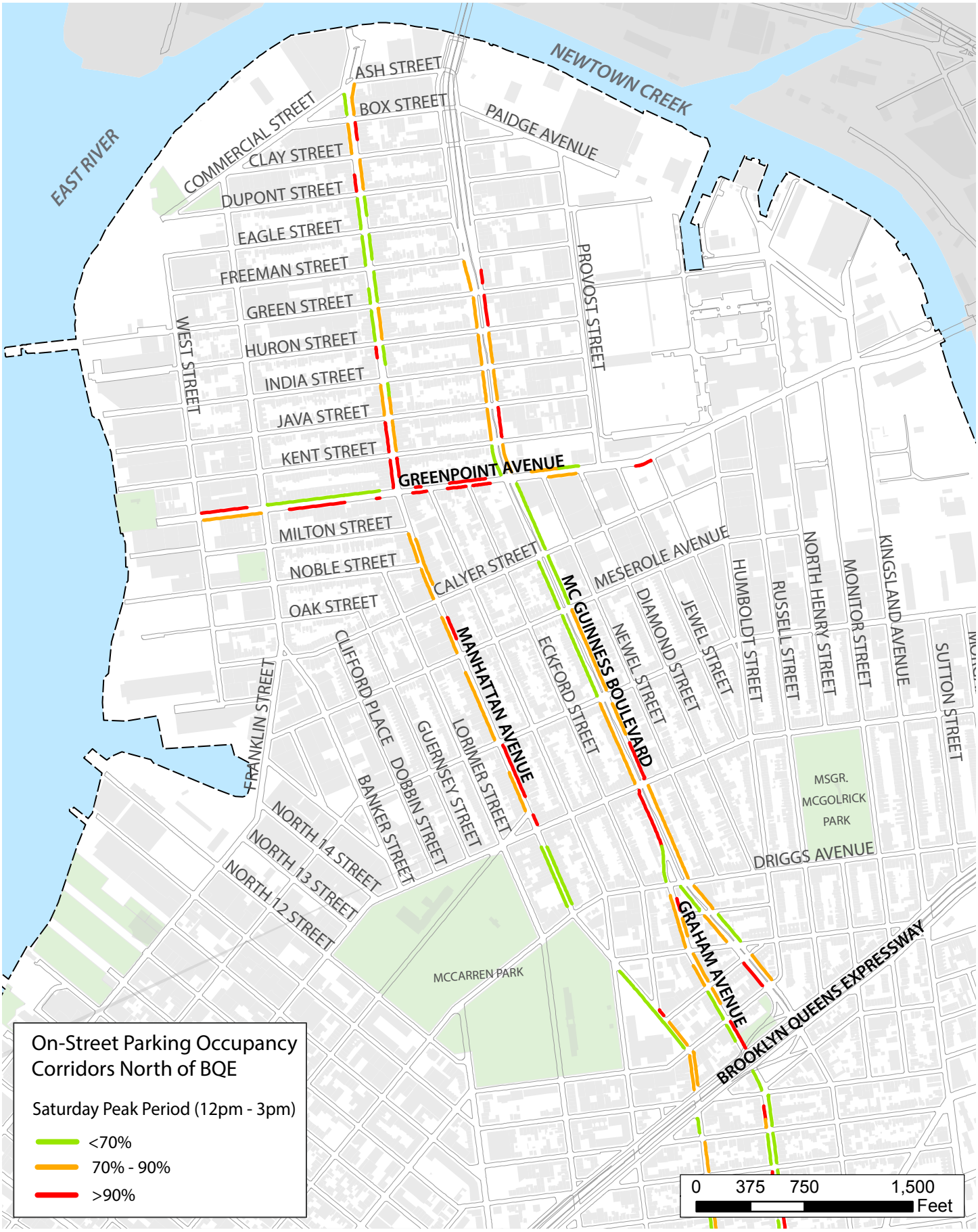

FIGURE 1.13: ON-STREET PARKING OCCUPANCY SATURDAY - CORRIDORS NORTH OF BQE

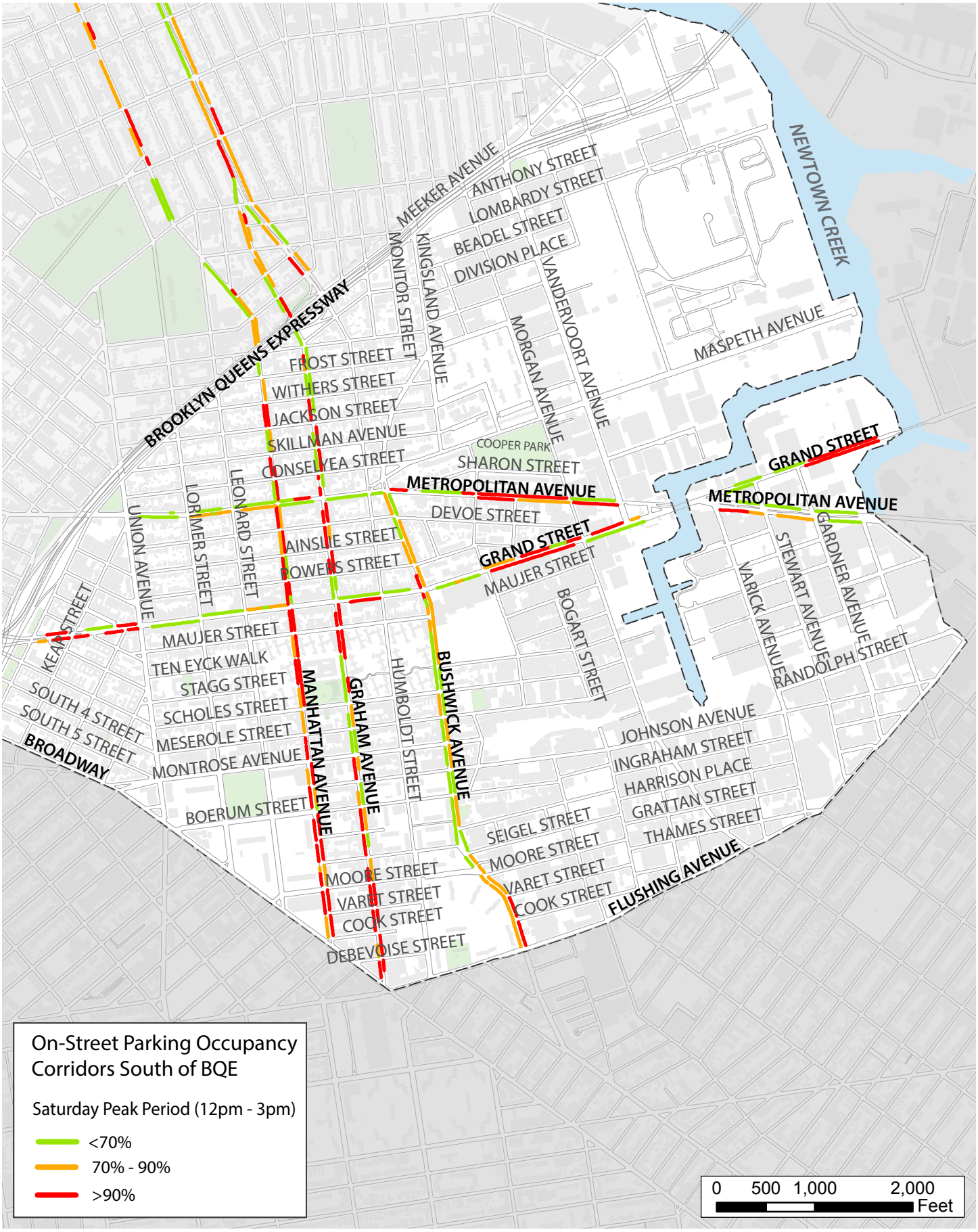

FIGURE 1.14: ON-STREET PARKING OCCUPANCY SATURDAY - CORRIDORS SOUTH OF BQE

North Williamsburg Transportation Study

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Table 1-3 shows the relationship between parking supply and average occupancy during the peak periods. Average parking occupancy is at its lowest when the parking supply is greatest during the PM peak periods. Parking occupancy peaks in Focus Area 1 during the Saturday midday peak period, when supply is nearly 500 spaces higher than the weekday AM and midday peak periods. Focus Area 2, which has the least variation in parking supply of the three areas, peaks during weekday AM and midday peak periods. Both unmetered and metered parking along the Major Corridors reach peal occupancy during the weekday Midday. The parking occupancy of truck loading areas is typically low and is not correlated to supply.

Table 1-3: Parking Supply and Occupancy during Peak Periods

	AM		Midday		PM		Saturday	
Focus Area 1	#	Occ	#	Occ	#	Occ	#	Occ
Unmetered	3,489	80%	3,500	85%	4,151	71%	3,957	86%
Metered	99	79%	99	88%	0		99	92%
Truck Loading	107	26%	100	21%	11	25%	33	43%
Total	3,695	74%	3,699	78%	4,162	69%	4,089	84%
	AM		**Midday**		**PM**		**Saturday**	
Focus Area 2	#	Occ	#	Occ	#	Occ	#	Occ
Unmetered	3,556	90%	3,562	90%	3,842	70%	3,733	68%
Metered	0		0		0		0	
Truck Loading	84	56%	84	36%	9	38%	33	47%
Total	3,640	85%	3,646	84%	3,851	64%	3,766	65%
	AM		**Midday**		**PM**		**Saturday**	
Major Corridors	#	Occ	#	Occ	#	Occ	#	Occ
Unmetered	1,635	82%	1,875	85%	2,868	69%	2,134	78%
Metered	717	61%	717	84%	0		721	79%
Truck Loading	29	39%	26	71%	9	36%	18	60%
Total	2,381	71%	2,618	83%	2,877	68%	2,873	77%

Table 1-4 shows the average parking occupancy of blockfaces adjacent to residential, commercial, industrial and civic land uses. The land use categories represent likely user groups, which are expected to experience peaks at different times.

Table 1-4: Average Parking Occupancy by Land Use

	Focus Area 1				Focus Area 2				Major Corridors			
Peak Period	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
Residential	79%	82%	72%	81%	81%	82%	91%	73%	73%	85%	76%	75%
Commercial	70%	76%	70%	85%					68%	82%	70%	78%
Industrial	77%	75%	61%	83%	88%	86%	48%	61%	80%	81%	46%	75%
Civic	72%	76%	67%	85%	87%	75%	83%	60%				
All Uses	**74%**	**78%**	**69%**	**84%**	**85%**	**84%**	**64%**	**65%**	**71%**	**83%**	**68%**	**77%**

Focus Area 1 achieves peak utilization during the Midday and Saturday peak periods. The peak utilization of commercial streets occurs on Saturday. Residential streets in Focus Area 1 maintain a consistent average occupancy of 72-82% during all peak periods. In Focus Area 2, parking demand on residential streets is similar, but utilization peaks at 91% during the PM peak period. Industrial blockfaces located in the IBZ experience peak utilization during the AM and Midday peak periods. The average occupancy of Focus Area 2 is highest during the AM and midday peak periods. All of the uses along Major Corridors reach peak occupancy during the midday peak period. Average occupancy along residential streets is most consistent of the uses, ranging from 73-85%.

In the study area as a whole, parking utilization peaks in commercial areas during the Midday and Saturday peak periods. Industrial areas peak during the AM and Midday peak periods and are underutilized during the PM and Saturday peak periods. Overall parking occupancy is lowest during the PM peak hour for all user groups except for residents in Focus Area 2. Lower occupancy numbers in commercial and industrial areas can be attributed to the increase in parking supply during the evening.

In summary, the occupancy maps reveal the following sub-areas with parking shortfalls and surpluses:

Locations of Parking Shortfalls

- The core of Focus Area 1, which represents the commercial center of Williamsburg, during the Midday and Saturday peak period. Parking occupancy is generally highest along the blocks surrounding the Bedford Avenue metered zone.

- Parking occupancy is consistently high during the weekday peak periods in the residential neighborhood north of the BQE, situated around Msgr. McGoldrick Park. Occupancy peaks during the PM peak period.
- Commercial corridors north of the BQE during the Midday and Saturday peak periods
- Industrial areas in Focus Area 2 during the AM and Midday peak periods. The high occupancy levels in the industrial areas east of Kingsland Avenue can be attributed to the high level of on-street truck loading and unloading.
- Residential section of Manhattan Avenue located south of Metropolitan Avenue during daytime peak periods.

Location of Parking Surplus

- Parking located under the BQE was found underutilized during all of the peak periods surveyed.
- Parking in the industrial areas of Focus Area 2 is underutilized during the PM and Saturday peak periods.
- Metered and unmetered parking on Metropolitan Avenue and Grand Street between Bushwick Avenue and Union Avenue is underutilized during all peak periods surveyed.

The results of the occupancy survey convey a general need for additional residential parking options in Focus Area 2 and commercial-related parking in Focus Area 1 and along the Major Corridors.

Illegal Parking

Parking at hydrants and driveways accounts for the majority of illegal parking offenses observed during the occupancy survey. On busier streets, this is reflective of high parking demand. However, there were many instances documented where vehicles were found illegally parked on relatively quiet streets, which suggests a lack of enforcement. Figure 1-15 through Figure 1-18 show the number of double and illegal parked vehicles that were observed on during all survey periods on blockfaces with high and low occupancies.

The following discussion outlines issues observed in the field that contribute to this behavior.

Commercial Areas

Double parked commercial vehicles were observed along most major corridors primarily during the AM and Midday peak periods. Commercial vehicles have little choice but to double park because there is shortfall of loading zones along commercial corridors during these periods. This causes congestion because most commercial corridors in the study area have one lane of traffic.

Double parked vehicles are often seen blocking bicycle lanes on Grand Street, Manhattan Avenue, and Greenpoint Avenue.

Industrial Areas

Illegal truck parking and loading is concentrated in the IBZ, where regulation signage is often missing and curbs are in poor condition. Industrial businesses that are unable to accommodate truck loading within their property rely on curb space. As a result, property owners have used a series of strategies to preserve curb space for their operations. Businesses have painted yellow curbs and posted unofficial tow-away signs to dissuade vehicles from parking near driveways. The confusion caused by these practices effectively reduces parking supply. In addition, many regulation signs appear to have been tampered with to change the length of the regulation. Signs were found altered with tape and spray paint to change a double arrow regulation to a single arrow, resulting in the loss of parkable space.

Many blockfaces in the IBZ do not have curbs which make it difficult to distinguish between private and public property. It is typical to find vehicles parked on blockface faced perpendicular to the street. Loading zone regulations appear to be inconsistently placed because they are not located in front of many businesses that engage in on-street loading.

Residential Areas

The residential areas of Focus Areas 1 and 2 often bear the negative externalities associated with the neighboring IBZs. Residential developments, such as the Copper Park Houses, are located directly across the street from the IBZ boundary. Over two dozen instances were documented where a commercial vehicle was either double parked or illegally parked on a residential blockface.

In addition to illegally parked vehicles, waste containers were found parked along various residential blockfaces in Focus Areas 1 and 2 throughout the duration of the study. In many cases, the container did not appear to be associated with any ongoing construction. The length of the container reduces the capacity of parking segments by at least two cars.

B. Off-Street Parking

Methodology and Procedure

The purpose of the off-street parking occupancy survey is to determine parking demand during the peak hours analyzed in this study. It was not possible to conduct occupancy counts for off-street parking facilities because they are located on private property and the parking areas are often not in full view from the street. However, short interviews were conducted with parking

garage attendants to identify user groups and qualify occupancy during the study's peak periods. Anecdotal evidence was obtained from 12 of the 13 garages.

User Groups

Garage operators typically classify customers as either *monthly* or *transient* users. Monthly users pay to park using the garage's monthly rates and are allowed unlimited re-entries. Transient users pay to park using the garage's daily or hourly rates and are not permitted re-entry. Monthly users are typically residents living in or a short walk from the building where the garage is located. Transient users are typically visitors that patron nearby retail, restaurant, and event venues. Garages located near construction sites (i.e. along the East River waterfront), often have construction workers parking at daily rates. Several garages contain Zip Cars available for rent by the hour.

Residents are assumed to be the primary users of private surface parking lots. Zip Cars were found parked in at least one lot in the Greenpoint neighborhood. It is assumed that Zip Car provides its customers a passkey to access these lots.

Peak Utilization

Parking attendants at the garages located in Williamsburg reported being near or close to capacity during the week when residents are less likely to drive. On Saturdays, occupancy is more dependent on transient users, because residents tend to use their vehicles on weekends. Garages located near special events venues, such as McCarren and East River Parks, reported a surge in transient users on Saturdays. Off-street occupancy is dependent on on-street occupancy. Garages experience a dip in activity on Wednesdays, when street cleaning regulations are not in effect along most residential streets. Occupancy is also correlated with a facility's proximity to mass transit. It was determined from the interviews that surface lots located further from subway stations tend to have lower occupancy rates during the day.

FIGURE 1.15: ON-STREET PARKING VIOLATIONS (COUNTED DURING SURVEY) - FOCUS AREA 1

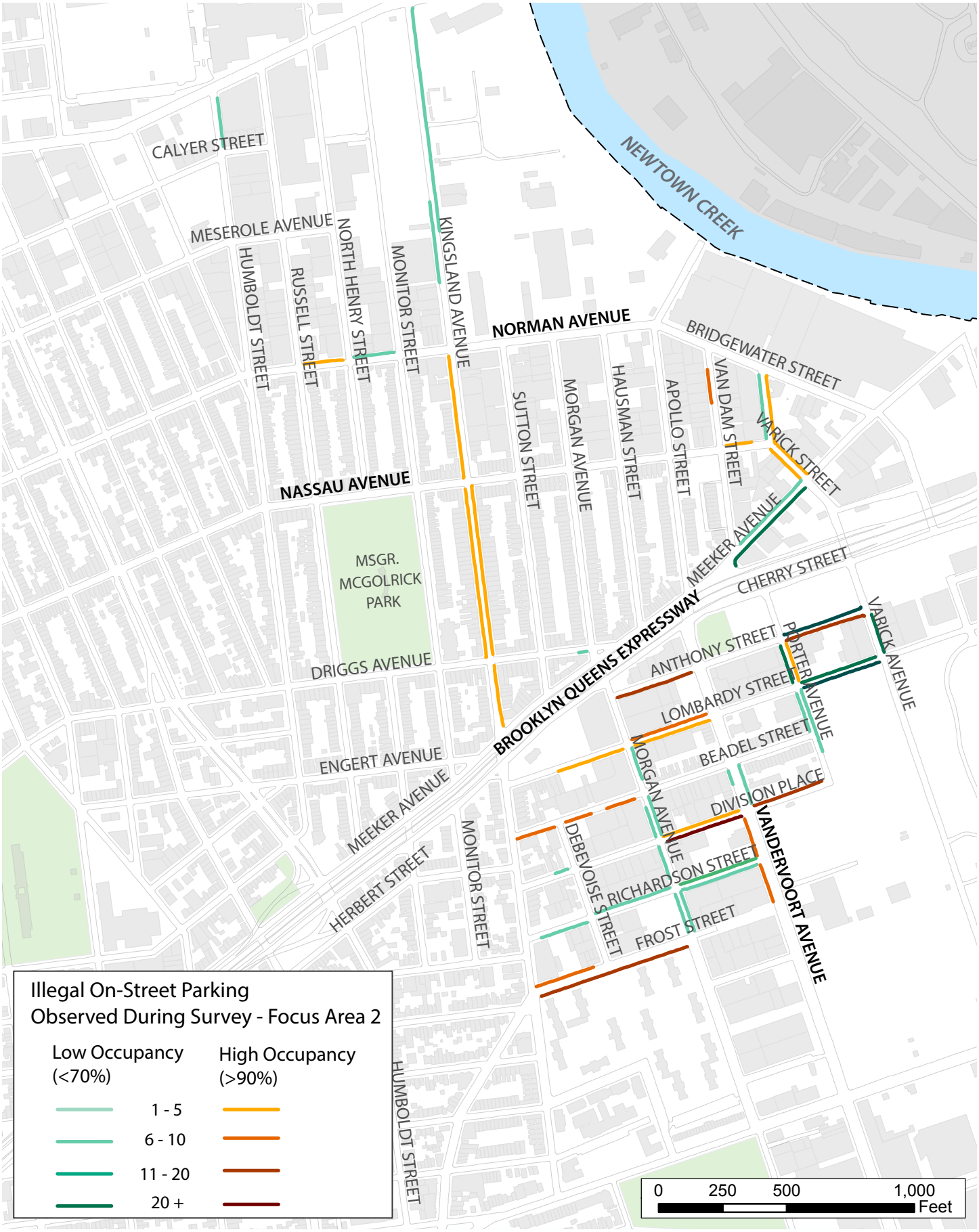

FIGURE 1.16: ON-STREET PARKING VIOLATIONS (COUNTED DURING SURVEY) - FOCUS AREA 2

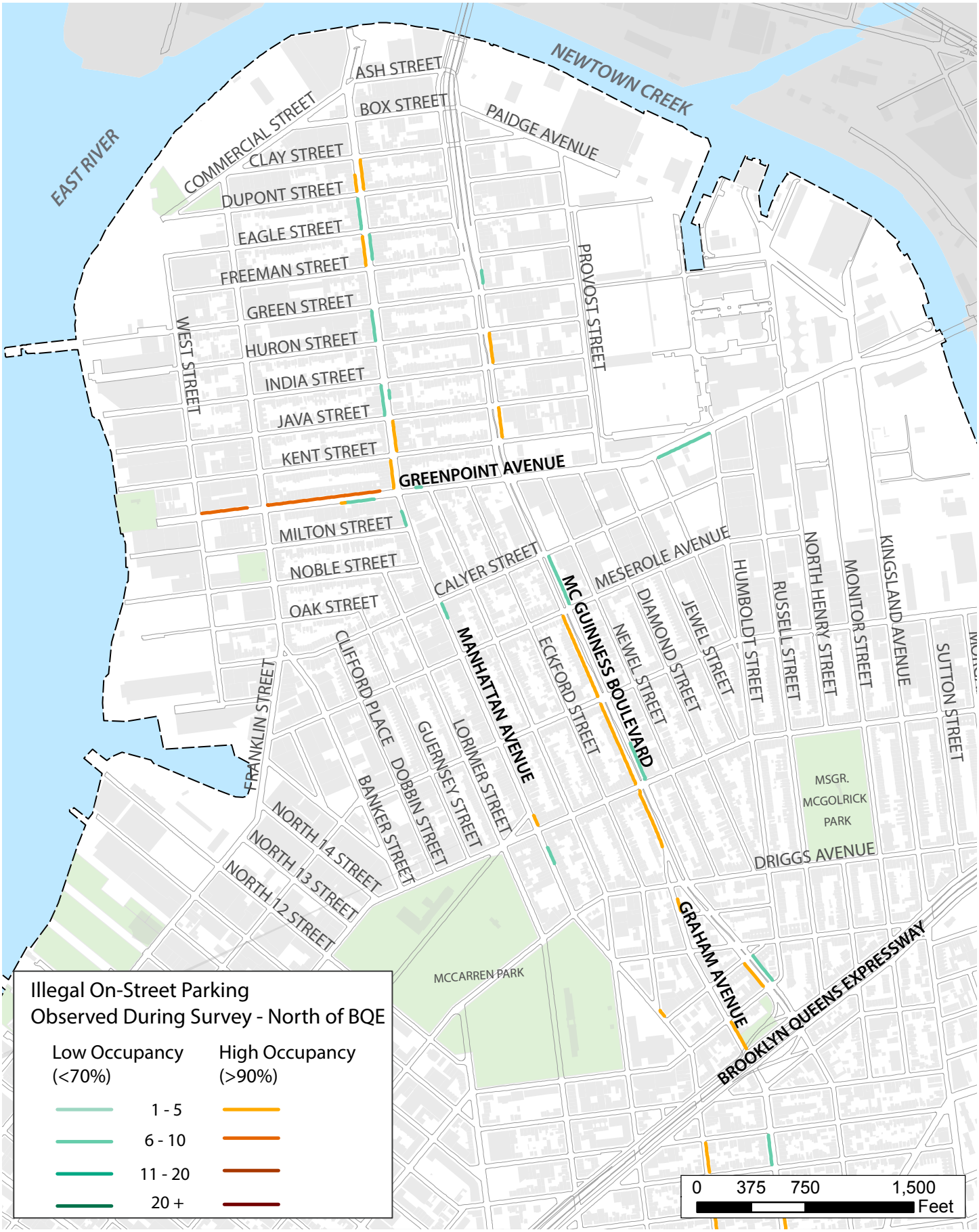

FIGURE 1.17: ON-STREET PARKING VIOLATIONS (COUNTED DURING SURVEY) - CORRIDORS NORTH BQE

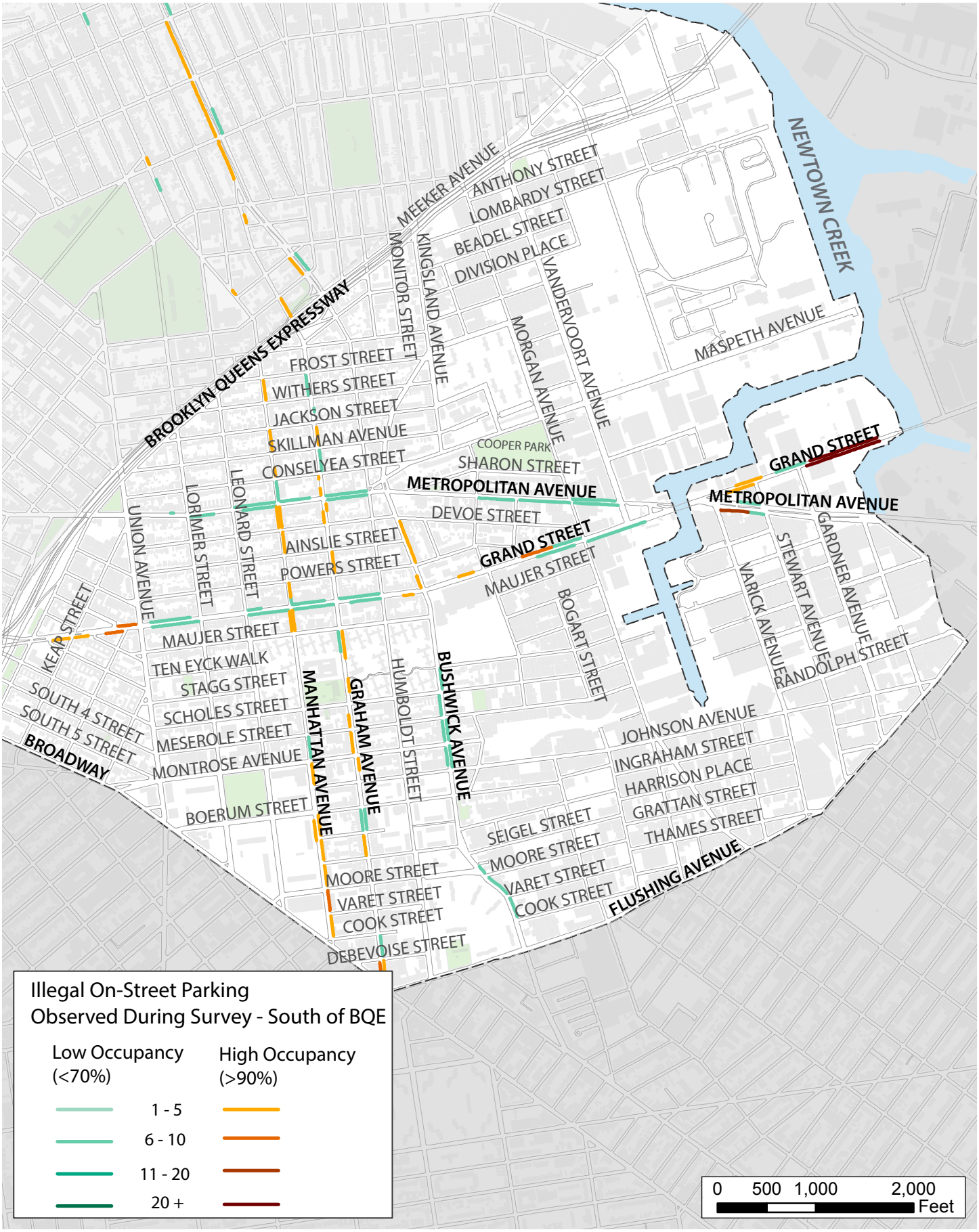

FIGURE 1.18: ON-STREET PARKING VIOLATIONS (COUNTED DURING SURVEY) - CORRIDORS SOUTH BQE

1.4. RECOMMENDATIONS

A. Commercial Area Recommendations

Expand metered parking zones

Expand existing metered zones to include additional blockfaces to increase availability and turnover of parking along commercial corridors. This is recommended for the following corridors, as illustrated in Figure 1-19 to Figure 1-21:

- Grand Street from Berry Street to Marcy Avenue
- Metropolitan between Havemeyer Street and North 4th Street
- Bedford Avenue between North 8th Street and North 12th Street and Grand Street and North 4th Street
- Berry Street, Driggs Avenue, Wythe Avenue, between North 3rd and North 9th
- Kent Avenue between North 8th Street and North 12th Street
- Manhattan Avenue between Dupont Street and Box Street
- Graham Avenue between Maujer Street and Skillman Avenue

Add meters to several blockfaces already located in metered zones:

- Manhattan Avenue between Eagle Street and Freeman Street, west side
- Graham Avenue between Montrose Avenue and Johnson Avenue, west side
- Greenpoint Avenue between Franklin Street and Manhattan Avenue, south side

Create paid commercial loading zones along major corridors

Metered "No Standing Commercial Loading and Unloading" zones should be established along commercial corridors that have metered parking, such as Manhattan Avenue and Graham Avenue and on streets where truck double parking is prevalent. These zones should be placed in front of large commercial vehicle trip attractors, such as supermarkets, that do not have off-street loading areas.

- Manhattan Avenue between Java Street and India Street
- Graham Avenue between Skillman Avenue and Conselyea Street
- Grand Street between Humboldt Street and Manhattan Avenue

The following blockfaces that have existing no parking regulations in front of supermarkets should be changed to conform to this policy:

- Graham Avenue between Devoe Street and Metropolitan Avenue, east side
- Manhattan Avenue between Meserole Avenue and Calyer Street, east side
- Grand Street between Leonard Street and Manhattan Avenue, north side
- Grand Street between Humboldt Street and Bushwick Avenue, north side

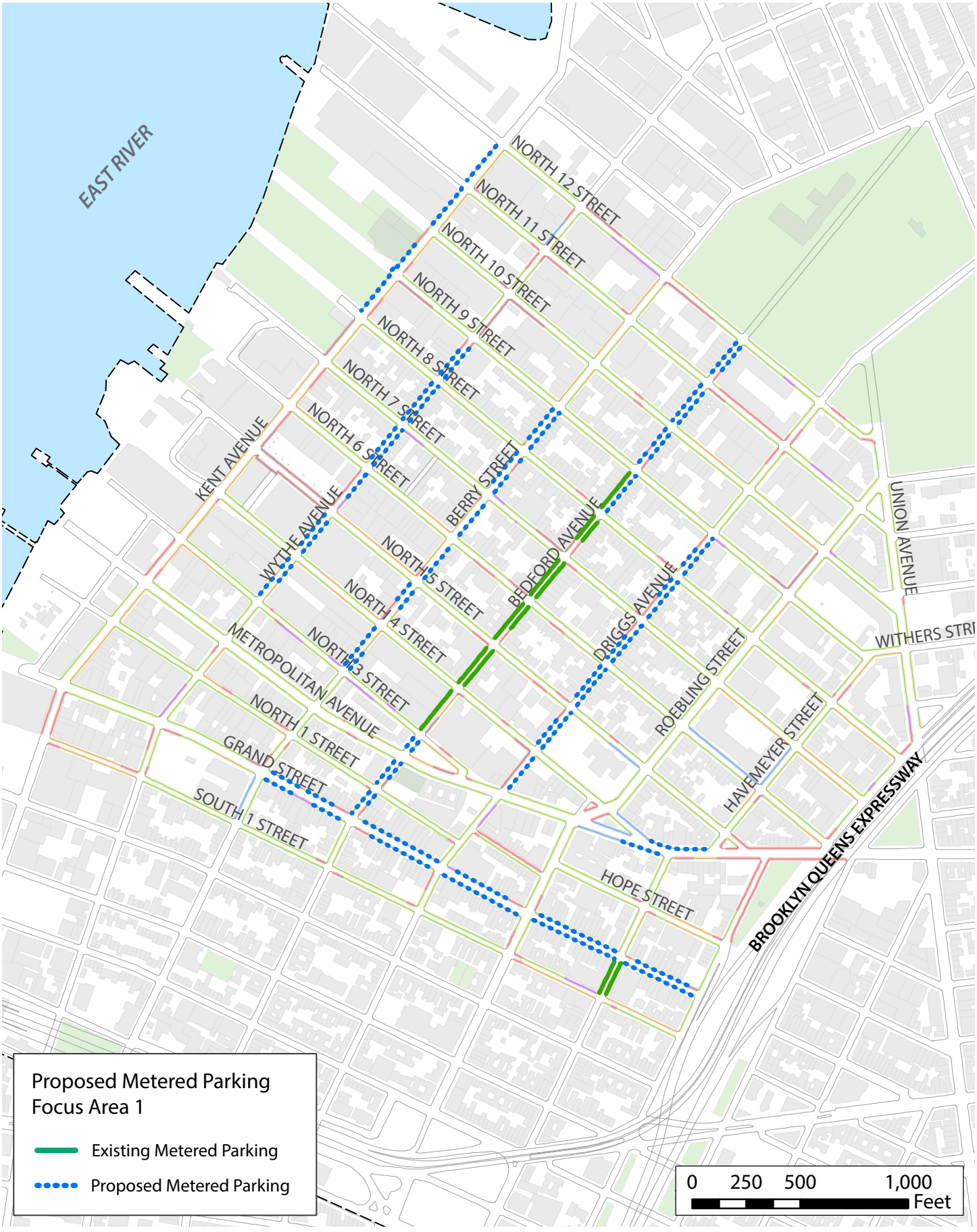

FIGURE 1.19: PROPOSED METERED PARKING - FOCUS AREA 1

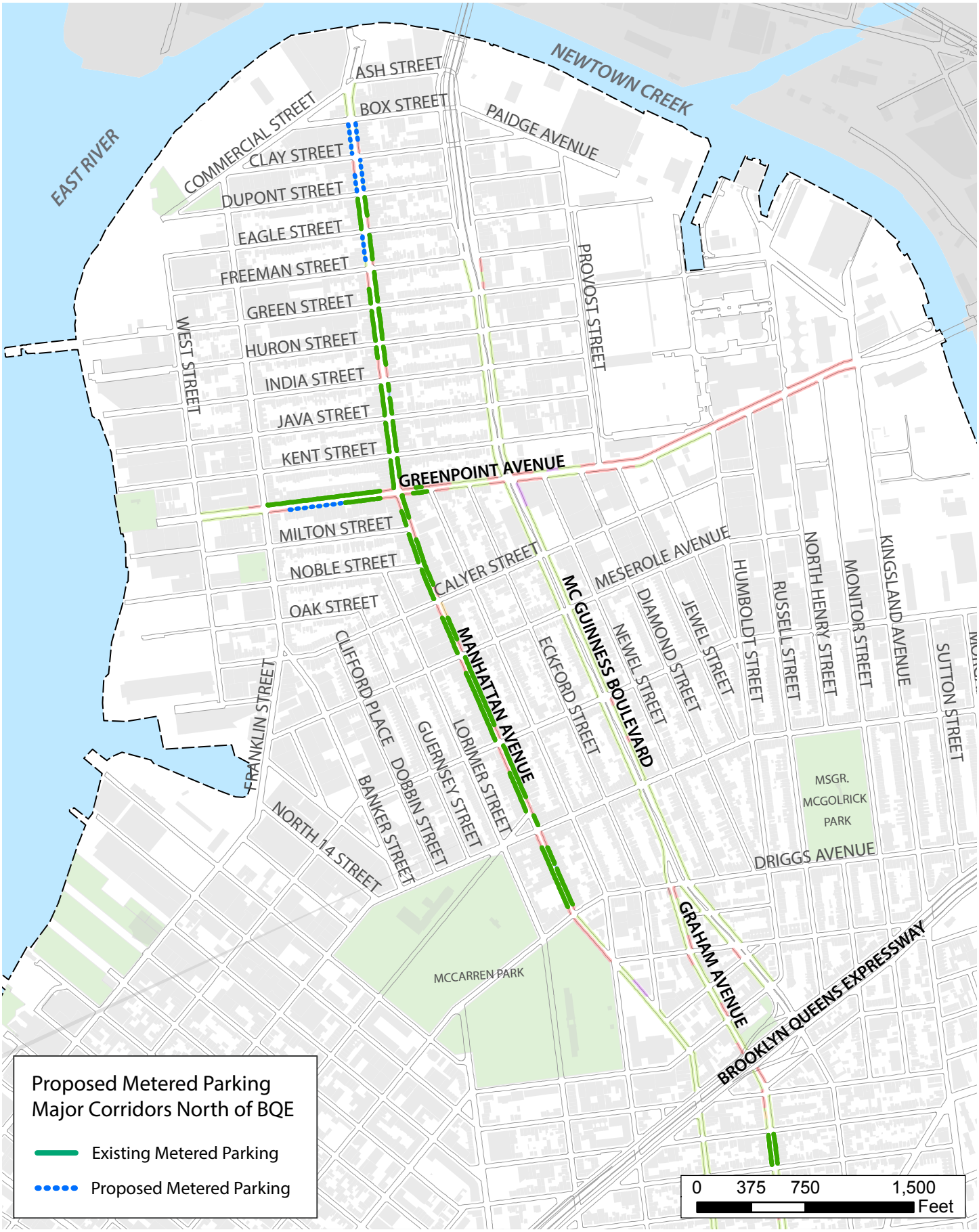

FIGURE 1.20: PROPOSED METERED PARKING - CORRIDORS NORTH OF BQE

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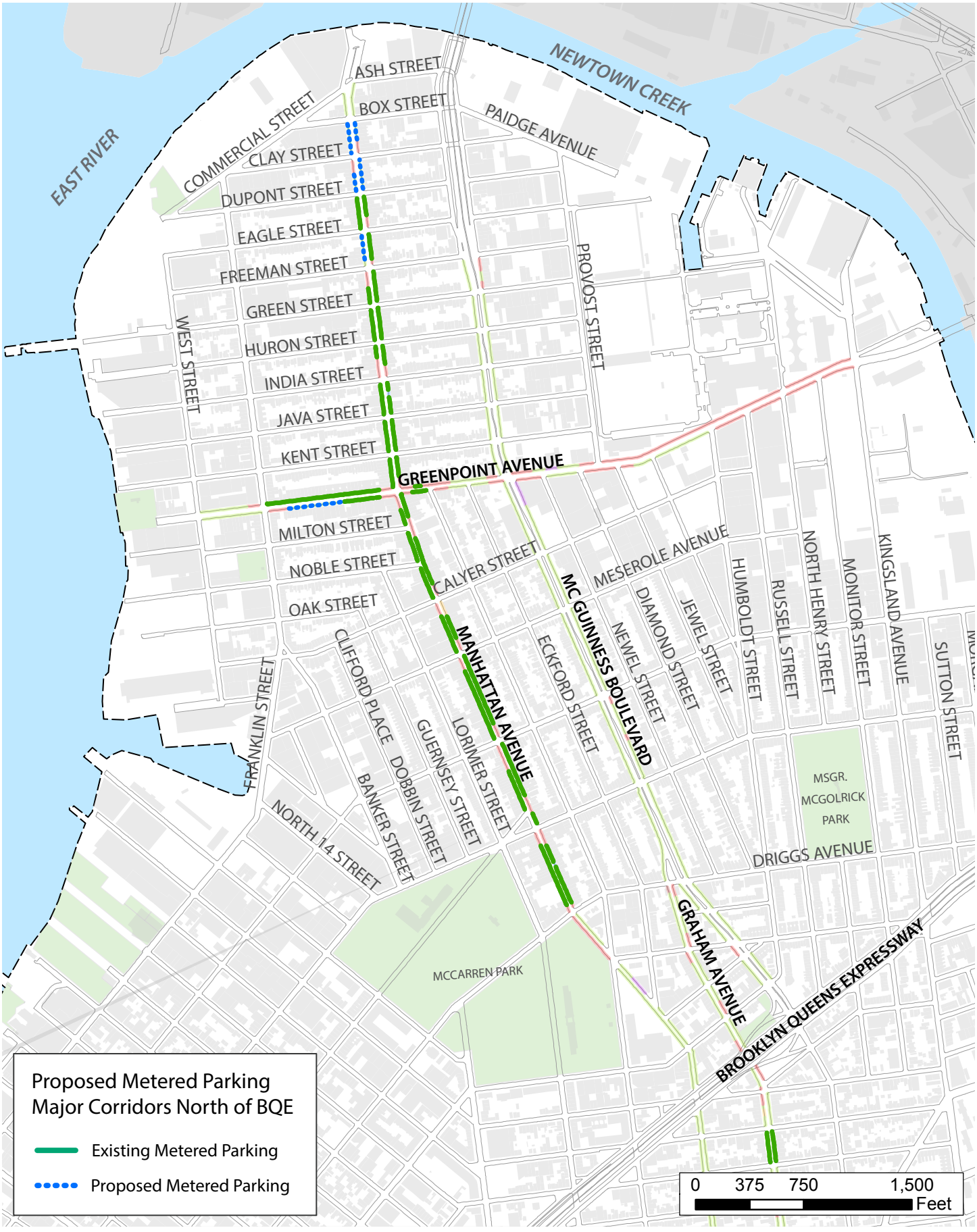

FIGURE 1.21: PROPOSED METERED PARKING - CORRIDORS SOUTH OF BQE

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B. Industrial Area Recommendations

Improve parking regulation signage

The survey revealed that more than a dozen blockfaces in the IBZ are missing regulation signage. Existing signage, which is often damaged from contact with large vehicles, should be reinforced. Figure 1-22: Blockfaces Missing Signage and Curbs shows blockfaces in Focus Area 2 that are missing regulation signage.

Encourage property owners to repair curbs and sidewalks

Property owners are required by law to maintain the sidewalks adjacent to their properties. The Department of Transportation should issue sidewalk violations to property owners or repair missing and defective curbs. Figure 1-22 shows blockfaces in Focus Area 2 that are missing curbs.

Additional recommendations regarding truck loading and parking regulations can be found in Section 2.5 of the Goods Movement/Trucks Section.

C. Residential Area Recommendations

Increase parking enforcement to minimize commercial vehicle parking and idling in neighborhoods

Continous enforcement of traffic and parking regulations is key to preserving the quality of life of residents living near the IBZ boundary or along a truck route. Parking regulation signage should indicate that on-street commercial vehicle parking is not permitted between 9am and 5pm.

Encourage residents to park in underutilized blocks

The residential area of Focus Area 2 experiences a peak in parking utilization during the PM peak period where occupancy levels reach 90%. During the same period, parking under the BQE and the surrounding industrial neighborhoods is underutilized. Efforts should be made to encourage residents to use these underutilized parking areas that in many cases are less than a quarter mile away from any point in the residential neighborhood. The parking area under the BQE should be upgraded with better lighting and landscaping to make it more appealing to users.

Convert parking under BQE into Municipal Lot

Study the feasibility of incorporating the parking under the BQE into the municipal parking system to provide residents additional long-term parking options given the lack of off-street parking lots available in Focus Area 2. The lot should offer monthly permits that are managed using the NYCDOT Parking Reservation System (PRS). The current design allows for the installation of

control gates at each end of the three blocks of parking within the study area. This should be considered for the entire study area.

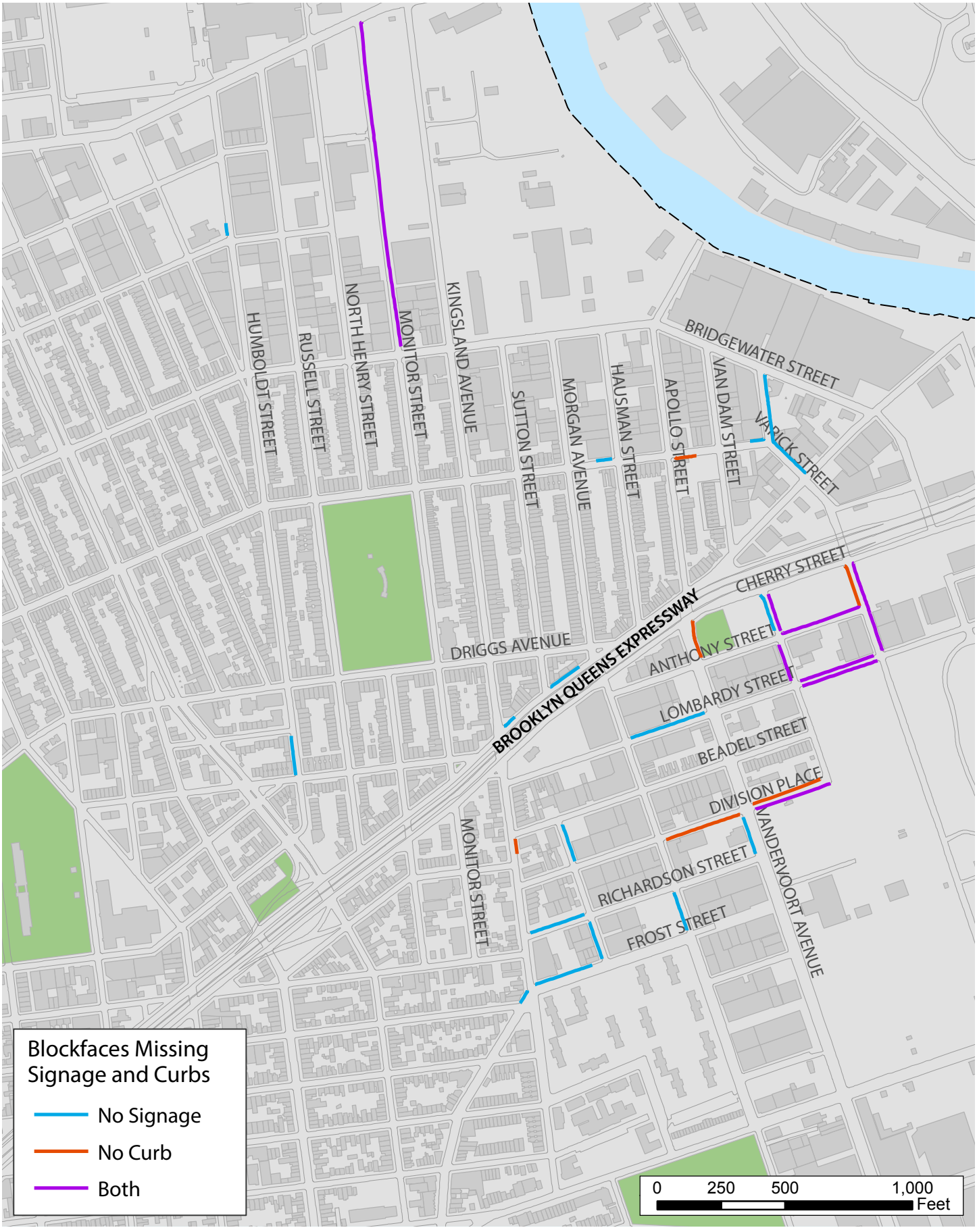

FIGURE 1.22: BLOCKFACES MISSING SIGNAGE AND CURBS

Section 2.0: Goods Movement/Trucks

This section provides an overview of the existing transportation conditions related to goods movement and truck circulation in the North Williamsburg area. The analysis will set the context for understanding the issues and to create a foundation for recommendations on proposed improvements and strategies.

2.1. INVENTORY OF EXISTING LOCAL AND THROUGH TRUCK ROUTES

A. Truck Route Network

There are a number of truck routes in the North Williamsburg area which provide connections for commercial vehicles to access nearby areas as well as the regional roadway network. All vehicles defined as a truck (two axles and six tires, or three or more axles) are required to follow the Truck Route Network. Commercial vehicles that do not meet the definition of a truck are not required to follow this network, but must follow all posted signage regarding the operation of commercial vehicles.[3] The location of truck routes is a sensitive issue for many residents due to the conflicts of neighborhood uses, as well as the impacts of truck traffic on the roadway network.

Figure 2-1 shows the NYC DOT map of Local Truck Routes and Through Truck Routes. According to NYC DOT, Local Truck Routes are designated for trucks with an origin and destination within a borough. This includes trucks that are traveling to make a delivery, or for loading or servicing. Trucks should only use non-designated routes for the purpose at the beginning or end of a trip, when traveling between their origin/destination and a truck route. The Through Truck Route Network is primarily composed of major urban arterials and highways and must be used by trucks that have neither an origin nor destination within the borough.

As seen in Figure 2-1, the Through Truck Routes include the Brooklyn Queens Expressway (BQE) and the access ramp to the Williamsburg Bridge. All other routes are classified as Local Truck Routes. Figure 2-2 shows the land uses that typically generate the greatest volumes of truck activity. Major gateways to and from the North Williamsburg area are also shown in Figure 2-2.

[3] NYC DOT: Truck Routing. Accessed at http://www.nyc.gov/html/dot/html/motorist/truckrouting.shtml

FIGURE 2.1: TRUCK ROUTES (NYCDOT TRUCK ROUTE MAP)

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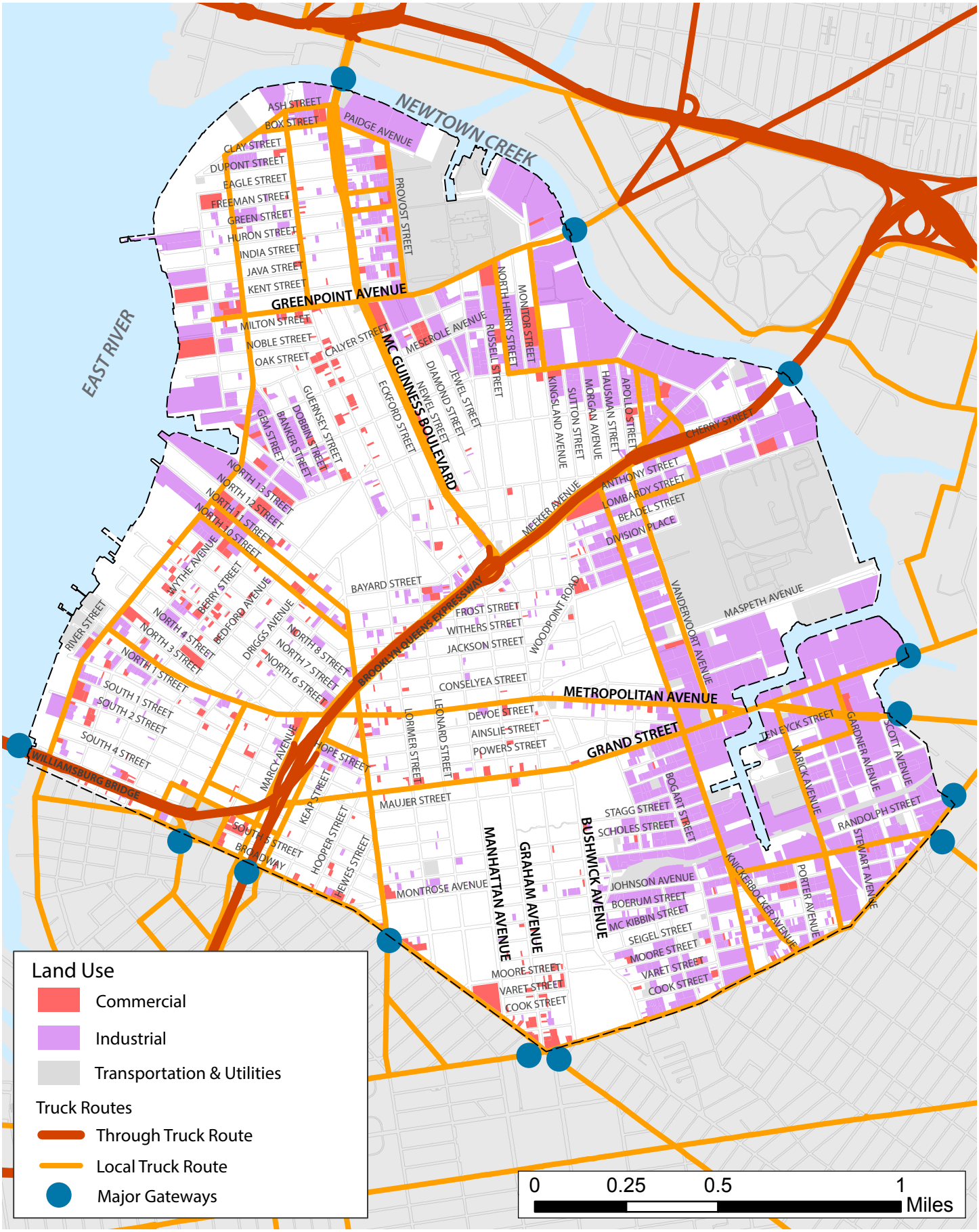

FIGURE 2.2: TRUCK ROUTES WITH INDUSTRIAL AND COMMERCIAL LAND USES

North Williamsburg Transportation Study

Source: City of New York

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Concentrations of industrial uses in the study area include the North Brooklyn IBZ, the Morgan Avenue Railyard and the Greenpoint/Williamsburg IBZ. As seen in Figure 2-1, there are also a number of industrial areas just outside of the study area, specifically north of Newtown Creek in Queens. This area is accessed via the Pulaski Bridge, Greenpoint Avenue Bridge and Grand Street Bridge. The Brooklyn Navy Yard IBZ is located to the south of the study area (along Kent Avenue). That site has excellent access to the BQE.

As stated in the New York City Traffic Rules (Section 4-13), a truck operator is allowed to travel on a street that is not a designated truck route for the purpose of arriving at his or her destination. Truck operators must leave a designated truck route at the intersection that is nearest to his/her destination, proceed by the most direct route, and then return to the nearest designated truck route using the most direct route. If the operator has additional destinations in the same general area, he/she may proceed by the most direct route to his/her next destination without returning to a designated truck route, provided that the operator's next destination does not require crossing a designated truck route.

With regard to enforcement, truck drivers are required to utilize the truck route network as stated above and have a bill of lading on hand, showing the points of origin and destination of the trip. The presence of signage is not required to enforce Truck Route regulations.

B. Truck Route Signage

While all the truck route regulations and designated roadways are specified in the City's Vehicle and Traffic Rules (Section 4-13), truck route signage is the primary means by which users are advised of the route system. The primary signs used to delineate truck routes include:

- Directional or "Intersection" signs;
- Route designation signs; and
- Trailblazers, Advance Advisory and Guide signs.

Typical directional or intersection sign

The directional or intersection sign, shown to the right is found at locations where two truck routes intersect each other. This is the most common signage type in the truck route network because it is the primary way to notify drivers of changes in the roadway assignment of the designated route. The signage helps truck drivers to make routing choices within the truck network to reach the intersection closest to their destination. Signing all truck route approaches at each truck route intersection was one of the primary recommendations of a truck study completed for NYCDOT in the early 1980's[4].

As part of this study, an in-person survey of truck route intersections in the study area was conducted to determine the presence or absence of directional signage. This inventory was conducted on May 26, 2016. Figure 2-3 shows the 89 intersections surveyed. As shown, 10 intersections have signs at each truck route approach (green), 22 intersections have some directional signage (blue) and 57 intersections have no truck route signage (red). Detailed maps showing signage at each approach to these intersections are provided in Figure 2-4 through Figure 2-7. The green and red arrows indicate approaches where signage is present or not present respectively. As seen in the table below, 130 (70%) of the 185 intersection approaches are not currently signed for commercial vehicles.

As seen in the signage maps, truck route signage is found intermittently throughout the study area. There are some areas where signage is more prevalent such as along Johnson Avenue, Metropolitan Avenue, Flushing Avenue and Meadow Street in the southeast portion of the study area (Figure 2-7). Table 2-1 shows that 65% of the truck route approaches in the southeast portion of the study area have signage. In the northwest portion of the study area (Figure 2-5), signage is more consistently found along the Greenpoint Avenue corridor.

[4] Between 1974 and 1982, the New York City Department of Transportation conducted a series of individual truck route studies for each of the boroughs. Source: Truck Route Management and Community Impact Reduction Study, March 2007.

FIGURE 2.3: TRUCK ROUTE SIGNAGE INVENTORY

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Table 2-1: Signage at Truck Route Intersection Approaches

	Intersections				Directional Signage		
Quadrant	**All Approaches**	**Some Approaches**	**No Signage**	**Total**	**Signs Present**	**No Sign Present**	**Total**
Southwest **(Figure 2.4)**	2 (5%)	11 (30%)	24 (65%)	37	12 (17%)	58 (83%)	70
Northwest **(Figure 2.5)**	1 (6%)	4 (25%)	11 (69%)	16	10 (25%)	30 (75%)	40
Northeast **(Figure 2.6)**	0 (0%)	2 (10%)	18 (90%)	20	3 (10%)	26 (90%)	29
Southeast **(Figure 2.7)**	7 (44%)	5 (31%)	4 (25%)	16	30 (65%)	16 (35%)	46
Total	10 (11%)	22 (25%)	57 (64%)	89	55 (30%)	130 (70%)	185

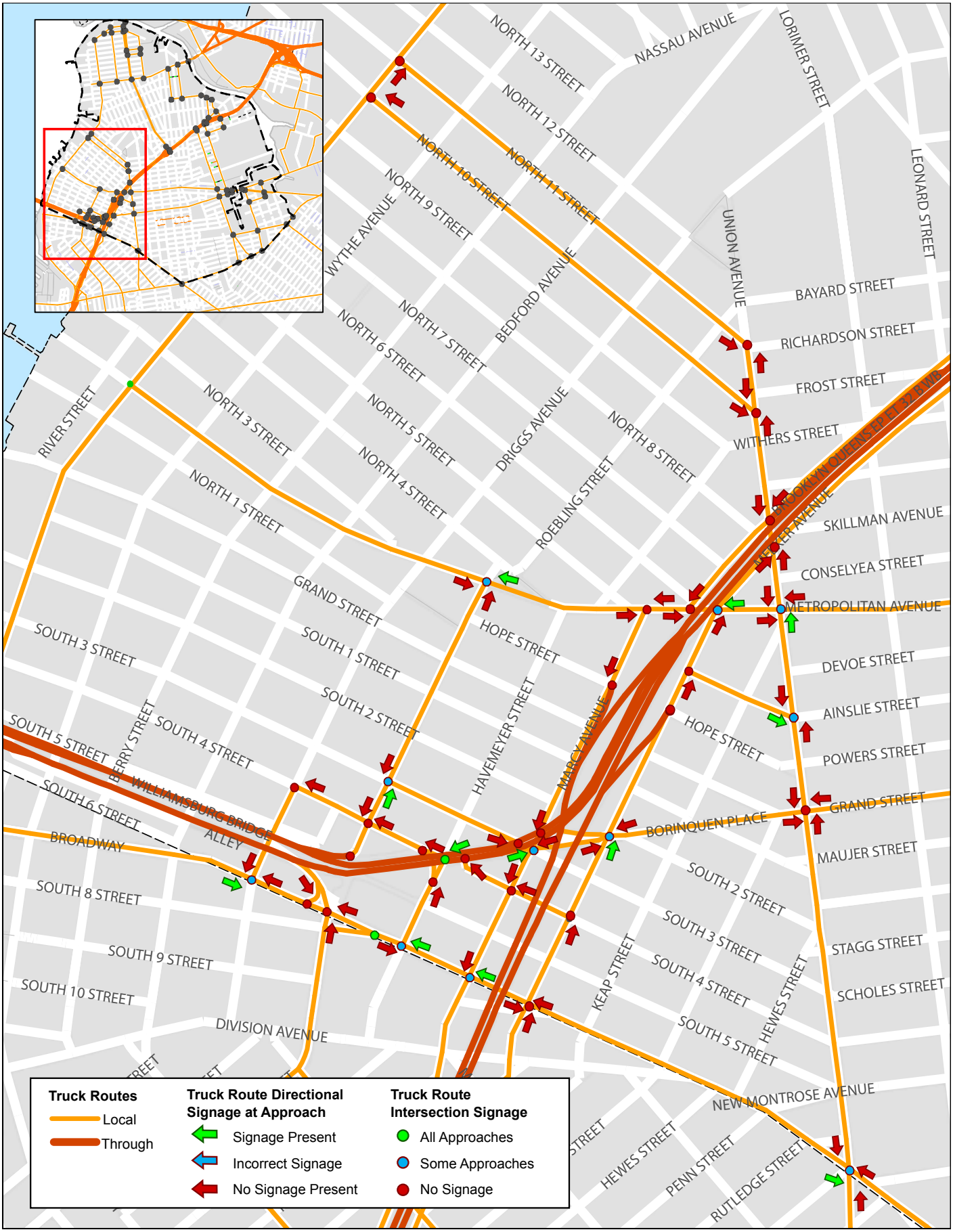

FIGURE 2.4: TRUCK ROUTE SIGNAGE - SOUTHWEST AREA

FIGURE 2.5: TRUCK ROUTE SIGNAGE - NORTHWEST AREA

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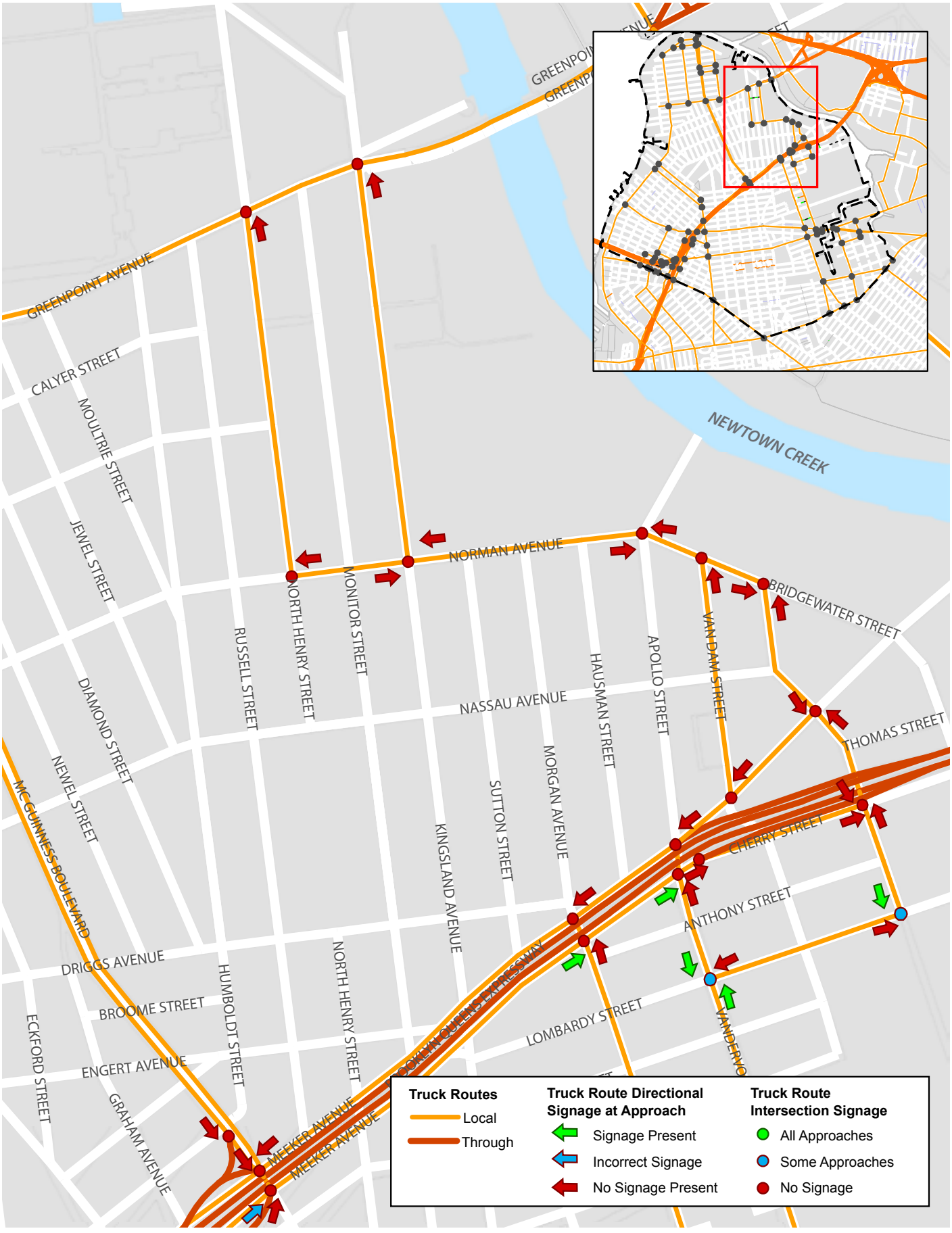

FIGURE 2.6: TRUCK ROUTE SIGNAGE - NORTHEAST AREA

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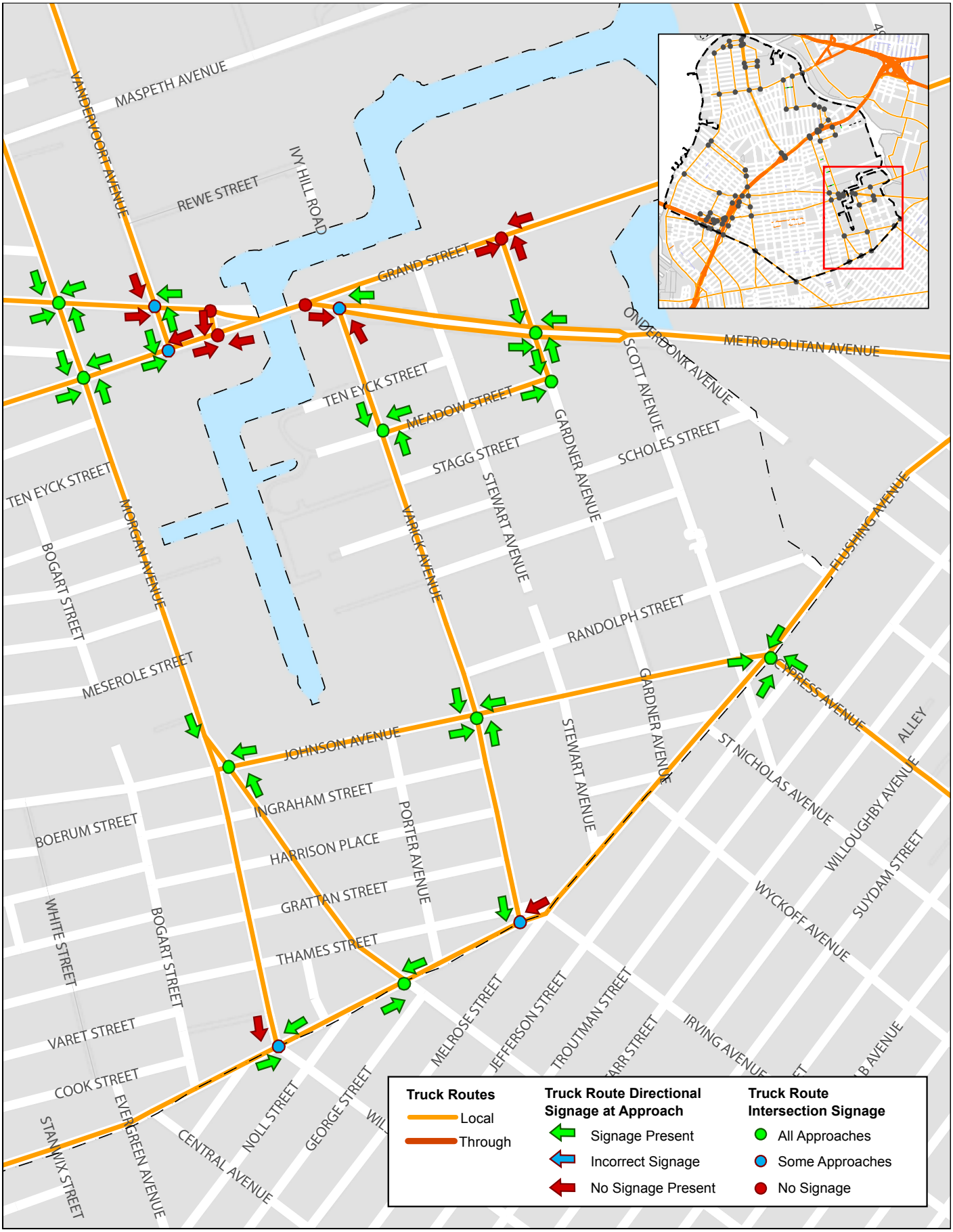

FIGURE 2.7: TRUCK ROUTE SIGNAGE - SOUTHEAST AREA

North Williamsburg Transportation Study

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C. Signage Recommendations

It is recommended that NYCDOT provide a comprehensive truck route network that easily identifies designated truck routes and minimizes illegal truck traffic. Appropriate signage will reduce the negative impacts of truck traffic on other roads and will improve traffic flow and safety. In addition, improving signage will facilitate enforcement. Directional signage should be located at key decision points in the truck route network such as at intersections of two or more truck routes. As shown in Table 2-2, truck route signage should also be used to provide advance notice to trucks when they need to change lanes to turn onto a truck route and to reassure drivers that they are on a truck route.

Table 2-2: Types of Truck Route Signage

Type of Sign	Description	Location
Directional	Signs pointing to truck routes where decisions about travel direction can be made (i.e., intersections).	• All intersections • Points at which truck routes turn left or right at intersections with non-truck routes. • At base of exit ramps • At tunnel and bridge exits
Advance	Signs in advance of intersection at which trucks may have to change lanes to turn onto truck route.	• 150 feet before intersection
On-route	Signs reassuring drivers that they are on a truck route.	• All truck routes • One-half mile increments

Source: Urban Freight Case Studies: New York, U.S. DOT

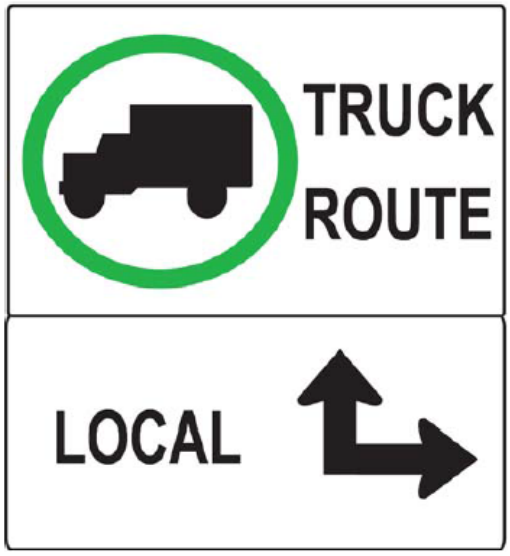
Signs should be easy to recognize, graphically consistent, and follow standards established by NYCDOT. NYC initiated an improved signage program as part of its Truck Route Management and Community Impact Reduction Study. The signage, shown in Figure 2-8, was designed to improve recognition and legibility. The signage program proposed by NYCDOT was conditionally approved and is awaiting full approval from Federal Highway Administration (FHWA).[5]

An in-person survey (discussed in Section 2.2) conducted as part of this study showed that drivers in the study area need consistent truck route signage. Some respondents were unaware of the actual truck routes that are located in the study area. Respondents to the survey also indicated that truck drivers that mistakenly end up on non-truck routes may be forced to make difficult turning maneuvers. Signs are needed to prevent trucks from traveling on non-commercial routes, especially when large freight vehicles are unable to easily make turning maneuvers at non-truck route intersections (one such area identified in the surveys was Richardson Street and Kingsland Avenue).

[5] *Urban Freight Case Studies: New York, U.S. DOT*

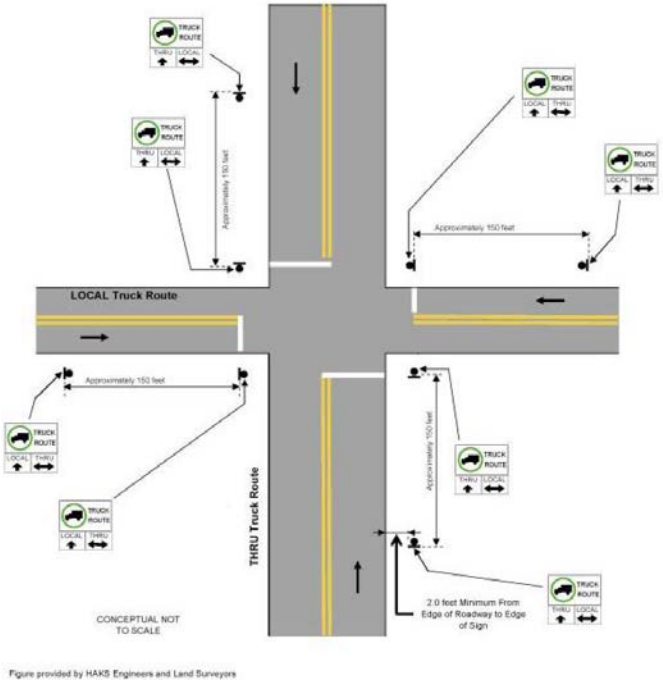
Figure 2-8: NYCDOT Proposed Signage Program

Example of proposed truck route sign



Source: NYC DOT, Truck Route Management and Community Impact Reduction Study (2007)

Directional and advance sign placement at an intersection



Signage should be prioritized at entrances to the community (such as bridge crossings over Newtown Creek), exits off of the BQE, and other high truck volume locations (as identified in Section 2.3). Gateway signage will help to call attention to the route system as well as the regulations governing truck movements to all drivers unfamiliar with the system. The Truck Route Management and Community Impact Reduction Study recommended that in addition to entrances to the City, gateway signage can be extended to intra-borough locations on routes that reinforce the truck route system and relevant regulations.

Gateway Truck Route Sign

2.2. ORIGIN AND DESTINATION OF TRUCKS IN THE STUDY AREA

The high concentration of industrial and commercial uses in the study area tend to produce and attract a significant amount of truck traffic. This study utilized existing land use data combined with industrial employment data to indicate where the highest concentration of truck generators are located in the study area. An in-person survey of local businesses was conducted to further understand truck origin and destination activity in the study area. The in-person surveys provided both quantitative data and qualitative responses that highlight certain problem areas that are of concern for the businesses.

The survey results confirmed that the origin and destination of truck trips depends on the type of business. Large freight and truck rental companies are located in the heart of the North Brooklyn Industrial Business Zone. The largest generators of trucks in the study area are sending trucks to all areas of New York City and the larger region. The majority of truck trips captured in the survey are primarily utilizing the major roadways to exit the study area, including: I-278, Greenpoint Avenue and the Pulaski Bridge.

A. Major Truck Generators

Areas with high concentrations of truck trip generators were identified in the study area using both employment and land-use data. Both methods have particular strengths and weaknesses to predicting truck trip generation. But looking at both maps helps to gain an understanding for the general areas where truck activity is highest.

The employment method shown in Figure 2-9, utilizes Longitudinal Employer-Household Dynamics (LEHD) data provided by the US Census to show concentrations of industrial jobs in the study area. For the purposes of this study, employment in industrial sectors were used (i.e. construction, manufacturing, warehousing, etc.). As expected, the North Brooklyn IBZ and the southeast portion of the study area have the largest concentration of industrial employment.

The second method for determining the freight trips generated in the study area utilizes multipliers developed for different land uses. The North American Industry Classification System (NAICS) listed in the City's PLUTO land-use data was determined to be an effective predictor of the number of produced truck trips[6]. This analysis, shown in Figure 2-10 confirmed that a high concentration of truck trips is associated with the North Brooklyn IBZ in particular, the southeast portion of the study area. There is also a large concentration of truck trip generators found in the

[6] Transportation Research Board of the National Academies, "Freight Trip Generation and Land Use," National Cooperative Highway Research Program Report 739 & National Cooperative Freight Search Program Report 19, 2012, pp.73-74.

industrial area east of McGuiness Boulevard between Greenpoint Avenue and I-278. A field survey was conducted to confirm some of the major truck generators in the study area.

B. Business Survey

Methodology

The in-person survey targeted large industrial establishments in the Study area to determine their truck related activity as well as their anecdotal comments on issues in the area. Large truck generators were identified by the size of the establishment and the concentration of industrial workers/employees.[7] Outreach was conducted over two weeks via phone, e-mail and door-to-door. After contact was made with a business in the study area, the surveyor requested to meet with a person in the company that is familiar with their truck operations and logistics.

Nine businesses responded to the survey. While the quantitative data is not statistically significant, the results seemed to confirm prior origin and destination analysis. The qualitative data in the survey also provided valuable insight, which helped to develop recommendations in this report. A map showing results of the origin and destination survey is provided in the Appendix along with the raw survey tool.

There were several limitations to the survey process. Chief among those limitations was the reluctance of businesses to respond or engage in the survey itself. Several attempts were made to reach key truck generators in the study area via phone or email, several key generators did not respond to the requests for information. Another limiting factor was a language barrier, which was most pronounced in the southwestern portions of the study area. Another factor limiting the response rate was the fact that many businesses do not prescribe suggested routes for truck drivers when entering and exiting the study area.

[7] Jaller, Miguel. "Large urban freight traffic generators: Opportunities for city logistics initiatives," *The Journal of Transport and Land Use*, Vol. 8, No.1, 2015, pp. 51-67.

Figure 2.9: Industrial Employment Locations

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Source: LEHD, US Census

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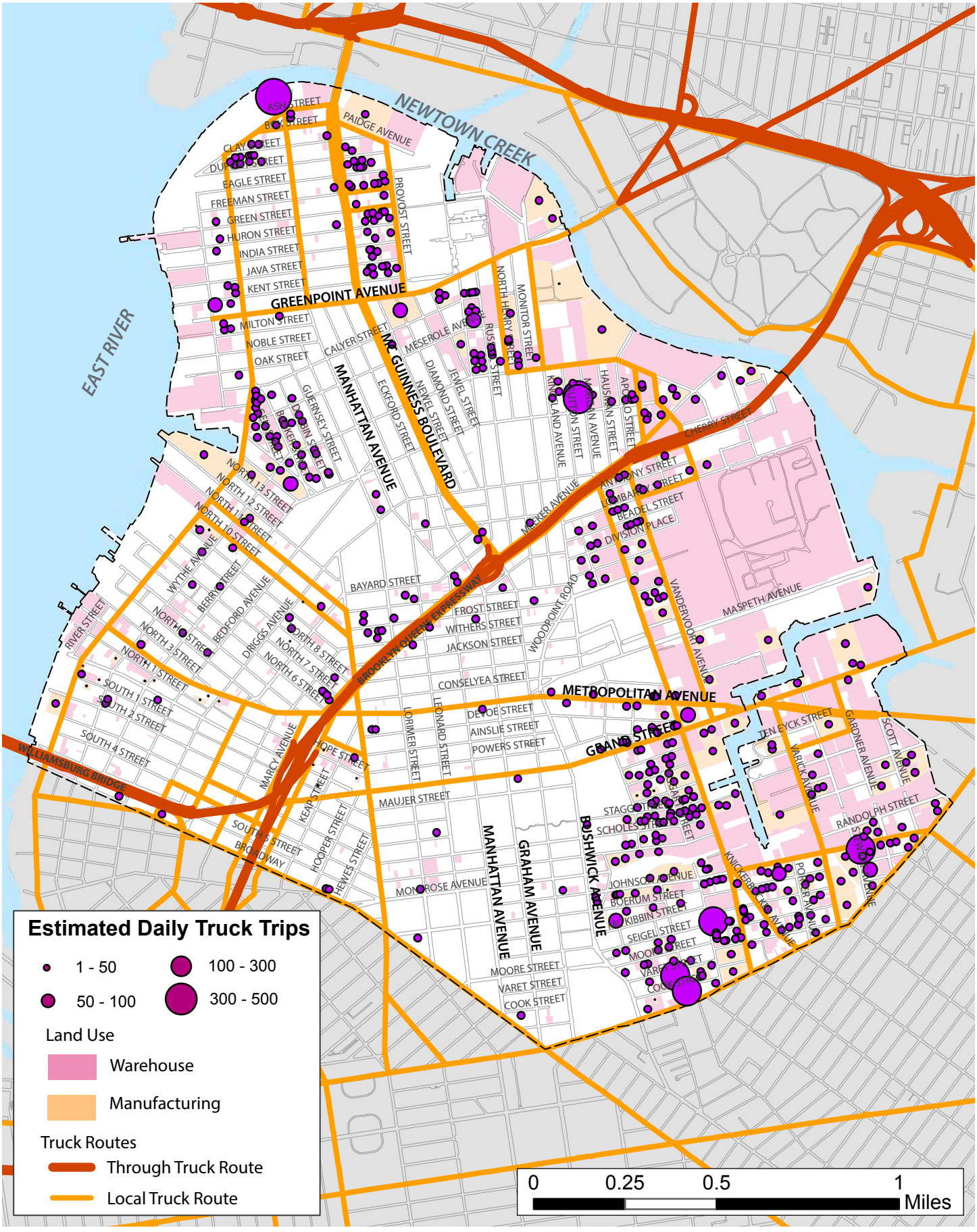

FIGURE 2.10: ESTIMATED DAILY TRUCK TRIPS FOR ALL INDUSTRIAL USES (BASED ON NCHRP 19

North Williamsburg Transportation Study

Sources: NYC Dept of City Planning, Transportation Research Board

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Origin and Destination Findings

The survey helped to identify several travel patterns and issues in the study area. The majority of major freight generators send trucks in all directions out of the study area. Businesses commented on North Brooklyn's strategic location which provides access to many areas of the City and the larger region (Westchester, Long Island and New Jersey). Interstate 278 (I-278), the primary arterial highway that connects the study area to the wider regional economy, is the most heavily relied upon entrance and exit to the study area. Truck drivers are also utilizing I-278 to traverse the study area. One survey respondent located along the Newtown Creek identified I-278 as a preferable traffic route to move north to south (or vice versa) in the study area. This involves trucks crossing out of the study area via Greenpoint Avenue, taking Interstate 495 (I-495) East, then taking I-278 West to the Metropolitan Avenue (or farther south).

A significant portion of trucks enter and exit the study area via Greenpoint Avenue and the Williamsburg Bridge. Many businesses identified Manhattan as a center for client establishments that require trucks for service. Both Greenpoint Avenue (via I-495) and the Williamsburg Bridge provide the most direct access to Manhattan from the study area.

Many of the businesses were unable to give specific details of traffic patterns due to either the changing nature of their business, or that they were unaware of routing choices their drivers make to get to their destinations. Another issue identified was the variable traffic conditions and detours due to congestion and the on-going Kosciuszko Bridge construction project.

Major Issues

This section identifies some of the major issues identified during the survey process Figure 2-11 provides a summary map of the issues identified in the study area. Survey respondents were generally more sensitive to truck related traffic issues in closer proximity to their businesses. Some of the responses addressed specific issues faced by the survey respondent's particular business. The summary focuses on common or widespread issues in the study area.

Traffic Congestion

Traffic congestion was a frequently cited issue. Major thoroughfares such as I-278, Flushing Avenue, Metropolitan Avenue and Greenpoint Avenue were all considered heavily congested. Respondents stated that traffic congestion has resulted in a decrease in business activity and an increase in labor costs.

Time-sensitive deliveries are an associated issue with traffic congestion. Some businesses are required to make deliveries or pickup shipments at specific times during the day which increases the number of trucks they must deploy on the streets, specifically during peak-traffic hours.

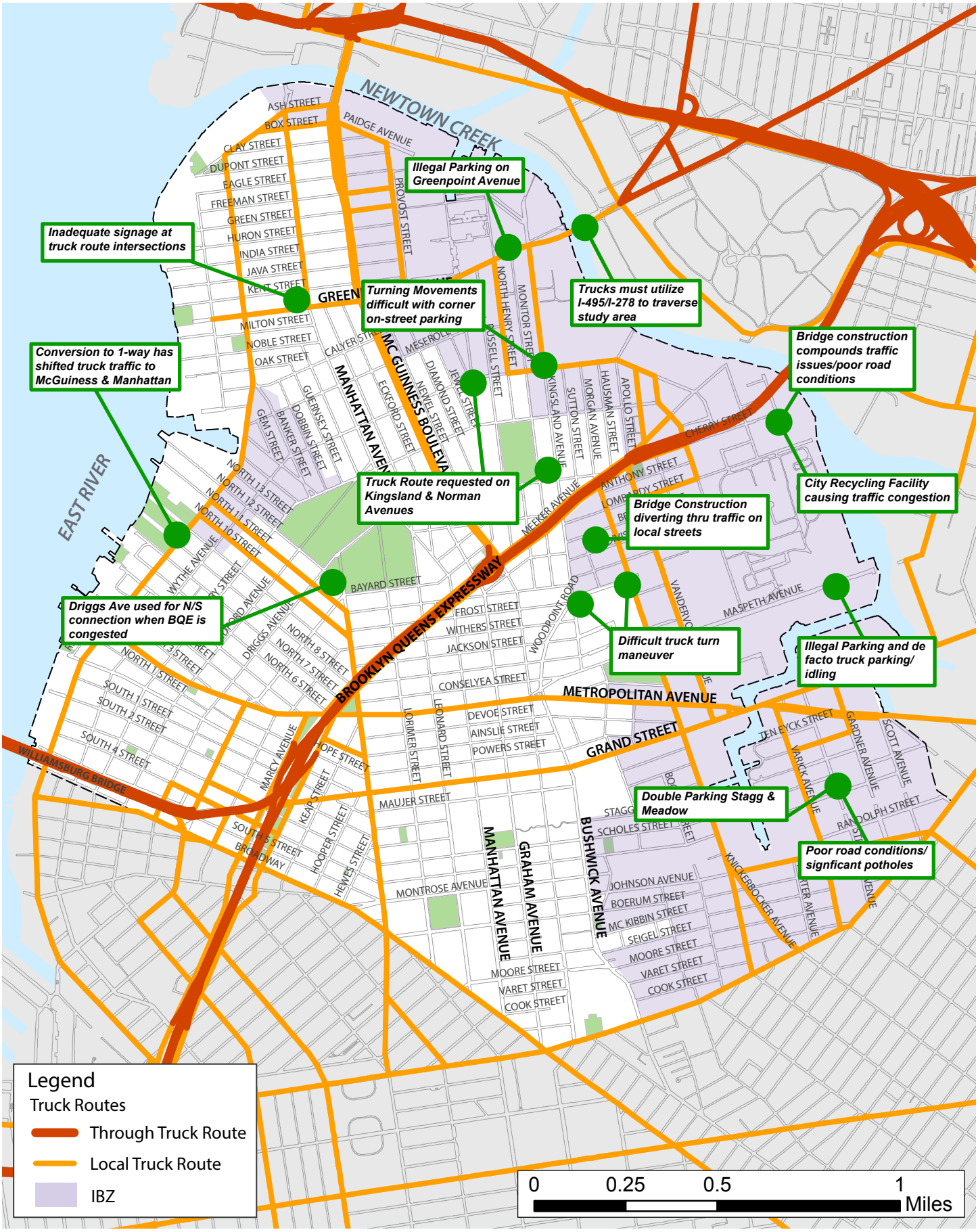

FIGURE 2.11: CIRCULATION ISSUES BASED ON FEEDBACK FROM BUSINESS SURVEY

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The intersection at Kingsland Avenue and Greenpoint Avenue was identified by several businesses as a major hot spot for traffic congestion. Some businesses suggested that the drawbridge on John Jay Byrne Bridge causes significant congestion.

Conflicts between trucks and bikes where truck routes intersect with bike routes were also cited as issues for truck drivers. New bicycle routes on the Pulaski and John Jay Byrne Bridges have reduced the capacity for truck traffic adding to already congested truck routes that provide access to the study area.

Truck Routes

Almost all survey respondents expressed frustration in the limited amount of options for truck routes to navigate the study area, and the high level of congestion on each of the routes. Respondents commented that there are limited truck route options connecting the northern and southern portions of the study area. A few businesses highlighted the fact that trucks are now unable to traverse the industrial areas closer to the waterfront due to the new one-way traffic pattern along Kent Avenue. Before conversion to a one-way road, Kent Avenue was an important North/South connection for truck drivers in the study area. One respondent commented that this change has caused their business to divert traffic to Manhattan Avenue and McGuinness Avenue.

Respondents indicated that turning maneuvers on some of the designated truck routes in the North Brooklyn IBZ are difficult with the current on-street parking. Sometimes, turning was restricted by vehicles parked illegally at the intersection corners. Identified intersections with difficult turning conditions for larger trucks include:

- Norman Avenue and Kingsland Avenue
- Norman Avenue and Monitor Street
- Richardson Street and Kingsland Avenue
- Richardson Street and Morgan Avenue

Survey respondents suggested the following truck routes:

- Norman Avenue between McGuiness Boulevard and North Henry Street, and
- Kingsland Avenue between Meeker Avenue and Norman Avenue.

Recommendations for proposed routes are provided in Section 2.5.

Parking Enforcement

Parking enforcement was cited as another issue. Respondents indicated that illegal parking (or idling) of trucks is common on public streets in the more industrial areas. Many businesses that are unable to park all of their vehicles onsite have relied on the public right-of-way to queue trucks waiting to make deliveries.

Maspeth Avenue between Newtown Creek and Vandervoort Avenue has become an informal area for on-street truck parking and idling. Businesses surveyed along Maspeth Avenue had no strong objections to the de facto parking area due to the width of the streets. However, street and stormwater drain cleaning were raised as issues along Maspeth Avenue. Some businesses requested that street cleaning regulations should be enforced more regularly to improve drainage issues along Maspeth Avenue.

Respondents indicated that truck queueing has become a major issue along Gardner Avenue between Meeker Avenue and Lombardy Street. Gardner Avenue handles a significant amount of truck traffic from several freight companies, recycling and waste transfer facilities, as well as a large liquor distributor. It was reported that many of the recycling trucks previously idled on the north side of Gardner Avenue at Cherry Street, but have moved to Gardener Avenue due to the ongoing construction of the Kosciuszko Bridge. Respondents commented that the bridge construction has caused significant traffic congestion and a long-term solution is needed for handling traffic along this corridor.

Truck Route Signage

Respondents commented on the need for consistent truck route signage in the study area. Truck drivers that end up on non-truck routes are sometimes forced to make difficult turning maneuvers. Some survey respondents expressed a need to post signs where large freight vehicles will be unable to make turns at certain intersections (one area identified in the surveys was Richardson Street and Kingsland Avenue).

Overall, many of the survey respondents were unaware of the actual truck routes that are located in the study area. This is especially true for out-of-city truck drivers making trips to the area. Some businesses believed existing truck routes have been removed; while other businesses were misinformed about which streets are designated truck routes. Sometimes drivers of rented trucks are not familiar with the area and the routes. A more detailed discussion of truck route signage in the study area can be found in Section 2.1.

Road Conditions

Some respondents reported poor street maintenance conditions in the study area. Poorly maintained truck routes can cause traffic crashes, increased congestion and increased repair costs for businesses. There are a number of streets with large potholes, particularly in the southeast portion of the study area. Gardener Avenue is also in poor repair which exacerbates the problem related to on-street idling.

Global Positioning Systems (GPS) for Trucks

None of the businesses surveyed use commercial GPS products. These devices are meant to reduce human-error in finding the most efficient routes within the truck route network. Some respondents expressed interest in using commercial GPS products but were concerned about costs for the technology. Other respondents felt the commercial GPS products were not reflective of the nuances of driving trucks in New York City, and relying on incorrect information could lead truck drivers into difficult navigation issues. Some respondents stated that most truckers figured out their routes based on word-of-mouth advice with other drivers.

2.3. TRUCK ACTIVITY WITHIN THE STUDY AREA

A. Assessment of Truck Activity

NYC DOT traffic count data accessed through the Traffic Information Management System (TIMS) was used to assess truck turning movements in the study area. Intersection classification counts were utilized to determine truck volumes at the intersection approaches surveyed. Data from the 87 available one-day intersection classification counts were used in the analysis. These counts were performed between 2012 and 2015. Data was not available for all truck routes in the study area, particularly in the far western portion of the study area, including most of Kent Avenue, North 10 Street, North 11 Street, and Metropolitan Avenue west of Marcy Avenue.

The NYC DOT classification counts identified the following vehicle types: car, truck, bus, and bicycle. Data was provided for 15-minute intervals during the AM and PM peak 2-hour periods, which are 7:00 AM – 9:00 AM and 4:00 PM – 6:00 PM, respectively. Ten of these intersections only had data for the AM peak period. Where intersections had multi-day field observations, only one day of data was used. Vehicle counts in both directions were combined in order to obtain a total volume of traffic for each street segment. The percentage of truck traffic for each street segment was obtained by dividing the total volume of truck traffic on that segment by the combined volume of traffic from all vehicular modes of transportation (i.e. cars, trucks, and buses).

Figure 2-12 and Figure 2-13 show the percentage of truck traffic calculated for the AM peak and combined AM and PM peak periods respectively. Total vehicular counts for the surveyed intersections are shown to provide an understanding of relative vehicular activity.

Table 2-3 shows the roadway segments along truck routes that had the highest percentage of truck traffic in relation to total traffic. In general, truck volumes were higher during the AM peak period (7AM-9AM). Street segments shown are those with trucks representing more than 15% of the total traffic. Segments with high truck percentages but small total volume (< 250 trucks in AM period) were omitted from the results; counts for all segments with truck volumes over 15% can be found in the appendix. Truck activity on non-truck roads is generally lower. Most of the non-truck route segments that have more than 5% truck activity are found within an IBZ. Bushwick Avenue, a non-truck route, is a road in a non-IBZ area that consistently had truck activity representing more than 5% of total traffic.

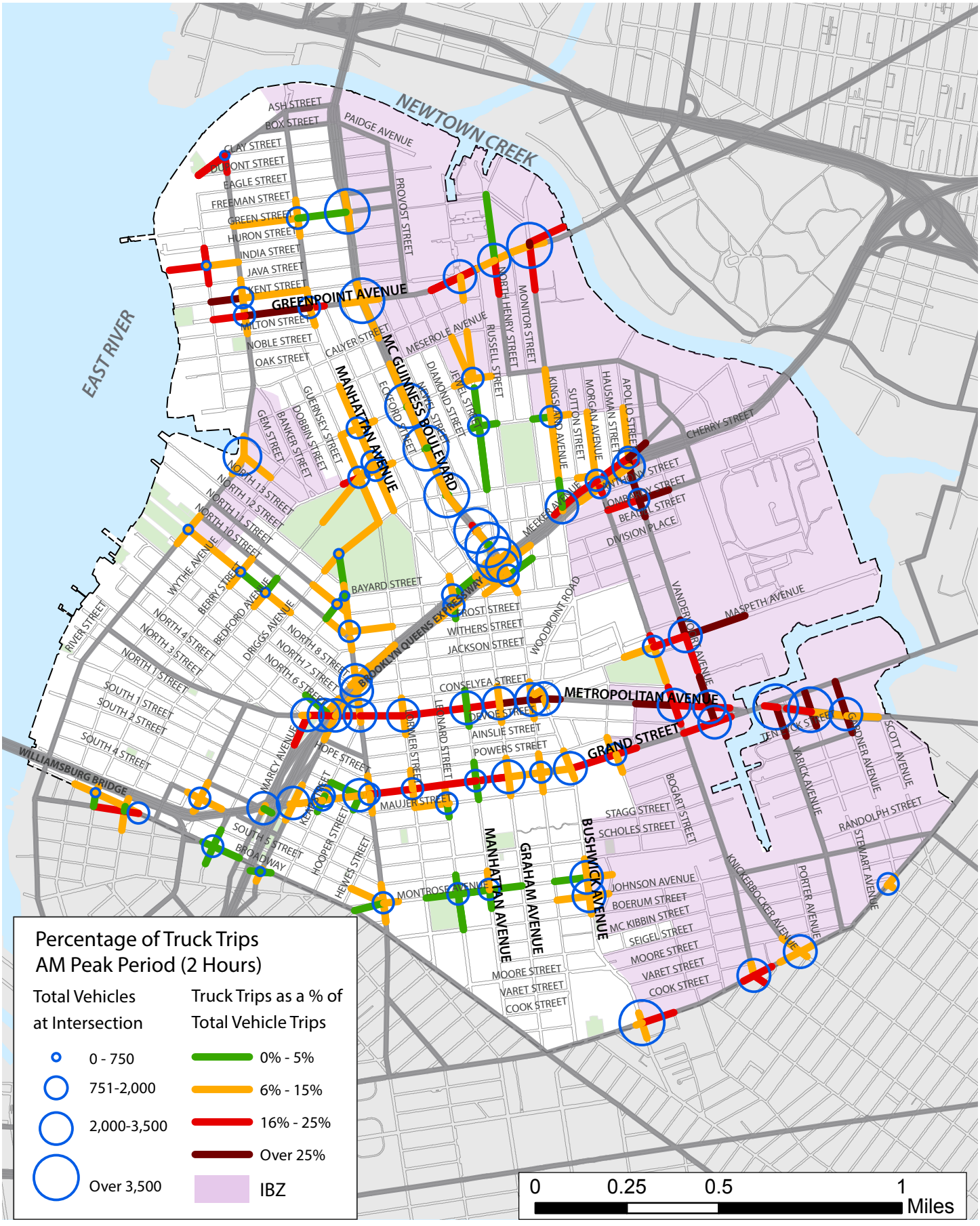

Figure 2.12: Truck Activity - AM Peak Period

North Williamsburg Transportation Study

Source: NYC DOT TIMS Database

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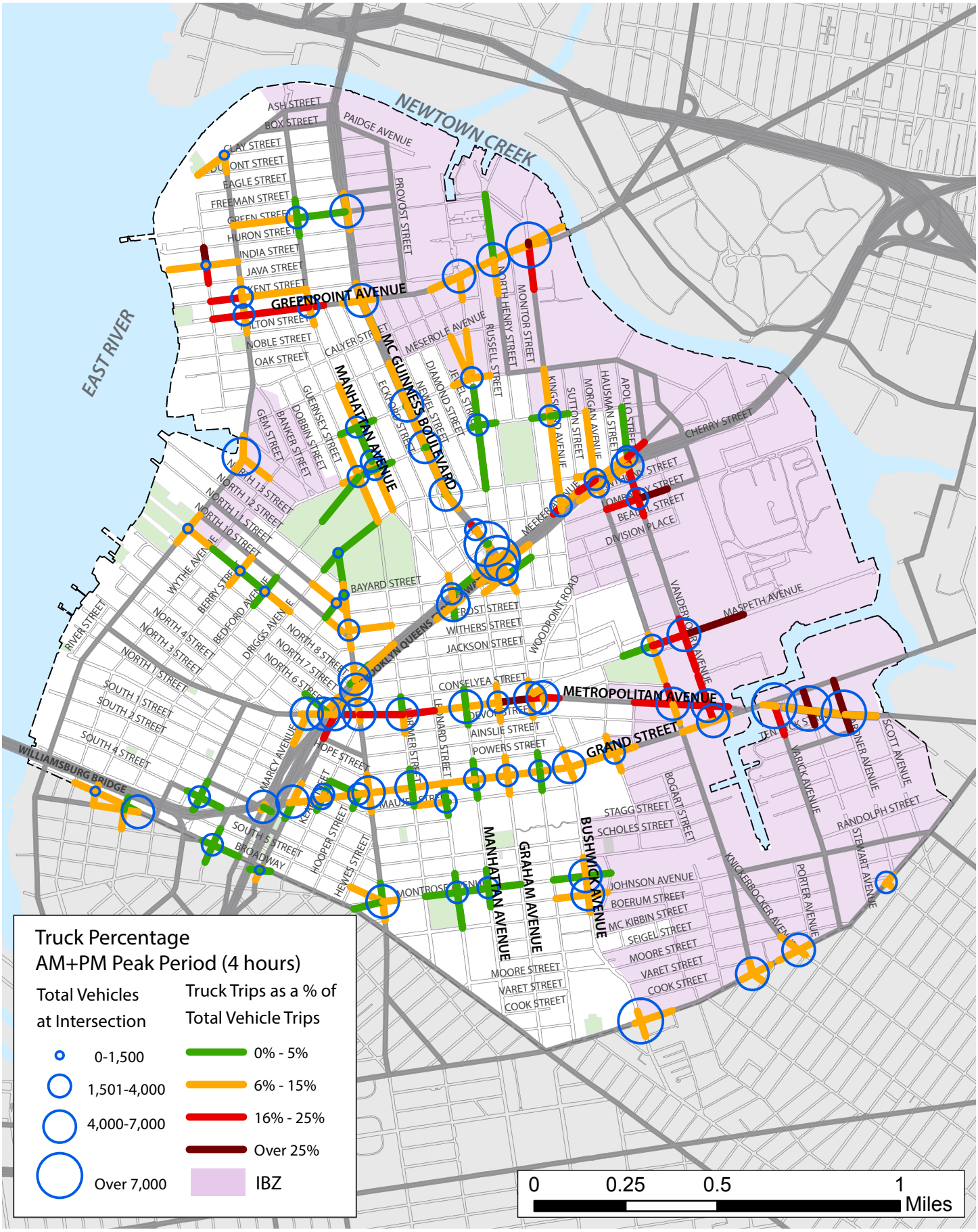

Figure 2.13: Truck Activity - AM and PM Peak Period

North Williamsburg Transportation Study

Source: NYC DOT TIMS Database

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*Table 2-3: Truck Route Street Segments with High % of Truck Traffic**

Street Name	Cross Street(s)	AM Peak		AM + PM Peak	
		Percent Trucks	Vehicular Volume	Percent Trucks	Vehicular Volume
MASPETH AVE	VANDERVOORT AVE	42.3%	650	37.0%	1,173
VANDERVOORT AVE	LOMBARDY ST	30.2%	1,147	22.6%	2,349
MEEKER AVE	APOLLO ST, VANDERVOORT AVE	30.0%	962	21.1%	2,054
VANDERVOORT AVE	LOMBARDY ST	30.0%	1,012	20.7%	2,172
VANDERVOORT AVE	METROPOLITAN AVE	29.9%	1,083	24.1%	2,035
METROPOLITAN AVE	BUSHWICK AVE	27.3%	1,566	18.5%	3,633
METROPOLITAN AVE	HUMBOLDT ST, MASPETH AVE	27.1%	1,542	17.9%	3,742
VANDERVOORT AVE	MASPETH AVE	27.0%	1,512	22.4%	3,137
VANDERVOORT AVE	GRAND ST	27.0%	957	18.8%	2,776
METROPOLITAN AVE	BUSHWICK AVE	26.9%	1,490	19.0%	3,372
METROPOLITAN AVE	MORGAN AVE	26.7%	1,448	19.7%	3,138
VANDERVOORT AVE	METROPOLITAN AVE	26.1%	1,457	19.4%	3,255
METROPOLITAN AVE	GRAHAM AVE	25.3%	1,511	25.3%	1,511
METROPOLITAN AVE	UNION AVE	24.0%	1,790	19.0%	3,778
MEEKER AVE	KINGSLAND AVE	23.9%	1,056	16.2%	1,989
METROPOLITAN AVE	VANDERVOORT AVE	23.0%	1,462	19.4%	2,438
METROPOLITAN AVE	MORGAN AVE	22.8%	1,542	17.7%	3,124
VANDERVOORT AVE	MASPETH AVE	22.3%	1,797	18.2%	3,598
METROPOLITAN AVE	MANHATTAN AVE	21.9%	1,451	14.7%	3,452
METROPOLITAN AVE	LORIMER ST	21.0%	1,828	16.6%	3,786
METROPOLITAN AVE	MANHATTAN AVE	20.8%	1,498	14.4%	3,459
METROPOLITAN AVE	MEEKER AVE, RODNEY ST	20.4%	2,058	16.9%	4,163
GRAND ST	VANDERVOORT AVE	18.6%	2,180	13.8%	5,327
GREENPOINT AVE	HUMBOLDT ST	18.3%	2,321	12.1%	5,164
MARCY AVE	METROPOLITAN AVE	17.8%	1,850	11.9%	3,718
METROPOLITAN AVE	MEEKER AVE, RODNEY ST	17.8%	1,982	12.6%	3,886
METROPOLITAN AVE	MEEKER AVE	17.5%	1,995	12.6%	3,906
METROPOLITAN AVE	VARICK AVE	17.2%	3,823	14.1%	8,046
GREENPOINT AVE	HUMBOLDT ST	16.9%	2,796	11.6%	5,791
METROPOLITAN AVE	STEWART AVE	16.8%	3,537	13.7%	7,340
METROPOLITAN AVE	VARICK AVE	16.8%	3,546	13.5%	7,364
CHERRY ST	VANDERVOORT AVE, MEEKER AVE	16.7%	1,848	13.3%	3,345
GRAND ST	VANDERVOORT AVE	16.4%	1,565	13.0%	3,321
METROPOLITAN AVE	MARCY AVE	15.8%	2,826	10.6%	5,888
MC GUINNESS BLVD S	NEWTON ST	15.7%	3,743	15.7%	3,743
WILSON AVE	FLUSHING AVE, MORGAN AVE	15.2%	1,694	11.6%	3,769

Truck Route
Non-truck Route

*Street segments with 250 or more trucks and 15% or higher percentage of truck traffic in the AM peak period (2 hrs.)

Source: NYC DOT

Of the streets surveyed, Metropolitan Avenue and Vandevoort Avenue, both local truck routes, had street segments with relatively high volumes of truck traffic and total traffic. Greenpoint Avenue also consistently had high percentages of truck activity. These streets are discussed further below.

Streets with Heavy Truck Activity

Metropolitan Avenue

Metropolitan Avenue, an east-west truck route/arterial has a high concentration of truck activity in areas adjacent to the North Williamsburg IBZ. Trucks make up 13 to 27 percent of vehicular traffic during the AM period between Morgan Avenue and Gardner Avenue. Cross-streets along the Metropolitan Avenue corridor (i.e. Morgan, Vandervoort, Varick, Stewart, and Gardner Avenues) in the IBZ have high percentages of truck traffic, however with much lower volumes of total traffic.

Metropolitan Avenue remains a heavily trafficked corridor by trucks outside of the IBZ. From Marcy Avenue to Bushwick Avenue, truck traffic comprises 12 to 27 percent of total traffic during the AM peak period. Truck traffic on Metropolitan Avenue east of Marcy Avenue is more than twice as heavy compared to west of Marcy Avenue. These data suggest that a significant amount of truck traffic turns from Metropolitan Avenue to Marcy Avenue to access the BQE (westbound).

Vandervoort Avenue

Vandervoort Avenue runs north-south through the North Brooklyn IBZ, and is a designated truck route between Meeker Avenue/BQE and Grand Street. The road carries a relatively high volume of vehicles, of which trucks comprise between 22 and 30 percent. The north end of the Vandervoort truck route (at Lombardy Street, Maspeth Avenue, Metropolitan Avenue, and Grand Street) carried the highest volumes of truck traffic, with trucks making up 16 to 51 percent of traffic on these segments. It should be noted that northbound Vandervoort Avenue between Meeker Avenue westbound and eastbound (i.e. under the BQE) was closed for construction during data collection.

Greenpoint Avenue

Greenpoint Avenue is an east-west truck route within the northern portion of the North Brooklyn IBZ and provides access to and from the LIE via the J.J. Byrne Memorial Bridge. Between McGuinness Boulevard and the J.J. Byrne Memorial Bridge, truck traffic makes up 11 to 18 percent of vehicular traffic during the AM peak period.

2.4. TRUCK LOADING/UNLOADING AND PARKING NEEDS

This section highlights issues related to on-street truck parking and loading zones. In general, there is very limited truck parking or loading areas in the Study Area. The lack of parking capacity for trucks in the Study Area has resulted in increased illegal parking, double parking as well as traffic congestion. Figure 2-14 illustrates commercial and industrial corridors where illegal parking and double parking was observed as part of the study.

Commercial Corridors

Major commercial corridors in the Study Area include: Metropolitan Avenue, Grand Street, Graham Avenue, Bedford Avenue, Manhattan Avenue and Greenpoint Avenue. These commercial corridors have a mix of uses with differing delivery needs and the diversity in loading activity can result in conflicts. Illegal parking activities are more pronounced along these major traffic corridors. Field observations in the Study Area found a particularly high concentration of double parked trucks along dense commercial corridors (see Figure 2-14).

Incidents of double parked trucks and parking in bike lanes was observed to be concentrated along Grand Street. These illegal activities are a cause of congestion and safety issues for drivers, pedestrians and bicyclists. Grand Street is a major truck route for trucks entering leaving the study area for Manhattan and it is also adjacent to the industrial area east of Bushwick Avenue and the commercial area west of Bushwick Avenue.

Metropolitan Avenue is another key truck route as it provides access to I-278. Recent residential development along the corridor, especially near the L-train stations has increase the demand for on-street parking, thus reducing available parking for trucks. Double parked trucks were observed to be prevalent near the intersection of Graham Avenue and Metropolitan Avenue.

Greenpoint Avenue and Manhattan Avenue are facing similar challenges to those found on Grand Street and Metropolitan Avenue. Both Manhattan Avenue and Greenpoint Avenue have a high concentration of commercial uses adjacent to dense residential communities with a high demand for on-street parking. Norman Avenue and Nassau Avenue between Manhattan Avenue and Monitor Street also have a high concentration of illegal and double parked trucks.

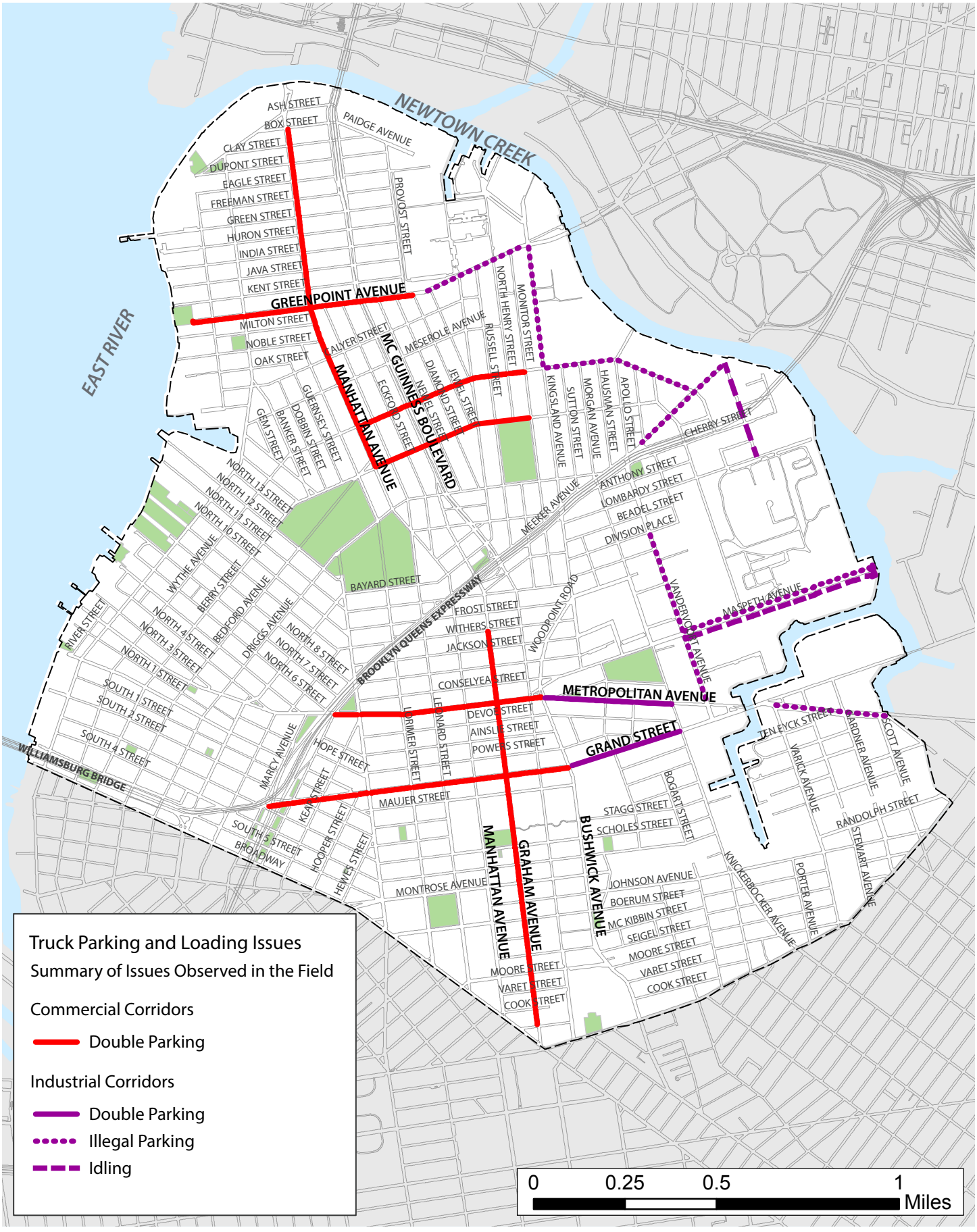

Figure 2.14: Industrial and Commercial Parking Issues

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Industrial Areas

There are various challenges related to on-street parking in industrial areas. On-street parking adjacent to high concentrations of industrial uses are in high-demand by trucks waiting to make deliveries in the study area. Demand for on-street parking is particularly near businesses that attract truck traffic to the area from other parts of the region. Large freight companies, food distributors, and waste transfer facilities attract a significant amount of truck traffic and are often required to load on the street or wait on public streets to make deliveries. Issues related to illegal parking and truck idling, specifically in the industrial areas along Greenpoint Avenue, Maspeth Avenue and Gardner Avenue are shown in see Figure 2-14.

Illegal truck parking along Greenpoint Avenue is common between Moultrie Street and the Greenpoint Avenue Bridge into Long Island City. Illegal parking was observed in the bicycle lanes along Greenpoint Avenue; most of these businesses did not have sufficient on-site parking to satisfy their loading needs.

Maspeth Avenue is a common area for trucks to idle and wait to make deliveries. The road is wide enough to accommodate double parking without impeding the flow of traffic (based on conversations with local businesses and confirmed with on-site observations). Some trucks are parked illegally overnight and for extended periods of time. This illegal parking has been reported as a problem for street cleaning crews and has made access to storm drains difficult, exacerbating flooding issues along Maspeth Avenue.

Illegal truck idling is prevalent along Gardner Avenue under the Kosciuszko Bridge. This has become a particularly acute problem due to the street closures and detours associated with the Kosciuszko Bridge construction project. Local businesses in the area report that before the construction project, trucks waiting to make deliveries to the waste transfer facilities along Gardner Avenue utilized the area under the Kosciuszko Bridge as an informal waiting area. After construction began, trucks began to illegally park along Gardener Avenue until they are able to make their delivery. Trucks have been observed to park haphazardly along the road as there is no on-street parking signage. The bridge construction project also rerouted local truck traffic to use Gardner Avenue to access industrial areas north of I-278. These two issues have contributed to significant congestion issues along Gardner Avenue.

2.5. RECOMMENDATIONS

A. Truck Route Signage

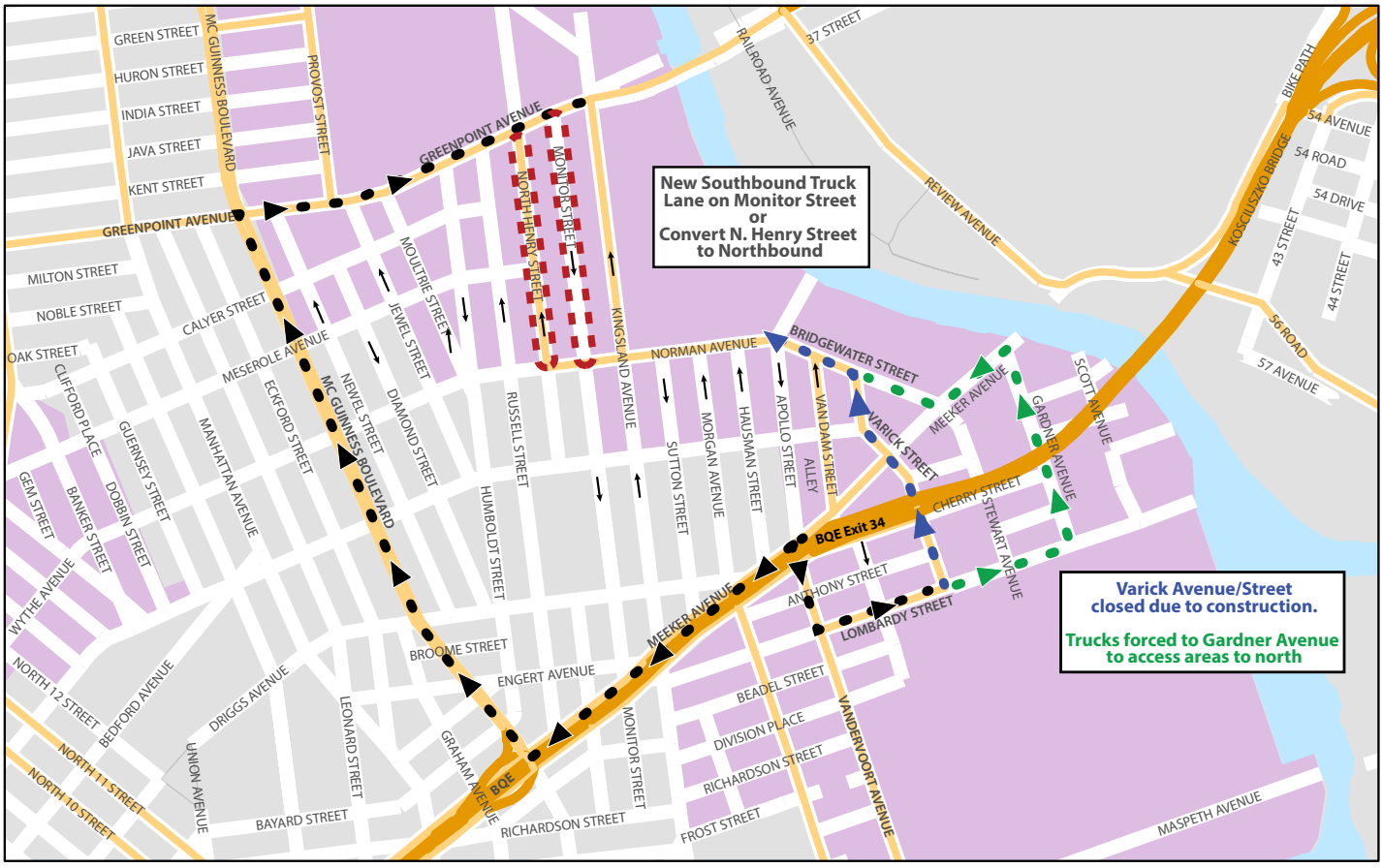
Posting proper signage will help to ensure that trucks are utilizing the designated truck routes in the study area. These efforts will improve traffic flow and improve safety on local roadways. Section 2.2 includes a detailed survey of missing directional signage at key decision points in the truck route network such as at intersections of two or more truck routes. The field surveys show that 79 intersections have signage missing from one or more approach. There are 130 total approaches on truck routes that should be considered for truck signage. Signage should be prioritized at entrances to the community (such as bridge crossings over Newtown Creek), exits off of the BQE, and other high truck volume locations (as identified in Section 2.1).

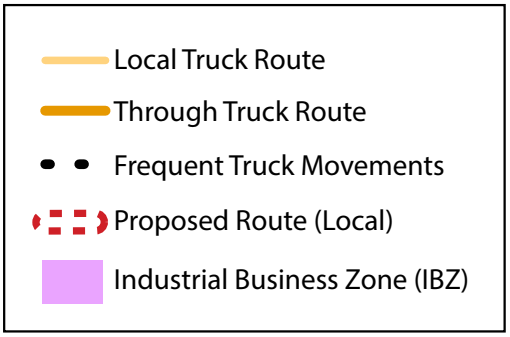
B. New Truck Routes

Monitor Street between Greenpoint Avenue and Norman Avenue

Businesses in the industrial area north of Meeker Avenue and south of Greenpoint Avenue report that the preferred route for entering the neighborhood from I-278 Exit 34 westbound (Meeker Avenue) is via McGuinness Boulevard north and to Greenpoint Avenue east. While they can access the area via Vandervoort Avenue, Lombardy Street, Gardner Avenue, that route is not preferred due to the fact that Gardner is heavily congested between Lombardy Street and Meeker Avenue. This issue is partially due to detours and street closures as a part of the Kosciuszko Bridge construction project. There is also a lack of truck route signage in the area, adding to confusion for truck drivers.

Along Greenpoint Avenue, there are no southbound truck routes between McGuinness Boulevard and Kingsland Avenue. To provide an alternative route to the area, a new truck route should be considered for Monitor Street between Greenpoint Avenue and Norman Avenue, which is in an industrial area. The intersection of Monitor Street and Norman Avenue may require parking to be removed at each of the corners as well as recessing the parking areas for cars to allow for proper turning movements. The turning radius of the intersection should also be evaluated. Alternatively, North Henry Street, an existing truck route can be converted from one-way northbound to one-way southbound service. These options are illustrated in Figure 2-15.





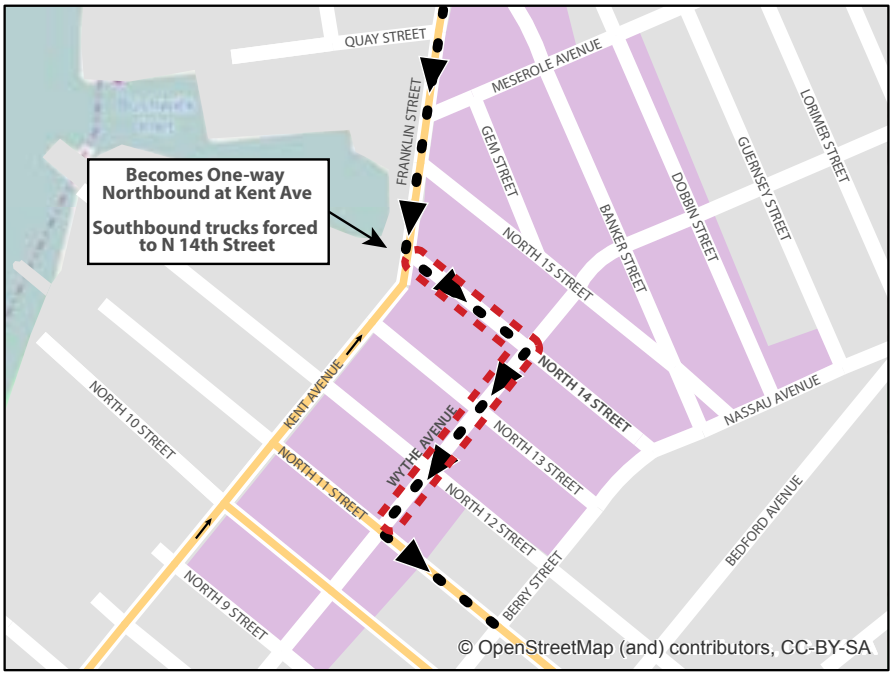


FIGURE 2.15: RECOMMENDED TRUCK ROUTES

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From a circulation perspective, a truck route along Kingsland Avenue between Meeker and Norman would provide more direct access for commercial traffic traveling north from the BQE to the high concentration of industrial area along Newtown Creek between I-278 and Greenpoint Avenue. This route would also provide a more direct link between I-278 and Greenpoint Avenue, two major entry and exit points to the study area. This truck route was also suggested during the survey process. While this option may improve access for trucks, it is an undesirable solution due to potential impacts to the residential land uses along Kingsland Avenue between Meeker Avenue and Nassau Avenue.

Wythe Avenue between North 14th Street and 11th Street

It is recommended that DOT consider correcting the disruption of the truck route network at Franklin Avenue and North 14th Street. Kent Avenue is a one-way northbound street. Southbound traffic on Franklin Street is forced to turn east on 14th Street at Kent Avenue, which is not a truck route. Trucks making this turn have no option to remain on an established truck route. Adding two new segments: (1) North 14th Street between Kent Avenue and Wythe Avenue, and (2) Wythe Avenue between North 14th Street and North 11th Street to the designated truck route map would resolve this issue. This route (see Figure 2-15) remains within the Williamsburg/Greenpoint Industrial Business Zone and connects to Union Avenue. Union Avenue allows for direct access to I-278.

C. Global Positioning Systems (GPS)

There is a need for a low-cost GPS solution to help truck drivers navigate New York City's complex truck network. It is recommended that NYCDOT consider working with the providers of truck GPS applications to provide up-to-date bridge clearances, truck routes, real-time construction updates/detours, and identifies difficult intersections for trucks to navigate. This support could be similar to the MTA's App Quest competition, which invited contestants to develop applications for mobile devices to improve the experience for MTA customers.

D. On-Street Parking

Daylighting Intersection Corners in IBZ

On-street parking within (at least) 20 feet of the corner be removed from intersections where trucks frequently make turns. Daylighting these corners will ensure better traffic flow, by making turning movements easier and it will improve visibility for truck drivers and pedestrian safety. Figure 2-16 shows narrow intersections along truck routes and in industrial areas that should be considered for daylighting.

Figure 2.16: Proposed Intersections for Daylighting

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On-Street Parking Enforcement

Many of the businesses surveyed for this study expressed the need for better on-street parking enforcement for all types of vehicles. Respondents commented that illegal parking is a contributing factor to congestion issues and poor street-cleaning maintenance (which contributes to flooding issues). Posting of proper signage for parking should be established before traffic enforcement protocols change.

Truck Waiting Areas

Due to the limited on-street parking capacity for trucks in the Study Area, truck waiting areas should be established in the Study Area along Maspeth Avenue between Vandervoort Avenue and the Newtown Creek. Another possible location for a truck waiting area is on Bridgewater Street between Apollo Street and Meeker Avenue. Similar protocols used in the Maspeth Industrial Park should be developed. A long-term solution for on-street parking will need to be developed for the area under the Kosciuszko Bridge. This area was informally used by businesses to queue vehicles making deliveries to waste transfer facilities adjacent to the Kosciuszko Bridge.

Commercial Loading Zones

More on-street commercial loading zones are needed along congested commercial corridors and active industrial streets. The official process for businesses to request on-street commercial loading zones should be made clear. There is a high demand for on-street loading that should be managed through strategic placement of on-street commercial loading zones.

E. Truck Route Roadway Conditions

Survey respondents indicated that maintenance and condition of existing truck routes was a significant issue for truck drivers. Truck routes should be prioritized for resurfacing and maintenance in order to improve traffic flow and reduce damage to trucks traveling on these roads. Opportunities to coordinate with local businesses and BIDs interested in partnering on street maintenance efforts should be explored.

Section 3.0: Appendix

Appendix Figures:

On Street Parking Regulations for AM, MD, PM, Sat for each Focus Area

On-Street Parking Occupancy for AM, MD, PM Peak Periods for each Focus Area

Blockfaces Excluded from On-Street Occupancy Survey

Business Survey

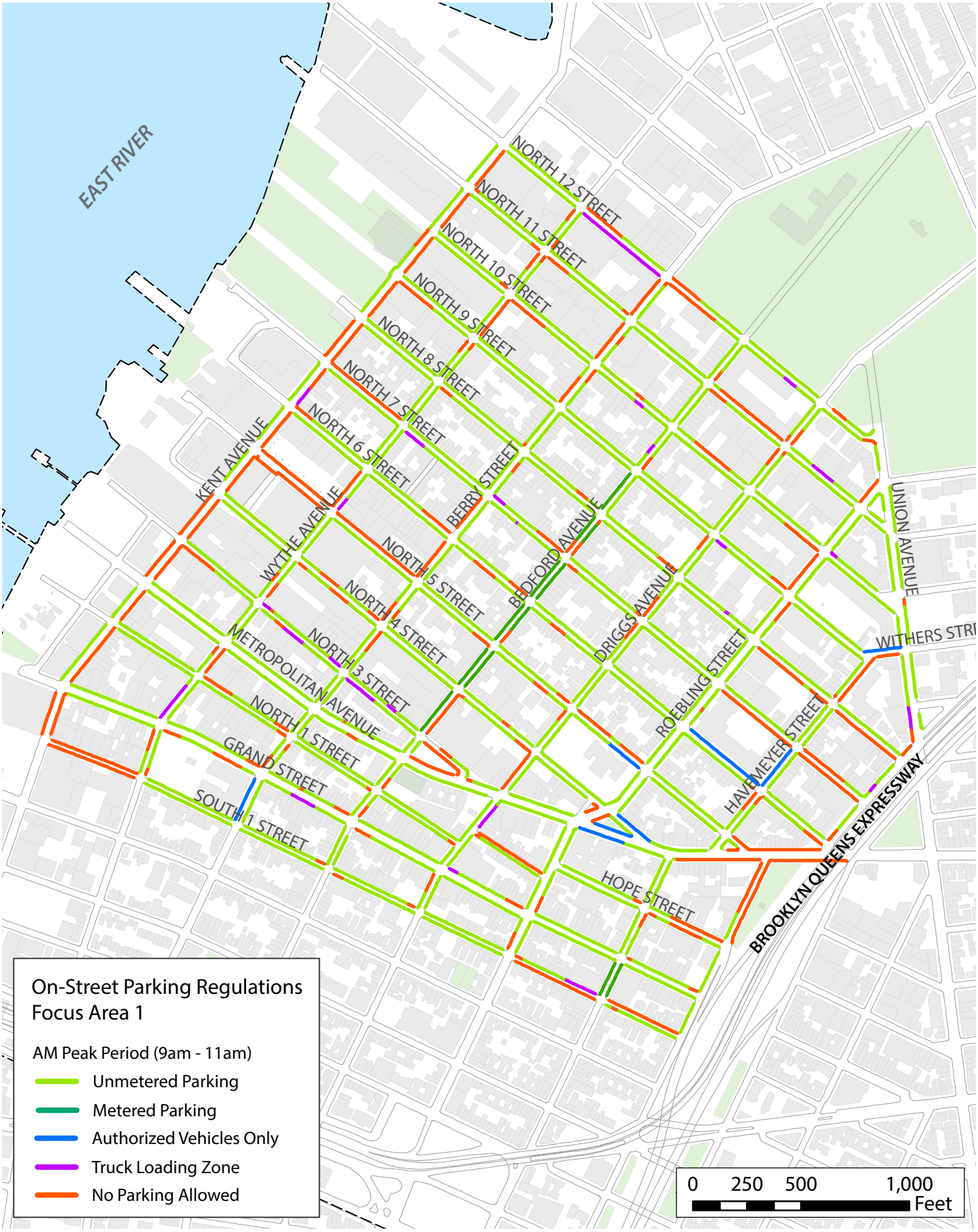

FIGURE 3.1: ON-STREET PARKING REGULATIONS - FOCUS AREA 1 - AM

North Williamsburg Transportation Study

BFJ Planning

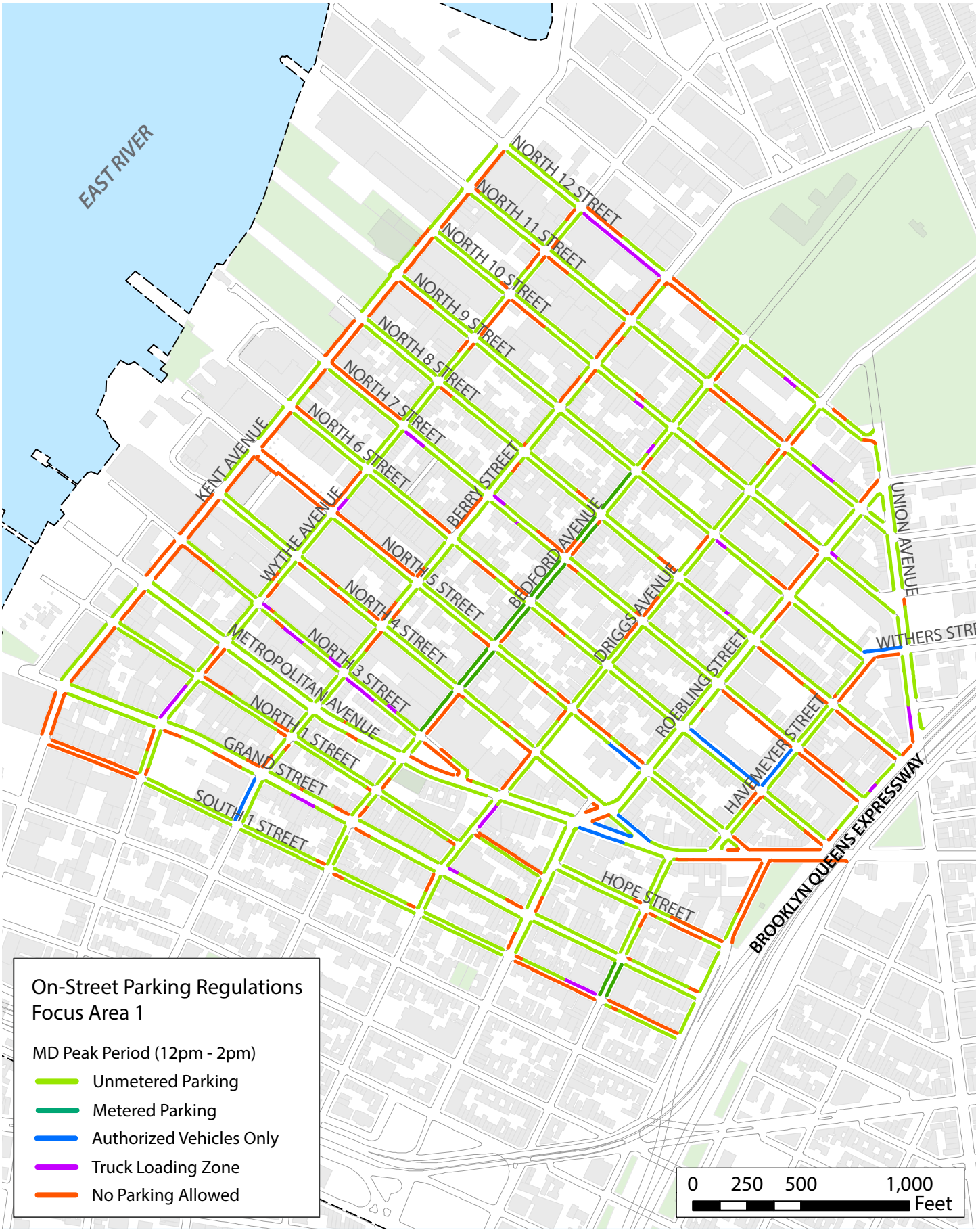

FIGURE 3.2: ON-STREET PARKING REGULATIONS - FOCUS AREA 1 - MIDDAY

North Williamsburg Transportation Study

BFJ Planning

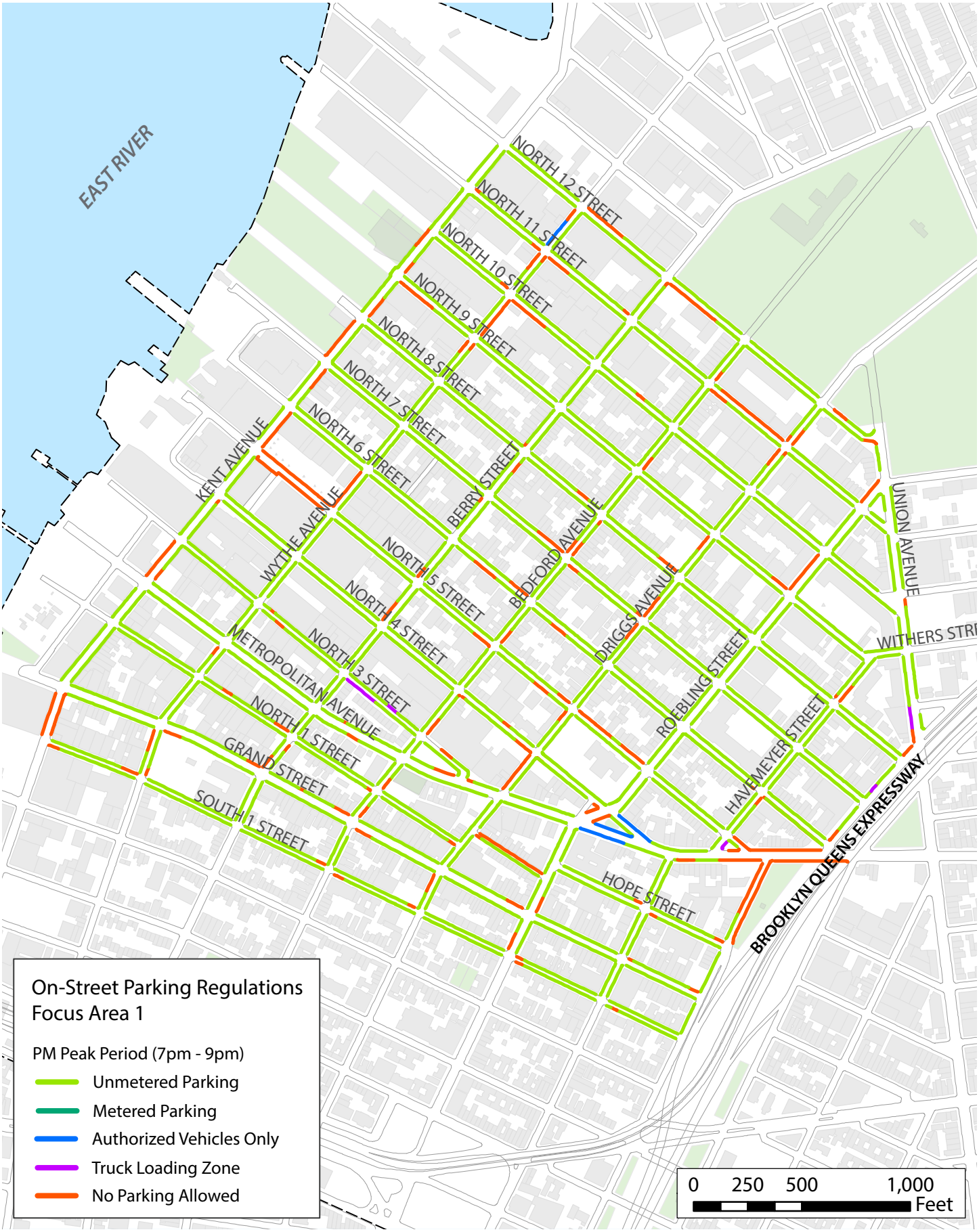

FIGURE 3.3: ON-STREET PARKING REGULATIONS - FOCUS AREA 1 - PM

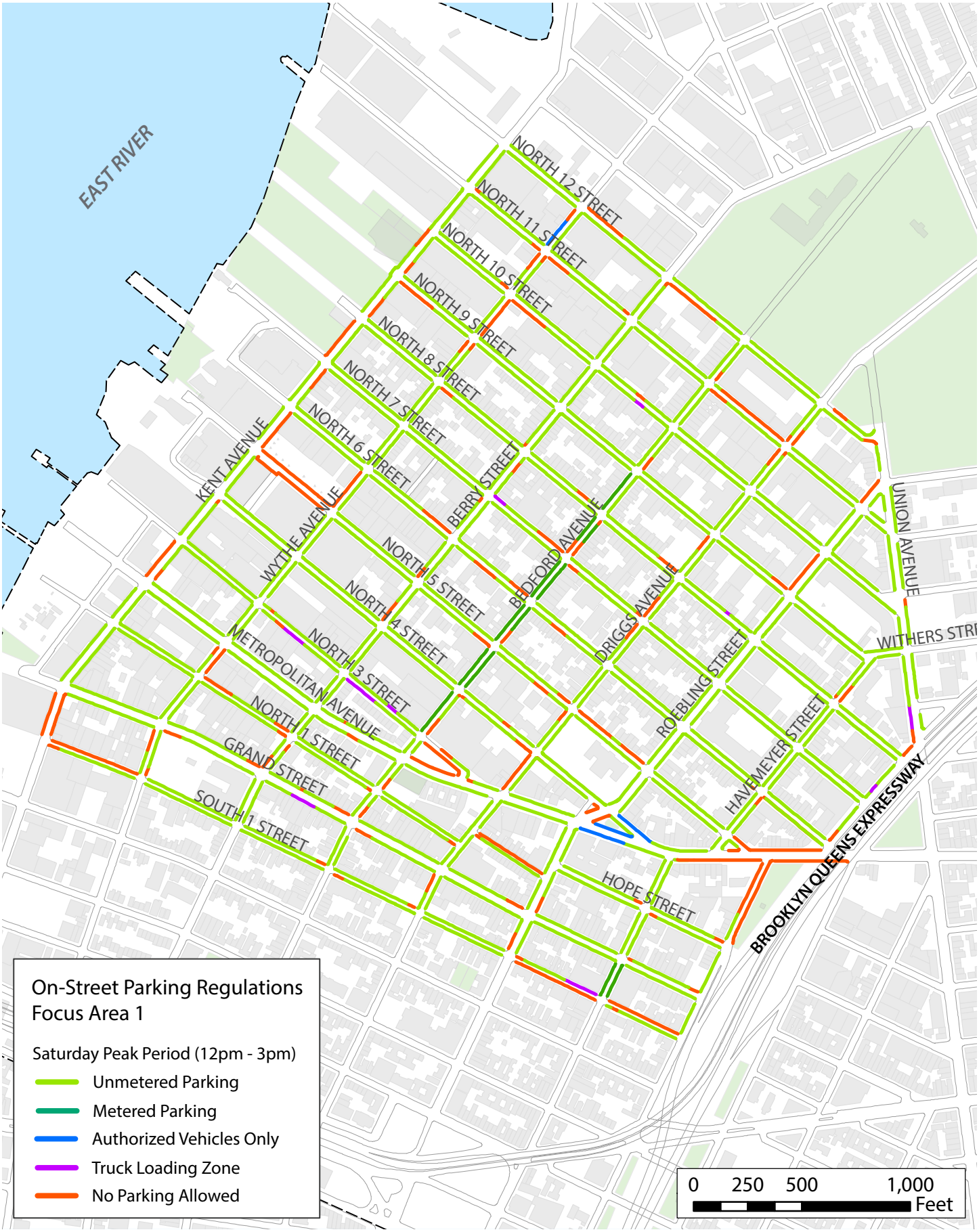

FIGURE 3.4: ON-STREET PARKING REGULATIONS - FOCUS AREA 1 - SATURDAY

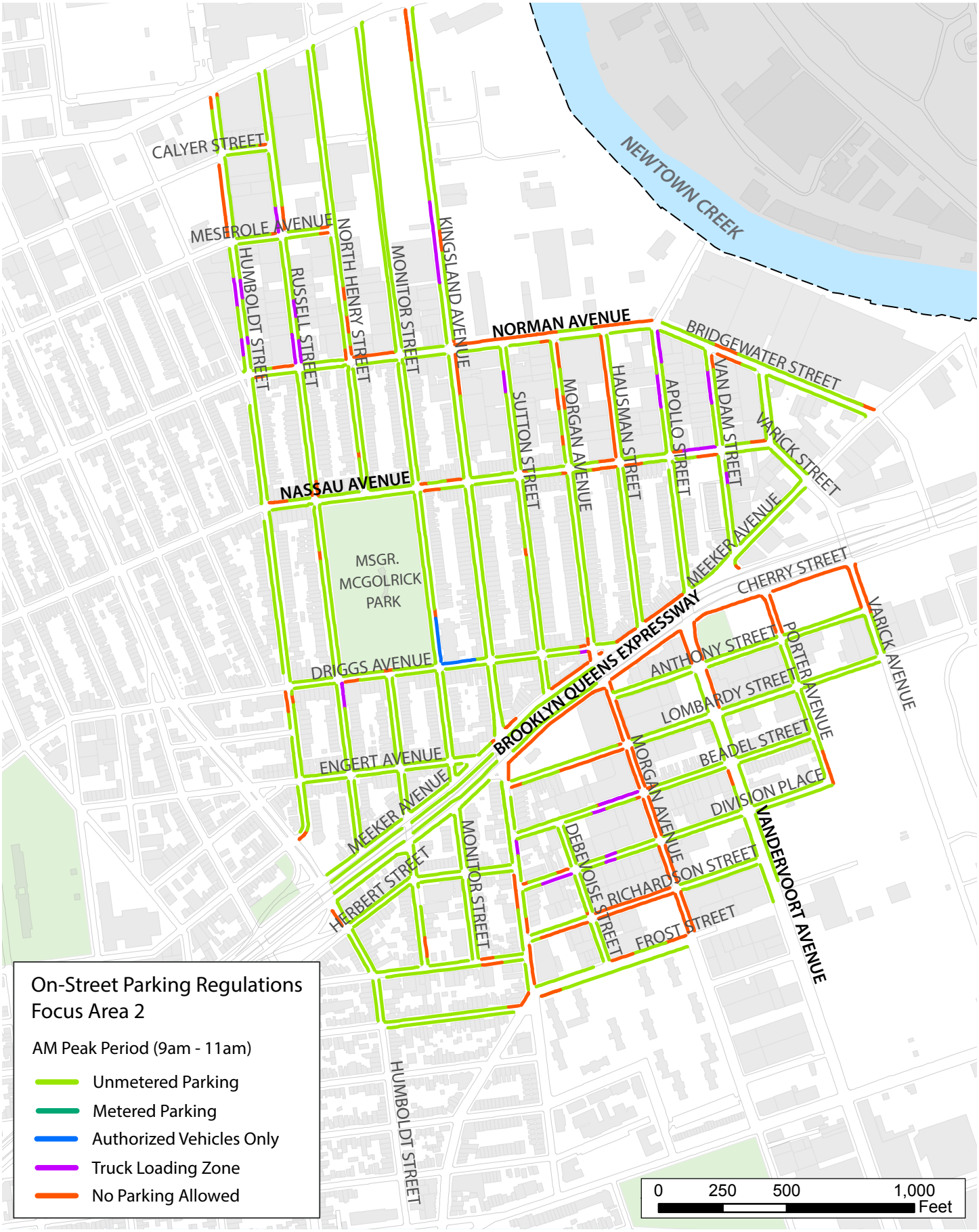

FIGURE 3.5: ON-STREET PARKING REGULATIONS - FOCUS AREA 2 - AM

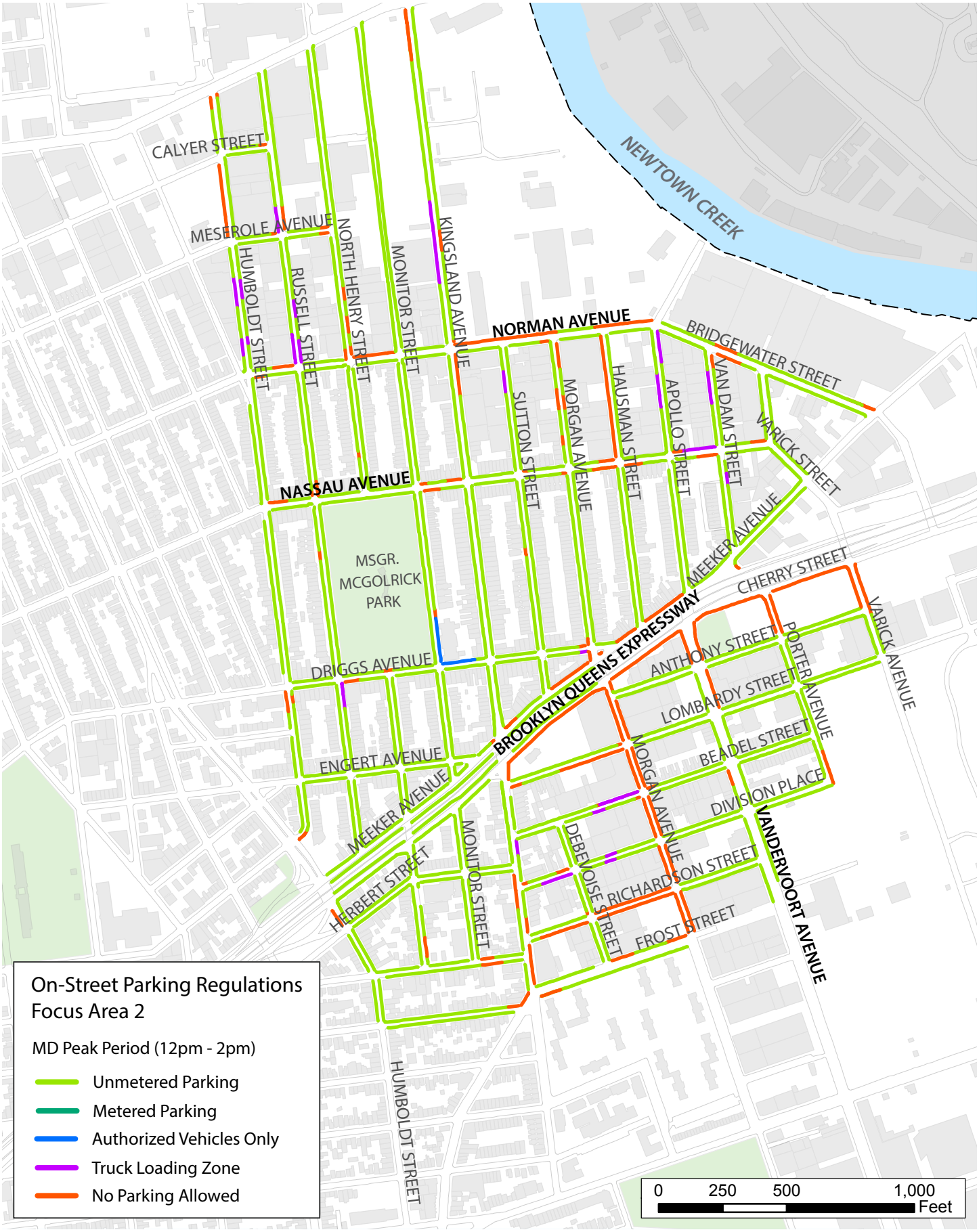

FIGURE 3.6: ON-STREET PARKING REGULATIONS - FOCUS AREA 2 - MIDDAY

North Williamsburg Transportation Study

BFJ Planning

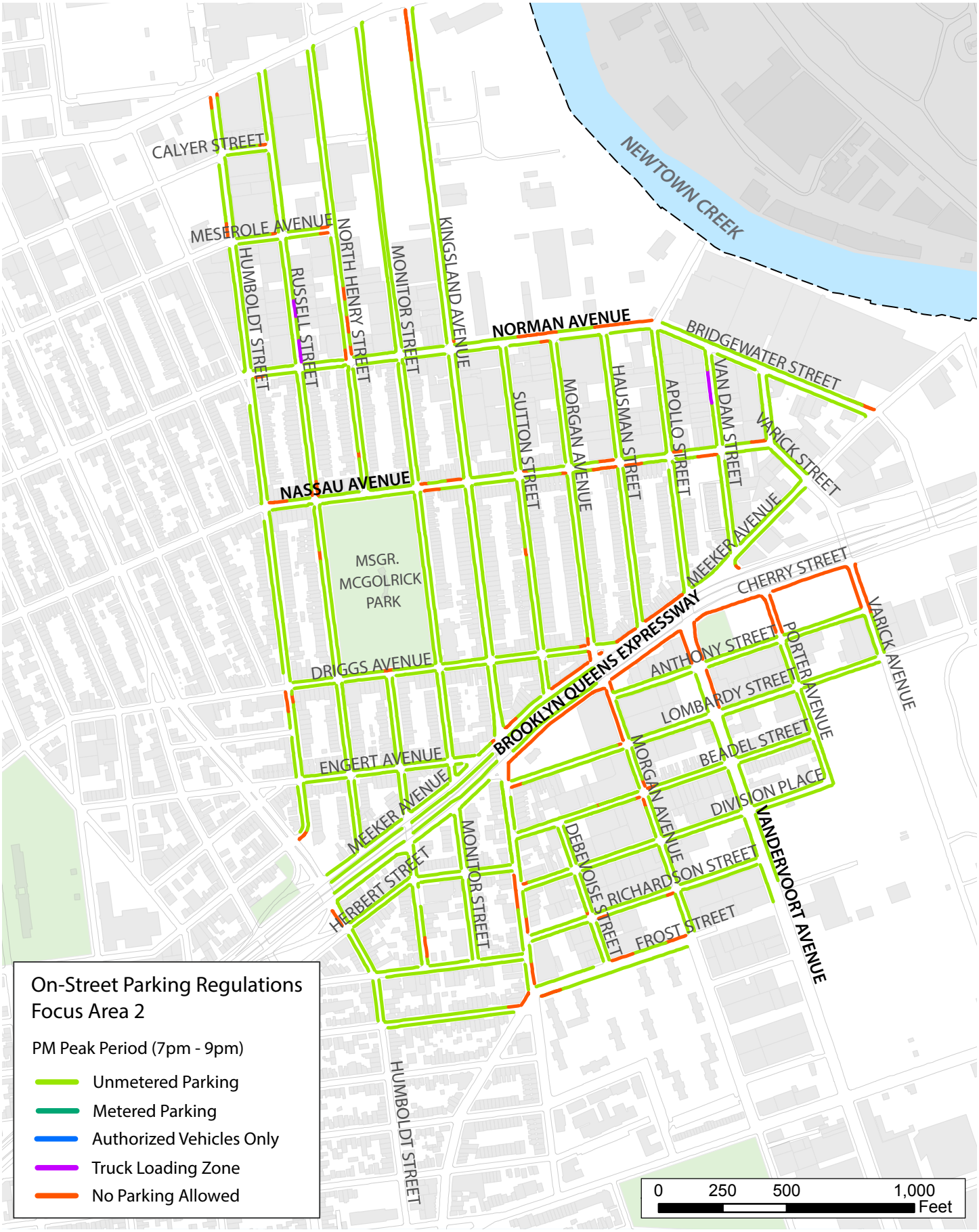

FIGURE 3.7: ON-STREET PARKING REGULATIONS - FOCUS AREA 2 - PM

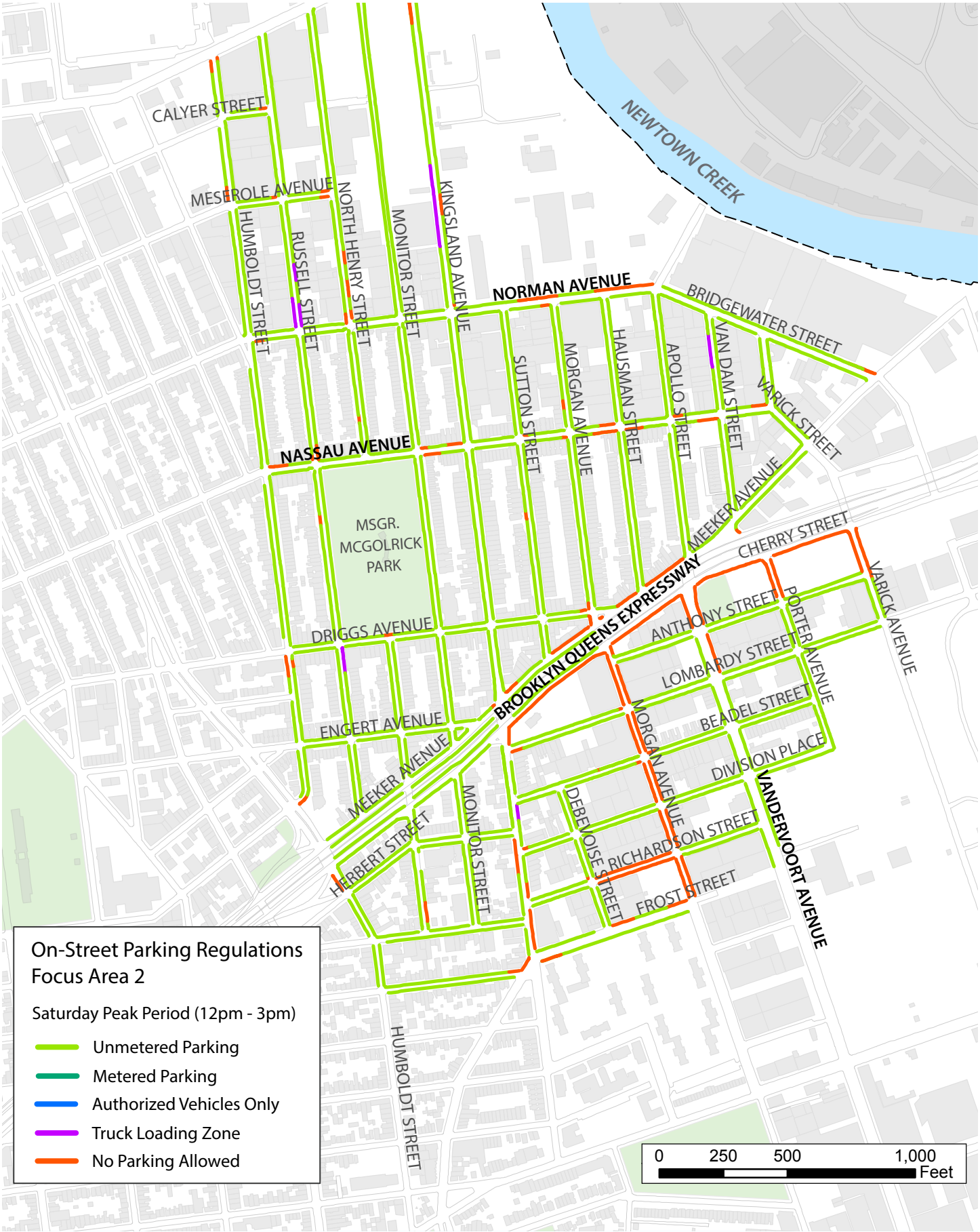

FIGURE 3.8: ON-STREET PARKING REGULATIONS - FOCUS AREA 2 - SATURDAY

North Williamsburg Transportation Study

BFJ Planning

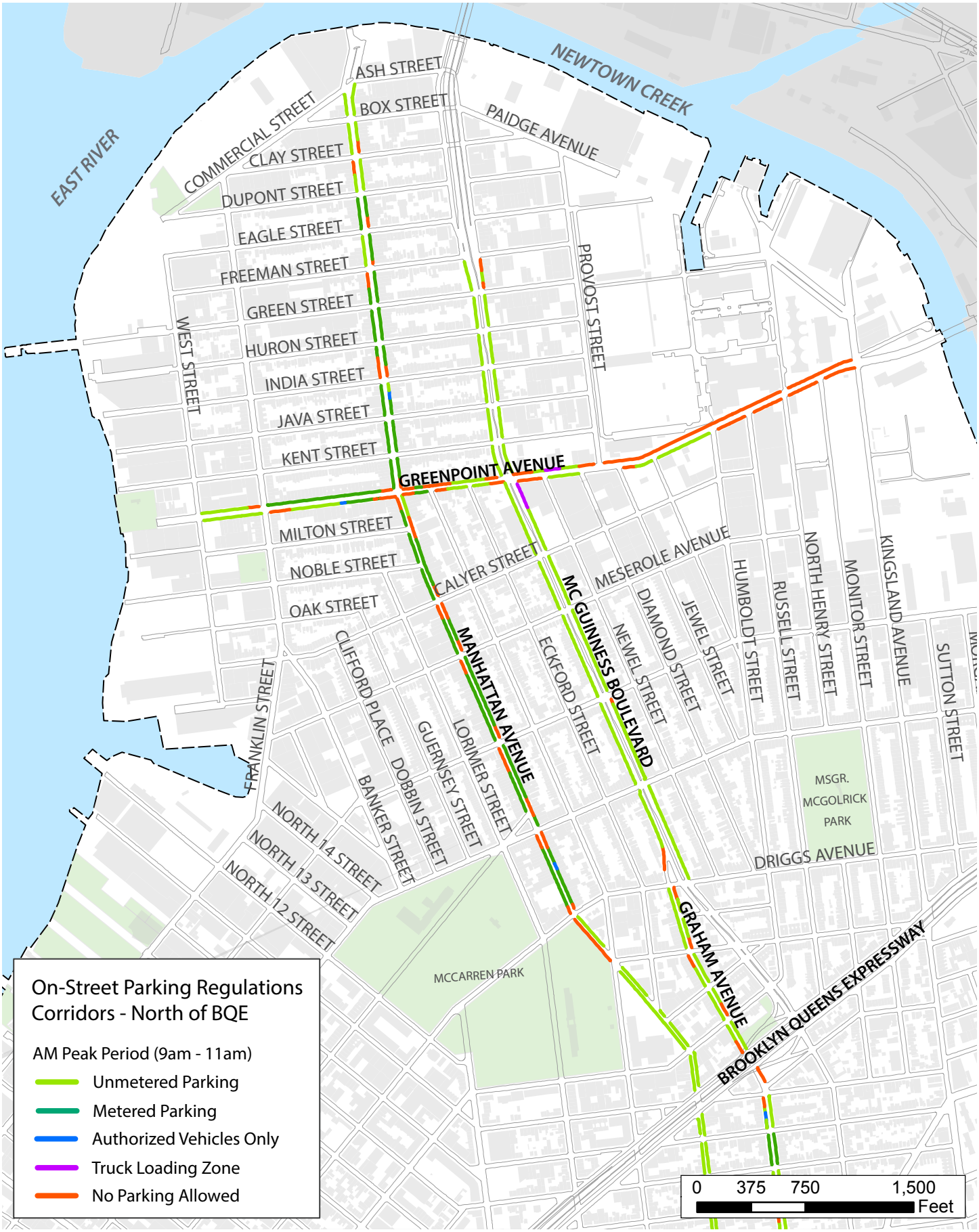

FIGURE 3.9: ON-STREET PARKING REGULATIONS - CORRIDORS NORTH OF BQE AM

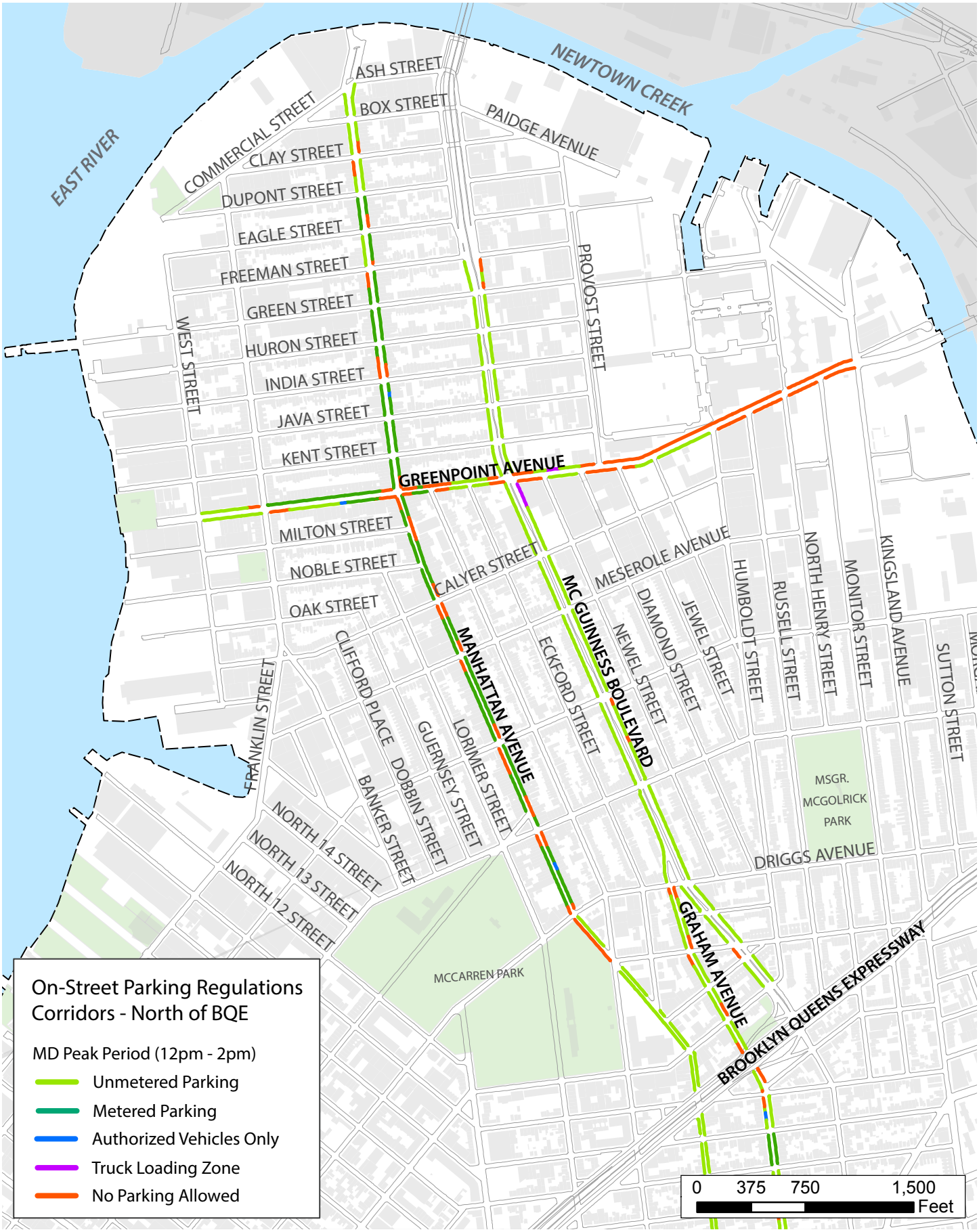

FIGURE 3.10: ON-STREET PARKING REGULATIONS - CORRIDORS NORTH OF BQE MIDDAY

North Williamsburg Transportation Study

BFJ Planning

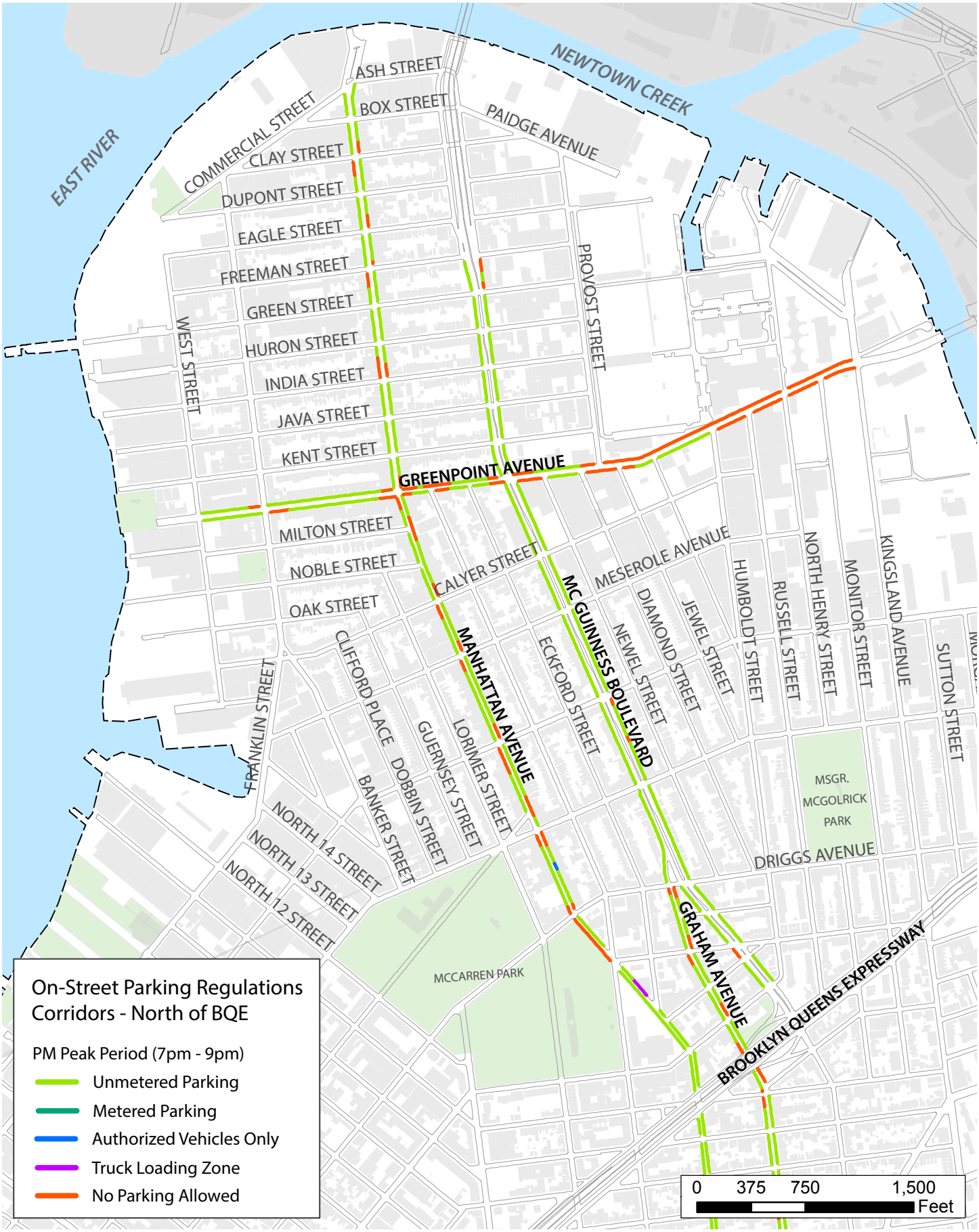

FIGURE 3.11: ON-STREET PARKING REGULATIONS - CORRIDORS NORTH OF BQE PM

North Williamsburg Transportation Study

BFJ Planning

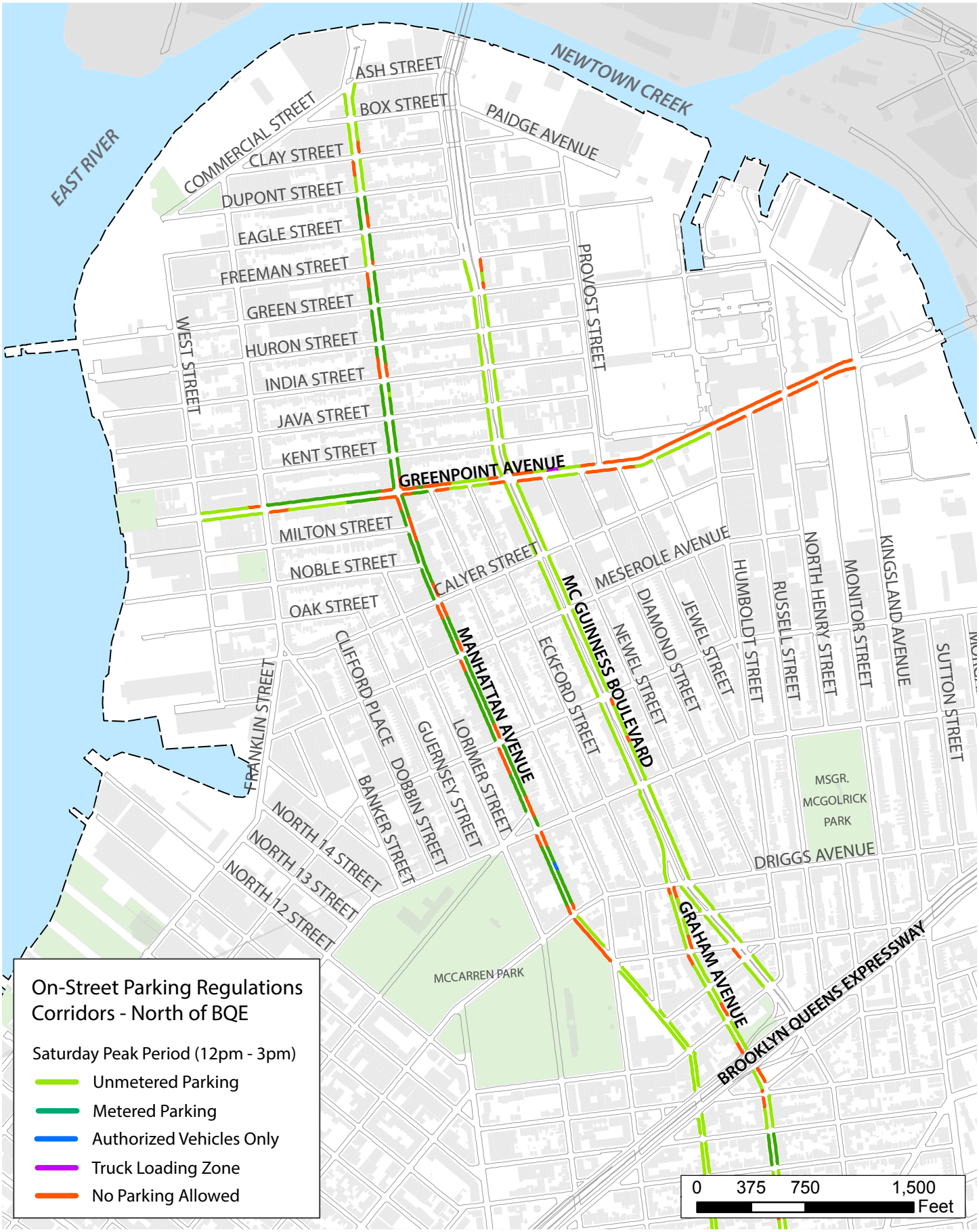

FIGURE 3.12: ON-STREET PARKING REGULATIONS - CORRIDORS NORTH OF BQE SATURDAY

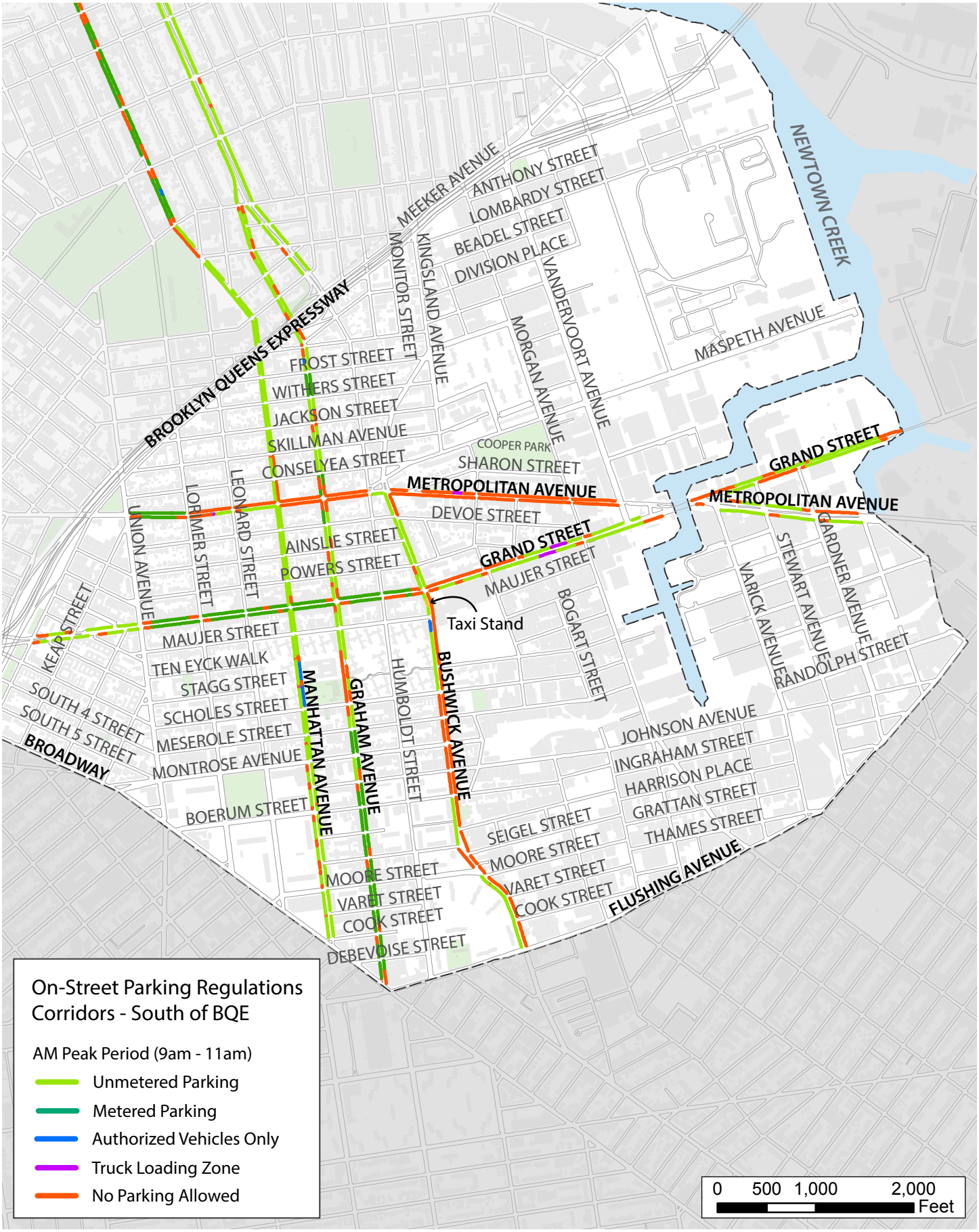

FIGURE 3.13: ON-STREET PARKING REGULATIONS - CORRIDORS SOUTH OF BQE AM

BFJ Planning

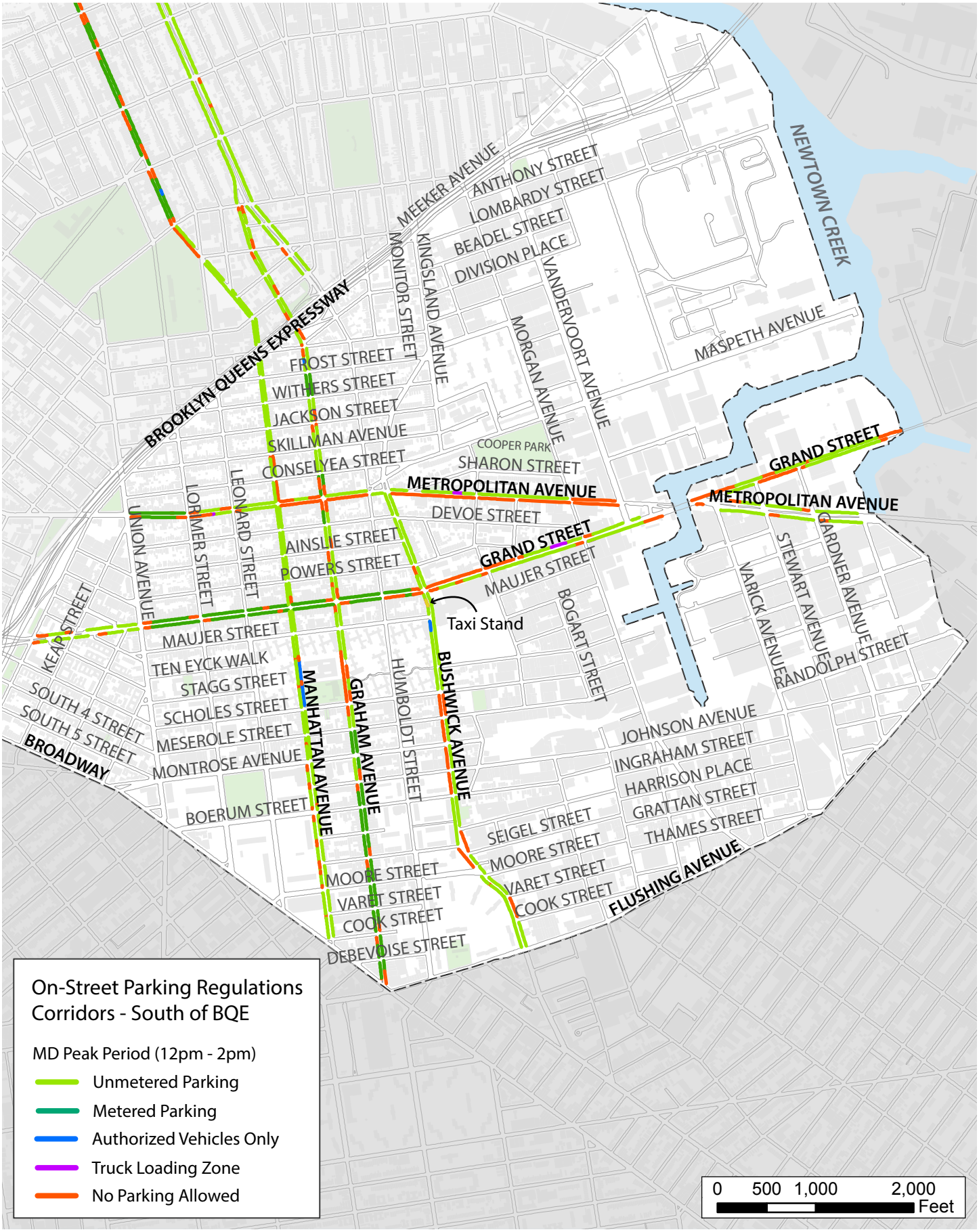

FIGURE 3.14: ON-STREET PARKING REGULATIONS - CORRIDORS SOUTH OF BQE MIDDAY

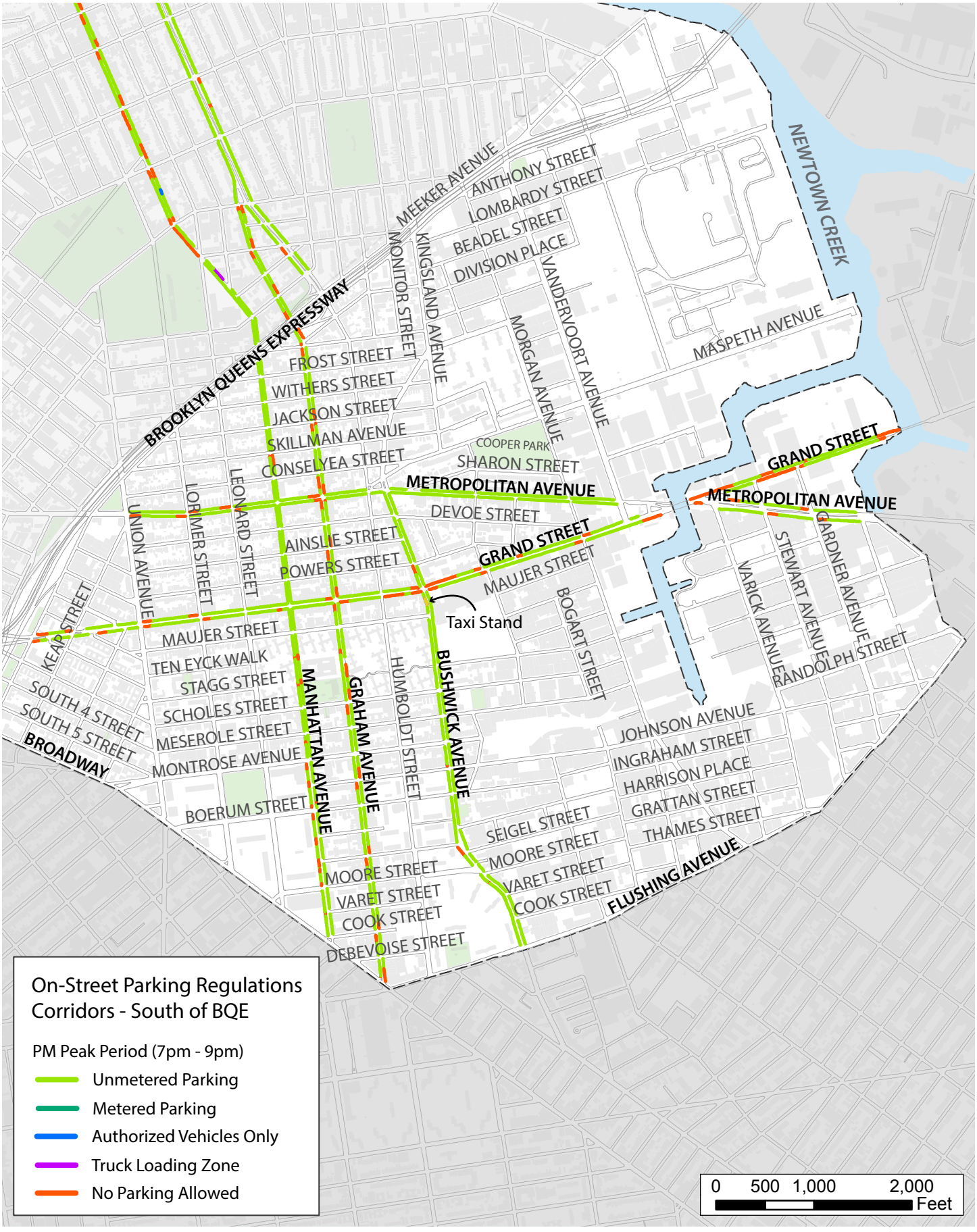

FIGURE 3.15: ON-STREET PARKING REGULATIONS - CORRIDORS SOUTH OF BQE PM

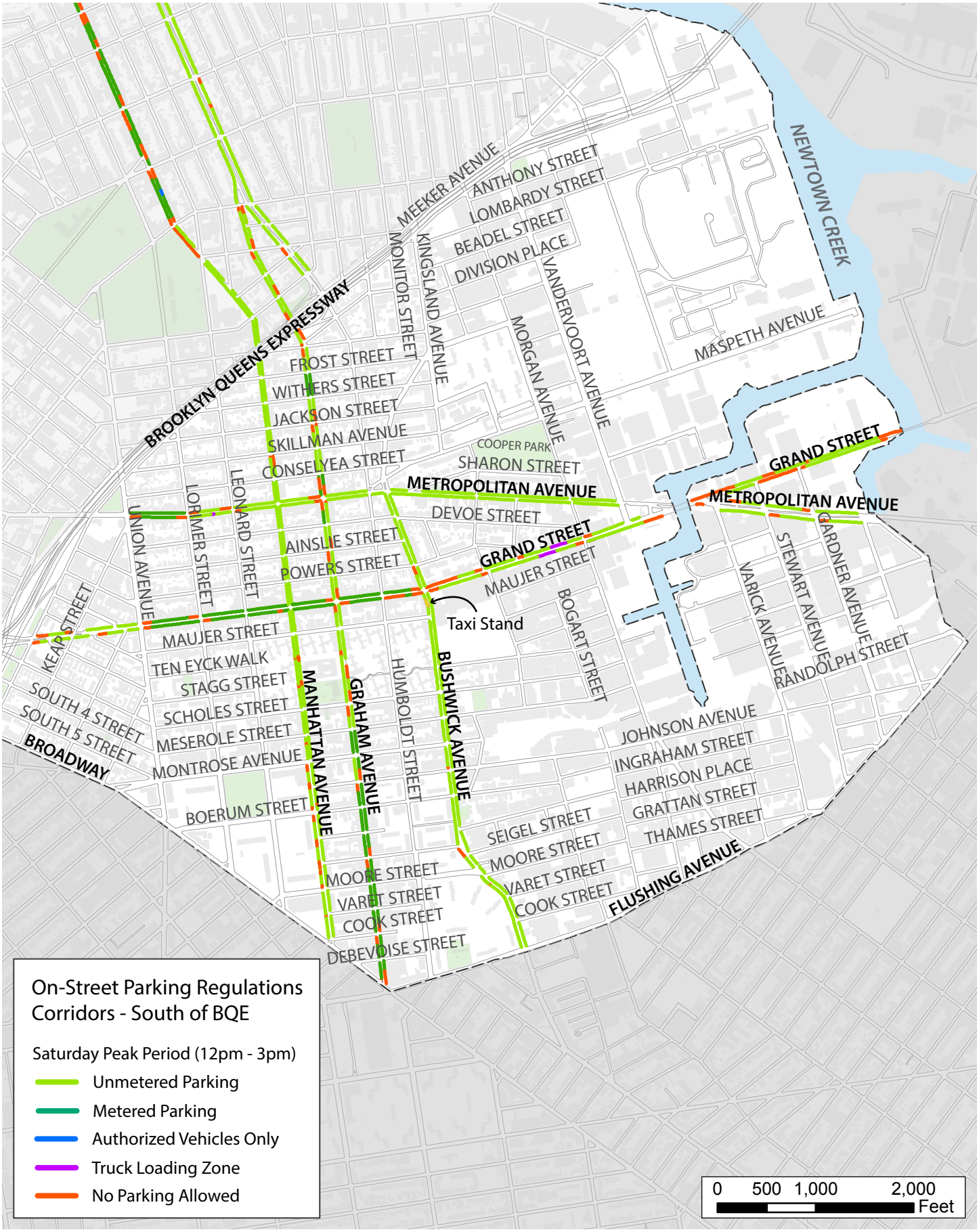

FIGURE 3.16: ON-STREET PARKING REGULATIONS - CORRIDORS SOUTH OF BQE SATURDAY

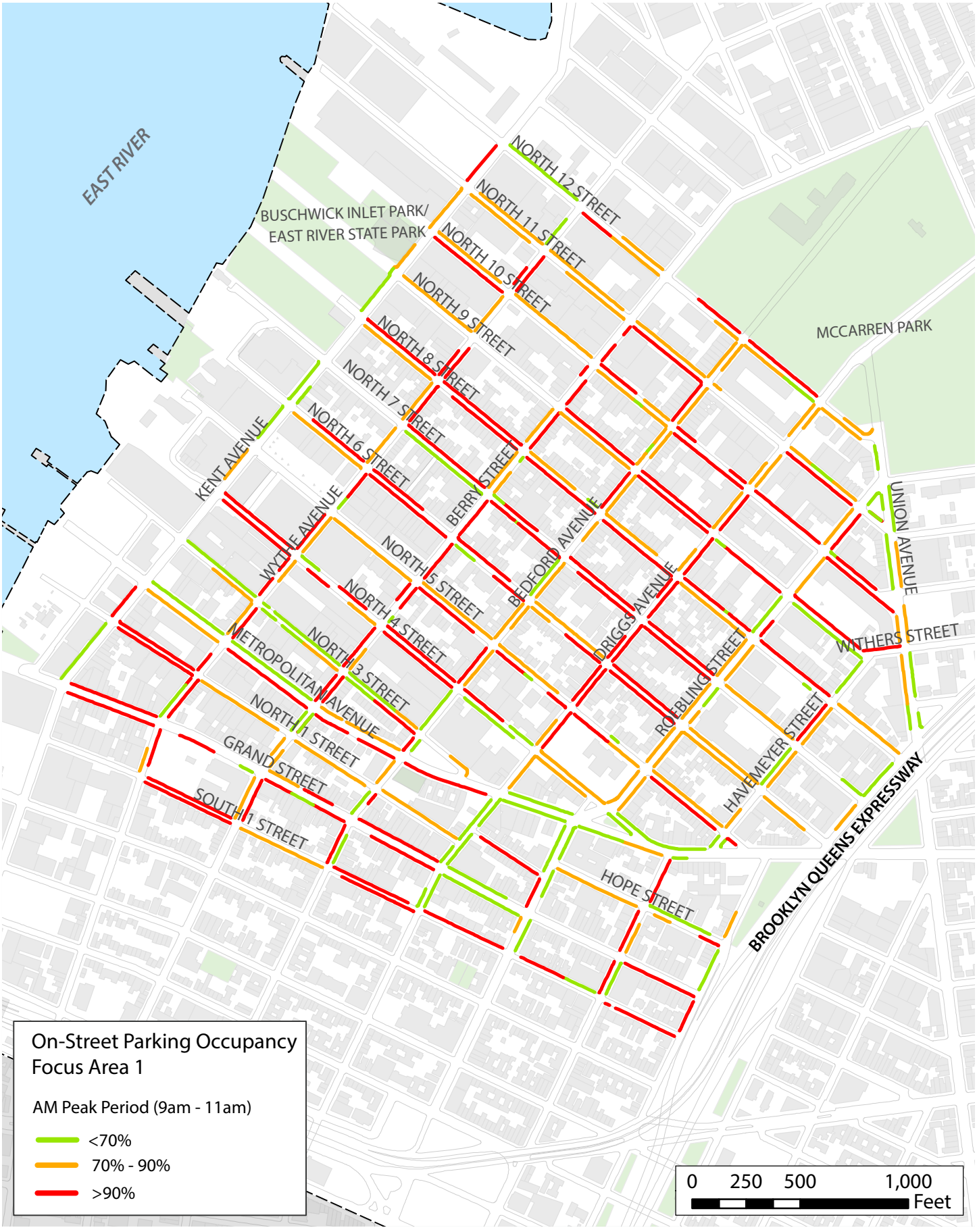

FIGURE 3.17: ON-STREET PARKING OCCUPANCY - FOCUS AREA 1 - AM

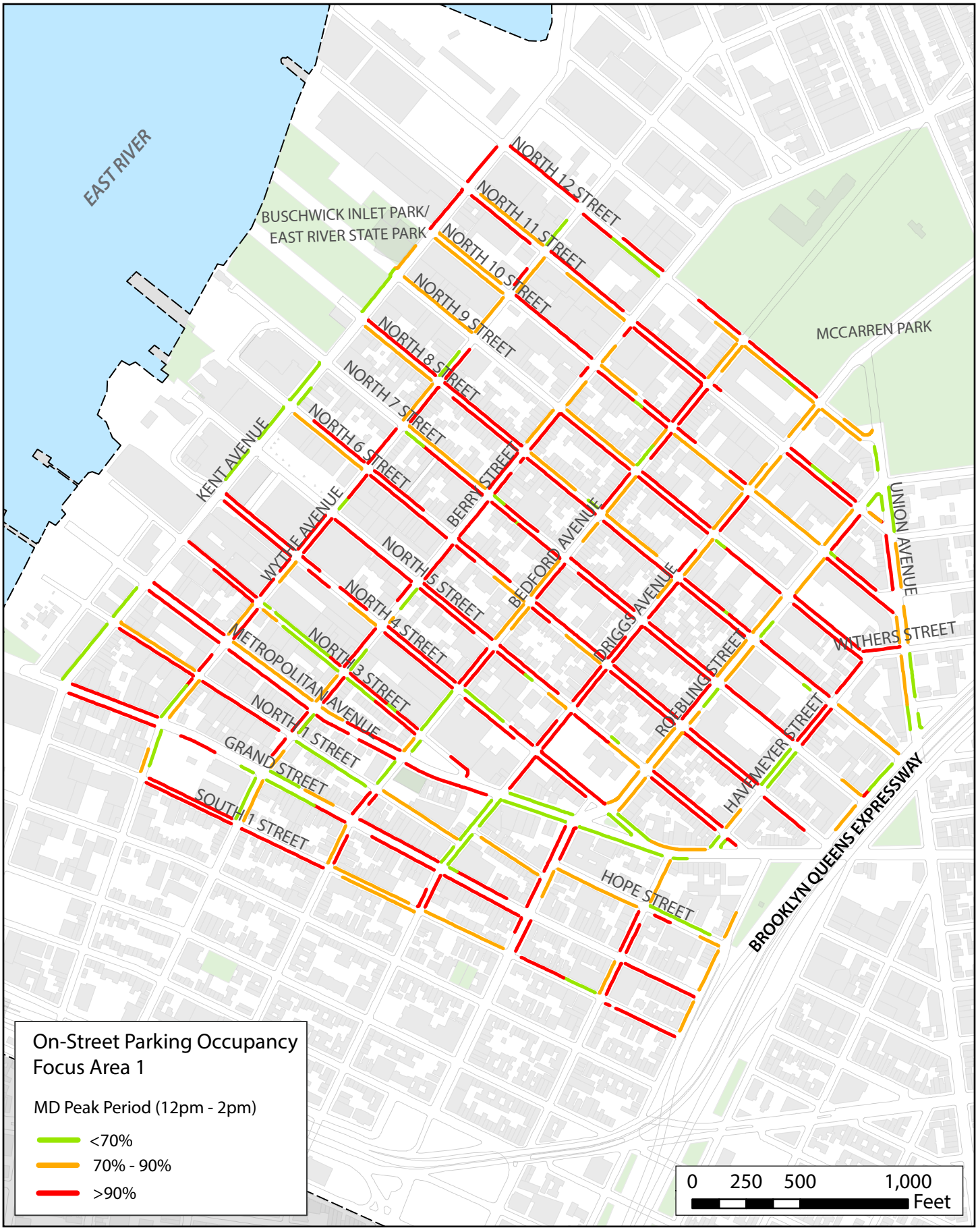

FIGURE 3.18: ON-STREET PARKING OCCUPANCY - FOCUS AREA 1 - MIDDAY

FIGURE 3.19: ON-STREET PARKING OCCUPANCY - FOCUS AREA 1- PM

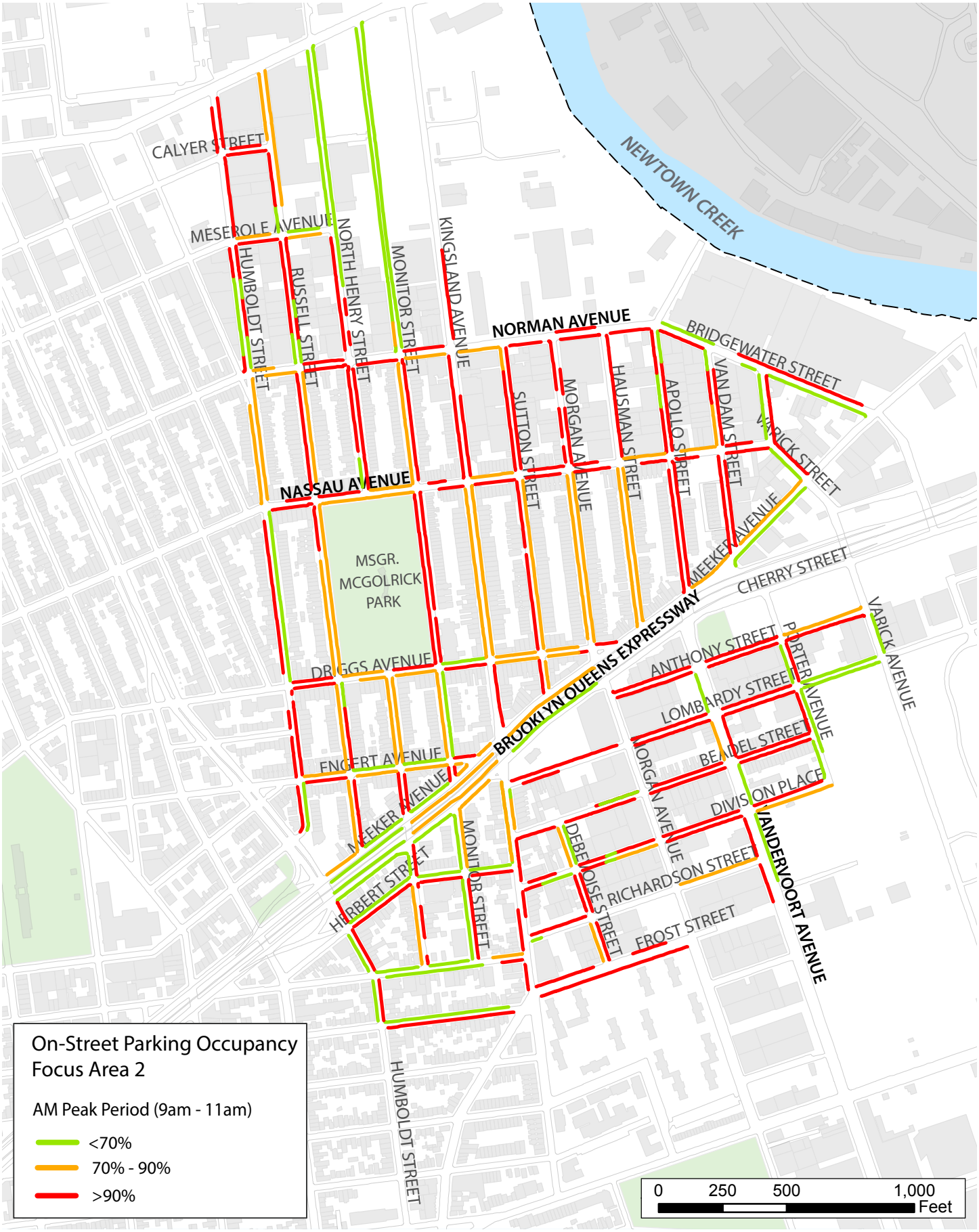

FIGURE 3.20: ON-STREET PARKING OCCUPANCY - FOCUS AREA 2 - AM

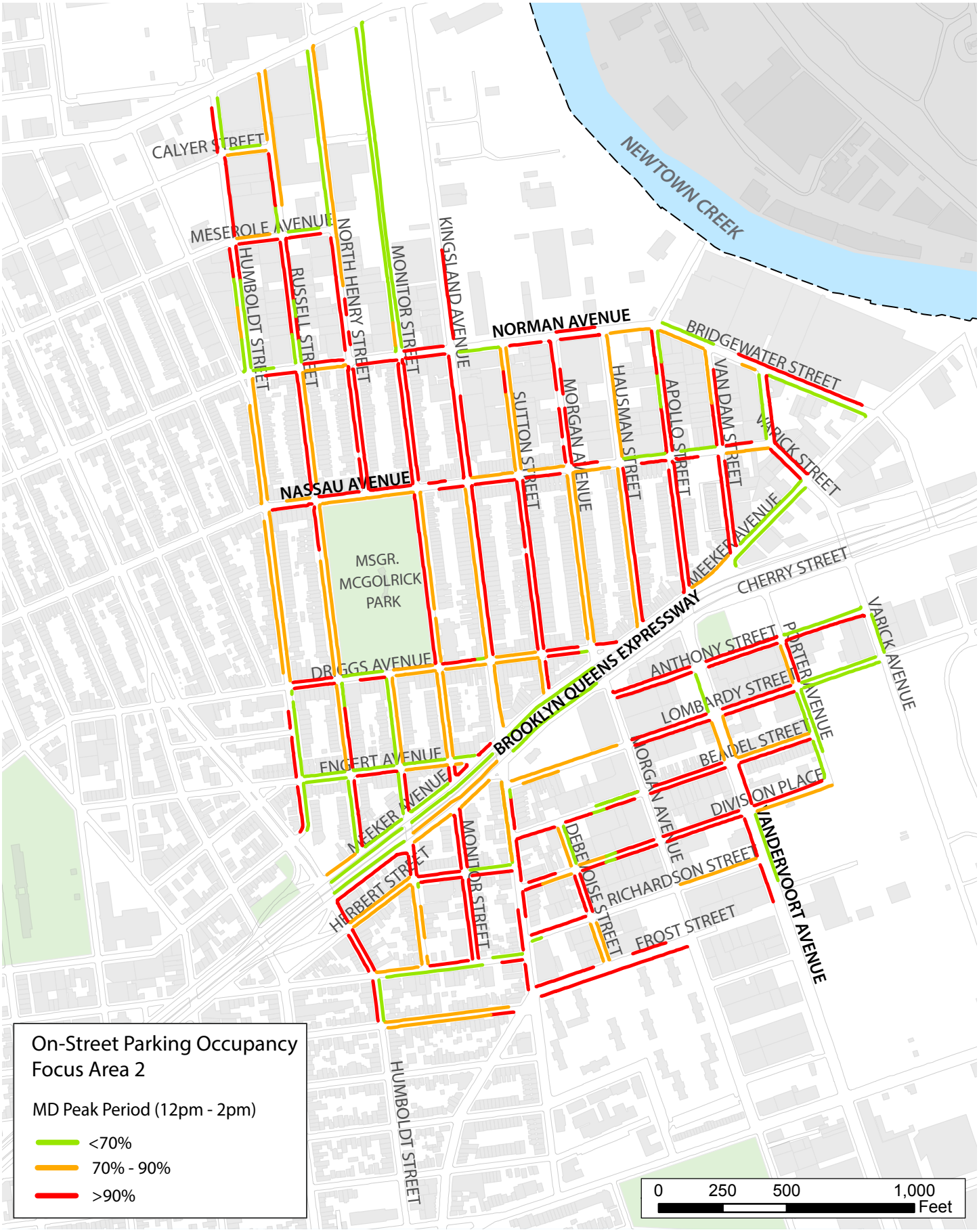

FIGURE 3.21: ON-STREET PARKING OCCUPANCY - FOCUS AREA 2 - MIDDAY

North Williamsburg Transportation Study

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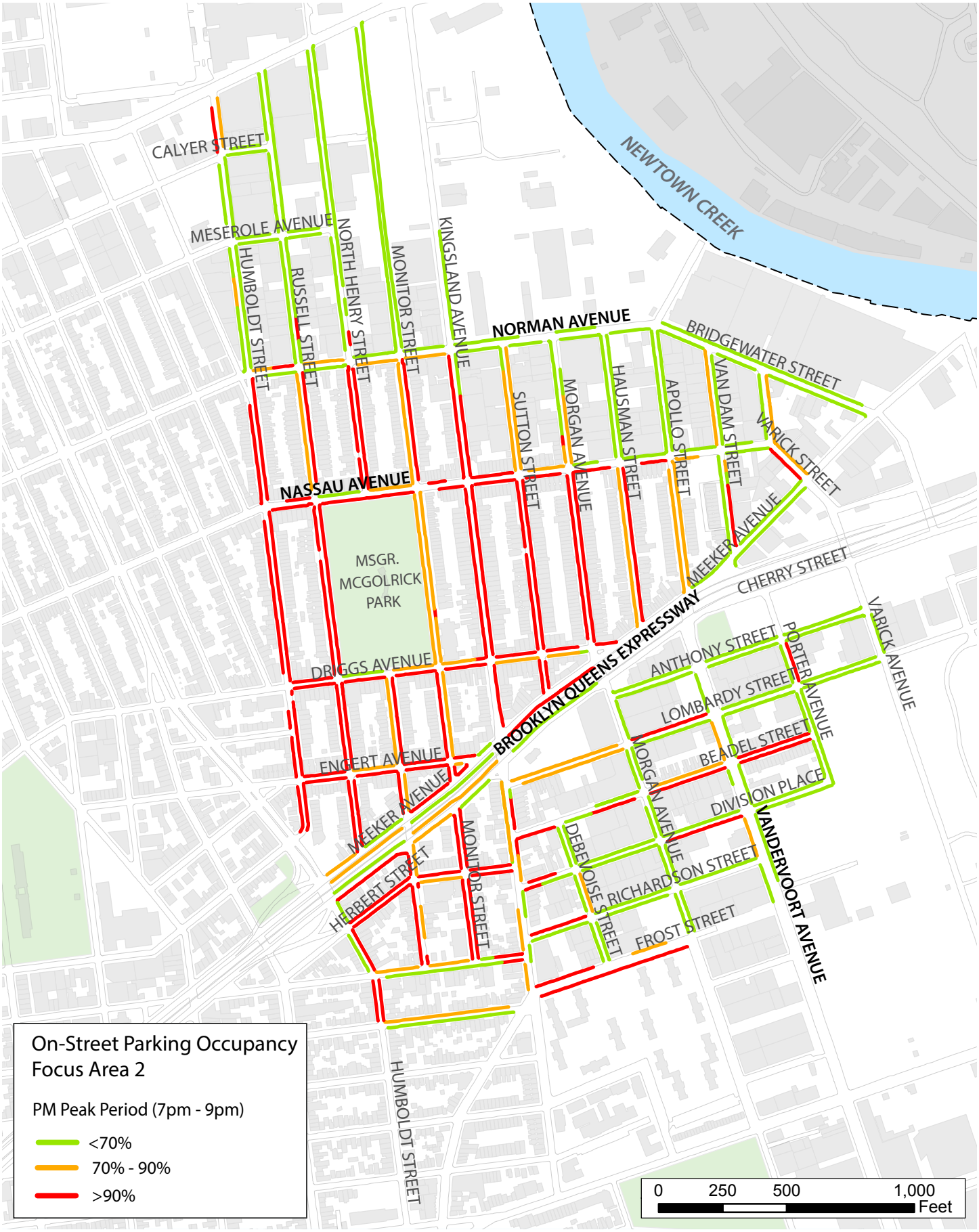


FIGURE 3.22: ON-STREET PARKING OCCUPANCY - FOCUS AREA 2 - PM

North Williamsburg Transportation Study

BFJ Planning

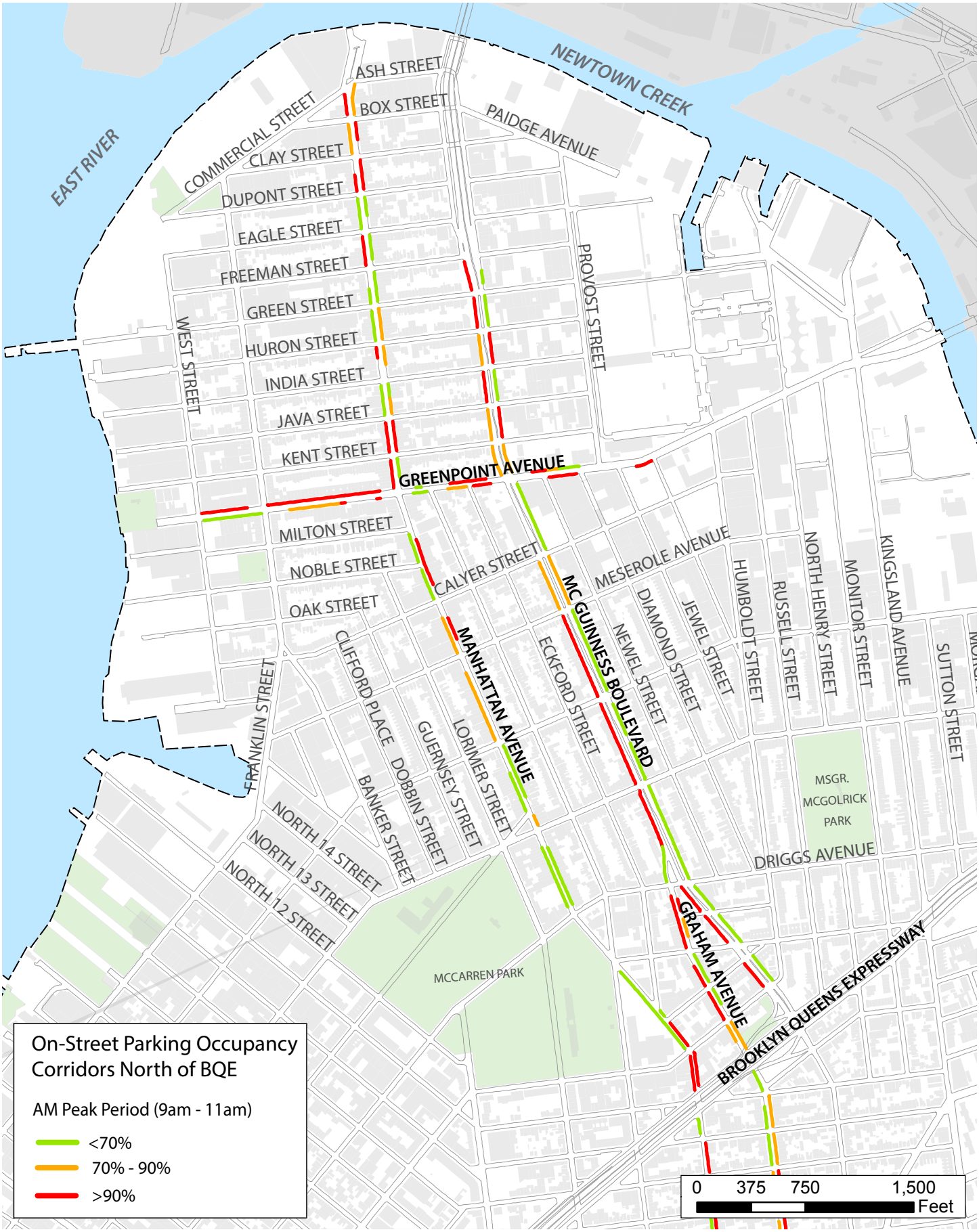


FIGURE 3.23: ON-STREET PARKING OCCUPANCY - CORRIDORS NORTH OF BQE AM

BFJ Planning

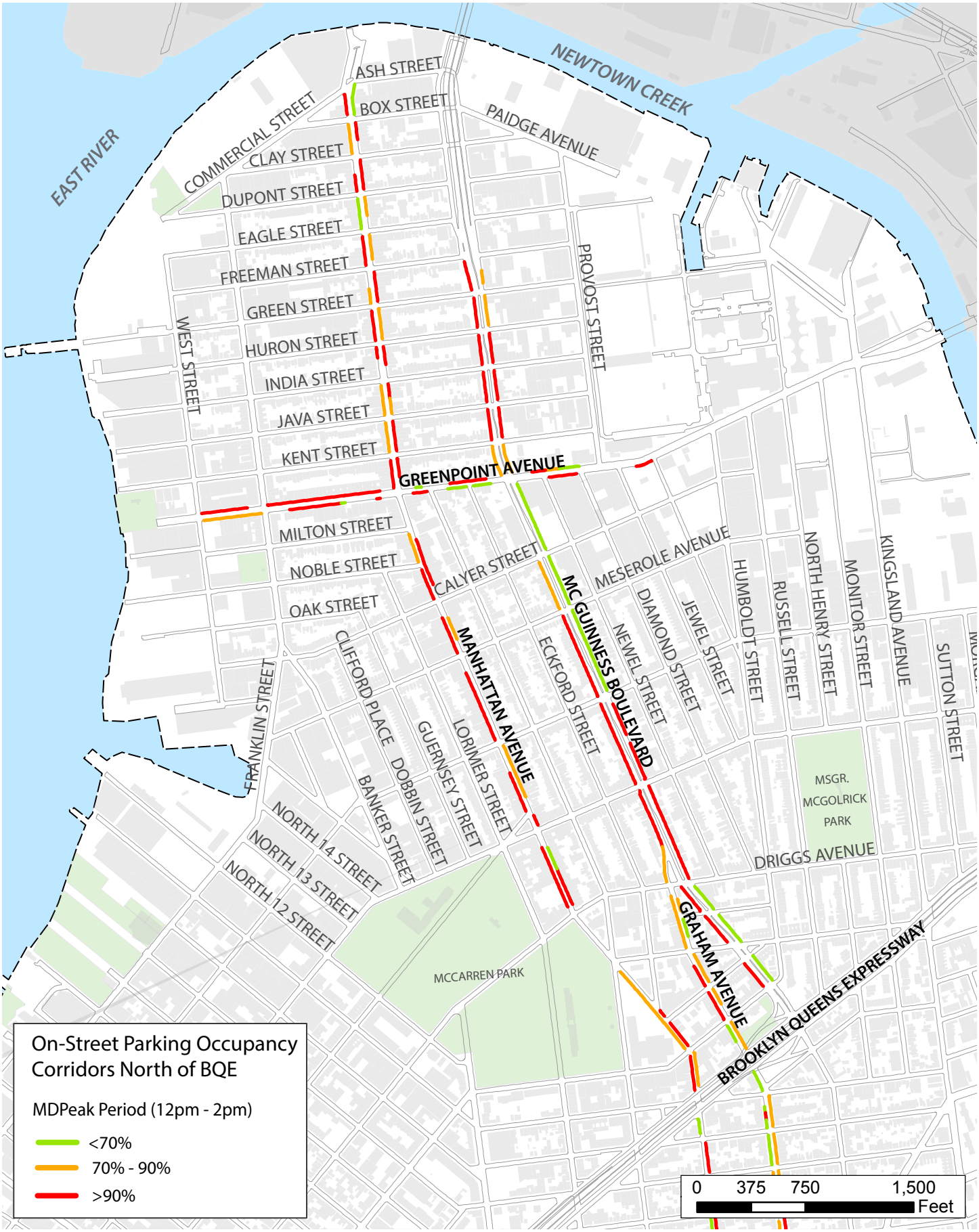


FIGURE 3.24: ON-STREET PARKING OCCUPANCY - CORRIDORS NORTH OF BQE MIDDAY

North Williamsburg Transportation Study

BFJ Planning

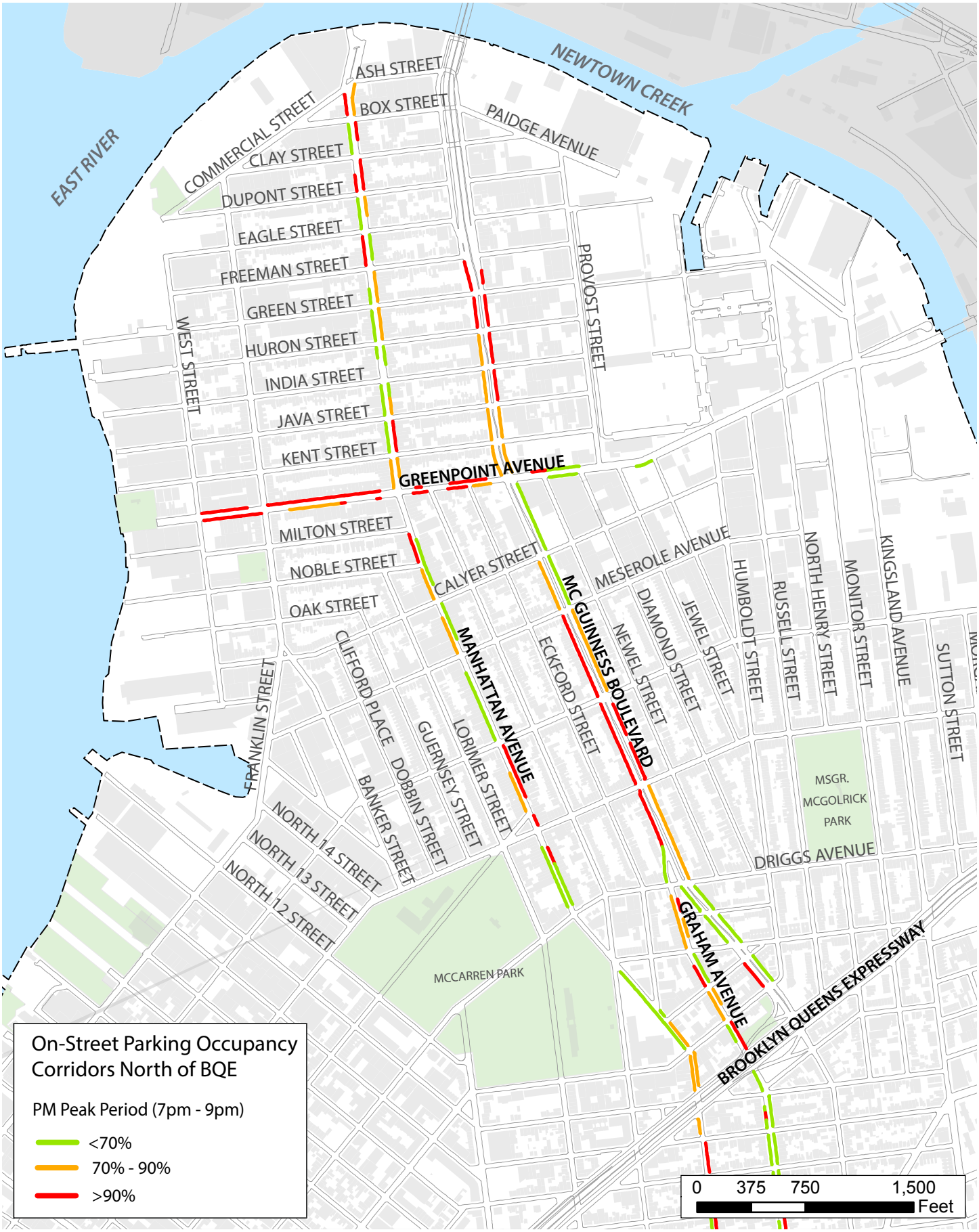


FIGURE 3.25: ON-STREET PARKING OCCUPANCY - CORRIDORS NORTH OF BQE PM

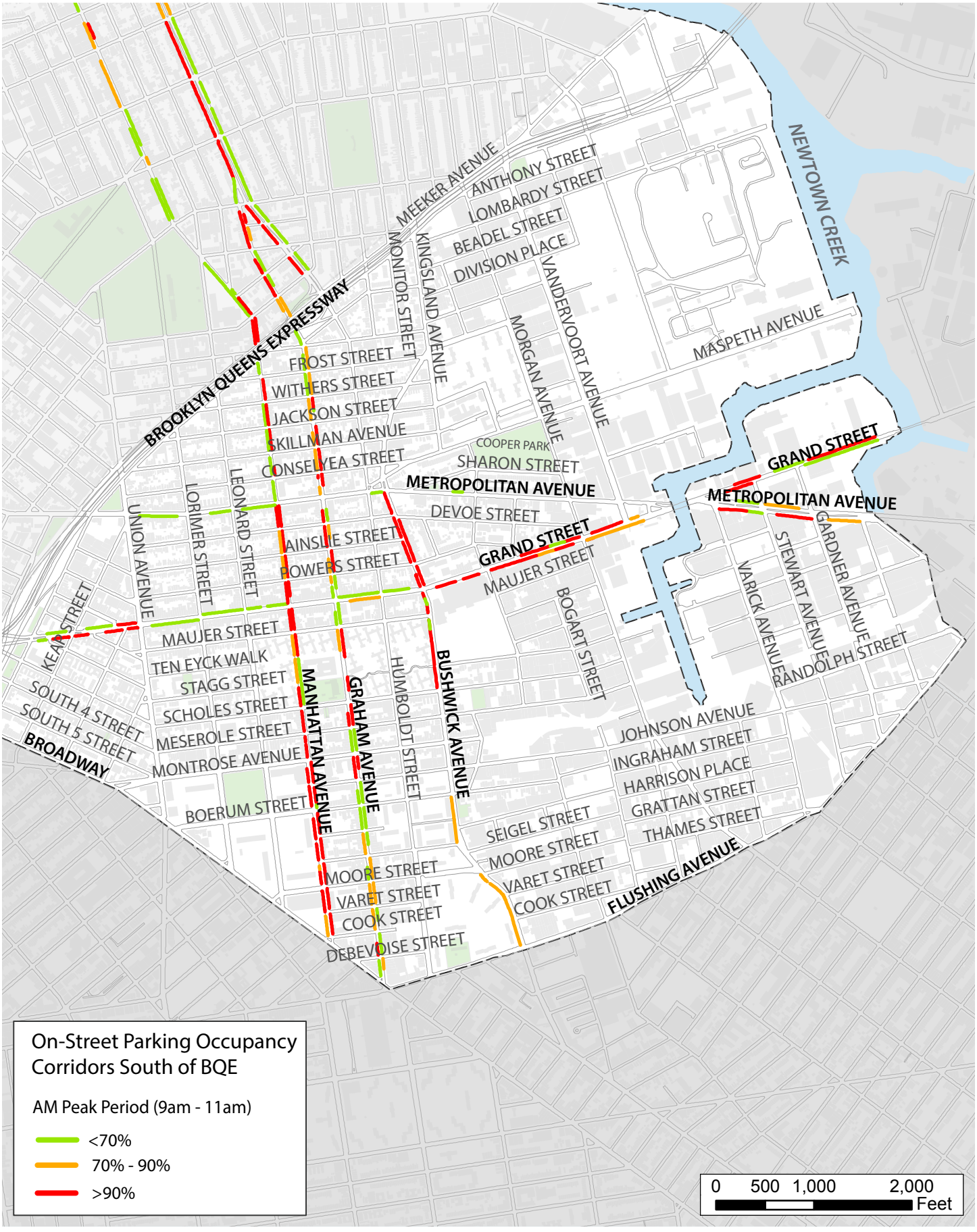


FIGURE 3.26: ON-STREET PARKING OCCUPANCY - CORRIDORS SOUTH OF BQE AM

North Williamsburg Transportation Study

BFJ Planning

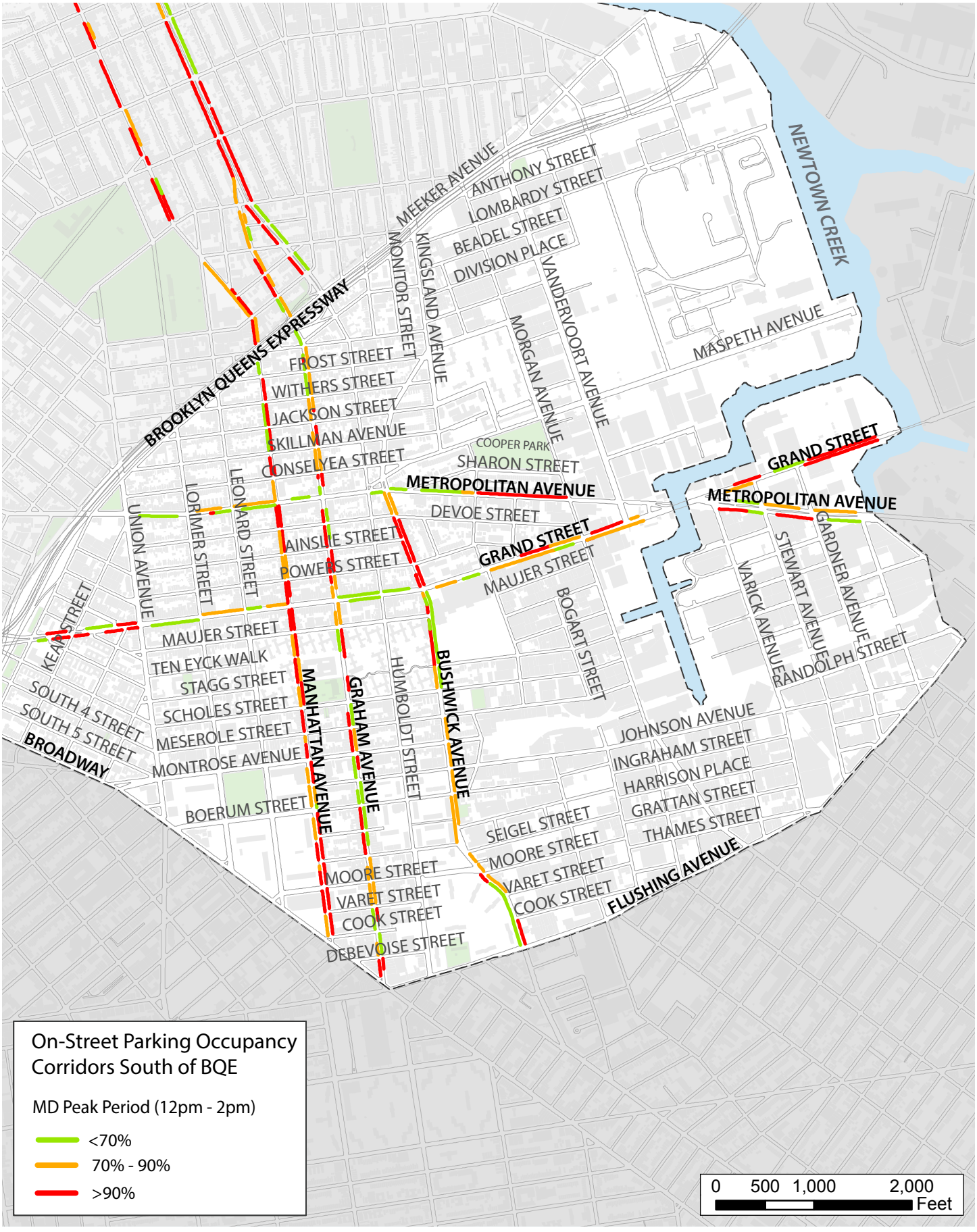


FIGURE 3.27: ON-STREET PARKING OCCUPANCY - CORRIDORS SOUTH OF BQE MIDDAY

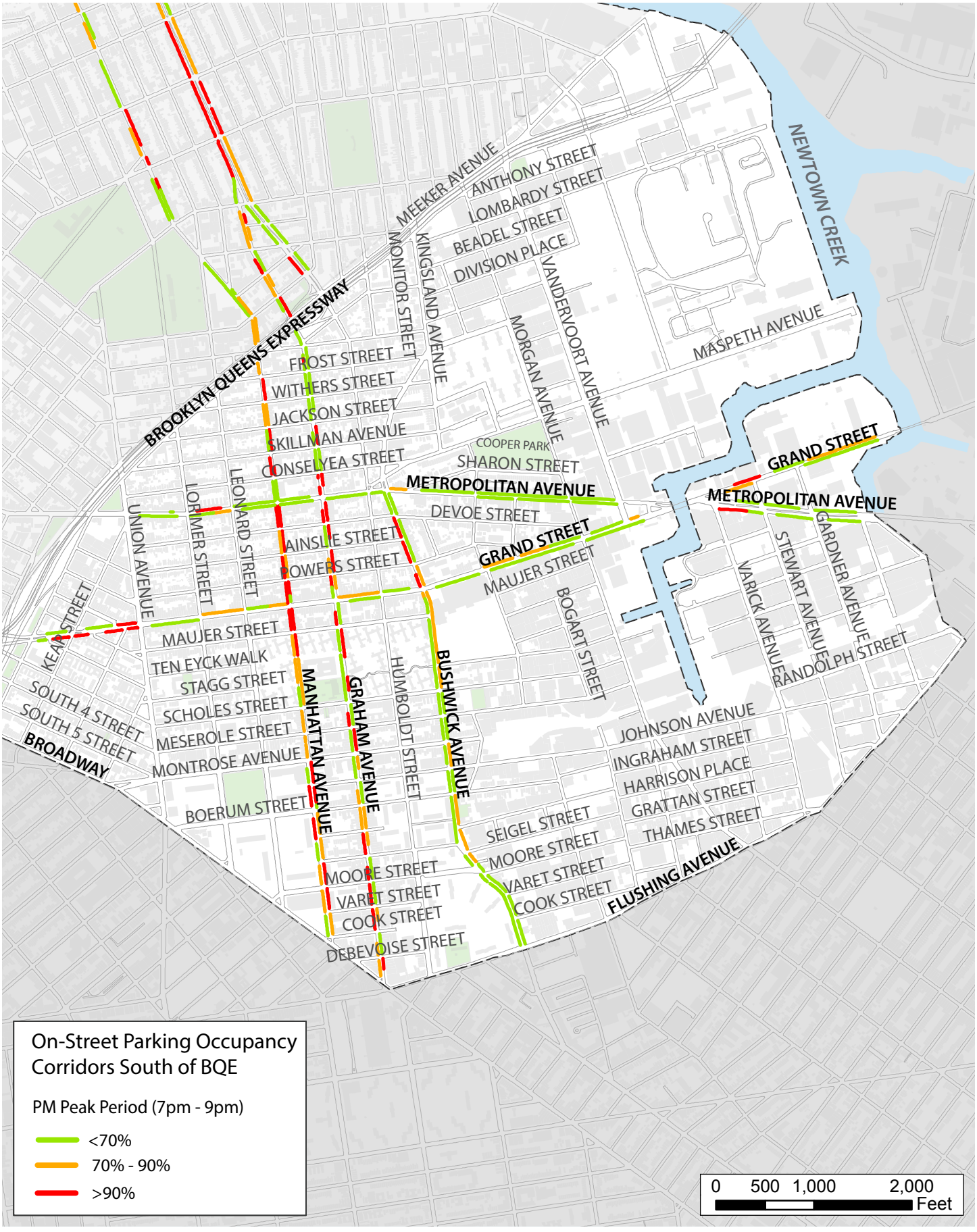


FIGURE 3.28: ON-STREET PARKING OCCUPANCY - CORRIDORS SOUTH OF BQE PM

FIGURE 3.29: BLOCKFACES EXCLUDED FROM OCCUPANCY SURVEY - FOCUS AREA 1

North Williamsburg Transportation Study

BFJ Planning

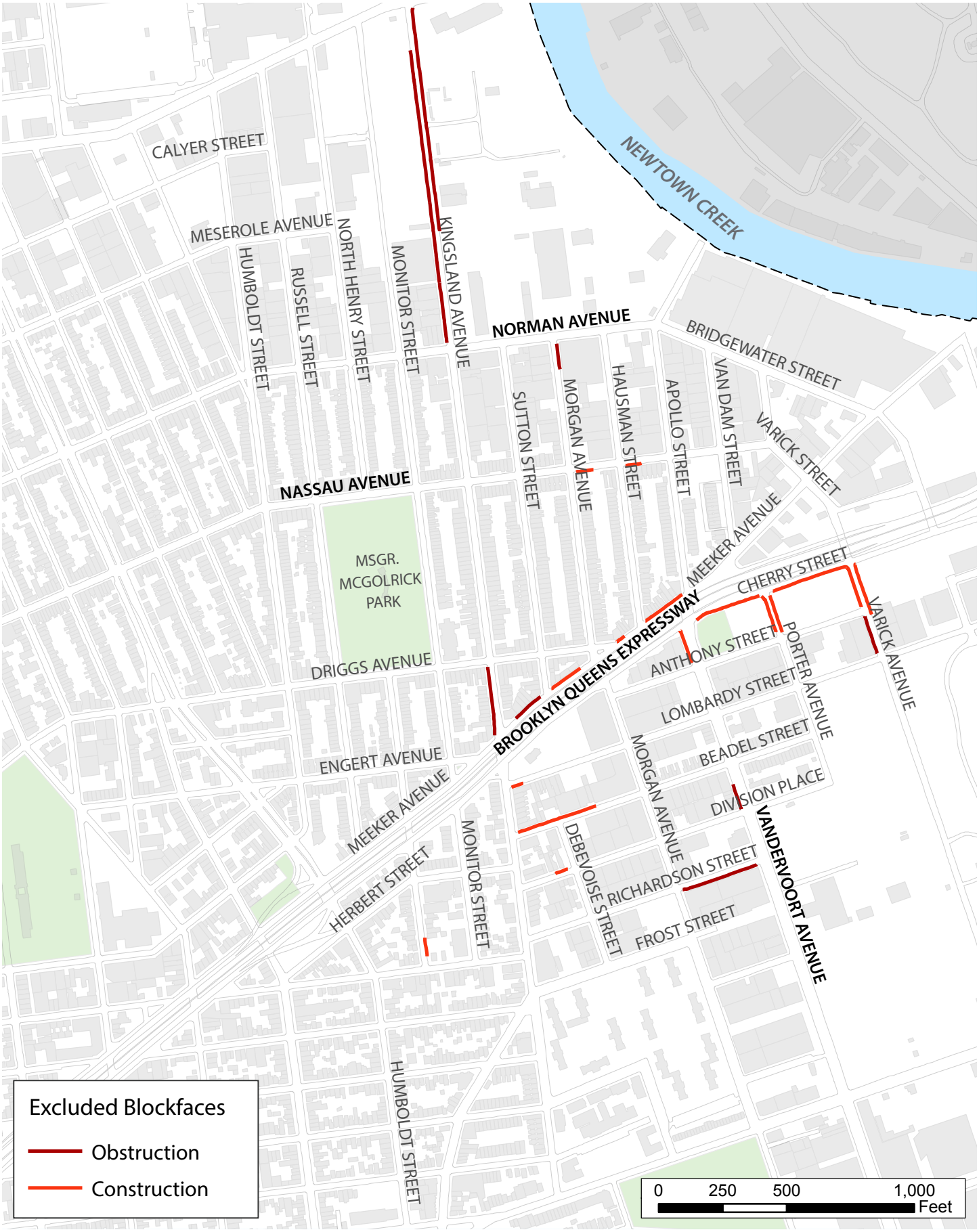


FIGURE 3.30: BLOCKFACES EXCLUDED FROM OCCUPANCY SURVEY - FOCUS AREA 2

North Williamsburg Transportation Study

BFJ Planning

FIGURE 3.31: BLOCKFACES EXCLUDED FROM OCCUPANCY SURVEY - CORRIDORS NORTH OF BQE

BFJ Planning

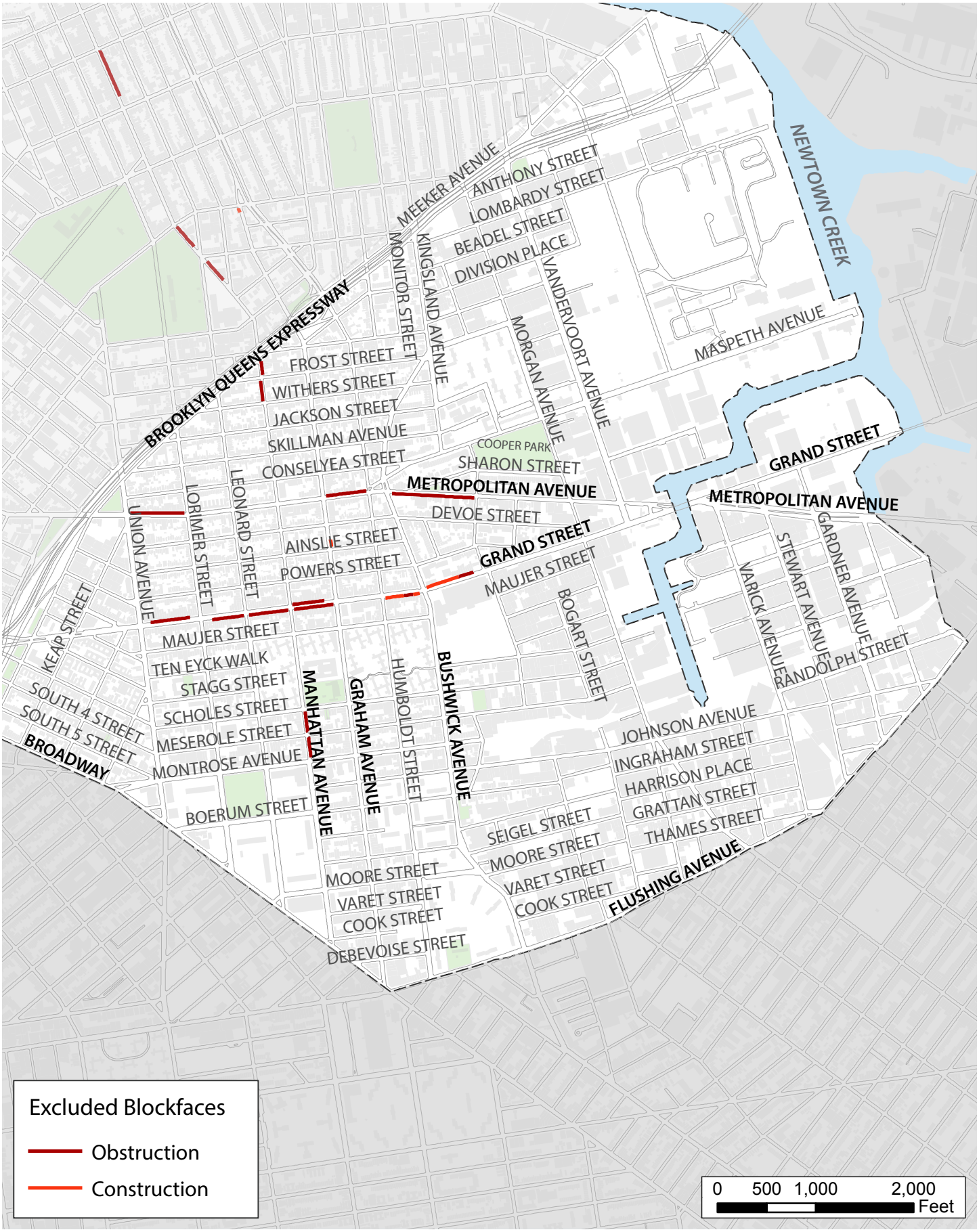
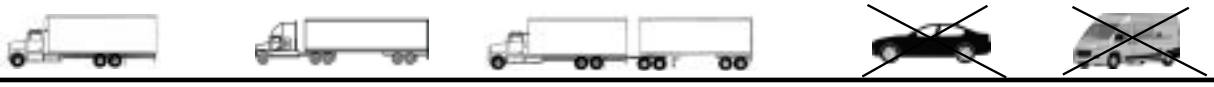


FIGURE 3.32: BLOCKFACES EXCLUDED FROM OCCUPANCY SURVEY - CORRIDORS SOUTH OF BQE

North Williamsburg Freight Truck Survey

NYC Department of Transportation and BFJ Planning are exploring the conditions and needs of the Industrial Business Zones in North Brooklyn. As a neighborhood stakeholder, your input is extremely valuable. This study is focused on understanding the movement of freight trucks (two axles and six tires, or three or more axles) in and out of North Brooklyn. An image of the types of trucks that are relevant for this study are provided below:



Business Information

1. Name: _____ 2. Title: _____

3. Name of Business: _____

4. Address: _____

5. Telephone Number: _____ 6. E-mail: _____

Please answer the following questions regarding typical freight activity at this location:

7. How do you identify your business? ☐ Manufacturing ☐ Storage ☐ Wholesale ☐ Repair ☐ Construction ☐ Retail ☐ Distribution ☐ Other: _____

8. What days of the week are you open for business? ☐ Mon. ☐ Tues. ☐ Wed. ☐ Thurs. ☐ Fri. ☐ Sat. ☐ Sun.

9. What are your hours of operation?: _____

10. Approximately how many employees work at this facility? _____ Employees

On a typical day, please describe the truck activity on your site:

11. How many trucks do you own and operate from this site? _____ Trucks

12. How many trucks are parked overnight on your site? _____ Trucks

13. Where does truck loading occur?: ☐ On Street ☐ Off Street

14. How many round trips are made by trucks (Outbound shipments) from this site? _____ Trucks/Day

15. How many trucks from other companies are received on this site(i.e. Inbound shipments)? _____ Trucks/Day

16. In the table below, please provide the percentage of trucks that arrive or exit your site during each time period

INBOUND SHIPMENTS						
Arrival Time	6AM - 9 AM	9AM - 3PM	3PM - 6PM	6PM - 10PM	10PM - 6AM	Total
Percentage						100%

OUTBOUND SHIPMENTS						
Arrival Time	6AM - 9 AM	9AM - 3PM	3PM - 6PM	6PM - 10PM	10PM - 6AM	Total
Percentage						100%

17. Do you have any concerns about truck routes, signage or other issues related to truck movements in the study area? _____

_____

_____

FIGURE 3.33: BUSINESS SURVEY

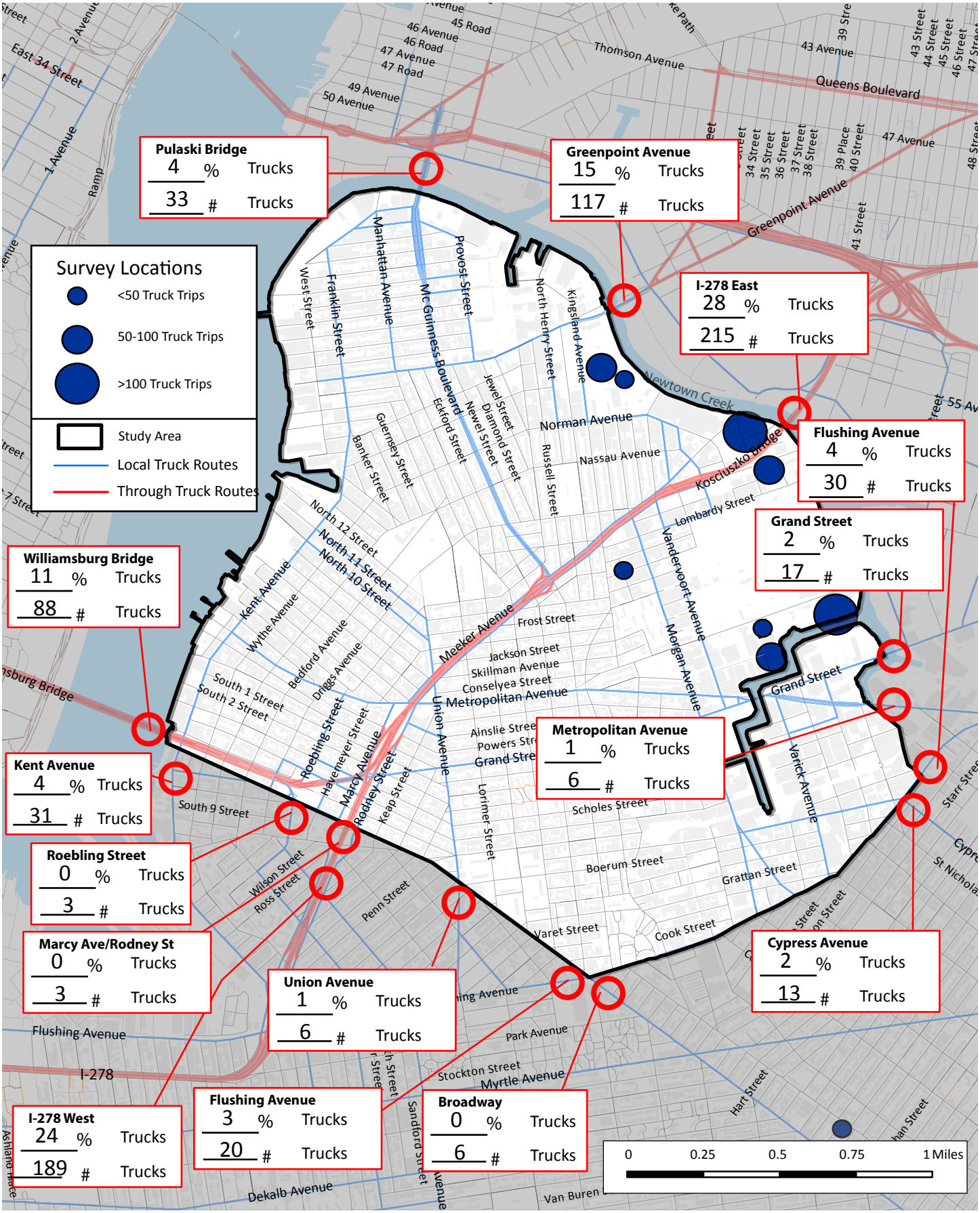


FIGURE 3.34: ORIGINS AND DESTINATIONS BASED ON SURVEY RESPONSES

North Williamsburg Transportation Study

BFJ Planning

APPENDIX B

Transit Report

North Williamsburg Transportation Study

North Williamsburg Transit Report

Issue | July 8, 2016

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 227520-33

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ARUP

Contents

Figures

Appendices

Appendix A

Additional Maps

Executive Summary – Williamsburg Transit Study

This study examined transit in Williamsburg, New York to identify potential issues related to transportation use and the ways in which these constraints can be relieved. The existing transit services were evaluated in the context of the travel demand for work trips and the performance parameters in the Transit Capacity and Quality of Service manual. Transit reliability data from the NYCDOT were compared to industry benchmarks.

The access to transit and the access to destinations by transit were quantified using a representation of the transit network in the morning peak period, based on GTFS data. Census data provided area context and information about work trip patterns.

Land use patterns in the study area were compared to the existing transit provisions. The evaluation found that there is good access to transit and good quality transit service available for home-based work trips originating in the study area; both in absolute terms and relative to elsewhere in New York City. Many study area residents work in Manhattan and nearby dense employment centres in Brooklyn and Queens, and use the rapid transit services leading to these workplace destinations. In contrast, there is a lower overall level of transit accessibility for home-based work trips to Williamsburg from external origins; accordingly, the mode share for inbound work trips is lower than for those outbound. Trips to and from the rest of Brooklyn are better served by transit compared to trips to and from most of Queens because of the differences in transit provision and directness, partly as a result of the barrier of the Newtown creek.

The effect of hypothetical network alterations on travel times and the resulting access to jobs and labour was tested. It was found that an L-train tunnel closure with no replacement service could affect the study area with reductions of more than 10% to the available jobs and labour force, while a potential Brooklyn-Queen connector line could increase jobs and labour access by up to 5%.

It is recommended that a detailed transit operations analysis be conducted in order to evaluate the potential benefit of suggested mitigation methods, including: bus priority measures on the corridors with lowest reliability, added connections to underserved areas to the East, modified ferry services, and transfer improvements. In addition, policies aimed at shifting travel modes are recommended. These include: travel demand management, parking regulations, transit-oriented policies for future land development.

1 Introduction

A Transit Study for North Williamsburg was conducted under Task Order 33 – North Williamsburg Transportation Study. The study area is bordered by the Newtown Creek, Flushing Avenue, Broadway and the East River.
The purpose of the work was to:

1. Document and analyze existing transit facilities;
2. Identify existing service gaps and needs;
3. Identify service provision problems/issues, pinch-points and street network capacity constraints/problems in relation to surface transit; and
4. Make recommendations that address the existing and future transit needs of the study area.

Section 0 below discusses the information that was available for the analyses.

This structure enables interrogation of the following research questions, which reflect the study brief:

- In what way could the study area's existing and future conditions influence transportation choices? (view Section 4)
- How well is the study area served by transit? (relative to nearby areas, and in the context of where people wish to travel) (Section 5, 7)
- Which transit lines are most used and are there any capacity issues? (Section 5)
- Could fares have an impact on transit usage in the study area? (Section 5)
- Where do study area residents travel to and does transit facilitate these trips efficiently? (Section 5, 7)
- Where do study area workers travel from and does transit facilitate these trips efficiently? (Section 5, 7)
- By what mode are commuters currently travelling to/from the study area and why? (Section 6)

The recommendations drawn from the combined analyses are discussed in Section 8, 9.

2 Performance Parameters

2.1 Service Frequency

Average Headway	Select TCQSM Notes
<=5 min	• Very frequent service, no need for passengers to consult schedules • Exclusive right of way is highly desirable to reduce external impacts on transit operations • Adding more frequency to add capacity may not be feasible or effective
6 – 10 min	• Frequent service, no need for passengers to consult schedules • Exclusive right of way is highly desirable to reduce external impacts on transit operations
11 – 15 min	• Relatively frequent service, but passengers will usually check scheduled arrival times to minimize waiting times at stops/stations • Maximum desirable wait time for the next service is bus or train if missed
16 – 30 min	• Passengers will check scheduled arrival times to minimize waiting times at stops/stations • Passengers must adapt their travel time to the transit schedule, often resulting in less than optimal arrival and/or departure times for them • Longest commuter bus headway
31 – 59 min	• Require passengers to check schedules arrival times • Passengers must adapt their travel time to the transit schedule, often resulting in less than optimal arrival and/or departure times for them
60 min	• Provides a minimal service level to meet basic travel needs • May be provided to meet a service coverage standard
>= 60 min	• Undesirable for urban transit

2.2 Access

Service Level	Select TCQSM Notes
>90% of service area population served	• Transit serves nearly all destinations within a community • Operator has made a policy decision to emphasize coverage over cost-efficiency • Portions of routes covering low density areas likely to be unproductive
>90% of transit-supportive area* served	• Transit serves nearly all higher-density within a community • Destinations located in lower-density areas may not be accessible
75-90% of transit-supportive area served	• Most destinations within higher-density areas are served, but not all • Balances coverage and cost-efficiency
50-74% of transit-supportive area served	• A majority of destinations within higher-density areas are served • Potential opportunity to add service, as many areas that could support service have no service
<50% of transit-supportive area served	• Service is typically provided only in the community's highest-density corridors • Operator has made a policy decision to emphasize cost-efficiency over coverage

*A *transit-supportive area* is defined in TCQSM as an area that has a residential density greater than 7.5 units per hectare or 10 jobs per hectare.

2.3 Passenger Load

Service Level	Select TCQSM Notes
Up to 50% seated load	• Perceived travel time = actual travel time • Unproductive service is condition occurs at the maximum load point in the peak direction
Up to 80% seated load	• Perceived travel time = actual travel time • Marginally productive service is condition occurs at the maximum load point in the peak direction
Up to 100% seated load	• Perceived travel time up to 1.1x actual travel time • Productive service • Often used as a standard for commuter transit, where passengers may be on the vehicle for long periods
Up to 125% seated load	• Perceived travel time up to 1.25x actual travel time for seated passengers and up to 2.1x for standees • Very productive service • Often used as a standard for off-peak bus service
Up to 150% seated load	• Perceived travel time up to 1.4x actual travel time for seated passengers and up to 2.25x for standees • Very productive service • Maximum design load for perk-of-the-peak conditions • High potential for boarding and alighting delays
Greater than 150% seated load	• Crush loading conditions • Passengers may choose to wait for the next vehicle • Perceived travel continue to go up • Likely to generate complaints about overcrowding

2.4 Reliability

On-time performance	Select TCQSM Notes
95-100%	• Achievable by transit services operating below capacity on a grade-separated guideway not shared with non-transit vehicles, with few infrastructure or vehicle problems
90-94%	• Achievable by transit services operating on a grade-separated guideway not shared with non-transit vehicles
80-89%	• Achievable by bus services in small- to mid- sized cities
70-79%	• Achievable by bus services in large cities
<70%	• May be best possible result for mixed-traffic operations in congested CBDs

2.5 Travel Time

Transit-Auto travel time ratio	Select TCQSM Notes
<=1	• Feasible when transit operates in a separate right-of-way and the roadway network is congested
1-1.25	• Feasible with express services or limited-stop service in an exclusive lane or right-of-way
1.25 – 1.5	• Tolerable for choice riders
1.5 – 1.75	• Round trip up to 1hour longer by transit for a 40 minute one-way trip
1.75 – 2	• May be best possible result for mixed traffic operations in congested downtown areas
>2	• Tedious for all riders

2.6 Creating a Transit Service Database

The first activity was to create an inventory of existing facilities and services. Using the latest available General Transit Feed Specification (GTFS) files for transit agencies in the New York Metropolitan Area, in addition to Ferry service data available from the NYCDOT Ferry Information website. GTFS files include geo-coded information for all physical stop locations, as well as detailed schedule information. GTFS files were imported and processed for: New York City Transit (NYCT) Subway, NYCT Buses, MTA Bus Co, Long Island Rail Road, Metro North Rail Road, New Jersey Rail and Bus, PATH rail, Nassau buses, and Westchester buses, using an Arup-developed tool. Ferry services and the JFK Airtrain were added manually.

As a result of the processing, a database was generated of stop locations, stopping patterns, service frequencies and scheduled stop to stop travel times, for six time periods (AM Peak, PM Peak, All Day, Midday, Evening and Overnight).

Service capacity was calculated for all services assuming an average bus capacity of 60 and subway capacities of 984 for the 4-car G-train and 1968 for the 8-car L-train capacities were not presented for the JMZ-train because ridership data was not available with which to compare, but they would be assumed to be the same as the L-train.

2.7 Assessing Strategic Transit Accessibility

Three key metrics were used to answer the questions that relate to how well transit serves the area and if transit is well positioned to serve trips in the area.

The first is an estimation of walk area catchments based on a pre-defined maximum walk distance, specified by NYCDOT as ¼ mile for bus stops and 1/3 mile for subway stations. This first assessment provides an indication of areas that may be outside the reach of transit but does not take into account the amount of service being provided at each stop/station.

The second is an Arup developed metric, the Access to Transit Score, based on Transport for London's Public Transport Accessibility Levels (PTALs). This is an estimation of transit service density presented as a 1-to-10 score, where 1 is low and 10 is high. This is a 'relative' measure, which was calibrated for this study so that 10 represents the highest levels of transit service being provided in the New York Metropolitan Area.

The Access to Transit is, essentially, a more sophisticated version of the basic stop/station catchment analysis that adds information on service frequency and walking distance to bus stops. A key statistic that is generated as a result is the number of people or jobs by Access to Transit score.

This Access to Transit metric, does not take into account where the services calling at the stops/stations are going to (i.e. if the services are going to where people want to go. a third metric was included, which is labelled 'Access to Destinations'. Access to Destinations, more than a metric is a tool that Arup has developed to help understand the number of destinations defined by the user that are reachable within a given maximum travel time, including walking and wait times. The Access to Destinations tool was used to estimate the number of jobs and people within 45 minutes of TAZ centroids in the study area, and the proportion of all trip origins/destination pairs of all modes that can be satisfied by transit within 45 minutes.

3 Methodology

3.1 Input Data

Data used as part of the study includes the following:

Information	Source
Transit ridership • Detailed information for ferries • Daily average by route for bus and by station for subways	NYCDOT
Service reliability statistics	NYCDOT
Transit service specifications (route, frequency, stop pattern) and stop locations	Latest available General Transit Feed Specification (GTFS) files and Ferry website
Transit service capacity	Estimate based on service frequency and average vehicle capacity
Demographics (population, income, car ownership)	Census 2010
Employment	Census Transportation Planning Package (CTPP) Part 2 – Workplace Based Data (2005-2010)
Travel to work trip matrices	CTPP Part 3 – Home-to-Work matrices (2005 – 2010)
Metropolitan Transportation Authority (MTA) Bus Time	Internet link provided by NYCDOT, 2014 archived data

3.2 Analysis

The table below lists the tasks with a brief description of the work undertaken for each. The analytical work focused on three variables:

- Site Context/Transportation Supply: transit service being provided in the study area
- Transportation Demand: demographics and employment characteristics of the study area as well as work trip patterns obtained from the CTPP
- Analysis of Transportation Service: comparison of demand versus supply identifying potential gaps in service and possible reasons for low transit mode share

Task	Work done
Inventory existing facilities	Collated transit service specifications and stop locations (sourced from latest available GTFS and Ferry website)
Collect transit ridership data	Mapped available ridership information. Only limited ridership data was available.
Map transit issues and network constraints	High-level analysis of transit service in North Williamsburg, looking at: • Supplied service vs sources of demand (i.e. population, employment) • Observed travel patterns • Analysis of transit accessibility impacts of introduction of BQX and L train closure
Develop conceptual recommendations	Developed conceptual recommendations related to service provision, policy and infrastructure

The Transit Capacity and Quality of Service Manual (TCQSM) defines six quality-of-service measures for fixed-route transit services, divided into measures of availability, comfort and convenience:

- Measures of Availability
  - Service Frequency – how often service is provided
  - Service Span – hours of service during the day
  - Access – where the service is provided
- Comfort and Convenience
  - Passenger Load – how many people use the service
  - Reliability – schedule/frequency of service adherence
  - Travel Time – transit time in relation to auto travel times

The analyses carried out as part of the work cover all points, with the exception of Service Span, as described in the following table:

Quality of Service Measure	TCQSM Description	Analysis
Service Frequency	Service conditions related to various transit headways.	For a more meaningful analysis, service frequencies are studied in the context of access to transit service (Section 7.1) and access to destinations (Section 7.2)
Service Span	Number of hours during the day when transit service is provided along a route	Not assessed
Access	Descriptive trade-offs between coverage and cost-efficiency are provided in the manual.	The access to transit analysis presented here offers a nuanced appraisal of transit access by taking frequency into account in addition to showing simple catchments of the areas served. (Section 7.1)
Passenger Load	Conditions on transit vehicles subject to varying passenger load levels.	Due to the lack of detailed ridership data, specific passenger loads could not be calculated. A relative comparison of the ridership and capacity of bus routes is provided instead. (Section 5.4)
Reliability	Various measures are listed, with detailed descriptions provided for on-time performance, headway adherence and excess wait-time. On-time performance is confirmed as the most widely used measure in the North American transit industry	Bus on-time performance data for 2015 is compared directly to benchmarks to describe the perceived desirability of buses in the context of mode choice (Section 6)
Travel Time	Ranges of a transit-to-auto travel time ratio to describe the passenger and operator perspective of various service levels.	The analysis presented in this report considers transit travel time independently, and places them in context by calculating the resulting number of destinations within a certain absolute transit travel time. (Section 7.2)

The TCQSM generally does not specify minimum or maximum values for each measure but instead, it provides descriptions of the quality of service for each measure for transit operators to interpret and apply. The tables below summarize some of the key descriptions of the measures, as described in the TCQSM.

4 Site Context

4.1 Study Area

The study area is comprised of three neighbourhoods in Brooklyn: Williamsburg to the southwest, East Williamsburg to the southeast and Greenpoint in the north. The area is bordered by East River on the west, Newtown Creek on the east and Flushing Avenue to the south (Figure 1).

The study area has changed rapidly in the past decade. In 2005, close to 200 blocks of Williamsburg and Greenpoint primary industrial use were rezoned to allow for inclusionary housing, waterfront redevelopment and new open space.[1] The rezoning made way for significant change and gentrification in the study area and it is still impacting neighborhood growth today.

A number of high density developments are newly opened, under construction or proposed, concentrated primarily along East River. For example, 1N4th is a 41-storey, luxury apartment building constructed on the river between Williamsburg Bridge and Bushwick Inlet Park. Studio apartments are available for $3,000 to $3,500 a month. The former site of the Domino Sugar factory, sitting slightly south of the 1N4th tower, is slated for office and residential redevelopment. These examples depict the changing urban fabric of the study area which will likely result in changes to job and population density, and travel patterns.

[1] NYC Government, 2006, http://www1.nyc.gov/assets/planning/download/pdf/plans/greenpoint-williamsburg/greenpointwill.pdf

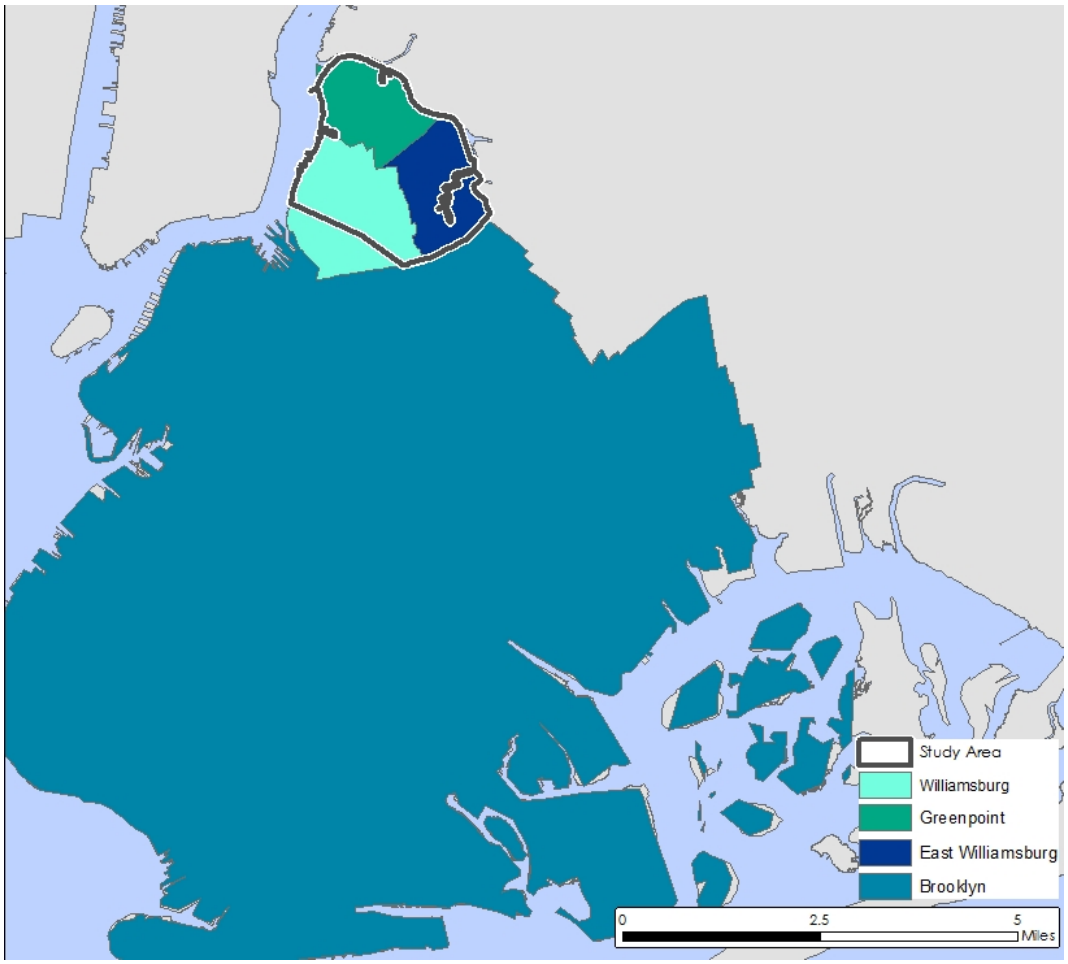


Figure 1: Study area neighborhoods

4.2 Land Use

The map in Figure 2 shows a distinct land use pattern. The east side of the study area along Newtown Creek and a smaller area along Bushwick Inlet are industrial, transportation or utility zones. The majority of the remainder of the study area is residential or mixed residential-commercial. The mixed-residential commercial spaces are concentrated typically around the subway lines while the parking facilities are concentrated in the industrial zone.[2]

[2] A concurrent study on parking in Williamsburg is underway and will provide additional information on parking supply and demand in the study area.

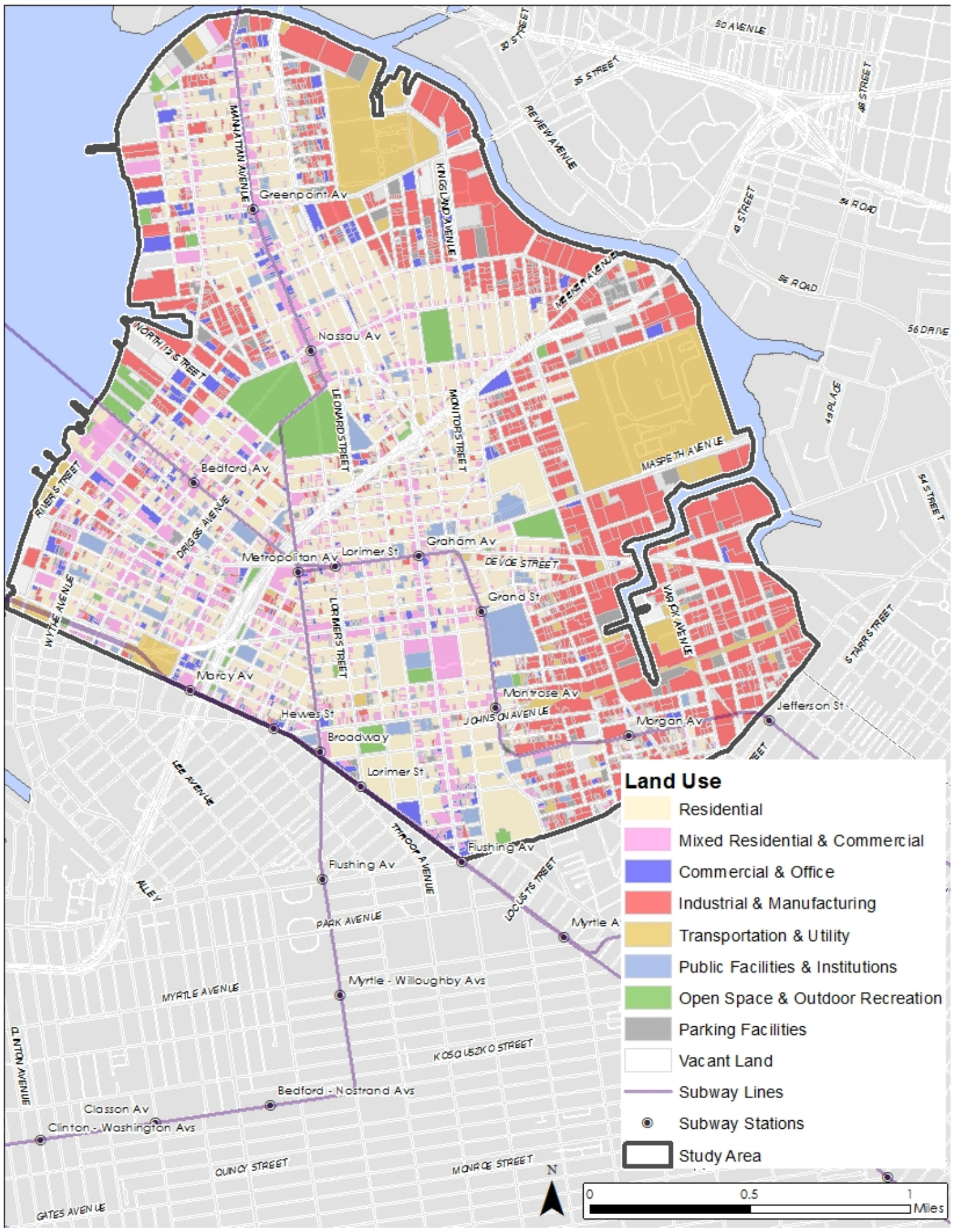


Figure 2: Land use in the study area

4.3 Income Distribution

The median annual household income for the majority of central Williamsburg residents is between $50,000 and $100,000, as shown in Figure 3. The southern portion of the study area along the J, Z and M subway lines has the lowest median household income with either between $25,000 and $50,000 a year or less than $25,000 a year.

When the study area is situated within a larger site context, the income level for residents is comparable to most of New York. The notable difference that emerges is the absence of a zone with median household income in a wage bracket higher than $100,000 per year. The average household income of the study area (~$50,000) is slightly higher than the Brooklyn average, higher than the Bronx, and lower than other New York boroughs, as shown in Figure 4.

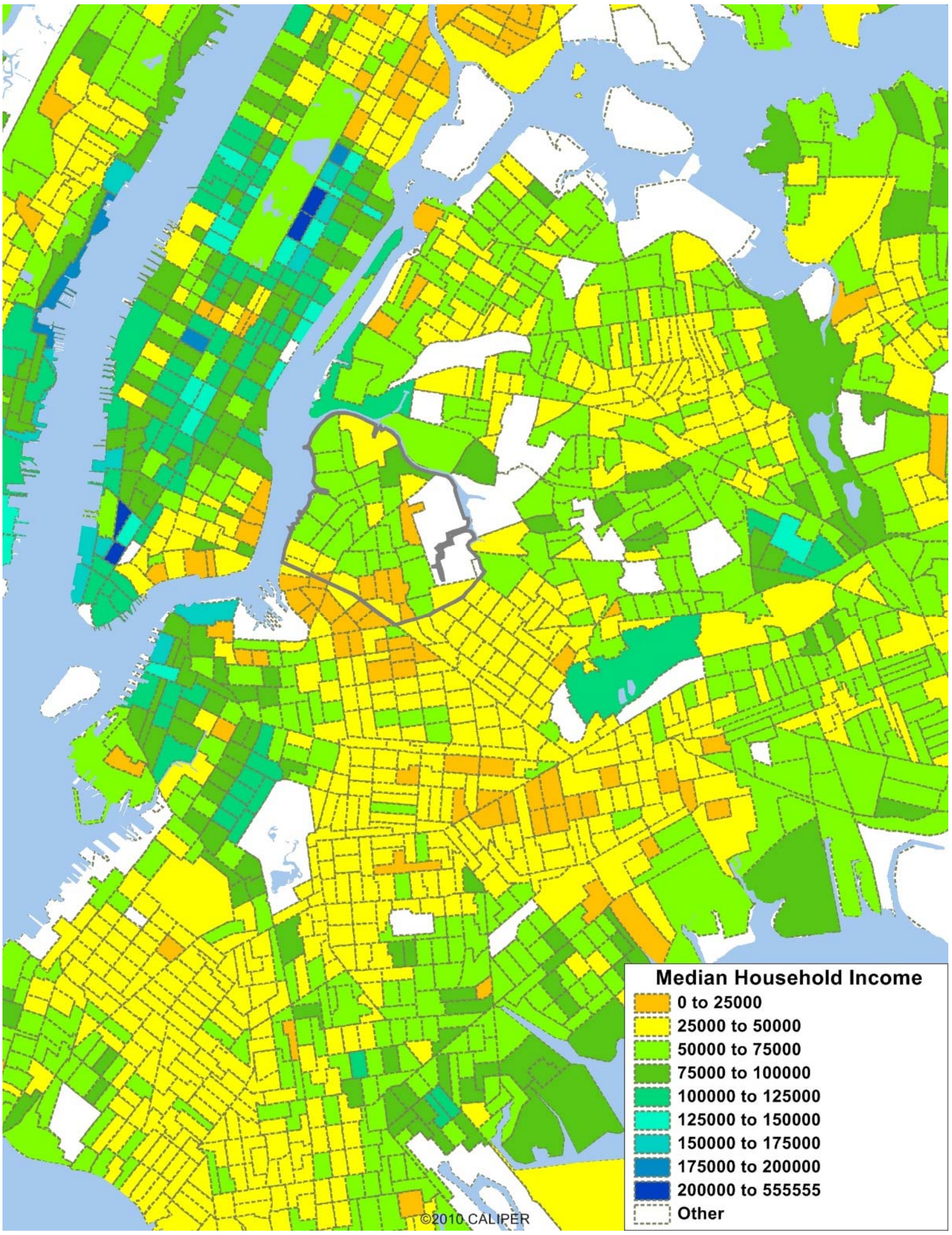


Figure 3: Site context median household income

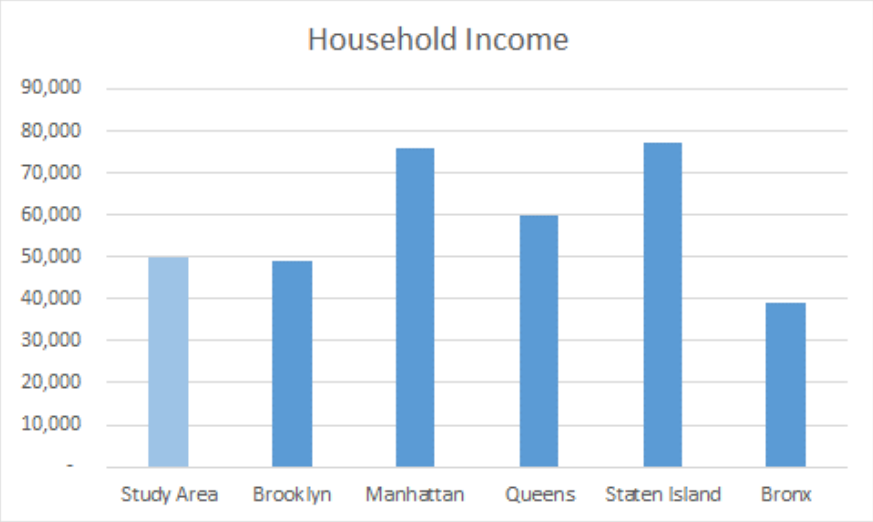


Figure 4: Household Income

4.4 Population and Employment Distribution

The population in the study area varies by location (Figure 5) and appears to correlate to the availability of transit. The higher population areas are centered generally along the subway lines while the low population areas border the river and the east industrial end of the study area. High density residential developments are currently being completed and/or planned, which may significantly alter the distribution of population in the areas, with large numbers of people potentially residing closer to the river than the subway.

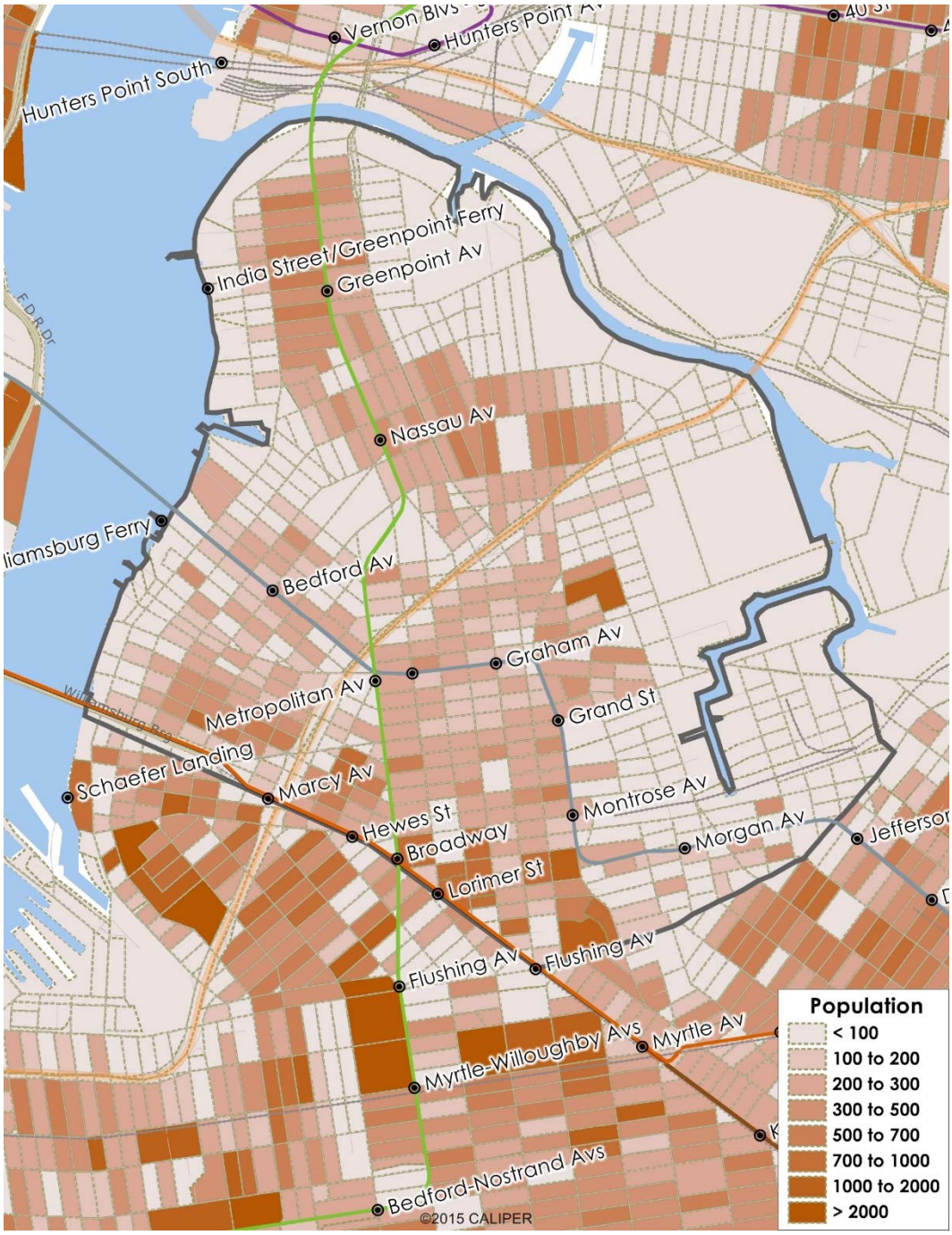


Figure 5: Population distribution study area

The employment distribution, density and job type maps, shown in Figure 6, Figure 7 and Figure 8, demonstrate that commercial jobs are clustered near the subway and industrial jobs, near the Newtown Creek Inlet, are supplied at lower density. Employment density is typically lower compared to downtown Brooklyn and Long Island City.

The predominant job types map (Figure 8) displays the category of work – professional, retail or industry - that captures the largest percentage of jobs in a given zone. The professional category includes information, administration, finance, education, health and social services jobs.

The zones along the J, Z and M lines are predominantly professional while the areas bordering the river and creek are predominantly industrial. There are some smaller zones scattered through the study area where the available jobs are primarily retail (near G and J subway stations). The area outside the study area in Queens is classified as industrial while other parts of Brooklyn are predominantly professional.

Figure 6: Employment distribution study area

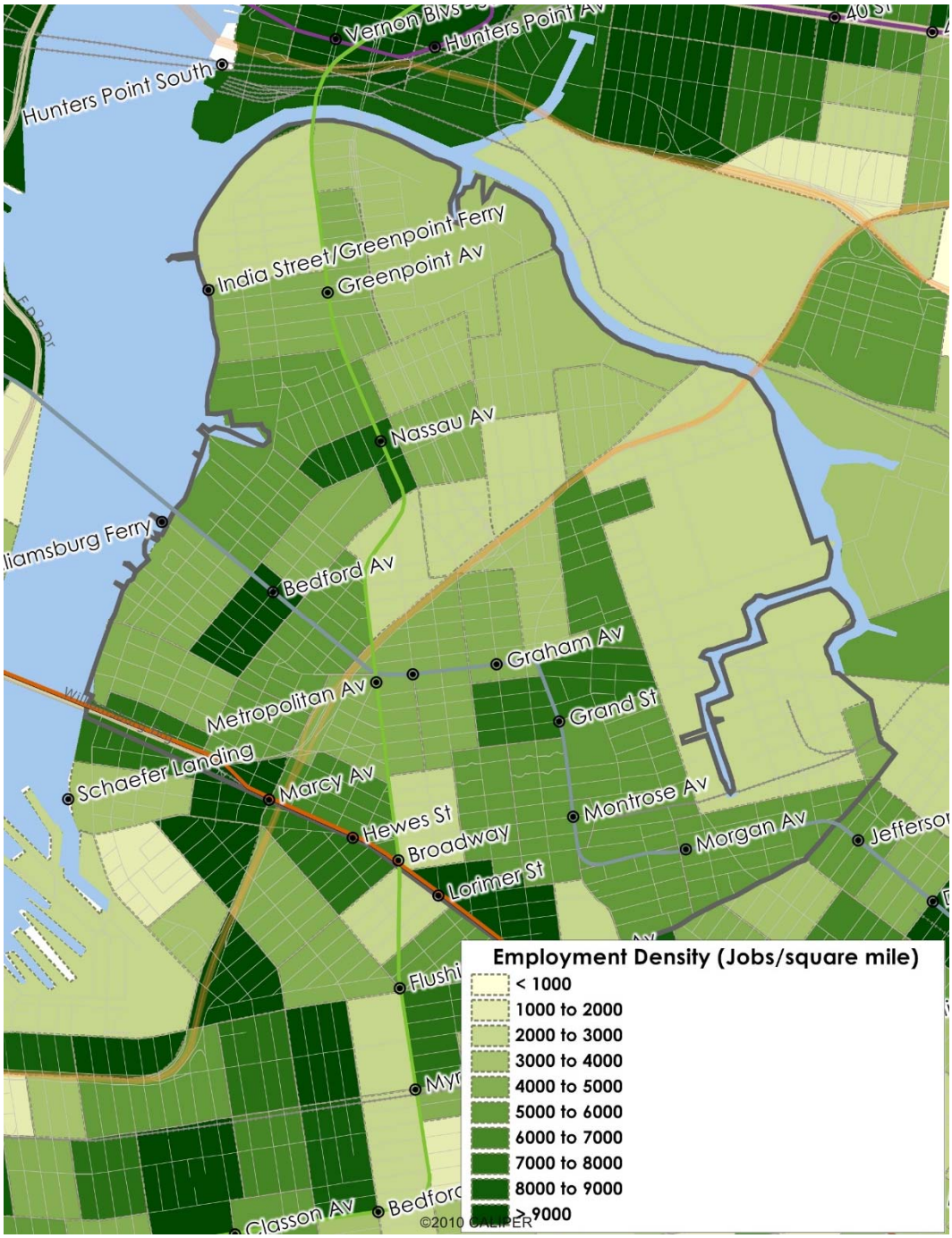


Figure 7: Employment density site context

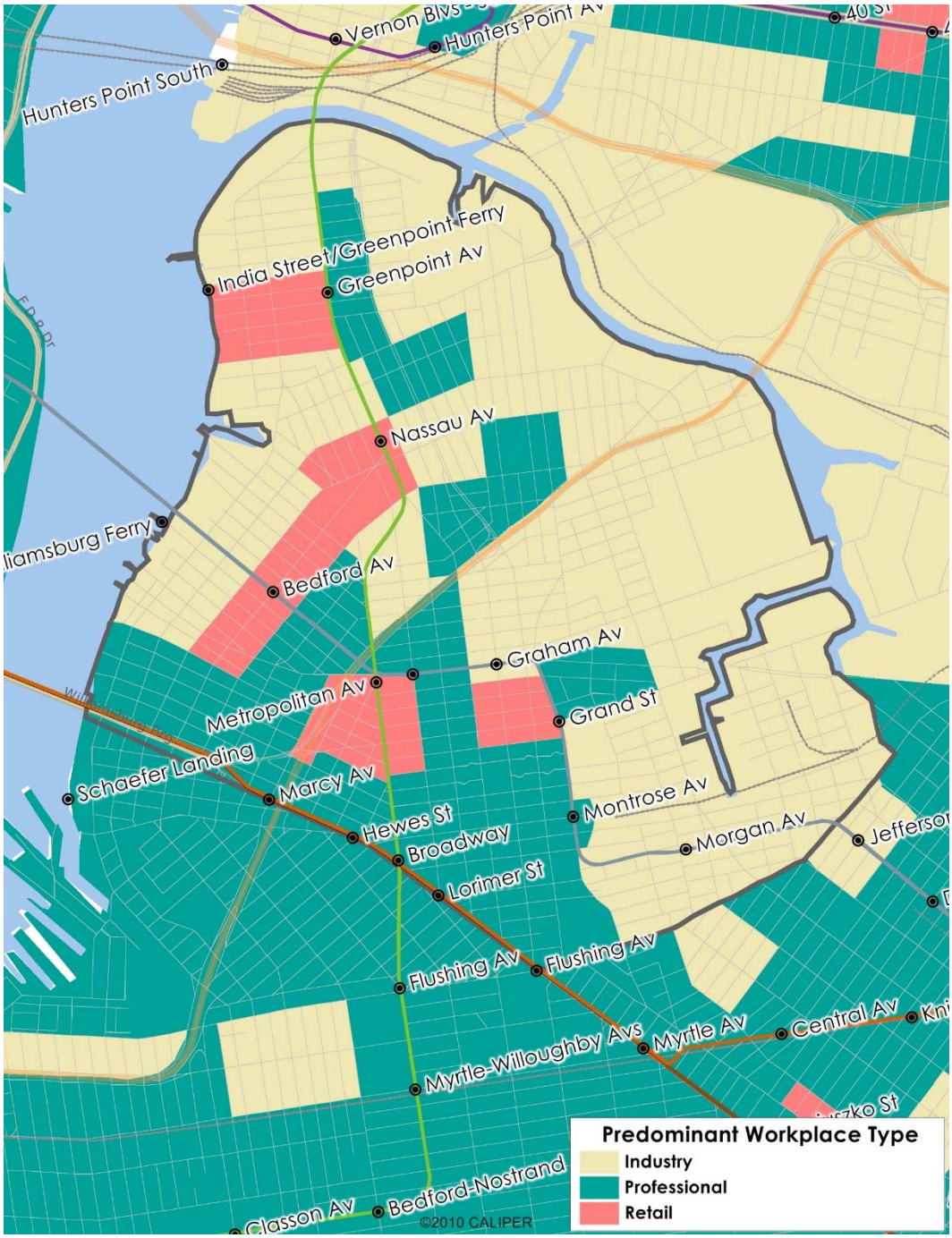


Figure 8: Predominant workplace type

5 Transit Diagnostics

5.1 Travel Costs

Figure 9 is a fare map showing the one-way transit commuting cost to jobs in Williamsburg (excluding journeys where an intermodal transfer is required[3]) from external locations. The map shows traffic analysis zones (TAZ) where at least 50 work trips to Williamsburg originate. The majority of origin zone trips within the New York City Transit (NYCT) jurisdiction and cost $2.75 if purchased with a pay-as-you-go MetroCard or $3.00 for a SingleRide ticket for direct trips to Williamsburg.

Figure 9 shows fares for trips from the origin zone that terminate outside of NYC, estimated from a sample of one-way fares originating at New York Penn Station and Grand Central Terminal. For example, a trip to Nassau would cost approximately $10.00 for a commuter fare plus the cost of NYCT, depending on the trip origin.

Transit users can purchase a 30-Day Unlimited Ride MetroCard which costs $116.50 and can be used for unlimited subway or local bus trips.[4] Transit systems not included in the MetroCard scheme include PATH, AirTrain and Express Buses.

The ferry costs $4 for a single weekday ride, $190 for a 30 day pass with a bicycle or $160 without.[5]

[3] Passengers must pay a second fare when transferring between transit services.
[4] Information on MTA fares were accessed from the following website http://web.mta.info/metrocard/mcgtreng.htm
[5] Information on the ferry fares were accessed from the following website http://www.eastriverferry.com/fareinfopolicies/#

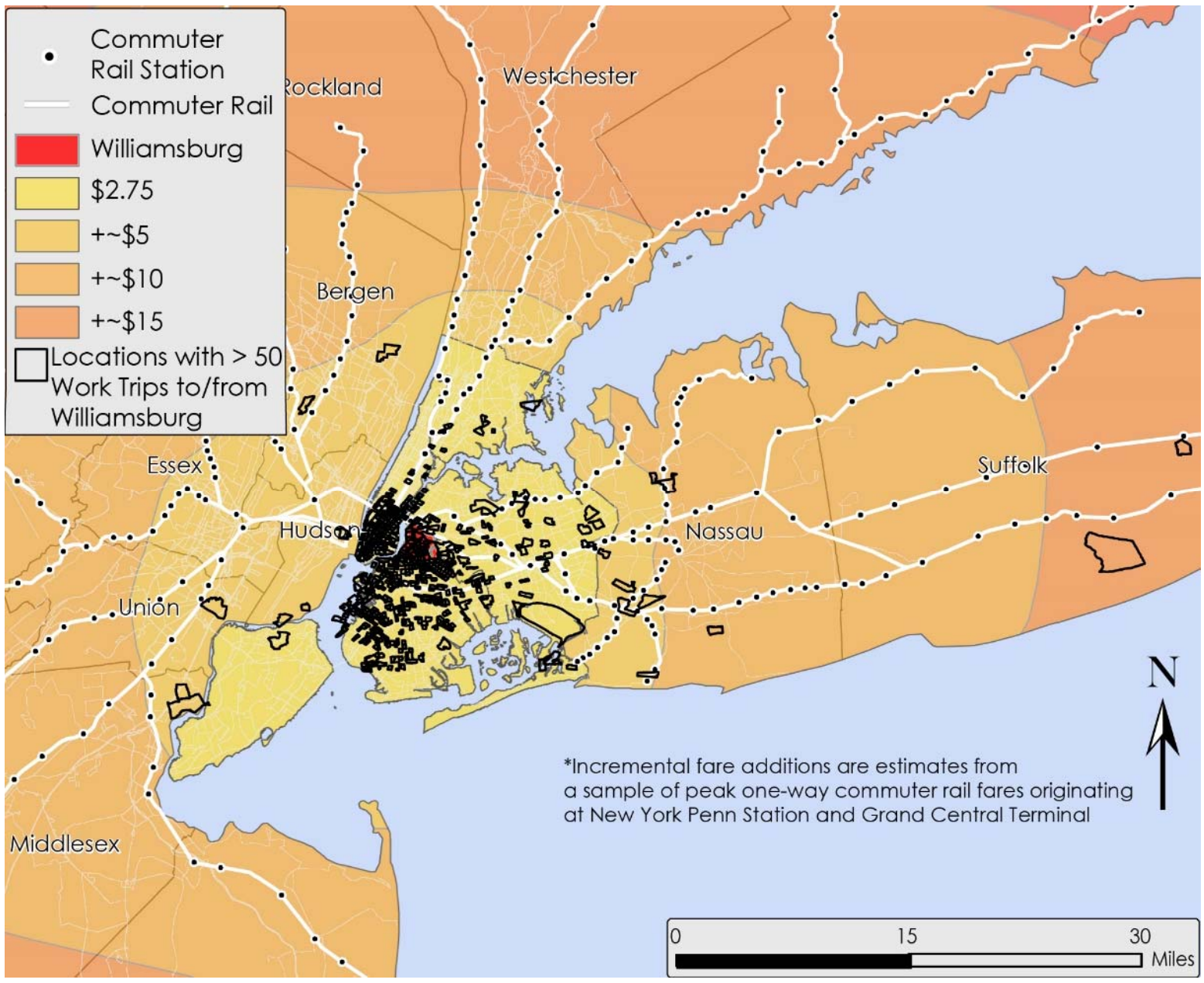


Figure 9: Fare map Metro NY Region

5.2 Transit Supply

The dimensions of transit supply considered in this study include available services, coverage, frequency and capacity. The transit services available in the study area and the service headway are described in Table 1 and shown in Figure 10 and Figure 11.

Table 1: Transit service description

Transit Route	Route Description	Headway
Subway		
Subway G Line	Links central Brooklyn and west Queens	7 min AM peak, 8 min allday
Subway J Line	Provides local and rush hour express service between Queens, Brooklyn and Lower Manhattan, operating on same alignment as Z Line	7 min AM peak, 9 min allday
Subway Z Line	Provides rush hour express service between Queens, Brooklyn and Lower Manhattan, operating on same alignment as J Line	30 min AM peak direction only
Subway L Line	Links 14th Street in Lower Manhattan and Carnarsie Local in East Brooklyn	4 min AM peak and off-peak
Subway M Line	Operates in loop pattern between central Queens, lower Manhattan and western Brooklyn, and terminates in central Queens	7 min AM peak, 9 min allday
Ferry		
Ferry	Two stops in study area and two just outside it. The ferry crosses to/from Lower Manhattan, operates between five stops on the east side of the East River and crosses to the Midtown/West 39th St Manhattan ferry terminal.	30 min allday
Bus		
Brooklyn B24	Williamsburg - Greenpoint	18 min AM peak, 25 min allday
Brooklyn B32	Williamsburg - Long Island City	36 min AM peak, 31 min allday
Brooklyn B39	Williamsburg Bridge Plaza - Lower East Side	40 min AM peak, 32 min allday
Brooklyn B43	Greenpoint - Lefferts Gardens	9 min AM peak, 12 min allday

Brooklyn B46	Kings Plaza - Williamsburg	6 min AM peak, 8 min allday
Brooklyn B48	Lefferts Gardens - Greenpoint	12 min AM peak, 18 min allday
Brooklyn B57	Gowanus - Maspeth	12 min AM peak, 16 min allday
Brooklyn B60	Williamsburg - Carnarsie	9 min AM peak, 12 min allday
Brooklyn B62	Downtown Brooklyn - Long Island City	8 min AM peak, 13 min allday
Queens Q54	Williamsburg - Jamaica	8 min AM peak, 12 min allday
Queens Q59	Williamsburg - Rego Park	10 min AM peak, 14 min allday

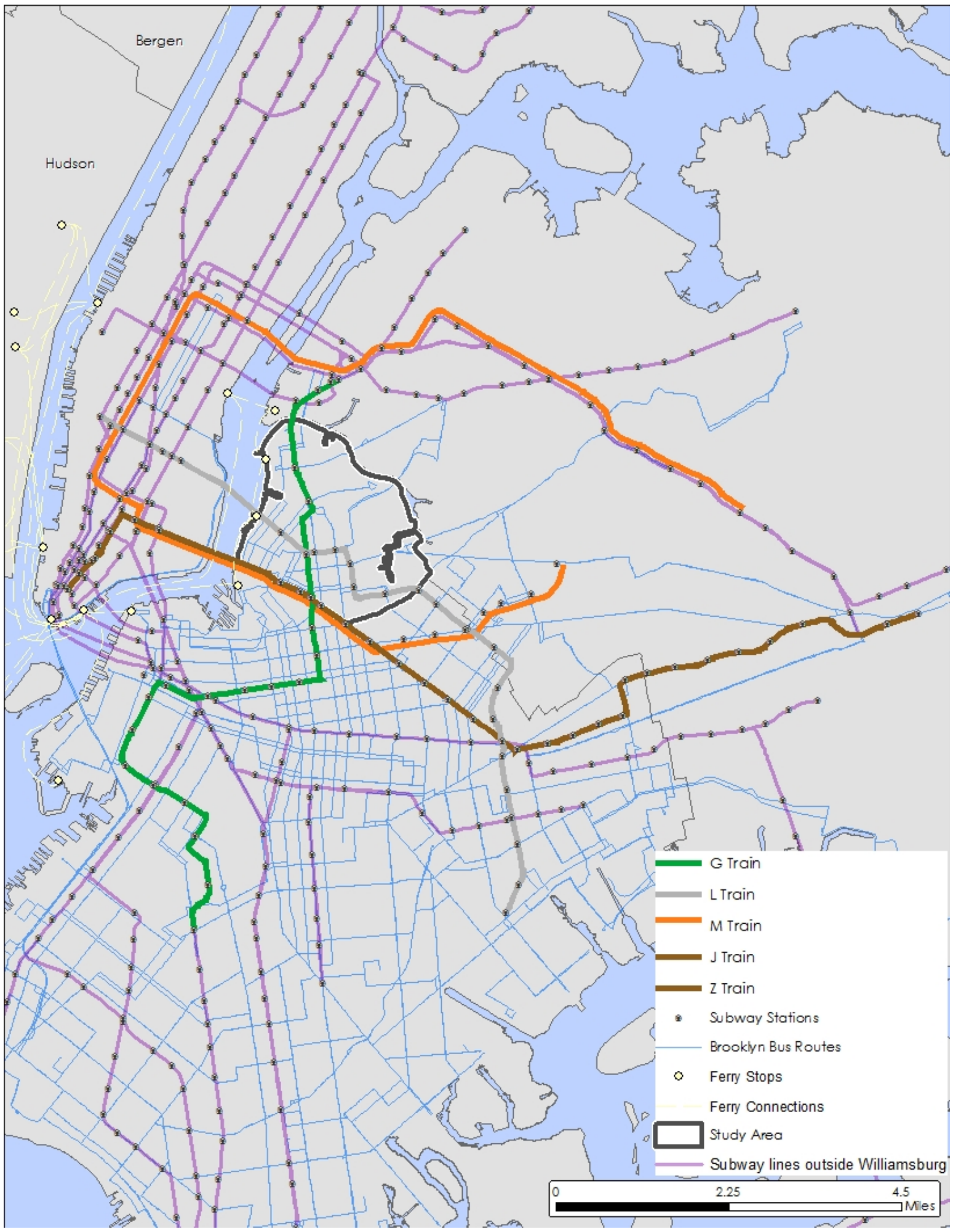


Figure 10: Transit services

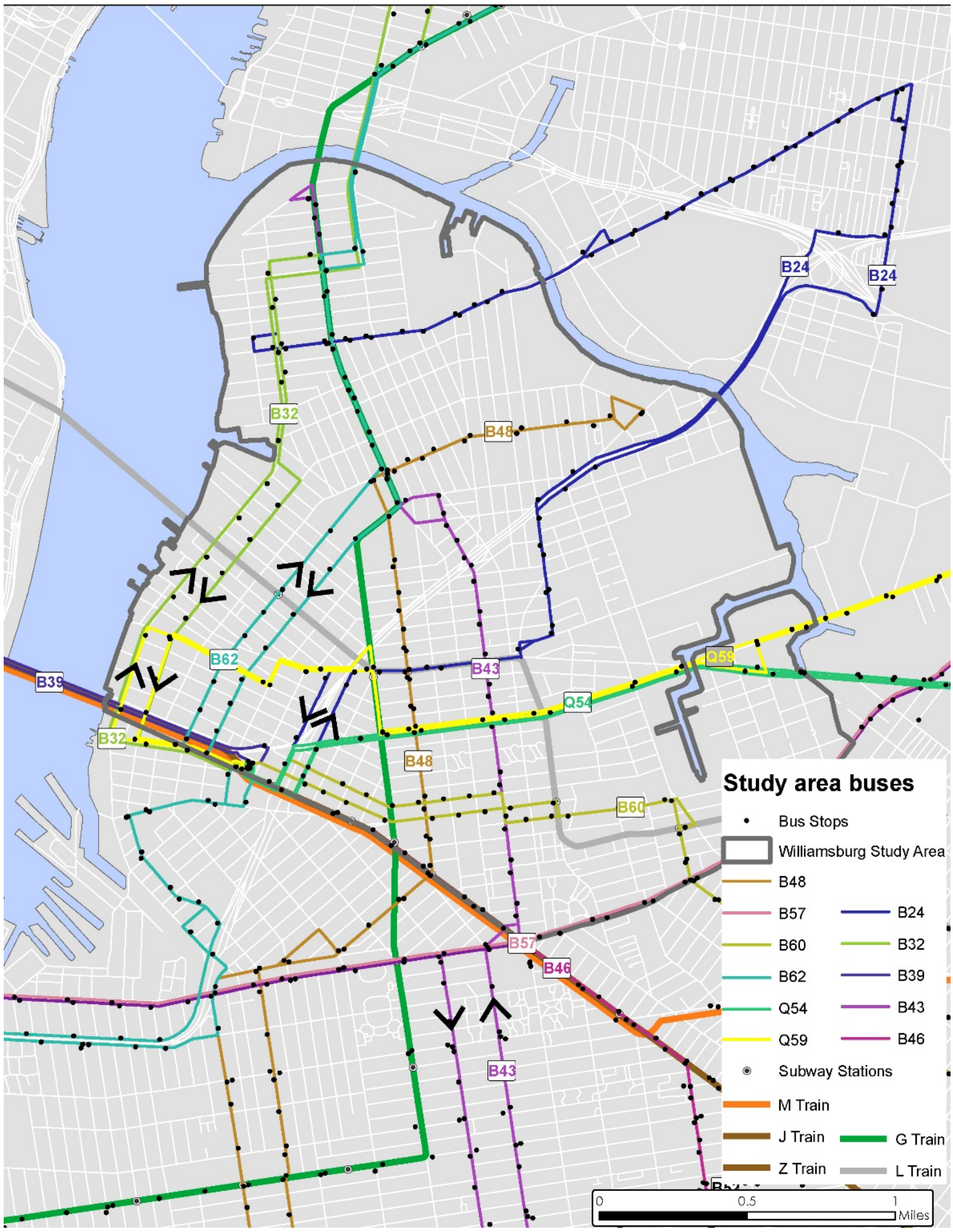


Figure 11: Study area bus routes

Figure 12 shows where the Citi Bike station locations are relative to the transit lines. While there is a variation in the number of bikes available at each station, Citi Bike stations evenly cover Williamsburg and a portion of Greenpoint. There are no stations located east of Bushwick Ave/Kingsland Ave, the area where industrial and manufacturing are predominant. Citi Bikes can help transit users get to or from the station and may be an alternative to walking or using the bus for the first/last leg of a trip.

Figure 12: Citi Bike stations

Maps of morning peak frequency for subway (by direction) and bus routes (average one-way) are shown in Figure 13 and Figure 14. The J, Z and M corridors operate at around 3.5-minute headways in each direction in the morning peak hour. Grand Avenue has the most frequent bus service in the study area (multiple routes) with headways of approximately 2 minutes westbound and 5 minutes eastbound in the morning peak.

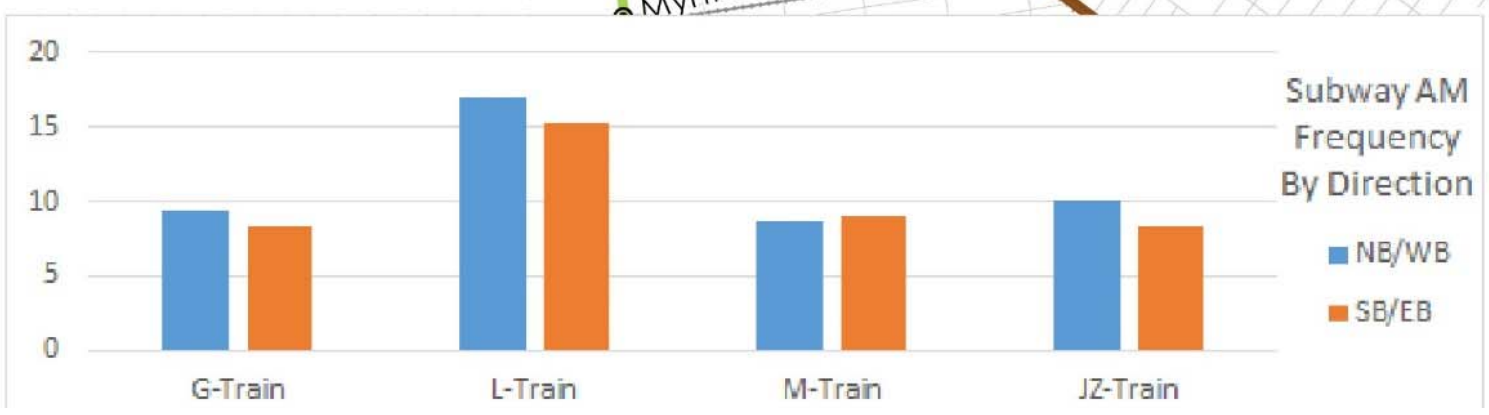
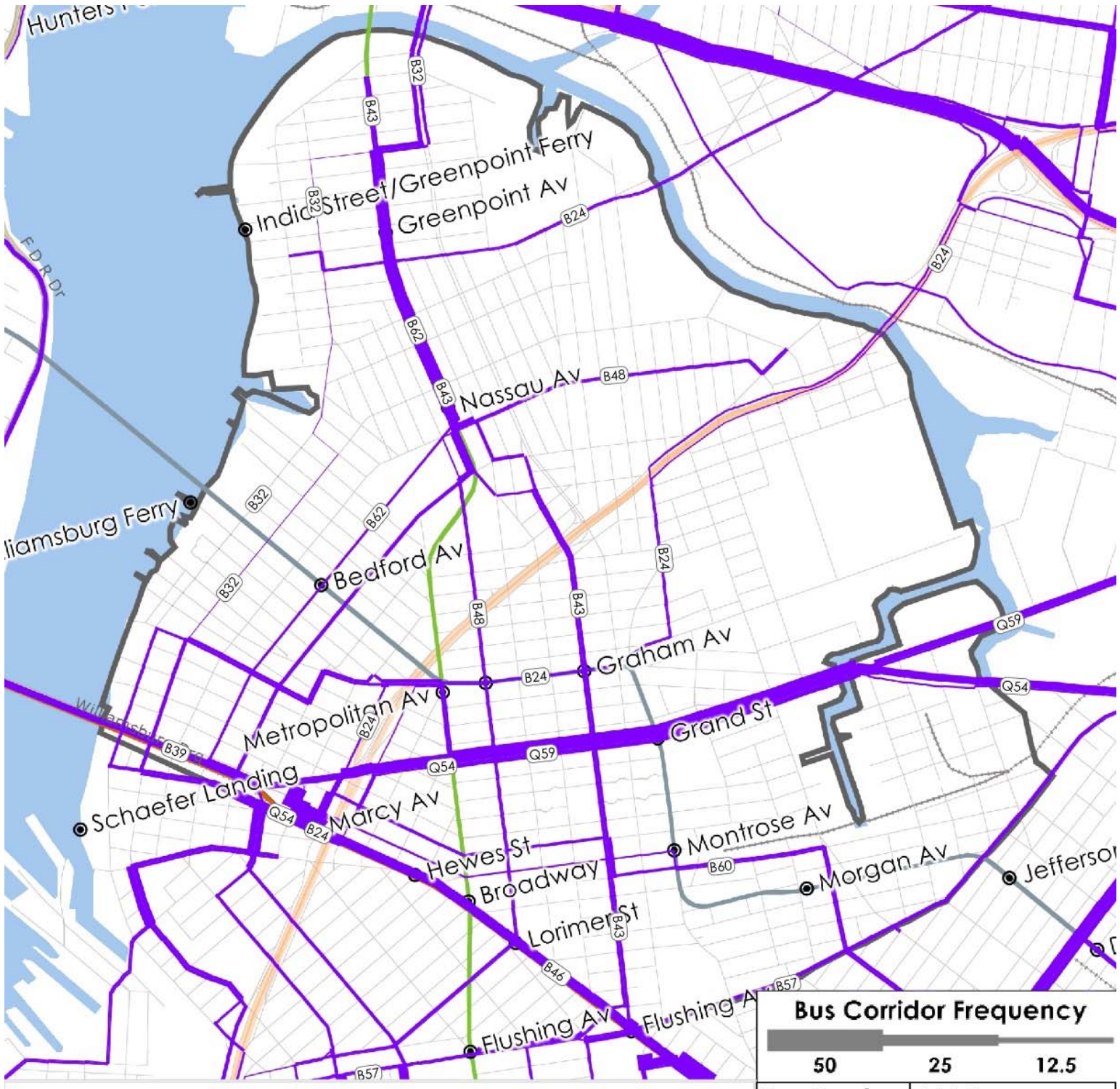
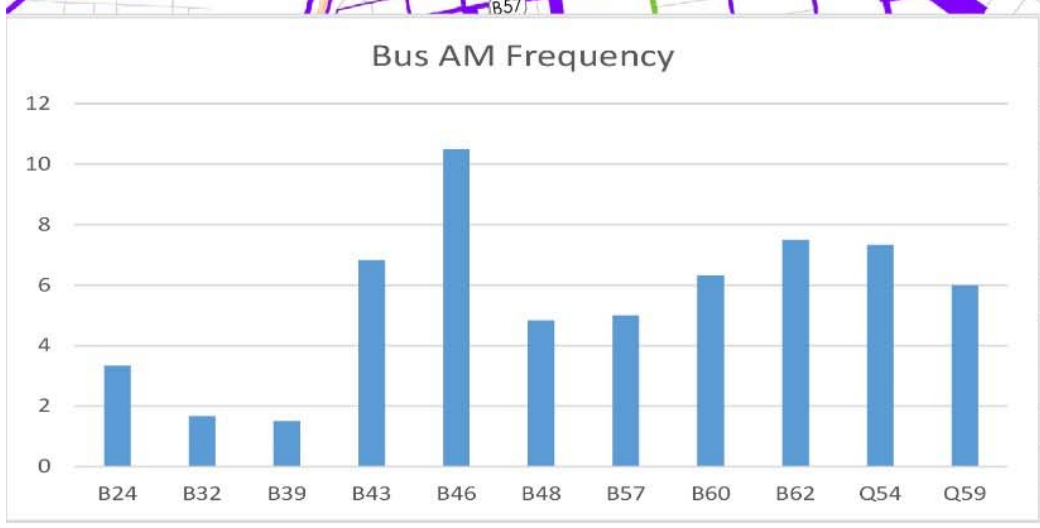


Figure 13: AM Peak hour service frequency by subway route





Bus Corridor Frequency

50 25 12.5

Bus Route	AM Frequency
B24	3.3
B32	1.7
B39	1.5
B43	6.8
B46	10.5
B48	4.8
B57	5.0
B60	6.3
B62	7.5
Q54	7.3
Q59	6.0

Figure 14: AM Peak hour service frequency by bus route

The subway routes and bus services along Grand Ave offer the greatest overall daily transit corridor capacity (Figure 15). The east industrial zone and northern study area have limited bus capacity.

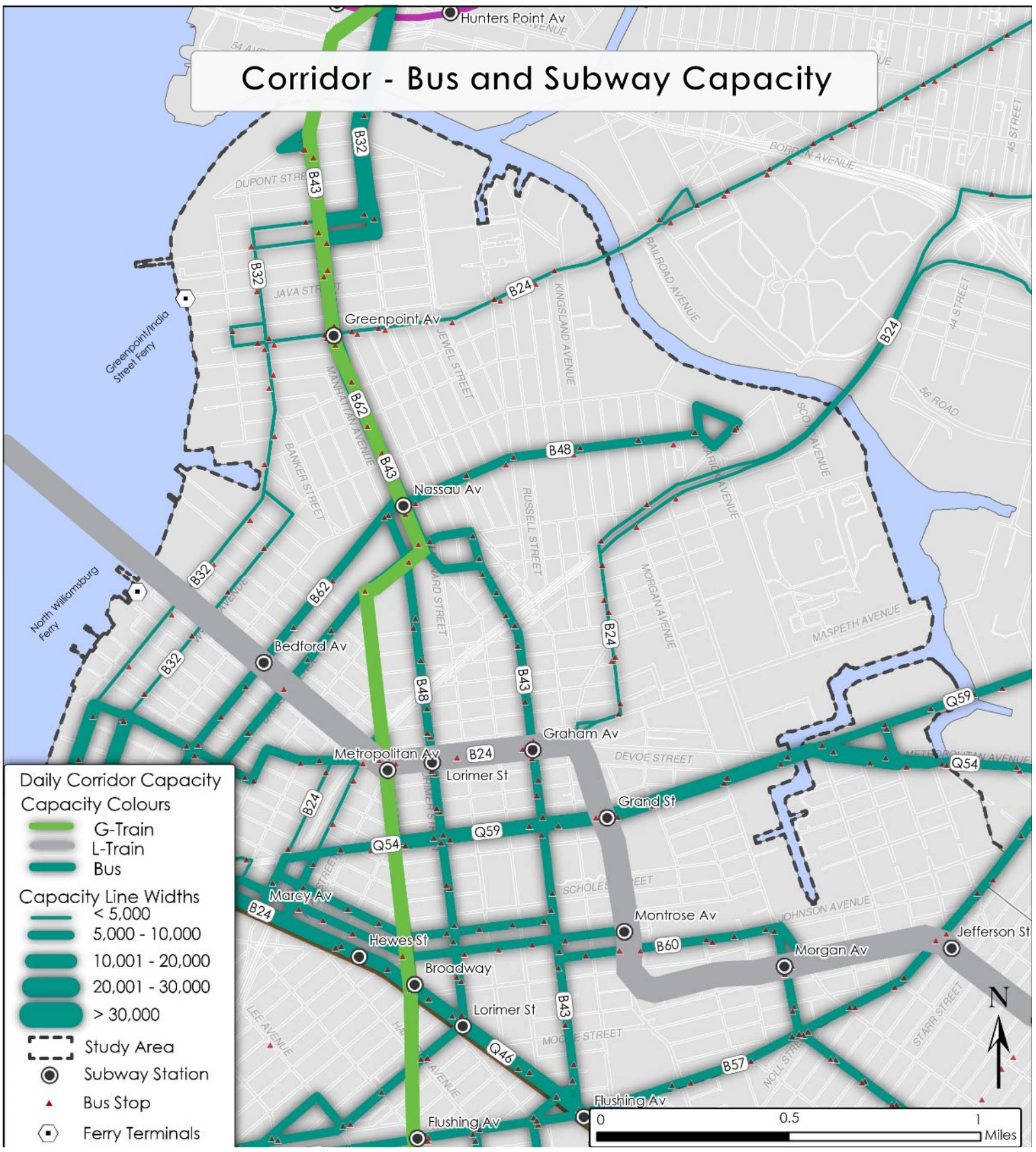


Figure 15: Bus and subway corridor capacity

5.3 Travel Demand

The analysis used the latest available (2005-2010) Census Transportation Planning Package (CTPP) data, relating to work trips, in order to better understand trip making in the study area. Figure 17 shows the geographic distribution of work trips from and to the study area.

More than half of the work trips made by Williamsburg residents are to lower Manhattan, with many others (~30%) ending in Brooklyn including some in the study area itself (~1/3 of trips within Brooklyn). Some Williamsburg commuters work in Queens including some trips to JFK and LaGuardia airports and downtown Long Island City.

Home-based work trips terminating in Williamsburg are more geographically dispersed. Most Williamsburg employees are Brooklyn residents (~50%) from areas across the borough including many study area residents. A large proportion of work trips to the study area originate in Queens (~20%), mostly in dispersed residential areas to the east. There are relatively few (less than 5%) commuting trips to the area from Manhattan.

There are approximately 104,000 commuting trips originating in or destined for the study area per day according to CTPP data with 56% of trips generated by residents of the study area and 44% by people who live elsewhere.

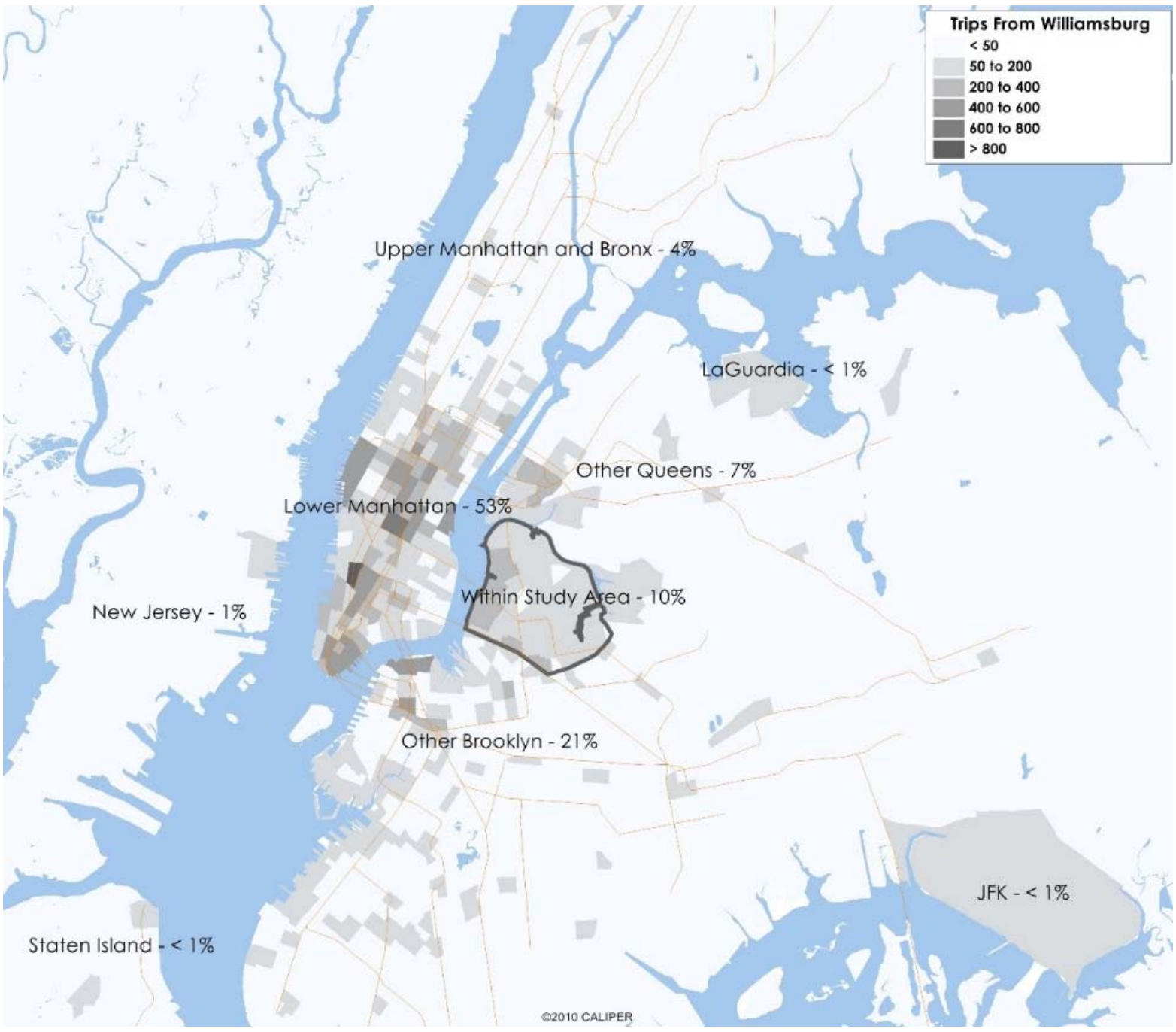


Figure 16: Work trips from study area

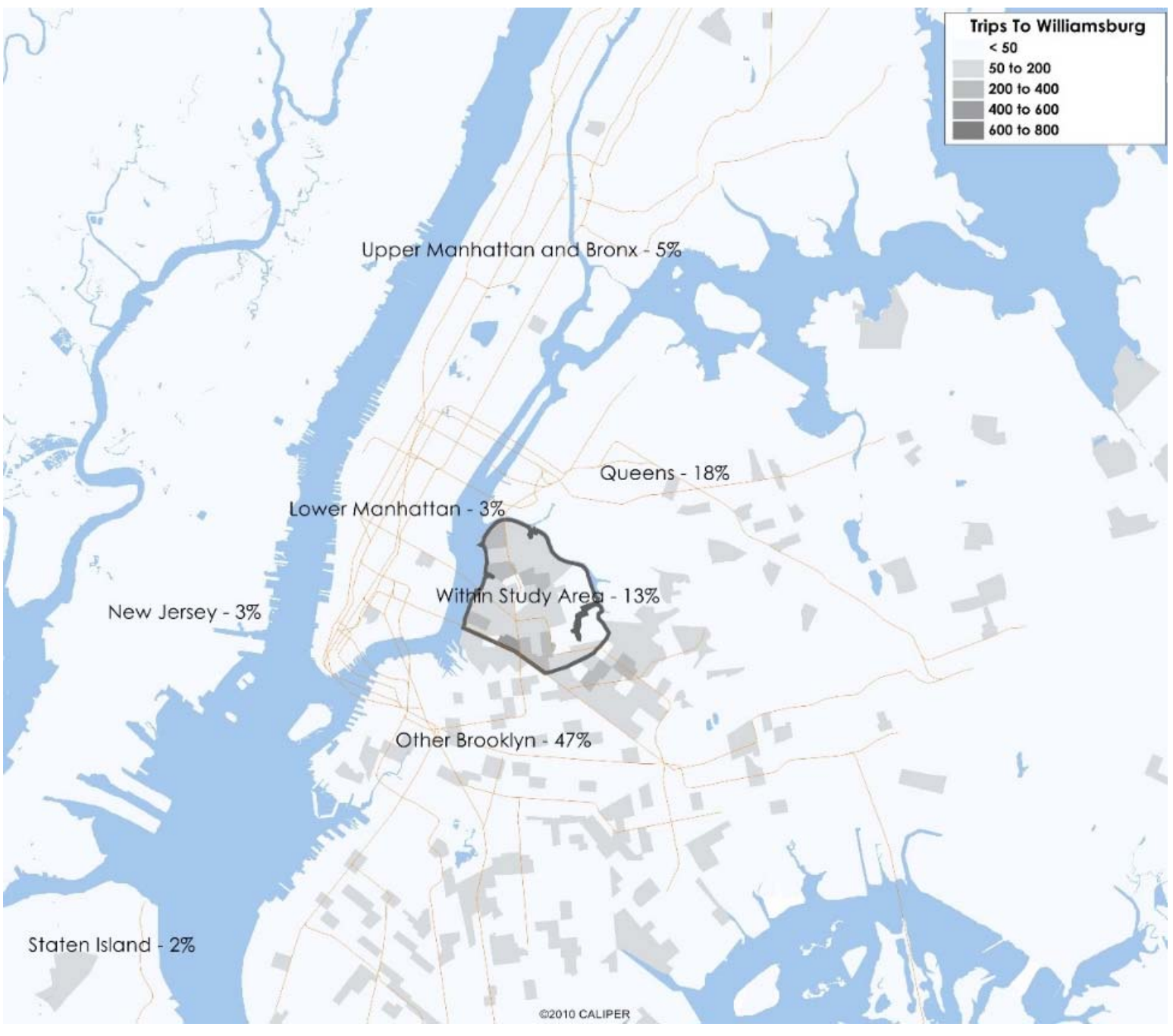


Figure 17: Work trips to study area

5.4 Volume-to-Capacity

Rider demand and route capacity are compared within the study area only, on bus routes that operate in the area. Bus ridership information was provided as a two-way daily average by route. With this level of detail it is only possible to gain a broad understanding of global bus ridership. Similarly, the subway data available identifies the number of riders boarding at each station and the ferry ridership data is a daily average. Critical system performance details including peak load points by direction, crowded sections of routes, stop usage and diurnal patterns cannot be explored.

Figure 19 shows the daily ridership of bus routes while Figure 18 shows daily average ridership for ferry terminals and daily subway boardings per station. The highest number of riders access the subway through Bedford Avenue Station in the study area. The current ferry ridership numbers are low, with between 90 and 150 average daily riders per stop. Ridership is highest along bus routes that run along the same roads as the G-train and J/M/Z-train lines (B46, B43, Q54). These high-ridership routes also show higher ratios of ridership-to-capacity compared to other routes in the study area such as the riverfront B32 route with low ridership (Figure 20).

Figure 18: Transit Access by Subway Station, Ferry Terminal

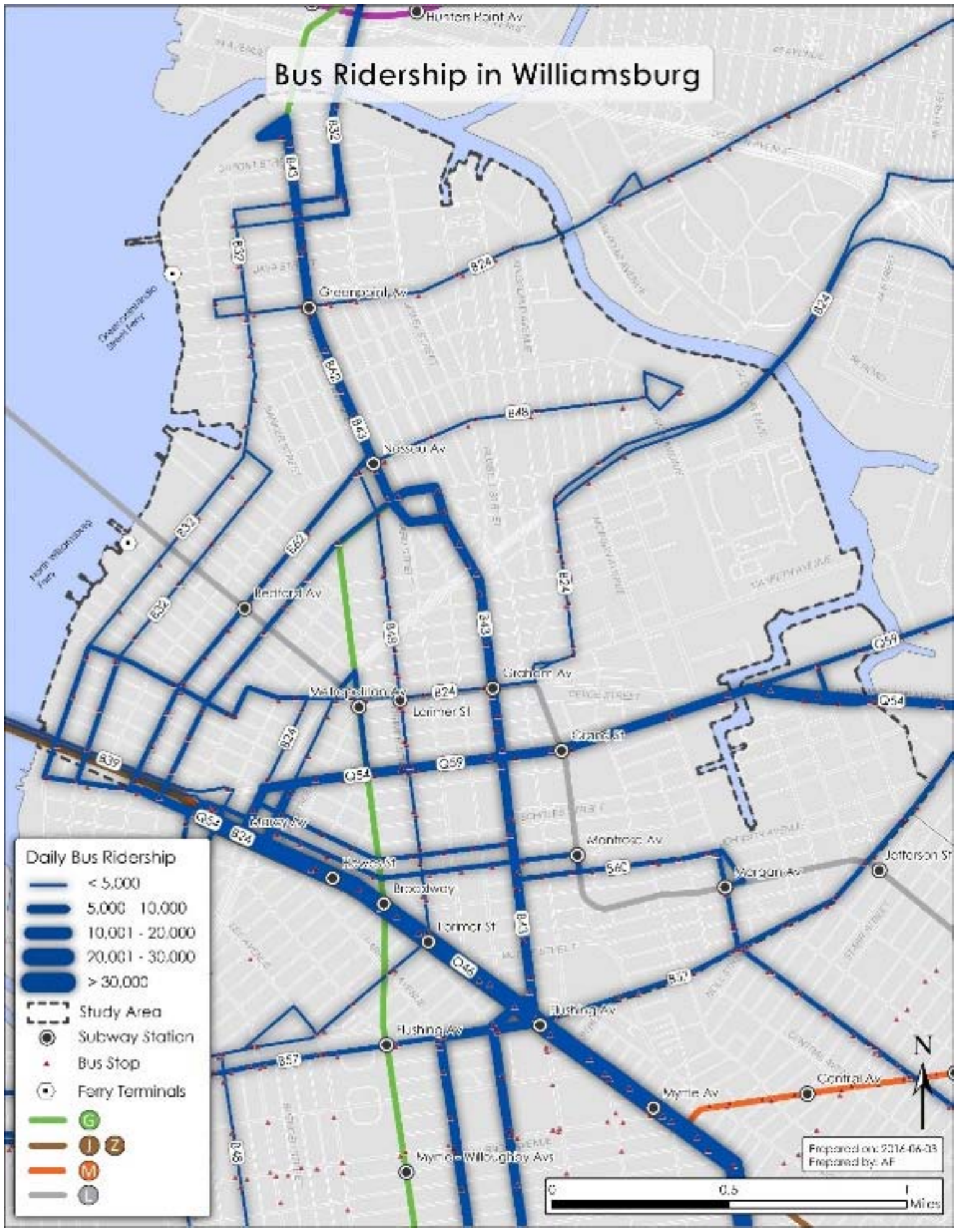


Figure 19: Bus Ridership

Figure 20: Bus Ridership to Capacity Ratio

6 Mode Choice

The mode splits of work trips to and from the study area vary depending on the trip origin and destination. Figure 21 shows the overall mode splits (transit, walking/cycling, and auto) for trips made within the study area and to/from other parts of New York City. Overall, among work trips originating in the study area (made by residents of Williamsburg), 72% use public transit; however, for trips to workplaces inside the study area, the transit mode share is only 43%.

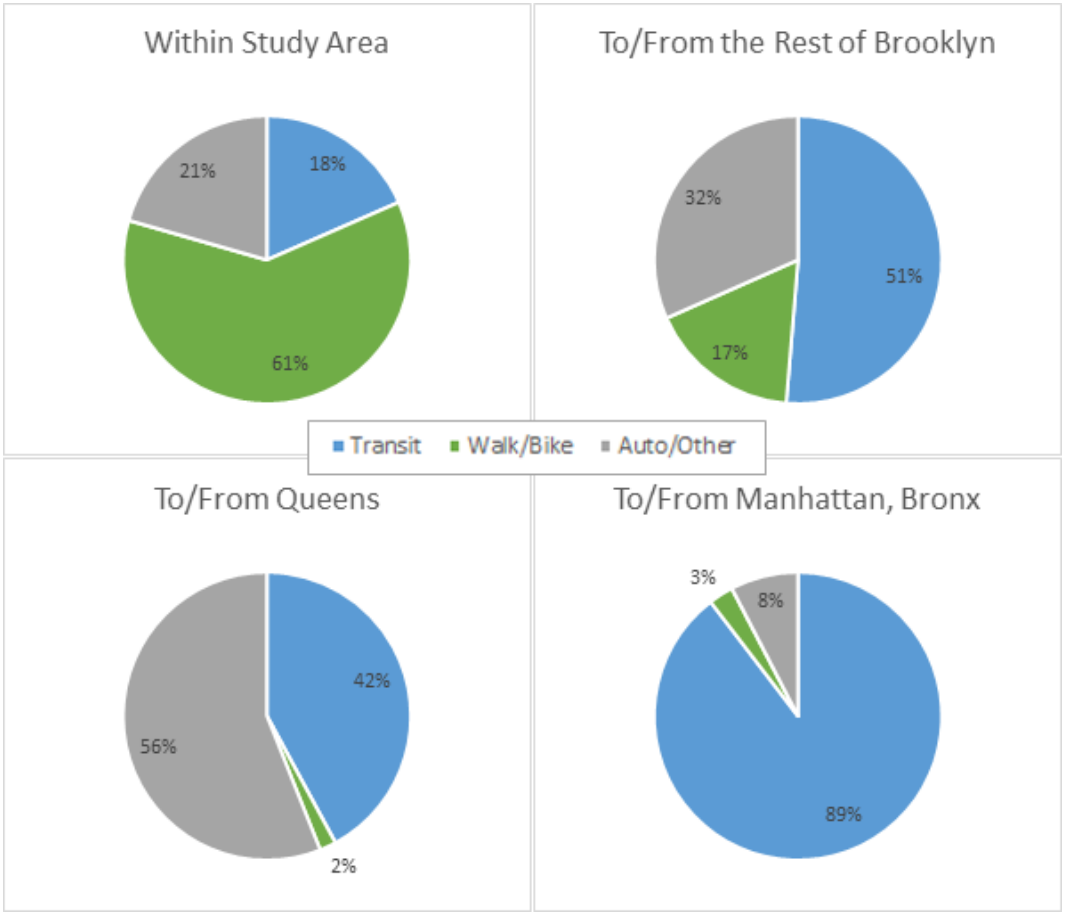


Figure 21: Mode Splits by Borough, Study Area

Figure 22 shows the transit mode shares for home-based work trips to and from the study area. Trips from Williamsburg to lower Manhattan have a very high transit mode share of 93% compared to transit shares of 50%-60% to others parts of Brooklyn and Queens. The transit mode share for inbound work trips from Queens is only 35% and can be prioritized for improvement. These trips originate typically in areas of Queens further to the east where the transit routes to the study area are less direct.

Transit mode shares for home-based work trips from the study area to Queens are higher than those in the other direction because a high percentage of Williamsburg residents commute to Long Island City, which is highly accessible by the G train.

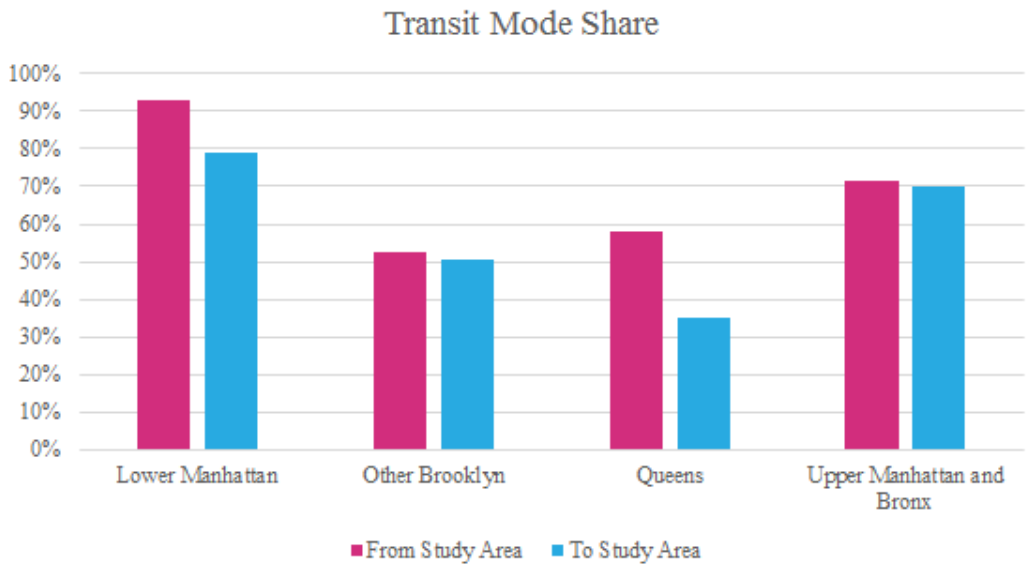


Figure 22: Transit Mode Share to/from the Study Area by Borough, by direction (inbound/outbound)

Figure 24 shows the transit mode shares for trips from Williamsburg to each work destination zone, beside the transit mode share of home-based work trips to Williamsburg from each origin zone. The proportion of transit trips for travel within the study area is low: there is a high walking mode share for these short trips. Overall, Williamsburg residents tend to work in locations with good transit connections resulting in high transit mode share for work trips.

Those who work in Williamsburg travel from geographically-dispersed areas throughout Brooklyn and Queen including areas to the east. Comparatively, Williamsburg residents have a higher level of transit access to their workplaces than people who work in Williamsburg and live elsewhere.

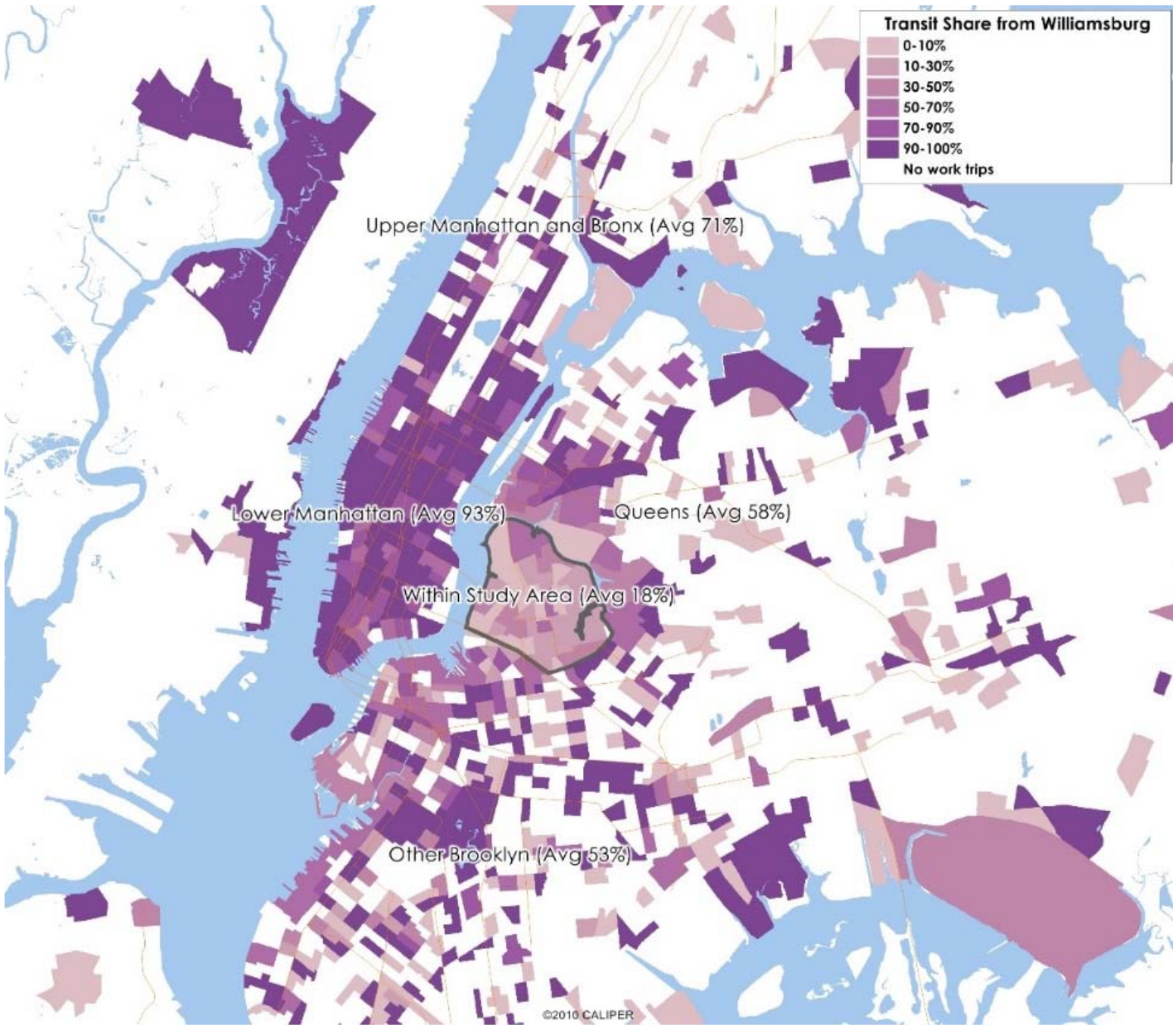


Figure 23: Transit mode share of work trips to study area

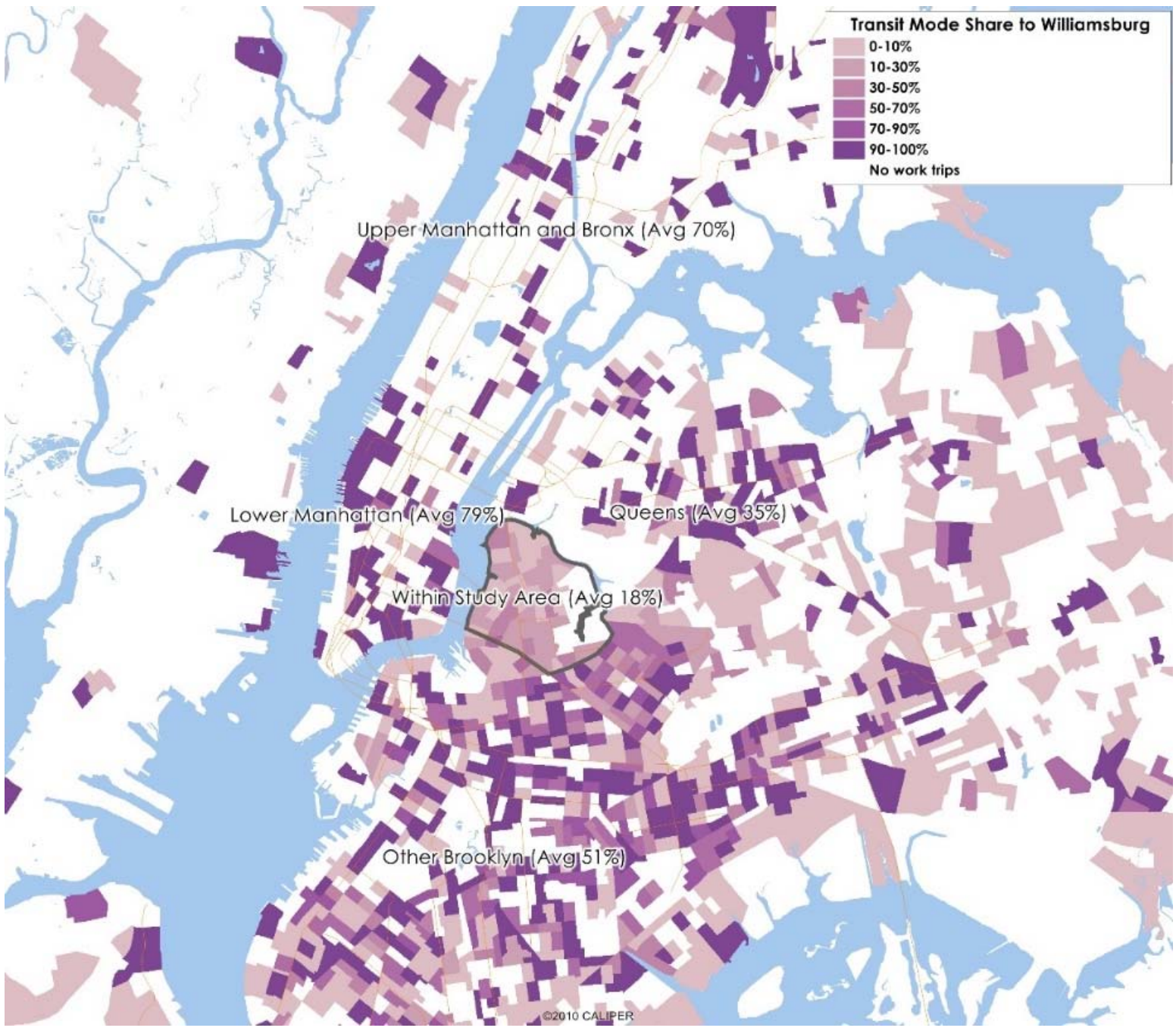


Figure 24: Transit mode share of work trips to study area

Figure 25 compares transit mode shares for home-based work trips to Williamsburg to link-based transit service frequency. Figure 26compares the mode splits (transit, walk/bike and auto) for trips to Williamsburg to the number of transit transfers required. This shows that transit trips from nearby areas to the east would require more transit transfers to the study area than nearby areas to the south, which is correlated with the higher auto mode shares and lower transit shares in those areas.

Residential areas with infrequent local transit or multiple transfers required show lower transit mode shares and higher auto usage. The Maspeth and Middle Village areas are close to the study area but feature relatively low transit mode shares due likely to indirect connections. These areas are within a 30-minute bike ride.

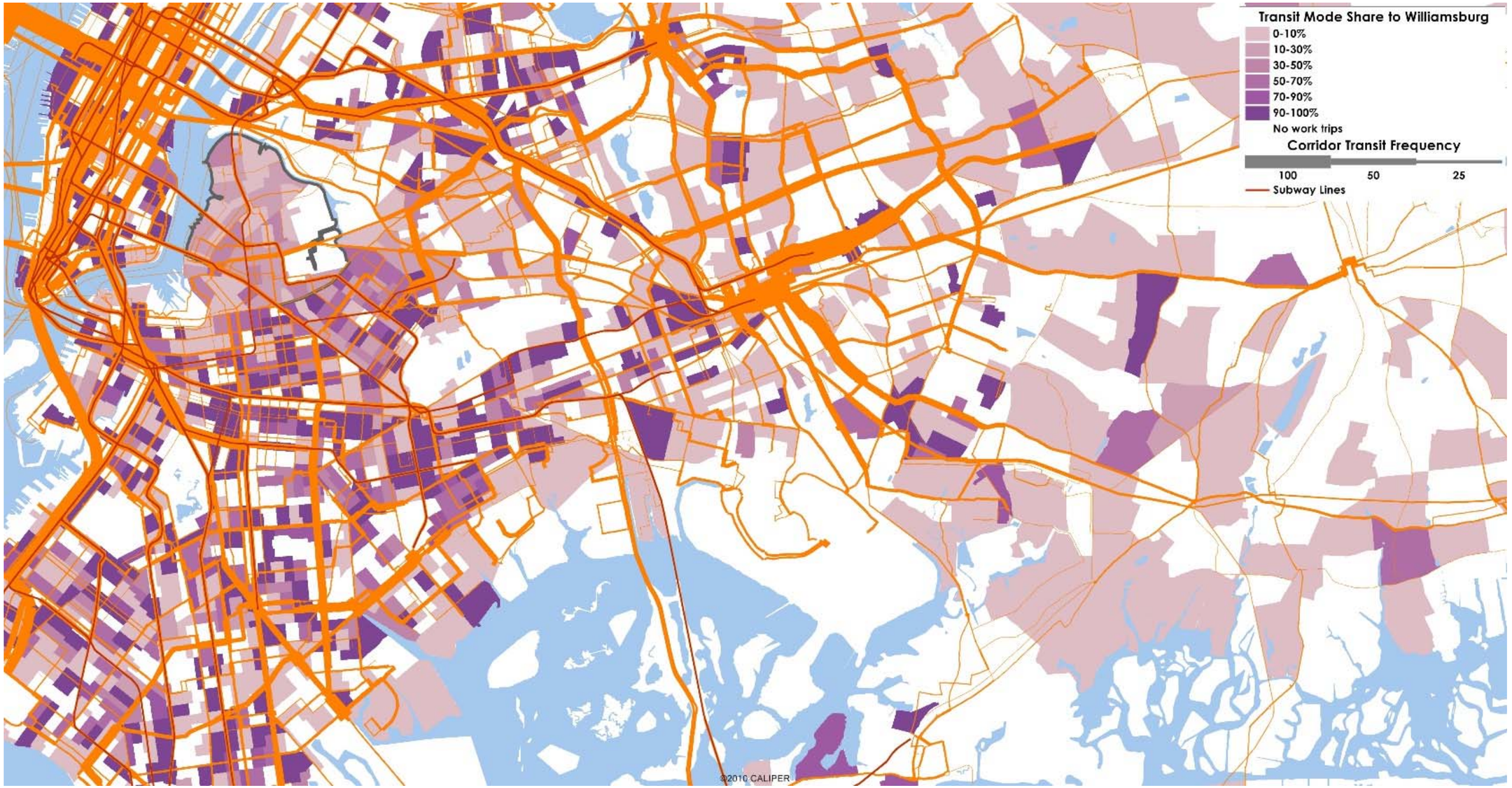


Figure 25: Transit Share to Williamsburg with Transit Frequency

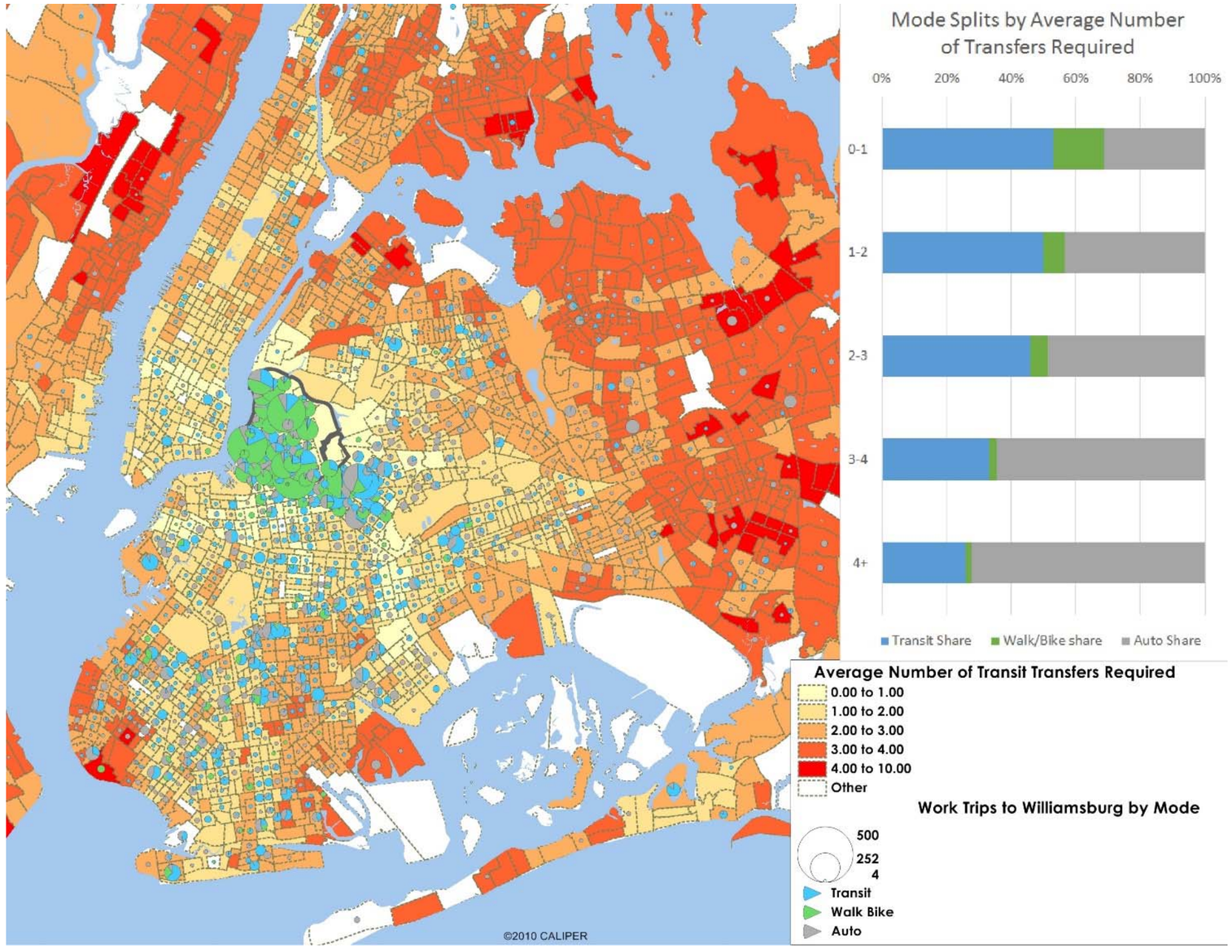


Figure 26: Mode Splits by Average Number of Transit Transfers Required

The active transportation mode share for home-based work trips to and from the study area is 14% overall and varies by origin and destination. While 25% of trips from the study area to the rest of Brooklyn are by active modes only 12% of trips from the rest of Brooklyn into the study area are walk or cycle.

The walking and cycling mode shares are much lower to (4%) and from (1%) Queens, which are likely to be influenced by the natural barrier effect of Newtown Creek. For both transit and active transportation, the mode shares are higher to/from Brooklyn than to/from Queens for a combination of reasons including limited bike/transit connections across the creek, and transit frequency and directness.

Figure 27 compares active transportation more shares to formalised cycling infrastructure. There is an evident relationship between infrastructure supply and mode share outside of a reasonable walking catchment.

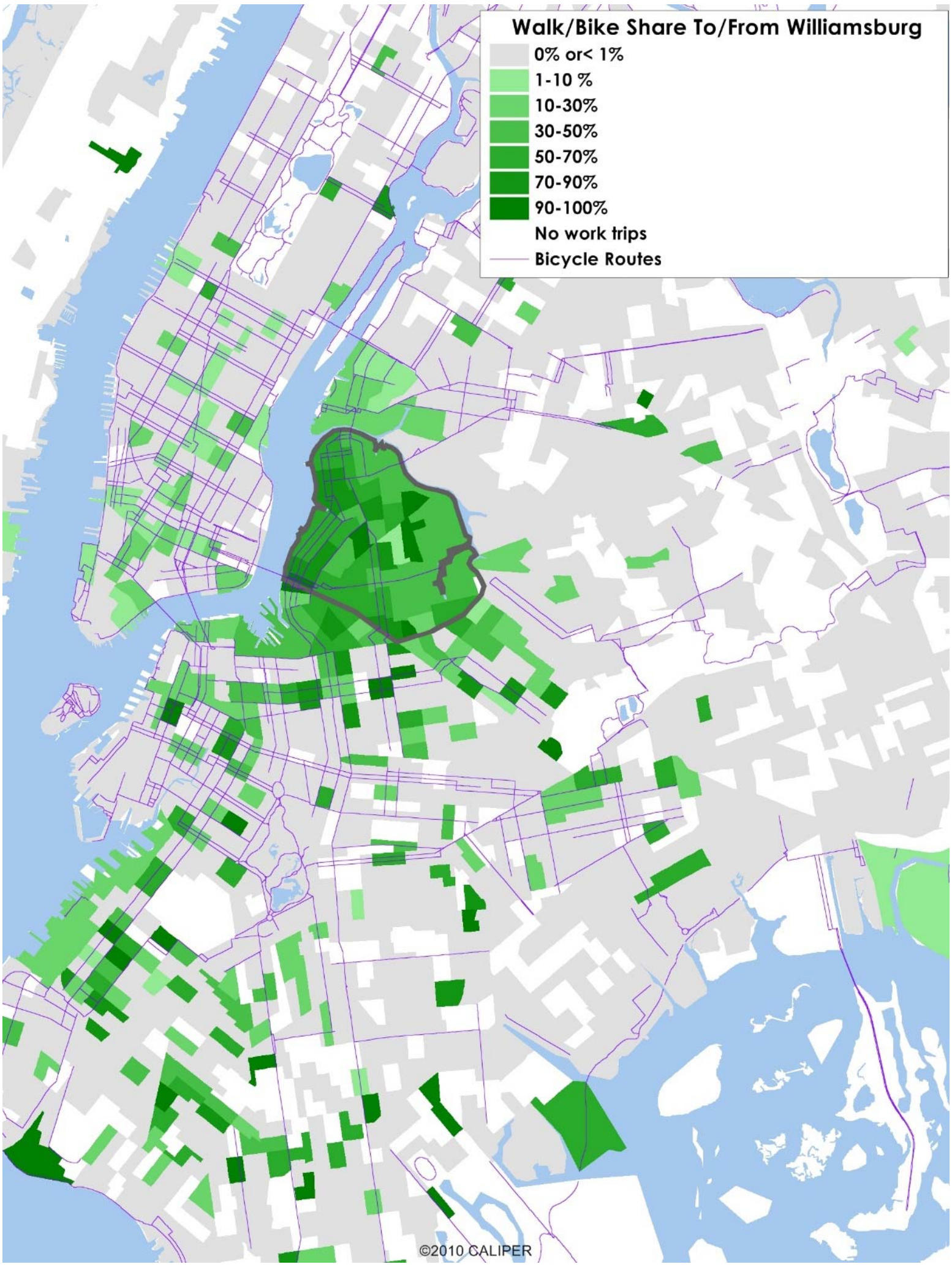


Figure 27: Active Transportation Share To/From Williamsburg

Among home-based work trips that are entirely within the study area, 61% are made by active transportation (mostly walking); however, there is a high auto mode share (13% drove alone and 5% carpooled) among these very short trips that may be possible by other modes. More data is provided in Appendix A.

Similarly, a summary of mode split by trip distance (Appendix A) shows that there are many short auto trips to study area workplaces (less than five miles). More detailed analysis of these short auto trips shows that they originate mainly within the study area, to the east (where transit/bike connections are poor), and in the area immediately southeast of the study area. The trips terminate in both the industrial areas and at workplaces in the south of the study area.

Some short driving trips are occurring between origin and destination pairs that are served reasonably by the L, M, J or Z trains. Barriers to use of transit may include the lack of a seamless transfer between subway lines, long walks to and from subway stations at both the origin and destination, or unreliable bus performance.

Figure 28 shows that bus routes that run generally east-west through the study area experience lower on-time performance in the weekday AM peak compared to less congested north-south routes. On-time performance benchmarks section 3.2, propose that in a performance of less than 70% is likely to be perceived as highly unreliable. Most routes that pass the study area perform at less than 70% on-time in weekday PM peak times.

During weekday AM and midday times, most routes show on-time performances between 70-79%, a level considered achievable by bus services in large cities. In addition, parts of the study area show relatively high rates of auto ownership, if the time and cost of auto trips, compares favorably to transit trips (Appendix A).

Mode choice: key points
Overall, aside from small areas at the southern and northern ends of the study area, transit and cycling mode shares are higher among study area residents than in most other parts of New York City
Nearly all trips to (and from) Manhattan are by transit modes
The majority of people who both live and work within the study area walk to work
Transit and walking/cycling mode shares to/from other parts of Brooklyn are higher than to/from Queens due to the barrier of the Newtown Creek
Most work trips to/from Queens are auto driving trips and the lower transit mode shares are among work trips to the study area from Queens
In areas where indirect transit service results in the need for transfers for journeys, the transit mode share is lower and auto share is higher to/from the study area, sometimes over relatively short distances.

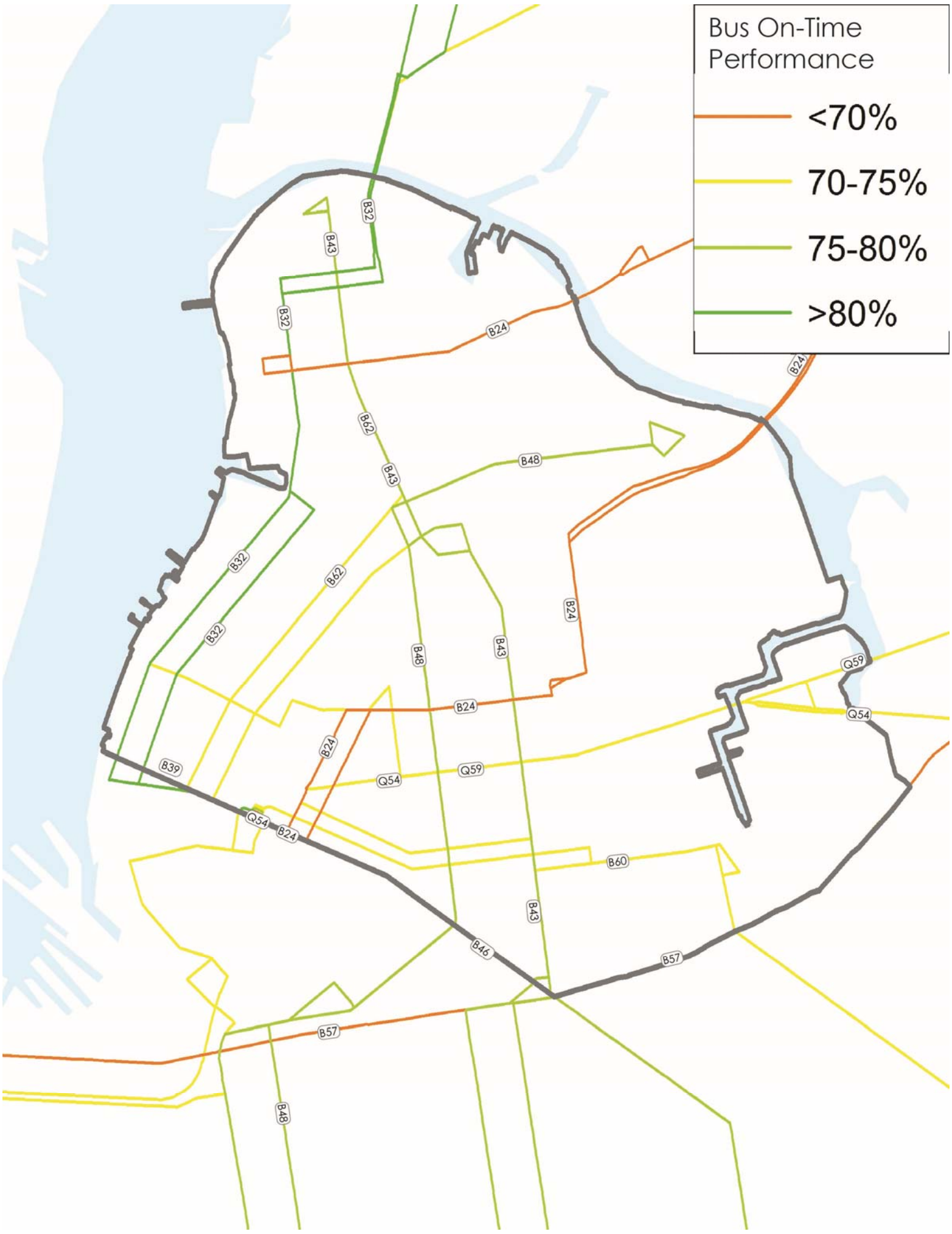


Figure 28: Bus on-time performance

7 Analysis of Transportation Service

7.1 Access to Transit

The Access to Transit score is a measure developed by Arup, based on the Public Transport Accessibility Level (PTAL) metric developed by Transport for London in the UK, which combines service frequency and walk distance to transit stops/stations. The score is a ‘relativistic’ measure in which the maximum value (10) has been calibrated to the maximum service density in the New York Metropolitan area. It is, therefore, a powerful representation of how accessible transit is within the study area compared to elsewhere in New York.

Parts of study area have very high Access to Transit scores (along the subway lines) while other parts have much lower access to transit that most of New York City (Figure 29). Within Williamsburg, areas with high frequency transit service show high access to transit scores, with very low scores in the north-eastern parts of the study area and at some points along the river (Figure 30).

The distribution of population and employment within the study area is informative when compared to Access to Transit scores. Williamsburg residents are well-served by transit -70% of the population lives in an area with an Access to Transit score of 8 or higher; however, only 50% of the jobs in Williamsburg are in locations with a score of 8 or higher. This is consistent with the finding that the transit mode shares for Williamsburg residents' commute trips are higher than the transit mode shares of Williamsburg employees from home.

This approach provides insight into how well specific places are served by transit along a continuous scale, instead of simply defining whether or not they fall into a catchment area.

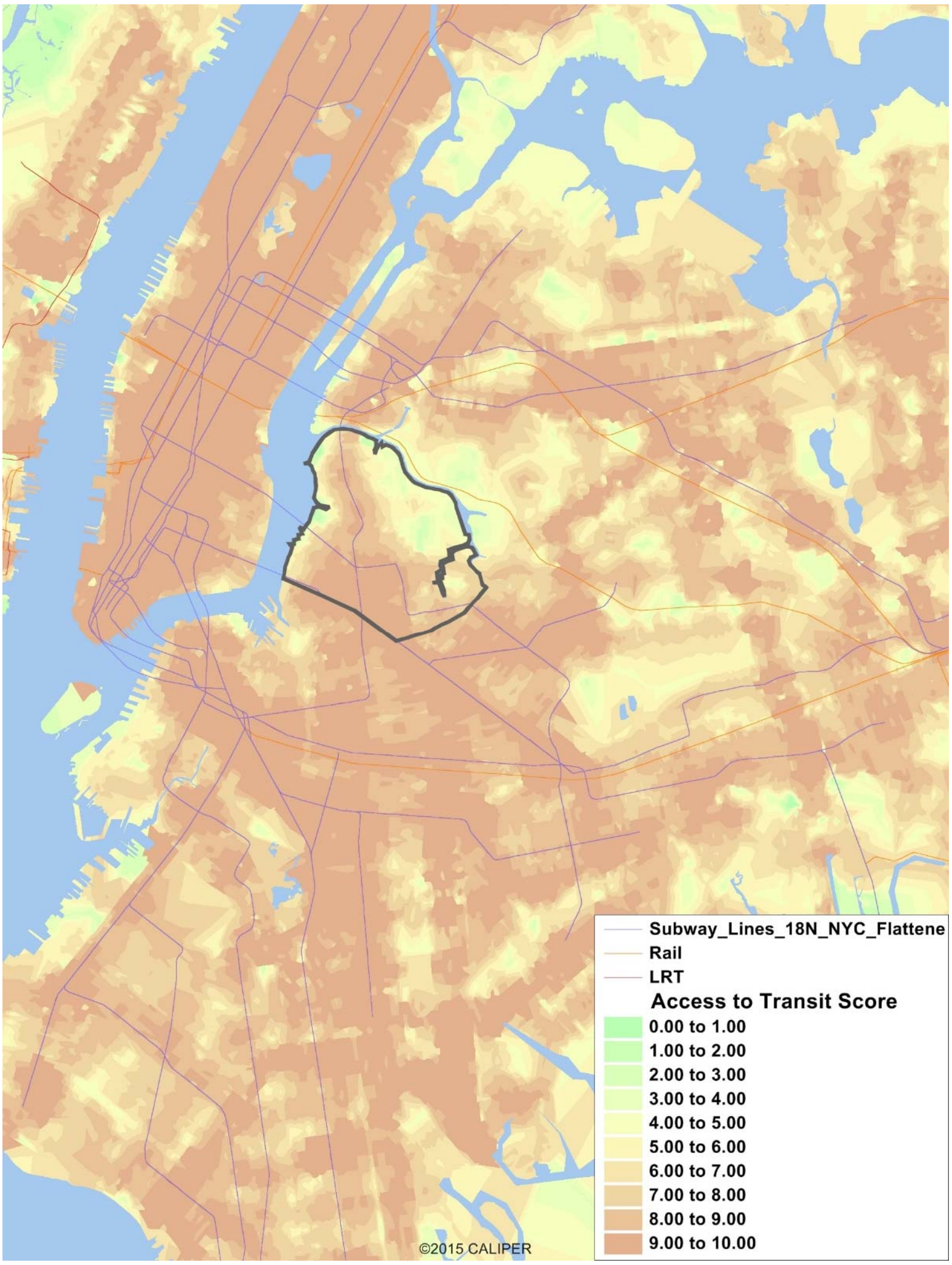


Figure 29: Access to Transit scores across New York City

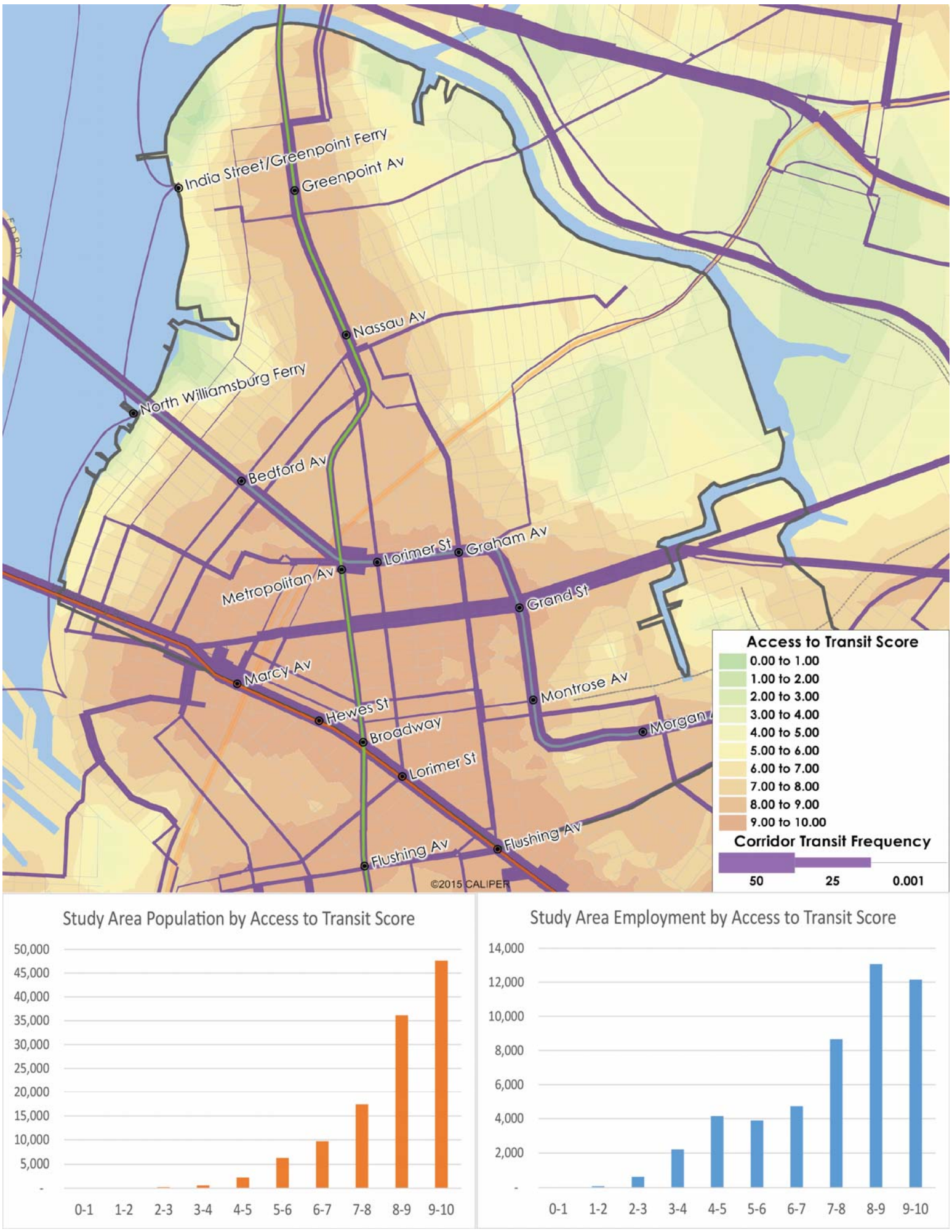


Figure 30: Access to Transit compared to transit corridor frequencies

All traffic zones in the study area are "transit-supportive" meaning that they have sufficient densities to support transit (three or more households/acre or four or more jobs/acre). 84% of this transit-supportive area is in the 1/2-mile subway catchment or the 1/4-mile bus catchment area (view Appendix). According to the Transit Capacity and Quality of Service Manual, this degree of transit coverage results in most but not all destinations in higher density areas being served by transit. Furthermore, 80% of the transit-supportive study area has an Access to Transit score of 5 or more, but only 45% of the area has a very high score of 8 or above, corresponding with the areas with high existing population. Other portions of the study area also have sufficient population or employment to be transit-supportive, with growing densities, though they are less well served by transit.

In summary, while the entire study area has sufficient population or employment density to support transit use, some parts are not within a short access distance to transit. Most of the study area population is located in areas with very good access to transit, however many employment locations and half of the land area have Access to Transit scores in the lower and medium ranges of the scale.

7.2 Access to Destinations

The Access to Destinations tool, developed by Arup, processes transit schedule data to calculate the number of destinations within reach by transit. The destinations are defined by the user contingent on the purpose of the analysis and availability of relevant geo-located data. The tool is used to test the impact of hypothetical changes to the transit network (new lines, service changes, etc.) on transit accessibility to destinations. For this study, the access to destinations tool was used to quantify the number of jobs and people of working age/labour force within 45 minutes by transit.

On average, there are 1.5 million people of working age living within 45 minutes of employment locations in the study area and 2.6 million jobs within 45 minutes of the study area population. Intuitively, access to jobs and labour force are highest near subway stations; especially L-train stations in the middle of the study area. The number of jobs accessible by transit within 45 minutes is higher than in many other parts of New York City, but lower than in nearby Downtown Brooklyn, Long Island City and Manhattan (see Appendix A).
Point-to-point transit travel times calculated by the Access to Destinations tool (based on transit schedule data and estimated walking times at journey start and end) are consistent broadly with self-reported travel times captured by the Census for trips within the study area (~30 min) and to Manhattan (30-45 min). Figure 31 reveals longer transit travel times to nearby places just east of the study area (across Newtown Creek and not connected by subway) than to nearby places in other directions. The 45-minute transit catchment area covers parts of Brooklyn from which commuters travel to the study area as well as Long Island City in Queens; however, most Queens residents commuting to the study area come from further to the east, from areas outside of the 45-minute transit catchment.

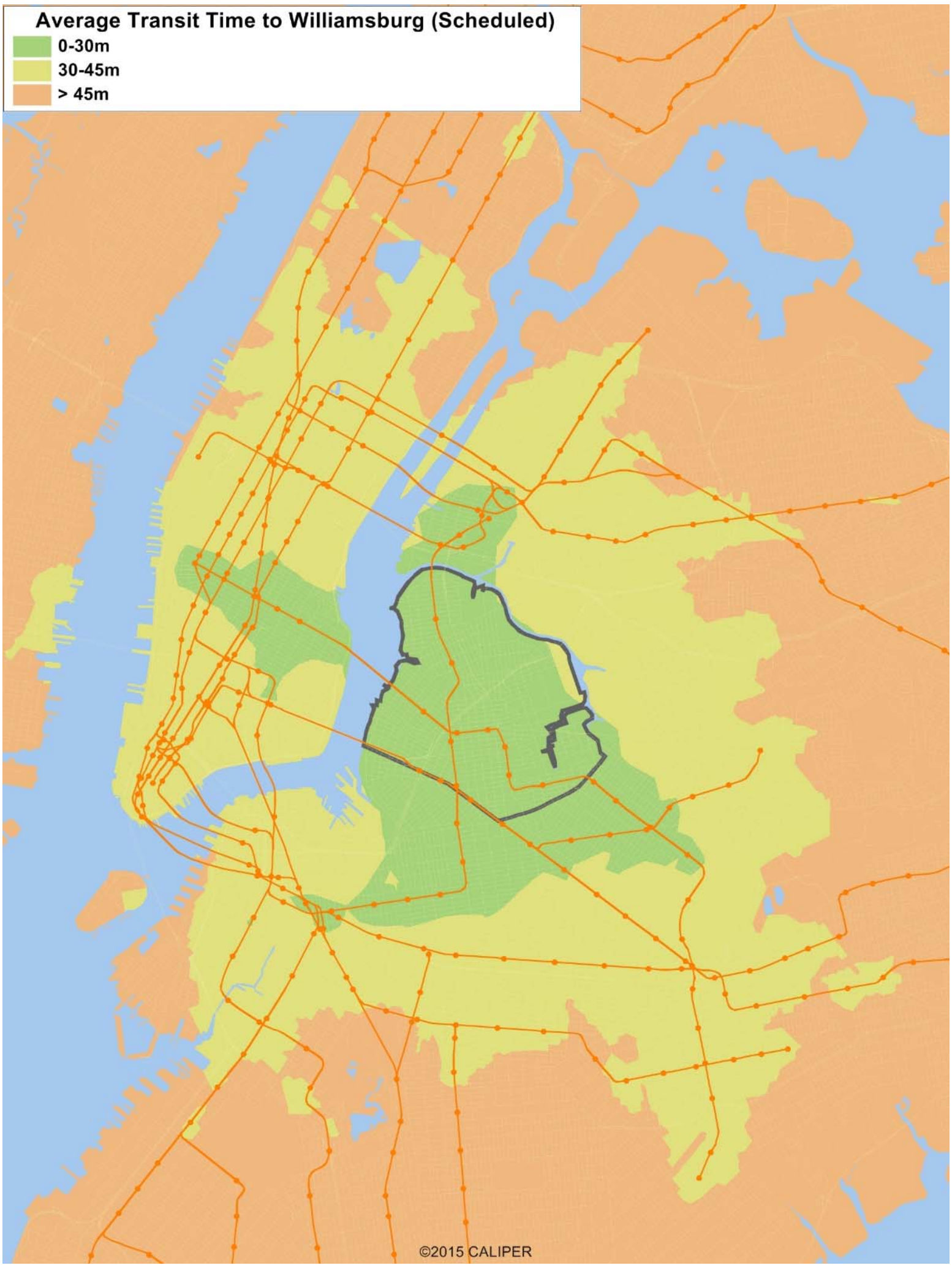


Figure 31: Transit Travel Time Catchments

7.3 Transit Network Changes

Three hypothetical scenarios involving changes to the Williamsburg transit network were tested using the Access to Destinations tool: the closure of the L-train tunnel, the addition of the Brooklyn-Queens connector LRT and the addition of two Citywide ferry stops.

The scenario involving the closure of the L-train tunnel was defined by separating the subway line into two parts that do not cross the river without any replacement services. Although a realistic scenario would include added transit services to mitigate the impact, the evaluation excluded such additions in order to quantify the extent of the effect that the closure itself would cause.

Figure 32 shows the extent of the L-train closure effect. Large portions of Manhattan show noticeably increased travel times and all commutes across the East River from Williamsburg show travel times longer than 30 minutes. In terms of access to destinations, the closure results in a reduction in jobs within 45 minutes of approximately 290,000 (~10% reduction), and reduces the labor force within 45 min of Williamsburg by 220,000 (~15% reduction).

In the Brooklyn-Queens connector scenario, the LRT was represented as a line from Astoria in Queens via the study area near the waterfront, through downtown Brooklyn to Sunset Park, with a branch from downtown Brooklyn to Atlantic Terminal station. Figure 33 shows a minor change to the 30 and 45-minute transit catchment areas with travel time reductions to areas at the north end of the proposed LRT line and to riverside areas south of downtown Brooklyn.

The relatively small effect on travel times can be explained by the presence of existing transit routes (mainly the G-train) connecting the study area with adjacent areas. The addition of the LRT results in a small relative increase in the number of jobs (27,000, or 1%) and labor force (58,000 or 4%) within 45 minutes.

The scenario involving Citywide Ferry evaluated the impacts of adding two Manhattan stops (Stuyvesant and Grand Street) to the existing East River Ferry service. This modification alone does not affect the 30 minute or 45 minute transit catchment areas or the number of jobs/labor force within 45 minutes (Figure 34). There are small changes to the average travel times from Williamsburg to some zones but they are insufficient to alter overall results. Greater travel time savings may be observed from specific Williamsburg zones on the riverfront to certain destinations.

Scenario	Description	Jobs in 45 minutes	Labour in 45 minutes
Base	Current network	~2,600,000	~1,500,000
L-train closed	Tunnel closed, line split in two, no shuttles	-290,000, -10%	-220,000, -15%
BQ connector	LRT Astoria-Sunset Park with Atlantic Terminal branch	+27,000, +1%	+58,000, +4%

Citywide Ferry	Two stops added to East River Ferry	no change	no change

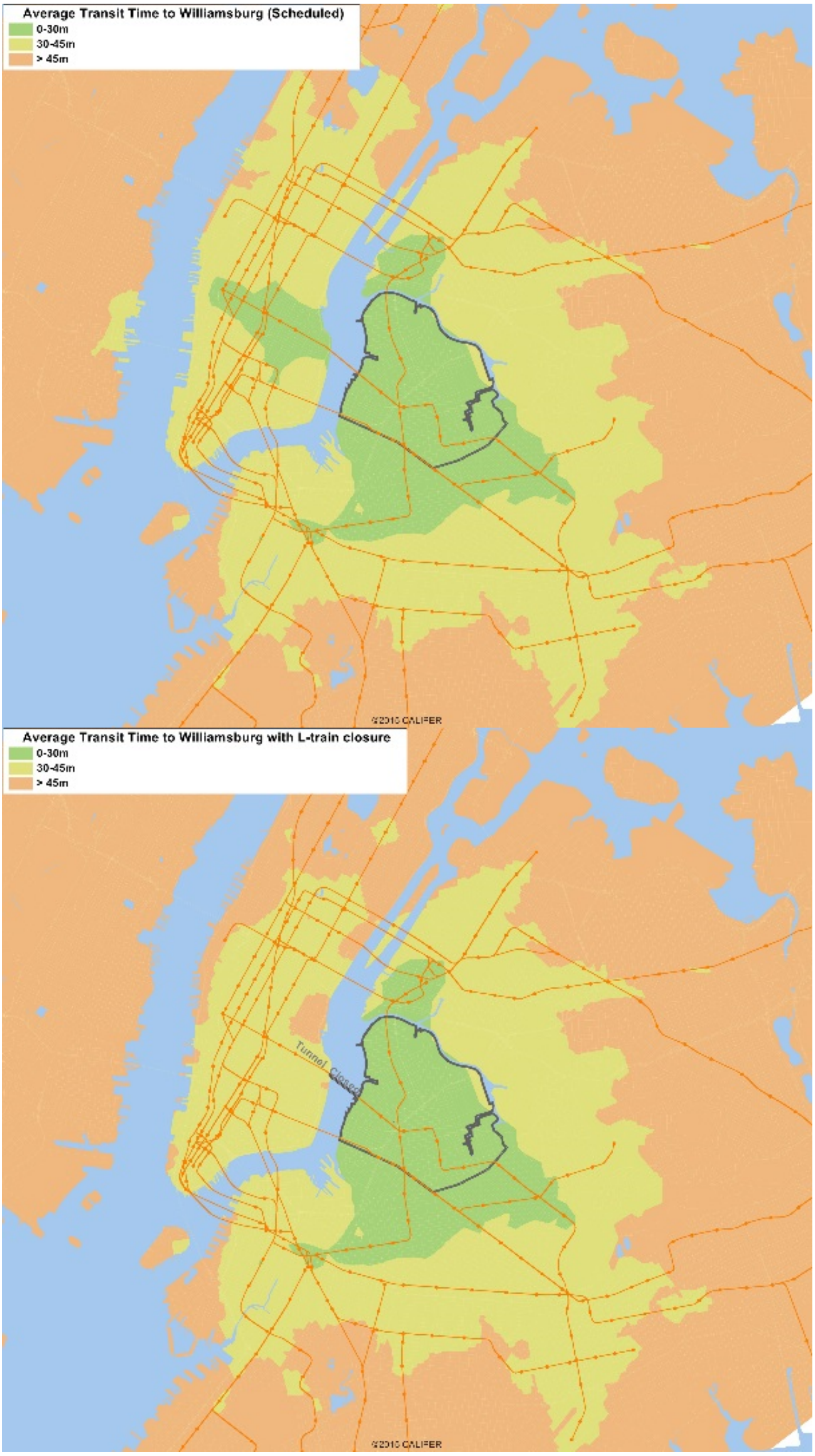


Figure 32: Effect of L-train closure

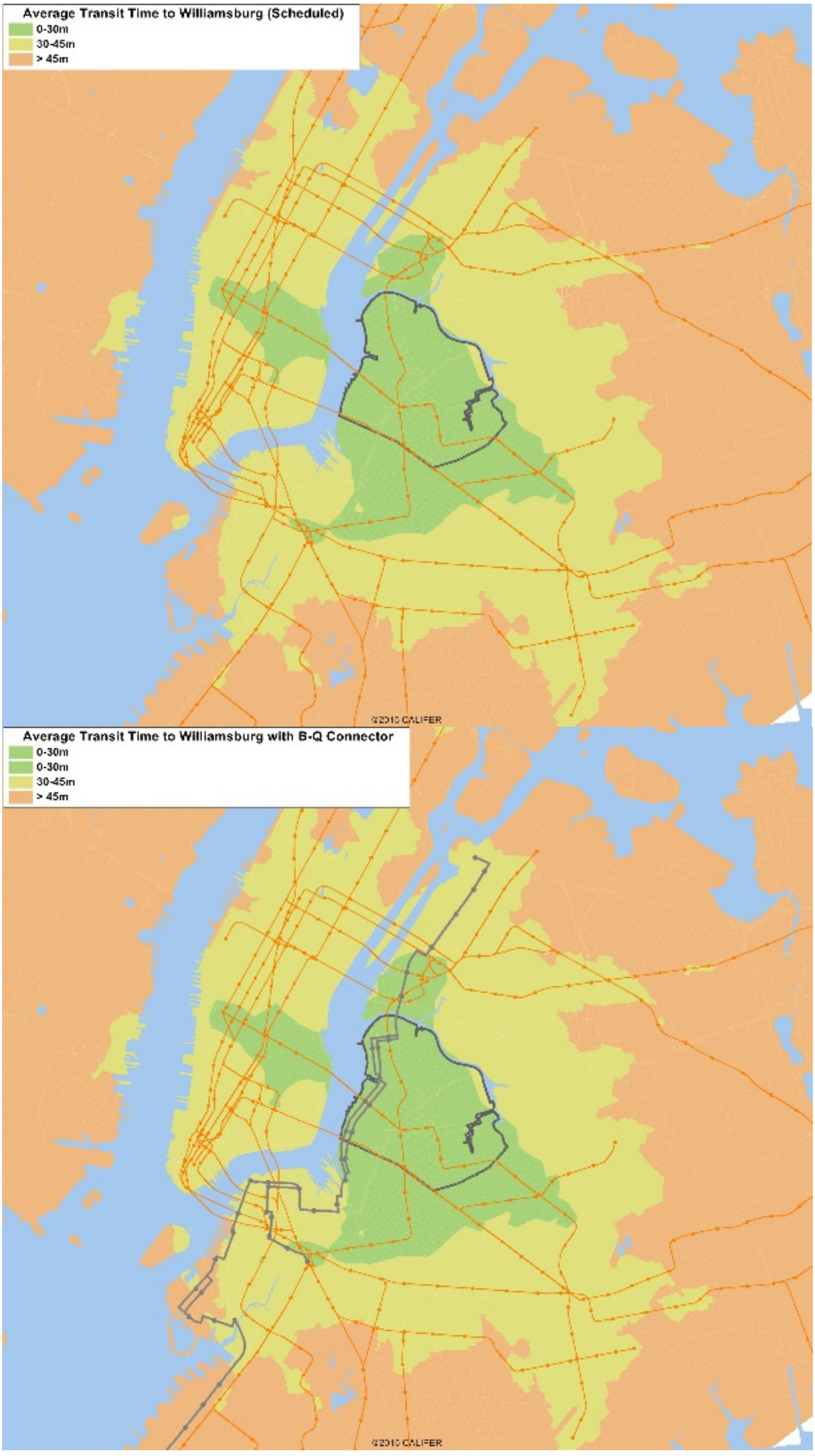


Figure 33: Effect of Brooklyn Queens Connector LRT

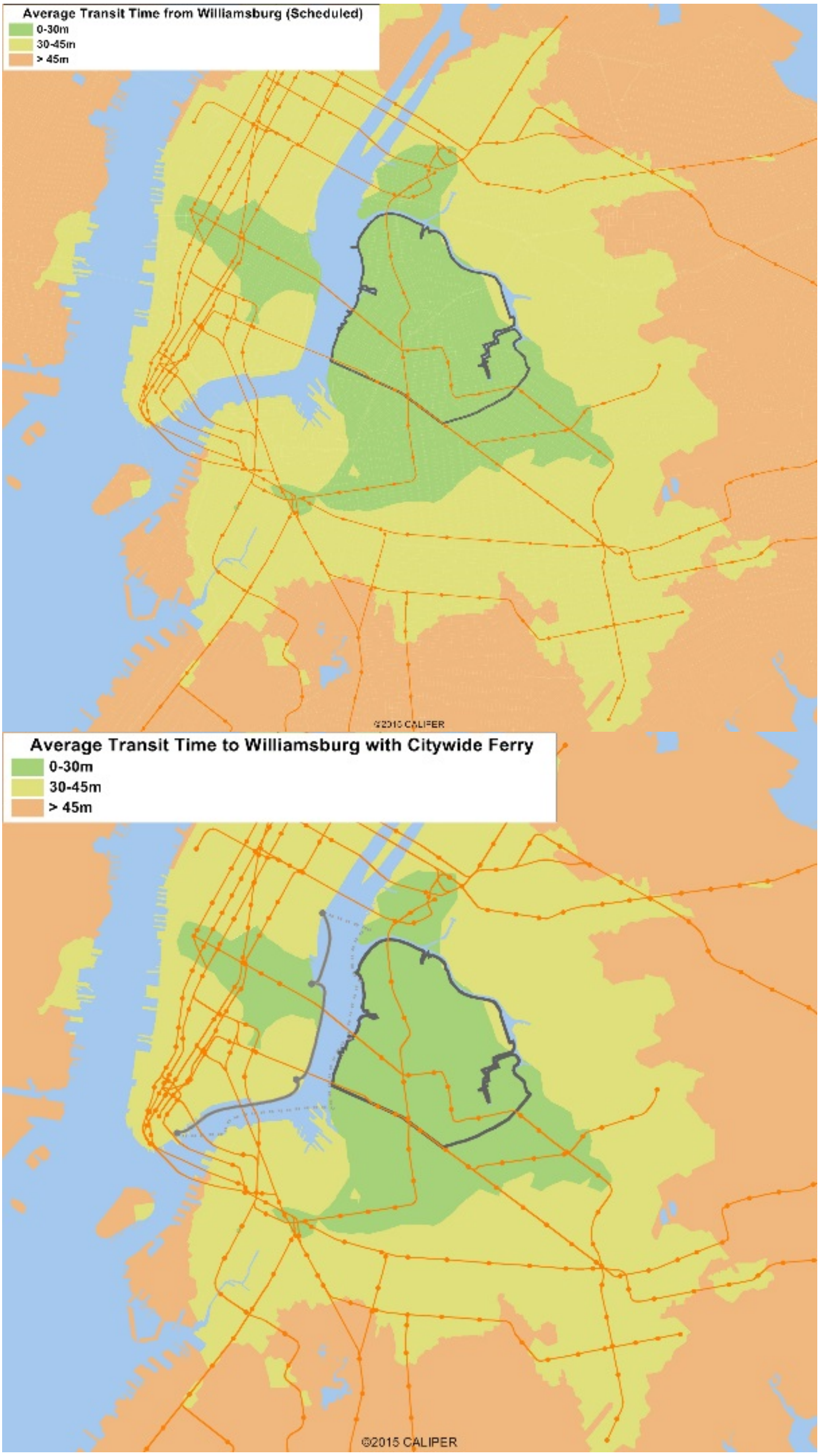


Figure 34: Effect of Citywide Ferry (East River)

8 Findings

The following questions structured the study analyses. The findings include,

In what way could the study area existing and future conditions influence transportation choices? Could fares have an impact on transit usage in the study area?

The current study area is dominated by industrial land use on the east side, has a similar median household income to the rest of Brooklyn and population/employment density concentrated along the subway lines. The industrial zone has low population density and high private automobile use. While the study area median income is comparable to Brooklyn, there are some low income neighborhoods that may be transit dependent ($50,000 - $25,000/$25,000 or less). High-density development is occurring on the East River and altering the urban fabric of the study area, likely resulting in changes to job and population density and travel patterns.

How well is the study area served by transit? (relative to nearby areas, and in the context of where people wish to travel)

The evaluation found that there is good access to transit and transit reach for home-based work trips originating in the study area; both in absolute terms and relative to elsewhere in New York City. In contrast, there is a lower overall level of transit accessibility for home-based work trips being undertaken currently to Williamsburg from external origins.

Which transit lines are most used and are there any capacity issues?

Ridership is highest along bus routes that run along the same roads as the G-train and J/M/Z-train lines (B46, B43, Q54). These high-ridership routes also show higher ratios of ridership-to-capacity compared to other routes in the study area (such as the riverfront B32 route with low ridership). The data required to assess the capacity of the transit lines was not available.

Where do study area residents travel to and does transit facilitate these trips efficiently? Where do study area workers travel from and does transit facilitate these trips efficiently?

More than half of the work trips made by Williamsburg residents are to lower Manhattan, with many others (~30%) ending in Brooklyn including some in the study area itself (~1/3 of the trips within Brooklyn). Home-based work trips terminating in Williamsburg are more geographically dispersed. Most Williamsburg employees are Brooklyn residents (~50%) from areas across the borough including many study area residents. A large proportion of work trips to the study area originate in Queens (~20%), mostly in dispersed residential areas to the east.

Williamsburg residents are well-served by transit -70% of the population lives in an area with an Access to Transit score of 8 or higher; however, only 50% of the jobs in Williamsburg are in locations with a score of 8 or higher.

By what mode are commuters currently travelling to/from the study area and why?

For trips from the study area, there is mode variability depending on trip destination, with trips to Manhattan showing much higher transit share than trips to other parts of Brooklyn and Queens. This is due to the presence of many higher order services leading to the most dense employment centres, with fewer options leading to other workplace destinations. For trips to the study area, there is variability depending on trip origins with trips to Brooklyn being relatively more convenient by transit compared to trips to Queens. This is because of the differences in transit provision and directness (more transfers required), at least partly as a result of the barrier of the Newtown creek.

Direct comparisons can be made between the Transit Capacity and Quality of Service Manual and the following findings of the analysis:

- **Service Frequency**: The subway services have headways of under 10 minutes, categorized by the manual as frequent service with short wait times and no need to consult schedules. The ferry headways of 20-30 minutes require passengers to adapt to schedules, with little arrival/departure time flexibility. The AM peak headways of most bus routes in the study area are under 15 minutes; this is considered to be relatively frequent, although passengers will likely schedule their arrival times such that waiting is reduced. Three bus routes in the study area run less frequent services that require passengers to adapt to bus schedules, resulting in less desirable arrival/departure times.
- **Access**: Comparing to the TCQSM, 84% of the study area (all of which has densities that are considered to be transit-supportive) is served by transit. This is categorized as a good balance of service coverage versus efficiency. However, further analysis reveals that much of this area is less well served by frequent transit that many other parts of New York City.
- **Reliability**: Most bus routes in the study area have an AM peak on-time performance between 70-79%, which is considered to be a realistically achievable reliability for bus services in large cities. In the PM peak, many bus routes in the study area have an on-time performance below 70%, categorized as typical of mixed-traffic operations in congested urban centres.

9 Recommendations

The following recommendations are based on the study area transit constraints and focus on service, policy and infrastructure improvements.

Service

- Undertake more detailed analysis of overall transit operations along the subway corridors where there is service duplication with buses. The analysis should focus on peak hour loadings, origin-destination matrices and volume-to-capacity to understand if there is a reasonable basis for rerouting some bus services into the north-eastern part of the study area to improve service coverage. Critically, this should not be at the expense of level-of-service for current patrons if buses serve demand overspill from the subway.

  The detailed transit operations analysis should include:

  - Investigation of bus priority measures for routes B24, B57, B60, B62, Q54, and Q59 in order to improve on-time performance as these east-west routes have the lowest on-time performance in the study area, which may discourage commuters from choosing transit. The investigation should focus on specific pinch-points based on GPS data and consider transit travel time reliability as well as network operational performance for other modes of transport

  - Review of bus connections to the east, to portions of Queens with lower transit mode share to study area. Improved services could include connecting to the existing frequent east-west subway corridors in Queens with increased bus service along Greenpoint Avenue or the Brooklyn-Queens Expressway.

  - Assess the potential effects of improving transit connections to the north and east (across Newtown Creek). Any proposal to add connections should incorporate an active transportation infrastructure component to facilitate increased cycling trips

  - The East River ferry terminals are located where significant growth is to occur; particularly the N6th Street/North Williamsburg terminal. A review of the ferry operating schedules should be undertaken to understand how ridership may be increased.

- Investigate the potential for the implementation of a private shuttle service operating model with the proposed TMAs to function as subway connectors. This could be done as an alternative to a public bus rerouting

or extended service program following a high-level cost/ benefit assessment

Policy

- Consider implementing a Transportation Demand Management (TDM) strategy to shift commuters away from driving and towards more sustainable modes. A TDM strategy could include:
    - Development of travel plans for employers to make people aware of transit options, encourage car-pooling, offer financial support for transit tickets, etc.
    - Encourage cycling by incentivizing the provision of end of trip facilities, such as secure parking, showers, etc. for cyclists
    - On-site parking supply and management

  A series of Transportation Management Associations (TMAs) could be set up across Williamsburg to oversee development and implementation of TDM plans with highest priority being for industry located in the eastern part of the study area.
- Review parking policy applicable to study area workplaces including statutory minimum and maximum parking provisions and requirements to time-limit or charge for use of parking
- Review planning policy to:
    - Intensify employment in the study area located near high-frequency transit lines to leverage transit accessibility. This could be facilitated through a review of zoning/ planning codes and development incentivisation strategies (e.g. density bonuses if not already applicable)
    - Facilitate more mixed-use and higher intensity development in lower density employment areas to the east of the study area; again, through review of planning policy. This should increase the density of potential transit riders and provide more justification for improved service coverage and operating frequencies
- Enable free transfer for single-use ticketholders between bus and subway routes in order to encourage transit use and allow bus routes to act as feeders to the subway

Infrastructure

- Undertake an audit of existing connections (Pulaski Bridge, Grand Avenue) to identify if active transportation infrastructure should be upgraded to make them more attractive, safe and comfortable, and therefore facilitative of active transportation trips.

Further Study Suggestions

Further study may focus on specific issues related to transit use in and around the study area, such as:

- considering improvements to interchanges between transit services,
- detailed analysis of ferry uses including land development accessibility and service directness to destinations (including the testing of the impact of service changes on access to destinations), and,
- scenario testing of potential changes to bus routes and/or bus operating speeds.

Appendix A

Additional Maps

A1 Additional mode-share information

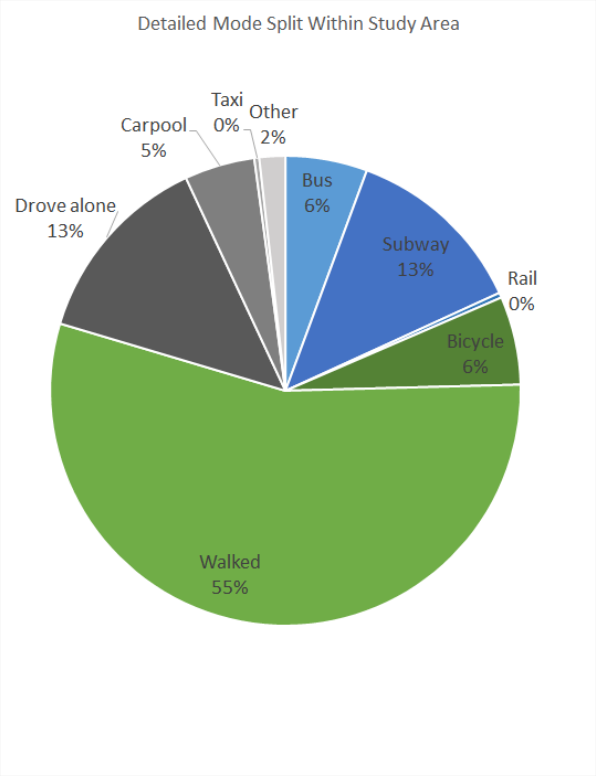


Figure 35: Detailed Mode Split Within Study Area

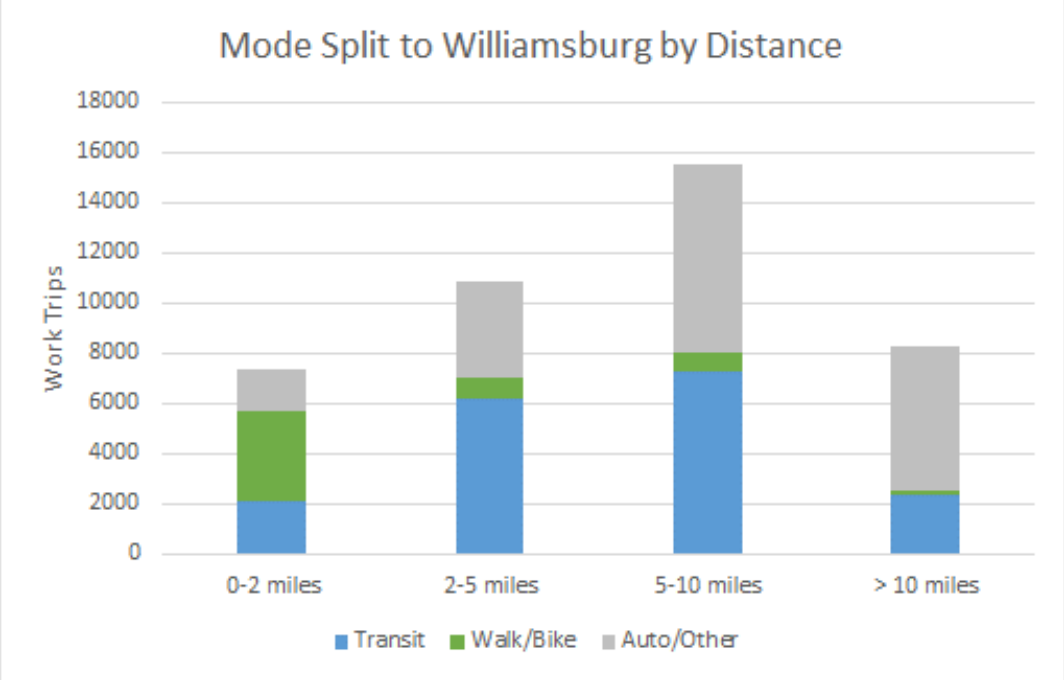


Figure 36: Mode Split to Williamsburg By Distance

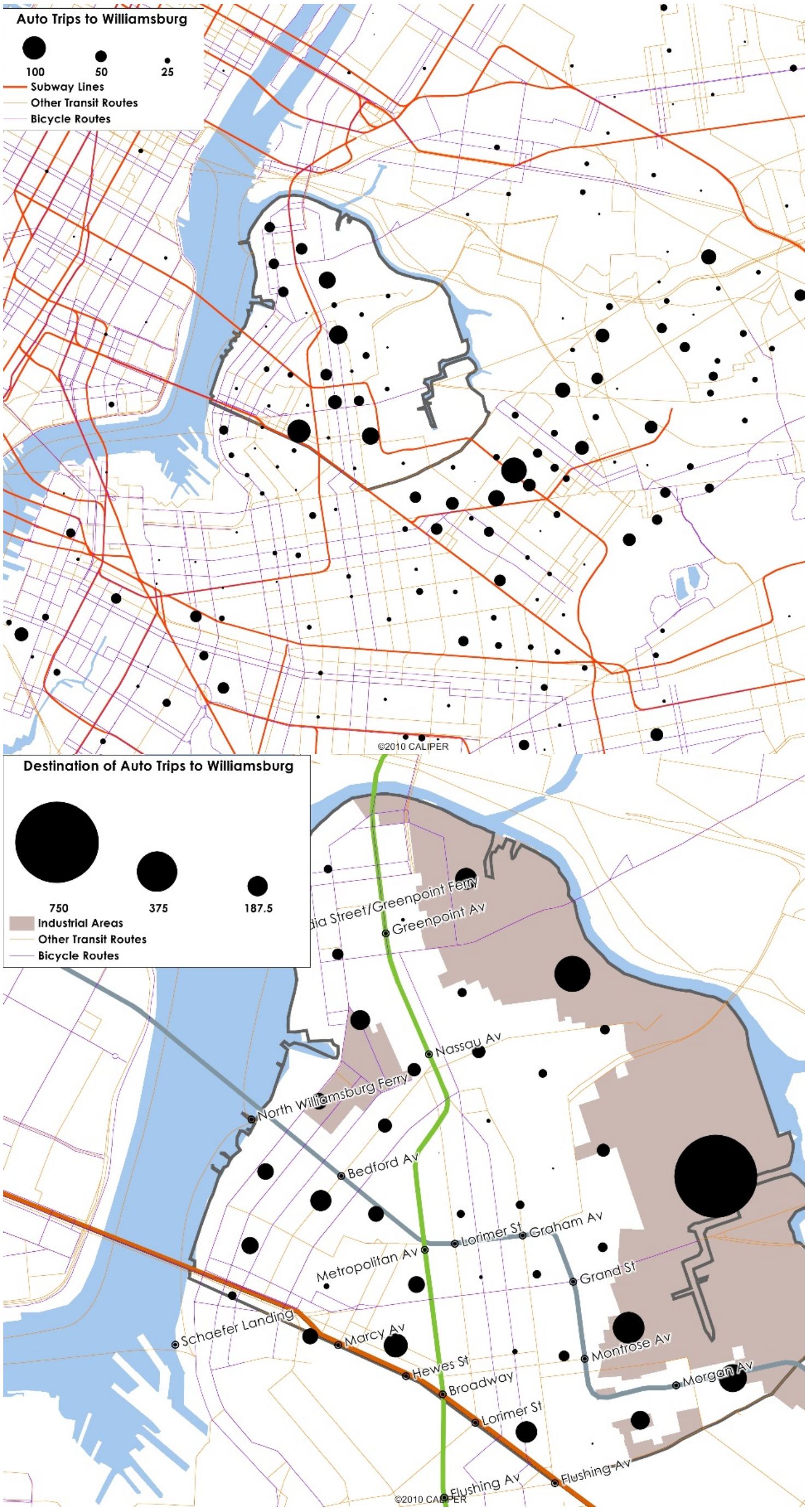


Figure 37: Short Auto Trips to Williamsburg

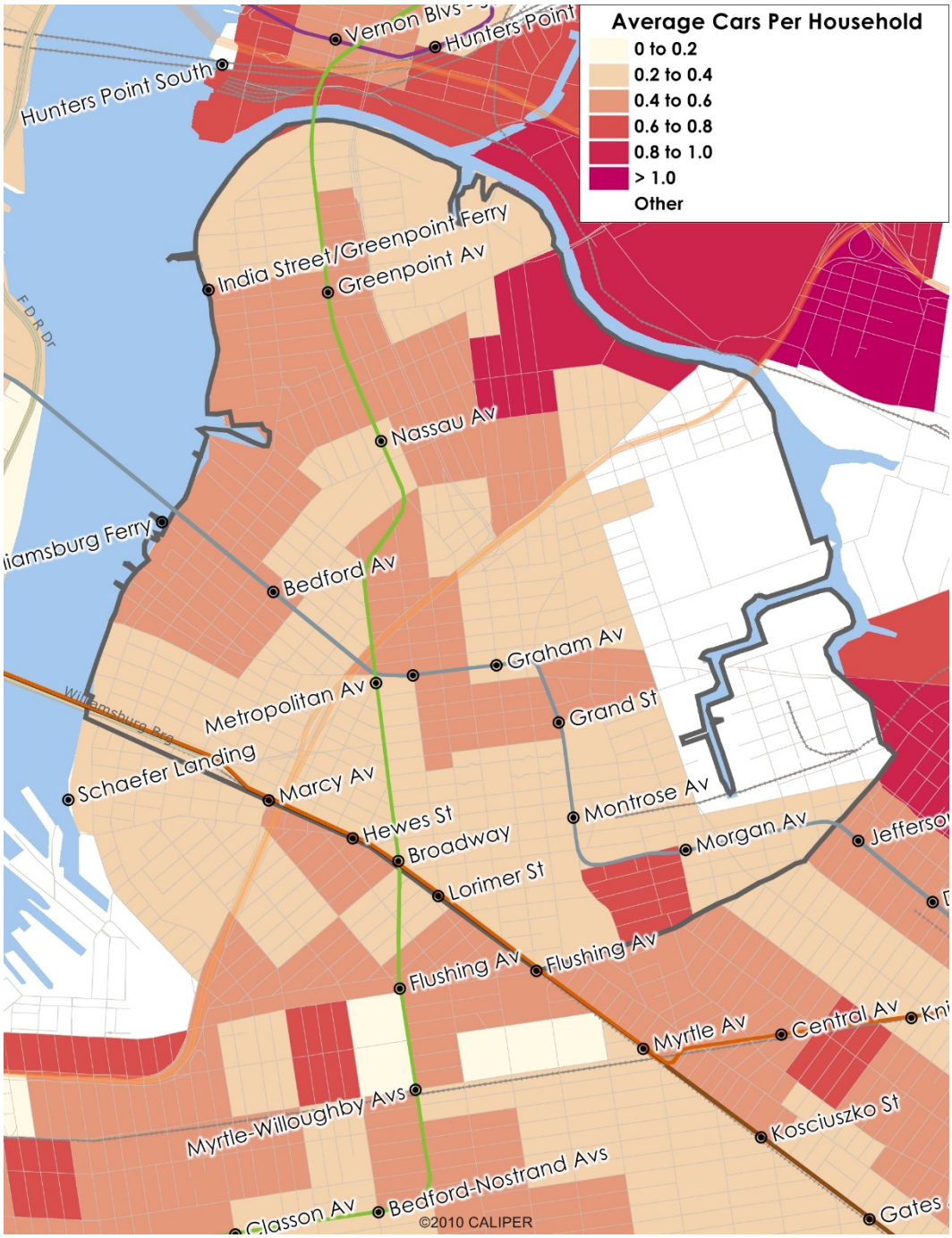


Figure 38: Auto Ownership

A2 Transit access

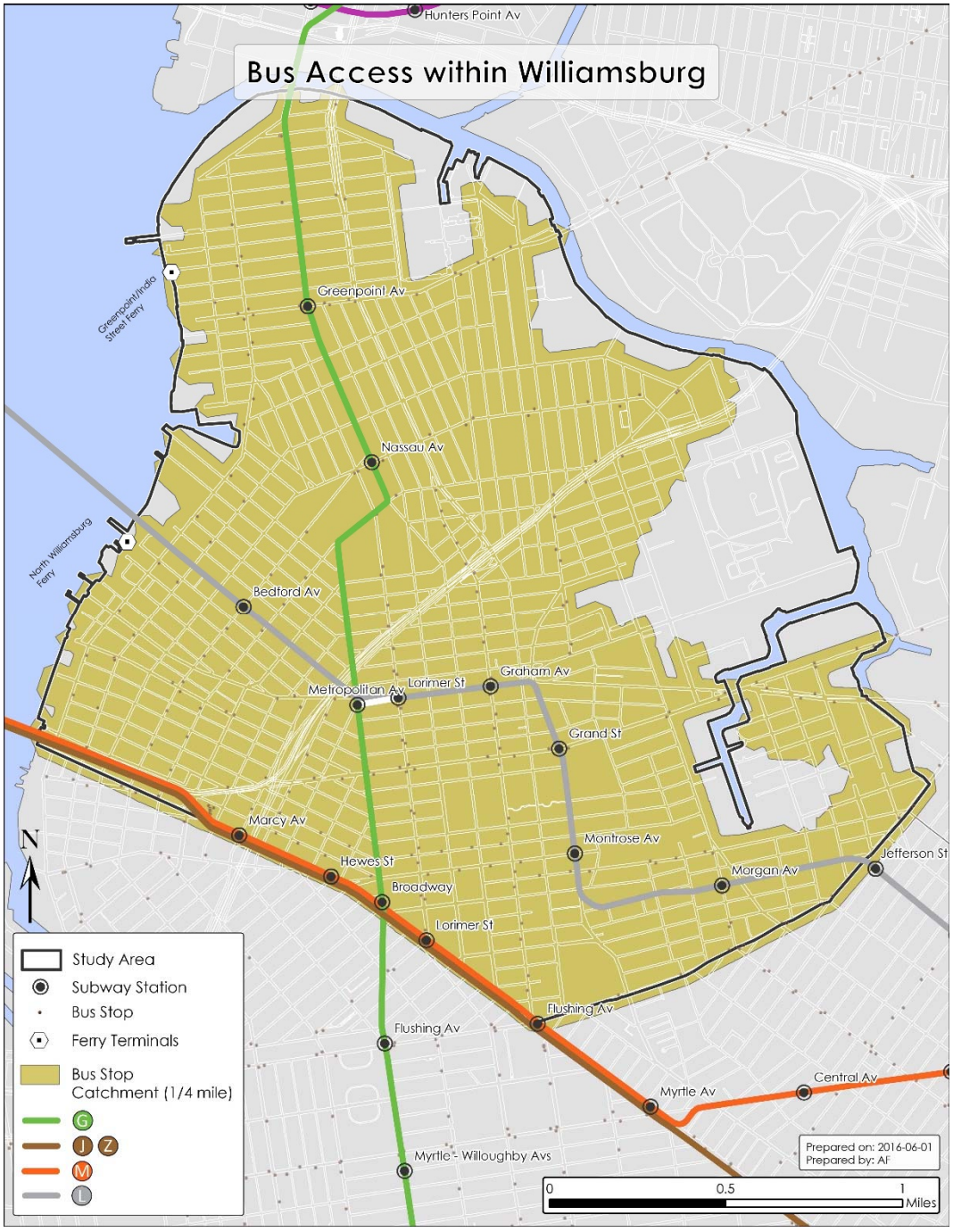


Figure 39: Bus stop catchment

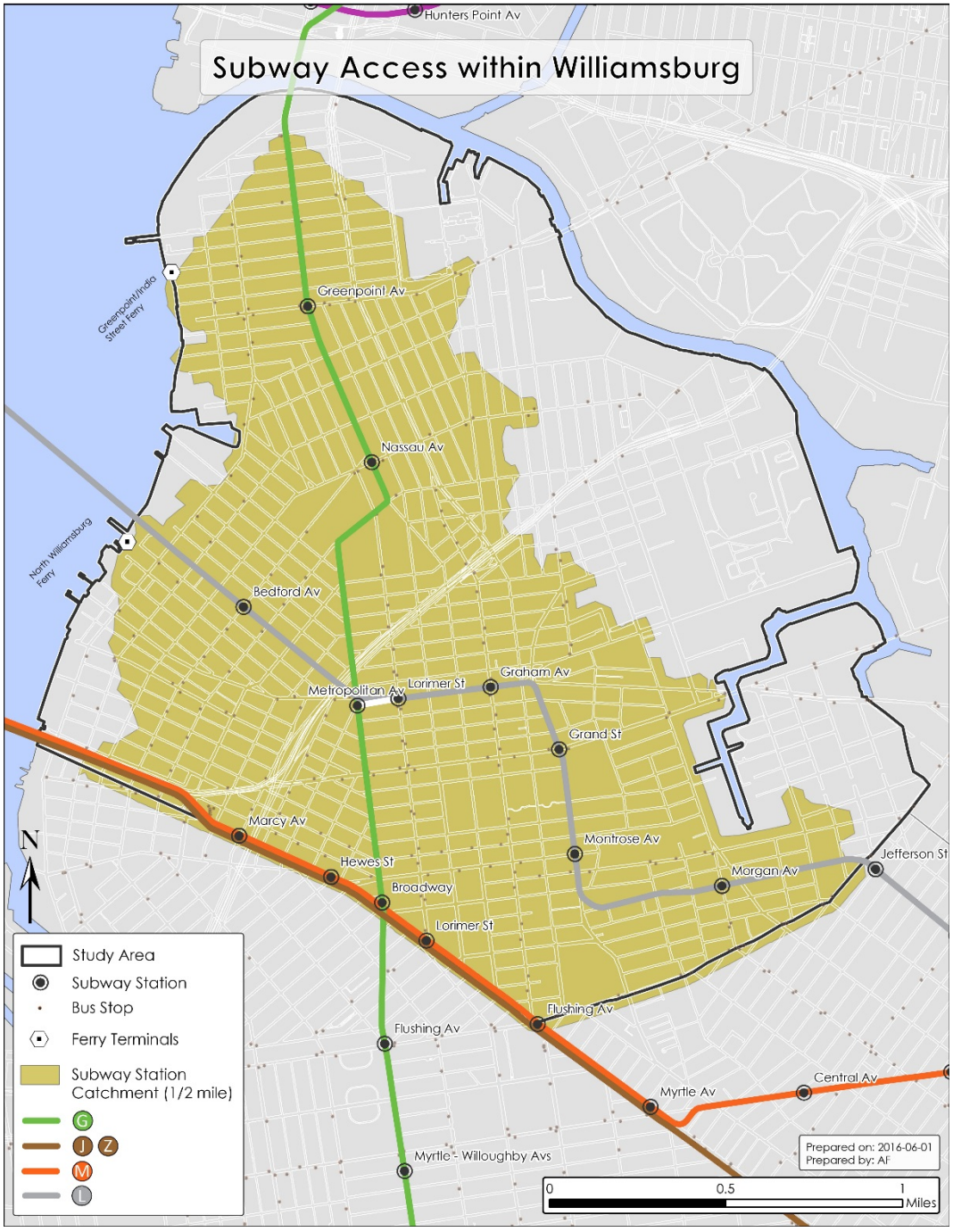
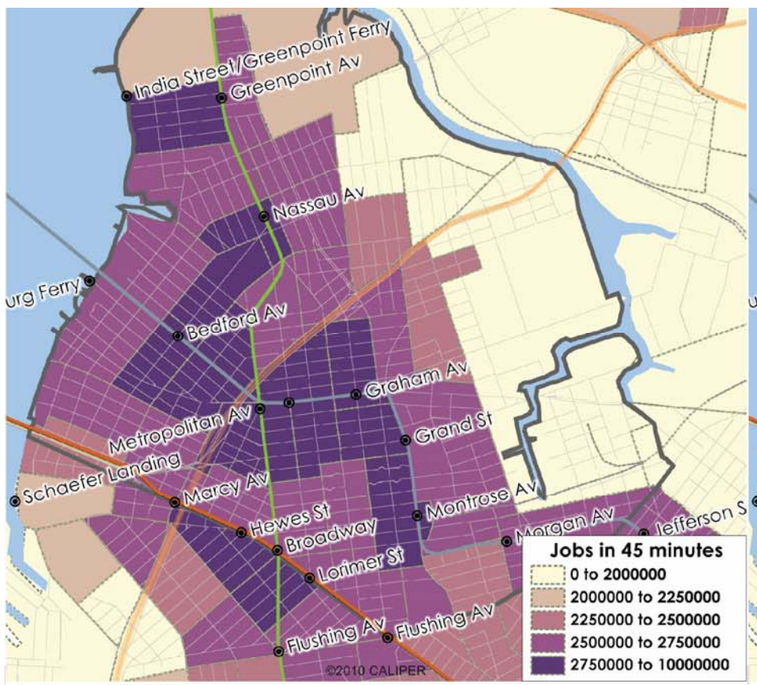
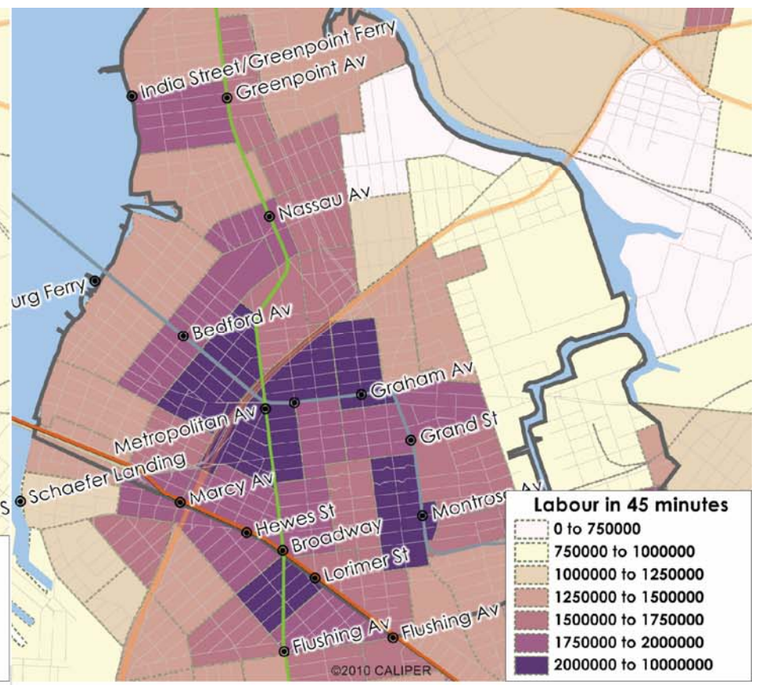
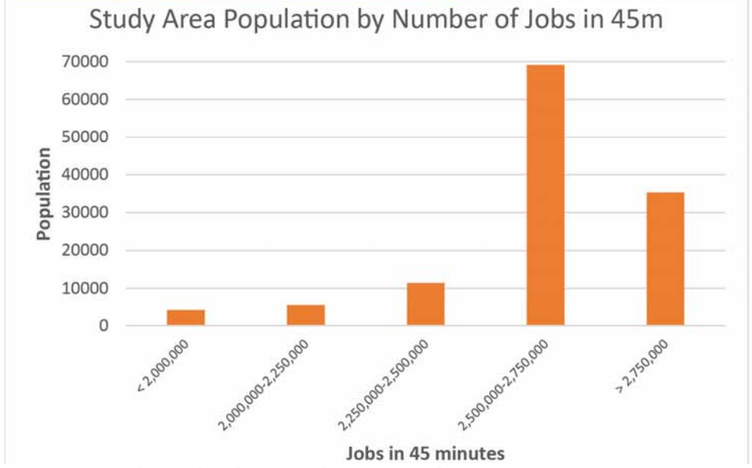


Figure 40: Subway stop catchment







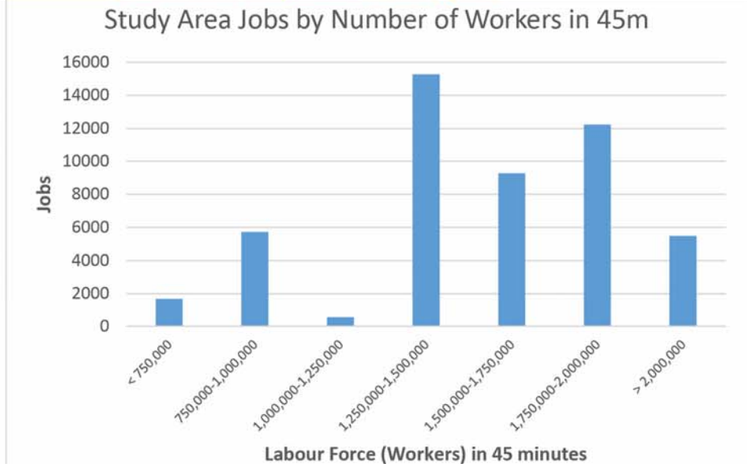


Figure 41: Jobs and Labour within 45 min by transit

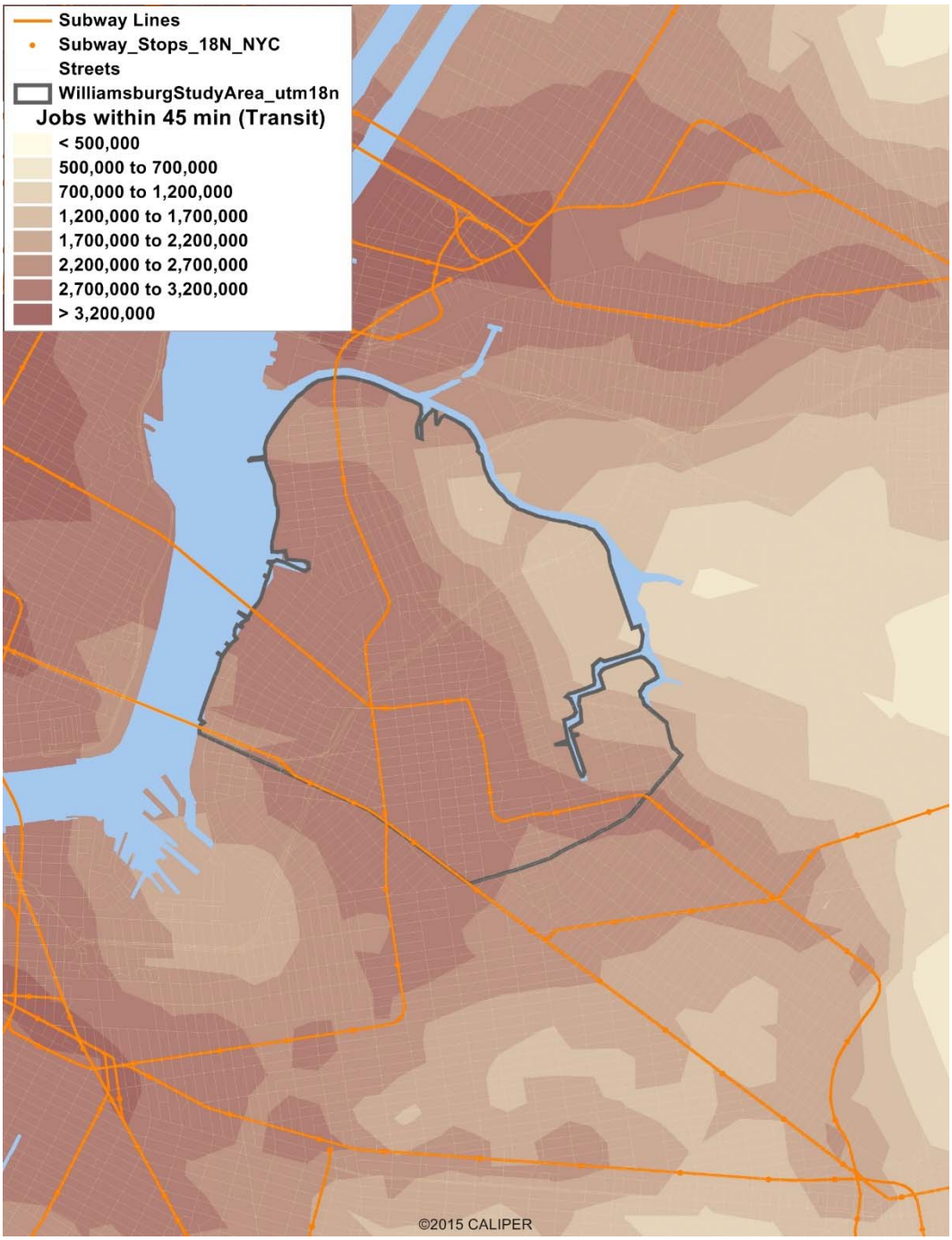


Figure 42: Jobs within 45 min by transit (contours)

APPENDIX C

Notes of Meeting

- TAC Meeting #1 (Kickoff) – February 23, 2016
- Public Meeting #1 (Kickoff) – May 12, 2016
- Public Meeting #2 (Kickoff) – May 16, 2016
- NYCDOT Booth @ Go Green Festival – June 4, 2016
- TAC Meeting #2 (Existing Conditions) – March 9, 2017
- Public Meeting #3 (Existing Conditions) – March 30, 2017
- CB1 Presentation (Summary of Recommendations) – April 10, 2018
- CB1 Transportation Committee Meeting) – May 31, 2018
- Public Meeting #4 (Full Recommendations) – June 6, 2018

North Williamsburg Transportation Study

Notes of Technical Advisory Committee (TAC #1) Kick-off Meeting

February 23, 2016 @ 10:30 AM

NYC Department of Transportation conducted the first TAC meeting for the North Williamsburg Transportation Study at the Borough Commissioner's office, 16 Court Street in Brooklyn. In attendance were City Councilman Stephen Levin and representatives for Congresswoman Nydia Velazquez, Assemblywoman Maritza Davila, Assemblyman Joseph Lentol and Senator Daniel Squadron, NYC Department of City Planning, Brooklyn Community Board 1, NYPD and NY State DOT. Also, several NYCDOT divisions were represented including Traffic Operations, Freight Mobility, Metropolitan Planning and Grants, Traffic Engineering and Planning, Highway Design and Bikes & Pedestrians. The purpose of the meeting was to introduce the study and present the scope of work.

Michael Griffith (NYCDOT) opened the meeting with a brief introduction and background to the study before introducing Harvey Lareau (NYCDOT) to present the draft scope. The presentation outlined the goals and objectives, study area boundaries and the subjects to be analyzed for the existing and future conditions. It also included a work schedule and other known initiatives in the study area. After the presentation attendees were invited to comment and/or ask questions.

Councilman Levin asked about coordination with the South Williamsburg Transportation Study and The North Brooklyn Industry and Innovation Plan, an effort that is being undertaken by DCP.

DOT stated that coordination will occur on various levels such as a data exchange, identifying community issues and through participation in respective community meetings and TAC meetings to avoid overlap and redundancy.

CM Levin's representative informed DOT of a DCP study for the Greenpoint IBZ.

The co-chair of the CB transportation committee identified two locations, along Kent Avenue and at Kent Avenue and Wallabout St, where problems exist and asked if they can be addressed immediately

DOT said that short term recommendations often accompany the existing conditions analysis, many of which can be implemented quickly.

A question was raised concerning duplicating data collection and the possibility of conflicting recommendations from the South and North Williamsburg studies.

DOT explained that there will be coordination between the studies in developing short and long term recommendations.

A follow-up question was when will a presentation be made to the Community Board?

It was explained that the Community Board is invited to all TAC and public meetings and when preliminary recommendations or projects are developed, these would be presented directly to the transportation committee and the full board.

The committee emphasized the need for effective public participation as the community best knows the many issues.

Concern was expressed that some members of the community might be excluded from the process due to the medium of communication such as using an online survey where some might not be tech savvy. It was stated that the area has a large senior population that should be informed or invited to these meetings using more conventional methods.

DOT said there are many different ways we communicate with community members such as e-mail invitations, distributing fliers (libraries, schools, community centers, etc.) to maximize community participation.

A member highlighted the community's mixed feeling towards the Kent Avenue Greenway project which some members support while others do not.

CM Levin explained that there are opportunities to gain parking spaces where there are unused curb cuts associated with previous businesses as well as where there are dysfunctional fire hydrants.

DOT explained that this can be complicated since curb cuts are approved by DOB and may require their involvement. However, DOT will explore the situation.

A member asked if the existing conditions analysis will take account of different seasons since summer peak for many trips near the waterfront are very high and enquired if counts will be conducted in summer?

DOT replied in the affirmative that counts will be conducted as necessary at locations that attract significant pedestrians and vehicle traffic.

Another issue raised was the high parking demand in the area due to the lack of accessory parking within the IBZ. It was explained that there are many converted buildings with no accessory parking whose customers take up on street parking.

DOT said that a parking analysis would be conducted to assess short and long term parking needs for the entire study area.

CM Levin asked if the BQX trolley proposal or the L train shutdown would affect the existing data collection and analysis.

DOT explained that without definitive details or clear transportation planning assumptions that can provide quantifiable information, they cannot be factored into the analysis. However, as details emerge regarding either subject the study will seek to take them into account.

Another member asked how you go about identifying intersections with problems in such a large study area.

DOT stated that community complaints are received in the Borough offices (e.g. Borough Engineers, Borough Planners, etc.) and that institutional knowledge of the area, reconnaissance and field observations help identify the problems.

In regard to the future conditions analysis, a TAC member stated that base line projections may not work since the community is changing at such a rapid pace.

DOT stated that one of the reasons demographics and land use are examined is to capture some of those changing conditions in the area.

A TAC member asked if the study would look at late night activities and traffic volumes, particularly along Wythe Avenue and Bedford Avenue where such activities occur.

DOT stated that the ATR counts are collected from one week, 24 hours a day which capture traffic volumes reflecting all periods.

Councilman Levin's representative suggested that the public meetings be held in multiple locations to accommodate as many people as possible to which DOT concurred.

After thanking the participants for their great comments and contribution the meeting was adjourned.

North Williamsburg Transportation Study

Notes of Public Kickoff Meeting #1

May 12, 2016 6:30 PM

NYCDOT Traffic Engineering & Planning conducted the first of two public kickoff meetings for the North Williamsburg Transportation Study on May 12, 2016 at the Swinging 60's Senior Center at 211 Ainslie St. The purpose of the meeting was to present the scope of the study and receive feedback from the public. In attendance were Councilmember Steven Levin, representatives of Congresswoman Nydia Velazquez, Assemblyman Joe Lentol, Senator Martin Dilan, Community Board 1, Department of City Planning, NYMTC, Evergreen, the Grand Street BID, Transportation Alternatives, Town Square, and many area residents.

NYCDOT gave a Power Point presentation on the scope of the study which summarized the goals and objectives, methodology, subjects of analysis and study schedule. After the presentation attendees were invited to comment or ask questions. Following are pertinent comments and questions.

A resident stated that waste management trucks and other heavy vehicles on Metropolitan Avenue between Lorimer Street and Union Street have caused significant structural damage to the homes and buildings on that corridor. Additionally double parking and congestions from Trucks accessing the BQE have increased the asthma rates in the neighborhood. A previous study of Metropolitan Avenue resulted in some new signage but the resident hopes that this study results in more significant changes.

An area resident commented that Devoe Street is used by many trucks as an illegal diversion from Metropolitan Ave. No through trucks signage is needed.

A NYMTC representative stated that the Staten Island One Way toll pushes trucks into the area.

A resident stated that bike and truck traffic have increased significantly on Ainslie Street and a four way stop should be implemented at Ainslie Street and Leonard Street where vehicles fail to stop at existing stop sign on Ainslie St.

The representative of Congresswoman Nydia Valazquez stated that the neighborhood has been dealing with truck issues over the last 20+ years and hopes the study will result in positive changes for the residents. She then identified the following problematic locations that DOT should focus upon:

- Broadway and Flushing (Woodhull Hospital) is a dangerous location for pedestrians. Crosswalks on all four corners need to be addressed. Perhaps a pedestrian fence would work.
- Marcy Avenue and Havemyer Street between Broadway and S 5th Street has deteriorated roadway conditions with many potholes. This is also a difficult intersection for pedestrian to cross. Crosswalk needs to be refurbished
- Borinquen Place and Keap Street medians are not very visible (particularly at night). Traffic funnels to one lane in front of median.
- Borinquen Pl btw Roebling and Keep approaching the Williamsburg Bridge – Short light going onto bridge causing congestion. Road marking fades quickly. Perhaps an overhead sign could replace the roadway marking.

A resident stated that Manhattan Avenue between Metropolitan and Meeker Avenue needs additional speed controls due to speeding along this corridor (car service vehicles in particular).

Multiple residents agreed that Wythe Ave, which is the only southbound route until Driggs Avenue, is often very congested with nightlife activities and hotel related traffic. This is a particular concern due to emergency vehicle access.

A resident commented that Meeker at McGuiness Blvd is very difficult to cross as a pedestrian and that DOT needs a comprehensive approach to Meeker Avenue that addresses pedestrian safety.

A representative from Evergreen stated that with the new pedestrian and bike travel lanes on the Kosciuszko Bridge upcoming DOT should plan the network connections beforehand.

Several residents enquired for any new details about the possible L Train shutdown and wondered how the study would handle the changes. Alternative modes should be examined. J/M trains are already packed. New service should be added now and should remain after the L train service is restored.

A community member emphasized that the study should examine how L Train shutdown will affect traffic.

A resident enquired about the legality of multi-trailer trucks traveling along Metropolitan.

A member of the Grand Street BID declared that the signal timing is not coordinated on Grand Street between Union Avenue and Bushwick Ave.

A business owner stated that DOT should increase parking meter time on Grand Street to two hours consistently. She also asked if the study information (parking utilization/crash data/pedestrian counts) could be shared earlier in the process through the online portal.

Residents asked if improvement measures be implemented before the conclusion of the study.

A representative of Assemblyman Joseph Lentol stated that Morgan Avenue and Vandervort Avenue were recently turned to one-way pairs and that a temporary signal; was installed on Vandervort Avenue at Lombardi Street as part of the Kosciuszko Bridge construction and that some of his constituents have requested this to remain after the bridge is open.

A resident identified Maspeth Avenue being used as a truck alternative to Metropolitan Ave. She stated that trucks have difficulty turning at Maspeth and Kingsland Avenue and has requested an all way stop or signal at Maspeth and Kingsland Ave.

A community member identified Humboldt Street from McGuiness Blvd to Metropolitan Avenue as a non-truck route often used by trucks

A resident identified that Olive Street between Devoe Street and Powers Street and Broadway and Manhattan Avenue all having deteriorated roadway conditions and many potholes. He then question the quality of the roadway materials and wondered why they deteriorate too fast.

A member of CB1 asked if the study will be looking at the Citibike program. Citibike parking placement need oversight as it's a paid service and removal of parking spaces affects businesses. Community was given impression that it would be easy to move or remove existing parking racks but found there is little flexibility. There are issues with parking racks on Grand Ave, Driggs Ave, Nassau Avenue in which businesses are complaining about the removal of parking spaces. The Community Board would like (CB1 Trans Chair) oversight to remove particular racks. Parking should be planned strategically.

Councilman Steven Levin stated that the study should focus on Crash and Safety issues and improvements identifying fatality locations, identifying choke points and assessing what can be done to reduce congestion and truck traffic. He feels that needs to be done to keep the trucks on the major thoroughfares. Pulaski bridge lane reduction is a good example of what can be done without creating issues.

A resident stated that bikes don't follow road rules. Business owners are responsible for liability of sidewalk but have no say in placement of citibike racks.

A community member said that there is a need for more cameras to enforce the 25mph speed limit. However, she felt the slower speed limit causes drivers to be more impatient and aggressive.

A resident asked if there are any plans for municipal parking in Greenpoint and stated that more off street parking is needed.

A community member said that the study should reach out to the BIDs and Businesses in the area and that the study needs better outreach for meetings.

Councilman Steven Levin stated that curb cuts for previous industrial uses (and non-working hydrants) should be removed for additional on street parking.

North Williamsburg Transportation Study

Notes of Public Kickoff Meeting #2

May 16, 2016 6:30 PM

NYCDOT Traffic Engineering & Planning conducted the second of two public kickoff meetings for the North Williamsburg Transportation Study on May 16, 2016 at the McCarren Park Play Center at 776 Lorimer St. The purpose of the meeting was to present the scope of the study and receive feedback from the public. In attendance were representatives of Assemblyman Joe Lentol, Senator Daniel Squadron, Community Board 1, NYSDOT and area residents.

NYCDOT gave a Power Point presentation on the scope of the study which summarized the goals and objectives, methodology, subjects of analysis and study schedule. After the presentation attendees were invited to comment or ask questions. Following are pertinent comments and questions.

A representative of State DOT asked if the study will be taking account of the BQX rail project.

A resident asked if traffic data is being collected in the summer. This is the peak period and completely different from other times of the year. He then identified new hotels on Wythe Avenue around N. 11th and N12th Street creating congestion particularly during the late night and stated that more hotels are coming (under construction at S 8th or 7th). He believes that the increasing development density and free parking is an issue in the area creating double parking conditions and adding to the congestion.

A community member identified the intersection of N 4th Street and Bedford needing a traffic signal and day lighting on the corners.

A resident identified Wythe Avenue as the only southbound route before Driggs Avenue and stated that it is often very congested. DOT should consider turning Kent Avenue back to two-way to provide SB access. Additionally, Kent Avenue needs better bike coordination (bike signals) for pedestrian safety because it has bikes in both directions operating on a one way street. He added that continuing development is adding more people, noise and congestion to the area. City allows the development without necessary infrastructure.

A resident stated that the amount of film crews in the area is very high. The representative of Assemblyman Lentol added that while this is not in DOTs purview they should consider creative solutions.

A resident stated that the bike markings in the intersection of Franklin Avenue @ Greenpoint Avenue bike lane markings are confusing and should be simplified. She added that the bike lane on Franklin Avenue is not safe because of encroaching vehicles on a narrow street and perhaps DOT should consider making it a protected lane.

Residents agreed that the congestion will get much worse when the L Train gets shut down.

On street parking in Greenpoint is in high demand with many cars circulating and waiting for parking spots.

It was stated that Provost Street is very industrial and not wide enough for two cars to pass. Loading and unloading trucks often block the roadway.

Residents agreed that cars and trucks often use the bike lane to travel and to load/unload and that DOT should consider more loading zones in the area.

A community member stated that bike lanes should connect to the schools in the area. She added that WB Oak Street @ Franklin Avenue needs daylighting as Cars cannot see the bikes when entering intersection. There is possible missing signage at this location.

A resident stated that Manhattan Avenue is narrow with Buses running in both directions. Bikes weave in and out. Bike lane drops at Greenpoint Avenue and picks back up at Engert Street but bikes continue to use Manhattan Avenue during this stretch.

A community member identified a bottleneck situation at Kent Avenue and N 14th Street where Kent becomes Franklin Ave.

Yellow cabs and livery vehicles were identified as parking on Provost and McGuinness Blvd.

A resident stated that Greenpoint was cut off from Manhattan after Hurricane Sandy. Greenpoint needs more buses to access queens and Manhattan and better transit services for residents.

Residents agreed that the study feedback portal is very helpful but information on the study was hard to find online and the meeting should have been better promoted.

A community resident stated that there is not enough recreation space in the area and the City needs to plan for the future demand of the upcoming developments

North Williamsburg Transportation Study

Notes of Public Comments from NYCDOT Booth at Go Green Festival

June 4, 2016 11:00AM – 4:00PM

NYCDOT Traffic Engineering & Planning hosted an information booth at the Go Green Festival held on June 4, 2016 in McCarren Park. Two project members actively engaged the festival attendees, explaining the scope of the study, passing out information regarding the study's online feedback portal and discussing and transcribing any transportation issues which the attendees identified. Following are the pertinent comments from the event arranged by category:

Traffic

- The intersection of Franklin ST/Calyer Street and Banker Street is complex, confusing and has blind spots that create accidents.
- Many vehicles run the red light at Manhattan Avenue and Driggs Avenue and at Driggs and N 12th St. Both locations could benefit from a red light camera. Red light camera fines could be used to fund transit and transportation projects.
- Daylighting is needed for Streets crossing Wythe to better see the approaching traffic
- Manhattan Avenue north of Greenpoint Avenue is crazy with many bikes and cars, and prominent double parking
- The signal at Lorimer Street and Ainslie Street seems to be too long in the PM.
- Kent Avenue should be a two way street
- There are two off ramps from the BQE but only one on ramp which forces more traffic along Meeker St.
- There is too much speeding vehicles on Graham Avenue from the BQE to McGuiness Blvd
- There should be more northbound crossings over Newtown Creek
- The is a synchronization issue with the traffic lights on Manhattan Avenue and Lorimer Avenue between Devoe Street and Ainslie Street particularly at night

- There are traffic/pedestrian safety concerns on Manhattan Avenue between Box Avenue and Clay St.
- Heavy traffic on Ainslie Street and Devoe Street with new building construction and a street closure.
- Late night activities (1AM) create congestion on N 10th St.
- Vehicles often speed on Graham Avenue between Meeker Avenue and Driggs Avenue

Difficult Pedestrian Crossings

- Meeker Avenue at McGuiness Blvd is a very difficult crossing for pedestrians
- Havemeyer Street and S 4th Street is a difficult pedestrian crossing with few crosswalks
- Nassau Avenue and McGuiness Blvd is difficult to cross with high speeds and a fast right turn onto Nassau from McGuiness Blvd northbound
- Need an additional crosswalk at Driggs Avenue at Union Avenue Street between the McCarren Park entrances.

Public Transit

- The G train is an important line in the area but the off peak headways are very long.
- The G train should be extended with an extra car
- The Shuttle bus that replaced the G when it was inoperable was more efficient.
- L train is always overcrowded. The G train needs improvements if it is to take some of the burden off the L train
- B24 headways are very long
- M train runs infrequently
- How will the BQX relate to the study?
- The BQX will not be an effective transit option.
- The neighborhood needs more connections to Queens and to Manhattan. Ferries should connect to Manhattan around 14th Street.
- B43 has turning difficulties at Manhattan Avenue and Driggs Ave.
- B62 runs very slow along Bedford Avenue particularly during when school buses are picking up and dropping off students.

Trucks

- Difficult to drive a truck in the area particularly with bikes not obeying the law
- Not enough loading and unloading zones in the area
- Production companies taking up the parking with their trucks
- Trucks too often speed along Metropolitan Ave
- Freeman Avenue between Manhattan Avenue and McGuiness Blvd has many trucks that shouldn't be there particularly now that it has a bike lane.
- Many trucks are using Wythe Avenue to travel southbound though it is not a truck route.

Bikes

- Citibikes take up too many on street parking spaces
- Bikes shouldn't have to stop for the entire red light if there is no conflicting traffic
- Bike entrance to the Pulaski Bridge on Eagle Street is confusing
- New bike lane on Pulaski Bridge is transformative to the bike network.\
- Bike lane on Pulaski Bridge takes a lane away from the vehicles and creates additional congestion
- Manhattan Avenue at Bedford Avenue is a mess with many bikes and vehicle conflicts
- Metropolitan Avenue widens after crossing the bridge and trucks speed up and make a fast right turn onto Varick Avenue which is very dangerous location for bikes.
- Bike route on Manhattan Avenue is problematic
- Bikers don't follow the rules of the road.
- Bikes should have to pay to be licensed
- Kent Avenue at N 5th Street and N 4th Street have considerable bike and pedestrian conflicts. Both the cars and the pedestrians do not expect bikes to be travelling southbound on a one-way street.

Parking

- Kent Avenue cannot meet the current parking demand and much more development is coming to this corridor
- Street cleaning machines are not very effective and twice a week ASP parking regulations is too much

Policy Issues

- Existing infrastructure doesn't support the growth of the area

North Williamsburg Transportation Study

Notes of Technical Advisory Committee (TAC #2) Existing Condition Analysis

March 9, 2017 @ 10:30 AM

NYC Department of Transportation conducted the second TAC meeting for the North Williamsburg Transportation Study at the Borough Commissioner's office, 16 Court Street in Brooklyn. In attendance were representatives for Congresswoman Nydia Velazquez, Assemblyman Joseph Lentol, City Councilmember Steven Levin, NYC Department of City Planning, NYPD and NY State DOT. The purpose of the meeting was to present the existing conditions analysis and get feedback from the committee.

Michael Griffith (NYCDOT) opened the meeting with a brief introduction and background to the study before introducing Harvey Lareau (NYCDOT) to present the existing conditions. The presentation highlighted eight subjects of analysis and then identified the issues and potential improvement locations. After the presentation attendees were invited to comment and/or ask questions.

The representative of Nydia Velazquez had several comments

- There are no issues or potential improvements identified around the area between S 4th Street and Broadway.
- S 5th needs better clarity for pedestrians
- Poor pavement conditions on Grand St/Borinquen Plaza and S4th St
- Grey metal bollards on the median on Borinquen Place are dark and difficult to see in the evening
- Eastbound Grand Street traffic often blocks the box at Keap Street and results in backup and horn honking on Keap St
- May be signal coordination issues on Grand Street eastbound from S 1st street
- Marcy Avenue has deteriorating roadway conditions

- Though there has been a recent change at Broadway and Roebling Street it still has pedestrian crossing issues and needs more attention.

The representative of Assemblyman Lentol brought up the issue of speeding on Nassau Avenue east of McGuinness Blvd and on Freeman Street west of McGuinness Blvd.

The representative of councilmember Levin discussed how the construction must finish on Wythe and Kent so the increasing density will warrant new signals. He added that the use daylighting is often ineffective as the size of vehicles using the spaces for short term parking (utility and delivery vehicles) are larger than the long term parked private vehicles.

The NYPD representative mentioned a recent fatality at Meeker Avenue and Steward Street

The representative of councilmember Reynoso stated that parking restrictions on S 5th Street between Havemeyer and Union (PM) create a wide roadway and result in speeding and pedestrian safety issues. She added that Keap and S 2nd Street needs a signal and has school bus pickup issues and that post office trucks park on sidewalk on Marcy Avenue between Grand Street and S 4th St.

The representative of Assemblyman Lentol stated that vehicles are still making the newly restricted turns from Meeker Avenue onto Union Street.

A member of the TAC stated that Taxi Stands are needed on Wythe Avenue near the new Hotels.

Another member of the TAC discussed the safety issues of bikes on McGuinness Blvd and Meeker Ave.

Public Meeting #2 - Existing Conditions Analysis

Swinging 60s Senior Center (211 Ainslie St)

March 30, 2017

NYCDOT Traffic Engineering & Planning conducted the second phase public meeting for the North Williamsburg Transportation Study on March 30, 2017 at the Swinging 60s Senior Center at 221 Ainslie St. The purpose of the meeting was to present the existing conditions analysis and receive feedback from the public. In attendance were city council member Steven Levin, representatives for council member Antonio Reynoso, Community Board 1, NYSDOT, the Grand Street BID, Evergreen, Waste Management, Transportation Alternatives and area residents.

NYCDOT gave a Power Point presentation on the existing conditions analysis identified the transportation issues and potential improvement locations in the study area. After the presentation attendees were invited to comment or ask questions. Following are pertinent comments and questions.

Councilman Levin asked if the presentation could be available for public consumption and that additional time be given for public feedback.

An area resident stated that Apollo Street has “No Truck Signs” but truck volume on the corridor is very high and needs enforcement. Truck honking and trash are two symptoms of the trucks. Additionally, the routing due to the construction of Kosciusko Bridge is making the issue worse.

A representative of Transportation Alternatives asked for more advance notice to meetings and asked for the presentation to be made available online. He agreed regarding off-route truck issues on Apollo Street and added that Humboldt Street near Grand Street is another off route truck issue with poor paving conditions. He also stated

that Maspeth Avenue between Morgan and Humboldt is not represented on the issues map but has high truck volumes.

A representative of Evergreen stated that the new enhanced crossing at Kingsland Avenue and Maspeth is not enough protection at this location as vehicles do not yield to pedestrians.

She also questioned why the on street parking section was divided into focus areas and did not represent the actual issues with on street parking. She added that there are overnight tractor trailers parked in the industrial areas, and trucks occupy too much on street capacity making it difficult for workers in the (transit poor) area to find parking. This issue is acute on Metropolitan Ave, Vandervoort Avenue and Kingsland Ave.

A community member asked how the potential improvement locations were selected and stated that Grand Avenue is not shown in the improvements but has many issues. Additionally, he wondered if the truck route volume map included off route trucks.

A representative of councilmember Reynoso said that there is speeding on Ainslie between Rodney Street and Union Avenue as vehicles come off BQE and added that vehicles making right turns from Broadway to Havemeyer Street often fail to yield to pedestrians in the crosswalk. She then inquired if there are bicycle improvement plans along Meeker Ave.

A member of community board 1 asked where the funding for implementation comes from.

A representative of NYCTCC asked about the potential to shift modes for commercial and industrial uses to use rail or smaller vehicles.

The Evergreen representative replied that DCP's North Brooklyn Industry & Innovation Study is looking at this issue.

Steven Levin also stated that he is working on legislation to exempt rail from waste transfer capacity limits thereby incentivizing rail operations.

A community member said that DOT's warrant analysis is not looking at pre and post school hours regarding the Kingsland Avenue and Maspeth Avenue intersection. He added that there are concerns about turn radius, double parking and congestion at Box Street and Clay, particularly for emergency vehicles.

A community member echoed concerns regarding off-route trucks on Humboldt Street and Apollo Street and noted the need for NYPD enforcement. Additionally he expressed a desire for DOT to synthesize the off route truck problem and to coordinate with NYPD and share the information.

Councilmember Levin said the on street parking utilization numbers seem too low and don't seem to reflect existing conditions. He stated that the blocks north of Greenpoint Avenue between McGuinness Blvd and Franklin Street are often fully utilized.

Councilmember Levin also asked about the ability to fill in curb cuts that are no longer in use. A representative of DOT stated that vehicles may park in curb cuts that have no entrance to the property and that building owners may not paint the curb or street.

A Transportation Alternatives representative mentioned that parking demand would decrease with better bicycle facilities. He then also mentioned the 2016 SIP at Union/Meeker is missing a pedestrian ramp on the southeast corner and wondered if the entrances to the parking lots under Meeker Avenue would be moved from Union Avenue to Meeker Avenue as proposed in the SIP.

The Transportation Alternatives representative stated that Leonard Street from Montrose Avenue to Broadway is wide with speeding issues and DOT should add a buffer to the bike lane to narrow the width of the moving lane.

A community member stated that Manhattan Avenue from Driggs Avenue to Greenpoint Avenue has many conflicts between traffic and cyclists. The street is narrow and there are many trucks double parked making deliveries and people crossing midblock with a particularly long block between Driggs Avenue to Nassau Ave.

A community member stated that the vehicles accessing the post office at Guernsey Street and Messerole Avenue take lots of on street parking, often double park and block the street.

Community members felt that DOT needs to find ways to slow traffic coming off the BQE onto local streets.

A member of the Grand Street Business Improvement District stated that not all curb extensions from the last safety plan were installed with particular issues at Graham Ave, Lorimer Street and Metropolitan Ave. Additionally Grand Street and Bushwick Avenue is missing curbs from latest subway construction and trucks often encroach onto the sidewalk.

Bushwick Avenue was said to have high off route truck volume.

A community member asked if the citywide freight Smart Truck initiative would include the North Brooklyn IBZ and stated that there are extensive truck turning radius issues within the IBZ with many 53' trucks.

A representative of DOT discussed the need to balancing the needs of all street users with their differing street requirements and wishes.

A representative of councilmember Reynoso asked if the study was taking consideration of the BQX and asked about the deadline for comments regarding the presentation.

Brooklyn CB1 Meeting – Summary of Recommendations and SIP presentation

Swinging 60s Senior Center (211 Ainslie St)

April 10, 2018

NYCDOT Traffic Engineering & Planning attended and presented to the Brooklyn Community Board 1 meeting on April 10, 2018 at the Swinging 60s Senior Center at 221 Ainslie St. DOT presented the study goals and process, a brief summary of the full study recommendations and then focused on three street direction change proposals that would be pursued for implementation in 2018. The three street segments were North Henry Street between Richardson Street and Meeker Ave EB, North Henry Street between Greenpoint and Norman Avenues and Eckford Street between Manhattan and Driggs Avenues. In attendance were members of the community board and many residents and business owners from the affected streets. Following the presentation there were several comments.

A board member asked about the process of moving from recommendation to implementation

A community member stated that a speed bump should be installed on North Henry Street between Herbert Street and Richardson Street.

A community member stated that converting North Henry Street between Greenpoint Ave and Monitor Street to SB will retain the same truck issues that exist on Monitor Street.

A community member stated that pedestrian safety improvement s are need at the unsignalized intersection of Meeker Avenue and Monitor Street.

A community member stated that a speed bump was needed on Monitor Street

A community member stated that all truck traffic should be diverted to McGuinness Boulevard

A community member stated that the proposed head on condition at North Henry Street and Norman Avenue needs to be fully evaluated

A community member asked whether there was any proposal to remove the traffic signal at Norman Ave and Monitor Street

A business owner of the Henry Norman Hotel stated that his business would be impacted by the proposed change.

A community member stated that trucks speed down Monitor Street and that there should be more two way streets.

A community member stated that traffic backs up along North Henry Street (between Richardson and Meeker Avenue) when congestion occurs along Meeker Avenue and that it will be very hard to circle the block to find parking if the street is converted to one way.

A group of community members stated that they live along North Henry Street and support the proposed one way conversion.

A community member stated that would like to see more proposals to improve Flushing Avenue.

Brooklyn CB1 Transportation Board Meeting –SIP presentation

Swinging 60s Senior Center (211 Ainslie St)

May 31, 2018

NYCDOT Traffic Engineering & Planning attended and presented to the Brooklyn Community Board 1 Transportation Committee on May 31, 2018 at the Swinging 60s Senior Center at 221 Ainslie St. The presentation focused on three street direction change proposals that would be pursued for implementation in 2018. The three street segments were North Henry Street between Richardson Street and Meeker Ave EB, North Henry Street between Greenpoint and Norman Avenues and Eckford Street between Manhattan and Driggs Avenues. In attendance were members of the community board and many residents and business owners from the affected streets. Following the presentation there were several comments.

A community member asked if the curb extension on Eckford Street at Manhattan Avenue would include planters.

A community member stated that McGuinness Boulevard was the best route for trucks given its width and manufacturing land uses. He stated that signal adjustments could be used to clear the congestion.

A community member stated that the proposed conversion would make the Norman Avenue and North Henry Street intersection worse and that a signal should be installed at this location.

A community member stated that the intersection of Norman Avenue and Humboldt Street has a speeding issue.

Several community members stated their support for the conversion of North Henry Street from Richardson Street to Meeker Avenue and asked how long it would take to implement.

A community member asked which treatments would be implemented to prevent vehicles going the wrong way on North Henry Street at Norman Avenue and suggested putting Speed Limit signs along North Henry Street.

A community member stated that Kingsland Avenue between Greenpoint Avenue and Nassau Ave should be converted to two way as an alternative to the proposal

A community member stated that a signal should be considered at Eckford Ave and Manhattan Avenue better facilitate pedestrian crossings at a nearby school.

Public Meeting #3 – Full Recommendations

P.S. 84 (250 Berry St)

June 7, 2018

NYCDOT Traffic Engineering & Planning presented the full recommendations at a public meeting hosted by City Councilmembers Steven Levin and Antonio Reynoso on June 7, 2018 at P.S 84 at 250 Berry St. The presentation provided a brief summary of the study history, the study findings and full recommendations. In attendance were representatives of CM Levin and Reynoso, members of the Brooklyn Community Board 1 and several residents and business owners from the study area. Following the presentation there were several comments.

A community member asked about the amount of traffic needed to warrant a traffic signal

A community member asked how the study would address truck traffic along Grand Street and Metropolitan Avenue

A business owner asked if Russel Street or Kingsland Avenue were considered for reversal instead of North Henry Street.

A community member asked if it was possible to force commercial/industrial deliveries to occur during a particular time period

A community member stated that Manhattan Avenue between Humboldt Street and Metropolitan Avenue has a lot of off route truck traffic and has no traffic signal at the intersections.

A community member stated that Kent Avenue is difficult to cross at unsignalized intersections and the Bedford Avenue and Metropolitan Avenue intersection is a challenge for pedestrians. He also stated that Kent and N 4th Street intersection is

particularly intense during the summer when waterfront activities draw pedestrians to the area. He then said that daylighting is ineffectual without proper enforcement and expressed disappointment in the lack of proposals along Kent Avenue.

A resident of the area stated that Wythe Avenue congestion is worst between 10pm and 2am Fridays and Saturdays and that a stop sign is needed at N 5th St and Wythe Avenue.

A Resident from Woodpoint Avenue indicated that better vehicles speed on Humboldt Street between Metropolitan Avenue and Foster Street and better enforcement is needed.

Several residents agreed that the past conversion of Kent Avenue from two-way to one way accounts for much of the congestion along the north-south corridors and something should be done to lessen the southbound congestion

A community member asked whether the intersection of Maspeth Avenue and Kingsland Avenue may warrant a stop control

A community member stated that Kent Avenue should have some bicycle priority signals because of the heavy bike volume.

A resident ofg the area stated that countdown signals are very helpful and hoped to see all signals converted to countdown signals.

A member of the community board asked how residents and business owners get notified about projects and recommendations and stated that DOT did not do a good job promoting the meeting and the potential projects.

APPENDIX D

NYCDOT Web Portal Comments

Count	Category	Location	Comment
1	Speeding	Kingsland Ave btw Driggs Ave and Nassau Ave	cars and trucks speed down this block in order to make the light at Nassau and Kingsland
2	Sidewalk Blocked / Damaged	Boerum St btw White St and Bogart St	sidewalk blocked by trucks.
3	Signage Problems	Mnahattan Ave @ Driggs Ave	Drivers frequently do not see the "Stop Here on Red" sign/line. Have witnessed many accidents almost happen as a result.
4	Trucks in Residential Area	Knickerbocker Ave btw Thames St and Flushing Ave	large trucks blocking road and creating noise pollution for the nearby residents
5	Speeding	McGuinness Blvd @ Driggs Ave	Speeding and running of lights continues to be terrible on this stretch of McGuinness Blvd. Bike lanes, eliminating commercial traffic should be options to help this dangerous situation.
6	Other	Olive St and Maspeth Ave	Trash can needed at corner of Cooper park.
7	Pedestrians in Bike Lane	Kent Ave btw N 4 St and n 12th St	Kent Ave between N.4th to N.12th has pedestrians wandering into bike lane without looking, with infants in strollers etc, from towers or parkland, VERY unsafe for both cyclists and people. More pedestrian signage is needed, plus live traffic officers on weekends by park entrances.
8	Water in Roadway	Bedford Ave @ Nassau Ave	This area of Bedford Ave has drainage problems.
9	Difficult Turn/Crossing	Bedford Ave and N 8th St	Last intersection in this area of Bedford without a traffic signal. Heavy pedestrian traffic makes this a very difficult intersection for bicyclists, drivers and pedestrians.
10	Lane Marking Problems	Nassau Ave btw Leonard and Manhattan Ave	Confusing 'Do Not Enter' Signs, since buses are allowed to drive down the block (but not cars.) This should be a 2 way street for all vehicles-cars and buses.
11	Signage Problems	GreenPoint Ave @ West St	This intersation needs better signage, perhaps a 4-way stop sign is appropriate?
12	Vehicles Driving in Bike Lane	Kent Ave @ N4th St	Trucks and cars (often going the wrong way) drive in Kent Ave bike lane way to often. Better protection is needed. See http://gothamist.com/2016/06/24/take_back_the_car_lane.php
13	Biking on the Sidewalk	Entrance to Bike Path on Pulaski Bridge	need a more direct route to Pulaski Bridge from South East Greenpoint. Lots of pedestrians.
14	Trucks in Residential Area	Kingsland Ave South of Norman Ave	Trucks are not allowed on Kingsland Ave, however they are always on this street and they speed excessively in order to beat the lights.
15	Speeding	Kingsland Ave btw Nassau Ave and Driggs Ave	Cars and massive trucks are constantly speeding down this block at incredibly high speeds in order to get to the traffic light at Kingsland and Nassau.
16	Dangerous Left Turn	McGuinness Blvd @ Green St	Last left turn to get on the bridge - people speed up. One of the densest streets in greenpoint.
17	Crowded bus stop	Franklin Ave btw Huron and India St	Very busy bus stop
18	Crowded bus stop	Franklin Ave btw Huron and India St	very busy bus stop
19	Bench Needed		More benches severely needed! When the original benches were all broken they only put in half the number of original benches. And, this park has become much more popular in recent years.
20	Other	Java St west of West St	The owner of the blue warehouse has illegal no parking signs posted on their buildings preventing residents from parking there in fear of getting towed. Please enforce the law by telling them to remove the yellow no parking or you will get towed signs
21	Vehicles Driving in Bike Lane	All Bike Lanes	we need all of the bike lanes to be repainted in this neighborhood
22	Red Light Running	Franklin Ave @ GreenPoint Ave	this intersection has become very dangerous because the truck route is now a very populated area. a few problems--lots of congestion, red light running, heavy bike traffic, ped xing, etc. The red light camera off Greenpoint ave has been broken for years.
23	Bus bench needed	Greenpoint Ave and Franklin St	Would love a bus bench here
24	Ferry Service Requested	Dupont St/Eagle St and Waterfront	Since subway access is more difficult on the northern end of Greenpoint and the neighborhood is under development, a ferry access point would be helpful and could curb the demand for greenpoint residents to own cars and future parking issues.
25	Bike Lane Requested	Kingsland Ave	Bike lane needed on kingsland to improve bicycle access to the Greenpoint Ave bridge
26	Speeding	Monitor St from Driggs to Meeker Ave	There is a lot of traffic on Monitor down to Meeker, and everyone speeds: cars, motorcycles, and trucks. With all the children in the neighborhood crossing the street to school and the park, we desperately need stoplights at the intersections on Monitor Street to slow traffic.

Count	Category	Location	Comment
27	Failure to Yield	Norman Ave and Russel St	This four way stop is notoriously terrible - vehicles, including large trucks, blow through the intersection and often stop quickly within the crosswalks without pausing behind them. This is a heavily residential area with a lot of foot traffic and the truck route is terrorizing the neighborhood. Please consider rerouting trucks away from this part of Norman Avenue. Motorcycles are also a problem, and normal vehicles (cars) also drive recklessly in this area.
28	Speeding	Humboldt btw Greenpoint and Norman	So much speeding on Humboldt Street between Greenpoint and Norman! Heavy industrial use and disregard of 25 mph speed limit.
29	Aggressive Drivers	Provost St Bike Lane	Riding on this designated bike lane through heavy industrial area during rush hour is not conducive to safe cycling. This is a valuable route, would be great to nix a lane of parking in favor of two way protected bike lane.
30	No Crosswalk	Manhattan Ave @ Box St – Ped Crossing	Lots of pedestrian traffic coming from Pulaski Bridge need a safer way to cross. Additionally, construction vehicles from Greenpoint Landing tear through this intersection as do the Timer Warner and NYCHA vehicles making it more perilous to cross.
31	Red Light Running	Greenpoint Ave @ Franklin St – Signal Issue	The light is too short for the northbound lane due to pedestrians crossing. Many people run the red light here because the northbound light is so short.
32	Trucks in Residential Area	Freeman Ave - Trucks	More and more trucks for construction in this area are using Freeman St. as a cut through.
33	Other	General	Street Parking frequently taken up by contsruction and Film Productions. Hard to find parking in the neighborhood.
34	Long Wait to Cross	Union Ave @ Meeker Ave	The light timing at this intersection does not make sense for pedestrians and is very confusing. I've seen more close calls for pedestrians who jay walk than I can count. This intersection is especially busy during the Giglio Festival, where many families with children try to cut across this intersection and are put in danger. A young girl was killed at this intersection. We need a better system for pedestrians at this intersection.
35	Aggressive Drivers	McGuinness Blvd @ Broome St	The car wash causes traffic to back up into the street shutting down the right lane. This causes accidents, honking and aggressive drivers.
36	Aggressive Drivers	Mcguinness Blvd @ Nassau Ave	Drivers run this red light ALL the time! Aggressive left-turning from all sides.
37	Double Parking	Humboldt St and Norman Ave	Trucks and cars turning left from Humboldt onto Norman Ave. have a difficult time, often requiring oncoming traffic to back up. This is particularly a problem because of double parked cars and cars parked too close to the corners.
38	Aggressive Drivers	Norman Ave and Russel St	Cars fail to stop at the three-way stop signs on a regular basis and the parked cars on the corners make it difficult for drivers to see who is coming down Norman Ave.
39	Aggressive Drivers	Russel St	Motorcycles and other vehicles speed down Russell Street. The motorcycles are particularly noisy as they head to their clubhouse down a couple of blocks. They don't care what hour of the day it is! The corner of Russell and Norman is another problem spot with cars and trucks failing to stop at the three-way stop and visible reduced by parked cars on the corners.
40	No Crosswalk	Bedford Ave and Nassau Ave	This intersection is very precarious to traverse, i.e. crossing streets. Crossing west from The Nassau-Bedford-Manhattan triangle is unmarked and often confront cars crossing either of those streets with the intention of getting West of Lorimer. Also with cars coming from so man directions without a traffic light crossing from west of Lorimer from either Nassau or Bedford is dangerous with the merging cars + Lorimer cross traffic. Need a light there and I think the N-B-Manhattan Ave triangle needs to be extended all the way to Lorimer.
41	No Crosswalk	Meeker Ave/Union Ave	There is a pedestrian walk way and no cross walk. When farmers markets happen on Saturday it is very hard to cross. You need a stop sign here
42	No Crosswalk	Union Ave and Meeker Ave	Add crosswalk and pedestrian light at Union & Meeker. I've seen two people hit by trucks here.
43	No Crosswalk	BQE Meeker Ave Crossings	Need crosswalks and pedestrian crossing lights at all street corners crossing the BQE!
44	Inaccessible Destination	Greenpoint Ferry Access	Access from end of Java to Ferry is open intermittently with no indication from West St as to whether it is open. Need pedestrian access from Kent St/Transmitter Park
45	Speeding	Humboldt btw Norman Ave and Nassau Ave	Cars speed down this block trying to make green light at Nassau Ave. and Humboldt. We need speed bumps or lights that can't be seen from the previous intersection(shielded by lovers like on Driggs and McGuiness
46	Speeding	Metropolitan Ave btw Orient Ave and Olive St	Lots of speeding along this stretch from cars and motorcycles, even when there are two red lights between the intersections.

Count	Category	Location	Comment
47	Blocking the Box	Metropolitan Ave @ Bushwick Ave	When traffic gets backed up along Metropolitan Avenue at this traffic light, drivers will separate into two lanes to try and circumvent the long line of cars/trucks, often speeding to do so.
48	No Crosswalk	Commercial St btw Franklin and Box St	There is no viable crosswalk from Franklin to the corner of Box/Commercial street. This is a high truck traffic area across from a playground.
49	Speeding	Nassau Ave @ Hausman St	Cars speed constantly here. Many children cross the street in the morning to get to the bus stop and there is no crosswalk or stop sign or speed bump to deter speeders.
50	Failure to Yield	Metropolitan Ave @ Marcy Ave	While pedestrians have the walk sign cars are racing to make left turns onto Marcy from Metropolitan across the oncoming lane of traffic and frequently come dangerously close to hitting pedestrians in the crosswalk who have the light and the right of way.
51	Water in Roadway	Meeker Ave @ Lorimer St	On east side of Meeker Avenue/Lorimer intersection, when it rains puddles form and always spew water at pedestrians. It is like a Loony Toons cartoon!
52	Uncomfortable for Novice Cyclists	Driggs Ave	Bike Lane needs to be repaved. It was patched up recently, but has completely buckled again.
53	Speeding	Monitor St btw Driggs Ave and Engert Ave	This is the last section after the speed bumps and stop signs. Motorists often see this as an opportunity to 'zoom' away. This street has many children living, as well as its proximity to the school that further traffic calming measures are warranted.
54	Failure to Yield	Monitor St @ Driggs Ave	These crosswalks are often not properly regarded by motorists, as it is a route used to get around the BQE/meeker ave. It is especially vulnerable given its proximity to the school.
55	Signage Problems	Morgan Ave @ Sharon St	This is a one way street. Cars like to enter it backwards from Morgan Ave.
56	Water in Roadway	Varick Ave @ Johnson Ave	Gigantic puddle on NW corner. Cars must drive into the other lane to avoid it, pedestrians get splashed.
57	Aggressive Drivers	Johnson Ave @Morgan Ave	Drivers do not yield to the light and make turns well into red lights. Trucks blocking the intersection encourage other drivers to bypass them.
58	Dangerous Left Turn	Kent Ave @ N 4th St	This intersection has become very crowded. You have pedestrians crossing, bike lanes in both directions, cars trying to make a turn off Kent Ave and cars also trying to cross along 4th Avenue to get to the residential buildings located on the pier. There needs to be better signage or a light to help direct traffic.
59	Lane Marking Problems	Kent Ave @ 14th St	Since bikes can make left from 14th onto Kent, they should not have to cross channelized area to do so as that is generally illegal. There should be street marking indicating path for left turning bikes.
60	Conflicting Turns	Kent Ave @ 14th St	Bikes on 14th can go left onto Kent, but south bound cars on Kent get green arrow for turn onto 14th at same time with no clear right of way.
61	Difficult Turn/Crossing	Kent Ave @ 14th St	Bikes on 14th can go left onto Kent, but south bound cars on Kent get green arrow for turn onto 14th at same time with no clear right of way.
62	Uncomfortable for Novice Cyclists	Grand St	The bike lane on Grand Street should be separated from traffic (perhaps two-way on one side of the street like Kent Ave). Vehicles are constantly double parked and swerving into the bike lane. With the coming L train closure this crucial bike link to the Williamsburg bridge needs to be safe and secure for cyclists -- right now only the adventurous/ experienced feel safe here.
63	Speeding	Olive St @ Powers St	Drivers speed through Olive Street to avoid traffic on Bushwick Avenue. These intersections should have four-way stop signs, especially at Olive & Powers where the visibility is poor due to the angle.
64	Speeding	Olive St @ Grand St	The crossing of Grand St at Olive/Waterbury is extremely dangerous for pedestrians. Drivers perceive the crossing between Waterbury and Olive as "straight ahead" instead of a left turn through a pedestrian crosswalk. Drivers use this route as a bypass of traffic on Bushwick Ave and will speed right through the crosswalk since they do not perceive it as a left turn/yield to pedestrians. The crossing of Grand St on the east side of the intersection lacks a painted crosswalk despite the presence of pedestrian walk/don't walk signals. It's amazing more people have not been hurt or killed here.
65	Difficult Turn/Crossing	N 11th St @ Union Ave	Cars run these stop signs, drivers soeed down union avenue, very dangerous crossing and intersection. really needs a stop light and speed bumps.

Count	Category	Location	Comment
66	Poor Visibility	Wythe Ave @ N 8th St	This is the route my children and I take to get to the park on the waterfront. It would be great if there were a stop sign. It feels like such a dangerous crossing with poor visibility and lots of trucks.
67	Aggressive Drivers	N Henry St btw Meeker Ave and Richardson St	This street N Henry needs to be one way from Richardson to Meeker. It's very narrow and always causing problems. The trucks and people coming from Meeker trying to avoid the construction ahead on Meeker are terrible. People get stuck and mirrors of parked cars get broken. Horns honking constantly. It's crazy. It wouldn't mess with anything because Humboldt goes one way the opposite way and you have Graham Ave and Kingsland near that are both normal two way streets. It would also be easy for you to do. Just put a one way sign up and a do not enter from meeker. Then you'd be done. All the residents agree that this makes sense. Thank you for your time. - Jeff Moore 25 N Henry St. 347-232-6136
68	Signage Problems	Nassau Ave btw Leonard and Manhattan Ave	Drivers come down Nassau Avenue and keep going down to Manhattan Avenue even though they should be turning onto Leonard Street. A more clearer or larger sign should be at the corner of Nassau Avenue and Leonard Street that this part of Nassau Avenue is now ONE WAY.
69	Not Enough Time to Cross	Greenpoint Ave @ Leonard Str	Drivers turn so quickly from Greenpoint Avenue onto Leonard Street that I have almost been run over twice.
70	Aggressive Drivers	Bedford Ave and N 4 St	This corner is turning really commercial- with a major chain market that just installed a sign. A traffic light would help protect cars and pedestrians.
71	Failure to Yield	Driggs Ave and Russel St	Drivers on Driggs slow for this stop sign but often do not stop. In addition, large delivery trucks stopping at the grocery store often block pedestrians' view of oncoming traffic. There are almost always kids crossing here because of the park and nearby PS 110. It's really dangerous. I have almost been hit twice. Please, please put in a stop light instead of the stop signs!
72	Sidewalk Blocked / Damaged	Eckford St and Nassau Ave	Rachel's Corner takes up nearly the entire sidewalk with their fruit, plants, etc. They put out stuff for sale on either side of the sidewalk so that pedestrians can only get past single file. It's a pain at rush hour, and I can't get a stroller through which makes me think that the handicapped and elderly can't pass either. It doesn't seem legal. (In this photo, only one set of displays is out. Usually they a lot more bins and crates out, along the street as well as in front of the store.)
73	Signage Problems	Messerole @ Lorimer St	Needs a stop sign!
74	Signage Problems		Needs to be a four way stop!
75	Signage Problems	Keap St and S 2nd St	Needs a stop sign!
76	Signage Problems	Keap St @ Ainslie St	Needs a stop sign!
77	U-Turns	Lorimer St and Messerole St	This intersection desperately needs a stop sign. There is a YMCA with tons of children on one corner, a police precinct on another corner and and elementary school p.s. 31 on the other corner. Cars go way too fast in an area with lots of pedestrians. Additionally, cars crossing the intersection on Lorimer must pull into the middle of the street in order to see if cars are coming down Meserole then pull out while praying that a pedestrian hasn't decided to cross at the same time. Someone's going to get killed.
78	Speeding Trucks	Monitor St btw Nassau Ave & Driggs Ave	Monitor Street along McGolrick Park is incredibly dangerous to pedestrians and cyclists and especially for children attending PS 110! Despite the new speed bumps and no trucks signage, large trucks still use Monitor Street to get to the BQE. They speed over the speed bumps and often do not stop at the intersection of Driggs and Monitor (by PS 110!!!!) They completely disregard the school zone signs. Could we get some flashing lights on the no trucks and school zone signs? I don't know what else can be done.
79	Difficult Turn/Crossing	Monitor St btw Nassau Ave & Driggs Ave	This is a major entrance route to the Kent Bike Lane (especially for those commuting across the Williamsburg Bridge heading north). There is no traffic control for the cars on Kent. I think there should be a light here.
80	Conflicting Turns	Kingsland Ave @ Meeker St – wrong side of median	despite some signage, drivers still turn in the wrong lanes
81	Other	Manhattan Aver	Bike lane on Manhattan Ave. is completely worn away for several blocks. Needs repainting!

Count	Category	Location	Comment
82	No Crosswalk	Maspeth Ave @Bushwick Ave	This intersection of Maspeth and Woodpoint Rd. is heavily used by pedestrians. There is no crosswalk. The traffic on Woodpoint is heavy and two-way. Especially dangerous is cars using this right-turn lane and not seeing pedestrians about to cross. There is inadequate lighting, and at night, pedestrians are invisible. I've seen a man struck by a car here, even though he was in the crosswalk across Maspeth. You can see that sight lines are blocked by illegal parking on the sidewalk. With thousands more people living in new buildings east of this intersection, it's only a matter of time before someone is killed. The whole intersection needs redesigning.
83	Trucks in Residential Area	Maspeth Ave btw Woodpoint Rd and Morgan Ave	Illegal truck traffic is constant on this two-way stretch of Maspeth Ave. (between Morgan and Woodpoint), which borders on Cooper Park. Better signage prohibiting trucks and perhaps a neck-down at the intersection of Morgan and Maspeth would deter trucks from using this illegal "shortcut."
84	Conflicting Turns	Maspeth Ave btw Woodpoint Rd and Morgan Ave	Pedestrians are in danger when they attempt to cross, even in the crosswalk. At this intersection of two two-way streets, cars turn from three directions, often disregarding pedestrians in the crosswalk. Solution could be three-way stop signs and two additional crosswalks across Maspeth Ave.
85	Double Parking	Wythe Ave (around N 11th St)	Too many cars stopping and blocking traffic.
86	No Crosswalk	Kent Ave @ N 4th St	This intersection needs a stop light and crosswalk to make it safer for bikers, pedestrians and motorists. Cars and pedestrians crossing Kent have low visibility - especially visibility of the bike lane. The river/pier area makes it a popular pedestrian area. Cyclists do not yield to pedestrians.
87	No Crosswalk	N 4th St and Wythe Ave	This intersection needs crosswalks across Wythe.
88	Speeding	Wythe Ave @ N 4th St	There needs to be a stop sign on Wythe at this intersection. Cars usually make rolling stops at the stop sign on Wythe and 5th, and this makes crossing the street challenging for pedestrians at this intersection.
89	Bike Lane Requested	Metropolitan Ave	Metropolitan Ave needs a bike lane.
90	Blocking the Box		This intersection is treacherous. Especially during warm months, I see cyclists ignoring pedestrians and nearly getting slammed by cars or threatening to run over people walking all the time. There desperately needs to be a stoplight and crosswalk added for all forms of traveler
91	Dangerous Left Turn	Bedford Ave @ S 3rd St	There are accidents in this intersection every other week. vehicles turning left from south 3rd onto bedford avenue cannot see oncoming traffic due to cars parked on the southwest corner of bedford avenue. there should be a no parking from here to corner sign or a stoplight installed. it has become a dangerous corner.
92	Blocking the Box	Kent Ave and N 4th St	This is an extremely dangerous corner and needs a light. There are many kids, cyclists and cars with no right of way - this is an accident waiting to happen.
93	Difficult Turn/Crossing	N 4th St and Kent Ave	It is very difficult to cross North 4th to get to Northside Piers due to car, bike and pedestrian traffic in multiple directions here with no traffic signal.
94	Signage Problems	N 4th St and Kent Ave	Please add a stop light + pedestrian crosswalk. The traffic on the intersection of Kent and N4th is problematic and dangerous. We have a ton of people coming to the area for the smorgasburg/flea market, etc who are not familiar with the miriad of vehicles, bikes, runners and what not on the streets. Not a week goes by without someone being nearly hit either by bikers or pedestrians. As a driver, it is very hard to cross Kent Ave if one is on N4th. Please add traffic lights. Thanks.
95	Deliveries in Bike Lane	Kent Ave and N 5th St	Trucks delivering to Duane Reade pose a hazard for pedestrians and bikers. They not only block the bike lane but the visibility of those crossing. They should be banned from Kent. It would be less problematic if they delivered on N5th
96	Aggressive Biking	Kent Ave Bike Lane	Needs to be specific lights for bikers along this path. too many bikers blowing red lights
97	Difficult Turn/Crossing	Kent Ave and N 4th St	There needs to be a light here. Numerous cars are crossing a busy intersection into the driveway across the street while trying to navigate cars and bikes.
98	Signage Problems	Berry St btw N 4 and N 5th St	Half of the West side of this block is marked "No Parking" for no reason. Normal parking rules should be extended to the South corner.

Count	Category	Location	Comment
99	Signage Problems	N 3rd St @ Berry St	Half of the entire North side of the street is "No Standing" from a time when this street was mostly industrial. There is no reason why such a huge area of parking should be No Standing during the day. Normal parking rules should be extended to Berry St
100	Signage Problems	N 2nd St @ Berry St	The end of this block is marked No Parking for no reason. The signs should be removed and parking should be extended to the end of the block.
101	Sidewalk Blocked / Damaged	N 13th St and Kent Ave	The sidewalk is mostly missing from the South side of the street and cars randomly use it as illegal parking. The entire sidewalk should be replaced and proper parking signage should be introduced.
102	Signage Problems	Grand St btw Havemeyer and Roebling St	There is a no parking sign here and there is no reason why parking should be blocked in front of this building with a door. Please remove the no parking sign and extend parking to the CitiBike stand.
103	Signage Problems	Bedford Ave and N 1st St	The sign here says no parking for the last parking spot on the North side of the street. That is not a fire hydrant and is just a water sampling station. The no parking sign should be removed and parking should be allowed to the white line.
104	Signage Problems	Wythe Ave and N 12th St	Brooklyn Bowl has determined that they "own" the parking in front of their building and constantly put orange cones in front to "reserve" parking. City permits anyone to park here and they are not allowed to reserve parking spots. They need to be instructed to stop and allow anyone who wants to park there.
105	Sidewalk Blocked / Damaged	S 1st St btw Kent Ave and Wythe Ave	The produce business here is constantly parking their trucks on the sidewalk and storing palettes of their goods on the sidewalks, blocking the view. They double park as well and block residents from getting through. Saturday mornings around 9-10am are particularly bad.
106	Poor Visibility	Messerole Ave Leonard St	It's very hard to see fast-moving traffic on Meserole when crossing from Leonard St. Drivers frequently violate No Standing Anytime sign on southwest corner of Meserole making it impossible to see into intersection. Please widen curb at corner to prevent illegal parking here.
107	Poor Visibility	Messerole Ave Eckford St	It's very hard to see fast-moving traffic on Meserole when crossing from Eckford St. Drivers frequently violate No Standing Anytime sign on southeast corner of Meserole making it impossible to see into intersection. Please widen curb at corner to prevent illegal parking here.
108	Narrow Sidewalk	Bedford Ave around N 7th St	Sidewalk way too narrow for the number of people on Bedford Av, especially on weekends. Consider revisiting Williamsburg Walks program and close street to cars.
109	Too Many Placards	Montrose Ave btw Broadway and Union Ave	Montrose is an NYPD parking lot just barely pretending to be a city street. Cars are combat parked three deep, and the precinct has striped parking stalls for the NYPD trikes on the sidewalk.
110	Too Many Placards	Johnson Ave btw Broadway and Union Ave	FDNY and NYPD block both sides of sidewalk with personal vehicles
111	Sidewalk Blocked / Damaged	Gardner Ave and Grand ST	Sidewalk is used as parking lot
112	Too Many Placards	Grand St and Stewart Ave	Firefighters block the sidewalk with their personal vehicles
113	Too Many Placards	Greenpoint Ave and McGuinness Blvd	FDNY blocks sidewalk with personal cars all the time
114	Sidewalk Blocked / Damaged	Richardson St btw Lorimer St and Leonard St	Sidewalk always blocked by FDNY personal vehicles illegally parked with impunity
115	Too Many Placards	Richardson St btw Lorimer St and Leonard St	FDNY completely blocks sidewalk for personal parking
116	Speeding	Ainslie St @ Humboldt St	Cars fly down Kent extremely fast. There are often construction vehicles blocking/moving in and out of the intersection and cars stop short. It isn dangerous for pedestrians who are forced to cross the street because the sidewalk is closed.
117	Failure to Yield	Ainsle ST and Humboldt St	Cars constantly do not obey the stop sign posted at this location. They either stop very briefly for pedestrians or do not stop at all before continuing through this intersection.
118	Speeding	Green ST west of McGuinness Blvd	Speeding to get the green light. One of the densest blocks in northern greenpoint.
119	Failure to Yield	Ainslie St @ Humboldt St	Not enough visibility to crossing pedestrians. Volume of peds is increasing.
120	Jaywalking	Ainslie St @ Humboldt St	People mostly trying to get to the B62 stop.
121	Speeding	Broadway @ Kent Ave	Cars come speeding down Broadway at high speed and make the area around Broadway and Kent dangerous for everyone not in a car.
122	Speeding	Ainslie St @ Humboldt St	Cars and motorcycles speed down this stretch of Russell.
123	Red Light Running	McGuiness Blvd@Nassau Ave	Motorists run this light all the time. A traffic camera here would be great.

Count	Category	Location	Comment
124	Other	John Byrne Bridge (Bike Lanes)	Greenpoint Avenue bridge had become a travesty for drivers ever since the bike lanes have gone in. Traffic is ridiculous on any given day, but when that bridge goes up it is backed up all the way into Sunnyside! Not fair to drivers at all and we pay through the nose to drive. I cannot take mass transit from middle village and it should not take me an hour plus to get to work!!
125	Signage Problems	Bayard St @ Leonard St (currently enhanced crossing)	Stop sign is needed here. This is a dangerous intersection near a school where drivers need to slow down and stop as there are often children in the area.
126	Red Light Running	Richardson @ Leonard St (*two facing one ways have no stop stop sign)	Stop sign needed
127	Double Parking	Leonard St and Bayard St	Need an always stop. Now it's a one way stop but drivers miss it and accidents happen at least once a year with near misses daily. I live on the corner and we see the traffic. With a school and park this is very dangerous.
128	Jaywalking	Berry St @ N 7th St	This intersection (N7 and Berry) has a ton of pedestrian traffic from the subway. However there is no stop sign or light,
129	Signage Problems	S 5th St and Wythe Ave	Signage needs to be very clear that you turn left on S 5th to head towards the bridge entrance. Drivers are always unsure whether to turn left and slow down the traffic behind them while deciding whether to turn left.
130	Jaywalking	N 6th St and Wythe Ave	People are constantly jaywalking across busy Wythe Ave against the red light, causing the traffic to slow down even more and back up to the North.
131	Sidewalk Blocked / Damaged	Wythe Ave btw S6th St and Broadway	Sidewalk is entirely torn up here and uneven to walk on. Small children on scooters/strollers have problems.
132	Bus stop needed	Kent Ave B32	The Kent Ave bus stops are at 6th, 9th, 12th St. These are too far apart. The 9th St bus stop should be removed and there should instead be stops every 2 streets, at 6th, 8th, 10th, 12th.
133	Double Parking	Kent Ave and Broadway	The 90th precinct lets Giando's turn wide Broadway **and the sidewalk** into its private valet parking lot. Whenever there are events at Giando's, there are cars strewn everywhere, and sometimes double-wide parked down the center of Broadway making it dangerous for everyone because pedestrians cross the middle of the street and can't be seen in the dark. The 90th pct has uniformed officers "protecting" Giando's when they are flagrantly violating NYC DOT regulations and residents have no recourse.
134	Conflicting Turns	Bedford Ave @ Nassau Ave	Bedford drivers have the right-of-way and there is a stop sign the other direction but drivers constantly ignore it and are making a left-hand turn directly into an intersection with pedestrians crossing.
135	Vehicles parked in bus stop	Bedford Ave @ Nassau Ave	Delivery trucks constantly parked in bus stop. Bus lets passengers off sandwiched between bus and truck and blocks traffic.
136	Speeding Trucks	Wythe Ave	Wythe Ave is now the BQE Jr. because it is the only main avenue going South unless you shoot all the way over to Driggs. Because of this, there are non-stop trucks barreling South at high speeds all during peak times. Because Williamsburg is becoming a more and more dense residential area, trucks should be forced to drive on/under the BQE and not allowed to transit on Wythe.
137	Signage Problems	Lorimer St @ Calyer St	There is no Stop sign when approaching Calyer St. In a very bizarre NYC intersection the "side" street has no stop sign and drivers go straight through the intersection without stopping. Because it is not what drivers expect it leads to confusion and potential for accidents.
138	Double Parking	Wythe Ave	Taxi/Livery drivers block the road in the evening instead of pulling over to the side of the road. Most of the time they aren't even letting a passenger in/out but are just scouting the area. All traffic moving South is brought to a crawl and backs up all the way to Norman
139	Double Parking	N 5th St and Kent Ave	There are *constantly* cars double parked right in front of this building and the traffic light, forcing everyone driving East to drive on the wrong side of road into oncoming turning vehicles.
140	Aggressive Drivers	Wythe Ave	In the morning rush hour there are non-stop trucks and vehicles trying to cram down Wythe ever since Kent was changed to only run North. Drivers constantly cut off others and don't obey right-of-way when turning left onto Wythe from Broadway and large multi-axle trucks get stuck all the time turning down Wythe because cars are parked right until the end of the block.

Count	Category	Location	Comment
141	Signage Problems	Manhattan Ave @ Leonard St	This is a one way street on only one block on Nassau Ave (btn Manhattan Ave & Leonard St.). It has a double solid yellow line indicating it's a 2 way street...but it's only 2 ways for buses. It's misleading and creates a potential hazard for those driving, biking and crossing the street. More signage is needed ASAP..or just make it 2 - ways for everyone.
142	Bike Lane Requested	Wythe Ave	No bike line by the park
143	No Sidewalk	Richardson St and Lorimer St	Cars parked on sidewalks
144	Dangerous Left Turn	Jackson St @ Woodpoint Rd	Need signal light
145	Aggressive Biking	Manhattan Ave and Bayard St	Bikers speeding on curve and intersection
146	Double Parking	Richardson St and Lorimer St	No sidewalk and double parking
147	No Sidewalk	Richardson St and Lorimer St	24/7 parking on the sidewalk
148	Failure to Yield	Leonard St and Bayard St	Need All Stop
149	Failure to Yield	Leonard St and Bayard St	Need All Stop
150	Not Enough Time to Cross	Meeker Ave @ Union Ave	This is a dangerous intersection, cars are constantly turning against the light, or running the light, and they rarely yield to pedestrians.
151	Difficult Turn/Crossing	Meeker Ave @ Union Ave	Cars are constantly turning left from Union just like the car in this photo
152	Speeding Trucks	Humboldt btw Nassau Ave and Driggs Ave	All day speeding truck traffic coming down a No Thru Truck Traffic street.. It is even worse when the trucks come barrelling down at night and you can feel your house shake
153	Sidewalk Blocked / Damaged	Driggs Ave btw N Henry St and Russel St	The sidewalk all along the park on the Driggs side is hazardous, especially to the hundreds of kids that use it daily to get to school.
154	Jaywalking	McGuinness Blvd and Nassau Ave	There should be more signage to make pedestrians aware of the dangers of crossing against the light here. People have died doing just that.
155	Other	Meeker Ave @ Union Ave	Hard to cross Meeker safely at Union with the cars turning left and right on to Meeker.
156	Other	Maspeth Ave @ Kingsland Ave	It is hard to cross Maspeth at Kingsland, especially with children, and there is a local park and school nearby.
157	Narrow Sidewalk	Manhattan Ave @ Greenpoint Ave	Sidewalk by fruit stand very narrow and always congested (bus stop, trucks delivering food, neighborhood drunks, sidewalk merchandising). Opposite side by HSBC bank ramp also very narrow
158	Dangerous Left Turn	Franklin St @ Oak St	Westbound Oak to Southbound Franklin: blind turn dangerous for drivers and cyclists
159	Other	Freeman St btw Manhattan Ave and Franklin St	All 4 junker vehicles viewed here: the rusty white Nissan, the purple VW, the Beamer with a flat tire and dangling rear bumper, and the red Honda that was likely pushed into that parking spot (since replaced with another junker), all belong to the same single owner who basically uses this stretch of public street as a highly unsuccessful used car dealership, monopolizing a half-block of useful parking for people who require and use their vehicles. These cars barely run and belong in a garage or auto salvage lot. This contributes to the congestion & double-parked trucks referred to in the other comment on this stretch of Freeman St.
160	Other	Greenpoint Ave and McGuinness Blvd	In the morning traffic builds up from Nassau all the way over to the LIC side of the Pulaski Bridge; in addition to Key Food delivery trucks and double parked cars on Mc Guinness, the LIC side of the Pulaski Bridge is completely unworkable - lights need to be better synchronized, turn off to Jackson Ave is not large enough to accommodate volume of cars, turnoff in right lane to access Mid Town tunnel needs more and dedicated green time. The main problem with McGuinness Blvd in the morning stems from the LIC side of the Pulaski Bridge
161	Speeding Trucks	Morgan Ave (north of Meeker Ave)	Speeding trucks on Morgan when they should be taking Kingsland, the designated truck route.
162	Sidewalk Blocked / Damaged	Driggs Ave @ N Henry St	Sidewalk surrounding the park is crumbling, buckling and in need of maintenance.
163	Speeding	Morgan Ave btw Driggs Ave and Nassau Ave	Drivers, including cars and commercial traffic, race up Morgan from the stop light at Meeker Ave, exceeding the 25 mph speed limit by 20-30 mph. Street should get speed bumps.
164	Signage Problems	Richardson St and Leonard St	This is a two way stop and not at all intuitive.
165	Signage Problems	Richardson St and Leonard St	This is a two way stop and not at all intuitive.
166	Signage Problems	Richardson St and Leonard St	This is a two way stop and not at all intuitive.
167	Aggressive Drivers	Manhattan Ave @ Meeker Ave	this light is very quick and people speed down manhattan to make the light. crosswalk only gives 10 seconds to cross meeker
168	Other	Manhattan Ave and Frost St	construction site constantly closing down the street and not giving the required 48 hours notice of "no parking/towing" therefore residents are getting ticketed without proper warning
169	No Crosswalk	Kent Ave and N 4th St	Stoplight needed.

Count	Category	Location	Comment
170	Difficult Turn/Crossing	Kent Ave and N 4th St	Stoplight needed.
171	Trucks in Residential Area	Kingsland Ave btw Beadle St and Division Pl	Trucks idling and blocking traffic, often in both directions.
172	Trucks in Residential Area	Kingsland Ave @ Richardson Ave	Large tractor trailers trying to navigate this two lane street. Leads to congestion, noise pollution, and danger to electrical poles/lighting.
173	Speeding	Division Pl @ Debevoise Ave	Motorcycles speeding and creating unwanted noise pollution.
174	Dangerous Left Turn	Metropolitan Ave @ Marcy Ave	Left turn from Metro Av to Marcy extremely dangerous. Common red light running and failure to yield
175	Other	Borinquen Pl/Marcy Ave	Pavement in terrible condition at Borinquen Place/Marcy Av intersection
176	Aggressive Drivers	Grand Ave @ S 1st St	Drivers take the turn from Grand St to S 1 St at high speed and without signaling
177	Bike Lane Requested	S 5th Pl @ Williamsburg Bridge Bike Entrance	Should have 2-way parking-protected bike lane. Existing southbound approach to bridge path via sidewalk is confusing
178	Other	Bayard St and Leonard St	PUT A TRASH CAN ON THIS CORNER!
179	Ferry Service Requested	Oak St and Waterfront	Would love to see a ferry stop added in this part of Greenpoint and more stops in Manhattan to address overcrowding and looming shutdown of L Train.
180	Water in Roadway	Eckford St btw Norman and Messerole St	Lots of water on road here during rain due to low curbs and lack of catch basins.
181	Speeding	Bedford Ave btw N 12th and Nassau Ave	Frequent speeding by drivers on this stretch of Bedford in front of high school. Street should be narrowed and stop signs added.
182	Double Parking	McGuinness Blvd and Messerole St	The tire shop here double parks cars blocking this very busy stretch of McGuinness and performs illegal auto repairs in the roadway.
183	Aggressive Drivers	Humboldt St @ Richardson St	4-WAY STOP SIGN NEEDED
184	Aggressive Drivers	Graham Ave @ Richardson St	4-WAY STOP SIGN NEEDED
185	Blocking the Box	Nassau Ave btw Manhattan Ave and McGuinness Blvd	Poorly timed lights and lack of enforcement of blocking the box leads to frequent blocking of crosswalks and intersections by drivers on Nassau between Manhattan and McGuinness.
186	Aggressive Drivers	Humboldt St and Richardson St	Need stop sign here for traffic heading sound on Humboldt. Humbold bends here and with the traffic very aggressive coming off the McGuinness and the BQE offramp, it is very dangerous for anyone trying to cross Humbold.
187	Double Parking	Eckford St and Norman Ave	Parents from PS 34 park illegally along Eckford St and block the crosswalk every morning and evening, creating dangerous situations for students and pedestrians in the area. Existing no parking areas need to be enforced by NYPD and the school administration needs to discourage parents from driving and crack down on out-of-state children being driven to school here.
188	Aggressive Drivers	Richardson St and Graham Ave	This intersection is multi-pronged and also Graham avenue curves here, decreasing visibility. It is extremely dangerous for all car/bike/foot traffic heading East on Richardson approaching Graham. It desperately needs a traffic light or â€" at the very least â€" a stop sign.
189	Speeding	Eckford St and Norman Ave	Drivers exceed the speed limit on this very narrow segment of Eckford St, putting pedestrians and children from PS 34 at risk. DOT already conducted an investigation in October 2015 and concluded this is a good candidate location for the installation of a speed hump, but the speed hump has still not been installed.
190	No Crosswalk	Nassau Ave and Bedford Ave	A crosswalk is needed to cross Nassau and reach the western sidewalk on Bedford. Drivers to not come to a full stop at the existing stop sign.
191	Not ADA Accessible	Roebling St @ S 1st St	There are no stop signs on Roebling street to cross over It is hard to cross with 4 children without a stop sign nor red light It is very dangerous to cross everytime
192	No Crosswalk	Greenpoint Ave @ N Henry St	There is a bus stop servicing not just the sewage treatment plant, but workers and residents. There needs to be a crosswalk and signal installed to allow safe crossing across Greenpoint Ave.
193	Dangerous Left Turn	Bedford Ave @ Nassau Ave	Drivers eastbound on Nassau do not come to a full stop at the stop sign when turning onto Bedford when trying to make it through the traffic light on Bedford. Also, drivers at the stop sign turn their attention to cars coming from the right on Bedford and turn left without looking for pedestrians in the cross walk. This intersection needs a redesign and I would suggest eliminating eastbound traffic on Nassau between Guernsey and Bedford since Bedford already provides a duplicate route eastbound.
194	Dangerous Left Turn	Greenpoint Ave and N Henry St	Due to heavy volume, it is difficult to turn onto Greenpoint Ave from N. Henry, whether a right or left hand turn. A traffic light is needed.
195	Speeding	Meeker Ave	ALL OF MEEKER AVENUE IS SPEEDING CARS.

Count	Category	Location	Comment
196	Difficult Turn/Crossing	Bedfrod Ave/Lorimer St/Nassau Ave	Incredibly dangerous intersection for bicyclists, drivers and pedestrians. The Berry Street bike lane abrupt ends and leads into this insane cross-section.
197	Bike Lane Requested	Lorimer/Guernsey St	Bike lanes on Lorimer and Guernsey would improve connections within the neighborhood to PS 31 and the Y and to McCarren Park. It could help alleviate the dangerous bike/driving connections on Franklin as the bike lane changes from a two-way greenway to a shared bike lane.
198	Bike Parking Needed	Messerole/Guerney St	PS 31 should have bike parking for students (and teachers)
199	Signage Problems	Richardson ST and Leonard St	There MUST be a stop sign on this corner for people coming down Richardson. Between the firehouse, new condo, distillery, school, park, NYC Gym and seasonal pool there is lots of pedestrian traffic. A lot of drivers think there is a stop sign already and yield to pedestrians, others zoom through the intersection.
200	Too Many Placards	Messerole St and Lorimer St	the intersection of Meserole and Lorimer serves the YMCA and PS 31, both of which serve small children. The local precinct parks on the sidewalks and blocks the crosswalks, making the intersection dangerous even when the crossing guard is on duty
201	Aggressive Drivers	Humboldt St and Driggs Ave	Busy street in morning and evening. People speeding to make the light on Driggs. Lots of children on this street and also going to and from church. Reckless driving.
202	Weaving Vehicles	Freeman St btw Manhattan Ave and Franklin St and Franklin St	There are often double-parked vehicles for elderly services, deliveries both residential and commercial, as well as cars waiting for a parking space that cause back-ups and weaving. The heavily used bike land is often obstructed.
203	Double Parking	Nassau Ave	Double parking so dangerous for bikers and cars! Why doesn't Nassau Abe have 1 hour parking only!!!!! From Manhattan Ave to russle! Or even better from the end of McCarren park to McGolrick park! Why isn't it safer for pedestrians, bikers and cars to get between these congested areas.
204	Bike Lane Requested		No bike lane to school ps110 and McGolrick park
205	Speeding	Provost St	Provost is a major cut through with aggressive, speeding drivers, both commercial vehicles and autos. Biking is hazardous with the traffic and parked trucks that do not fit inside the painted parking areas.
206	Double Parking	Nassau Ave	Double parking up and down the se side of Nassau up to mcguiness Blvd so unsafe for bikers and cars!!!
207	Bike Lane Requested	Nassau Ave	So unsafe no where for bikers!
208	Uncomfortable for Novice Cyclists	Provost St	Provost is marked as a shared bike lane in both directions, but the roadway is not wide enough to accommodate two-way auto traffic, let alone bikes combined with trucks and truck parking (trucks do not fit in the painted parking lanes)
209	Trucks in Residential Area	Monitor St	So many trucks turn off Greenpoint avenue and race down monitor past ps110. There are speed bumps so it's so loud and disruptive. Also unsafe! Why on this beautiful park, residential and school street are large trucks allowed!
210	Uncomfortable for Novice Cyclists	Provost St	Provost is marked as a shared bike lane in both directions, but the roadway is not wide enough to accommodate two-way auto traffic, let alone bikes combined with trucks and truck parking (trucks do not fit in the painted parking lanes)
211	No Nearby Bike Route	PS110 Bike Lanes	Many bikers coming to school no nearby lanes!
212	Bike Lane Requested	Driggs Ave and Monitor St	There's citi bikes right here. The Driggs bike lane starts closer to Manhattan but once again PS110 and the MCGolrick park neighborhood are left with little help getting safety to the bike lanes closer to Williamsburg they aren't connected. Many families bike to and from school make it safer for us.
213	Speeding	Monitor St	There's an entrance to the park and a public ELEMENTARY SCHOOL ps110. Too many cars still speed down this long block. It's also used as truck route. It's loud and disruptive to the classrooms in the school and dangerous.
214	Bike Parking Needed	Nassau Ave/Lorimer/Bedford Ave	There's no where for the amazing berry bike path to go? It ends. So many KIDS and FAMILIES including mine bike from Williamsburg to Greenpoint(specifically McGolrick park/PS 110) there's no way to get to the park safely on bike. The neighborhood around McGolrick isn't close to - subway and this is a big biking community.
215	Trucks in Residential Area	N Henry St and Herbert St	This blog should absolutely have a sign on the corner of North Henry and Herbert to prevent large trucks from a coming down this already narrow, very congested two way street. Large trucks are never able to turn onto Richardson street from North Henry Street and cause many problems, traffic backups and other issues. The Block Association of North Henry Street will also be petitioning the survey to consider turning North Henry Street one way going from Richardson towards Herbert street.
216	Dangerous Left Turn	Franklin St and Oak St	Needs a light

Count	Category	Location	Comment
217	Trucks in Residential Area	Manhattan Ave and Calysre St	H
218	Trucks in Residential Area	Freeman St at Franklin St	This is not a truck route and it creates hazards with bike in marked bike lanes. All turns, especially have limited sight lines and automobiles and bikes must enter crossing in order to proceed onto or across Franklin.
219	Add Bus Service	Franklin St and Commercial St	There is no bus service nearby despite hundreds of housing units under construction and a destination park to be constructed.
220	Add Bus Service	Provost St and Paidge Ave	There is no bus service nearby, but there are many businesses and a park. Additional bus service could alleviate overcrowding on the b62.
221	Add Bus Service	Manhattan Ave and Box St	There is only one bus route nearby, with an industrial area, senior housing and hundreds additional housing units underway.
222	Other	Newtown Creek Bridge	to relieve congestion on the Pulaski and to knit the waterfront communities of Greenpoint and LIC (again), a bridge should be built across Newtown Creek for additional bus service in North Greenpoint and Hunters Point, pedestrian access and local auto (no trucks).
223	Failure to Yield	Lorimer St and Skillman Ave	The intersection of Lorimer Street and Skillman Avenue is an all-way stop, but many drivers on Lorimer go right through the intersection without even slowing down let alone stopping. A traffic signal would be more effective.
224	Bus bench needed	Manhattan Ave and Freeman St	Heavily utilized bus stop has no bench. There are often long waits especially when the Pulaski draw bridge is opened. A bus shelter with bench would be welcome
225	Speeding	Freeman St	This map is old. There is too much going on Freeman St. This is a residential street that is increasingly being used as a cut through, over traveling on commercial McGuinness and Manhattan. There is heavy motorist traffic at rush hours, with buses and commercial vehicles taking over the highly utilized bike lane. Motorists travel too fast from the light and bikers go the wrong way. There are frequently double parked vehicles blocking or partially blocking the roadway. This is not a truck route street and measures should be taken to re-route non-local traffic, including buses.
226	Wrong-way Cycling	Driggs Ave btw Manhattan Ave and N 7th St	There is a lot of Cyclists traveling against traffic on Driggs from Manhattan Avenue till N 7th Street.
227	Jaywalking	Kent Ave	Since there is NO crosswalk from Metropoltian till N 5, this is an area where people cross one lane of traffic, one turning lane and 2 bike lanes. It is danagerous.
228	Long Distance to Cross	Flushing Ave and Bushwick Ave	The wide, four-way intersection of Flushing Ave and Bushwick Ave is densely trafficked with both commercial truck and commuter use. Drivers heading Northwest on Bushwick Ave gain speed as they descend down the hill.
229	Weaving Vehicles	Union Ave and S 4th St	Extra wide parking lane, and on-curb driving to access both Gas Station and Car wash at this intersection makes for low visibility between drivers and other people using the street.
230	Speeding Trucks	Metropolitan Ave Bridge	Needed speed camera on the Metropolitan Ave Bridge - this is a street! Not a highway. Especially dangerous is the width and lack of visual lane markings.
231	Speeding	S 4th St and Havemeyer St	Safer access to the Williamsburg Bridge for biking and the walkability at the intersection of South 4th St and Havemeyer St can't come soon enough.
232	Too Many Placards	Metropolitan Ave and Union Ave	Transit police precinct vehicles block sidewalk, handicapped ramps and hydrants
233	Vehicles Parking in Bike Lane	Leonard St and Bayard St	Vehicles block bike lane during school drop-off/dismissal times
234	Trucks in Residential Area	Humboldt St South of BQE	Trucks use Humboldt St exit off BQE, operate illegally on residential street
235	Add Bus Service	B24 route	B24 would be much more useful if it came more than every 30 minutes on weekends
236	Multiple Buses Arrive Together	B43 Route	Constant daytime bus bunching on B43 route
237	Bench Needed	Lorimer/Nassau/Bedford Ave	Great opportunity for pedestrian plaza
238	Confusing Bike Route Connection	Throop Ave/Whipple St/Manhattan Ave	Route from Throop Av -> Whipple St -> Manhattan Av should be better marked/protected.
239	Vehicles Parking in Bike Lane	Manhattan Ave btw Broadway and Montrose	Constant bike lane blocking on Manhattan Av from Broadway to Montrose. Plenty of room for parking-protected lane
240	Other	Union Ave and Roebling St	The recent changes to this area (plazas, curb extensions, traffic flow changes) have made this a much more pleasant place to be. More like this please!
241	Conflicting Turns	Bushwick Ave and Grand St	Very busy intersection with subway traffic and high school. Note pedestrians standing on sidewalk in street view photo. Need curb extensions to accommodate pedestrians and slow turns
242	Speeding	Ainslie St @ Humboldt St	Drivers still act like they are driving on the BQE on this growing residential street

Count	Category	Location	Comment
243	Vehicles Parking in Bike Lane	Leonard St	Lots of room here for a parking-protected bike lane. Will prevent double parking and be safer for novice cyclists
244	No Crosswalk	Ten Eyck Walk and Stagg Walk	Ten Eyck Walk and Stagg Walk should have marked crosswalks to make pedestrian connections easier. Should be combined with speed table treatments to slow speeding cars and trucks on this stretch of Humboldt St
245	Speeding	Humboldt St btw Maujer St and Scholes St	Frequent speeding
246	Other	Manhattan Ave @ Grand St	Pavement is in horrible condition on Manhattan Av from Maujer St to Grand St
247	Dangerous Left Turn	Graham Ave and Grand St	Busy left turn with many trucks/buses. Senior citizen killed in 2014.
248	Speeding	Humboldt Ave and Withers St	There should be a stop sign on Humboldt at Withers. Cars travelling on Humboldt St from the light at Herbert St get up a head a steam and speed to beat the light at Skillman Ave. Fast traffic on this corridor.
249	Poor Visibility	Skillman St and Manhattan Ave	When traveling straight on Skillman Ave, hard to see oncoming traffic on Manhattan Ave. Maybe Manhattan Ave could have a stop sign?
250	Double Parking	Grand St	We only have 1 hour metered parking on Grand Street. That is not enough time for our patrons of our SMALL businesses. It is very inconvenient to have to continue to buy new tickets every hour. Please change the limit to 2 hours. If we want people to support our businesses, we have to make it convenient.
251	Other	Kent Ave	Eliminate parking on Kent Ave, this important corridor is just too crowded to allow for on-street parking.
252	Other	Maspeth Ave and Kingsland Ave	Need a stop sign on Maspeth Ave so kids going/coming from nearby park can cross the street safely.
253	Lane Marking Problems	Metropolitan Ave and Meeker Ave	There is a bottle neck here and we need 2 lanes for traffic to pass. left lane for those turning left onto the Marcy Ave for the BQE and right lane for those continuing on Metropolitan. Do not need 3 parking spots here, make it no standing all the time.
254	No Crosswalk	Maspeth Ave and Olive St	Please, please a stop sign and a crosswalk here where there is heavy and often fast moving traffic, adjacent a park where many small children need to cross the street. The recently added speed bumps are nonsense. STOP sign, so easy to do.
255	Other	Metropolitan Ave and Meeker Ave	the N/S of Metropolitan Ave is 'no standing' in the morning but should be 'no standing' all day. There needs to be 2 lanes for moving traffic at all peak times.
256	Weaving Vehicles	N 4th St and Kent Ave	There is a need for traffic lights on north 4th and Kent avenue. Four major apt complexes with over thousand units and their deliveries are using this crossing!
257	Inaccessible Destination	Grand ST and Bushwick Ave	There is no catch basin here so when it rains puddling makes the southern and eastern crosswalks very very dangerous. DDC/DEP need to install a catch basin or other mitigation measure here ASAP
258	Congested Bike Route	Franklin Ave and Manhattan Ave	Franklin St. and Manhattan Ave. are too narrow for shared bike lanes. It's harrowing for everyone. Too much truck and bus traffic. Make West and Leonard the bike lanes. Leave Franklin and Manhattan for buses and local deliveries (NOT endorsing double parking)
259	No Crosswalk	Meeker Ave and Skillman Ave	There is no crosswalk here and vehicles drive up Meeker at a high speed and take this right turn as pedestrians try to cross Skillman. Also, the view for cars making the right turn is blocked by vehicles parked on the corner of Meeker and Skillman in front of Union Pool
260	Red Light Running	Skillman Ave and Graham Ave	I have barely missed being struck several times.
261	Poor Visibility	Graham Ave and Jackson St	Cars park to the edge of the corner on the East side of Graham. Drivers coming out of Jackson need to move very far into Graham to be able to see if they can turn, cross. There have been several accidents at this intersection.
262	Deliveries in Bike Lane	JJ Byrne Bridge	On the Queens side of the bridge, an insulation warehouse consistently uses the bike lane and bus stop for a loading area, causing congestion that extends into the study area.
263	Other	Wythe Ave	Wythe Avenue is the only one of four major North/South streets that is one way southbound with three northbound. On Friday and Saturday nights with the proliferation of clubs, hotels, bars and music venues on Wythe it is impossible for traffic and particularly emergency vehicles to get from Greenpoint toward south Williamsburg. Either Kent should be returned to two way or one of the other two streets, Berry or Bedford should be reversed.
264	Speeding Trucks	Greenpoint Ave btw Franlin Ave and Manhattan Ave	Large trucks continue to use this increasingly residential street as a connecting corridor, and the slope of the street seems to encourage trucks to speed here.

Count	Category	Location	Comment
265	Signage Problems	Rodney Ave @ Metropolitan Ave	Signage regarding No left turn from northbound Rodney onto Metropolitan is inadequate and confusing. One sign indicates Metropolitan Ave West and East, other signs say no Left Turn. There should be arrow greens indicating straight and right turn only and signage indicating for west bound Metropolitan need to go to Union. Same issue on southbound side.
266	Aggressive Drivers	Manhattan Ave btw Metropolitan Ave and Meeker Ave	Stretch of Manhattan Ave between Metropolitan and Meeker is a speedway for drivers avoiding the lights on Graham Avenue and driving at high speeds downhill thinking they will make the green at Meeker. An additional traffic light at Skillman and Manhattan would slow them down and would make it safer for children going to the Settlement House programs on that corner.
267	No Crosswalk	Ten Eyck Walk and Stagg Walk	Ten Eyck St and Stagg St should have crosswalks across Manhattan Av, Graham Av, and Humbolt St (for a total of six crosswalks). And where there's no sewer grates, you can do sidewalk extensions too to make it a shorter distance to cross, and so drivers and pedestrians can see eachother.
268	Bike Parking Needed	Harrison Pl and Bogart St	Right in front of the station, the two parking spots in the T-intersection should be replaced by bike racks in the street. You can also add a crosswalk too.
269	Bike Lane Requested	Grand St / Metropolitan Ave	Grand Street and Metropolitan are the two streets that allow travel from North Brooklyn eastward to Queens, but both are very dangerous for bikes, with high speed truck traffic. One of those two streets should be made usable for bicyclists.
270	Long Wait to Cross	Metropoltan Ave and Marcy Ave	The light for pedestrians crossing Metropolitan takes far too long to arrive, and cars making left turns don't respect the pedestrians crossing Marcy.
271	Vehicles Parking in Bike Lane	Grand St	Trucks are constantly in the bike lane
272	Bike Lane Requested	Metropolitan Ave Bridge	This bridge is a pretty critical missing connection for bikes between Williamsburg and Ridgewood
273	Uncomfortable for Novice Cyclists	Franklin St North of Greenpoint Ave	this section on Franklin is really a missing link in the BWG, making it dangerous for novice cyclists to get betweeen Kent Ave and the Pulaski Bridge
274	Aggressive Drivers	Wythe Ave	lots of aggressive drivers on Wythe south of the bridge
275	Vehicles Parking in Bike Lane	Kent Ave @ S 5th St	trucks frequently parking in the bike lane on this stretch
276	Bike Lane Requested	Nassau Ave @ Lorimer St	need to continue Berry St / Nassau Ave bike lane into Greenpoint
277	Bike Lane Requested	Manhattan Ave	Bike lane needed on Manhattan Ave -- abruptly ends at Greenpoint Ave
278	Bike Lane Requested	McGuinness Blvd and Freeman St	Upgrade sharows to proper bike lane on McGuinness linking Pulaski Bridge to Freeman St. There is so much roadway to work with.
279	Speeding	Meeker Ave and Lombardy St	Close this slip lane. It just encourages dangerously fast turns off Meeker.
280	Bike Lane Requested	General	There's no east/west bike lanes between S 4th/S 5th/Grand and Greenpoint Ave. N 10th/Frost and N 11th/Richardson could be a good east/west pair. (Just need to figure out the crossing of Meeker.)
281	Bike Lane Requested	GEneral	There's no east/west bike lanes between S 4th/S 5th/Grand and Greenpoint Ave. N 10th/Frost and N 11th/Richardson could be a good east/west pair. (Just need to figure out the crossing of Meeker.)
282	Long Distance to Cross	Meeker Ave and N Henry St	It is 175' to get all the way across Meeker on the west side of Henry with inadequate refuges.
283	Inadequate Lighting	BQE	Even at noon, it is dark and foreboding under the BQE
284	No Crosswalk	Engert Ave and Newton St	There should be a crosswalk on the south side of Engert at Newton
285	Sidewalk Blocked / Damaged	Bushwick Ave and Woodpoint Rd	Taxis are always blocking sidewalk
286	Inaccessible Destination	Humboldt Ave and Maspeth Ave	This tangle of slip lanes is horrific, and a pedestrian on the NE corner of Humboldt and Maspeth still has no way to cross either street.
287	No Crosswalk	Eckford St and Manhattan Ave	Mark the unmarked crosswalk.
288	Long Distance to Cross	Eckford St and Manhattan Ave	Unmarked crosswalk is 70' long
289	Failure to Yield	Eckford St and Manhattan Ave	Shallow uncontrolled turn and unmarked crosswalk combine to encourage speeding and failure to yield to pedestrians attempting the 70' crossing. Build out the sidewalk to regularize the intersection and narrow crossing and stripe crosswalks.
290	Dangerous Merge	Banker St @ Franklin Ave	Shallow slip lane controlled only by yield sign encourages dangerously fast merge onto Franklin.
291	Long Distance to Cross	Banker St and Wythe Ave	Build out sidewalk to square off intersection, reducing crossing distance, and put in the missing two crosswalks.
292	Other	Banker St and N 15th St	The first blocks of Baker and N 15th St just west of Nassau are redundant. One of them should be pedestrianized.
293	No Crosswalk	Nassau Ave	There are no crosswalks on Berry/Nassau from N 12th St to St Lorimer 1400' later.

Count	Category	Location	Comment
294	Bike Lane Requested	N 14th St	N 14th St doesn't need to be two-way. West-bound traffic can use 13th or 15th. Make 14th one-way heading east and upgrade the sharrows to a real bike lane.
295	Vehicles Parking in Bike Lane	Kent Ave and N 14th St	North-bound bike lane is frequently blocked here. At least paint it green.
296	Difficult Turn/Crossing	Kent Ave and N 14th St	Having to merge across the lane of cars at N 14th St to continue north on Kant Ave bike lane is tricky, especially for novice riders. Bikers should get a leading interval heading north before cars are allow to proceed.
297	No Crosswalk	Kent Ave and N 10th ST	There should be crosswalks and painted pedestrian islands across Kent at N 10th St
298	Aggressive Drivers	Frankin St north of Greenpoint Ave	Cars take turns from Franklin onto the side streets very fast, and because curbside parking goes all the way to the very ends of the block. It's hard for the speeding drivers and pedestrians crossing the streets to see each other.
299	Dangerous Left Turn	Kent Ave and N 7th St	Bikers/pedestrians should get a leading interval on Kent at N 7th St before cars are permitted to turn left.
300	Dangerous Left Turn	Kent Ave and N 6th St	Bikers/pedestrians should get a leading interval on Kent at N 6th St before cars are permitted to turn left.
301	Dangerous Left Turn	Kent Ave and N 5th St	Bikes should get a leading interval on Kent at N 5th St before cars are permitted to turn left.
302	No Crosswalk	Kent Ave and N 4th St	There should be crosswalks across Kent at N 4th St.
303	No Crosswalk	Kent Ave and N 3rd St	There should be crosswalks across Kent at N 3rd St.
304	Dangerous Left Turn	Kent Ave and N 3rd St	Left turn from Kent to N 3rd should be (at minimum) stop controlled. Drivers making the turn do not yield to bike traffic.
305	Dangerous Left Turn	Kent Ave and Metropolitan Ave	Vehicles making left from Kent to Metropolitan don't yield to bike traffic. There should be a LPI/LBI so bikes and pedestrians can establish themselves in crossing before cars are permitted to turn left.
306	No Crosswalk	Kent Ave and N 1st St	Need crosswalks across Kent at N 1st
307	Dangerous Left Turn	Kent Ave and N 1st St	Left turn from Kent to N 1st should be (at minimum) stop controlled. Drivers making the turn do not yield to bike traffic.
308	No Crosswalk	Kent Ave and Grand St	Pedestrians should have crosswalk across Kent at Grand.
309	No Crosswalk	Kent Ave and S 2nd St	Pedestrians should have crosswalk across Kent at S 2nd St.
310	Dangerous Left Turn	Kent Ave and S 2nd St	Left turn from Kent to S 2nd should be (at minimum) stop controlled. Drivers making the turn do not yield to bike traffic.
311	Failure to Yield	Kent Ave and S 5th St	Left turn from Kent to S 5th should be (at minimum) stop controlled. Drivers making turn do not yield to bike traffic.
312	No Crosswalk	Kent Ave and S 5th St	No crosswalk for crossing Kent at S 5th St
313	Difficult Turn/Crossing	Kent Ave and S 5th St	Nowhere for bikers on Kent (going either direction) to wait to make turn onto S 5th St
314	Vehicles Parking in Bike Lane	Berry St	Lots of bike lane blocking
315	Double Parking	Manhattan Ave	Lots of cars double park on Manhattan Ave, the main thoroughfare in Greenpoint. It's also a major bus route with store (and deliveries along it). The double-parked cars create huge backs ups. We should reduce the amount of on street parking and make designated loading spots available.
316	No Crosswalk	Bedford Ave btw N 12 St and Nassau Ave	There should be a crosswalk connecting the school/tennis courts with the rest of McCarren Park.
317	No Crosswalk	Nassau Ave and Bedford Ave	Pedestrians get stranded at the intersection of Nassau & Bedford when the triangle ends. There should be a crossing to the south side of Bedford.
318	No Crosswalk	Driggs Ave and N henry St	Crosswalks would improve access to the park.
319	No Crosswalk	Nassau Ave and N Henry St	A crosswalk would improve access to the park.
320	No Nearby Bike Route	General	There is no bike infrastructure in Greenpoint south of Greenpoint Ave and east of Leonard St.
321	Bike Lane Requested	Metropolitan Ave Bridge	Need bike lanes on Metropolitan Ave Bridge
322	No Crosswalk	Manhattan Ave and Eagle St	Pedestrians should have crosswalks on Eagle at Manhattan.
323	Difficult Turn/Crossing	Manhattan Ave and Eagle St	Difficult for bikers on Eagle to cross two-way uncontroled traffic on Manhattan from a dead stop after stop sign.
324	No Crosswalk	Meeker Ave	It's over 500' without a crosswalk on Meeker between N 6th and Union. This contributes to speeding and the hostile atmosphere for pedestrians.
325	No Crosswalk	Meeker Ave	It's 750' without a crosswalk on Meeker between Union and Lorimer. This contributes to speeding and the hostile atmosphere for pedestrians.
326	Bike Lane Requested	Eckford Ave	Put in a north-bound curb-side bike lane on Eckford to complement the south-bound lane on Leonard.
327	Uncomfortable for Novice Cyclists	Nassau Ave and Guersey St	This is a terrible way for a bike lane to end: no warning or wayfinding, right before a complex, chaotic intersection.
328	Uncomfortable for Novice Cyclists	Greenpoint Ave and Monitor St	Merging with cars the block before the Greenpoint Ave bridge is very uncomfortable. Eliminate this conflict by keeping the curb-side bike lane and just one east-bound car lane until Kingsdale and then open it up to two car lanes once on the bridge.

Count	Category	Location	Comment
329	Aggressive Drivers	Greenpoint Ave and McGuinness Blvd	This intersection is terrifying on foot. Cars are too preoccupied with trying to make left and right turns that they rush and almost hit pedestrians.
330	Speeding	Meeker Ave	Drivers on Meeker drive like they are still on the BQE
331	Deliveries in Bike Lane	Manhattan Ave	Many private cars and delivery trucks park in the bike lane on Manhattan. We need more designated delivery zones on the street.
332	Bike Lane Requested	Union Ave	wide street could accomodate useful north-south bike connection between williamsburg and bedstuy
333	Aggressive Drivers	Freeman St	After the light at Manhattan, man cars and trucks speed recklessly down Freeman to reach the stop sign at the end of the block. Even though there's a painted bike lane here, drivers use their pent up energy to make this residential street less safe for bikers and pedestrians.
334	Aggressive Drivers	Freeman St	After the light at Manhattan, man cars and trucks speed recklessly down Freeman to reach the stop sign at the end of the block. Even though there's a painted bike lane here, drivers use their pent up energy to make this residential street less safe for bikers and pedestrians.
335	Bike Lane Requested	Franklin St	As part of the Brooklyn Waterfront Greenway, this section of Franklin needs something more substantial and safer than sharrows
336	Difficult Turn/Crossing	Borinquen Pl and S 3rd St	It difficult for bikers on S 3rd to cross the uncontrolled south-bound traffic on Borinquen. There should be a light here.
337	Uncomfortable for Novice Cyclists	McGuinness Blvd and Freeman St	connection from Pulaski Bridge to Freeman St is confusing for newcomers and scary for all due to speeding cars and bus movements; can the path for bikes be more clearly marked and delineated
338	Confusing Bike Route Connection	Borinquen Pl under BQE	As the paint has faded, it is unclear that bikers can cross the median at Borinquen place. It should be better marked. The "All Traffic -->" sign should have an "Except Bikes" plaque.
339	Confusing Bike Route Connection	Borinquen Pl under BQE	hard to figure out this connection; granite blocks and parked cars often block bike route
340	Bike Lane Requested	Roebling St btw S 4th St and S 5th St	Put in a north-bound bike lane on Roebling between S 4th and S 3rd Sts for bikers heading east from the bridge. Roebling is 40', which is wide enough to add one class II bike lane without changing the moving or parking lanes (two 7'-6" parking lanes, two 10' moving lanes, one 5' bike lane).
341	Signage Problems	Bedford Ave btw s5th St and s 6th St	Entrance to Williamsburg Bridge pedestrian path is terribly marked.
342	Signage Problems	Williamsburg Bridge Bike Entrance	Signs should alert pedestrians that they cannot enter the Williamsburg Bridge path here, AND there should be wayfinding signs directing them to the pedestrian path entrance on Bedford Ave.
343	Pedestrians in Bike Lane	Williamsburg Bridge Bike Entrance	Lots of pedestrians in bike only part of Williamsburg Bridge path.
344	Sidewalk Blocked / Damaged	Kent Ave and Broadway	Giando on the Water constantly uses west sidewalk on Kent at Broadway as a valet parking lot.
345	Long Distance to Cross	Meeker Ave/Humboldt ST and McGuinness Blvd	Intersection is hell on earth for pedestrians, and an important route for Eastern Greenpoint residents reaching the L Train at Graham Ave.
346	Uncomfortable for Novice Cyclists	Greenpoint Ave btw Manhattan Ave McGuinness Blvd	Bike lane disappearing for 3 blocks in middle of Greenpoint Ave is hostile to novice cyclists, especially those riding uphill
347	Other	General	The flexible delineators "protecting" the bike lane are constantly being taken out by cars. Something more robust is needed.
348	Lane Marking Problems	Greenpoint Ave and Kingsland Ave	Practically while the green paint was still wet, the new curb-side buffered bike lane was ripped up by utility work and not restored.
349	Uncomfortable for Novice Cyclists	Franklin St and Quay St	The bike lane ending and being dumped into sharrows is intimidating for novice bikers