

4. EXISTING SURFACE TRANSIT AND TRAVEL CHARACTERISTICS

4.1 CORRIDOR IDENTIFICATION

To facilitate analysis of the Core Study Area, four study corridors were identified within Downtown Brooklyn that reflect not only distinct areas and characteristics of the urban core, but also differing circulation patterns and travel needs. These four corridors were initially identified through discussion with the project's Steering Committee, comprised of representatives of the Downtown Brooklyn Partnership, New York City Transit, the New York City Department of Transportation, and the URS Study Team. The four corridors identified include the following:

- JayStreet/Adams Street/Cadman Plaza Corridor
- Fulton Street/Livingston Street Corridor
- Atlantic Avenue Corridor
- Flatbush Avenue Corridor

These corridors all feature a significant amount of surface transit service. Table 22 shows the frequency of peak period buses at representative stops within each corridor.¹⁴

Table 22 - Buses per Hour at Key Stops in Corridors

Corridor	Stop	# of Bus Routes	Average Buses Per Peak Hour			
			AM Peak		PM Peak	
			to Downtown	from Downtown	to Downtown	from Downtown
Jay Street / Adams Street / Cadman Plaza	Joralemon St & Court St	8	63	57	67	67
Fulton Street / Livingston Street	Fulton St & Hoyt St	5	43	39	45	44
Fulton Street / Livingston Street	Livingston St & Hoyt St	5	34	30	37	39
Atlantic Avenue	Atlantic Ave & Flatbush Ave	4	30	28	35	36
Flatbush Avenue	Livingston St & Flatbush Ave	5	34	30	37	39

Jay Street/Adams Street/Cadman Plaza Corridor

The Jay Street/Adams Street/Cadman Plaza corridor generally runs in a north-south orientation and is bounded by Red Cross Place adjacent to the entry ramps to the Brooklyn Bridge on the north, Jay Street on the east, Cadman Plaza West on the west, and Atlantic Avenue on the south.

From a land-use perspective, this corridor is characterized by a predominance of institutional and educational facilities in its northern section and includes major trip generators such as Brooklyn Borough Hall, the U.S. Court House, and N.Y. State Supreme Court buildings adjacent to Cadman Plaza, as well as

¹⁴ Buses per Hour was calculated using information from NYCT bus timetables (April 2009). First, the number of buses scheduled to arrive at each station during the peak period (AM Peak: 6am to 10am, PM Peak: 3pm to 7pm) was summed. That number was then divided by the number of hours in the period (four) to determine the average number of buses arriving per hour

bus routes. The busiest single stop in the corridor during the PM peak period is at Jay Street/Fulton Street, where boardings total 3,211. Borough Hall at Joralemon Street is also a prime destination in the evening, with nearly 1,000 alightings during the PM peak.

Heavy boardings also occur at Jay and Willoughby Streets (1,521), at Adams and Willoughby Streets (1,657), and at Jay and Livingston Streets (1,518). These numbers reflect commuter activity generated by the court houses and other institutional employment centers, the heavy inbound and outbound ridership from the Jay Street/Borough Hall subway stop connection, and the considerable commercial activity from the adjacent Fulton Street/Livingston Street corridor. There are very light boardings on Cadman Plaza West, where buses layover. This is attributed to the time saved by walking east across Columbus Park and boarding the same routes on Adams Street, thereby catching buses en route and avoiding layover time.

Cadman Plaza

Cadman Plaza is an urban park located in what was once a central Elevated train and trolley system terminal area known as Sands Street (Figure 34). Most Brooklyn trolley lines traversed the Brooklyn Bridge and terminated in Manhattan. The bus system that eventually replaced trolleys did not terminate in Manhattan, and with no central terminal, these lines terminated in different locations in the area in and around Cadman Plaza West and Tillary Street, thereby forever changing the travel patterns and characteristics of Brooklyn’s transit system.



Figure 34 - Construction of Cadman Plaza

Today, Cadman Plaza is the primary layover point for a large percentage of Downtown Brooklyn’s buses operated by NYCT (Figure 35). It serves as both a layover point for buses and for bus recovery time for some of NYCT’s longer bus routes. Some routes, such as the B41, have trip times in excess of one hour during peak hours. During peak hours, at least one bus per route is in layover for eight to ten minutes along Cadman Plaza West and Tillary Street, and as many as two buses layover for routes with both Limited and regular service. A total of 12 bus routes stop or layover at Cadman Plaza. Bus turning conflicts can be observed daily at the corner of Tillary Street and Adams Street due to tight clearance and turning radius issues shortly after buses re-start their return route from Cadman Plaza West.



Figure 35 - Cadman Plaza Bus Layover Area

Fulton Street/Livingston Street Corridor

The Fulton Street/Livingston Street Corridor runs in an east-west orientation and is bounded by Court Street to the west, Atlantic Avenue Terminal to the east, and Livingston Street and Fulton Mall to the south and north, respectively.

This corridor is the heart of Downtown Brooklyn’s commercial area, as indicated in Figure 36, where land uses highlighted in dark red represent commercial and office buildings. The corridor is a combination of

significant portions of the Court Livingston Schermerhorn Business Improvement District (BID) and the Fulton Street BID. This is also the only corridor within the Study Area with bus only lane operations, as described in the previous section.

Figure 36 shows ridership by stop along Fulton and Livingston Streets for PM peak hour boardings (3 PM to 7 PM). During this peak period, a total of 13,322 passengers board buses on these two streets - the highest levels of any corridor in the Study Area.

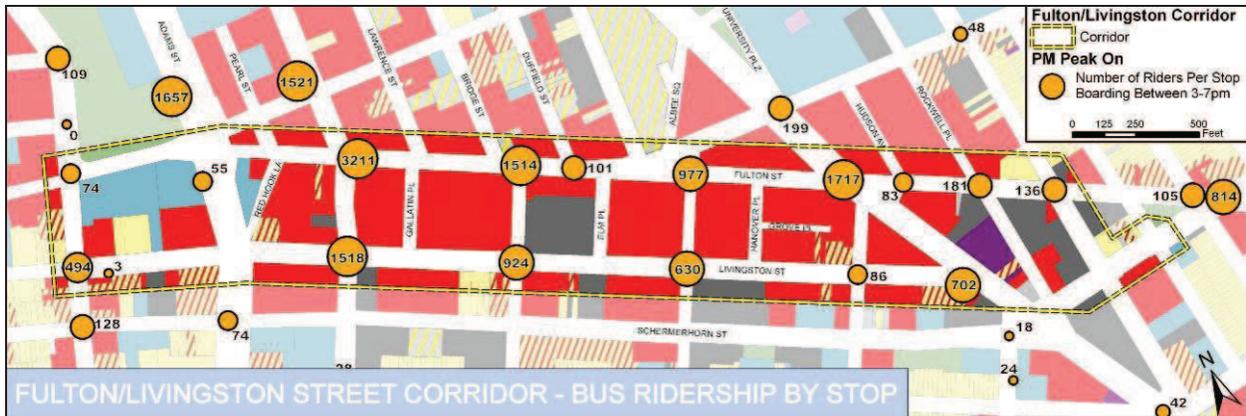


Figure 36 - Bus Ridership by Stop in Fulton / Livingston Corridor

The Fulton Street/Livingston Street Corridor is the focus of a separate report, the Fulton Streetscape Project, which is currently in preparation.

Atlantic Avenue Corridor

Atlantic Avenue is one of the oldest streets in Brooklyn, dating back to the 1700s. Today, the street retains some of its historical identity, offering a mix of ethnic restaurants, specialty food shops, antique, furniture and other boutiques. Atlantic Avenue is a bi-directional, four-lane urban arterial, with separate parking lanes on each side. The eastbound parking lane between Boerum Place and 4th Avenue serves as a travel lane from Monday to Friday between 4PM and 7PM. Despite this additional lane of capacity, traffic is extremely heavy between 3rd Avenue and 4th Avenue during the PM Peak.

Key bus routes serving Atlantic Avenue include the B61, B63, and B65. Bus ridership during the PM peak period is relatively light compared to the Fulton Street/Livingston Street corridor (Figure 37). Between Court Street to 4th Avenue, a total of 1,087 passengers boarded during the four-hour PM peak period.



Figure 37 - Bus Ridership by Stop in Atlantic Avenue Corridor

Flatbush Avenue Corridor

Flatbush Avenue is considered the “arterial gateway” to Brooklyn and is one of the busiest arterials in the Study Area. It provides a six-lane, bi-directional link to the Brooklyn Bridge and is the principal connector to the rest of Brooklyn. Land use along Flatbush Avenue reveals rapid development of new residential housing units, which will be discussed in more detail in the Future Conditions report. North of the Atlantic Avenue Terminal and the Fulton Mall area, there is relatively little bus service along Flatbush Avenue within the Core Study Area. The B51 route provides stops near Tillary at Flatbush Avenue/Chapel Street at the northern end of the Core Study Area. In addition, the B54 route provides stops at Flatbush Avenue/DeKalb Street and at Flatbush Avenue/Myrtle Avenue. The lack of bus service along this section of Flatbush Avenue is evident when looking at the PM Peak ridership within the corridor, as only 31 passengers board at Chapel Street/Flatbush Avenue during this 4-hour period (Figure 38). Significant bus service operates along Flatbush Avenue south of Livingston Street. Improving bus service within the Study Area may require addressing operational issues in this area as well.

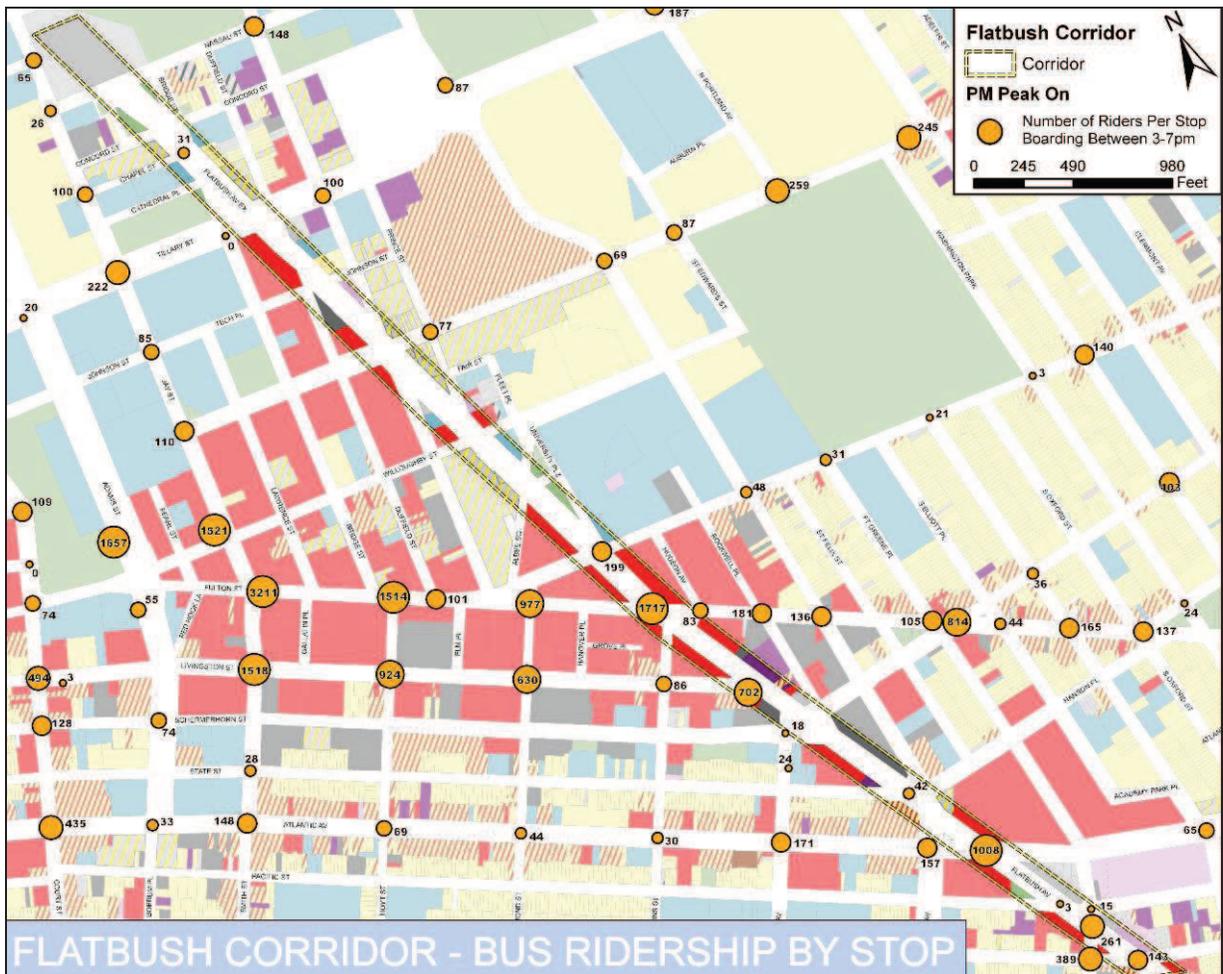


Figure 38 - Bus Ridership by Stop in Flatbush Avenue Corridor

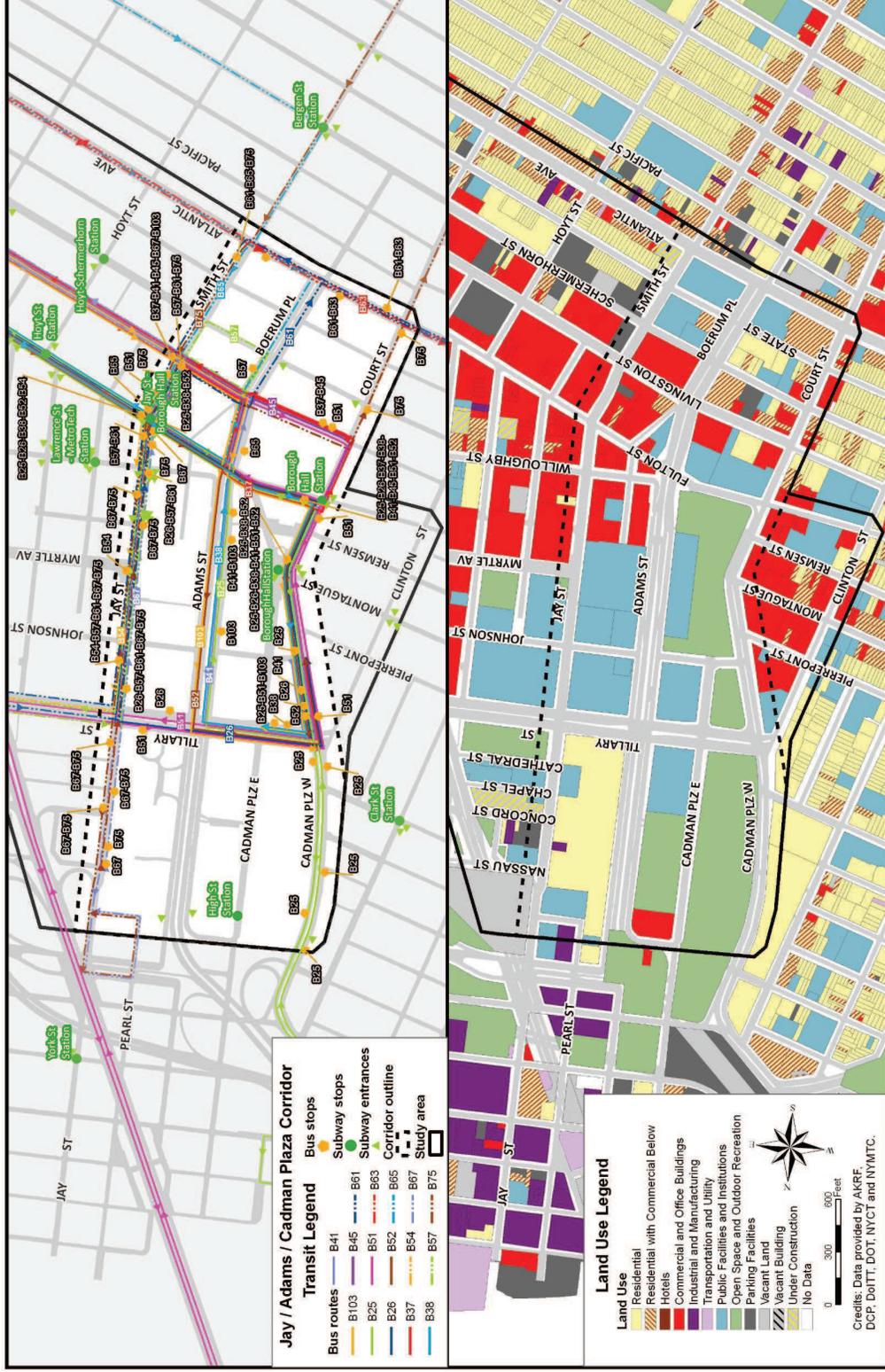




Figure 40 - Fulton / Livingston Street Corridor

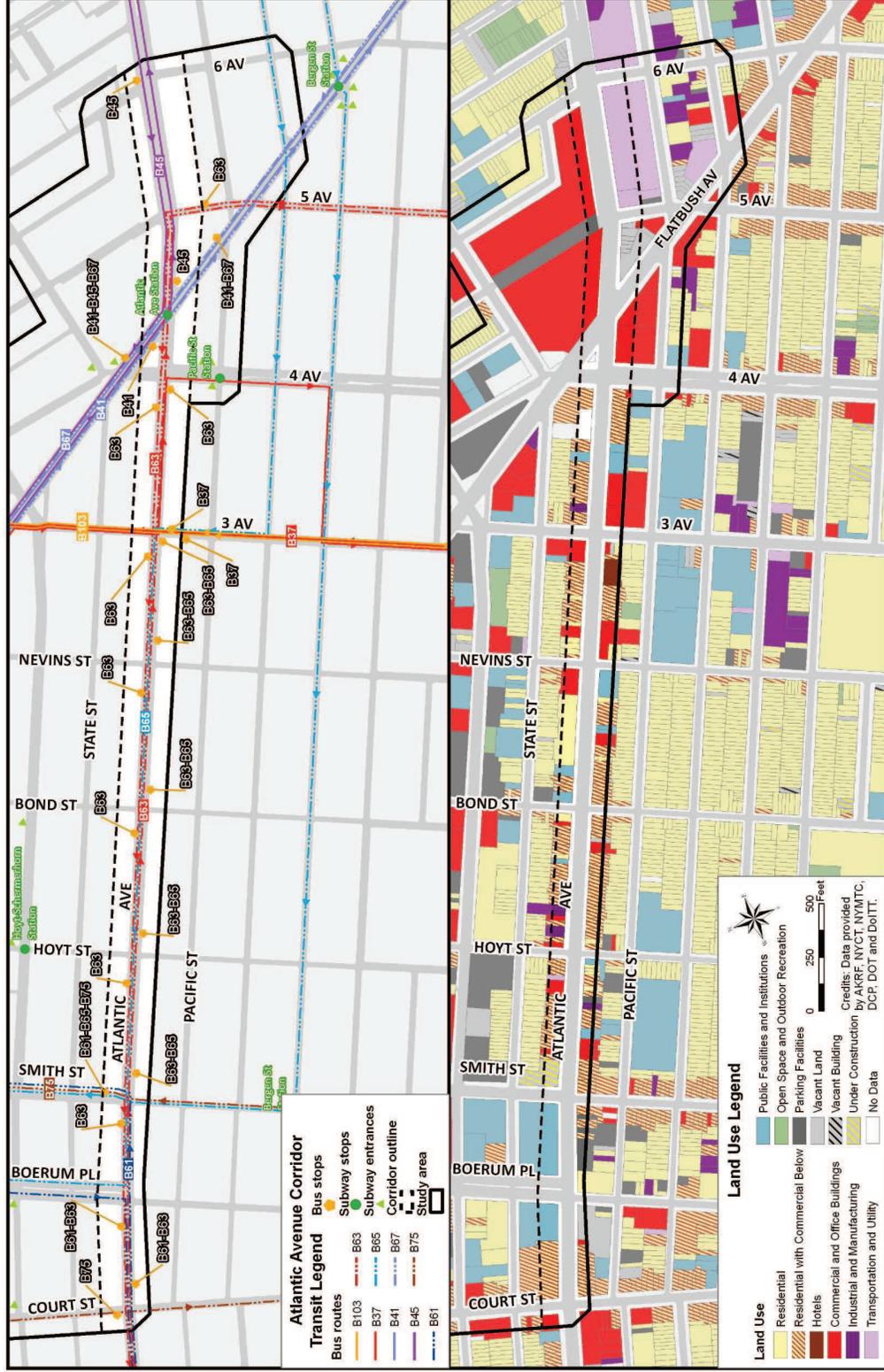


Figure 41 - Atlantic Avenue Corridor

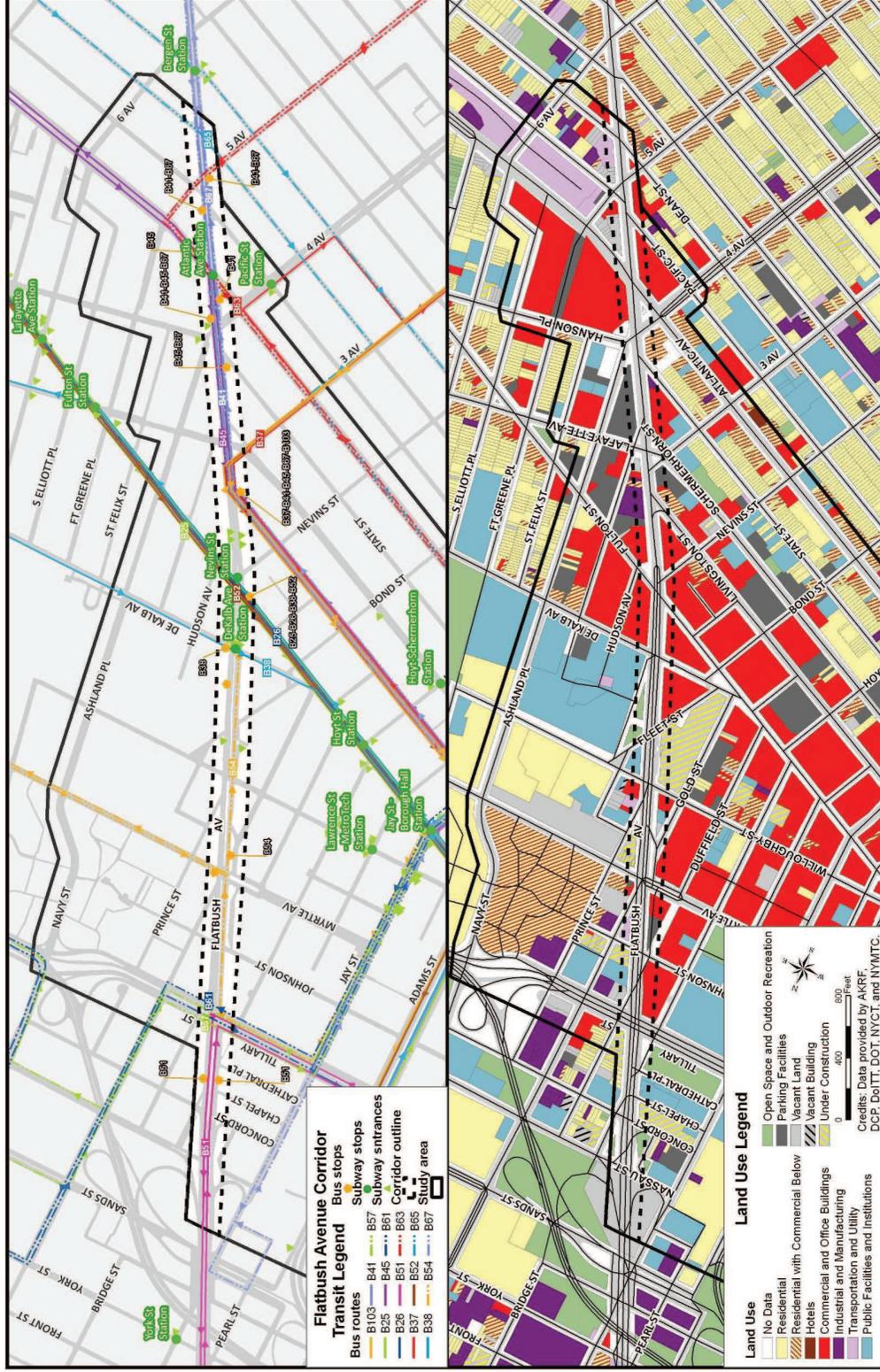


Figure 42 - Flatbush Avenue Corridor

4.2 JOURNEY TO WORK

The percentage of Study Area residents who use transit to get to work is significant (Table 23). The majority of Core Study Area residents (63%) take the subway to get to work. An additional 13% of residents walk to work, and another 12% drive. At the same time, only 2% of residents who live in the Core Study Area take the bus to work. The modal distribution of the Core Study Area is similar to that of the Overall Study Area.

Table 23 - Journey to Work Modal Split (2000 US Census)

Area	% Car	% Bus	% Streetcar/ Trolley	% Subway	% Rail	% Ferry	% Taxi	% Bike	% Walk	% Other	% Work at home
Core Study Area	12.0	2.0	0.3	62.6	1.6	0.1	1.4	1.4	12.7	0.5	5.5
Overall Study Area	13.2	3.2	0.2	63.1	1.1	0.0	0.8	1.0	11.0	0.5	5.9
Brooklyn	30.4	10.4	0.2	44.8	1.4	0.0	0.7	0.5	8.8	0.5	2.3
New York City	32.9	11.4	0.2	37.6	1.6	0.4	1.7	0.5	10.4	0.5	2.9

Although the percentage of people using public transit in Study Area is high, there are still areas with unmet transportation demand. Figure 43 identifies areas where the use of public transit is lower than other areas in the Overall Study Area. In these areas, improving the surface transportation system could encourage more people to choose the bus as their mode of transportation to work.

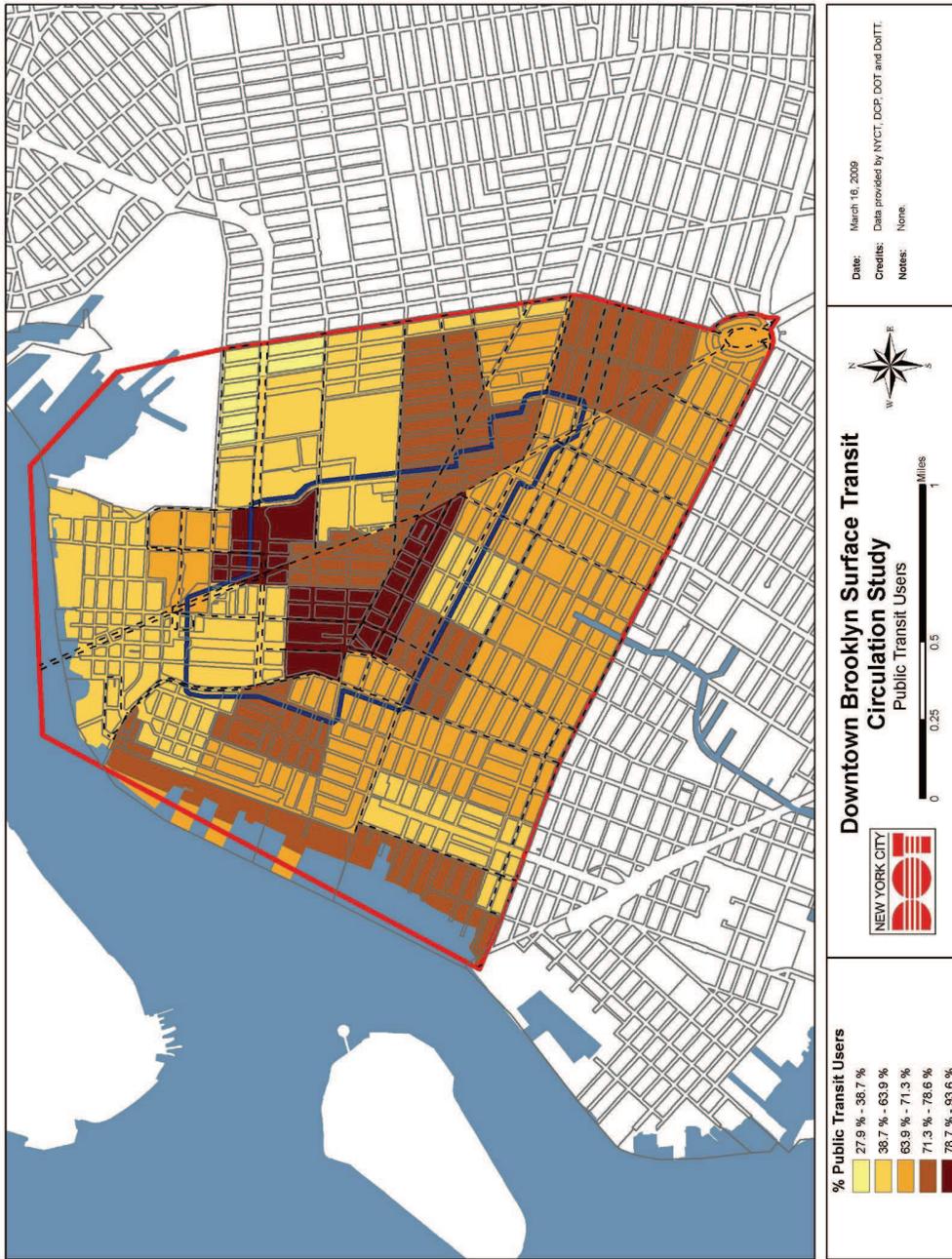


Figure 43 - Journey to Work, Percent Using Public Transit (US Census)

While the above analysis looks at the mode choices of people living within the Study Area, it is also important to understand the travel patterns of individuals who work in Downtown Brooklyn.¹⁵ Table 24 and Table 25 complement the data displayed in Figure 44. Of the people who work in Downtown Brooklyn, approximately 74% of them work within the Core Study Area. The origins of workers going to both the Overall and Core Study Areas are similar. The majority of workers live in Brooklyn, but of these individuals, most do not live within the Overall Study Area. The next most common residence of workers in Downtown Brooklyn is Queens. Relatively few workers commute from Manhattan, Staten Island, and the Bronx.

Table 24 - Residences of Employees in the Study Area

Residence of Employee	Overall Study Area		Core Study Area	
	Number of Employees	Percent	Number of Employees	Percent
Bronx	6,280	4.9%	5,303	5.6%
Brooklyn	84,138	65.5%	60,218	63.2%
<i>Overall Study Area</i>	11,539	9.0%	5,369	5.6%
<i>Other</i>	72,599	56.5%	54,849	57.5%
Manhattan	8,432	6.6%	6,079	6.4%
Queens	22,550	17.6%	18,056	18.9%
Staten Island	6,982	5.4%	5,674	6.0%
Total	128,382	100%	95,330	100%

Overall, 18.6% of workers who commute to the Core Study Area do so by bus (Table 25 and Figure 44). Bus travel is most common among residents of Brooklyn, who take the bus 12.7% of the time. Bus commuting is more common between other parts of Brooklyn and the Core Study Area (13.1%), but 8.5% of people who live in the Overall Study Area and work in the Core Study Area still use the bus to get to work. This compares with only 3.2% of all workers who live in the Overall Study Area who commute to work by bus. A significant percentage of workers from Staten Island also commute to the Core Study Area by bus. Relatively few commuters take the bus from the Bronx, Queens, and Manhattan, likely because most people choose to use the subway for long distance travel.

Table 25 - Bus Ridership of Employees in the Study Area

Residence of Employee	Overall Study Area			Core Study Area		
	# Total Employees	# Employees who Take the Bus	% Employees who Take the Bus	# Total Employees	# Employees who Take the Bus	% Employees who Take the Bus
Bronx	6,280	471	7.5%	5,303	389	7.3%
Brooklyn	84,138	10,141	12.1%	60,218	7,621	12.7%
<i>Overall Study Area</i>	11,539	668	5.8%	5,369	457	8.5%
<i>Other</i>	72,599	9,473	13.0%	54,849	7,164	13.1%
Manhattan	8,432	419	5.0%	6,079	328	5.4%
Queens	22,550	1,484	6.6%	18,056	1,080	6.0%
Staten Island	6,982	880	12.6%	5,674	671	11.8%
Total	128,382	23,536	12.1%	95,330	17,710	18.6%

¹⁵ The data does not include information about workers who live outside of New York City (e.g. New Jersey or Long Island).

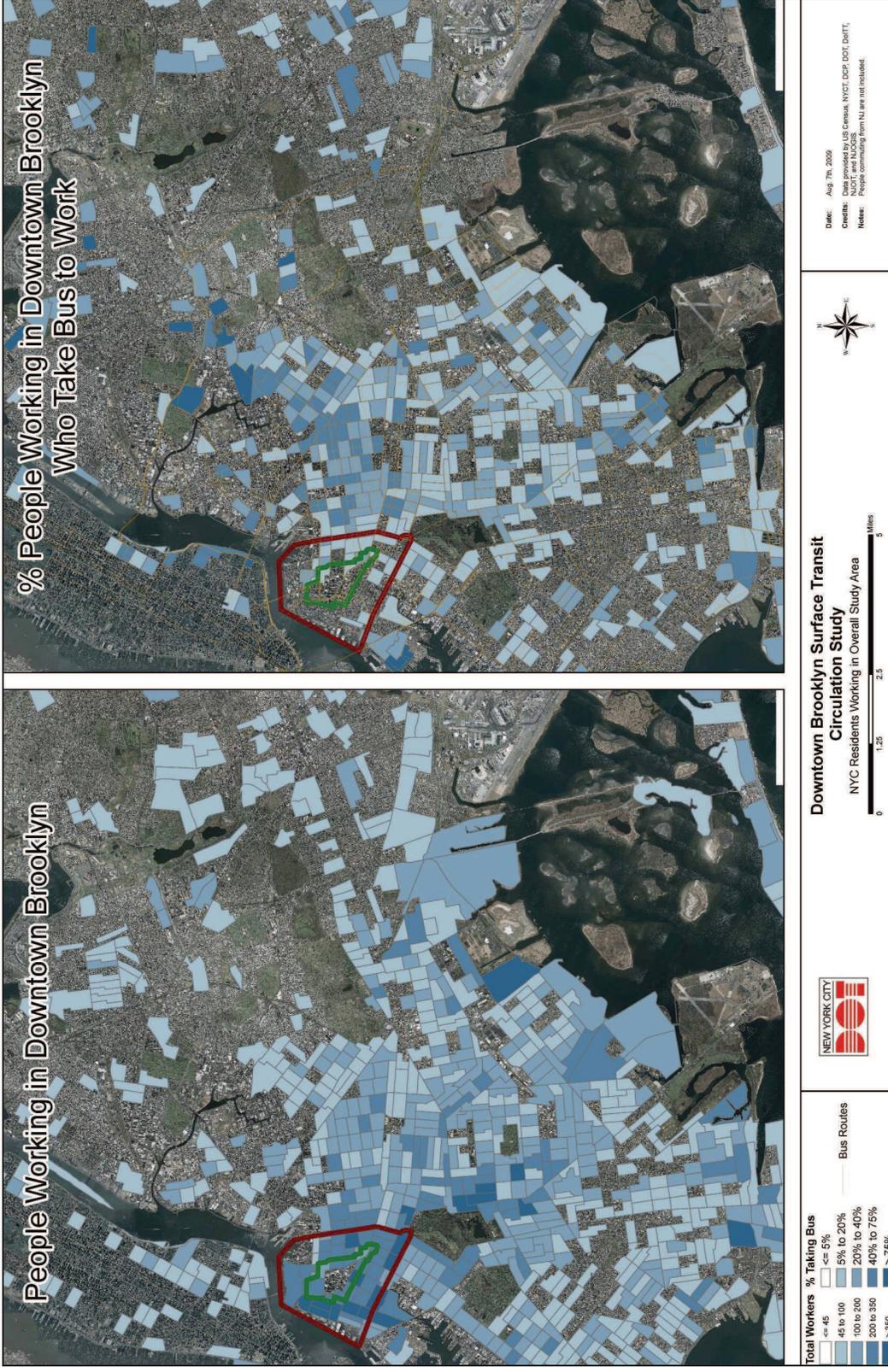


Figure 44 - New York City Residents Working in the Overall Study Area

4.3 FIELD OBSERVATIONS

A number of site investigations were conducted within the Study Area between February and June, 2009. This included developing a database of project photos, including a number presented in this report. Observations were made at a number of key intersections, including Flatbush/Atlantic Avenue, Smith and Livingston, Adams/Tillary, Cadman Plaza West/Johnson Street, Atlantic Ave/Hicks, Jay/Fulton, Flatbush/Fulton, Borough Hall, and Jay Street, to name a few. Several key intersections or series of intersections were then focused on and are presented in the section related to problematic intersections. A sample list of these observations is presented on the following pages.

Tillary/Adams

This location has frequent turning conflicts, as buses have difficulty negotiating the tight turning radius. Frequent bus/pedestrian/vehicle conflicts due to roadway geometry and frequency of buses. During peak hours, conflicts can occur every eight to ten minutes.

Adams/Fulton

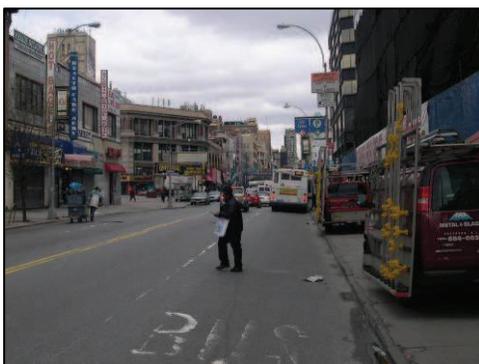
Nearly 700 buses currently travel along Fulton Mall each day, making these blocks critical to the bus operations serving the Study Area. During peak periods, high volumes of buses create congestion that appear to slow down overall operations. In addition, while private vehicle use of this street are officially limited to deliveries and short stretches where north/south streets “jog” so drivers are allowed to use Fulton Street, Fulton Mall’s bus only lanes were observed to be frequently violated by automobiles which significantly reduced bus operating reliability. The weave section where buses are required to cross traffic to turn left onto Fulton Mall was also identified as a problem.

Livingston Street and Multiple Cross Streets

Although on-time performance and reliability information was not available for most of this corridor, Livingston Street vehicular congestion was observed to be constant during peak hours. Heavy auto congestion and multiple, overlapping bus routes contribute to problem of slow moving traffic.



Bus only lanes were observed to be frequently violated by automobiles and construction at new developments led to single lane operations in one direction.



Bus only lane pavement markings on Livingston Street do not meet current NYCDOT standards; much of the pavement markings are worn and not very visible to motorists.

Vehicles parked illegally at several bus stops causing buses to stop away from curb lane to let passengers on and off.

Jay Street heading south toward Livingston Street

Vehicular/bike/bus conflicts. Buses need to cross bike lane to pull in and out of bus stops – safety issue.



Flatbush/Atlantic Avenue

During peak periods, buses pull in already at capacity, causing large numbers of passengers to wait at this stop to leave downtown area during PM Peak period.

Generally, street crossings in the Flatbush/Atlantic area are unfriendly to pedestrians.

4.4 TRAVELER INTERCEPT AND BUS RIDER SURVEYS

Journey to Work data (Section 4.2) was used to develop an overview of travel patterns in Downtown Brooklyn. While this data provided insight into mode choice, analysis of new data was needed to:

- Confirm field observations;
- Gain a better understanding of perceptions of existing Downtown Brooklyn bus service; and
- Identify travel patterns by collecting information on origin and destinations in the Study Area.

In order to collect the above information, two fields surveys, a traveler intercept and a bus rider survey, were conducted during April and May 2009. Sample survey forms are included in Appendix A. While the survey were not designed to provide statistical data, their purpose was to elicit qualitative responses, and to provide information on passengers’ experiences and impressions of existing surface transit operations as well as quality of service within the Study Area

On April 18, April 30, May 28, and May 31, surveyors from SIMCO Engineering and URS Corporation stationed at several locations in Downtown Brooklyn conducted intercept surveys with people waiting for the bus and people walking on the sidewalk. The surveyors asked people their trip origins and destinations, and which mode(s) they typically use to travel to and from Downtown Brooklyn or will use to arrive at their destination, and preferences for potential bus service improvements. Bus riders were asked to rate service on the line they were waiting for and to pick their top choice from a list of bus stop improvements. The following section analyzes responses to the traveler intercept and bus rider surveys.

A high percentage of responses to several of the questions fell into the “other” category. In order to achieve the most accurate analysis possible, if people marked “other” but the reason fit into a category,

responses were re-coded. For example, if someone responding to the origin or destination question said “other” and the surveyor wrote in “Church,” that response was coded under Social/Church/Personal. “Other” responses to questions about bus service improvements and stop amenities were harder to categorize since they elicited qualitative responses. Wherever possible, however, remarks listed in “other” have been interpreted to fit into a response. For example, if the surveyor wrote “more benches” to the question “What one improvement to this bus stop environment would you like to see most,” the response was placed in the “waiting area comfort” category.

Following are the primary findings gathered from the surveys:

- To increase bus ridership around Downtown Brooklyn, service must be more reliable in terms of on-time performance and frequency of service, especially on the weekend. The B41, B61, and B63 routes are priority candidates for reliability improvements.
- In terms of bus stops, waiting area comfort was the top request by passengers. The need for seating was the highest priority. Providing shelters at all bus stops was also highly rated. A few passengers also requested that bus shelters be placed farther away from the curb.

Summary of Survey Results

A total of 825 surveys were collected – 260 bus surveys and 565 sidewalk intercept surveys. The number of surveys collected at each site was close to equal, except for at Atlantic Center (Table 26). The bulk of surveys were distributed during the midday period and on weekdays (Table 27).

Table 26 - All Surveys by Location

Location	Number	Percent
Atlantic Terminal	167	20%
Livingston & Smith	162	20%
LICH	161	20%
DUMBO	146	18%
LIU	136	16%
Atlantic Center	53	6%
Total	825	100%

Table 27 - All Surveys by Time and Day

Day	Number	Percent
Thursday	491	60%
Saturday	147	18%
Wednesday	143	17%
Sunday	44	5%
Total	825	100%
Time	Number	Percent
Midday	406	49%
PM	234	28%
AM	185	22%
Total	825	100%

Bus Riders

The following is a summary of survey responses by bus riders. Surveyors collected 260 questionnaires from people waiting for the bus at five Downtown Brooklyn locations see (Table 28).

Table 28 - Bus Surveys by Location

Location	Number	Percent
Livingston & Smith	91	35%
LICH	67	26%
Atlantic Center	53	20%
Atlantic Terminal	36	14%
LIU	13	5%
TOTAL	260	100%

Nearly half of the surveys were collected during the midday period, and just fewer than 68% were distributed on a weekday. As shown in Figure 45, bus riders were primarily traveling between work and home – these destinations represent just over 60% of origins and 58% of destinations. Of the responses with clear origins and destinations, 67% were traveling within Brooklyn.

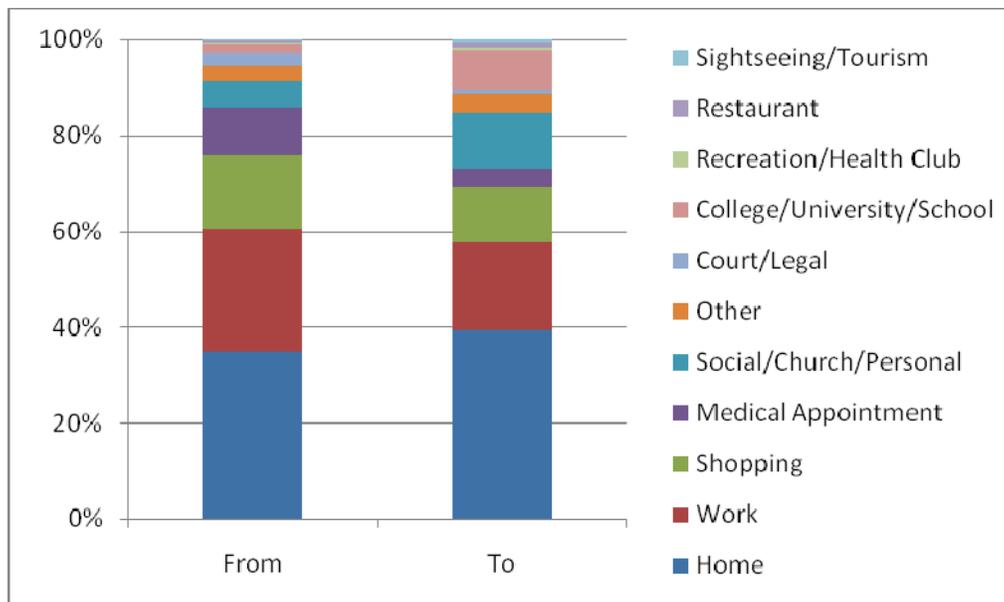


Figure 45 - Origin and Destination: Bus Riders

More than one-third of bus riders walked to reach their bus stop from their origin, while another third transferred from another route. Very few or zero respondents said they used a taxi, bicycle, or commuter van to reach their bus stop. Passengers connecting to their destination bus route from another bus route primarily came from the B61 (27 respondents) with several transferring from the B41, B63, B45, and B75 routes. Of the 31 people who responded "Other," 22 transferred to a bus from the Long Island Rail Road. Table 29 shows the complete mode choice of riders accessing their bus stop.

Table 29 - Mode Used to Access Bus Stop

Mode	Number	Percent
Walk	98	37%
Another Bus	80	30%
Subway Line	50	19%
Other	31	12%
Car	4	2%
Commuter Van	1	0%
Taxi	1	0%
Total	265	100%

The next question asked people to rate their satisfaction with the bus route that served their stop. Nearly two-thirds of responses fell in the “Fair” or “Good” categories (Figure 46).

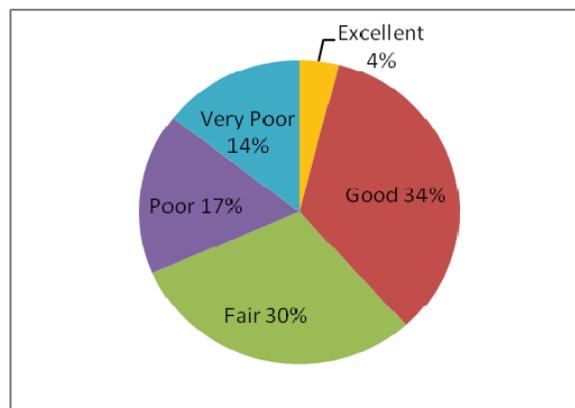


Figure 46 - Satisfaction with Bus Service Used on Day of Survey

Bus customers were asked which improvements they would most like to see. According to their responses, bus riders clearly want more frequent service (Figure 47). Frequency of bus service is often not an issue of how often a bus is scheduled to operate, but how reliable a bus is to arrive on-time. As shown in Table 16 (page 55), 15-minute or better headways are standard for Study Area service from 6am to at least 7pm. The conclusion drawn from comparing the feedback to the data is not an issue of scheduled service frequency, but of actual service performance of buses to arrive on-time and at reliable headways.

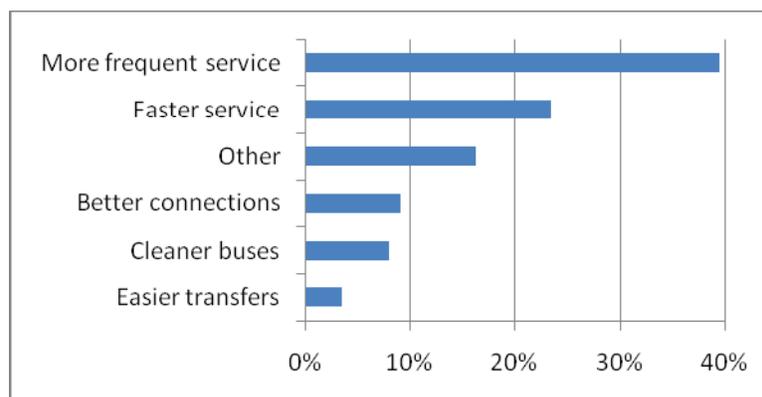


Figure 47 - Requested Improvements to Bus Routes: Bus Riders

From the 52 people who checked “Other,” some of the most popular requests were:

- Buses running on schedule – no bunching;
- Friendlier, more courteous drivers;
- Less crowded buses;
- Better weekend service;
- Get buses around vehicle congestion; and
- Lower fares.

Of the 89 bus riders who requested “more frequent service” or “faster service”, 29% cited that they rode the B61, with 15% each citing the B63 and B41 (Table 30). Since these routes operate with headways of no less than every 15 minutes for most the week, these responses are interpreted as requests for improved reliability of the already-frequent scheduled service.

Table 30 - Routes of Bus Riders Requesting More Frequent or Faster Service

More Frequent Service or Faster Service	
Bus Route	Total
B61	26
B63	13
B41	13
B45	7
B38	5
B75	4
B57	4
B52	4
B103	44
B44	2
B67	2
B68	2
B26	1
B8	1
B35	1
B43	1
Total	89

Next, respondents were asked what type of bus stop improvements they would like to see. “Waiting area comfort” and “Shelter” were the most popular response (Figure 48), and many people wrote in that they wanted seating. At stops with benches, many people requested longer benches to accommodate everyone. Most of the people who checked “Other” wrote that the bus stops are fine as they are.

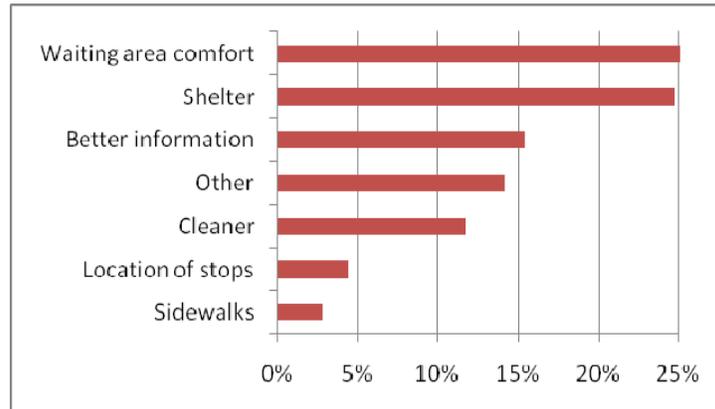


Figure 48 - Requested Improvements to Bus Stops

The final survey question asked if the respondent knew of locations in and around Downtown Brooklyn requiring new or additional bus service. The majority of respondents said “Don’t Know” as shown in Table 31. A large number of respondents selected “Other.” In terms of additional service, respondents primarily referred to the bus routes they used to arrive at the bus stop as needing more frequent service. The most frequent places that survey respondents believed need new or additional bus service included Red Hook, Borough Hall, Myrtle Avenue, and Carroll Gardens.

Table 31 - Locations in Need of New/Additional Bus Service

Place	Number	Percent
Don't Know	124	52%
Other	74	31%
Brooklyn Heights/Cobble Hill	19	8%
Flatbush at “X”	10	4%
DUMBO	8	3%
Fulton Ferry Landing	3	1%
Total	238	100%

Sidewalk Intercepts

The following is a summary of responses gathered from sidewalk intercept surveys. A total of 565 pedestrians filled out surveys at five locations (Table 32). Just over 80% of surveys were completed during on a weekday (Wednesday or Thursday). Nearly half of the surveys were distributed around the midday.

Table 32 - Sidewalk Surveys by Location

Location	Number	Percent
DUMBO	146	26%
Atlantic Terminal	131	23%
Long Island University	123	22%
Long Island College Hospital	94	17%
Livingston Street & Smith Street	71	13%
Total	565	100%

Similarly to individuals traveling by bus, pedestrians were mostly traveling between work and home, as shown in Figure 49. The percentage of respondents traveling from home – 50% – was much higher than the percentage for bus riders. Similar to results from bus rider surveys, shopping was the third highest reason for travel. Of the 353 responses with origins coded by borough, 60% were traveling within Brooklyn.

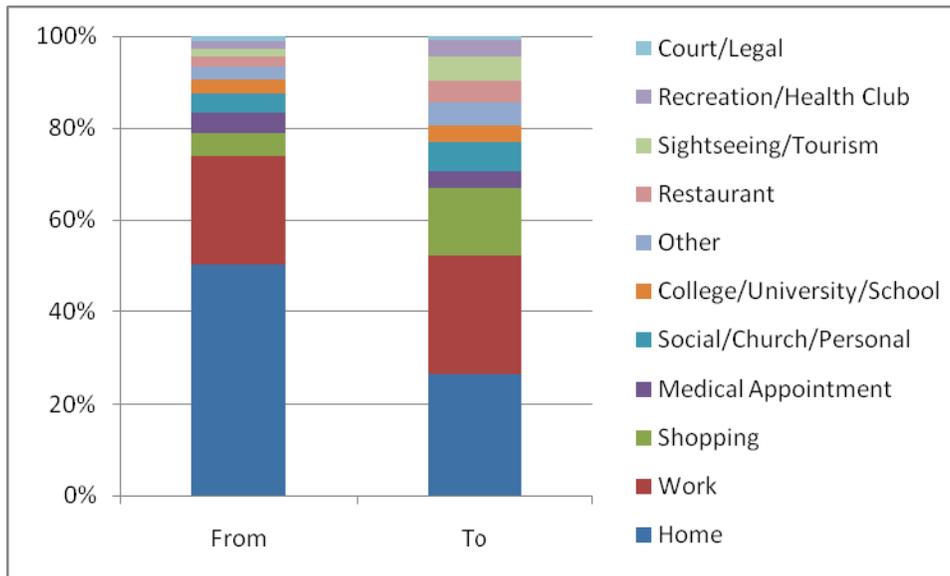


Figure 49 - Origin and Destination: Pedestrians

Pedestrians mostly responded that they would take the subway to get to their final destination (Table 33). Of those pedestrian respondents who identified a specific bus route they would subsequently take, individuals commonly mentioned the B41, B63, B61, B25, and B45. In terms of what mode respondents typically use within Downtown Brooklyn, responses were nearly the same, except that bus use slightly edged out walking. Bus routes identified as typically being used by surveyed pedestrians include the B41, B63, B61, B38, B25, B44, and B45.

Table 33 - Mode Choice: Sidewalk Surveys

Mode	What mode will you use today?		What mode do you typically use?	
	Number	Percent	Number	Percent
Subway Line	223	36%	248	39%
Walk	182	29%	113	18%
Bus	125	20%	139	22%
Car	68	11%	79	12%
Other	16	3%	23	4%
Bike	6	1%	15	2%
Taxi	4	1%	16	3%
Commuter Van	3	0%	4	1%
Total	627	100%	637	100%

When asked what factored into their mode choice on the day of the survey, people primarily cited speed and convenience (Figure 50).

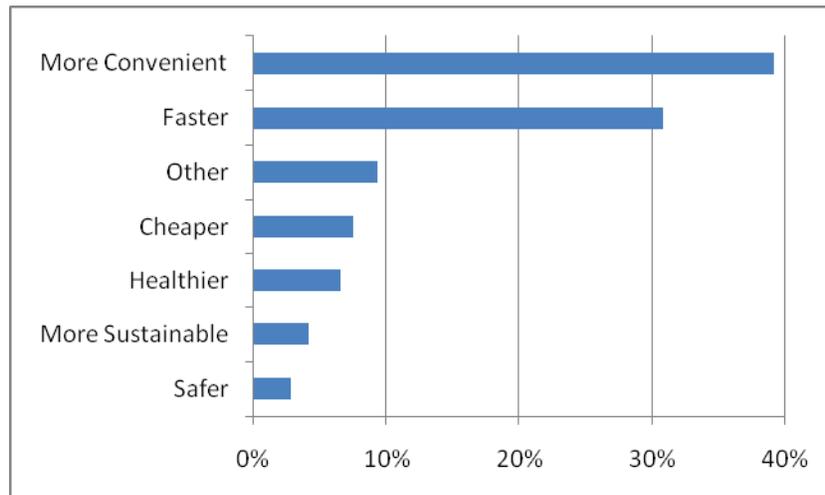


Figure 50 - Reasons for Mode Choice: Sidewalk Surveys

When people were asked why they don't take the bus, the most common complaint was that service is too slow and infrequent (Figure 51). The second most common response was that routes do not go where people want to go. Fixing this problem will be a primary goal of this study. The cost of riding the bus was not cited as a factor, nor was any preference to drive. 15% of respondents stated that they preferred walking over driving or taking transit.

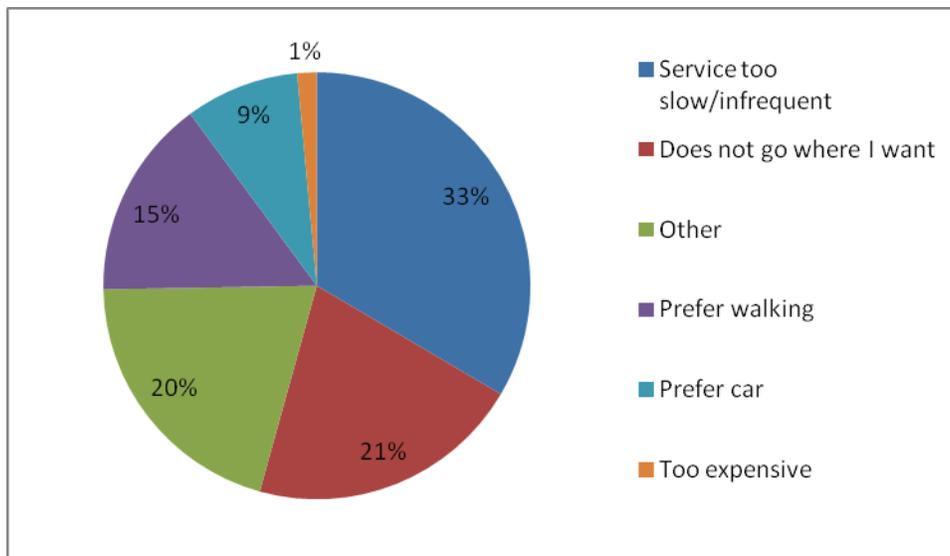


Figure 51 - Reasons Why People Do Not Take the Bus: Sidewalk Surveys

Similar to bus riders, pedestrians cited the need for more frequent and faster service as the main improvements they would like to see (Figure 52).

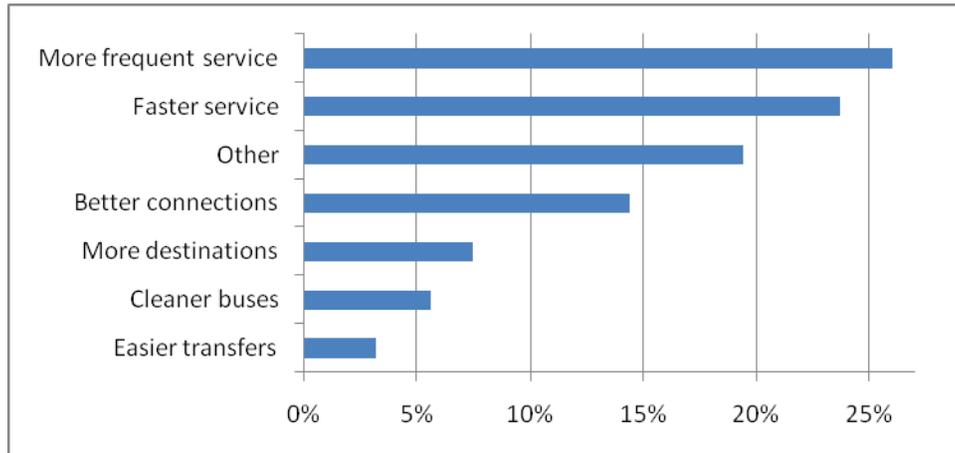


Figure 52 - Requested Improvement to Bus Routes: Sidewalk Surveys

A total of 170 respondents (30.1%) requested more frequent bus service, of which 57 said they would use the bus to get to their final destination and 37 identified specific bus routes they were going to use. The second most frequent response, “faster service” was cited by 155 people (27.4%). Of those people, 50 said they were going to use the bus to get to their final destination, and 22 gave the actual route they were going to use.

Table 34 shows the routes that pedestrians who requested more frequent or faster service used on the day of the survey. These respondents most frequently rode the B41. Since this route already operates with headways of no less than 15 minutes for the majority of the week, these responses are interpreted as requests for improved reliability of the scheduled service.

Table 34 - Routes of Pedestrians Requesting More Frequent or Faster Service

More Frequent or Faster Service		
Bus Route	Responses per Route	Total Responses
B41	18	18
B45, B61, B63	6	18
B46, B103	4	8
B25, B52, B67	3	9
B20, B26, B37, B49, B83	2	10
B23, B38, B44, B54, B65	1	5
	Total	68

In the “other” category, some common responses were:

- Unfamiliar with how to use the bus system;
- Unfamiliar with where bus routes run;
- Buses are too crowded;
- Prefer taking subway, train is easier; and
- Not convenient.

In response to the survey question asking which locations in Brooklyn that require new or additional service, most pedestrians responded “Don’t Know.” The location cited as most requiring bus connections was DUMBO (Table 35). Several Downtown Brooklyn bus routes were cited as requiring additional service.

Table 35 - Places Requiring New/Additional Bus Service: Sidewalk Surveys

Place	Number	Percent
Don't Know	297	52%
DUMBO	88	16%
Other	85	15%
Brooklyn Heights/Cobble Hill	45	8%
Fulton Ferry Landing	35	6%
Flatbush at	16	3%
Total	566	100%

4.5 FOCUS GROUP RESULTS

Public involvement is a key component of the DBSTCS. While quantitative data is valuable for determining travel patterns, qualitative input helps determine why travelers are making their mode choices. One of the elements of the study’s public involvement plan was to facilitate focus groups representing Study Area stakeholders. These stakeholders were organized into two groups: residents and community groups, and employees and business owners/managers. The following presents summaries of the feedback received from the focus groups. A map produced by is also included (Figure 53).

The focus group meetings allowed stakeholders who live and work in the area to identify and profile their distinct travel experiences, perceptions, expectations, and preferences. The Team collected direct feedback from each group on a number of travel issues, including:

- Levels and patterns of transit use and assessment of services;
- Key origins and destinations within the Study Area;
- Locations served, underserved, and unserved by transit;
- Span of service and service frequencies of transit services;
- Walking conditions along routes to transit stops and at transit stops; and
- Walking conditions along routes unserved by transit.

Stakeholders most frequently travel to the following locations within the area:

- Stores at Livingston Street at Hoyt Street, along Flatbush Avenue, and along Atlantic Avenue;
- Post office at Atlantic Avenue;
- Banking along Montague Street and Court Street;
- Metrotech Center;
- Borough Hall and the Green Market;
- Brooklyn Academy of Music; and
- Long Island Rail Road Terminal/Atlantic Terminal Mall.

The following locations were also mentioned as areas underserved by current bus service:

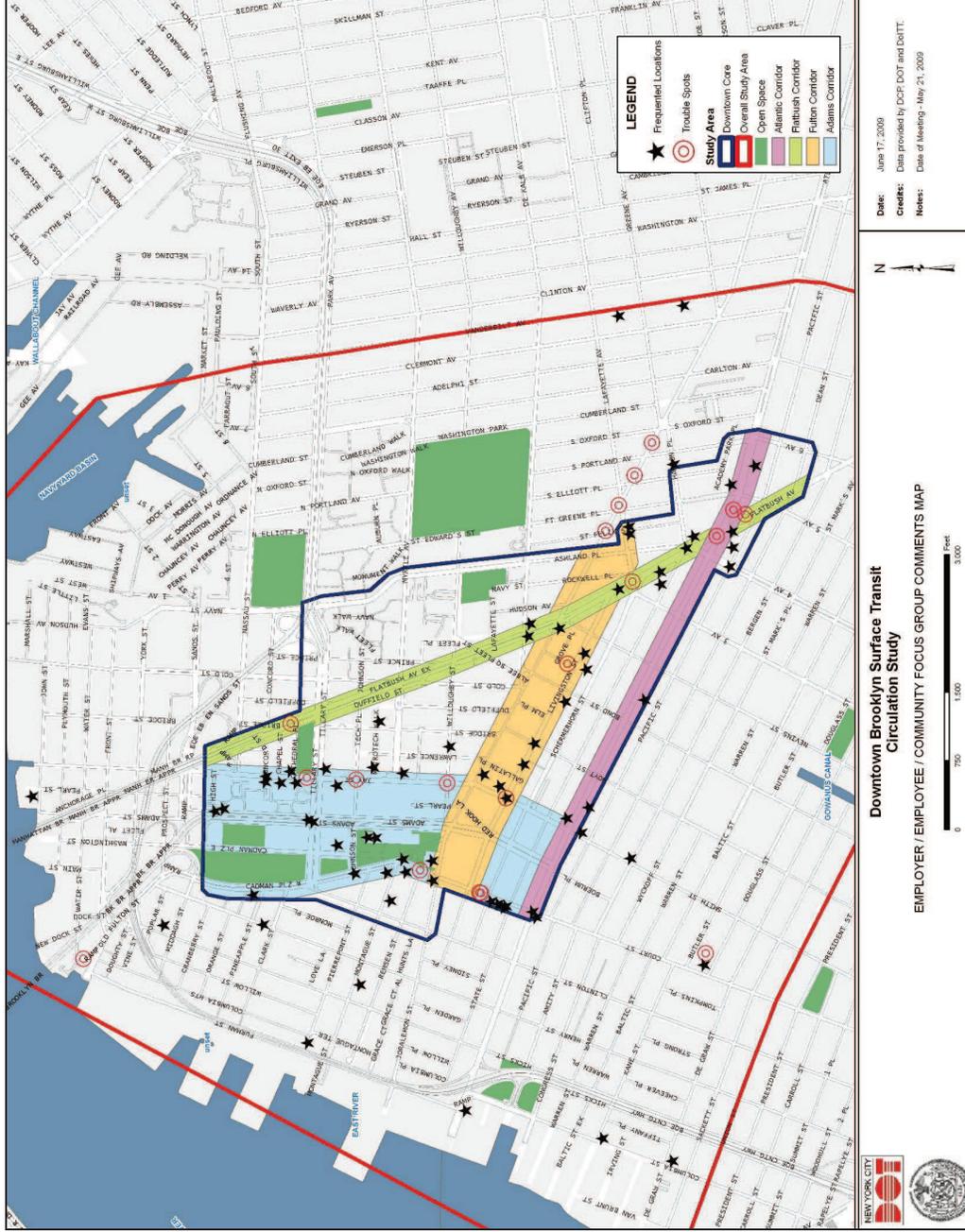
- Montague Street;
- Red Hook – IKEA, Fairway;

- Fulton Ferry/DUMBO area (especially in the evenings);
- Piers below Brooklyn Heights; and
- Future Brooklyn Bridge Park.

While there is significant bus service operating east and west along Fulton and Livingston Streets, there is limited service that runs north and south. Stakeholders requested implementing a Downtown Loop that would take people from offices to the shopping along Smith and Livingston Streets.

Pedestrian improvements were also requested to help people travel between the bus and their origin or destination. The following locations were noted as being unfriendly to pedestrians:

- The intersection of Atlantic, Flatbush and 4th Avenues;
- The length of Atlantic Avenue, especially at Court Street;
- The length of Adams Street, especially at Tillary Street;
- Livingston Street and Bond/Hanover: The parking facility creates an unsafe and uncomfortable situation with short pedestrian timings;
- Metrotech Center is dead space; and
- Livingston Street is very dark after sunset and feels unsafe.



Downtown Brooklyn Surface Transit
Circulation Study
EMPLOYER/EMPLOYEE/COMMUNITY FOCUS GROUP COMMENTS MAP

Figure 53 - Focus Group Map: Areas Frequented and Troubled Bus Areas in Downtown Brooklyn